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ALEXCO RESOURCE CORP.

TECHNICAL REPORT PRELIMINARY ECONOMIC ASSESSMENT OF THE KENO HILL SILVER DISTRICT PROJECT, YUKON TERRITORY, CANADA

NI 43-101 Report

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RPA

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FORWARD-LOOKING INFORMATION

This report contains forward-looking statements. All statements, other than statements of historical fact regarding Alexco Resource Corp or Keno Hill Silver District Project, are forward-looking statements. The words "believe", "expect", "anticipate", "contemplate", "target", "plan", "intend", "project", "continue", "budget", "estimate", "potential", "may", "will", "can", "could" and similar expressions identify forward-looking statements. In particular, this report contains forward-looking statements with respect to cash flow forecasts, projected capital, operating and exploration expenditure, targeted cost reductions, mine life and production rates, potential mineralization and metal or mineral recoveries, and information pertaining to potential improvements to financial and operating performance and mine life at the Keno Hill Silver District Project that may result from. All forward-looking statements in this report are necessarily based on opinions and estimates made as of the date such statements are made and are subject to important risk factors and uncertainties, many of which cannot be controlled or predicted. Material assumptions regarding forward-looking statements are discussed in this report, where applicable. In addition to such assumptions, the forward-looking statements are inherently subject to significant business, economic and competitive uncertainties, and contingencies. Known and unknown factors could cause actual results to differ materially from those projected in the forward-looking statements. Such factors include, but are not limited to: fluctuations in the spot and forward price of commodities (including gold, copper, silver, diesel fuel, natural gas and electricity); the speculative nature of mineral exploration and development; changes in mineral production performance, exploitation and exploration successes; risks associated with the fact that the Keno Hill Silver District Project is still in the early stages of evaluation and additional engineering and other analysis is required to fully assess their impact; diminishing quantities or grades of reserves; increased costs, delays, suspensions, and technical challenges associated with the construction of capital projects; operating or technical difficulties in connection with mining or development activities, including disruptions in the maintenance or provision of required infrastructure and information technology systems; damage to Alexco Resource Corp's or Keno Hill Silver District Project's reputation due to the actual or perceived occurrence of any number of events, including negative publicity with respect to the handling of environmental matters or dealings with community groups, whether true or not; risk of loss due to acts of war, terrorism, sabotage and civil disturbances; uncertainty whether the Keno Hill Silver District Project will meet Alexco Resource Corp's capital allocation objectives; the impact of global liquidity and credit availability on the timing of cash flows and the values of assets and liabilities based on projected future cash flows; the impact of inflation; fluctuations in the currency markets; changes in interest rates; changes in national and local government legislation, taxation, controls or regulations and/or changes in the administration of laws, policies and practices, expropriation or nationalization of property and political or economic developments in Canada; failure to comply with environmental and health and safety laws and regulations; timing of receipt of, or failure to comply with, necessary permits and approvals; litigation; contests over title to properties or over access to water, power and other required infrastructure; increased costs and physical risks including extreme weather events and resource shortages, related to climate change; and availability and increased costs associated with mining inputs and labor. In addition, there are risks and hazards associated with the business of mineral exploration, development, and mining, including environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins, flooding and gold bullion, copper cathode or gold or copper concentrate losses (and the risk of inadequate insurance, or inability to obtain insurance, to cover these risks).

Many of these uncertainties and contingencies can affect Alexco Resource Corp's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, Alexco Resource Corp. All of the forward-looking statements made in this report are qualified by these cautionary statements. Alexco Resource Corp. and RPA and the Qualified Persons who authored this report undertake no obligation to update publicly or otherwise revise any forward-looking statements whether as a result of new information or future events or otherwise, except as may be required by law.

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1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA) was retained by Alexco Resource Corp. (Alexco) to prepare a Preliminary Economic Assessment (PEA or the Study) on the Keno Hill Silver District Project (the Project), located in the Yukon Territory, Canada. The purpose of this report is to disclose the results of the PEA. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). RPA carried out a site visit from September 12 to 14, 2016.

Alexco is a public company with its headquarters in Vancouver, B.C. Alexco, through wholly owned subsidiaries, owns the mineral rights for the Keno Hill Silver District (KHSD) following its successful bid for the assets of the bankrupt United Keno Hill Mines Ltd in 2006. Alexco obtained the properties with all pre-existing liabilities subject to indemnification. Alexco also owns an environmental consulting company, Alexco Environmental Group (AEG), which provides environmental services to Alexco and the mining and mineral exploration industry.

The Project comprises:

- A network of public and private roads connecting the mines, process plants and other facilities.
- Crushing plant and flotation processing plant with a design capacity of 408 tpd.
- Dry stack tailings facility (DSTF) located adjacent to the process plant.
- Process and potable water sources.
- Electrical power available from the Yukon Electric grid.
- Administration, maintenance, and camp facilities near the town of Elsa.
- Mobile equipment to support activity at the site.
- Mine workings at the Bellekeno Mine.
- Collar of a portal for Flame & Moth.
- Mine workings and minor surface buildings at the Lucky Queen.
- Waste rock storage facility at Lucky Queen.
- Mine workings, ventilation fans, and dewatering pumps at the Bellekeno mine.
- Waste rock storage at the Bellekeno mine.

In 2008, Alexco entered into a Silver Purchase Agreement (SPA) with Silver Wheaton Corp. (Silver Wheaton) whereby 25% of all future silver production from the KHSD properties owned or controlled by Alexco at the time of the consummation of the SPA will be delivered to Silver Wheaton in exchange for a payment of US$3.90 per ounce as well as a payment by Silver Wheaton of US$50 million. The SPA has been renegotiated on several occasions and effective March 29, 2017, the Company entered into an agreement with Silver Wheaton to amend the SPA whereby Silver Wheaton will continue to receive 25% of the LOM payable silver from the KHSD with the production payment (originally US$3.90 per ounce) to be based on monthly silver head grade and monthly silver price. The actual monthly production payment will fall within a defined grade and pricing range governed by upper and lower numeric criteria (ceiling grade/price and floor grade/price) pursuant to the following formula:

$$\frac{\text{(Ceiling Grade – Deemed Shipment Head Grade)}}{\text{(Ceiling Grade – Floor Grade)}} \times \frac{\text{(Ceiling Price – Deemed Shipment Silver Price)}}{\text{(Ceiling Price – Floor Price)}} \times \text{Market Price}$$

Floor Grade	=	600 g/t Ag
Floor Price	=	US$13/oz Ag
Ceiling Grade	=	1,400 g/t Ag
Ceiling Price	=	US$25/oz Ag
Deemed Shipment Head Grade	=	Calculated monthly mill silver head grade
Deemed Shipment Silver Price	=	Average monthly silver price
Market Price	=	Spot silver price prior to day of sale

Mining at Bellekeno was suspended in September 2013, before all of the conditions of the SPA were met by Alexco.

Alexco used the funds from the SPA for development on the property, the 2010 construction of a 408 tonne per day (tpd) capacity flotation processing plant and the commencement of mining at the Bellekeno deposit. In 2014, a PEA was published for the Bellekeno, Flame & Moth, and Lucky Queen deposits. Since 2013, Alexco has maintained the Project on a care and maintenance status and focussed on additional exploration leading to increases in the Mineral Resources for the Bermingham and Flame & Moth deposits. The revised Bermingham Mineral Resource has been included in this PEA study for a 400 tpd operation including the Flame & Moth, Bellekeno, Bermingham, and Lucky Queen deposits.

In addition to the development of the PEA, the Mineral Resource estimates for the Onek, Lucky Queen, Flame & Moth, and Bermingham deposits have been updated to a single reference date and with the same metal price and foreign exchange rates.

This report is considered by RPA to meet the requirements of a Preliminary Economic Assessment as defined in Canadian NI 43-101 regulations. The economic analysis contained in this report is based, in part, on Inferred Mineral Resources, and is preliminary in nature. Inferred Mineral Resources are considered to be too geologically speculative to have mining and economic considerations applied to them and to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this PEA is based will be realized.

A summary of the Mineral Resource at the KHSD is shown in Table 1-1.

TABLE 1-1 SUMMARY OF MINERAL RESOURCE ESTIMATES AS AT JANUARY 3, 2017
Alexco Resource Corp. – Keno Hill Silver District Project

Deposit	Classification	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au g/t
Bellekeno	Indicated	262,000	585	3.50	5.30	n/a
	Inferred	243,000	428	4.10	5.10	n/a
Lucky Queen	Indicated	132,300	1,167	2.43	1.63	0.16
	Inferred	257,900	473	1.04	0.80	0.13
Flame & Moth	Indicated	1,679,000	498	1.85	5.33	0.42
	Inferred	365,200	356	0.47	4.25	0.26
Onek	Indicated	700,200	191	1.24	11.85	0.6
	Inferred	285,100	118	1.15	8.26	0.42
Bermingham	Indicated	858,000	628	2.40	1.65	0.13
	Inferred	220,000	770	2.13	2.21	0.15
Total	**Indicated**	**3,631,500**	**500**	**2.00**	**5.60**	**0.30**
	Inferred	**1,371,200**	**408**	**1.63**	**4.26**	**0.21**

Notes:
1. Bellekeno estimate is at September 30, 2013 and reflects the September 30, 2012 estimate less estimated depletion from mining to September 30, 2013.
2. CIM definitions were followed for Mineral Resources.
3. Mineral Resources are estimated at a net smelter return (NSR) cut-off value of $185/tonne.
4. Bellekeno Mineral Resources are estimated using metal prices of US$22.50/oz Ag, US$0.85/lb Pb, US$0.95/lb Zn, and US$1,300/oz Au and a US$/C$ exchange rate of 0.96.
5. Lucky Queen, Onek, Flame & Moth and Bermingham Mineral Resources are estimated using metal prices of US$20.00/oz Ag, US$0.95/lb Pb, US$1.00/lb Zn and US$1,300/oz Au and a US$/C$ exchange rate of 0.80.
6. Bulk density estimated by regression analysis for Bellekeno, Lucky Queen, and Onek and from core and pulp sampling for Flame & Moth and Bermingham.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.

CONCLUSIONS

RPA offers the following conclusions:

- The Mineral Resources at the KHSD have been estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standard Definitions for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM definitions).

- The resource evaluations reported herein are a reasonable representation of the global polymetallic Mineral Resources for the listed deposits at the current level of sampling.

- This study has been completed to a PEA level of study. The mine designs, mine dewatering designs, mining plans, and processing assumptions are based upon preliminary evaluations.

- The areas requiring further study and design are:
    - Geotechnical conditions.
    - Hydrological conditions.
    - Mine access design.
    - Mine ventilation design.
    - Stope designs and pillar recovery alternatives.
    - Metallurgical testing of samples and a blend of samples.
    - Waste rock characterization to determine the quantities of potential acid generation (PAG) waste.
    - Design of waste storage facilities for the PAG waste.
    - Expansion of the DSTF.

- The Project has the potential to generate an after tax 5% NPV of $79 million and a 75% IRR from the mining and processing of 1.02 million tonnes of mineralization grading 843 g/t Ag, 4.6% Zn, 3.3% Pb and 0.4 g/t Au over a nine year mine life using an exchange rate C$1.00 = US$0.76 in years 1 to 3 and C$1.00 = US$0.79 thereafter; metal prices of US$18.60/oz for silver in year 2 and US$19.35/oz thereafter; US$ 1.20/lb zinc for years 2 to 4 and US$1.00 thereafter, US$1.00/lb lead for years 2 to 4 and US$0.94/lb thereafter and US$1,300.00/oz for gold. There is 25% of silver sold to Silver Wheaton under a streaming agreement at prices ranging from US$3.54/oz to US$8.18/oz silver.

- The estimated economic returns based upon the PEA support further study to restart the plant and mine from the Bellekeno, Flame & Moth, Bermingham, and Lucky Queen deposits.

- The planned exploration drive to the Bermingham deposit will provide additional resource information as well as geotechnical and hydrologic information related to the deposit.

- Initial studies should focus on the expected conditions along the planned Flame & Moth and Bermingham access development and ventilation raises.

- The LOM schedule is based on the specific strategy selected, however, there are other possible scenarios for defining an overall production schedule that may warrant further study, particularly if changing metal prices or exploration results alter the mine planning context.

- The Lucky Queen mining rate in 2024 is considered to be a high production rate for the planned extent of the Lucky Queen mining.

- The current PEA study assumes the mill facility production will increase to a nominal rate of 400 tpd once an additional ball mill is commissioned.

- Metallurgical recoveries are not based on testing of blending samples from the different deposits.

- Only one composite sample has been metallurgically tested with variable results.

- Additional metallurgical testing on the Flame & Moth mineralization is warranted.

- A model of the overall recovery was generated using open circuit flotation tests.

    - The life of mine silver recovery is estimated at 93%.
    - The life of mine zinc recovery is estimated at 88%.
    - The life of mine lead recovery is estimated at 94%.

- Blending of various zones prior to processing is not expected to impact the metallurgical performance of the blended mill feed. Metallurgical test work has not been completed to confirm the performance of a blended mill feed.

- Zinc losses in the lead circuit are expected to be the only significant metallurgical shortfall.

- Completion of the installation of the additional grinding mill is planned to achieve the 400 tpd operating rate.

- The construction of the DSTF expansion will be required for the Project.

- The processing of the Flame & Moth mineralization requires an amendment to the Water Licence and the mining and processing of the Bermingham mineralization will require amendments to the Quartz Mining Licence and to the Water Licence.

RECOMMENDATIONS

RPA provides the following recommendations:

- Carry out investigation of the ground conditions expected along the Flame & Moth ventilation raise and Bermingham access ramps and ventilation raises before development commences.

- Undertake the planned exploration development and drilling at the Bermingham deposit.

- Complete geotechnical studies of the Flame & Moth, Bermingham, and Lucky Queen deposits as development advances to refine the mine plans, stope dimension recommendations, and ground support requirements.

- Study the hydrology of the Flame & Moth and Bermingham deposits to confirm the expected ground water inflows and ground water chemistry.

- Update the ground support criteria to reflect localized conditions at the Flame & Moth, Bermingham, and Lucky Queen deposits as those deposits are advanced.

- Advance the mine planning, optimize the designs and review stope plans to ensure a positive economic benefit from each stope.

- Review the planned Lucky Queen mining rate well in advance of the commencement of mining operations at Lucky Queen.

- Review the LOM production schedule with a view to reducing the variations in feed tonnage in the later years of the plan.

- Undertake metallurgical test work to confirm:
    - The metallurgical performance of the Flame & Moth mineralization.
    - The expected good performance of a blended mill feed.
    - Options to reduce expected zinc losses in the lead circuit.
    - Settling and geochemical characteristics of the mineralization.

- Use the results of the recommended work to advance the Project level of study.

ECONOMIC ANALYSIS

The economic analysis contained in this report is based, in part, on Inferred Resources, and is preliminary in nature. Inferred Resources are considered too geologically speculative to have mining and economic considerations applied to them and to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this PEA is based will be realized. Inferred Mineral Resources form the basis of 2% of the "potentially mineable tonnes" included in the plant feed schedule of this PEA.

A pre-tax Cash Flow Projection (base case) has been generated from the LOM production schedule and capital and operating cost estimates, and is summarized in Table 1-2. A summary of the key criteria is provided below.

ECONOMIC CRITERIA

REVENUE

- 400 tonnes per day mining from underground (146,000 tonnes per year).
- Mill recovery based on experience and as indicated by testwork, averaging 97.1% silver, 88.4% zinc, 94.6% lead, and 50% gold recovered in two concentrates.
- Lead – silver concentrate and zinc concentrate shipped to smelter for treatment.
- Exchange rate C$1.00 = US$0.76 in years 1 to 3 and C$1.00 = US$0.79 thereafter.

- Long term metal prices of US$18.60/oz for silver in year 2 and US$19.35/oz thereafter, US$ 1.20/lb zinc for years 2 to 4 and US$1.00 thereafter, US$1.00/lb lead for years 2 to 4 and US$0.94/lb thereafter and US$1300.00/oz for gold.
- 25% of silver is sold to Silver Wheaton under a streaming agreement at prices ranging from US$3.54/oz to US$8.18/oz silver.
- NSR includes shipping, treatment, and refining costs.
- There is a 1.5% NSR royalty (to a maximum of $4 million) to the Government of Canada.
- Revenue is recognized at the time of production.

COSTS

- Pre-production period: 20 months (March 2017 to December 2018).
- Mine life: nine years.
- LOM production plan as summarized in Table 1-2.
- Pre-production capital of $27 million (accounting for revenue generated in 2018) and sustaining capital of $62.9 million.
- Average operating cost over the mine life is $324.93 per tonne milled.

RPA has relied upon Alexco and its tax advisors for the calculation of the taxes in the economic model.

TABLE 1-2 CASH FLOW SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

Date:	UNITS	TOTAL	2017 Year 1	2018 Year 2	2019 Year 3	2020 Year 4	2021 Year 5	2022 Year 6	2023 Year 7	2024 Year 8	2025 Year 9	2026 Year 10	2027 Year 11	2028 Year 12
MINING														
Underground														
Operating Days	days	3,150	350	350	350	350	350	350	350	350	350			
Tonnes milled per day	tonnes / day	324	-	185	417	417	417	417	319	407	338			
Production	'000 tonnes	1,021	-	65	146	146	146	146	112	142	118			
Waste	'000 tonnes	811	25	187	161	108	123	53	95	33	26			
Total Moved	'000 tonnes	1,832	25	252	307	254	269	199	207	175	145			
PROCESSING														
Mill Feed	'000 tonnes	1,021	-	65	146	146	146	146	112	142	118	-		
Au Grade	g/t	0.4	-	0.1	0.4	0.4	0.5	0.3	0.4	0.4	0.5	-		
Ag Grade	g/t	843.00	-	931	1,089	919	788	681	743	812	798			
Pb Grade	%	3.3%	-	7.7%	3.3%	3.1%	3.3%	2.8%	3.6%	2.2%	2.9%			
Zn Grade	%	4.6%	-	5.7%	4.5%	4.7%	4.8%	5.2%	4.7%	3.3%	4.7%			
Recovery														
Pb Concentrate	%													
Au		50%	-	50%	50%	50%	50%	50%	50%	50%	50%			
Ag		93.6%	-	94.3%	95.5%	94.2%	93.0%	91.9%	92.5%	93.2%	93.1%			
Pb		94.5%	-	95.9%	94.6%	94.5%	94.6%	94.4%	94.7%	94.0%	94.4%			
Zn Concentrate	%													
Ag		3.6%	-	2.70%	1.46%	2.80%	4.00%	5.14%	4.46%	3.77%	3.91%			
Zn		88.4%	-	87.6%	88.4%	88.5%	88.5%	88.6%	88.4%	88.5%	88.5%			
Recovered Metal														
Pb Concentrate														
Au	oz	6,350	-	131	847	999	1,064	766	767	918	857	-		
Ag	oz (000)	25,906	-	1,825	4,884	4,063	3,438	2,938	2,468	3,464	2,825	-		
Pb	tonnes	32,008	-	4,792	4,544	4,226	4,608	3,908	3,778	2,886	3,266	-		
Zn	tonnes	4,058	-	349	568	585	601	640	448	397	470	-		
Zn Concentrate														
Au	oz	2,540	-	52	339	400	426	306	307	367	343	-		
Ag	oz	937,571	-	52,175	74,800	120,590	148,042	164,394	119,102	139,944	118,524	-		
Pb	tonnes	779	-	56	115	112	116	108	91	93	89	-		
Zn	tonnes	41,726	-	3,247	5,859	6,076	6,221	6,712	4,598	4,121	4,892	-		
REVENUE														
Metal Prices														
Au	US$/oz Au	$1,300		$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300			
Ag	US$/oz Ag	$19.30		$18.60	$19.35	$19.35	$19.35	$19.35	$19.35	$19.35	$19.35			
Ag (SW)	US$/oz Ag	$6.37		$5.82	$3.54	$5.48	$6.97	$8.18	$7.49	$6.70	$6.86			
Pb	US$/lb Pb	$0.96		$1.00	$1.00	$1.00	$0.94	$0.94	$0.94	$0.94	$0.94			
Zn	US$/lb Zn	$1.07		$1.20	$1.20	$1.20	$1.00	$1.00	$1.00	$1.00	$1.00			
Exchange Rate	US$:C$	$0.78		$0.76	$0.76	$0.79	$0.79	$0.79	$0.79	$0.79	$0.79			
Concentrate Payable														
Pb Concentrate Payable														
Payable Au	oz	4,872		-	622	790	837	572	580	775	696			
Payable Ag	oz	24,611,086		1,734,015	4,639,857	3,859,875	3,266,001	2,791,275	2,345,027	3,291,058	2,683,978			
Payable Pb	tonnes	30,408		4,552	4,317	4,014	4,377	3,713	3,589	2,742	3,102			
Zn Concentrate Payable				-	-	-	-	-	-	-	-			
Payable Ag	oz	446,688		21,250	25,770	54,687	71,965	80,681	59,483	74,891	57,961			
Payable Zn	tonnes	35,050		2,728	4,922	5,104	5,226	5,638	3,863	3,462	4,110			

Date:	UNITS	TOTAL	2017 Year 1	2018 Year 2	2019 Year 3	2020 Year 4	2021 Year 5	2022 Year 6	2023 Year 7	2024 Year 8	2025 Year 9	2026 Year 10	2027 Year 11	2028 Year 12
Gross Revenue														
Au Gross Revenue	US$ '000	$6,334		$0	$809	$1,027	$1,088	$744	$755	$1,008	$904			
Ag Gross Revenue	US$ '000	$401,242		$27,040	$71,839	$62,172	$54,262	$47,555	$39,395	$54,484	$44,495			
Pb Gross Revenue	US$ '000	$64,719	$ -	$10,036	$9,518	$8,850	$9,071	$7,694	$7,438	$5,682	$6,429			
Zn Gross Revenue	US$ '000	$82,895	$ -	$7,216	$13,020	$13,502	$11,521	$12,429	$8,516	$7,632	$9,060			
Total Gross Revenue	US$ '000	**$555,191**	$ -	**$44,291**	**$95,187**	**$85,552**	**$75,941**	**$68,422**	**$56,104**	**$68,806**	**$60,888**			
Total Charges														
Total Charges	US$ '000	$102,924	$ -	$9,610	$16,523	$15,247	$14,481	$13,727	$10,878	$11,164	$11,295			
Net Smelter Return	US$ '000	**$452,266**	$ -	**$34,682**	**$78,664**	**$70,305**	**$61,460**	**$54,695**	**$45,226**	**$57,642**	**$49,593**			
Royalty NSR	US$ '000	$3,113	$ -	$0	$1,180	$1,055	$879	$0	$0	$0	$0			
Net Revenue	US$ '000	**$449,153**	$ -	**$34,682**	**$77,484**	**$69,250**	**$60,581**	**$54,695**	**$45,226**	**$57,642**	**$49,593**			
Unit NSR	**US$/t milled**	**$440**	$ -	**$536**	**$531**	**$474**	**$415**	**$375**	**$405**	**$405**	**$419**			
OPERATING COST														
Mining (Underground)	C$/t milled	$193.25		$273.76	$185.29	$189.01	$186.35	$166.88	$239.71	$168.61	$191.14			
Processing	C$/t milled	$61.96		$71.17	$58.17	$58.15	$58.12	$58.12	$72.46	$59.36	$69.00			
G&A	C$/t milled	$69.79		$134.88	$58.89	$59.06	$59.23	$59.41	$81.18	$60.80	$70.57			
Total Operating Cost	**C$/t milled**	**$325.00**		**$479.81**	**$302.34**	**$306.22**	**$303.70**	**$284.40**	**$393.35**	**$288.77**	**$330.71**			
Mining (Underground)	C$ '000	$197,320	$0	$17,708	$27,050	$27,594	$27,206	$24,363	$26,779	$24,001	$22,620			
Processing	C$ '000	$63,263	$0	$4,603	$8,492	$8,489	$8,484	$8,484	$8,095	$8,449	$8,166			
G&A	C$ '000	$71,258	$1,918	$8,724	$8,597	$8,623	$8,648	$8,673	$9,069	$8,655	$8,351			
Total Operating Cost	**C$ '000**	**$331,841**	**$1,918**	**$31,035**	**$44,140**	**$44,705**	**$44,338**	**$41,520**	**$43,943**	**$41,104**	**$39,137**			
Unit Operating Cost	C$/t milled	$325	$0	$480	$302	$306	$304	$284	$393	$289	$331			
Operating Cashflow	C$ '000	$242,311	($1,918)	$14,598	$57,813	$42,953	$32,347	$27,714	$13,305	$31,860	$23,639			
CAPITAL COST														
Direct Cost														
Mining	C$ '000	$75,754	$8,663	$19,323	$10,392	$6,369	$7,231	$4,940	$10,457	$5,429	$2,949			
Processing	C$ '000	$951	$205	$746	$0	$0	$0	$0	$0	$0	$0			
Infrastructure	C$ '000	$7,947	$364	$3,691	$1,386	$210	$298	$0	$1,998	$0	$0			
Tailings	C$ '000	$821	$0	$47	$119	$118	$118	$116	$89	$120	$95			
Total Direct Cost	**C$ '000**	**$85,473**	**$9,232**	**$23,808**	**$11,897**	**$6,697**	**$7,647**	**$5,056**	**$12,543**	**$5,548**	**$3,044**			
Contingency	C$ '000	$17,095	$1,846	$4,762	$2,379	$1,339	$1,529	$1,011	$2,509	$1,110	$609			
Total Capital Cost	**C$ '000**	**$102,568**	**$11,078**	**$28,569**	**$14,277**	**$8,037**	**$9,176**	**$6,068**	**$15,052**	**$6,658**	**$3,653**			
CASH FLOW														
Net Pre-Tax Cashflow	C$ '000	$139,744	($12,996)	($13,971)	$43,536	$34,916	$23,170	$21,647	($1,747)	$25,202	$19,986	$0	$0	$0
Cum. Pre-Tax Cashflow	C$ '000		($12,996)	($26,967)	$16,569	$51,485	$74,656	$96,302	$94,555	$119,758	$139,744	$139,744	$139,744	$139,744
Taxes	C$ '000	$32,074	$0	$764	$3,522	$6,176	$8,027	$5,746	$663	$7,301	$3,385	($1,896)	($949)	($664)
After-Tax Cashflow	C$ '000	$107,670	($12,996)	($14,735)	$40,014	$28,740	$15,143	$15,901	($2,410)	$17,901	$16,601	$1,896	$949	$664
Cum After-Tax Cashflow	C$ '000		($12,996)	($27,731)	$12,283	$41,024	$56,167	$72,068	$69,658	$87,560	$104,161	$106,057	$107,006	$107,670
PROJECT ECONOMICS														
Pre-Tax IRR	%	89%												
Pre-tax NPV 5%	C$ '000	$104,292												
Pre-tax NPV 10%	C$ '000	$79,139												
After Tax IRR	%	75%												
After tax NPV 5%	C$ '000	$79,393												
After tax NPV 10%	C$ '000	$59,510												

CASH FLOW ANALYSIS

Considering the Project on a stand-alone basis, the undiscounted after tax cash flow totals $107.7 million over the mine life, and simple payback occurs approximately one year from start of production.

The after-tax Net Present Value (NPV) at a 5% discount rate is $79.4 million, and the after-tax Internal Rate of Return (IRR) is 75%.

SENSITIVITY ANALYSIS

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities:

- Silver price
- Exchange rate
- Silver head grade
- Operating costs
- Capital costs

IRR sensitivity over the base case has been calculated for a range of variations. The after-tax sensitivities are shown in Table 1-3, Figures 1-1 and 1-2.

TABLE 1-3 AFTER-TAX SENSITIVITY

Alexco Resource Corp. – Keno Hill Silver District Project

Factor	Silver Grade (g/t)	5% NPV ($M)	IRR (%)
0.8	674	37	40%
0.9	759	59	59%
1.0	**843**	**79**	**75%**
1.1	927	99	90%
1.2	1,012	117	103%

Factor	Recovery (%)	5% NPV ($M)	IRR (%)
0.80	74.9%	68	66%
0.90	84.3%	74	71%
1.00	**93.6%**	**79**	**75%**
1.01	94.6	80	76%
1.02	95.5	81	76%

Factor	Silver Price (US$/oz)	5% NPV ($M)	IRR (%)
0.8	15.41	41	41%
0.9	17.33	61	59%
1.0	**19.26**	**79**	**75%**
1.1	21.18	96	89%
1.2	23.11	110	102%

Factor	Exchange Rate	5% NPV ($M)	IRR (%)
0.8	0.63	150	133%
0.9	0.71	111	101%
1.0	**0.78**	**79**	**75%**
1.1	0.86	53	53%
1.2	0.94	29	32%

Factor	Operating Cost ($/t)	5% NPV ($M)	IRR (%)
0.85	276	118	104%
0.93	301	97	88%
1.00	**325**	**79**	**75%**
1.18	382	34	40%
1.35	439	(10)	(12%)

Factor	Capital Cost ($M)	5% NPV ($M)	IRR (%)
0.85	87	92	97%
0.93	95	85	85%
1.00	**103**	**79**	**75%**
1.18	121	64	55%
1.35	138	50	40%

FIGURE 1-1 AFTER-TAX 5% NPV SENSITIVITY

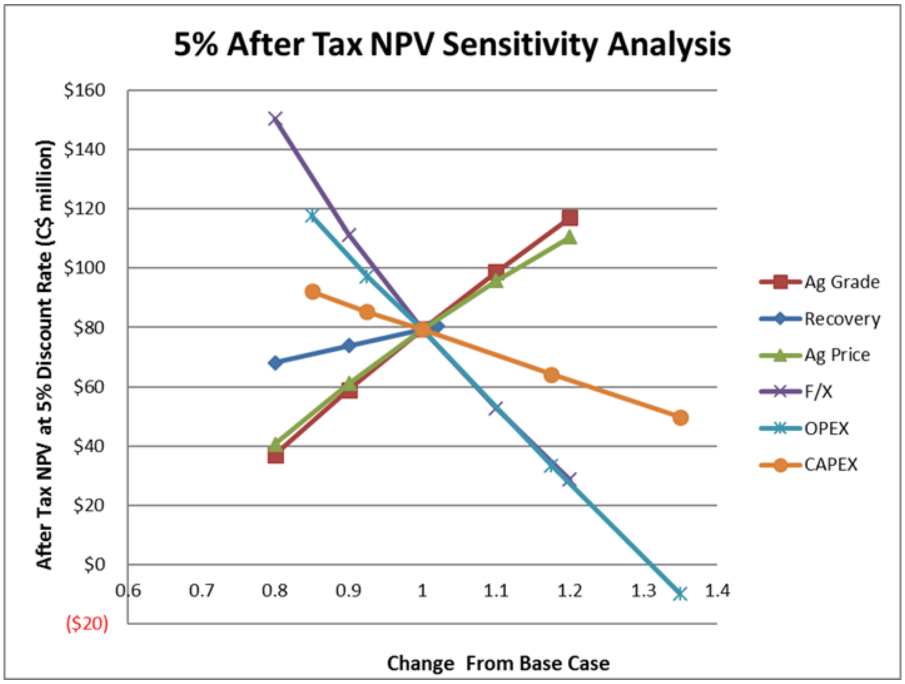
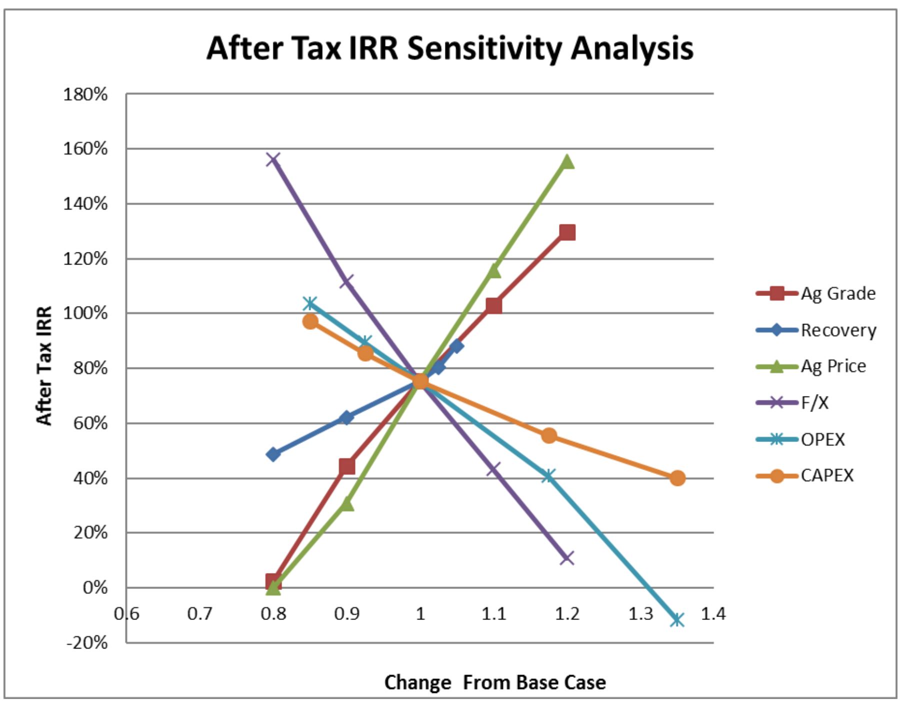


FIGURE 1-2 AFTER-TAX IRR SENSITIVITY



TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Project is located approximately 350 km north of Whitehorse, Yukon, Canada near Elsa and Keno City. Alexco has exploration, maintenance, and camp facilities near Elsa, and administration, mill and mine facilities at the mill complex located near Keno City. The area is covered by NTS map sheets 105M/13 and 105M/14.

The KHSD Project consists of a 237.44 km^2 property package consisting of claims and leases. There are numerous silver, lead, and zinc deposits and mines on the property. There are Mineral Resource estimates on the Bellekeno mine and the Onek, Flame & Moth, Bermingham and Lucky Queen deposits. This PEA is based upon underground mining and processing of mineralization from the Bellekeno, Flame & Moth, Bermingham, and Lucky Queen deposits.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES AND PHYSIOGRAPHY

The closest sizable town is Mayo, located approximately 40 km to the southwest. Mayo is accessible from Whitehorse via a 460 km all-weather road and is also serviced by the Mayo airport. An all-weather gravel road known as the Silver Trail Highway leads from Mayo to the Project, the historic company town of Elsa, and the village of Keno City.

The central Yukon is characterized by a subarctic continental climate with cold winters and warm summers. Exploration and mining work can be carried out year-round. Annual precipitation averages 28 cm. Half of this amount falls as snow, which starts to accumulate in October and remains into May or June.

The KHSD is well connected by a network of public and private gravel roads. A large number of roads constructed for past mining operations are still serviceable.

Local resources in terms of manpower, rental equipment, materials, and supplies are very limited. Electrical power is available from Yukon utility.

The landscape surrounding the KHSD is characterized by rolling hills and mountains with a relief of up to 1,600 m. The highest elevation is Keno Hill at 1,975 m. Slopes are gentle except the north slopes of Keno Hill and Sourdough Hill.

HISTORY

The Keno Hill mining camp area has a rich history of exploration and mining dating back to the beginning of the 1900s. Key dates include:

- Early gold prospecting near Mayo, particularly after the Klondike gold rush of 1898.
- The first silver was found in 1903, with assay from 1905 yielding more than 11 kilograms per tonne (kg/t) silver.
- Small-scale mining commenced in 1913 with the first shipment of 50 t of vein material to a smelter in San Francisco.
- The end of the First World War and high silver prices led to successful exploration activity in the area with the Yukon Gold Company and later Keno Hill Limited as the first truly commercial operators. Success at the Keno mine led to a staking rush, resulting in the discovery of a number of rich deposits.
- In the early 1920s, the Treadwell Yukon Company Limited (TYC) started mining. After the Second World War a new company, Keno Hill Mining Company Ltd. (later UKHM), purchased all TYC properties and started production. Very good results led to another staking rush and the formation of a large number of junior exploration companies, many of which were purchased by UKHM.
- The 1950s proved to be the most successful period, starting in the early 1960s, new discoveries, and additions to mineral inventory were less than production.
- The Husky underground mine went into production in 1972, with open pit operations introduced in 1977 to recover crown pillars. From 1982 to 1985 (Sadie-Ladue and Shamrock mines) and 1989 to 1990 (Shamrock, Silver King, Hector-Calumet, Lucky Queen, and Keno mines) were mined on a small scale basis.
- UKHM stopped production from the Keno Hill District permanently in early 1989.
- Alexco acquired the KHSD in 2006, and produced from Bellekeno mine from 2011 to 2013. Exploration has resulted in development and identification of the Lucky Queen, Flame & Moth, Onek, and Bermingham deposits.

GEOLOGICAL SETTING AND MINERALIZATION

The Keno Hill mining camp is located in the northwestern part of the Selwyn Basin in an area characterized by the Robert Service and Tombstone Thrust Sheets that are overlapping and trend northwest. The area is underlain by Upper Proterozoic to Mississippian rocks that were deposited in a shelf environment during the formation of the northern Cordilleran continental margin. The Keno Hill Silver District geology is dominated by the Mississippian Keno Hill Quartzite comprising the Basal Quartzite Member and conformably overlying Sourdough Hill

Member. The unit is overthrust in the south by the Upper Proterozoic Hyland Group Yusezyu Formation and is conformably underlain in the north by the Devonian Earn Group.

Mineralization is of the polymetallic silver-lead-zinc vein type that typically exhibits a succession of hydrothermally precipitated minerals from the vein wall towards the vein centre. However, in the Keno Hill Silver District, multiple pulses of hydrothermal fluids or fluid boiling, probably related to repeated reactivation and breccia formation along the host fault structures, have formed a series of vein stages with differing mineral assemblages and textures. Supergene alteration may have further changed the nature of the mineralogy in the veins. Much of the supergene zone may have been removed due to glacial erosion.

In general, common gangue minerals include (manganiferous) siderite and, to a lesser extent, quartz and calcite. Silver predominantly occurs in argentiferous galena and argentiferous tetrahedrite (freibergite). In some assemblages, silver is also found as native silver, in polybasite, stephanite, and pyrargyrite. Lead occurs in galena and zinc in sphalerite, which at the KHSD can be either an iron-rich or iron-poor variety. Other sulphides include pyrite, pyrrhotite, arsenopyrite, and chalcopyrite.

DEPOSIT TYPES

The Keno Hill mining camp has long been recognized as a polymetallic silver-lead-zinc vein district with characteristics possibly similar to other well-known mining districts in the world. Examples of this type of mineralization include the Kokanee Range (Slocan), British Columbia; Coeur d'Alene, Idaho; Freiberg and the Harz Mountains, Germany; and Príbram, Czech Republic.

In the Keno Hill Silver District, the largest accumulation of minerals of economic interest occur in areas of increased hydrothermal fluid flow in structurally prepared competent rocks such as the Basal Quartzite Member and Triassic Greenstone. Incompetent rocks like phyllites tend to produce fewer and smaller (if any) open spaces, limiting fluid flow and resulting mineral precipitation.

EXPLORATION

The exploration conducted by Alexco since 2005 is the first comprehensive exploration effort in the Keno Hill Silver District since 1997. The work has included a program of geologic data compilation, aerial geophysical surveying, geological mapping, and surface core drilling.

Alexco converted the historic maps and documents from nearly 70 years of mining in the district to digital form. The digital data has been used to construct district scale maps and three-dimensional (3D) mine models.

Exploration drilling by Alexco has primarily been conducted to test targets immediately adjacent to historic resource areas and, to a lesser extent, to evaluate targets based on interpretation of exploration data. The objective has been to locate structurally controlled vein mineralization.

DRILLING

Alexco has completed several core drilling campaigns using Canadian diamond drilling contractors. The campaigns resulted in a total of 661 surface drill holes for a total of 158,619 m. In addition, a total of 407 underground holes for 25,460 m was also completed mainly at Bellekeno. Apart from 34 RC holes and some minor RC pre-collaring at Flame & Moth, drill holes have essentially all been diamond cored in HQ size.

Surface drill hole collars were surveyed with either an Ashtech GPS device utilizing post-processing software or a Sokkia GRX1 RTK GPS. All underground collars and drill stations were surveyed by underground surveyors. Downhole surveys are recorded using Reflex survey tools at regular intervals of between 15 m and 30 m depending on the hole location and geologic conditions.

Standard logging and sampling conventions are used to capture information from the drill core. Between 2006 and 2010 core was logged in detail using paper forms and then entered into an electronic database. Since 2010 all core logging data has been directly digitally entered to the geology database with data including comments captured in separate tables including:

- Lithology: rock type, faults and mineralized vein-faults, and textural modifiers
- Structure: type of structure and measurements relative to core axis
- Mineralization type, intensity of oxidation, phases and abundance of veining

- Alteration
- Stratigraphy: units consistent with the surface mapping
- Geotechnical: percentage recovery and rock quality determination and fracture intensity.

Alexco systematically measured core bulk density (CBD) of mineralized material as well as basic rock types. Pulp bulk density (PBD) measurements were obtained by pycnometry on select assay intervals of mineralized zones by ALS Laboratories and AGAT Laboratories.

2006–2013 ALEXCO DRILLING AT THE BELLEKENO MINE

A total of 43,784 m of drilling from both surface and underground (excluding service holes) was completed at the Bellekeno deposit between 2006 and 2013.

The 2006 drilling was to confirm and test the historical mineral inventory and block model, as well as to extend the known mineralization. Between 2006 and 2009, 200 drill holes focussed on the 48 and 49 vein structures from underground and surface platforms. Later core drilling on the Bellekeno property has focussed on resource definition, and to a lesser degree exploration programs.

2006–2012 ALEXCO DRILLING AT LUCKY QUEEN

Alexco conducted surface core drilling programs at Lucky Queen from 2006 to 2010 with 47 core drill holes totalling 11,104 m drilled. The drilling was designed to test along strike and down-plunge of the historical workings.

2010–2014 ALEXCO DRILLING AT ONEK

Alexco conducted surface diamond drilling programs at Onek in 2007, 2008, 2010, and 2011 with 78 core holes totalling 11,981 m drilled. The drilling was designed to confirm and test historic reserve/resource blocks and extend known mineralization along strike and down plunge.

A 220 m decline was driven towards the Onek deposit in 2012 and 2013. In 2013, twelve underground core holes (975 m) were drilled.

2010–2016 ALEXCO DRILLING AT FLAME & MOTH

Alexco conducted surface core drilling programs at Flame & Moth in from 2010 to 2014, for a total of 151 holes for 35,244 m for resource estimation. The exploration drilling was initially designed to test geologically derived targets in the vicinity of the historical Flame & Moth workings. Following new discoveries, additional drilling was successful in outlining two zones on the Flame vein.

In 2016, following the initial development of the Flame portal, 17 underground drill holes were drilled along the proposed decline trace, for a total of 572 m.

2009–2016 ALEXCO DRILLING AT BERMINGHAM

Alexco conducted surface diamond drilling programs at Bermingham between 2009 and 2011 with 36 core holes totalling 10,456.2 m drilled to test along strike and down plunge of historic resource, open pit workings, and around the historic underground mine workings. Drilling was successful in outlining an area of silver-lead-zinc mineralization developed in the hangingwall of the Mastiff Fault.

Drilling between 2012 and 2016 of 28,220.4 m in 83 holes led to the discovery and definition of high grade vein deposits. To date the interpretation of the consolidated drilling results has identified four mineralized veins that splay and change orientation along strike within the north-northeast striking and moderately to steeply southeast dipping Bermingham vein-fault structural corridor. This structural corridor is divided into the Etta Zone in the hangingwall of the post-mineral Mastiff Fault and the Artic Zone in its footwall. The main through-going Bermingham and Bermingham Footwall veins occur in both the Etta and Arctic zones, while the Bear vein and associated newly identified conjugate West Dipper vein set occur only within the Arctic Zone in a position controlled by a flexure in the Bermingham vein-fault.

SAMPLE PREPARATION, ANALYSES AND SECURITY

Core logging and sampling is completed by Alexco staff, where a logging geologist marks the sample intervals and cutting orientation normal to veins on the core. After logging, the core is digitally photographed and sawn in half lengthwise using a diamond saw where possible. One half is returned to the core box for storage at the site and the other bagged for sample shipment.

Each 20-sample batch sent for assaying includes three control samples: a commercial standard reference material (SRM), a blank, and a duplicate. The blank is commercially purchased “landscape rock”. An empty sample bag is inserted at the location of the duplicate, which is prepared during sample preparation at the laboratory prep facility. The duplicate consists of a coarse reject split of the preceding sample.

DATA VERIFICATION

Dr. Gilles Arseneau and Chris Elliott of SRK carried out a visit to examine the Lucky Queen, Bellekeno, and Onek deposits. In total, SRK spent two and half days at the sites between July 26 and 28, 2010 examining drill core, core logging and sampling procedures; visiting drill sites; and examining the mineralization exposed in surface cuts. Alexco provided SRK with information related to these activities during the site visit. Dr. Arseneau carried out a second site visit on May 7 and 8, 2012 and a third site visit on September 12, 13, and 14, 2016 to examine the surface geology and drill core for the Bermingham deposit.

MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical testwork has been conducted independently on each of the three deposits included in the production plan. Testwork performed from 1996 through 2009 was the basis for the design and construction of the mill facility in 2010. The Bellekeno mine and mill complex achieved commercial production in January 2011, processing an average of 253 tpd in 2012. Since 2011, samples from Lucky Queen, Flame & Moth, and Bermingham deposits were tested to assess flotation performance.

The PEA LOM schedule indicates that significant blending of the different deposits is planned. To date, no testwork has been conducted on a blended sample from any of the three deposits. While there is little information related to the blending and processing of different mineralized zones, there is no expectation that blending of ores will harm the metallurgical response of individual materials. The deposits vary widely in terms of base and precious metals and all samples have responded well to flotation processes for the production of saleable concentrates.

MINERAL RESOURCE ESTIMATE

Definitions for resource categories used in this report are consistent with the CIM definitions incorporated by reference into NI 43-101. A summary of the Mineral Resource at the Project is shown in Table 1-1.

Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserve.

The resource evaluations reported herein are a reasonable representation of the global polymetallic mineral resources in the Bellekeno, Lucky Queen, Flame & Moth, Onek, and Bermingham deposits given the current level of sampling.

RESOURCE ESTIMATION PROCEDURES

The resource evaluation methodology for the five deposits employed the following procedures:

- Database compilation and verification.
- Construction of wireframe models for the boundaries of the polymetallic mineralization.
- Definition of resource domains.
- Estimation of bulk density.
- Data conditioning (compositing and capping) for geostatistical analysis and variography.
- Block modelling and grade interpolation.
- Resource classification and validation.
- Assessment of "reasonable prospects for eventual economic extraction" and selection of appropriate cut-off grades.
- Preparation of the Mineral Resource Statement.

SOLID BODY MODELLING

3D wireframe solids were constructed by Alexco to accurately represent the geometry of the Bellekeno mine, Lucky Queen, Flame & Moth, Onek, and Bermingham vein structures. These wireframes were reviewed and validated by the QP before Mineral Resource estimation.

MINERAL RESOURCE CLASSIFICATION

Blocks estimated during the first estimation run considering full variogram ranges can be classified in the Indicated category. Blocks estimated during the second pass considering search neighbourhoods set at twice the variogram ranges should be appropriately classified in the Inferred category.

MINERAL RESERVE ESTIMATE

There are no Mineral Reserve estimates at the KHSD.

MINING METHODS

The KHSD is historically known for locally challenging ground conditions encountered that limit the applicable mining methods to fully supported methods with limited spans, such as cut and fill or very small scale longhole. For most of its mining life, the most successful method was square set stoping with timber.

The deposits considered for production in this PEA are the Flame & Moth, Bermingham, Bellekeno, and Lucky Queen deposits. All of the mining in this PEA is planned to be underground mining using rubber tired mobile equipment and adit entries. The dominant recommended mining method is mechanized overhand cut and fill (MCF) or drift and fill in wider areas. Longhole stoping with backfill has been recommended in wider areas interpreted to have intact hangingwall and footwall intersections.

The backfill is planned to be a mixture of waste rock fill and tailings from the DSTF with cement added as required.

GEOTECHNICAL EVALUATION

SRK completed preliminary geotechnical evaluations for the Bellekeno, Lucky Queen, Flame & Moth, and Bermingham deposits. The evaluations considered the mineralized veins, hangingwall and footwall zones adjacent to planned mining, and general areas for proposed infrastructure development. Based on these assessments, recommendations for mining methods, stope design, and support requirements have been provided.

Information available for the evaluations included drill hole databases, core photographs, Gemcom models, and information collected by SRK during various site visits. Only the Bellekeno review has the benefit of underground observations.

Further geotechnical studies are recommended to confirm the pillar requirements and the mine design details. RPA recommends that the initial geotechnical reviews focus on the Flame & Moth and Bermingham access drives and ventilation raises to assess conditions along the planned alignments.

HYDROGEOLOGICAL CONDITIONS

The Bellekeno and Lucky Queen proposed mining zones are located above the valley floor, which tends to limit the occurrence and impact of adverse hydrogeological conditions. In contrast, the Flame & Moth deposit is situated such that there is a possibility of water inflow to the planned workings. Preliminary investigations have been used to estimate inflows for the Flame & Moth deposits.

POTENTIALLY MINEABLE TONNES

In the first pass of mine planning, the stope shapes and mining areas were reviewed based upon an NSR value per tonne cut-off of $290. The stopes were then reviewed based upon the revised operating cost estimate of $325/tonne. This review removed from stopes and some stoping areas that were either unprofitable, had a very low overall margin, and/or required significant additional development for access to the area. Mining recovery was applied at 95% for Bellekeno, Flame & Moth, and Lucky Queen which is in line with Alexco's historic operational experience. For Bermingham, mining recovery was applied at 90%, which is in recognition of anticipated challenging ground conditions.

A mining recovery of 50% was applied to the geotechnical pillars at Flame & Moth. A different approach was used for geotechnical pillars at Bermingham, where ground support costs were doubled for excavations located within 5m of large faults (in addition to the 90% mining recovery outlined above). These different approaches reflect the level of geotechnical understanding at these deposits.

Estimated potentially mineable tonnes were tabulated for each deposit and arranged to support production scheduling. Table 1-4 shows the estimate of potentially mineable tonnes for the four deposits contributing to the updated PEA plant feed.

TABLE 1-4 POTENTIALLY MINEABLE TONNES FOR PEA PLANT FEED
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	**Diluted ('000 t)**	**Ag (g/t)**	**Au (g/t)**	**Pb (%)**	**Zn (%)**
Bellekeno	37	747	n/a	10.6	5.9
Lucky Queen	81	1,206	0.1	2.6	1.63
Flame & Moth	683	666	0.5	2.8	5.8
Bermingham	220	1,276	0.2	4.1	2.1
Total PEA Plant Feed	1,021	843	0.4	3.3	4.6

RPA worked with Alexco on an overall strategy to guide the development of the PEA production plan. This involved considering various combinations of the four deposits, that would achieve a sustainable plant feed rate of 400 tpd as early as possible and give priority to the highest grade and largest potential tonnage deposits.

PLANNED PRODUCTION RATES

RPA and Alexco estimated maximum production rates to be respected during production scheduling. They were estimated based on mining method, vein thickness, mining shape geometry, and the layout of the vein access crosscut. The overall scheduling was based upon taking the Bellekeno material first as readily accessible material to create a stockpile for the initial mill start up.

The balance of the mine plan was based upon operating two mines most of the time and limiting the time spent trying to run three mines at one time. The schedule was set based upon the planned timing of the permits for Bermingham so that the Bermingham and Flame & Moth deposits commence mill feed production at the same time.

The KHSD mill processing rate is limited by permits to 400 tpd.

DEVELOPMENT AND PRODUCTION SCHEDULES

A development and production schedule was prepared for each deposit using Deswik software.

For the Flame & Moth and Bermingham, the main ramp from surface has been scheduled at advance rates of three to four metres per day line advance, based upon rates that are considered to be achievable by well-organized owner's crews.

The production schedule includes some time allowances for vein water drainage after the vein has been intersected by access crosscuts. Production stoping is not scheduled to begin until a second route out of the mine has been established to that location.

RECOVERY METHODS

PROCESS FLOWSHEET

The process facility is based on traditional unit operations for the recovery of silver, lead, and zinc into sulphide mineral concentrates. The lead concentrates typically contain approximately 90 to 95 percent of the mill feed silver values. Detailed analysis of test work results indicates that lead and silver recoveries are typically dependent on the respective head grades for these two metals. Zinc recovery is typically defined or affected by the ratio of lead to zinc.

Unit operations within the Alexco facilities include crushing of run-of-mine material, grinding for preparation of flotation feed, selective flotation for the production of lead and zinc concentrates, concentrate dewatering and tailings thickening and filtration. Concentrates are shipped off site for smelting and tailings are stored in the DSTF.

DESIGN CRITERIA

The mill facility was designed to process 408 tpd at an overall plant availability of 92%. The target grind size was at P80 size of 174 µm and the 2010 Project design included the option of a regrind mill before the lead cleaner circuit. The plant was built without the lead regrind mill.

2012 MILL PERFORMANCE

In 2012, the mill facility processed 94,800 t of Bellekeno vein material generating 13,000 t of lead-silver concentrate and 5,700 t of zinc concentrate. The average daily throughput was 260 tpd at 89% availability. The maximum monthly throughput for the year was 320 tpd, with peak production in September and October.

The 2012 mill facility lead recoveries ranged from 84% to 98% with a concentrate lead grade of 55% to 68%. The silver recoveries to silver-lead concentrate ranged from 83% to 97% with silver grades from 4,231 g/t to 5,270 g/t.

The zinc recovery to zinc concentrate ranged from 46% to 64% with a final zinc grade of 40% to 49% zinc. Zinc metallurgical performance did not meet design criteria nor was it comparable to test work results.

PLANT MODIFICATIONS

With the current equipment, the mill facility has not demonstrated the ability to achieve the target throughput of 400 tpd. Based on plant testing, the installation of a second ball mill in series after the existing mill was recommended. Installation commenced in 2013 but was not completed. As part of the Project the mill installation is to be completed along with modifications to the classification circuit.

On-going evaluation of the flotation process will be required as the plant is optimized and operated on a long term basis. Technical support should include a flotation engineer and a metallurgical technician to support the operating staff.

PROJECT INFRASTRUCTURE

ELSA FACILITIES

The administrative offices and first aid facilities are currently based in Elsa, Yukon in a large facility that also accommodates the exploration group offices and core processing area. Maintenance and warehouse facilities are also located at Elsa. The warehouse building in Elsa is a two-story building with warehousing on both levels and a fully serviced maintenance shop on the northern end of the bottom floor. This building is used as a centralized warehouse/surface equipment facility for the Project operations.

FLAT CREEK FACILITIES

The currently licensed Flat Creek camp facilities include a trailer camp, kitchen facility, and drillers dry assembled at the old Flat Creek town site (part of Elsa). The camp has a total capacity of 90 permanent beds. There are four refurbished houses located nearby with a total of 28 rooms, and an additional 20 rooms available in a bunkhouse. A fourth bunkhouse located adjacent to the houses is primarily used for seasonal surface exploration programs. The entire capacity of the camp facilities is 140 rooms. The facilities will require expansion to accommodate the estimated 230 operations employees in addition to the ongoing surface exploration employees and contractors.

Alexco is licensed to draw water from Flat Creek and an existing groundwater well for domestic use. Alexco has two sewage disposal permits at Elsa: one for the Flat Creek camp and one for the houses.

MILL FACILITY

The current facilities at the mill facility include mine and mill offices and dry, an assay lab, first aid facilities, and the mill and DSTF complex. The mine geology and engineering office buildings from Bellekeno were moved to the mill area to serve as a central office and dry facility for all mining operations. A metallurgical and assay laboratory conducts all basic testwork to monitor and improve the process flowsheet metallurgy and efficiency, and to support environmental monitoring.

The assay laboratory was constructed as a pre-packaged unit consisting of two retrofitted 40-foot shipping containers converted into laboratory modules. The laboratory is equipped with the necessary analytical instruments to provide all routine assays for the mine, plant, and environmental quality control monitoring.

AREA HAUL ROAD SYSTEM

Alexco has constructed a series of access and haul roads to route mine traffic around the Keno City community. All traffic between Elsa and the mill facility and/or the Bellekeno mine is routed along the Christal Lake road and subsequently the Bellekeno haul road.

During mine production, heavy truck traffic from Lucky Queen will be routed along the Keno City bypass road to/from the Bellekeno haul road. Light truck traffic from Lucky Queen will continue to be routed through Keno City during mine operations.

ELECTRICAL POWER

Electrical power is available at the Project from the Yukon electrical utility.

MARKET STUDIES AND CONTRACTS

The principal commodities at KHSD are freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured.

CONCENTRATE SALES CONTRACTS

Previously, the production of both the silver/lead concentrate and the zinc concentrate from the mill facility was being sold under contract with Glencore Ltd. The terms of the contract were reviewed and renegotiated annually to reflect current market conditions.

The terms of the current contract are included in the economic model in order to generate NSR values for the LOM plan.

OTHER CONTRACTS

Alexco has entered into contracts with the following companies to support the operations of the Project:

- Canadian Lynden Transport is contracted by Alexco to transport lead and zinc concentrates to a smelter in North America and to back haul supplies to the site.
- Yukon Energy provides power under contract to various substations and to the Bellekeno mine and mill facility.

- Superior Propane provides propane under contract to Bellekeno with the largest consumption for mine air heating in the winter.

ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The Project area includes a number of historical mines and processing operations within the Keno Hill Silver District spread out over 237.44 km^2. These include nine major mines, three tailings disposal areas, and dozens of different shafts and adits. The Bellekeno, Lucky Queen and Bermingham sites have historical mine workings, waste rock storage areas, and mine water discharges, whereas the Flame & Moth site only has minor historical surface mine workings and a waste rock storage area that were reclaimed during the construction of the Keno District Mill.

Alexco and its subsidiary, ERDC, have a unique arrangement with the Government of Canada in which Alexco is responsible for the care, maintenance, and closure of the historical mines, with government and company funding provided to address the historical liabilities. Alexco is indemnified from the historic environmental liabilities. The company, along with territorial, federal, and First Nation governments, is responsible for developing a district-wide closure plan that addresses these historic environmental liabilities arising from past mining activities. Some high priority activities have already been implemented. Currently, active water treatment is carried out at five locations in the Keno Hill Silver District.

Alexco is responsible for environmental assessment, permitting, compliance, and costs associated with its ongoing exploration and new mine development activities. Additionally, if a new mine is brought into production including the use of infrastructure associated with a historic mine, terrestrial liabilities (i.e., waste rock storage areas and roads) and water related liabilities located within a designated "Production Unit" become the responsibility of Alexco. At this time, Bellekeno is the only area that has been defined as an active Production Unit. However, once commercial operations commence, the Lucky Queen, Flame & Moth and Bermingham mining areas would be classified as Production Units for which Alexco would be responsible for historic terrestrial and water related liabilities that are contained within the new active mining footprint.

ENVIRONMENTAL ASSESSMENT AND PERMITTING

Existing approvals for the care and maintenance, exploration, and mine development activities cover all aspects of the mine development at the Bellekeno, Lucky Queen, and Flame & Moth mines.

The Bellekeno and Lucky Queen mines have all permits and authorizations in place to commence full scale mine production. The Flame & Moth deposit has in place an amended Quartz Mining License QML-0009 which authorizes mine development to commence. Before milling of material from the Flame & Moth deposit, an amendment to Water Use Licence QZ09-092 is required. Additional minor approvals will also be required.

The terms and conditions for the Flame & Moth development, outlined in the Decision Document, include additional water treatment requirements, provision for a liner under the DSTF, additional equipment to reduce noise from the mill area crusher, and increased air quality and noise monitoring, and community consultation to address community concerns regarding air quality and noise related issues. The water license amendment process is well advanced and the final permitting phase for Flame & Moth is to hold a public hearing. The public hearing process is expected in early Q2 2017 followed by issuance of the water license amendment in Q2 2017.

The Bermingham deposit has in place a Class IV Mining Land Use permit that authorizes surface exploration to occur. Underground development and advanced exploration drilling, will commence under an amendment to the current Class IV authorizations. It is assumed that underground development will need to be assessed through YESAB and that the water license will be amended to allow commercial milling of material from the Bermingham deposit. The Bermingham permitting timeline includes a two-step process which includes first permitting Bermingham to allow underground decline construction and bulk sampling followed by permitting to allow milling and tailings storage in the DSTF.

A 21 month period is estimated for the Bermingham deposit environmental assessment, permitting, and water licence amendment so that processing could begin in Q4 2018.

NOISE, VIBRATION, DUST AND TRAFFIC CONSIDERATIONS

Several specific issues were raised during the review process, and have been included in the Quartz Mining Licence. Mitigation measures that have been implemented or proposed by the company include limiting certain activities (e.g. crusher operations) and types of traffic to the hours of 7 am to 7 pm, constructing a building around the crusher and installing a sound dampening enclosure around the Flame & Moth ventilation fan.

Traffic-related issues have resulted in the construction of bypass roads and signage to separate public traffic from mine operations in key areas.

LAND, RESOURCE USE AND HERITAGE RESOURCES

The local community and First Nations have expressed concerns regarding continued access for recreation and tourism in the area, subsistence harvesting and traditional use, sport and commercial hunting, fishing and trapping, mineral development, and preservation of historical resources. Although impacts are expected to be minor, Alexco is working with the various stakeholders to address these concerns.

COMMUNITY AND FIRST NATIONS RELATIONS

The Keno Hill Silver District is situated in the traditional territory of the First Nation of Na-cho Nyak Dun (FNNND). Alexco has met regularly with stakeholders and First Nations regarding their ongoing operations as well as the new plans, presenting detailed information about the Project and seeking expression of concerns.

Alexco has signed a Comprehensive Cooperation and Benefits Agreement (CCBA) with the FNNND that recognizes the rights, obligations, and opportunities of the two parties. The Agreement includes detailed discussion about respecting and protecting the environment, including enhanced opportunities for FNNND to be involved in environmental management of all operations, from mining through to closure and reclamation. The CCBA was reviewed and amended in May 2016 and there are no material changes to the CCBA.

WASTE AND WATER MANAGEMENT PLANS

Waste rock from the deposits can have the potential for acid generation and/or metal leaching (P-AML). The P-AML rock is stored in specific designed facilities. Non P-AML is stored on surface or is used for construction as needed.

Water from mining operations is discharged to ponds and if necessary treated before discharge.

TAILINGS

Tailings will continue to be deposited in the licensed DSTF or used as backfill in the operating mines. Geochemical testing on tailings from Bermingham have not been completed, however, for the purpose of this PEA, it is assumed that the Flame & Moth and Bermingham tailings will be geochemically similar to the already licensed tailings and that no additional measures will be required to control metal leaching/acid rock drainage.

MINE RECLAMATION AND CLOSURE

An updated Reclamation and Closure Plan was approved by the Government of Yukon in 2016 that encompasses all of the active mining and processing activities in the Keno Hill Silver District. Some key aspects of the closure plan are listed as below:

- P-AML waste rock will either be placed as backfill in the mine or sloped to shed water and then covered with a 0.5 m layer of low permeability borrow material.
- N-AML waste rock storage facilities will be regraded, scarified, and revegetated.
- Adits and raises will be sealed to prevent access.
- At the Bellekeno mine, in-pool treatment measures will be implemented to reduce metal loadings if required. The active treatment system will be converted to a passive bioreactor system.
- All buildings and equipment will be removed from the portal areas.
- Linear disturbances (roads) will be subject to standard decommissioning measures.
- The Flat Creek camp will be downsized as needed to support ongoing care and maintenance activities in the KHSD.
- Buildings and other infrastructure in the mill area will be dismantled and removed.
- The DSTF will be covered. If monitoring indicates that it is necessary, meteoric water will be directed to a passive biological treatment system for polishing prior to discharge.
- Various monitoring activities will continue until the performance of the closure measures has been verified.

CAPITAL AND OPERATING COSTS

The capital cost estimate for the Project is summarized in Table 1-5. The capital costs include the restart of the Bellekeno mine, development of the Flame & Moth deposit, development of the Bermingham deposit and the reopening of the Lucky Queen mine plus the necessary process plant and infrastructure for the restart of operations. Pre-production is considered to be year 1 and year 2 (2017 and 2018) of the plan. The capital costs are based on Q4 2016 estimates.

TABLE 1-5 CAPITAL COST SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

		Total	Year 1	Year 2	Year 3	Year 4	Year 5	Yr 6-9
Mining	C$ '000	75,754	8,663	19,323	10,392	6,369	7,231	23,775
Processing	C$ '000	951	205	746	-	-	-	-
Infrastructure	C$ '000	7,947	364	3,691	1,386	210	298	1,998
Tailings	C$ '000	821	-	47	119	118	118	419
Total Capital Cost	C$ '000	85,473	9,232	23,808	11,897	6,697	7,647	26,192
								-
Contingency	C$ '000	17,095	1,846	4,762	2,379	1,339	1,529	5,238
Total Capital Cost	C$ '000	102,568	11,078	28,569	14,277	8,037	9,176	31,431

The capital cost estimates were generated by Alexco and were reviewed and modified based upon detailed review by RPA. RPA considers the accuracy of capital cost estimate components to be at a scoping level. A 20% contingency has been included in the capital cost estimate based upon a review of the capital details.

The sustaining capital is mainly the major mine development in the deposits to be mined.

Exclusions from the capital cost estimate include, but are not limited to, the following:

- Study costs to advance the Project engineering.
- All sunk costs to the end of 2016.
- Project financing and interest charges.
- Working capital.
- Escalation during construction and operation.

Table 1-6 shows the LOM site operating cost estimate. It is based on LOM plant feed of 1,021 kt and operating at a rate of 146,000 tpa.

TABLE 1-6 LOM SITE OPERATING COST SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

Area	LOM Site Opex ($M)	Unit Cost ($/t)
Mine	197.3	193.25
Mill	61.9	61.89
G&A	69.8	69.79
LOM Total Site	**331.8**	**324.93**

The operation is planned to be a fly-in fly out operation with employees remaining in camp for their work rotation. The manpower will range from 197 to 235 persons over the Project life.

2 INTRODUCTION

Roscoe Postle Associates Inc. (RPA) was retained by Alexco Resource Corp. (Alexco) to prepare a Preliminary Economic Assessment (PEA or the Study) on the Keno Hill Silver District Project (the Project), located in the Yukon Territory, Canada. The purpose of this report is to disclose the results of the PEA. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. RPA carried out a site visit from September 12 to 14, 2016.

Alexco is a public company with its headquarters in Vancouver, B.C. Alexco, through wholly owned subsidiaries, owns the mineral rights for the Keno Hill Silver District (KHSD) following its successful bid for the assets of the bankrupt United Keno Hill Mines Ltd in 2006. Alexco obtained the properties with all pre-existing liabilities subject to indemnification. Alexco also owns an environmental consulting company, Alexco Environmental Group (AEG), which provides environmental services to Alexco and the mining and mineral exploration industry.

In 2008, Alexco entered into a Silver Purchase Agreement (SPA) with Silver Wheaton Corp. (Silver Wheaton) whereby 25% of all future silver production from the KHSD properties owned or controlled by Alexco at the time of the consummation of the SPA will be delivered to Silver Wheaton in exchange for a payment of US$3.90 per ounce as well as a payment by Silver Wheaton of US$50 million. The SPA has been renegotiated on several occasions and effective March 29, 2017, the Company entered into an agreement with Silver Wheaton to amend the SPA whereby Silver Wheaton will continue to receive 25% of the LOM payable silver from the KHSD with the production payment (originally US$3.90 per ounce) to be based on monthly silver head grade and monthly silver price. The actual monthly production payment will fall within a defined grade and pricing range governed by upper and lower numeric criteria (ceiling grade/price and floor grade/price) pursuant to the following formula:

$$\frac{\text{(Ceiling Grade – Deemed Shipment Head Grade)}}{\text{(Ceiling Grade – Floor Grade)}} \times \frac{\text{(Ceiling Price – Deemed Shipment Silver Price)}}{\text{(Ceiling Price – Floor Price)}} \times \text{Market Price}$$

Floor Grade	=	600 g/t Ag
Floor Price	=	US$13/oz Ag
Ceiling Grade	=	1,400 g/t Ag
Ceiling Price	=	US$25/oz Ag
Deemed Shipment Head Grade	=	Calculated monthly mill silver head grade
Deemed Shipment Silver Price	=	Average monthly silver price
Market Price	=	Spot silver price prior to day of sale

Mining at Bellekeno was suspended in August 2013, before all of the conditions of the SPA were met by Alexco.

Alexco used the funds from the SPA for development of the Bellekeno mine, the 2010 construction of a 408 tpd capacity flotation processing plant and the commencement of mining at the Bellekeno deposit. In 2014 a PEA was published for the Bellekeno, Flame & Moth, and Lucky Queen deposits. With low metal prices, Alexco maintained the Project on a care and maintenance status and focused on additional exploration leading to increases in the Mineral Resources for the Bermingham and Flame & Moth deposits. The revised Bermingham Mineral Resource has been included in this PEA study for a 400 tpd operation including the Flame & Moth, Bellekeno, Bermingham, and Lucky Queen deposits.

In addition to the development of the PEA, the Mineral Resource estimates for the Onek, Lucky Queen, Flame & Moth, and Bermingham deposits have been updated to a single reference date and with the same metal price and foreign exchange rates.

This report is considered by RPA to meet the requirements of a Preliminary Economic Assessment as defined in Canadian NI 43-101 regulations. The economic analysis contained in this report is based, in part, on Inferred Mineral Resources, and is preliminary in nature. Inferred Mineral Resources are considered to be too geologically speculative to have mining and economic considerations applied to them and to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this PEA is based will be realized.

SOURCES OF INFORMATION

Site visits were carried out by Mr. Torben Jensen, P.Eng., Principal Mining Engineer for RPA, and Dr. Gilles Arseneau, P.Geo., Associate Principal Geologist, SRK Consulting (Canada) Inc. (SRK), from September 12 to 14, 2016.

Discussions were held with personnel from Alexco and its consultants:

- Ms. Melanie Roberts, Director of Technical Services, Alexco
- Mr. Brad Thrall, Chief Operating Officer, Alexco
- Mr. Kourosh Tarighi, Senior Mining Engineer, Alexco
- Mr. Julian Watson, Principal Mining Consultant, Petram Mechanica LLC

Mr. Jensen has responsibility for Sections 1 to 10, 23 to 27, and 30 of this report. Dr. Arseneau reviewed the geology, sampling, assaying, and resource estimate work and is responsible for Section 12 and the parts of Section 14 of the report pertaining to the Lucky Queen, Flame & Moth, Onek, and Bermingham deposits. Mr. David Farrow, P.Eng., Principal Geologist, GeoStrat Consulting Services Inc. (GeoStrat) is responsible for parts of Section 14 pertaining to the Bellekeno deposit. Mr. Dennis Bergen, P.Eng., RPA Associate Principal Mining Engineer reviewed the mining, infrastructure, environmental, and permitting aspects and economics and is responsible for Sections 15, 16, 18, 19, 20, 21, and 22. Mr. Jeffrey B. Austin, P.Eng., Metallurgist, International Metallurgical & Environmental Inc., reviewed the metallurgy and processing and is responsible for Sections 13 and 17.

The documentation reviewed, and other sources of information, are listed at the end of this report in Section 27 References.

LIST OF ABBREVIATIONS

Units of measurement used in this report conform to the metric system. All currency in this report is Canadian dollars (C$) unless otherwise noted.

a	annum
A	ampere
bbl	barrels
btu	British thermal units
°C	degree Celsius
C$	Canadian dollars
cal	calorie
cfm	cubic feet per minute
cm	centimetre
cm^2	square centimetre
d	day
dia	diameter
dmt	dry metric tonne
dwt	dead-weight ton
°F	degree Fahrenheit
ft	foot
ft^2	square foot
ft^3	cubic foot
ft/s	foot per second
g	gram
G	giga (billion)
Gal	Imperial gallon
g/L	gram per litre
Gpm	Imperial gallons per minute
g/t	gram per tonne
gr/ft^3	grain per cubic foot
gr/m^3	grain per cubic metre
ha	hectare
hp	horsepower
hr	hour
Hz	hertz
in.	inch
in^2	square inch
J	joule
k	kilo (thousand)
kcal	kilocalorie
kg	kilogram
km	kilometre
km^2	square kilometre
km/h	kilometre per hour
kPa	kilopascal
kVA	kilovolt-amperes
kW	kilowatt
kWh	kilowatt-hour
L	litre
lb	pound
L/s	litres per second
m	metre
M	mega (million); molar
m^2	square metre
m^3	cubic metre
µ	micron
MASL	metres above sea level
µg	microgram
m^3/h	cubic metres per hour
mi	mile
min	minute
µm	micrometre
mm	millimetre
mph	miles per hour
MVA	megavolt-amperes
MW	megawatt
MWh	megawatt-hour
oz	Troy ounce (31.1035g)
oz/st, opt	ounce per short ton
ppb	part per billion
ppm	part per million
psia	pound per square inch absolute
psig	pound per square inch gauge
RL	relative elevation
s	second
st	short ton
stpa	short ton per year
stpd	short ton per day
t	metric tonne
tpa	metric tonne per year
tpd	metric tonne per day
US$	United States dollar
USg	United States gallon
USgpm	US gallon per minute
V	volt
W	watt
wmt	wet metric tonne
wt%	weight percent
yd^3	cubic yard
yr	year

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by RPA for Alexco. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by Alexco and other third party sources.

For the purpose of this report, RPA has relied on ownership information provided by Alexco.

RPA has relied on Alexco for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Project.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

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4 PROPERTY DESCRIPTION AND LOCATION

The KHSD Project is located approximately 350 km north of Whitehorse, Yukon, Canada (Figure 4-1). The nearest town is Keno City, which is accessible from Whitehorse via a 460 km all-weather road and by air via the Mayo airport. An all-weather gravel road, known as the Silver Trail Highway, connects Mayo to the Project area and the village of Keno City. Alexco has exploration, maintenance, and camp facilities near the location of the historic mining town of Elsa, which is located just off the Silver Trail Highway, and administration, mill and mine facilities at the mill complex located near Keno City. The area is covered by NTS map sheets 105M/13 and 105M/14.

MINERAL TENURE

Mineral exploration in the KHSD area was initially permitted under the terms and conditions set out by the Yukon Government in the Class III Quartz Mining Land Use Permit – LQ-00186, issued on July 5, 2006 and valid until July 4, 2011. Alexco subsequently obtained a Class IV Quartz Mining Land Use Permit – LQ-00240 on June 17, 2008. The two permits were amalgamated on December 8, 2008 under LQ-00240, which is valid until June 16, 2018.

All quartz mining leases have been legally surveyed; the quartz mining claims have not been legally surveyed.

The KHSD quartz mining claims and quartz mining leases are held by one of two wholly-owned subsidiaries of Alexco: Elsa Reclamation & Development Company Ltd. (ERDC) or Alexco Keno Hill Mining Company (AKHM), except for holding a 50% share with third party individuals in three leases (Rico, Kiddo and Argentum) (Appendix 1).

The Alexco Keno Hill property mineral holdings, excluding the mineral claims that are the subject of the separate technical report "Mineral Resource Estimation Elsa Tailings Project Yukon, Canada" by SRK dated June 16, 2010, covers an area of 237.44 km^2, and comprises 703 quartz mining leases 866 quartz mining claims and two Crown Grants as shown in Figure 4-2 (also attached separately with claim label detail).

Figure 4-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Location Map

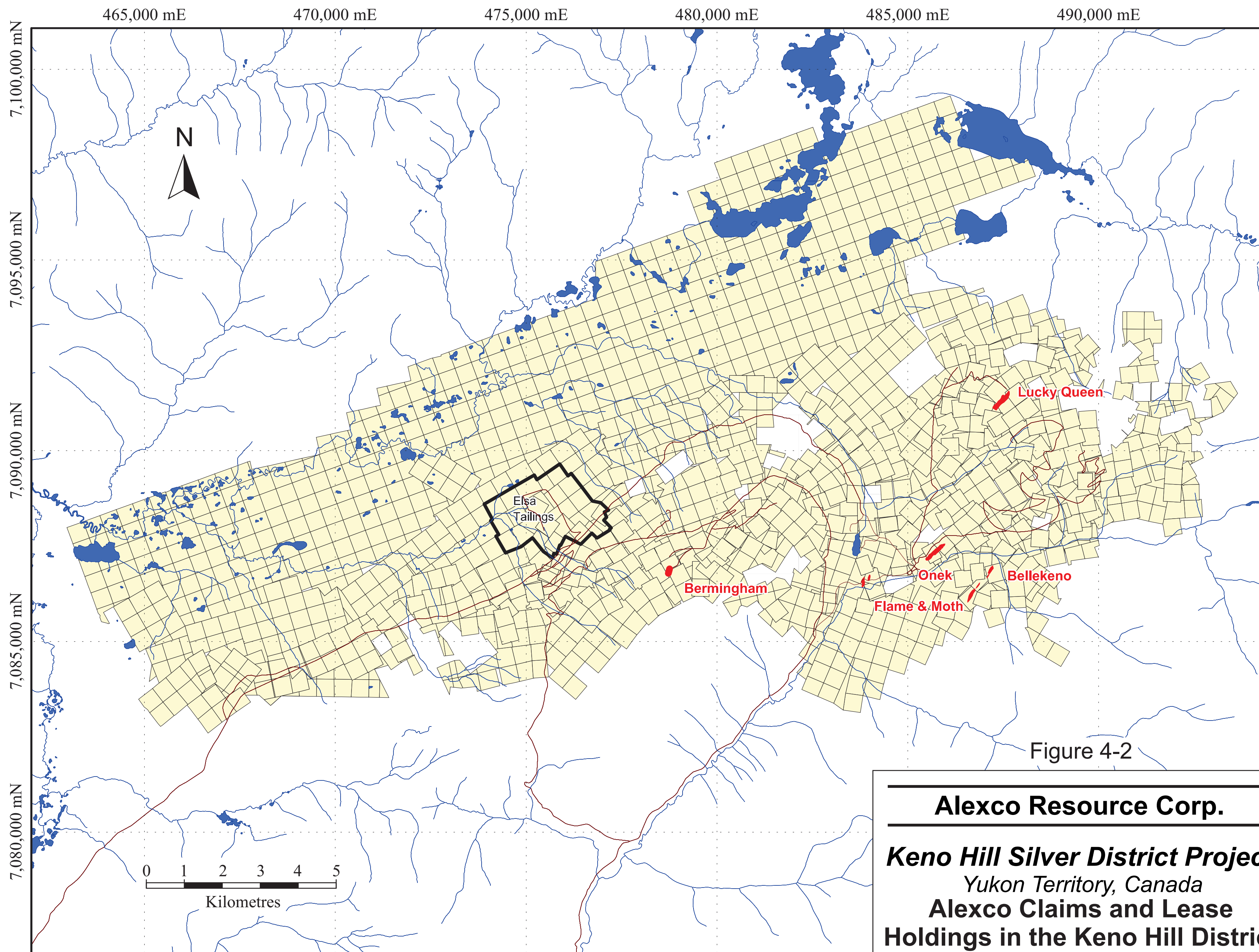


Figure 4-2

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Alexco Claims and Lease Holdings in the Keno Hill District

March 2017

Source: Alexco Resource Corp., 2017.

www.rpacan.com

The Bellekeno mine is centred at Latitude 63.90853 degrees north; Longitude 135.26201 degrees west. The Mineral Resources for the Bellekeno deposit reported herein are located on the following quartz mining leases: SAM 55327, TUNDRA 12838, WHIPSAW 14081, and NOD FR. 16170.

The Lucky Queen deposit is centred at Latitude 63.94786 degrees north; Longitude 135.25421 degrees west. The Mineral Resources for the Lucky Queen deposit are located on the following quartz mining leases: ANTHONY 12909, OK FRACTION 13094, UNCLE SAM 12923, MATHOLE 12937, and MAYO 12919.

The Flame & Moth deposit is centred at Latitude 63.90588 degrees north; Longitude 135.32931 degrees west. The Mineral Resources for the Flame & Moth deposit are located on the MOTH, FLAME, FRANCES 5, and FRANCES 7 quartz mining leases and the BLUE claim.

The Onek deposit is centred at Latitude 63.91293 degrees north; Longitude 135.29134 degrees west. The Mineral Resources for the Onek deposit are located on the following quartz mining leases: FISHER, ELI, GALENA FARM, and LONE STAR.

The Bermingham deposit is centred at Latitude 63.908° N, Longitude 135.434° W. The Mineral Resources for the Bermingham prospect reported herein are located on the ATLANTIC, ARCTIC, ETTA, and MASTIFF quartz mining leases.

UNDERLYING AGREEMENTS

Alexco's rights to much of the KHSD properties are held through ERDC, an Alexco wholly-owned subsidiary.

In June 2005, PwC, a court appointed interim receiver and receiver-manager of United Keno Hill Mines Limited and UKH Minerals Limited (collectively UKHM), selected Alexco as the preferred purchaser of the assets of UKHM.

PwC and Alexco entered into an agreement (the "Purchase Agreement") dated August 4, 2005, as amended November 2, 2005 and January 31, 2006. Alexco assigned the Purchase Agreement to its wholly owned subsidiary ERDC on February 6, 2006.

In February 2006, following the negotiation of a Subsidiary Agreement between the Government of Canada, the Government of Yukon, and Alexco, the Supreme Court of Yukon approved the purchase of the assets of UKHM by Alexco through its wholly-owned subsidiary ERDC. The UKHM assets comprised two Crown grants, 674 mining leases, 289 mineral claims, a concentration plant, various buildings and equipment, as well as partial ownership interest in three mining leases, 36 mineral claims, in addition to a leasehold interest in one mineral claim.

Interim closing of the UKHM transaction was completed on April 18, 2006. Alexco assumed responsibility for care and maintenance operations at the UKHM property. On the initial closing, among other things, Alexco:

- Deposited $10 million in trust to be used exclusively to fund ERDC's contribution to the cost of the reclamation of the pre-existing environmental liabilities of the UKHM property.
- Obtained possession of the mineral claims and leases, titled property, and Crown grants of UKHM and the equipment on the UKHM properties for the purposes of contracted care and maintenance and exploration by ERDC of the UKHM property.

Title to all UKHM assets was transferred to Alexco (final closing) in late November 2007, following the approval of a Type B Water Licence by the Yukon Water Board.

Alexco is formulating an Existing State of Mine Closure Plan for the entire Keno Hill Silver District as part of its agreements with different levels of government.

All quartz mining leases have been legally surveyed, whereas most of the quartz mining claims have not.

Future production from the Project, including the Bellekeno silver mine, is subject to a 1.5% NSR royalty, capped at $4.0 million, payable to the Government of Canada. This royalty is a condition of the Subsidiary Agreement. Payment of the royalty does not begin until all pre-production capital has been recouped plus an additional allowance for the Project exploration of approximately $6.2 million.

Alexco and Silver Wheaton entered into an agreement on October 2, 2008 (the "SPA") whereby 25% of all future silver production from the KHSD properties owned or controlled by Alexco at the time of the consummation of the SPA will be delivered to Silver Wheaton in exchange for a payment of US$3.90/oz as well as a payment by Silver Wheaton of US$50 M for use in the development and construction of the Bellekeno silver mine.

On June 16, 2014, the terms of this agreement were agreed to be altered, the terms of that amendment were never fulfilled. Effective March 29, 2017, Alexco amended the agreement with Silver Wheaton, whereby Silver Wheaton will continue to receive 25% of the LOM payable silver from the KHSD with the production payment to be based on monthly silver head grade and monthly silver price. The actual monthly production payment will fall within a defined grade and pricing range governed by upper and lower numeric criteria (ceiling grade/price and floor grade/price) pursuant to the following formula:

$$\frac{\text{(Ceiling Grade – Deemed Shipment Head Grade)}}{\text{(Ceiling Grade – Floor Grade)}} \times \frac{\text{(Ceiling Price – Deemed Shipment Silver Price)}}{\text{(Ceiling Price – Floor Price)}} \times \text{Market Price}$$

Floor Grade	=	600 g/t Ag
Floor Price	=	US$13/oz Ag
Ceiling Grade	=	1,400 g/t Ag
Ceiling Price	=	US$25/oz Ag
Deemed Shipment Head Grade	=	Calculated monthly mill silver head grade
Deemed Shipment Silver Price	=	Average monthly silver price
Market Price	=	Spot silver price prior to day of sale

The above noted terms have been used in the economic model.

Alexco and Glencore Ltd., Stamford (Glencore), a branch of a wholly-owned subsidiary of the Swiss-based international resources group Glencore International AG, entered into a lead and zinc concentrate off-take agreement in December 2010, coincident with the initiation of concentrate shipments from Alexco's Bellekeno operations.

PERMITS AND AUTHORIZATION

The Bellekeno and Lucky Queen mines have all permits and authorizations in place to commence full scale mine production. The Flame & Moth deposit has, in place, an amended Quartz Mining License QML-0009 which authorizes mine development to commence. Before milling of material from the Flame & Moth deposit, an amendment to Water Use Licence QZ09-092 is required. The amendment to the Water Licence is expected in early 2017. Additional minor approvals will also be required. The key permits for the activities at KHSD are summarized in Table 4-1.

TABLE 4-1 RELEVANT ASSESSMENT AND REGULATORY APPROVALS – KHSD PROJECT
Alexco Resource Corp. – Keno Hill Silver District Project

Purpose	YESAA Approval	Quartz Mining Act Approval	Water Use Licence
Onek and Lucky Queen Mine Production	Project#2011-0315 Decision Document	Quartz Mining Licence (QML-0009, amendment 1, expires 2025)[e]	Type A Water Use Licence QZ09-092, amendment 1 expires 2020[d]
Bellekeno Mine Production	Project # 2009-0030 Decision Document	Quartz Mining Licence (QML-0009, expires 2025)[a]	Type A Water Use Licence QZ09-092, expires 2020[b]
Flame & Moth Mine Production	Project # 2013-0161 Decision Document	Quartz Mining Licence (QML-0009, Amendment 2, expires 2031)[a]	Type A Water Use Licence QZ09-092, Amendment 1 expires 2020[d]
Advanced Exploration	Project # 2008-0039 Decision Document	Class 4 Mining Land Use Approval (Lucky Queen00240, expires 2018)	Type B Water Use Licence QZ07- 078/Amendment 1 QZ10-0606, expires 2018[c]
Care and Maintenance	Project # 2006-0293	N/A	Type B Water Use Licence QZ12-057 expires 2018[d]

The Bermingham deposit has in place a Class IV Mining Land Use permit that authorizes surface exploration to occur. Underground development and advanced exploration drilling will commence under an amendment to the current Class IV authorizations. Mining and processing of material from Bermingham will require amendments to the Quartz Mining Licence and the Type A Water Use Licence. Obtaining those amendments will require approximately 21 months.

ENVIRONMENTAL LIABILITIES

Under the terms of the acquisition of the UKHM properties, Alexco owns both the assets and the pre-existing liabilities, subject to an indemnification by the Government of Canada. Alexco is responsible for reclamation of any new work areas.

The Government of Yukon requires financial security in the form of a letter of credit to cover potential liabilities associated with the cost of reclamation and closure. As part of QML-0009, the Government of Yukon currently holds $6.3 million in security for the Bellekeno, Lucky Queen, Flame & Moth, and Onek mine operations, the mill area, and the DSTF. This amount was set in 2016, following a third party review of Alexco's costs. Alexco has estimated that the costs for reclaiming this area would be on the order of $4.9 million.

The PEA includes a capital cost allowance of $1.5 million for expected increases in the financial security related to the Bermingham mining and the increases in the DSTF and the waste storage piles.

RPA is not aware of any other environmental liabilities on the property. Alexco has all required permits to conduct the proposed work on the property. RPA is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Project is located in central Yukon, Canada. The closest sizable town is Mayo, located on the Stewart River, approximately 40 km to the southwest. Mayo is accessible from Whitehorse via a 460 km all-weather road and is also serviced by the Mayo airport, which is located just to the north of Mayo. An all-weather gravel road known as the Silver Trail Highway leads from Mayo to the Project, the historic company town of Elsa, and the village of Keno City.

CLIMATE

The central Yukon is characterized by a subarctic continental climate with cold winters and warm summers. Average temperatures in the winter are between -15 and -20 degrees Celsius (°C) but can reach -60°C. The summers are moderately warm with average temperatures in July approximately 15°C. Exploration and mining work can be carried out year-round.

Because of its northern latitude, winter days are short with the sun low on the horizon such that north-facing slopes can experience ten weeks without direct sunlight throughout the winter solstice. Conversely, summer days are very long, especially in early summer throughout the summer solstice. Annual precipitation averages 28 centimetres (cm); half of this amount falls as snow, which starts to accumulate in October and remains into May or June.

LOCAL RESOURCES

The KHSD is well connected by a network of public and private gravel roads including the Silver Trail Highway and the Bellekeno haul road, which was built to skirt the village of Keno City. A large number of roads constructed for past mining operations are still serviceable.

Local resources in terms of manpower, rental equipment, materials, and supplies are very limited.

INFRASTRUCTURE

The existing infrastructure at the site includes:

- A network of public and private roads connecting the mines, process plants and other facilities.
- Administration, maintenance, and camp facilities near the town of Elsa.
- Collar of a portal for Flame & Moth.
- Mine workings and minor surface buildings at the Lucky Queen.
- Waste rock storage facility at Lucky Queen.
- Mine workings, ventilation fans, and dewatering pumps at the Bellekeno mine.
- Waste rock storage at the Bellekeno mine.
- Crushing plant and flotation processing plant with a design capacity of 408 tpd.
- Dry stack tailings facility (DSTF) located adjacent to the process plant.
- Process and potable water sources.
- Electrical power is available in the area from the Yukon Electric grid.

PHYSIOGRAPHY

The landscape surrounding the KHSD is characterized by rolling hills and mountains with a relief of up to 1,600 m. The highest elevation is Keno Hill at 1,975 m. Slopes are gentle except the north slopes of Keno Hill and Sourdough Hill.

6 HISTORY

EXPLORATION AND DEVELOPMENT HISTORY

The history of the Keno Hill mining camp is described in Cathro (2006); the information presented in this section draws heavily from that source.

The Keno Hill mining camp area has a rich history of exploration and mining dating back to the beginning of the 1900s. Earliest prospectors had been working the area in the vicinity of Mayo for gold, especially after the Klondike gold rush of 1898. The first silver was found in 1903; however, interest was low due to the prospector's interest in gold alone — despite an assay from 1905 yielding more than 11 kilograms per tonne (kg/t) silver. Small-scale mining finally commenced in 1913 with the first shipment of 50 t of vein material to a smelter in San Francisco. Due to the shallow depth of the deposit and the First World War, interest in the area had dwindled by 1917.

The end of the First World War and high silver prices led to renewed and ultimately successful exploration activity in the area with the Yukon Gold Company and later Keno Hill Limited as the first truly commercial operators. Success at the Keno mine led to a staking rush, resulting in the discovery of a number of rich deposits.

In the early 1920s, the Treadwell Yukon Company Limited (TYC) became interested in the KHSD area and, under the leadership of Livingston Wernecke, acquired a number of claims and started mining.

Wernecke's death and the Second World War resulted in a sharp decline in activity in the Keno Hill camp until a new company, Keno Hill Mining Company Ltd., later UKHM, spearheaded by Thayer Lindsley, purchased all TYC properties and started production. Very good results led to another staking rush and the formation of a large number of junior exploration companies, many of which were purchased by UKHM.

The 1950s proved to be the most successful time of the mining camp. Starting in the early 1960s, new discoveries, and additions to mineral inventory, lagged production.

In 1972, the Husky mine went into production and, in 1977, open pit operations were introduced into the camp mainly in order to recover crown pillars. From 1982 to 1985 (Sadie-Ladue and Shamrock mines) and 1989 to 1990 (Shamrock, Silver King, Hector-Calumet, Lucky Queen, and Keno mines) float trains were mined on a small scale basis.

UKHM stopped production from the Keno Hill District permanently in early 1989. Production of greater than 1,000 tons prior to 1989 from deposits in the district is shown in Table 6-1.

TABLE 6-1 DISTRICT PRODUCTION THROUGH TO 1989 (CATHRO, 2006)
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	Tons (‘000)	Recovered Grades Ag (oz/ ton)	Pb (%)	Zn (%)	Ag (‘000 Oz)	Pb ('000 Lbs)	Zn ('000 Lbs)
Hector-Calumet	2,721.3	35.4	7.5	6.1	96,220	406,913	334,571
Elsa	491.0	61.4	4.9	1.4	30,158	47,708	13,485
Husky	429.4	41.7	3.9	0.4	17,889	33,290	3,309
Sadie Ladue	244.3	52.1	6.5	4.5	12,726	31,924	22,029
Keno	283.8	44.4	10.7	3.7	12,602	60,549	21,189
Lucky Queen	123.6	89.2	7.0	2.7	11,019	17,223	6,653
Silver King	207.6	53.0	7.7	0.8	10,996	31,918	3,510
No Cash	166.5	29.8	3.6	1.9	4,969	11,912	6,188
Galkeno	167.1	27.2	5.2	2.7	4,544	17,437	8,999
Bermingham	186.3	20.3	4.2	0.6	3,778	15,576	2,158
Bellekeno	40.5	42.6	9.8	2.3	1,724	7,967	1,829
Black Cap	48.6	27.4	1.6	0.3	1,331	1,560	269
Onek	95.3	13.6	5.5	3.4	1,299	10,456	6,452
Ruby	40.7	25.2	3.0	1.3	1,024	2,421	1,023
Shamrock	5.3	180.3	37.6	0.3	962	4,013	37
Comstock	22.9	39.7	10.7	3.8	907	4,891	1,719
Dixie	23.9	20.2	3.8	5.1	482	1,813	2,456
Husky Southwest	10.5	39.6	0.3	0.1	414	56	17
Townsite	18.6	16.4	4.3	2.0	305	1,583	730
Mt. Keno	1.6	139.3	17.7	-	221	562	-
Miller (UN & Dragon)	9.4	15.1	2.2	0.7	141	420	140
Flame & Moth	1.6	18.3	1.1	0.9	29	35	29

Between 1990 and 1998, the Dominion Mineral Resources and Sterling Frontier Properties Company of Canada Limited (Dominion), after acquiring a 32% interest in UKHM, carried out extensive reclamation, remediation, and exploration work at the Bellekeno, Husky Southwest, and Silver King mines in order to reopen the camp. Lack of financing forced Dominion to abandon its rights, in effect reverting back the rights to UKHM. Environmental liabilities and site maintenance costs drove UKHM into bankruptcy; the federal government inherited the assets.

A historical resource estimate completed for the Silver King deposit during this time is shown in Table 6-2.

TABLE 6-2 HISTORICAL RESOURCE ESTIMATE FOR SILVER KING PROPERTY
Alexco Resource Corp. – Keno Hill Silver District Project

Class	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Proven, Probable and Indicated	98,998	1,354	n/a	1.6	0.1
Inferred	22,581	1,456	n/a	0.1	n/a

Historical resources for Silver King were estimated by UKHM, as documented in an internal report entitled “Mineral Resources and Mineable Ore Reserves” dated March 9, 1997. The historical resources were estimated based on a combination of surface and underground drill holes and chip samples taken on the vein and calculated using the polygonal (block) model and the 1997 CIM definitions for resource categories. These estimated historical resources include a total of 55,674 t classified as proven and probable reserves and 43,324 t classified as indicated resources, plus an additional 22,581 t classified as Inferred Resources. Verification of the estimate would require new drill holes into a statistically significant number of the historical resource blocks and/or a combination of on-vein sampling. A qualified person has not done sufficient work to classify this estimate of historical resources as current, nor is Alexco treating this historical estimate as a current Mineral Resource.

In June 2005, Alexco was selected as the preferred purchaser of the assets of UKHM by PwC, the court-appointed interim receiver and receiver-manager of the Project holdings. In February 2006, following lengthy negotiations with federal and territory governments, the Supreme Court of the Yukon approved Alexco’s purchase of UKHM’s assets through Alexco’s wholly-owned subsidiary ERDC.

Interim closing of the Project transaction was completed on April 18, 2006, and an agreement governing management and future reclamation of the Project was signed. Under the Keno Hill Subsidiary Agreement, ERDC, and Alexco are indemnified against all historical liability, has property access for exploration and future development, and is not required to post security against pre-existing liabilities. ERDC will also be reimbursed for its future environmental reclamation activities — estimated at more than $50 million — while itself contributing $10 million to the clean-up of the Project. ERDC has also assumed responsibility for ongoing environmental care and maintenance of the site under contract to the Government of Canada, and are actively preparing an Existing State of Mine Closure Plan for the historic environmental conditions.

To finalize the Project acquisition, ERDC applied for and received a water licence in November 2007. Upon receipt of the license, ERDC received clear title to surface and subsurface claims, leases, free-hold land, buildings, and equipment at the Project.

During 2006, Alexco embarked on an aggressive exploration program in the Project, targeting the historical resources at Bellekeno and Husky Southwest and subordinately other former mines in the Project.

HISTORY OF THE BELLEKENO MINE

The Bellekeno area hosts ten veins on the north facing slope of Sourdough Hill, across the Lightning Creek valley from the Keno mine. Initially staked in 1919 by Andrew Johnson following the discovery of the Tundra vein, the nearby Ram vein was staked the following year. During 1921, Alex Gordon staked the Eureka, Whipsaw, and Extension mining claims. Combined, these five claim groups covered all the known veins in the Bellekeno deposit.

The Bellekeno deposit was mined during four periods between 1921 and 2011. Each period of mining was followed by a period of extensive exploration to replace exhausted mineral inventory. Between 1921 and 1928, 495 t of hand sorted, vein material grading 9,621 g/t silver was sacked and shipped to San Francisco.

The Depression, World War II, and perhaps some litigation marked the transition into larger scale mining. In 1947, the claims were purchased by Mayo Mines Ltd. After extensive exploration and adit development, production briefly recommenced. Under the ownership of Mayo Mines, the Bellekeno mine extracted two products: a direct shipping high grade product, and a lower grade concentrate that was processed at the nearby Mackeno mill. With high development requirements, small deposits and poor milling recovery (<70%), the company operated at a net loss between 1947 and 1954.

Between 1955 and 1965, the property changed owners a number of times, as production attempts proved unsuccessful, before it was purchased by UKHM. After acquiring the deposit, UKHM began intermittent exploration, development, and rehabilitation programs, and the development of the Bellekeno 625 adit. Exploration programs included surface overburden drilling, soil and geophysics surveys, trenching, and core drilling. Bellekeno was in production between 1988 and 1989, until UKHM was forced into bankruptcy in 2000 and its assets were inherited by the Canadian federal government. Purchased in 2006 by Alexco, the small mineral inventory has been expanded and it was in commercial production from 2011 to 2013. Mining to date by Alexco has extracted 5.6 million ounces of silver along with lead, zinc, and gold. Production results are summarized in Table 6-3.

TABLE 6-3 BELLEKENO MINE PRODUCTION SUMMARY, 1919 TO 2013 (DATA COMPILED FROM INTERNAL DOCUMENTS)

Alexco Resource Corp. – Keno Hill Silver District Project

Year	Shipper	Claims	Tonnes	Ag (g/t)	Pb (%)[3]	Ag (oz)
1921-27	Gordon	Eureka	186	10,900	73.9	65,200
		Whipsaw	6.8	8,280	61.9	1,810
		Extension	0.9	7,820	75.4	230
		Chance	1.4	5,420	71.1	240
1927-28	Johnson	Ram	266	8,850	64.0	75,690
			460	**9,660**	**68.0**	**143,100**
1947-52	Mayo Mines	Ram	several 100			
	Bellekeno - DS[1]		113	6,000	70.0	21,800
1953	Bellekeno - DS		131	6,690	72.0	28,200
	Bellekeno - MK[2]		4,690	1,880	11.6	283,500
1954	Bellekeno - DS		91	7,280	74.0	21,300
	Bellekeno - MK		4,980	2,030	9.3	325,000
			10,010	**2,110**	**12.5**	**679,800**
1966	UKHM		3,450	250		27,700
			170	2,430		13,300
			3,620	**352**		**41,000**
1988	UKHM		11,600	1,510		563,200
1989	UKHM		17,100	1,510		830,100
			28,700	**1,510**		**1,393,300**
2010	Alexco		18,600	210	9.2	125,600
2011	Alexco		71,992	834	10.2	1,930,400
2012	Alexco		86,354	760	9.6	2,110,000

Year	Shipper	Claims	Tonnes	Ag (g/t)	Pb (%)[3]	Ag (oz)
2013	Alexco		65,206	705	7.7	1,478,000
			242,150	**725**	**9.2**	**5,644,000**
Grand Total			**284,940**	**862**	**8.4**	**7,901,200**

Notes:
1 Direct shipping
2 Material processed at the historic Mackeno Mill
3 Pb grade based on tonnes with known production grades

HISTORY OF THE LUCKY QUEEN DEPOSIT

The Lucky Queen deposit was mined from 1927 to 1932 when mineral inventory was exhausted, producing 112,100 t of vein material at 3,060 g/t Ag from two mineralized shoots. Four levels of underground workings (50, 100, 200, and 300) totalling approximately 1,085 m, were developed, with level development roughly coincident with extensive stoping, resulting in the Lucky Queen production totals listed in Table 6-4. There were no historical Mineral Resources or Mineral Reserves remaining at the Lucky Queen mine.

TABLE 6-4 PAST PRODUCTION RECORDS FOR THE LUCKY QUEEN PROPERTY
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Ag ('000 oz)	Pb ('000 lb)	Zn ('000 lb)
Lucky Queen	112,100	3,060	7.0	2.7	11,020	17,220	6,650

The Lucky Queen vein and strike extensions were explored intermittently by surface overburden drilling, trenching, and soil sampling throughout the decades from 1950 to the early 1980s.

A 500 level exploration drift, collared near the Black Cap prospect and totalling approximately 1,800 m, was developed by UKHM in 1985-1987. It was designed to come in underneath the historical Lucky Queen workings and to drive a raise up to the 300 level and connect with the No 2 inclined shaft. Poor ground conditions near the shaft, combined with difficulty in locating the vein and an urgent need for miners elsewhere in the KHSD caused the adit to be abandoned.

Drilling by Alexco in the Lucky Queen prospect area totalled four surface core drill holes (875 m) in 2006, three surface core drill holes (557 m) in 2007, 12 surface core drill holes (2,999 m) in 2008, 14 surface core drill holes (3,048 m) in 2009, and 14 surface core drill holes (3,625 m) in 2010.

Following rehabilitation of most of the 500 level, four underground core holes (210.50 m) were drilled in 2012 outside of the resource area.

HISTORY OF FLAME & MOTH DEPOSIT

Claim staking and prospecting began at Flame & Moth in 1920. By 1923, numerous surface workings and a 13 m inclined shaft had been sunk with a 4.6 m crosscut developed from it on the Moth claim. It is believed that a second shaft to a depth of 30.5 m was also sunk in this vicinity. An adit was developed along 12.2 m on the Frances 7 claim. Production for this period is not known.

Subsequent to this early work, little or nothing appears to have happened on the property until the acquisition by UKHM just prior to 1950. A 27.4 m inclined shaft was sunk to a vertical depth of 21.3 m along the footwall of what was likely the Moth vein. A crosscut, through the zone 13.7 m below surface and 42.7 m of drifting 22.9 m below surface, identified quartz-carbonate vein hosted mineralization averaging 343 g/t Ag, 1.6% Pb, and 5% Zn developed in quartzite and greenstone along a zone approximately 30.5 m long and up to 9.1 m wide. Thirteen horizontal core drill holes totalling 193 m were drilled from the drift, but the core recovery was poor.

During 1954 and 1955, mineralization of pyrite and minor arsenopyrite was reported up to 240 m along strike to the north. This was explored by bulldozer trenching, soil sampling, and ground geophysics, but was unsuccessful because of the depth of gravel overburden, reported to a 12 m depth.

UKHM returned to Flame & Moth in 1961 with a program of soil sampling and ground geophysics (self-potential, magnetics, Ronka EM), and drilled five surface core drill holes located near the shaft to test the mineralization at depth. The soil samples and geophysics yielded little information, and no veining was intercepted in the drilling.

In 1965, 28 vertical overburden drill holes were drilled, along with another attempt at soil sampling and geophysics. A proposal to excavate an open pit was first made at this date, based on a calculated resource of 3,360 t grading 573 g/t Ag, 1.4% Pb, and 5.6% Zn. The pit would have reached to 18.3 m below the surface.

In 1974, four lines of angled overburden drill holes totalling 989 m were drilled for extensions along a 180 m strike length with limited success due to deep overburden and broken ground conditions, although a weakly mineralized structure was located at 76 m in the footwall of the main vein.

More overburden drilling was completed along strike in 1984 and four core drill holes were sited to test the downward projection of the known mineralization. The deeper drilling (60 to 90 m below surface) returned only very low values from a wide but diffuse pyritic vein zone. A small amount of vein material (368 t grading 699 g/t Ag, 1.39% Pb, and 0.72% Zn) was sent to the mill, which may have come from vein material exposed during stripping of overburden in preparation for the open pit development. In May 1987, the open pit Mineral Resources were re-evaluated at 12,600 t grading 699 g/t Ag and 4.0% Pb to a depth of 24.4 m. The key assumptions used to estimate this historical estimate are not known. This historical estimate was prepared before the adoption of NI 43-101 and therefore should not be relied upon. That estimate is superseded by the Mineral Resources reported herein.

Total production at the Flame & Moth property is listed (Table 6-5) as 1,440 t grading 627 g/t silver, 1.1% lead, and 0.9% zinc (Cathro, 2006). It is assumed most of these figures came from the underground work in the 1950s.

TABLE 6-5 PAST PRODUCTION RECORDS FOR THE FLAME & MOTH PROPERTY
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Ag (oz)	Pb (lb)	Zn (lb)
Flame & Moth	1,440	627	1.1	0.9	29,100	35,400	28,900

Surface core drilling by Alexco in the Flame & Moth resource area totalled 14 drill holes (3,986.2 m) in 2010, 32 drill holes (7,149.2 m) in 2011, and 48 drill holes (10,106.5 m) in 2012, eight drill holes (1,835 m) in 2013, and 49 drill holes (12,166.4 m) in 2014.

HISTORY OF ONEK DEPOSIT

The Onek Mining Company Ltd. was organized in 1922 to explore the core Onek claims via a number of open cuts and shallow underground workings in two shafts. In 1950 to 1952, UKHM reopened the shafts and drove an adit in from the northwest to drift along the vein strike at the 400 level for approximately 396 m, driving raises up into the historic workings along the way. Some developmental mineralized material was removed. The Onek deposit was revisited in the early 1960s with limited success due to manpower shortages and poor ground support, as the timbers from the 1950s had been left in place. All mining at Onek ceased in 1965 until the late 1980s when a 20 m to 40 m deep open pit was developed over the length of the majority of the Onek workings near the historical shafts. Historical production from the Onek deposit is shown in Table 6-6.

Surface exploration consisted of extensive overburden drilling along the vein strike as exploration stepouts and as infill drilling for open pit delineation.

TABLE 6-6 PAST PRODUCTION RECORDS FOR THE ONEK PROPERTY.
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Ag (oz)	Pb (lb)	Zn (lb)
Onek	86,447	466	5.5	3.4	1,299,333	10,456,254	6,452,107

Drilling by Alexco in the Onek prospect area totalled 13 surface core drill holes (2,803 m) in 2007, 29 surface core drill holes (5,127 m) in 2008, 25 surface core holes (2,913 m) in 2010, 12 surface core holes (1,138 m) in 2011, and two surface core holes (531.98 m) in 2012.

A 220 m decline was driven towards the Onek deposit in 2012 and 2013 following the drilling of a single 236.77 m surface core portal cover hole. In 2013, 12 underground core holes (738.50 m) were drilled.

HISTORY OF BERMINGHAM DEPOSIT

The first claims in the Bermingham area, the Arctic and Mastiff mineral claims, were staked by C. H. Bermingham and C. R. Settlemier in 1921, however, no underground exploration was conducted until 1923 when vein float was discovered. When TYC optioned the Mastiff claim group in 1928, a 30 m shaft and 223 m of drifting had been completed on three separate levels and 1894 t grading 4,951 g/t Ag, 55.50% Pb, and 0.6% Zn, had been extracted from the Bermingham Vein. The underground workings showed a structure with a maximum width of 17 m on the 100 level that contained multiple bands of mineralization with interstitial waste that was cut off at its southwest extent by the Mastiff fault.

Trenching and prospect shafts identified the offset vein approximately 91 m to the west-northwest, where TYC sank the No. 1 shaft and completed 22 m of drifting. An oxidized siderite-pyrite vein with some galena was located below the position of the future main Bermingham pit but no mineralized material was reported from 127 m of drifting completed on the 200 level. TYC relinquished the lease in 1930 due to low silver prices and the absence of economic grade material. A variety of individual workers extracted another 676 t grading 7,875 g/t Ag and 70% Pb between 1930 and 1940. This work was poorly documented but is known to include considerable trenching, shafting, and drifting during 1930, 1932 to 1937, and 1939 to 1940.

UKHM subsequently purchased the property as part of the district consolidation, and during 1948 to 1951 drove an adit and drift approximately 9 m below the bottom of the TYC workings. Lacking a good understanding of the complexity of the structure and geology, UKHM decided to drift into the footwall and raise up into the older workings where considerable milling ore appeared available. In 1952, many of the old TYC workings were surveyed and sampled, but the adit level was subsequently abandoned after very little ore grade material was realized, although almost 4,536 t of ore was salvaged from dumps between 1952 and 1954. In total, UKHM milled 4,686 t of ore grading 1,620 g/t Ag, 8% Pb, and 1.3% Zn of which all but 54 t was recovered from the old mine dumps.

Between 1955 and 1960, trenching and soil sampling traced the vein from the Bleiler shaft to the North Star Mineral Claim. In 1956 three diamond drill holes were attempted on the western edge of the Lily Claim to investigate a geochemical anomaly but all were abandoned due to poor ground conditions. From 1965 to 1982, 874 overburden drill holes totalling 19,931 m were drilled in the Bermingham area, as well as 27 core holes totalling 2,407 m. Poor ground conditions prevented many of these holes from adequately penetrating the vein zone however the work essentially outlined an open pit resource above the underground workings.

Stripping on the main Bermingham pit began in 1977 and until 1983 produced 82,649 t grading 572 g/t Ag. Overburden drilling and open pit mining led to a much better understanding of the geology. The feasibility of deepening the Bermingham pit was evaluated during 1980 to 1982 with several percussion drill holes testing the vein below the pit and two diamond drill holes testing the Bleiler extension to the northeast. The drill holes indicated a narrowing of the vein to 3.0 m to 4.5 m wide and did not encounter ore grade. A resource was constructed by extrapolating chip assays taken at the bottom of the pit to a depth of 6 m. A potential resource of 15,117 t at 476 g/t Ag was estimated but not deemed economic and the pit was not extended.

To the southwest of the open pit and in the hangingwall of the Mastiff Fault, several historic shafts had tested the offset extension of the Bermingham Vein. These included the No. 3 shaft, sunk by TYC, which included 22 m of drifting on the 45 level. The vein was reported to be 2.4 m wide and to mainly consist of siderite with small bunches of galena, however no ore was encountered. A small open pit did operate on this segment of the vein in the mid-1980s, and an intended second pit located 150 m to the southwest was stripped to bedrock in 1983. However, the veins exposed there appeared weak and un-mineralised. Mining was never initiated although drilling indicated shallow ore containing a resource of 274,000 ounces of silver to exist below this elevation. The historical mineral resource estimate does not use mineral resource categories stipulated by NI 43-101. RPA is not aware of the parameters and assumptions used in preparing this estimate. The historical estimate should not be relied upon; it is only stated here for historical completeness.

Between 2009 and 2016, a total of 38,676.6 m surface core diamond drilling has been completed by Alexco at Bermingham, with a total of 119 drill holes, including two drill holes (522.7m) in 2009, nine drill holes (3,045.6 m) in 2010, 25 drill holes (6,887.9 m) in 2011, 17 drill holes (5,576 m) in 2012, eight drill holes (2,667.5 m) in 2014, eight drill holes (2,605.9 m) in 2015 and 50 drill holes (17,371 m) in 2016. All holes were diamond cored in HQ/HTW apart for a few reduced to NQ/NTW because of ground conditions. A total of six holes for 1,150 m were abandoned.

In total, the Bermingham property produced 3,777,932 ounces of silver from 168,979 tonnes (Table 6-7) (Cathro, 2006).

TABLE 6-7 PAST PRODUCTION RECORDS FOR THE BERMINGHAM PROPERTY
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Ag (‘000 oz)	Pb (‘000 lb)	Zn (‘000 lb)
Bermingham	168,979	695	4.2	0.6	3,778	15,575	2,158

7 GEOLOGICAL SETTING AND MINERALIZATION

REGIONAL GEOLOGY

The Keno Hill mining camp is located in the northwestern part of the Selwyn Basin in an area characterized by the Robert Service and the Tombstone Thrust Sheets that are overlapping and trend northwest. The area is underlain by Upper Proterozoic to Mississippian rocks that were deposited in a shelf environment during the formation of the northern Cordilleran continental margin (Figure 7-1).

A compressional regime that possibly existed during the Jurassic, but certainly during the Cretaceous, produced thrusts, folds, and penetrative fabrics of various scales. Early large scale deformation (D1 and D2) produced recumbent folds, resulting in local structural thickening of strata. A third deformational event (D3) produced gentle southwest-plunging syn- and antiform pairs (Roots, 1997). The dominant structural fabric (foliation) is essentially axial planar to the early recumbent folds.

The Robert Service Thrust Sheet lying to the south of the Keno Hill Silver District is composed of a Late Proterozoic to Cambrian coarse grained quartz rich turbidite succession with interbedded shales and locally limestone of the Hyland Group, Yusezyu Formation.

The Tombstone Thrust Sheet that lies to the north and underlies the Keno Hill Silver District consists of Devonian phyllite, felsic meta-tuffs, and metaclastic rocks of the Earn Group that is conformably overlain by the Mississippian Keno Hill Quartzite. This latter unit is locally thickened due to folding and/or thrusting and is the predominant host of the silver-lead-zinc mineralization of the Keno Hill Silver District.

Intrusive rocks formed during four episodes of plutonism. During the Late-Triassic, gabbro to diorite formed sills of various sizes in the Tombstone Thrust Sheet. A second phase of plutonism took place approximately 92 million years ago (My) in the early Cretaceous and resulted in widespread and voluminous Tombstone intrusions of commonly granitic to granodioritic composition. Cretaceous fine-grained lamprophyre dated at 89 My occurs as metre-scale dykes and sills. The youngest intrusions are the McQuesten intrusive suite that occurred at approximately 65 My in the Upper Cretaceous and resulted in the formation of peraluminous megacrystic potassium feldspar granite.

In addition to the polymetallic veins of the Keno Hill mining camp, the area hosts a number of other mineral occurrences and showings of tungsten, copper, gold, lead, zinc, antimony, and barite.

PROPERTY GEOLOGY

The Keno Hill Silver District geology is dominated by the Mississippian Keno Hill Quartzite comprising the Basal Quartzite Member and conformably overlying Sourdough Hill Member. The unit is overthrust in the south by the Upper Proterozoic Hyland Group Yusezyu Formation and is conformably underlain in the north by the Devonian Earn Group (McOnie and Read, 2009) as shown in the local stratigraphic column in Figure 7-2.

The Yusezyu Formation of the Precambrian Hyland Group that comprises greenish quartz-rich chlorite-muscovite schist with locally clear and blue quartz-grain gritty schist is separated from the Keno Hill sequence by the Robert Service Thrust Fault.

The Earn Group formerly mapped as the “lower schist formation” (Boyle, 1965) is typically composed of recessive weathering grey graphitic schist and green chlorite-sericite schist with an upper siliceous graphitic schist found locally.

Within the Keno Hill Quartzite, the Basal Quartzite Member is up to 1,100 m thick where structurally thickened and comprises thick to thin-bedded quartzite and graphitic phyllite (schist). This is the dominant host to the silver mineralization in the Keno Hill Silver District. The overlying Sourdough Hill Member, formerly mapped as the “upper schist formation” (Boyle, 1965) is up to approximately 900 m in thickness and comprises predominantly graphitic and sericitic phyllite, chloritic quartz augen phyllite, and minor thin limestone.

The Earn Group and Keno Hill Quartzite are locally intruded by Middle Triassic greenstone sills. The sequence was metamorphosed to greenschist facies assemblages during Cretaceous regional deformation, and later intruded by quartz-feldspar aplite sills or dikes that are correlated with the 92 My Tombstone intrusive suite found elsewhere in the Keno Hill Silver District.

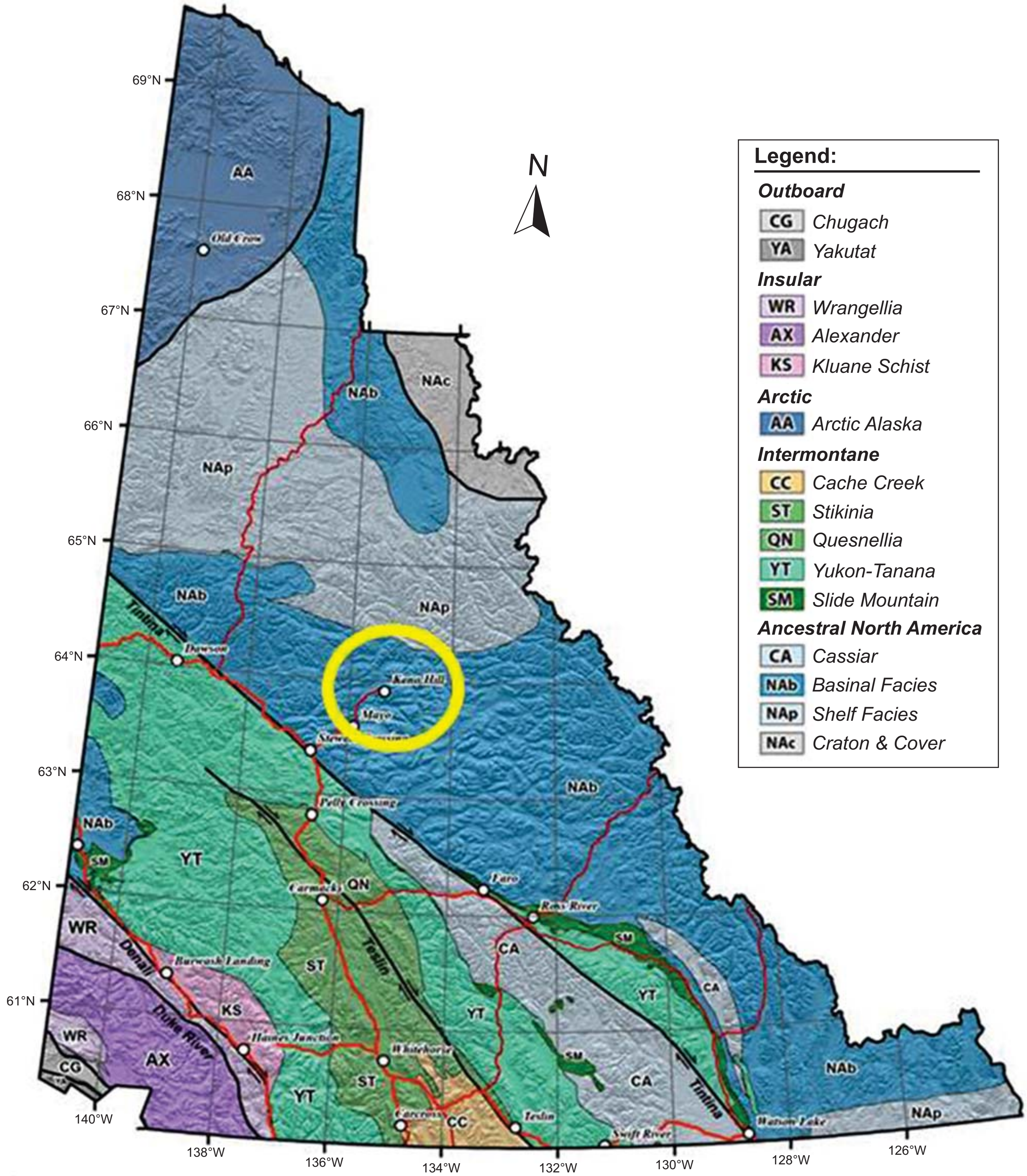
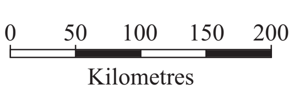


Figure 7-1



Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Regional Geology of the Keno Hill Area

March 2017

Source: Yukon Geological Survey, 2011.

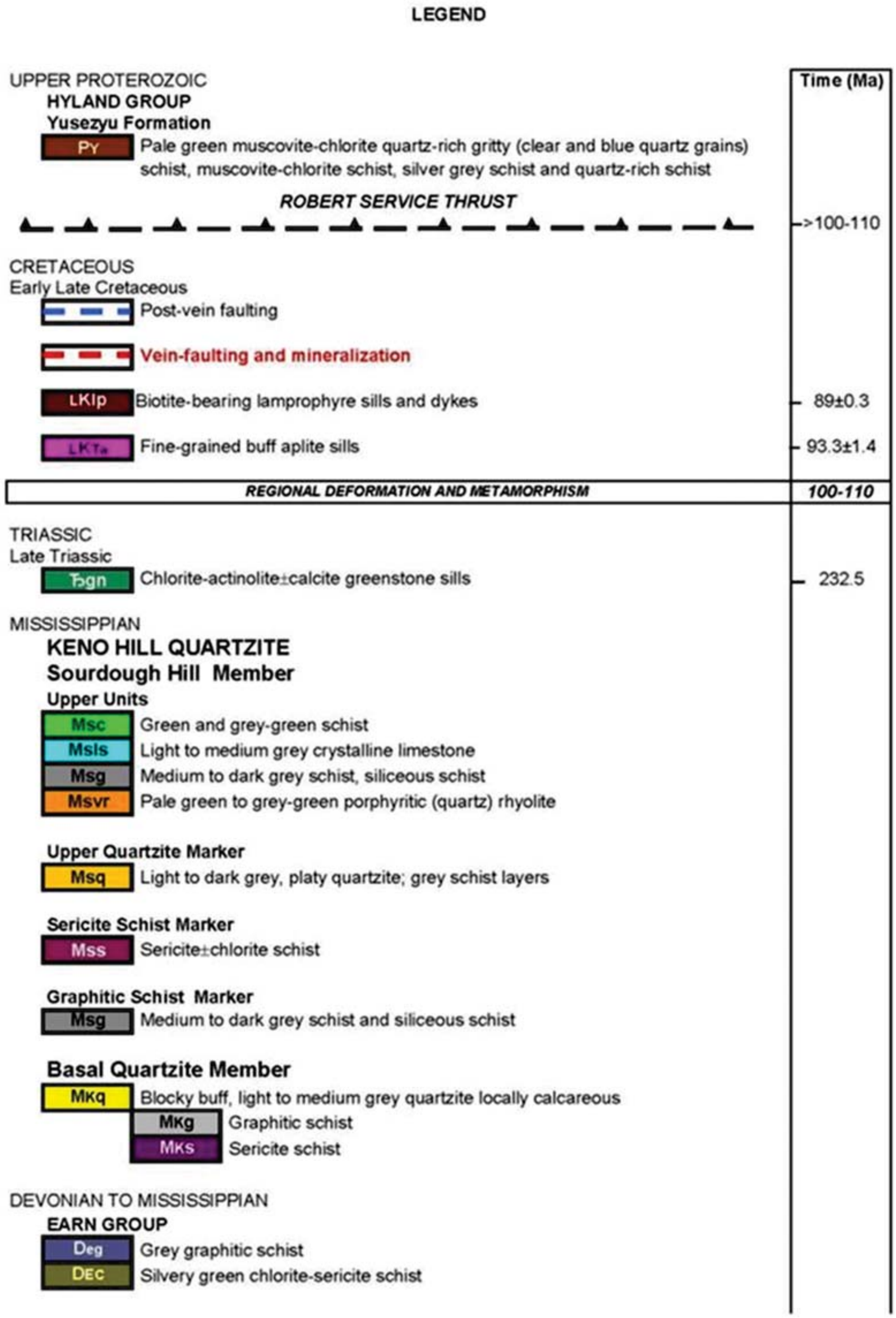


Figure 7-2

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Keno Hill Silver District Simplified Stratigraphy

March 2017

Source: Alexco Resource Corp., 2013.

Three phases of folding are identified in the Keno Hill Silver District. The two earliest phases consist of isoclinal folding with subhorizontal, east- or west-trending fold axes. The later phase consists of subvertical axial planes and moderate southeast-trending and plunging fold axes. In the Keno Hill Silver District, the first phases of folding formed structurally dismembered isoclinal folds of which the Basal Quartzite Member outlines synforms at Monument Hill where the Lucky Queen mine is located and at Caribou Hill, while between Galena Hill and Sourdough Hill the Bellekeno mine, the Flame & Moth deposit and the Bermingham prospect are located on the upper limb of a large scale anticline that closes to the north.

Within the Keno Hill Silver District, up to four main periods of faulting are recognized. The oldest fault set consists of south-dipping foliation-parallel structures that developed contemporaneously with the first phase folding. The Robert Service Thrust Fault truncates the top of the Keno Hill Quartzite and sets the Precambrian schist of the Yusezyu Formation above the Mississippian Sourdough Hill Member. The silver mineralization in the Keno Hill Silver District is hosted by a series of north-east–trending pre- and syn- mineral vein-faults that display apparent left lateral normal displacement locally referred to as longitudinal veins that, depending on the competency of the host rock, can be up to 30 m wide with an anastomosing system of subveins. A related set of faults, known as transverse faults that strike north-northeast and dip moderately to the southeast, can reach up to 5 m in thickness.

High angle cross faults, low angle faults, and bedding faults offset veins and comprise post-mineralization faults. Most commonly, these comprise northwest-striking cross faults recognized by offset veins that show apparent right-lateral displacement. The geology of the Keno Hill Silver District is shown in Figure 7-3.

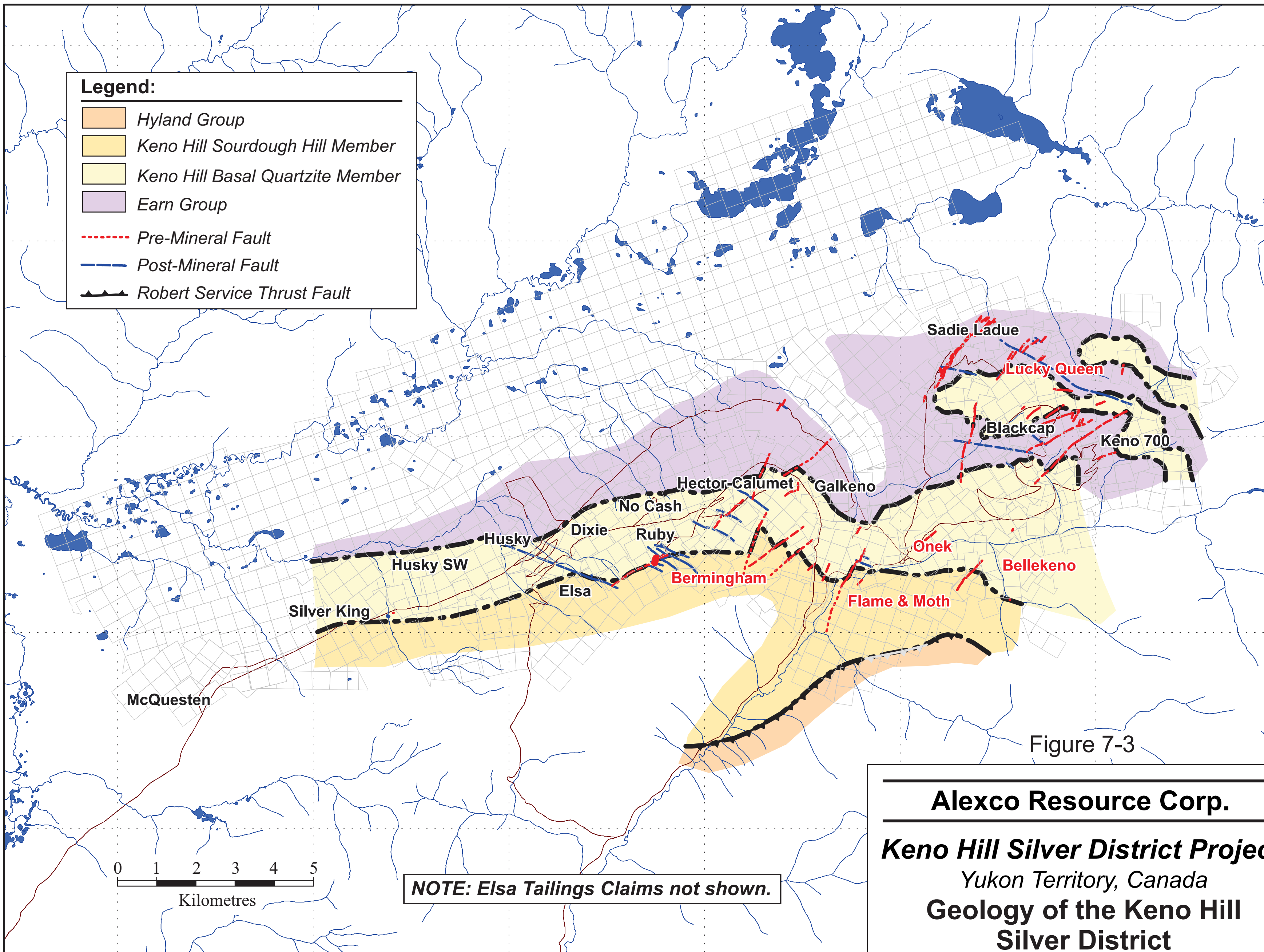


Figure 7-3

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Geology of the Keno Hill Silver District

March 2017

Source: Alexco Resource Corp., 2017.

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MINERALIZATION

Summaries of the Keno Hill Silver District silver-lead-zinc mineralization can be found in Boyle (1965), Cathro (2006), Murphy (1997), and Roots (1997). Mineralization in the Keno Hill mining camp is of the polymetallic silver-lead-zinc vein type that typically exhibits a succession of hydrothermally precipitated minerals from the vein wall towards the vein centre. However, in the Keno Hill Silver District, multiple pulses of hydrothermal fluids or fluid boiling, probably related to repeated reactivation and breccia formation along the host fault structures, have formed a series of vein stages with differing mineral assemblages and textures. Supergene alteration may have further changed the nature of the mineralogy in the veins. Much of the supergene zone may have been removed due to glacial erosion.

In general, common gangue minerals include (manganiferous) siderite and, to a lesser extent, quartz and calcite. Silver predominantly occurs in argentiferous galena and argentiferous tetrahedrite (freibergite). In some assemblages, silver is also found as native silver, in polybasite, stephanite, and pyrargyrite. Lead occurs in galena and zinc in sphalerite, which at the KHSD can be either an iron-rich or iron-poor variety. Other sulphides include pyrite, pyrrhotite, arsenopyrite, and chalcopyrite.

Cathro (2006) suggested that the mineralized veins may exhibit a vertical zonation in mineralogy with a typical mineralized shoot displaying a vertical zoning from lead-rich at the top to zinc-rich at the bottom. He reported mineralogical changes to the mineralization with increasing depth historically interpreted to indicate a silver-poor, sphalerite-rich base to the economic mineralization. Historically, it was also believed that economic mineralization in the Keno Hill mining camp was restricted to a shallow zone of approximately 120 m thickness. However, the 370 m depth of production from the Hector-Calumet mine and drill indicated mineralization to over 350 m depth at Flame & Moth demonstrate that silver-rich veins exist over greater vertical intervals and that other known veins exhibit exploration potential at depth.

Across the district, favourable environments for mineralization are considered to be:

- Quartzite or greenstone present on one wall of the vein-fault. (Veins pinch down significantly in schist bound structures);
- Adjacent to, or in the footwall of cross faults (015° vein sets);
- Where the vein splits or forms cymoid loops;
- Where the vein changes dip.

BELLEKENO MINE MINERALIZATION

The Bellekeno vein system consists of ten known veins with variable characteristics. Vein material has been extracted from the Ram, Eureka, Tundra, 48, 49, and 50 veins. Veins generally strike 030° to 040°, with dip directions varying 60° to 80° southeast or northwest. Mechanized mining has focused on the larger 48 vein structure, while conventional (historical) mining has focused on the smaller, higher grade vein structures.

Within the 48 vein structure, there are three main zones: Southwest, 99, and East, as shown in Figure 7-4. The zones have distinctive silver to lead ratios, zinc content, and accessory mineral assemblages within the 48 vein structure. Vein true thickness ranges between a few cm to upwards of 5.5 m. Post- and syn- vein-faults have been observed during mining activities. Post-vein faults typically show intense iron carbonate alteration and local brecciation, while syn-vein-faults have a strong impact on silver grades and mineral textures (Figure 7-5). Left oblique-normal movement along the 48 vein structure is estimated at 35 m.

Mineralized zones are commonly hosted within manganese-rich siderite structures that may have pervasive limonitic alteration when exposed to ground water. Minerals of economic interest include silver-bearing sulphosalts, galena, and sphalerite. Common accessory minerals include pyrite, arsenopyrite, and chalcopyrite. Anglesite, cerussite, smithsonite, malachite, and azurite have been occasionally observed. The mineralized shoots within the vein structures are not continuous.

LUCKY QUEEN MINERALIZATION

The Lucky Queen vein structure has an average strike of approximately 043˚ with local variations ranging from 025˚ to 060˚, and an average dip of approximately 045˚ to the southeast, within a range of 30º to 55˚. The main structure has a strike length, as defined by drilling, of approximately 650 m and is open along strike to both the northeast and southwest. Stratigraphic units correlated across the structure show a normal separation of approximately 30 – 35 m. Reported vein thickness ranges from just a few cm to several m. Mineralized zones are largely composed of brecciated wall rock, siderite (± limonite), vein quartz, and minerals of economic interest including silver sulphosalts, galena, sphalerite, and native silver, as seen in Figure 7-6. Minor primary minerals present include arsenopyrite and pyrite.

FLAME & MOTH MINERALIZATION

Two main styles of banded and locally brecciated mineralized veining are noted. An early phase comprises dominantly quartz gangue with abundant but irregular pyrite, sphalerite, and arsenopyrite, while a later phase is siderite-dominant with abundant sphalerite and irregular pyrite and galena development. Other minerals commonly observed include pyrrhotite and chalcopyrite, with trace amounts of the argentian tetrahedrite, pyrargyrite, jamesonite, boulangerite, and cassiterite identified in petrologic samples. The veining often displays multiple periods of brecciation and re-healing (Figure 7-7).

ONEK MINERALIZATION

The Onek vein system comprises at least three individual vein-faults occurring within a broad northeast striking, southeast dipping structural zone. The vein-faults occur over a strike length of at least 600 m and are characterized by brittle fractured or milled zones, locally containing massive sulphide vein material in or associated with siderite, consisting of sphalerite and galena along with minor pyrite, arsenopyrite, and quartz. Mineralized breccia zones are also present, consisting of wall rock fragments and siderite-sulphide cement. These zones are often surrounded by brittle fractured zones cemented by siderite and minor sphalerite stringers (Figure 7-8).

BERMINGHAM MINERALIZATION

In the Bermingham area, five mineralized veins have been identified (Aho, Bermingham, Bear, Bermingham Footwall, and West Dipper veins) within a structurally complex network of fault and vein structures related to the through-going northeast striking, southeast dipping, Bermingham vein-fault system. Less extensive north-northeast striking vein geometries are also observed within the mineralized system. The combined displacement of the Bermingham, Bermingham, Bear and West Dipper veins has displaced the hangingwall of the vein system approximately 165 m along a vector 095°/ -60° to the southeast, while dip separation of stratigraphy across the Aho vein ranges from 50 m to 80 m. The mineralized veins are affected by numerous post-mineral faults.

The early Aho vein comprises predominantly quartz, and occurs over several metres width within a wide halo of structurally damaged rocks. Minor sulphides are present with arsenopyrite and pyrite being the most abundant, with accessory galena and sphalerite.

The Bermingham vein has a strike between 029° and 042° and dips between 40° and 64° to the southeast. The structure accommodates approximately 65 m of the total Bermingham displacement. In the Etta Zone (in the hangingwall of the post-mineral Mastiff fault), the Bermingham vein at its most southwestern extent, is observed to converge with the Aho vein structure, while to the northeast, it converges with the Bermingham Footwall vein.

The Bermingham Footwall vein has a strike of between 040° and 060°, and dips between 67° and 73° to the southeast. The structure accommodates approximately 70m of the total Bermingham displacement. In the Etta Zone, the Bermingham Footwall vein terminates against the Bermingham vein up-dip and this intersection plunges moderately-steeply to the northeast into the Arctic Zone (in the footwall of the post-mineral Mastiff fault). At depth the Bermingham Footwall vein terminates against the Aho vein along a steep plunging northeasterly trajectory.

The Bermingham vein and Bermingham Footwall vein typically exist within a wide 5 m to 10 m wide structurally damaged zone containing numerous stringers, veinlets, breccias, and gouge. In most cases, a discrete vein 0.5 m to 2.5 m wide exists within this zone, consisting predominantly of carbonate (dolomite, ankerite, and siderite), quartz and calcite gangue, and sulphides: sphalerite, galena, pyrite, and arsenopyrite, with accessory, chalcopyrite, argentian tetrahedrite (freibergite), jamesonite, ruby silver, and native silver. High silver values are common within the vein and in stringers, and veinlets within the wider and lower grade damage zone (Figure 7-9).

The Bear vein strikes between 010°and 050° and dips between 65°and 80° to the southeast. The structure accommodates approximately 30 m of the total Bermingham displacement. It occupies a position in the footwall of the system beneath a major flexure in the Bermingham vein, to which it joins up dip. At depth and to the southwest, the Bear vein junctions with the Bermingham Footwall vein. Early phase mineralization is absent and the Bear structure is considered a late response to the slip-impeding flexure in the Bermingham vein noted above. Wide high grade mineralization is positioned on more northerly striking and steeper dipping areas.

First recognized in 2016, the West-Dipping vein strikes 020° and dips 50° to the west, it is situated between the Bear and Bermingham veins. It displays only minor displacement and is considered to represent an adjustment in the Bear vein hangingwall to a pronounced curvature in the sliding path. Similarly oriented veins were observed historically in the Keno Hill district at Elsa, Husky, Runer, Black Cap, and are also interpreted at Hector-Calumet and Lucky Queen (Boyle, 1965; Cathro 2006; UKHM, unpublished). The Bear and West Dipping veins are structurally and mineralogically similar to the Bermingham veins but quartz and calcite (considered early mineral phases) are less abundant or absent whilst sulphosalts are more abundant. This difference is considered a product of a shorter duration of activity on both the Bear and West Dipping veins allowing for deposition of only the later stages of the mineralization. Wide, high grade veining is spatially associated with vein-fault domains exhibiting steeper dip and/or more northerly strike.

The post-mineral faults that are recognized within the resource area include the Mastiff, Hangingwall, Cross and Super faults. The attitudes of post-mineral faults appear bimodal, with one set striking between 280° and 293°, and the other at 314° to 317°, although they may represent end members of a single fault set. These northwest trending structures cut and displace all mineralized veins, and while they are typically non-mineralized, it is sometimes observed that mineralization may have been drawn into the later fault.

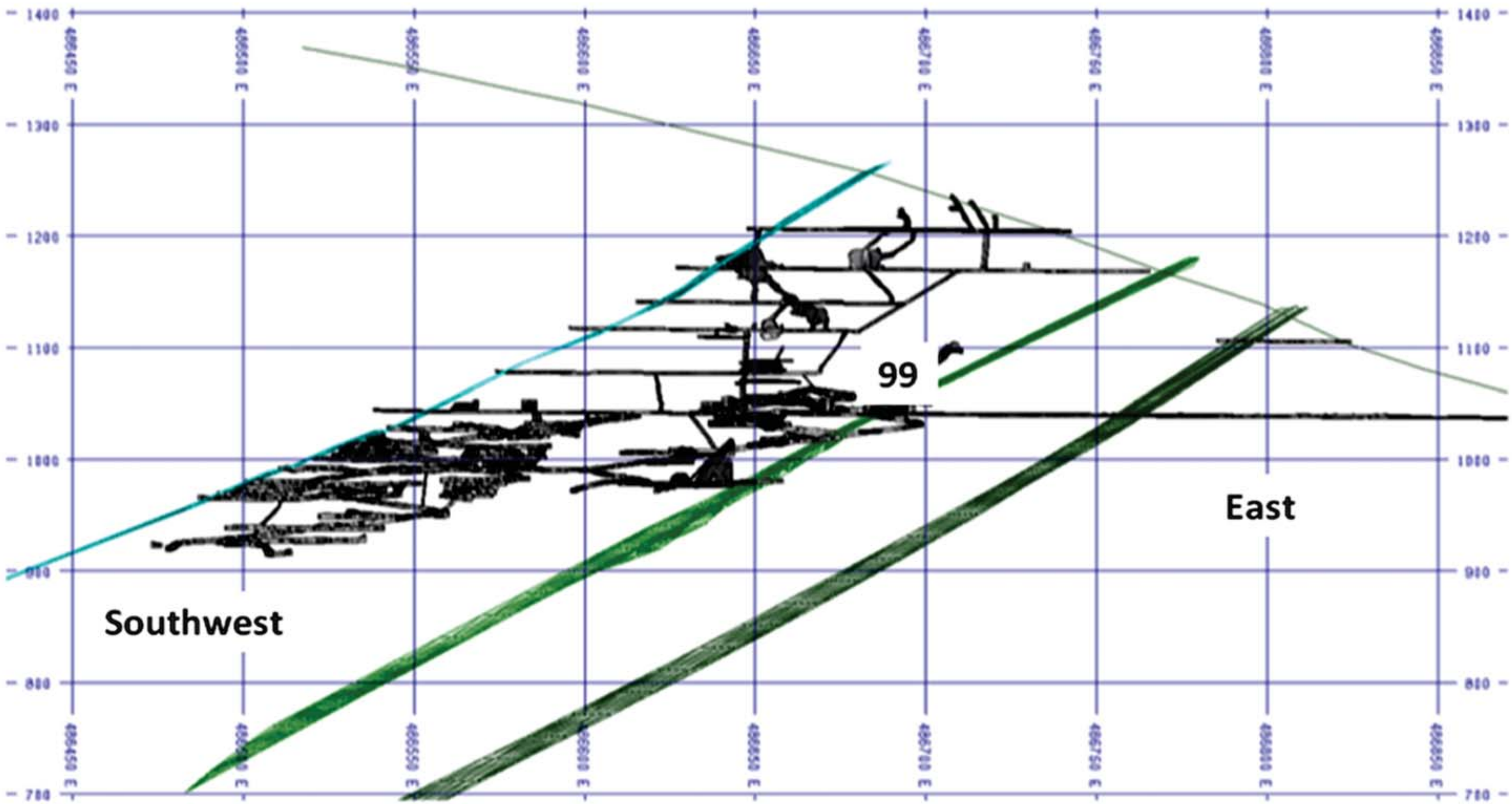
The Mastiff fault strikes at 137°, dips 51° to the southwest, and displaces the hangingwall obliquely 131 m down to the northwest along a vector 302° / -23°. The location of the Mastiff fault is well constrained by drilling and exposure in the main pit. When discussing the Bermingham, Bermingham Footwall and Aho veins, the vein zones located in the footwall of the Mastiff fault are referred to as the “Arctic” Zone (to the west) and “Etta” Zone in the hangingwall (to the east).

The Hangingwall fault strikes between 000° and 025° and dips between 53° and 65°to the east and is represented in drill core by very wide zones (10-30 metres) of unconsolidated fault breccia and gouge, mineralization is sporadic and weak and occurs as trails of fragmented clasts that are interpreted to represent pre-fault material. The Hangingwall fault extends to surface where it was intersected by historic trenching northeast of the current resource area.

The Cross fault strikes between 120° and 130° and dips between 45° and 68° to the south. The fault displaces all veins 76 m down to the south along a vector 274° / -29°.The Cross fault includes two sub-parallel splays and their generation is considered a response to a strong flexure in the main fault shape.

The Super fault strikes 133° and dips 25° to the southwest with the hanging wall displaced approximately 42 m downward to the south along a vector 272° / -15°. The structure dislocates the historic workings and open pit from the current resource area that is wholly situated in the footwall. The fault structure is well represented by drill core and is exposed in the north end of the historic main pit where it has also been referred to as the Mirror fault.

View Looking West - Northwest (Az. 290°)



0 50 100 150 200

Metres

Figure 7-4

Alexco Resource Corp.

Keno Hill Silver District Project

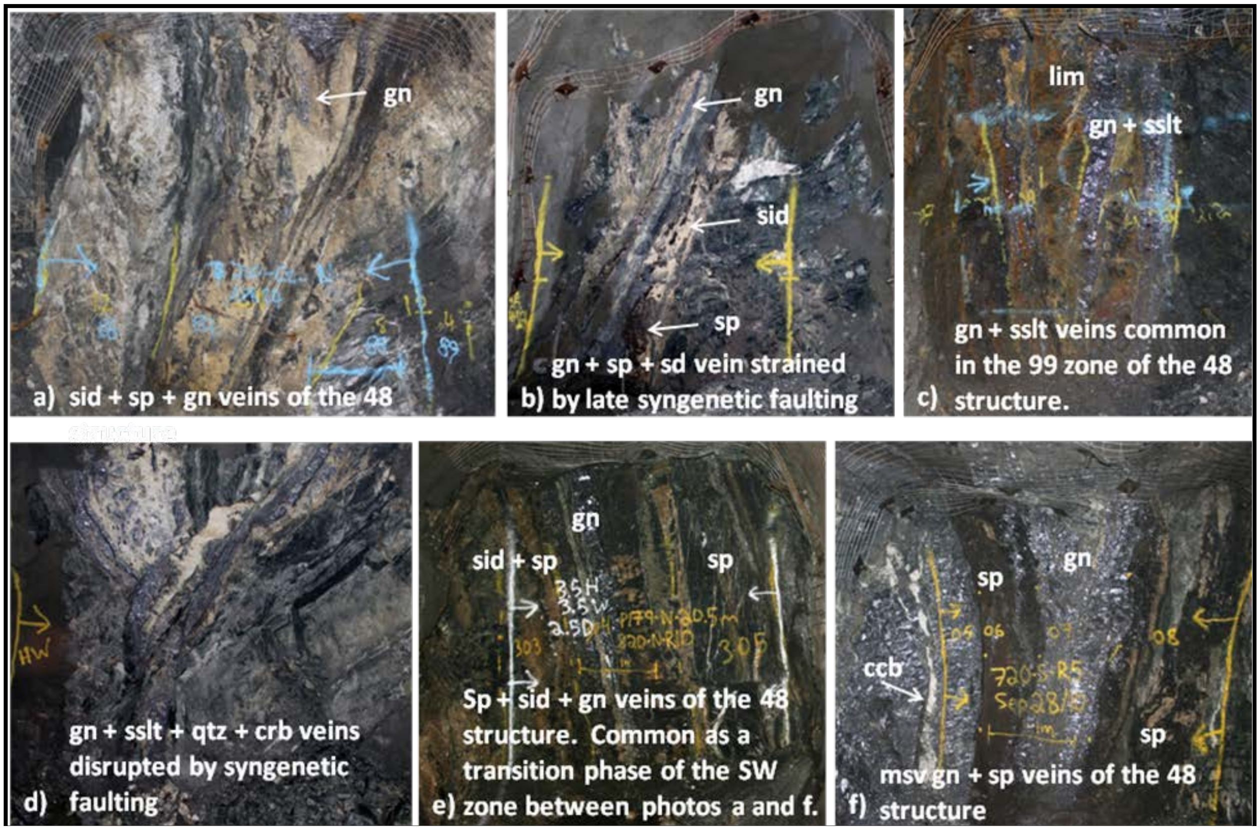
Yukon Territory, Canada

Schematic Longsection of the Bellekeno Mine

March 2017

Source: Alexco Resource Corp., 2013.

FIGURE 7-5 VEIN STRUCTURES AND MAJOR MINERALOGIES – IN THE BELLEKENO MINE



Note. (gn) galena; (sid) manganese rich siderite; (sp) iron rich; (Fe 65) sphalerite; (lim) limonitic alteration of carbonate facies; (sslts) non-specific sulphosalts; (qtz) siliceous floods and concretions associated with late breccias; (ccb) white carbonate

FIGURE 7-6 VEIN-FAULT INTERCEPT IN DRILL HOLE K-07-0114 – IN THE LUCKY QUEEN MINE

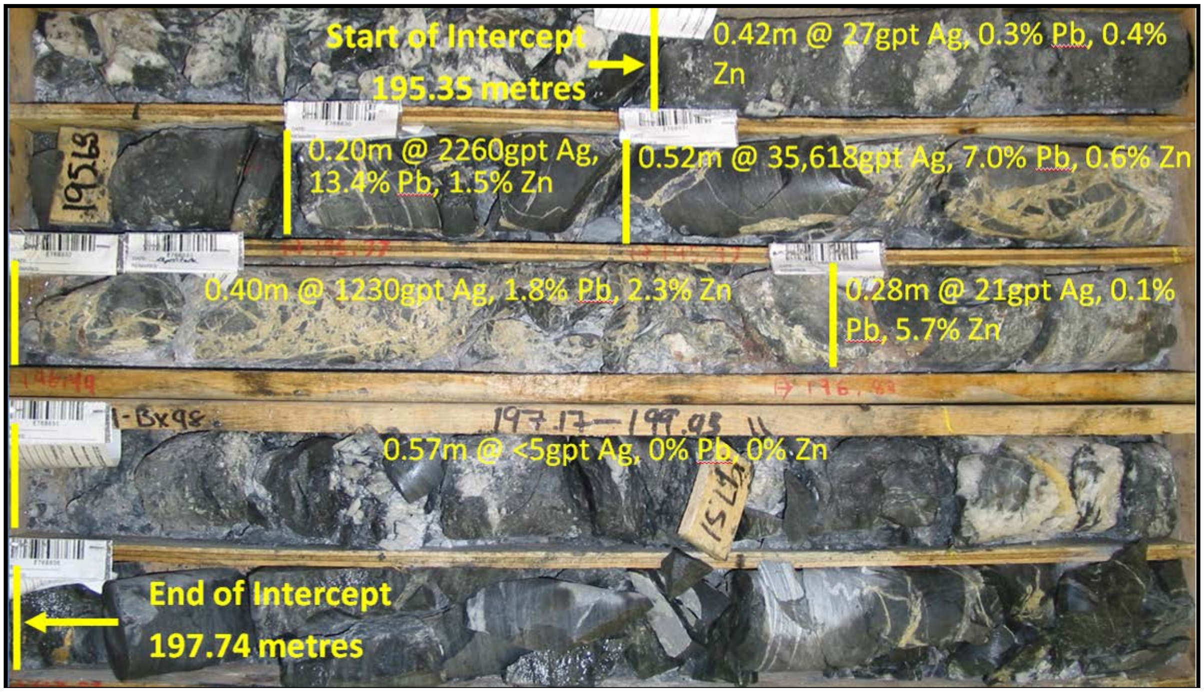
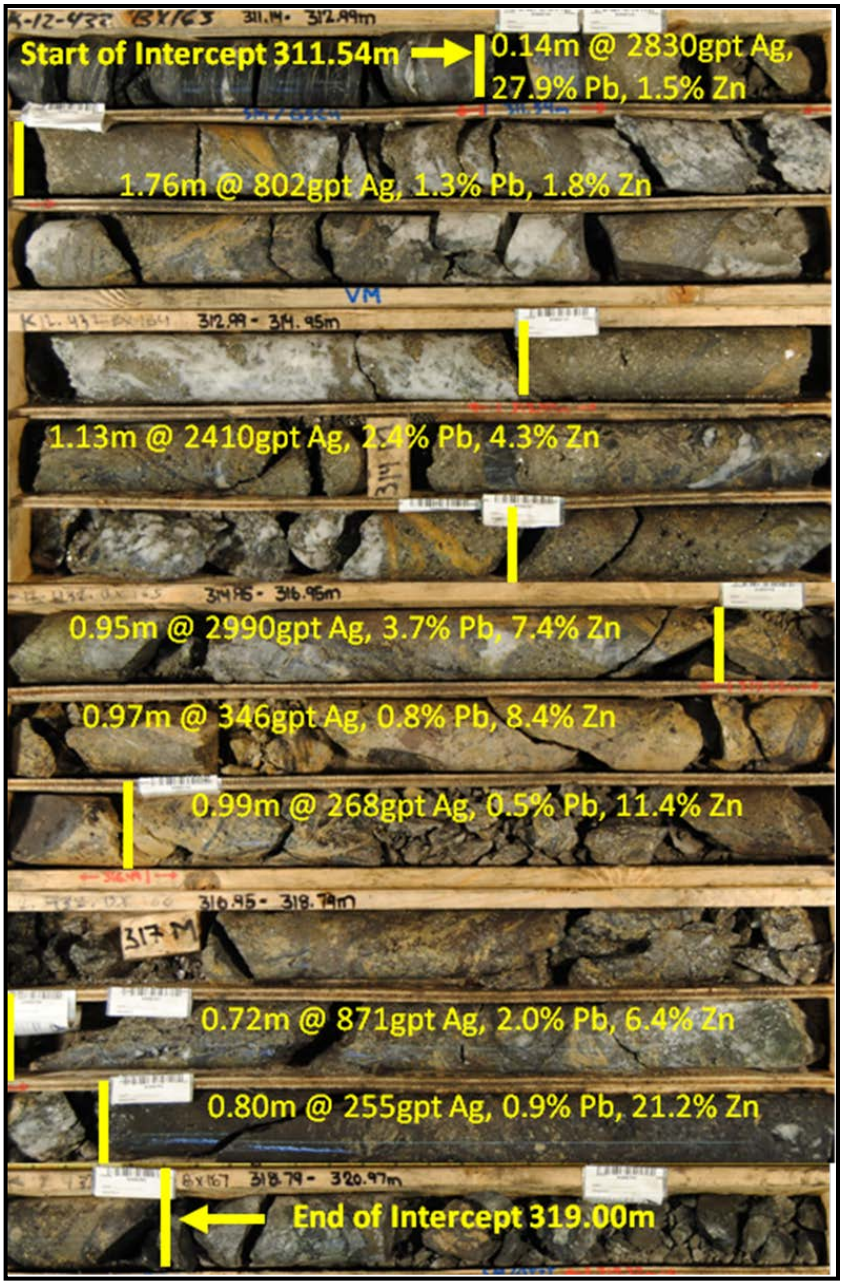
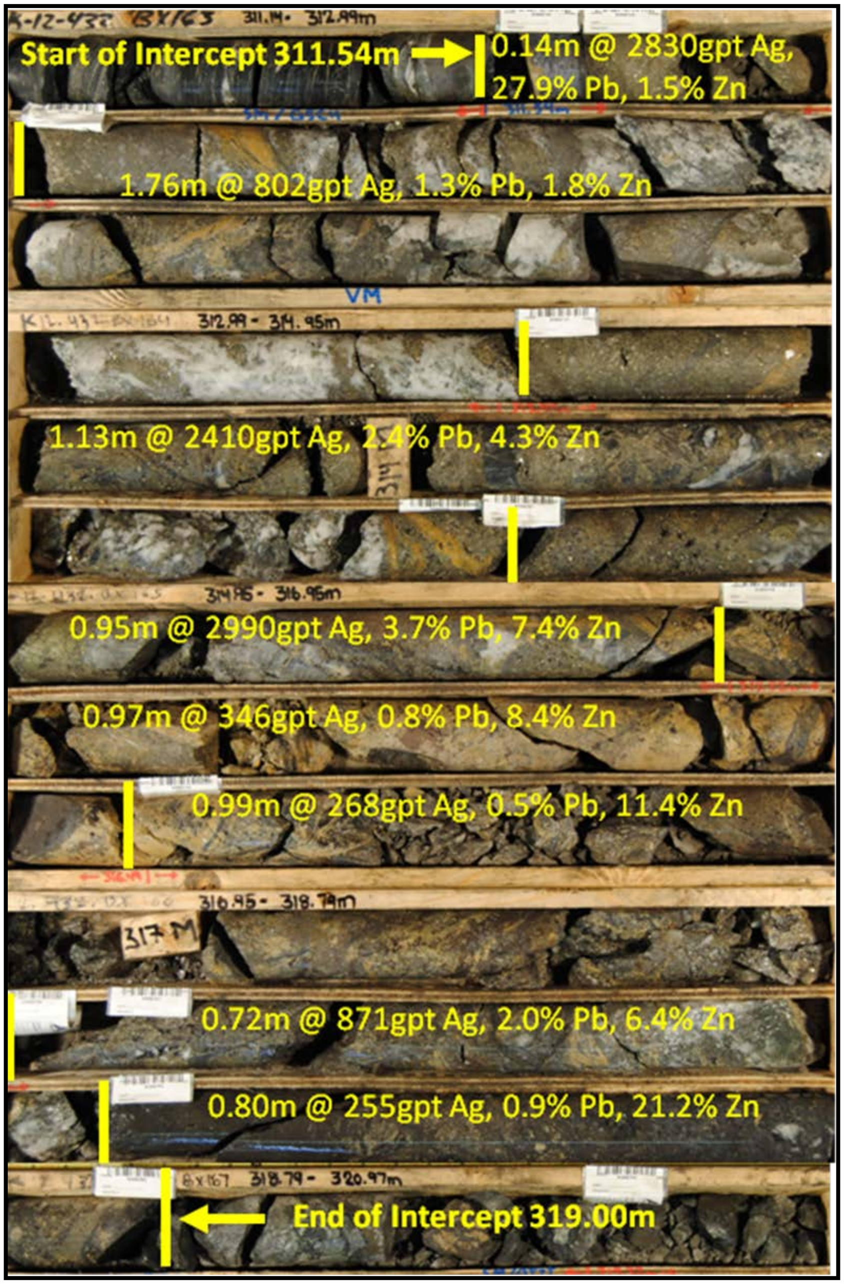


FIGURE 7-7 VEIN-FAULT INTERCEPT IN DRILL HOLE K-12-0432 – IN THE FLAME & MOTH DEPOSIT



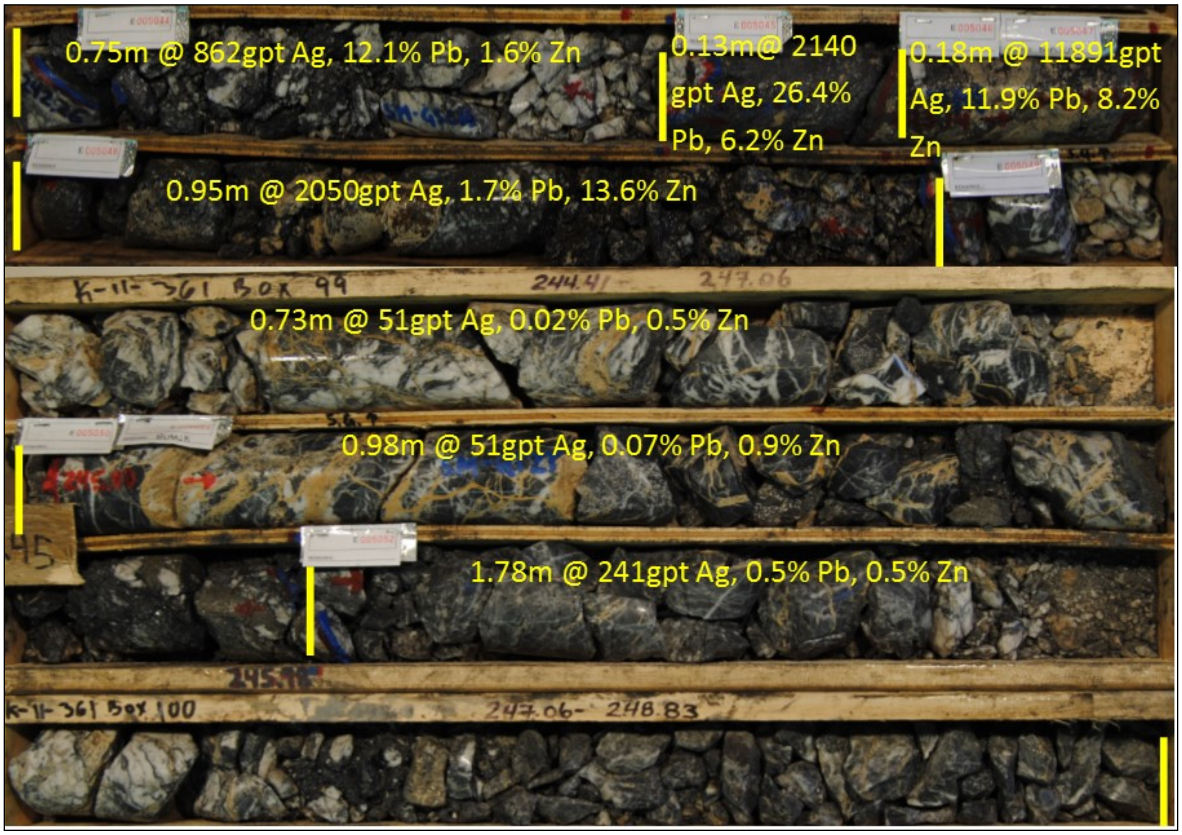
From: SRK 2013

FIGURE 7-8 VEIN-FAULT INTERCEPT IN DRILL HOLE K-10-0306 - IN THE ONEK DEPOSIT



From: Alexco 2014

FIGURE 7-9 VEIN-FAULT INTERCEPT IN DRILL HOLE K-11-0361- IN THE BERMINGHAM DEPOSIT



From: Alexco 2014

8 DEPOSIT TYPES

The Keno Hill mining camp has long been recognized as a polymetallic silver-lead-zinc vein district with characteristics possibly similar to other well-known mining districts in the world. Examples of this type of mineralization include the Kokanee Range (Slocan), British Columbia; Coeur d'Alene, Idaho; Freiberg and the Harz Mountains, Germany; and Príbram, Czech Republic.

The common characteristics of these locales are their proximity to crustal-scale faults and the occurrence in a package of monotonous clastic metasedimentary rock, which have been intruded by plutons. The intrusions may have acted as a heat source for hydrothermal circulation, and the mineralization may be locally related to the intrusions. Mineral precipitation occurred where metal-laden hydrothermal fluids, with a temperature of 250 to >400°C, travelled through open fractures caused by a local tensional stress regime in an otherwise compressional environment and precipitated metals as in multiple pulses as pressure and temperature changed and boiling or fluid mixing took place (Lynch, 2009). The metals were likely leached from crustal rocks by hot circulating fluids with mineral precipitation occurring at estimated depths of up to 11 km.

In the Keno Hill Silver District, the largest accumulation of minerals of economic interest occurred in areas of increased hydrothermal fluid flow in structurally prepared competent rocks such as the Basal Quartzite Member and Triassic Greenstone. Incompetent rocks like phyllites tended to produce fewer and smaller (if any) open spaces, limiting fluid flow and resulting mineral precipitation.

9 EXPLORATION

Most past exploration work in the Keno Hill Silver District was conducted as support to the mining activities until the mines closed in 1989. A good summary of the early exploration work is provided by Cathro (2006). This historic work involved surface and underground drilling designed to explore areas surrounding the main underground working areas. It is beyond the scope of this report to describe all historical exploration work completed in the district and only the relevant historical work is referred to below.

The exploration conducted by Alexco since 2005 is the first comprehensive exploration effort in the Keno Hill Silver District since 1997. During the initial phase of Alexco's involvement at the Keno Hill Silver District, a program of geologic data compilation, aerial geophysical surveying, geological mapping, and surface core drilling was completed.

Past operator UKHM accumulated a large number of maps and documents relating to nearly 70 years of district mining, but the documentation and data were never assembled into a coherent database that could be used to evaluate the geology on a district scale. Beginning in late 2005 and continuing through 2008, Alexco converted this historic data to over 300 gigabytes of digital form by scanning and data entry that has been used to construct district scale maps and three-dimensional (3D) mine models.

Since acquiring the Keno Hill property, Alexco has completed a total of 661 surface drill holes for a total of 158,619 m up until December 2016 as detailed in Table 9-1 and shown in Figure 9-1. In addition, a total of 406 underground holes for 25,450 m have also been completed mainly at Bellekeno.

Apart from 34 RC holes for a total of 1,151 m and some additional minor RC pre-collaring at Flame & Moth, drill holes have essentially all been diamond cored in HQ size.

TABLE 9-1 DISTRIBUTION OF DRILL HOLES 2006 TO DECEMBER 2016
Alexco Resource Corp. – Keno Hill Silver District Project

Deposit	Surface Holes	Surface Metres	Underground Holes	Underground Metres	Total Holes	Total Metres
Bellekeno	70	19,861	373	23,693	443	43,554
Lucky Queen	47	11,105	4	210	51	11,315
Onek	87	13,455	12	975	99	14,430
Flame & Moth area	176	41,528	17	572	193	42,100
Bermingham area	119	38,677			119	38,677
Other	128	32,842			128	32,842
RC	34	1,151			34	1,151
Total	**661**	**158,619**	**406**	**25,450**	**1,067**	**184,069**

Exploration drilling by Alexco has primarily been conducted to test targets immediately adjacent to historic resource areas, and to a lesser extent to evaluate targets based on interpretation of exploration data (Figure 9-1). In each case the objective has been to locate structurally controlled narrow vein mineralization that is known to occur across the entire district.

In the western part of the district, initial drill programs have been completed at the Leo and McQuesten prospects, while at Silver King, drilling of 10,453 m in 42 drill holes has mainly focused on extending the historic resource in the No 5 Vein located in the hanging wall to the historically mined mineralization. Some significant intercepts indicate that further exploration is required on this structure, as well as along the extensions of the past producing No 1 and No 2 veins.

Along the Husky – Husky SW vein system, the northeastern extension of the Silver King structure, Alexco has completed 13,780 m of drilling in 50 drill holes. The results of this drilling has confirmed that in places the historically mined veins extend to depth below mine workings and thus the potential for locating additional mineralization is open.

The mineralized Bermingham vein structure is considered to be spatially related to the southwest extension of the major historic producing Hector – Calumet mine vein system. The structure is complex and a number of different veins are known. To date Alexco has completed 40,495 m drilling in 129 drill holes on exploring the area between the Bermingham and Hector-Calumet mine areas, which has resulted in the discovery of significant high grade silver mineralization. Other targets drilled at the northeastern end of Galena Hill have obtained mineralized intercepts that will be followed up in the future.

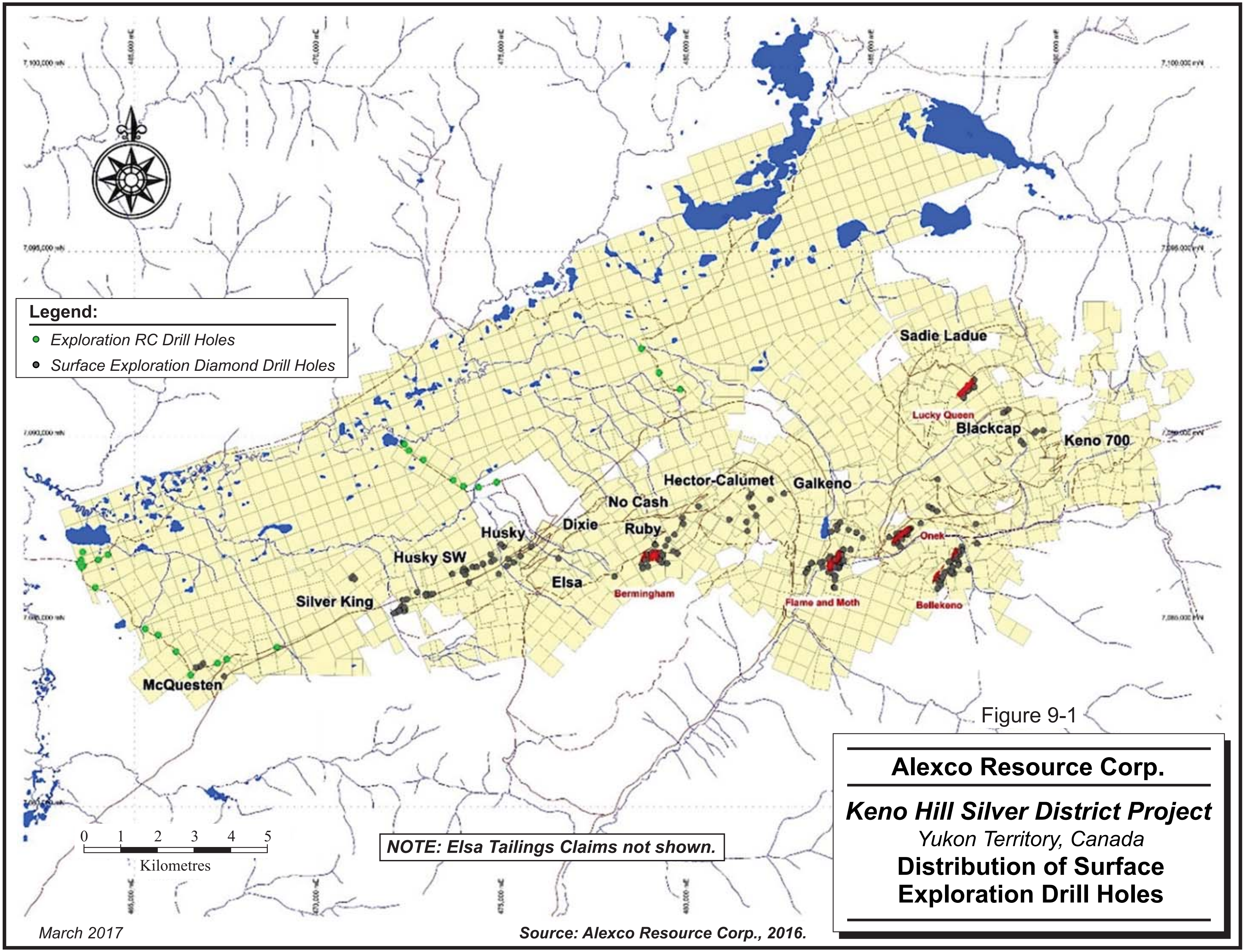


Figure 9-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Distribution of Surface Exploration Drill Holes

RPA

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In the Flame & Moth area exploration has extended beyond the central resource zone to the Flame West, Mackeno, and Northeast Flame areas, with the total drilling in the area comprising 41,528 m in 176 drill holes.

On Keno Hill, Alexco has completed a total of 1,494 m drilling in 10 holes on the Keno and Shamrock vein systems, with other exploration commenced at northeast of Onek and at Runer. In each of these locations results indicate that additional exploration work would be justified.

A district-wide surface geological mapping and structural study, started in 2007, has continued through the 2016 field season.

BELLEKENO EXPLORATION

A series of core drilling programs and geophysical surveys have been conducted on the Bellekeno deposit since 2006. The combined drilling programs have produced 43,936 m of drill core from 446 drill holes. Drill holes targeted mineralized zone extensions and were used to verify historical results and to estimate Mineral Resources.

Five surface core drilling campaigns since 2006 totalling 20,233 m delineated regions of the Bellekeno deposit and adjacent targets. Underground drill campaigns were initiated in 2009 with major targets including the Ram, Eureka, and the 48 vein systems, including the projected southwest 48 vein extension, known as the Thunder zone. In the post-mining period, modelling of the Bellekeno data has assisted in the development of a Keno district exploration model that has provided an understanding of the structural controls of mineralization.

EXPLORATION OF LUCKY QUEEN DEPOSIT

Drilling by Alexco in the Lucky Queen prospect area totalled four surface core drill holes (875 m) in 2006, targeting the vein structure below the southwest end of the historical workings and around the lowermost reaches of the internal winze.

Core drilling at Lucky Queen late in the season in 2007 consisted of three surface core drill holes (557 m), of which only one reached the target depth before inclement weather forced an end to the drilling season. In 2008, twelve surface core drill holes (2,999 m) were drilled as stepouts along the vein strike to the southwest. Closer spaced and infill drilling around the 2007 drill hole intercept was the focus of the 2009 (fourteen surface core drill holes for 3,048

m) and 2010 (fourteen surface core drill holes for 3,625 m) drill campaigns that formed the basis for the resource estimate.

Following rehabilitation of most of the 500 level in 2013, four underground core holes (211m) were drilled in 2012 outside of the resource area.

A district-wide surface geological mapping and structural study, started in 2007, was continued through the 2012 field season with findings incorporated into the Lucky Queen geologic model where applicable.

EXPLORATION OF FLAME & MOTH DEPOSIT

Field mapping by Alexco (McOnie and Read, 2009) identified the possible presence of northeast trending vein-faults thought to have displacement of approximately 450 m based on the offset of local stratigraphy. In conjunction with review of the past exploration results on the property, this led to the generation of drill targets with 3,986 m of drilling in 14 drill holes completed in 2010 that provided the Flame vein discovery hole (K-10-0264) intercepting 693 g/t silver over a 4.64 m interval (Alexco Press Release, February 16, 2011).

During 2010, a soil geochemical and a ground magnetic geophysical survey were also completed over the area. A further 32 drill holes for 7,150 m were drilled in 2011 with the results leading to the publication of the initial resource estimate (SRK, January 30, 2013). Follow up drilling of 43 drill holes for 8,753 m completed in 2012 supported a revised resource estimate (Alexco, 2013).

Drilling completed in 2013 (three holes, 1,257 m) extended the strike length of the mineralization for at least 220 m to the southwest to over 900 m. Several ground geophysical surveys undertaken in 2013 were not particularly successful in delineating the mineralization.

Drilling completed in 2014 (59 holes, 15,133 m) was largely designed to infill for resource estimation confirmation and explore along strike to the southwest, with a revised resource estimate published 28 April 2015 (SRK, 2015).

Initial portal development of approximately 20 m was completed in 2016, followed by 17 geotechnical underground drill holes along the proposed decline trace, for a total of 572 m.

EXPLORATION OF ONEK DEPOSIT

Drilling by Alexco on the Onek prospect in 2007 totalled thirteen surface core drill holes (2,803 m) targeting the down-plunge extension of the mineralization outlined in the historical workings. Twenty-nine surface core drill holes (5,127 m) were drilled in 2008 as infill and extension around the well-mineralized 2007 intercepts as well as targeting the historical resource blocks around the historical workings with a view to doing a new resource calculation. No work was completed in 2009, but renewed focus on Onek in 2010 saw twenty-five surface core holes (2,913 m) drilled with exploration success along strike to the southwest of the historical workings. Infill drilling around the newly identified mineralization to the southwest was completed in twelve surface core holes (1,138 m) in 2011. Two surface core holes (532 m) were drilled along strike to the southwest outside of the resource area in 2012.

A 220 m decline was driven towards the Onek deposit in 2012 and 2013 following the drilling of a single 237 m surface core portal cover hole. In 2013, twelve underground core holes (739 m) were drilled.

Detailed pit mapping at Onek was used in constructing the geological model.

EXPLORATION OF BERMINGHAM DEPOSIT

The first targets generated in the Bermingham area were drilled by Alexco in 2009, targeting the Bermingham vein at depth in the hangingwall of the Mastiff Fault below an area with an historic shallow open pit resource outlined where some unexplained silver anomalies existed. Results of this drilling were sufficiently encouraging to continue exploration in 2010 and 2011.

The results of the district-wide surface geological mapping and structural study have been used in conjunction with the drill results to resolve the stratigraphy and structural complications at Bermingham and to further refine vein targeting.

In 2010, a soil-gas survey was conducted along the Bermingham trend. This survey was completed over a 2,200 m long, by 175 m wide corridor stretching from Coral-Wigwam, over the Bermingham pit area, to the Townsite mine. An induced polarity and resistivity geophysical survey was conducted over the same area. As a result of these surveys some anomalies were identified on the Bermingham trend along strike southwest of the open pit workings that remain as future drilling targets.

Seventeen drill holes were completed in 2012 for 5,576 m, to identify southwesterly extensions of the vein system and to also investigate vein continuity to the northeast into the footwall of the Mastiff fault. As a result of this drilling the initial resource estimate for the Etta and Arctic Zones was completed (refer SRK, Aug 8, 2012)

Eight drill holes were completed in 2014 for 2,667 m, to establish continuity to northeastern extensions to the mineralization, and in 2015 a further eight drill holes were completed for 2,606 m essentially to follow up on a very high grade 2014 intersection on the Bermingham vein now correlated with the separate (splay) Bear vein.

Fifty drill holes were completed in 2016 for 17,371 m, to define the extent of the high grade Bear vein and to better understand the vein geometries and position of some post-mineral faulting known in the area. As reported later the drilling was completed to sufficient intercept spacing to allow a renewed resource estimate. In addition a deliberate strategy to identify the possible presence of a reverse dipping vein set was adopted in five drill holes for 1,729 m drilled to the northeast, and they confirmed the presence of the mineralized West Dipping vein.

10 DRILLING

TRENCHING

Limited historical trenching work was completed along vein strike extensions, with very limited assaying and little geological information was documented.

In 2013 Alexco completed a six trench program totalling 375 m on Galena Hill between the Bermingham and Hector-Calumet historic mines.

DRILLING

In 2006, core drilling was performed by Peak Diamond Drilling, based out of Courtenay, British Columbia, utilizing two skid mounted drill rigs, a LF-70 drill, and an EF-90 drill. Drilling employed the wireline method using N-size equipment (NQ2).

In 2007 and 2008, core drilling was performed by Quest Diamond Drilling, based out of Abbotsford, British Columbia, utilizing four skid mounted drill rigs, two LF-70 drills, and two LF-90 drills in 2007; and two skid mounted drill rigs, one LF-90, and one QD-4 drills in 2008. Drilling employed the wireline method using H-size equipment (HQ).

The 2009 surface drilling was performed by Kluane Drilling of Whitehorse, Yukon, utilizing two skid mounted KD-1000 drills. Drilling employed the wireline method using N- and H-size equipment.

Surface drilling in 2010 was split among three contractors: Cabo Drilling based in Surrey, BC, Kluane Drilling out of Whitehorse, Yukon, and Ensign Encore Drilling from Calgary, Alberta.

Boart Longyear, based in Calgary, Alberta, completed the 2011 to 2016 drilling programs using LF70, LF90 wireline drill rigs or a LX11 multipurpose RC/core drill rig. All core was recovered in PQ, HQ, and NQ sizes.

For all campaigns the drilling was well supervised, the drill sites were clean and safe, and the work was efficiently done. Diamond drill operational safety inspections were conducted on each drill rig at various times throughout the drilling programs.

Underground core drilling at Bellekeno, Lucky Queen, and Onek in 2009, 2010, 2011, 2012, and 2016 was completed in NQ or HQ core size by Boart Longyear utilizing skid-mounted LM90 diamond drill rigs.

Air rotary geotechnical/hydrological drilling programs completed at Flame & Moth and Bermingham in 2013 and 2016 were completed by Midnight Sun Drilling, based out of Whitehorse, Yukon, utilizing a Sandvik Marlin M5 Truck Mount rig.

Proposed surface drill hole collars were initially located using a hand held Garmin GPS device, with the completed collars being surveyed with either an Ashtech GPS device utilizing post-processing software or a Sokkia GRX1 RTK GPS.

All underground collars and drill stations were surveyed by underground surveyors (employed by Procon Mining & Tunnelling Ltd. or Alexco) using a total station survey instrument.

All coordinates are recorded in the Universal Transverse Mercator (UTM) NAD 83 Zone 8 map projection coordinate system. Downhole surveys are recorded using Reflex survey tools at regular intervals of between 15 m and 30 m depending on the hole location and geologic conditions.

Standard logging and sampling conventions are used to capture information from the drill core. Between 2006 and 2010 core was logged in detail using paper forms with the resulting data entered into a commercial computerized logging program either by the logging geologist or a technician. Since then all core logging data has been directly digitally entered to the geology database with data including comments captured in separate tables including:

- Lithology: rock type, including significant Fault or Mineralized vein-faults, and textural modifiers.
- Structure: type of structure and measurements relative to core axis.
- Mineralization to identify type and intensity of oxidation, metamorphic, hydrothermal, or disseminated phases, and abundance of veining.

- Alteration.
- Stratigraphy: units consistent with the surface mapping.
- Geotechnical: percentage recovery and rock quality determination and fracture intensity. Additional more detailed geotechnical data has been recorded from the Flame & Moth and Bermingham drilling.

Alexco systematically measured core bulk density (CBD) of mineralized material as well as basic rock types. Bulk density was measured using a balance and measuring the weight of core pieces in air and in water. The core weighted in water was not covered by wax or plastic film. Pulp bulk density (PBD) measurements were obtained by pycnometry on select assay intervals of mineralized zones for Alexco drilling by ALS Laboratories (ALS) and AGAT Laboratories (AGAT).

HISTORICAL DRILLING AT THE BELLEKENO MINE

Historical percussion and core drilling for the Bellekeno area extended from 1975 to 1996. Although all of the data has been compiled, sections are most likely incomplete.

Between 1975 and 1996, UKHM drilled four surface, and two underground percussion programs. These drill holes were logged, sampled, and assayed at four and five -foot intervals, respectively (1.22 m and 1.52 m). Originally, percussion drilling and sampling was undertaken to mitigate loss of vein material observed in coring programs. However, the nature of chip logging, recirculation of water and rock material within these types of drill holes are considered poor data sources for technical reports and were not used for the resource estimation.

Coring programs between 1986 and 1996 were drilled from underground totalling 4,944 m across 60 drill holes under UKHM. Drill holes were drilled with BQ and NQ bits, but generally resulted in moderate to poor recovery in areas where foliation and stratigraphy were subparallel to the core angle, heavily fractured, and or friable material was encountered. Drill holes were generally designed to test for the downward extension of the 99 zone, and smaller programs for the Southwest and East zones, as illustrated in Figure 10-1.

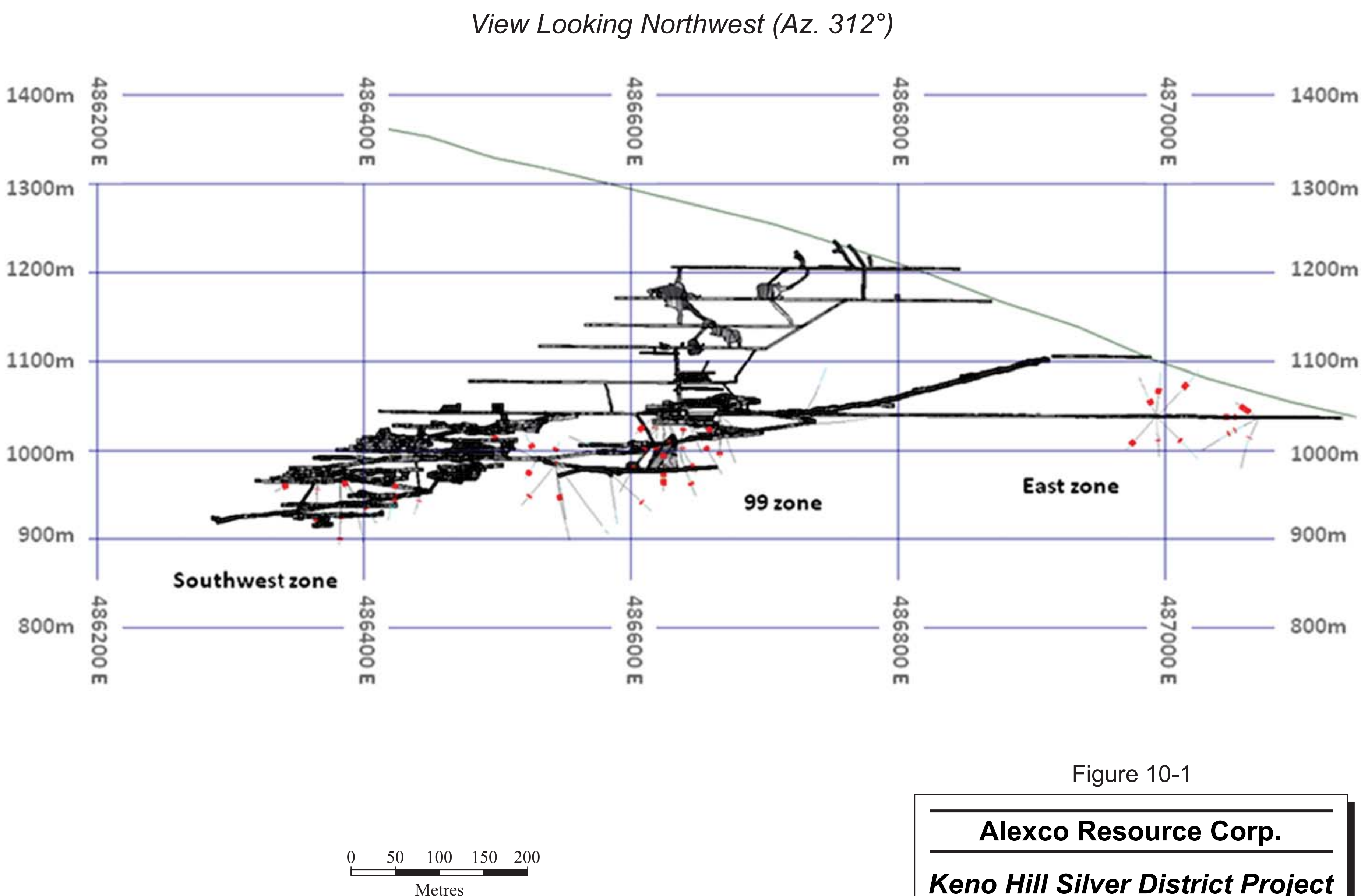


Figure 10-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno Mine Long Section, 1986 - 1996 UKHM Core Drill Holes

March 2017

Source: SRK Consulting, 2013.

www.rpacan.com

Archived drilling data and procedures were briefly reviewed by G. David Keller, P.Geo., of SRK as part of the updated PEA technical report issued by Wardrop in 2009. As part of this review, Mr. Keller discussed the drill core sampling procedures with UKHM staff active during the mining operations at Bellekeno. The drilling procedures were deemed reasonable based upon the limited information available (Wardrop, 2009), and thus considered reliable for geologic interpretation and resource calculations.

2006–2013 ALEXCO DRILLING AT THE BELLEKENO MINE

A total of 43,784 m of drilling from both surface and underground (excluding service holes) was completed at the Bellekeno deposit between 2006 and 2013 (Table 10-1).

TABLE 10-1 2006 TO 2013 BELLEKENO PROPERTY CORE DRILLING SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

Year	No. of Drill Holes	Length (m)
Surface Drilling		
K-2006	9	3,728
K-2007	37	11,063
K-2008	2	782
K-2009	17	2,729
K-2010	5	1,559
Total	**70**	**19,861**
Service	**1**	**230**
Underground Drilling		
2009	135	7,718
2010	49	4,938
2011	89	4,610
2012	64	4,520
2013	36	1,907
Total	**373**	**23,693**
Total Drilling	**444**	**43,784**

An aggressive core drilling program by Alexco began in 2006 to confirm and test the 1997 historical mineral inventory and block model, as well as to extend the known mineralization for the 2009 PEA of the Bellekeno resource. Between 2006 and 2009, 200 drill holes of HQ and HQ3 size were drilled resulting in 25,967 m focussed on the 48 and 49 vein structures from underground and surface platforms. The drill core sampling and logging procedures were reviewed, and later compared against the UKHM drilling programs, and active mining. The larger core diameter, along with triple tube chambers helped to limit core loss in the vicinity of the vein, but did not fundamentally change core recovery. Drill core programs, surveying, and sampling procedures were considered reliable for geological modelling and Mineral Resource estimation.

More recent core drilling on the Bellekeno property has focused on resource definition, and to a lesser degree exploration programs. The underground drilling programs included infill, geotechnical, and exploration targets between 2010 and 2013. Surface drill holes are illustrated in Figure 10-2, while underground core drill hole traces are shown in Figure 10-3. Drilling procedures and results were reviewed and considered reliable for geologic interpretations and resource calculations.

During 2010, five surface core drill holes were drilled (1,599 m): two drill holes on the southern offset of the 48 vein structure, and three drill holes to the north of the 99 zone. The drill holes ranged in length from 124 m to 615 m, generally oriented northwest to southeast, with a declination between -55° and -72°. These orientations provided drilling intercepts almost perpendicular to the vein structure strike and resulted in vein intercepts that are as close as possible to true thickness. Downhole surveys were generally taken every 30 m, using a Reflex downhole survey tool.

Underground core drill holes were drilled almost continuously from 2010 through 2013. During this time, 238 drill holes were drilled with completed lengths between 12 m and 285 m. Resource infilling drill holes were typically targeted on 15 m centres, while larger step outs of 25 m and 50 m were more common on exploratory drill holes. Attempts were made to intersect the vein structures at orientations that would provide intercepts close to true thickness. Orientations generally ranged from northwest to southeast, with declinations between +65° and -55°, as depicted in Figure 10-3. Resource definition drill holes were generally drilled on a 15 m dice pattern, while geotechnical and stratigraphic drilling targets were placed as required. This drilling pattern is considered operationally feasible and an accurate strategy for resource estimations given the heterogeneity over the vein composition. A summary of core recovery by year is summarized in Tables 10-2 and 10-3.

TABLE 10-2 SUMMARY OF SURFACE AND UNDERGROUND CORE RECOVERY STATISTICS 1996–2009
Alexco Resource Corp. – Keno Hill Silver District Project

	Core Recovery		NQ	HQ
Zone	%*	%**	Intervals	Intervals
East	81	83	5	0
99	67	75	30	5
SW	79	88	45	13
Average	76	83	Sum 80	18

* NR Zones are treated as 0% recovery
** NR Zones are excluded

TABLE 10-3 SUMMARY OF UNDERGROUND CORE RECOVERY STATISTICS 2009–2012
Alexco Resource Corp. – Keno Hill Silver District Project

	Core Recovery (%)			
Headings	2009	2010	2011	2012
East Zone				
Number	14	3		
Average	67	21		
Min	24	2		
Max	91	34		
99 Zone				
Number	44		13	20
Average	72		58	62
Min	44		26	36
Max	89		99	86
Southwest Zone				
Number	64	27	53	4
Average	80	73	62	80
Min	25	16	36	74
Max	98	98	86	84

Vein heterogeneity and moderate to poor vein recovery during drilling has been overcome by the incorporation of chip data into the geological model. An example of vein heterogeneity is illustrated in Figure 10-4.

View Looking Northwest (Az. 312°)

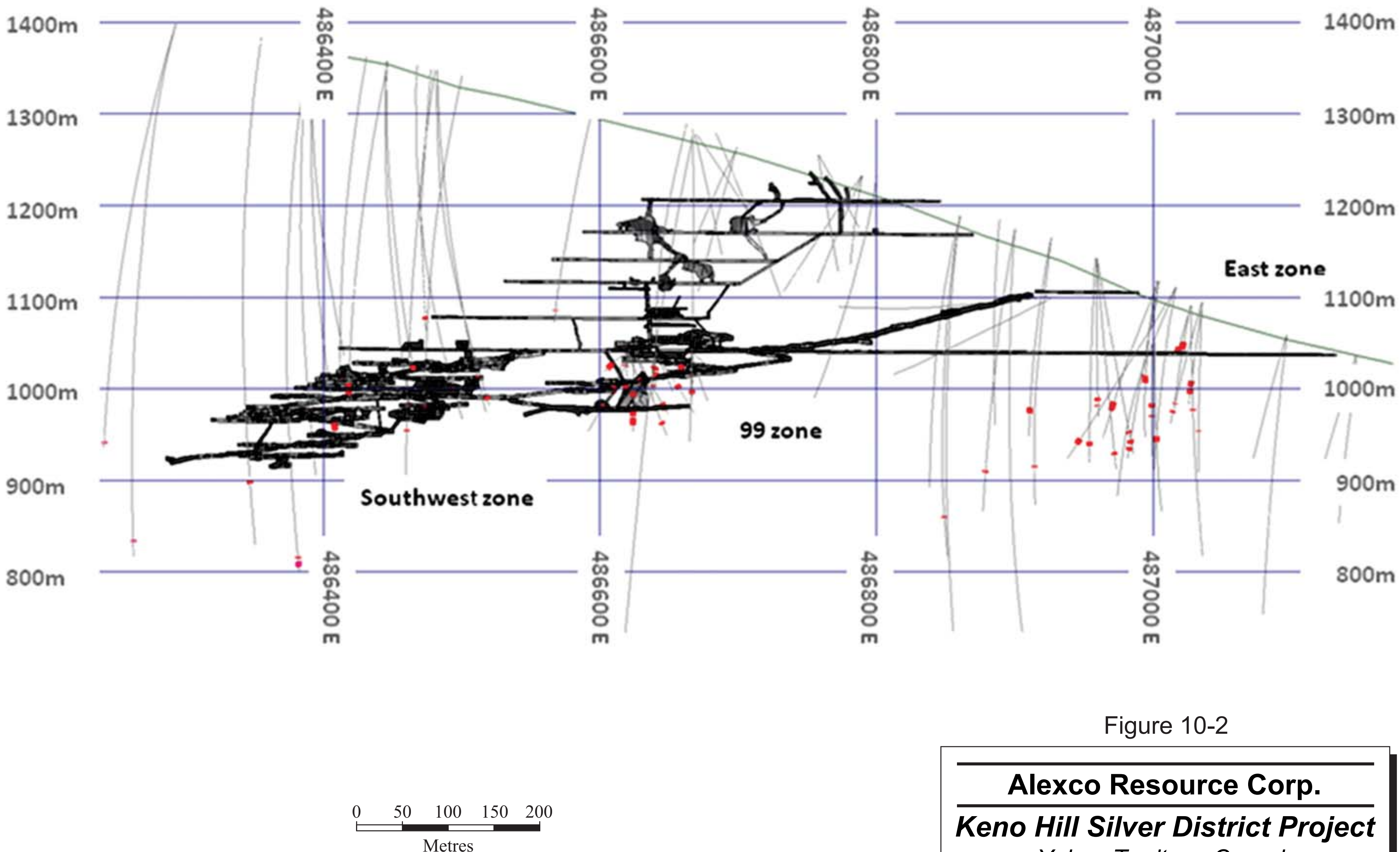


Figure 10-2

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno Mine Long Section, Surface Core Drill Holes, 2006 - 2013

March 2017

Source: SRK Consulting, 2013.

View Looking Northwest (Az. 312°)

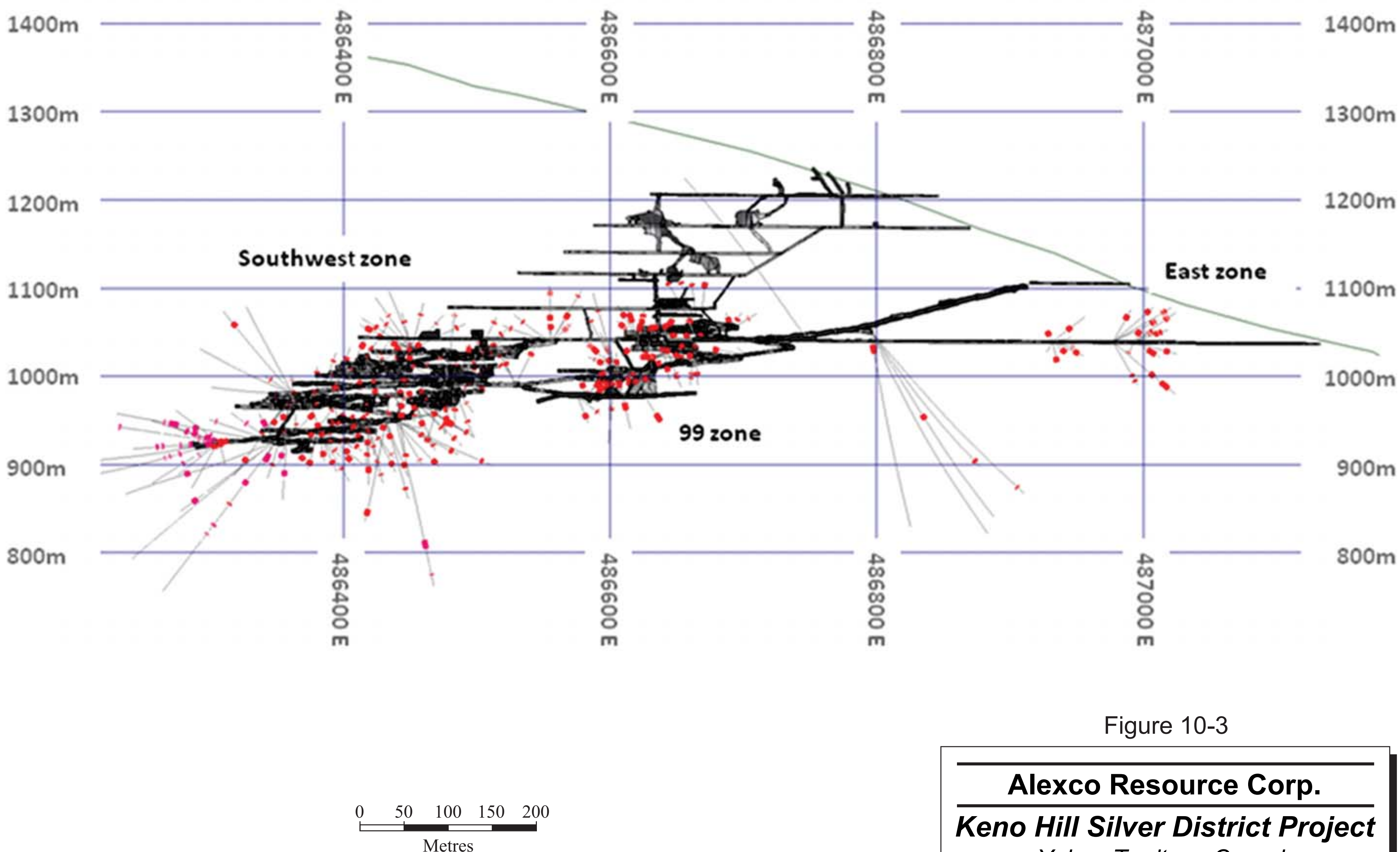


Figure 10-3

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno Mine Long Section, Underground Core Drill Holes, 2006 - 2013

March 2017

Source: SRK Consulting, 2013.

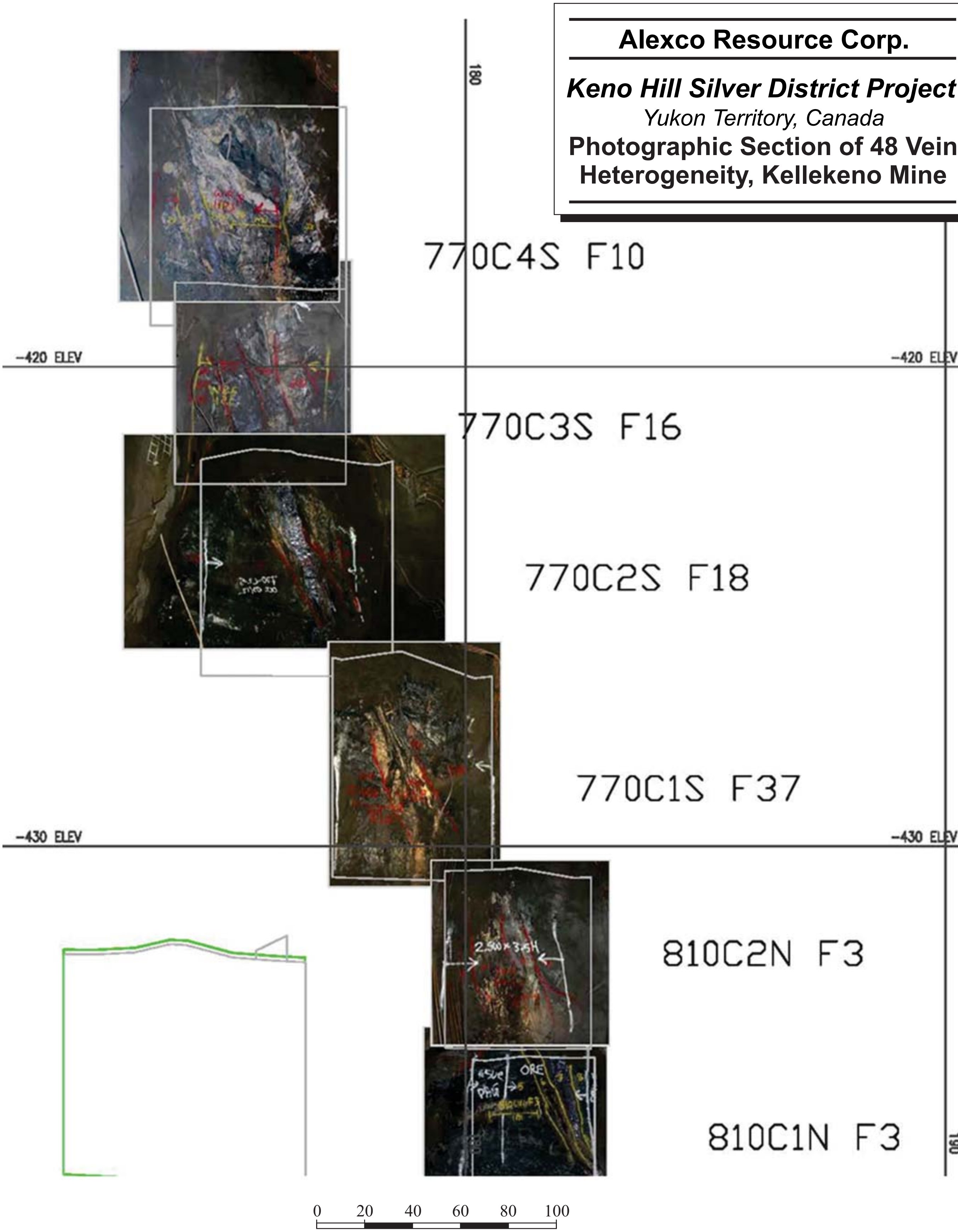
Figure 10-4

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Photographic Section of 48 Vein Heterogeneity, Kellekeno Mine



March 2017

Source: SRK Consulting, 2013.

HISTORICAL DRILLING AT LUCKY QUEEN

For the Lucky Queen area, historical drilling information is available from the 1950s through the 1980s.

In 1957, UKHM drilled two surface core drill holes (Lucky Queen2 and Lucky Queen4) that intercepted the main Lucky Queen structure below the existing 300 level workings; however, core recovery was very poor. For example, across a 50.90 m interval (from a depth of 156.06 m to 206.96 m in drill hole Lucky Queen4), in the approximate vicinity of the vein, recorded recovery averaged only 22%. The fractured, friable nature of vein material makes its retrieval very unlikely given the already poor recovery conditions. No assays exist for drill holes Lucky Queen2 or Lucky Queen4 because vein material was either not intercepted or was not recovered and, thus, assaying was likely deemed unnecessary. In addition, survey control for these drill holes is sparse. For the above reasons the historical surface core drilling data was not used in the Lucky Queen resource estimate.

In 1985–1987, UKHM drilled underground test drill holes from the Lucky Queen 500 level adit. These percussion drill holes were sampled and assayed at 4 ft intervals. Percussion drilling does not present reliably the accurate location of a sample. No recovery data was obtained by UKHM. On this basis, historic assays were not used in this resource estimate. The test drill holes did provide some useful geological information and were used to help constrain the geometry of the main Lucky Queen structure and associated splay structures during wireframe construction.

Shallow, rotary percussion surface drill holes were also drilled in the Lucky Queen area in the 1970's through 1980 totalling approximately 20,400 m in 507 drill holes. As with the underground rotary percussion drill holes, these data were not deemed reliable for Mineral Resource estimation. The data were used in select geostatistics (variography) and in construction of mineralization and geological models, where applicable.

2006 – 2012 ALEXCO DRILLING AT LUCKY QUEEN

Alexco conducted surface core drilling programs at Lucky Queen from 2006 to 2010 with 47 core drill holes totalling 11,105 m drilled (Figure 10-5). The drilling was designed to test along strike and down-plunge of the historical workings.

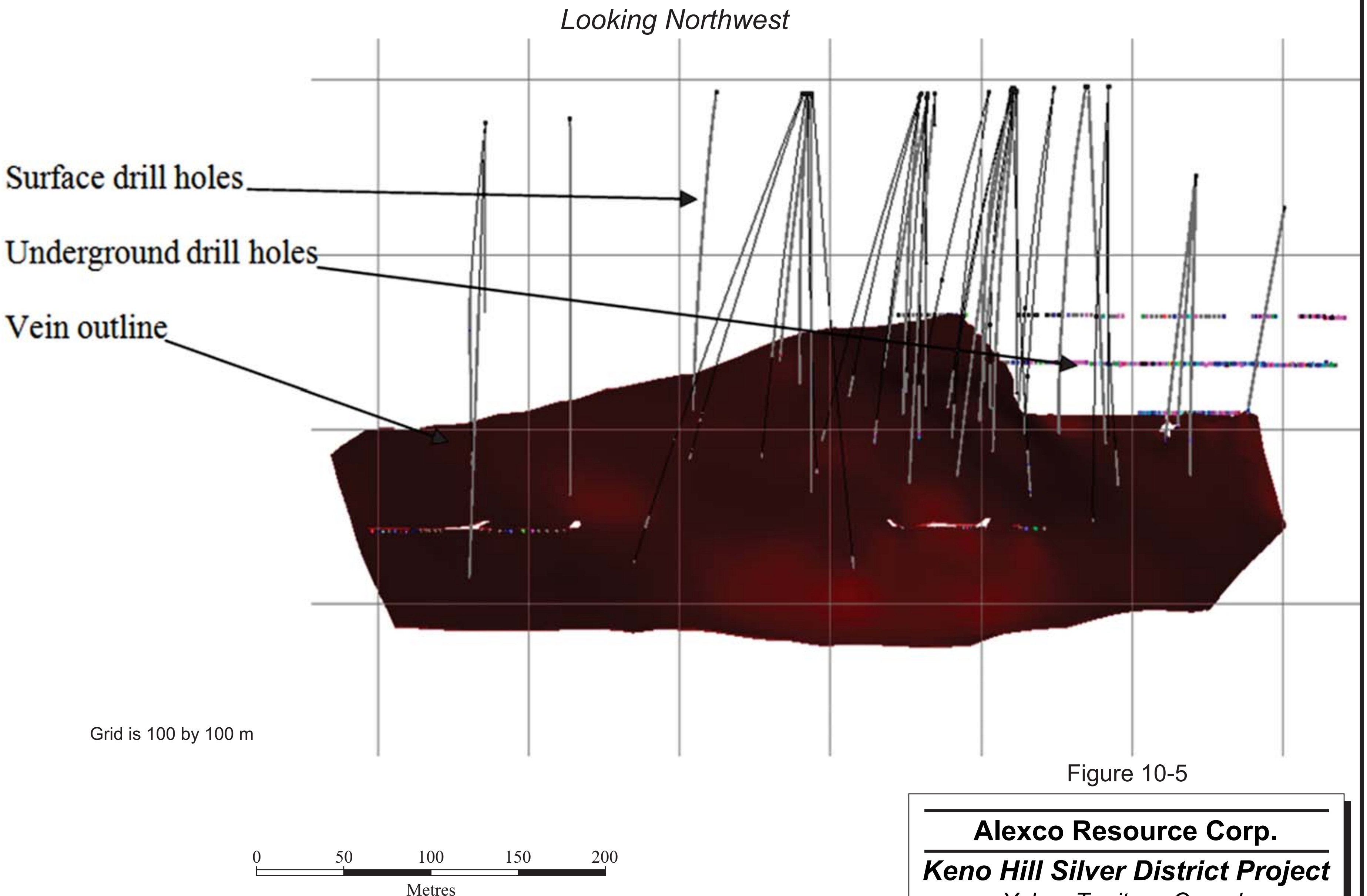


Figure 10-5

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Location of Surface Drill Holes Drilled from 2006 to 2010 at Lucky Queen

March 2017

Source: SRK Consulting, 2011.

Surface drill holes ranged in length from 18 m to 324 m, averaging 235 m. Most drill holes were drilled on a northwest azimuth with a declination of between 45° and 80°. In most cases, the drill holes were designed to intercept the mineralized zones perpendicular to the strike direction to give as close as possible a true thickness to the mineralized interval. Downhole surveys were taken approximately every 60 m in 2006, 30 m in 2007 and 2008, and 15 m in 2009 and 2010 using a Reflex survey tool.

Drilling was designed to have a regular grid pattern with vein pierce point spacing on the order of 20 m to 30 m.

Following rehabilitation of most of the 500 level, four underground core holes (210.50 m) were drilled in 2012 outside of the resource area.

HISTORICAL DRILLING AT FLAME & MOTH

Historical drilling at Flame & Moth was predominantly shallow surface percussion overburden drill holes with 133 overburden drill holes totalling 4,044 m drilled on an average azimuth of 320°. Nine core drill holes totalling 731 m were drilled from surface and thirteen drill holes totalling 193 m were drilled from underground. Core recovery was generally poor, particularly in mineralized zones, which were the only intervals assayed.

Due to recovery issues for the historical core drill holes, lack of careful sampling techniques, and the open-hole nature of the percussion drilling, drilling data from these programs were not deemed reliable for use in the Mineral Resource estimation, although the data were used in the construction of geological models where applicable.

2010 – 2016 ALEXCO DRILLING AT FLAME & MOTH

Alexco conducted surface core drilling programs within the resource area at Flame & Moth in 2010, 2011, 2012, 2013 and 2014, for a total of 151 holes for 35,244 m in the area wireframe modelled (Figure 10-6) for resource estimation. The exploration drilling was initially designed to test geologically derived targets in the vicinity of the historical Flame & Moth workings. Following new discoveries, additional drilling was successful in outlining two zones of silver-lead-zinc mineralization on the Flame vein that were offset by the post-mineral Mill fault. Sufficient density of drilling has been completed to support Mineral Resource estimation.

Looking North-Northwest

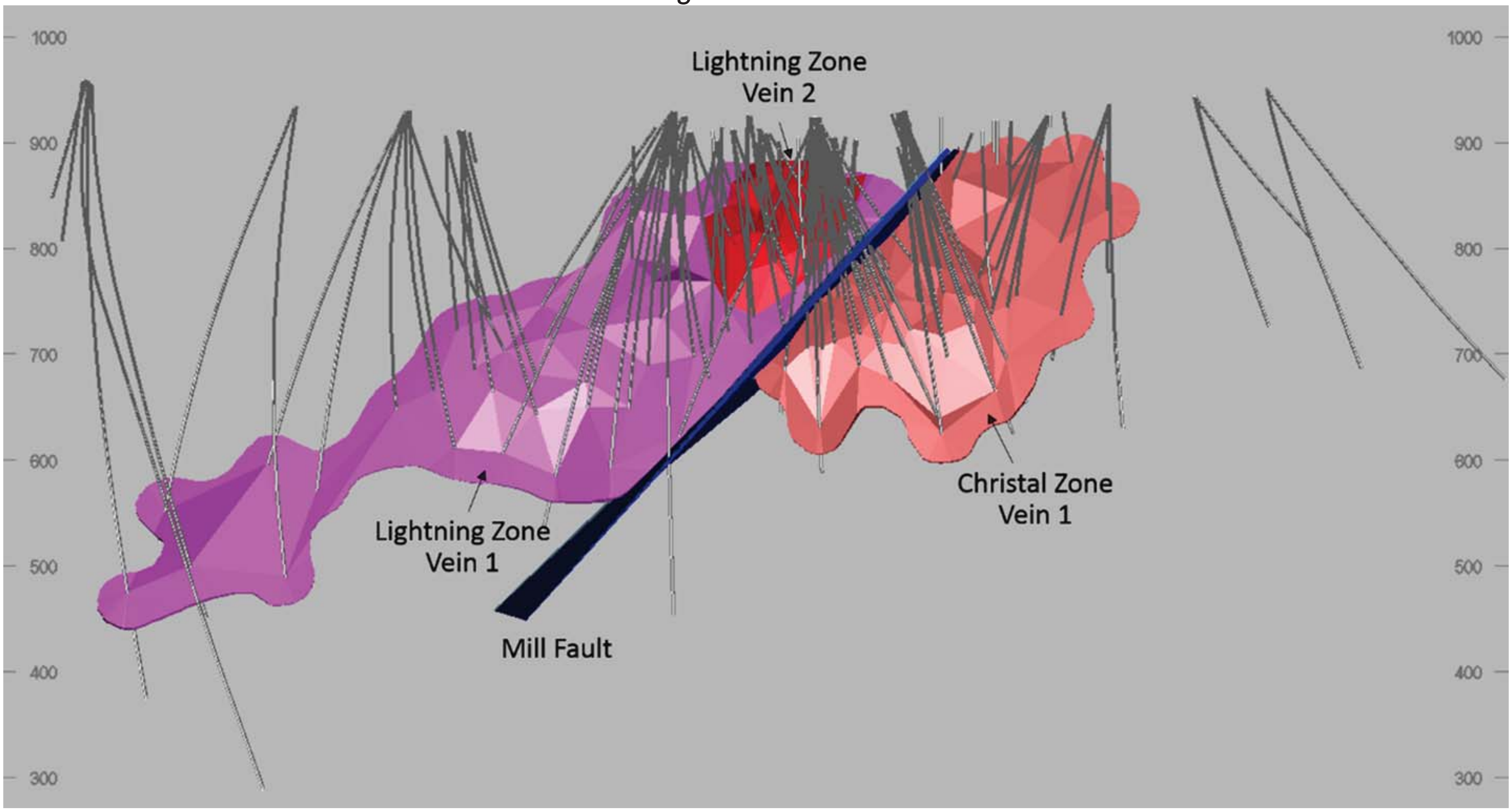


Figure 10-6

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Location of Surface Drilling from 2010 to 2014 at Flame & Moth Used in Resource Estimation

0 50 100 150 200
Metres

March 2017

Source: Alexco Resource Corp., 2016.

In 2010, 14 drill holes were collared to target the structure identified by surface mapping. After losing the first drill hole in deep overburden, 11 other drill holes intercepted silver-lead-zinc mineralization that defined a mineralized structure striking 025° and dipping 62° southeast (Christal Zone). One drill hole that was drilled furthest to the southwest, encountered mineralization much deeper than anticipated and implied a right lateral fault offset of the structure. In total, thirteen drill holes were drilled to target depth in 2010 for a total of 3,974 m.

In 2011, 32 drill holes were collared; however, eight were lost or abandoned. The majority of these drill holes targeted the up-dip extension of the mineralized vein located in the hangingwall of the Mill fault (Lightning Zone) located in the 2010 drilling campaign. In total, 24 drill holes were completed to target depth for a total of 6,708 m.

In 2012, 43 drill holes were collared to infill and extend the initially defined resource. Of these four were abandoned. About half of the drill holes targeted the upper part of the Lightning zone not previously drill tested, while the remaining drill holes were drilled in the lower and southwestern part of the Lightning Zone and various infill areas in the Christal Zone. In total, 39 drill holes were drilled to target depth in 2012 for a total of 8,610 m.

In 2013, eight drill holes were completed outside the resource area for a total of 1,835 m to better define the upper part of the Christal Zone and the southwest extension of the Lightning Zone. Three air rotary holes were also drilled for hydrogeological purposes, for a total of 624m.

In 2014, 59 drill holes were collared in and around the Flame area, of which nine were abandoned. A total of 46 drill holes were designed to infill in the Christal and Lightning Zones and follow the southwest extension of the Lightning Zone. Three drill holes were used to define the overburden depth over a potential decline location. Another ten drill holes were testing nearby vein targets and geophysical targets. In total, 50 drill holes were drilled to target depth in 2014 for a total of 14,560 m.

In 2016, following the initial development of the Flame portal, 17 underground drill holes were drilled along the proposed decline trace, for a total of 572 m.

Surface core drill holes in the Mineral Resource area that were drilled to target depth ranged in length from 38 m to 715 m. Most drill holes were drilled on a northwest azimuth with a declination of between 45° and 90°. In most cases, the drill holes were designed to intercept the mineralized zones perpendicular to the strike direction to give as close as possible a true thickness to the mineralized interval. Drill hole spacing is in the order of 25 m to 60 m, with a closer spaced grid pattern in the core of the higher grade Mineral Resource areas.

HISTORICAL DRILLING AT ONEK

Historical core drilling at Onek is limited to 10 short, underground, horizontal drill holes. The holes were drilled at various azimuths and did not include downhole surveys. Drill recovery was generally poor, particularly in mineralized zones, and core assays were restricted to well-mineralized zones.

Short, open-hole, underground test holes and percussion holes were commonly drilled during development of the underground workings. Shallow, open-hole, surface percussion drilling was also done in the Onek area, mainly during the 1970s, totalling approximately 13,000 m in 319 holes.

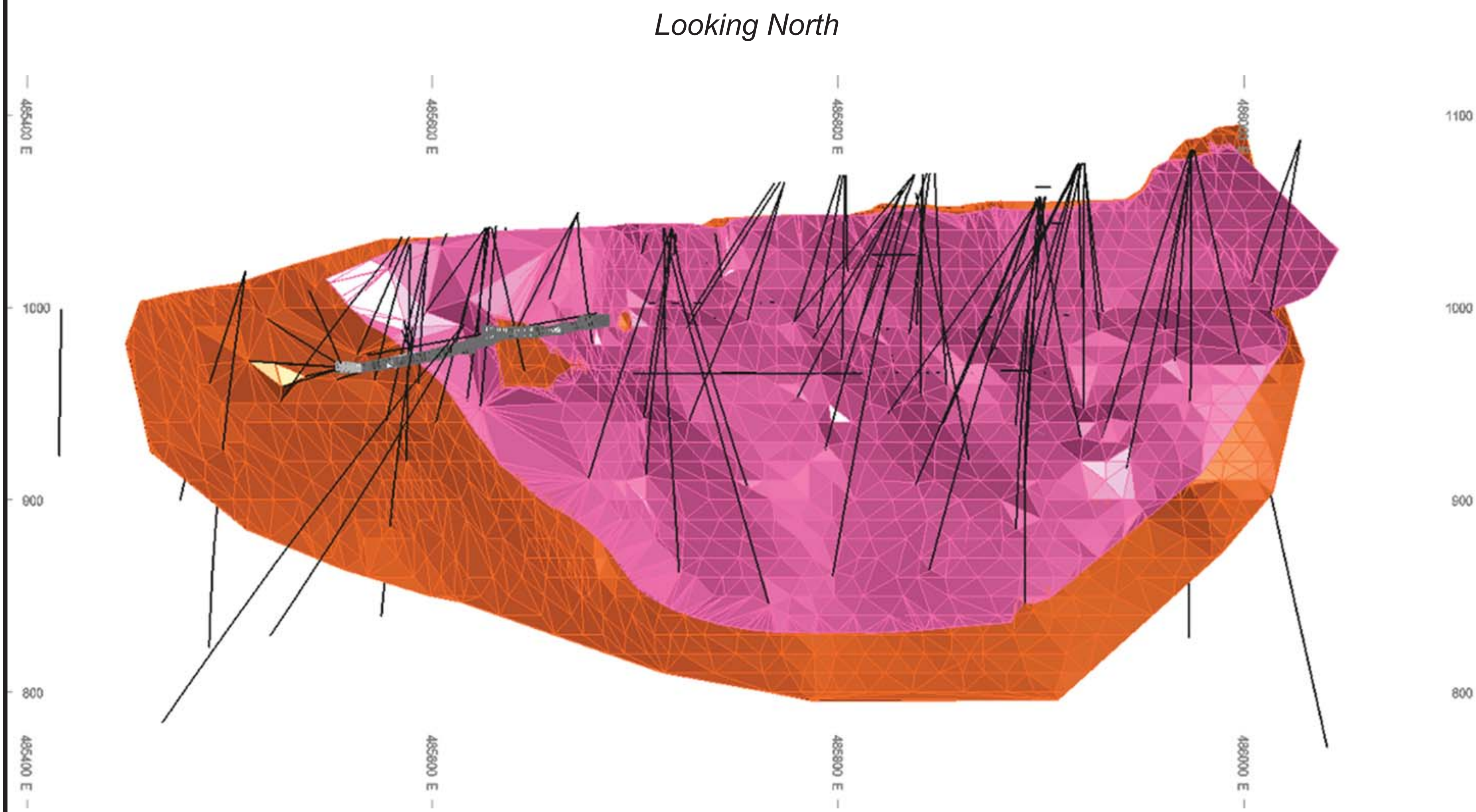
Due to recovery issues for the core holes, lack of careful sampling techniques, and the open-hole nature of the test/percussion, drilling data from these programs was not deemed reliable for use in the resource calculation. The data were used in select geostatistical analyses (variography) and in construction of mineralization/geologic models, where applicable.

2010–2014 ALEXCO DRILLING AT ONEK

Alexco conducted surface diamond drilling programs at Onek in 2007, 2008, 2010 and 2011 with seventy eight core holes in the resource area totalling 11,981 m drilled (Figure 10-7). The drilling was designed to confirm and test historic reserve/resource blocks and extend known mineralization along strike and down plunge in order to produce a robust geological model and new resource calculation in keeping with current standards.

Two surface core holes (531.98 m) were drilled along strike to the southwest outside of the resource area in 2012.

A 220 m decline was driven towards the Onek deposit in 2012 and 2013 following the drilling of a single 236.77 m surface core portal cover hole. In 2013, twelve underground core holes (975 m) were drilled.



0 50 100 150 200
Metres

Figure 10-7

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Location of Surface and Underground Drilling from 2007 to 2013 at Onek

March 2017

Source: Alexco Resource Corp., 2014.

HISTORICAL DRILLING AT BERMINGHAM

Historical core drilling at Bermingham in the resource estimation area is limited to 16 core drill holes dating from 1969. The holes were drilled at an average azimuth of 323° and did not include downhole surveys. The average hole length was approximately 80 m with several holes ranging up to 146 m. Drill recovery was generally poor, particularly in mineralized zones, and core assays were restricted to well mineralized zones.

A small portion of the 874 shallow, open-hole, surface percussion drill holes completed historically in the Bermingham area were focussed on the present resource area, first as vertical holes in a grid pattern on approximately 30 m centers followed later by a definition drill program of inclined holes along strike of the vein to define an open pit target.

Due to recovery issues for the core holes, lack of careful sampling techniques, and the open-hole nature of the percussion drilling, drilling data from these programs was not deemed reliable for use in the resource calculation. The data were used in construction of mineralization/geologic models, where applicable.

2009–2016 ALEXCO DRILLING AT BERMINGHAM

Alexco conducted surface diamond drilling programs at Bermingham between 2009 and 2011 with 34 core holes totalling 9,691 m drilled (Figure 10-8). The drilling was designed to test along strike and down plunge of historic near surface reserve/resource blocks, open pit workings, and around the historic underground mine workings. Drilling was successful in outlining an area of silver-lead-zinc mineralization developed in the hangingwall of the Mastiff fault such that a new resource estimate could be completed in keeping with current standards. Of the 34 holes drilled in the area, 23 totalling 6,442 m were used in the resource estimate.

Alexco drilled two core holes in 2009, for a total of 523 m, which were designed to test the Bermingham vein at depth in the hangingwall of the Mastiff fault. Silver-lead-zinc mineralization encountered in both holes was deemed significant enough to warrant follow-up drilling the next year. Thus, in 2010 nine core holes totalling 3,046 m were completed, of which six intercepted the Bermingham vein, one was abandoned due to bad ground and one missed the target due to unforeseen structural complexity. Re-interpretation of the data at this time led to the recognition of a subparallel second vein, referred to as the Aho vein located in the hangingwall of the Bermingham vein.

Encouraging assays led to an expanded 2011 drill program with 23 holes completed for a total of 6,122 m. Of this, 3,217 m (13 holes) drilled in the hangingwall of the Mastiff fault were largely used to explore and infill in the vicinity of the 2009 and 2010 drilling. The additional data obtained from this drilling necessitated interpretation of a third vein structure developed in the footwall of the Bermingham vein that is referred to as the Bermingham Footwall vein. As well, nine holes (2,466 m) were drilled in the footwall of the Mastiff fault (Arctic Zone); partly to find and test the intersection of the Bermingham and Aho veins as this structural configuration was thought to control the mineralization observed in the Mastiff hangingwall zone. Two of these holes were abandoned due to poor ground conditions. Two holes (766 m) were drilled to locate the continuation of vein structures to the northeast several hundred metres from the next nearest hole.

In 2012, 17 drill holes totalling 5,576 m were completed. One 314 m long hole was drilled to follow up on 2011 drill holes which encountered fault structures carrying anomalous silver values to the northeast of Bermingham. As a result, the strike length of the Aho vein was extended 440 m in this direction. Nine holes totalling 2,978 m were drilled in the Arctic Zone in the footwall of the Mastiff fault to outline and extend mineralization encountered in this zone during 2011 drilling. One of these holes had to be abandoned due to poor ground conditions before reaching target depth and another missed the target vein due to fault complexity. The seven holes that successfully intercepted the Bermingham structures demonstrated the continuity of strong mineralization along a strike length of more than 200 m. Intercepts included 52.7 oz/ton Ag over 4.04 m true thickness and often contained pyrargyrite and/or native silver. Mineralization remained open along strike to the northeast and at depth. Four holes totalling 1,798 m were drilled 200 m to the southwest of the resource area (SRK, 2012) and targeted possible extensions of the Etta Zone. A vein structure was encountered in all four holes but silver values were low grade.

In 2014, eight core holes were drilled for a total of 2,668 m, with four of these (1,192 m) drilled in the immediate footwall of the Mastiff fault (Arctic Zone) to allow for resource estimation. Four more holes (1,476 m) were drilled to the northeast of this area to expand and infill around a well mineralized Bermingham vein intercept in drill hole K-12-0477. All four holes intersected the Bermingham vein-fault, with one (K-14-0537) returning a composite assay of 6,118 g/t (197 oz/ton) Ag over 5.81 m true thickness that on reinterpretation is now referred to as the Bear vein.

Eight core holes were drilled in 2015 for a total of 2,605 m. All eight were targeted to extend mineralization around the high grade intercept in drill hole K-14-0537 and all holes reached target depth. Four of these holes intercepted similar grades to K-14-0537 and defined a steeply plunging shoot.

Fifty drill holes were completed in 2016 for 17,371 m, primarily to define the high grade Bear vein that ranges in true width up to 6.4 m at 182 ounce per tonne ("oz/t") silver (K-14-0537) and in grade up to 240 oz/ton Ag over 5.0 m true width (K-15-0580). The zone has now been traced over a down-plunge extent of 270 m (over a vertical range of 230 m) and a plunge width of up to 100 m, with the top of the deposit being approximately 160 m below surface and has obtained sufficient intersections for resource estimation. Deeper exploration drilling was also initiated to obtain information on the mineralized structures located in the more competent stratigraphy as inferred to host the nearby Hector-Calumet deposit.

To date the Interpretation of the consolidated drilling results has identified four mineralized veins that splay and change orientation along strike within the north-northeast striking and moderately to steeply southeast dipping Bermingham vein-fault structural corridor. This structural corridor is divided into the Etta Zone in the hangingwall of the post-mineral Mastiff fault and the Artic Zone in its footwall. The main through-going Bermingham and Bermingham Footwall veins occur in both the Etta and Arctic zones, while the Bear vein and associated newly identified conjugate West Dipping vein set (confirmed by drilling at an orientation 180º from that undertaken to explore the normal southeast dipping vein sets) occur only within the Arctic Zone in a position controlled by a flexure in the Bermingham vein-fault.

Surface drill holes in the resource area that were drilled to target depth ranged in length from 203 to 469 m. Most holes were drilled on a northwesterly azimuth with a declination of between 50° and 80°. In most cases, the drill holes were designed to intercept the mineralized zones perpendicular to the strike direction to give as close as possible a true thickness to the mineralized interval. Downhole surveys were taken at approximately 15 m to 20 m intervals using a Reflex survey tool.

Two air rotary holes were drilled in 2016 for hydrogeological purposes.

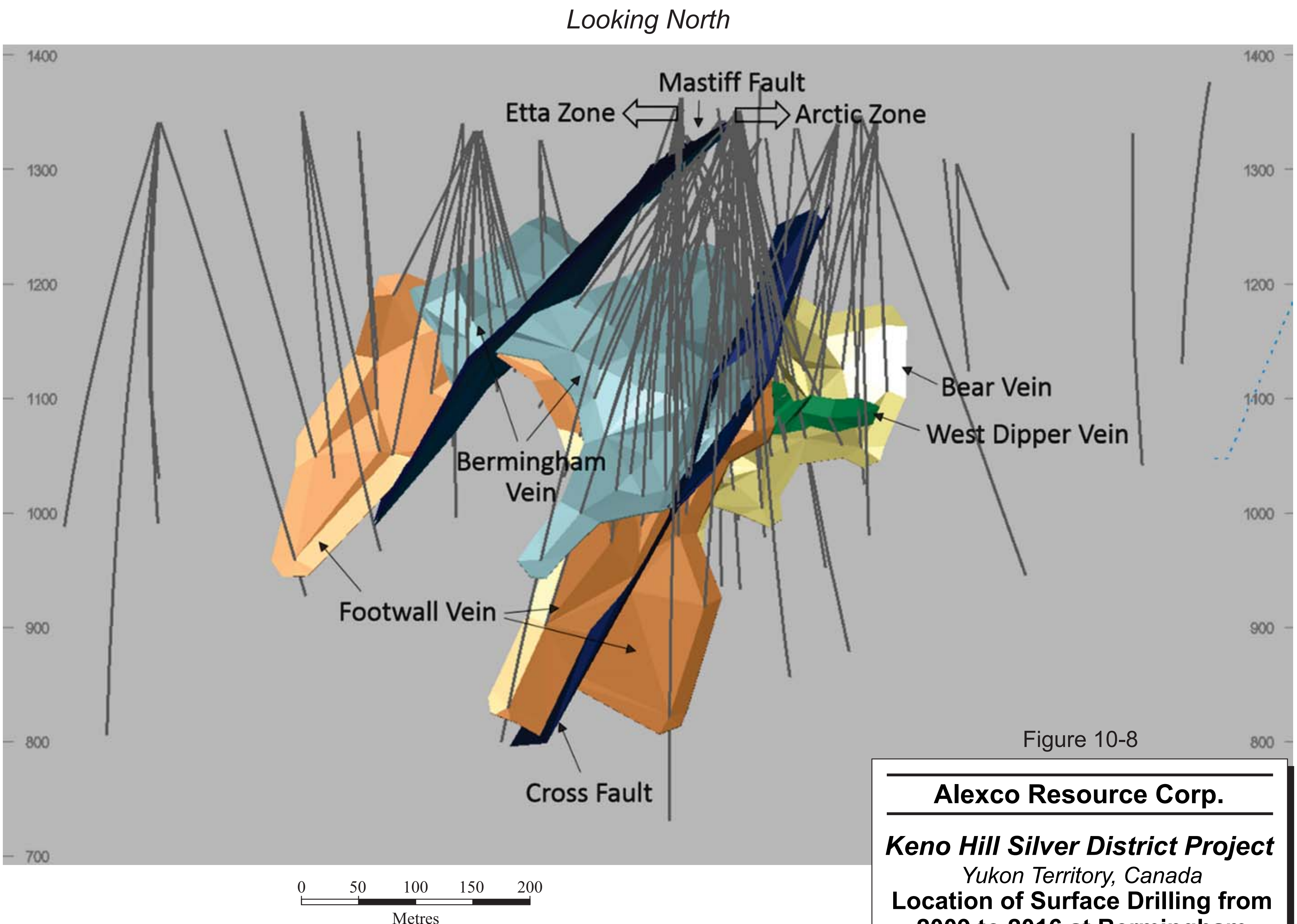


Figure 10-8

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Location of Surface Drilling from 2009 to 2016 at Bermingham

March 2017

Source: Alexco Resource Corp., 2016.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

SAMPLE PREPARATION AND ANALYSES

HISTORICAL SAMPLING (PRE-ALEXCO)

Information regarding historical (pre-Alexco) sampling approach and methodology is limited. The available documentation is outlined below.

A 1965 UKHM document outlines the sampling procedures for a newly purchased percussion drill. It was found that in most cases the frozen ground gave sufficient support for the drill hole without additional casing. In a few cases where the ground was not frozen, casing was advanced with the drill bit.

Drill cuttings were collected using a locally designed cone-shaped deflector with a catch pan shaped to fit around the casing. During drilling operations, cuttings were blown upwards between the drill rod and the casing, where they hit the deflector and were caught by the catch pan. Runs were 5 ft (1.5 m) in length, and provided 10 lb to 15 lb of sample material. At the end of each shift, several hundred grams were split from each sample in the geochemical laboratory; the remainder of the sample material was screened to -14 mesh. Constituents of the fine and coarse fraction were identified separately.

A document dated 1994 by Watts Griffiths and McQuat (WGM) outlines sampling procedures for the reverse circulation drilling. Two samples were to be collected for each 5 ft interval. One sample was sent to the laboratory while the other sample stayed at the drill for reference. The samples were collected in porous plastic bags and were dried prior to analysis. The document stresses cleanliness during the sampling procedure in order to avoid contamination.

An undated UKHM document outlines underground chip sample procedures as well. In addition to the above information, emphasis is put on clean faces in order to prevent sample contamination from previous blasting activities. Samples were to be taken within a 1.5 ft (0.5 m) wide area across the rock face. In addition to separate samples per rock type, this undated document requires separate samples for a change in structure. The sample location was to be measured from the nearest survey station; the resulting distance measurement was used to plot the samples (and assay results) on level plans. More detailed information was listed regarding the direction in which samples were to be taken for various kinds of underground openings.

ALEXCO CORE DRILLING SAMPLING - EXPLORATION PROGRAMS (2006–2016)

The sampling protocol has remained relatively unchanged for the 2006–2016 surface and underground drill programs conducted by Alexco.

Core logging and sampling is completed by Alexco staff, where a logging geologist marks the sample intervals and cutting orientation normal to veins on the core. After logging, the core is digitally photographed and sawn in half lengthwise using a diamond saw where possible and for broken core it is manually split in half. One half is returned to the core box for storage at the site and the other bagged for sample shipment. No further on-site processing is performed.

Samples are typically two metres in length within major rock types. Sample intervals are broken at lithological contacts and at significant mineralization changes, and where identified, exclude zones of no recovery. Sample intervals within mineralized zones range from 0.10 to 1.0 m, based on consistency of mineralization. In initial work at the prospects, drill holes are sampled top to bottom. However, once a considerable body of geochemical data was available and the nature and distribution of the mineralization better understood, some intervals of barren material are not sampled where in close proximity to adjacent drill holes that has been sampled continuously.

Some minor modification in the sample shipment procedure has occurred over time, primarily in response to changing laboratory locations and the logistics surrounding available commercial transport. In all cases, approximately four to five individual samples are placed in rice bags (grain sacks) for shipment.

In 2006, samples were sent to Whitehorse, Yukon via Kluane Transport then to the ALS Chemex facility in North Vancouver, British Columbia for preparation and analysis via Manitoulin Transport. Beginning in 2007, each rice bag was sealed with a numbered security tag. Bags were then placed on pallets and wrapped for shipping.

In 2007/2008, samples were transported to the Canadian Freightways facility in Whitehorse, Yukon by Alexco personnel. Canadian Freightways then trucked the samples to the ALS Chemex facility in Terrace, British Columbia for preparation. Pulverized subsample splits were then sent to the ALS Chemex facility in North Vancouver, British Columbia for analysis.

In 2009, samples were transported to the Eco Tech Labs preparation facility in Whitehorse, Yukon by Alexco personnel. Pulverized subsample splits were then sent to the Eco Tech facility in Kamloops, British Columbia for analysis.

In 2010, samples were shipped via Manitoulin Transport to Whitehorse, Yukon where they were couriered to the preparation facilities of either AGAT or ALS Minerals in Whitehorse. The pulverized subsample splits were then sent to the AGAT facility in Mississauga, Ontario, or the ALS facility in North Vancouver, British Columbia, for analysis.

Between 2011 and 2013, samples were shipped via Manitoulin Transport to Whitehorse, Yukon where they were delivered directly to the preparation facilities of ALS Minerals in Whitehorse. The pulverized subsample splits were then sent under seal by the laboratory to the ALS facility in North Vancouver, British Columbia, for analysis.

Since 2014, samples have been shipped in sealed wooden boxes containing approximately 100 samples, directly by Alexco employees to the ALS Minerals sample preparation facility in Whitehorse and again the assay pulp is transported under seal by the laboratory to the North Vancouver analytical facility.

ALS Minerals, Eco Tech, and AGAT are all accredited to ISO 17025 by the Standards Council of Canada for a number of specific test procedures, including fire assay for gold and silver with atomic absorption and gravimetric finish; multi-element inductively coupled plasma optical emission spectroscopy; and atomic absorption assays for silver, copper, lead, and zinc. ALS Minerals laboratories also participate in a number of international proficiency tests, such as those managed by CANMET and Geostats.

Sample preparation and analyses have been consistent for the 2006–2016 Alexco programs. Sample preparation consists of initial fine crushing of the sample to better than 70% passing 2 mm with the crusher cleaned with "barren material" after every sample. A nominal 250 g split of this material is then pulverized to greater than 85% passing 75 µm for analyses with the pulverizer cleaned with "barren material" after every sample. Duplicate samples are prepared at the preparation facility by collecting a second 250 g split from the crushed material taken from the preceding sample when noted.

Samples are analyzed for gold by fire assay and atomic absorption spectrometry on 30 g subsamples and for a suite of 27 to 48 elements by four acid digestion and either inductively coupled plasma atomic emission spectroscopy (ICP-AES) or induced coupled plasma mass spectroscopy (ICP-MS) (on 0.5 g subsamples). Elements exceeding the concentration limits of ICP-AES or ICP-MS are re-assayed by single element four acid digestion and atomic emission spectroscopy. Silver results exceeding ICP-AES limits are re-assayed by fire assay and gravimetric finish on 30 g subsamples. Lead and zinc results exceeding concentration limits are analyzed by volumetric titration.

In the opinion of the author, the sampling preparation, security, and analytical procedures used by Alexco are consistent with generally accepted industry best practices and are, therefore, adequate for inclusion in this study.

QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS

Alexco implements standard assay quality control procedures for all Keno Hill Silver District drilling campaigns. Each 20-sample batch sent for assaying includes three control samples: a commercial standard reference material (SRM), a blank, and a duplicate. The location of control samples in the sample stream is defined by the logging geologist (standard reference material or SRM, blank, and duplicate). Control samples are inserted when the core is sawn or when the whole core is sampled. The SRM is already processed to a pulp and is inserted as a 50 g to 100 g sample. The blank is commercially purchased "landscape rock," either dolomite or basalt with approximately 0.35 kg to 1.5 kg of this material inserted. An empty sample bag is inserted at the location of the duplicate, which is prepared during sample preparation at the laboratory prep facility. The duplicate consists of a coarse reject split of the preceding sample.

The quality control program developed by Alexco is considered mature and overseen by appropriately qualified geologists. The data collected by Alexco on the Project was acquired using adequate quality control procedures that generally met or exceeded industry best practices for an exploration property at the resource delineation stage.

HISTORICAL DATA VERIFICATION BY ALEXCO

During almost 100 years of exploration and mining in the KHSD, large amounts of data and documents were produced; much of this material is accessible to Alexco.

Large amounts of data were scanned by Alexco with documents initially labelled with the location where they were found (e.g., file cabinet number and drawer) before being moved from the storage sites to the scanning facility. The scans of large maps and sections were stored as image files (JPEG format) where the file name contained original title block information. Individual files were stored in directories that mimicked the physical storage location. Smaller maps and reports were scanned and saved as Adobe PDF files.

Naming convention and file hierarchy were the same as for the large maps. Each file was also given a five digit number that was added in front of the file name. These numbers were listed in an Excel spreadsheet that also contained the file name, the file extension, the file size, the scanning date, the directory location, and a key word index for each file. The scans were also organized into descriptive folders for each mine/prospect.

HISTORICAL CORE DRILLING DATA

All accessible core drill hole logs were transcribed onto standardized spreadsheets as close to verbatim as possible; the original logs were scanned and file names and numbers were recorded in the new spreadsheets as well. These first spreadsheets were then inspected by geologists for consistency. The next step was to “normalize” the original transcribed data in order to match current nomenclature; data verification was ongoing. Collar information, as well as survey, assay, and recovery data were then verified by a person other than the original data entry person; the final step was to amalgamate separate spreadsheets into one global database.

BELLEKENO HISTORICAL CORE DRILLING DATA

Bellekeno underwent three phases of core drilling: 1986, 1994–1996, and 2006–2013. Alexco’s access to mine workings in 2009 allowed resurveying of the 1986 and 1994–1996 historical (UKHM) drill hole collars in UTM coordinates, thereby assuring all collar locations were tied to a common datum.

In instances where 2009 underground drilling and historical drilling were twinned, the positioning of the 2009 composite locations were honoured, as historically down-hole surveying was irregularly spaced or not done at all.

In instances where surface drilling and underground drilling had conflicting contact locations, 2009 underground drilling was honoured. This was the case in the Southwest zone with surface drill hole K-07-0101. The vein intercept in this drill hole is 376 m downhole. Within 15 to 20 m on each side are two Alexco underground drill holes of 15 m length of similar grade and thickness. In this case, the grade from K-07- 0101 was used in the estimation but its position is assumed to be defined by the adjacent underground drill holes.

Drilling programs under the supervision of UKHM were given careful scrutiny prior to being incorporated into the Alexco resource estimation. Historic data was evaluated and checked by processing paper drilling logs into electronic formats, resurveying of underground drill hole collars, and twinning of historical vein pierce points. Early programs were deemed reasonably complete and accurate for the purpose of resource and geologic modelling.

Two phases of underground core drilling occurred at the Bellekeno mine under UKHM management, 1986 and 1994-1996. During this time, most of the drilling operated off the local Treadwell grid system. For verification purposes, Alexco resurveyed the collar positions of the core and percussion drill holes in 2009 on the areas where the mine rehabilitation had been completed. The collar data was then verified against the UTM NAD 83 Zone 8 map projection coordinates. Only minor discrepancies were found in the underground percussion drilling. While the collar positions were updated, these drill holes were not included in the resource evaluation.

As part of the due diligence for the 2009 updated PEA conducted by Wardrop, twinning of the core drill hole vein pierce points were conducted. Twinned intercepts were commonly within 0.5 m to 1.5 m of the original pierce point. In most cases, the intercepts of both drill holes were commonly useable for interpretations. However, in instances where the two pierce points were significantly different, the 2009 underground drilling was given precedence. Surface drill holes were assumed to have more deviation because of down-hole depth, and irregularly spaced or incomplete down-hole survey data.

LUCKY QUEEN HISTORICAL CORE DRILLING DATA

Historical drilling data are not deemed reliable and, therefore, was not considered for Mineral Resource estimation.

FLAME & MOTH HISTORICAL CORE DRILLING DATA

Historical drilling data are not deemed reliable and, therefore, was not considered for Mineral Resource estimation.

ONEK HISTORICAL CORE DRILLING DATA

Historical drilling data are not deemed reliable and, therefore, was not considered for Mineral Resource estimation.

BERMINGHAM HISTORICAL CORE DRILLING DATA

Historical drilling data are not deemed reliable and, therefore, was not considered for Mineral Resource estimation.

HISTORICAL CHIP SAMPLE DATA

Data verification by Alexco personnel was done on the TYC and UKHM underground chip sample data from the assay plan maps for each deposit where they were available. The verification procedure consisted of cross-checking the assay values in the database to the values on the original scanned historic assay plan maps. The sample interval points and respective silver assays were imported from the database and overlain on the original maps. All points were visually inspected to ensure that chip sample lines fell within the boundaries of the drift outlines. Then all assay intervals in the database were checked to ensure they matched with what was originally written on the maps.

BELLEKENO HISTORICAL CHIP SAMPLE DATA

Both historical (UKHM) chip sample and Alexco chip sample data was used in the grade estimation. Historical chip samples were commonly analyzed for silver, lead, and zinc only. Chip samples were generally taken as cuts across the vein and into the hangingwall and footwall rocks. The wireframe was constructed regardless of chip sample location. Chip samples were not used to define wireframe contacts or wireframe width. The determination of which chip samples to use in the grade estimation was made by “capturing” the chip sample intervals within the wireframe and tagging those intervals for composite. An interval had to be at least 25% within the wireframe to be tagged and used for compositing. The 25% rule was used because of the location uncertainty in the historical surveying of upper levels and stopes that were inaccessible to Alexco.

The high density of chip sample composites warranted declustering so that drill hole data influence on estimation would be honoured and chip sampling bias would be reduced. Chip sample composites were declustered on a 10 m x 6 m x 10 m grid.

Historical chip sample data was extensively reviewed by Alexco as part of the 2009 updated PEA. Chip assay values and string traces were visually referenced against the grades plotted on level plan view maps. During this early review, chip data was accepted if: a) the chip lines matched the UTM co-ordinates in the database within 0.1 m; b) the chip lines fell within the boundaries of the drift outline; c) the assays were real values; and d) the grades checked against the face grade sheets. Literary reviews of UKHM practices suggest a strong emphasis was placed on chip sampling, and chip sample protocols were well established by the time stoping began at Bellekeno in 1988. Mine correction factors issued across the KHSD suggest the chip samples from Bellekeno were very representative of the vein material received; the mine was assigned a correction factor of 1.0.

Chip samples collected by UKHM were commonly analyzed for silver, lead, and zinc, while chip samples above the 400 level were commonly only analyzed for silver. Data tracking for Bellekeno during 1988–1989 included car sampling of the vein material before it was transported to the mill. A production review of the data showed a 12% variance between the car and chip data. Further analyses of the chip data using declustered data by zones are summarized in Table 11-1. This table summarizes a 14% to 40% variance in silver assay by zone. Results are significantly higher than anticipated, and do not reflect the chip sample to mill sample variations currently observed with active production. Sampling tests conducted by Alexco in 2011 showed a good mixing trend between chip samples, truck samples, and belt samples taken at the mill over a one month period. After reviewing the historical statistical data, the declustering analysis was considered excessively conservative given the reconciliation of the active chip samples with smelter products, and the chip- truck-belt cut mixing curves observed. Alexco considers the historical chip data from the Bellekeno resource area to be reliable.

TABLE 11-1 STATISTICAL REVIEW OF UKHM BELLEKENO PRODUCTION CHIP DATA
Alexco Resource Corp. – Keno Hill Silver District Project

Area	Mean Ag (ppm)	Mean Pb (%)	Mean Zn (%)
99 Zone			
Chip Sample Data	1,269	6.93	2.89
Declustered Chip Sample Data	897	5.19	2.31
Difference	-29%	-25%	-20%
Southwest Zone			
Chip Sample Data	1,047	10.15	3.53
Declustered Chip Sample Data	626	5.85	2.58
Difference	-40%	-42%	-27%
East Zone			
Chip Sample Data	391	0.57	6.83
Declustered Chip Sample Data	338	0.49	6.2
Difference	-14%	-14%	-9%

LUCKY QUEEN HISTORICAL CHIP SAMPLE DATA
No historical chip data were used for Mineral Resource estimation. The data were used in select geostatistical analyses (variography) and in the construction of mineralization and geological models, where applicable.

FLAME & MOTH HISTORICAL CHIP SAMPLE DATA
No historical chip data were available for the Flame & Moth deposit.

ONEK HISTORICAL CHIP SAMPLE DATA
SRK reviewed the historical chip data for the Onek deposit and because of the apparent bias associated with the chips sample data, SRK decided only to use the chip data to model the vein contacts. None of the historical chip samples were used to estimate the Mineral Resource.

BERMINGHAM HISTORICAL CHIP SAMPLE DATA
No historical chip data were available for the Bermingham deposit.

VERIFICATION OF 2006 TO 2016 DATA BY ALEXCO
Alexco maintains an SQL database of all the Project drill and sample data. Each property is assigned an identifier to extract property specific subsets from the master database. Until

2010, all data was entered or imported into the database via Datashed database management software, and subsequently via customized GeoSpark software. The data for individual properties is exported from the SQL database by scripted routine to comma separated values (CSV) files, which are imported into MineSight. The following drill hole files are generated: collar, survey, drill hole assay, chip sample assay, lithology, mineralization, structure and geotechnical. During the 2006–2012 drilling programs, Alexco personnel conducted routine visual verifications to ensure the reliability of the drilling data, including a 100% check of the collar and survey tables and a minimum 10% verification of the remaining exported tables. The process uncovered a low level of data entry errors, which were corrected.

Three control samples (standard, blank, duplicate) were included in each 20-sample batch sent for assaying. During the 2006–2012 drill campaigns, Alexco used one of 16 standard reference material (SRM) purchased from WCM Sales Limited of Burnaby, British Columbia: eight polymetallic copper, lead, zinc, and silver reference materials (PB 111, PB 112, PB 113, PB 116, PB 129, PB 131, and PB 137) and eight silver reference materials (PM 1107, PM 1108, PM 1116, PM 1117, PM 1128, and PM 1133) for inclusion in each 20-sample batch (Table 11-2).

TABLE 11-2 COMMERCIAL STANDARD REFERENCE MATERIAL USED BY ALEXCO FOR THE 2006–2012 DRILLING PROGRAMS FOR THE KHSD PROJECT
Alexco Resource Corp. – Keno Hill Silver District Project

SRM	Cu (%)	SD	Pb (%)	SD	Zn (%)	SD	Ag (g/t)	SD	Ag (oz/t)	SD	Au (g/t)	SD
PB111	0.69	0.01	2.12	0.04	0.45	0.02	195	6	-	-	-	-
PB112	0.85	0.01	0.92	0.02	1.27	0.03	222	2	-	-	-	-
PB113	0.47	0.01	1.11	0.02	1.40	0.05	22	1	-	-	-	-
PB116	0.43	0.01	1.40	0.06	0.85	0.02	22	1	-	-	-	-
PB129	0.28	0.01	1.24	0.02	2.00	0.06	23	1.7	-	-	-	-
PB131	0.47	0.01	1.04	0.04	1.89	0.06	262	11	-	-	-	-
PB137	0.21	0.01	2.62	0.09	2.69	0.115	111	2	-	-	-	-
PB141	1.02	0.013	6.68	0.146	3.78	0.136	173	3	-	-	-	-
PM1107	-	-	-	-	-	-	1,194	34	34.8	1.0	-	-
PM1108	-	-	-	-	-	-	658	10	19.2	0.3	-	-
PM1116	-	-	-	-	-	-	769	23	22.4	0.7	-	-
PM1117	-	-	-	-	-	-	386	16	11.3	0.5	-	-
PM1123	0.31	0.0082	-	-	-	-	31	1.2851	-	-	1.42	0.046

SRM	Cu (%)	SD	Pb (%)	SD	Zn (%)	SD	Ag (g/t)	SD	Ag (oz/t)	SD	Au (g/t)	SD
PM1128	-	-	-	-	-	-	592	12	17.3	0.4	-	-
PM1132	-	-	-	-	-	-	2287	54.334	66.69	1.5847	-	-
PM1133	-	-	-	-	-	-	757	19	22.1	0.5	-	-

In 2012, Alexco also started using a series of certified standard reference material developed from the Bellekeno deposit: polymetallic standards (Table 11-3), that were certified by Smee & Associates Consulting Ltd. (Bellekeno-C, Bellekeno-M, Bellekeno-S, Bellekeno-R and Bellekeno-W) that are now commercially available, and CDN Resource Laboratories Ltd. (ME-4, ME-5) that are used as internal lab standards at the Project assay laboratory. These standards were tested internally before insertion into batches containing commercial SRMs.

TABLE 11-3 STANDARD REFERENCE MATERIAL USED BY ALEXCO DURING THE 2012 DRILLING PROGRAM FOR THE BELLEKENO MINE
Alexco Resource Corp. – Keno Hill Silver District Project

SRM	Pb (%)	SD	Zn (%)	SD	Ag (g/t)	SD	Ag (oz/t)	SD
Bellekeno-C	14.62	0.58	12.32	0.23	1,162	23.5	-	-
Bellekeno-M	14.02	0.63	7.85	0.20	971	19	-	-
Bellekeno-R	36.19 (Provisional)	2.33	5.08	0.13	2,224	47	-	-
Bellekeno-S	12.47	0.38	13.17	0.41	1,094	20	-	-
Bellekeno-W	3.06	0.06	1.79	0.05	270	10	-	-
ME-4	4.25	0.12	1.10	0.03	402	12.5	-	-
ME-5	2.13	0.06	0.579	0.01	206.1	6.55	-	-

Assay results for quality control samples were monitored on an ongoing basis during all drill programs (2006 to 2012). Each potential quality control failure was investigated and appropriate remedy action was taken, including the re-assaying of batches containing abnormal quality control samples. In some instances, the potential failures occurred in batches of samples outside potentially mineralized areas. In such cases no remedy actions were taken.

All mineralized chip samples collected concurrent with mining activities between 2011 and 2012 that were included in the Bellekeno Mineral Resource were sent to external laboratories for check assays. Duplicate pulp samples were made at the Alexco laboratory facility from coarse reject material and submitted for external assay checks. All standards submitted with the chip sample assaying returned within ±2 standard deviations of the mean. Duplicate pulp sample results suggest the silver, lead and zinc grades are reasonably reproducible.

The Bellekeno 2006–2012 analytical quality control data produced by Alexco are summarized in Table 11-4.

TABLE 11-4 QUALITY CONTROL DATA PRODUCED BY ALEXCO FROM 2006 TO 2012 FOR BELLEKENO
Alexco Resource Corp. – Keno Hill Silver District Project

Quality Control Type	Count	Ratio
Core Samples	4,627	
Blanks	230	5.0% (1:20)
Standards	313	6.8% (1:15)
Duplicates	380	8.2% (1:12)
Chip Samples	2,078	
Blanks	21	1.0% (1:100)
Standard Reference Material	228	11.0% (1:9)
Coarse Reject Duplicate	109	5.2% (1:19)

The Lucky Queen 2006 to 2010 external analytical quality control data produced by Alexco are summarized in Table 11-5.

TABLE 11-5 QUALITY CONTROL DATA PRODUCED BY ALEXCO FROM 2006 TO 2010 FOR LUCKY QUEEN
Alexco Resource Corp. – Keno Hill Silver District Project

Quality Control Type	Count	Ratio
Core Samples	3,144	-
Blanks	185	1:17 (5.9%)
Standard Reference Material	183	1:17 (5.8%)
Coarse Reject Duplicate	186	1:17 (5.9%)

The Flame & Moth quality control data produced by Alexco are summarized in Table 11-6.

TABLE 11-6 QUALITY CONTROL DATA PRODUCED BY ALEXCO FROM 2010 TO 2012 FOR FLAME & MOTH
Alexco Resource Corp. – Keno Hill Silver District Project

Quality Control Type	Count	Ratio
Core Samples	3,996	-
Blanks	248	1:16 (6.2%)
Standard Reference Material	240	1:16 (6.0%)
Coarse Reject Duplicate	251	1:16 (6.3%)

All standards consistently returned values within ±2 standard deviations of the mean, with only occasional values falling outside this limit, but then within ±3 standard deviations of the mean.

Analysis of assays from coarse reject duplicate samples suggests that silver, lead, and zinc grades can be reasonably reproduced with no apparent bias.

The Onek quality control data produced by Alexco are summarized in Table 11-7.

TABLE 11-7 QUALITY CONTROL DATA PRODUCED BY ALEXCO FROM 2007 TO 2014 FOR ONEK
Alexco Resource Corp. – Keno Hill Silver District Project

Quality Control Type	Count	Ratio
Core Samples	4,730	-
Blanks	282	1:16 (6.0%)
Standard Reference Material	302	1:16 (6.4%)
Coarse Reject Duplicate	286	1:16 (6.1%)

All standards consistently returned values within ±2 standard deviations of the mean with only occasional values within ±3 standard deviations of the mean.

Analysis of assays from coarse reject duplicate samples suggests that silver, lead and zinc grades can be reasonably reproduced from the coarse reject split of the original samples with no apparent bias.

The Bermingham 2009 to 2016 external analytical quality control data produced by Alexco are summarized in Table 11-8.

TABLE 11-8 QUALITY CONTROL DATA PRODUCED BY ALEXCO FROM 2009 TO 2016 FOR BERMINGHAM
Alexco Resource Corp. – Keno Hill Silver District Project

Quality Control Type	Count	Ratio
Core Samples	8,841	-
Blanks	456	1:16 (5.9%)
Standard Reference Material	456	1:16 (5.9%)
Coarse Reject Duplicate	458	1:16 (5.9%)

SRK reviewed the Bermingham QA/QC data prepared by Alexco and found it to be in keeping with industry standard and that the assay data were acceptable for inclusion in a Mineral Resource estimate. Overall only one standard reference material was outside of the acceptable limits and, after review, the issue seems to be a mislabelled standard.

12 DATA VERIFICATION

RPA is of the opinion that database verification procedures for the Project comply with industry standards and are adequate for the purposes of Mineral Resource estimation.

VERIFICATIONS BY SRK

SITE VISITS

Dr. Gilles Arseneau and Chris Elliott of SRK carried out a visit to examine the Lucky Queen, Bellekeno, and Onek deposits. In total, SRK spent two and half days at the sites between July 26 and 28, 2010 examining drill core, core logging and sampling procedures; visiting drill sites; and examining the mineralization exposed in surface cuts. Alexco provided SRK with information related to these activities during the site visit. Dr. Arseneau carried out a second site visit on May 7 and 8, 2012 and a third site visit on September 12, 13, and 14, 2016 to examine the surface geology and drill core for the Bermingham deposit.

VERIFICATIONS OF ANALYTICAL QUALITY CONTROL DATA FOR LUCKY QUEEN

SRK reviewed and verified the Lucky Queen drill hole data and quality control assay data from 2006 to 2010 and found the data to be reliable for resource estimation purposes.

The 2006 to 2010 quality control data collected by Alexco was considered comprehensive and the assaying results delivered by ALS Chemex and AGAT are considered reliable for the purpose of resource estimation.

SRK aggregated the assay results for the external quality control samples and duplicate assay pairs. Time series bias charts and assay pair precision plots were constructed for applicable elements.

A total of 185 samples of unknown composition designated as blanks were submitted by Alexco during the drilling operations. Performance of the blank samples was reasonably good, with no systematic failures noted for silver, lead, or zinc. For gold assays, 6% of the submitted blanks returned a grade higher than 0.01 g/t Au.

A total of 183 commercial standard reference samples were submitted by Alexco during the drilling operations. All reference standards used by Alexco were purchased from WCM Minerals, Burnaby, British Columbia. Performance of the commercial standard reference samples was reasonably good, with only the analytical results for one standard (PM-1107) being consistently less than the average grade of the standard.

A total of 186 samples were analyzed as duplicates by Alexco. No significant discrepancies were noted between the original and duplicate analyses, and the correlation between samples is good.

Upon completion of the review, SRK considered that the analytical data produced by Alexco are sufficiently reliable to support Mineral Resource estimation.

VERIFICATION OF ANALYTICAL QUALITY CONTROL DATA FOR ONEK

In November 2010, June 2011 and August 2014, SRK completed audits of the Alexco analytical and quality control data acquired with the sampling of the Onek deposit. This involved analysis of the drill hole and assay database, review of the assay certificates received directly from the ALS Chemex and AGAT, and review of assay results for blank, standard, and duplicate samples.

SRK conducted routine verifications to ascertain the reliability of the electronic borehole database provided by Alexco. All assays in the current database were verified against the independently sourced sample certificates from ALS Chemex and AGAT. The silver, lead, zinc and gold values in the assay table were found to match the laboratory certificates. In addition, SRK verified the conversion of units between different methods utilized in the laboratories and believes the conversions were done correctly.

Several assay batches were received from AGAT in 2010, where any one or more of the standards, blanks and duplicates included in the batch did not pass Alexco's quality control standards, and were sent for re-assay either through AGAT or submitted to ALS Chemex. A very minor number of batches showed sample preparation errors that were either resolved through the lab in question or by quarter-coring the remaining core and submitting new samples to ALS Chemex.

The review of analytical quality control data produced by ALS Chemex, AGAT and Alexco, suggests that silver, gold, lead and zinc grades can be reasonably reproduced, suggesting that the final assay results reported by ALS Chemex and AGAT are generally reliable for the purpose of resource estimation

After the review, SRK was of the opinion that the Onek drilling database is sufficiently reliable for resource estimation.

VERIFICATION OF ANALYTICAL QUALITY CONTROL DATA FOR BERMINGHAM

SRK completed an audit of the Alexco analytical and quality control data acquired during the sampling of the Bermingham deposit; this audit conducted of routine verifications to ascertain the reliability of the electronic drill hole database provided by Alexco. All assays in the current database were verified against independently sourced sample certificates from ALS, Echo-Tech, and AGAT. The silver, lead, zinc, and gold values in the assay table were found to match the laboratory certificates with a few exceptions where samples had been re-assayed and the database had not been updated with the re-assay certificate number. Alexco corrected this and the samples values were found to match the re-assay certificates.

After the review, the QP is of the opinion that the Bermingham drilling database is sufficiently reliable for resource estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

BACKGROUND

The United Keno Hill District has been providing mineralized material for approximately 100 years to various process facilities for the production of silver-bearing lead and zinc concentrates. During this time, flotation was the process of choice and metallurgical responses to flotation were considered excellent during these historic operations. As deposits are further explored and developed, bench scale test work is conducted to evaluate the ability of the various base and precious metals to be recovered and to quantify the nature of the concentrates produced. This section details bench scale test work related to four main mineralized zones that are included as part of this PEA.

Metallurgical testwork has been conducted independently on each of the three deposits included in the production plan. The Bellekeno Development Plan reported by Wardrop in 2009 summarized the metallurgical program results at that time. Testwork performed from 1996 through 2009 was the basis for the design and construction of the mill facility in 2010. Alexco's Bellekeno silver-lead-zinc mine and mill complex achieved commercial production in January 2011, processing an average of 253 tpd in 2012. Since 2011, samples from Lucky Queen, Flame & Moth, and Bermingham deposits were tested to assess flotation performance.

The production schedule is discussed in report Section 16. The production schedule indicates that significant blending of the different deposits is planned. While there is little information related to the blending and processing of different mineralized zones, there is no expectation that blending of ores will harm the metallurgical response of individual materials. In fact, blending of materials to minimize variation of feed grades will likely benefit the operation of the production facility, as constant feed grades will generally improve flotation performance. The deposits vary widely in terms of base and precious metals and all samples have responded well to flotation processes for the production of saleable concentrates.

To date, no testwork has been conducted on a blended sample from any of the three deposits. The production schedule is discussed in report Section 16. Recovery methods indicates that significant blending of the different deposits is planned.

Historical testwork program reports are listed in Section 27.

Table 13-1 summarizes the total tonnes, contribution by deposit, and average head grades for the life of mine (LOM) production plan incorporated in this PEA technical report.

TABLE 13-1 SUMMARY OF LOM GRADES AND TONNES PER DEPOSIT
Alexco Resource Corp. – Keno Hill Silver District Project

PEA LOM	Bellekeno	Lucky Queen	Bermingham	Flame & Moth	Total
Mill Feed (kt)	37	81	220	683	1,021
Lead grade (%)	10.6	2.6	4.1	2.8	3.3
Zinc grade (%)	5.9	1.6	2.1	5.8	4.6
Gold grade (g/t)	-	0.1	0.2	0.5	0.4
Silver grade (g/t)	747	1,206	1,206	666	843
Total mass (%)	4	8	22	67	100

At 67% of the total mill feed, Flame & Moth material will significantly impact the Project economics, as it will represent a large portion of the mill feed blend for the LOM plan. To date, only one composite sample from Flame & Moth has been tested with variable results and additional testing on the Flame & Moth mineralization is warranted. The preliminary testing of the Flame & Moth materials indicates good metallurgical performance is expected from this material.

HARDNESS TESTWORK

Three test programs included Bond rod work index, Ball work index and abrasion testwork for grindability on Bellekeno samples. The test results are summarized in Table 13-2. The hardness results are considered to be in the soft to medium-soft range with low variability.

No hardness testing has been completed on Lucky Queen, Flame & Moth, or Bermingham samples.

TABLE 13-2 GRINDABILITY TEST RESULTS
Alexco Resource Corp. – Keno Hill Silver District Project

Test Program	Deposit	Sample	Ball Mill (kWh/t)	Rod Mill (kWh/t)	Abrasion Index (g)
1996	Bellekeno	Bellekeno Comp	9.3 *	-	-
2007	Bellekeno	Bellekeno Comp	9.5**	-	-
2008/2009	Bellekeno	Master Comp	-	8.7	0.438
	Bellekeno	East Zone Comp	8.7**	-	-
	Bellekeno	SW Zone Comp	9.0**	-	-

*At closing screen size of 106 µm; ** at closing screen size of 150 µm

MINERALOGY

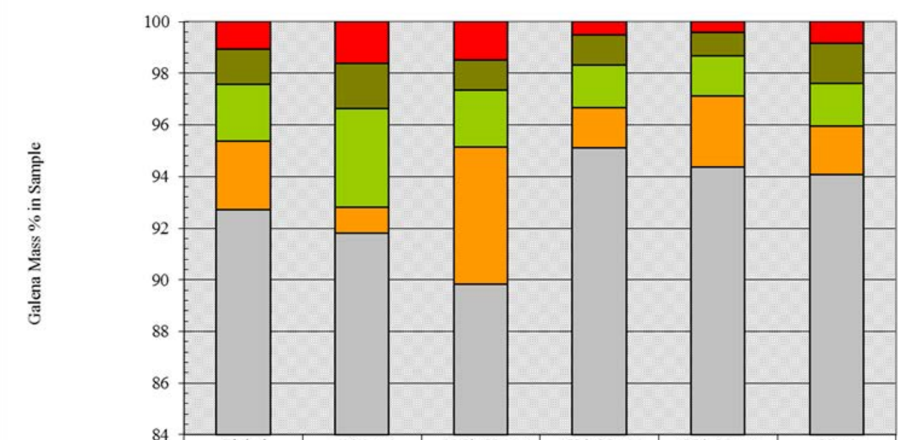
Mineralogical investigations were included in the 2007 and 2016 test work programs for the Bellekeno and Bermingham zones respectively.

The 2007 Qemscan examination confirmed galena and sphalerite as the main sulphide minerals. Liberation data for the Bellekeno zone for galena and sphalerite is shown in Figures 13-1 and 13-2 respectively. Very high degrees of liberation were observed for these minerals at 150 microns particle size distributions and supports the selection of relatively coarse primary grinds and the limited need for re-grinding of rougher concentrates.

In 2016, Qemscan analysis of the Bermingham composite sample also showed coarse liberation of the galena and sphalerite mineralization. Liberation data for the Bermingham zone is shown in Figures 13-3 and 13-4.

In all of the mineralogical analysis, sphalerite liberation is better than that for galena, this can be observed in the graphical data contained herein.

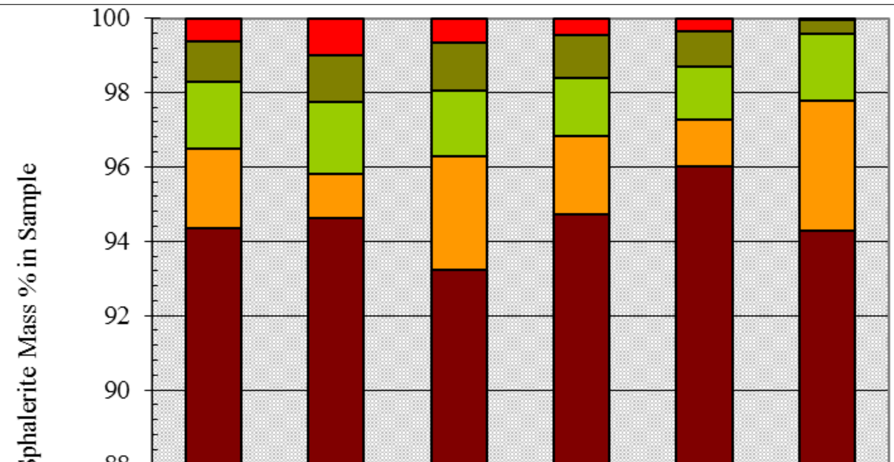
FIGURE 13-1 BELLEKENO GALENA LIBERATION DATA



	Global	+106 um	-106/+53 um	-53/+38 um	-38/+20 um	-20 um
Locked Gal	1.1	1.6	1.5	0.5	0.4	0.9
Gal Sub-Midds	1.4	1.8	1.2	1.2	0.9	1.5
Gal Midds	2.2	3.8	2.2	1.7	1.6	1.7
Lib Gal	2.7	1.0	5.3	1.6	2.7	1.9
Free Gal	92.7	91.8	89.8	95.1	94.4	94.1

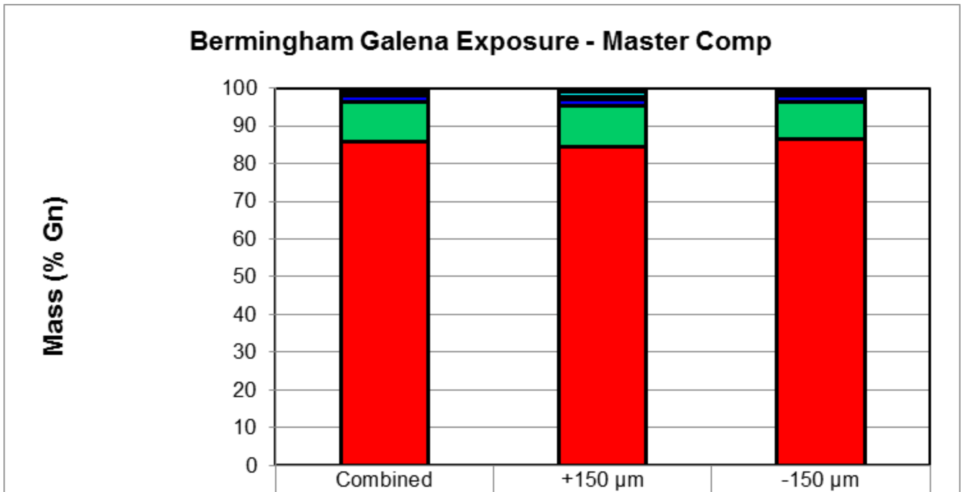
F-7 Feed: Fraction

FIGURE 13-2 BELLEKENO SPHALERITE LIBERATION DATA



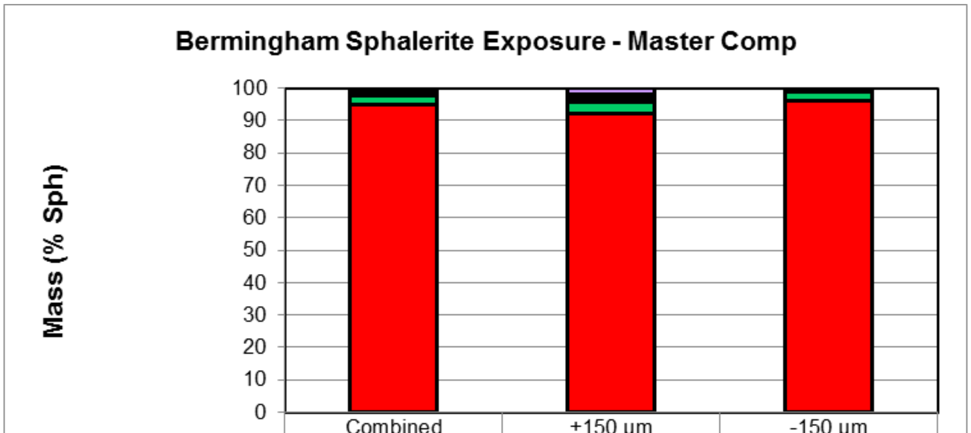
	Global	+106 um	-106/+53 um	-53/+38 um	-38/+20 um	-20 um
Locked Sph	0.6	1.0	0.7	0.5	0.4	0.1
Sph Sub-Midds	1.1	1.3	1.3	1.2	0.9	0.3
Sph Midds	1.8	1.9	1.8	1.6	1.4	1.8
Lib Sph	2.1	1.2	3.1	2.1	1.3	3.5
Free Sph	94.3	94.6	93.2	94.7	96.0	94.3

FIGURE 13-3 GRAPHICAL REPRESENTATION OF GALENA EXPOSURE FOR BERMINGHAM ZONE COMPOSITE



	Combined	+150 µm	-150 µm
Locked Gn	0.02	0.06	0.01
0-10% Exposed Gn	0.51	0.82	0.42
10-20% Exposed Gn	0.78	1.41	0.61
20-30% Exposed Gn	0.81	0.77	0.82
30-50% Exposed Gn	1.64	1.58	1.66
50-80% Exposed Gn	10.3	11.0	10.1
Exposed Gn	86.0	84.4	86.4

FIGURE 13-4 GRAPHICAL REPRESENTATION OF SPHALERITE EXPOSURE FOR BERMINGHAM ZONE COMPOSITE



	Combined	+150 µm	-150 µm
Locked Sph	0.07	0.13	0.04
0-10% Exposed Sph	0.65	1.63	0.23
10-20% Exposed Sph	0.39	1.16	0.06
20-30% Exposed Sph	0.62	0.81	0.54
30-50% Exposed Sph	0.43	0.64	0.34
50-80% Exposed Sph	3.01	3.44	2.83
Exposed Sph	94.8	92.2	96.0

Qemscan analysis of the Bermingham samples was completed in 2016 and is reported within the SGS final report. Similar liberation data for galena and sphalerite were reported, when compared to previous mineralogical analysis.

In both the Bellekeno and Bermingham zone mineralogical analysis, there is little association of galena and sphalerite minerals, and flotation separation effectiveness should not be affected by liberation issues. Separation effectiveness in flotation will be governed by surface chemistry issues and reagent utilization.

No mineralogical work has been completed to date on Lucky Queen or Flame & Moth zones to confirm if the deposits share the same mineralogical characteristics and liberation sizes as Bellekeno and Bermingham zones. However, the flotation response of these two materials implies similar mineralogical characteristics as seen in other zones.

FLOTATION TESTWORK

All four deposits have been individually tested for flotation performance using a similar flotation process with minor changes to flotation parameters. The common unit operations are shown in the following figure and are considered industry standard. Historical operations used the identical process philosophy that is shown below.

With the high-grade, coarse-grained nature of the KHSD mineralized zones, the flotation response is expected to be very good and modelling of the expected overall performance can be done using relatively simple flotation tests. Most flotation projects tend to require detailed locked cycle testing to model flotation performance and locked cycle tests eliminate the impact of circulating loads in the flotation process and accurately report expected metal deportment to final concentrates. In the case of the KHSD deposits, lead rougher flotation recovery tends to range from 90 to 98 percent of the contained metal and cleaner flotation recoveries are expected to well exceed the rougher recoveries. The overall flotation recovery which can be represented as the product of the rougher and cleaner recovery is expected to be relatively high. A model of the overall recovery can be generated using open circuit flotation tests and there exists enough locked cycle test data to provide confirmation or validity of the recovery model that is generated in this data set.

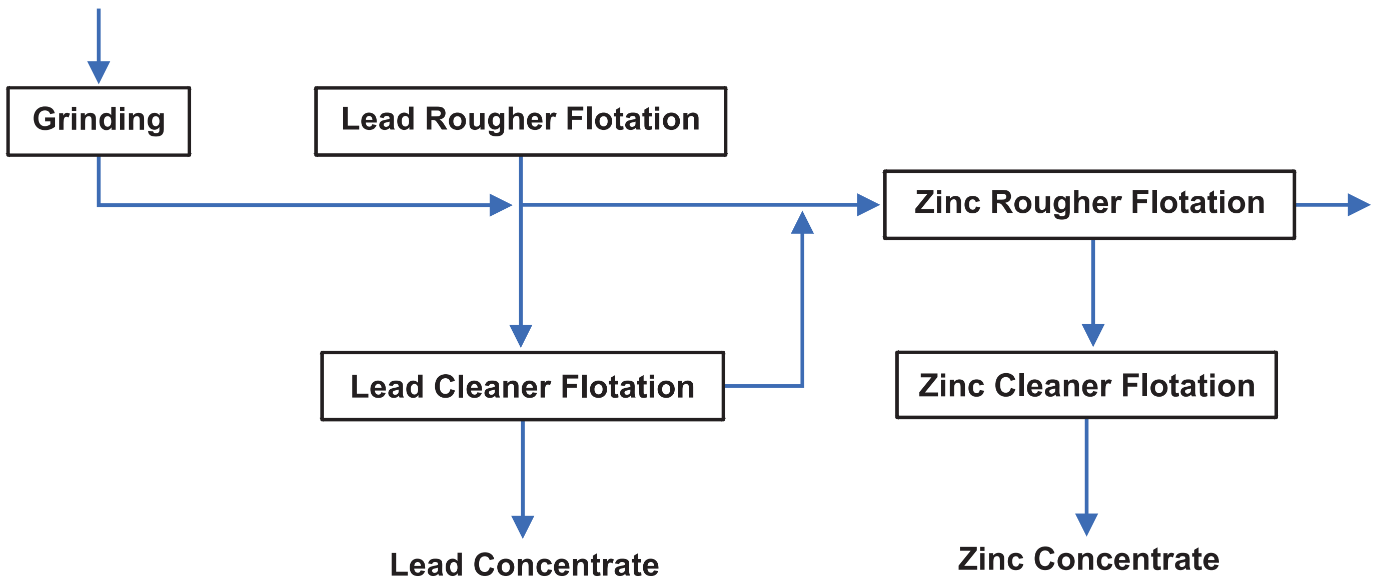


Figure 13-5

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Simplified Unit Operations in Concentrate Production

March 2017

Source: Alexco Resource Corp., 2017.

With the high-grade, coarse-grained nature of the KHSD mineralized zones, the flotation response is expected to be very good and modelling of the expected overall performance can be done using relatively simple flotation tests. Most flotation projects tend to require detailed locked cycle testing to model flotation performance and locked cycle tests eliminate the impact of circulating loads in the flotation process and accurately report expected metal deportment to final concentrates. In the case of the KHSD deposits, lead rougher flotation recovery tends to range from 90 to 98 percent of the contained metal and cleaner flotation recoveries are expected to well exceed the rougher recoveries. The overall flotation recovery which can be represented as the product of the rougher and cleaner recovery is expected to be relatively high. A model of the overall recovery can be generated using open circuit flotation tests and there exists enough locked cycle test data to provide confirmation or validity of the recovery model that is generated in this data set.

Flotation data is drawn from a number of sources including formally reported metallurgical research programs as well as individually conducted flotation tests on specific samples. The following table outlines the metallurgical data used in this data analysis and it represents all of the metallurgical work conducted by Alexco during the time period from 2007 to 2017.

TABLE 13-3 SOURCE DATA FOR METALLURGICAL MODELLING AND PREDICTION
Alexco Resource Corp. – Keno Hill Silver District Project

Mineralized Zone	Laboratory Contractor	Tests conducted and Objectives
Bellekeno	Process Research Assoc.	Investigative met work, basis for mill construction
Onek	Inspectorate Labs	Preliminary tests, based on mill design
Lucky Queen	Inspectorate Labs	Preliminary tests, based on mill design
Flame & Moth	Inspectorate Labs	Preliminary tests, based on mill design
Bermingham	SGS - Vancouver	Investigative met work, based on mill design

The testwork program for Bellekeno was completed in 2009. The Bellekeno program included an assessment of primary grind size, regrinding, reagent schemes, and variability on bench-scale, open cycle flotation test performance. The open cycle flotation tests included cleaning of lead and zinc concentrates. The Bellekeno flotation program also included bench-scale, locked cycle tests (LCTs), which were part of the 1996, 2007, and 2008/2009 test programs.

Primary grind size was investigated in the 2007 and 2008/2009 test programs. The results indicated rougher flotation performance was not sensitive to primary grind up to a P_{80} size of 174 µm. This is in line with the results of mineralogical evaluations of the various materials.

Based on the conclusions of the 2009 test work, a concentrator was constructed in 2010/2011 and began operation in 2011, processing material from the Bellekeno zone.

The mill facility operated in 2012 with a target primary grind P_{80} size of 175 µm without regrinding of any flotation concentrates prior to cleaning. It should be noted that most of the test work to date has been conducted at a finer primary grind size than is being achieved by the mill facility.

In 2011, Lucky Queen and Flame & Moth samples were tested at the Inspectorate laboratory in Vancouver, British Columbia. The open cycle flotation tests included rougher and cleaning stages using a flowsheet similar to the current mill facility.

Detailed flotation test work using Bermingham samples was completed at SGS Laboratories in 2016 at Vancouver, British Columbia. This test work was based on the operational parameters seen in the full scale production facility.

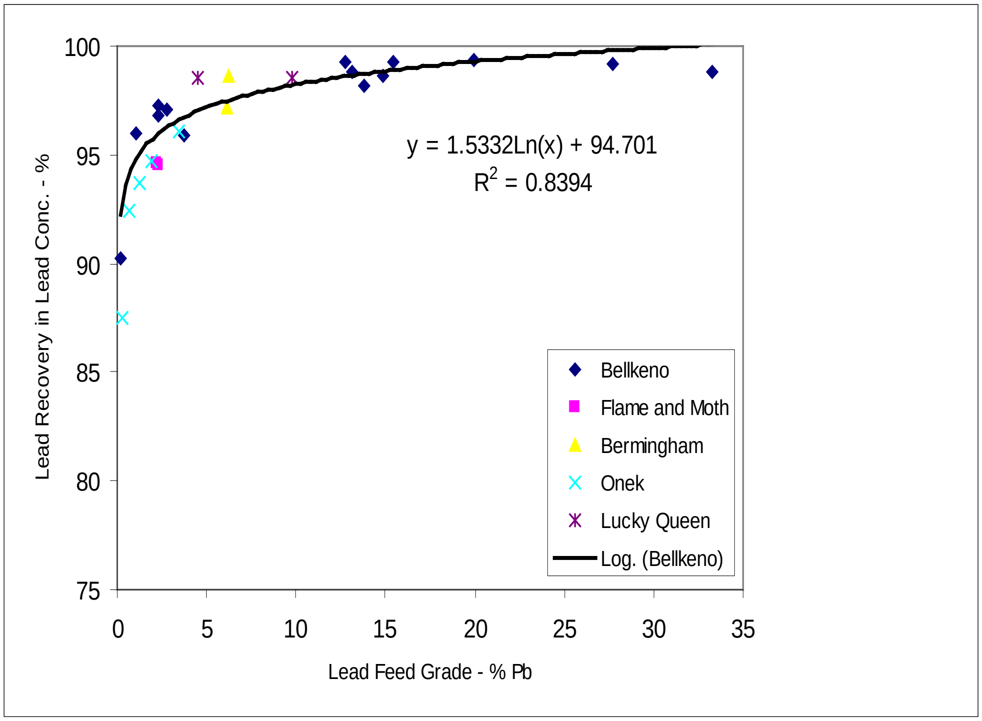
Table 13-4 summarizes the lead rougher recovery for all of the various zones and samples. The dates of the test work and the various laboratories used to generate the data are also shown in this table. It is important to note that individual sample feed grades may be significantly different than average grades for a zone as shown in Table 13-1.

TABLE 13-4 LEAD CIRCUIT ROUGHER RECOVERY DATA FOR ALL ZONES
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Lab/Year	Lead Feed Grade (%)	Lead Rougher Recovery (%)	Comments
Bellekeno	PRA/2008[1]	14.87	98.6	Individual sample
Bellekeno	PRA/2008	15.43	99.3	Individual sample
Bellekeno	PRA/2008	2.33	96.8	Individual sample
Bellekeno	PRA/2008	19.98	99.4	Individual sample
Bellekeno	PRA/2008	33.3	98.8	Individual sample
Bellekeno	PRA/2008	2.27	97.3	Individual sample
Bellekeno	PRA/2008	27.75	99.2	Individual sample
Bellekeno	PRA/2008	12.72	99.3	Individual sample
Bellekeno	PRA/2008	1.08	96.0	Individual sample
Bellekeno	PRA/2008	2.81	97.1	Individual sample
Bellekeno	PRA/2008	0.2	90.2	Individual sample
Bellekeno	PRA/2008	3.77	95.9	Individual sample
Flame & Moth	Insp. 2013[2]	2.3	94.5	Composite sample
Flame & Moth	Insp. 2013	2.23	94.6	Composite sample
Onek	Insp. 2011[3]	1.92	94.7	Individual sample
Onek	Insp. 2011	1.2	93.7	Individual sample
Onek	Insp. 2011	0.67	92.4	Individual sample
Onek	Insp. 2011	0.24	87.5	Individual sample
Onek	Insp. 2011	3.45	96.1	Individual sample
Lucky Queen	Insp. 2011[3]	4.54	98.5	Individual sample
Lucky Queen	Insp. 2011	9.74	98.5	Individual sample
Bermingham	SGS 2016[4]	6.23	98.6	Composite sample
Bermingham	SGS 2016	6.1	97.2	Composite sample

Shown in Figure 13-6 is a graphical representation of the open-circuit lead recovery data for all of the deposits included in the Project, as it relates to lead feed grades. While the various deposit samples are different in terms of feed grades, the flotation performance is dictated by the grade of the flotation feed. This is a somewhat different conclusion than previously used with respect to the Project, however, it appears to be reasonable considering the common mineralogical textures across the deposits. The lead grades expected from actual mining will likely be confined to a range of 2% Pb to 7% Pb and not as wide ranging as that seen in the test samples. This would imply a rough flotation recovery of 95% to 97% for lead.

FIGURE 13-6 LEAD RECOVERY IN ROUGHER FLOTATION TESTS FOR ALL AVAILABLE DEPOSITS



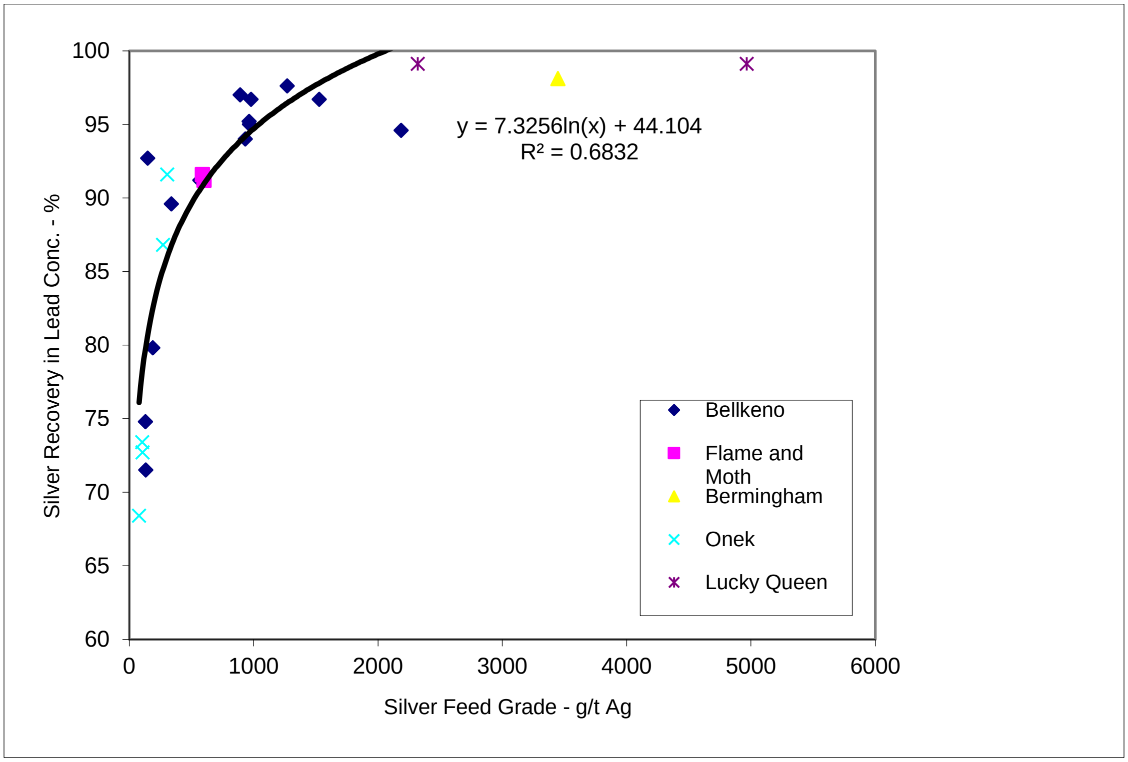
The data for silver recovery in open circuit tests is compiled in a manner similar to that for lead and is contained in the following Table 13-5.

TABLE 13-5 SILVER RECOVERY IN LEAD CONCENTRATE - ROUGHER RECOVERY DATA, ALL ZONES
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Lab/Year	Silver Feed grade (g/t)	Silver Rough Recovery (%)	Comments
Bellekeno	PRA/2008	967	95.0	Individual sample
Bellekeno	PRA/2008	980	96.7	Individual sample
Bellekeno	PRA/2008	337	89.6	Individual sample
Bellekeno	PRA/2008	1269	97.6	Individual sample
Bellekeno	PRA/2008	2187	94.6	Individual sample
Bellekeno	PRA/2008	148	92.7	Individual sample
Bellekeno	PRA/2008	1528	96.7	Individual sample
Bellekeno	PRA/2008	892	97.0	Individual sample
Bellekeno	PRA/2008	133	71.5	Individual sample
Bellekeno	PRA/2008	188	79.8	Individual sample
Bellekeno	PRA/2008	130	74.8	Individual sample
Bellekeno	PRA/2008	568	91.2	Individual sample
Flame & Moth	Insp. 2013	600	91.2	Composite sample
Flame & Moth	Insp. 2013	589	91.6	Composite sample
Onek	Insp. 2011	304	91.6	Individual sample
Onek	Insp. 2011	106	72.7	Individual sample
Onek	Insp. 2011	104	73.4	Individual sample
Onek	Insp. 2011	79	68.4	Individual sample
Onek	Insp. 2011	272	86.8	Individual sample
Lucky Queen	Insp. 2011	2321	99.1	Individual sample
Lucky Queen	Insp. 2011	4965	99.1	Individual sample
Bermingham	SGS 2016	3448	98.1	Composite sample
Bermingham	SGS 2016	3302	98.3	Composite sample

In a similar evaluation, the open-circuit silver recovery to the lead rough concentrate is strongly related to the silver feed grade and is shown in Figure 13-7. The silver recovery is modelled in a confined range from about 100 to 2,000 g/t Ag and in this range silver recovery changes significantly from about 75% to 97%. Above approximately 2,000 g/t Ag, silver recovery is expected to consistently be in the 97% range. It should be noted that the silver content of galena is maximized at approximately 25,000 g/t Ag and when lead concentrates contain silver grades above this level, it is due to silver sulphide minerals being present. Silver sulphide minerals behave in a manner similar to lead minerals in flotation and are strongly concentrated into a lead concentrate.

FIGURE 13-7 SILVER RECOVERY IN ROUGHER FLOTATION TESTS FOR ALL AVAILABLE DEPOSITS

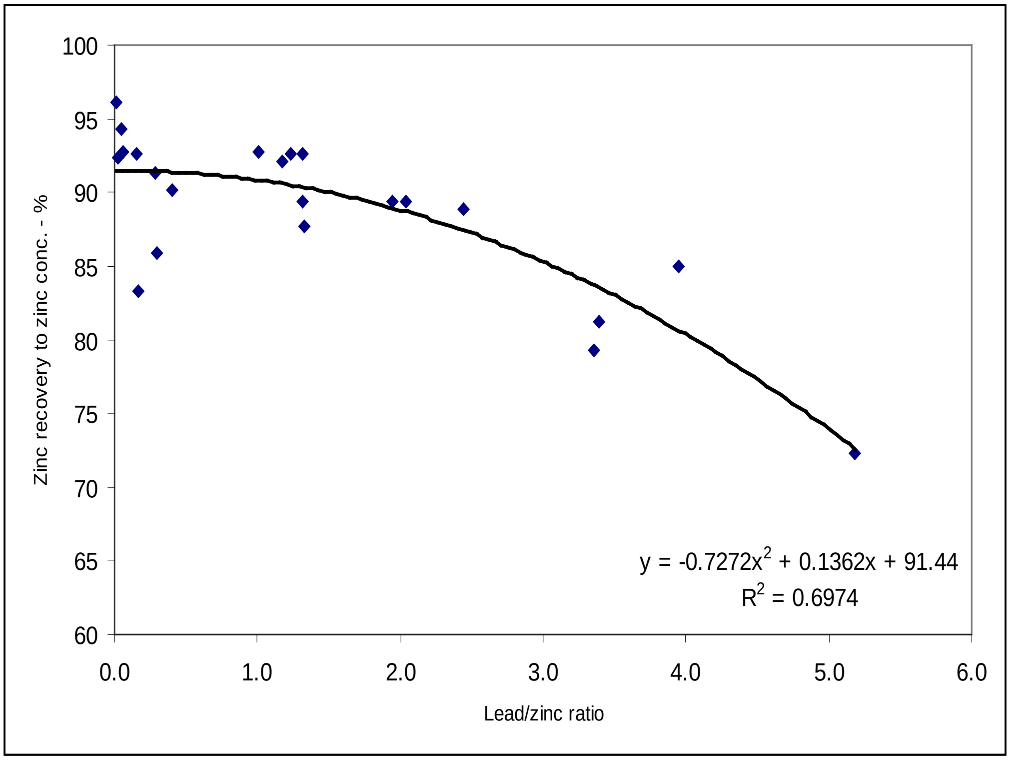


The zinc recovery data from laboratory test work also indicates that high zinc recoveries are to be expected for all deposits in the Project and zinc performance is not related to the source deposit. It was observed that zinc recovery losses in the lead concentrate increase as the volume of lead concentrate is increased relative to the volume of zinc, and this relationship is shown in Figure 13-8. As previously indicated, the liberation of zinc mineralization is typically better that that for lead mineralization. Total zinc flotation recovery in laboratory tests is the sum of zinc recovery in a lead concentrate and in a zinc concentrate. Total zinc flotation recovery is typically 97.5% to 99.5% of total zinc, with zinc losses from the zinc concentrate being the result of zinc recovered in the lead concentrate. Typically, zinc losses to flotation tailings is less than 2% in laboratory flotation tests. As the ratio of lead to zinc increases, the percentage of zinc lost in the lead concentrate increases. Table 13-6 summarizes the performance of zinc flotation test work for the same data set evaluated in terms of lead flotation performance.

TABLE 13-6 ZINC CIRCUIT ROUGHER RECOVERY DATA FOR ALL ZONES
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Lab/year	Zn grade (%)	Total Zn Rec. (%)	Loss in Pb Con (%)	Zn Rec. (%)	Comments
Bellekeno	PRA/2008	11.33	99.5	4	92.6	Individual sample
Bellekeno	PRA/2008	12.5	99.5	4	92.6	Individual sample
Bellekeno	PRA/2008	15.45	99.5	4	92.6	Individual sample
Bellekeno	PRA/2008	8.19	99.6	8	88.8	Individual sample
Bellekeno	PRA/2008	6.42	99.5	25	72.3	Individual sample
Bellekeno	PRA/2008	1.17	96.2	4	89.4	Individual sample
Bellekeno	PRA/2008	7.02	99.6	12	84.9	Individual sample
Bellekeno	PRA/2008	12.56	99.6	4	92.7	Individual sample
Bellekeno	PRA/2008	10.07	98.2	4	91.7	Individual sample
Bellekeno	PRA/2008	9.85	99.2	4	92.3	Individual sample
Bellekeno	PRA/2008	9.34	98.9	6	90.1	Individual sample
Onek	Insp. 2011	11.81	88.4	2.5	83.3	Individual sample
Onek	Insp. 2011	20.71	97.1	1.5	92.7	Individual sample
Onek	Insp. 2011	15.71	97.7	0.5	94.3	Individual sample
Onek	Insp. 2011	23.32	99.6	0.5	96.1	Individual sample
Onek	Insp. 2011	11.51	90.1	1.5	85.9	Individual sample
Lucky Queen	Insp. 2011	3.41	97.4	7	87.7	Individual sample
Lucky Queen	Insp. 2011	4.77	99.1	7	89.3	Individual sample
Bermingham	SGS 2016	1.84	98.8	15	81.3	Comp. sample
Bermingham	SGS 2016	1.82	96.7	15	79.2	Comp. sample

FIGURE 13-8 ZINC RECOVERY IN ROUGHER FLOTATION TESTS FOR ALL AVAILABLE DEPOSITS



The relationships shown in the preceding three figures can be used to develop overall recovery models. This can be done by multiplying each relationship by a fixed cleaner circuit recovery, cleaner circuit recoveries are estimated at 98% for lead and silver and 97% for zinc. Overall recovery for lead and silver is dependent on feed grades, while zinc recovery is strongly influenced by losses of zinc in a lead concentrate. Validation of the overall recovery model is discussed following this section.

Lead recovery to a final concentrate across all deposits can be predicted by the following equation:

Rec.(lead) = (1.5332 x ln(lead feed grade) + 94.71) x 0.98

Silver recovery to a lead concentrate across all deposits can be predicted by the following equation:

Rec.(silver) = (8.0 x ln(silver feed grade/1.2) + 43.0) x 0.98

Above 1500 g/t silver in feed, fix silver recovery at 97.0 percent

Zinc recovery to a zinc concentrate across all deposits can be predicted by the following equation:

Rec.(zinc) = (-0.7272 x (lead:zinc ratio)^2 + 0.1362 x (lead:zinc ratio) + 91.44) x 0.97

These relationships can be used for estimations of metallurgical recovery with a geological block model, although below about 1% feed grades, caution should be used, as well, as with very high grades of base metals. It is recommended that metal recoveries be limited to being less than 97% in all cases.

Comparison of the recovery modeling results, with locked cycle testing is good, with three locked cycle tests completed. Two locked cycle tests were completed using Bellekeno samples and one test was completed with Bermingham samples. A comparison of the actual recovery data from the locked cycles and the predictive models is shown in Table 13-7.

TABLE 13-7 COMPARISON OF RECOVERY DATA FOR LOCKED CYCLE TESTS AND PREDICTIVE RECOVERY MODELS
Alexco Resource Corp. – Keno Hill Silver District Project

Sample	Locked Cycle Data (%)	Predictive Model Data (%)
Bellekeno LC 1		
Lead Recovery	94.0	96.7
Silver Recovery	98.8	94.3
Zinc Recovery	94.4	88.7
Bellekeno LC 2		
Lead Recovery	98.2	96.8
Silver Recovery	95.2	94.6
Zinc Recovery	92.2	88.6
Bermingham LC 2		
Lead Recovery	95.3	95.6
Silver Recovery	97.5	97.0
Zinc Recovery	63.6	80.6

MISCELLANEOUS TESTWORK

The 2008/2009 test program included a series of miscellaneous tests and the results are presented in greater detail in the Wardrop report.

Settling tests were performed on samples of both Bellekeno concentrates and tailings. Two flocculants were tested and an average unit thickener area of 0.02 m^2/t/d was identified for the mill design criteria. Filtration tests were also performed on samples of lead-silver and zinc concentrates without any issues reported.

Whole rock assay and inductively coupled plasma analysis were performed on bulk tailings samples with the main components identified as being silicon and iron. The tailings water was also assayed by inductively coupled plasma scan. Acid base accounting tests were performed on low and high sulphide tailings samples to determine their acid generating potential.

RECOMMENDATIONS FOR FURTHER TESTWORK

The current PEA study assumes the mill facility production will increase to a nominal rate of 400 tpd once an additional ball mill is commissioned.

The LOM plan is generally based on the mill processing a variable blend of two deposits at a time. It is recommended that some test work be completed to confirm the expected good performance of a blended mill feed.

Zinc losses in the lead circuit are expected to be the only significant metallurgical shortfall in the operation going forward and additional testing is recommended to minimize this issue. This issue could also be optimized in the operation as it is evaluated, although this may be expensive from an operational loss of zinc.

Testing of additional samples for settling and geochemical characteristics is also warranted

14 MINERAL RESOURCE ESTIMATE

Definitions for resource categories used in this report are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM definitions) incorporated by reference into NI 43-101. In the CIM classification, a Mineral Resource is defined as “a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction”. Mineral Resources are classified into Measured, Indicated, and Inferred categories. A Mineral Reserve is defined as the “economically mineable part of a Measured and/or Indicated Mineral Resource” demonstrated by studies at Pre-Feasibility or Feasibility level as appropriate. Mineral Reserves are classified into Proven and Probable categories. To date, no Mineral Reserves have been estimated for the Project.

A summary of the Mineral Resource at the KHSD is shown in Table 14-1.

TABLE 14-1 SUMMARY OF MINERAL RESOURCE ESTIMATES AS AT JANUARY 3, 2017

Alexco Resource Corp. – Keno Hill Silver District Project

Deposit	Classification	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au g/t
Bellekeno	Indicated	262,000	585	3.50	5.30	n/a
	Inferred	243,000	428	4.10	5.10	n/a
Lucky Queen	Indicated	132,300	1,167	2.43	1.63	0.16
	Inferred	257,900	473	1.04	0.80	0.13
Flame & Moth	Indicated	1,679,000	498	1.85	5.33	0.42
	Inferred	365,200	356	0.47	4.25	0.26
Onek	Indicated	700,200	191	1.24	11.85	0.6
	Inferred	285,100	118	1.15	8.26	0.42
Bermingham	Indicated	858,000	628	2.40	1.65	0.13
	Inferred	220,000	770	2.13	2.21	0.15
Total	**Indicated**	**3,631,500**	**500**	**2.00**	**5.60**	**0.30**
	Inferred	**1,371,200**	**408**	**1.63**	**4.26**	**0.21**

Notes:
1. Bellekeno estimate is at September 30, 2013 and reflects the September 30, 2012 estimate less estimated depletion from mining to September 30, 2013.
2. CIM definitions were followed for Mineral Resources.
3. Mineral Resources are estimated at an NSR cut-off value of $185/tonne.
4. Bellekeno Mineral Resources are estimated using metal prices of $22.50/oz Ag, US$0.85/lb Pb, US$0.95/lb Zn and $1,300/oz Au and a US$/C$ exchange rate of 0.96.
5. Lucky Queen, Onek, Flame & Moth and Bermingham Mineral Resources are estimated using metal prices of $20.00/oz Ag, US$0.95/lb Pb, US$1.00/lb Zn and $1,300/oz Au and a US$/C$ exchange rate of 0.80
6. Bulk density estimated by regression analysis for Bellekeno, Lucky Queen and Onek and from core and pulp sampling for Flame & Moth and Bermingham.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.

INTRODUCTION

This section describes the assumptions and methodologies used to prepare the Mineral Resource estimates for the four deposits included in this PEA technical report and one additional deposit not included in the PEA economic analysis (Section 22):

- Bellekeno deposit;
- Lucky Queen deposit;
- Flame & Moth deposit;
- Onek deposit (not part of the PEA economic analysis);
- Bermingham deposit.

The Mineral Resources have been estimated in conformity with the generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines* (CIM, 2003) and are reported in accordance with NI 43-101. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserve.

In the opinion of the author, the resource evaluations reported herein are a reasonable representation of the global polymetallic mineral resources in the Bellekeno, Lucky Queen, Flame & Moth, Onek, and Bermingham deposits given the current level of sampling.

The updated Bellekeno Mineral Resource Statement presented herein represents the third Mineral Resource evaluation prepared for the Bellekeno deposit in accordance with CIM definitions. The Mineral Resource model was prepared by Alexco personnel under the supervision of a third party consulting geologist and considers 405 core drill holes drilled by

Alexco during the period of 2006 to 2012 as well as historical drilling and chip sampling data collection during production undertaken both historically and by Alexco. The resource estimation work was completed by David Farrow, PGeo, of GeoStrat, a QP as defined in NI 43-101.

The updated resource model for the Bellekeno mine was reviewed by Dr. Gilles Arseneau, P. Geo., of SRK and found to be completed to a standard acceptable to SRK and in accordance with NI 43-101.

The Mineral Resource model for the Lucky Queen deposit was prepared by SRK and published in an independent technical report on September 8, 2011. The author of the report was Dr. Arseneau. The report is entitled "Technical Report on the Lucky Queen Deposit, Lucky Queen Property, Keno Hill District, Yukon."

The Mineral Resource model for the Flame & Moth deposit was prepared by Marek Nowak, PEng, SRK Consulting Services Inc, and published in a News Release dated April 29, 2015.

The Mineral Resource estimate for the Onek deposit was prepared by SRK and published in an independent technical report on September 8, 2011. The author of the report was Dr. Arseneau. The report is entitled "Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon." The Onek mineral resource has been updated in this report to include the results of additional drilling carried out in 2012 and 2013.

The Mineral Resource estimate for the Bermingham deposit was prepared by SRK in 2016 and published in a news release dated January 3, 2017.

The databases used to update the Bellekeno mine and Flame & Moth Mineral Resource estimates were audited by the QPs. The QPs are of the opinion that the current drilling information is sufficiently reliable to interpret with confidence the boundaries for the polymetallic mineralization and that the assay data are sufficiently reliable to support Mineral Resource estimation.

Mintec's MineSight software was used to construct the geological solids for all five deposits. The Lucky Queen, Onek, and Bermingham geological models and database were imported into GEMS format Access databases for geostatistical analysis, block model construction, metal grades estimates, and the tabulation of the Mineral Resources. Isatis was used for geostatistical analysis and variography, block model construction, estimating metal grades, and Mineral Resource tabulation for Bellekeno. The Lucky Queen, Flame & Moth, Onek, and Bermingham were estimated using GEMS.

RESOURCE ESTIMATION PROCEDURES

The resource evaluation methodology for the five deposits employed the following procedures:

- Database compilation and verification.
- Construction of wireframe models for the boundaries of the polymetallic mineralization.
- Definition of resource domains.
- Estimation of bulk density.
- Data conditioning (compositing and capping) for geostatistical analysis and variography.
- Block modelling and grade interpolation.
- Resource classification and validation.
- Assessment of “reasonable prospects for economic extraction” and selection of appropriate cut-off grades.
- Preparation of the Mineral Resource Statement.

RESOURCE DATABASE

DATABASE FOR THE BELLEKENO MINE

The Bellekeno database comprises a cumulative database from all sampling campaigns undertaken on the deposit to May 2012. These data include recent exploration drilling, from both surface and underground, and underground face (chip) samples, both recent and historical. Summary of the data available is shown in Table 14-2. Samples from within the defined geological solids were used in the resource estimation and are summarized in Table 14-3.

TABLE 14-2 BELLEKENO MINE SAMPLE DATABASE
Alexco Resource Corp. – Keno Hill Silver District Project

Sample Type	Count	Number of Samples	Length (m)
Chip	1,666	5,232	4,226.9
Core (Surface)	65	8,541	15,273.9
Core (Underground)	348	7,645	12,003.6
Total	2,079	21,418	31,504.4

TABLE 14-3 BELLEKENO MINE SAMPLES USED FOR MINERAL RESOURCE ESTIMATION
Alexco Resource Corp. – Keno Hill Silver District Project

Sample Type	Count	Number of Samples	Length (m)
Chip	1,064	2,617	2,006.7
Core (Surface)	37	156	135.0
Core (Underground)	183	776	649.9
Total	1,284	3,549	2,791.6

The Mineral Resource database was imported into a ISATIS database, and validated by checking for inconsistencies in naming conventions, analytical units, duplicate entries, length, distance values, or sample intervals less than or equal to zero, blank or zero-value assays, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, and missing interval and coordinate fields. A few minor inconsistencies were noted and corrected. No other significant validation errors were noted in the supplied database.

DATABASE FOR THE LUCKY QUEEN MINE

The Lucky Queen data were exported from the SQL database by scripted routine to CSV files, which were imported into MineSight. The following drill hole files were generated: collar, survey, drill hole assay, chip sample assay, geology, and geotechnical.

The Lucky Queen database comprises descriptive information and assay values both from historical underground sampling and from exploration drilling carried out by Alexco from 2006 through 2010. The database was provided to SRK as an Excel format spreadsheet and contains a total of 558 records encompassing 47 core drill holes and 511 historical underground channel samples (Table 14-4). From the drilling results, Alexco has identified a total of 106 core drill hole intervals as primary vein intercepts and 26 intervals as secondary splay intercepts, based on a combination of geological logging and assay grades.

TABLE 14-4 LUCKY QUEEN DEPOSIT SAMPLE DATABASE
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Count	Ag (g/t)	Au (g/t)	Pb (ppm)	Zn (ppm)	Vein Width (m)
Historical Chip	511	2,175	NA	50,661	39,216	1.20
Alexco Core Vein	106	1,426	0.19	36,523	21,222	0.67
Alexco Core Splays	26	1,128	0.06	18,340	6,905	0.78
Alexco Core other	3,012	3.6	0.02	322	378	1.84

The Mineral Resource database was imported into a GEMS format Access database and validated by checking for:

- inconsistencies in naming conventions or analytical units;
- duplicate entries;
- overlapping intervals;
- length or distance values less than or equal to zero;
- blank or zero-value assay results;
- out-of-sequence intervals;
- intervals or distances greater than the reported drill hole length;
- inappropriate collar locations; and
- missing interval and coordinate fields.

Two trivial terminal interval survey distances were noted and corrected; no other significant validation errors were noted in the supplied database. Assay intervals marked as below detection limit were assigned a nominal grade of 0.001 ppm prior to importing into GEMS.

DATABASE FOR THE FLAME & MOTH DEPOSIT

The Flame & Moth drill hole database comprises descriptive information and assay values from exploration drilling carried out by Alexco from 2010 through 2014. The database was provided to SRK as an Excel format spreadsheet and contains 149 core drill holes (Table14-5) drilled in the Flame & Moth area, of which 112 drill holes intercepted mineralized domains (Table 14-6).

TABLE 14-5 FLAME & MOTH DEPOSIT SAMPLE DATABASE
Alexco Resource Corp. – Keno Hill Silver District Project

Drill Hole Type	Drill Hole Number	Drill Hole Length (m)	Number of Samples
Core	149	36,659	6,038

TABLE 14-6 FLAME & MOTH DEPOSIT CORE DRILL HOLE VEIN INTERCEPTS
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Drill Hole Number	Drill Hole Length (m)	Number of Samples
Flame Vein - Christal Zone	66	326	496
Flame Vein - Lightning Zone 1	46	242	366
Flame Vein - Lightning Zone 2	15	50	83
Total	**1128**	**618**	**945**

Note. The total is not the sum of drill holes intersecting each zone. One drill hole may intersect two zones

The Mineral Resource database was imported into GEOVIA GEMS™ and validated with a focus on checking for narrow mineralized intersections, sampling gaps, and sample intervals with no assay data within mineralized intersections.

For resource estimation a small number of narrow drill hole intersections of the mineralized zones were expanded to at least 1.5 m mining widths. This resulted in some adjustments to the original mineralized solids (Table 14-7).

TABLE 14-7 ORIGINAL AND ADJUSTED NARROW MINERALIZED ZONES DRILL HOLE INTERSECTIONS
Alexco Resource Corp. – Keno Hill Silver District Project

Hole-ID	From Orig	To Orig	Length Orig	From Adj.	To Adj.	Length Adj.	Rock Name
K-10-0303	302.15	303.66	1.51	301.19	304.51	3.32	V1C
K-11-0343	156.36	156.68	0.32	155.37	157.65	2.28	V2
K-12-0396	103.91	104.09	0.18	103.14	104.7	1.56	V1L
K-12-0398	96.65	96.88	0.23	95.55	97.63	2.08	V2
K-12-0404	37.08	38.6	1.52	37.08	38.6	1.52	V1L
K-12-0414	148.05	148.5	0.45	147.44	149.14	1.70	V2
K-12-0417	163.86	165.25	1.39	163.71	166.05	2.34	V1L
K-12-0420	120.43	120.58	0.15	119.56	121.4	1.84	V1L
K-12-0421	133.86	134.71	0.85	133.42	135.15	1.73	V2
K-12-0425	162.79	163.26	0.47	162.03	164	1.97	V1L

Hole-ID	From Orig	To Orig	Length Orig	From Adj.	To Adj.	Length Adj.	Rock Name
K-13-0498	77.73	79.17	1.44	77.16	79.7	2.54	V1C
K-14-0540	368.46	369.7	1.24	368.2	369.89	1.69	V1L
K-14-0561	206.56	207.82	1.26	206.33	208.03	1.70	V1C
K-14-0572	279.4	281.05	1.65	279.18	281.23	2.05	V1C

There are a small number of sampling gaps within mineralized intersections. Those are related to no recoveries or fault intersections (Table 14-8).

TABLE 14-8 SAMPLE GAPS IN MINERALIZED ZONES
Alexco Resource Corp. – Keno Hill Silver District Project

Hole-ID	From	To	Adjacent From	Adjacent To	Gap Length	Code
K-12-0404	32.34	32.49	32.74	33.16	0.25	V2
K-12-0404	32.74	33.16	33.24	33.63	0.08	V2
K-12-0406	45	45.35	45.65	46.06	0.30	V1L
K-12-0409	135.5	135.6	135.65	136.1	0.05	V2
K-12-0438	344.53	345.8	346.80	347.25	1.00	V1L
K-14-0528	230.52	230.93	231.45	232.35	0.52	V1L
K-14-0548	481.3	482	482.40	483	0.40	V1L

There are 90 additional intervals inserted by loggers at sample locations with lower recoveries. A review of those intervals showed that they occurred primarily in zones of slight to moderate core loss, and the intervals may not reflect actual no recovery locations. An example of those intervals is presented in Table 14-9. Alexco has reviewed core photos and logged data and commented on each one of the intervals in question. As a result of this review, SRK proceeded with assignment of missing assay values from adjacent assays. Only in a few cases where extremely low recoveries were logged, the missing assay values were excluded from the resource estimation process (10 intervals).

TABLE 14-9 EXAMPLES OF SAMPLE INTERVALS ASSUMED TO HAVE NO RECOVERIES
Alexco Resource Corp. – Keno Hill Silver District Project

Hole-ID	From	To	Ag (g/t)	Code
K-12-0406	33.39	33.76	463	V2
K-12-0406	33.76	34.65		V2
K-12-0406	34.65	35.06	147	V2
K-12-0406	47	47.55	546	V1L
K-12-0406	47.55	48.05		V1L

Hole-ID	From	To	Ag (g/t)	Code
K-12-0406	48.05	48.23	29.8	V1L
K-12-0406	48.23	48.53		V1L
K-12-0406	48.53	48.65	217	V1L
K-12-0406	48.65	49.35		V1L
K-12-0406	49.35	49.52	1225	V1L

All assays below detection limit entered in the database as negative values were assigned as follows: Ag - 0.02 g/t, Au – 0.001 g/t, Pb – 0.5 g/t.

DATABASE FOR THE ONEK DEPOSIT

The Onek data were exported from the SQL database by scripted routine to CSV files, which were imported into MineSight. The following drill hole files were generated: collar, survey, drill hole assay, chip sample assay, geology, and geotechnical.

The Onek database comprises descriptive information and assay values both from historical underground sampling and from exploration drilling carried out by Alexco from 2007 through 2013. The database was provided to SRK as an Excel format spreadsheet and contains a total of 1,567 records encompassing 92 core drill holes and 1,302 historical underground channel samples, 10 historical drill holes, 29 percussion holes and 134 test holes (Table 14-10). From the drilling results, Alexco has identified a total of 106 core drill hole intervals as primary vein intercepts and 26 intervals as secondary splay intercepts, based on a combination of geological logging and assay grades.

TABLE 14-10 ONEK DEPOSIT SAMPLE DATABASE AVERAGE ASSAY VALUES INSIDE VEINS
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Count	Sample inside Veins	Ag (g/t)	Au (g/t)	Pb (ppm)	Zn (ppm)
Historical Chip	1,302	1156	275	NA	23,283	111,645
Alexco Drilling	92	633	215	0.57	17,134	112,434
Historical Drilling	10	8	NA	NA	6	3,250
Percussion Test holes	29	72	NA	NA	NA	29,014
Test Holes	134	97	NA	NA	3,277	32,439
Total	1,567	1,966				

The Mineral Resource database was imported into a GEMS format Access database and validated by checking for:

- inconsistencies in naming conventions or analytical units;
- duplicate entries;
- overlapping intervals;
- length or distance values less than or equal to zero;
- blank or zero-value assay results;
- out-of-sequence intervals;
- intervals or distances greater than the reported drill hole length;
- inappropriate collar locations; and
- missing interval and coordinate fields.

A few minor inconsistencies were noted and corrected by Alexco. No other significant validation errors were noted in the supplied database. Assay intervals marked as below detection limit were assigned a nominal grade of 0.001 ppm prior to importing into GEMS.

DATABASE FOR THE BERMINGHAM DEPOSIT

The Bermingham data were exported from the SQL database by scripted routine to CSV files, which were imported into Gemcom. The following drill hole files were generated: collar, survey, drill hole assay, chip sample assay and geology.

The Bermingham drill hole database comprises descriptive information and assay grades from exploration drilling carried out by Alexco from 2009 through 2016. The database was provided to SRK as a CSV format spreadsheet and contained 119 diamond drill holes, 93 of which were used in the resource estimation (Tables 14-11 and 14-12).

TABLE 14-11 BERMINGHAM DEPOSIT SAMPLE DATABASE INSIDE VEINS
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Number	Length (m)	Samples
DDH	93	705	**1,027**

TABLE 14-12 BERMINGHAM DEPOSIT DIAMOND DRILL HOLE VEIN AND VEIN MARGIN INTERCEPTS
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Number of intercepts	Length (m)	Samples
Bermingham vein	47	109	182
Bermingham vein margin	49	141	181
Footwall vein	32	84	122
Footwall vein margin	33	101	122
Bear vein	51	90	160
Bear vein margin	48	141	198
West Dipper vein	11	21	41
West Dipper vein margin	4	18	21
TOTAL	**275**	**705**	**1,027**

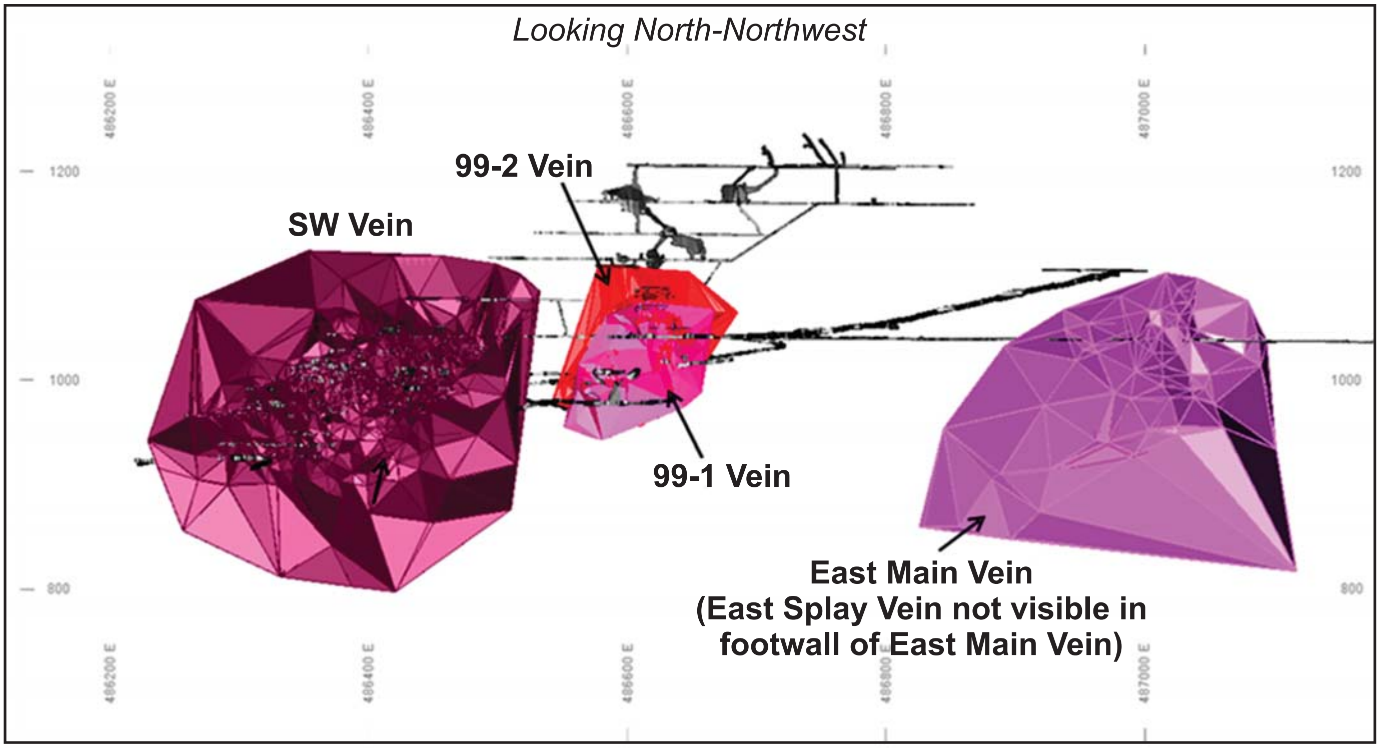
The supplied drill hole database was validated by checking for inconsistencies in naming conventions, analytical units, duplicate entries, length, distance values, or sample intervals less than or equal to zero, blank or zero-value assays, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, and missing interval and coordinate fields. No errors were noted in the supplied database. Assay intervals marked as below detection limit were assigned a zero grade during compositing.

SOLID BODY MODELLING

3D wireframe solids were constructed by Alexco to accurately represent the geometry of the Bellekeno mine, Lucky Queen, Flame & Moth, Onek, and Bermingham vein structures. These wireframes were reviewed and validated by SRK before Mineral Resource estimation.

SOLID BODY MODELLING FOR THE BELLEKENO MINE

Wireframes were constructed for three portions of the Bellekeno deposit: the Southwest (SW) vein and splay, 99 vein and splay, and the East vein and splay (Figure 14-1). The wireframes were constructed using Mintec's MineSight 3D software. All points of construction on the veins are from Alexco's core drilling and mapping of underground exposure during mining. Individual points were constructed on the hangingwall and footwall of each drill hole vein/structure intercept. These points were chosen based on the fault/vein structure where, in most cases, the hangingwall and footwall contacts were clear and the mineralization was contained within a well-defined structure.



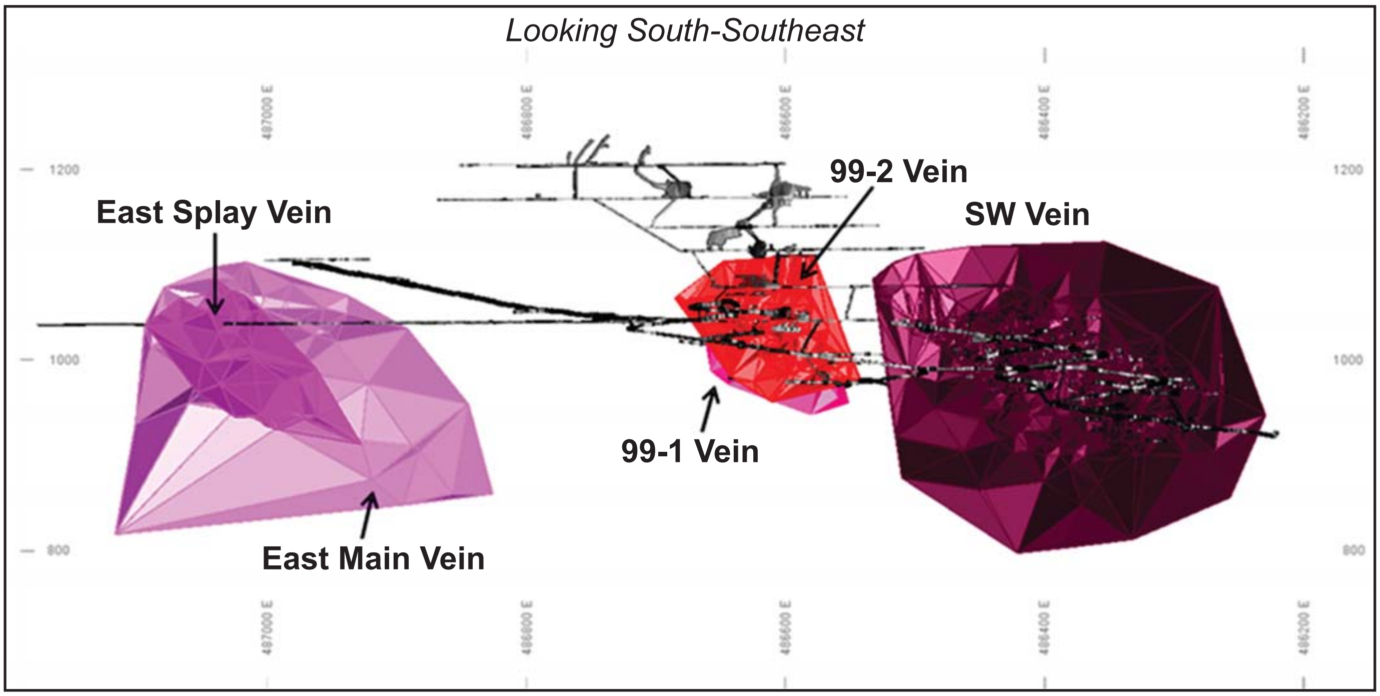


Figure 14-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno Mine Long Section, Wireframes

March 2017

Source: Alexco Resource Corp., 2013.

SOLID BODY MODELLING FOR THE LUCKY QUEEN MINE

At Lucky Queen, the majority of high-grade, silver-bearing vein material is confined between relatively intact rock of the hangingwall and footwall and is manifested as vein mineral and highly deformed fault rock (in varying proportions). High silver values are only rarely found outside the main structure as stringer zones or splays. Coincidence of high grade mineralization within identifiable structural limits made it sensible to base the wireframe interpretation on structural and geological controls, and contacts were chosen accordingly. In addition to Alexco drill hole data, historical drill hole data and geological mapping conducted by UKHM were used to constrain the geometry of the main Lucky Queen structure and associated splay structures, where applicable.

Historical drift and stope mapping is considered by Alexco to be accurate and representative. Field verification of the mapping could not be performed by Alexco geologists because the underground workings are inaccessible. However, historical maps of other mines in the Keno Hill Silver District have been verified and found to be generally accurate in their representation of the geology. Historical maps were scanned, geo-referenced, and imported into MineSight. The images were then draped onto drift solids at the appropriate elevation. This mapping was used to tag hangingwall and footwall contacts on the wireframe.

The main Lucky Queen mineralized body occupies a central part of the primary wireframe and the most important constraints delineating it are the lower grade drill intercepts that occupy locations above, below, and to the northeast. Beyond these drill holes, the wireframe is cut off (approximately) along the deepest extents of the 200 and 300 level historic workings. Fault 3 and 5 cut off the wireframe to the northeast and at shallow elevations, respectively. The earlier Lucky Queen workings include extensive stoping. As a result, it was decided to exclude the entire area containing the 50, 100, 200, and 300 level workings from the wireframe solid. Those areas of the 500 level workings that intersect the wireframes were also removed from the wireframe solid (Figure 14-2).

SOLID BODY MODELLING FOR THE FLAME & MOTH DEPOSIT

Wireframes were constructed for two portions of the Flame vein offset along the Mill fault in the geology model for the Flame & Moth prospect. The Flame vein in the hangingwall of the Mill fault was termed the Lightning zone while the portion in the footwall of the Mill fault was termed the Christal zone (Figure 14-3).

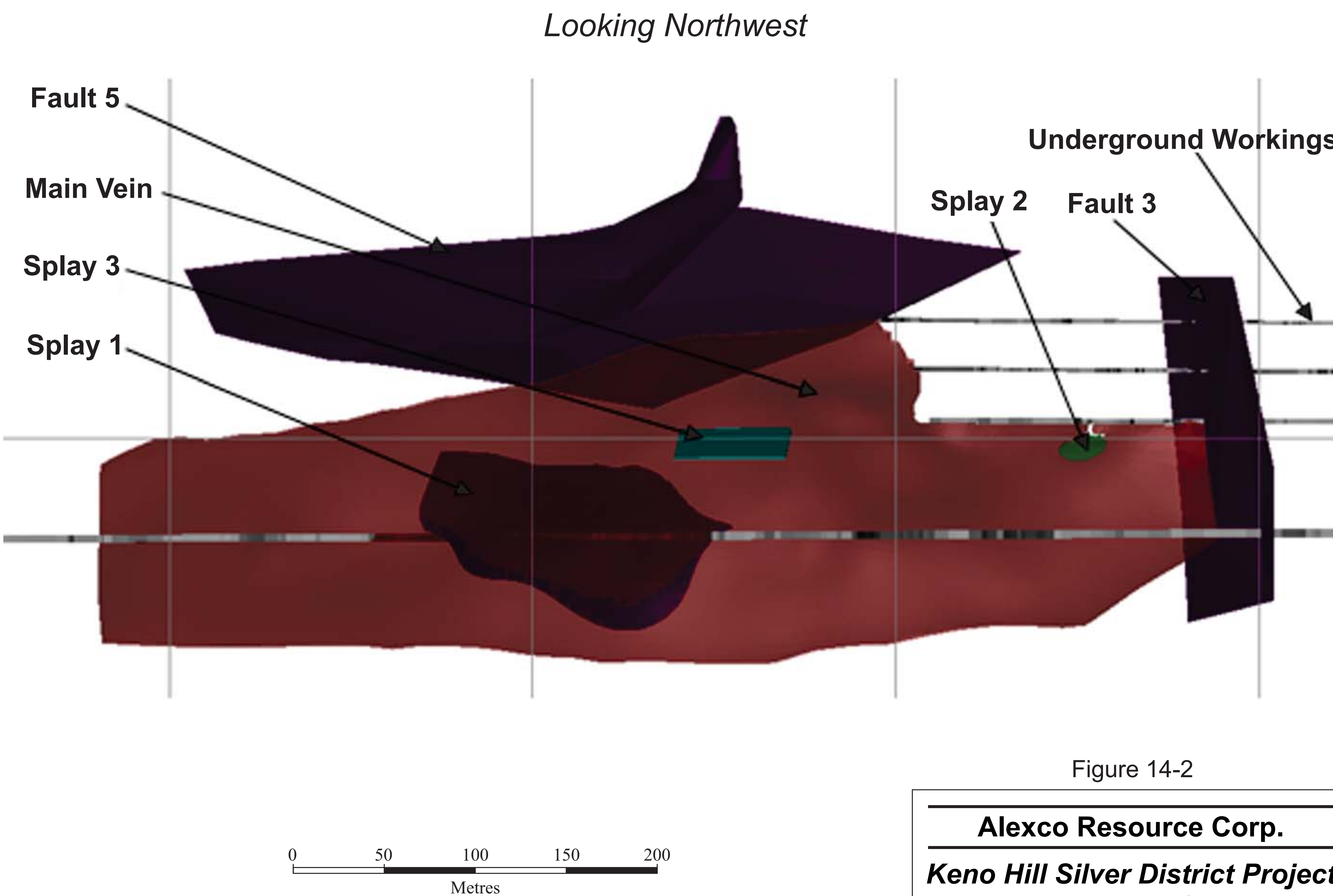


Figure 14-2

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Section of Lucky Queen Wireframes

March 2017

Source: SRK Consulting, 2011.

Looking North-Northwest

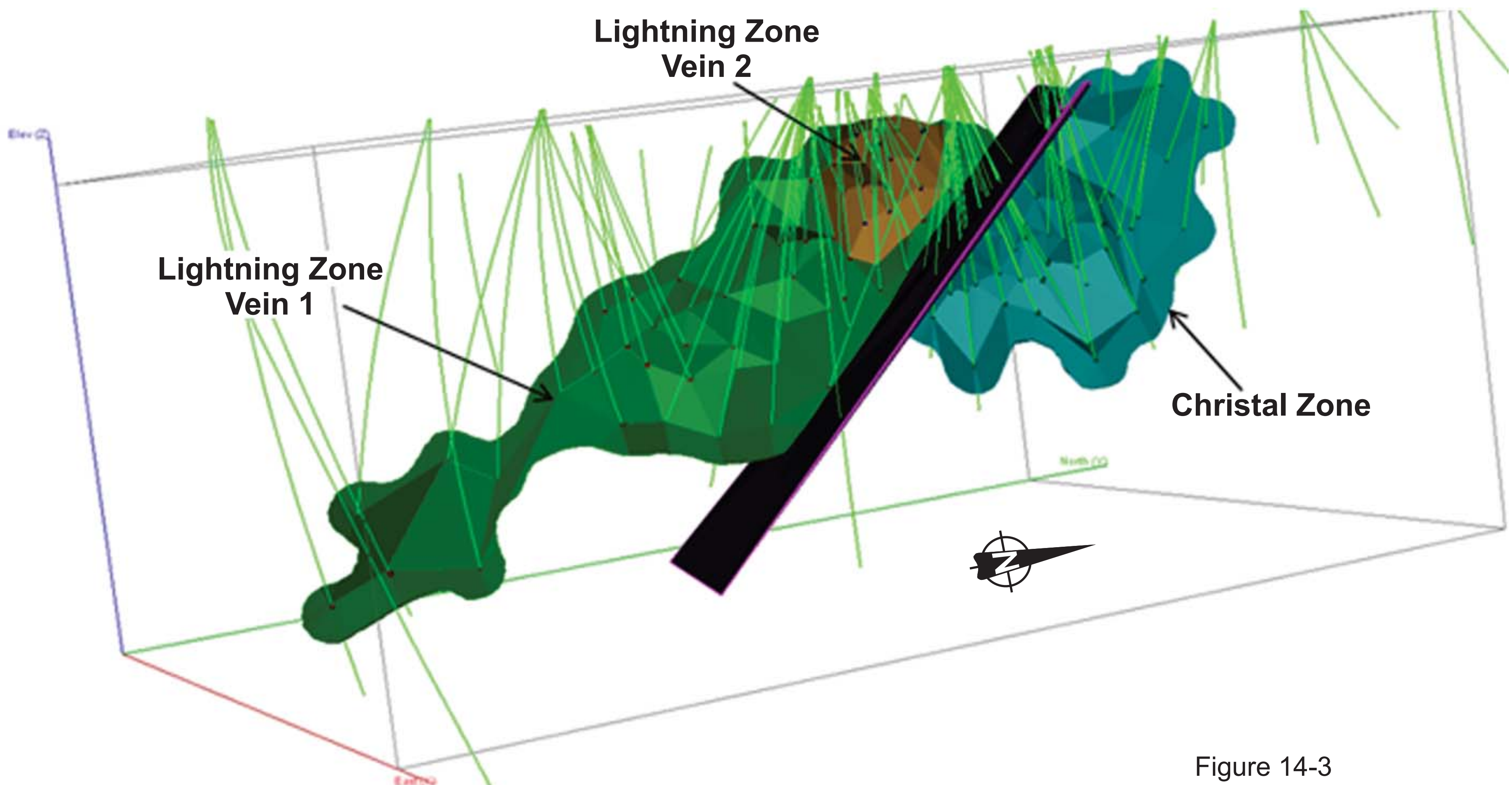


Figure 14-3

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Vein Wireframes and Location of Surface Drilling at Flame & Moth Used in Resource Estimation

March 2017

Source: Alexco Resource Corp., 2016.

SRK reviewed and validated the wireframes and concluded that the wireframes of the Flame & Moth deposit are fair representations of the mineralized veins. The wireframes were constructed using MineSight software. All points of construction on the Flame vein are from Alexco's core drilling. Individual points were constructed on the hangingwall and footwall of each drill hole vein/structure intercept. These points were chosen based on the fault/vein structure where in most cases, the hangingwall and footwall contacts are clear and the mineralization is contained within a well-defined structure. The Flame vein strikes between 025° and 027° and dips between 62° and 66° to the southeast.

SOLID BODY MODELLING FOR THE ONEK DEPOSIT

Three dimensional wireframe solids for the Onek deposit were constructed by Alexco to accurately represent the geometry of Onek vein structures. SRK reviewed and validated the wireframes before resource estimation. SRK concluded that the wireframes of the Onek deposit were fair representations of the mineralized veins and acceptable for resource estimation.

Wireframes for three separate veins were constructed for Onek: Vein 1, Vein 2, and Vein 1FW. Vein 1 is the dominant vein-fault structure at Onek, extending over 600 m in length and up to 260 m in depth. The vein is interpreted to extend through all drilling done to date and to encompass the drifts, stopes, and raises of the historical workings. The vein-fault thickness varies from approximately 7.5 m to less than a metre but, on the whole, is fairly thick and persistent. The farthest southwest drilling contains very little grade and acts as a constraint to the strike extent of the mineralization. On the northeastern end of the deposit, the underground mapping on the 400 level shows the vein narrowing and splitting into two, with the likely more dominant structure curving to the south-east and ending with sporadic mineralization in a possible cross fault (Figure 14-4).

Vein 2 forms an anastomosing structure in the hangingwall of Vein 1, with repeated convergence and divergence from the Vein 1 structure, as seen in the drill holes and underground level plan mapping. Vein 2 thickness is much smaller and less consistent than Vein 1 and the mineralization has much less continuity. This is regarded as a secondary structure in the Onek deposit. Vein 2 also bends sharply to the east at the northeastern end of the deposit where intercepts in the drill holes are much more sporadic. Several small weakly mineralized vein intercepts were noted in the hangingwall of Vein 2 but continuity of mineralization could not be established and they are not modeled at this time (Figure 14-5).

Two drill holes, K-08-0149 and K-10-0244, were drilled from separate collar locations but passed within 0.5 m of each other within the Vein 2 shape. As the location of Vein 2 in hole K-08-0149 could not be reconciled with the Vein 2 location in hole K-10-0244 without significant deviation in the wireframe, and since the K-10-0244 intercept had better survey control and was less oblique to the vein surface, the K-08-0149 Vein 2 intercept was excluded from the wireframe.

A third vein, Vein 1FW, was identified in several drill holes at the southwestern end of the deposit, likely splaying sharply off Vein 1, and was modelled for resource estimation.

Several weakly mineralized vein fault intercepts were identified in drill holes in the footwall to Vein 1 in the central portion of the deposit, in the vicinity of the historical workings. The continuity of these intercepts could not be established with the information available and these veins are regarded as small splays off the main Vein 1 structure. These intercepts were not modeled for resource purposes at this time.

Each of the vein shapes were wireframed independently, with a hangingwall surface and a footwall surface constructed using the drill hole intercepts, the shapes of the veins mapped in the levels and raises, and surface pit mapping. Where there was less information available, a contour tool was used to interpolate the vein shape and width every 10 metres in elevation and to smooth the vein surface. The vein shapes were extended to approximately 50 metres beyond known drilling and given a nominal vein thickness.

Veins 2 and 1FW were clipped against the Vein 1 shape. Veins 1 and 1FW were also clipped against the topographic that was based on casing depth in nearby diamond drill holes and interpreted overburden depths in proximal historic overburden (rotary) holes.

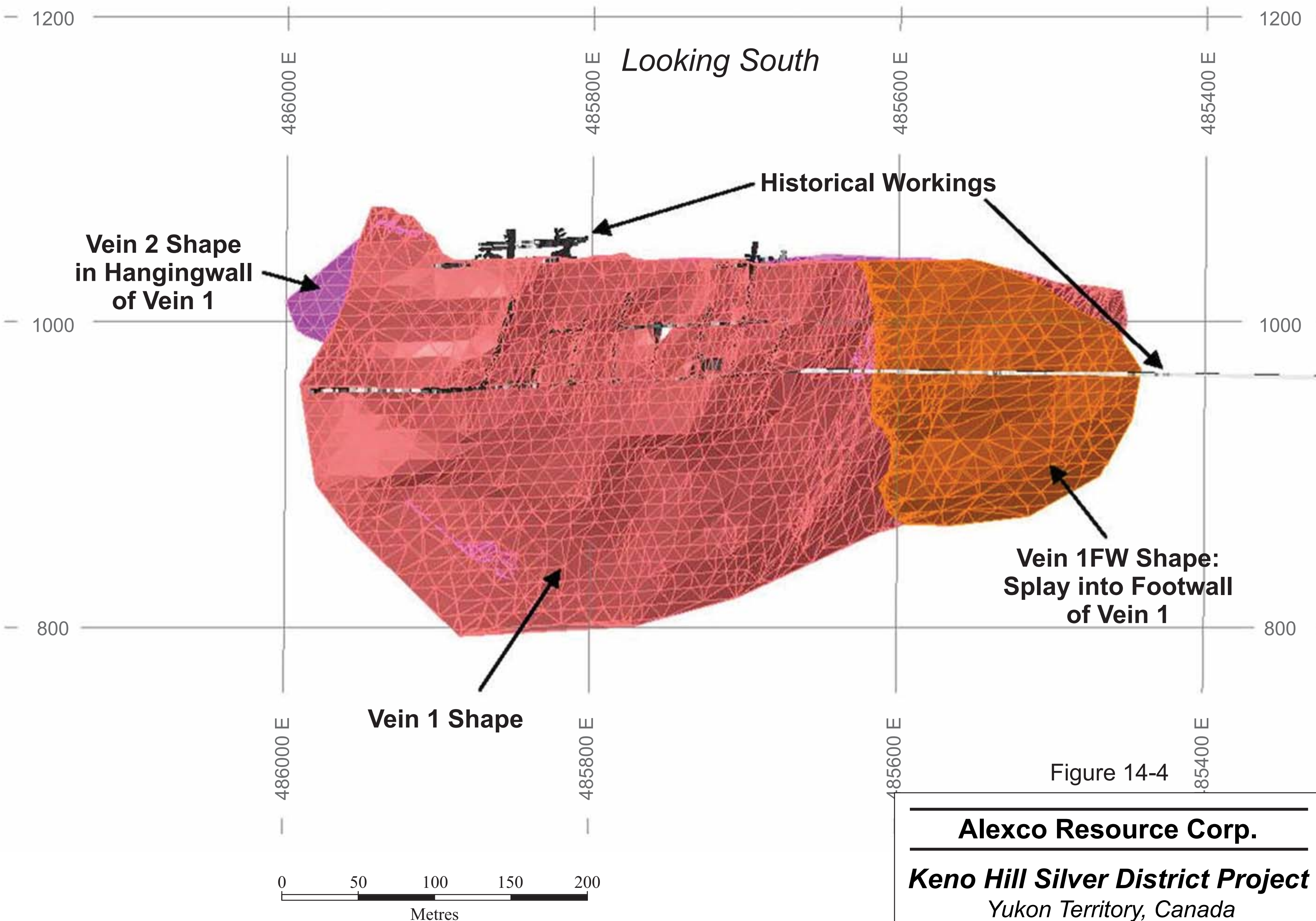


Figure 14-4

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

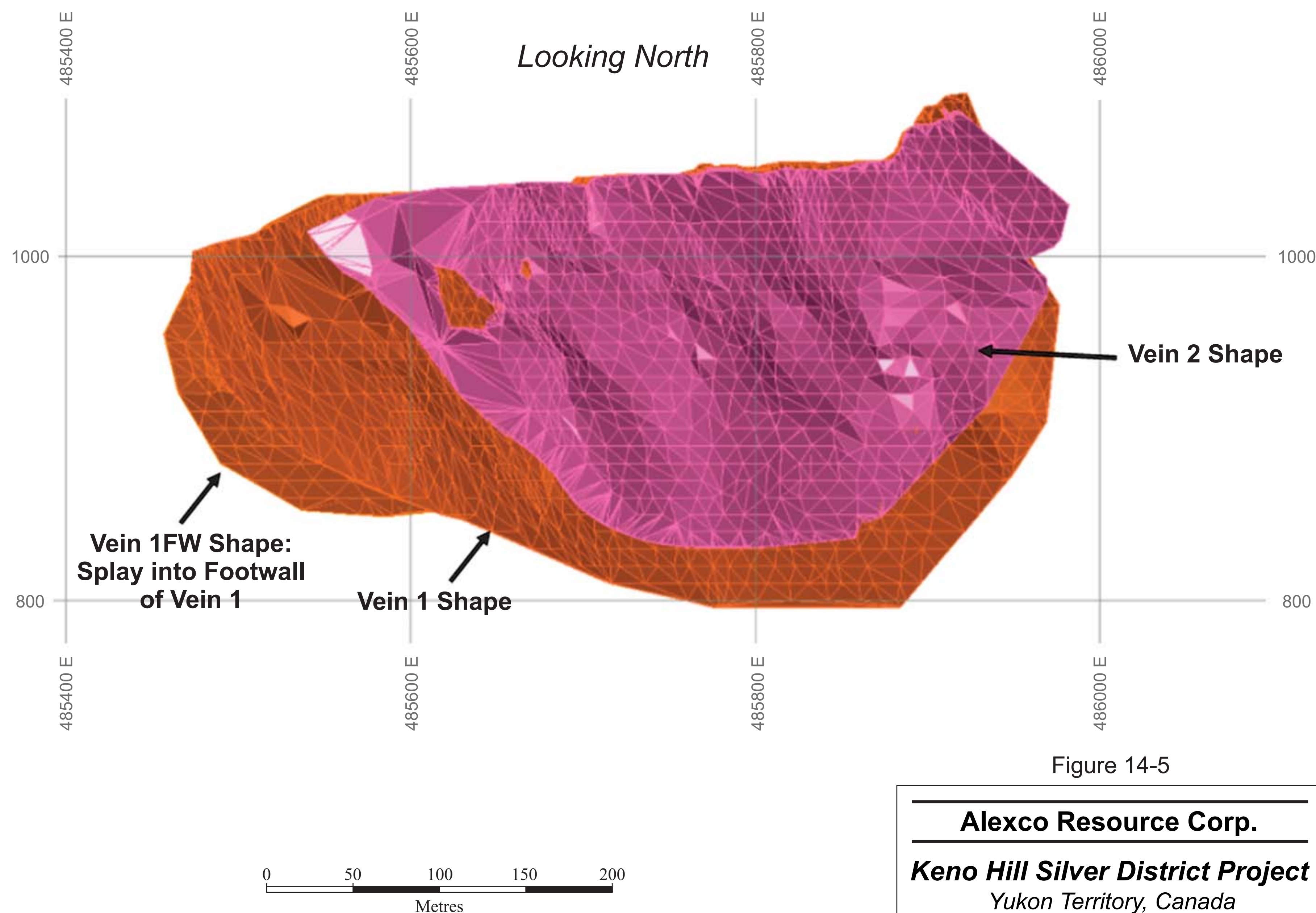
Long Section of Onek Wireframes Looking South

March 2017

Source: SRK Consulting, 2014.

RPA

www.rpacan.com



March 2017

Source: SRK Consulting, 2014.

Figure 14-5

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Long Section of Onek Wireframes Looking North

Historical drift and stope mapping is considered by Alexco to be accurate and representative. Field verification of the mapping could not be performed by Alexco geologists because of the current inaccessibility of the underground workings, however; historical maps of other mines in the Keno Hill district have been verified and found to be generally accurate in their representation of the geology. Historical maps were scanned, geo-referenced and imported into Minesight. The images were then draped onto drift solids at the appropriate elevation. This mapping was used to tag hangingwall and footwall contacts on the wireframe. Historical (UKHM) chip sample data were not used to define wireframe contacts or wireframe width.

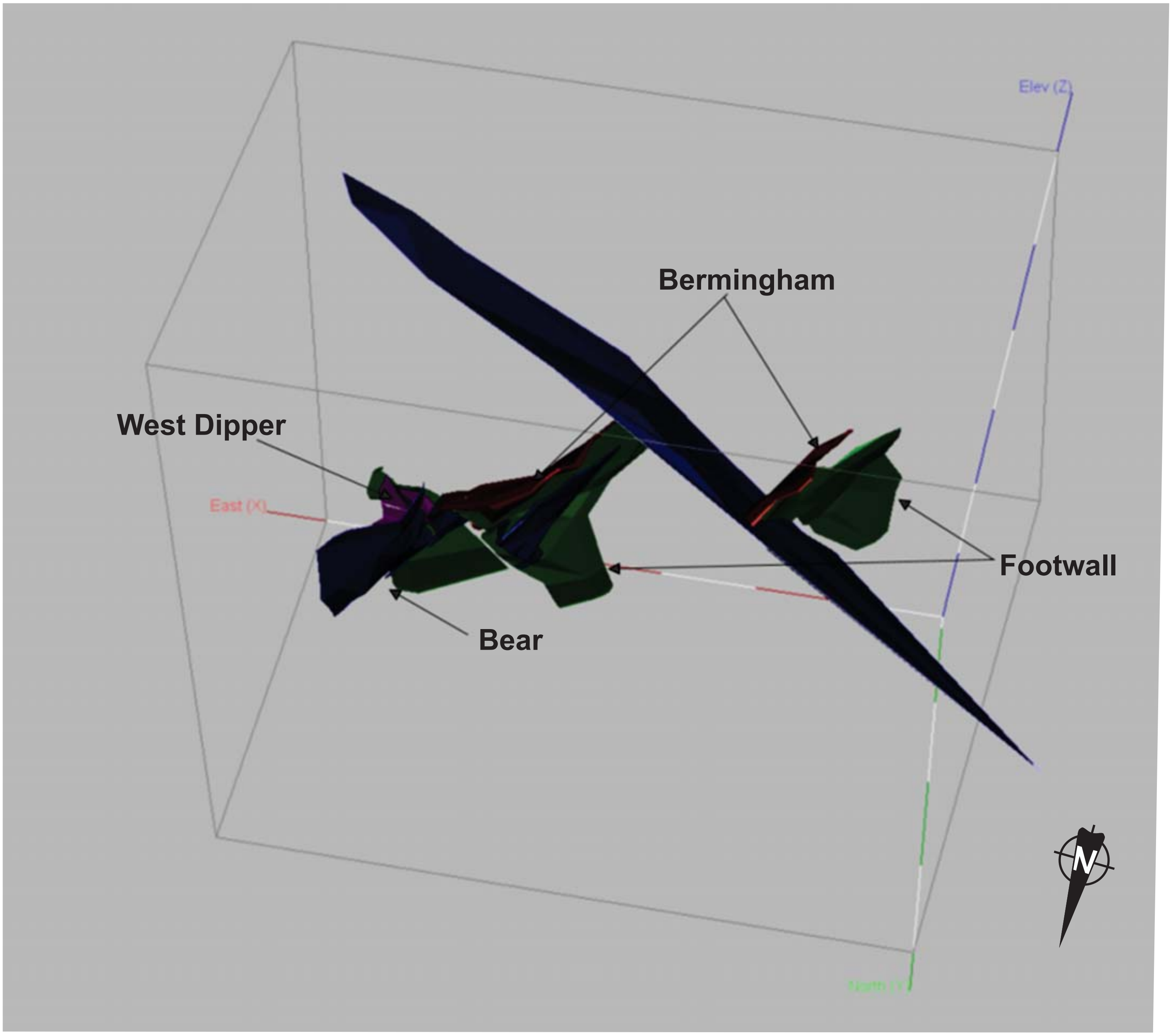
SOLID BODY MODELLING FOR THE BERMINGHAM DEPOSIT

The Bermingham deposit wireframes were constructed for four mineralized vein structures: the Bermingham vein, Footwall vein, Bear vein, and West Dipper vein. Potentially economic mineralisation also occurs within a halo of structurally damaged rocks surrounding the veins. The damage zones have fairly discrete and identifiable limits for each vein, often terminating in a minor fault or breccia zone. These vein margin zones were modelled separately form the vein structures for the purpose of resource estimation. The wireframes for resource modelling were constructed using Mintec's MineSight 3D software. SRK reviewed and validated the wireframes before resource estimation and concluded that the wireframes of the Bermingham deposit were fair representations of the mineralized veins and acceptable for resource estimation.

Within the area of interest, the Bermingham Veins have a strike of between 029° and 042° and dips between 57° and 64° to the southeast. The veins are offset by the Mastiff Fault and have been identified across the Mastiff fault. The offset across the fault has been resolved from the intersection of a stratigraphic marker horizon with the Bermingham vein-fault. East of the Mastiff Fault, two new vein structures have been identified, the high-grade Bear vein and the West Dipper vein (Figure 14-6).

The Bear and West Dipper veins don't occur west of the Mastiff Fault and the Bear vein seems to terminate against the Footwall vein to the east of the Mastiff Fault (Figure 14-7).

Looking South



NOTE: *Bermingham vein in red, Footwall vein in green, Bear vein in blue, West Dipper vein in cyan*

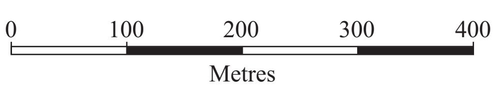


Figure 14-6

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Vein Wireframes
Bermingham 3D Perspective

March 2017

Source: SRK Consulting, 2014.

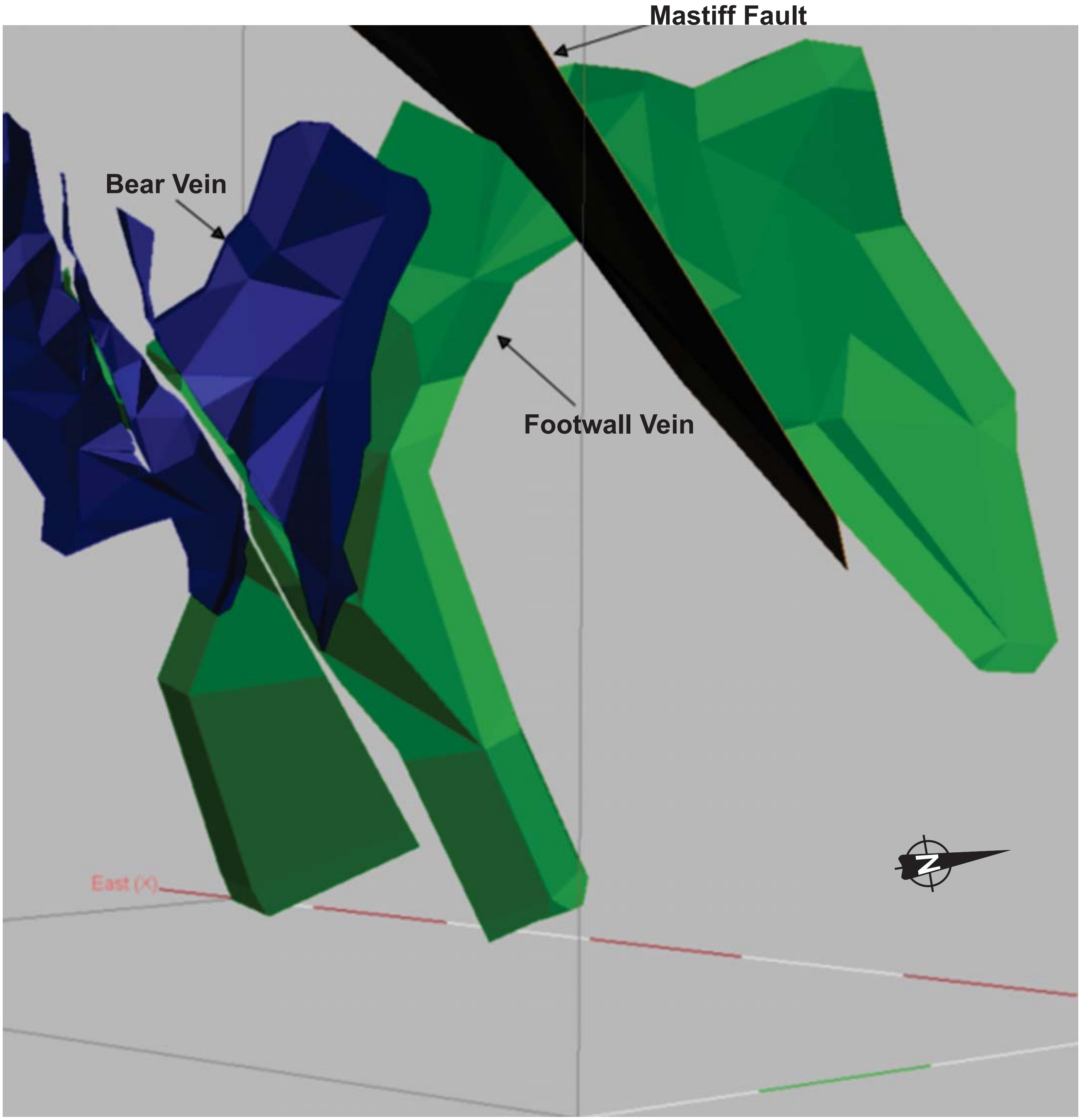


Figure 14-7

0 50 100 150 200
Metres

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Perspective View Looking East of Bear Vein Terminating Against the Footwall Vein West of the Mastiff Fault

March 2017

Source: SRK Consulting, 2014.

BULK DENSITY DATA

BULK DENSITY FOR THE BELLEKENO MINE

The bulk density of vein material at the Bellekeno mine is very sensitive to the lead, zinc, and iron concentrations. To accommodate for these variations, regression analyses were done using metal grades and bulk density measured on pulp (PSG) for the Southwest and 99 zones of the Bellekeno mine. The relationships were used to calculate rock mass bulk density. A comparison of the smelter returns, production tonnage, and metal content for January 2011 to May 2012 shows a less than a 1% variance between metal tonnes. Production tonnes are calculated from the bulk density lead-based regression equations.

Bulk density measured on core samples (CBD) has a limited application for estimating block bulk density and production results. However, the in situ rock mass density can be back calculated from metal assays using the regression relationships between the measured PBD and the CBD for the Southwest and 99 zones, respectfully. The relationships are as summarized:

Southwest zone: PBD = (0.000004) x Pb (ppm) + 3.336689
CBD = 0.834456 x PSG + 0.683904

99 zone : PBD = (0.00005) x Pb (ppm) + 3.040291
CBD = 0.795686 x PBD + 0.509225

Although limited PBD and CBD data has been collected on the East zone, there is a poor regression correlation between assay results and measured CBD. An average bulk density of 3.45 was assigned to East zone vein material based upon the average CBD measured. The poor correlation is most likely the result of poor core recovery in the vein areas. Once mining has actively commenced in the area, a new bulk density study will begin.

Material outside of the veins was assigned a bulk density of 2.7. This measurement is based upon the average CBD measured.

BULK DENSITY FOR THE LUCKY QUEEN MINE

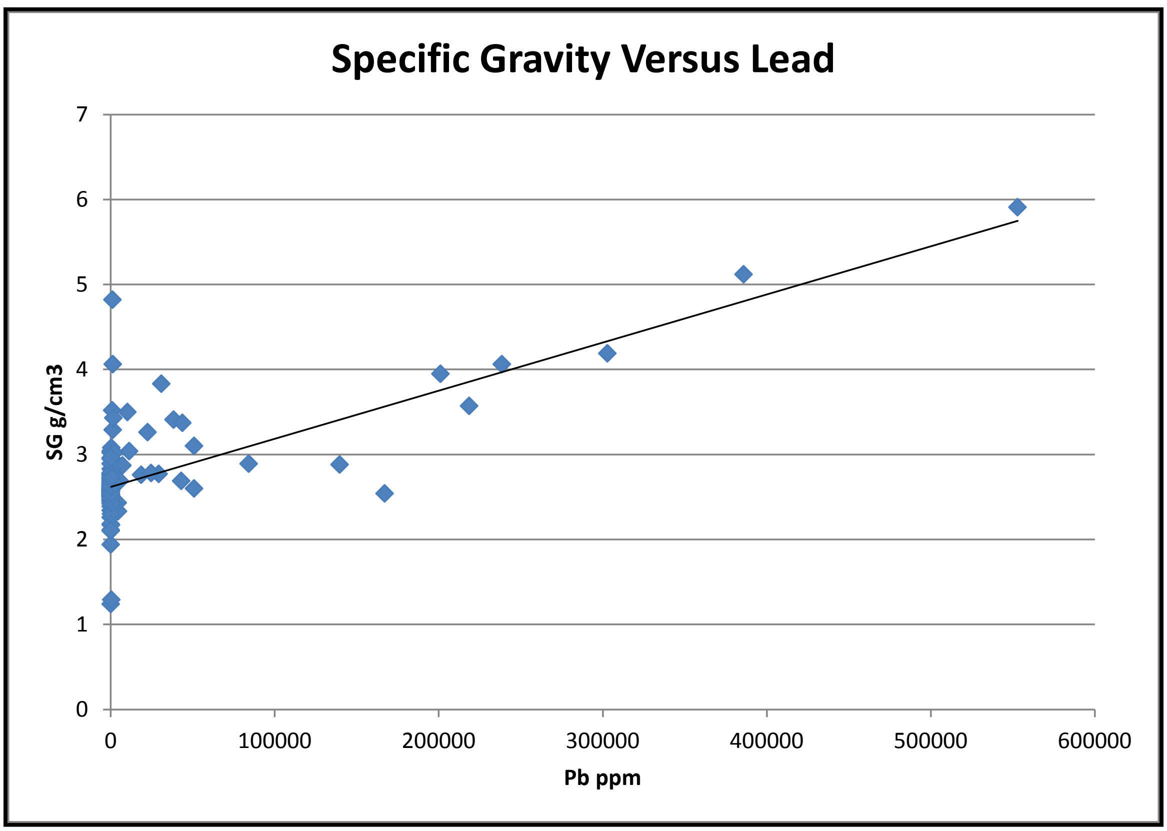
The bulk density data for Lucky Queen included a total of 191 bulk density measurements (Table 14-13) on core samples. Bulk density was measured by Alexco using a laboratory scale and recording the mass of core pieces in air and in water. Core was not covered by wax or plastic film prior to immersion. Regression analysis of the bulk density measurements shows a moderately strong correlation between the lead assay results and the reported bulk density, with a correlation coefficient of 0.62 (Table 14-13). Therefore, a linear correlation was used to assign a bulk density value to each block based on the following relationship:

Bulk density = Pb (ppm) x 0.00006 + 2.617

TABLE 14-13 LUCKY QUEEN BULK DENSITY MEASUREMENTS
Alexco Resource Corp. – Keno Hill Silver District Project

Count	Bulk Density Measured on Core			
	Minimum	Maximum	Average	Median
191	1.24	6.81	2.74	2.60

FIGURE 14-8 SCATTER PLOT OF LEAD ASSAY RESULTS AND BULK DENSITY MEASUREMENTS



From: SRK 2011

BULK DENSITY FOR THE FLAME & MOTH DEPOSIT

The data supplied by Alexco for Flame & Moth included a total of 691 bulk density measurements on core samples and 3,340 pulp density measurements, 304 and 724 of which, respectively, fall within the modelled vein solids (Table 14-14).

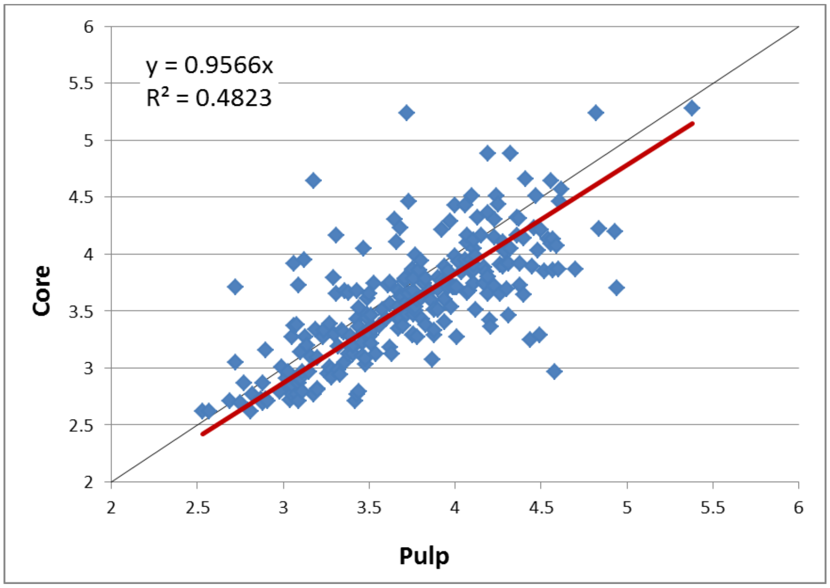
TABLE 14-14 FLAME & MOTH BULK DENSITY MEASUREMENTS WITHIN MINERALIZED ZONES
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Type of material	Count	Bulk Density Minimum	Bulk Density Maximum	Bulk Density Average
Christal	Pulp	290	2.53	5.6	3.79
	Core	114	2.6	5.28	3.63
Lightning V1	Pulp	365	2.65	5.71	3.51
	Core	169	2.54	5.24	3.48
Lightning V2	Pulp	69	2.84	4.6	3.46
	Core	21	2.79	4.23	3.5
Total	**Pulp**	**724**	**2.54**	**5.71**	**3.62**
	Core	**304**	**2.54**	**5.28**	**3.54**

Bulk density was measured on core samples by Alexco using a laboratory scale and recording the mass of core pieces in air and in water. Core was not covered by wax or plastic film prior to immersion. Pulp bulk density measurements were measured by pycnometry at ALS in North Vancouver. A linear regression between core and pulp bulk density measurements has been used to adjust the pulp density values by a factor of 0.957 (Figure 14-9).

For estimates of block SG values a combination of core bulk density and adjusted pulp density values was used.

FIGURE 14-9 PULP VERSUS CORE SG VALUES



BULK DENSITY FOR THE ONEK DEPOSIT

The data supplied by Alexco for Onek included a total of 626 bulk density measurements on core samples and 1,549 pulp density measurements. Of the density measurement from core, 182 were from the mineralized veins and of the 1,549 pulp density measurements, 521 were from inside the mineralized veins (Table 14-15).

Bulk density was measured on core samples by Alexco using a laboratory scale and recording the mass of drill hole core pieces in air and in water. Drill hole core was not covered by wax or plastic film prior to immersion. Pulp bulk density measurements were measured by pycnometer at ALS Chemex in Vancouver.

A linear regression of the core versus pulp bulk density measurements for samples was calculated, where:

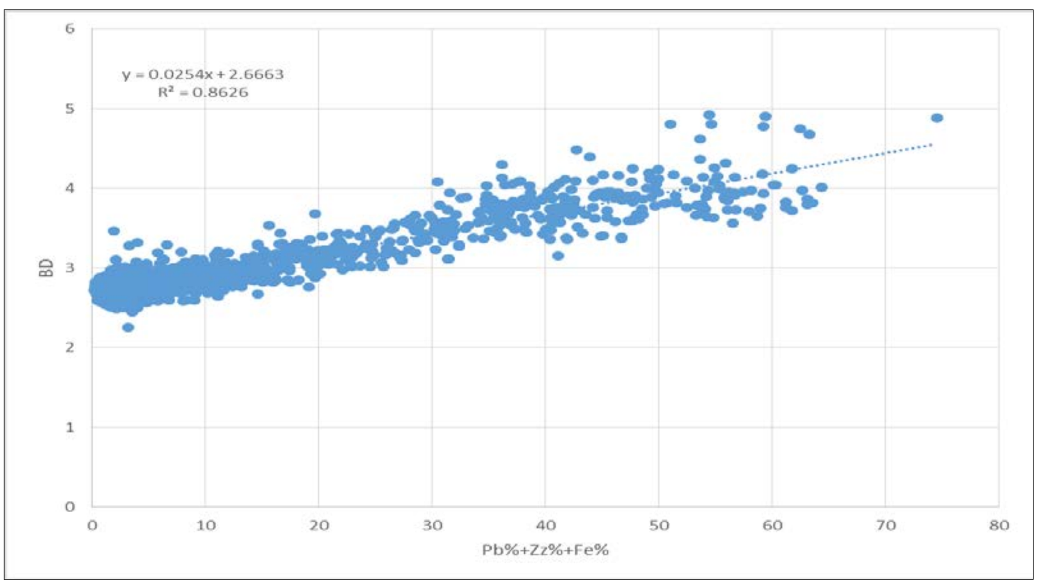
Core Bulk density = 0.8532*Pulp Bulk density + 0.408

TABLE 14-15 ONEK BULK DENSITY MEASUREMENTS
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Type	No of Samples	Minimum	Maximum	Average	Median
Vein 1	Pulp	385	2.54	4.92	3.44	3.47
	Core	140	2.47	7.32	2.67	3.45
Vein 1FW	Pulp	12	2.25	4.08	3.25	3.22
	Core	1	3.75	3.75	3.75	3.75
Vein 2	Pulp	124	2.59	4.90	3.17	2.96
	Core	41	2.55	5.07	3.28	3.21
All Samples	Pulp	521	2.25	4.92	3.37	3.35
	Core	182	2.47	7.32	3.36	3.42

SRK evaluated the bulk density data to see if there existed a correlation between SG and metal content. Figure 14-10 shows the correlation between the bulk density of samples collected from the Onek vein plotted against lead, zinc, and iron content. As can be seen from the figure there is a strong positive correlation between bulk density and metal content. For this reason, SRK decided to weight the composites against density as well as length for the resource estimation.

FIGURE 14-10 CORRELATION BETWEEN BULK DENSITY AND METAL CONTENT FOR ONEK VEINS

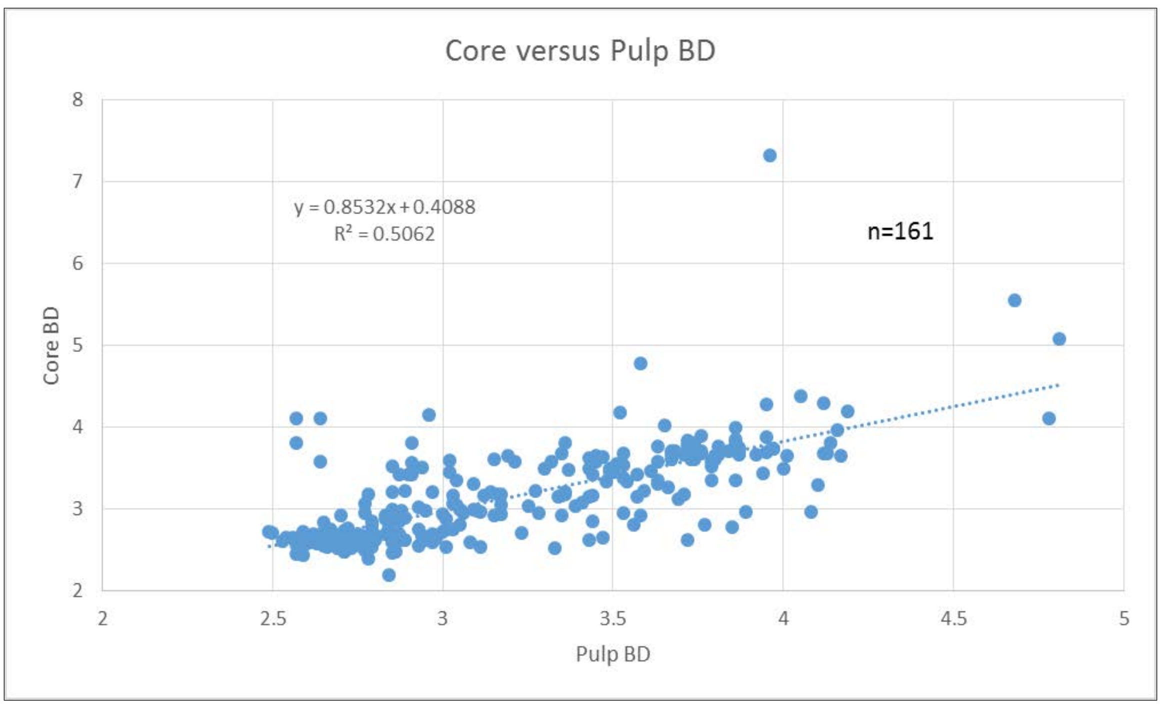


There are 633 assay intervals within the veins at Onek containing 703 bulk density measurements. Of the 633 assay intervals, 91 intervals have no density measurements leaving 542 intervals with density measurements and 161 of these intervals contain BD measurements from both core and pulp.

For the estimation of bulk density into the block model SRK used core measurement if both core and pulp measurements were present, pulp measurements where core measurements were missing and SRK calculated a bulk density based on the metal content where both core and pulp measurements were absent.

SRK acknowledges that pulp measurements are slightly higher than core density measurements where both sample types are present and that using pulp measurement without correction could lead to a slight (3% to 5%) over estimation of the bulk density (Figure 14-11). However, SRK is of the opinion that the difference is minimal and not material.

FIGURE 14-11 COMPARISON OF CORE AND PULP DENSITY MEASUREMENTS FOR ONEK



BULK DENSITY FOR THE BERMINGHAM DEPOSIT

The data supplied by Alexco for Bermingham included a total of 4,691 bulk density (BD) measurements. Most of the data (3,857) were derived from pycnometer measurement on pulp. Alexco took 534 field measurements on core using the water immersion method of determining density and 203 of these field samples have corresponding pulp density measurement. SRK compared the field measurements with the pycnometer measurement and concluded that the pycnometer measurements seem to be on average slightly higher than the bulk density (Figure 14-12). No strong correlation between bulk density measurements and lead or zinc assay results was noted (Figure 14-13), however, a good correlation seems to exist when percent iron is added to the zinc and lead content, perhaps indicating that iron is a more significant contributor to density than lead or zinc (Figure 14-14).

FIGURE 14-12 COMPARISON OF CORE AND PULP DENSITY MEASUREMENTS FOR BERMINGHAM

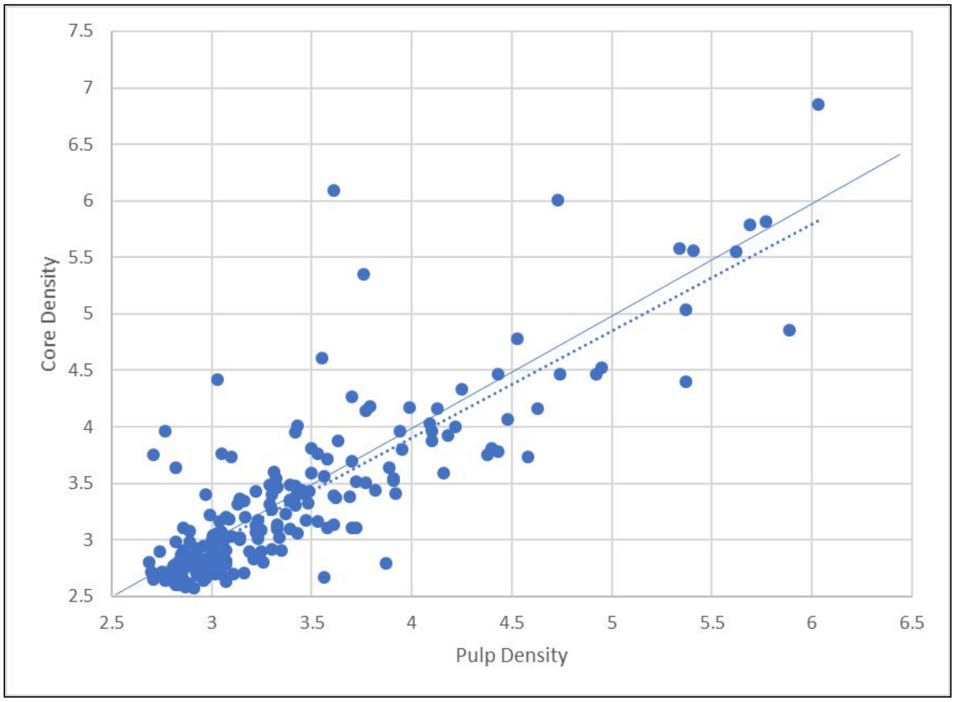


FIGURE 14-13 COMPARISON OF DENSITY AND LEAD AND ZINC CONTENT FOR BERMINGHAM

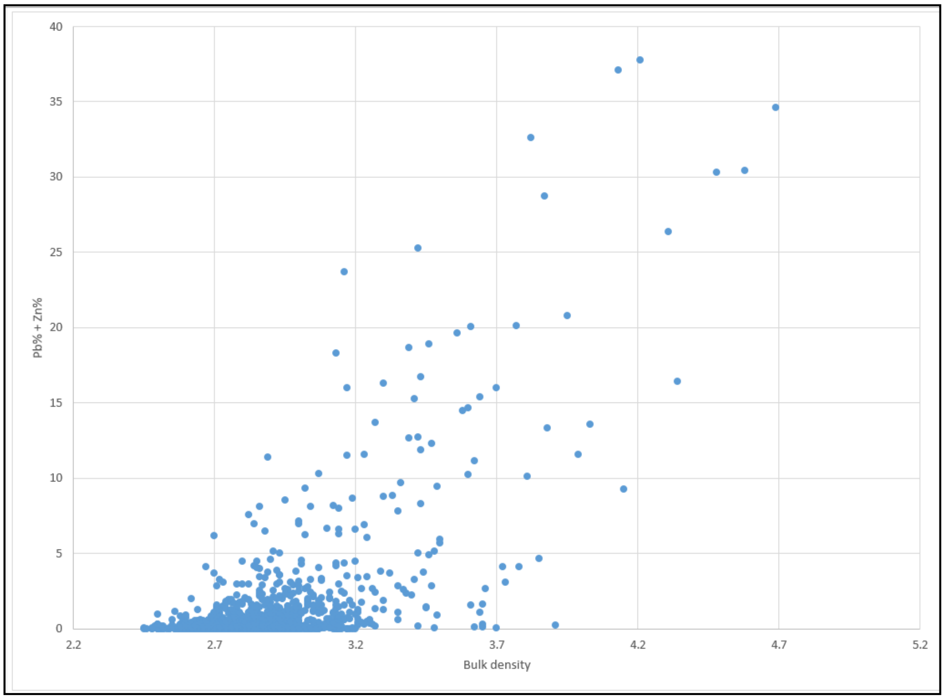
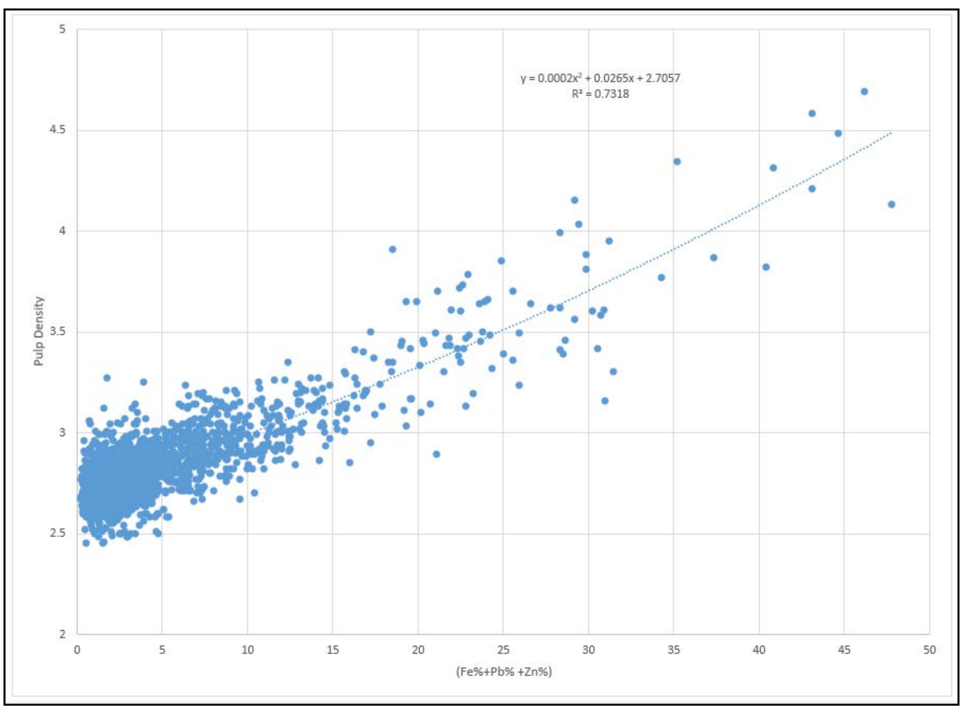


FIGURE 14-14 COMPARISON OF DENSITY AND IRON PLUS LEAD AND ZINC CONTENT FOR BERMINGHAM



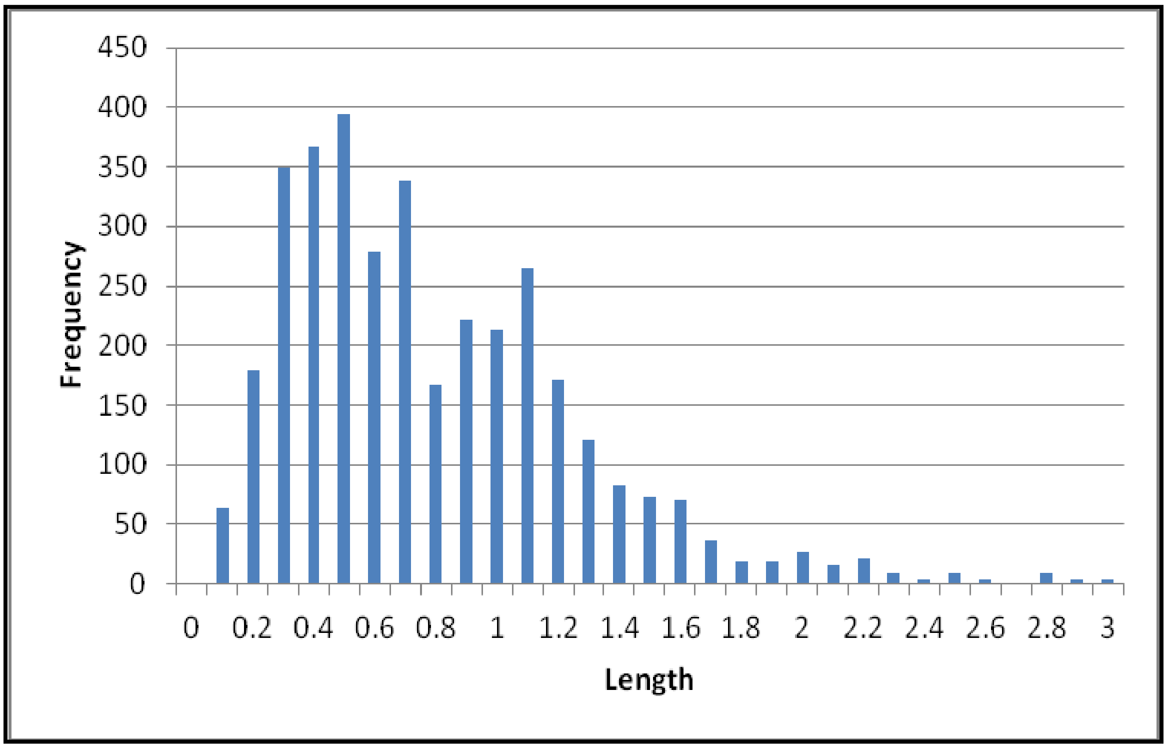
Core bulk density measurements were used where available for interpolation of bulk density into blocks. Where core density measurements were not available, pulp measurements were used.

COMPOSITING

COMPOSITING FOR THE BELLEKENO MINE

Alexco identified a total of 3,549 assay intervals as vein intercepts. These assay intervals were imported into ISATIS, and assays were then composited to 1-metre length-weighted intervals within the defined vein wireframes. A histogram of sample lengths for the mineralized zones can be seen in Figure 14-15.

FIGURE 14-15 HISTOGRAM OF SAMPLE LENGTHS FOR THE MINERALIZED ZONES FOR BELLEKENO MINE



From: SRK 2013

COMPOSITING FOR THE LUCKY QUEEN MINE

Alexco identified a total of 106 core drill hole assay intervals as primary vein intercepts and 26 intervals as secondary splay intercepts. These assay intervals were imported into GEMS, and assays were then composited to one metre length-weighted intervals within the defined vein wireframes. Terminal composites with a length of less than 50 cm were merged with the preceding composite in order to avoid a short sample bias during estimation. Missing sample intervals were assigned a nominal value of 0.001 during compositing.

COMPOSITING FOR THE FLAME & MOTH DEPOSIT

Before compositing, four very extreme assay values were capped: two for Ag at 7,500 g/t and two for Zn at 30%. Assays were composited to one metre intervals within the defined zone wireframes. All composites shorter than 0.5 m were attached to the previous composite assay. A histogram of sample lengths within the mineralized zones is presented in Figure 14-16.

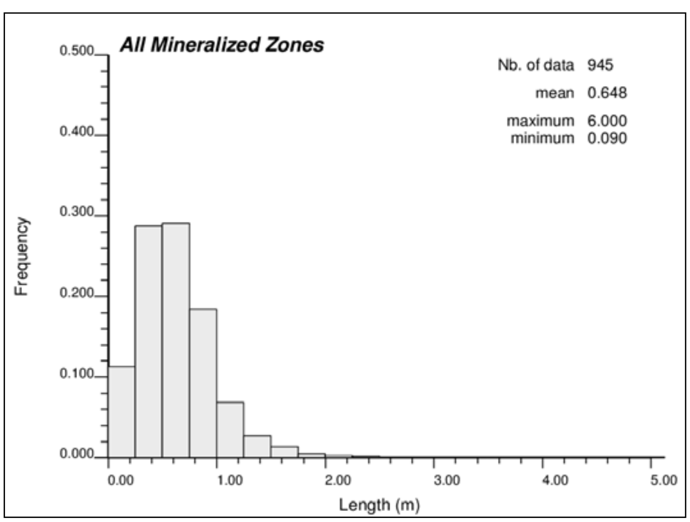
Two sets of composited data were produced:

1. Composites within original wireframes of the mineralized areas with occasional very narrow intersections.

2. Composites within adjusted wireframes of mineralized areas with narrow intersections expanded to a minimum of 1.5 m mining widths. This expansion had very minimal effect on the Lightning and Christal zones but had a substantial effect of increased volume in the V2 zone.

The two sets of composites were used to estimate block grades in two block models: (1) for resource reporting with mineralized zones expanded to a minimum of 1.5 m, and (2) for further engineering analysis and design of stopes based on originally designed wireframes.

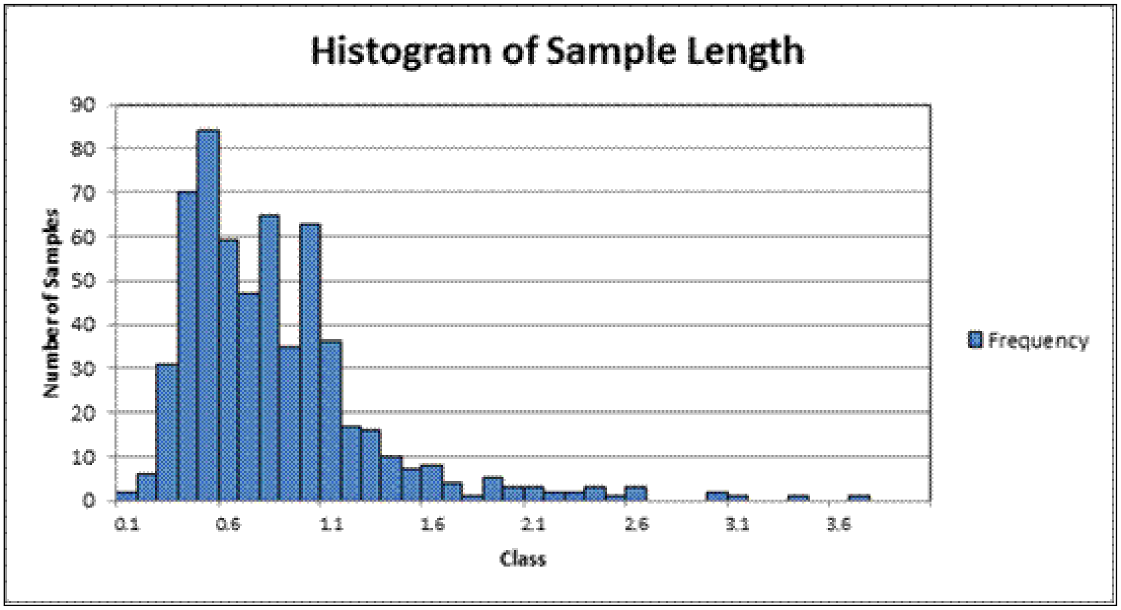
FIGURE 14-16 HISTOGRAM OF SAMPLE LENGTHS IN THE MINERALIZED ZONES FOR FLAME & MOTH DEPOSIT



COMPOSITING FOR THE ONEK DEPOSIT

Alexco identified a total of 633 diamond drill hole assay intervals as vein intercepts. These assay intervals were imported into GEMS, and assays were then composited to one metre length and density-weighted intervals within the defined vein wireframes. A histogram of sample lengths within the mineralized zones can be seen in Figure 14-17.

FIGURE 14-17 HISTOGRAM OF SAMPLE LENGTHS WITHIN ONEK VEINS



COMPOSITING FOR THE BERMINGHAM DEPOSIT

Alexco identified a total of 1,027 assay intervals as mineralized intercepts as summarized in Table 14-16. These assay intervals were imported into GEMS, and assays were then composited to one metre intervals within the defined vein wireframes.

TABLE 14-16 SUMMARY OF MINERALIZED ASSAY INTERVALS
Alexco Resource Corp. – Keno Hill Silver District Project

Rock type	Average Ag (g/t)	Average Au (g/t)	Average Pb%	Average Zn%	Number of Samples
Bermingham vein	919	0.19	3.03	2.51	182
Bermingham vein margin	258	.06	2.1	1.04	181
Footwall vein	1151	0.19	4.13	2.06	122
Footwall vein margin	256	0.11	0.72	0.97	122
Bear vein	5089	0.50	11.39	3.12	160
Bear vein margin	934	0.11	4.98	1.32	198
West Dipper vein	3009	0.27	8.06	4.73	41
West Dipper vein margin	407	0.06	0.45	0.90	21
Total	1477	0.19	4.55	1.94	1027

In addition, there were 39 sample intervals within the mineralized veins that had no recovery. These intervals were for the most part very short, 23 intervals were less than 0.5 m, however, four were larger than one metre. Because the intervals occurred within the mineralized veins and because of past experience with the lost core within the mineralized veins at Bellekeno, SRK decided not to treat the missing intervals as zero grade intercepts during compositing. The 39 missing intervals were assigned the lesser grade of the bordering assay values. Where the bordering assay was zero, the missing interval was assigned a zero grade even if the other bordering assay wasn't zero grade. In total, 34 missing values were replaced with assays ranging between 116 g/t Ag and 420 g/t Ag.

EVALUATION OF OUTLIERS

EVALUATION OF OUTLIERS FOR THE BELLEKENO MINE

Grade capping analysis was conducted on the domain-coded sample assay and composites data in order to limit the influence of extreme assay values during estimation. The assays were examined using histograms and cumulative frequency plots. After analysis, only silver composites were capped at a value of 5,000 g/t (Table 14-17). This capping threshold value was selected to minimize changes in the sample distribution. Composites were capped prior to estimation.

TABLE 14-17 COMPOSITE CAPPING LEVELS FOR THE BELLEKENO MINE
Alexco Resource Corp. – Keno Hill Silver District Project

Element	Maximum Value	Cap Value	Mean	Mean Capped	Number Capped	Lost Metal*
Ag (g/t)	10,128	5,000	1,044	1,025	21	1.82%

Note. *Lost metal is (Average – Averaged Capped)/Average * 100 where Average is the average grade of the assays before capping and Average Capped is the average grade of the assays after capping.

EVALUATION OF OUTLIERS FOR THE LUCKY QUEEN MINE

Grade capping analysis was conducted on the domain-coded and composites data in order to limit the influence of extreme assay values during estimation. The combined composite sample population for the main Lucky Queen vein and splay was examined using histograms, probability graphs, and capping plots. Capping threshold values were selected that minimize changes in the sample distribution, and sample values were capped to these values prior to compositing and estimation (Table 14-18). For lead, the capping threshold was set to the percentile used for grade capping of silver in order to maintain the observed correlation between these two elements.

TABLE 14-18 COMPOSITE CAPPING LEVELS FOR LUCKY QUEEN
Alexco Resource Corp. – Keno Hill Silver District Project

Element	Maximum Value	Cap Value	Mean	Mean Capped	Number Capped	Lost Metal*
Ag (g/t)	13,998	6,300	960	834	2	13.1%
Au (g/t)	3.00	2.00	0.16	0.15	1	10.0%
Pb (ppm)	303,963	148,000	20,831	18,461	2	11.4%
Zn (ppm)	210,100	70,000	13,944	10,143	3	27.2%

Note. * Lost metal is (Average – Averaged Capped)/Average * 100 where Average is the average grade of the assays before capping and Average Capped is the average grade of the assays after capping.

EVALUATION OF OUTLIERS FOR THE FLAME & MOTH DEPOSIT

Block grade estimates may be unduly affected by very high grade assays. Instead of capping the composites for high grade assays, SRK elected to limit the influence of the high grade intersections during the estimation process. For each estimation domain and each metal, a probability plot of composite assay grades was used to select a high grade threshold. Table 14-19 shows the high grade thresholds selected in the Flame & Moth deposit.

TABLE 14-19 HIGH GRADE THRESHOLDS IN THE FLAME & MOTH DEPOSIT
Alexco Resource Corp. – Keno Hill Silver District Project

Domain	Metal	Max Assays	Cap	Cap Extreme	Num Extreme Capped	High Grade Threshold Defined From Comps	Num All Comps	Number above threshold	%Dat above Threshold
	Au (g/t)	6.85		No		1.5	330	13	4
	Ag (g/t)	13,365	7,500	Yes	2	2,000.0	330	14	4
	Pb (%)	48.80		No		8.0	330	12	4
Lightning	Zn (%)	35.63	30	Yes	2	18.0	330	20	6
	Au (g/t)	4.02		No		1.5	245	12	5
	Ag (g/t)	6,270		No		2,000.0	245	12	5
	Pb (%)	52.30		No		12.0	245	12	5
Christal	Zn (%)	22.40		No		10.0	245	10	4
	Au (g/t)	1.65		No		1.0	52	2	4
	Ag (g/t)	3,390		No		1500.0	52	3	6
	Pb (%)	23.30		No		3.0	52	4	8
V2	Zn (%)	26.20		No		10.0	52	5	10

Continuity of the high grade assays was studied with a technique called “p-gram”. To construct p-grams, composites above a high grade threshold were coded with an indicator. Using a process similar to that for indicator variography, the data were paired over a series of lag distances. Only those pairs of data that are found in economic mineralization (above the threshold) were considered. The proportion of those pairs relative to the total number of pairs that started in high grade was determined. The higher the proportion, the greater continuity of the high grade assays.

Figure 14-18 shows the continuity of high grade silver composite assays at different thresholds in the Lightning zone. High grade continuities can be indicated up to a distance where plotted curves roughly level off. It is apparent that in this specific example the curves level off at distances higher than 20 m. The continuity of the high grade mineralization is very short. The p-grams were produced only for silver and zinc in the Lightning and Christal zones and the results were translated to a design of search radii in for all zones and all metals (Table 14-20). The direction of the high grade search ellipsoid was aligned with the overall direction of grade continuity in each zone.

FIGURE 14-18 CONTINUITY OF HIGH GRADE AG ASSAYS AT HIGH GRADE THRESHOLDS IN LIGHTNING ZONE

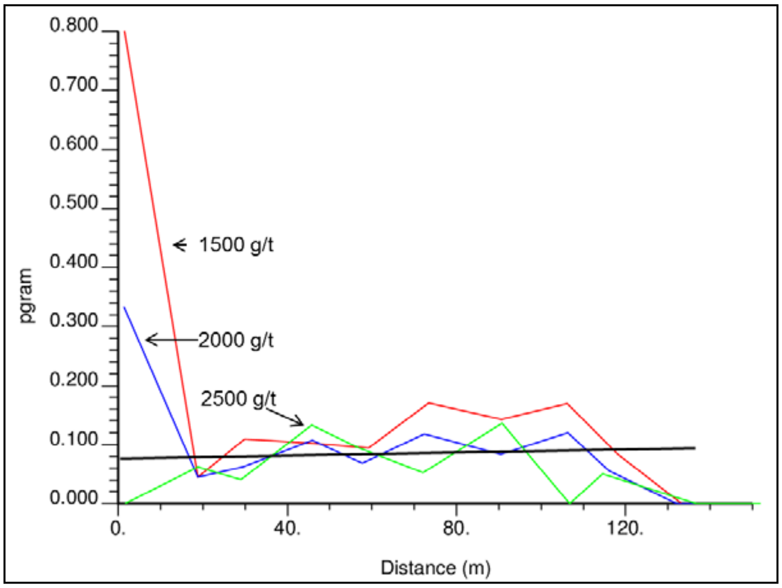


TABLE 14-20 HIGH GRADE SEARCH RADII
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Radii		
	X-Rot	Y-Rot	Z-Rot
Au	30	30	15
Ag	20	15	15
Pb	30	30	15
Zn	30	40	15

EVALUATION OF OUTLIERS FOR THE ONEK DEPOSIT

Before compositing, grade capping analysis was conducted on the domain-coded sample assay data in order to limit the influence of extreme assay values during estimation. The assays from Vein 1 and Vein 1FW and, separately, the assays from Vein 2 were examined using histograms, and cumulative frequency plots. Capping threshold values were selected that minimize changes in the sample distribution, and sample values were capped to these values prior to compositing and estimation (Table 14-21).

TABLE 14-21 SAMPLE CAPPING LEVELS FOR ONEK
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Commodity	Maximum Value	Cap Value	Number Capped	Average	Average Capped	Lost Metal*
Vein 1 and Vein 1FW	Ag (g/t)	3,440	3,000	2	210	208	0.7%
	Au (g/t)	10.2	5	4	0.65	0.63	4.8%
	Pb %	48.36	35	2	1.61	1.57	2.5%
	Zn %	55.92	35	56	13.36	12.46	7.3%
Vein 2	Ag (g/t)	4,080	3,000	4	238	221	7.8%
	Au (g/t)	3.1	2	1	0.33	0.32	2.3%
	Pb %	46.13	25	4	2.08	1.9	16.3%
	Zn %	40.45	20	4	4.48	4.22	6.1%

Note.* Lost metal is (Average – Averaged Capped)/Average * 100 where Average is the average grade of the assays before capping and Average Capped is the average grade of the assays after capping.

EVALUATION OF OUTLIERS FOR THE BERMINGHAM DEPOSIT

Grade capping analysis was conducted on the domain-coded composited assay data in order to limit the influence of extreme assay values during estimation. The composites from the Bermingham veins were examined using histograms, and cumulative frequency plots. Capping threshold values were selected on the one metre composited data to minimize changes in the sample distribution, and composited values were capped prior to estimation (Table 14-22).

TABLE 14-22 SAMPLE CAPPING LEVELS FOR BERMINGHAM
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Commodity	Maximum Value	Cap Value	Number Capped	CV Capped	Lost Metal*
Bermingham	Ag (g/t)	6,959	1,500	16	1.52	26
	Pb %	17.5	9.5	5	1.8	6
	Zn %	17.4	9	3	1.33	4
Footwall	Ag (g/t)	9,173	3,000	10	1.83	19
	Pb %	64.5	30	4	2.9	13
	Zn %	12	9	4	1.6	1.6
Bear	Ag (g/t)	26,124	11,000	10	1.86	19
	Pb %	49.6	20	14	1.67	19
	Zn %	23.5	7	10	1.5	14
West Dipper	Ag (g/t)	9,386	2,000	9	1.18	43
	Pb %	41.13	20	3	1.9	38
	Zn %	17.5	12	4	143	9

Note.* Lost metal is (Average – Averaged Capped)/Average * 100 where Average is the average grade of the assays before capping and Average Capped is the average grade of the assays after capping.

STATISTICAL ANALYSIS AND VARIOGRAPHY

STATISTICAL ANALYSIS AND VARIOGRAPHY FOR THE BELLEKENO MINE

The Bellekeno data was analyzed by zone and is presented in the following series of graphics - the SW zone, the 99 zone, and the East zone.

SOUTHWEST ZONE

Figures 14-19 to 14-26 through present the results for the SW zone: histograms, probability plots, normal variography, and lognormal variography.

In general, it is noted that reasonable variograms are obtained in log space for silver, lead, and zinc, with an omnidirectional range of approximately 40 m to 50 m in the plane of the vein.

THE 99 ZONE

Figures 14-27 to 14-31 present the results for the 99 zone: histograms, probability plots, normal variography, and lognormal variography.

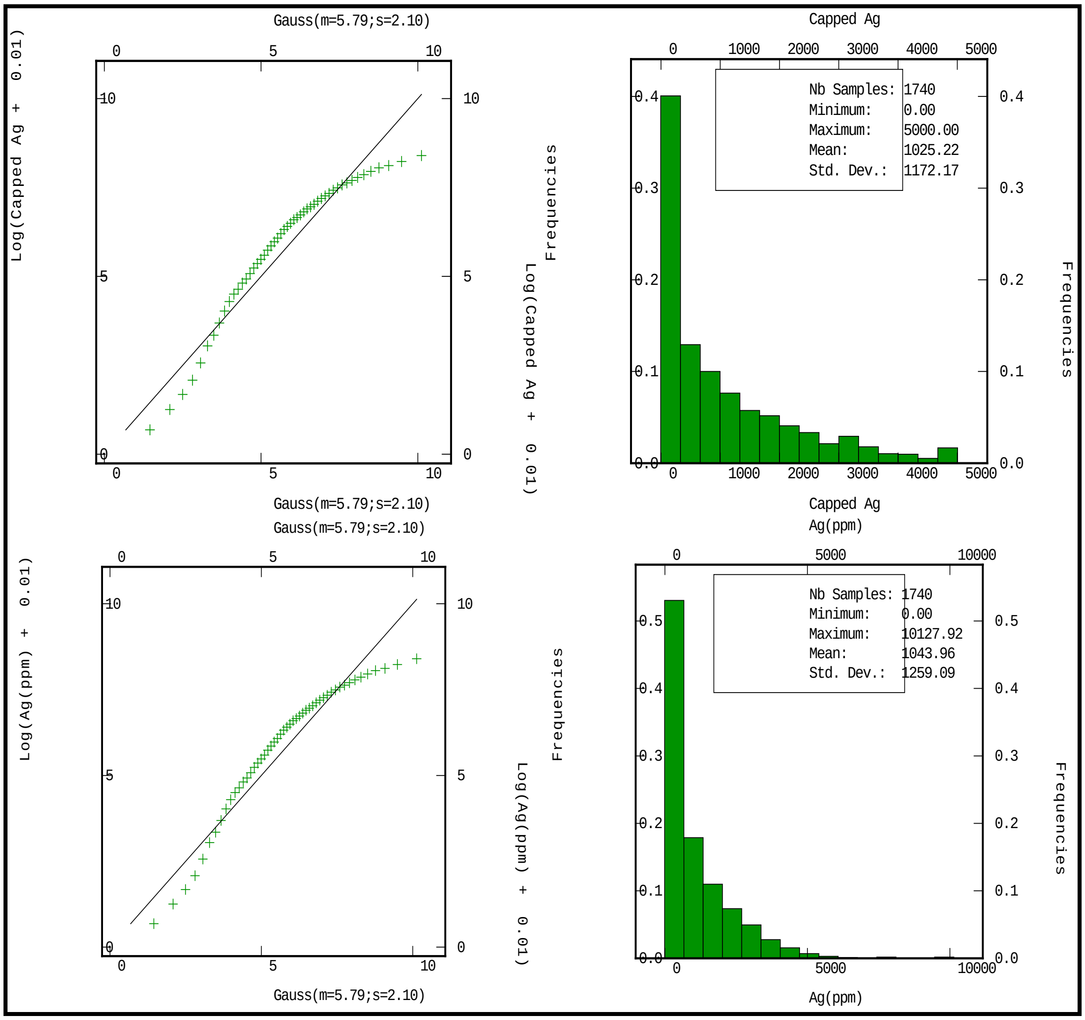
Range for the 99 zone is shorter than the SW zone, approximately 20 m to 30 m in the plane of the vein.

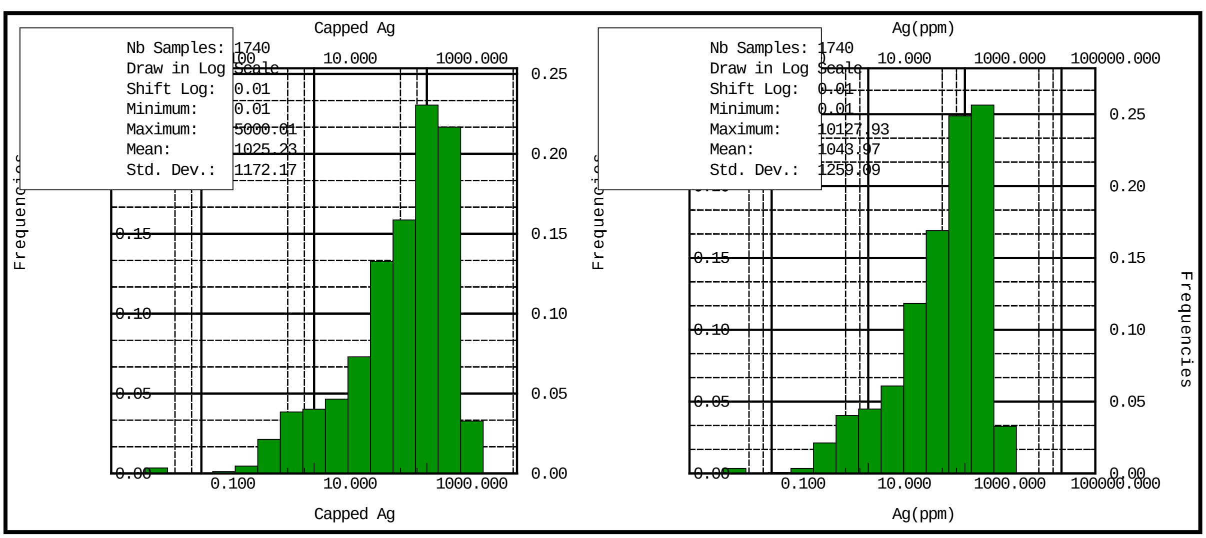
THE EAST VEIN

Figures 14-32 to 14-35 present the results for the East zone: histograms, probability plots, normal variography, and lognormal variography.

Lead and zinc did not display a spatial structure, possibly due to the relatively small data set available for analysis. The silver variogram appears to indicate a 20 m to 30 m range in the plane of the vein.

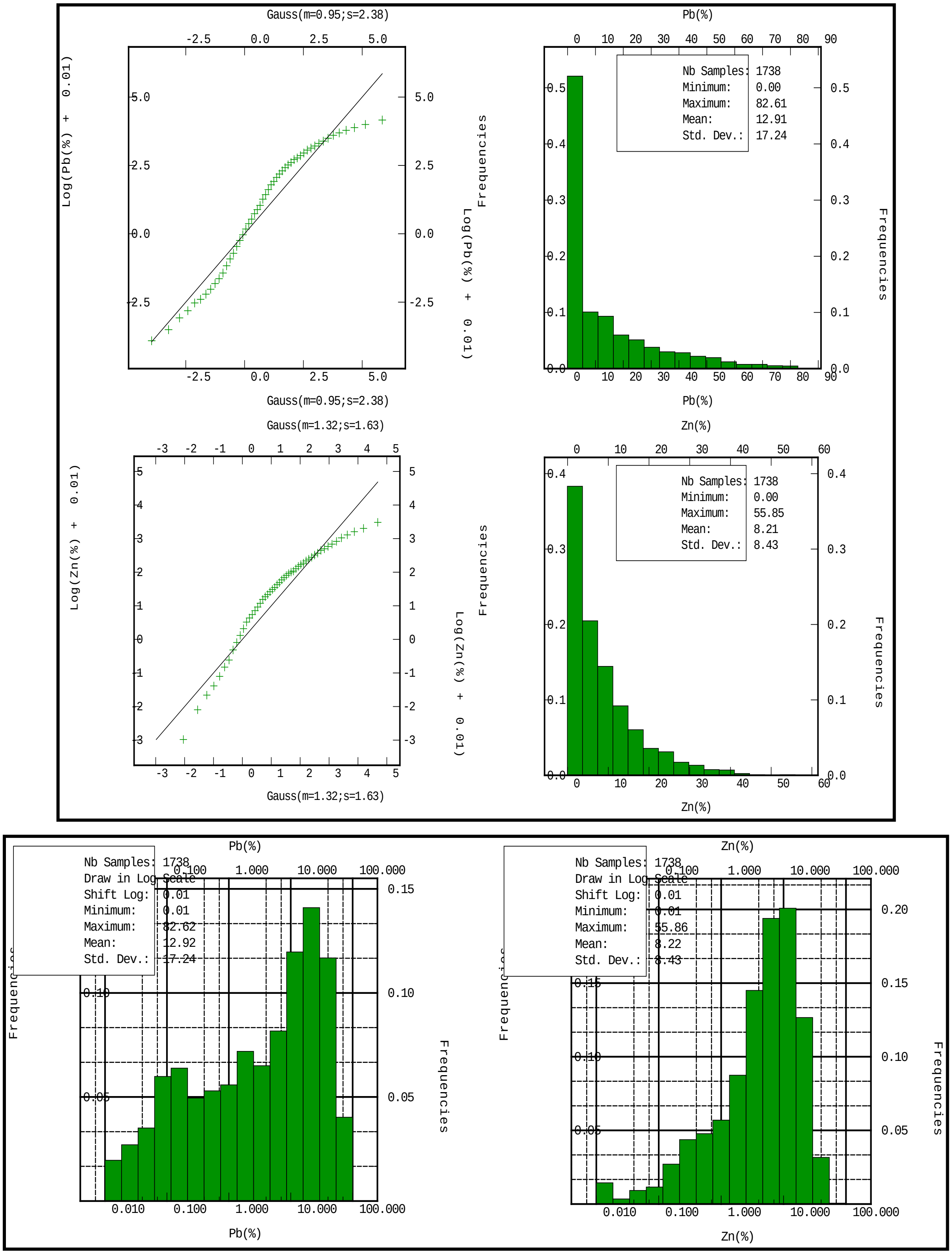
FIGURE 14-19 HISTOGRAMS AND PROBABILITY PLOTS FOR SILVER, CAPPED AND UNCAPPED, SOUTHWEST ZONE





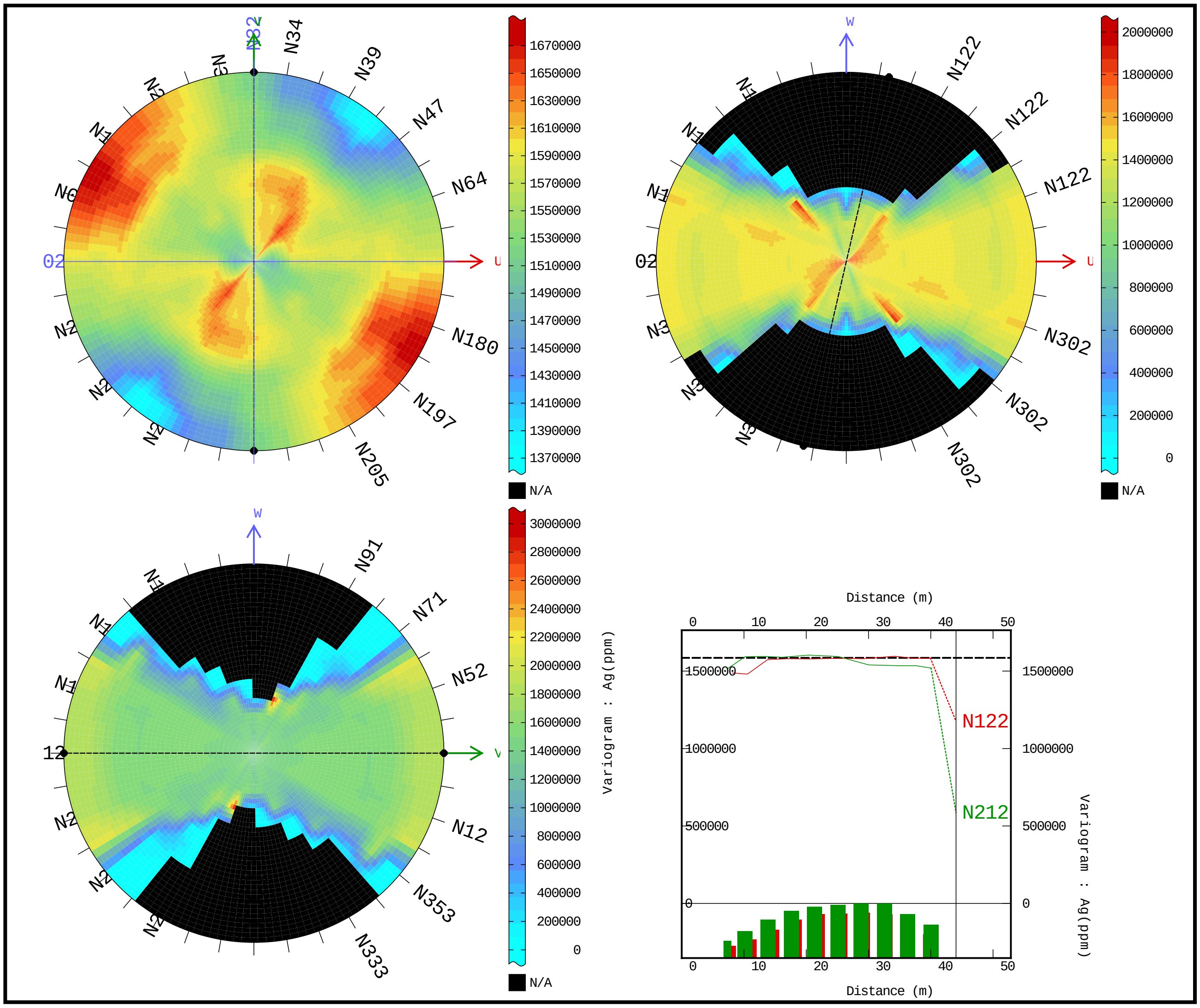
Source. SRK 2013

FIGURE 14-20 HISTOGRAMS AND PROBABILITY PLOTS FOR LEAD AND ZINC, CAPPED AND UNCAPPED, SOUTHWEST ZONE



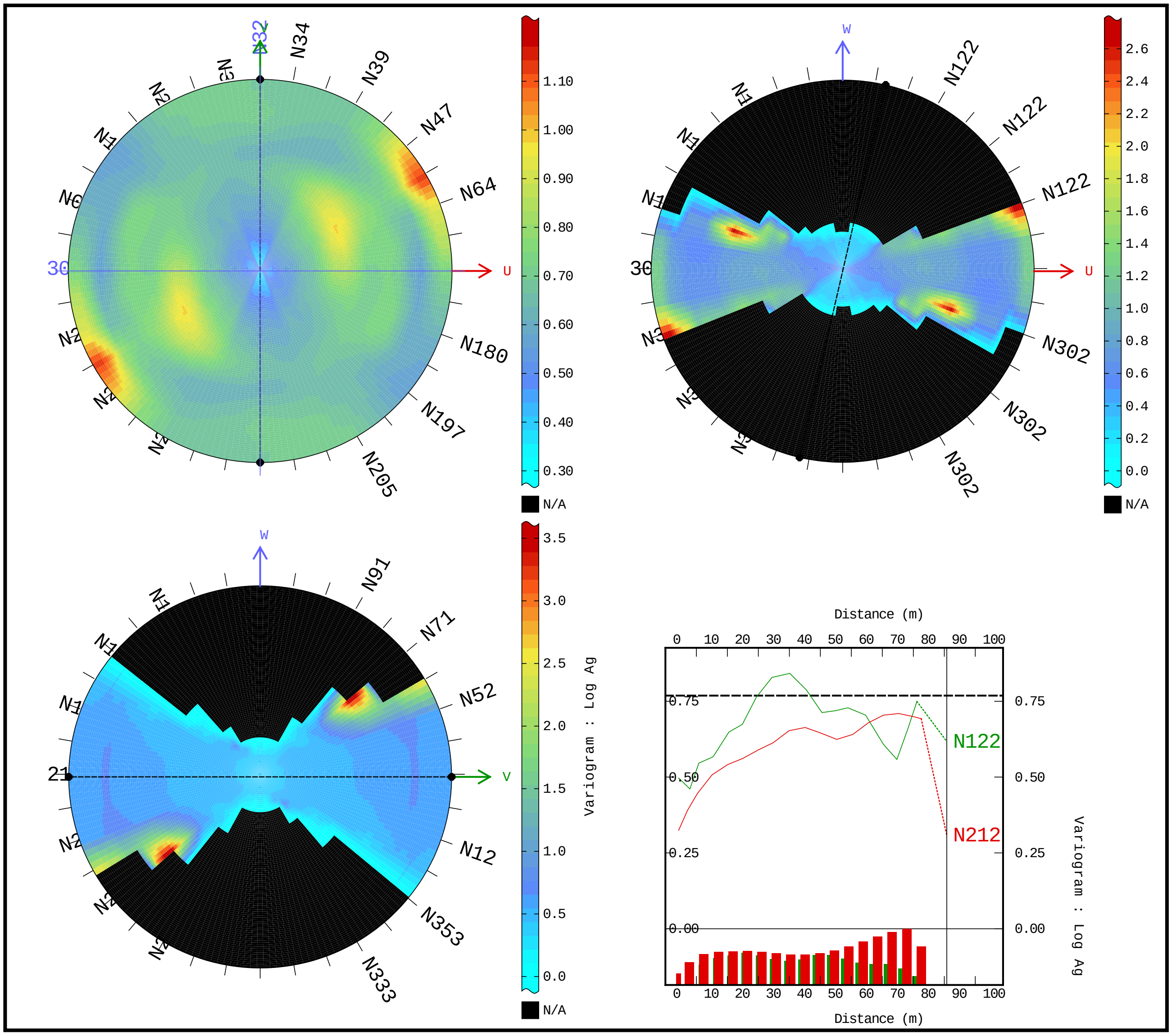
Source. SRK 2013

FIGURE 14-21 NORMAL VARIOGRAPHY OF SILVER, SOUTHWEST ZONE



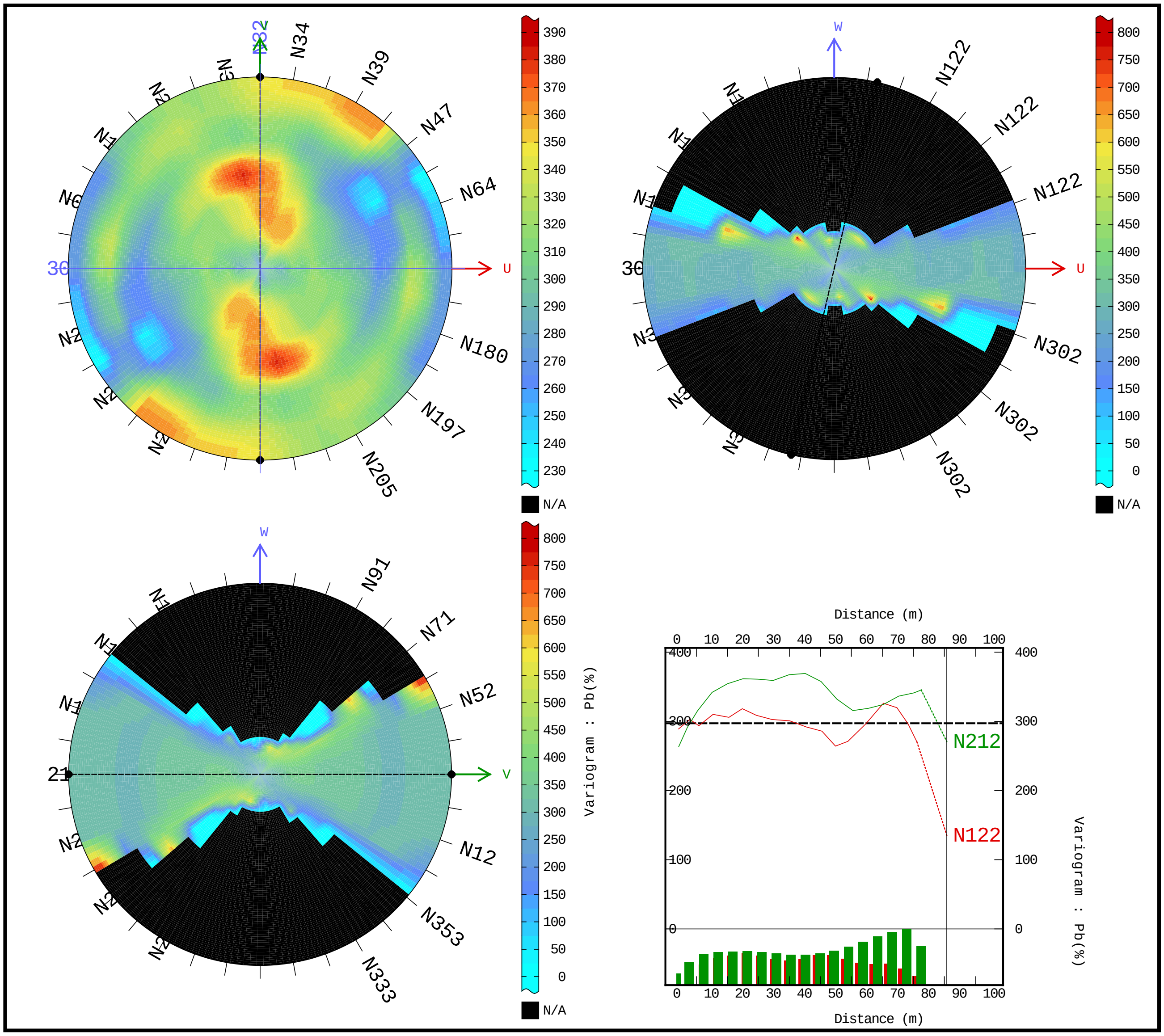
Source. SRK 2013

FIGURE 14-22 LOGNORMAL VARIOGRAPHY OF SILVER, SOUTHWEST ZONE



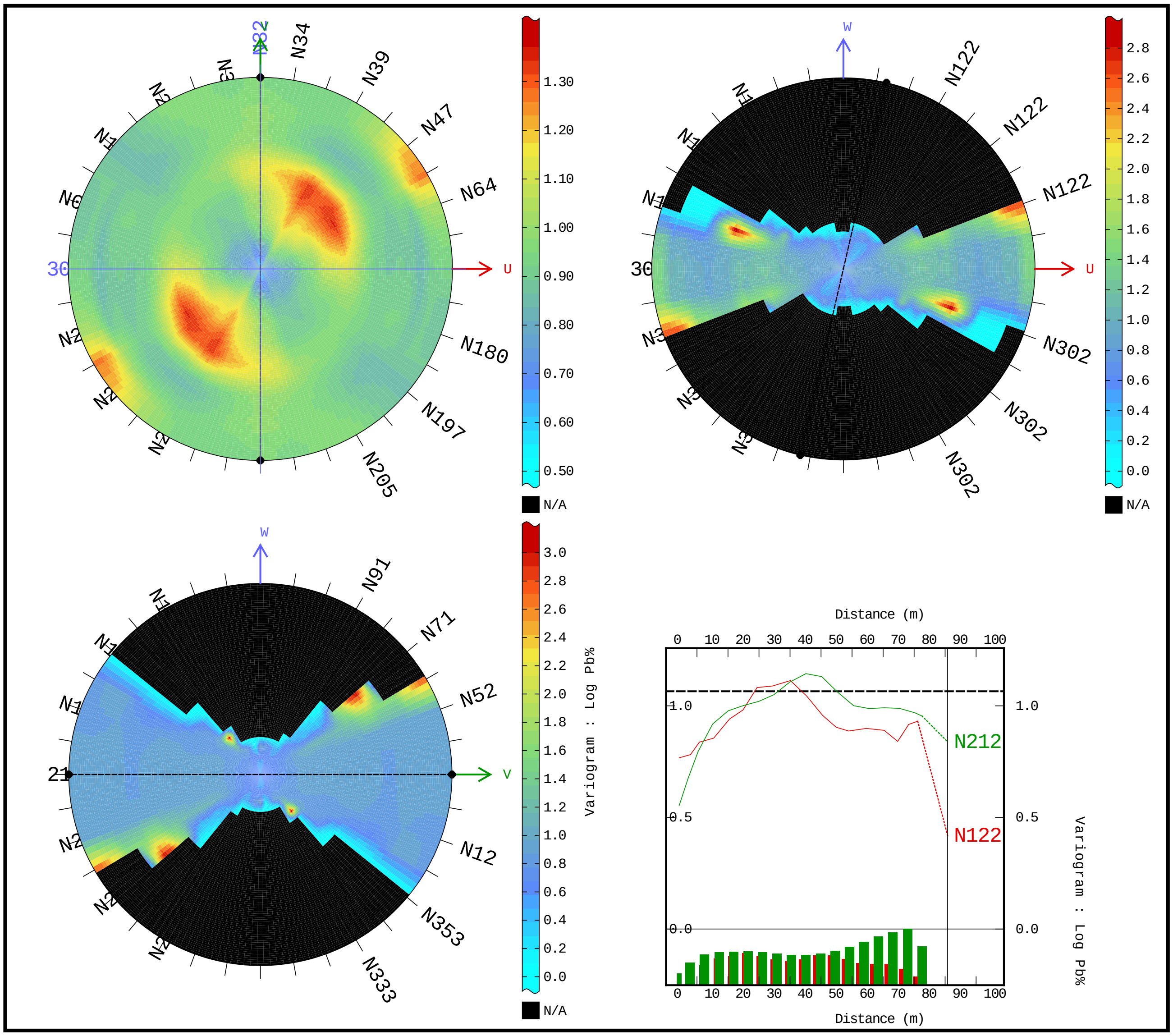
Source. SRK 2013

FIGURE 14-23 NORMAL VARIOGRAPHY OF LEAD, SOUTHWEST ZONE



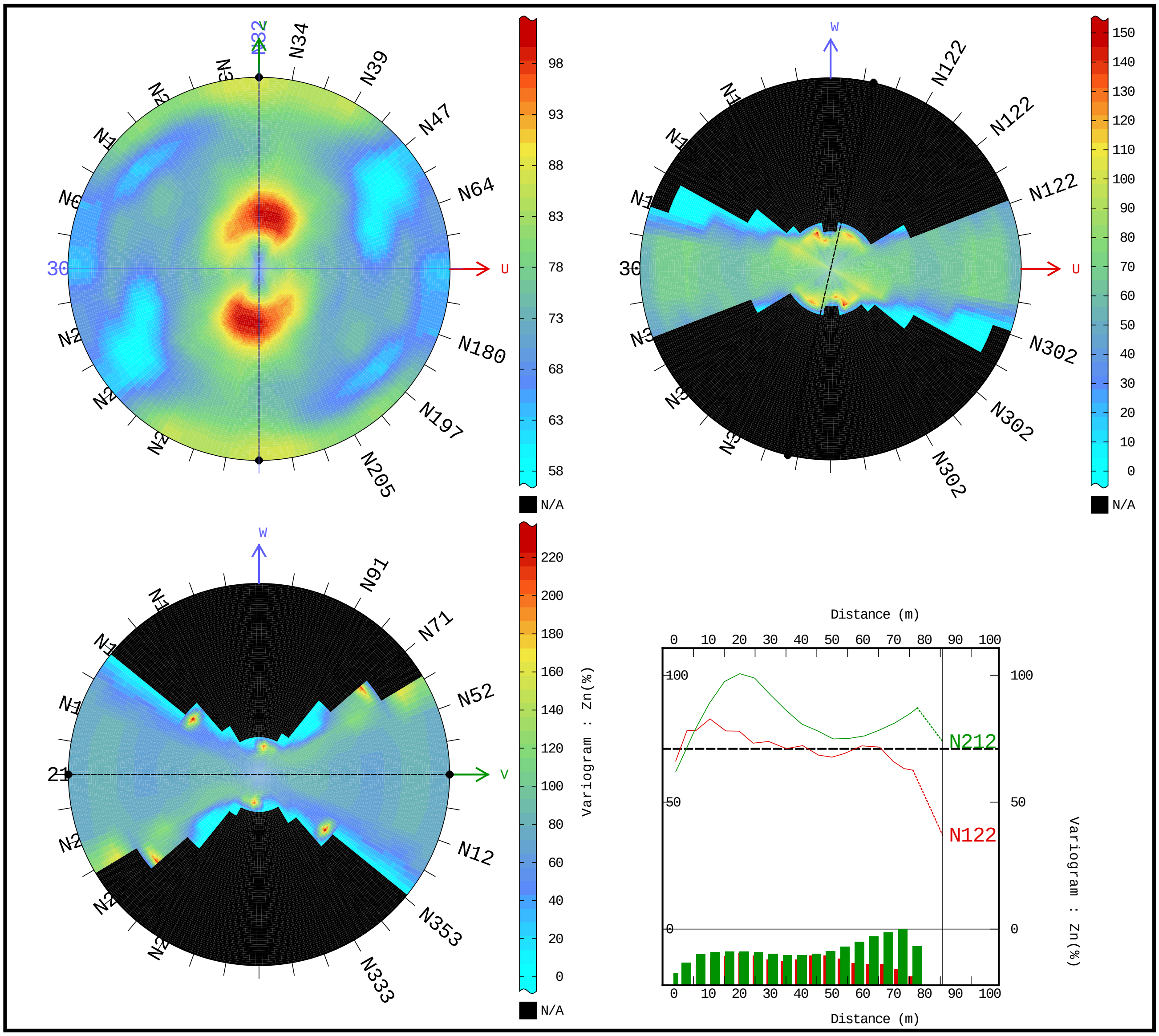
Source. SRK 2013

FIGURE 14-24 LOGNORMAL VARIOGRAPHY OF LEAD, SOUTHWEST ZONE



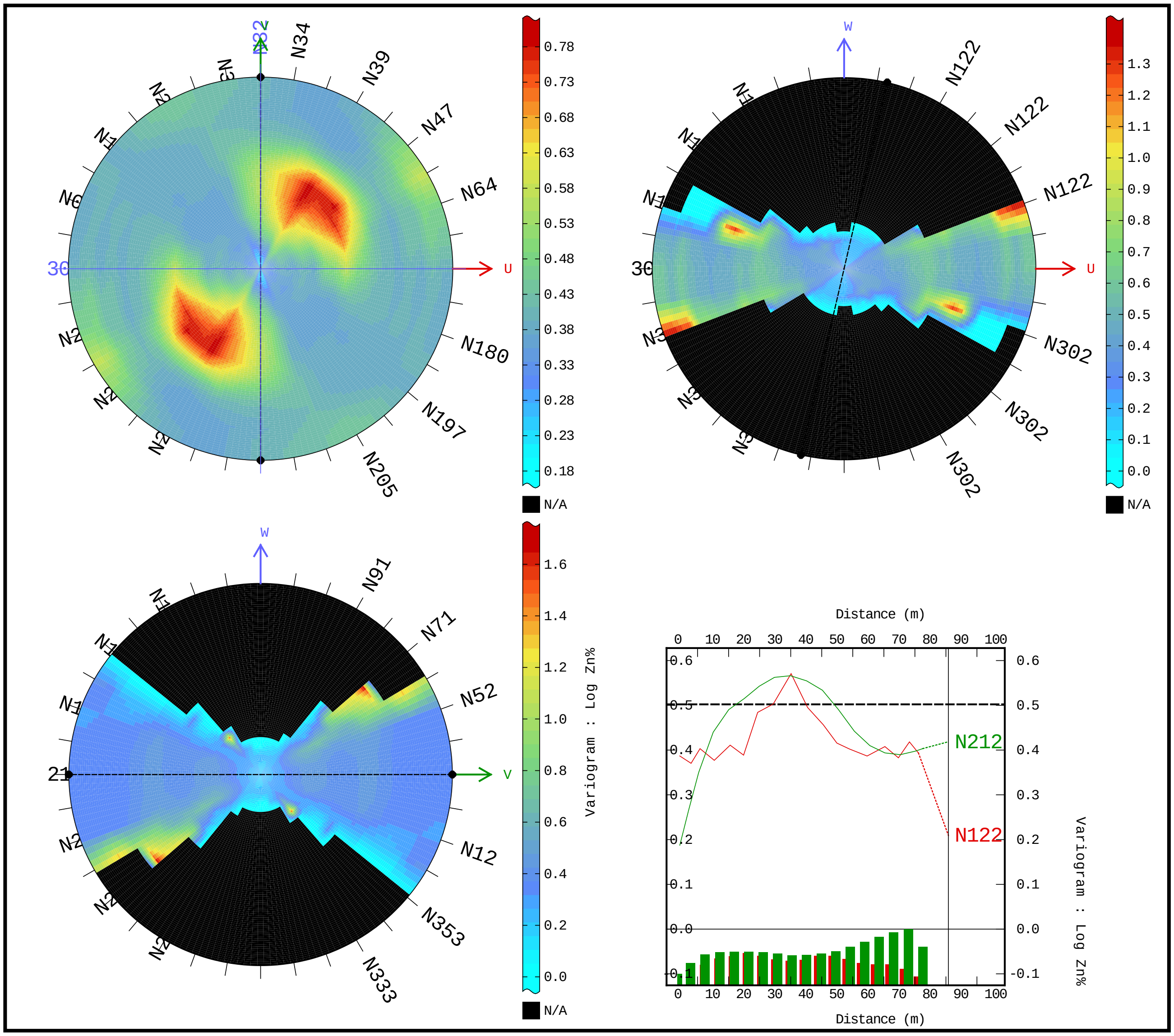
Source. SRK 2013

FIGURE 14-25 NORMAL VARIOGRAPHY OF ZINC, SOUTHWEST ZONE



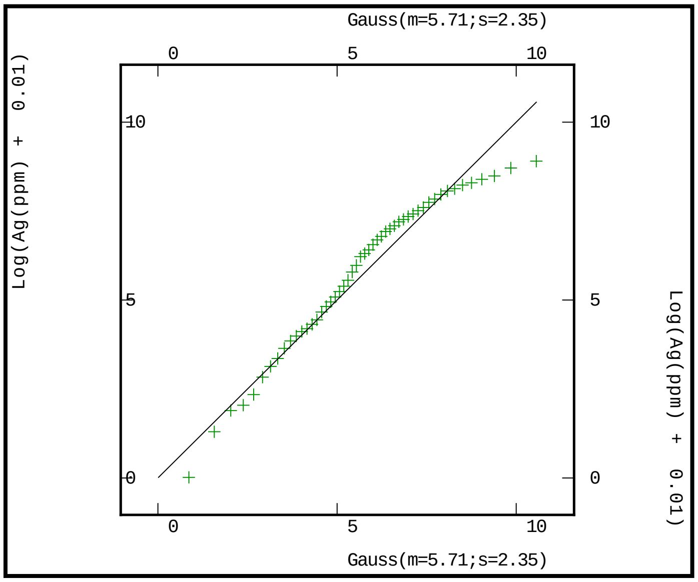
Source. SRK 2013

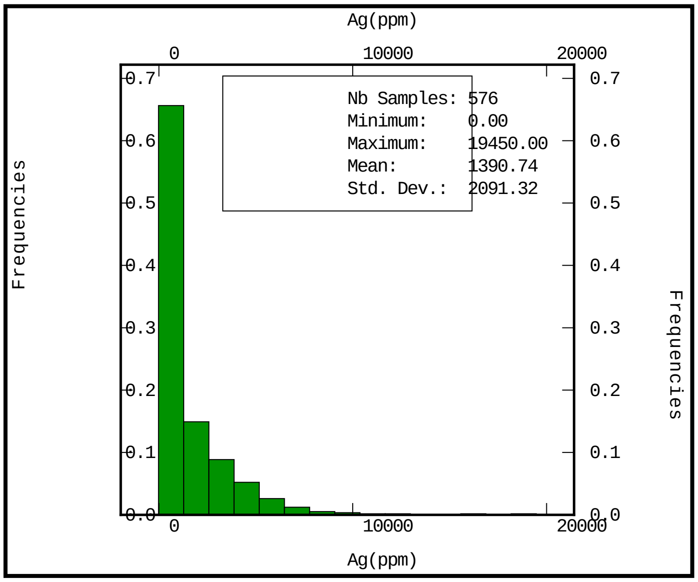
FIGURE 14-26 LOGNORMAL VARIOGRAPHY OF ZINC, SOUTHWEST ZONE



Source. SRK 2013

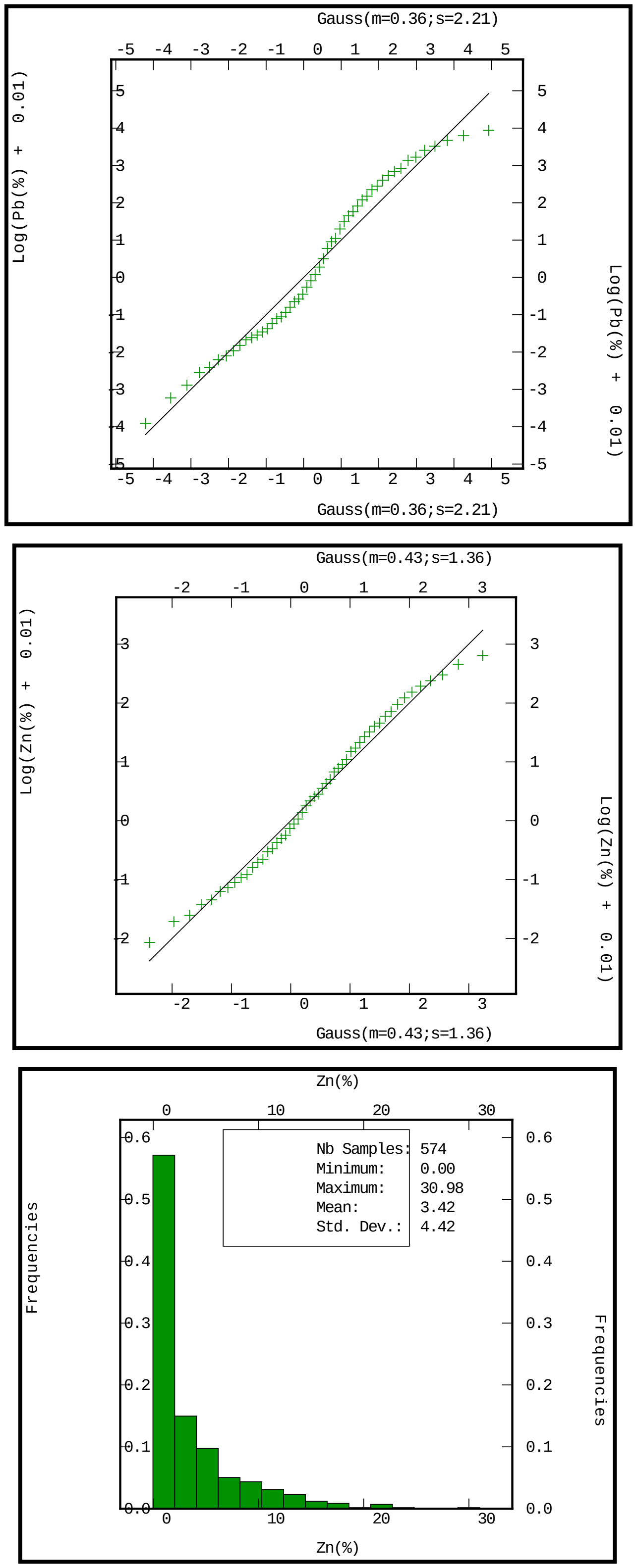
FIGURE 14-27 HISTOGRAMS AND PROBABILITY PLOTS FOR SILVER, 99 ZONE





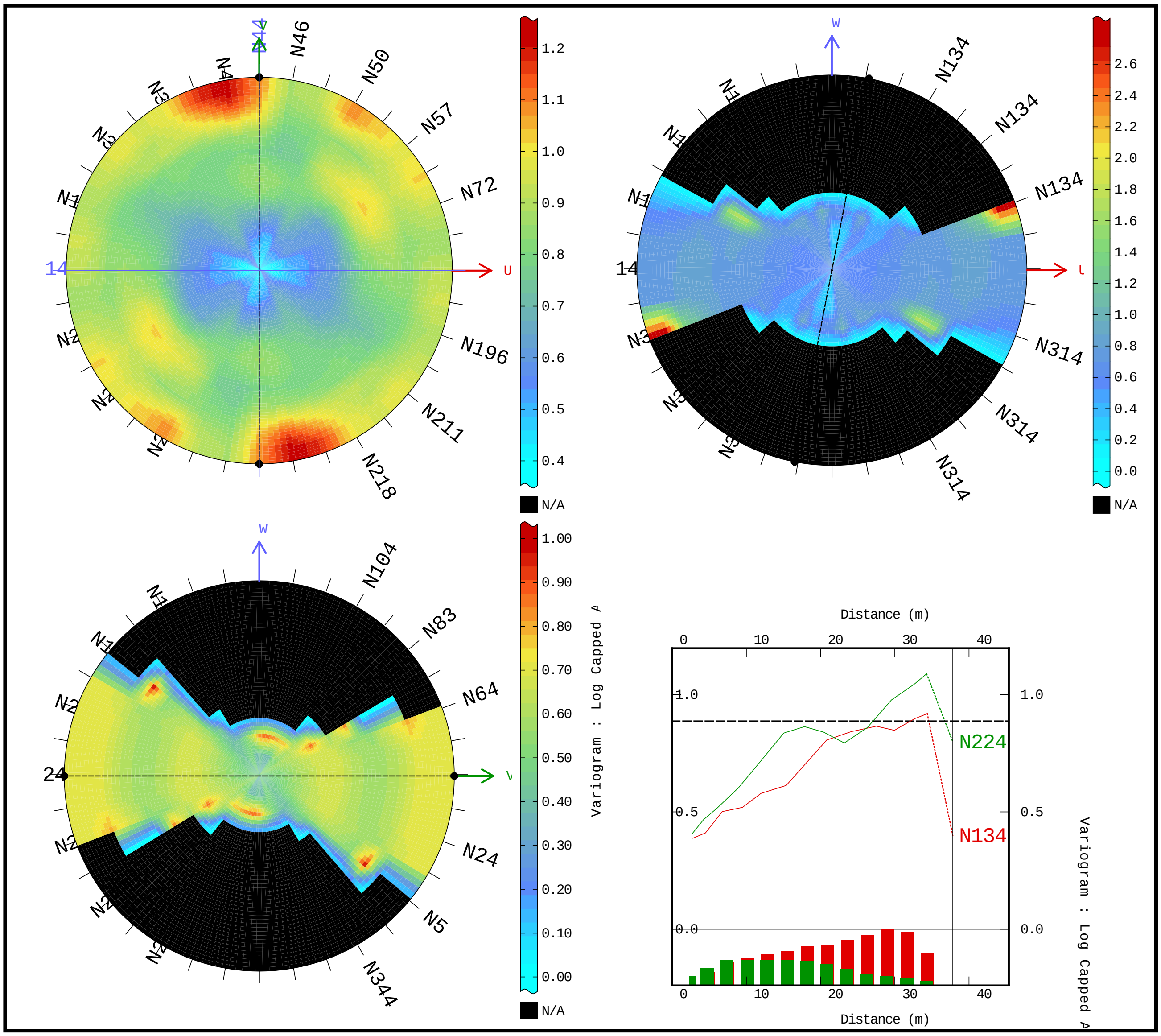
Source. SRK 2013

FIGURE 14-28 HISTOGRAMS AND PROBABILITY PLOTS FOR LEAD AND ZINC, 99 ZONE



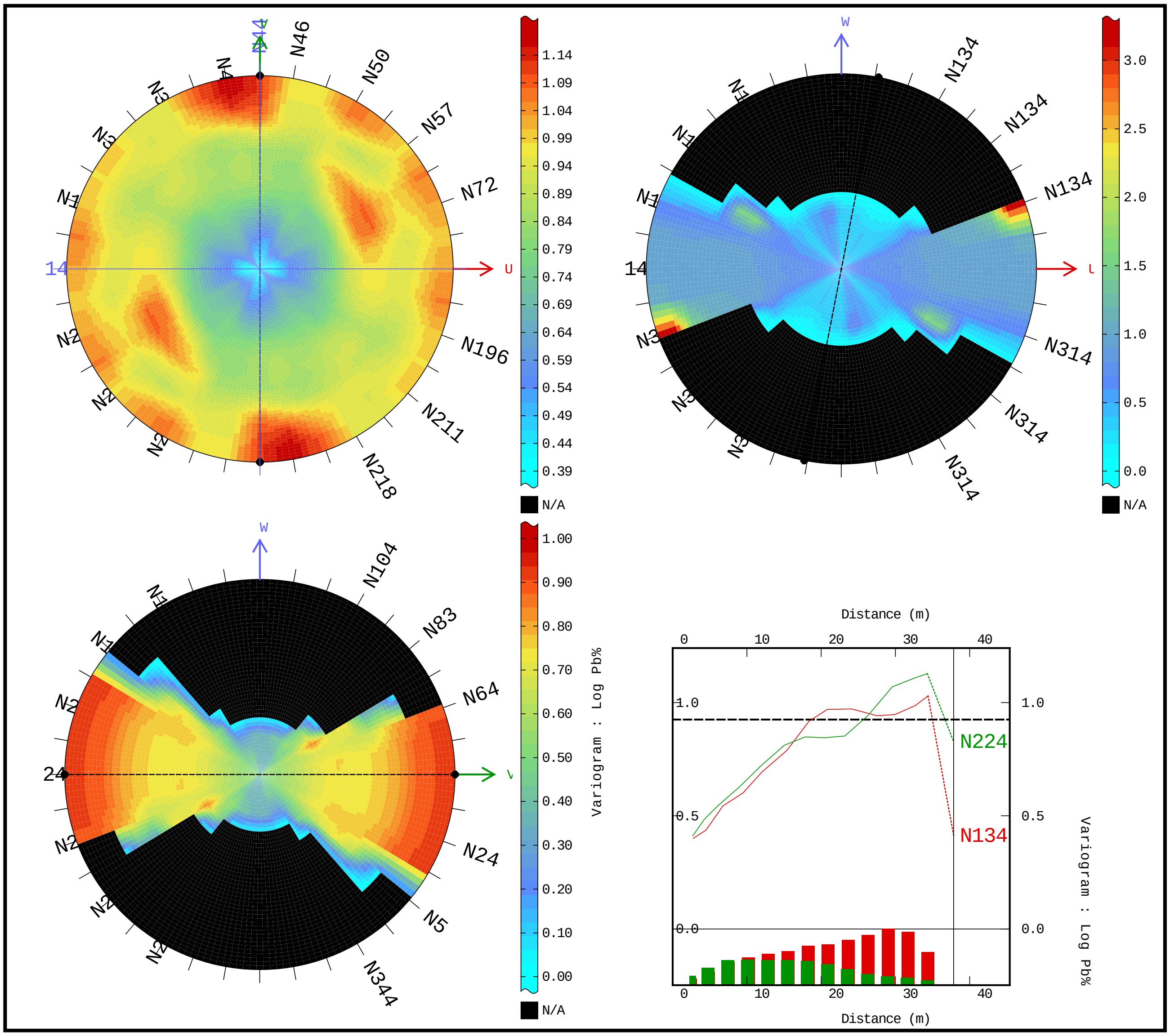
Source. SRK 2013

FIGURE 14-29 LOG SPACE VARIOGRAMS FOR CAPPED SILVER, 99 ZONE



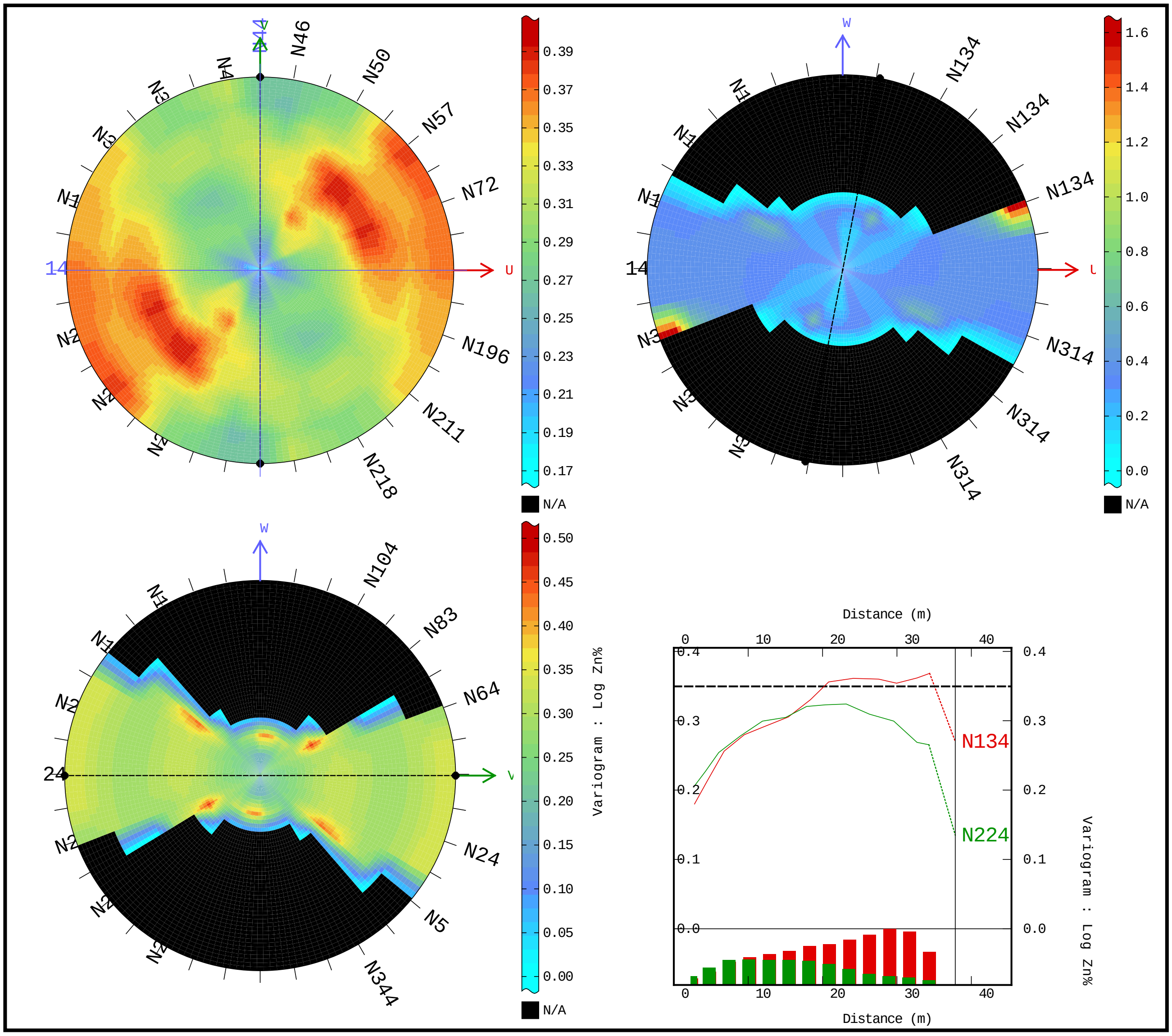
Source. SRK 2013

FIGURE 14-30 LOG SPACE VARIOGRAMS FOR LEAD, 99 ZONE



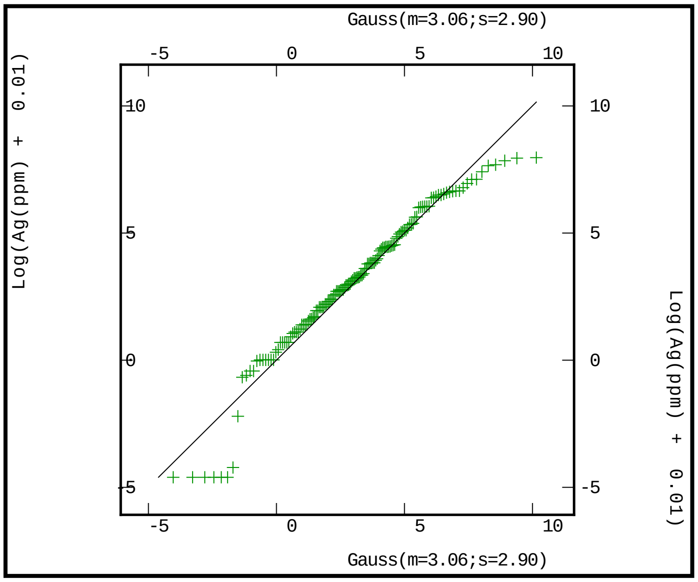
Source. SRK 2013

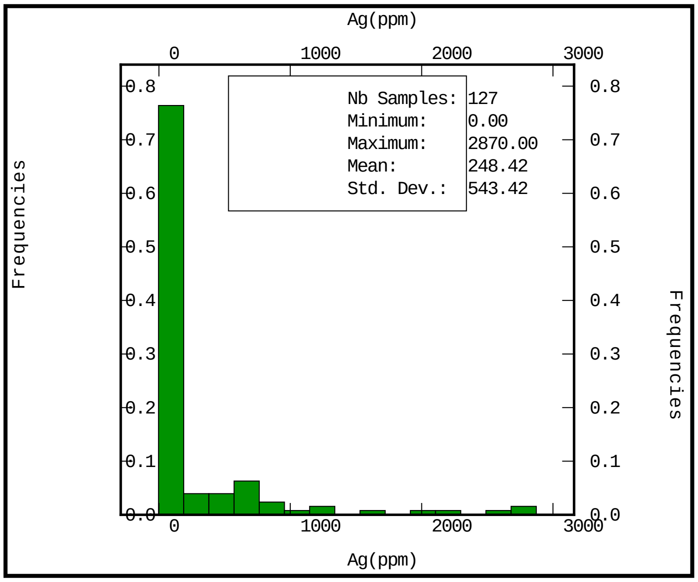
FIGURE 14-31 LOG SPACE VARIOGRAMS FOR ZINC, 99 ZONE



Source. SRK 2013

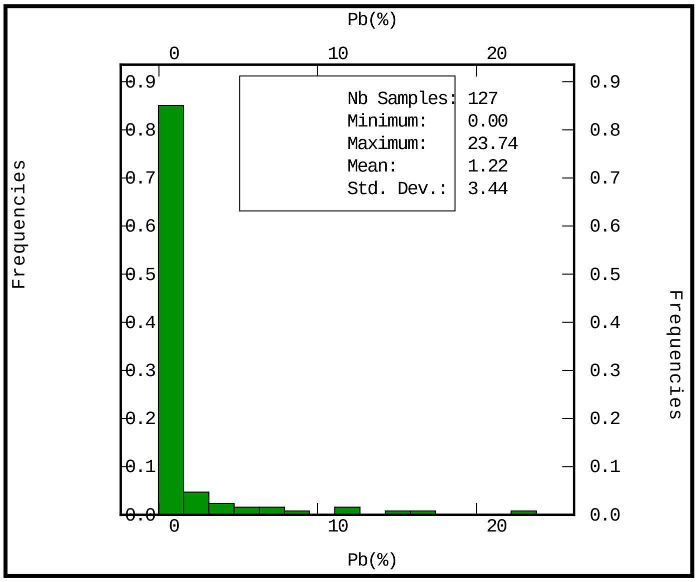
FIGURE 14-32 HISTOGRAMS AND PROBABILITY PLOTS FOR SILVER, EAST ZONE

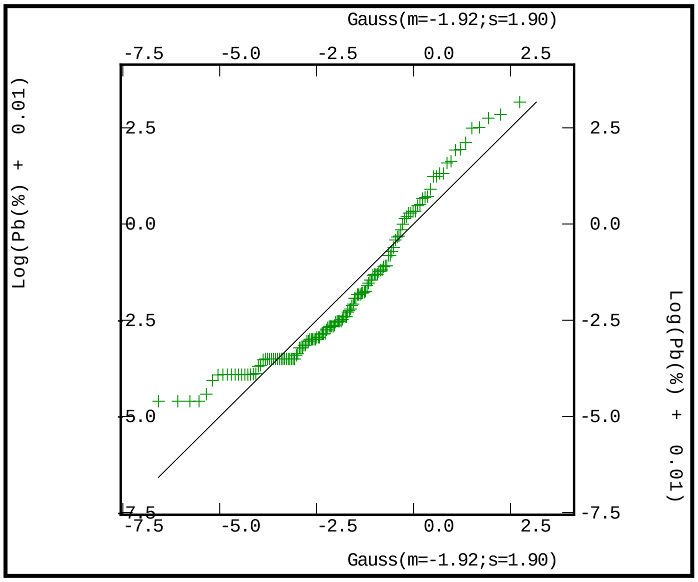




Source. SRK 2013

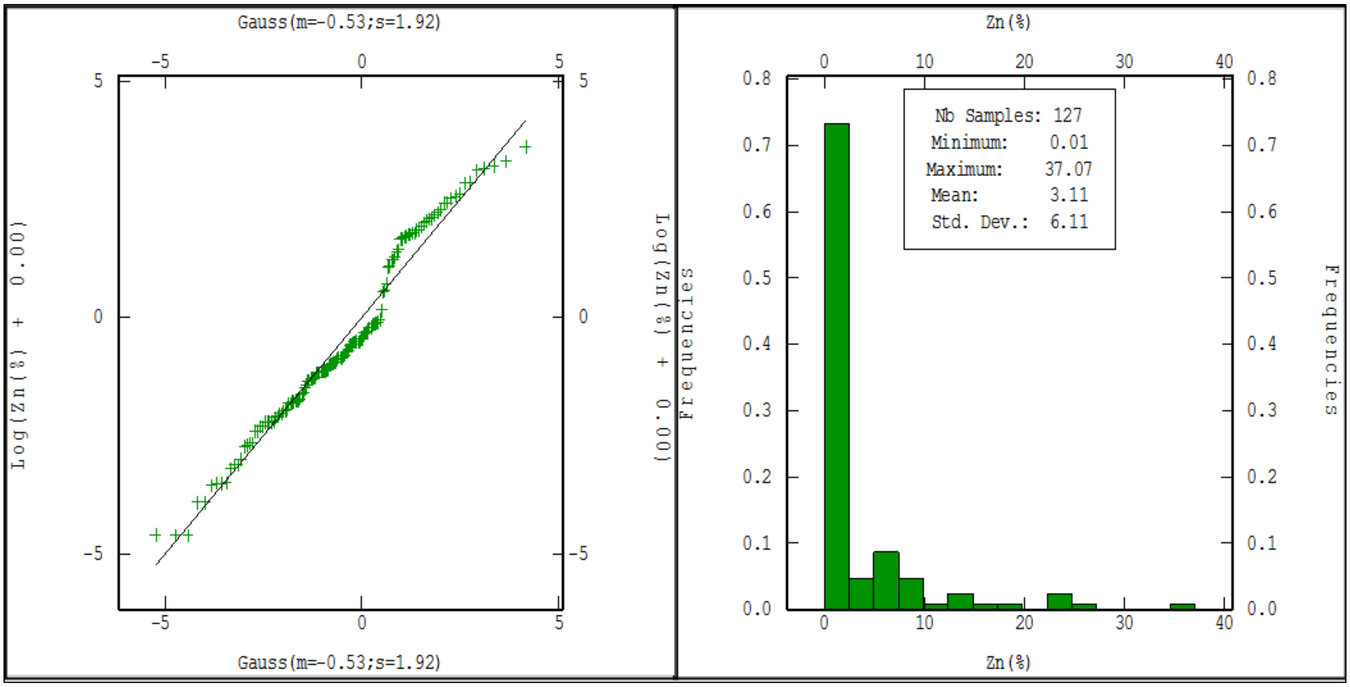
FIGURE 14-33 HISTOGRAMS AND PROBABILITY PLOTS FOR LEAD, EAST ZONE





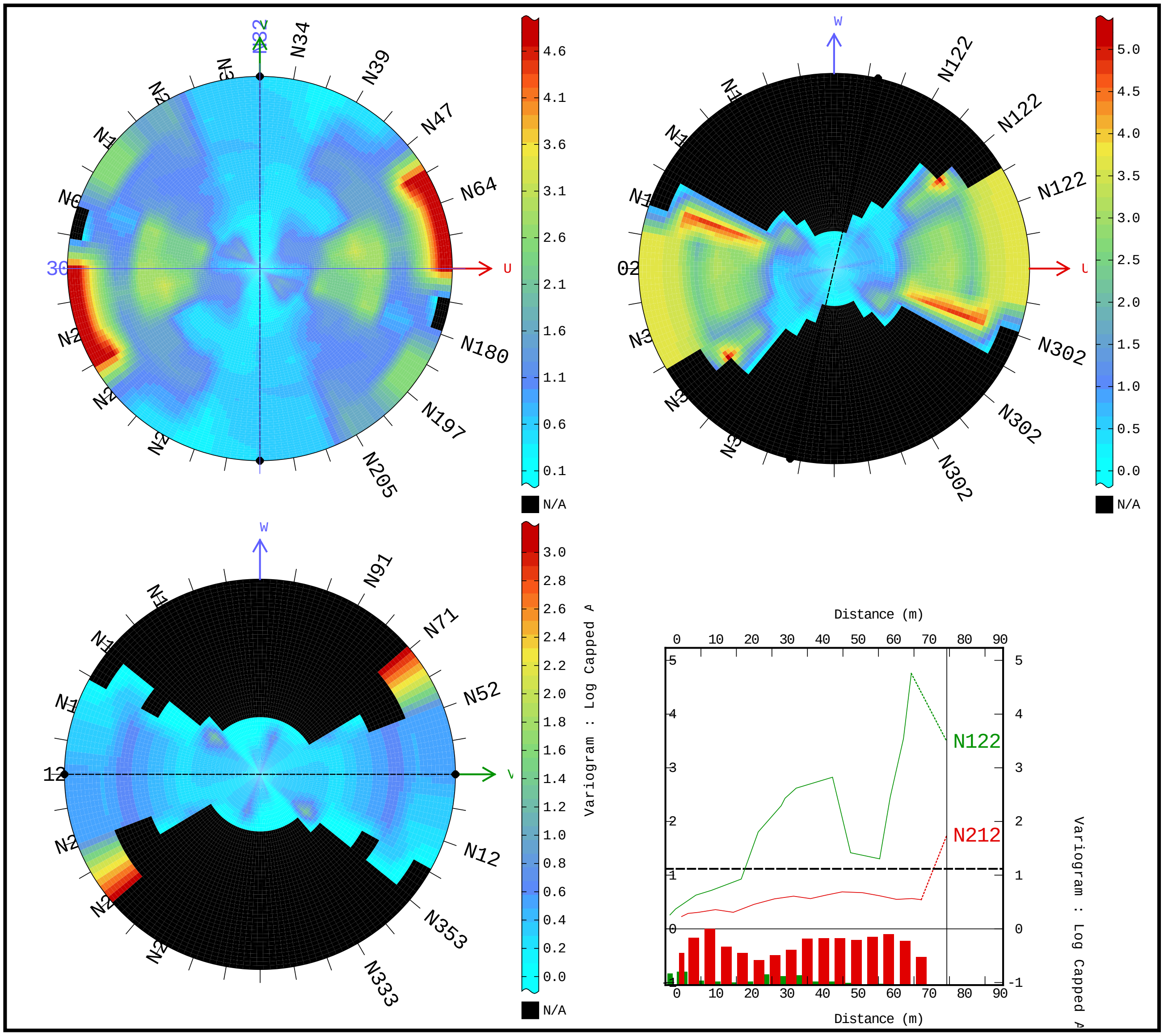
Source. SRK 2013

FIGURE 14-34 HISTOGRAMS AND PROBABILITY PLOTS FOR ZINC, EAST ZONE



Source. SRK 2013

FIGURE 14-35 LOG SPACE VARIOGRAMS FOR SILVER, EAST ZONE

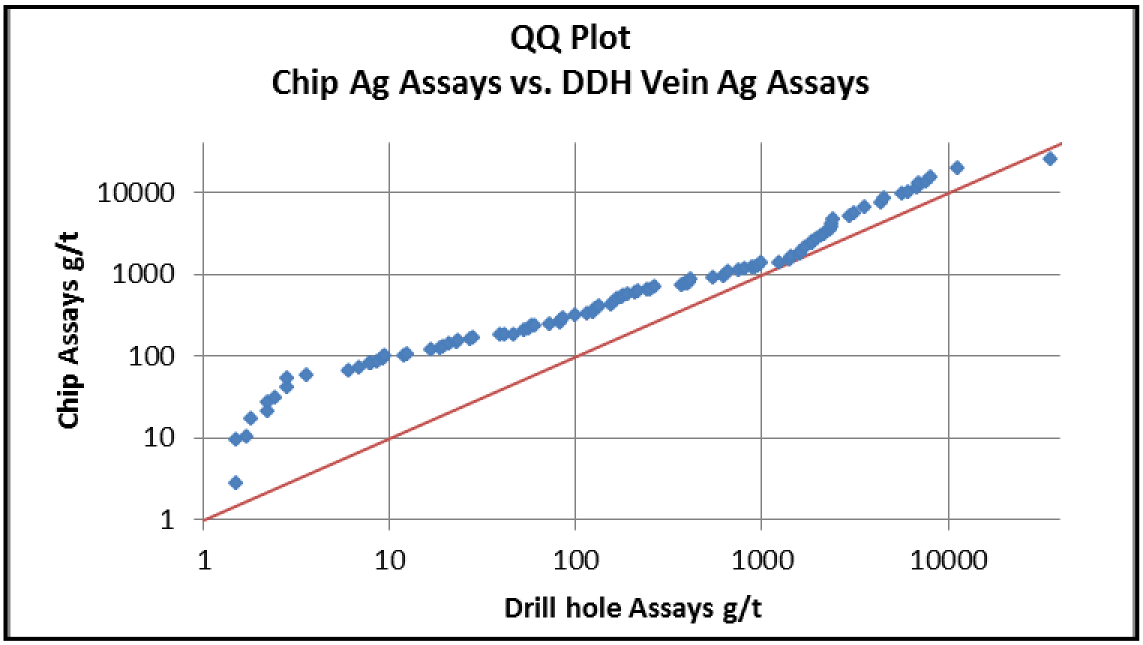


Source. SRK 2013

STATISTICAL ANALYSIS AND VARIOGRAPHY FOR THE LUCKY QUEEN MINE

Examination of the distribution of drill hole and chip assay sample populations suggests that drill hole assay data differ significantly from the chip assay data (Figure 14-36). The chip sample data were, therefore, used for continuity analysis, but were not used for Mineral Resource estimation.

FIGURE 14-36 Q-Q PLOT OF CHIP AND DRILL HOLE SILVER ASSAY SAMPLE DATA



Source: SRK 2011

Summary statistics were compiled for the composite data, both for the defined Lucky Queen vein and for a secondary splay identified by Alexco (Table 14-23). A total of 66 composites were derived for the Lucky Queen vein, and 15 composites for the secondary splay. An additional five composites averaging 1,591 g/t Ag have been identified by Alexco, but were not assigned to the primary Lucky Queen vein or the secondary splay. Correlation analysis between elements indicates a strong correlation between silver and lead, with a correlation coefficient of 0.62.

TABLE 14-23 COMPOSITE DATA SUMMARY STATISTICS FOR THE LUCKY QUEEN MINE
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Statistic	Ag (g/t)	Au (g/t)	Pb (ppm)	Zn (ppm)
Total Composites	Number of Samples	81	81	81	81
	Average	814	0.14	17,909	12,080
	Minimum	0.2	0.001	2,327	44
	Maximum	13,998	3.00	303,963	210,100
	Standard Deviation	1,929	0.375	42,651	31.353
	Coefficient of Variation	2.4	2.8	2.4	2.6
Vein Composites	Number of Samples	66	66	66	66
	Average	960	0.161	20,831	13,944
	Minimum	0.6	0.001	32	44
	Maximum	13,998	3.00	303,963	210,010
	Standard Deviation	2,098	0.412	46,265	34,315
	Coefficient of Variation	2.2	2.6	2.2	2.5
Splay Composites	Number of Samples	15	15	15	15
	Average	174	0.022	5,054	3,877
	Minimum	0.2	0.001	23	116
	Maximum	2,125	0.155	60,714	27,195
	Standard Deviation	547	0.040	15,496	7,862
	Coefficient of Variation	3.2	1.8	3.1	2.0

3D continuity analysis was conducted on the composite data and underground chip sample data for the Lucky Queen vein. Downhole and directional un-transformed and normal-scores transformed and normalized experimental semi-variograms were examined for silver, with the horizontal and across-strike directions aligned with the modelled vein orientation (Table 14-24).

Rotation was defined by the GEMS ZYZ convention within the rotated block model coordinate space. Due to the spatial distribution of the data, only a strike experimental semi-variogram could be satisfactorily modelled, and the range of the resulting normal-scores experimental semi-variogram was used to define sample selection requirements and classification criteria.

TABLE 14-24 MODELLED SEMI-VARIOGRAM FOR SILVER
Alexco Resource Corp. – Keno Hill Silver District Project

Direction	Experimental Semi-Variogram	Range
Nugget	0.2	
Sill 1	0.2	12
Sill 2	0.6	100

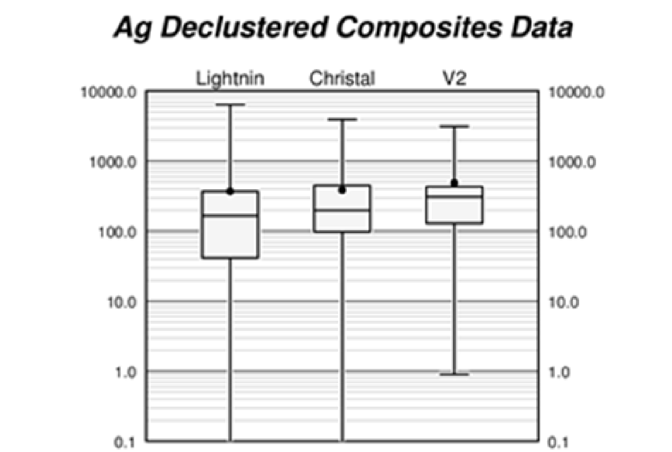
STATISTICAL ANALYSIS AND VARIOGRAPHY FOR THE FLAME & MOTH DEPOSIT

Summary statistics compiled for declustered composite data for Ag and Zn are presented in Figures 14-37 and 14-38. SRK tested the bivariate relationship between the metals used in the estimation process. In general the correlation between different metals is quite weak. The only exception is the correlation between Ag and Pb. Figure 14-39 shows an example of the correlation between Ag and Zn and Ag and Pb assays in the Lightning zone.

Experimental correlograms were derived for Ag and Zn from one metre composites in the Lightning and Christal zones. This type of a model was preferred because it is less sensitive to very high values and is normalized to the variance of the data used for a given lag. Downhole correlograms were used to model nugget effects (i.e. assay variability at very close distances). Directional correlograms were used to model grade continuities for larger distances. Final correlogram models used in in the resource estimation are presented in Tables 14-25 and 14-26. Note that, in view of a good correlation between Ag and Pb assays, the correlogram models for Pb were assumed to be identical to Ag assays.

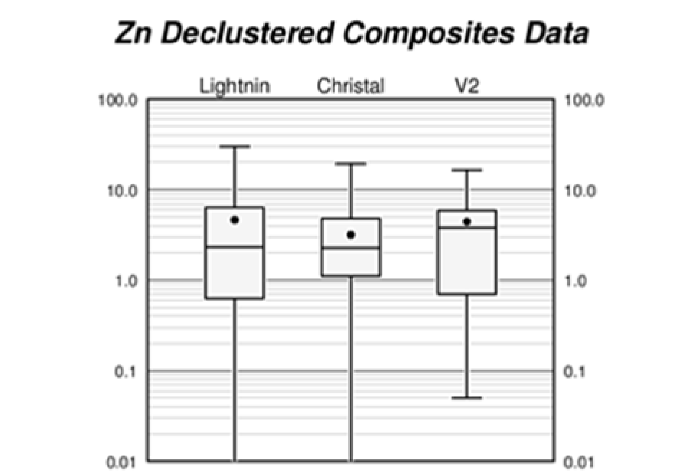
Block grades for all other metals were estimated by the Inverse Distance Squared procedure.

FIGURE 14-37 STATISTICS OF AG COMPOSITE GRADES IN THE MINERALIZED ZONES



	Lightnin	Christal	V2	
Number of data	334	249	49	Number of data
Mean	369.7	386.0	489.2	Mean
Std. Dev.	629.5	529.5	599.9	Std. Dev.
Coef. of Var.	1.7	1.4	1.2	Coef. of Var.
Maximum	6380.0	3951.0	3115.0	Maximum
Upper quartile	368.7	450.4	429.5	Upper quartile
Median	166.1	197.1	307.5	Median
Lower quartile	41.5	97.4	129.3	Lower quartile
Minimum	0.0	0.0	0.9	Minimum

FIGURE 14-38 STATISTICS OF SILVER COMPOSITE GRADES IN THE MINERALIZED ZONES



	Lightnin	Christal	V2	
Number of data	334	249	49	Number of data
Mean	4.63	3.17	4.43	Mean
Std. Dev.	5.41	2.94	4.26	Std. Dev.
Coef. of Var.	1.17	0.93	0.96	Coef. of Var.
Maximum	29.9	19.28	16.48	Maximum
Upper quartile	6.36	4.8	5.86	Upper quartile
Median	2.32	2.26	3.8	Median
Lower quartile	0.63	1.11	0.7	Lower quartile
Minimum	0.0	0.0	0.05	Minimum

FIGURE 14-39 STATISTICS OF ZINC COMPOSITE GRADES IN THE MINERALIZED ZONES

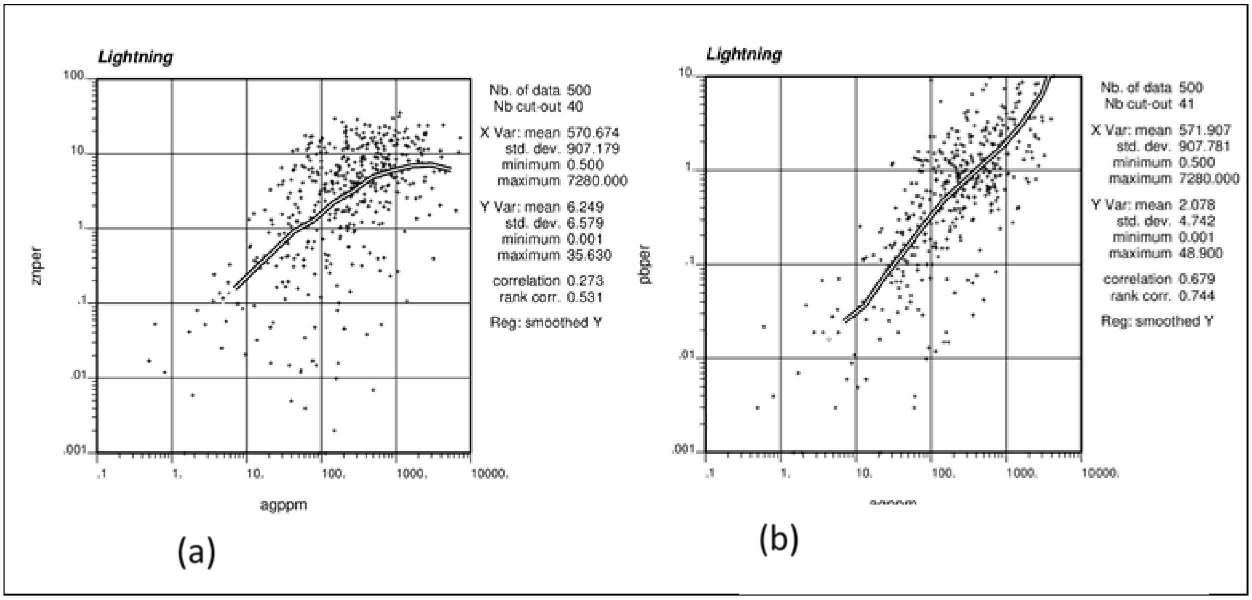


TABLE 14-25 CORRELOGRAM MODELS IN THE LIGHTNING ZONE
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Nugget C_0	Sill C_1 and C_2	Gemcom Rotations (RRR rule) around Z	around Y	around Z	Ranges a_1, a_2 X-Rot	Y-Rot	Z-Rot
Ag	0.20	0.60	-30	60	17	70	50	3
		0.20				100	80	10
Pb	0.20	0.60	-30	60	17	70	50	3
		0.20				100	80	10
Zn	0.05	0.60	-30	60	17	40	50	5
		0.35				80	150	10

TABLE 14-26 CORRELOGRAM MODELS IN THE CHRISTAL ZONE
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Nugget C_0	Sill C_1 and C_2	Gemcom Rotations (RRR rule) around Z	around Y	around Z	Ranges a_1, a_2 X-Rot	Y-Rot	Z-Rot
Ag	0.28	0.30	-25	60	0	30	30	5
		0.42				85	85	10
Pb	0.28	0.30	-25	60	0	30	30	5
		0.42				85	85	10
Zn	0.05	0.40	-25	60	0	20	20	5
		0.55				60	60	10

STATISTICAL ANALYSIS AND VARIOGRAPHY FOR THE ONEK DEPOSIT

Examination of the distribution of the drill hole and chip assay sample populations suggests that the drill hole assay data differ significantly from the chip assay data. Therefore, the chip sample data were not used for Mineral Resource estimation.

Summary statistics were compiled for the composite data for the Onek veins (Table 14-27). A total of 351 composites were derived for Vein1, 16 composites for Vein 1FW and 147 composites for Vein 2. Any composites lengths that were less than 0.5 m in length were linked to the previous composite to assure equal weighting of all composite and to assure that all composites were between 0.5 m and 1.5 m in length. Correlation analysis between commodities indicates a strong correlation between Ag and Pb, with a correlation coefficient of 0.83.

TABLE 14-27 COMPOSITE DATA SUMMARY STATISTICS FOR ONEK
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Statistic	Ag g/t	Ag Cap g/t	Au g/t	Au Cap g/t	Pb %	Pb Cap %	Zn %	Zn Cap %
Total Composites	No of Samples	514	514	514	514	514	514	514	514
	Average	181	175	0.51	0.49	1.4	1.26	9.5	8.93
	Minimum	0.64	0.64	0	0	0	0	0	0
	Maximum	3,410	3,000	7.68	4.89	46.13	27.94	50	35
	St Dev.	408	369	0.7	0.58	4.26	3.42	10.94	9.59
	CV	2.25	2.11	1.37	1.18	3.04	2.71	1.15	1.07
Vein 1 Composites	No of Samples	351	351	351	351	351	351	351	351
	Average	166	165	0.6	0.58	1.11	1.08	12.18	11.41
	Minimum	0	0	0	0	0	0	0	0
	Maximum	2,776	2,428	7.68	4.89	26.96	21.35	50	35
	St Dev.	309	299	0.77	0.63	2.92	2.75	11.92	10.36
	CV	1.86	1.81	1.28	1.09	2.63	2.55	0.98	0.91
Vein 1FW Composites	No of Samples	16	16	16	16	16	16	16	16
	Average	135	135	0.3	0.3	2.32	2.32	4.11	3.78
	Minimum	0.64	0	0	0	0	0	0	0
	Maximum	1,400	1,400	1.91	1.91	27.94	27.94	28.66	23.46
	St Dev.	364	364	0.59	0.59	7.15	7.15	7.29	6.14
	CV	2.70	2.70	1.97	1.97	3.08	3.08	1.77	1.62
Vein 2 Composites	No of Samples	147	147	147	147	147	147	147	147
	Average	222	201	0.31	0.3	1.99	1.57	3.7	3.56
	Minimum	0	0	0	0	0	0	0	0
	Maximum	3,410	3,000	1.77	1.65	46.13	25	30.14	24.1
	St Dev.	583	499	0.41	0.39	6.12	4.16	4.51	3.93
	CV	2.63	2.48	1.32	1.30	3.08	2.65	1.22	1.10

Experimental correlograms and correlogram models were generated for silver, lead, zinc, and gold from combined composite grade data for Vein 1 and Vein 1FW and from composite grade data for Vein 2. The nugget effect was established from downhole correlograms. Directional and downhole correlograms were examined for silver, lead, zinc, and gold. Apart from zinc, modeled directions of spatial continuity were aligned with strike and dip directions of modeled vein orientations. For zinc, the major direction of continuity was modelled as a shallow dipping south-west trending structure. Nugget effect and across-structure continuity was established from downhole correlograms. Rotation was defined by the GEMS ZYZ convention within the rotated block model coordinate space. The continuity ellipsoids for silver, lead, zinc, and gold were displayed as search ellipsoids in GEMS to validate the ellipsoid orientations. The correlogram models used for grade estimation within Vein1 and Vein 1FW (Figure 14-40), and Vein 2 (Figure 14-41) are summarized in Table 14-28.

FIGURE 14-40 MODELLED DIRECTIONAL AND DOWNHOLE CORRELOGRAMS FOR VEIN 1 AND VEIN 1FW

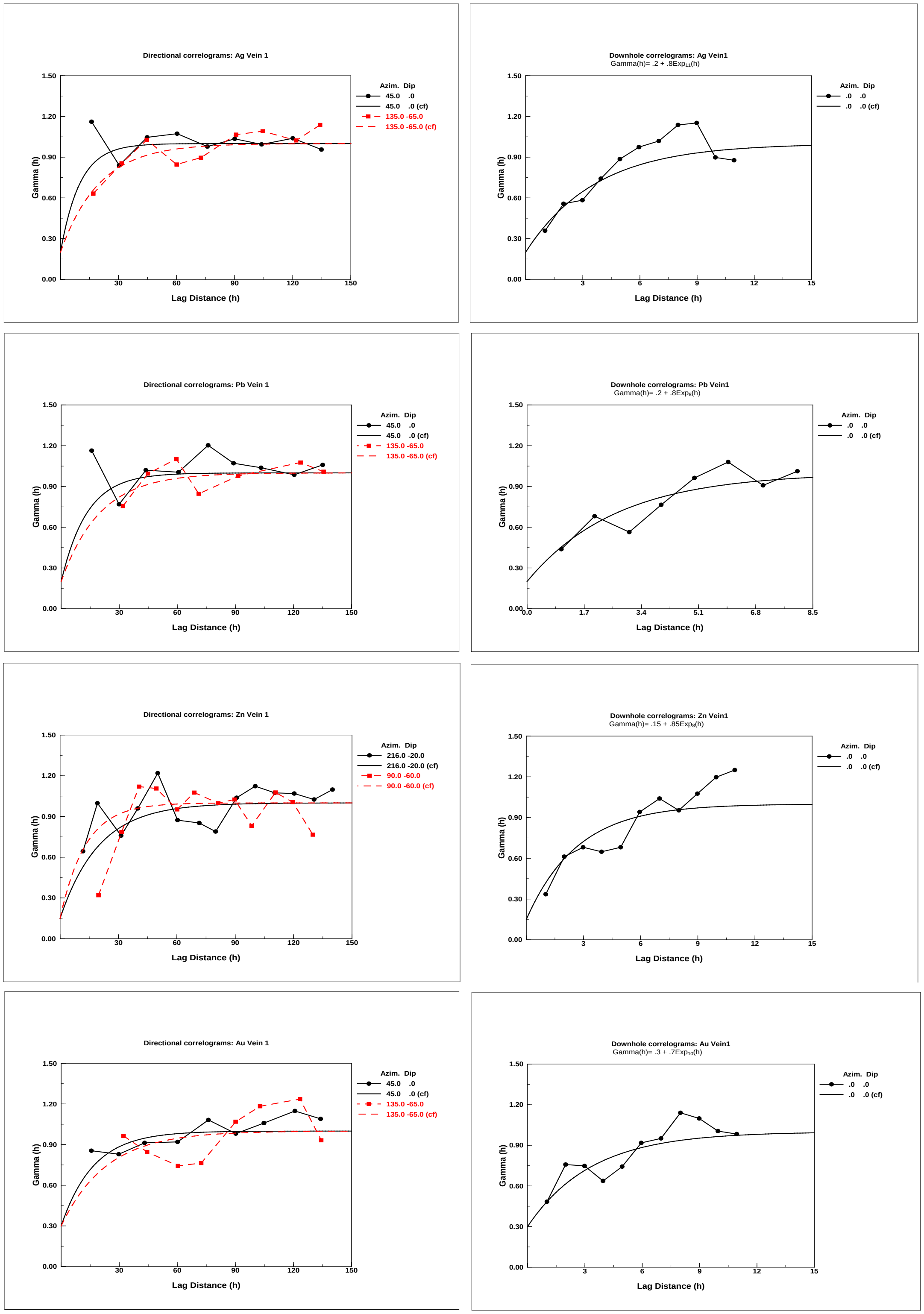


FIGURE 14-41 MODELLED OMNIDIRECTIONAL CORRELOGRAMS FOR VEIN 2

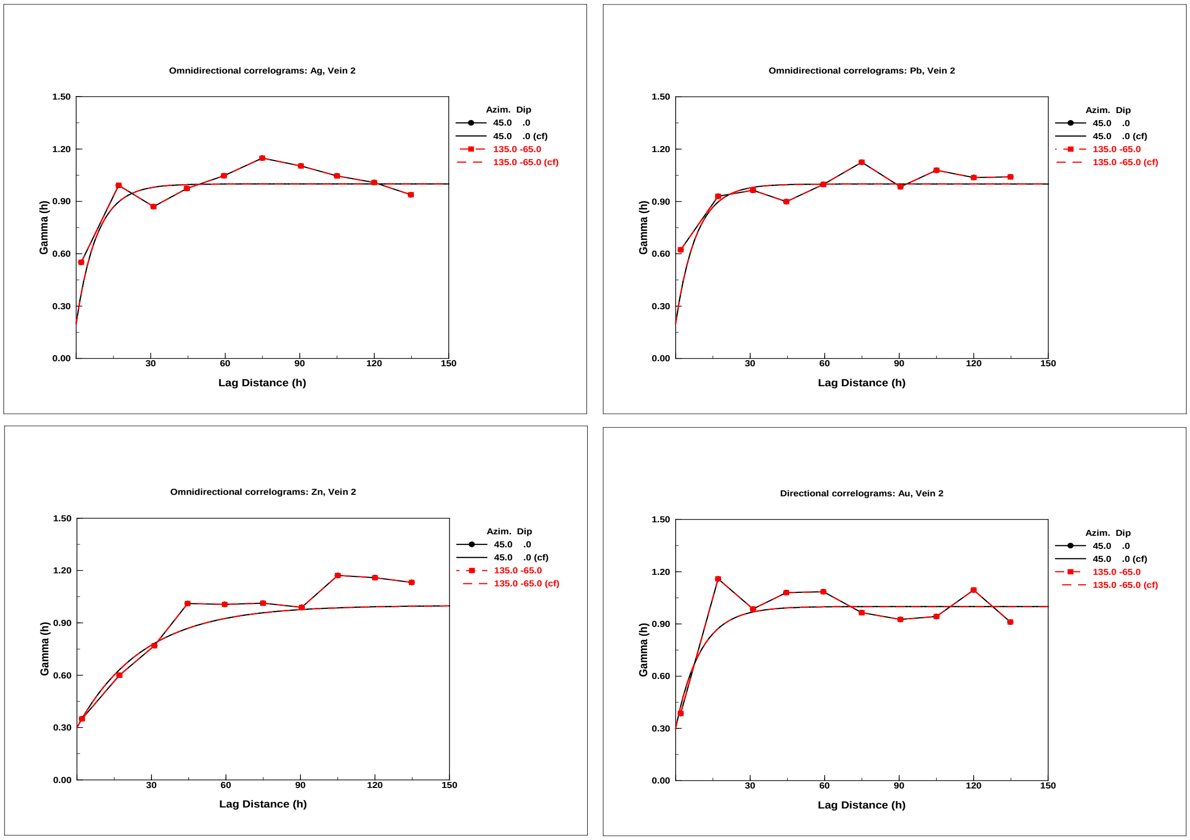


TABLE 14-28 MODELLED CORRELOGRAMS FOR ONEK VEINS
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Zone	Nugget C_0	Sill C	Gemcom Rotations (RRR rule) around Z	around Y	around Z	Range a X-Rot	Y-Rot	Z-Rot
Silver	Vein 1 and Vein 1FW	0.20	0.80	-45	65	0	60	30	11
	Vein 2	0.20	0.80	-45	65	0	25	25	10
Lead	Vein 1 and Vein 1FW	0.20	0.80	-45	65	0	60	40	8
	Vein 2	0.20	0.80	-45	65	0	25	25	10
Zinc	Vein 1 and Vein 1FW	0.15	0.85	-45	65	-70	60	40	8
	Vein 2	0.30	0.70	-45	65	0	80	80	7
Gold	Vein 1 and Vein 1F	0.30	0.70	-45	65	0	70	50	10
	Vein 2	0.30	0.70	-45	65	0	30	30	10

STATISTICAL ANALYSIS AND VARIOGRAPHY FOR THE BERMINGHAM DEPOSIT

Summary statistics were compiled for the composite data for the Bermingham veins and vein margins (Table 14-29).

TABLE 14-29 COMPOSITE DATA SUMMARY STATISTICS FOR BERMINGHAM
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Statistic	Ag g/t	Ag Cap g/t	Au g/t	Au Cap g/t	Pb %	Pb Cap %	Zn %	Zn Cap %
Total Composites	Number of Samples	734	734	734	734	734	734	734	734
	Average	940	761	0.15	0.15	2.78	2.27	1.44	1.34
	Minimum	0	0	0	0	0	0	0	0
	Maximum	26,124	11,000	1.9	1.9	76	30	23.5	12
	St Dev.	2,598	1,784	0.27	0.27	7.38	4.87	2.47	2.02
	CV	2.76	2.3	1.8	1.8	2.65	2.15	1.72	1.58
Bermingham Vein	Number of Samples	109	109	109	109	109	109	109	109
	Average	633	467	0.18	0.18	2.10	1.94	2.06	1.94
	Minimum	0	0	0	0	0	0	0	0
	Maximum	6,959	1,500	1.6	1.6	17.50	9.5	17.44	9.0
	St Dev.	1,018	538	0.26	0.26	3.35	2.8	2.67	2.13
	CV	1.60	1.15	1.45	1.45	1.59	1.4	1.29	1.1
Bermingham Vein Margin	Number of Samples	145	145	145	145	145	145	145	145
	Average	159	156	0.05	0.05	1.03	.57	0.80	.80
	Minimum	0	0	0	0	0	0	0	0
	Maximum	2,009	1,500	0.38	0.38	76.10	9.5	7.39	7.39
	St Dev.	285	265	0.05	0.05	6.32	1.2	1.05	1.05

Type	Statistic	Ag g/t	Ag Cap g/t	Au g/t	Au Cap g/t	Pb %	Pb Cap %	Zn %	Zn Cap %
	CV	1.78	1.69	1.0	1.0	6.12	2.1	1.31	1.3
Footwall vein	Number of Samples	88	88	88	88	88	88	88	88
	Average	899	655	0.17	0.17	3.27	2.8	1.68	1.64
	Minimum	0	0	0	0	0	0	0	0
	Maximum	9,173	3,000	1.1	1.1	64.5	30	12.07	9.0
	St Dev.	1,720	949	0.21	0.21	9.08	6.6	2.44	2.3
	CV	1.91	1.44	1.2	1.2	2.77	2.3	1.45	1.4
Footwall Vein Margin	Number of Samples	104	104	104	104	104	104	104	104
	Average	214	213	0.09	0.09	0.60	0.6	0.77	0.77
	Minimum	0	0	0	0	0	0	0	0
	Maximum	3,066	3,000	1.8	1.8	12.1	12.1	9.11	9.0
	St Dev.	406	402	0.19	0.19	1.58	1.58	1.34	1.3
	CV	1.89	1.88	2.0	2.0	2.63	2.63	1.72	1.7
Bear vein	Number of Samples	101	101	101	101	101	101	101	101
	Average	3,748	3,042	0.39	0.39	8.66	6.9	2.63	2.23
	Minimum	0	0	0	0	0	0	0	0
	Maximum	26,124	11,000	1.9	1.9	49.63	20	23.51	7.0
	St Dev.	5,746	3,789	0.51	0.51	11.62	7.7	3.63	2.4
	CV	1.53	1.24	1.27	1.27	1.34	1.1	1.38	1.07
Bear Vein Margin	Number of Samples	148	148	148	148	148	148	148	148
	Average	463	463	0.07	0.07	1.85	1.64	0.75	.71
	Minimum	0	0	0	0	0	0	0	0
	Maximum	5,383	5,383	0.60	0.60	39.48	20	11.17	7.0
	St Dev.	767	767	0.09	0.09	4.90	3.55	1.46	1.25
	CV	1.65	1.65	1.18	1.18	2.64	2.16	1.94	1.75
West Dipper vein	Number of Samples	22	22	22	22	22	22	22	22
	Average	1,974	1,121	0.25	0.25	7.08	5.06	4.29	3.88
	Minimum	0	0	0	0	0	0	0	0
	Maximum	9,386	2,000	0.83	0.83	41.13	20	17.53	12
	St Dev.	2,237	894	0.22	0.22	11.86	7.1	5.31	4.47
	CV	1.13	0.79	0.89	0.89	1.67	1.4	1.23	1.15
West Dipper Vein Margin	Number of Samples	17	17	17	17	17	17	17	17
	Average	328	286	0.04	0.04	0.38	0.38	0.96	0.96
	Minimum	0	0	0	0	0	0	0	0
	Maximum	2,717	2,000	0.45	0.45	2.27	2.27	3.07	3.07
	St Dev.	649	497	0.10	0.10	0.60	0.60	1.03	1.0
	CV	1.97	1.74	2.1	2.1	1.58	1.58	1.07	1.0

In total, 320 of the 734 composites were from massive vein and 414 were from vein margin zones. Correlation analysis between commodities indicates good correlation between silver and lead, and between silver and gold (Table 14-30).

TABLE 14-30 CORRELATION COEFFICIENT OF COMPOSITES WITHIN MINERALIZED ZONES
Alexco Resource Corp. – Keno Hill Silver District Project

	Ag Cap	Au Cap	Pb Cap	Zn Cap
Ag Cap	1.00	0.67	0.73	0.43
Au Cap	0.67	1.00	0.51	0.33
Pb Cap	0.73	0.51	1.00	0.45
Zn Cap	0.43	0.33	0.45	1.00

Due to the limited number of samples in West Dipper, estimation was carried out by inverse distance weighted to the second power (ID^2). Estimation for the Bermingham, Footwall, and Bear vein was carried out using ordinary kriging with correlogram parameters as outlined in Tables 14-31 to 14-33.

TABLE 14-31 CORRELOGRAM MODELS FOR THE BERMINGHAM VEIN
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Nugget C_0	Sill C_1.	Gemcom Rotations (RRR rule) around Z	around Y	around Z	Ranges a_1, a_2 X-Rot	Y-Rot	Z-Rot
Ag	0.35	0.59	-38	65	-32	49	46	3
Pb	0.35	0.59	-38	65	-32	49	46	3
Zn	0.3	0.65	-26	52	-3	26	78	4

TABLE 14-32 CORRELOGRAM MODELS IN THE FOOTWALL VEIN
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Nugget C_0	Sill C_1.	Gemcom Rotations (RRR rule) around Z	around Y	around Z	Ranges a_1, a_2 X-Rot	Y-Rot	Z-Rot
Ag	0.36	0.61	-45	72	53	35	25	11
Pb	0.35	0.61	-45	72	53	35	25	11
Zn	0.23	0.77	20	-52	22	20	22	6

TABLE 14-33 CORRELOGRAM MODELS IN THE BEAR VEIN
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Nugget C_0	Sill C_1.	Gemcom Rotations (RRR rule) around Z	around Y	around Z	Ranges a_1, a_2 X-Rot	Y-Rot	Z-Rot
Ag	0.38	0.61	-23	68	39	20	38	6
Pb	0.38	0.61	-23	68	39	20	38	6
Zn	0.18	0.78	-21	68	50	24	12	5

BLOCK MODEL AND GRADE ESTIMATION

BLOCK MODEL AND GRADE ESTIMATION FOR THE BELLEKENO MINE

A rotated block model was constructed to cover the entire extent of the mineralized veins. The block model includes separate sub models for silver, lead, zinc, and gold grade estimates, as well as bulk density, classification criteria, validation estimates, and a calculated block value. A block percentage model was used to accurately determine volume and tonnage values based on the supplied vein wireframes by Alexco. The geometrical parameters of the block model are summarized in Table 14-34.

TABLE 14-34 BLOCK MODEL LOCATION AND SETUP (ISATIS CONVENTION)
Alexco Resource Corp. – Keno Hill Silver District Project

Description	Easting (X)	Northing (Y)	Elevation (Z)
Block model origin (NAD 83 Zone 8N)	486,450	7,086,000	750
Block dimensions (metres)	2	2	2
Number of blocks	125	750	275
Rotation (degree)		32° (clockwise)	

Grades were interpolated into blocks using an inverse distance estimator (power of two) and search ellipses were set up to parallel the strike and dip of the veins. For silver, lead, zinc, and gold, a two-pass series of expanding search ellipsoids was used for sample selection and estimation.

Composite data used for the estimation was restricted to samples located in the respective veins. Individual block grades were used to calculate a NSR block model. Estimation criteria for each vein zone are summarized in Table 14-35. Blocks were classified as Indicated Mineral Resources if at least two drill holes and six composites were found within a 30 m by 30 m search ellipse. All other interpolated blocks were classified as Inferred Mineral Resource.

TABLE 14-35 SEARCH ELLIPSE PARAMETERS FOR THE BELLEKENO MINE
Alexco Resource Corp. – Keno Hill Silver District Project

Commodity	Search Pass	ISATIS Rotations Principal Azimuth	Principal Dip	Intermed Azimuth	Range X-Rot	Y-Rot	Z-Rot	Number of Composites Min.	Max.	Max. Samples per hole
SW Vein	1	-32	77	0	50	25	20	2	10	2
Ag, Pb, Zn	2	-32	77	0	100	50	20	2	10	2
99 Vein	1	-44	79	0	30	30	30	2	10	2
Ag, Pb, Zn,	2	-44	79	0	60	60	60	2	10	2
East Vein	1	-32	78	0	30	30	30	2	10	2
Ag, Pb, Zn	2				60	60	60			

BLOCK MODEL AND GRADE ESTIMATION FOR THE LUCKY QUEEN MINE

A rotated block model was constructed to cover the entire extent of the mineralized veins as defined by Alexco. The block model includes separate sub models for silver, lead, zinc, and gold grade estimates, as well as estimated bulk density, classification criteria, validation estimates, and a calculated block value. A block percentage model was used to accurately determine volume and tonnage values based on the supplied Alexco vein wireframes. The geometrical parameters of the block model are summarized in Table 14-36.

TABLE 14-36 BLOCK MODEL LOCATION AND SETUP FOR THE LUCKY QUEEN MINE
Alexco Resource Corp. – Keno Hill Silver District Project

Description	Easting (X)	Northing (Y)	Elevation (Z)
Block model origin (NAD 83 Zone 8N)	486,900	7,091,300	1,200
Block dimensions (metres)	10	10	10
Number of blocks	70	100	50
Rotation (degree)		-50° counter-clockwise	

An inverse distance estimator (power of two) was used for the estimation of block grades. A two-pass series of expanding search ellipsoids with varying minimum sample requirements was used for sample selection and estimation, with the primary and secondary axes of the search ellipsoid defined by the silver semi-variogram range. Composite data used during estimation were restricted to samples located in their respective domain. Individual block grades were then used to calculate a block model. For the second pass, estimation results were also iteratively queried to ensure that all potential mineral resources within the defined domains were estimated. Estimation criteria are summarized in Table 14-37.

During the first pass, four to 12 composites from two or more drill holes within a search ellipsoid corresponding to 50% of the semi-variogram range were required for the estimation. All blocks estimated during the first pass were classified as Indicated (Table 14-37).

During the second pass, the search ellipse was expanded to ensure that all blocks within the defined vein and splay models were estimated. Between four to 12 composites from one or more drill holes were used for estimation. All blocks estimated during the second pass were classified as Inferred. All splay resources were also classified as Inferred due to the small number of total samples for this domain.

TABLE 14-37 SEARCH ELLIPSE PARAMETERS FOR THE LUCKY QUEEN MINE
Alexco Resource Corp. – Keno Hill Silver District Project

Estimator	Search Pass	Search Type	Rotation		Search Ellipse Size			Number of Composites		Max. Samples per hole
			Z	Y	X (m)	Y (m)	Z (m)	Min.	Max.	
ID^2	1	Ellipse	0°	50°	50	50	10	4	12	3
ID^2	2	Ellipse	0°	50°	300	300	60	4	12	0

BLOCK MODEL AND GRADE ESTIMATION FOR THE FLAME & MOTH DEPOSIT

A rotated block model was constructed to cover the entire extent of the mineralized veins as defined by Alexco. The geometrical parameters of the block model are summarized in Table 14-38.

TABLE 14-38 BLOCK MODEL LOCATION AND SETUP FOR THE FLAME & MOTH DEPOSIT
Alexco Resource Corp. – Keno Hill Silver District Project

Description	Easting (X)	Northing (Y)	Elevation (Z)
Block Model Origin (Lower left corner)	483395.115	7086090.000	420.000
Block Dimension (m)	3	5	5
Number of Blocks	130	215	100
AZ Rotation		30° clockwise	

A total of seven metals were estimated, four of which are included as part of the current resource (Au, Ag, Pb, Zn). Estimates of grades from Cu, As, Cd, and Mn will be used for internal studies by Alexco. As discussed in other sections, the resource estimation methodology was based on the following:

The assays were composited to 1 m intervals. Two Ag and two Zn extremely high assays were capped before compositing.

Ten missing assays (no recoveries) were excluded from compositing.

The compositing was done within two sets of wireframes: original with some narrow mineralized intersections and modified with a minimum of 1.5 m mining width.

All short composites (< 0.5 m) were combined with previous composite data.

Ag, Zn, and Pb were estimated by kriging. Au, Cu, As, Cd, and Mn were estimated by ID^2.

A minimum of two and a maximum sixteen composite assays were used in the estimation process.

The composite assay grades from high-grade populations were used in the estimation process with limited influence.

SG was estimated by ID^2. All unestimated blocks were assigned an average SG within each mineralized zone.

The selection of the search radii and rotations of search ellipsoids were guided by variogram models. In addition, the search radii were established to estimate a large portion of the blocks within the modelled area with limited extrapolation. The parameters were established by conducting repeated test resource estimates and reviewing the results as a series of plan views and sections.

In the Lightning and Christal zones the Ag, Au, Pb, Zn, and Cu metal grade estimation involved two successive steps. The first step considered a relatively small search ellipsoid, which was doubled in size for the second step (Tables 14-39 and 14-40). Smaller search radii were used to restrict high grade assays (Table 14-19). In the V2 zone the estimates were done in one step. The first step in the estimation process ensured that the blocks were estimated from at least two drill holes.

TABLE 14-39 SEARCH ELLIPSE PARAMETERS FOR THE FLAME & MOTH DEPOSIT IN THE LIGHTNING ZONE
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Step	Gemcom Rotations (RRR rule)			Radii		
		around Z	around Y	around Z	X-Rot	Y-Rot	Z-Rot
Au	1	-30	60	17	60	60	20
	2	-30	60	17	120	120	40
Ag	1	-30	60	17	60	40	20
	2	-30	60	17	120	80	40
Pb	1	-30	60	17	60	60	20
	2	-30	60	17	120	120	40
Zn	1	-30	60	17	40	60	20
	2	-30	60	17	80	120	40

TABLE 14-40 SEARCH ELLIPSE PARAMETERS FOR THE FLAME & MOTH DEPOSIT IN THE LIGHTNING ZONE
Alexco Resource Corp. – Keno Hill Silver District Project

Metal	Step	Gemcom Rotations (RRR rule)			Radii		
		around Z	around Y	around Z	X-Rot	Y-Rot	Z-Rot
Au	1	-25	60	0	60	60	20
	2	-25	60	0	120	120	40
Ag	1	-25	60	0	40	40	20
	2	-25	60	0	80	80	40
Pb	1	-25	60	0	60	60	20
	2	-25	60	0	120	120	40
Zn	1	-25	60	0	40	40	20
	2	-25	60	0	80	80	40

BLOCK MODEL AND GRADE ESTIMATION FOR THE ONEK DEPOSIT

A rotated block model was constructed to cover the entire extent of the mineralized veins as defined by Alexco. The block model includes separate sub-models for silver, lead, zinc and gold grade estimates, as well as estimated specific gravity, classification criteria, validation estimates and a calculated block dollar value. A block percentage model was used to accurately determine volume and tonnage values based on the supplied Alexco vein wireframes and the percentage contained within the underground workings removed from the vein percentage to account for the mined out volume. The geometrical parameters of the block model are summarized in Table 14-41.

TABLE 14-41 ONEK BLOCK MODEL LOCATION AND SETUP
Alexco Resource Corp. – Keno Hill Silver District Project

Description	Easting (X)	Northing (Y)	Elevation (Z)
Block Model Origin NAD 83	485350	7087200	1120
Block Dimensions (metres)	3	5	5
Number of Blocks	80	150	80
Rotation (degree)		50° clockwise	

Ordinary Kriging (OK) of capped composite values was used for the estimation of block grades. Because of the strong correlation between density and contained metal, all grades were weighted against density and a grade times density model was prepared for silver, lead, zinc, and gold. Interpolation was carried out in two passes with expanding search ellipsoids with the primary and secondary axes of the search ellipsoid defined by the correlogram ranges. For Vein 1 and Vein 1F a third pass was used for sample selection and estimation of silver. Correlogram and search parameters derived for Vein 1 were applied to Vein 1 FW with varying minimum and maximum number of samples required for estimation.

Composite data used for estimation was restricted to samples located in the respective veins. Individual block grades were used to calculate a dollar equivalent value for each block. Estimation criteria for Vein 1, Vein 1F, and Vein 2 are summarized in Tables 14-42, 14-43, and 14-44 respectively. Blocks were classified as Indicated Mineral Resources if at least two drill holes and five composite were found within a 60 m by 30 m search ellipse. All other interpolated blocks were classified as Inferred Mineral Resource.

TABLE 14-42 SEARCH ELLIPSE PARAMETERS FOR ONEK VEIN 1
Alexco Resource Corp. – Keno Hill Silver District Project

Commodity	Estimator	Search Pass	Search Type	Rotation			Search Ellipse Size			Number of Composites		Max. Samples
				Z	Y	Z	X (m)	Y (m)	Z (m)	Min.	Max.	per DDH
Ag	OK	1	Ellipsoidal	5°	65°	90°	60	30	11	5	10	3
	OK	2	Ellipsoidal	5°	65°	90°	90	45	33	5	10	3
	OK	3	Ellipsoidal	5°	65°	90°	30	30	33	1	10	-
Pb	OK	1	Ellipsoidal	5°	65°	0°	60	40	8	4	10	3
	OK	2	Ellipsoidal	5°	65°	0°	90	60	32	4	10	3
Zn	OK	1	Ellipsoidal	5°	65°	0°	60	40	8	4	10	3
	OK	2	Ellipsoidal	5°	65°	0°	90	60	32	4	10	3
Au	OK	1	Ellipsoidal	5°	65°	0°	70	50	10	5	10	3
	OK	2	Ellipsoidal	5°	65°	0°	105	75	30	5	10	3

TABLE 14-43 SEARCH ELLIPSE PARAMETERS FOR ONEK VEIN 1F
Alexco Resource Corp. – Keno Hill Silver District Project

Commodity	Estimator	Search Pass	Search Type	Rotation			Search Ellipse Size			Number of Composites		Max. Samples
				Z	Y	Z	X (m)	Y (m)	Z (m)	Min.	Max.	per DDH
Ag	OK	1	Ellipsoidal	5°	65°	90°	60	30	11	3	10	2
	OK	2	Ellipsoidal	5°	65°	90°	90	45	33	3	10	2
	OK	3	Ellipsoidal	5°	65°	90°	30	30	33	1	10	-
Pb	OK	1	Ellipsoidal	5°	65°	0°	60	40	8	3	10	2
	OK	2	Ellipsoidal	5°	65°	0°	90	60	32	3	10	2
Zn	OK	1	Ellipsoidal	5°	65°	0°	60	40	8	3	10	2
	OK	2	Ellipsoidal	5°	65°	0°	90	60	32	3	10	2
Au	OK	1	Ellipsoidal	5°	65°	0°	70	50	10	3	10	2
	OK	2	Ellipsoidal	5°	65°	0°	105	75	30	3	10	2

TABLE 14-44 SEARCH ELLIPSE PARAMETERS FOR ONEK VEIN 2
Alexco Resource Corp. – Keno Hill Silver District Project

Commodity	Estimator	Search Pass	Search Type	Rotation			Search Ellipse Size			Number of Composites		Max. Samples per DDH
				Z	Y	Z	X (m)	Y (m)	Z (m)	Min.	Max.	
Ag	OK	1	Ellipsoidal	5°	65°	0°	25	25	10	4	10	3
	OK	2	Ellipsoidal	5°	65°	0°	75	75	30	4	10	3
Pb	OK	1	Ellipsoidal	5°	65°	0°	25	25	10	4	10	3
	OK	2	Ellipsoidal	5°	65°	0°	75	75	30	4	10	3
Zn	OK	1	Ellipsoidal	5°	65°	0°	80	80	7	4	10	3
	OK	2	Ellipsoidal	5°	65°	0°	120	120	21	4	10	3
Au	OK	1	Ellipsoidal	5°	65°	0°	30	30	10	4	10	3
	OK	2	Ellipsoidal	5°	65°	0°	75	75	30	4	10	3

BLOCK MODEL AND GRADE ESTIMATION FOR THE BERMINGHAM DEPOSIT

A block model was constructed to cover the entire extent of the mineralized veins as defined by Alexco. The block model includes separate sub-models for silver, lead, zinc, and gold grade estimates, as well as estimated specific gravity, classification criteria, validation estimates, and a calculated block dollar value. A block percentage model was used to accurately determine volume and tonnage values based on the supplied Alexco vein wireframes. The geometrical parameters of the block model are summarized in Table 14-45.

TABLE 14-45 BERMINGHAM BLOCK MODEL LOCATION AND SETUP TABLE
Alexco Resource Corp. – Keno Hill Silver District Project

Description	Easting (X)	Northing (Y)	Elevation (Z)
Block Model Origin NAD 83	478600	7086580	1400
Block Dimensions (m)	3	3	3
Number of Blocks	220	140	200

Grades were interpolated into blocks using ordinary kriging for the Bermingham, Footwall and Bear veins and breccias and ID^2 method for the West Dipper vein and breccia. Search ellipses were set up to parallel the strike and dip of the veins. For silver, lead, zinc, and gold, a four-pass series was used for sample selection and estimation. Passes two, three and four only filled blocks if they had been un-estimated by the previous passes.

Composite data used for the estimation was restricted to samples located in the respective vein or breccia units. Individual block grades were used to calculate a dollar value for each estimated block. Estimation criteria for both veins are summarized in Table 14-46. Blocks were classified as Indicated Mineral Resources if at least three drill holes and five composites were found within the pass one and two search ellipses. Because the classification sometimes results in inferred blocks being intermixed with mostly indicated blocks, a polygon was used to smooth the classification. All blocks that fell outside of the enclosing polygon were classified as Inferred Mineral Resource.

TABLE 14-46 SEARCH ELLIPSE PARAMETERS FOR BERMINGHAM VEINS AND VEIN MARGINS
Alexco Resource Corp. – Keno Hill Silver District Project

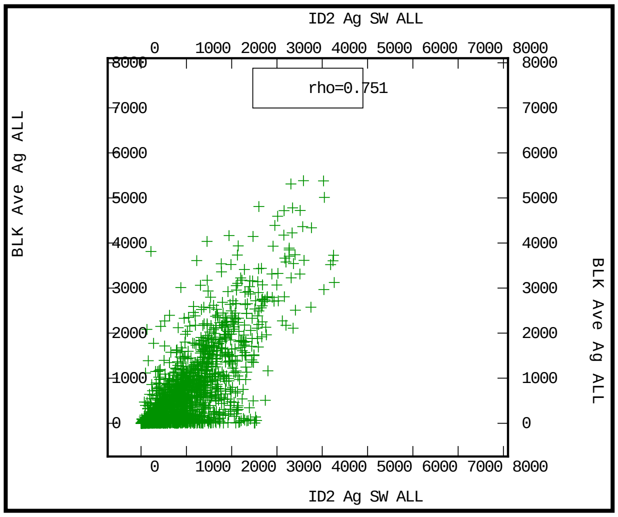
Vein	Commodity	Estimator	Search Pass	Rotation			Search Ellipse Size			Number of Composites		Max. Samples per DDH
				Z	Y	Z	X (m)	Y (m)	Z (m)	Min.	Max.	
Bermingham	Ag, Au, Pb, Zn,	OK	1	-38	65	32	49	46	3	5	15	2
		OK	2	-38	65	32	49	46	3	3	15	2
		OK	3	-38	65	32	75	75	30	2	15	2
		OK	4	-38	65	32	75	75	30	1	15	2
Footwall	Ag, Au, Pb, Zn	OK	1	-45	72	53	35	25	10	5	15	2
		OK	2	-45	72	53	35	25	10	3	15	2
		OK	3	-45	72	53	80	65	20	2	15	2
		OK	4	-45	72	53	80	65	20	1	15	2
Bear	Ag, Au, Pb, Zn,	OK	1	-23	68	56	23	38	6	5	15	2
		OK	2	-23	68	56	23	38	6	3	15	2
		OK	3	-23	68	56	40	80	12	2	15	2
		OK	4	-23	68	56	40	80	12	1	15	2
West Dipper	Ag, Au, Pb, Zn,	ID	1	-26	-57	0	18	25	6	5	15	2
		ID	2	-26	-57	0	18	25	6	3	15	2
		ID	3	-26	-57	0	36	50	12	2	15	2
		ID	4	-26	-57	0	36	50	12	1	15	2

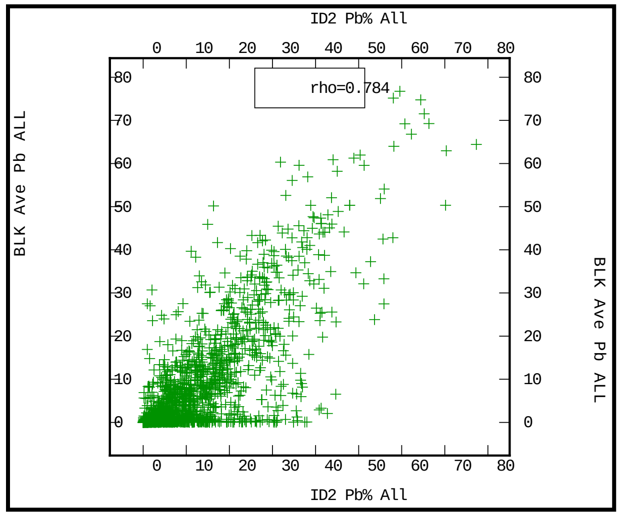
MODEL VALIDATION AND SENSITIVITY

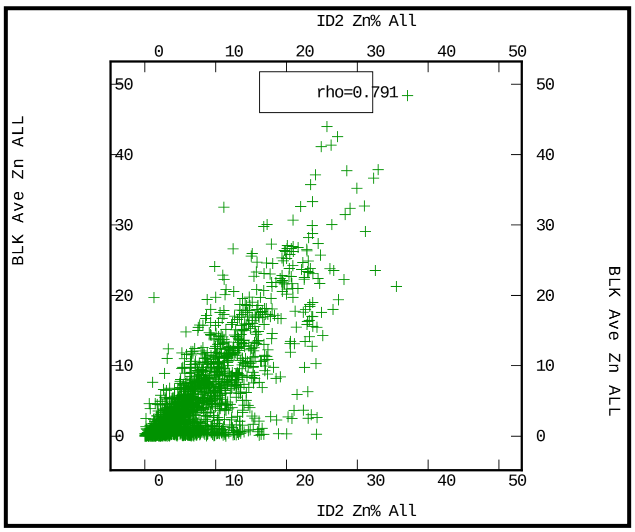
MODEL VALIDATION AND SENSITIVITY FOR THE BELLEKENO MINE

The block model was validated visually by the inspection of successive section lines in order to confirm that the block model correctly reflects the distribution of high-grade and low-grade samples. The average composite sample grades for all blocks containing composite samples (informed blocks) were compared to the ID^2 estimates using scatter plots. Both Inferred and Indicated blocks were plotted for both zones. The scatter plots for silver, lead, and zinc for blocks in the SW, 99, and East zones are displayed in Figures 14-42 to 14-44 and show an acceptable correlation between informed and estimated blocks.

FIGURE 14-42 COMPARISON OF ID² AND AVERAGE SAMPLE GRADES FOR SILVER, LEAD, AND ZINC, 48 VEIN, SOUTHWEST ZONE

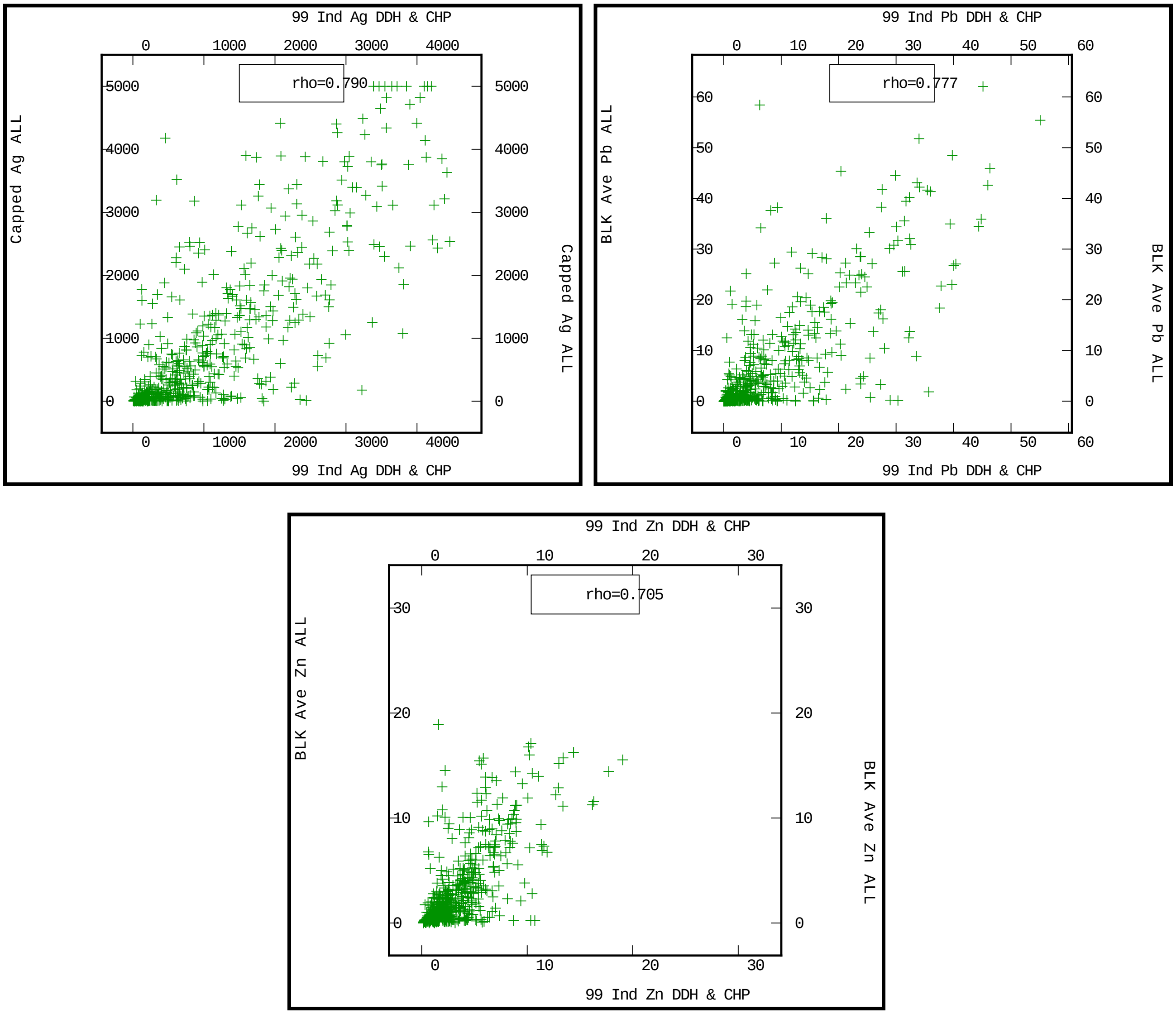






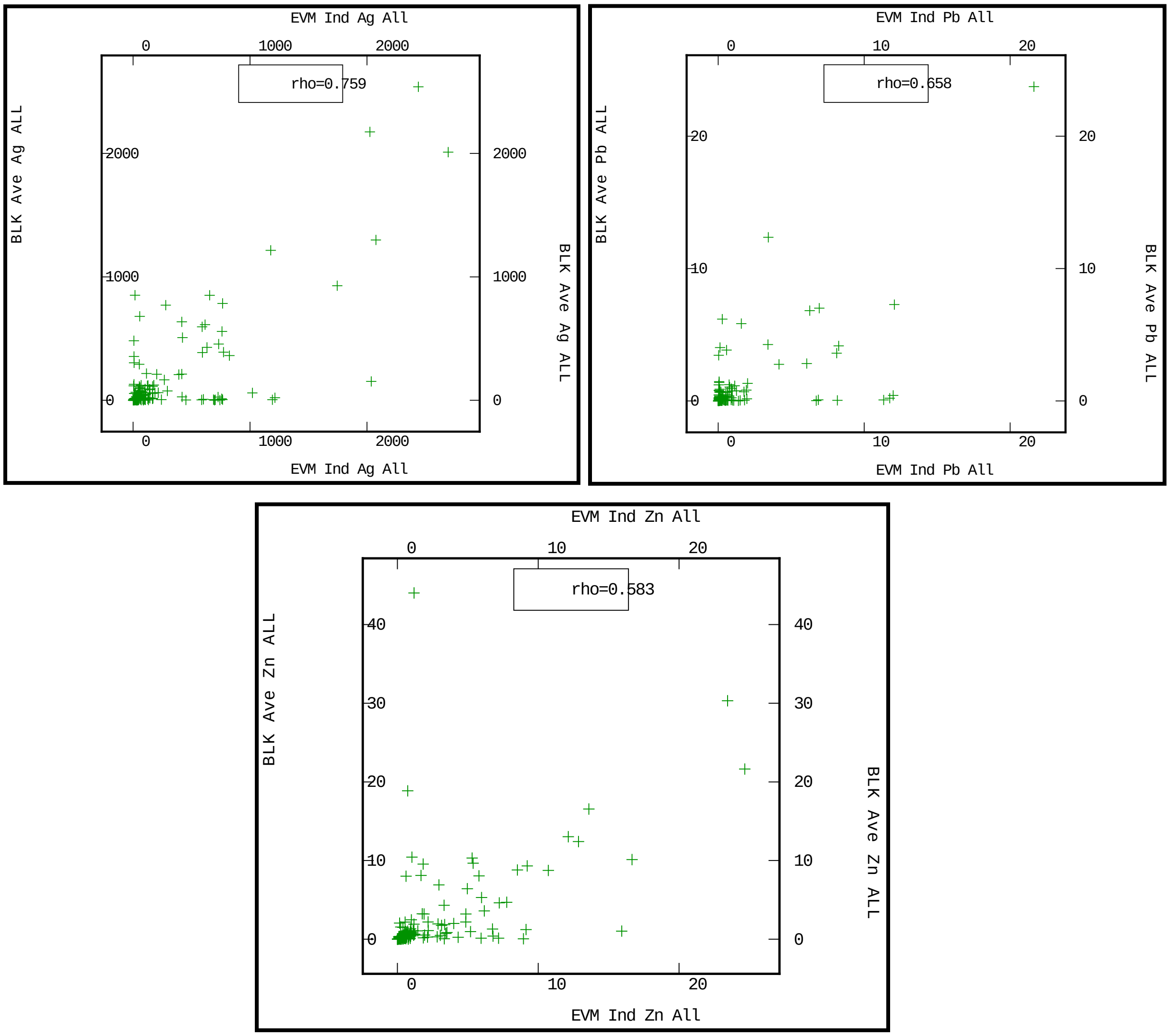
From: SRK 2013

FIGURE 14-43 COMPARISON OF ID^2 AND AVERAGE SAMPLE GRADES FOR SILVER, LEAD, AND ZINC, 48 VEIN, 99 ZONE



From: SRK 2013

FIGURE 14-44 COMPARISON OF ID^2 AND AVERAGE SAMPLE GRADES FOR SILVER, LEAD, AND ZINC, 48 VEIN, EAST ZONE



From: SRK 2013

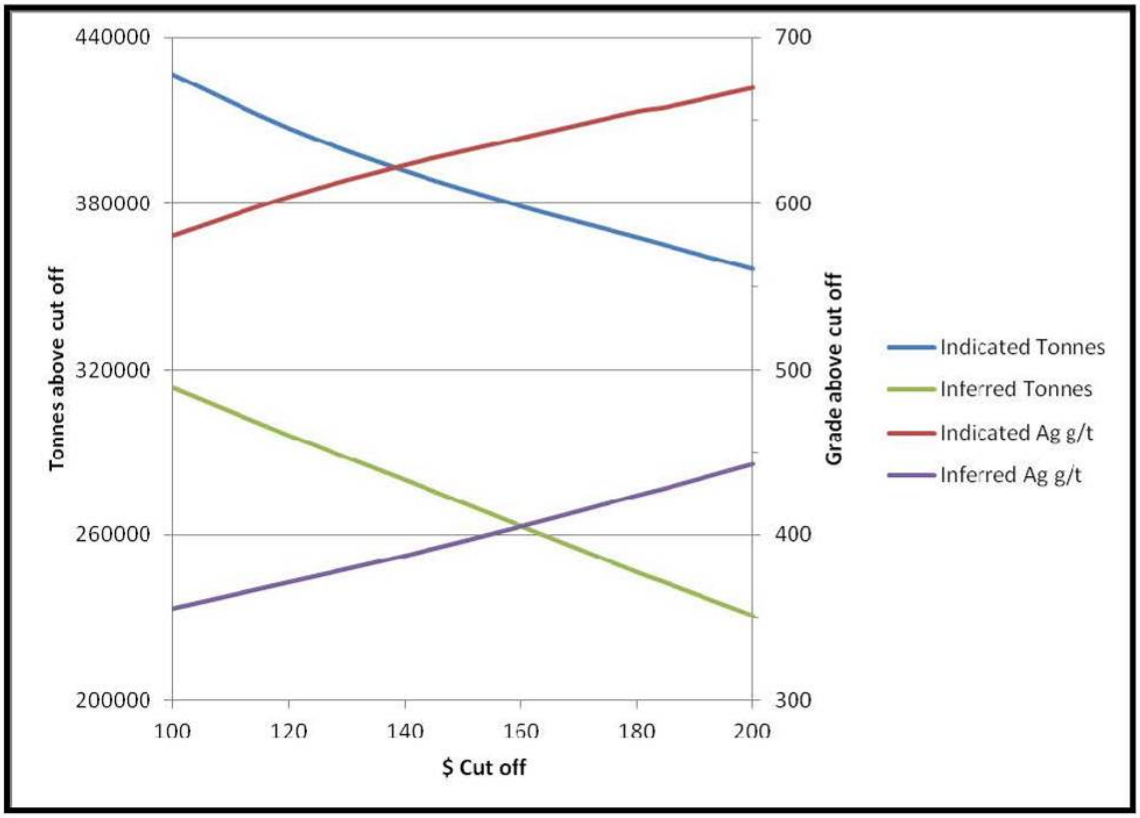
Table 14-47 tabulates global quantities and grade estimates at different cut-off grades for the Bellekeno deposit. Figure 14-45 presents the effects of increasing cut-offs on the tonnage and grade of the deposit. The reader is cautioned that these figures should not be misconstrued as a Mineral Resource. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of cut-off grades.

TABLE 14-47 BELLEKENO INFERRED AND INDICATED BLOCK MODEL QUANTITY AND GRADE ESTIMATES AT VARIOUS CUT-OFF VALUES
Alexco Resource Corp. – Keno Hill Silver District Project

Cut-Off (C$)	Indicated		Inferred	
	Tonnes	Ag (g/t)	Tonnes	Ag (g/t)
$200	356,473	670	230,903	442
$185	365,037	658	242,634	428
$180	367,934	656	246,445	423
$160	379,177	640	263,052	405
$140	391,963	623	279,851	387
$120	407,438	604	296,204	371
$100	426,986	581	313,408	355

Notes:
1. The reader is cautioned that the figures presented in this table should not be misconstrued as a Mineral Resource Statement. The reported quantities and grades are only presented to show the sensitivity of the resource model to the selection of a cut-off grade.
2. C$ values calculated at 1C$ = 1US$.

FIGURE 14-45 GRADE TONNAGE CURVE FOR BELLEKENO



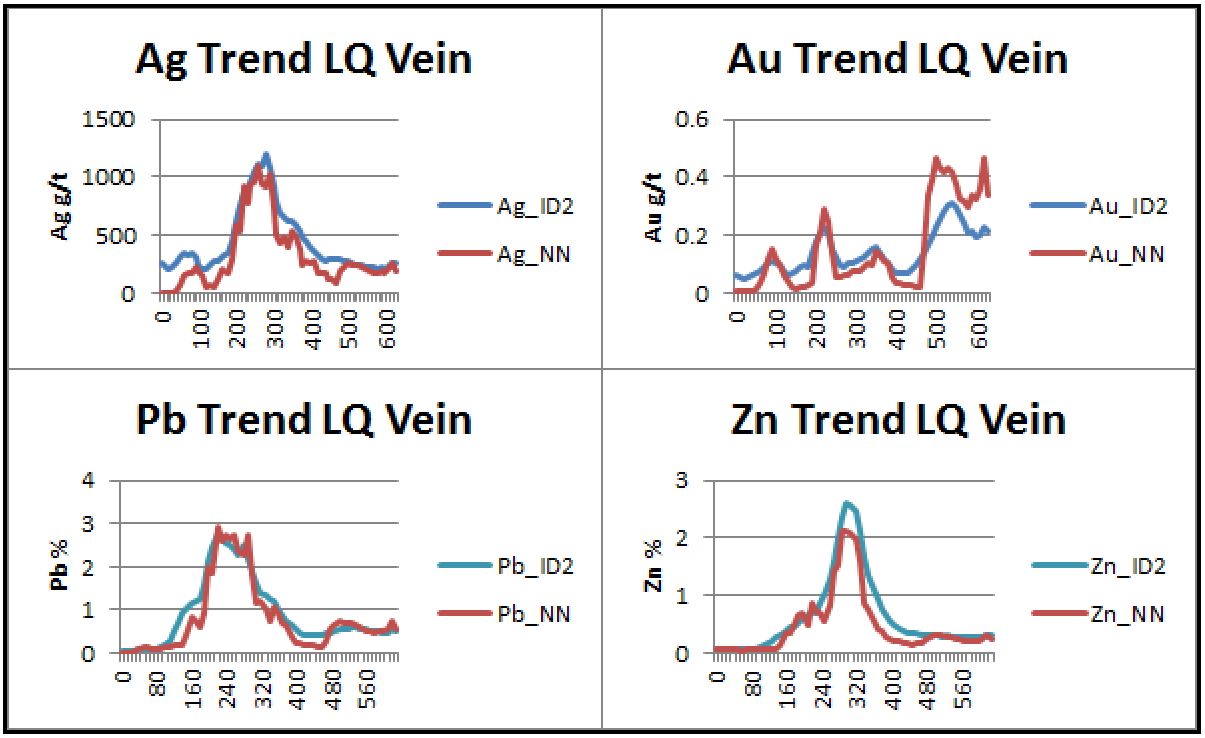
From: SRK 2013

MODEL VALIDATION AND SENSITIVITY FOR THE LUCKY QUEEN MINE

The block model was validated visually by the inspection of successive section lines in order to confirm that the block model correctly reflects the distribution of high-grade and low-grade samples.

Trend analysis for the Lucky Queen Mineral Resource estimate demonstrates a minimal global bias and slight smoothing of the inverse distance estimates as compared to a nearest neighbor (NN) estimates, and correctly reflects grade trends along the strike of the deposit (Figure 14-46). An additional validation check was completed by comparing the undiluted inverse distance estimates to undiluted nearest neighbour estimates generated using the same search criteria and tabulated at a zero cut-off (Table 14-48). The observed difference between two models average block estimates are a function of the sharp grade drop immediately adjacent to the high-grade core of the vein.

FIGURE 14-46 SWATH COMPARISON OF ID^2 AND NN ESTIMATION



From: SRK 2011

TABLE 14-48 NEAREST NEIGHBOUR BLOCK MODEL VALIDATION
Alexco Resource Corp. – Keno Hill Silver District Project

Variable	Inverse Distance Block Average	Nearest Neighbour Block Average
Ag (g/t)	545	452
Au (g/t)	0.14	0.15
Pb (%)	1.22	1.14
Zn (%)	0.82	0.70

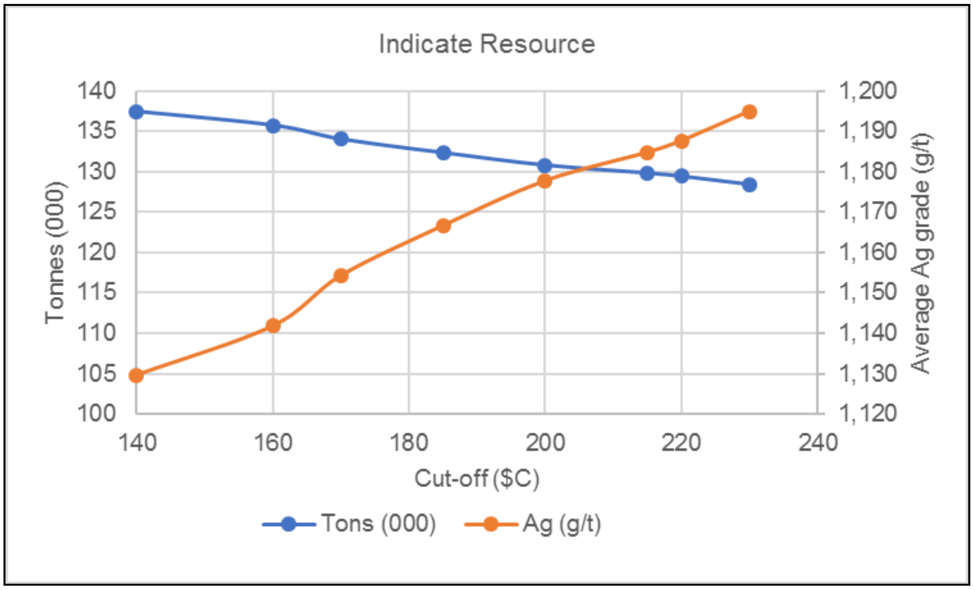
The Lucky Queen Mineral Resources are not sensitive to the selection of a cut-off grade. Table 14-49 shows the global quantities and grade estimates at different cut-off grades for the Lucky Queen vein and Figure 14-47 represents the effects of increasing cut-off grades on the tonnage and grade of the Lucky Queen deposit. The reader is cautioned that these figures should not be misconstrued as a Mineral Resource. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of cut-off grades.

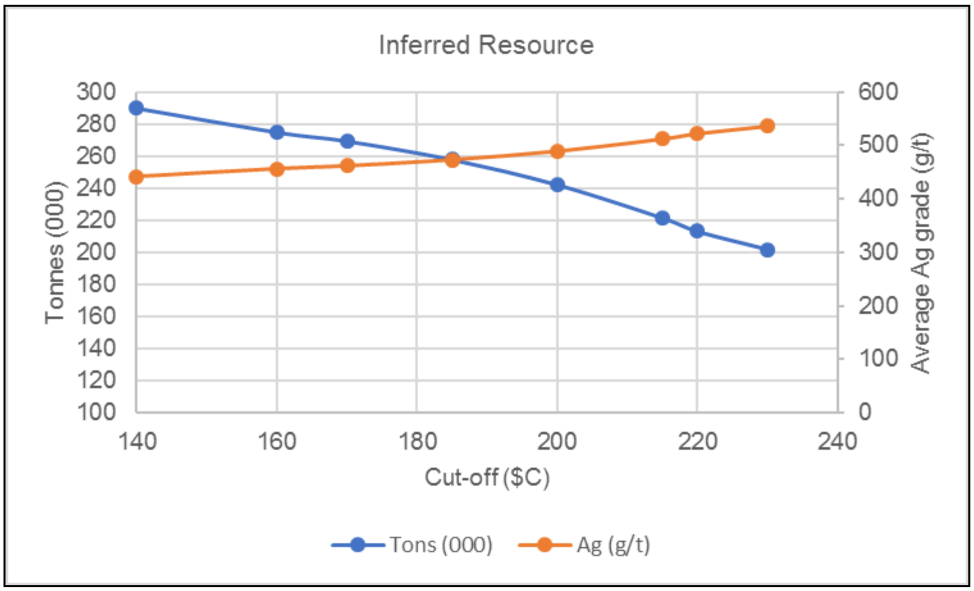
TABLE 14-49 LUCKY QUEEN MINE INDICATED AND INFERRED BLOCK MODEL QUANTITY AND GRADE ESTIMATES AT VARIOUS CUT-OFF VALUES
Alexco Resource Corp. – Keno Hill Silver District Project

Cut-Off (C$)	Indicated Tonnes	Ag (g/t)	Inferred Tonnes	Ag (g/t)
$230	128,400	1,195	201,900	537
$215	129,800	1,185	221,600	512
$200	130,800	1,178	242,200	489
$185	**132,300**	**1,167**	**257,900**	**473**
$170	134,000	1,154	269,400	462
$160	135,700	1,142	275,000	456
$140	137,000	1,130	290,000	441

Note. The reader is cautioned that the figures presented in this table should not be misconstrued as a Mineral Resource Statement. The reported quantities and grades are only presented to show the sensitivity of the resource model to the selection of a cut-off grade.

FIGURE 14-47 GRADE TONNAGE CURVE FOR LUCKY QUEEN





From: SRK, 2011

MODEL VALIDATION AND SENSITIVITY FOR THE FLAME & MOTH DEPOSIT

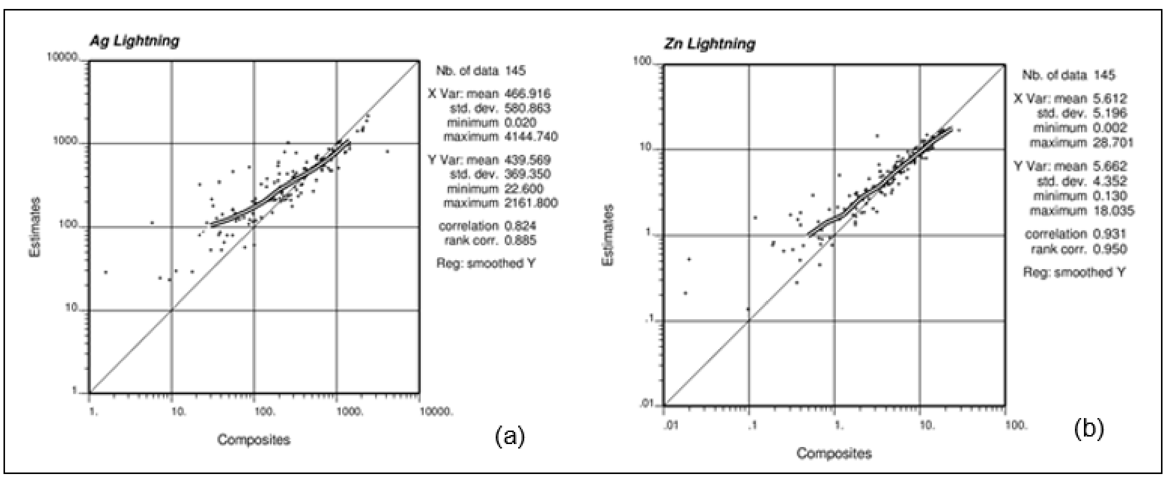
All estimated zones were validated by completing a series of visual inspections and by:

- Comparison of local "well-informed" block grades with composites contained within those blocks.

- Comparison of average assay grades with average block estimates along different directions – swath plots.

Figure 14-48 shows a comparison of estimated silver and zinc block grades with drill hole assay composite data contained within those blocks in the Lightning zone. On average, the estimated Zn blocks are slightly lower than the composite data, and the estimated Pb block grades are very similar to the composite data with very little scatter around the x = y line. This indicates that estimated block grades, at least those close to the data, are quite variable and not over smoothed. Similar results were noted in other estimation domains.

FIGURE 14-48 COMPARISON OF (A) SILVER AND (B) ZINC BLOCK ESTIMATES WITH BOREHOLE ASSAY DATA CONTAINED WITHIN BLOCKS IN THE LIGHTNING ZONE



As a final check, average composite grades and average block estimates were compared along different directions. This involved calculating de-clustered average composite grades and comparison with average block estimates along east-west, north-south, and horizontal swaths. Figure 14-49 shows the swath plots for silver in the Lightning zone. Note good similarity between the estimates and data at higher elevations and somewhat higher estimated block grades at lower elevations where fewer data are available. This area has been assigned to the Inferred category. Figure 14-50 shows the swath plots for zinc in the Lightning zone.

Note good similarity between the estimates and data. A similar relationship can be shown for all other estimation domains. Overall, the validation shows that current resource estimates are a good reflection of drill hole assay data.

FIGURE 14-49 LIGHTNING ZONE DECLUSTERED AVERAGE SILVER COMPOSITE GRADES COMPARED TO SILVER BLOCK ESTIMATES

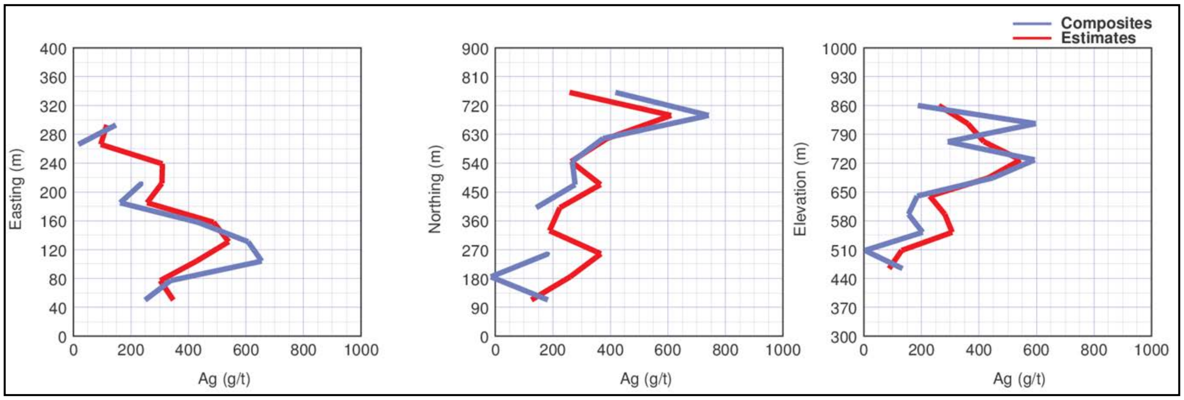


FIGURE 14-50 LIGHTNING ZONE DECLUSTERED AVERAGE ZINC COMPOSITE GRADES COMPARED TO ZINC BLOCK ESTIMATES

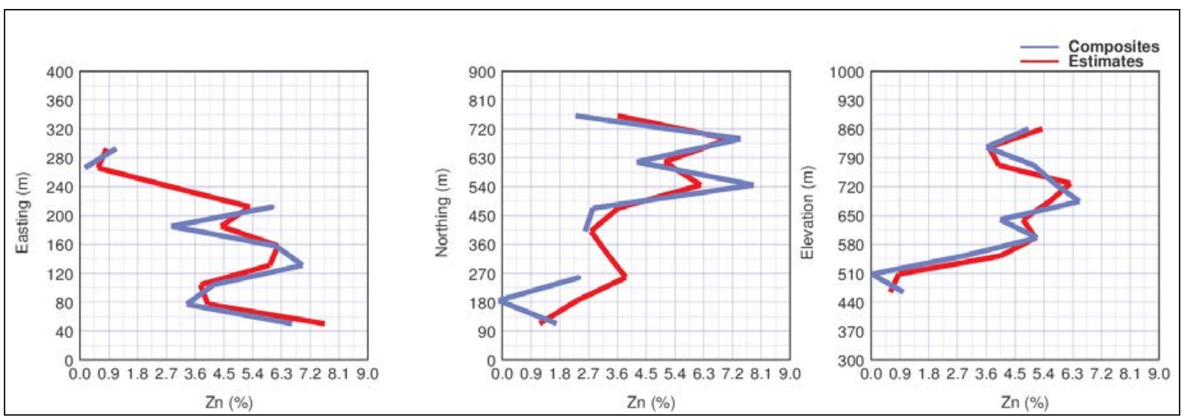


Table 14-50 tabulates Indicated and Inferred global quantities and grade estimates at different cut-off values for the Flame & Moth deposit.

TABLE 14-50 FLAME & MOTH INDICATED AND INFERRED BLOCK MODEL QUANTITY AND GRADE ESTIMATES AT VARIOUS CUT-OFF VALUES
Alexco Resource Corp. – Keno Hill Silver District Project

Cut-Off (C$)	Indicated Tonnes	Ag (g/t)	Inferred Tonnes	Ag (g/t)
$230	1,537,000	528	297,000	399
$215	1,582,000	518	317,000	385
$200	1,626,000	509	342,000	369
$185	**1,679,000**	**498**	**365,000**	**356**
$170	1,727,300	487	383,000	346
$160	1,759,200	481	396,000	339
$140	1,805,000	472	428,000	324

Note. The reader is cautioned that the figures presented in this table should not be misconstrued as a Mineral Resource Statement. The reported quantities and grades are only presented to show the sensitivity of the resource model to the selection of a cut-off grade.

Figure 14-51 represents the effects of increasing cut-off grades on the tonnage and grade of Indicated Mineral Resource for the Flame & Moth deposit and Figure 14-52 shows the same for the Inferred Mineral Resource.

FIGURE 14-51 GRADE TONNAGE CURVE FOR INDICATED MINERAL RESOURCES AT FLAME & MOTH

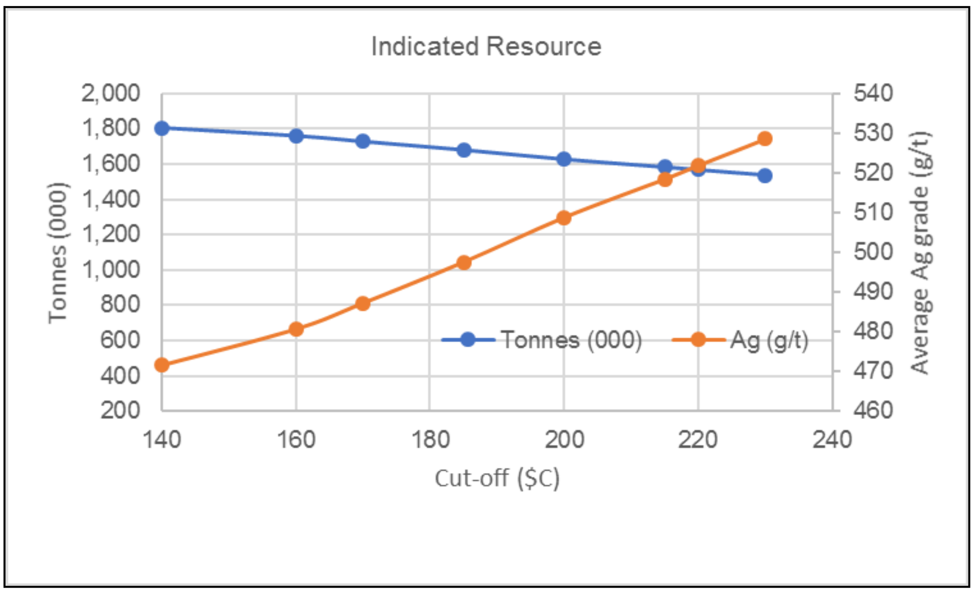
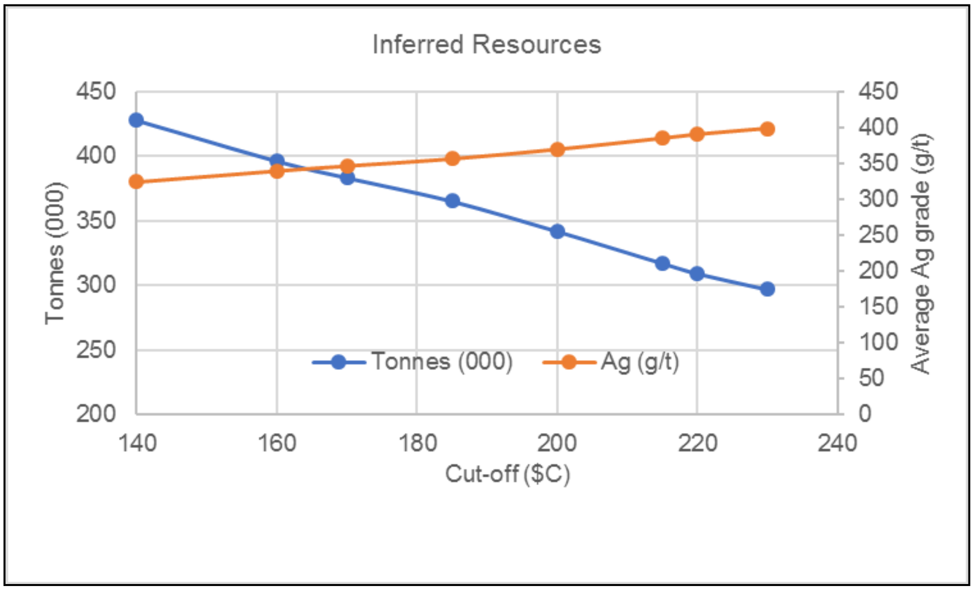


FIGURE 14-52 GRADE TONNAGE CURVE FOR INFERRED MINERAL RESOURCES AT FLAME & MOTH



MODEL VALIDATION AND SENSITIVITY FOR THE ONEK DEPOSIT

The block model was validated visually by the inspection of successive section lines in order to confirm that the block model correctly reflects the distribution of high-grade and low-grade samples. An ID^2 estimate was prepared for the blocks using the same search criteria and compared against the OK estimate. Analysis of OK versus ID^2 estimates at various cut-off values for the Onek deposit demonstrate a slight smoothing of the OK estimate compared to the ID^2 estimate for the indicated resource (Figure 14-53). For the inferred resource, OK estimate for silver show less smoothing than the ID^2 estimate. Average grades of the OK and ID^2 estimates for silver, lead, zinc, and gold at a $185 NSR cut-off are compared in Table 14-51.

FIGURE 14-53 COMPARISON OF OK AND ID^2 ESTIMATION FOR ONEK

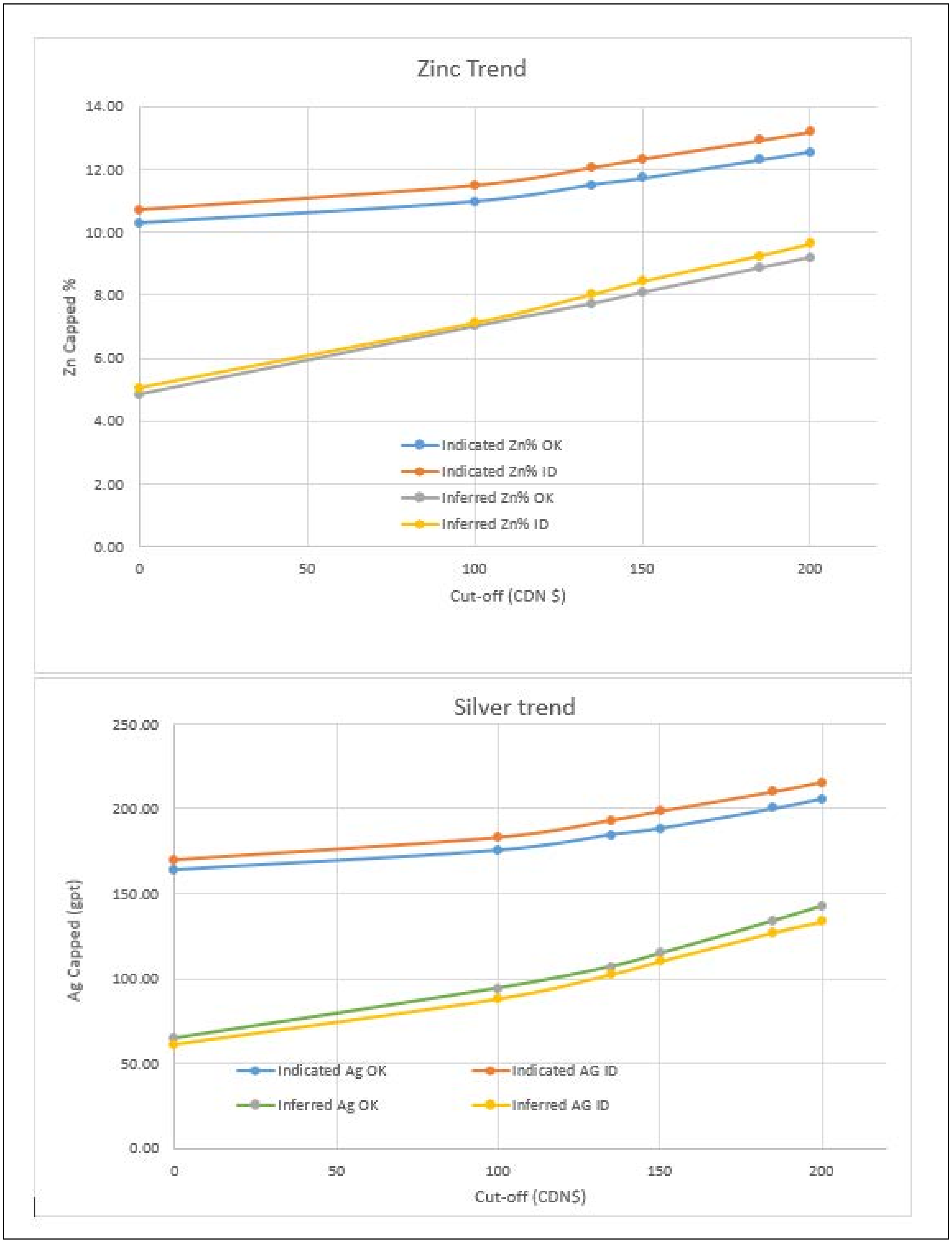


TABLE 14-51 OK AND ID2 ESTIMATE AT $185 DOLLAR VALUE CUT-OFF
Alexco Resource Corp. – Keno Hill Silver District Project

	Indicated		Inferred	
	OK	ID^2	OK	ID^2
Ag (g/t)	200	198	134	126
Pb (%)	1.29	1.31	1.24	1.26
Zn (%)	12.30	12.93	8.86	9.26
Au (g/t)	0.62	0.62	0.44	0.44

Table 14-52 tabulates global Indicated and Inferred quantities and grade estimates at different cut-off grades for the Onek deposit. Figure 14-54 represents the effects of increasing cut-offs on the tonnage and silver grade of the deposit and Figure 14-55 demonstrates the same for the zinc grade. The reader is cautioned that these figures should not be misconstrued as a Mineral Resource. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of the cut-off grades.

TABLE 14-52 ONEK GLOBAL BLOCK MODEL QUANTITY AND GRADE ESTIMATES AT VARIOUS DOLLAR CUT-OFF VALUES
Alexco Resource Corp. – Keno Hill Silver District Project

Class	Cut-off C$	Tons (000)	Ag Cap (g/t)	Au cap (g/t)	Pb cap (%)	Zn Cap (%)
Indicated	$230	634,500	204	0.62	1.32	12.50
	$215	657,300	199	0.62	1.29	12.28
	$200	680,100	195	0.61	1.26	12.05
	$185	**700,200**	**191**	**0.60**	**1.24**	**11.85**
	$170	719,400	187	0.60	1.21	11.66
	$160	730,000	185	0.60	1.20	11.55
	$140	751,300	181	0.59	1.8	11.32
Inferred	$230	217,900	139	0.45	1.26	9.11
	$215	236,600	133	0.44	1.23	8.84
	$200	260,400	125	0.43	1.19	8.56
	$185	**285,100**	**118**	**0.42**	**1.15**	**8.26**
	$170	312,400	112	0.41	1.11	7.96
	$160	331,000	107	0.40	1.08	7.76
	$140	365,000	101	0.40	1.03	7.41

Notes:
1. The reader is cautioned that the figures presented in this table should not be misconstrued as a mineral statement. The reported quantities and grades are only presented to show the sensitivity of the resource model at various cut-offs.
2. C$=0.80US$.

FIGURE 14-54 SILVER GRADE TONNAGE CURVE FOR ONEK

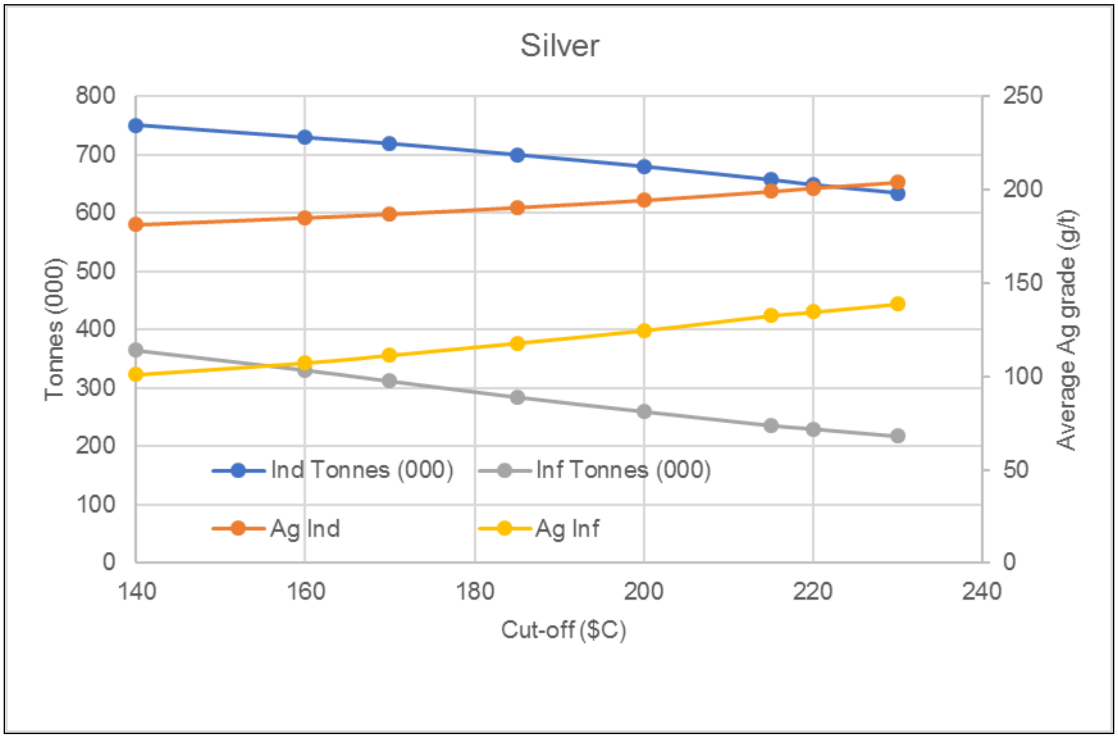
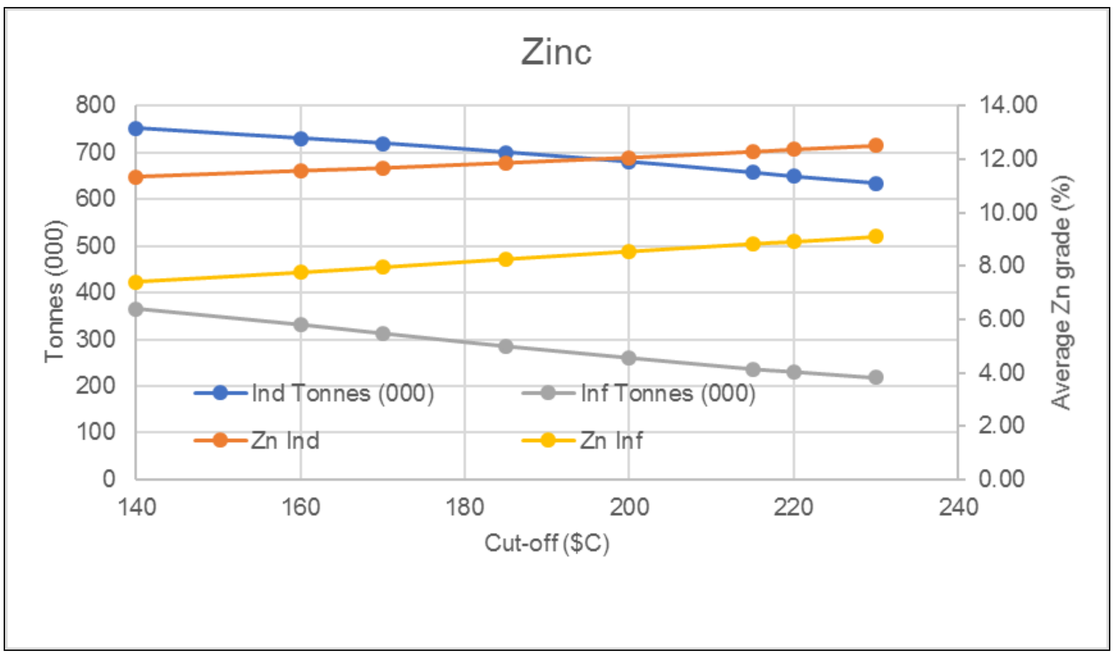


FIGURE 14-55 ZINC GRADE TONNAGE CURVE FOR ONEK



MODEL VALIDATION AND SENSITIVITY FOR THE BERMINGHAM DEPOSIT

The block model was validated visually by the inspection of successive section lines in order to confirm that the block model correctly reflects the distribution of high-grade and low-grade samples. The average composite sample grades for all blocks containing composite samples (informed blocks) were compared to the OK estimates using quantile-quantile (QQ) plots. Both inferred and indicated blocks were plotted for all zones due to the small number of informed blocks. The QQ plots for silver, lead, and zinc for all mineralized blocks are displayed in Figures 14-56 to 14-58 and show fair correlation between informed and estimated blocks with higher grades blocks having slightly lower grades than the composited data. This apparent under estimation of higher grades is a result of using multiple data from multiple drill holes to estimate a block grades, a typical smoothing effect. This process limits the influence of isolated high grade drill holes in the model.

FIGURE 14-56 COMPARISON OF COMPOSITED SILVER GRADES AND ESTIMATED BLOCK GRADES FOR WELL-INFORMED BLOCKS

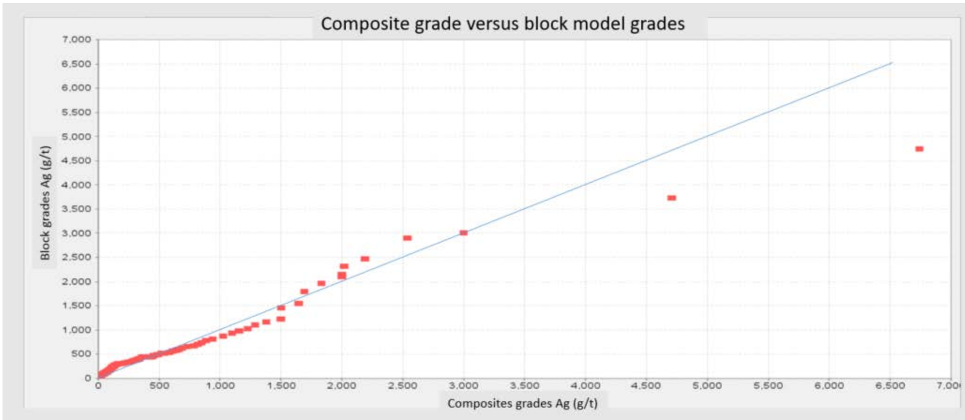


FIGURE 14-57 COMPARISON OF COMPOSITED ZINC GRADES AND ESTIMATED BLOCK GRADES FOR WELL-INFORMED BLOCKS

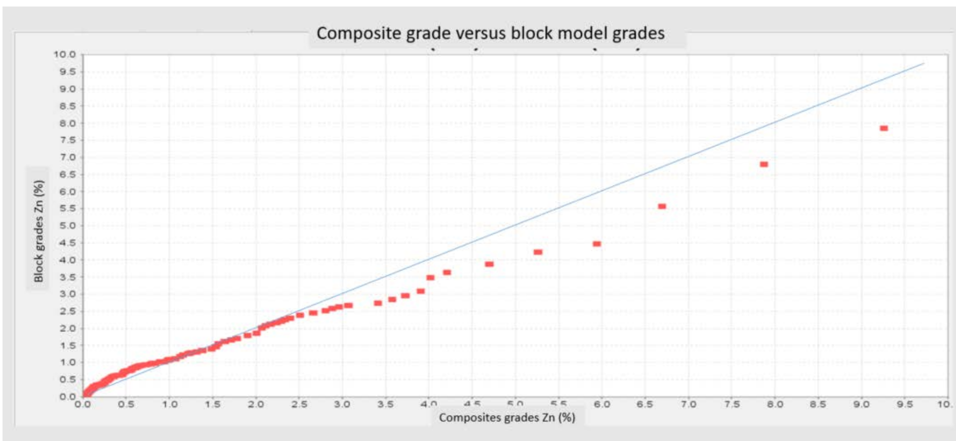


FIGURE 14-58 COMPARISON OF COMPOSITED LEAD GRADES AND ESTIMATED BLOCK GRADES FOR WELL-INFORMED BLOCKS

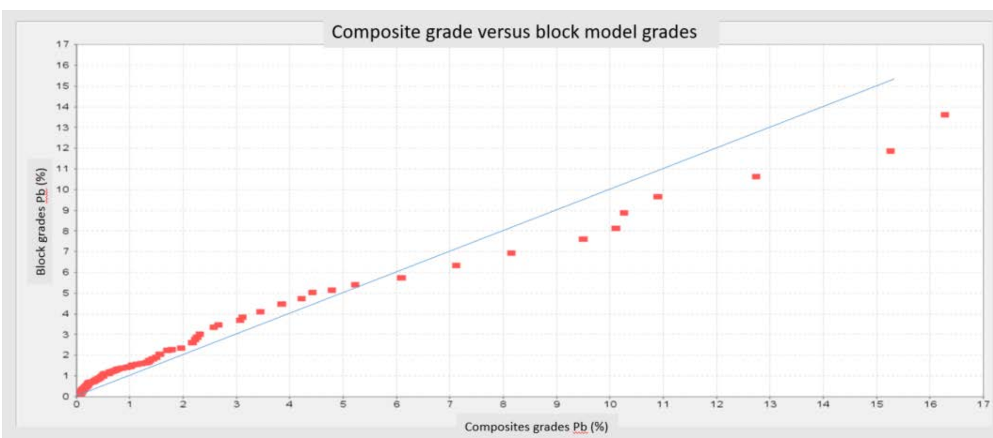


Table 14-53 tabulates global quantities and silver grade estimates at different cut-off grades for the Bermingham deposit. The reader is cautioned that these figures should not be misconstrued as a Mineral Resource. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of the cut-off grades. Figure 14-59 represents the effects of increasing cut-off grades on the tonnage and grade of Indicated Mineral Resource for the Bermingham deposit and Figure 14-60 shows the same for the Inferred Mineral Resource

TABLE 14-53 BERMINGHAM INDICATED AND INFERRED BLOCK MODEL QUANTITY AND GRADE ESTIMATES AT VARIOUS NSR CUT-OFF VALUES
Alexco Resource Corp. – Keno Hill Silver District Project

Cut-Off (C$)	Indicated Tonnes	Ag (g/t)	Inferred Tonnes	Ag (g/t)
$230	757,200	683	193,100	847
$215	791,700	663	204,900	812
$200	828,600	643	212,500	790
$185	**858,200**	**628**	**220,300**	**770**
$170	886,800	613	227,500	751
$160	905,600	604	232,600	738
$140	943,500	585	244,100	711

Notes:
1. The reader is cautioned that the figures presented in this table should not be misconstrued as a Mineral Resource Statement. The reported quantities and grades are only presented to show the sensitivity of the resource model to the selection of a cut-off grade.
2. C$ values calculated at 1C$ = 0.80US$

FIGURE 14-59 GRADE TONNAGE CURVE FOR INDICATED MINERAL RESOURCES AT BERMINGHAM

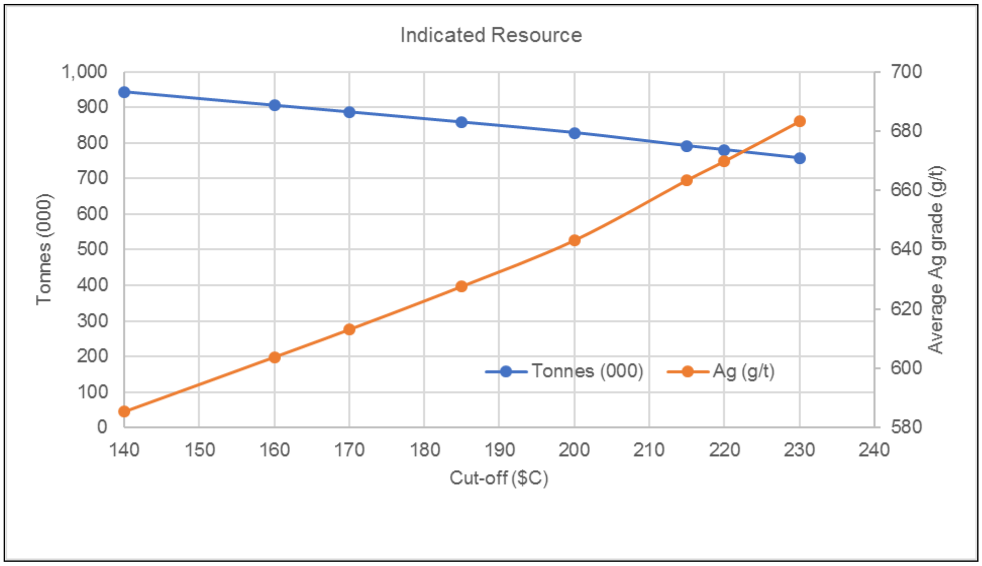
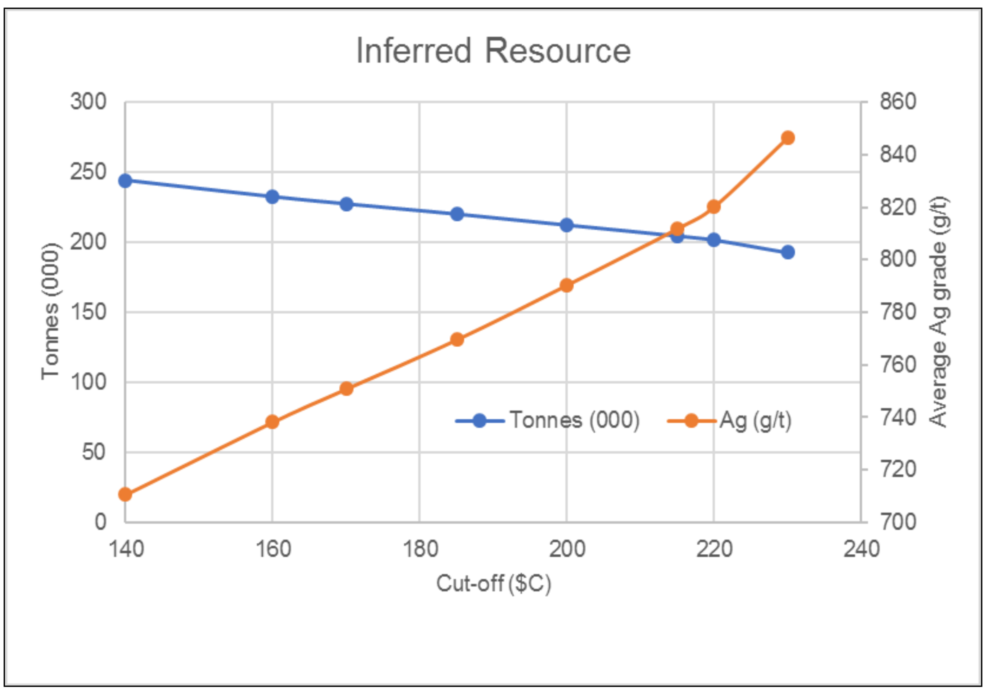


FIGURE 14-60 GRADE TONNAGE CURVE FOR INFERRED MINERAL RESOURCES AT BERMINGHAM



MINERAL RESOURCE CLASSIFICATION

Mineral Resource classification is typically a subjective concept. Industry best practices suggest that resource classification should consider both the confidence in the geological continuity of the mineralized structures, the quality and quantity of exploration data supporting the estimates, and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating these concepts to delineate regular areas at similar resource classification.

SRK is satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation.

Generally, for mineralization exhibiting good geological continuity investigated at an adequate spacing with reliable sampling information accurately located, SRK considers that blocks estimated during the first estimation run considering full variogram ranges can be classified in the Indicated category within the meaning of the CIM definitions. For those blocks, SRK considers that the level of confidence is sufficient to allow appropriate application of technical and economic parameters to support mine planning and to allow evaluation of the economic viability of the deposit.

Conversely, blocks estimated during the second pass considering search neighbourhoods set at twice the variogram ranges should be appropriately classified in the Inferred category because the confidence in the estimate is insufficient to allow for the meaningful application of technical and economic parameters or to enable an evaluation of economic viability.

All Mineral Resource estimates presented in this PEA technical report have been classified within the meaning of the CIM definitions by independent QPs as defined by NI 43-101.

The Mineral Resources were estimated in conformity with the generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines* (CIM, 2003). Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. Mineral resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors.

MINERAL RESOURCE CLASSIFICATION FOR THE BELLEKENO MINE

Block model quantity estimates, grade estimates, and resource classification for the Bellekeno deposit were prepared by David Farrow, PGeo, of GeoStrat, an independent QP.

GeoStrat considers that the quality of the exploration and production data (confidence in the location and reliability of the assaying results) acquired by Alexco is good and is not a factor that would impact resource classification. The confidence in the underlying data sets supports classification of Indicated and Inferred Mineral Resources. There is insufficient information to confirm both the geological and grade continuity with the current level of sampling to support a Measured Mineral Resource classification.

All blocks estimated in the first estimation run using drill sampling data were classified as Indicated Mineral Resources and all blocks estimated using the subsequent runs were classified as Inferred. Dr. Gilles Arseneau, PGeo, of SRK reviewed the process.

MINERAL RESOURCE CLASSIFICATION FOR THE LUCKY QUEEN MINE

Block model quantity estimates, grade estimates, and resource classification for the Lucky Queen deposit were prepared by F. H. Brown, CPG, PrSciNat, under the supervision of Dr. Gilles Arseneau, PGeo; both independent QPs.

SRK considers that the quality of the exploration data (confidence in the location and reliability of assaying results) acquired by Alexco is good and, therefore, is not a factor that would impact resource classification. The confidence in the underlying data sets supports classification of Indicated and Inferred Mineral Resources. There is insufficient information to confirm both the geological and grade continuity with the current level of sampling to support a Measured Mineral Resource classification.

All blocks estimated in the first estimation run were classified as Indicated Mineral Resources and all blocks estimated using the second estimation run were classified as Inferred Mineral Resources.

MINERAL RESOURCE CLASSIFICATION FOR THE FLAME & MOTH DEPOSIT

Block model quantity estimates, grade estimates, and resource classification for the Flame & Moth deposit were prepared by Marek Nowak, P.Eng, of SRK who is an independent QP.

The confidence in the underlying datasets supports classification of Indicated and Inferred Mineral Resources within the meaning of the CIM definitions. There is insufficient information to confirm both the geological and grade continuity with the current level of sampling to support a Measured Mineral Resource classification within the meaning of the CIM Definition Standards.

Block classification was applied to the resource model based on a combination of average distances to composites from a local estimate, the number of drill holes contributing to the local estimate, and minimum number of samples used. Blocks were assigned to an Indicated category if they were estimated in step 1 of the estimation process from at least two drill holes, from the data with average distance to the estimated blocks less than 40 m and at least six samples. All other estimated block grades were assigned to an Inferred category.

MINERAL RESOURCE CLASSIFICATION FOR THE ONEK DEPOSIT

Block model quantity estimates, grade estimates, and resource classification for the Onek project were prepared by Dr. Gilles Arseneau P.Geo., who is an Independent QP.

SRK considers that the quality of the exploration data (confidence in the location and reliability of assaying results) acquired by Alexco is good and therefore is not a factor that would impact resource classification. The confidence in the underlying datasets supports classification of Indicated and Inferred Mineral Resources within the meaning of the CIM definitions. There is insufficient information to confirm both the geological and grade continuity with the current level of sampling to support a Measured Mineral Resource classification within the meaning of the CIM definitions.

Blocks were classified as Indicated Mineral Resources if at least two drill holes and five composite were found within a 60 m by 30 m search ellipse. All other interpolated blocks were classified as Inferred Mineral Resource.

MINERAL RESOURCE CLASSIFICATION FOR THE BERMINGHAM DEPOSIT

Block model quantity estimates, grade estimates, and resource classification for the Bermingham deposit were prepared by Dr. Gilles Arseneau P.Geo., an Independent QP.

Mineral Resource classification is typically a subjective concept, industry best practices suggest that resource classification should consider both the confidence in the geological continuity of the mineralized structures, the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating both concepts to delineate regular areas at similar resource classification.

SRK is satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The confidence in the underlying datasets supports the classification of Indicated and Inferred Mineral Resources within the meaning of the CIM definitions. There is insufficient information to confirm both the geological and grade continuity with the current level of sampling to support a Measured Mineral Resource classification within the meaning of the CIM definitions.

Blocks were classified as Indicated Mineral Resources if at least three drill holes and five composite were found within the first two passes. All other interpolated blocks were classified as Inferred Mineral Resource.

MINERAL RESOURCE STATEMENTS

CIM (2014) defines a Mineral Resource as:

"A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling."

The "reasonable prospects for eventual economic extraction" requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries.

The Mineral Resource for the Bellekeno was estimated in 2012 and subsequently updated to reflect depletion from mining to September 30, 2013, when the mine production ceased. No drilling or other work has been carried out on the deposit since the time of the updated Mineral Resource estimate and that estimate remains unchanged as of January 3, 2017. The block model quantities and grade estimates were assessed to identify the portions of the Bellekeno deposit having "reasonable prospects for eventual economic extraction" considering underground mining based on parameters summarized in Table 14-54.

The Mineral Resources for the Lucky Queen, Flame & Moth, and Onek deposits were estimated in 2011, 2015, and 2011 respectively. The Lucky Queen, Flame & Moth, and Onek models were reviewed and updated by SRK in 2017. In SRK's opinion, the Mineral Resources for the three deposits satisfy the CIM definitions for Mineral Resources and Mineral Reserves. There has been no additional drilling or exploration work completed on the Lucky Queen, Flame & Moth, and Onek deposits since the previous Mineral Resource estimates. For this Study, the Mineral Resources for the three deposits were estimated and reported at a C$185 NSR cut-off value using updated metal prices and are considered current to January 3, 2017. The block model quantities and grade estimates were assessed to identify the portions of the Lucky Queen, Flame & Moth, and Onek deposits having "reasonable prospects for eventual economic extraction" considering underground mining based on parameters summarized in Table 14-55.

The Bermingham model was re-estimated in 2017 to include new drilling in 2016. In SRK's opinion, the Mineral Resources for this deposit satisfy the CIM definitions for Mineral Resources and Mineral Reserves. The Mineral Resources for the Bermingham deposit were estimated and reported at a C$185 NSR cut-off value using updated metal prices and are considered current to January 3, 2017. The block model quantities and grade estimates were assessed to identify the portions of the Bermingham deposit having "reasonable prospects for eventual economic extraction" considering underground mining based on parameters summarized in Table 14-55.

TABLE 14-54 ASSUMPTIONS CONSIDERED FOR PREPARING THE BELLEKENO MINERAL RESOURCE STATEMENT (ALEXCO, 2012)
Alexco Resource Corp. – Keno Hill Silver District Project

Parameter	Value	Unit
Silver price	22.50	US$ per ounce
Lead price	0.85	US$ per pound
Zinc price	0.95	US$ per pound
Exchange rate	0.96	US$/C$
NSR cut-off value	185	C$ per tonne mined
Process recovery silver	96	%
Process recovery gold	72	%
Process recovery lead	97	%
Process recovery zinc	88	%

TABLE 14-55 ASSUMPTIONS CONSIDERED FOR PREPARING THE LUCKY QUEEN, FLAME & MOTH, ONEK AND BERMINGHAM MINERAL RESOURCE STATEMENT (SRK 2017)
Alexco Resource Corp. – Keno Hill Silver District Project

Parameter	Value	Unit
Silver price	20.00	US$ per ounce
Gold price	1,300	US$ per ounce
Lead price	0.95	US$ per pound
Zinc price	1.00	US$ per pound
Exchange rate	0.80	US$/C$
NSR cut-off value	185	C$ per tonne mined
Process recovery silver	96	%
Process recovery gold	72	%
Process recovery lead	97	%
Process recovery zinc	88	%

MINERAL RESOURCE STATEMENT FOR THE BELLEKENO MINE

The Bellekeno mine was in operation to the end of August 2013 and as such has demonstrated its amenability to underground extraction. From June 1, 2012, the date of the previous Mineral Resource estimate, to the temporary mine shutdown in September 2013, Alexco reports actual tonnes processed from the Bellekeno mine of 124,000 tonnes at average grades of 701 g/t Ag, 8.3% Pb, and 4.3% Zn.

Commodity prices were provided to GeoStrat by Alexco as representative of its long-term strategic forecast. Metallurgical recoveries were from a previous PEA for the Bellekeno project at the Keno Hill Silver District (Wardrop, 2009), refer to Table 14-54. These metal prices and metallurgical recoveries were used to estimate values (C$/t) for blocks in the resource block model. No drilling or other work has been carried on the Bellekeno deposit since the previous Mineral Resource estimate and the estimate remains unchanged as of January 3, 2017. Mineral Resources for the Bellekeno deposit, updated for depletion from mining to September 30, 2013, are tabulated in Table 14-56 and have been reported relative to a cut-off value of C$185.00/t.

TABLE 14-56 MINERAL RESOURCE STATEMENT, BELLEKENO DEPOSIT, GEOSTRAT CONSULTING SERVICES INC. JANUARY 3, 2017
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Class	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au (g/t)
Total	Indicated	262,000	585	3.50	5.30	n/a
	Inferred	243,000	428	4.10	5.10	n/a

Notes:
1. The Mineral Resource estimate is at September 30, 2013 and reflects the September 30, 2012 estimate less estimated depletion from mining to September 30, 2013.
2. CIM definitions followed for Mineral Resources.
3. Reported at a cut-off value of C$185.00/t considering metal prices of US$22.50/oz for Ag, US$ 0.85/lb for Pb, and US$ 0.95/lb for Zn; and recovery of 96% for Ag, 97% for Pb, and 88% for Zn.
4. All numbers have been rounded to reflect the relative accuracy of the estimates.
5. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
6. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

MINERAL RESOURCE STATEMENT FOR THE LUCKY QUEEN MINE

SRK considers that the mineralization evaluated in the Lucky Queen deposit is amenable to underground extraction. Approximately 20% of the Lucky Queen vein as modelled by Alexco has a horizontal width of less than 1.20 m. In order to determine the quantities of material offering reasonable prospects for economic extraction from an underground mining operation, grades for blocks with a horizontal width of less than 1.20 m were adjusted (diluted) to a minimum thickness of 1.20 m assuming zero grade internal dilution.

Commodity prices were provided to SRK by Alexco as representative of its long-term strategic forecast. Metallurgical recoveries were from a previous PEA for the Bellekeno project at the Keno Hill Silver District (Wardrop, 2009), refer to Table 14-55 above.

These metal prices and metallurgical recoveries were used to estimate values (C$/t) for blocks in the resource block model.

Mineral Resources for the Lucky Queen deposit are shown in Table 14-57 and have been reported relative to a cut-off value of C$185.00/t.

TABLE 14-57 MINERAL RESOURCE STATEMENT, LUCKY QUEEN DEPOSIT, SRK CONSULTING (CANADA) INC., JANUARY 3, 2017
Alexco Resource Corp. – Keno Hill Silver District Project

Vein	Class	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au (g/t)
Main Lucky Queen	Indicated	132,300	1,167	2.43	1.63	0.16
Vein	Inferred	235,800	465	1.00	0.77	0.14
Splay	Inferred	22,100	564	1.51	1.10	0.04
Total	**Indicated**	**132,300**	**1,167**	**2.43**	**1.63**	**0.16**
	Inferred	**257,900**	**473**	**1.04**	**0.80**	**0.13**

Notes:
1. CIM definitions followed for Mineral Resources.
2. Reported at a cut-off value of C$185.00/t considering US/CDN exchange of US$0.80=C$1.00.
3. Metal prices of US$20.00/oz for Ag, US$0.95/lb for Pb, US$1.00/lb for Zn, and US$1,300/oz for Au; and recovery of 96% for Ag, 97% for Pb, 88% for Zn and 72% for Au.
4. All numbers have been rounded to reflect the relative accuracy of the estimates.
5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
6. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

MINERAL RESOURCE STATEMENT FOR THE FLAME & MOTH DEPOSIT

Commodity prices were provided to SRK by Alexco as representative of a consensus long-term strategic forecast. Metallurgical recoveries were from a previous PEA for the Bellekeno project at the Keno Hill Silver District (Wardrop, 2009), refer to Table 14-55 above.

These metal prices and metallurgical recoveries were used to estimate values (C$/t) for blocks in the resource block model.

Mineral Resources for the Flame & Moth deposit are shown in Table 14-58 and have been reported relative to a cut-off value of $185.00/t.

TABLE 14-58 MINERAL RESOURCE STATEMENT, FLAME & MOTH DEPOSIT, SRK CONSULTING (CANADA) INC., JANUARY 3, 2017
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Class	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au (g/t)
Christal	Indicated	571,900	530	2.33	3.65	0.50
	Inferred	70,600	207	0.91	2.38	0.22
Lightning	Indicated	997,900	489	1.63	6.34	0.40
	Inferred	292,600	392	0.37	4.69	0.27
Lightning V2	Indicated	109,200	406	1.31	4.80	0.23
	Inferred	2,000	367	0.87	5.50	0.27
Total	**Indicated**	**1,679,000**	**498**	**1.85**	**5.33**	**0.42**
	Inferred	**365,200**	**356**	**0.47**	**4.25**	**0.26**

Notes:
1. CIM definitions followed for Mineral Resources.
2. Reported at a cut-off value of C$185.00/t considering US/CDN exchange of US$0.80=C$1.00.
3. Metal prices of US$20.00/oz for Ag, US$ 0.95/lb for Pb, US$ 1.00/lb for Zn, and US$ 1,300/oz for Au; and recovery of 96% for Ag, 97% for Pb, 88% for Zn and 72% for Au.
4. All numbers have been rounded to reflect the relative accuracy of the estimates.
5. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
6. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

MINERAL RESOURCE STATEMENT FOR THE ONEK DEPOSIT

SRK considers that the mineralization evaluated in the Onek deposit is amenable for underground extraction.

Commodity prices were provided to SRK by Alexco as representative of their long term strategic forecast. Economic parameters are summarized in Table 14-55 above.

Mineral Resources for the Onek deposit defined relative to a dollar equivalent cut-off of $185/tonne, using metallurgical recoveries as proposed in the recent PEA for the Bellekeno project at Keno Hill (Wardrop, 2009), are listed in Table 14-59 below.

TABLE 14-59 MINERAL RESOURCE STATEMENT, ONEK DEPOSIT, SRK CONSULTING (CANADA) INC., JANUARY 3, 2017
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Class	Tonnes	Ag g/t	Pb %	Zn %	Au g/t
Vein 1	Indicated	614,200	175	1.03	12.66	0.63
	Inferred	234,500	114	0.98	8.94	0.45
Vein 1 FW	Indicated	8,800	325	5.10	3.71	0.57
	Inferred	5,500	141	4.86	4.20	0.44
Vein 2	Indicated	77,100	302	2.42	6.31	0.45
	Inferred	45,100	136	1.63	5.27	0.27
Total	**Indicated**	**700,200**	**191**	**1.24**	**11.85**	**0.60**
	Inferred	**285,100**	**118**	**1.15**	**8.26**	**0.42**

Notes:
1. CIM definitions followed for Mineral Resources.
2. Reported at a cut-off value of C$185.00/t considering US/CDN exchange of US$0.80=C$1.00.
3. Metal prices of US$20.00/oz for Ag, US$ 0.95/lb for Pb, US$1.00/lb for Zn, and US$1,300/oz for Au; and recovery of 96% for Ag, 97% for Pb, 88% for Zn and 72% for Au.
4. All numbers have been rounded to reflect the relative accuracy of the estimates.
5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
6. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

MINERAL RESOURCE STATEMENT FOR THE BERMINGHAM DEPOSIT

SRK considers that the mineralization evaluated in the Bermingham deposit is amenable for underground extraction.

Commodity prices were provided to SRK by Alexco as representative of their long term strategic forecast. Economic parameters are summarized in Table 14-55 above.

Mineral Resources for the Bermingham deposit defined relative to a dollar equivalent cut-off of $185/t, using metallurgical recoveries as proposed in the PEA for the Bellekeno project at Keno Hill (Wardrop, 2009) are listed in Table 14-60 below.

TABLE 14-60 MINERAL RESOURCE STATEMENT, BERMINGHAM DEPOSIT, SRK CONSULTING (CANADA) INC. JANUARY 3, 2017
Alexco Resource Corp. – Keno Hill Silver District Project

Deposit	Zone	Class	Vein (combined vein and vein margin)	Tonnage	Silver (g/t)	Lead (%)	Zinc (%)	Gold (g/t)	Silver Oz
Bermingham Vein Structure	Arctic	Indicated	Bermingham	248,000	376	1.47	1.33	0.12	3,001,000
			Bear	148,000	1,376	4.51	1.76	0.22	6,532,000
			Bermingham Footwall	122,000	717	3.63	1.33	0.20	2,823,000
			West-dipper	21,000	729	2.47	2.32	0.12	502,000
			Total Arctic Indicated	**539,000**	**724**	**2.83**	**1.49**	**0.16**	**12,858,000**
	Etta	Indicated	Bermingham	124,000	421	2.26	2.20	0.07	1,681,000
			Bermingham Footwall	195,000	444	1.28	1.76	0.06	2,779,000
			Total Etta Indicated	**319,000**	**435**	**1.66**	**1.93**	**0.06**	**4,460,000**
	Total Indicated			**858,000**	**628**	**2.40**	**1.65**	**0.13**	**17,318,000**
	Arctic	Inferred	Bermingham	46,000	460	1.92	2.21	0.12	680,000
			Bear	68,000	522	2.62	1.15	0.14	1,146,000
			Bermingham Footwall	72,000	1,276	1.24	3.06	0.18	2,961,000
			West-dipper	4,000	1,802	17.19	8.23	0.54	246,000
			Total Arctic Inferred	**191,000**	**815**	**2.22**	**2.27**	**0.16**	**5,033,000**
	Etta	Inferred	Bermingham	3,000	474	2.12	2.36	0.07	47,000
			Bermingham Footwall	26,000	436	1.24	1.69	0.07	371,000
			Total Etta Inferred	**30,000**	**425**	**1.29**	**1.70**	**0.07**	**418,000**
	Total Inferred			**220,000**	**770**	**2.13**	**2.21**	**0.15**	**5,451,000**

Notes:
1. CIM definitions followed for Mineral Resources.
2. Reported at a cut-off value of C$185.00/t considering US/CDN exchange of US$0.80=C$1.00.
3. Metal prices of US$20.00/oz for Ag, US$0.95/lb for Pb, US$1.00/lb for Zn, and US$1,300/oz for Au; and recovery of 96% for Ag, 97% for Pb, 88% for Zn and 72% for Au.
4. All numbers have been rounded to reflect the relative accuracy of the estimates.
5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
6. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

PREVIOUS MINERAL RESOURCE ESTIMATES

BELLEKENO PREVIOUS RESOURCE ESTIMATES

In its initial exploration efforts on the KHSD, Alexco targeted the historical resources documented at the Bellekeno deposit by validating and confirming the existence of the polymetallic silver mineralization. SRK, in conjunction with Alexco, produced an initial Mineral Resource Statement for the Bellekeno deposit on November 10, 2007, which was subsequently updated on January 28, 2008. During 2008, Alexco constructed a new 633-

metre decline designed to access the historical Bellekeno workings. This allowed for tight-spaced underground core drilling and updated geologic mapping within all three Bellekeno resource zones (Southwest, 99, and East) during 2009, which was incorporated into a Mineral Resource Statement dated November 9, 2009 (Wardrop, 2009). In 2012, GeoStrat updated the Bellekeno Mineral Resource estimate as summarized in Table 14-61.

TABLE 14-61 CONSOLIDATED MINERAL RESOURCE STATEMENT FOR THE BELLEKENO DEPOSIT, GEOSTRAT CONSULTING SERVICES INC. SEPTEMBER 30, 2012
Alexco Resource Corp. – Keno Hill Silver District Project

Category	Zone	Tonnes	Ag (g/t)	Pb (%)	Zn (%)
Indicated	Southwest	195,000	602	6.7	5.7
Indicated	99	95,000	760	4.0	3.5
Indicated	East	75,000	675	3.3	6.9
Total Indicated		**365,000**	**658**	**5.3**	**5.3**
Total Inferred		**243,000**	**428**	**4.1**	**5.1**

Notes:
1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
2. All figures have been rounded to reflect the relative accuracy of the estimates.
3. Reported at an NSR cut-off of C$185.00 considering metal prices of US$22.50/oz for Ag, US$0.85/lb for Pb, and US$0.95/lb for Zn; and recovery of 96% for Ag, 97% for Pb, and 88% for Zn.

FLAME & MOTH PREVIOUS RESOURCE ESTIMATES

A previous Mineral Resource Statement was produced by Alexco in 2013. The results were detailed in the Updated Technical Report on the Flame & Moth Deposit (Alexco, 2013), and are summarized in Table 14-62.

TABLE 14-62 MINERAL RESOURCE STATEMENT FOR THE FLAME & MOTH DEPOSIT, APRIL 28, 2015
Alexco Resource Corp. – Keno Hill Silver District Project

Class	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Indicated	1,638,000	506	0.4	1.9	5.4
Inferred	348,000	366	0.3	0.5	4.4

Notes:
1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
2. All figures have been rounded to reflect the relative accuracy of the estimates.
3. Reported at an NSR cut-off of $185 (0.96 USD = 1 CAD)/tonne using consensus long term metal prices (US$) and recoveries developed for the nearby Bellekeno deposit (Ag US$20.00/oz, recovery 96%; Pb US$ 0.94/lb, recovery 97%; Zn US$ 1.00/lb, recovery 88%; Au US$1,300/oz, recovery 72%).

For all veins, Ag grades capped at 3,000 g/t; Pb and Zn capped at 15% and 20% respectively; Au grades not capped.

ONEK PREVIOUS RESOURCE ESTIMATES

A previous Mineral Resource Statement was produced by SRK in 2011. The results were detailed in the previous technical report (SRK, 2011b) and are summarized in Table 14-63.

TABLE 14-63 MINERAL RESOURCE STATEMENT FOR THE ONEK DEPOSIT, SRK CONSULTING (CANADA) INC., OCTOBER 15, 2014
Alexco Resource Corp. – Keno Hill Silver District Project

Class	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Indicated	654,000	200	0.6	1.3	12.3
Inferred	234,000	134	0.4	1.2	8.9

Notes:
1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
2. All figures have been rounded to reflect the relative accuracy of the estimates.
3. Reported at an NSR cut-off of $185 considering metal prices of US$20.00/oz for Ag, US$0.90.lb for Pb, US$0.95/lb for Zn, and US$1,250/oz Au; and recovery of 96% for Ag; 97% for Pb; 88% for Zn; 72% for Au.

BERMINGHAM PREVIOUS RESOURCE ESTIMATES

A previous Mineral Resource Statement was produced by SRK in 2015. The results were detailed in a memo dated May 13, 2015 and are summarized in Table 14-64.

TABLE 14-64 MINERAL RESOURCE STATEMENT FOR THE BERMINGHAM DEPOSIT, SRK CONSULTING (CANADA) INC., APRIL 28, 2015
Alexco Resource Corp. – Keno Hill Silver District Project

Zone	Class	Tonnes	Ag g/t	Pb %	Zn %	Au g/t
Bermingham Vein (including breccia)	Indicated	246,000	426	1.7	1.6	0.1
	Inferred	16,000	458	1.4	1.2	0.2
Bermingham Footwall Vein (including breccia)	Indicated	130,000	437	1.5	1.9	0.1
	Inferred	36,000	485	1.1	2.2	0.1
Total	**Indicated**	**377,000**	**430**	**1.6**	**1.7**	**0.1**
	Inferred	**52,000**	**477**	**1.2**	**1.9**	**0.1**

Notes:
1. Reported at a NSR cut-off grade of C$185.00/t using metal prices (USD) and recoveries of Ag US$20.00/oz, recovery 96%; Pb US$ 0.94/lb, recovery 97%; Zn US$ 1.00/lb, recovery 88%; Au US$ 1,300/oz, recovery 72%.
2. All numbers have been rounded to reflect the relative accuracy of the estimates.
3. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

4. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

RECOMMENDATIONS FOR CONVERSION OF MINERAL RESOURCES INTO MINERAL RESERVES

No Mineral Reserves are estimated for the Project at this time.

15 MINERAL RESERVE ESTIMATE

There are no current Mineral Reserves at the Project.

16 MINING METHODS

INTRODUCTION

The KHSD is historically known for locally challenging ground conditions encountered that limit the applicable mining methods to fully supported methods with limited spans, such as cut and fill or very small scale longhole, as has been practiced at the Bellekeno mine by Alexco. Shrinkage stoping and square set stoping methods have also been used historically, however, they are not considered economically viable or practical.

The deposits considered for production in this PEA are the Flame & Moth, Bermingham, Bellekeno, and Lucky Queen deposits. All of the deposits are planned to be mined using underground mining methods. The deposits are shown on Figure 16-1. The Flame & Moth deposit is located adjacent to the district mill.

MINING METHOD

All of the mining included in this PEA is planned to be underground mining using rubber tired mobile equipment and adit entries. The dominant recommended mining method is mechanized overhand cut and fill (MCF) or drift and fill in wider areas. Longhole stoping with backfill has been recommended in wider areas interpreted to have intact hangingwall and footwall intersections.

The mining method selection benefits from Alexco's development and operating experience in the district with the limitation that the majority of the experience is based upon the mining at Bellekeno and the initial drift rehabilitation at Lucky Queen. There has been no mine development at the Flame & Moth or Bermingham deposits to guide the mine planning.

BELLEKENO

The Bellekeno mine is an existing developed mine that was last operated in 2013. The mine is open for access to pumps. Previous rock mass assessments for the Bellekeno mine identified poor ground conditions and the mining was by MCF and small scale long hole stoping.

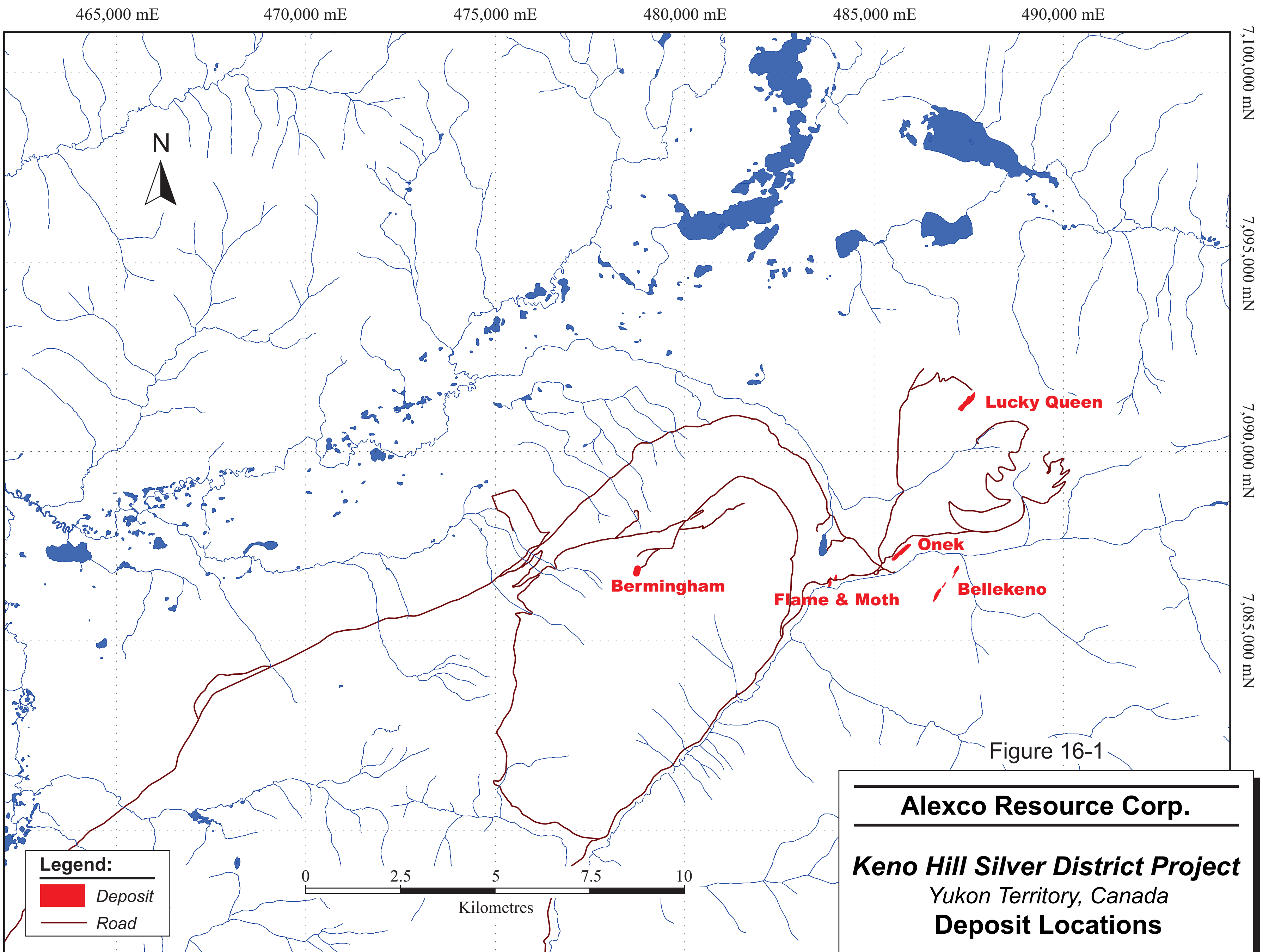


Figure 16-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Deposit Locations

March 2017

Source: Alexco Resource Corp., 2017.

Mining of Bellekeno, in this PEA plan, is based on a rapid, simple plan to extract approximately 37,000 t of readily accessible material to provide a mill stockpile and supplement the mill feed tonnage at the start of processing. The focus is on the most productive, highest grade areas with a minimum amount of development. After the initial production there is no planned mining at Bellekeno.

FLAME & MOTH

The Flame & Moth deposit is located beneath the mill and is undeveloped. The first 20 metres of the portal was constructed in Q3 2016 as well as the required surface facilities (shop, ventilation fan, compressor, storage containers). The Flame & Moth deposit will provide the majority of the process plant feed in this PEA. The mining methods considered suitable for the Flame & Moth deposit are MCF (drift and fill in wider vein areas) and small dimension longhole stoping with backfill. The assessment of the ground conditions at the Flame & Moth deposit is all based upon the evaluation of diamond drill core.

BERMINGHAM

The Bermingham deposit is the second largest mill feed source for this PEA. It is another undeveloped deposit. The deposit is considered to be amenable to MCF and minor longhole stoping with backfill. The assessment of the ground conditions at the Bermingham deposit is based upon the evaluation of diamond drill core. Alexco has approved a program of underground development and exploration for the Bermingham deposit. This work is scheduled to commence in Q2 2017.

LUCKY QUEEN

Lucky Queen is an existing mine with historic workings. The current plan is to use the reconditioned access drift to access a new stoping area. The historic stoping areas will not be encountered. Due to the shallow dipping orebody geometry and reported poor ground conditions at Lucky Queen, all mining has been planned using a MCF method. The focus of mining at the Lucky Queen deposit is on the highest grade material.

GEOTECHNICAL EVALUATION

The geotechnical evaluations are based upon work by SRK. SRK completed preliminary geotechnical evaluations for the Bellekeno, Lucky Queen, Flame & Moth, and Bermingham deposits. The evaluations considered the mineralized veins, hangingwall and footwall zones adjacent to planned mining, and general areas for proposed infrastructure development. Based on these assessments, recommendations for mining methods, stope design, and support requirements have been provided.

Information available for the evaluations included drill hole databases, core photographs, Gemcom models, and information collected by SRK during various site visits. All geotechnical descriptions have been interpreted from drill hole intersections of the mining horizons and, where available, underground observations. The Bellekeno evaluation is considered to be an update to geotechnical studies completed by SRK in 2009 (SRK, 2009) in support of the mine operation. The evaluations for Lucky Queen and Flame & Moth are based on data provided by Alexco and were updated by SRK in 2015. The Bermingham evaluation was undertaken in 2016.

Further geotechnical studies are recommended to confirm the pillar requirements and the mine design details. RPA recommends that the initial geotechnical reviews focus on the Flame & Moth and Bermingham access drives and ventilation raises to assess conditions along the planned alignments.

GEOTECHNICAL DESCRIPTION

The deposits are all hosted within district-scale metasedimentary rock units of the Keno Hill Basal Quartzite Member. While the quartzite is considered to be of fair to good rock mass quality, larger schist packages are often the locus of minor or moderate fault movement often producing gouge and poor rock mass conditions. Graphitic schist in the immediate vein hangingwall/footwall zone is considered to be of very poor to poor rock mass quality and tends to be more problematic especially where water is present. Areas of historic over-break are observed in excavations through schist units.

On vein conditions are considered to be fairly similar across the various deposits. Underground exposures and drill hole core intercepts of the vein exhibit extremely high variability both along strike and dip (on a scale of less than five metres). The mineralized and gangue components of the vein pinch and swell across the vein width, and the veining is generally considered to be of poor to very poor rock mass quality. Extensive support is utilized to control the ground while developing along the vein. However, excavation exposures tend to be better than those expected from drill hole core review.

STRUCTURAL DESCRIPTION

STRUCTURE – FLAME & MOTH

The Flame vein is divided into the Lightning and Christal mining areas, separated by the Mill fault. The fault offsets the Christal area in a southeast direction by approximately 120 m (Figure 16-2) and is primarily composed of very poor quality rock, with gouge and breccia materials. The fault thickness varies along strike, however, near the proposed development locations the fault is approximately two to four metres wide. Rock in the immediate hangingwall and footwall to the fault is considered to be of poor quality and exhibits conditions similar to those within the fault.

STRUCTURE - BERMINGHAM

The Bermingham deposit consists of four mineralized veins, the Bermingham Vein (BMVM), Bermingham Footwall Vein (FWVM), Bear Vein (BRVM), and West-dipper Vein (WDVM). Breccia zones exist around the veins with mineralization occurring in some of the breccia zones. The veins are offset by three faults which lay in the area of mineralization- the Cross Fault, Mastiff Fault, and Super Fault (Figure 16-3). Damaged rock mass areas approximately 2 m to 5 m wide exist along the Cross Fault, which are likely to result in slower mining with more rigorous levels of ground support. Graphitic schist is expected to play a major role in ground stability, particularly around the Cross Fault and the Bear Vein where this is expected to be more prevalent.

STRUCTURE – BELLEKENO

The structure in the Bellekeno area has been documented previously by Otto (2009) who identified approximately 100 m of hangingwall movement along the vein system. The large displacement combined with large schistose bands has produced adverse ground conditions in two identified locations. Zones of disturbed ground have been modelled through the proposed SW and 99 mining areas in addition to several schist packages (Figure 16-4). Poor ground conditions should be anticipated in these areas.

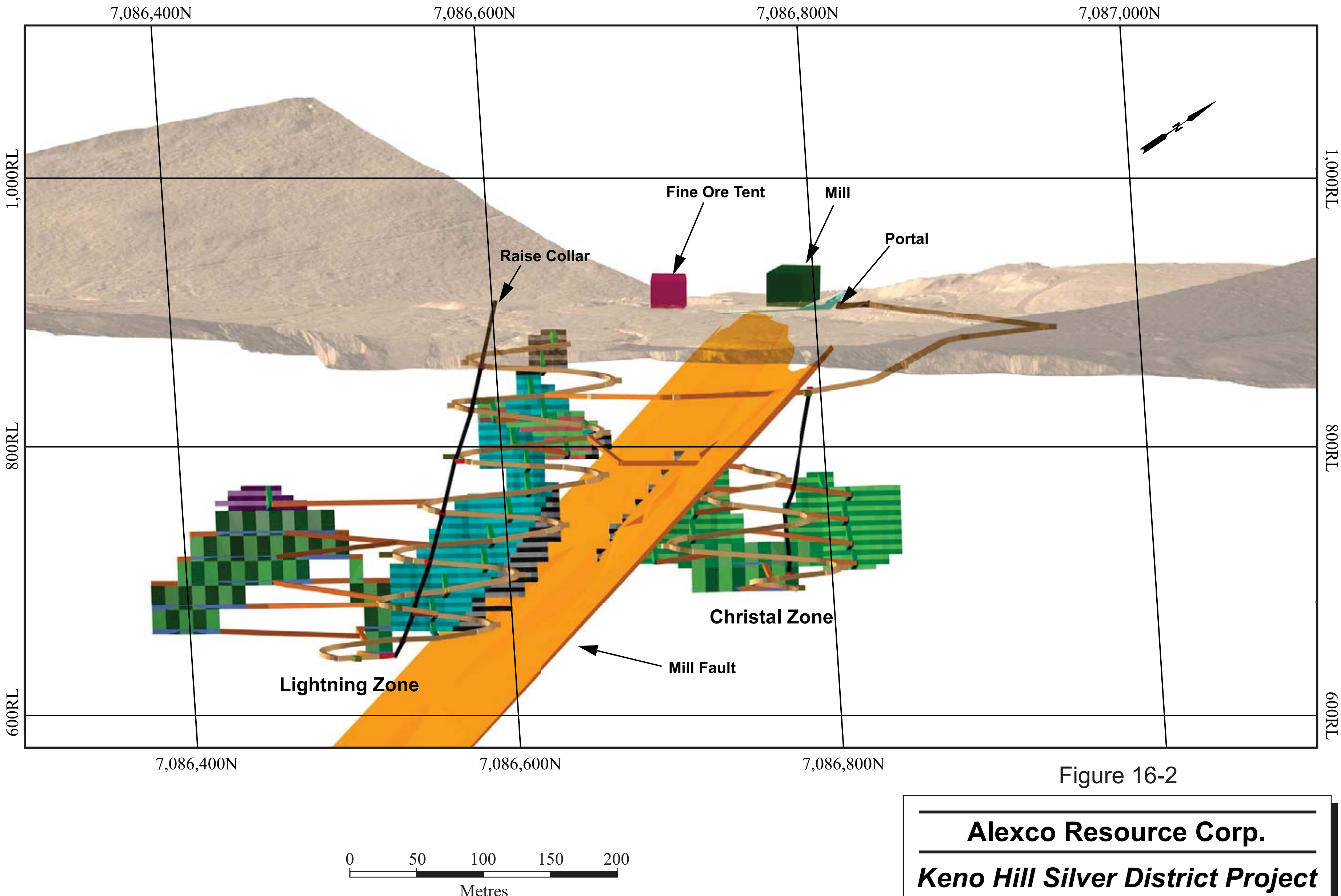


Figure 16-2

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Structure and Geology
Flame & Moth

March 2017

Source: Alexco Resource Corp., 2017.

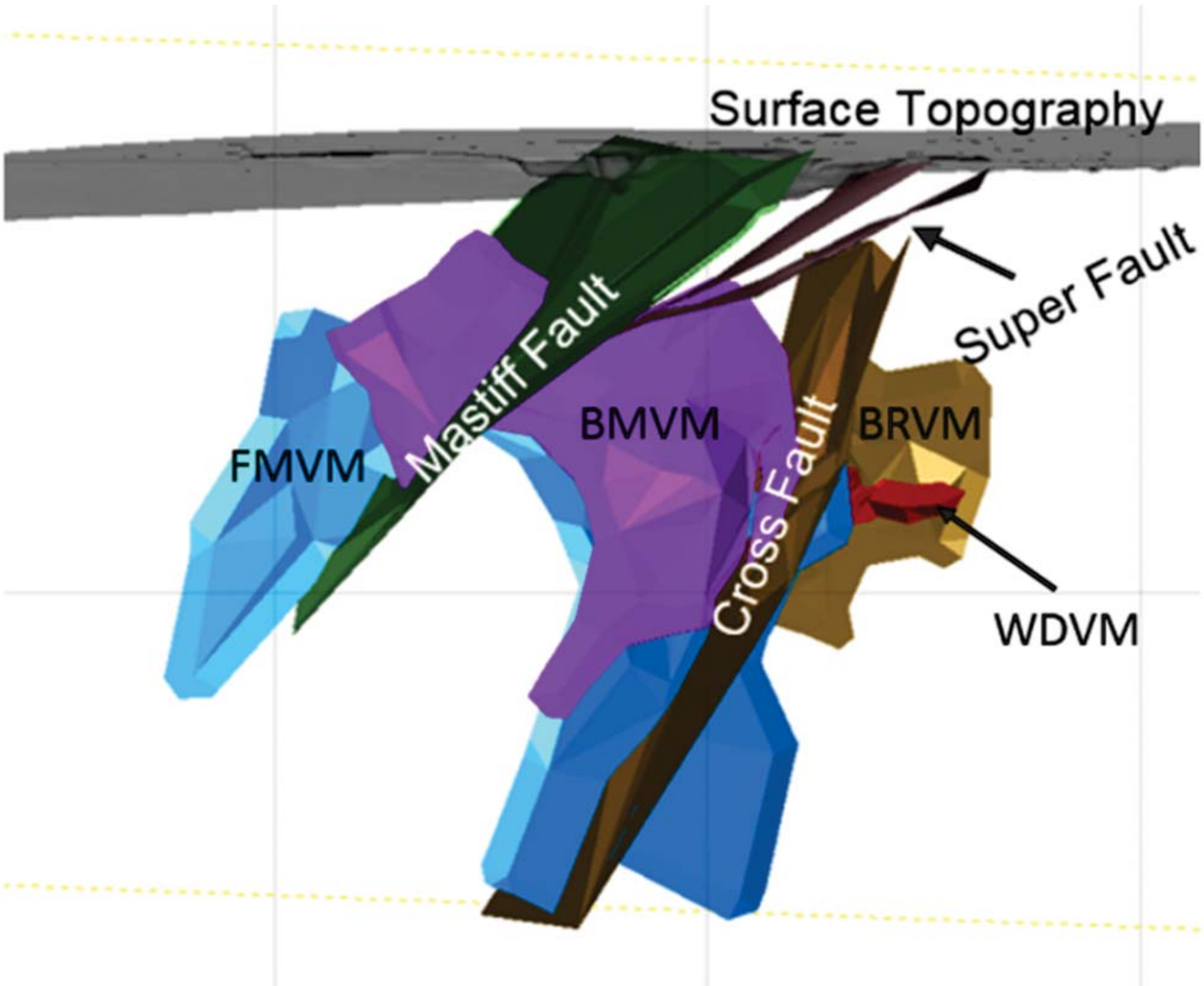


Figure 16-3

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Structure and Geology
Bermingham

March 2017

Source: SRK Consulting, 2016.

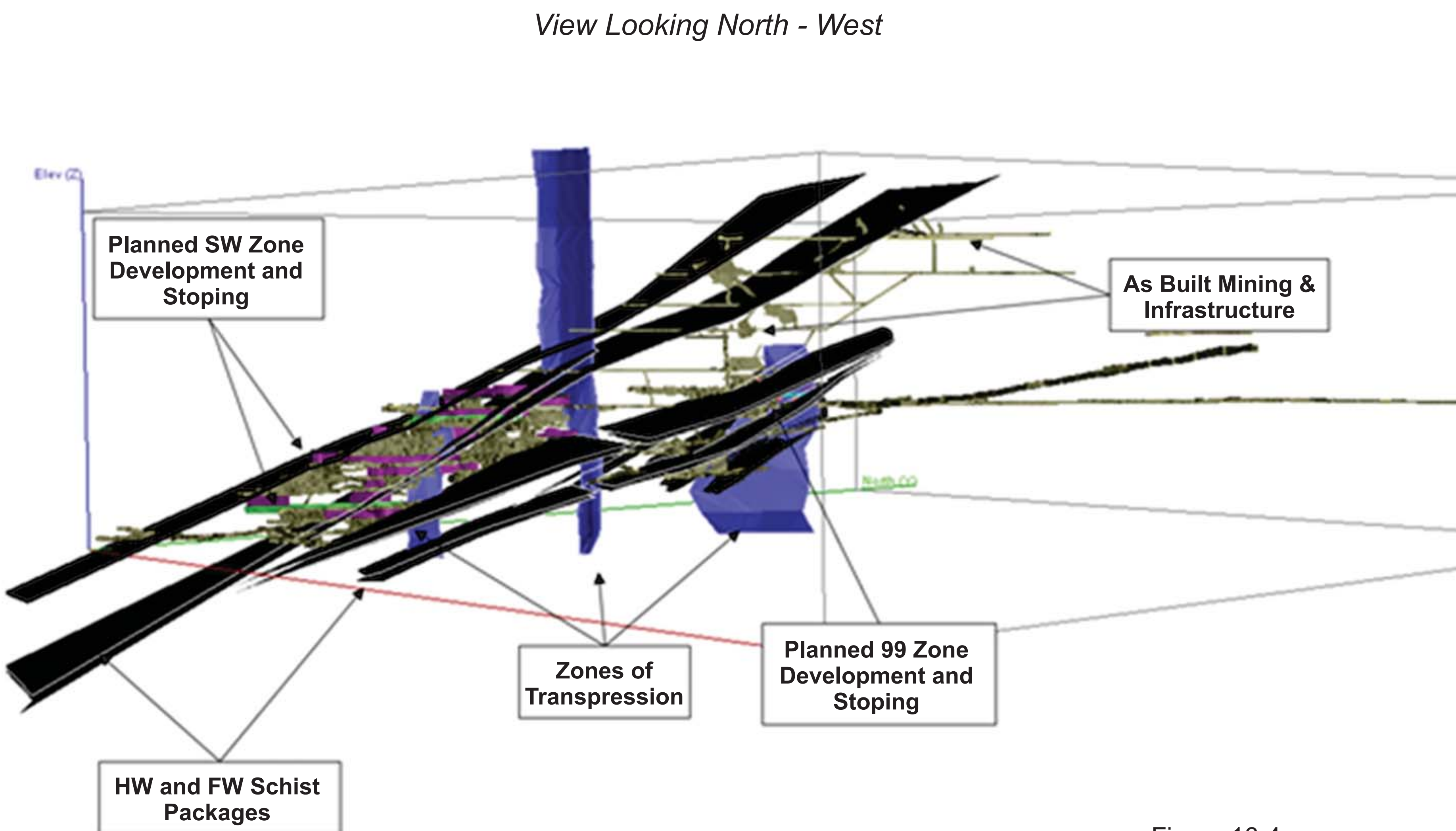


Figure 16-4

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Structure and Geology Bellekeno

March 2017

Source: SRK Consulting, 2013.

STRUCTURE – LUCKY QUEEN

At Lucky Queen, the overall orientation of the faulting rakes very shallowly to the southwest with the thickest fault intercepts coinciding with a schist unit (Figure 16-5). The hangingwall fault intercepts are well constrained along strike by fractured rock intervals sitting further into the hangingwall, while outside faulted zones competent wall rock is generally found right up to the vein structure above and below the faulted section. The fractured/broken rock intercepts are typically quartzite that look shattered, have brittle fracturing, or have partings along siderite or quartz veining associated with mineralization.

GEOTECHNICAL ASSESSMENT

From the data simplistic geotechnical domains were developed that reflect the quality of the rock mass relative to the mining methods proposed. Representative ground classes were developed that broadly correlate with the Poor, Fair, and Good domains.

The results of the geotechnical domain review for each mining area are presented in Figures 16-6 to 16-8. The rock mass was separated into hangingwall, mineralized zone, and footwall zones, and then domained in terms of poor, fair, or good rock mass conditions. Planned mining areas without drill hole coverage were assigned fair conditions. The mining in Bellekeno is planned to be the SW Zone.

Main infrastructure is more favourably located in the footwall for the Lucky Queen and Bellekeno deposits. At Flame & Moth, ground conditions within the footwall are less favourable based on well-developed weak schist packages, requiring the location of the infrastructure within the hangingwall of the veins.

RPA recommends further geotechnical studies of the Flame & Moth, Bermingham, and Lucky Queen deposits as development advances to refine the mine plans, stope dimension recommendations, and ground support requirements.

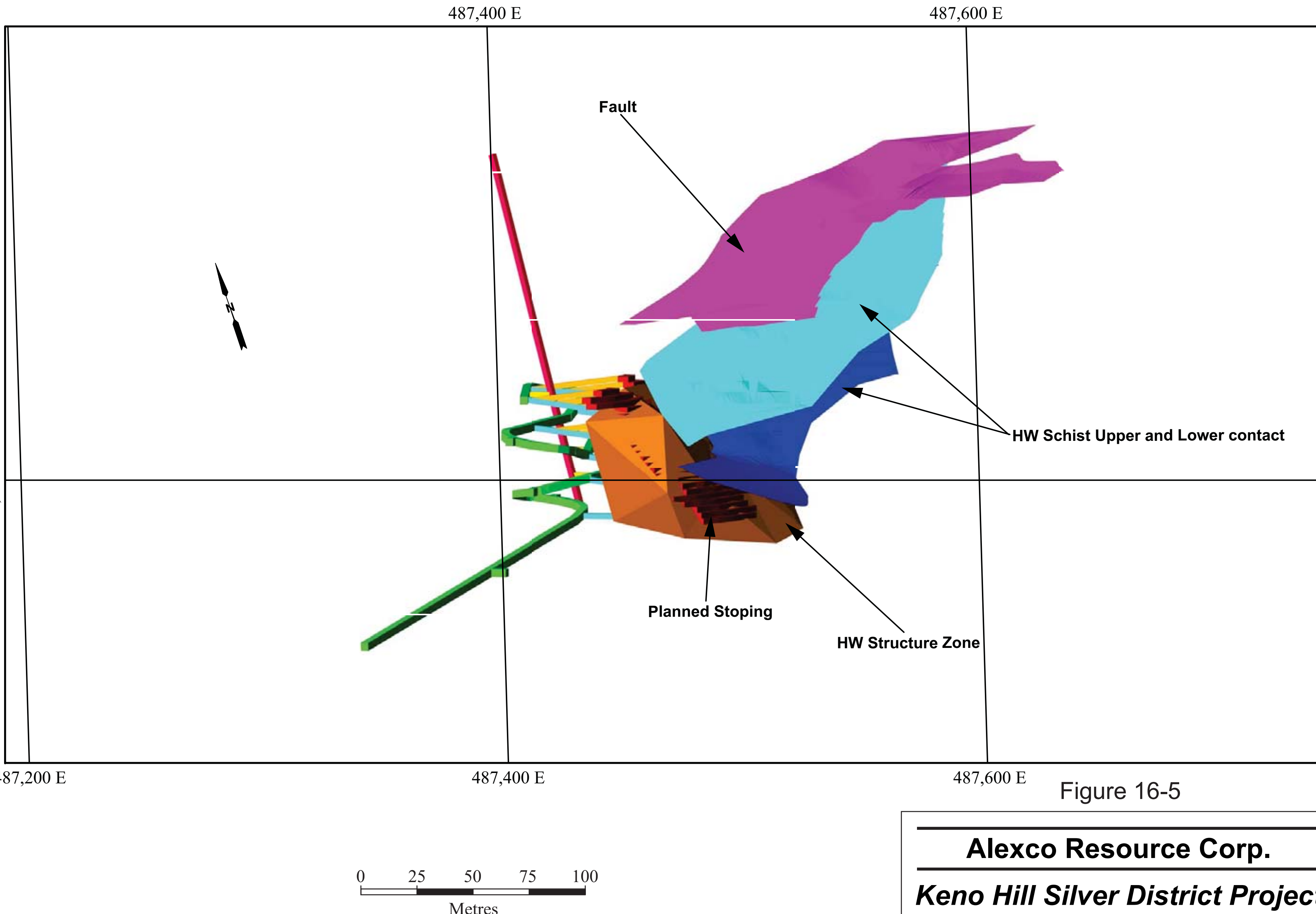


Figure 16-5

Alexco Resource Corp.

Keno Hill Silver District Project

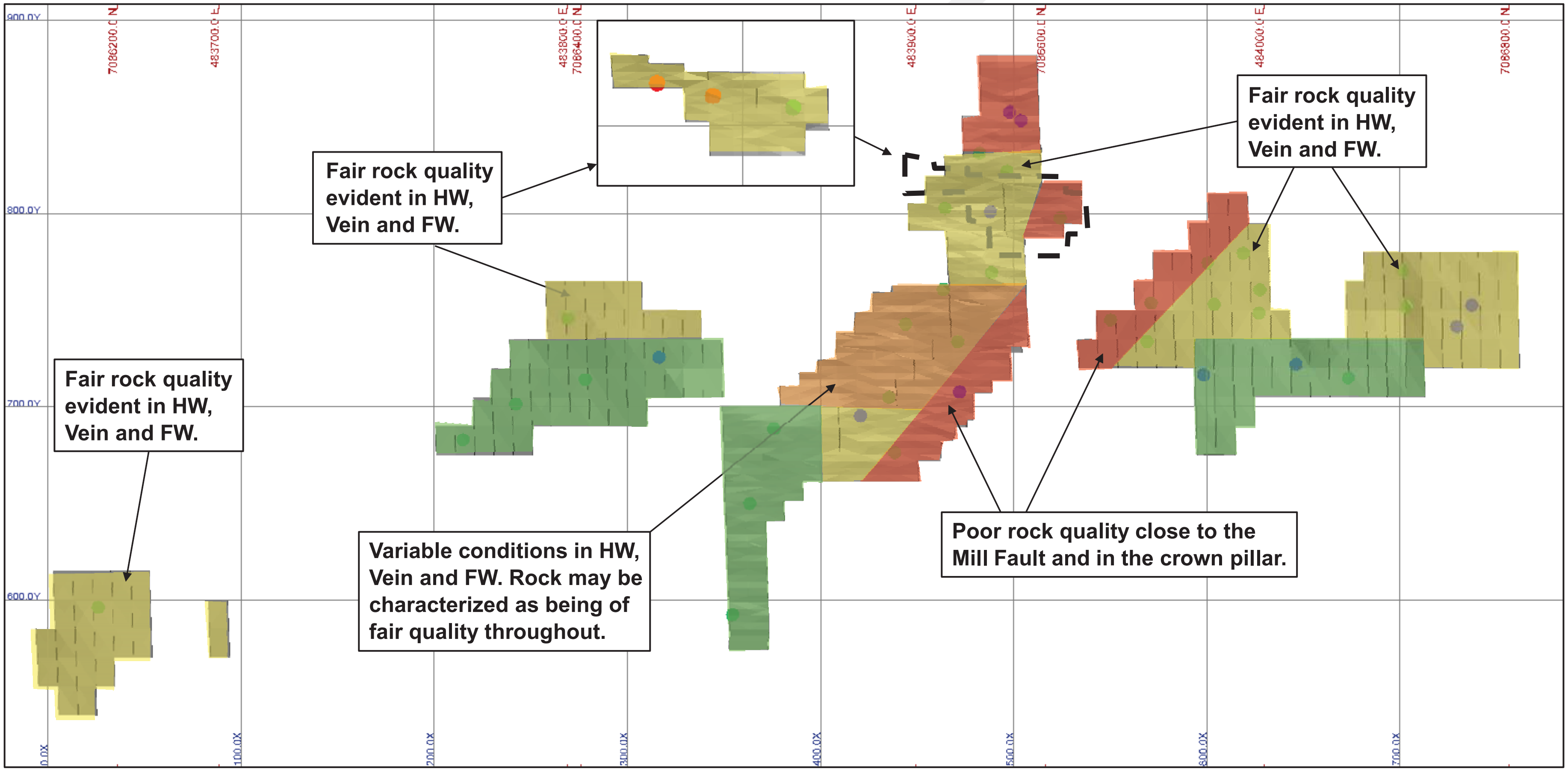
Yukon Territory, Canada

Structure and Geology
Lucky Queen

March 2017

Source: Alexco Resource Corp., 2017.

www.rpacan.com



Legend:

Geotechnical Domain	Thickness (m)
Good to Fair	< 3
Fair to Poor	< 7
Poor	<=20

Figure 16-6

Alexco Resource Corp.

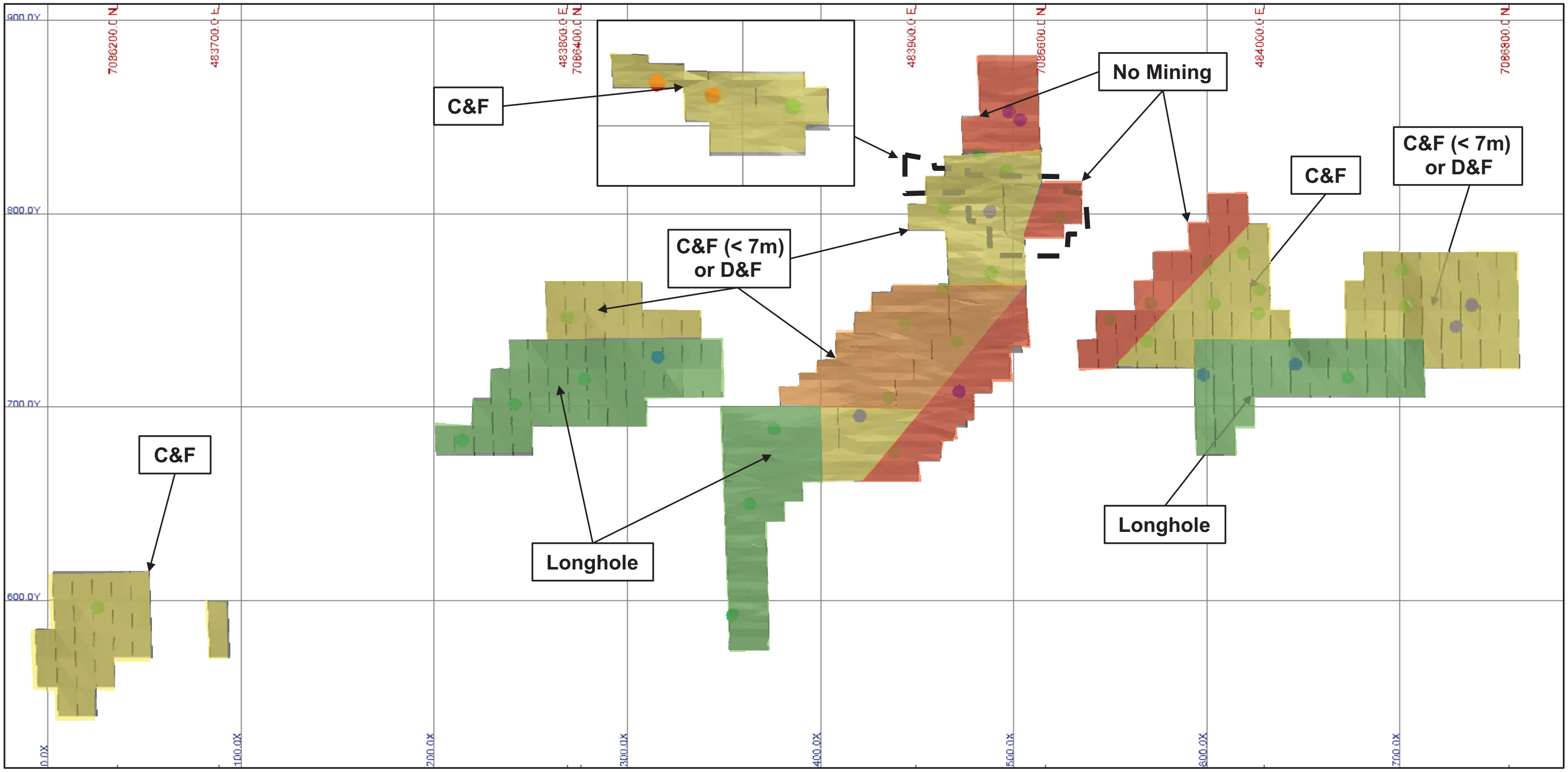
Keno Hill Silver District Project

Yukon Territory, Canada

Flame & Moth Geotechnical Domains

March 2017

Source: SRK Consulting, 2015.



Legend:

Mining Method Domain	Thickness (m)
Longhole	< 3
C&F or D&F	< 7
No Mining	<=20

0 50 100 150 200
Metres

March 2017

Source: SRK Consulting, 2015.

Figure 16-7

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Flame & Moth
Mining Method Domains

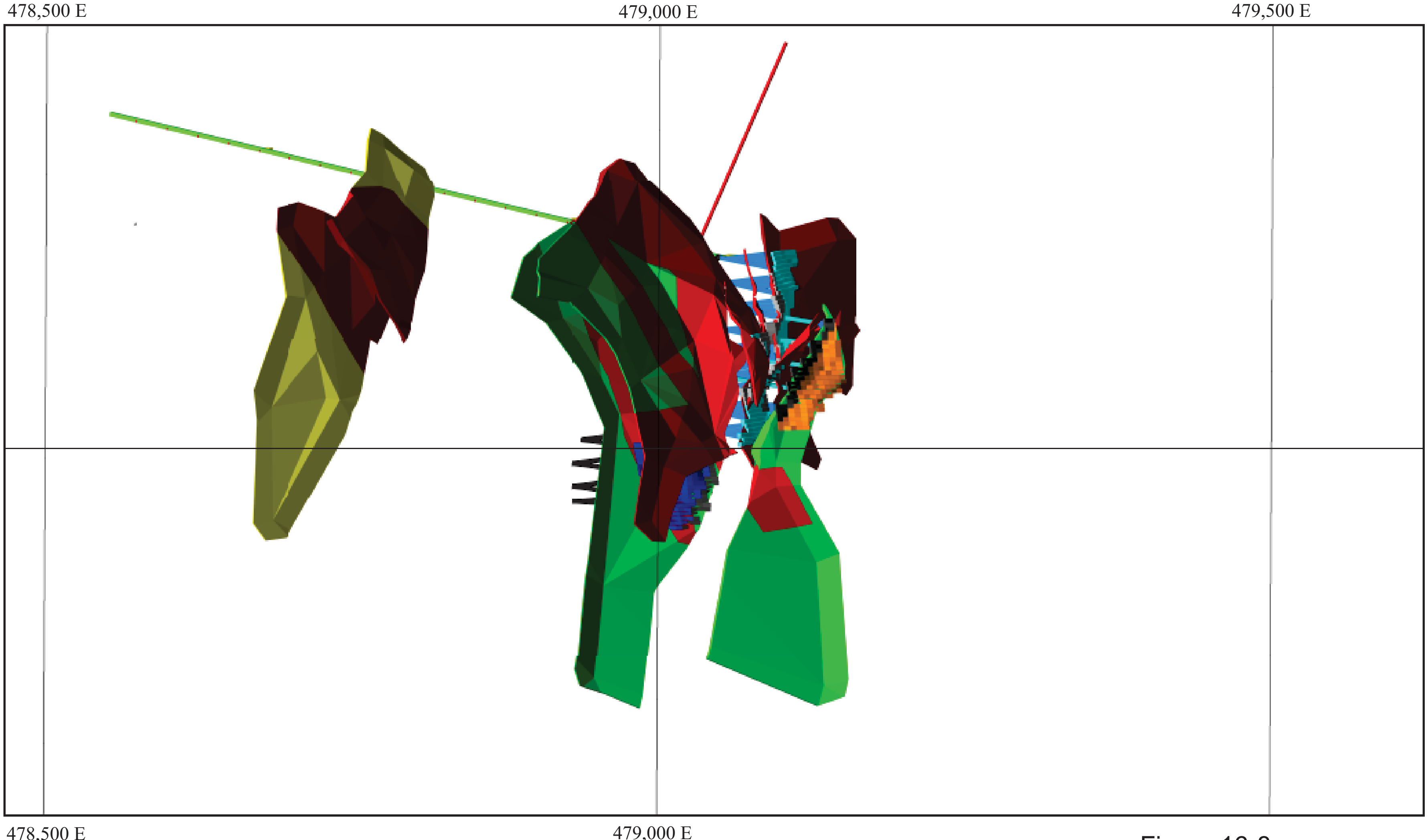


Figure 16-8

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bermingham Geotechnical Domains

Legend:
- *Short Longhole*
- *MCF*
- *Longhole*

0 50 100 150 200 250
Metres

March 2017

Source: Alexco Resource Corp., 2017

HYDROGEOLOGICAL CONDITIONS

The Bellekeno and Lucky Queen proposed mining zones are located above the valley floor, which tends to limit the occurrence and impact of adverse hydrogeological conditions. In contrast, the Flame & Moth deposits are situated below the valley floor and there is a possibility of significant water inflow to the planned underground workings. Hydrogeological studies and mine histories indicate that groundwater within the Keno Hill Silver District originates from infiltration of meteoric water, and migrates within unconsolidated glacial deposits and through fractures in metamorphic rocks. Groundwater inflows to historical and operating mines tend to be structurally controlled, with increased flows from veins and faults that have been intersected by drill holes and underground workings. Mine histories also indicate that enhanced groundwater inflows can occur when cross-faults are intersected by mine workings.

FLAME & MOTH

At the Flame & Moth site, three structures have been identified that could provide enhanced inflows to the proposed underground mine: Lightning zone (Flame vein), Christal zone (Flame vein), and the Mill fault that separates the two zones. During August and September of 2013, Alexco drilled three vertical test boreholes to investigate the water bearing characteristics of these three zones and the overlying rock. All three boreholes penetrated the target structures at depths similar to those of the planned mine workings. The boreholes were completed as monitoring wells and will be sampled in the future to assess bedrock water quality.

During drilling, water discharge rates were closely monitored and each borehole demonstrated progressively higher flow rate with depth. The maximum airlift flow rates ranged from approximately 2.5 L/s to 5.0 L/s (40 USgpm to 80 USgpm). Experience suggests that if a proper dewatering well is installed, its yield might be approximately two times the air-lift flow rate observed during drilling. Therefore, a dewatering well may discharge 5 L/s to 10 L/s (80 to 160 USgpm), in the absence of hydraulic interference from other wells.

In contrast to other areas of the KHSD, these drilling/flow observations provided evidence that groundwater flow in the Flame & Moth area is not strongly controlled by structures. There were no situations where a borehole was making very little water and then the flow increased dramatically upon intersecting a known vein or fault. Rather, the airlift flow rates tended to increase systematically as the boreholes were deepened suggesting that the rock mass is somewhat uniform with regard to hydraulic properties.

Given the information collected to date, calculations show that the inflow rate is zero for depths down to the static water level of 25 m below ground, after which the estimated dewatering rate increases in non-linear manner to a computed inflow rate of 35 L/s (555 USgpm) at the maximum mine depth of approximately 270 m below ground surface. This result is considered a conservative overestimate appropriate for mine planning and permitting.

The current plan is to dewater the mine using underground pumping with subsequent treatment of all water prior to discharge. The hydrogeological context and potential water ingress from faulting, overburden materials, and surface water features represent a potential risk to the Flame & Moth mine plan. A system of geotechnical/hydrological barrier pillars along the Mill fault and below the overburden areas has been included in the Flame & Moth mine design.

The PEA mine plan allows time for drainage prior to mining once the veins are intersected by underground development. Following dewatering, rock mass and mining conditions will need to be reassessed and a conservative mining approach adopted. There is a risk of higher ground support costs and reduced advance rates due to water inflow issues.

RPA recommends further study of the hydrology of the Flame & Moth deposit to confirm the expected ground water inflows and ground water chemistry.

BERMINGHAM

Hydrogeological conditions at Bermingham were investigated by AEG. During October 2016, two test holes were drilled at the proposed Bermingham mine site to investigate the groundwater conditions in bedrock. The overall objectives of the drilling program were to evaluate the physical rock conditions that could affect ramp excavation and to estimate groundwater inflows into the ramp during its construction. Discharge rates were monitored during air-hammer drilling, and airlift pumping/recovery tests in open holes were performed to evaluate the hydraulic conductivity of the rock mass.

The initial work plan called for drilling a single hole to a depth of 285 m. Drilling conditions were challenging and the work plan had to be adapted throughout the program. A cross-fault encountered in the initial borehole had loose material that caved; thus the initial borehole was terminated after drilling to a depth of 140 m. A second hole was started and difficult drilling was encountered upon intersecting a different geologic structure (interpreted to be a hanging-wall fault). The borehole was steel-cased to 147 m below ground surface and drilling continued. Cold weather conditions and other logistical constraints prevented further drilling and the second hole was terminated at a depth of 190 m.

Due to unstable conditions and caving in the open holes, the grouted-in pressure transducers were not installed in either test hole.

Drilling discharge rates and airlift pumping tests were used to evaluate hydraulic conductivity and rock mass heterogeneity with regard to hydraulic properties. These characteristics are important in estimating the dewatering requirements for the proposed ramp.

A dewatering estimate for the ramp was performed using a steady-state equation for radial flow towards a groundwater sink. The best-estimate dewatering rate systematically increases as the ramp is deepened and reaches a maximum rate of 3.25 L/s at its maximum depth of 160 m below ground. The actual inflow rate may increase in jumps when the ramp intersects cross-faults and other geologic structures.

Due to uncertainties associated with hydrologic characterization of the mine area, including the fact that the test holes did not intersect the Bermingham vein, it is prudent at this stage of planning to apply a factor-of-safety to the estimated inflow rates for engineering design. The associated maximum dewatering rate for engineering design approaches 6.5 L/s as the ramp reaches its maximum excavation depth of 160 m below ground. Future site investigations may provide information for reducing the factor-of-safety being used at this stage of the mine design.

RPA recommends further study of the hydrology of the Bermingham deposit to confirm the expected ground water inflows and ground water chemistry.

MINE DESIGN RECOMMENDATIONS

Mine design recommendations have been developed using Alexco's operating experience at Bellekeno mine, in addition to the reviews completed for each mining area. The general design recommendations are summarized as follows:

- Man entry spans have been reviewed based on the critical span curve of Ouchi et al. (2004):
    - Waste development headings: 5 m span;
    - Excavation spans can be increased for the main ramps, intersections, and permanent infrastructure areas of the mine, but must be supported accordingly;

  - o Spans for production headings on vein: RMR>35 is 4.0 m. RMR<25 is 3 m.

- Non man-entry stope design was completed using the modified Matthews stability curve (after Stewart and Forsyth, 1995) and the failure iso-probability curves developed by Mawdesley and Trueman (2003) based on intact rock strengths and joint orientations collected at the Bellekeno mine:
  - o Stope spans of 3 m to 7 m;
  - o Vertical heights and lengths of 8 m to 15 m;
    - The vertical end and back surfaces plot near the extremities in both graphs. In these areas limited case studies are available to support the failure divisions and some level of uncertainty will need to be accepted;
    - The location of each surface on the stability graph is considered to be consistent with Alexco's experience of longhole stoping at the Bellekeno mine.

- At Flame & Moth, a 20 m stand-off from the Mill fault has been recommended until studies are completed to confirm the hydrogeological conditions within the fault and vein areas, and a 30 m vertical crown pillar is to be maintained at the northern end of Lightning area (beneath unconsolidated overburden).

RPA recommends that these general design recommendations be updated to reflect localized conditions at the Flame & Moth, Bermingham, and Lucky Queen deposits.

GROUND SUPPORT RECOMMENDATIONS

Waste development and production support requirements have been based on the ground classes, empirical design (Palstrom & Broch, 2006; Laubscher, 1990), and have been adjusted with Alexco's experience in the Bellekeno mine, to provide the recommended ground support for development and production headings, and large span support in the production areas.

For development headings the ground support is based upon the ground classification and the support class. The support varies from 1.8 m friction bolts on a 1.2 m spacing up to 25 mm flash coated shotcrete, 2.4 m coated Swellex on one meter spacing plus mesh and straps as needed followed by 50 mm to 75 mm of shotcrete on the back and ribs.

For large production spans (four to seven metres) the support consists of 89 mm to 114 mm of fibre reinforced shotcrete followed by 3.04 m to 3.66 m foot Swellex bolts on a 1.3 m spacing through the shotcrete. The advance is limited to two metres.

For production headings less than four metres wide there are six support classifications ranging from 1.8 m friction bolts on a 1.2 m spacing up to 25 mm flash coated shotcrete plus three metre long Swellex bolts on a one metre spacing with mesh on the back and walls and a final 50 mm to 75 mm of shotcrete.

Shotcrete has been recommended as an option in all production areas to account for the need to tie the rock mass together in friable sugar-cube like areas.

The support recommendations are considered preliminary for the Lucky Queen, Flame & Moth and Bermingham deposits, and re-evaluation of the geotechnical evaluations and ground support plans is recommended as work progresses.

BACKFILL

Various combinations of cemented rock fill (CRF) using mine waste and tailings (dry filtered) have been selected for stope backfilling, with the cement content adjusted between 2% and 7% based on the requirement for fill strength. The following backfill mix guidelines are considered reasonable for planning purposes:

- CRF (with mine development waste):
    - 6% to 7% cement for sills and standing backfill wall in a longhole stope;
    - 0% cement if consolidated fill is not required.
- Dry filtered tailings:
    - 6% to 7% cement for a sill;
    - 2% to 3% cement for a standing backfill wall in a longhole stope;
    - 2% to 3% cement for a working floor;
    - 0% cement if consolidated fill is not required

PLANNED MINING METHODS

MINING METHOD SELECTION

This current study has the benefit of almost three years of recent mining experience at the Bellekeno mine.

The main factors driving the mining method selection process are:

- Proven mining methods used at the Bellekeno mine;
- Ground conditions in the vein and along the vein contacts range from good to very poor;
- Ground conditions can vary substantially over short distances (five metres);

- Vein continuity is good ; however, the vein geometries vary greatly between deposits:
- Metal content and distribution varies significantly between deposits and varies over the stope mining scale;
- The footwall is often characterized by competent quartzite but can be weak in some areas;
- The hangingwall varies from competent quartzite to weak layers of quartz breccia with clay filled shear bands, graphitic schists, or sericite schists;
- Geological contacts at the hangingwall and footwall can often be visually identified but can be faulted or fractured contacts with gouge and breccias;
- Mineralization contacts are less clearly defined and are based on a combination of structure, vein mineralogy, and metal grades;
- Vein systems can be locally water bearing and required time to drain when they are first crosscut by development;
- Vein depths are shallow with a low-stress regime, high-stress issues are not a factor in mine planning, but lack of clamping forces contributes to the poor ground conditions.

The various deposits require the use of mining methods that can adequately support the vein and that are flexible and selective while minimizing the direct mining costs.

The mine design strategy was to design as many areas as practical using small scale longhole mining methods while planning mechanized overhand cut and fill for areas where ground conditions were poor, or where the combination of vein dip and true width was not compatible with longhole stoping methods.

OVERHAND MECHANIZED CUT AND FILL MINING AT BELLEKENO

Each lift of MCF is typically accessed from the footwall ramp system by a 3.5 m wide by 3.5 m high attack ramp. Depending on the grade and length of the attack ramp, three to four additional cuts of MCF will be accessed by slashing the back of the attack ramp. The broken waste rock from the take down back (TDB) slashes was left in place and graded to access the next cut.

Each MCF stope was typically between 25 and 80 m in strike length, and was nominally 3.5 m high and a minimum of 2.5 m in width. Primary stope cuts were driven as development headings and subsequent cuts were developed by breasting and working on the backfill. A load-haul-dump (LHD) equipped with a jammer was used to ensure the backfill was well consolidated and pushed up tight to the back.

LONGHOLE MINING AT BELLEKENO

The overcut and undercuts were developed on nominal 10.5 m intervals from the footwall ramp system at the height of 3.5 m with typical widths of 2.5 m to 4.0 m. The mining sequence began by drilling and blasting a drop raise at one end or both ends of the zone, depending on the access point. The strike length of the individual stopes was limited to 10 m, which limited the tonnage per stope to between 500 t to 1,000 t, excluding development.

Once the zone is prepared for production, the first stope is blasted and mucked over a period of a week or less, with backfilling occurring during the next week. Speed of mining and filling is an important aspect of successfully mining in poor ground conditions.

In the past, much of the backfill used has been cemented rock fill with some use of cemented dry filtered tailings. The plan is to increase the use of dry filtered tailings in the backfill mix for the longhole stopes.

To maintain the slot in each subsequent panel of a stope, a plastic culvert with a cap is chained to the wall and dropped into the stope to be filled. Backfilling can then proceed normally as the culvert is strong enough that it does not collapse.

Drill holes will generally be 64 mm diameter up holes from the undercut, held back from breakthrough by 0.3 m. These drill holes will be immediately cased with 50 mm ID plastic pipe to prevent the drill holes from collapsing or plugging.

Drill holes will be double primed and loaded with ammonium nitrate/fuel oil (ANFO) immediately prior to blasting. Several rows will also typically be pre-loaded to minimize the loading crew's exposure to the open stope brow.

All remote mucking will be carried out using a 2.2 yd^3 LHD equipped with a remote package, while manual mucking will be done with either a 2.2 yd^3 LHD or a 3.5 yd^3 LHD.

OVERHAND MECHANIZED CUT AND FILL MINING AT LUCKY QUEEN

As the dip of the Lucky Queen mineralization averages 45° through the mining area, overhand MCF has been selected as the most suitable stoping method. Each lift of MCF will typically be accessed from the footwall ramp system by a 2.5 m wide by 2.5 m high attack ramp. Four to six additional cuts of MCF can be economically accessed by slashing down the back in the access. Each planned MCF stope is typically between 25 m and 80 m in strike length with a maximum of 50 m on either side of the access point to be mined from that access point. The operating practice will be to concentrate on cycling the active stopes as fast as practical.

MCF stopes will nominally be 2.5 m high and a minimum of 3.0 m wide to reduce the external dilution. Due to the shallow dip, additional external dilution will be realized. The overall external dilution value for Lucky Queen is estimated at 38% using the W/O formula.

The backfill will be a mixture of cemented rock fill and filtered mill tailings. A rammer jammer will be used to ensure the backfill is well consolidated and as tight to the back as is feasible.

PLANNED MINING METHODS FOR FLAME & MOTH

Planned mining methods for Flame & Moth include longhole, overhand MCF, and drift and fill. The longhole sublevel spacing will be 14 m vertically, measured sill to sill, with a stope strike length of 10 m. Stopes will be small, averaging only 800 t to 1200 t per stope after development tonnes are removed. Small diameter (64 mm) downhole drilling will be used. Stope development will be on vein with stopes being mined in a retreat sequence along strike. Backfill will be handled by truck and LHD and it will consist of a mix of development waste rock and dry filtered tailings hauled underground by truck.

Overhand cut and fill mining planned for Flame & Moth will be on 3.5 m high cuts with central crosscut access. Stope lengths will vary in the range of 30 m to 80 m. Three to four cuts will be accessed from each primary access crosscut by back slashing. Where the vein is wider than seven metres, drift and fill will be employed in two passes. Backfill will be handled by truck and LHD and it will consist of a mix of development waste rock and dry filtered tailings. A jammer attachment will be used to tight fill to the back.

SILL PILLAR RECOVERY METHODS

Where future recovery of sill pillars is scheduled, a cemented backfill together with a prepared sill mat will be used to provide a stable back to mine up to from beneath. Extraction of the vein by MCF methods requires that the pillar is self-supporting and maintains integrity while the heading is active. Alternatively the sills may be extracted by uphole drilling and retreat mining and remote mucking.

PLANNED MINING METHOD FOR BERMINGHAM

The mining at Bermingham will be by mechanized cut and fill. Mining of high grade, geotechnically recommended high grade pillars is included in the plan. The detailed ground support and mining plans for the pillar recovery will need to be developed in future studies based upon more detailed geotechnical investigation. Some high grade areas are anticipated to feature challenging ground conditions. Preliminary ground support designs in these locations will be refined after further geotechnical investigations planned for 2017.

ESTIMATE OF POTENTIALLY MINEABLE TONNES

There are no Mineral Reserves estimated for the KHSD and, for this PEA, the potentially mineable tonnes and production rates are based upon mining plans applied to the Measured, Indicated, and Inferred Mineral Resources for the following deposits that are part of the Project and comprise the plant feed schedule for this PEA:

- Bellekeno;
- Lucky Queen;
- Flame & Moth;
- Bermingham

Preliminary mine planning has been applied to the resource block models. Metals of economic interest include silver, lead, zinc, and gold for all properties except Bellekeno where the block model does not include estimates for the gold grade. Inferred Mineral Resources form the basis of approximately 2% of the "potentially mineable tonnes".

INITIAL OPERATING COST ESTIMATES

For the initial mine planning Alexco estimated operating costs of $275 to $290 per tonne milled and used this as a guide for the development of stope shapes. This was the preliminary operating cost estimate and was consistent with the 2012 operating experience.

METAL PRICES AND EXCHANGE RATES

The NSR value per tonne for the potentially mineable tonnes for this study is based on:

- Metal prices of US$20.00/oz silver, US$0.95/lb lead, US$1.00/lb zinc, and US$1,300/oz gold;
- An exchange rate of C$0.80:US$1.00;
- Silver price adjusted to match the amended SPA with Silver Wheaton so that 25% of the silver is valued at US$6.0000/oz.

NET SMELTER RETURN VALUE PER TONNE ESTIMATE

NSR value per tonne estimates are considered to be an appropriate measure of resource block value as the deposit includes four economic metals (silver, lead, zinc, and gold) that report to two concentrates.

Using the economic model, NSR value factors were derived for each payable metal for use in the resource block models for calculation of an NSR value per tonne for each block. The NSR value per tonne formulae on a $/t basis for the mines are:

- NSR = (0.55xAg) + (15.20xPb) + (11.65xZn) + (20.51xAu)

The NSR formulas incorporated the currently amended SPA (March 29, 2017).

The NSR value per tonne formulae were applied in the resource block models and then the economic cut-off values were used to outline areas of economically mineable tonnes referred to as mining shapes. The impact of mining dilution was accounted for in the stope shapes.

RPA reviewed the calculation of the NSR value per tonne factors and noted minor discrepancies compared to the parameters in the economic model. There were no material issues but RPA recommends a review of the metal value factors for future estimates.

EXTERNAL DILUTION ESTIMATES

External dilution was applied to the in situ tonnes and grades contained in each mining shape. The dilution percentage is defined as tonnes of dilution material (W) divided by tonnes of vein material (O), dilution % = W/O x 100. The dilution included with the stope shapes was:

- 15% for Flame & Moth
- 37% for Bermingham
- 23% for Bellekeno
- 38% for Lucky Queen.

As described above the shallower dip and narrow deposit at Lucky Queen increases the dilution. At Bermingham the focus was on the high grade mineralization and the extraction of the very high grade vein material led to the inclusion of significant quantities of dilution.

The dilution includes any material added to the stope shape to meet the minimum mining width. Dilution material metal grades, as found in wall rock immediately adjacent to the veins, were applied to the dilution. The metal grades determined were relatively low and are not significant at this level of study. This is an aspect that should be considered further in higher level mining studies.

MINIMUM MINING WIDTH

Minimum mining widths for all properties were 1.8 m for longhole and 2.4 m for cut and fill methods. The longhole minimum mining width was based on how tight the drilling could be and still expect the stope to break reliably. The cut and fill stope minimum mining width is based on the equipment available with 2.4 m being the minimum practical drift width that can be mucked with the current equipment fleet.

CREATION OF MINING SHAPES

Practical mining shapes based on mining methods were created from the wire framed, vein structures of the four deposits using the diluted cut-off values ($/t) previously described as a guide. The veins were mainly viewed in vertical long section for this work.

The exception to this is Lucky Queen, where the vein has a much flatter dip, and the mining method is cut and fill. Stope shapes for this deposit were created in plan view on a lift by lift basis.

POTENTIALLY MINEABLE TONNES

After the first pass of mine planning the stope shapes and mining areas were reviewed based upon an NSR value per tonne cut-off of $290. The revised operating cost estimate used in this PEA is $325/tonne. This review removed from stopes and some stoping areas that were either unprofitable, had a very low overall margin, and/or required significant additional development for access to the area. Mining recovery was applied at 95% for Bellekeno, Flame & Moth, and Lucky Queen which is in line with Alexco's historic operational experience. For Bermingham, mining recovery was applied at 90%, which is in recognition of anticipated challenging ground conditions.

A mining recovery of 50% was applied to geotechnical pillars at Flame & Moth. A different approach was used for geotechnical pillars at Bermingham, where ground support costs were doubled for excavations located within 5 m of large faults (in addition to the 90% mining recovery outlined above). These different approaches reflect the level of geotechnical understanding at these deposits.

Estimated potentially mineable tonnes were tabulated for each deposit and arranged to support production scheduling. Table 16-1 shows the estimate of potentially mineable tonnes for the four deposits contributing to the updated PEA plant feed.

TABLE 16-1 POTENTIALLY MINEABLE TONNES FOR PEA PLANT FEED
Alexco Resource Corp. – Keno Hill Silver District Project

Mine	Diluted ('000 t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Bellekeno	37	747	n/a	10.6	5.9
Lucky Queen	81	1,206	0.1	2.6	1.63
Flame & Moth	683	666	0.5	2.8	5.8
Bermingham	220	1,276	0.2	4.1	2.1
Total PEA Plant Feed	1,021	843	0.4	3.3	4.6

In all of the deposits there are Mineral Resources which have been excluded from the PEA mining plan primarily due to their lower NSR value per tonne. This material remains in place and should be reviewed and reconsidered if economic parameters such as metal price or operating cost estimates change.

RPA COMMENT

RPA worked with Alexco on an overall strategy to guide the development of the PEA production plan. This involved considering various combinations of the four deposits, that would achieve a sustainable plant feed rate of 400 tpd as early as possible and give priority to the highest grade and largest potential tonnage deposits.

RPA notes that the PEA is based on the specific strategy selected, however there are other possible scenarios for defining an overall production schedule that may warrant further study, particularly if changing metal prices or exploration results alter the mine planning context.

PLANNED PRODUCTION RATES

RPA and Alexco estimated maximum production rates to be respected during production scheduling. They were estimated based on mining method, vein thickness, mining shape geometry, and the layout of the vein access crosscut. The overall scheduling was based upon taking the Bellekeno material first as readily accessible material to create a stockpile for the initial mill start up.

The balance of the mine plan was based upon operating two mines most of the time and limiting the time spent trying to run three mines at one time. The schedule was set based upon the planned timing of the permits for Bermingham so that the Bermingham and Flame & Moth deposits commence mill feed production at the same time.

The KHSD mill processing rate is limited by permits to 400 tpd.

BELLEKENO MINE PLAN

Operations at the Bellekeno mine were temporarily suspended at the end of August 2013. The mine is accessible as there is ongoing mine water management. The Bellekeno production in the current plan is restricted to easily accessible higher value tonnage. The plan is to mine Bellekeno before the start of the plant and stockpile the material for mill feed. The Bellekeno production is summarized in Table 16-2.

TABLE 16-2 BELLEKENO PRODUCTION
Alexco Resource Corp. – Keno Hill Silver District Project

Item	Unit	Total
Mill Feed Tonnes	t	37,144
Ag, g/t	g/t	747
Au, g/t	g/t	n/a
Pb, %	%	10.55
Zn, %	%	5.88
Development		-
Access Drift	m	52
Cut & Fill Meters	m	396
LH Meters	m	185
Waste Rock Broken (tonnes)	t	2,279
Backfill Required	t	21,904

Planned mining methods include longhole and MCF. The Bellekeno block model did not include an estimate of gold grade and the value has been carried at zero in this PEA.

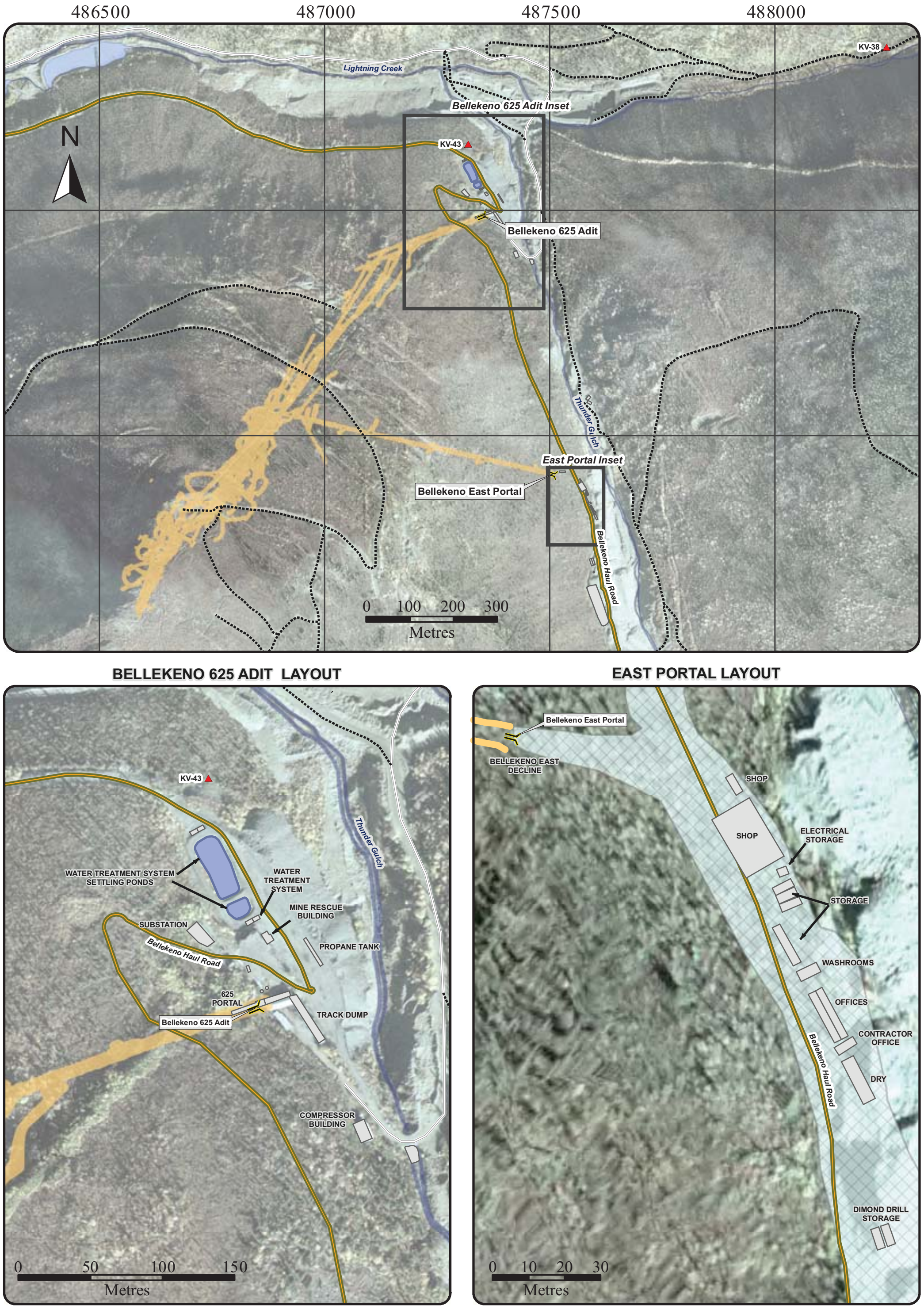


Figure 16-9

Legend:

Surface Water Quality Stations	Pipeline
Adit	Haul Road
Building/Structure	Local Roads
Pond	Track

Datum: NAD 83; Map Projection: UTM Zone 8N

March 2017

Source: Alexco Resource Corp., 2015.

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno Layout

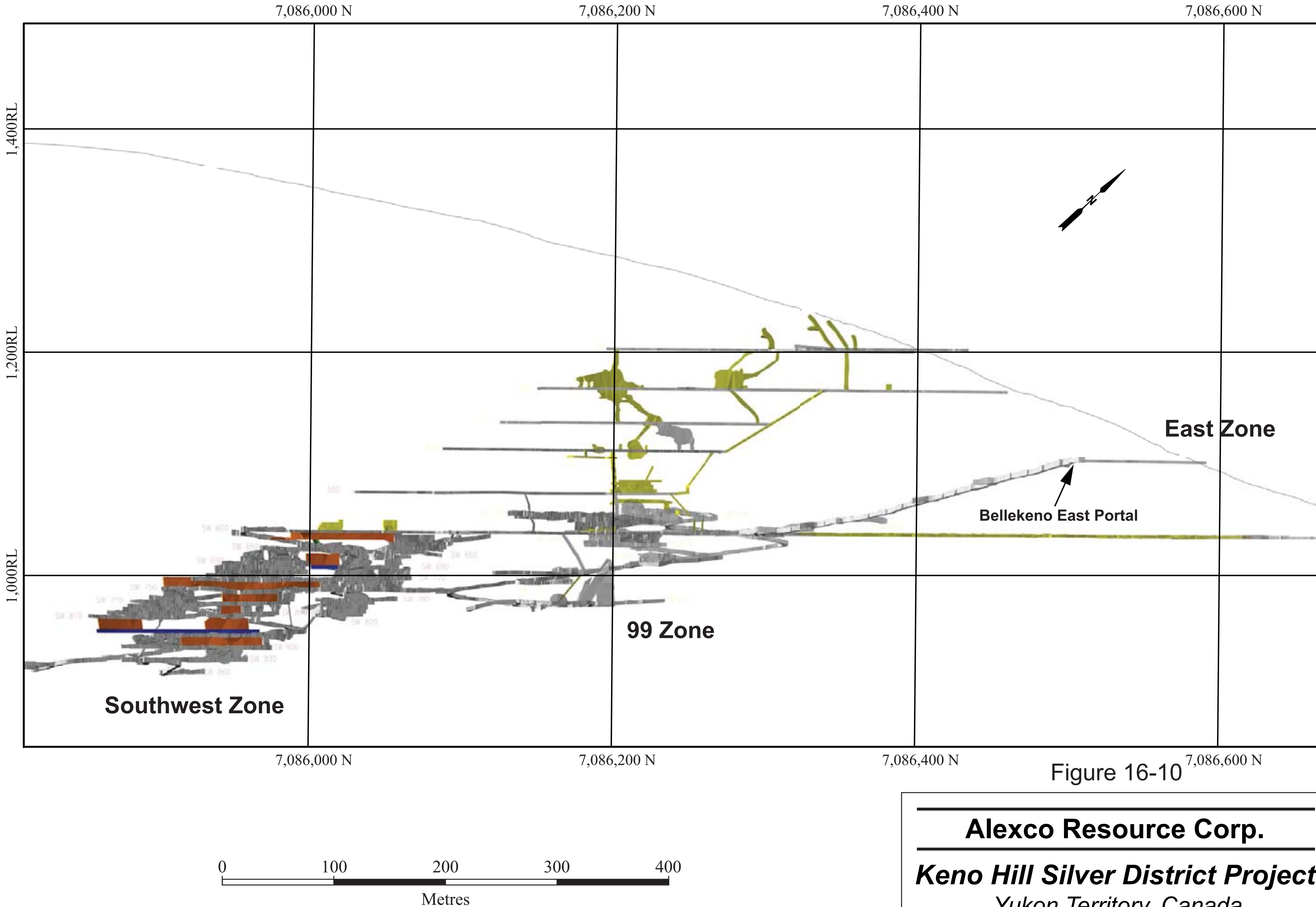


Figure 16-10

Alexco Resource Corp.

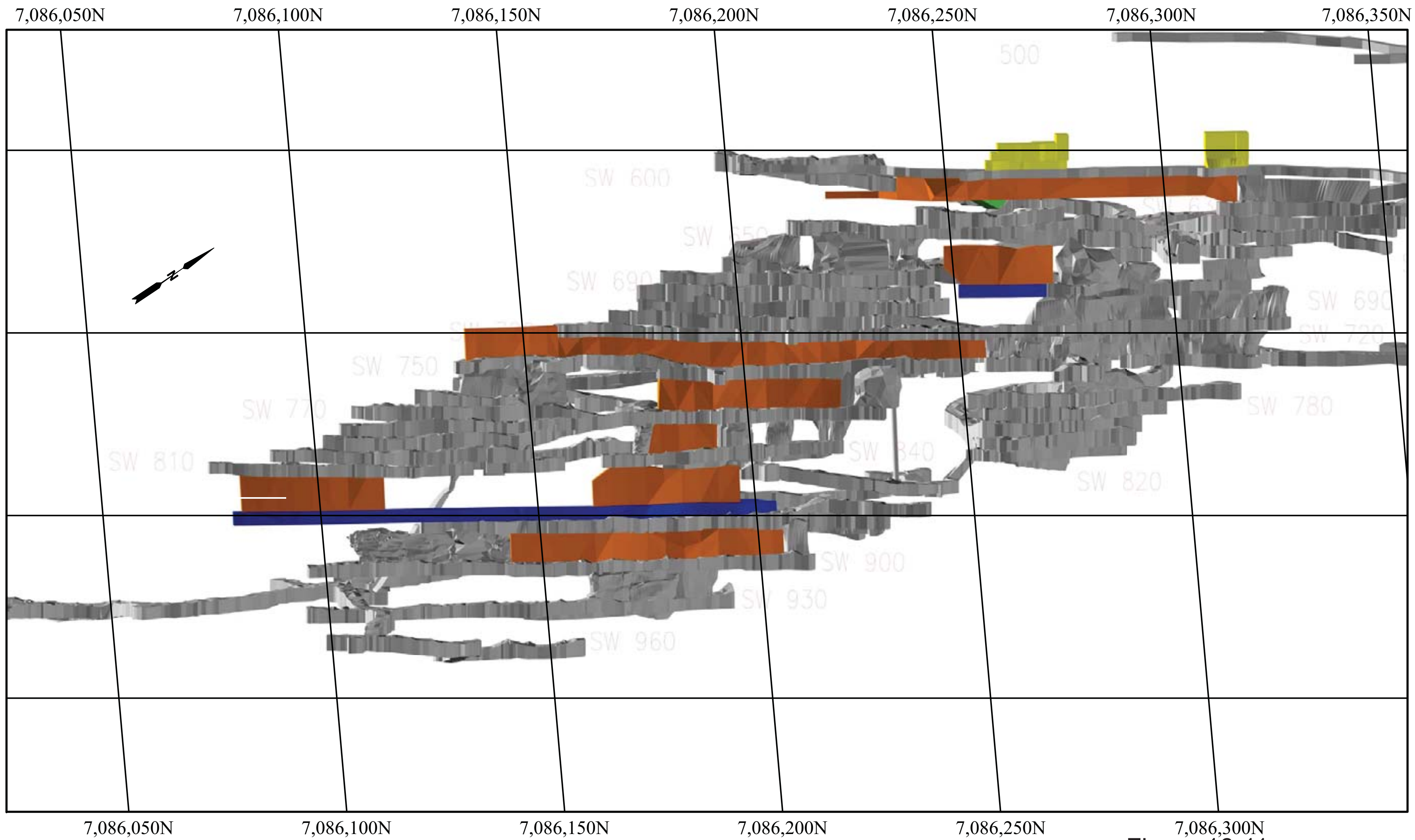
Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno Long Section Showing Workings

March 2017

Source: Alexco Resource Corp., 2017.



0 25 50 75 100
Metres

Figure 16-11

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno
Planned Mining Area

March 2017

Source: Alexco Resource Corp., 2017.

RPA

www.rpacan.com

Primary access to the Bellekeno mine is via the existing main portal and ramp system. There are no significant new internal ramps or extensions of existing ramps planned. Workings in the mine are generally sized at 3.7 m x 4.0 m and driven within the range of +/-15% gradient.

The main ventilation system is well established and no additional ventilation raises or emergency manways are required to support the PEA mine plan.

No additional raising is required to execute the PEA mine plan except for slot raises for longhole mining.

MINE SERVICES

MINERALIZED VEIN AND WASTE HANDLING

Vein material and waste will be handled underground by LHDs and 15-tonne capacity haulage trucks. Trucks will be loaded at remuck bays on the ramp systems or at the level entrances and hauled directly to the portal vein material and waste storage bays. Surface haulage trucks with 30-tonne capacity will enter the portal far enough to be loaded by LHD for transportation to the mill or to the existing surface waste rock storage facility.

Backfill materials consisting of development waste rock and dry filtered tailings will be back hauled to underground storage locations as close as possible to stopes being backfilled.

BACKFILLING

Backfill materials consisting of development waste rock and dry filtered tailings will be placed into empty stopes by LHD. The mix of these materials is flexible and will be varied to minimize the surface environmental impact. For MCF stopes, the backfill will be pushed up tight to the back using an LHD equipped with a jammer. For longhole stopes, dry filtered tailings will be mixed with bagged cement and water in a remuck and placed by LHD into the stope as slurry. The backfill requirement is estimated to be 22 kt of cemented tailings and rock fill. The ratio of materials used could vary significantly.

Cemented backfill at approximately 3% cement by weight is planned for longhole stopes. The cement, rock, and water will be mixed by LHD bucket in a small sump-like cut out near the empty stope. Cement will be transported underground in bulk bags.

VENTILATION

Previous the measured air flow entering the Bellekeno mine through the 625 level fresh air drift was 31 to 36 cubic metres per second (cms) (66,500 to 76,000 cfm). Heated fresh air will be delivered centrally to the mine as needed through the 625 level fresh air drift that connects to the ramp system. The fresh air will be distributed through the main ramp system to the work areas and then exhausted out through the main portal.

MINE DEWATERING

Main dirty water and clean water sumps exist at the bottom of the ramp from the main portal near where the 625 level fresh air drift intersects the main ramp. All water collected in the active mining areas will be pumped in stages from sump to sump to this dirty water sump. After decanting the clarified water into the clean water sump, the water will be pumped out the 625 level portal to a surface pond.

No additional infrastructure is expected to be required to complete the planned mining.

MAINTENANCE FACILITIES

Most of the mobile equipment maintenance is performed in a surface shop located near the main portal. The underground mine extent is relatively small and it is not difficult to bring underground equipment to the surface shop.

In addition to the mobile equipment, the mine maintenance department will be responsible for the stationary equipment consisting of air compressors, main ventilation fans and propane air heaters, underground electrical distribution system, and main dewatering pumps.

FLAME & MOTH MINE PLAN

The Flame & Moth deposit is located in close proximity to Alexco's mill facility. It has been defined by surface exploration drilling. Planned mining methods include longhole, cut and fill, and drift and fill. Drift and fill in two passes is planned for areas where the vein is thicker than 7 m, the span being too great for single pass cut and fill. The production plan for the Flame & Moth is summarized in Table 16-3.

TABLE 16-3 FLAME & MOTH PRODUCTION SCHEDULE
Alexco Resource Corp. – Keno Hill Silver District Project

		Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Mill Feed Tonnes	t	682,921	-	20,328	94,896	94,896	94,896	94,896	94,896	94,896	93,217
Ag, g/t		666	-	678	743	743	703	500	687	588	693
Au, g/t		0.50	-	0.31	0.44	0.56	0.59	0.39	0.47	0.54	0.54
Pb, %		2.75	-	2.58	2.86	2.70	3.00	2.09	3.76	1.88	2.98
Zn, %		5.78	-	6.71	5.62	6.21	6.45	6.90	5.12	4.30	5.63
Development	m	5,803	-	2,288	1,283	202	902	285	775	68	-
Access Drift	m	4,554	-	536	1,007	691	635	464	498	159	564
Cut & Fill	m	7,840	-	397	1,556	1,570	1,494	595	898	298	1,032
LH	m	700	-	-	-	-	-	230	150	220	100
Raise	m	433	-	88	222	26	50	-	48	-	-
Development	t	260,222	-	102,884	58,120	9,316	40,069	12,142	34,256	3,435	-
Access Drift	t	189,816	-	22,420	42,121	28,765	26,381	19,234	20,770	6,622	23,503
LH Tonnes	t	210,458	-	-	-	-	2,856	63,905	42,597	74,493	26,607
Cut & Fill	t	472,643	-	20,328	94,986	94,986	92,040	30,991	52,299	20,403	66,610
Development Rate	m/d		4	4	4	4	4	4	4	4	4
Access Drift	m/d		3	3	3	3	3	3	3	3	3
Cut & Fill	m/d		3	3	3	3	3	3	3	3	3
Cut & Fill	tpm	60	60	60	60	60	60	60	60	60	60
Longhole	m/d		1	1	1	1	1	1	1	1	2
Longhole	tpm	301	301	301	301	301	301	301	301	301	301
Raise Rate	m/d		5	5	5	5	5	5	5	5	6
Raise Tonnes	t/m	10,322	-	2,105	5,279	613	1,181	-	1,144	-	-
Waste Rock	t	469,576	-	132,567	107,956	39,099	68,037	31,375	56,981	10,057	23,503
Backfill Required	t	422,675	-	10,866	59,973	61,613	56,725	57,250	58,263	57,932	60,053

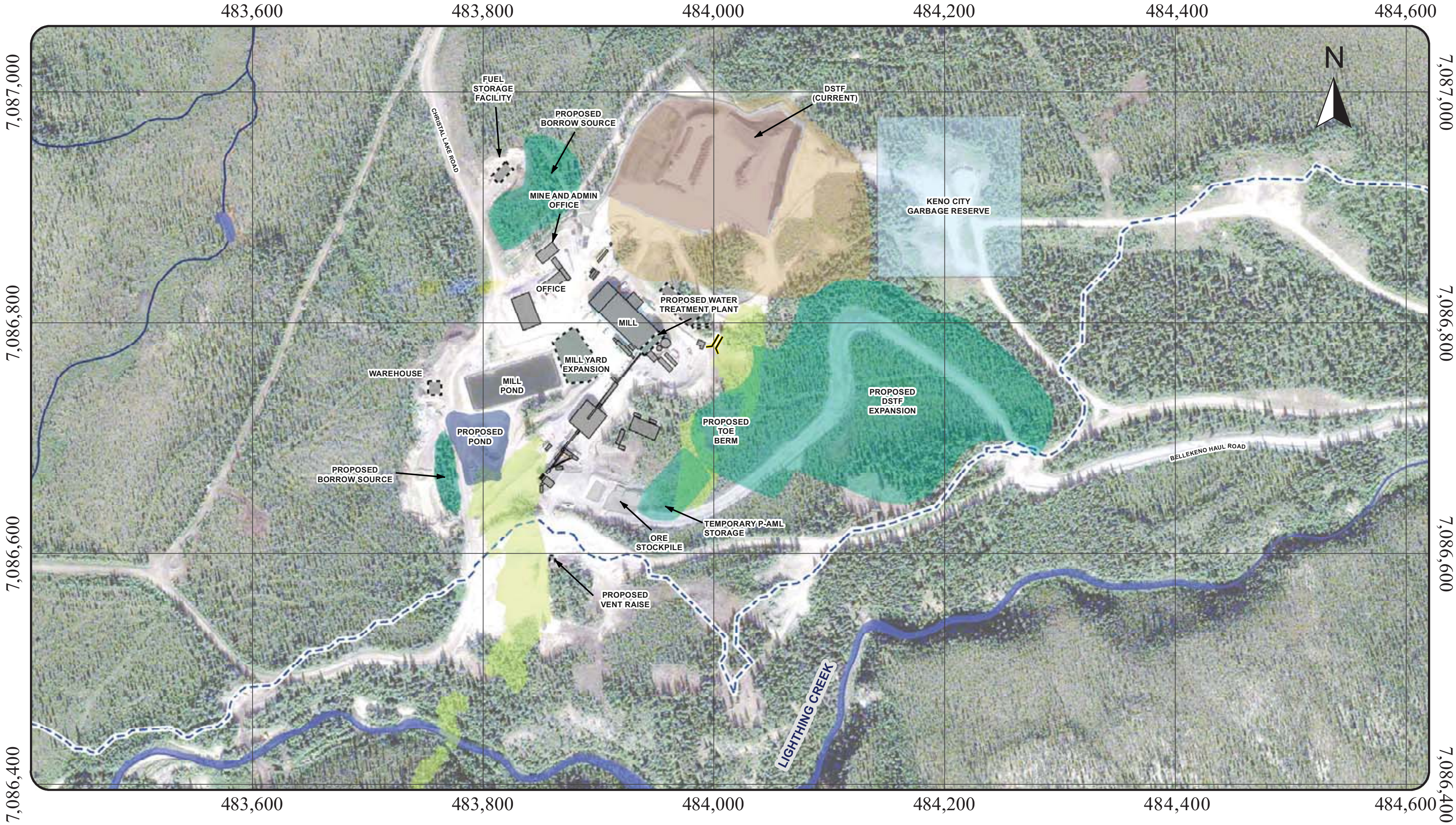


Figure 16-12

Legend:

Adit	Existing Building
Current DSTF	Proposed Building
Phase 1 DSTF Footprint	Flame and Moth Vein
Proposed Feature	Land Disposition
Proposed Mill Pond	Watershed Boundaries
Structures Footprint	Bellekeno Haul Road

0 50 100 150 200
Metres
Datum: NAD 83; Projection: UTM Zone 8N

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Flame & Moth Portal Area

March 2017

Source: Alexco Resource Corp., 2016.

RPA

www.rpacan.com

POTENTIALLY MINEABLE TONNES

Mining shapes were originally created by applying the $290/t diluted cut-off value to the resource mining blocks. The schedule was then revised to meet management's target of an average silver grade in excess of 650 g/t. The estimated external dilution averages 15%.

The pillars include a 30 m crown pillar and 20 m wide pillars planned to bracket the Mill fault with the intention of minimizing potential ground water inflows.

The distribution of mining methods by tonnes mined is 69% cut and fill and 31% longhole.

Figure 16-13 shows the mining shapes and mine development.

The bedrock surface is based mainly on drill hole information and it is observed to have some deep paleochannels where the overburden layer is 25 m thick and greater. There are large areas where the bedrock surface elevation is uncertain due to a lack of surface drill holes.

Primary access to the mine will be by ramp sized at 3.7 m x 3.7 m and driven at a -15% gradient. In 2016, a portal was collared into a hill side approximately 50 m southeast of the mill. At 20 m of advance the heading encountered unconsolidated material and frozen ground. The portal excavation was halted and more drilling was completed in the area. A plan for development through the area has not yet been developed.

All underground development is planned on the hangingwall side of the veins where ground conditions are expected to be better. Excavations will avoid the graphitic schist located on the footwall side of the Christal vein. Spiral ramps at -15% gradients are planned for Lightning and Christal sized at 3.7 m x 3.7 m to accommodate 15-tonne capacity trucks. Underground development is planned to pass through the Mill fault in two places.

A main ventilation raise from surface is planned next to the Lightning spiral ramp. It will deliver fresh air and will be equipped with a manway to provide a second exit from the mine. The raise collar on surface is planned in an area where bedrock is exposed.

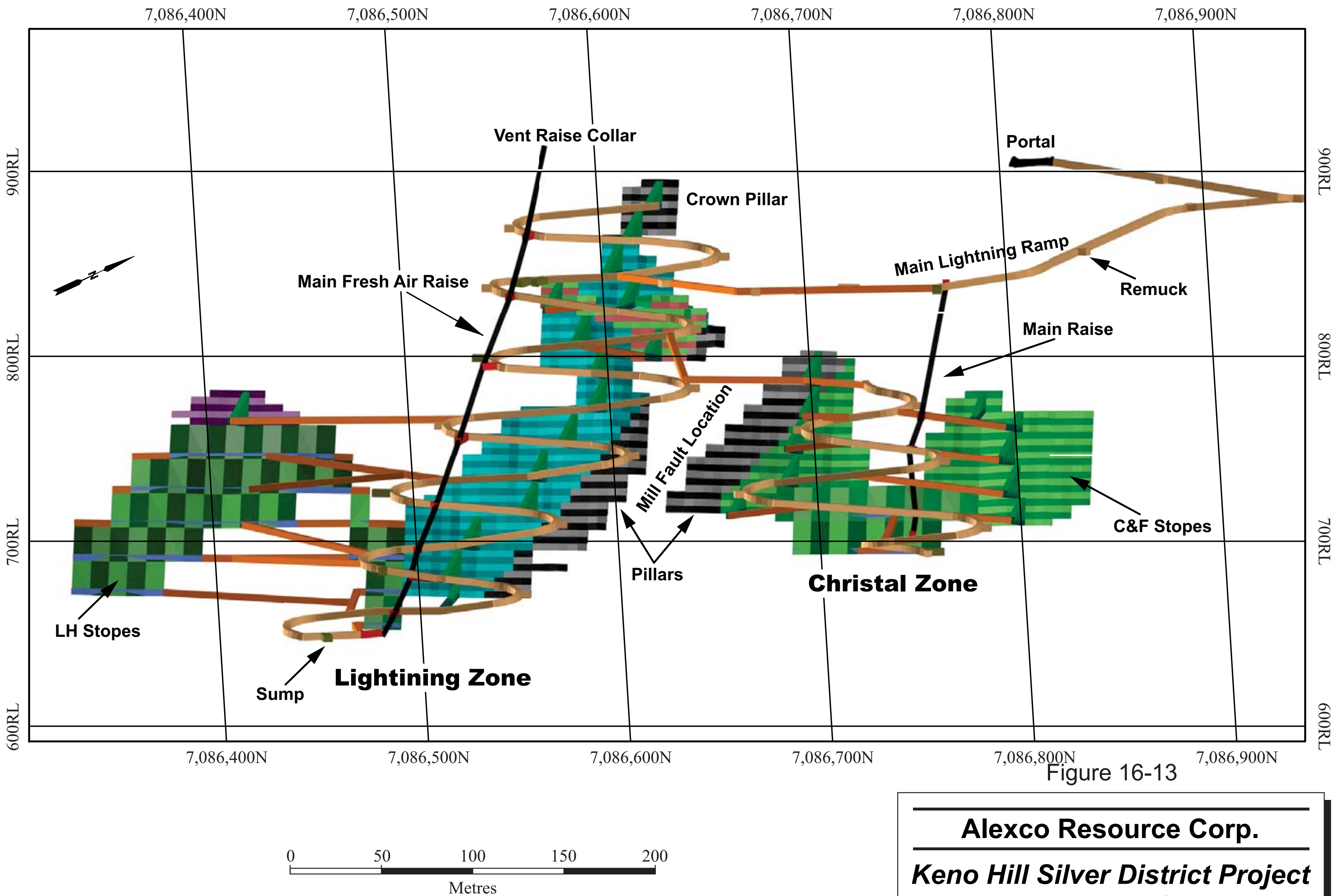


Figure 16-13

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Flame & Moth
Long Section

March 2017

Source: Alexco Resource Corp., 2017.

DEVELOPMENT AND PRODUCTION SCHEDULES

A development and production schedule was prepared using Deswik software. The production schedule is based on the assumption that 50% of the geotechnical pillars will be mined during the LOM.

The main ramp from surface and the entire Lightning ramp system has been scheduled at advance rates of 3 to 4 m per day line advance. The Christal spiral ramp system was scheduled at 3 to 4 m per day line advance. The intention was to schedule rates that can be achieved by well-organized owner's development crews.

The development and production schedule is based on Alexco starting ramp development in Q1 2018. Development of the Flame & Moth deposit has been scheduled to permit production to commence at the same time as production commences at the Bermingham deposit.

The production schedule includes time allowances for vein water drainage after the vein has been intersected by access crosscuts. An average of 1.8 months (minimum one month) has been allowed for drainage before mining in the vein begins. Another constraint is that production stoping is not scheduled to begin until a second route out of the mine has been established to that location.

MINE SERVICES

MINERALIZED VEIN AND WASTE HANDLING

Vein material and waste will be handled by 15-tonne capacity haulage trucks underground and on surface. Trucks will be loaded at remuck bays on the ramp systems and will haul directly to the surface vein material pad at the mill or to the planned surface waste rock dump location, both surface locations being within 400 m of the portal.

LOM development waste rock broken underground is estimated at 470 kt. Approximately 287 kt of this waste rock is needed for Flame & Moth backfill, along with 135 kt of dry filtered tailings. The conceptual plan for the remaining waste rock amount of 182 kt is to use it for surface construction such as the toe berm for the expansion of the DSTF. Detailed plans for the surface handling of Flame & Moth waste rock depend on the geochemical characterization of the rock, which has not been completed.

Flame & Moth backfill consisting of development waste rock and dry filtered tailings will be back hauled underground as close as possible to stopes being backfilled.

BACKFILLING

Backfill materials consisting of development waste rock and dry filtered tailings will be placed into empty stopes by a LHD or 15-tonne truck. For cut and fill and drift and fill stopes, the backfill will be pushed up tight to the back using an LHD equipped with a jammer. It is estimated that the LOM backfill requirement will be 423 kt.

Cemented backfill at approximately 5% cement by weight will be used in drift and fill stopes and longhole stopes. The cement, rock, and water will be mixed by LHD bucket in a small sump-like cut out near the empty stope. Cement will be transported underground in bulk bags.

VENTILATION

The planned ventilation flow for Flame & Moth is 78 cms, equivalent to 165,000 cfm based on the equipment fleet and similar projects. Heated fresh air will be delivered centrally to the mine through a 3-metre diameter bored raise equipped with a manway. Two fans operating in parallel will be set up on the fresh air raise. Bedrock is exposed on surface at the planned raise collar location.

Exhaust air will be through the main Lightning ramp system that extends from the mine bottom to surface.

From the fresh air raise, fresh air will be distributed by lateral development (through the lower link) to the Christal zone. Fresh air will be distributed upwards through Christal zone by a ventilation raise. Exhaust will be removed from the upper extremity of Christal zone through the upper link that connects it to the main Lightning ramp.

MINE DEWATERING

The Flame & Moth deposit extends below the valley floor and for that reason there is potential for significant inflows of water. An independent hydrologist commissioned by Alexco provided an opinion on the potential mine water inflow of 150 to 350 USgpm. An inflow rate of 300 USgpm is assumed as the basis of a scoping level capital cost estimate.

It is conceptually planned to have a main dirty water sump at the 836 m elevation near the fresh air raise and main ramp. Metso dirty water centrifugal pumps are planned in two parallel banks of three pumps each in series. Two steel cased 125-millimetre diameter drill holes are planned to deliver dirty water from the main sump to surface.

Area sumps are planned as follows: sumps at the following levels, 794, 724, and 651 at the lowest area of Lightning and one at the lowest area of Christal. These sumps will be equipped with 45 kW dirty water submersible pumps to pump to the main sump at the 836 m elevation.

MAINTENANCE FACILITIES

Most of the mobile equipment maintenance will be performed in a surface shop, which has been constructed near the Flame & Moth portal. The mine area is relatively small and it will not be difficult to bring underground equipment to the surface shop. An additional small maintenance shop will be set up underground to handle small repairs and routine servicing.

At the time Flame & Moth production is planned to ramp up, mining activity at Bellekeno will be coming to an end. Used shop tools and equipment will become available for use at Flame & Moth.

The maintenance department will have a fuel/lube truck, a mechanic's service truck, a tractor, and access to a scissor lift and a boom truck.

In addition to the mobile equipment, the mine maintenance department will be responsible for the stationary equipment consisting of air compressors, main ventilation fans, propane air heaters, underground electrical distribution system, and main dewatering pumps.

BERMINGHAM MINE PLAN

The Bermingham deposit is located approximately four kilometres west of the KHSD process plant; however, the road distance from Bermingham to the plant is approximately6 km. There was historic mining at Bermingham but the mining in this PEA is from a zone which has not been previously developed. The deposit has been defined by surface exploration drilling. The Bermingham deposit is planned to be mined by cut and fill methods due to small zones and the poor ground conditions. The production plan for Bermingham is summarized in Table 16-4.

TABLE 16-4 BERMINGHAM PRODUCTION SCHEDULE
Alexco Resource Corp. – Keno Hill Silver District Project

		Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Mill Feed Tonnes	t	220,037	-	7,211	51,096	51,096	51,096	51,096	8,442
Ag, g/t		1,276	-	2,591	1,732	1,245	945	1,019	1,142
Au, g/t		0	-	0.25	0.21	0.18	0.19	0.20	0.22
Pb, %		4	-	7.69	4.08	3.74	3.96	4.22	3.18
Zn, %		2	-	2.19	2.53	1.91	1.79	2.01	1.59
Development	m	3,113	600	976	446	642	392	26	31
Access Drift	m	3,404	-	153	761	975	872	521	122
Cut & Fill Meters	m	3,964	-	110	961	1,032	888	792	181
LH Meters	m	-	-	-	-	-	-	-	-
Raise Meters	m	391	-	184	94	50	63	-	-
Development		104,718	-	40,976	18,803	27,098	16,760	437	644
Access Drift		141,165	-	6,333	31,562	40,405	36,241	21,444	5,180
LH Tonnes		-	-	-	-	-	-	-	-
Cut & Fill Tonnes		220,037	-	7,211	51,096	51,096	51,096	51,096	8,442
Development Rate	m/d		4	4	4	4	4	4	4
Access Drift	m/d		3	3	3	3	3	3	3
Cut & Fill	m/d		3	3	3	3	3	3	3
Cut & Fill	tpm	56	56	56	56	56	56	56	56
Longhole	m/d		1	1	1	1	1	1	1
Longhole	tpm	-	-	-	-	-	-	-	-
Raise Rate	m/d		5	5	5	5	5	5	5
Raise Tonnes	t/m	9,310	-	4,381	2,233	1,187	1,509	-	-
Waste Rock	t	280,755	24,806	52,446	52,598	68,690	54,509	21,881	5,824
Backfill Required	t	147,115	-	4,378	30,270	31,999	34,134	38,874	7,461

POTENTIALLY MINEABLE TONNES

Mining shapes were originally created by applying the $290/t diluted cut-off value to the resource mining blocks. After development of the final PEA operating cost estimate the stopes and stope areas were reviewed to ensure that areas had a positive economic return. This resulted in a decrease in tonnage as areas were deleted from the schedule. The estimated external dilution averages 14.5%.

The pillars include a 5 m wide pillar along the Cross fault. This pillar is located in a high grade area of the deposit and as such efforts to maximize extraction of the pillar are planned. There will be extra costs for ground support and the mining plan for the pillar areas will require further geotechnical input.

Figure 16-14 shows the mining shapes and mine development, surface topography and planned exploration drilling. Figure 16-15 shows the planned Bermingham mining layout.

DEVELOPMENT AND PRODUCTION SCHEDULES

A development and production schedule was prepared using Deswik software. The production schedule is based on the assumption that 90% of the geotechnical pillars will be mined as the pillars are located within high grade areas of the deposit and will likely carry any additional costs associated with their extraction in challenging ground conditions.

The main ramp from surface has been scheduled at advance rates of 3 m to 4 m per day line advance based upon rates that are considered to be achievable by well-organized owner's crews.

The production schedule includes some time allowances for vein water drainage after the vein has been intersected by access crosscuts. Production stoping is not scheduled to begin until a second route out of the mine has been established to that location.

MINE SERVICES

MINERALIZED VEIN AND WASTE HANDLING

Vein material and waste will be handled by 15-tonne capacity haulage trucks underground and out to on surface. Trucks will be loaded at remuck bays on the ramp systems and will haul directly to the surface vein material pad. From the portal the vein material and waste rock will be hauled by 30 tonne surface trucks.

LOM development waste rock broken underground is estimated at 281 kt. Approximately 100 kt of this waste rock is needed for backfill, along with 47 kt of dry filtered tailings. Detailed plans for the surface handling of Bermingham waste rock depend on the geochemical characterization of the rock, which has not been completed.

BACKFILLING

Backfill materials consisting of development waste rock and dry filtered tailings will be placed into empty stopes by a LHD or 15-tonne truck. The backfill will be pushed up tight to the back using an LHD equipped with a jammer.

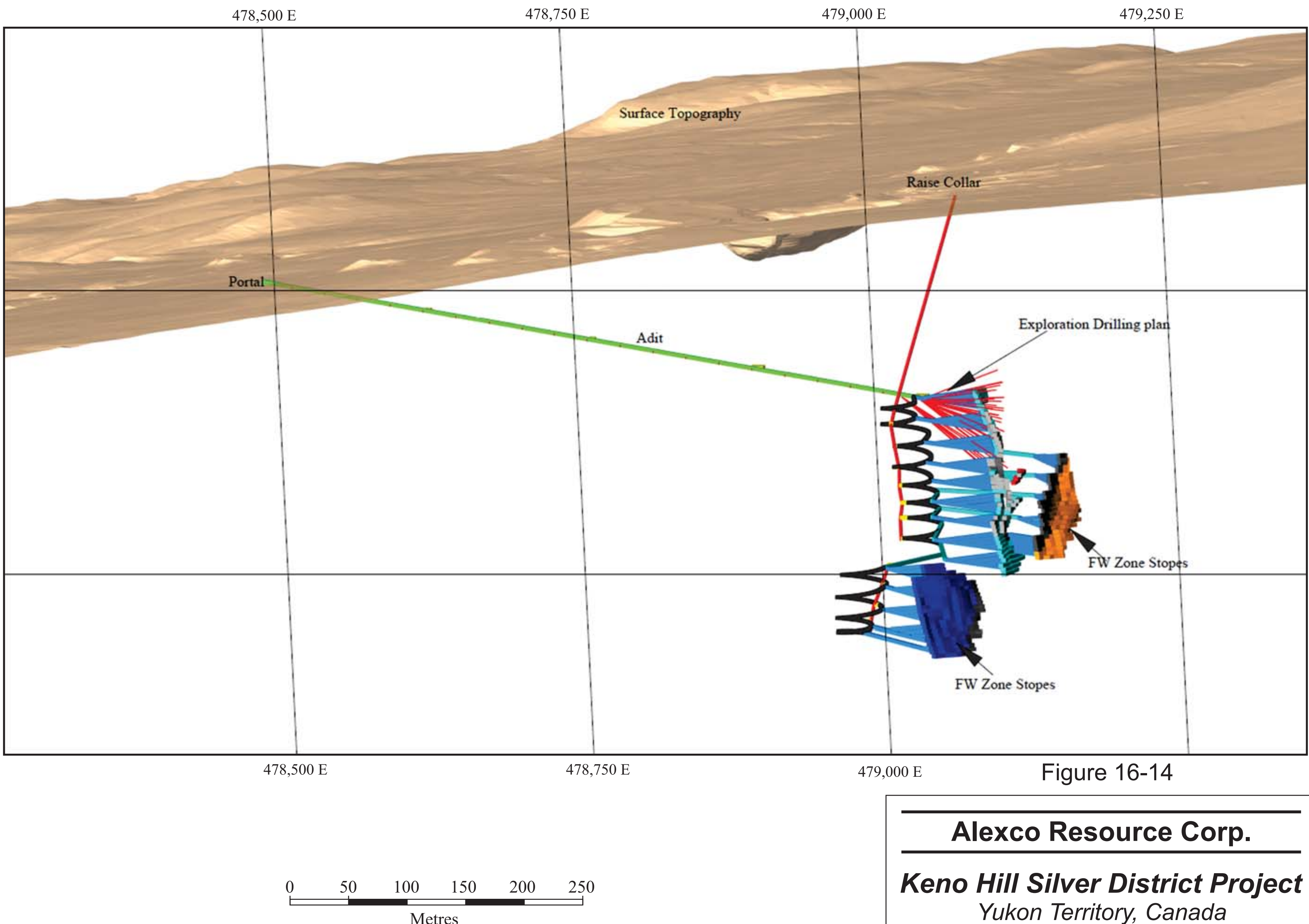


Figure 16-14

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bermingham Development with Topography and Exploration Plan

March 2017

Source: Alexco Resource Corp., 2017

www.rpacan.com

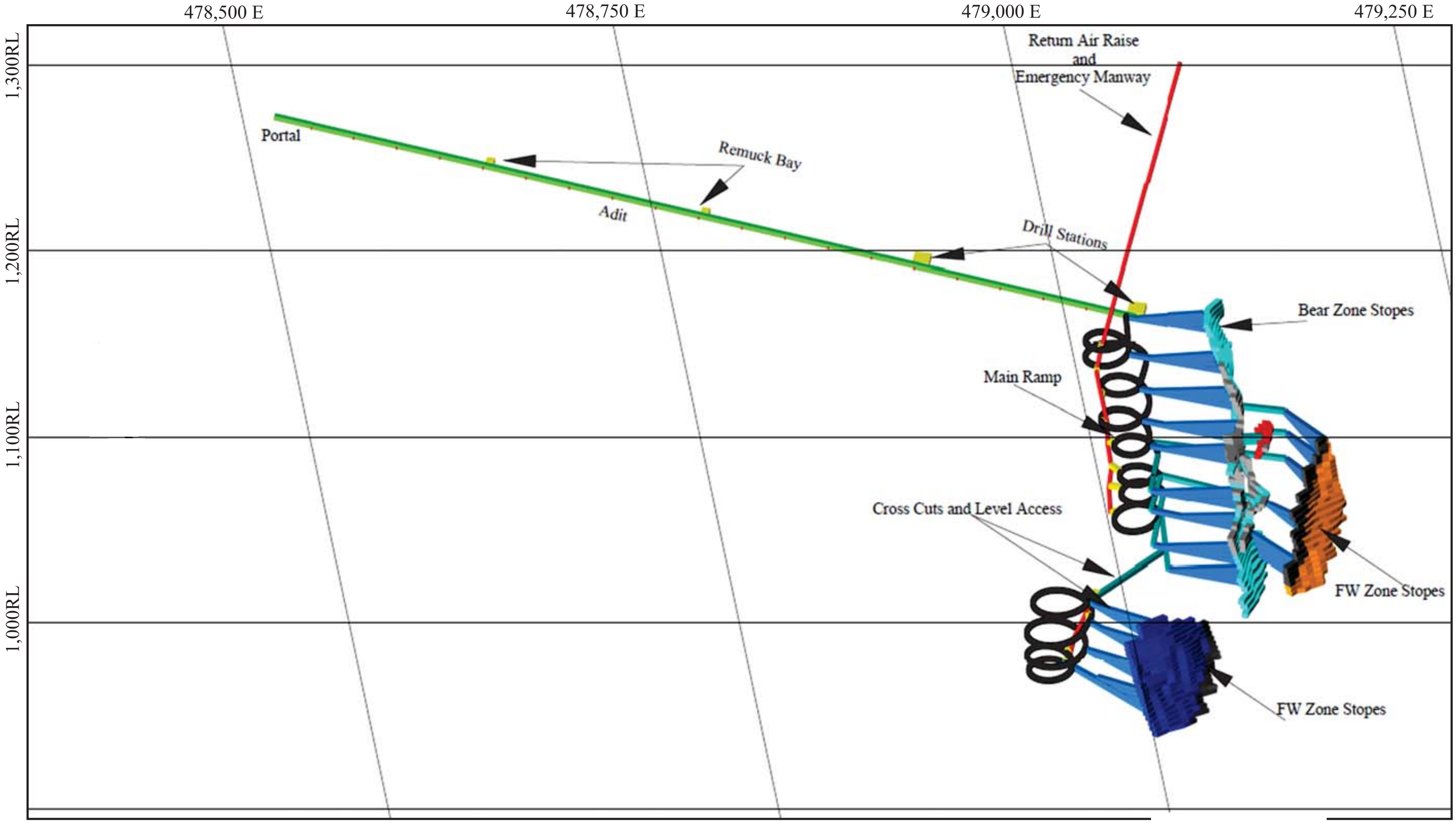


Figure 16-15

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bermingham Mining Plan

March 2017

Source: Alexco Resource Corp., 2017

VENTILATION

The planned ventilation flow for Bermingham is 130,000 cfm based on the equipment fleet and similar projects. Heated fresh air will be delivered centrally to the mine through a direct fired mine air heater at the portal. Fresh air will be directed through the mine and then exhausted by a raise to surface.

MINE DEWATERING

Based upon preliminary testing a groundwater inflow rate of 300 USgpm is assumed as the basis of a scoping level capital cost estimate. Dirty water will be collected in the mine and pumped in stages to a surface settling pond.

MAINTENANCE FACILITIES

Most of the mobile equipment maintenance will be performed in a surface shop, which will be constructed near the portal.

The maintenance department will have a fuel/lube truck, a mechanic's service truck, a tractor, and access to a scissor lift and a boom truck.

In addition to the mobile equipment, the mine maintenance department will be responsible for the stationary equipment consisting of air compressors, main ventilation fans, propane air heaters, underground electrical distribution system, and main dewatering pumps.

LUCKY QUEEN MINE PLAN

The Lucky Queen deposit is located approximately 10 km from Alexco's mill facility with an established haul road. The mine plan is based on re-entering the previously reconditioned drift to the starting point for the new ramp development. The development includes the ramp development and a ventilation raise. The Lucky Queen production is based upon mining the high grade portions of the deposit. The Lucky Queen production is summarized in Table 16-5. Mining in Lucky Queen is not planned to commence until 2023.

TABLE 16-5 LUCKY QUEEN PRODUCTION
Alexco Resource Corp. – Keno Hill Silver District Project

Lucky Queen	Unit	Value
Mill Feed Tonnes	t	80,959
Ag Grade	g/t	1,206
Au Grade	g/t	0.12
Pb Grade	%	2.63
Zn Grade	%	1.32
Ramp Development	m	989
Access Drift Meters (Xcut)	m	1,061
Cut & Fill Metres	m	1,990
LH Metres		-
Raise Metres	m	160
Slashing Metres		-
Waste Rock Broken (tonnes)	t	58,221
Backfill Required	t	60,544

The surface layout at the Lucky Queen is shown in Figure 16-16. The planned mining method is MCF with cemented backfill consisting of development waste rock. Figures 16-17 and 16-18 shows the planned mechanized cut and fill stoping included in the updated PEA LOM plan for Lucky Queen.

Primary access to the mine is through the reconditioned one kilometre-long 500 level track drift. The drift is too narrow for most underground haulage trucks. One of the major limiting factors to the mine's productivity will be the limited ability to effectively haul material in and out of the mine. Alexco removed the existing track during the reconditioning process and purchased a Young's 470 TZ underground haul truck rated at 6.4-tonne capacity. One truck is capable of hauling 100 tpd of vein material to the portal, while a second, additional truck will be required to haul the development waste rock to the portal or to the stope to make cemented rock fill. The requirement of a third truck as a spare should be reviewed in the future.

From the underground starting point of the main ramp development, ramp size increases to 3.5 m x 3.5 m and it will be driven at a maximum +15% gradient. A shop facility, refuge station, and main sump are planned for the area at the bottom of the ramp.

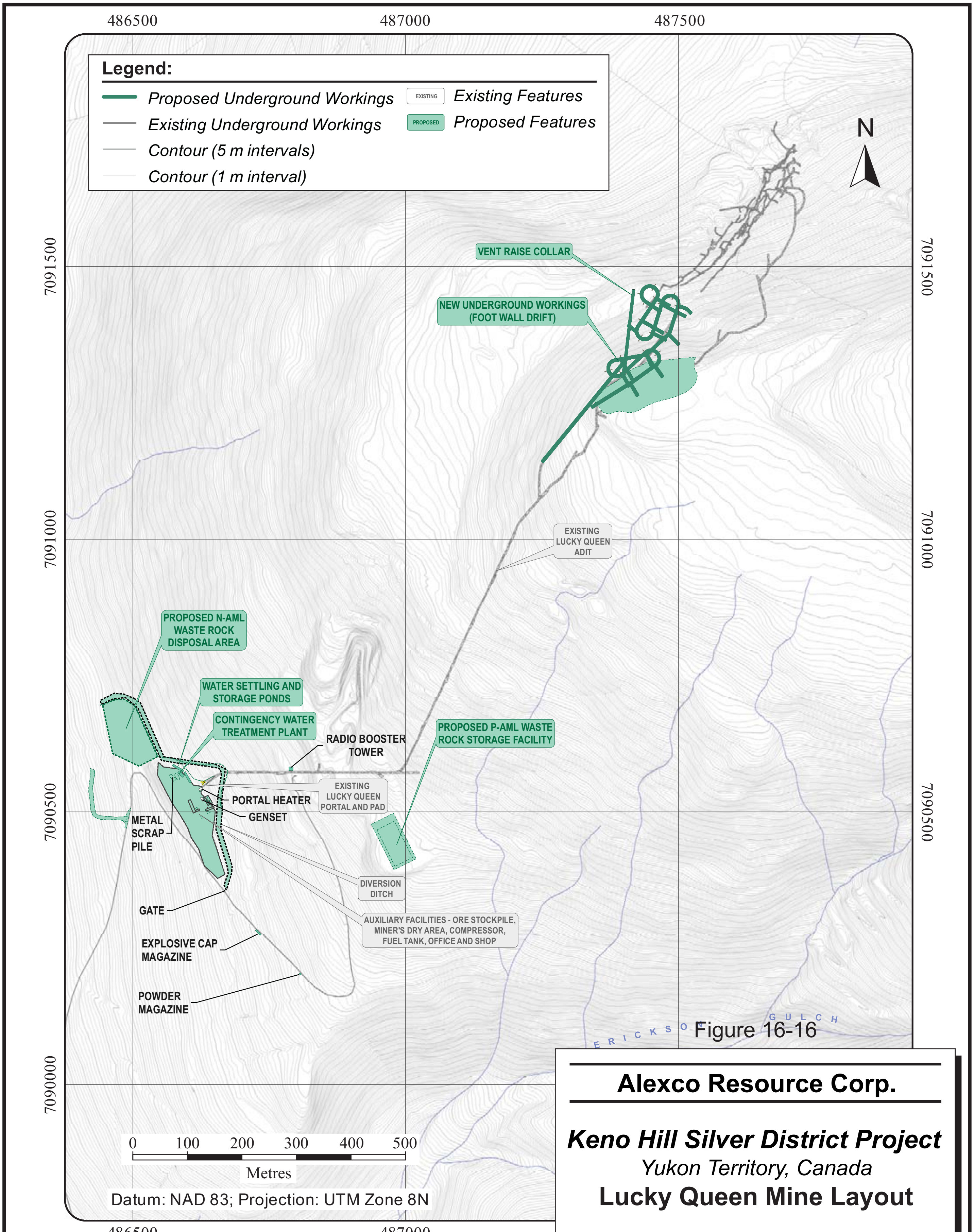


Figure 16-16

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Lucky Queen Mine Layout

March 2017

Source: Alexco Resource Corp., 2017.

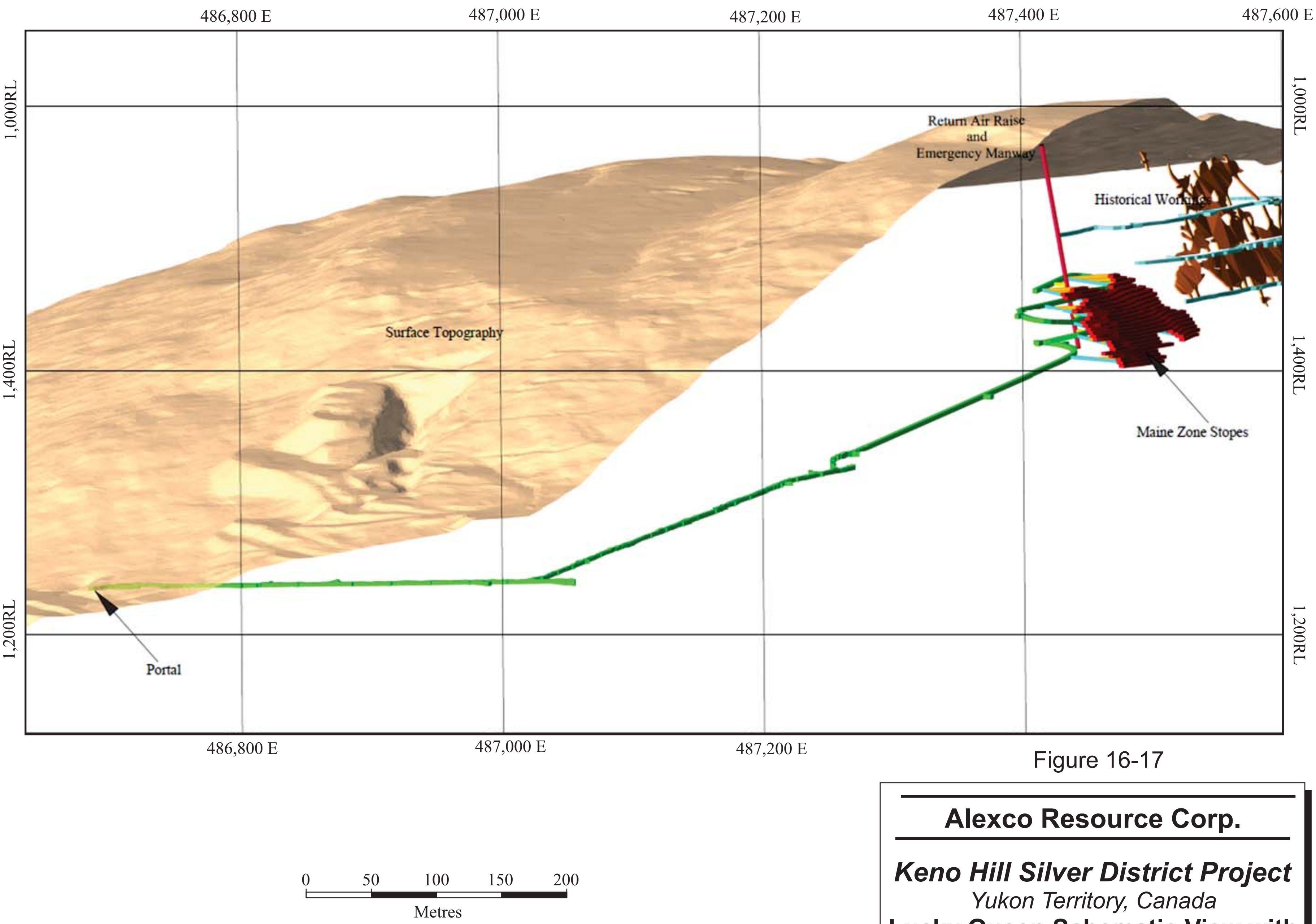


Figure 16-17

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Lucky Queen Schematic View with Topography and Exploration Plan

March 2017

Source: Alexco Resource Corp., 2017

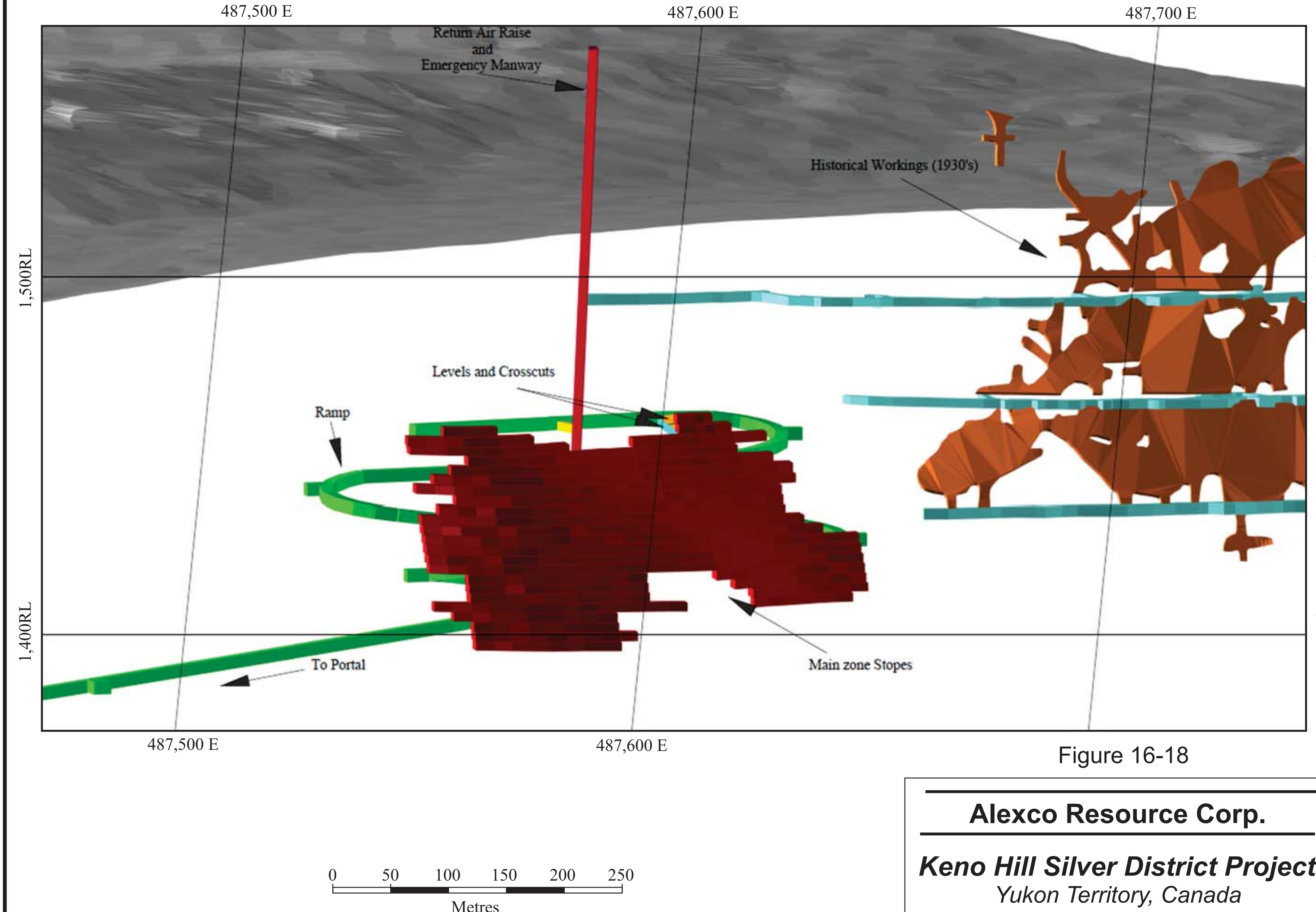


Figure 16-18

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Lucky Queen Schematic View Mining Area

March 2017

Source: Alexco Resource Corp., 2017

All underground development is planned on the footwall side of the veins to ensure the ramp is in stable ground and to optimize use of the attack crosscuts into the vein. Due to the flatter dip of the Lucky Queen deposit (averaging 45°) more lifts can be accessed economically from each attack crosscut. The primary crosscuts are planned at a -15% gradient with dimensions of 2.5m x 2.5m.

A main return air raise, and emergency escapeway, to surface is planned next to the main ramp. Fresh air will be delivered through the 500 level drift from the portal to the bottom of the ramp, then up the ramp to the active workings. After the auxiliary ventilation systems have flushed the active workings, the exhaust air will continue up the ramp to the next ventilation crosscut to be exhausted to surface. The return air raise will be equipped with a manway to provide a second exit from the mine. The raise collar on surface is planned in an area where bedrock is near surface. Road access exists to the area but needs to be upgraded if anything other than a 4 x 4 pickup truck is to visit the site.

The capital budget plan includes building a shelter on surface as it would take considerable time for surface vehicles to reach the raise collar area in the event of an evacuation of the underground workings.

DEVELOPMENT AND PRODUCTION SCHEDULES

A development and production schedule was prepared using Deswik software. Development work on the Lucky Queen main ramp was temporarily suspended in March 2013. At that time, the main ramp face location was 20 m past the sump. Development for the refuge station and sump is complete, however, the cut out for the small shop has not been made. This defines the Lucky Queen development start-up status for the planned re-start in 2023.

The mining rate in 2024 is 130 tpd. RPA considers this to be a high production rate for the planned extent of the Lucky Queen mining. RPA recommends a review of the planned Lucky Queen mining rate well prior to the commencement of mining operations at Lucky Queen. The production shown in Table 16-6 is the contribution of the Lucky Queen mine to the total planned plant feed. Note that the production schedule commences in year 7 (2023).

TABLE 16-6 LUCKY QUEEN PRODUCTION SCHEDULE
Alexco Resource Corp. – Keno Hill Silver District Project

Lucky Queen	Unit	Total	Year 7	Year 8	Year 9
Mill Feed Tonnes	t	80,959	9,400	51,096	20,463
Ag Grade	g/t	1,206	958	1,281	1,133
Au Grade	g/t	0.12	0.13	0.12	0.12
Pb Grade	%	2.63	1.78	2.73	2.76
Zn Grade	%	1.32	2.62	1.22	0.99
Development Metres (Ramp, Level)	m	989	660	329	-
Access Drift Metres (Xcut)	m	1,061	316	596	149
Cut & Fill Metres	m	1,990	272	1,267	451
LH Metres	m	-	-	-	-
Raise Metres	m	160	160	-	-
Slashing Metres	m	-	-	-	-
Development Tonnes (Ramp, Level)	t	35,217	23,477	11,740	-
Access Drift Tonnes (Xcut)	t	19,688	5,860	11,071	2,757
LH Tonnes	t	-	-	-	-
Cut & Fill Tonnes	t	80,959	9,400	51,096	20,463
Development Rate	m/d		4.0	4.0	4.0
Access Drift	m/d		3.0	3.0	3.0
Cut & Fill	m/d		3.0	3.0	3.0
Cut & Fill	t/m	41	-	-	-
Longhole	m/d		1.0	1.0	1.0
Longhole	t/m	#DIV/0!	-	-	-
Raise Rate	m/d		4.8	4.8	4.8
Raise Tonnes	t/m	2,977	2,977	-	-
Waste Rock Broken	t	58,221	32,652	22,812	2,757
Backfill Required	t	60,544	7,085	36,909	16,550

MINE SERVICES

MINERALIZED VEIN AND WASTE HANDLING

Vein material and waste will be handled underground by 6.5-tonne capacity haulage trucks. Trucks will be loaded at remuck bays on the ramp systems or at the level entrances and haul directly to the portal vein material and waste pads outside the portal. The 30-tonne surface haul trucks will haul material to the mill facility or to the proposed rock storage cell.

BACKFILLING

Backfill materials consisting of development waste rock and dry filtered tailings will be back hauled to underground storage locations. Approximately 3% cement by weight will be added to the backfill materials before placement into empty cut and fill stopes by an LHD. The LOM stope backfill requirement is estimated to be 60.5 kt.

VENTILATION

The measured air flow entering the Lucky Queen mine during the development stage via the 500 level portal was 9.8 cms, equivalent to 20,800 cfm. This was delivered by a 45 kW auxiliary ventilation fan through a 760 mm twin duct, with a number of booster fans required to overcome the losses caused by more than one kilometre of ducting to the face.

Once the return air raise is broken through to surface, the boosters and twin duct will be removed, the portal fans will be installed in their permanent location with mine air heaters, and fans will be installed in a bulkhead at the return air raise to create a push-pull ventilation system capable of 30 cms or 65,000 cfm. The expected requirement at full production, given the planned equipment, is 22 cms or 47,000 cfm.

Once the changeover is complete, fresh air will be delivered to the mine through the 500 level drift that connects to the ramp system. The fresh air will be distributed through the main ramp system to the work areas and then exhausted out through the return air raise to surface.

MINE DEWATERING

A main dirty water sump has been excavated at the bottom of the ramp at the 500 level elevation. All water collected in the active mining areas will be pumped in stages from sump to sump to this dirty water sump. The dirty water will then be pumped out the 500 level portal to a surface settling pond to be recycled.

No additional infrastructure should be required to complete the planned mining.

MAINTENANCE FACILITIES

Most of the mobile equipment maintenance will be performed in a small underground shop that is planned near the bottom of the ramp at the 500 level. The mine area is relatively small and it is not difficult to bring underground equipment to this shop. Major work will be done at the larger surface shop located at Elsa.

In addition to the mobile equipment, the mine maintenance department will be responsible for the stationary equipment consisting of air compressors, main ventilation fans, propane air heaters, the underground electrical distribution system, and the main dewatering pumps.

EQUIPMENT

Operations are planned using Alexco equipment. The equipment fleet will be a combination of existing units (repaired as necessary) and new or refurbished units purchased for the operation. Mining equipment will initially be used for the Bermingham development and the Bellekeno production, followed by use at Flame & Moth. Equipment for the Lucky Queen will be taken from the existing fleet and augmented with smaller scale units as necessary.

The underground equipment fleet is shown in Table 16-7.

TABLE 16-7 UNDERGROUND EQUIPMENT
Alexco Resource Corp. – Keno Hill Silver District Project

Type		Size	Unit	yr 1	yr 2	yr 3	yr 4	yr 5	yr 6	yr 7
LHD										
JS125	existing	1.25	yd	-	-	-	-	-	-	1
JS220	existing	2.2	yd	1	-	-	-	-	-	-
JS220	existing	2.2	yd	-	-	-	-	-	-	1
JS350	existing	3.5	yd	1	-	-	-	-	-	-
New LHD	new	3.5	yd	-	4	2	-	-	-	-
New LHD	new	2.2	yd	-	-	-	-	-	-	1
Drills										
Mini Jumbo	existing			-	-	-	-	-	-	1
HS105D Jumbo	existing			1	-	-	-	-	-	-
HS105D Jumbo	existing			-	1	-	-	-	-	-
Jumbo	new			-	3	-	-	-	-	-
Longhole	new			-	1	1	-	-	1	1
Bolters										
Tamrock Bolter	existing			1	-	-	-	-	-	-
Bolter	new			-	3	-	-	-	-	-
Trucks				-	-	-	-	-	-	-
EJC416D	existing	15	ton	1	-	-	-	-	-	-
EJC416D	existing	15	ton	-	1	-	-	-	-	-
Young 470T7	existing	7	ton	-	-	-	-	-	-	1
Young 470T7	new	7	ton	-	-	-	-	-	-	1
Volvo A340	existing	35	ton	-	1	-	-	-	-	-
Volvo A340	existing	35	ton	-	1	-	-	-	-	-
Truck	new	15	ton	-	3	-	-	-	-	-
Utility Vehicles										

Type		Size	Unit	yr 1	yr 2	yr 3	yr 4	yr 5	yr 6	yr 7
03451 JUT 41	existing			-	1	-	-	-	-	-
Scissor Lift	new			-	2	1	-	-	-	-
Tractors	new			1	4	1	-	-	-	-
CAT D-3 Dozer	existing			-	-	-	-	-	-	-
Shotcrete Sprayer/Forklift	existing			-	1	-	-	-	-	-
Shotcrete Sprayer/Forklift	new			-	-	2	-	-	-	-
Service Truck	new			-	-	1	-	-	-	-

Alexco also owns and operates a surface mobile equipment fleet as shown in Table 16-8. There are also pickups and light equipment such as pumps, light plants, and miscellaneous equipment at the site.

TABLE 16-8 SURFACE EQUIPMENT FLEET
Alexco Resource Corp. – Keno Hill Silver District Project

Type	Units
Heavy Highway Truck	4
Medium Highway Truck	3
Cat 930 Loader	3
Cat 966 G Loader	1
Cat D7R Dozer	1
Cat CS 56E Packer	1
Hitachi Zaxis 270LC	1
KX 161 Excavator	1
Skidsteer/forklift	4
Compressor electric (750 cfm)	2
Diesel Compressor 750 cfm	1
Diesel Compressor 800 cfm	1
Cat generators (350-450 kW)	2
Cat generators (100 kW)	1

MANPOWER

Alexco plans to undertake planned future operations with its own employees, without the involvement of a general mining contractor. Some specialty tasks such as diamond drilling, alimak raising, and raise boring are expected to be contracted services.

Table 16-9 shows the estimated annual manpower for the planned operation.

TABLE 16-9 ANNUAL MANPOWER ESTIMATE
Alexco Resource Corp. – Keno Hill Silver District Project

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9
Management	2	10	10	10	10	10	10	10	10
Mine General	-	43	45	47	47	47	49	47	47
Bellekeno Mine	-	30	-	-	-	-	-	-	-
Flame & Moth Mine	-	28	46	46	48	50	50	50	42
Onek	-	-	-	-	-	-	-	-	-
Lucky Queen Mine	-	-	-	-	-	-	30	30	30
Bermingham	-	26	26	26	26	26	26	-	-
Mill Operations	-	45	45	45	45	45	45	45	45
Site Services	6	18	18	18	18	18	18	18	18
Site Environmental	1	2	2	2	2	2	2	2	2
Health and Safety	-	5	5	5	5	5	5	5	5
Total	**9**	**207**	**197**	**199**	**201**	**203**	**235**	**207**	**199**

LIFE OF MINE PLAN

MINE PRODUCTION

The annual mill feed and waste production for the four mines in the plan are summarized in Table 16-10.

TABLE 16-10 MINE PRODUCTION SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

Mill Feed	Unit	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Total
Bellekeno	(t 000)	-	37.1								37.1
Flame & Moth	(t 000)		20.3	94.9	94.9	94.9	94.9	94.9	94.9	93.2	682.9
Bermingham	(t 000)		7.2	51.1	51.1	51.1	51.1	8.4	-	-	220.0
Lucky Queen	(t 000)							8.4	47.4	25.1	81.0
Total	(t 000)	-	64.6	146.0	146.0	146.0	146.0	111.7	142.3	118.3	1,021.0
Waste											
Bellekeno	(t 000)	-	2.3								
Flame & Moth	(t 000)		132.6	108.0	39.1	68.0	31.4	57.0	10.1	23.5	469.6
Bermingham	(t 000)	24.8	52.4	52.6	68.7	54.5	21.9	5.8	-	-	280.8
Lucky Queen	(t 000)							32.7	22.8	2.8	58.2
Total	(t 000)	24.8	187.3	160.6	107.8	122.5	53.3	95.5	32.9	26.3	808.6
											-
Total											
Bellekeno	(t 000)		-	-	-	-	-	-	-	-	-
Flame & Moth	(t 000)	-	152.9	202.9	134.0	162.9	126.3	151.9	105.0	116.7	1,152.5
Bermingham	(t 000)	24.8	59.7	103.7	119.8	105.6	73.0	14.3	-	-	476.0
Lucky Queen	(t 000)		-	-	-	-	-	41.0	70.3	27.9	164.0
Total	(t 000)	24.8	212.6	306.5	253.8	268.5	199.2	207.2	175.2	144.6	1,792.5
Backfill											
Bellekeno	(t 000)	21.9									21.9
Flame & Moth	(t 000)		10.9	60.0	61.6	56.7	57.3	58.3	57.9	60.1	422.7
Bermingham	(t 000)		4.4	30.3	32.0	34.1	38.9	7.5	-	-	147.1
Lucky Queen	(t 000)							7.1	36.9	16.6	60.5
Total	(t 000)	21.9	15.2	90.2	93.6	90.9	96.1	72.8	94.8	76.6	652.2

Backfill will be a mix of dry filtered tailings and development waste rock, with cement added when needed.

PLANT FEED SCHEDULE

Table 16-11 shows the planned combined plant feed schedule. Processing is scheduled to commence in year 2 and continue until the end of year 9. The plant production schedule is shown in Table 16-12.

TABLE 16-11 ANNUAL MILL PRODUCTION
Alexco Resource Corp. – Keno Hill Silver District Project

	Tonnes (000)	Gold g/t	Silver g/t	Lead (%)	Zinc (%)
Year 1					
Year 2	65	0.13	931	7.73%	5.73%
Year 3	146	0.36	1,089	3.29%	4.54%
Year 4	146	0.43	919	3.06%	4.70%
Year 5	146	0.45	788	3.34%	4.82%
Year 6	146	0.33	681	2.84%	5.19%
Year 7	112	0.43	743	3.57%	4.66%
Year 8	142	0.40	812	2.16%	3.27%
Year 9	118	0.45	798	2.92%	4.67%
TOTAL	**1,021**	**0.39**	**843**	**3.31%**	**4.62%**

TABLE 16-12 PRODUCTION SCHEDULE
Alexco Resource Corp. – Keno Hill Silver District Project

		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Total
Mill Feed	'000 t		65	146	146	146	146	112	142	118	1,021
Au Grade	g/t		0.13	0.36	0.43	0.45	0.33	0.43	0.40	0.45	0.39
Ag Grade	g/t		931	1,089	919	788	681	743	812	798	843.00
Pb Grade	%		7.73	3.29	3.06	3.34	2.84	3.57	2.16	2.92	3.31
Zn Grade	%		5.73	4.54	4.70	4.82	5.19	4.66	3.27	4.67	4.62
Contained Au	oz		262	1,694	1,998	2,129	1,531	1,535	1,836	1,714	12,699
Contained Ag	k oz		1,936	5,112	4,313	3,697	3,199	2,668	3,716	3,035	27,674
Contained Pb	tonnes		4,997	4,804	4,472	4,869	4,141	3,989	3,071	3,458	33,801
Contained Zn	tonnes		3,707	6,626	6,867	7,033	7,579	5,203	4,658	5,528	47,200
Recovery											
Pb Concentrate	%										
Au			50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Ag			94.3%	95.5%	94.2%	93.0%	91.9%	92.5%	93.2%	93.1%	93.6%
Pb			95.9%	94.6%	94.5%	94.6%	94.4%	94.7%	94.0%	94.4%	94.5%
Zn			9.4%	8.6%	8.5%	8.5%	8.4%	8.6%	8.5%	8.5%	8.6%
Zn Concentrate	%										
Au			20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Ag			2.7%	1.5%	2.8%	4.0%	5.1%	4.5%	3.8%	3.9%	3.6%
Pb			1.1%	2.4%	2.5%	2.4%	2.6%	2.3%	3.0%	2.6%	2.5%
Zn			87.6%	88.4%	88.5%	88.5%	88.6%	88.4%	88.5%	88.5%	88.4%
Recovered Amount											
Pb Concentrate											
Au	oz		131	847	999	1,064	766	767	918	857	6,350
Ag	k oz		1,825	4,884	4,063	3,438	2,938	2,468	3,464	2,825	25,906
Pb	tonnes		4,792	4,544	4,226	4,608	3,908	3,778	2,886	3,266	32,008
Zn	tonnes		349	568	585	601	640	448	397	470	4,058
Zn Concentrate											
Au	oz		52	339	400	426	306	307	367	343	2,540
Ag	k oz		52	75	121	148	164	119	140	119	938
Pb	tonnes		56	115	112	116	108	91	93	89	779
Zn	tonnes		3,247	5,859	6,076	6,221	6,712	4,598	4,121	4,892	41,726
Grades in Concentrate											
Pb Concentrate	tonnes		7,372	6,991	6,501	7,089	6,013	5,813	4,440	5,024	49,243
Au grade	g/t		0.55	3.77	4.78	4.67	3.96	4.11	6.43	5.31	4.01
Ag grade	g/t		7,701	21,728	19,439	15,085	15,200	13,209	24,266	17,490	16,363
Pb grade	%		65	65	65	65	65	65	65	65	65
Zn grade	%		4.7	8.1	9.0	8.5	10.6	7.7	8.9	9.3	8.24
Zn Concentrate	tonnes		6,494	11,718	12,152	12,442	13,423	9,197	8,242	9,785	83,453
Au grade	g/t		0.25	0.90	1.02	1.06	0.71	1.04	1.39	1.09	0.95
Ag grade	g/t		250	199	309	370	381	403	528	377	349.44
Pb grade	%		0.9	1.0	0.9	0.9	0.8	1.0	1.1	0.9	0.93
Zn Grade	%		50	50	50	50	50	50	50	50	50

17 RECOVERY METHODS

The mill facility started operating in late 2010 and commercial production was declared in January 2011.

PROCESS FLOWSHEET

The process facility is based on traditional unit operations for the recovery of sulphide mineral concentrates, namely lead and zinc concentrates. The silver values in the district ores are strongly associated with lead minerals and the lead concentrates typically contain approximately 90% to 95% of the mill feed silver values. Overall, silver typically represents 70% to 80% of the value of the ores in the district. Detailed analysis of a large inventory of test work results indicates that lead and silver recoveries are typically dependent on the respective head grades for these two metals. Zinc recovery is typically defined or affected by the ratio of lead to zinc, with high lead ratios causing zinc losses in the lead concentrate and therefore reducing zinc recoveries. Detailed analysis of the recovery models is contained in Section 13 of this report.

Unit operations within the Alexco facilities include crushing of run-of-mine material, grinding for preparation of flotation feed, selective flotation for the production of lead and zinc concentrates, concentrate dewatering and tailings thickening and filtration.

Material is crushed in a two-stage closed circuit crushing plant which includes a primary jaw crusher followed by cone crusher and vibrating screen, the cone crusher operates in closed circuit with the vibrating screen. Material is crushed to approximately minus 12mm and the crushed material is placed on a 400 tonne stockpile prior to being withdrawn into the grinding/flotation process. The grinding circuit includes two stages of grinding to achieve a throughput of 400 tpd. The primary mill is a 180 kW mill followed by a secondary mill of 180 kW. The milling circuit is operated with a classifying cyclone producing a slurry with a P_{80} of 180 microns. Cyclone overflow is fed to the flotation plant for the recovery of lead and zinc minerals with silver values typically recovered with a lead concentrate.

Flotation processes use agitated forced-air mechanical cells in all applications.

Rougher and scavenger silver-lead flotation concentrates feed a three-stage lead cleaner flotation circuit generating a final silver-lead concentrate. The lead scavenger tailings feed the zinc rougher scavenger flotation circuit to recover the zinc minerals generating the final, low pyrite tailings, which are stored in a dry stacking facility.

The zinc rougher flotation concentrate feeds a three-stage cleaner flotation circuit, which produces the final zinc concentrate and a high pyrite tailing. The silver-lead concentrate and the zinc concentrate are thickened and filtered prior to transport off site. The high pyrite tailings are thickened and used for underground backfill. Regrinding of either lead or zinc rougher concentrates is currently not included in the mill facility flowsheet.

Figure 17-1 is a schematic process flow diagram for the mill facility with the main circuit elements.

Reagents used in the plant include flocculent, copper sulphate, frother (MIBC), collectors (SIBX, 3418A), sodium sulphite, zinc sulphate, and carbon dioxide. All of these reagents are standard operating practice for lead/zinc feed flotation circuits. A review of the mill facility production data for 2012 indicated the typical reagent consumptions were similar to other operations treating comparable grades and mineralogy.

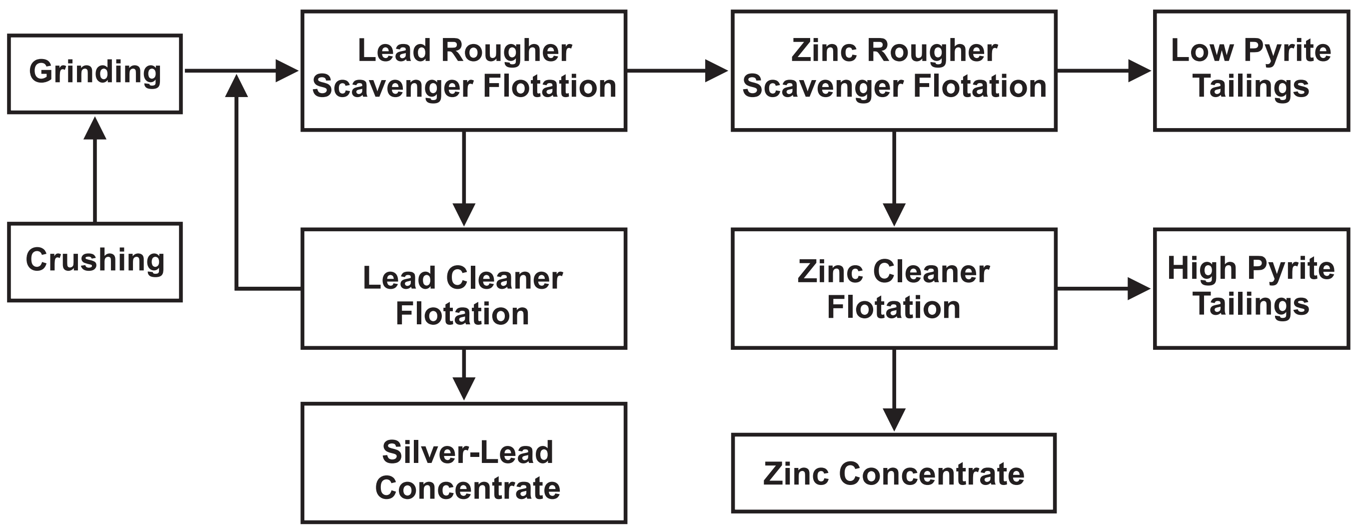


Figure 17-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Mill Facility Simplified Process Flow Diagram

March 2017

Source: SRK Consulting, 2014.

DESIGN CRITERIA

The mill facility was designed to process 408 tpd at an overall plant availability of 92%. The target grind size was at P_{80} size of 174 µm and the Project included the option of a regrind mill before the lead cleaner circuit. The key design criteria are shown in Table 17-1. Despite the design criteria, the plant was built without the lead regrind mill.

TABLE 17-1 MILL FACILITY DESIGN CRITERIA
Alexco Resource Corp. – Keno Hill Silver District Project

	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)
Head Grades	9.5	5.6	871	0.4
Lead Concentrate Grades	70	2.3	6,185	1.5
Zinc Concentrate Grades	0.5	54	1.1	300
Concentrate Recovery, %	97	88	72	94
General				
Mill Throughput (tpd)				408
Availability (%)			92	
Primary Grind P_{80} Size (µm)				174
Lead Regrind Grind P_{80} Size (µm)			45	

2012 MILL PERFORMANCE

In 2012, the mill facility processed 94,800 t of Bellekeno vein material generating 13,000 t of lead-silver concentrate and 5,700 t of zinc concentrate. The average daily throughput was 260 tonnes per day at 89% availability. The maximum monthly throughput for the year was 320 tonnes per day, with peak production in September and October.

The 2012 mill facility lead recoveries ranged from 84% to 98% with a concentrate lead grade of 55% to 68%. The silver recoveries to silver-lead concentrate ranged from 83% to 97% with silver grades from 4,231 g/t to 5,270 g/t. Zinc grade in the silver-lead concentrate ranged from 4% to 9% with recovery as high as 26%.

The zinc recovery to zinc concentrate ranged from 46% to 64% with a final zinc grade of 40% to 49%. The silver recoveries to zinc concentrate ranged from 2% to 6% and the maximum lead recovery to zinc concentrate was 6% with a maximum grade of 7% Pb. Zinc metallurgical performance did not meet design criteria nor was it comparable to test work results. Zinc metallurgical performance appears to be detrimentally impacted by excessive use of zinc depressants, unfavorable (low) retention times in primary grinding and excessively long retention times in the lead flotation circuit.

PLANT MODIFICATIONS

With the current equipment, the mill facility has not demonstrated the ability to achieve the target throughput of 400 tpd. In order to address this limitation, Alexco retained Starkey & Associates (S&A) of Oakville, Ontario, to perform a grinding circuit throughput analysis. In February 2013, S&A conducted a one hour benchmark survey on the grinding circuit and collected samples for grindability testing (Starkey & Associates, 2013).

Based on the results of the comminution analysis, S&A recommended the installation of a second ball mill in series after the existing mill. According to the S&A report, the addition of a secondary 1.8 x 3 m ball mill with 130 kW of installed power would allow the mill facility to process 430 tpd (at 89% availability) of material with similar hardness to the feed currently being processed. Alexco has already purchased the second ball mill and it will be installed prior to resuming milling operations. As part of this mill installation, the classification circuit will be upgraded to include classification cyclones rather than the current vibrating classifying screen. This change in classification will result in finer grinding of sulphide minerals when compared to gangue minerals and will also significantly increase retention time within the grinding equipment.

S&A reports the current mill grind P_{80} size at 137 µm; however, simulations to forecast mill performance with the additional mill are presented in their report with a grind P80 size of 180 µm.

The target grind size for the upgraded grinding plant is 180 microns which is in line with mineralogical analysis of all materials tested in the various metallurgical test work programs.

It is also recommended that on-stream analysis equipment be installed to monitor the flotation performance on a real-time basis and assist in minimizing reagent usage. Over-use of reagents is likely the key cause of lower concentrate grades as selectively is lost with excess reagent usage.

On-going evaluation of the flotation process will be required as the plant is optimized and operated on a long term basis. Technical support should include a flotation engineer and a metallurgical technician to support the operating staff when the operation re-starts and be retained during the life of the operation.

There are no required changes to crushing requirements or concentrate de-watering as these components of the process are significantly oversized. The crushing plant has capabilities in the range of 100 tonnes per hour and the concentrate de-watering circuit is approximately three times the size required as the base metal feed grades are reduced from the original design criteria.

RECOVERY AND CONCENTRATE GRADE ESTIMATION

Test work has been completed on all of the four deposits to various levels of completeness. A majority of the test work has been open-circuit tests, with limited locked cycle tests being completed. The test work results are also discussed in Section 13. The lead and silver recovery has been shown to be dependent on the feed grade of these metals and shown in the following two graphs, are these recovery relationships.

It is expected that the operational grinding and flotation plant can be operated to meet the recovery data available from the various laboratory test work programs.

FIGURE 17-2 LEAD RECOVERY AS A FUNCTION OF LEAD FEED GRADE

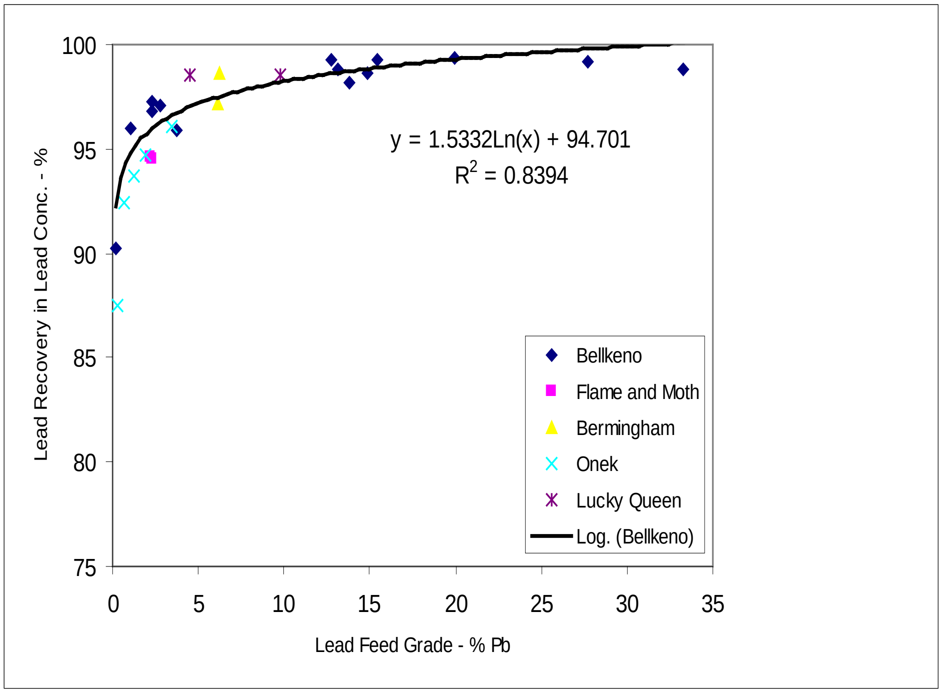


FIGURE 17-3 SILVER RECOVERY AS A FUNCTION OF SILVER FEED GRADE.

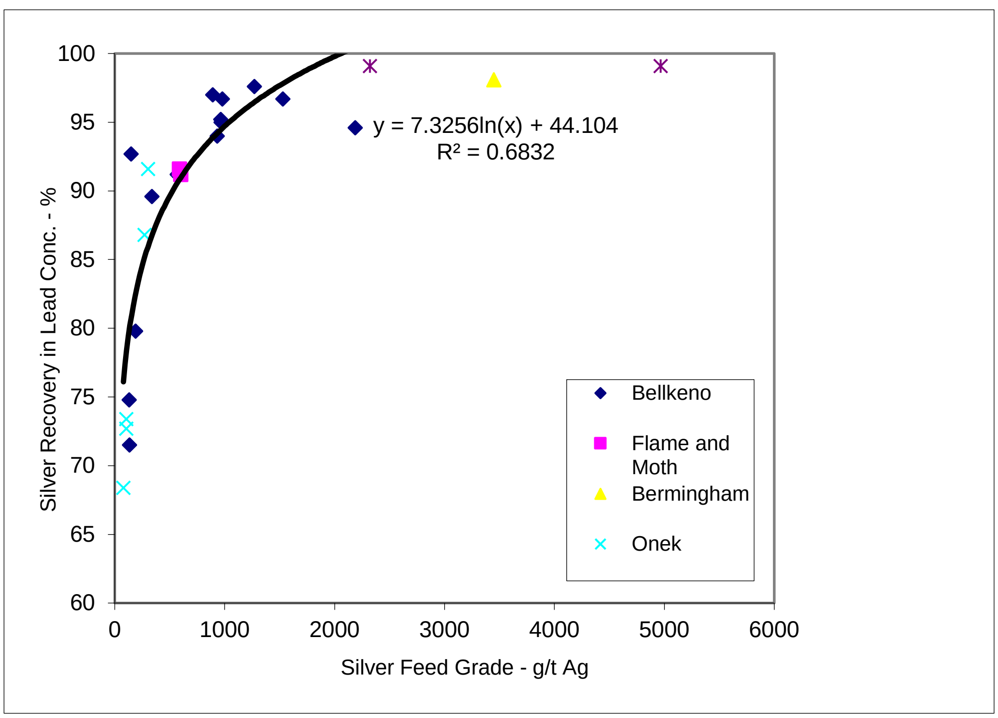
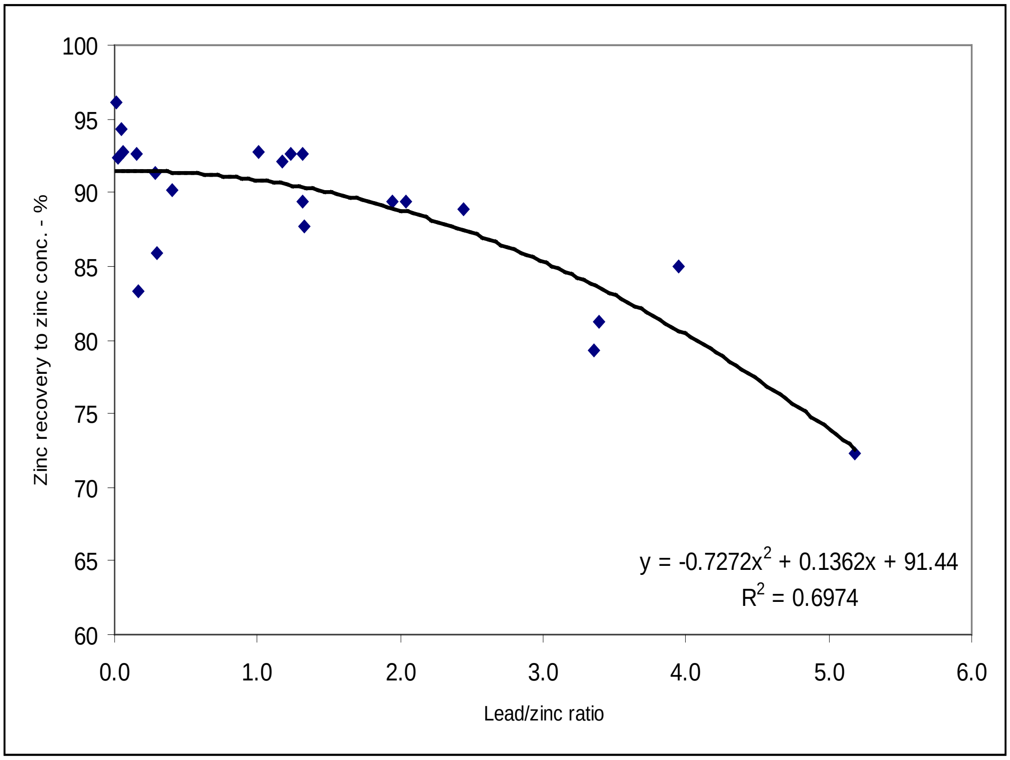


FIGURE 17-4 ZINC RECOVERY AS A FUNCTION OF LEAD/ZINC RATIO



Generally speaking, the operating plant recoveries were slightly below that predicted from test work for lead and silver. It is expected that plant modifications will result in bring the plant recoveries into line with test work results. The current difference for lead and silver recovery losses due to plant performance problems is in the order of 1% to 3% for lead and silver.

The zinc circuit in the production plant has performed well below expectations both in terms of zinc recovery and zinc concentrate quality. This is due exclusively to surface chemistry issues related to zinc depression and zinc activation, which will benefit from changes to the grinding plant configuration and higher throughput. Online analysis of process streams will provide insight to the impacts of reagent on the zinc flotation performance and it is expected that significant improvements will be seen as the process plant is re-started.

LIFE OF MINE SUMMARY

Table 17-2 presents a summary of the average LOM feed grades and LOM concentrate grade targets.

TABLE 17-2 OVERALL LIFE-OF-MINE ESTIMATES
Alexco Resource Corp. – Keno Hill Silver District Project

	Pb (%)	Zn (%)	Ag (g/t)
Head Grades	3.0	4.3	788
Lead Concentrate Grades	65	4	17,073
Zinc Concentrate Grades	0.4	50	654
Concentrate Recovery, %	**94**	**88**	**93***

* Silver recovery to lead concentrate only

Mine production will come from four different mines over the planned nine year LOM. A majority of the mine production will come from the Flame & Moth deposit. Reduced tonnages are seen in years 2 and 8 owing to mining schedules, the balance of the mine production represents approximately 400 metric tonnes per day of mill throughput.

Lead concentrate production will be in the range of 5,000 tpa to 7,000 tpa and this concentrate is expected to contain approximately 17,000 g/t Ag. Zinc concentrate production will be in the range of 9,000 tpa to 11,000 tpa.

The base metal and silver grades during the LOM are on average, quite range bound and are shown in Table 16-12. There are expected to be short term highly variable mill feed grades and stockpile management and mill feed blending can be used to ensure that feed grades are managed to benefit the production plant.

18 PROJECT INFRASTRUCTURE

ELSA FACILITIES

The administrative offices and first aid facilities are currently based in Elsa, Yukon in a large facility that also accommodates the exploration group offices and core processing area. Maintenance and warehouse facilities are also located at Elsa. The warehouse building in Elsa is a two-story building with warehousing on both levels and a fully serviced maintenance shop on the northern end of the bottom floor. This building is used as a centralized warehouse/surface equipment facility for the Project operations and requires no further upgrades.

FLAT CREEK CAMP FACILITIES

The currently licensed Flat Creek camp facilities include a trailer camp, kitchen facility, and drillers dry assembled at the old Flat Creek town site (part of Elsa). The camp has a total capacity of 90 permanent beds. There are four refurbished houses located nearby with a total of 28 rooms, and an additional 20 rooms available in a bunkhouse. A fourth bunkhouse located adjacent to the houses is primarily used for seasonal surface exploration programs. The entire capacity of the camp facilities is 140 rooms. The facilities will require expansion to accommodate the estimated 230 operations employees in addition to the ongoing surface exploration employees and contractors.

Alexco is licensed to withdraw water from Flat Creek and an existing groundwater well for domestic use. A water treatment facility located within the Flat Creek camp consists of 5,000 L of storage, a water softener, UV treatment, and chlorination. Alexco has two sewage disposal permits at Elsa: one for the Flat Creek camp and one for the houses. Waste water is treated in septic tanks and released via drain fields.

A Commercial Dump Permit # 81-012 is currently held from YG Environment in accordance with the *Environment Act* Solid Waste Regulations as well as the *Public Health and Safety Act*. This permit was renewed effective January 1, 2012 and will continue to be used in support of mine operations. In compliance with this permit, upgrades to the location of solid waste disposal included upgrades to the electric bear fence and the addition of a cattle guard to prevent animals from entering the facility.

MILL FACILITY

The current facilities at the mill facility include mine and mill offices and dry, an assay lab, first aid facilities, and the mill and DSTF complex, as seen in Figure 18-1. The mine geology and engineering office buildings from Bellekeno were moved to the mill area to serve as a central office and dry facility for all mining operations.

A metallurgical and assay laboratory conducts all basic testwork to monitor and improve the process flowsheet metallurgy and efficiency, and to support environmental monitoring.

The assay laboratory was constructed as a pre-packaged unit consisting of two retrofitted 40 ft shipping containers converted into laboratory modules, which are located adjacent to the mill building. The laboratory is equipped with the necessary analytical instruments to provide all routine assays for the mine, plant, and environmental quality control monitoring. The equipment included allows the preparation and analysis of approximately 80 samples per 12-hour shift. Standard analysis includes acid digestion of samples followed by analysis on an atomic absorption spectrometer.

AREA HAUL ROAD SYSTEM

Alexco has constructed a series of access and haul roads to route mine traffic around the Keno City community.

All traffic between Elsa and the mill facility and/or the Bellekeno mine is routed along the Christal Lake road and subsequently the Bellekeno haul road.

During mine production, heavy truck traffic from Lucky Queen will be routed along the Keno City bypass road to/from the Bellekeno haul road. Light truck traffic from Lucky Queen will continue to be routed through Keno City during mine operations. The Keno City bypass road was developed from the Wernecke road, crossing Sign Post road, along the historic Onek power line, to the Onek 990 portal, crossing Lightning Creek road and the Onek access bridge across Lightning Creek to the Bellekeno haul road. The bypass road is approximately 2.1 km long and six to nine meters wide as per Yukon Workers' Compensation Health and Safety Board regulations and the identified haul road type (i.e., single or double lane).

BELLEKENO MINE SURFACE INFRASTRUCTURE

The Bellekeno East portal is fully equipped with all infrastructure needed to operate the underground mine including miners' office buildings with septic storage, maintenance shop, miners' dry area, warehouse containers, and surface layout area.

A temporary potential acid metal leaching (P-AML) storage pad is located near the Bellekeno East portal.

Water discharge from the Bellekeno mine is treated at the Bellekeno 625 adit portal water treatment facility.

LUCKY QUEEN MINE SURFACE INFRASTRUCTURE

The existing Lucky Queen portal pad, developed on a historic waste dump, will be used to support mining operations at Lucky Queen.

Mine support facilities, such as the miners' dry area, equipment and supplies laydown area, offices and trailers, and fuel storage are in place on the Lucky Queen portal pad.

A set of fresh air fans with mine air heaters are also installed at the portal. Compressed air and power were being supplied by a portable diesel compressor and a diesel generator set mounted in a sea container. The plan is to replace the diesel compressor with an electrical compressor once the planned power line extension is completed.

A planned return air ventilation raise will provide additional ventilation to the underground workings and function as an emergency escapeway to surface. A small building will be constructed over the ventilation raise surface break through and signage will be installed warning of the open hole hazard.

Non-acid metal leaching (N-AML) waste rock generated from development and mining at Lucky Queen will be deposited in a new N-AML waste rock storage facility, which will be built as an extension to the historic waste rock storage area at Lucky Queen. P-AML waste rock is expected to be deposited in a P-AML waste rock storage facility constructed nearby.

A settling pond is located on top of the historic waste rock storage area near the Lucky Queen portal and is used to settle suspended solids from adit water prior to discharge. A diversion ditch is proposed above the Lucky Queen portal and the non-acid or metal leaching (N-AML) waste rock storage facility.

Fuel and petroleum products are held in two Envirotanks to supply fuel for mine development and production operations: one 28,500 L main tank and a 2,100 L "day tank" for the diesel generator.

At Lucky Queen, up to 4,500 kg of explosives will be stored in an appropriate location on the portal bench.

FLAME & MOTH MINE PLANNED SURFACE INFRASTRUCTURE

The Flame & Moth mine will use a combination of planned and existing infrastructure at the mill site. Existing infrastructure consists of geology and engineering office trailers, maintenance shop and fuel storage facility.

The planned infrastructure in the area of the proposed Flame & Moth mine portal, northeast of the mill building, consists of:

- a miners' office trailer and miners' dry facility;
- cold storage structure;
- air compressors;
- settling pond for mine water discharge, with clarified water supplying the underground mine.

The fresh air raise collar location is planned south of the crusher and coarse vein material stockpile (Figure 18-1). The main ventilation fans and mine air heater will be located at the raise collar.

ELECTRICAL POWER

The Project is supplied with electrical power from a hydroelectric plant near Mayo and connection to the Yukon wide electrical grid. In the past, this facility had sufficient capacity to supply electricity to the mill and all of the various mines. However, after the closure of UKHM, Yukon Energy Corporation (YEC) built a transmission line from Mayo to Dawson City to allow the shutdown of diesel power generation in Dawson City. There remains ample capacity on the grid to power the combined mine and mill operations at a 400 tpd throughput.

The Yukon and federal governments announced in August 2009 approval and financing for the expansion of the hydroelectric plant in Mayo (Mayo B Project) as well as the extension of the power line from Pelly Crossing to Stewart Crossing, thus completing the northern grid and tying in Mayo/Elsa with the entire southern Yukon electrical generating and distribution systems. The power line extension was completed in 2010 and is able to provide ample power for any future mine throughput increases at Bellekeno and throughout the rest of the Project.

A new 69 kV/4.16 kV 3 MVA substation was installed to deliver power to the mill facility and associated infrastructure.

Alexco owns several substations in the area, including the Elsa substation, the Onek substation, and the Bellekeno 625 portal substation. It also owns the transmission line connecting the latter two. Power for the Bellekeno mine is now provided exclusively by the YEC electrical distribution system.

Electrical power for Lucky Queen was initially provided by on-site diesel-powered generators and eventually will transition to grid power. Under full operating conditions, Lucky Queen is expected to require 750 kW. A transmission line (via surface teck cable) will be established along Wernecke road to the site, as shown on Figure 18-1.

Power for the camp is supplied from the local grid that runs through Elsa to Keno City.

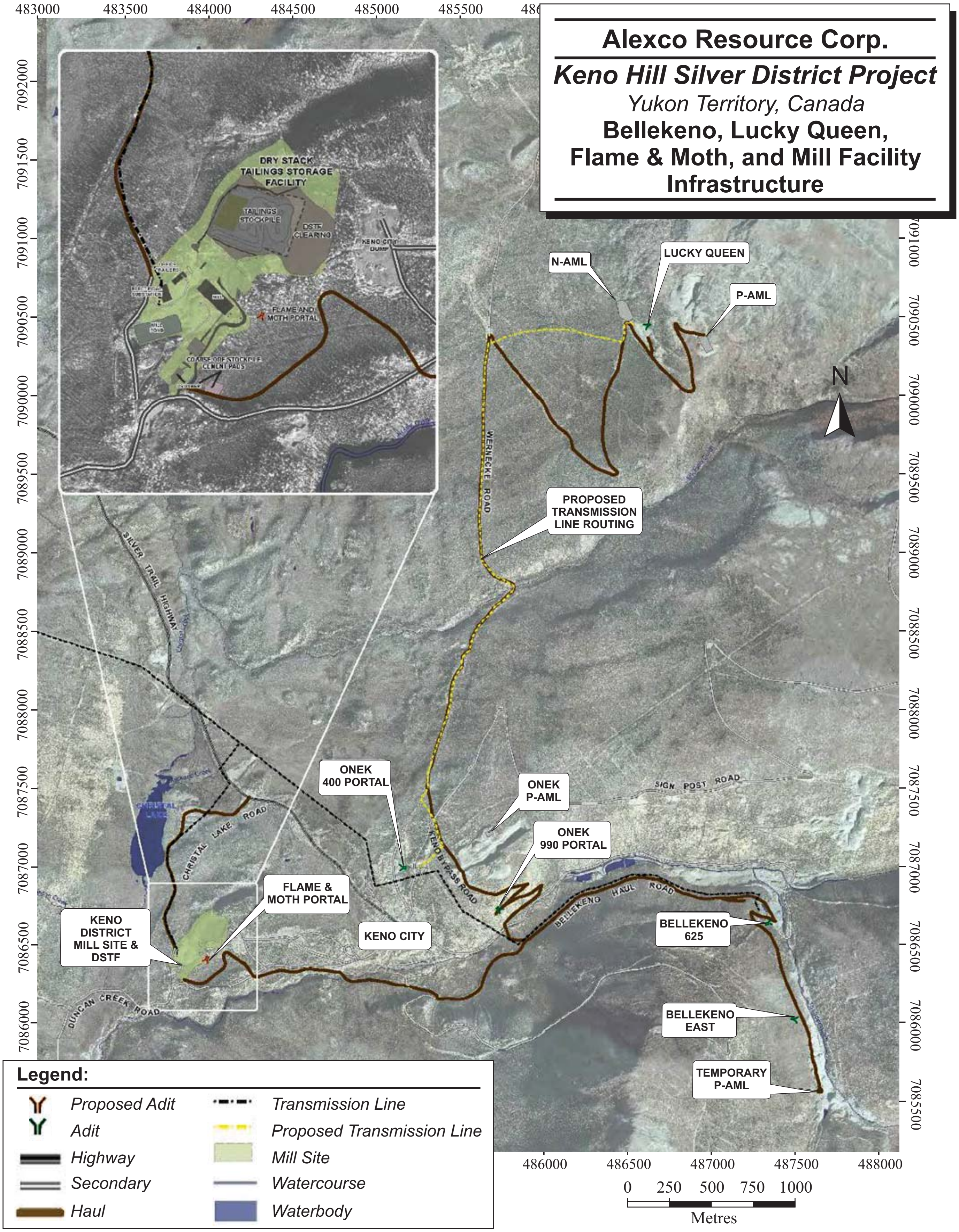
Figure 18-1

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Bellekeno, Lucky Queen, Flame & Moth, and Mill Facility Infrastructure



March 2017

Source: Alexco Resource Corp., 2013.

19 MARKET STUDIES AND CONTRACTS

MARKETS

The principal commodities at KHSD are freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured. RPA used metal prices of:

- Silver: US$18.60/oz in 2018, US$19.35/oz thereafter.
- Zinc: US$1.20/lb in 2018, 2019, and 2020 and US$1.00/lb thereafter
- Lead: US$1.00/lb in 2018, 2019, and 2020 and US$0.94/lb thereafter
- Gold: US$11,300/oz.

The currency exchange was C$1.00:US$0.76 for 2018 and 2019, C$1.00:US$0.79 for 2020 and C$1.00:US$0.80 thereafter.

CONTRACTS

CONCENTRATE SALES

Previously the production of both the silver/lead concentrate and the zinc concentrate from the mill facility was being sold under contract with Glencore Ltd. The terms of the contract were reviewed and renegotiated annually to reflect current market conditions

The terms of the current contract are included in the economic model in order to generate NSR values for the LOM plan.

OTHER CONTRACTS

Alexco has entered into contracts with the following companies to support the operations of the Project:

- Canadian Lynden Transport is contracted by Alexco to transport lead and zinc concentrates to a smelter in North America and to back haul supplies to the site.
- Yukon Energy provides power under contract to various substations and to the Bellekeno mine and mill facility.
- Superior Propane provides propane under contract to Bellekeno with the largest consumption for mine air heating in the winter.

RPA has reviewed the concentrate off-take charges and considers the rates to be appropriate. The remaining contracts are considered to be normal business contract with local suppliers.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

SITE AND REGULATORY CONTEXT

The Bellekeno, Lucky Queen, Flame & Moth deposits, and Bermingham deposits are all part of the former UKHM claims, which include a number of historical mines and processing operations within the Keno Hill Silver District. The historical operations in the district are spread out over 237.44 km^2, and include nine major mines, three tailings disposal areas, and dozens of different shafts and adits. The Bellekeno, Lucky Queen and Bermingham sites have historical mine workings, waste rock storage areas, and mine water discharges, whereas the Flame & Moth site only has minor historical surface mine workings and a waste rock storage area that were reclaimed during the construction of the Keno District Mill.

The property is located within the Yukon Plateau (North) Ecoregion and is characterized by rolling upland areas and wide open valleys. Vegetation communities include Northern boreal forests along the lower slopes and valley bottoms, and open scree slopes above treeline. Many of the valley bottoms include open peatlands, fens, and meadows. A variety of wildlife, birds, and fish species are present in the area. The Keno Hill Silver District is situated in the traditional territory of the First Nation of Na-cho Nyak Dun. The Bellekeno mine is located on Sourdough Hill while Lucky Queen is located on Keno Hill. The Bermingham deposit is located on Galena Hill and the Flame & Moth site is located immediately adjacent to the Keno District Mill. All of the sites are located in within 5 km of Keno City, which has roughly 12 permanent residents, and 50 km from the community of Mayo, which has a population of approximately 450 residents. The region supports mineral development activities (including placer mining), tourism, and recreation and traditional pursuits.

Alexco and its subsidiary, ERDC, have a unique arrangement with the Government of Canada in which Alexco is responsible for the care, maintenance, and closure of the historical mines, with government and company funding provided to address the historical liabilities. Alexco is indemnified from the historic environmental liabilities. The company, along with territorial, federal, and First Nation governments, is responsible for developing a district-wide closure plan that addresses these historic environmental liabilities arising from past mining activities.

However, some high priority activities have already been implemented. Currently, active water treatment is carried out at five locations in the Keno Hill Silver District.

Under this agreement, Alexco is responsible for environmental assessment, permitting, compliance, and costs associated with its ongoing exploration and new mine development activities. Additionally, if a new mine is brought into production including the use of infrastructure associated with a historic mine, terrestrial liabilities (i.e., waste rock storage areas and roads) and water related liabilities located within a designated “Production Unit” become the responsibility of Alexco. For example, water treatment from the Bellekeno workings (which are intermixed with historical workings) is now Alexco’s responsibility. At this time, Bellekeno is the only area that has been defined as an active Production Unit. However, once commercial operations commence, the Lucky Queen, Flame & Moth and Bermingham mining areas would be classified as Production Units for which Alexco would be responsible for historic terrestrial and water related liabilities that are contained within the new active mining footprint.

ENVIRONMENTAL ASSESSMENT AND PERMITTING

Existing approvals for the care and maintenance, exploration, and mine development activities are summarized in Table 20-1. These existing licences cover all aspects of the mine development at the Bellekeno, Lucky Queen, and Flame & Moth mines. Although licences are also in place for Onek, there are currently no plans to bring this deposit into production.

TABLE 20-1 RELEVANT ASSESSMENT AND REGULATORY APPROVALS – KHSD PROJECT
Alexco Resource Corp. – Keno Hill Silver District Project

Purpose	YESAA Approval	Quartz Mining Act Approval	Water Use Licence
Onek and Lucky Queen Mine Production	Project#2011-0315 Decision Document	Quartz Mining Licence (QML-0009, amendment 1, expires 2025)[e]	Type A Water Use Licence QZ09-092, amendment 1 expires 2020[d]
Bellekeno Mine Production	Project # 2009-0030 Decision Document	Quartz Mining Licence (QML-0009, expires 2025)[a]	Type A Water Use Licence QZ09-092, expires 2020[b]
Flame & Moth Mine Production	Project # 2013-0161 Decision Document	Quartz Mining Licence (QML-0009, Amendment 2, expires 2031)[a]	Type A Water Use Licence QZ09-092, Amendment 1 expires 2020[d]
Advanced Exploration	Project # 2008-0039 Decision Document	Class 4 Mining Land Use Approval (Lucky Queen00240, expires 2018)	Type B Water Use Licence QZ07- 078/Amendment 1 QZ10-0606, expires 2018[c]
Care and Maintenance	Project # 2006-0293	N/A	Type B Water Use Licence QZ12-057 expires 2018[d]

* a) http://www.emr.gov.yk.ca/mining/pdf/mml_khsdmo_QML_0009.pdf
** b) www.yukonwaterboard.ca/registers/quartz/QZ09092/Volume%204/10-1%20Water%20Use%20Licence.pdf
*** c) www.yukonwaterboard.ca/registers/quartz/QZ10-060/Licence.pdf
**** d) http://www.yukonwaterboard.ca/WATERLINE/
*****e) http://www.emr.gov.yk.ca/mining/pdf/mml_khsdmo_QML_0009.pdf

The Bellekeno and Lucky Queen mines have all permits and authorizations in place to commence full scale mine production. The Flame & Moth deposit has in place an amended Quartz Mining License QML-0009 which authorizes mine development to commence. Before milling of material from the Flame & Moth deposit, an amendment to Water Use Licence QZ09-092 is required. Additional minor approvals will also be required.

Under the Yukon Environmental and Socio-economic Assessment Act (YESAA) process, amendments to the Quartz Mining Licence and Water Use Licence, require a review by the Yukon Environmental and Socio-economic Assessment Board (YESAB). The review for the Flame & Moth project was completed on October 5, 2014, and YESAB has made a recommendation to the Yukon Government to allow the Project to proceed, subject to a number of specified terms and conditions (YESAB 2014). A Decision Document was issued by Yukon Government on November 4, 2014. The Quartz Mining Licence was amended in February 2016 to allow underground development and mining to commence at the Flame & Moth deposit.

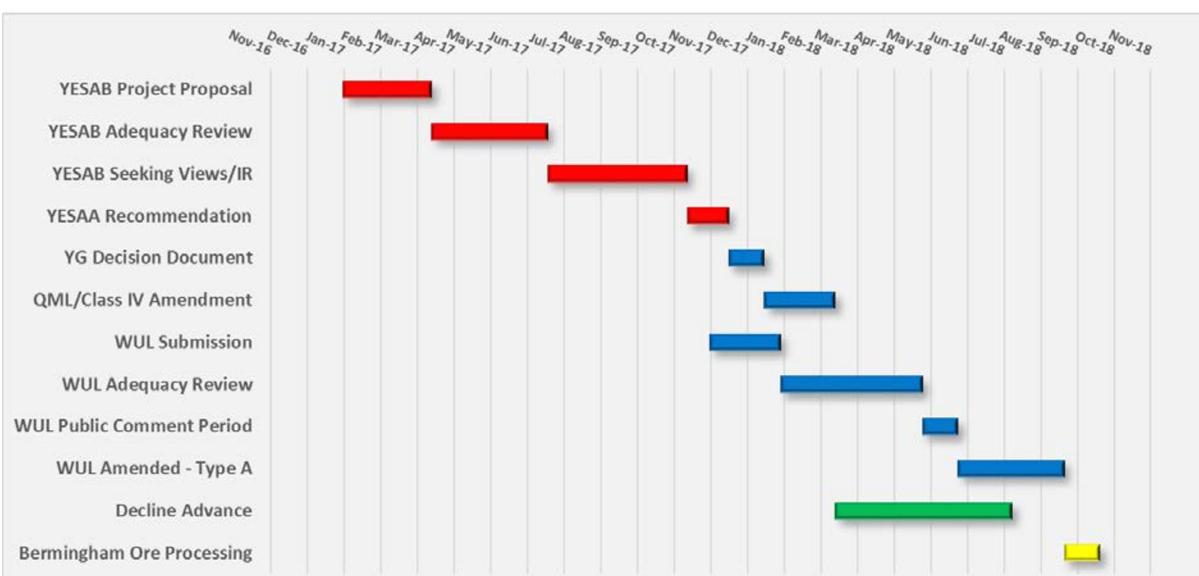
The terms and conditions for the Flame & Moth development, outlined in the Decision Document, include additional water treatment requirements, provision for a liner under the

DSTF, additional equipment to reduce noise from the mill area crusher, and increased air quality and noise monitoring, and community consultation to address community concerns regarding air quality and noise related issues. The water license amendment process is well advanced and the final permitting phase for Flame & Moth is to hold a public hearing. The public hearing process is expected in early Q2 2017 followed by issuance of the water license amendment in Q2 2017. As noted, development and construction of the Flame & Moth decline is fully authorized and can commence prior to issuance of the amended water license.

The Bermingham deposit has in place a Class IV Mining Land Use permit that authorizes surface exploration to occur. Underground development and advanced exploration drilling, will commence under an amendment to the current Class IV authorizations. For the basis of environmental permitting timelines, it is assumed that underground development will need to be assessed through YESAB and that the water license will be amended to allow commercial milling of material from the Bermingham deposit. The Bermingham permitting timeline includes a two-step process which includes first permitting Bermingham to allow underground decline construction and bulk sampling followed by permitting to allow milling and tailings storage in the DSTF.

A schedule to complete the Bermingham deposit environmental assessment and permitting process is presented in Table 20-2. The colours in the table indicate common types of activities (red – project proposal, blue – water licence amendment).

TABLE 20-2 BERMINGHAM PERMITTING SCHEDULE



ENVIRONMENTAL AND SOCIO-ECONOMIC CONSIDERATIONS

The key environmental and socio-economic considerations associated with this Project are:

- water quality (water treatment discharge criteria, metal leaching, acid rock drainage, and nutrient release);
- noise/traffic/dust;
- land, resource use, and heritage resources; and
- community and First Nations relations.

WATER QUALITY CONSIDERATIONS

The underground mine workings, waste rock, and tailings are all potential sources of metal leaching. Residues from blasting may also be a source of ammonia and nitrate from these areas.

Information on the water quality and the geochemistry of waste rock and tailings was provided in the YESAB project proposal (Alexco, 2012a), and in annual water license monitoring reports from the site, and is summarized below. Information on the water quality and the geochemistry of waste rock and tailings for Flame & Moth was provided in the YESAB project proposal (Alexco, 2014). Water quality considerations for Bermingham will be similar to those already presented for Flame & Moth.

MINE WORKINGS

Adit drainages from Bellekeno have neutral pH levels but elevated total zinc concentrations. Active mining operations have also resulted in slightly elevated ammonia concentrations. A lime precipitation water treatment plant is in operation and is effective in treating Bellekeno mine water to remove metals and ammonia prior to discharge. Treatment for metals is likely to continue over the long-term, and these costs are included in the approved Reclamation and Closure Plan (RCP) for the Bellekeno mine. The current approved RCP indicates that the Bellekeno 625 water treatment ponds will be converted to a passive treatment system (bioreactor) for treatment of long-term adit drainage.

Historical adit drainages at Lucky Queen have metal concentrations below the licensed discharge criteria, with slightly elevated zinc concentrations that are below effluent quality standards. The water is currently directed to an unlined settling pond for control of total suspended solids (TSS), and is then allowed to infiltrate into the ground. Flows are small (approximately 1 L/s), and there is approximately 3 km of distance before groundwater flows from this area would reach Christal Creek, suggesting that attenuation mechanisms should be sufficient to protect down gradient water quality.

The new workings at Lucky Queen will not intersect the historical workings and will be above the current groundwater table, as understood at present. However, the new workings will connect with the 500 level adit, and, therefore, any water from this new area will be allowed to mix with water from the historical area. Water balance estimates (Alexco, 2012a) indicate that the new workings represent a 23% increase in surface area for meteoric water infiltration, resulting in a potential increase in flows from 56 m^3/day to 85 m^3/day.

During operations, much of this water will be consumed as part of operations, but at closure, this additional water would likely report to the 500 level adit drainage. It is possible that some of the flow originating from both the historical and the new workings could infiltrate into the groundwater system. It is assumed that this water will continue to meet discharge criteria. The water license amended for Lucky Queen requires a groundwater investigation to be completed once mining commences at Lucky Queen. This investigation will ensure that there is adequate monitoring in the down gradient environment to assess potential changes in flow or chemistry resulting from the new workings, and will consider some sampling and testing of water from within the mine to assess whether the water quality data from the portal is representative of the water quality from the mine as a whole.

The majority of the Flame & Moth mine workings are expected to be below the water table; however, the portal will be developed approximately 20 m above the water table. As such, long-term discharge from the site is not anticipated.

A review of the existing groundwater data in the mill area and a drilling program were undertaken to characterize the potential mine inflow rates and water quality associated with the Flame & Moth deposit. Water encountered in the underground workings is anticipated to be similar to or better than that observed at the Bellekeno 625 adit. Water balance estimates indicate a potential adit discharge during production of 2,912 m^3/day (33 L/s), when the mine reaches its deepest levels. Water that is dewatered from the proposed workings will be pumped to surface and directed to a water treatment plant to be constructed on the mill site.

The mill pond currently has a design storage capacity of 5,000 m^3 and has effluent quality standards listed in water licence QZ09-092 for a discharge up to 10 L/s via land disposal (not exceeding 0.8% of the flow in Christal Creek at KV-6). A new 6,500 m^3 pond will be constructed as part of the Flame & Moth water treatment plant.

The new underground workings at Bermingham will not be connected to the historical underground workings. At present, there is approximately 1 L/s of drainage from the historic Bermingham adit that is not treated and infiltrates into the ground. Two bore holes were drilled into the Bermingham deposit area in Q4 2017 to provide groundwater infiltration rates and estimates for permitting and mine planning requirements. Drilling and testing of the two boreholes was by Midnight Sun Drilling Company using a truck-mounted air-hammer drill rig. The borehole locations were determined based on subsurface geologic mapping interpreted from mineral exploration core holes drilled by Alexco. The drilling/testing program conducted at the Bermingham site has provided useful information for characterizing the hydrologic properties of the rock mass and predicting dewatering flow rates during ramp excavation. Using a steady-state equation for radial groundwater flow, the best-estimate maximum inflow rate to the ramp is 3.25 L/s. The maximum inflow rate used for design is 6.5 L/s, which is a conservative value that includes a 2.0 factor-of-safety.

WASTE ROCK

Prior to mining, an assessment of acid rock drainage and metal leaching (ARD/ML) potential of waste rock from Bellekeno was completed. Approximately 26% of the rock was identified as being P-AML, while the remainder was identified as N-AML. Alexco is using a field segregation method to separate these materials during mining and direct them to an appropriate disposal location. Monitoring data presented in the annual reports (Alexco, 2012b) indicates that the screening criteria currently used to segregate P-AML and N-AML waste rock is effective.

The YESAB project proposal (Alexco, 2012a) documents geochemical characterization work completed by Access Consultants on Lucky Queen waste rock. The geology and mineralization at Lucky Queen was reported to be similar to that of Bellekeno. The main rock types are quartzite, graphitic schist with interbedded carbonaceous quartzite and schist, greenstone, and sericite schist. Acid base accounting tests and metal analyses were used to characterize the ARD/ML potential of the waste rock from this site. Analysis of the Lucky Queen data set (Alexco, 2012a) indicated that while much of the rock is unlikely to produce net acidity and/or metal leaching, a significant proportion is indicated to be P-AML. The following key distinctions between Lucky Queen and Bellekeno are presented below:

- A higher overall proportion of samples at Lucky Queen are indicated by acid base accounting testing and geochemical screening criteria as P-AML when compared with Bellekeno.

- The Lucky Queen deposit contains generally lower base metal concentrations (especially zinc) than the Bellekeno deposit, both within the veins and in the surrounding country rock, leading to less likelihood of metal leaching from these materials.

- While sulphur content and net acid potential are similar at Lucky Queen, calcium content and neutralization potential are significantly lower than Bellekeno.

Based on this information, Lucky Queen was estimated to have approximately 35% P-AML rock and 65% N-AML rock.

The geochemical characterization program for Flame & Moth included static testing of 50 drill core samples for metals, acid base accounting, and shake flask extraction, five kinetic field leach bins, and a humidity cell on N-AML waste rock (Access 2013). Key findings of the program are presented as follows:

- The geology and style of mineralization is similar to that of the other deposit areas, resulting in similar geochemical characteristics. However, more of the rock will be from areas outside of the mineralized zones, resulting in more favourable geochemical characteristics (smaller proportion of P-AML rock) within the planned development and excavation area at Flame & Moth.

- Results of kinetic testing (humidity cell, weeks 0-56) on one Flame & Moth waste rock composite sample show moderate amounts of sulphate and low levels of leachable metals.

- Field barrels constructed with rock classified as N-AML under the proposed Flame & Moth geochemical screening criteria showed higher levels of leachable metals (loid). However all were below the existing effluent quality standards and loading rates calculated from the field barrels were generally in line with, or lower than, those scaled from the humidity cell data (AKHM 2014)

Seepage monitoring data for P-AML rock stored in the Bellekeno East temporary waste rock storage facility (Station KV-78b) was sampled on three occasions in 2011 and 2012. Seepage pHs were neutral, however, cadmium and zinc concentrations were somewhat elevated (cadmium ranging from 0.004 to 0.016 mg/L and zinc from 0.17 to 0.81 mg/L), indicating that the more mineralized waste rock is a potential source of metals in any of the surface waste rock storage facilities. There was no seepage data for any N-AML waste rock. Therefore, the potential for metal leaching is unknown. Nonetheless, the total footprint area of the new waste rock sources are expected to be relatively small, and the flows associated with these are minor in comparison to the adit drainages.

A geochemical characterization program commenced in Q4 2016 to assess the waste rock from Bermingham. A total of 22 samples from five separate drill holes within the Bermingham deposit representing typical lithologies associated with Bermingham country rock were tested. In general, country rock consists of quartzites with interspersed graphitic schists. Acid base accounting testwork was completed along with the commencement of kinetic humidity cell tests.

TAILINGS

Tailings are stored in a DSTF located near the mill. The tailings from Bellekeno and Lucky Queen are non-acid generating. Based on testwork, tailings from Flame & Moth are estimated to be non-acid generating and, therefore, will not result in any appreciable differences in water quality. Alexco has completed geochemical characterization of tailings generated from Flame & Moth metallurgical testing that confirms this assumption. Locked cycle tests on Bermingham mineralization is underway and tailings produced from these tests will be subject to similar ABA and kinetic testing to demonstrate that the Bermingham tailings are consistent with other deposits and properly stored in the DSTF.

Seepage and runoff are currently directed to the mill for use as make-up water. At closure, the DSTF will be covered, and the mill pond will be converted to a bioreactor to remove any residual metals that originate from this area. Progressive reclamation has already begun on the DSTF with final slopes being re-contoured and revegetated with a soil cover.

NOISE, VIBRATIONS, DUST AND TRAFFIC CONSIDERATIONS

Due to the close proximity of this site to the community of Keno City, noise, dust, and traffic have been high profile issues at this site, and are the subject of ongoing discussions with the community. Several specific issues were raised during the YESAA process, and have been included in the decision document and Quartz Mining Licence. Mitigation measures that have already been implemented or that are proposed by the company include limiting certain activities (e.g. crusher operations) and types of traffic to the hours of 7 am – 7 pm, constructing a building around the crusher and installing a sound dampening enclosure around the Flame & Moth ventilation fan.

Dust is closely managed and monitored at the site. The dust monitoring data are compared to the Yukon ambient air standards.

Traffic-related issues have resulted in the construction of bypass roads and signage to separate public traffic from mine operations in key areas. A new bypass road has been constructed to haul vein material from Lucky Queen to the mill facility. No additional roads are required for the Flame & Moth mine. Roads to access the Bermingham portal location will require upgrading, mainly widening and installing properly sized berms.

LAND, RESOURCE USE, AND HERITAGE RESOURCES

The local community and First Nations have expressed concerns regarding continued access for recreation and tourism in the area, subsistence harvesting and traditional use, sport and commercial hunting, fishing and trapping, mineral development, and preservation of historical resources. Although impacts are expected to be minor, Alexco is working with the various stakeholders to address these concerns.

COMMUNITY AND FIRST NATIONS RELATIONS

Alexco has met regularly with stakeholders and First Nations regarding their ongoing operations as well as the new plans for Flame & Moth, presenting detailed information about the Project and seeking expression of concerns. Additional consultation facilitated by the regulators is also part of the formal YESAA and licencing processes.

Alexco has signed a Comprehensive Cooperation and Benefits Agreement (CCBA) with the First Nation of Na-cho Nyak Dun (FNNND) that recognizes the rights, obligations, and opportunities of the two parties. Individual chapters in the Agreement include human resources (employment and training), contracting, a formal drug and alcohol policy, business contracting and business partnering opportunities, environmental issues, and financial resourcing for the Agreement including legacy funding contributions.

Since environmental matters occupy prime importance with FNNND, the Agreement includes detailed discussion about respecting and protecting the environment, including enhanced opportunities for FNNND to be involved in environmental management of all operations, from mining through to closure and reclamation. The Agreement also describes a “Cooperative Engagement Process” that allows for early engagement of FNNND in the mine permitting process. The CCBA was reviewed and amended in May 2016 and there are no material changes to the CCBA.

WASTE AND WATER MANAGEMENT PLANS

WASTE ROCK

Annual monitoring reports record the actual waste rock production (Alexco, 2011; 2012b). Bellekeno mine production between 2010 and 2012 generated 58,535 tonnes of N-AML waste rock, which was brought to surface and used for road construction and re-handled for underground backfill. A total of only 2,059 tonnes of P-AML waste rock was stored in in the temporary P-AML waste rock storage facility and upon temporary suspension of operations all of this P-AML material was used as underground backfill. The remainder of the development rock was used as underground backfill.

As part of this PEA, the amount of waste rock that would be produced from Bellekeno is estimated at 2,300 t, while the planned use of waste rock for backfill requirements is approximately 7,400 t. Therefore, 12,600 t of waste rock will be removed from surface storage. It is assumed that all of the P-AML rock from Bellekeno will remain underground as backfill.

For the Lucky Queen mine, approximately 116,000 t of waste rock will be produced and of that approximately 82,000 t will be required for backfill. This will result in a net storage requirement of 24,000 t of waste rock on surface. Alexco is proposing a new P-AML waste rock storage facility of 5,000 m^2 based on an approved generic design, and a new N-AML disposal area of 8,000 m^2. The P-AML facility is designed to hold 44,000 t, and the N-AML is designed to hold 80,000 t. However, the current licence allows for additional storage if required. During operations, seepage from the P-AML storage area will be monitored, and if needed, water would be collected and trucked to the Bellekeno water treatment facility. At closure, if any P-AML material remains that cannot be used as backfill, the storage area will be covered with 0.5 m of low permeability borrow material.

It is projected that 560,000 t of waste rock will be produced from Flame & Moth and that 407,000 t will be used in backfill. This leaves approximately 153,000 t of excess waste rock. Alexco plans to use the majority of the excess waste rock to construct a toe berm for the expansion of the DSTF, while a small quantity will require permanent storage on surface. An additional temporary waste rock storage facility with a maximum capacity of 63,000 t will be built for temporary stockpiling of waste rock until it can be used underground as backfill.

At Bermingham, it is projected that 286,000 t of waste rock will be produced and that 105,000 t will be used in backfill. This leaves approximately 181,000 t of excess waste rock.

TAILINGS

Tailings will continue to be deposited in the licensed DSTF or used as backfill in the operating mines.

Based on the information provided on the tailings geochemistry, the introduction of tailings from Lucky Queen mineralization is not expected to have a negative impact on the geochemical stability of tailings within the DSTF. Metallurgical tests have been completed to characterize the tailings from Flame & Moth and the results can be compared to the Bellekeno and Lucky Queen tailings. Geochemical testing on tailings from Bermingham have not been completed, however, for the purpose of this PEA, it is assumed that the Flame & Moth and Bermingham tailings will be geochemically similar to the already licensed tailings and that no additional measures will be required to control metal leaching/acid rock drainage.

As of September 2013, 181,000 t of tailings have been placed in the DSTF. The current material balance for the project indicates that a total of 896,000 t of tailings will be produced during the mine plan of the PEA. Of this, 687,000 t will be stored in the DSTF, bringing the total storage requirements for the DSTF to 868,000 t. Although a relatively low quantity of tailings (<10% of total) has been used as backfill to date as a consequence of using more waste rock for backfill than originally predicted, current projections indicate that approximately 32% or 209,000 t of the future tailings produced can be backfilled into the underground workings (comprising 32% of the backfill by mass).

An expanded DSTF (Phase 2) has been permitted and included in the amended QML. The DSTF Phase 2 is located immediately adjacent to the current Phase 1 DSTF and has a design capacity of 500,000 t. Although the water licence allows for the production and placement of 322,000 t of tailings in Phase 1, the operation, maintenance, and surveillance manual for the DSTF (EBA, 2010) indicates that it has a design capacity of 123,220 m^3 (or 198,000 t based on placed density of 1,606 kg/m^3). Designs are now complete for an expanded facility that would bring the capacity up to 322,000 t, which is the current permitted capacity of the facility.

The future expansion of Phase 2 would bring the total capacity to 850,000 t, as shown in Figure 20-1. This Phase 2 expansion is approved and included in the amended QML. EBA (pers comm. Justin Pigage) have indicated that the expansion would be constructed using the same foundation system, tailings placement techniques, and geometry (side slopes and bench elevations) as the current DSTF design. All other conditions regarding placement and compaction of the tailings as detailed in the DSTF Operation, Maintenance, and Surveillance Manual (EBA, 2010) are assumed to remain the same as those used in the current facility. The subsurface conditions within the footprint of the expansion are assumed to be generally similar to those under the existing approved footprint, but will be investigated as part of the detailed design.

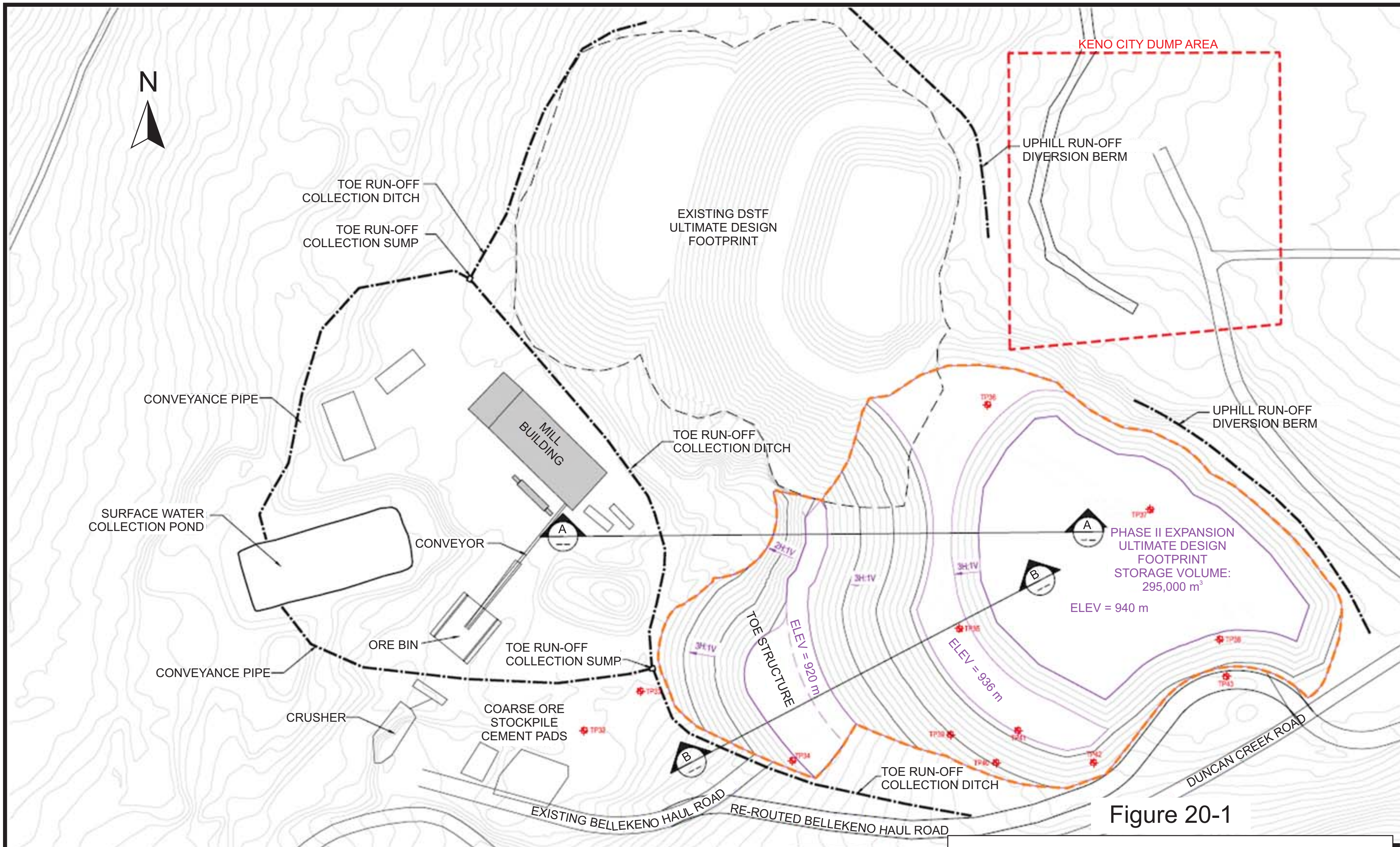


Figure 20-1

Legend:

- Test pit Location (Phase II Expansion)
- DSTF Phase II Expansion Footprint

0 20 40 60 80 100
Metres

Alexco Resource Corp.

Keno Hill Silver District Project

Yukon Territory, Canada

Preliminary Dry Stack Expansion Design to 850,000 Tonnes

March 2017

Source: Tetra Tech, 2015.

RPA

www.rpacan.com

RECLAMATION AND CLOSURE

An updated Reclamation and Closure Plan was approved by the Government of Yukon in 2016 that encompasses all of the active mining and processing activities in the KHSD (Alexco, 2012c). Some key aspects of the closure plan are listed as below:

- P-AML waste rock will either be placed as backfill in the mine or sloped to shed water and then covered with a 0.5 m layer of low permeability borrow material. Reclaimed areas will be covered with growth material and then seeded to promote vegetative growth.
- N-AML waste rock storage facilities will be regraded and then scarified. Organic materials may be blended into the surface to promote growth of vegetation.
- Adits and raises will be sealed to prevent access. Bulkheads will be constructed in some areas to enhance water management activities.
- At the Bellekeno mine, in-pool treatment measures will be implemented to reduce metal loadings if required. The active treatment system will be converted to a passive bioreactor system.
- All buildings and equipment that are not needed for the treatment activities will be removed from the portal areas. Any additional debris will be transferred to the Elsa solid waste disposal facility. The portal areas will be re-contoured and scarified to facilitate re-vegetation.
- Linear disturbances (roads) will be subject to standard decommissioning measures such as removal of culverts, scarification, re-vegetation, and removal of safety berms.
- The Flat Creek camp will be downsized as needed to support ongoing care and maintenance activities in the Keno Hill Silver District.
- Buildings and other infrastructure in the mill area will be dismantled and sold for salvage or demolished on site and disposed of in an approved landfill. Concrete footings will be covered with overburden, scarified, and re-vegetated.
- The DSTF will be covered. If monitoring indicates that it is necessary, meteoric water will be directed to a passive biological treatment system for polishing prior to discharge.
- Various monitoring activities will continue until the performance of the closure measures has been verified.

Alexco will have a site presence for many years while reclamation of the historical liabilities occurs. Therefore, monitoring of the Bellekeno, Lucky Queen, Flame & Moth, and Bermingham mine areas can be integrated with Keno Hill Silver District monitoring programs over the long term. This is expected to improve the efficiency of these ongoing water treatment and monitoring activities.

A key aspect of the closure planning is how liabilities associated with the new mine development will be separated from historical liabilities that are also under Alexco's mandate. Alexco's position on the liabilities for Lucky Queen is summarized in Table 20-3.

TABLE 20-3 LUCKY QUEEN DEVELOPMENT AND PRODUCTION PROJECT LIABILITIES
Alexco Resource Corp. – Keno Hill Silver District Project

Alexco Liabilities	Aboriginal Affairs and Northern Development Canada (AANDC) Liabilities
Lucky Queen	
New N-AML waste rock storage facility(ies)	
Newly rehabilitated Lucky Queen portal	Wernecke Road
Portal pad	
New mine water management	
New P-AML waste rock storage facility(ies)	
Existing Waste rock storage areas	

The Government of Yukon requires financial security in the form of a letter of credit to cover potential liabilities associated with the cost of reclamation and closure. As part of QML-0009, the Government of Yukon currently holds $6,304,508 in security for the Bellekeno, Lucky Queen, Flame & Moth, and Onek mine operations, the mill area, and the DSTF. This amount was set in 2016, following a third party review of Alexco's costs. Alexco has estimated that the costs for reclaiming this area would be on the order of $4,864,000.

The PEA includes a capital cost allowance of $1.5 million for expected increases in the financial security related to the Bermingham mining and the increases in the DSTF and the waste storage piles.

Additional closure costs may be incurred if the effectiveness of the current closure concepts cannot be demonstrated. For example, active water treatment may be required at Bellekeno if passive bioreactors are not capable of meeting the discharge criteria. A full scale pilot bioreactor has operated successfully at Galkeno 900 to support the long term water management and treatment assumptions in the closure plan. The ongoing monitoring programs will be critical for ensuring that there is sufficient information available to support final closure plans for these production areas. A pilot scale in situ treatment process has been successfully demonstrated at the Silver King mine.

The reclamation and closure plan must be updated every two years to incorporate any changes to site conditions.

21 CAPITAL AND OPERATING COSTS

CAPITAL COSTS

The capital cost estimate for the Project is summarized in Table 21-1. The capital costs include the restart of the Bellekeno mine, development of the Flame & Moth deposit, development of the Bermingham deposit and the reopening of the Lucky Queen mine plus the necessary process plant and infrastructure for the restart of operations. Pre-production is considered to be year 1 and year 2 (2017 and 2018) of the plan. The capital costs are based on Q4 2016 estimates.

TABLE 21-1 CAPITAL COST SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

		Total	Year 1	Year 2	Year 3	Year 4	Year 5	Yr 6-9
Mining	C$ '000	75,754	8,663	19,323	10,392	6,369	7,231	23,775
Processing	C$ '000	951	205	746	-	-	-	-
Infrastructure	C$ '000	7,947	364	3,691	1,386	210	298	1,998
Tailings	C$ '000	821	-	47	119	118	118	419
Total Direct Cost	C$ '000	85,473	9,232	23,808	11,897	6,697	7,647	26,192
								-
Contingency	C$ '000	17,095	1,846	4,762	2,379	1,339	1,529	5,238
Total Capital Cost	C$ '000	102,568	11,078	28,569	14,277	8,037	9,176	31,431

The capital costs are estimated from mine development cost estimates applied to mine designs for the major mine development. Equipment costs are based on quotations for the supply of mining equipment. Process plant restart costs are based on detailed estimates for the work to restart the plant. The DSTF capital cost is based upon the initial cost per area and the tonnage capacity per unit area of DSTF constructed. Various infrastructure items are based on experience. Mining equipment in the capital plan is purchased as required and subsequently moved from mine to mine as needed as part of the production schedule.

The capital cost estimates were generated by Alexco and were reviewed and modified based upon detailed review by RPA. RPA considers the accuracy of capital cost estimate components to be at a scoping level.

A 20% contingency has been included in the capital cost estimate based upon a review of the capital details.

The sustaining capital is mainly the major mine development in the deposits to be mined.

Exclusions from the capital cost estimate include, but are not limited to, the following:

- Study costs to advance the Project engineering.
- All sunk costs to the end of 2016.
- Project financing and interest charges.
- Working capital.
- Escalation during construction and operation.

The capital cost estimate details by mine area are shown in Table 21-2.

TABLE 21-2 CAPITAL ESTIMATE BY MINE AREA
Alexco Resource Corp. – Keno Hill Silver District Project

			2017	2018	2019	2020	2021	
		Total	Year 1	Year 2	Year 3	Year 4	Year 5	Yr 6-9
Bellekeno Equipment	$000	1,602	-	1,602	-	-	-	-
Bellekeno Development	$000	164	-	164	-	-	-	-
Lucky Queen Equipment	$000	2,409	-	-	-	-	-	2,409
Lucky Queen Development	$000	7,178	-	-	-	-	-	7,178
Flame & Moth Equipment	$000	5,460	-	3,592	1,472	-	-	396
Flame & Moth Development	$000	29,825	200	6,435	5,326	3,026	4,281	10,557
Bermingham Equipment	$000	3,819	1,100	2,336	383	-	-	-
Bermingham Development	$000	21,164	3,929	4,494	3,212	3,344	2,950	3,235
	$000	-						-
Processing	$000	951	205	746	-	-	-	-
Infrastructure	$000	12,082	3,798	4,392	1,386	210	298	1,998
Tailings	$000	821	-	47	119	118	118	419
Total Direct Cost	$000	85,274	9,032	23,808	11,897	6,697	7,647	26,193
	$000	-						-
Contingency	$000	17,095	1,846	4,762	2,379	1,339	1,529	5,239
Total Capital Cost	$000	102,568	11,078	28,570	14,277	8,037	9,176	31,431

OPERATING COSTS

Site operating costs have been estimated in Q4 2016 dollars based on RPA's review of Alexco's past operating budgets and reported operating costs for 2011 and 2012. The operating costs were estimated in detail by Alexco and reviewed and modified as required by RPA. The estimates reflect Alexco's ongoing and planned initiatives aimed at reducing the site unit operating cost.

These initiatives include:

- Mine operations including development and production are planned as owner operated.
- Direct purchasing of new and used equipment mining.
- Establishing long term supply contracts with suppliers for basic materials such as ground support, explosives, and other materials.
- Upgrading the mill facility to ensure that it can reliably process 400 tpd.

Table 21-3 shows the LOM site operating cost estimate. It is based on LOM plant feed of 1,021 kt.

TABLE 21-3 LOM SITE OPERATING COST SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

Area	LOM Site Opex ($M)	Unit Cost ($/t)
Mine	197.3	193.25
Mill	61.9	61.89
G&A	69.8	69.79
LOM Total Site	**331.8**	**324.93**

The operating costs by mine are shown in Table 21-4. The Bellekeno costs are high due to the high G&A charges and low production in the year that the Bellekeno deposit is milled. The high Lucky Queen costs reflect the small scale cut and fill mining and the Bermingham costs are high as it is all cut and fill and the development requirements are high to develop and produce the high grade feed from the mine.

TABLE 21-4 MINE OPERATING COSTS BY MINE
Alexco Resource Corp. – Keno Hill Silver District Project

Area	Units	Bellekeno	Lucky Queen	Flame & Moth	Bermingham
Mining	C$/t milled	187.26	281.12	170.21	233.46
Processing	C$/t milled	71.10	63.64	62.10	59.04
G&A	C$/t milled	134.88	65.94	66.25	62.47
Total	C$/t milled	393.24	410.70	298.56	354.97
Mining	C$ '000	6,956	22,757	116,238	51,369
Processing	C$ '000	2,641	5,151	42,407	12,991
G&A	C$ '000	5,010	5,338	45,245	13,747
Total	C$ '000	14,606	33,246	203,890	78,108

22 ECONOMIC ANALYSIS

The economic analysis contained in this report is based, in part, on Inferred Resources, and is preliminary in nature. Inferred Resources are considered too geologically speculative to have mining and economic considerations applied to them and to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this Preliminary Economic Assessment is based will be realized. Inferred Mineral Resources form the basis of 2% of the "potentially mineable tonnes" included in the plant feed schedule of this PEA.

A pre-tax Cash Flow Projection (base case) has been generated from the LOM production schedule and capital and operating cost estimates, and is summarized in Table 22-1. A summary of the key criteria is provided below.

ECONOMIC CRITERIA

REVENUE

- 400 tonnes per day mining from underground (146,000 tonnes per year).
- Mill recovery based on experience and as indicated by testwork, averaging 97.1% silver, 88.4% zinc, 94.6% lead, and 50% gold recovered in two concentrates.
- Lead – silver concentrate and zinc concentrate shipped to smelter for treatment.
- Exchange rate C$1.00 = US$0.76 in years 1 to 3 and C$1.00 = US$0.79 thereafter.
- Long term metal prices of US$18.60/oz for silver in year 2 and US$19.35/oz thereafter, US$ 1.20/lb zinc for years 2 to 4 and US$1.00 thereafter, US$1.00/lb lead for years 2 to 4 and US$0.94/lb thereafter and US$11,300.00/oz for gold.
- 25% of silver is sold to Silver Wheaton under a streaming agreement at process ranging from US$3.54/oz to US$8.18/oz silver.
- NSR includes shipping, treatment, and refining costs.
- There is a 1.5% NSR (to a maximum of $4 million) to the Government of Canada.
- Revenue is recognized at the time of production.

COSTS

- Pre-production period: 20 months (March 2017 to December 2018).
- Mine life: nine years.
- LOM production plan as summarized in Table 16-10.
- Preproduction capital of $27 million (accounting for revenue generated in 2018) and sustaining capital of $62.9 million.
- Average operating cost over the mine life is $324.93 per tonne milled.

TABLE 22-1 CASH FLOW SUMMARY
Alexco Resource Corp. – Keno Hill Silver District Project

Date:	UNITS	TOTAL	2017 Year 1	2018 Year 2	2019 Year 3	2020 Year 4	2021 Year 5	2022 Year 6	2023 Year 7	2024 Year 8	2025 Year 9	2026 Year 10	2027 Year 11	2028 Year 12
MINING														
Underground														
Operating Days	days	3,150	350	350	350	350	350	350	350	350	350			
Tonnes milled per day	tonnes / day	324	-	185	417	417	417	417	319	407	338			
Production	'000 tonnes	1,021	-	65	146	146	146	146	112	142	118			
Waste	'000 tonnes	811	25	187	161	108	123	53	95	33	26			
Total Moved	'000 tonnes	1,832	25	252	307	254	269	199	207	175	145			
PROCESSING														
Mill Feed	'000 tonnes	1,021	-	65	146	146	146	146	112	142	118	-		
Au Grade	g/t	0.4	-	0.1	0.4	0.4	0.5	0.3	0.4	0.4	0.5	-		
Ag Grade	g/t	843.00	-	931	1,089	919	788	681	743	812	798			
Pb Grade	%	3.3%	-	7.7%	3.3%	3.1%	3.3%	2.8%	3.6%	2.2%	2.9%			
Zn Grade	%	4.6%	-	5.7%	4.5%	4.7%	4.8%	5.2%	4.7%	3.3%	4.7%			
Recovery														
Pb Concentrate	%													
Au		50%	-	50%	50%	50%	50%	50%	50%	50%	50%			
Ag		93.6%	-	94.3%	95.5%	94.2%	93.0%	91.9%	92.5%	93.2%	93.1%			
Pb		94.5%	-	95.9%	94.6%	94.5%	94.6%	94.4%	94.7%	94.0%	94.4%			
Zn Concentrate	%													
Ag		3.6%	-	2.70%	1.46%	2.80%	4.00%	5.14%	4.46%	3.77%	3.91%			
Zn		88.4%	-	87.6%	88.4%	88.5%	88.5%	88.6%	88.4%	88.5%	88.5%			
Recovered Metal														
Pb Concentrate														
Au	oz	6,350	-	131	847	999	1,064	766	767	918	857	-		
Ag	oz (000)	25,906	-	1,825	4,884	4,063	3,438	2,938	2,468	3,464	2,825	-		
Pb	tonnes	32,008	-	4,792	4,544	4,226	4,608	3,908	3,778	2,886	3,266	-		
Zn	tonnes	4,058	-	349	568	585	601	640	448	397	470	-		
Zn Concentrate														
Au	oz	2,540	-	52	339	400	426	306	307	367	343	-		
Ag	oz	937,571	-	52,175	74,800	120,590	148,042	164,394	119,102	139,944	118,524	-		
Pb	tonnes	779	-	56	115	112	116	108	91	93	89	-		
Zn	tonnes	41,726	-	3,247	5,859	6,076	6,221	6,712	4,598	4,121	4,892	-		
REVENUE														
Metal Prices														
Au	US$/oz Au	$1,300		$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300	$1,300			
Ag	US$/oz Ag	$19.30		$18.60	$19.35	$19.35	$19.35	$19.35	$19.35	$19.35	$19.35			
Ag (SW)	US$/oz Ag	$6.37		$5.82	$3.54	$5.48	$6.97	$8.18	$7.49	$6.70	$6.86			
Pb	US$/lb Pb	$0.96		$1.00	$1.00	$1.00	$0.94	$0.94	$0.94	$0.94	$0.94			
Zn	US$/lb Zn	$1.07		$1.20	$1.20	$1.20	$1.00	$1.00	$1.00	$1.00	$1.00			
Exchange Rate	US$:C$	$0.78		$0.76	$0.76	$0.79	$0.79	$0.79	$0.79	$0.79	$0.79			
Concentrate Payable														
Pb Concentrate Payable														
Payable Au	oz	4,872		-	622	790	837	572	580	775	696			
Payable Ag	oz	24,611,086		1,734,015	4,639,857	3,859,875	3,266,001	2,791,275	2,345,027	3,291,058	2,683,978			
Payable Pb	tonnes	30,408		4,552	4,317	4,014	4,377	3,713	3,589	2,742	3,102			
Zn Concentrate Payable				-	-	-	-	-	-	-	-			
Payable Ag	oz	446,688		21,250	25,770	54,687	71,965	80,681	59,483	74,891	57,961			
Payable Zn	tonnes	35,050		2,728	4,922	5,104	5,226	5,638	3,863	3,462	4,110			

Date:	UNITS	TOTAL	2017 Year 1	2018 Year 2	2019 Year 3	2020 Year 4	2021 Year 5	2022 Year 6	2023 Year 7	2024 Year 8	2025 Year 9	2026 Year 10	2027 Year 11	2028 Year 12
Gross Revenue														
Au Gross Revenue	US$ '000	$6,334		$0	$809	$1,027	$1,088	$744	$755	$1,008	$904			
Ag Gross Revenue	US$ '000	$401,242		$27,040	$71,839	$62,172	$54,262	$47,555	$39,395	$54,484	$44,495			
Pb Gross Revenue	US$ '000	$64,719	$ -	$10,036	$9,518	$8,850	$9,071	$7,694	$7,438	$5,682	$6,429			
Zn Gross Revenue	US$ '000	$82,895	$ -	$7,216	$13,020	$13,502	$11,521	$12,429	$8,516	$7,632	$9,060			
Total Gross Revenue	US$ '000	**$555,191**	$ -	**$44,291**	**$95,187**	**$85,552**	**$75,941**	**$68,422**	**$56,104**	**$68,806**	**$60,888**			
Total Charges														
Total Charges	US$ '000	$102,924	$ -	$9,610	$16,523	$15,247	$14,481	$13,727	$10,878	$11,164	$11,295			
Net Smelter Return	US$ '000	**$452,266**	$ -	**$34,682**	**$78,664**	**$70,305**	**$61,460**	**$54,695**	**$45,226**	**$57,642**	**$49,593**			
Royalty NSR	US$ '000	$3,113	$ -	$0	$1,180	$1,055	$879	$0	$0	$0	$0			
Net Revenue	US$ '000	**$449,153**	$ -	**$34,682**	**$77,484**	**$69,250**	**$60,581**	**$54,695**	**$45,226**	**$57,642**	**$49,593**			
Unit NSR	**US$/t milled**	**$440**	$ -	**$536**	**$531**	**$474**	**$415**	**$375**	**$405**	**$405**	**$419**			
OPERATING COST														
Mining (Underground)	C$/t milled	$193.25		$273.76	$185.29	$189.01	$186.35	$166.88	$239.71	$168.61	$191.14			
Processing	C$/t milled	$61.96		$71.17	$58.17	$58.15	$58.12	$58.12	$72.46	$59.36	$69.00			
G&A	C$/t milled	$69.79		$134.88	$58.89	$59.06	$59.23	$59.41	$81.18	$60.80	$70.57			
Total Operating Cost	**C$/t milled**	**$325.00**		**$479.81**	**$302.34**	**$306.22**	**$303.70**	**$284.40**	**$393.35**	**$288.77**	**$330.71**			
Mining (Underground)	C$ '000	$197,320	$0	$17,708	$27,050	$27,594	$27,206	$24,363	$26,779	$24,001	$22,620			
Processing	C$ '000	$63,263	$0	$4,603	$8,492	$8,489	$8,484	$8,484	$8,095	$8,449	$8,166			
G&A	C$ '000	$71,258	$1,918	$8,724	$8,597	$8,623	$8,648	$8,673	$9,069	$8,655	$8,351			
Total Operating Cost	**C$ '000**	**$331,841**	**$1,918**	**$31,035**	**$44,140**	**$44,705**	**$44,338**	**$41,520**	**$43,943**	**$41,104**	**$39,137**			
Unit Operating Cost	C$/t milled	$325	$0	$480	$302	$306	$304	$284	$393	$289	$331			
Operating Cashflow	C$ '000	$242,311	($1,918)	$14,598	$57,813	$42,953	$32,347	$27,714	$13,305	$31,860	$23,639			
CAPITAL COST														
Direct Cost														
Mining	C$ '000	$75,754	$8,663	$19,323	$10,392	$6,369	$7,231	$4,940	$10,457	$5,429	$2,949			
Processing	C$ '000	$951	$205	$746	$0	$0	$0	$0	$0	$0	$0			
Infrastructure	C$ '000	$7,947	$364	$3,691	$1,386	$210	$298	$0	$1,998	$0	$0			
Tailings	C$ '000	$821	$0	$47	$119	$118	$118	$116	$89	$120	$95			
Total Direct Cost	**C$ '000**	**$85,473**	**$9,232**	**$23,808**	**$11,897**	**$6,697**	**$7,647**	**$5,056**	**$12,543**	**$5,548**	**$3,044**			
Contingency	C$ '000	$17,095	$1,846	$4,762	$2,379	$1,339	$1,529	$1,011	$2,509	$1,110	$609			
Total Capital Cost	**C$ '000**	**$102,568**	**$11,078**	**$28,569**	**$14,277**	**$8,037**	**$9,176**	**$6,068**	**$15,052**	**$6,658**	**$3,653**			
CASH FLOW														
Net Pre-Tax Cashflow	C$ '000	$139,744	($12,996)	($13,971)	$43,536	$34,916	$23,170	$21,647	($1,747)	$25,202	$19,986	$0	$0	$0
Cum. Pre-Tax Cashflow	C$ '000		($12,996)	($26,967)	$16,569	$51,485	$74,656	$96,302	$94,555	$119,758	$139,744	$139,744	$139,744	$139,744
Taxes	C$ '000	$32,074	$0	$764	$3,522	$6,176	$8,027	$5,746	$663	$7,301	$3,385	($1,896)	($949)	($664)
After-Tax Cashflow	C$ '000	$107,670	($12,996)	($14,735)	$40,014	$28,740	$15,143	$15,901	($2,410)	$17,901	$16,601	$1,896	$949	$664
Cum After-Tax Cashflow	C$ '000		($12,996)	($27,731)	$12,283	$41,024	$56,167	$72,068	$69,658	$87,560	$104,161	$106,057	$107,006	$107,670
PROJECT ECONOMICS														
Pre-Tax IRR	%	89%												
Pre-tax NPV 5%	C$ '000	$104,292												
Pre-tax NPV 10%	C$ '000	$79,139												
After Tax IRR	%	75%												
After tax NPV 5%	C$ '000	$79,393												
After tax NPV 10%	C$ '000	$59,510												

TAXATION AND ROYALTIES

There is a NSR royalty of 1.5% payable to the Government of Canada. The NSR is capped at $4 million and commences when net revenue exceeds $3.06 million.

Taxes include Quartz Mining Tax, Federal, and Yukon Taxes. It is assumed that the four operating deposits will be permitted as one mine for income tax and royalty tax purposes.

RPA has relied upon Alexco and its tax advisors for the calculation of the taxes in the economic model.

CASH FLOW ANALYSIS

Considering the Project on a stand-alone basis, the undiscounted after tax cash flow totals $107.7 million over the mine life, and simple payback occurs approximately one year from start of production.

The after tax Net Present Value (NPV) at a 5% discount rate is $79.4 million, and the after-tax Internal Rate of Return (IRR) is 75%.

SENSITIVITY ANALYSIS

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities:

- Silver price
- Exchange rate
- Silver head grade
- Operating costs
- Capital costs

IRR sensitivity over the base case has been calculated for a range of variations. The after tax sensitivities are shown in Figure 22-1 and Figure 22-2, and Table 22-2.

TABLE 22-2 AFTER-TAX SENSITIVITY
Alexco Resource Corp. – Keno Hill Silver District Project

Factor	Silver Grade (g/t)	5% NPV ($M)	IRR (%)
0.8	674	37	40%
0.9	759	59	59%
1.0	**843**	**79**	**75%**
1.1	927	99	90%
1.2	1,012	117	103%

Factor	Recovery (%)	5% NPV ($M)	IRR (%)
0.80	74.9%	68	66%
0.90	84.3%	74	71%
1.00	**93.6%**	**79**	**75%**
1.01	94.6	80	76%
1.02	95.5	81	76%

Factor	Silver Price (US$/oz)	5% NPV ($M)	IRR (%)
0.8	15.41	41	41%
0.9	17.33	61	59%
1.0	**19.26**	**79**	**75%**
1.1	21.18	96	89%
1.2	23.11	110	102%

Factor	Exchange Rate	5% NPV ($M)	IRR (%)
0.8	0.63	150	133%
0.9	0.71	111	101%
1.0	**0.78**	**79**	**75%**
1.1	0.86	53	53%
1.2	0.94	29	32%

Factor	Operating Cost ($/t)	5% NPV ($M)	IRR (%)
0.85	276	118	104%
0.93	301	97	88%
1.00	**325**	**79**	**75%**
1.18	382	34	40%
1.35	439	(10)	(12%)

Factor	Capital Cost ($M)	5% NPV ($M)	IRR (%)
0.85	87	92	97%
0.93	95	85	85%
1.00	**103**	**79**	**75%**
1.18	121	64	55%
1.35	138	50	40%

FIGURE 22-1 AFTER-TAX 5% NPV SENSITIVITY

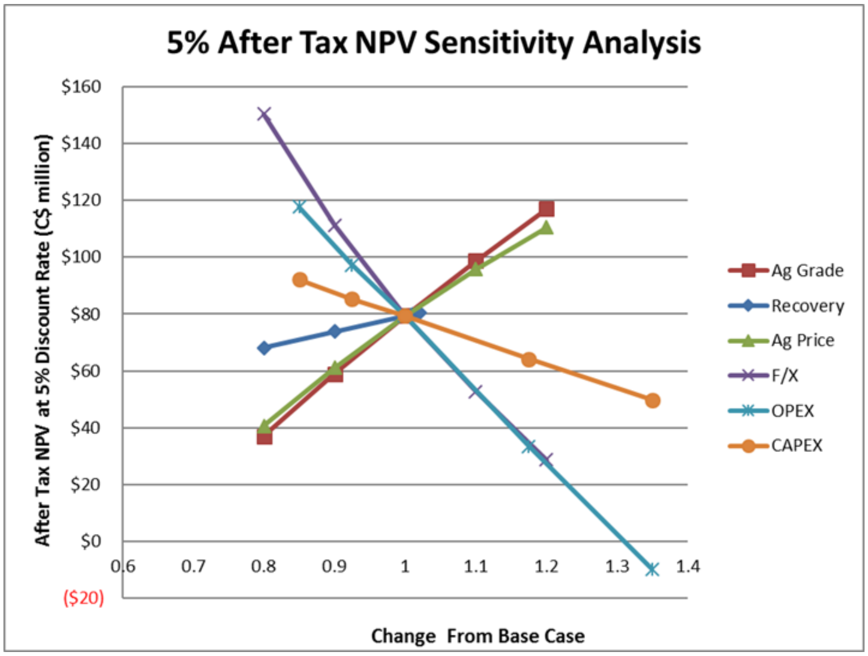
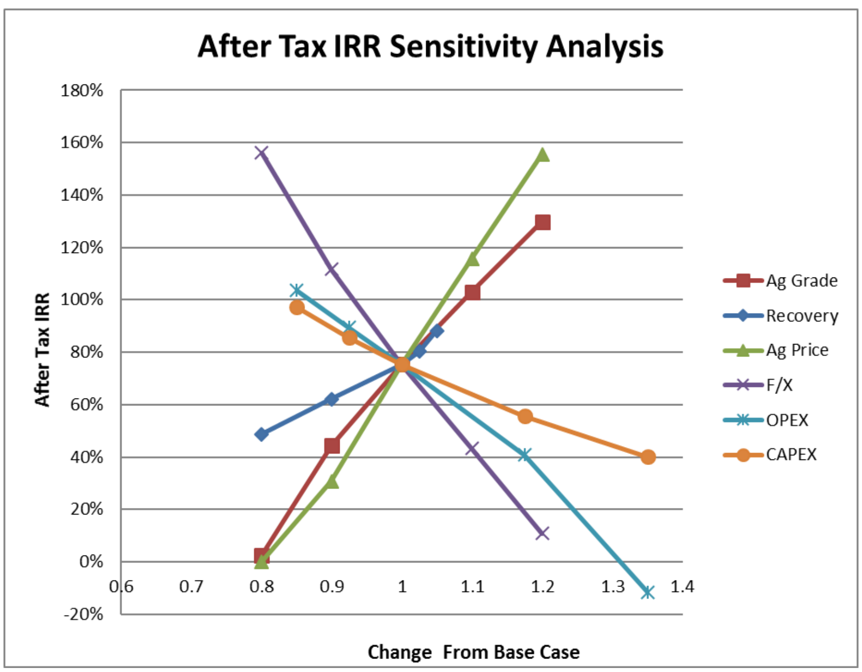


FIGURE 22-2 AFTER-TAX IRR SENSITIVITY



23 ADJACENT PROPERTIES

There are no adjacent properties considered relevant to this technical report.

24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25 INTERPRETATION AND CONCLUSIONS

RPA offers the following conclusions:

- The Mineral Resources at the KHSD have been estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standard Definitions for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM definitions).

- The resource evaluations reported herein are a reasonable representation of the global polymetallic Mineral Resources for the listed deposits at the current level of sampling.

- This study has been completed to a PEA level of study. The mine designs, mine dewatering designs, mining plans, and processing assumptions are based upon preliminary evaluations.

- The areas requiring further study and design are:
    - Geotechnical conditions.
    - Hydrological conditions.
    - Mine access design.
    - Mine ventilation design.
    - Stope designs and pillar recovery alternatives.
    - Metallurgical testing of samples and a blend of samples.
    - Waste rock characterization to determine the quantities of PAG waste.
    - Design of waste storage facilities for the PAG waste.
    - Expansion of the DSTF.

- The Project has the potential to generate an after tax 5% NPV of $79 million and a 75% IRR from the mining and processing of 1.02 million tonnes of mineralization grading 843 g/t Ag, 4.6% Zn, 3.3% Pb and 0.4 g/t Au over a nine year mine life using an exchange rate C$1.00 = US$0.76 in years 1 to 3 and C$1.00 = US$0.79 thereafter; metal prices of US$18.60/oz for silver in year 2 and US$19.35/oz thereafter; US$ 1.20/lb zinc for years 2 to 4 and US$1.00 thereafter, US$1.00/lb lead for years 2 to 4 and US$0.94/lb thereafter and US$1,300.00/oz for gold. There is 25% of silver sold to Silver Wheaton under a streaming agreement at prices ranging from US$3.54/oz to US$8.18/oz silver.

- The estimated economic returns based upon the PEA support further study to restart the plant and mine from the Bellekeno, Flame & Moth, Bermingham, and Lucky Queen deposits.

- The planned exploration drive to the Bermingham deposit will provide additional resource information as well as geotechnical and hydrologic information related to the deposit.

- Initial studies should focus on the expected conditions along the planned Flame & Moth and Bermingham access development and ventilation raises.

- The LOM schedule is based on the specific strategy selected, however, there are other possible scenarios for defining an overall production schedule that may warrant further study, particularly if changing metal prices or exploration results alter the mine planning context.

- The Lucky Queen mining rate in 2024 is considered to be a high production rate for the planned extent of the Lucky Queen mining.

- The current PEA study assumes the mill facility production will increase to a nominal rate of 400 tpd once an additional ball mill is commissioned.

- Metallurgical recoveries are not based on testing of blending samples from the different deposits.

- Only one composite sample has been metallurgically tested with variable results.

- Additional metallurgical testing on the Flame & Moth mineralization is warranted.

- A model of the overall recovery was generated using open circuit flotation tests.

    - The life of mine silver recovery is estimated at 93%.
    - The life of mine zinc recovery is estimated at 88%.
    - The life of mine lead recovery is estimated at 94%.

- Blending of various zones prior to processing is not expected to impact the metallurgical performance of the blended mill feed. Metallurgical test work has not been completed to confirm the performance of a blended mill feed.

- Zinc losses in the lead circuit are expected to be the only significant metallurgical shortfall.

- Completion of the installation of the additional grinding mill is planned to achieve the 400 tpd operating rate.

- The construction of the DSTF expansion will be required for the Project.

- The processing of the Flame & Moth mineralization requires an amendment to the Water Licence and the mining and processing of the Bermingham mineralization will require amendments to the Quartz Mining Licence and to the Water Licence.

26 RECOMMENDATIONS

RPA provides the following recommendations:

- Carry out investigation of the ground conditions expected along the Flame & Moth ventilation raise and Bermingham access ramps and ventilation raises before development commences.

- Undertake the planned exploration development and drilling at the Bermingham deposit.

- Complete geotechnical studies of the Flame & Moth, Bermingham, and Lucky Queen deposits as development advances to refine the mine plans, stope dimension recommendations, and ground support requirements.

- Study the hydrology of the Flame & Moth and Bermingham deposits to confirm the expected ground water inflows and ground water chemistry.

- Update the ground support criteria to reflect localized conditions at the Flame & Moth, Bermingham, and Lucky Queen deposits as those deposits are advanced.

- Advance the mine planning, optimize the designs and review stope plans to ensure a positive economic benefit from each stope.

- Review the planned Lucky Queen mining rate well in advance of the commencement of mining operations at Lucky Queen.

- Review the LOM production schedule with a view to reducing the variations in feed tonnage in the later years of the plan.

- Undertake metallurgical test work to confirm:
    - The metallurgical performance of the Flame & Moth mineralization.
    - The expected good performance of a blended mill feed.
    - Options to reduce expected zinc losses in the lead circuit.
    - Settling and geochemical characteristics of the mineralization.

- Use the results of the recommended work to advance the Project level of study.

27 REFERENCES

Access Consulting Group, 2013. Geochemical Rock Characterization, Flame & Moth Project, Keno Hill District, Yukon. Memo prepared for Alexco Keno Hill Mining Corp., November 29, 2013.

Alexco Resource Corp., 2013, Updated Technical Report on the Flame & Moth Deposit, Flame & Moth Property, Keno Hill District, Yukon, prepared by Farrow, D., and McOnie, A., Effective Date January 30, 2013; signature date March 15, 2013.

Alexco Keno Hill Mining Corp., 2014. Keno Hill Silver District Operations, Flame & Moth Deposit Production. Type A Water Use Licence QZ09-092 Renewal Application, October 2014

Alexco Keno Hill Mining Corp., 2012a. Keno Hill Silver District Operations, Lucky Queen and Onek Deposit Production. Project Proposal Submission to YESAB, Revised Version, April 2012.

Alexco Keno Hill Mining Corp., 2012b. 2011 Annual Report, Quartz Mining Licence QML-0009. Prepared for Yukon Government Energy, Mines and Resources. March 2012.

Alexco Keno Hill Mining Corp., 2012c. Preliminary Reclamation and Closure Plan, Keno District Mine Operations, Keno Hill Silver District, Revision 2. September 2012.

Alexco Keno Hill Mining Corp., 2010b. 2010 Annual Report - Resubmission, Quartz Mining Licence QML-0009. Prepared for Yukon Government Energy, Mines and Resources. June 2011.

Alexco Keno Hill Mining Corp., 2010. Supplemental Information to Mine Construction and Operation Plan, QML-0009. Letter to Government of Yukon, May 4, 2010.

Boyle, R. W. 1965. Geology, geochemistry, and origin of the lead-zinc-silver deposits of the Keno Hill-Galena Hill area, Yukon Territory; Geol. Surv. Canada, Bull. 111, p. 302.

CIM, 2014. Definition Standards for Mineral Resources and Mineral Reserves.

CIM, 2003. Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines.

Cathro, R.J., 2006. The History and Geology of the Keno Hill Silver Camp, Yukon Territory, Geoscience Canada, v. 33, No. 3, p. 103 – 134

EBA, 2010. Revision 2010-1, Operation, Maintenance, and Surveillance Manual, Dry Stack Tailings Facility, Keno Hill Mill facility, YT. EBA File: W13101178.008. Prepared for Alexco Keno Hill Mining Corp. September 2010.

Farrow D. and A. McOnie, 2013. Updated Technical Report on the Flame & Moth Deposit, Flame & Moth Property, Keno Hill District, Yukon. March 15, 2013.

Inspectorate America Corporation – PRA, 2009. Metallurgical Testing of Samples Originating from the Bellekeno Project. PRA Project No. 0806208. Prepared for Alexco Resource Corp.

Lynch, G., 2009. Pressure-depth relationships of the Roop Lakes Stock and Keno Hill Ag-Pb-Zn veins. In Yukon Exploration and Geology, 2009. K.E. MacFarlane et al (eds), Yukon Geological Survey (p. 229 – 235).

McOnie, A and P.B. Read, 2009. Stratigraphy, Structure and Exploration Opportunities Sourdough, Galena and part of Keno Hills, Keno Hill Mining Camp, Central Yukon. Internal Report Alexco Resource Corp.

Murphy, D. C., 1997. Geology of the McQueston River Region, Northern McQueston and Mayo Map Areas, Yukon Territory (115P/14, 15, 16l 105M/13, 14), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Bulletin 6, p.122.

Otto, Bruce R., 2009. Structural and stratigraphic relationships at the Bellekeno Mine; their control on ore grade and thickness and their implications for exploration.

Roots, C.F., 1997. Geology of the Mayo Map Area, Yukon Territory (105M), Geological Survey of Canada, Bulletin 7, p. 82.

Starkey & Associates, 2013. Bellekeno Grinding Circuit – Comminution Throughput Analysis Report. S&A Project No. C139 Final Report Rev 0. Prepared for Alexco Resource Corp.

SGS, 2008. An Investigation into Lead, Zinc and Silver Flotation Testing on Bellekeno Samples. SGS Project 11694-002 – Report 1. Prepared for Alexco Resource Corp.

SRK, 2014. Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada, prepared for Alexco Resource Corp., December 10, 2014.

SRK, 2013. Updated Preliminary Economic Assessment for the Eastern Keno Hill Silver District Project – Phase 2, Yukon, Canada, prepared for Alexco Resource Corp., November 15, 2013.

SRK, 2012. Technical Report on the Flame & Moth Deposit, Flame & Moth Property, Keno Hill District, Yukon. SRK Project 2CA017.004. Prepared for Alexco Resource Corp, August 8, 2012.

SRK, 2011a. Technical Report on the Lucky Queen Deposit, Lucky Queen Property, Keno Hill District, Yukon. SRK Project 2CA017.001. Prepared for Alexco Resource Corp, September 8, 2011.

SRK, 2011b. Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon. SRK Project 2CA017.001. Prepared for Alexco Resource Corp, September 8, 2011.

Wardrop, 2009. Bellekeno Project - Updated Preliminary Economic Assessment Technical Report, Independent technical report prepared for Alexco Resource Corp and filed on SEDAR (www.sedar.com), 363 pages.

United Keno Hill Mines Ltd., 1996. Report No. UKH/96/03 - Mine Reopening – Operating Plan, not published.

YESAB 2014. Designated Office Evaluation Report Flame & Moth Development and Production Proposal, Project Number: 2013-0161, Alexco Keno Hill Mining Corporation. Prepared by Yukon Environmental and Socio-economic Assessment Board, Mayo Designated Office, Assessment Completion Date: October 5, 2014

28 DATE AND SIGNATURE PAGE

This report titled "Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada" and dated March 29, 2017, was prepared and signed by the following authors:

(Signed & Sealed) "*Torben Jensen*"

Dated at Toronto, ON
March 29, 2017

Torben Jensen, P.Eng.
Principal Mining Engineer

(Signed & Sealed) "*Gilles Arseneau*"

Dated at Vancouver, BC
March 29, 2017

Dr. Gilles Arseneau, Ph.D., P.Geo.
Associate Consultant (Resource Geology)
SRK Consulting (Canada) Inc.

(Signed & Sealed) "R*. Dennis Bergen*"

Dated at Toronto, ON
March 29, 2017

R. Dennis Bergen, P.Eng.
Associate Principal Mining Engineer

(Signed & Sealed) "*Jeffrey B. Austin*"

Dated at Kelowna, B.C.
March 29, 2017

Jeffrey B. Austin, P.Eng.
Metallurgist
International Metallurgical & Environmental Inc.

(Signed & Sealed) "*David Farrow*"

Dated at Vancouver, BC
March 29, 2017

David Farrow, P.Geo.
Geologist
GeoStrat Consulting Services Inc.

29 CERTIFICATE OF QUALIFIED PERSON

TORBEN JENSEN, P.ENG.

I, Torben Jensen, P.Eng., as an author of this report entitled “Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada” prepared for Alexco Resource Corp. with an effective date of January 3, 2017 and dated March 29, 2017, do hereby certify that:

1. I am a Principal Mining Engineer with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of South Dakota School of Mines and Technology in 1978 with a B.Sc. degree in Mining Engineering.

3. I am registered as a Professional Engineer in the Province of Ontario (Reg.# 90286881). I have worked as a mining engineer for a total of 36 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Preparation of NI 43-101 Technical Reports, feasibility studies, and due diligence reviews for a wide range of commodities including gold, silver, nickel, lead, zinc, uranium, coal, asbestos, potash, copper, and diamonds.
   - Vice President Corporate Development with a Canadian gold mining company, responsible for the evaluation of investment opportunities.
   - Vice President Engineering with a Canadian base metal mining company, responsible for preparation of feasibility studies related to property acquisitions and development, engineering design of underground and open pit projects, short and long range mine planning, capital and operating cost estimation for budgets, and permitting.
   - Manager of Engineering with a Canadian based mining company, responsible for the reopening of a former nickel mine.
   - Chief Mining Engineer with a Canadian-based coal company, responsible for mine contracting, short and long range mine planning, budget preparations, scheduling, project management, feasibility studies related to property acquisitions, open pit and underground engineering design, underground construction design, costing, and supervision.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Project from September 12 to 14, 2016.

6. I am responsible for the preparation of Sections 1 to 10, 23 to 27, and 30 the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 29th day of March, 2017

(Signed & Sealed) "*Torben Jensen*"

Torben Jensen, P.Eng.

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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled"Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada" with an effective date of January 3, 2017 (the "**Technical Report**") by Alexco Resource Corp. (the "**Company**").

I, Dr. Gilles Arseneau, P. Geo., residing at in North Vancouver do hereby certify that:

1) I am an associate consultant with the firm of SRK Consulting (Canada) Inc. (“SRK”) with an office at Suite 2200, 1066 West Hastings Street, Vancouver, British Columbia, Canada;
2) I am a graduate of University of New Brunswick with a B.Sc. (Geology) degree obtained in 1979, the University of Western Ontario with an M.Sc. (Geology) degree obtained in 1984 and the Colorado School of Mines with a Ph.D. (Geology) obtained in 1995. I have practiced my profession continuously since 1995. I have worked in exploration in North and South America and have several years of experience modelling high grade silver veins similar to the mineralization found on the Keno Hill Silver District Project;
3) I am a Professional Geoscientist registered with the Association of Professional Engineers & Geoscientists of British Columbia (no. 23474);
4) I have personally inspected the subject project on July 26 to 28, 2011, May 7 and 8, 2012 and September 12 to 14, 2016;
5) I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a qualified person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
7) I am co-author of this report and responsible for Sections 11 and 12 and the parts of Section 14 of the report pertaining to the Lucky Queen, Flame & Moth, Onek and Bermingham deposits and accept professional responsibility for those sections of this technical report;
8) I have had prior involvement with the subject property in that I am co-author of a technical report on the subject property dated December 10, 2014;
9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith;
10) I have not received, nor do I expect to receive, any interest, directly or indirectly in the Keno Hill Silver District Project or securities of Alexco Resources Corp.; and
11) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Vancouver, B.C.
March 29, 2017

[“signed and sealed”]
Dr. Gilles Arseneau, P. Geo.
Associate Consultant

R. DENNIS BERGEN, P.ENG.

I, Raymond Dennis Bergen, P.Eng., as an author of this report entitled "Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada" prepared for Alexco Resource Corp. with an effective date of January 3, 2017 and dated March 29, 2017, do hereby certify that:

1. I am an Associate Principal Mining Engineer with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of the University of British Columbia, Vancouver, B.C., Canada, in 1979 with a Bachelor of Applied Science degree in Mineral Engineering. I am a graduate of the British Columbia Institute of Technology in Burnaby, B.C., Canada, in 1972 with a Diploma in Mining Technology.

3. I am registered as a Professional Engineer in the Province of British Columbia (Reg. #16064) and as a Licensee with the Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (Licence L1660). I have worked as an engineer for a total of 37 years since my graduation. My relevant experience for the purpose of the Technical Report is:

    - Practice as a mining engineer, production superintendent, mine manager, Vice President of Operations and a consultant in the design, operation, and review of mining operations.
    - Review and report, as an employee and as a consultant, on numerous mining operations and projects around the world for due diligence and operational review related to project acquisition and technical report preparation.
    - Engineering and operating superintendent at the Con gold mine, a deep underground gold mine, Yellowknife, NWT, Canada
    - Mine Superintendent at the Polaris Mine, Nunavut, Canada.
    - General Manager of the Ketza River Mine, Yukon, Canada
    - VP Operations in charge of the restart of the Golden Bear Mine, BC, Canada
    - General Manager in Charge of the Reopening of the Cantung Mine, NWT, Canada
    - Mine Manager at three different mines with open pit and underground operations.
    - Consulting engineer (RPA Associate Principal Mining Engineer) for over eight years working on project reviews, engineering studies, Mineral Reserve audits, technical report preparation and other studies for a wide range of worldwide projects.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have previously visited the Project on June 5 to 7, 2013.

6. I am responsible for Sections 15, 16, 18, 19, 20, 21, and 22 and contributed to Sections 1, 25, 26, and 27 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had prior involvement with the property that is the subject of this Technical Report. I visited the Project on a 2013 assignment for RPA for a Bellekeno operations and plans audit, prepared for Alexco and Silver Wheaton.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 29th day of March, 2017

(Signed & Sealed) "R*. Dennis Bergen*"

Raymond Dennis Bergen, P.Eng.

JEFFREY B. AUSTIN, P.ENG

I, Jeff Austin, P.Eng., do hereby certify that:

1. I am an independent consultant of International Metallurgical & Environmental Inc., located at 906 Fairway Crescent, Kelowna, B.C., and incorporated in 1995.

2. I graduated with a B.A. Sc. degree from the University of British Columbia in 1984.

3. I am a member, in good standing, of the Association of Professional Engineers and geoscientists of British Columbia, License Number 15708.

4. I have practiced my profession continuously for 33 years and have been involved in the design, evaluation and operation of mineral processing facilities during that time. A majority of my professional practice has been the completion of test work and test work supervision related to feasibility and pre-feasibility studies of projects involving flotation techniques.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I am responsible for the preparation of sections 13 and 17 of the Technical Report titles "Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada", dated March 29, 2017.

7. I have visited the Keno Hill Project during past consulting work for Alexco Resource Corp.

8. As of the date of this certificate, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to make the Technical Report not misleading.

9. I am independent of the Issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on websites accessible by the public, of the Technical Report.

Dated this 29th day of March, 2017

(Signed & Sealed) "*Jeff Austin*"

Jeff Austin, P.Eng.

DAVID FARROW, P.GEO.

To Accompany"Technical Report on the Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada" with an effective date of January 3, 2017.

1. I, David Farrow, residing in North Vancouver, British Columbia do hereby certify that:

2. I am a Geologist with GeoStrat Consulting Services Inc of 2220 Carmaria Court, North Vancouver, British Columbia, V7J 3M4, Canada.

3. I am a graduate of the University of the Witwatersrand, Johannesburg, South Africa (GDE (Geostatistics) 1998) and the University of Cape Town, Cape Town, South Africa (B.Sc. (Hons) 1982). I have practiced my profession continuously since graduation.

4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (License # 33860). I am also a member in good standing of The South African Council for Natural Science Professions (License # 400074/87).

5. I visited the subject property in October, 2011.

6. As a qualified person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7. I am responsible for the preparation of sections of Chapter 14 which deal with the Bellekeno Mine Resource.

8. I have had prior involvement with the property that is the subject of the Technical Report, co-authoring a report for Alexco Resource Corporation on the Flame & Moth Deposit, (Farrow and McOnie 2013). I also co-authored an Updated PEA report on the project, completed in December, 2014.

9. I have read National Instrument 43-101 and the definition of "Qualified Person" set out in the Instrument and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of National Instrument 43101. Further, I have read this Technical Report, and certify that it has been prepared in compliance with National Instrument 43-101 and Form 43-101 Fl.

10. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the subject property or securities of Alexco Resource Corp. (Alexco).

11. That, as of the date of this certificate, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

(Signed & Sealed) "*David Farrow*"

David Farrow

Vancouver
March 29th, 2017

30 APPENDIX 1

MINERAL TENURE INFORMATION

TABLE 30-1 KHSD QUARTZ MINING CLAIMS AND QUARTZ MINING LEASES
Alexco Resource Corp. – Keno Hill Silver District Project

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC32217		Active	43	Alexco Keno Hill Mining Corp. - 100%	21/08/2004	23/08/2004	31/12/2018	
56501	NM00059	Active	83	Elsa Reclamation & Development Company Ltd. - 100%	17/09/1947	24/09/1947	24/07/2021	
15331	NM00244	Active	"X"	Elsa Reclamation & Development Company Ltd. - 100%	09/05/1929	30/05/1929	28/02/2024	
56502	NM00060	Active	A.A.	Elsa Reclamation & Development Company Ltd. - 100%	17/09/1947	24/09/1947	24/07/2021	
55590	NM00297	Active	ABEL	Alexco Keno Hill Mining Corp. - 100%	08/10/1946	28/03/1947	23/02/2025	
55548	NM00322	Active	ACE-HI	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	13/02/1947	08/02/2025	
55549	NM00323	Active	ACE-HI 1	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	13/02/1947	08/02/2025	
55559	NM00331	Active	ACE-HI 10	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55560	NM00332	Active	ACE-HI 11	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55550	NM00324	Active	ACE-HI 2	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	13/02/1947	08/02/2025	
55552	NM00325	Active	ACE-HI 4	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55553	NM00326	Active	ACE-HI 5	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55555	NM00327	Active	ACE-HI 6	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55556	NM00328	Active	ACE-HI 7	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55557	NM00329	Active	ACE-HI 8	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
55558	NM00330	Active	ACE-HI 9	Elsa Reclamation & Development Company Ltd. - 100%	17/10/1946	14/02/1947	08/02/2025	
56575	NM00170	Active	ACRE FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	14/07/1948	21/07/1948	12/06/2022	
14858		Active	ADA	Elsa Reclamation & Development Company Ltd. - 100%	30/07/1923	30/08/1923	31/12/2017	
83011	NM00593	Active	ADAM FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	29/06/1963	09/07/1963	02/11/2027	
55477	OM00013	Active	ADONAIS	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1946	24/01/1947	15/12/2017	
YC02775		Active	Ag	Alexco Keno Hill Mining Corp. - 100%	09/07/2001	10/07/2001	31/12/2021	
62132	NM00555	Active	AGRAM	Alexco Keno Hill Mining Corp. - 100%	03/06/1952	17/06/1952	02/11/2027	
14466	OM00033	Active	AJAX	Elsa Reclamation & Development Company Ltd. - 100%	30/09/1921	07/12/1921	18/08/2018	
12840	NM00361	Active	AJAX	Elsa Reclamation & Development Company Ltd. - 100%	09/09/1919	28/10/1919	30/04/2025	
80178	NM00499	Active	ALBERTA L	Elsa Reclamation & Development Company Ltd. - 100%	07/12/1956	13/12/1956	26/11/2025	
YC48132		Active	Alex 1	Alexco Keno Hill Mining Corp. - 100%	26/05/2006	02/06/2006	31/12/2019	
YC48141		Active	Alex 10	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48231		Active	Alex 100	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48232		Active	Alex 101	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48233		Active	Alex 102	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48234		Active	Alex 103	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48235		Active	Alex 104	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48236		Active	Alex 105	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48237		Active	Alex 106	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48238		Active	Alex 107	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48239		Active	Alex 108	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48240		Active	Alex 109	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48142		Active	Alex 11	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48241		Active	Alex 110	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48242		Active	Alex 111	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48243		Active	Alex 112	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48244		Active	Alex 113	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48245		Active	Alex 114	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48246		Active	Alex 115	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48247		Active	Alex 116	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48248		Active	Alex 117	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48249		Active	Alex 118	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48250		Active	Alex 119	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48143		Active	Alex 12	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48251		Active	Alex 120	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48252		Active	Alex 121	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48253		Active	Alex 122	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48254		Active	Alex 123	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48255		Active	Alex 124	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48256		Active	Alex 125	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48257		Active	Alex 126	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48258		Active	Alex 127	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2019	
YC48259		Active	Alex 128	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2019	
YC48260		Active	Alex 129	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2019	
YC48144		Active	Alex 13	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48261		Active	Alex 130	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2019	
YC48262		Active	Alex 131	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48263		Active	Alex 132	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48264		Active	Alex 133	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48265		Active	Alex 134	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48266		Active	Alex 135	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48267		Active	Alex 136	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48268		Active	Alex 137	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48269		Active	Alex 138	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48270		Active	Alex 139	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48145		Active	Alex 14	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48271		Active	Alex 140	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48272		Active	Alex 141	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48273		Active	Alex 142	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48274		Active	Alex 143	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48275		Active	Alex 144	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48276		Active	Alex 145	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48277		Active	Alex 146	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48278		Active	Alex 147	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48279		Active	Alex 148	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48280		Active	Alex 149	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48146		Active	Alex 15	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48281		Active	Alex 150	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48282		Active	Alex 151	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48283		Active	Alex 152	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48284		Active	Alex 153	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48285		Active	Alex 154	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48286		Active	Alex 155	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48287		Active	Alex 156	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48288		Active	Alex 157	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48289		Active	Alex 158	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48290		Active	Alex 159	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48147		Active	Alex 16	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48291		Active	Alex 160	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48292		Active	Alex 161	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48293		Active	Alex 162	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48294		Active	Alex 163	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48295		Active	Alex 164	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48296		Active	Alex 165	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48297		Active	Alex 166	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48298		Active	Alex 167	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48299		Active	Alex 168	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48300		Active	Alex 169	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48148		Active	Alex 17	Alexco Keno Hill Mining Corp. - 100%	26/05/2006	02/06/2006	31/12/2020	
YC48301		Active	Alex 170	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48302		Active	Alex 171	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48303		Active	Alex 172	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48304		Active	Alex 173	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48305		Active	Alex 174	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48306		Active	Alex 175	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2023	
YC48307		Active	Alex 176	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2023	
YC48308		Active	Alex 177	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48309		Active	Alex 178	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48310		Active	Alex 179	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48149		Active	Alex 18	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48311		Active	Alex 180	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48312		Active	Alex 181	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48313		Active	Alex 182	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48314		Active	Alex 183	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48315		Active	Alex 184	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48316		Active	Alex 185	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48317		Active	Alex 186	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48318		Active	Alex 187	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48319		Active	Alex 188	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48320		Active	Alex 189	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48150		Active	Alex 19	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48321		Active	Alex 190	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48322		Active	Alex 191	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48323		Active	Alex 192	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48324		Active	Alex 193	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48325		Active	Alex 194	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48326		Active	Alex 195	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48327		Active	Alex 196	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48328		Active	Alex 197	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48329		Active	Alex 198	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48330		Active	Alex 199	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48133		Active	Alex 2	Alexco Keno Hill Mining Corp. - 100%	26/05/2006	02/06/2006	31/12/2019	
YC48151		Active	Alex 20	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48331		Active	Alex 200	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48332		Active	Alex 201	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48333		Active	Alex 202	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48334		Active	Alex 203	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48335		Active	Alex 204	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48336		Active	Alex 205	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48337		Active	Alex 206	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48338		Active	Alex 207	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48548		Active	Alex 208	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48339		Active	Alex 209	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48152		Active	Alex 21	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48340		Active	Alex 210	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48341		Active	Alex 211	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48342		Active	Alex 212	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48343		Active	Alex 213	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48344		Active	Alex 214	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48345		Active	Alex 215	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48346		Active	Alex 216	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48347		Active	Alex 217	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48348		Active	Alex 218	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48349		Active	Alex 219	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48153		Active	Alex 22	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48350		Active	Alex 220	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48351		Active	Alex 221	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2020	
YC48352		Active	Alex 222	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2020	
YC48353		Active	Alex 223	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2020	
YC48354		Active	Alex 224	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2020	
YC48355		Active	Alex 225	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2020	
YC48356		Active	Alex 226	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2020	
YC48357		Active	Alex 227	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48358		Active	Alex 228	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48359		Active	Alex 229	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48154		Active	Alex 23	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48360		Active	Alex 230	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48361		Active	Alex 231	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48362		Active	Alex 232	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48363		Active	Alex 233	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48364		Active	Alex 234	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48365		Active	Alex 235	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48366		Active	Alex 236	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2019	
YC48367		Active	Alex 237	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48368		Active	Alex 238	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48369		Active	Alex 239	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48155		Active	Alex 24	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48370		Active	Alex 240	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48371		Active	Alex 241	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48372		Active	Alex 242	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48373		Active	Alex 243	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48374		Active	Alex 244	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48375		Active	Alex 245	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48376		Active	Alex 246	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48377		Active	Alex 247	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48378		Active	Alex 248	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48379		Active	Alex 249	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48156		Active	Alex 25	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48380		Active	Alex 250	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48381		Active	Alex 251	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48382		Active	Alex 252	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48383		Active	Alex 253	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48384		Active	Alex 254	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48385		Active	Alex 255	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48386		Active	Alex 256	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48387		Active	Alex 257	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48388		Active	Alex 258	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48389		Active	Alex 259	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48157		Active	Alex 26	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48390		Active	Alex 260	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48391		Active	Alex 261	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48392		Active	Alex 262	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48393		Active	Alex 263	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48549		Active	Alex 264	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48394		Active	Alex 265	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48395		Active	Alex 266	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48396		Active	Alex 267	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48397		Active	Alex 268	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48398		Active	Alex 269	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48158		Active	Alex 27	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48399		Active	Alex 270	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48400		Active	Alex 271	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48401		Active	Alex 272	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48402		Active	Alex 273	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48403		Active	Alex 274	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48404		Active	Alex 275	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48405		Active	Alex 276	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2019	
YC48406		Active	Alex 277	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2023	
YC48407		Active	Alex 278	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2023	
YC48408		Active	Alex 279	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2023	
YC48159		Active	Alex 28	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48409		Active	Alex 280	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2023	
YC48410		Active	Alex 287	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48411		Active	Alex 288	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48412		Active	Alex 289	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48160		Active	Alex 29	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48413		Active	Alex 290	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48414		Active	Alex 291	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48415		Active	Alex 292	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48416		Active	Alex 293	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48417		Active	Alex 294	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2020	
YC48418		Active	Alex 295	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48419		Active	Alex 296	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48420		Active	Alex 297	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48421		Active	Alex 298	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48422		Active	Alex 299	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48134		Active	Alex 3	Alexco Keno Hill Mining Corp. - 100%	26/05/2006	02/06/2006	31/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48161		Active	Alex 30	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2020	
YC48423		Active	Alex 300	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48424		Active	Alex 301	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48425		Active	Alex 302	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48426		Active	Alex 303	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48427		Active	Alex 304	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48428		Active	Alex 305	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48429		Active	Alex 306	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48430		Active	Alex 307	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48431		Active	Alex 308	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48432		Active	Alex 309	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48162		Active	Alex 31	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48433		Active	Alex 310	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48434		Active	Alex 311	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48435		Active	Alex 312	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48436		Active	Alex 313	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48437		Active	Alex 314	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48438		Active	Alex 315	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48439		Active	Alex 316	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48440		Active	Alex 317	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48441		Active	Alex 318	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48442		Active	Alex 319	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48163		Active	Alex 32	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48443		Active	Alex 320	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48444		Active	Alex 321	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48445		Active	Alex 322	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48446		Active	Alex 323	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48447		Active	Alex 324	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48448		Active	Alex 325	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48449		Active	Alex 326	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48450		Active	Alex 327	Alexco Keno Hill Mining Corp. - 100%	19/05/2006	02/06/2006	31/12/2020	
YC48451		Active	Alex 328	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48452		Active	Alex 329	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48164		Active	Alex 33	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48453		Active	Alex 330	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48454		Active	Alex 331	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48455		Active	Alex 332	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48456		Active	Alex 333	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48457		Active	Alex 334	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48458		Active	Alex 335	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48459		Active	Alex 336	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48460		Active	Alex 337	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48461		Active	Alex 338	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48462		Active	Alex 339	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48165		Active	Alex 34	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48463		Active	Alex 340	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48464		Active	Alex 341	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48465		Active	Alex 342	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2019	
YC48466		Active	Alex 343	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48467		Active	Alex 344	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48468		Active	Alex 345	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48469		Active	Alex 346	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48470		Active	Alex 347	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48471		Active	Alex 348	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48472		Active	Alex 349	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48166		Active	Alex 35	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48473		Active	Alex 350	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48474		Active	Alex 351	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48475		Active	Alex 352	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48476		Active	Alex 353	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48477		Active	Alex 354	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48478		Active	Alex 355	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48479		Active	Alex 356	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48480		Active	Alex 357	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48481		Active	Alex 358	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48482		Active	Alex 359	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48167		Active	Alex 36	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48483		Active	Alex 360	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48484		Active	Alex 361	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48485		Active	Alex 362	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48486		Active	Alex 363	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48487		Active	Alex 364	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48488		Active	Alex 365	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48489		Active	Alex 366	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48490		Active	Alex 367	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48491		Active	Alex 368	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48492		Active	Alex 369	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48168		Active	Alex 37	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48493		Active	Alex 371	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48494		Active	Alex 372	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48495		Active	Alex 373	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48496		Active	Alex 374	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48497		Active	Alex 375	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48498		Active	Alex 376	Alexco Keno Hill Mining Corp. - 100%	02/06/2006	02/06/2006	31/12/2019	
YC48499		Active	Alex 377	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2023	
YC48500		Active	Alex 379	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48169		Active	Alex 38	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48501		Active	Alex 380	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48502		Active	Alex 381	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48503		Active	Alex 382	Alexco Keno Hill Mining Corp. - 100%	23/05/2006	02/06/2006	31/12/2019	
YC48504		Active	Alex 383	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2019	
YC48505		Active	Alex 384	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2019	
YC48506		Active	Alex 386	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2019	
YC48170		Active	Alex 39	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48135		Active	Alex 4	Alexco Keno Hill Mining Corp. - 100%	26/05/2006	02/06/2006	31/12/2019	
YC48171		Active	Alex 40	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48507		Active	Alex 400	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	
YC48508		Active	Alex 401	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48509		Active	Alex 403	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	
YC48510		Active	Alex 404	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	
YC48172		Active	Alex 41	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48173		Active	Alex 42	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48511		Active	Alex 423	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	
YC48512		Active	Alex 424	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	
YC48513		Active	Alex 425	Alexco Keno Hill Mining Corp. - 100%	24/05/2006	02/06/2006	31/12/2021	
YC48514		Active	Alex 429	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48174		Active	Alex 43	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48515		Active	Alex 430	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48516		Active	Alex 431	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48517		Active	Alex 432	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48518		Active	Alex 433	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48519		Active	Alex 434	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48520		Active	Alex 435	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48521		Active	Alex 436	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48522		Active	Alex 437	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48523		Active	Alex 438	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48524		Active	Alex 439	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48175		Active	Alex 44	Alexco Keno Hill Mining Corp. - 100%	15/05/2006	02/06/2006	31/12/2019	
YC48525		Active	Alex 440	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48526		Active	Alex 441	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48527		Active	Alex 442	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48528		Active	Alex 443	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48529		Active	Alex 444	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48530		Active	Alex 445	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48531		Active	Alex 446	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48532		Active	Alex 447	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48533		Active	Alex 448	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48534		Active	Alex 449	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48176		Active	Alex 45	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48535		Active	Alex 450	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48536		Active	Alex 451	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48537		Active	Alex 452	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48538		Active	Alex 453	Alexco Keno Hill Mining Corp. - 100%	17/05/2006	02/06/2006	31/12/2020	
YC48539		Active	Alex 454	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48540		Active	Alex 455	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48541		Active	Alex 456	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48542		Active	Alex 457	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48543		Active	Alex 458	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48544		Active	Alex 459	Alexco Keno Hill Mining Corp. - 100%	16/05/2006	02/06/2006	31/12/2020	
YC48177		Active	Alex 46	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC48545		Active	Alex 460	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48546		Active	Alex 461	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC48547		Active	Alex 462	Alexco Keno Hill Mining Corp. - 100%	18/05/2006	02/06/2006	31/12/2020	
YC56176		Active	Alex 463	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	12/06/2007	12/12/2019	
YC56177		Active	Alex 464	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	12/06/2007	12/12/2019	
YC56178		Active	Alex 465	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56179		Active	Alex 466	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC56180		Active	Alex 467	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56181		Active	Alex 468	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56182		Active	Alex 469	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC48178		Active	Alex 47	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC56183		Active	Alex 470	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56184		Active	Alex 471	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56185		Active	Alex 472	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56186		Active	Alex 473	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56187		Active	Alex 474	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56188		Active	Alex 475	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56189		Active	Alex 476	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56190		Active	Alex 477	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56191		Active	Alex 478	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56192		Active	Alex 479	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC48179		Active	Alex 48	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC56193		Active	Alex 480	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56194		Active	Alex 481	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56195		Active	Alex 482	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56196		Active	Alex 483	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56197		Active	Alex 484	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56198		Active	Alex 485	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56199		Active	Alex 486	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2023	
YC56200		Active	Alex 487	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56201		Active	Alex 488	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56202		Active	Alex 489	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC48180		Active	Alex 49	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC56203		Active	Alex 490	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56204		Active	Alex 491	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56205		Active	Alex 492	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56206		Active	Alex 493	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56207		Active	Alex 494	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56208		Active	Alex 495	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56209		Active	Alex 496	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56210		Active	Alex 497	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2023	
YC56211		Active	Alex 498	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2023	
YC56212		Active	Alex 499	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2023	
YC48136		Active	Alex 5	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48181		Active	Alex 50	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC56213		Active	Alex 500	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2023	
YC56214		Active	Alex 501	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2023	
YC56215		Active	Alex 502	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56216		Active	Alex 503	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2023	
YC56217		Active	Alex 504	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56218		Active	Alex 505	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56219		Active	Alex 506	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56220		Active	Alex 507	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56221		Active	Alex 508	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56222		Active	Alex 509	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC48182		Active	Alex 51	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC56223		Active	Alex 510	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56224		Active	Alex 511	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019	
YC56225		Active	Alex 512	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56226		Active	Alex 513	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56227		Active	Alex 514	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56228		Active	Alex 515	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56229		Active	Alex 516	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56230		Active	Alex 517	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56231		Active	Alex 518	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56232		Active	Alex 519	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC48183		Active	Alex 52	Alexco Keno Hill Mining Corp. - 100%	21/05/2006	02/06/2006	31/12/2019	
YC56233		Active	Alex 520	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56234		Active	Alex 521	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56235		Active	Alex 522	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56236		Active	Alex 523	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56237		Active	Alex 524	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56238		Active	Alex 525	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56239		Active	Alex 526	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56240		Active	Alex 527	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56241		Active	Alex 528	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56242		Active	Alex 529	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2023	
YC48184		Active	Alex 53	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC56243		Active	Alex 530	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56244		Active	Alex 531	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56245		Active	Alex 532	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56246		Active	Alex 533	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56247		Active	Alex 534	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56248		Active	Alex 535	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56249		Active	Alex 536	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56250		Active	Alex 537	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56251		Active	Alex 538	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56252		Active	Alex 539	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC48185		Active	Alex 54	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC56253		Active	Alex 540	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56254		Active	Alex 541	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56255		Active	Alex 542	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56256		Active	Alex 543	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56257		Active	Alex 544	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56258		Active	Alex 545	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56259		Active	Alex 546	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56260		Active	Alex 547	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56261		Active	Alex 548	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56262		Active	Alex 549	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC48186		Active	Alex 55	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC56263		Active	Alex 550	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56264		Active	Alex 551	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56265		Active	Alex 552	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56266		Active	Alex 553	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019	
YC56267		Active	Alex 554	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC56268		Active	Alex 556	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56269		Active	Alex 558	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC48187		Active	Alex 56	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC56270		Active	Alex 560	Alexco Keno Hill Mining Corp. - 100%	22/06/2007	22/06/2007	22/12/2019	
YC56271		Active	Alex 562	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	22/06/2007	22/12/2019	
YC56272		Active	Alex 564	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019	
YC56273		Active	Alex 565	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	13/06/2007	13/12/2019	
YC48188		Active	Alex 57	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48189		Active	Alex 58	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48190		Active	Alex 59	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48137		Active	Alex 6	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48191		Active	Alex 60	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC56874		Active	Alex 601	Alexco Keno Hill Mining Corp. - 100%	14/07/2007	24/07/2007	31/12/2021	
YC56875		Active	Alex 602	Alexco Keno Hill Mining Corp. - 100%	14/07/2007	24/07/2007	31/12/2021	
YC56876		Active	Alex 603	Alexco Keno Hill Mining Corp. - 100%	14/07/2007	24/07/2007	31/12/2021	
YC56877		Active	Alex 604	Alexco Keno Hill Mining Corp. - 100%	14/07/2007	24/07/2007	31/12/2021	
YC56878		Active	Alex 605	Alexco Keno Hill Mining Corp. - 100%	14/07/2007	24/07/2007	31/12/2021	
YC56879		Active	Alex 606	Alexco Keno Hill Mining Corp. - 100%	14/07/2007	24/07/2007	31/12/2021	
YC48192		Active	Alex 61	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48193		Active	Alex 62	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48194		Active	Alex 63	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48195		Active	Alex 64	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48196		Active	Alex 65	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48197		Active	Alex 66	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48198		Active	Alex 67	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48199		Active	Alex 68	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48200		Active	Alex 69	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48138		Active	Alex 7	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48201		Active	Alex 70	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48202		Active	Alex 71	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48203		Active	Alex 72	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48204		Active	Alex 73	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48205		Active	Alex 74	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48206		Active	Alex 75	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48207		Active	Alex 76	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48208		Active	Alex 77	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48209		Active	Alex 78	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48210		Active	Alex 79	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48139		Active	Alex 8	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48211		Active	Alex 80	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48212		Active	Alex 81	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48213		Active	Alex 82	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48214		Active	Alex 83	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48215		Active	Alex 84	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48216		Active	Alex 85	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48217		Active	Alex 86	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48218		Active	Alex 87	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48219		Active	Alex 88	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48220		Active	Alex 89	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC48140		Active	Alex 9	Alexco Keno Hill Mining Corp. - 100%	20/05/2006	02/06/2006	31/12/2019	
YC48221		Active	Alex 90	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48222		Active	Alex 91	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48223		Active	Alex 92	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48224		Active	Alex 93	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48225		Active	Alex 94	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48226		Active	Alex 95	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48227		Active	Alex 96	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48228		Active	Alex 97	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48229		Active	Alex 98	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
YC48230		Active	Alex 99	Alexco Keno Hill Mining Corp. - 100%	22/05/2006	22/05/2006	31/12/2020	
59013	NM00070	Active	ALICE	Elsa Reclamation & Development Company Ltd. - 100%	28/08/1948	01/09/1948	08/08/2021	
55573	NM00276	Active	ALICE	Elsa Reclamation & Development Company Ltd. - 100%	25/10/1946	17/02/1947	18/04/2024	
62317	NM00470	Active	ALICE 1	Elsa Reclamation & Development Company Ltd. - 100%	25/07/1953	05/08/1953	26/11/2025	
62318	NM00471	Active	ALICE 2	Elsa Reclamation & Development Company Ltd. - 100%	25/07/1953	05/08/1953	26/11/2025	
YB29727		Active	ALLA 4	Elsa Reclamation & Development Company Ltd. - 100%	15/03/1993	19/03/1993	31/12/2021	
YB29728		Active	ALLA 5	Elsa Reclamation & Development Company Ltd. - 100%	16/03/1993	19/03/1993	31/12/2021	
YB29729		Active	ALLA 6	Elsa Reclamation & Development Company Ltd. - 100%	16/03/1993	19/03/1993	31/12/2021	
81223	NM00651	Active	ANDY	Elsa Reclamation & Development Company Ltd. - 100%	21/06/1962	26/06/1962	12/03/2031	
13108	NM00058	Active	ANEROID	Elsa Reclamation & Development Company Ltd. - 100%	27/04/1920	10/06/1920	18/07/2021	
12909	NM00642	Active	ANTHONY	Elsa Reclamation & Development Company Ltd. - 100%	13/10/1919	17/12/1919	24/03/2030	
56443	OM00022	Active	APEX FR.	Elsa Reclamation & Development Company Ltd. - 100%	11/07/1947	15/07/1947	15/12/2017	
55476	OM00014	Active	APOLLO	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1946	23/01/1947	15/12/2017	
14089	NM00692	Active	ARCTIC	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	26/07/1921	19/12/2035	
16589	NM00351	Active	ARDELLE	Elsa Reclamation & Development Company Ltd. - 100%	12/06/1925	23/07/1925	30/03/2025	
55474	OM00016	Active	ARETHUSA	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1946	23/01/1947	15/12/2017	
16393	NM00174	Active	ARGENTUM	Nora Ethel Swenson - 50%, Elsa Reclamation & Development Company Ltd	02/02/1928	25/02/1928	16/11/2022	
16561	NM00753	Active	ARIZONA	Elsa Reclamation & Development Company Ltd. - 100%	02/06/1925	30/06/1925	27/01/2037	
14225	NM00134	Active	ARNOLD	Elsa Reclamation & Development Company Ltd. - 100%	18/07/1921	24/09/1921	07/05/2022	
55475	OM00015	Active	ARTEMIS	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1946	23/01/1947	15/12/2017	
38819	NM00163	Active	ASTORIA	Elsa Reclamation & Development Company Ltd. - 100%	28/10/1934	19/11/1934	12/06/2022	
14998	NM00701	Active	ATLANTIC	Elsa Reclamation & Development Company Ltd. - 100%	18/06/1924	14/07/1924	29/01/2036	
38687	OM00036	Active	AUGUST	Elsa Reclamation & Development Company Ltd. - 100%	13/08/1930	16/09/1930	18/08/2018	
62200	NM00370	Active	B & H	Elsa Reclamation & Development Company Ltd. - 100%	25/07/1952	04/08/1952	30/04/2025	
55429	NM00533	Active	BALTO	Alexco Keno Hill Mining Corp. - 100%	25/05/1946	06/06/1946	02/11/2027	
59373	NM00195	Active	BANKER	Elsa Reclamation & Development Company Ltd. - 100%	28/07/1949	29/07/1949	16/06/2023	
59374	NM00196	Active	BANKER 1	Elsa Reclamation & Development Company Ltd. - 100%	28/07/1949	29/07/1949	16/06/2023	
59375	NM00197	Active	BANKER 2	Elsa Reclamation & Development Company Ltd. - 100%	28/07/1949	29/07/1949	16/06/2023	
59376	NM00198	Active	BANKER 3	Elsa Reclamation & Development Company Ltd. - 100%	28/07/1949	29/07/1949	16/06/2023	
YB43712		Active	Barb One	Elsa Reclamation & Development Company Ltd. - 100%	12/10/1994	12/10/1994	31/12/2020	
14446	NM00061	Active	BARKER Jr	Elsa Reclamation & Development Company Ltd. - 100%	13/10/1921	01/12/1921	24/07/2021	
55569	NM00014	Active	BARKY	Elsa Reclamation & Development Company Ltd. - 100%	24/10/1946	17/02/1947	27/07/2019	
15306	NM00097	Active	BEAR	Elsa Reclamation & Development Company Ltd. - 100%	27/10/1928	29/11/1928	26/08/2021	
55048	NM00109	Active	BEE	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1937	29/10/1937	28/08/2021	
14826		Active	BELL YORK	Elsa Reclamation & Development Company Ltd. - 100%	04/06/1923	09/07/1923	31/12/2017	
59518	NM00005	Active	BEN	Elsa Reclamation & Development Company Ltd. - 100%	01/11/1949	01/11/1949	27/07/2019	
59474	NM00098	Active	BERRHOME	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1949	03/09/1949	26/08/2021	
59121	NM00138	Active	BERRMAC 1	Elsa Reclamation & Development Company Ltd. - 100%	04/11/1948	10/11/1948	07/05/2022	
59122	NM00139	Active	BERRMAC 2	Elsa Reclamation & Development Company Ltd. - 100%	04/11/1948	10/11/1948	07/05/2022	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
59123	NM00140	Active	BERRMAC 3	Elsa Reclamation & Development Company Ltd. - 100%	04/11/1948	10/11/1948	07/05/2022	
59124	NM00141	Active	BERRMAC 4	Elsa Reclamation & Development Company Ltd. - 100%	04/11/1948	10/11/1948	07/05/2022	
59476	NM00143	Active	BERRNAT	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1949	03/09/1949	07/05/2022	
56533	NM00436	Active	BES	Elsa Reclamation & Development Company Ltd. - 100%	09/06/1948	23/06/1948	26/11/2025	
59342	NM00018	Active	BETS	Elsa Reclamation & Development Company Ltd. - 100%	14/07/1949	19/07/1949	27/07/2019	
56524	NM00062	Active	BETTY	Elsa Reclamation & Development Company Ltd. - 100%	05/06/1948	11/06/1948	24/07/2021	
16105	NM00246	Active	BETTY	Elsa Reclamation & Development Company Ltd. - 100%	27/12/1925	20/01/1926	28/02/2024	
38831	NM00164	Active	BILLYS	Elsa Reclamation & Development Company Ltd. - 100%	25/04/1935	15/05/1935	12/06/2022	
55371	NM00365	Active	BINGO	Elsa Reclamation & Development Company Ltd. - 100%	20/07/1945	25/10/1945	30/04/2025	
14084	NM00695	Active	BIRMINGHAM	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	25/07/1921	15/01/2036	
12869	NM00175	Active	BLACK CAP	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1919	12/11/1919	19/11/2022	
13480	4161	Active	BLACK MAGGIE	Elsa Reclamation & Development Company Ltd. - 100%	13/08/1920	13/10/1920	9/3/2016*	Renewed Aug 16, 2016
62272	NM00344	Active	BLOOD	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1952	17/09/1952	15/02/2025	
YC01993	NM00720	Active	Blue	Alexco Keno Hill Mining Corp. - 100%	09/09/1999	10/09/1999	02/10/2033	
13143	NM00617	Active	BLUE BELL	Elsa Reclamation & Development Company Ltd. - 100%	07/05/1920	16/06/1920	31/01/2030	
59160	NM00015	Active	BLUE BIRD	Elsa Reclamation & Development Company Ltd. - 100%	11/11/1948	22/11/1948	27/07/2019	
59366	NM00209	Active	BLUE FOX 10	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
59343	NM00202	Active	BLUE FOX 2	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	27/07/2023	
59359	NM00201	Active	BLUE FOX 3	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	27/07/2023	
59360	NM00203	Active	BLUE FOX 4	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
59361	NM00204	Active	BLUE FOX 5	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
59362	NM00205	Active	BLUE FOX 6	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
59363	NM00206	Active	BLUE FOX 7	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
59364	NM00207	Active	BLUE FOX 8	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
59365	NM00208	Active	BLUE FOX 9	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	20/07/2023	
YC90545	NM00721	Active	Blue Fr. 2	Alexco Keno Hill Mining Corp. - 100%	17/09/2011	20/09/2011	02/10/2033	
YC90546	NM00722	Active	Blue Fr. 3	Alexco Keno Hill Mining Corp. - 100%	17/09/2011	20/09/2011	02/10/2033	
13122	NM00044	Active	BLUE ROCK	Elsa Reclamation & Development Company Ltd. - 100%	28/04/1920	12/06/1920	14/11/2020	
13151	NM00636	Active	BLUE STONE	Elsa Reclamation & Development Company Ltd. - 100%	07/05/1920	16/06/1920	31/12/2029	
59351	NM00210	Active	BLUE-FOX 1	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	27/07/2023	
55394		Active	BOB	Elsa Reclamation & Development Company Ltd. - 100%	07/02/1946	05/03/1946	31/12/2017	
59543	NM00189	Active	BOB	Elsa Reclamation & Development Company Ltd. - 100%	14/04/1950	01/05/1950	09/02/2023	
59494	NM00192	Active	BOBBIE 10	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	12/02/2023	
59486	NM00456	Active	BOBBIE 2	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59487	NM00457	Active	BOBBIE 3	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59488	NM00458	Active	BOBBIE 4	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59491	NM00190	Active	BOBBIE 7	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	12/02/2023	
59493	NM00191	Active	BOBBIE 9	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	12/02/2023	
55365	NM00275	Active	BOKA	Elsa Reclamation & Development Company Ltd. - 100%	08/07/1945	25/10/1945	18/04/2024	
15250	NM00063	Active	BOYLE	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1928	06/08/1928	24/07/2021	
59026	NM00064	Active	BOYLE	Elsa Reclamation & Development Company Ltd. - 100%	11/09/1948	13/09/1948	24/07/2021	
15249	NM00242	Active	BRIDGETTE	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1928	06/08/1928	28/02/2024	
59316	NM00287	Active	BRISTOL	Elsa Reclamation & Development Company Ltd. - 100%	11/07/1949	19/07/1949	27/06/2024	
12988	NM00274	Active	BRITANNIA	Elsa Reclamation & Development Company Ltd. - 100%	10/03/1920	09/04/1920	18/04/2024	
62152	NM00319	Active	BUCK	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1952	02/07/1952	01/02/2025	
59041	NM00171	Active	BUCKEYE	Elsa Reclamation & Development Company Ltd. - 100%	20/09/1948	21/09/1948	12/06/2022	
59795	NM00572	Active	BUCKO	Elsa Reclamation & Development Company Ltd. - 100%	29/09/1950	02/10/1950	02/11/2027	
55504	NM00302	Active	BUCONJO 1	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
55513	NM00311	Active	BUCONJO 10	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1946	03/02/1947	31/01/2025	
55514	NM00312	Active	BUCONJO 11	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1946	03/02/1947	31/01/2025	
55515	NM00313	Active	BUCONJO 12	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1946	03/02/1947	31/01/2025	
55516	NM00314	Active	BUCONJO 13	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1946	03/02/1947	31/01/2025	
55517	NM00315	Active	BUCONJO 14	Elsa Reclamation & Development Company Ltd. - 100%	24/09/1946	03/02/1947	31/01/2025	
55518	NM00316	Active	BUCONJO 15	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1946	03/02/1947	31/01/2025	
62154	NM00317	Active	BUCONJO 16	Elsa Reclamation & Development Company Ltd. - 100%	16/06/1952	02/07/1952	31/01/2025	
55505	NM00303	Active	BUCONJO 2	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	
55506	NM00304	Active	BUCONJO 3	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	
55507	NM00305	Active	BUCONJO 4	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	
55508	NM00306	Active	BUCONJO 5	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	
55509	NM00307	Active	BUCONJO 6	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	
55510	NM00308	Active	BUCONJO 7	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1904	01/02/1947	31/01/2025	
55511	NM00309	Active	BUCONJO 8	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1946	03/02/1947	31/01/2025	
55512	NM00310	Active	BUCONJO 9	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1946	03/02/1947	31/01/2025	
55503	NM00301	Active	BUCONJO FRACTIO	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	31/01/2025	
14884	NM00065	Active	BUDDY	Elsa Reclamation & Development Company Ltd. - 100%	02/09/1923	22/10/1923	24/07/2021	
13454	4261	Active	BULL FROG	Elsa Reclamation & Development Company Ltd. - 100%	29/07/1920	02/10/1920	3/30/2017*	Renewed Oct 4, 2016
YA39498		Active	Bulldozer 1	Elsa Reclamation & Development Company Ltd. - 100%	03/04/1979	04/04/1979	31/12/2021	
YC90503	NM00719	Active	BULLDOZER F 2	Alexco Keno Hill Mining Corp. - 100%	26/08/2012	27/08/2012	02/10/2033	
83133	NM00656	Active	Bunk	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1963	13/08/1963	12/03/2031	
59534	NM00543	Active	BUNKER	Alexco Keno Hill Mining Corp. - 100%	18/03/1950	01/04/1950	02/11/2027	
59535	NM00544	Active	BUNKER NO. 1	Alexco Keno Hill Mining Corp. - 100%	18/03/1950	01/04/1950	02/11/2027	
13058	NM00035	Active	BUNNY	Elsa Reclamation & Development Company Ltd. - 100%	03/04/1920	11/05/1920	25/04/2020	
16166	NM00084	Active	BUNNY	Elsa Reclamation & Development Company Ltd. - 100%	08/06/1926	12/07/1926	20/08/2021	
59542	NM00186	Active	BUNT	Elsa Reclamation & Development Company Ltd. - 100%	14/04/1950	01/05/1950	09/02/2023	
14445	NM00099	Active	BUSH	Elsa Reclamation & Development Company Ltd. - 100%	11/10/1921	01/12/1921	26/08/2021	
59420	NM00100	Active	CACHI 1	Elsa Reclamation & Development Company Ltd. - 100%	27/07/1949	10/08/1949	26/08/2021	
59421	NM00101	Active	CACHI 2	Elsa Reclamation & Development Company Ltd. - 100%	27/07/1949	10/08/1949	26/08/2021	
59422	NM00102	Active	CACHI 3	Elsa Reclamation & Development Company Ltd. - 100%	27/07/1949	10/08/1949	26/08/2021	
55587	NM00294	Active	CAIN	Alexco Keno Hill Mining Corp. - 100%	08/10/1946	28/03/1947	23/02/2025	
62341	NM00288	Active	CAKE	Elsa Reclamation & Development Company Ltd. - 100%	11/11/1953	20/11/1953	27/06/2024	
62282	NM00280	Active	CALF	Elsa Reclamation & Development Company Ltd. - 100%	21/09/1952	02/10/1952	18/04/2024	
13114	NM00290	Active	CALUMET 1	Elsa Reclamation & Development Company Ltd. - 100%	27/04/1920	11/06/1920	15/08/2024	
15319	NM00243	Active	CALUMET 2	Elsa Reclamation & Development Company Ltd. - 100%	01/03/1929	27/03/1929	28/02/2024	
59249	NM00268	Active	CAMARRILA	Elsa Reclamation & Development Company Ltd. - 100%	28/05/1949	31/05/1949	18/01/2024	
59248	NM00267	Active	CAMEO	Elsa Reclamation & Development Company Ltd. - 100%	28/05/1949	31/05/1949	18/01/2024	
13175	NM00666	Active	CAMOROTE	Elsa Reclamation & Development Company Ltd. - 100%	05/05/1920	19/06/1920	31/10/2033	
55484	NM00135	Active	CANADA	Elsa Reclamation & Development Company Ltd. - 100%	26/08/1946	24/01/1947	07/05/2022	
12970	NM00041	Active	CANADIAN	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1919	04/03/1920	14/08/2020	
59250	NM00269	Active	CAPSTAN	Elsa Reclamation & Development Company Ltd. - 100%	28/05/1949	31/05/1949	18/01/2024	
12878	NM00021	Active	CARIBOU	Elsa Reclamation & Development Company Ltd. - 100%	06/09/1919	26/11/1919	14/09/2019	
81152		Active	Carol	Alexco Keno Hill Mining Corp. - 100%	29/05/1962	04/06/1962	31/12/2019	
80239		Active	Carol 1	Alexco Keno Hill Mining Corp. - 100%	08/10/1957	16/10/1957	31/12/2019	
80240		Active	Carol 2	Alexco Keno Hill Mining Corp. - 100%	08/10/1957	16/10/1957	31/12/2019	
80241		Active	Carol 3	Alexco Keno Hill Mining Corp. - 100%	08/10/1957	16/10/1957	31/12/2019	
80242		Active	Carol 4	Alexco Keno Hill Mining Corp. - 100%	08/10/1957	16/10/1957	31/12/2019	
80348		Active	Carol 5	Alexco Keno Hill Mining Corp. - 100%	26/06/1959	02/07/1959	31/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
Y 68414		Active	Case 1	Elsa Reclamation & Development Company Ltd. - 100%	03/08/1972	17/08/1972	31/12/2020	
Y 68415		Active	Case 2	Elsa Reclamation & Development Company Ltd. - 100%	03/08/1972	17/08/1972	31/12/2020	
Y 68416		Active	Case 3	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1972	17/08/1972	31/12/2020	
62236	NM00403	Active	CAT	Elsa Reclamation & Development Company Ltd. - 100%	25/08/1952	27/08/1952	12/06/2025	
81226	NM00653	Active	CATHY	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1962	26/06/1962	12/03/2031	
83012	NM00594	Active	CATHY FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	29/06/1963	09/07/1963	02/11/2027	
55120	OM00020	Active	CHANCE	Elsa Reclamation & Development Company Ltd. - 100%	05/11/1938	28/11/1938	15/12/2017	
38779	NM00665	Active	CHANCE	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1934	18/04/1934	17/06/2033	
59796	NM00573	Active	CHARITY	Elsa Reclamation & Development Company Ltd. - 100%	29/09/1950	02/10/1950	02/11/2027	
13089	OM00039	Active	CHIEF	Elsa Reclamation & Development Company Ltd. - 100%	16/04/1920	08/06/1920	18/08/2018	
13088	OM00038	Active	CHIEF 2	Elsa Reclamation & Development Company Ltd. - 100%	16/04/1920	08/06/1920	18/08/2018	
13092	NM00103	Active	CHIEF 3	Elsa Reclamation & Development Company Ltd. - 100%	18/04/1920	08/06/1920	26/08/2021	
13093	NM00627	Active	CHIEF 4	Elsa Reclamation & Development Company Ltd. - 100%	18/04/1920	09/06/1920	06/12/2029	
YC02670		Active	Chiko 1	Alexco Keno Hill Mining Corp. - 100%	12/10/2000	27/10/2000	31/12/2018	
YC02679		Active	Chiko 10	Alexco Keno Hill Mining Corp. - 100%	14/10/2000	27/10/2000	31/12/2018	
YC02671		Active	Chiko 2	Alexco Keno Hill Mining Corp. - 100%	12/10/2000	27/10/2000	31/12/2018	
YC02672		Active	Chiko 3	Alexco Keno Hill Mining Corp. - 100%	12/10/2000	27/10/2000	31/12/2018	
YC02673		Active	Chiko 4	Alexco Keno Hill Mining Corp. - 100%	12/10/2000	27/10/2000	31/12/2018	
YC02674		Active	Chiko 5	Alexco Keno Hill Mining Corp. - 100%	12/10/2000	27/10/2000	31/12/2018	
YC02675		Active	Chiko 6	Alexco Keno Hill Mining Corp. - 100%	12/10/2000	27/10/2000	31/12/2018	
YC02676		Active	Chiko 7	Alexco Keno Hill Mining Corp. - 100%	14/10/2000	27/10/2000	31/12/2018	
YC02677		Active	Chiko 8	Alexco Keno Hill Mining Corp. - 100%	14/10/2000	27/10/2000	31/12/2018	
YC02678		Active	Chiko Fr. 9	Alexco Keno Hill Mining Corp. - 100%	14/10/2000	27/10/2000	31/12/2018	
62284	NM00467	Active	CITY	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1952	02/10/1952	26/11/2025	
59475	NM00104	Active	CLIMBEAGLE	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1949	03/09/1949	26/08/2021	
59120	NM00105	Active	CLIMBER	Elsa Reclamation & Development Company Ltd. - 100%	04/11/1948	10/11/1948	26/08/2021	
80358	NM00580	Active	CLOSURE	Elsa Reclamation & Development Company Ltd. - 100%	09/07/1959	21/07/1959	02/11/2027	
55421	NM00023	Active	COMPLEX	Elsa Reclamation & Development Company Ltd. - 100%	25/05/1946	16/08/1946	28/08/2019	
62153	NM00320	Active	CON	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1952	02/07/1952	01/02/2025	
55480	NM00031	Active	CORA	Elsa Reclamation & Development Company Ltd. - 100%	26/08/1946	24/01/1947	11/02/2020	
56473	NM00601	Active	CORA	Elsa Reclamation & Development Company Ltd. - 100%	11/08/1947	25/08/1947	22/07/2028	
56574	NM00162	Active	CORA 2	Elsa Reclamation & Development Company Ltd. - 100%	09/07/1948	21/07/1948	02/06/2022	
59765	NM00055	Active	CORA Fr 2	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	27/09/1950	17/06/2021	
14094	NM00363	Active	CORAL	Elsa Reclamation & Development Company Ltd. - 100%	04/05/1921	26/07/1921	30/04/2025	
55420	NM00564	Active	CROESUS	Elsa Reclamation & Development Company Ltd. - 100%	22/05/1946	27/05/1946	02/11/2027	
13418	NM00372	Active	CUB	Elsa Reclamation & Development Company Ltd. - 100%	26/07/1920	25/09/1920	10/05/2025	
59005	NM00509	Active	D.C.	Elsa Reclamation & Development Company Ltd. - 100%	11/08/1948	26/08/1948	01/11/2026	
59645	NM00545	Active	DAISY FRACTION	Alexco Keno Hill Mining Corp. - 100%	15/07/1950	22/07/1950	02/11/2027	
14883	NM00699	Active	DARWIN	Elsa Reclamation & Development Company Ltd. - 100%	16/09/1923	18/10/1923	28/01/2036	
16097	NM00531	Active	DAVID	Alexco Keno Hill Mining Corp. - 100%	14/11/1925	08/12/1925	02/11/2027	
62367	NM00472	Active	DAWSON	Elsa Reclamation & Development Company Ltd. - 100%	19/06/1954	21/06/1954	26/11/2025	
59367	NM00176	Active	DE CHUCK	Elsa Reclamation & Development Company Ltd. - 100%	21/07/1949	25/07/1949	19/11/2022	
55315	NM00046	Active	DELIA	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1944	19/02/1945	14/11/2020	
59253	NM00270	Active	DENTON	Elsa Reclamation & Development Company Ltd. - 100%	01/06/1949	03/06/1949	18/01/2024	
14846	NM00687	Active	DENVER	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1923	11/08/1923	14/10/2035	
55577	NM00277	Active	DEVON	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1946	20/03/1947	18/04/2024	
YA40163		Active	Dice 1	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40173		Active	Dice 11	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1979	29/06/1979	29/12/2018	
YA40174		Active	Dice 12	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1979	29/06/1979	29/12/2018	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YA40175		Active	Dice 13	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1979	29/06/1979	29/12/2018	
YA40176		Active	Dice 14	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1979	29/06/1979	29/12/2018	
YA40164		Active	Dice 2	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40165		Active	Dice 3	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40166		Active	Dice 4	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40167		Active	Dice 5	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40168		Active	Dice 6	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40169		Active	Dice 7	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40170		Active	Dice 8	Elsa Reclamation & Development Company Ltd. - 100%	14/06/1979	29/06/1979	29/12/2018	
YA40171		Active	Dice 9	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1979	29/06/1979	29/12/2018	
55362	NM00430	Active	DIVIDE	Elsa Reclamation & Development Company Ltd. - 100%	08/07/1945	25/10/1945	26/11/2025	
62283	NM00466	Active	DIVORCE	Elsa Reclamation & Development Company Ltd. - 100%	21/09/1952	02/10/1952	26/11/2025	
55585	NM00567	Active	DIXIE	Elsa Reclamation & Development Company Ltd. - 100%	10/11/1946	20/03/1947	02/11/2027	
14903	NM00746	Active	DIXIE	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1923	21/11/1923	07/10/2036	
55333	OM00018	Active	DOE	Elsa Reclamation & Development Company Ltd. - 100%	23/05/1945	16/10/1945	15/12/2017	
YC57134		Active	Doh Fr.	Alexco Keno Hill Mining Corp. - 100%	04/08/2007	21/08/2007	31/12/2018	
14228	4254	Active	Dolly Varden	Elsa Reclamation & Development Company Ltd. - 100%	24/07/1921	24/09/1921	2/15/2017*	Renewed Oct 4, 2016
61599	NM00550	Active	DON FRACTION	Alexco Keno Hill Mining Corp. - 100%	23/05/1951	25/05/1951	02/11/2027	
61733	NM00397	Active	DON FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	07/07/1951	19/07/1951	12/06/2025	
15393	NM00559	Active	DONNIE	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1929	26/08/1929	02/11/2027	
16497	NM00669	Active	DONNIE	Elsa Reclamation & Development Company Ltd. - 100%	20/07/1924	28/08/1924	24/11/2033	
59692	NM00200	Active	DORA	Alexco Keno Hill Mining Corp. - 100%	11/09/1950	19/09/1950	29/07/2023	
61021	NM00574	Active	DOT	Elsa Reclamation & Development Company Ltd. - 100%	26/10/1950	27/10/1950	02/11/2027	
62294	NM00404	Active	DOUBT	Elsa Reclamation & Development Company Ltd. - 100%	04/10/1952	11/10/1952	12/06/2025	
YB28942		Active	DOUG 1	Alexco Keno Hill Mining Corp. - 100%	31/08/1992	04/09/1992	31/12/2024	
YB28943		Active	DOUG 2	Alexco Keno Hill Mining Corp. - 100%	31/08/1992	04/09/1992	31/12/2024	
YB28944		Active	DOUG 3	Alexco Keno Hill Mining Corp. - 100%	31/08/1992	04/09/1992	31/12/2024	
YB28945		Active	DOUG 4	Alexco Keno Hill Mining Corp. - 100%	31/08/1992	04/09/1992	31/12/2024	
YB28998		Active	Doug 5	Alexco Keno Hill Mining Corp. - 100%	10/09/1992	25/09/1992	31/12/2024	
YB28999		Active	Doug 6	Alexco Keno Hill Mining Corp. - 100%	10/09/1992	25/09/1992	31/12/2024	
YB29000		Active	Doug 7	Alexco Keno Hill Mining Corp. - 100%	10/09/1992	25/09/1992	31/12/2024	
YB29001		Active	Doug 8	Alexco Keno Hill Mining Corp. - 100%	10/09/1992	25/09/1992	31/12/2024	
YB29395		Active	DOUG 9	Alexco Keno Hill Mining Corp. - 100%	18/11/1992	18/11/1992	31/12/2024	
55440	NM00431	Active	DOUGLAS	Elsa Reclamation & Development Company Ltd. - 100%	01/07/1946	06/07/1946	26/11/2025	
62268	NM00340	Active	DRAKE	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1952	17/09/1952	15/02/2025	
14223	NM00071	Active	DREADNAUGHT	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1921	24/09/1921	08/08/2021	
62271	NM00343	Active	DUCE	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1952	17/09/1952	15/02/2025	
59932	NM00548	Active	DUDE	Alexco Keno Hill Mining Corp. - 100%	05/10/1950	11/10/1950	02/11/2027	
59468	NM00367	Active	DUNCAN 1	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	30/04/2025	
59469	NM00368	Active	DUNCAN 2	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	30/04/2025	
59470	NM00369	Active	DUNCAN 3	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	30/04/2025	
YC90504		Pending	Duncan Fr. 4	Alexco Keno Hill Mining Corp. - 100%	13/09/2013	13/09/2013	13/09/2019	
55499	NM00026	Active	DUPLEX	Elsa Reclamation & Development Company Ltd. - 100%	12/09/1946	01/02/1947	12/10/2019	
16588	NM00350	Active	EAGLE	Elsa Reclamation & Development Company Ltd. - 100%	12/06/1925	23/07/1925	30/03/2025	
61908	NM00462	Active	EDBO	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1951	22/08/1951	26/11/2025	
61909	NM00463	Active	EDBO 2	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1951	22/08/1951	26/11/2025	
59478	NM00449	Active	EDITH-CAVELL 1	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59479	NM00450	Active	EDITH-CAVELL 2	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	

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59480	NM00451	Active	EDITH-CAVELL 3	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59481	NM00452	Active	EDITH-CAVELL 4	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59482	NM00453	Active	EDITH-CAVELL 5	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59483	NM00454	Active	EDITH-CAVELL 6	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59484	NM00455	Active	EDITH-CAVELL 7	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2025	
59485	NM00597	Active	EDITH-CAVELL 8	Elsa Reclamation & Development Company Ltd. - 100%	03/09/1949	06/09/1949	26/11/2027	
59670	NM00386	Active	EDITH-CAVELL 9	Elsa Reclamation & Development Company Ltd. - 100%	05/08/1950	16/08/1950	22/05/2025	
16496	NM00085	Active	EFFIE	Elsa Reclamation & Development Company Ltd. - 100%	04/08/1924	28/08/1924	20/08/2021	
59754	NM00020	Active	EILEEN	Elsa Reclamation & Development Company Ltd. - 100%	24/09/1950	26/09/1950	27/07/2019	
56591	NM00355	Active	EILEEN	Elsa Reclamation & Development Company Ltd. - 100%	19/08/1948	20/08/1948	30/03/2025	
55319	NM00563	Active	ELI	Elsa Reclamation & Development Company Ltd. - 100%	12/10/1944	19/02/1945	02/11/2027	
59419	NM00570	Active	ELI 2	Elsa Reclamation & Development Company Ltd. - 100%	20/07/1949	08/08/1949	02/11/2027	
59296	NM00072	Active	ELINOR 1	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1949	30/06/1949	08/08/2021	
59302	NM00073	Active	ELINOR 2	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1949	30/06/1949	08/08/2021	
59297	NM00074	Active	ELINOR 3	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1949	30/06/1949	08/08/2021	
59298	NM00075	Active	ELINOR 4	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1949	30/06/1949	08/08/2021	
16523	4262	Active	ELSA	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1924	11/10/1924	5/12/2017*	Renewed Oct 4, 2016
13169	OM00027	Active	ELSIE FRACTIONA	Elsa Reclamation & Development Company Ltd. - 100%	11/05/1920	18/06/1920	08/01/2018	
55473	OM00017	Active	ENDYMION	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1946	23/01/1947	15/12/2017	
62247	NM00465	Active	ERICA	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1952	05/09/1952	26/11/2025	
38737	NM00066	Active	ETHEL	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1932	11/04/1932	24/07/2021	
14169	NM00691	Active	ETTA	Elsa Reclamation & Development Company Ltd. - 100%	10/07/1921	14/09/1921	19/12/2035	
14327	OM00025	Active	EUREKA	Elsa Reclamation & Development Company Ltd. - 100%	21/08/1921	11/10/1921	15/12/2017	
12877	NM00038	Active	EUREKA	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1919	26/11/1919	20/08/2020	
59519	NM00542	Active	EVY	Alexco Keno Hill Mining Corp. - 100%	24/11/1949	30/11/1949	02/11/2027	
61916	NM00554	Active	EVY	Alexco Keno Hill Mining Corp. - 100%	16/08/1951	29/08/1951	02/11/2027	
16087	OM00024	Active	EXTENSION	Elsa Reclamation & Development Company Ltd. - 100%	19/10/1925	24/11/1925	15/12/2017	
16026	NM00348	Active	EXTENSION	Elsa Reclamation & Development Company Ltd. - 100%	29/07/1925	31/08/1925	30/03/2025	
62944	NM00474	Active	FAIR FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	30/12/1955	06/01/1956	26/11/2025	
61725	NM00525	Active	FALLOT	Elsa Reclamation & Development Company Ltd. - 100%	09/07/1951	16/07/1951	01/11/2026	
59437	NM00510	Active	FALLS 1	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59446	NM00519	Active	FALLS 10	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59447	NM00520	Active	FALLS 11	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	01/11/2026	
59448	NM00521	Active	FALLS 12	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	01/11/2026	
59449	NM00522	Active	FALLS 13	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	01/11/2026	
59450	NM00523	Active	FALLS 14	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	01/11/2026	
59451	NM00524	Active	FALLS 15	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	01/11/2026	
59452	NM00384	Active	FALLS 16	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	22/05/2025	
59438	NM00511	Active	FALLS 2	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59439	NM00512	Active	FALLS 3	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59440	NM00513	Active	FALLS 4	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59441	NM00514	Active	FALLS 5	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59442	NM00515	Active	FALLS 6	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59443	NM00516	Active	FALLS 7	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59444	NM00517	Active	FALLS 8	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
59445	NM00518	Active	FALLS 9	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	01/11/2026	
14085	NM00694	Active	FIG TREE	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	25/07/1921	08/01/2036	
80347	NM00578	Active	FILL	Elsa Reclamation & Development Company Ltd. - 100%	03/06/1959	10/06/1959	02/11/2027	

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62826	NM00289	Active	FILTER FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	16/06/1955	23/06/1955	27/06/2024	
80359	NM00581	Active	FINAL	Elsa Reclamation & Development Company Ltd. - 100%	09/07/1959	21/07/1959	02/11/2027	
12876	NM00022	Active	FISHER	Elsa Reclamation & Development Company Ltd. - 100%	02/09/1919	26/11/1919	14/09/2019	
38643	4175	Active	FLAME	Elsa Reclamation & Development Company Ltd. - 100%	13/10/1929	13/11/1929	11/29/2016*	Renewed Aug 16, 2016
55527	NM00377	Active	FLY FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	18/09/1946	04/02/1947	22/05/2025	
12870	OM00009	Active	FORAKER FRACTIO	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1919	13/11/1919	27/12/2017	
13412		Active	FOREST	Elsa Reclamation & Development Company Ltd. - 100%	24/07/1920	24/09/1920	31/12/2017	
55592	NM00539	Active	FOX	Alexco Keno Hill Mining Corp. - 100%	12/10/1946	28/03/1947	02/11/2027	
61877	NM00553	Active	FOX	Alexco Keno Hill Mining Corp. - 100%	13/08/1951	15/08/1951	02/11/2027	
12845	NM00056	Active	FOX	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1919	28/10/1919	11/03/2021	
55599	NM00261	Active	FRANCES 3	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	09/01/2024	
55600	NM00262	Active	FRANCES 4	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	09/01/2024	
56401	NM00263	Active	FRANCES 5	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	09/01/2024	
56402	NM00264	Active	FRANCES 6	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	09/01/2024	
56403	NM00265	Active	FRANCES 7	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	09/01/2024	
56404	NM00266	Active	FRANCES 8	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	09/01/2024	
14220	NM00076	Active	FRANK	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1921	24/09/1921	08/08/2021	
13152	NM00685	Active	FRIENDSHIP	Elsa Reclamation & Development Company Ltd. - 100%	07/05/1920	16/06/1920	30/01/2035	
55317	NM00132	Active	FROG	Elsa Reclamation & Development Company Ltd. - 100%	11/10/1944	19/02/1945	03/02/2022	
59125	OM00041	Active	FRONTIER	Elsa Reclamation & Development Company Ltd. - 100%	11/11/1948	13/11/1948	06/01/2019	
80517	NM00584	Active	GAIL FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1960	04/08/1960	02/11/2027	
Y 69403		Active	Galaxy	Elsa Reclamation & Development Company Ltd. - 100%	22/05/1973	05/06/1973	31/12/2017	
YA77506		Active	Galena	Elsa Reclamation & Development Company Ltd. - 100%	06/06/1984	13/06/1984	31/12/2018	
13032	NM00193	Active	GALENA FARM	Elsa Reclamation & Development Company Ltd. - 100%	04/03/1920	06/05/1920	22/03/2023	
38812	NM00682	Active	GALENA HILL	Elsa Reclamation & Development Company Ltd. - 100%	03/10/1934	12/11/1934	14/04/2035	
14816	NM00106	Active	GIBRALTAR	Elsa Reclamation & Development Company Ltd. - 100%	28/02/1923	13/04/1923	26/08/2021	
84616	OM00003	Active	GLORIA FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	06/08/1965	24/08/1965	08/10/2017	
80361	NM00583	Active	GNAT	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	22/07/1959	02/11/2027	
55386	NM00050	Active	GOPHER	Elsa Reclamation & Development Company Ltd. - 100%	09/08/1945	26/10/1945	14/11/2020	
59821	NM00460	Active	GRACE	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1950	02/10/1950	26/11/2025	
15304	4256	Active	GREEN BACK	Elsa Reclamation & Development Company Ltd. - 100%	04/10/1928	27/11/1928	3/13/2017*	Renewed Oct 4, 2016
14336	NM00649	Active	GREENSTONE	Elsa Reclamation & Development Company Ltd. - 100%	24/08/1921	19/10/1921	28/05/2030	
55593	NM00540	Active	GRETA	Alexco Keno Hill Mining Corp. - 100%	16/10/1946	28/03/1947	02/11/2027	
12817	NM00273	Active	GROUND HOG	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1919	20/10/1919	18/04/2024	
61600	NM00551	Active	GROUSE	Alexco Keno Hill Mining Corp. - 100%	13/05/1951	25/05/1951	02/11/2027	
15305	NM00086	Active	GRUB STAKE	Elsa Reclamation & Development Company Ltd. - 100%	10/10/1928	27/11/1928	20/08/2021	
80357	NM00579	Active	HAP	Elsa Reclamation & Development Company Ltd. - 100%	09/07/1959	21/07/1959	02/11/2027	
10269	NM00011	Active	HAPPY	Elsa Reclamation & Development Company Ltd. - 100%	05/07/1936	22/07/1936	27/07/2019	
59315	NM00087	Active	HARDIX	Elsa Reclamation & Development Company Ltd. - 100%	25/06/1949	13/07/1949	20/08/2021	
55177	NM00364	Active	HARDWICK	Elsa Reclamation & Development Company Ltd. - 100%	08/10/1940	19/12/1940	30/04/2025	
56525	NM00353	Active	HARRIETT	Elsa Reclamation & Development Company Ltd. - 100%	12/06/1948	14/06/1948	30/03/2025	
59030	NM00137	Active	HAVLOCK	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1948	17/09/1948	07/05/2022	
16025	NM00668	Active	HAWKS NEST	Elsa Reclamation & Development Company Ltd. - 100%	28/07/1925	31/08/1925	24/11/2033	
55428	NM00054	Active	HAY	Elsa Reclamation & Development Company Ltd. - 100%	02/06/1946	19/08/1946	14/11/2020	
55582	NM00565	Active	HECLA	Elsa Reclamation & Development Company Ltd. - 100%	24/10/1946	20/03/1947	02/11/2027	
16326	NM00663	Active	HECTOR	Elsa Reclamation & Development Company Ltd. - 100%	09/05/1927	30/05/1927	17/06/2033	
55364	OM00007	Active	HELEN	Elsa Reclamation & Development Company Ltd. - 100%	08/07/1945	25/10/1945	01/11/2017	

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14908	NM00425	Active	HELEN	Elsa Reclamation & Development Company Ltd. - 100%	01/11/1923	27/11/1923	26/11/2025	
55318	NM00429	Active	HENRY	Elsa Reclamation & Development Company Ltd. - 100%	11/10/1944	19/02/1945	26/11/2025	
55478	OM00012	Active	HESPERIDES	Elsa Reclamation & Development Company Ltd. - 100%	31/08/1946	24/01/1947	15/12/2017	
13072	NM00034	Active	HIGHLANDER	Elsa Reclamation & Development Company Ltd. - 100%	03/04/1920	04/06/1920	25/04/2020	
56506	NM00758	Active	HILL	Elsa Reclamation & Development Company Ltd. - 100%	21/11/1947	28/11/1947	23/05/2037	
56577	NM00067	Active	HOBO	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1948	03/08/1948	24/07/2021	
38720	NM00248	Active	HOBO	Elsa Reclamation & Development Company Ltd. - 100%	04/07/1931	24/07/1931	28/02/2024	
61209	NM00387	Active	HOBO 3	Elsa Reclamation & Development Company Ltd. - 100%	04/12/1950	18/12/1950	22/05/2025	
YC02323		Active	Hoito 1	Alexco Keno Hill Mining Corp. - 100%	11/12/1999	29/12/1999	29/12/2022	
YC02324		Active	Hoito 2	Alexco Keno Hill Mining Corp. - 100%	11/12/1999	29/12/1999	29/12/2022	
YC02325		Active	Hoito 3	Alexco Keno Hill Mining Corp. - 100%	12/12/1999	29/12/1999	29/12/2022	
YC02326		Active	Hoito 4	Alexco Keno Hill Mining Corp. - 100%	12/12/1999	29/12/1999	29/12/2022	
YC02327		Active	Hoito 5	Alexco Keno Hill Mining Corp. - 100%	12/12/1999	29/12/1999	29/12/2022	
YC02328		Active	Hoito 6	Alexco Keno Hill Mining Corp. - 100%	12/12/1999	29/12/1999	29/12/2022	
YC02329		Active	Hoito 7	Alexco Keno Hill Mining Corp. - 100%	12/12/1999	29/12/1999	29/12/2022	
YC02330		Active	Hoito 8	Alexco Keno Hill Mining Corp. - 100%	12/12/1999	29/12/1999	29/12/2022	
56592	NM00225	Active	HOLIDAY 1	Elsa Reclamation & Development Company Ltd. - 100%	15/08/1948	23/08/1948	22/08/2023	
56600	NM00232	Active	HOLIDAY 10	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1948	23/08/1948	22/08/2023	
59001	NM00233	Active	HOLIDAY 11	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1948	23/08/1948	22/08/2023	
59002	NM00234	Active	HOLIDAY 12	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1948	23/08/1948	22/08/2023	
59003	NM00235	Active	HOLIDAY 13	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1948	23/08/1948	22/08/2023	
59004	NM00236	Active	HOLIDAY 14	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1948	23/08/1948	22/08/2023	
56593	NM00226	Active	HOLIDAY 2	Elsa Reclamation & Development Company Ltd. - 100%	15/08/1948	23/08/1948	22/08/2023	
56594	NM00227	Active	HOLIDAY 3	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1948	23/08/1948	22/08/2023	
56595	NM00228	Active	HOLIDAY 4	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1948	23/08/1948	22/08/2023	
56597	NM00229	Active	HOLIDAY 7	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1948	23/08/1948	22/08/2023	
56598	NM00230	Active	HOLIDAY 8	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1948	23/08/1948	22/08/2023	
56599	NM00231	Active	HOLIDAY 9	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1948	23/08/1948	22/08/2023	
13133	NM00702	Active	HOMESTAKE	Elsa Reclamation & Development Company Ltd. - 100%	29/04/1920	15/06/1920	27/02/2036	
59171	NM00279	Active	HONEYMOON 1	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	18/04/2024	
59172	NM00379	Active	HONEYMOON 2	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	22/05/2025	
59173	NM00380	Active	HONEYMOON 3	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	22/05/2025	
59174	NM00381	Active	HONEYMOON 4	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	22/05/2025	
59175	NM00382	Active	HONEYMOON 5	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	22/05/2025	
59176	NM00383	Active	HONEYMOON 6	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	22/05/2025	
55377	NM00366	Active	HOPE	Elsa Reclamation & Development Company Ltd. - 100%	04/08/1945	26/10/1945	30/04/2025	
55589	NM00296	Active	HORSESHOE	Alexco Keno Hill Mining Corp. - 100%	08/10/1946	28/03/1947	23/02/2025	
55273	NM00298	Active	HUB	Elsa Reclamation & Development Company Ltd. - 100%	21/10/1943	27/05/1944	30/01/2025	
55536	NM00212	Active	HUSKY	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	12/02/1947	10/08/2023	
55537	NM00213	Active	HUSKY 1	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	12/02/1947	10/08/2023	
55546	NM00222	Active	HUSKY 10	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	13/02/1947	10/08/2023	
55547	NM00223	Active	HUSKY 11	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	
56576	NM00224	Active	HUSKY 12	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1948	21/07/1948	10/08/2023	
55538	NM00214	Active	HUSKY 2	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	12/02/1947	10/08/2023	
55539	NM00215	Active	HUSKY 3	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	
55540	NM00216	Active	HUSKY 4	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	
55541	NM00217	Active	HUSKY 5	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	
55542	NM00218	Active	HUSKY 6	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	
55543	NM00219	Active	HUSKY 7	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
55544	NM00220	Active	HUSKY 8	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	12/02/1947	10/08/2023	
55545	NM00221	Active	HUSKY 9	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1946	22/10/1946	10/08/2023	
14087	NM00696	Active	HUXLEY	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	26/07/1921	20/01/2036	
55479	NM00602	Active	IDOL	Elsa Reclamation & Development Company Ltd. - 100%	26/08/1946	24/01/1947	22/07/2029	
55091	NM00628	Active	IKE	Elsa Reclamation & Development Company Ltd. - 100%	05/07/1938	12/08/1938	06/12/2029	
16554	NM00247	Active	IKWOGGY	Elsa Reclamation & Development Company Ltd. - 100%	29/05/1925	15/06/1925	28/02/2024	
59385	NM00272	Active	INCA	Elsa Reclamation & Development Company Ltd. - 100%	23/07/1949	29/07/1949	18/01/2024	
80346	NM00577	Active	INCA FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	23/04/1959	30/04/1959	02/11/2027	
56567	NM00169	Active	INDIANA	Elsa Reclamation & Development Company Ltd. - 100%	26/06/1948	28/06/1948	12/06/2022	
55326	NM00373	Active	IRENE	Elsa Reclamation & Development Company Ltd. - 100%	06/04/1945	16/10/1945	22/05/2025	
13799		Active	IVAN	Elsa Reclamation & Development Company Ltd. - 100%	12/05/1921	23/06/1921	31/12/2017	
12810	NM00394	Active	IVY	Elsa Reclamation & Development Company Ltd. - 100%	23/08/1919	14/10/1919	12/06/2025	
61744	NM00398	Active	JACK	Elsa Reclamation & Development Company Ltd. - 100%	14/07/1951	20/07/1951	12/06/2025	
YB29440		Active	JARRET 1	Alexco Keno Hill Mining Corp. - 100%	18/12/1992	18/12/1992	31/12/2024	
YC01768		Active	Jarret 2	Alexco Keno Hill Mining Corp. - 100%	24/04/1999	30/04/1999	31/12/2021	
55427	NM00053	Active	JAY	Elsa Reclamation & Development Company Ltd. - 100%	01/06/1946	19/08/1946	14/11/2020	
16524	4263	Active	JEAN	Elsa Reclamation & Development Company Ltd. - 100%	12/09/1924	11/10/1924	5/19/2017*	Renewed Oct 4, 2016
12809	NM00393	Active	JEAN	Elsa Reclamation & Development Company Ltd. - 100%	23/08/1919	10/10/1919	12/06/2025	
84626	OM00005	Active	JEAN FRACTIONAL	Elsa Reclamation & Development Company Ltd. - 100%	20/08/1965	26/08/1965	08/10/2017	
15294	NM00180	Active	JEFFREY SPECIAL	Elsa Reclamation & Development Company Ltd. - 100%	06/09/1928	28/09/1928	02/02/2023	
81139	NM00587	Active	JEFFY FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	29/05/1962	31/05/1962	02/11/2027	
55581	NM00133	Active	JENBET	Elsa Reclamation & Development Company Ltd. - 100%	24/10/1946	20/03/1947	03/02/2022	
83532	NM00624	Active	JENNY 3	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1964	17/07/1964	28/02/2030	
81228	NM00588	Active	JENNY FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	13/06/1962	28/06/1962	02/11/2027	
83003	NM00590	Active	JENNY TOO FRACT	Elsa Reclamation & Development Company Ltd. - 100%	05/06/1963	12/06/1963	02/11/2027	
38694	NM00679	Active	JESSIE	Elsa Reclamation & Development Company Ltd. - 100%	26/10/1930	21/11/1930	14/04/2035	
59178	NM00237	Active	JESSIE 1	Elsa Reclamation & Development Company Ltd. - 100%	20/01/1949	25/01/1949	29/08/2023	
59180	NM00238	Active	JESSIE 3	Elsa Reclamation & Development Company Ltd. - 100%	20/01/1949	25/01/1949	29/08/2023	
38744	NM00681	Active	JEWEL	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1932	21/07/1932	14/04/2035	
61598	NM00549	Active	JIB NO. 2	Alexco Keno Hill Mining Corp. - 100%	16/05/1951	25/05/1951	02/11/2027	
15366	NM00008	Active	JIGGYWIG	Elsa Reclamation & Development Company Ltd. - 100%	09/06/1929	18/07/1929	27/07/2019	
55330	NM00047	Active	JIMMIE	Elsa Reclamation & Development Company Ltd. - 100%	01/05/1945	16/10/1945	14/11/2020	
38715	NM00664	Active	JOCK	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1931	20/05/1931	17/06/2033	
84489		Active	Joe 2	Alexco Keno Hill Mining Corp. - 100%	28/05/1965	02/06/1965	31/12/2019	
80453		Active	Joe No. 1	Alexco Keno Hill Mining Corp. - 100%	18/07/1960	27/05/1960	31/12/2019	
61919	NM00399	Active	JOY FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	30/08/1951	31/08/1951	12/06/2025	
82531	NM00655	Active	Joyce	Elsa Reclamation & Development Company Ltd. - 100%	05/03/1963	12/03/1963	12/03/2031	
14880	NM00107	Active	JUMBO	Elsa Reclamation & Development Company Ltd. - 100%	29/09/1923	17/10/1923	26/08/2021	
59274	OM00008	Active	JUNE	Elsa Reclamation & Development Company Ltd. - 100%	12/06/1949	22/06/1949	01/11/2017	
62992	NM00614	Active	JUNE	Elsa Reclamation & Development Company Ltd. - 100%	24/06/1956	11/07/1956	21/08/2029	
YC42549		Active	K 1	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2024	
YC42558		Active	K 10	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC56127		Active	K 100	Alexco Keno Hill Mining Corp. - 100%	15/06/2007	15/06/2007	31/12/2020	
YC56128		Active	K 101	Alexco Keno Hill Mining Corp. - 100%	15/06/2007	15/06/2007	31/12/2020	
YC56129		Active	K 102	Alexco Keno Hill Mining Corp. - 100%	15/06/2007	15/06/2007	31/12/2024	
YC56155		Active	K 103	Alexco Keno Hill Mining Corp. - 100%	21/06/2007	22/06/2007	31/12/2017	
YC56156		Active	K 104	Alexco Keno Hill Mining Corp. - 100%	21/06/2007	22/06/2007	31/12/2017	
YC56157		Active	K 105	Alexco Keno Hill Mining Corp. - 100%	21/06/2007	22/06/2007	31/12/2017	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC56158		Active	K 106	Alexco Keno Hill Mining Corp. - 100%	21/06/2007	22/06/2007	31/12/2017	
YC56159		Active	K 107	Alexco Keno Hill Mining Corp. - 100%	21/06/2007	22/06/2007	31/12/2017	
YC42559		Active	K 11	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42560		Active	K 12	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42561		Active	K 13	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42562		Active	K 14	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42563		Active	K 15	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42564		Active	K 16	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42565		Active	K 17	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42566		Active	K 18	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42567		Active	K 19	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42550		Active	K 2	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2024	
YC42568		Active	K 20	Alexco Keno Hill Mining Corp. - 100%	29/11/2005	15/12/2005	15/12/2020	
YC42569		Active	K 21	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42570		Active	K 22	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42571		Active	K 23	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42572		Active	K 24	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42573		Active	K 25	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42574		Active	K 26	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42575		Active	K 27	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	15/12/2021	
YC42576	NM00715	Active	K 28	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	02/10/2033	
YC42577		Active	K 29	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	15/12/2021	
YC42551		Active	K 3	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2024	
YC42578	NM00716	Active	K 30	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	02/10/2033	
YC42579		Active	K 31	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	15/12/2021	
YC42580	NM00717	Active	K 32	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	02/10/2033	
YC42581		Active	K 33	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42582		Active	K 34	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42583		Active	K 35	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	01/12/2005	31/12/2024	
YC42584		Active	K 36	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	01/12/2005	31/12/2020	
YC42585		Active	K 37	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	01/12/2005	31/12/2020	
YC42586		Active	K 38	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	01/12/2005	31/12/2020	
YC42587		Active	K 39	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42552		Active	K 4	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2020	
YC42588		Active	K 40	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42589		Active	K 41	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	15/12/2021	
YC42590		Active	K 42	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	15/12/2021	
YC42591		Active	K 43	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2021	
YC42592		Active	K 44	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2021	
YC42593		Active	K 45	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2021	
YC42594		Active	K 46	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2021	
YC42595		Active	K 47	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2021	
YC42596		Active	K 48	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2021	
YC42597		Active	K 49	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	03/12/2005	31/12/2021	
YC42553		Active	K 5	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2020	
YC42598		Active	K 50	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	15/12/2021	
YC42599		Active	K 51	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	15/12/2005	31/12/2021	
YC42600		Active	K 52	Alexco Keno Hill Mining Corp. - 100%	03/12/2005	03/12/2005	03/12/2021	
YC42601		Active	K 53	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	05/12/2005	31/12/2017	

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YC42602		Active	K 54	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2017	
YC42603		Active	K 55	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2017	
YC42604		Active	K 56	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2017	
YC42605		Active	K 57	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2018	
YC42606		Active	K 58	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2018	
YC42607		Active	K 59	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2018	
YC42554		Active	K 6	Alexco Keno Hill Mining Corp. - 100%	04/12/2005	15/12/2005	15/12/2020	
YC42608		Active	K 60	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2018	
YC42609		Active	K 61	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2020	
YC42610		Active	K 62	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2020	
YC42611		Active	K 63	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42612		Active	K 64	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42613		Active	K 65	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42614		Active	K 66	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42615		Active	K 67	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42616		Active	K 68	Alexco Keno Hill Mining Corp. - 100%	01/12/2005	15/12/2005	15/12/2020	
YC42617		Active	K 69	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2024	
YC42555		Active	K 7	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42618		Active	K 70	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2024	
YC42619		Active	K 71	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2020	
YC42620		Active	K 72	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2020	
YC42621		Active	K 73	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2020	
YC42622		Active	K 74	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2020	
YC42623		Active	K 75	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2020	
YC42624		Active	K 76	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2020	
YC42625		Active	k 77	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2020	
YC42626		Active	k 78	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2020	
YC42627		Active	K 79	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2017	
YC42556		Active	K 8	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC42628	NM00718	Active	K 80	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	02/10/2033	
YC42629		Active	K 81	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2017	
YC42630		Active	K 82	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2017	
YC42631		Active	K 83	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2017	
YC42632		Active	K 84	Alexco Keno Hill Mining Corp. - 100%	02/12/2005	15/12/2005	15/12/2017	
YC42633		Active	K 85	Alexco Keno Hill Mining Corp. - 100%	05/12/2005	15/12/2005	15/12/2018	
YC55952		Active	K 86	Alexco Keno Hill Mining Corp. - 100%	26/05/2007	28/05/2007	31/12/2017	
YC55953		Active	K 87	Alexco Keno Hill Mining Corp. - 100%	26/05/2007	28/05/2007	31/12/2020	
YC56115		Active	K 88	Alexco Keno Hill Mining Corp. - 100%	13/06/2007	13/06/2007	31/12/2017	
YC56116		Active	K 89	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	13/06/2007	31/12/2020	
YC42557		Active	K 9	Alexco Keno Hill Mining Corp. - 100%	30/11/2005	15/12/2005	15/12/2020	
YC56117		Active	K 90	Alexco Keno Hill Mining Corp. - 100%	12/06/2007	13/06/2007	31/12/2019	
YC56118		Active	K 91	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	13/06/2007	31/12/2018	
YC56119		Active	K 92	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	13/06/2007	31/12/2018	
YC56120		Active	K 93	Alexco Keno Hill Mining Corp. - 100%	13/06/2007	13/06/2007	31/12/2018	
YC56121		Active	K 94	Alexco Keno Hill Mining Corp. - 100%	13/06/2007	13/06/2007	31/12/2018	
YC56122		Active	K 95	Alexco Keno Hill Mining Corp. - 100%	14/06/2007	15/06/2007	31/12/2018	
YC56123		Active	K 96	Alexco Keno Hill Mining Corp. - 100%	14/06/2007	15/06/2007	31/12/2018	
YC56124		Active	K 97	Alexco Keno Hill Mining Corp. - 100%	14/06/2007	15/06/2007	15/12/2018	
YC56125		Active	K 98	Alexco Keno Hill Mining Corp. - 100%	14/06/2007	15/06/2007	15/12/2018	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YC56126		Active	K 99	Alexco Keno Hill Mining Corp. - 100%	14/06/2007	15/06/2007	15/12/2018	
YC90502		Pending	K Fr. 109	Alexco Keno Hill Mining Corp. - 100%	19/08/2012	10/09/2012	10/09/2018	
YC90501		Pending	K Fr. 110	Alexco Keno Hill Mining Corp. - 100%	19/08/2012	10/09/2012	10/09/2018	
80345		Active	K.P.O.	Elsa Reclamation & Development Company Ltd. - 100%	07/10/1958	14/10/1958	31/12/2020	
80082		Active	K.P.O. 1	Elsa Reclamation & Development Company Ltd. - 100%	05/10/1956	05/10/1956	31/12/2020	
80362		Active	K.P.O. 13	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	24/07/1959	31/12/2020	
80364		Active	K.P.O. 15	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	24/07/1959	31/12/2020	
80366		Active	K.P.O. 17	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	24/07/1959	31/12/2020	
80367		Active	K.P.O. 18	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	24/07/1959	31/12/2020	
80368		Active	K.P.O. 19	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	24/07/1959	31/12/2020	
80083		Active	K.P.O. 2	Elsa Reclamation & Development Company Ltd. - 100%	05/10/1956	05/10/1956	31/12/2020	
80369		Active	K.P.O. 20	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	24/07/1959	31/12/2020	
80370		Active	K.P.O. 21	Elsa Reclamation & Development Company Ltd. - 100%	16/07/1959	24/07/1959	31/12/2020	
80372		Active	K.P.O. 23	Elsa Reclamation & Development Company Ltd. - 100%	16/07/1959	24/07/1959	31/12/2020	
80374		Active	K.P.O. 25	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1959	24/07/1959	31/12/2020	
80376		Active	K.P.O. 27	Elsa Reclamation & Development Company Ltd. - 100%	18/07/1959	24/07/1959	31/12/2020	
80378		Active	K.P.O. 29	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1959	28/07/1959	31/12/2020	
80084		Active	K.P.O. 3	Elsa Reclamation & Development Company Ltd. - 100%	05/10/1956	05/10/1956	31/12/2020	
80085		Active	K.P.O. 4	Elsa Reclamation & Development Company Ltd. - 100%	05/10/1956	05/10/1956	31/12/2020	
YC69940	NM00641	Active	K108F	Alexco Keno Hill Mining Corp. - 100%	02/09/2008	10/09/2008	23/02/2030	
80561	NM00586	Active	KANGAROO FRACT	Elsa Reclamation & Development Company Ltd. - 100%	18/10/1960	25/10/1960	02/11/2027	
62248	NM00526	Active	KARIN	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1952	05/09/1952	01/11/2026	
62198	NM00401	Active	KARL	Elsa Reclamation & Development Company Ltd. - 100%	21/07/1952	04/08/1952	12/06/2025	
59177	NM00286	Active	KAY R.	Elsa Reclamation & Development Company Ltd. - 100%	19/01/1949	25/01/1949	27/06/2024	
59336	NM00017	Active	KAYE	Elsa Reclamation & Development Company Ltd. - 100%	14/07/1949	19/07/1949	27/07/2019	
16556	4257	Active	KENO	Elsa Reclamation & Development Company Ltd. - 100%	29/05/1925	18/06/1925	3/21/2017*	Renewed Oct 4, 2016
55024	OM00035	Active	KENO	Elsa Reclamation & Development Company Ltd. - 100%	14/10/1936	30/10/1936	18/08/2018	
55579	NM00278	Active	KENO	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1946	20/03/1947	18/04/2024	
12784	NM00622	Active	KENO	Elsa Reclamation & Development Company Ltd. - 100%	29/07/1919	10/09/1919	23/02/2030	
62295	NM00468	Active	KENT	Elsa Reclamation & Development Company Ltd. - 100%	04/10/1952	11/10/1952	26/11/2025	
62310	NM00469	Active	KID	Elsa Reclamation & Development Company Ltd. - 100%	02/07/1953	15/07/1953	26/11/2025	
12812	NM00748	Active	KID	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1919	16/10/1919	19/10/2036	
13060	NM00024	Active	KIDDO	John Hawthorne - 50%, Elsa Reclamation & Development Company Ltd. - 5	03/04/1920	11/05/1920	11/11/2019	
56419	NM00088	Active	KIJO	Elsa Reclamation & Development Company Ltd. - 100%	31/05/1947	10/06/1947	20/08/2021	
15264	NM00346	Active	KIM	Elsa Reclamation & Development Company Ltd. - 100%	28/07/1928	10/08/1928	30/03/2025	
62270	NM00342	Active	KING	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1952	17/09/1952	15/02/2025	
12818	NM00660	Active	KING	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1919	20/10/1919	27/09/2031	
15323	NM00181	Active	KLONDIKE	Elsa Reclamation & Development Company Ltd. - 100%	07/03/1929	25/04/1929	02/02/2023	
13558	NM00603	Active	LADUE	Elsa Reclamation & Development Company Ltd. - 100%	11/09/1920	05/11/1920	07/07/2029	
13225	NM00645	Active	LAKE 1	Elsa Reclamation & Development Company Ltd. - 100%	08/06/1920	13/07/1920	27/04/2030	
13276	NM00646	Active	LAKE 2	Elsa Reclamation & Development Company Ltd. - 100%	08/06/1920	25/08/1920	27/04/2030	
13277	NM00647	Active	LAKE 3	Elsa Reclamation & Development Company Ltd. - 100%	08/06/1920	25/08/1920	27/04/2030	
YB64184		Active	Lakehead 1	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2019	
YB64191		Active	Lakehead 10	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2023	
YB64194		Active	Lakehead 11	Alexco Keno Hill Mining Corp. - 100%	29/06/1995	30/06/1995	31/12/2023	
YB64195		Active	Lakehead 12	Alexco Keno Hill Mining Corp. - 100%	29/06/1995	30/06/1995	31/12/2023	
YB64196		Active	Lakehead 13	Alexco Keno Hill Mining Corp. - 100%	29/06/1995	30/06/1995	31/12/2023	
YB64185		Active	Lakehead 2	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2019	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
YB64192		Active	Lakehead 3	Alexco Keno Hill Mining Corp. - 100%	29/06/1995	30/06/1995	31/12/2023	
YB64193		Active	Lakehead 4	Alexco Keno Hill Mining Corp. - 100%	29/06/1995	30/06/1995	31/12/2023	
YB64186		Active	Lakehead 5	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2023	
YB64187		Active	Lakehead 6	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2023	
YB64188		Active	Lakehead 7	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2023	
YB64189		Active	Lakehead 8	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2023	
YB64190		Active	Lakehead 9	Alexco Keno Hill Mining Corp. - 100%	27/06/1995	28/06/1995	31/12/2023	
13222	NM00635	Active	LAKOTA	Elsa Reclamation & Development Company Ltd. - 100%	07/06/1920	09/07/1920	31/12/2029	
62051	NM00400	Active	LAMB FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	26/10/1951	07/11/1951	12/06/2025	
12961	NM00028	Active	LAST CHANCE	Elsa Reclamation & Development Company Ltd. - 100%	06/09/1919	26/02/1920	05/02/2020	
62977	NM00650	Active	LE BLANC	Elsa Reclamation & Development Company Ltd. - 100%	10/06/1956	21/06/1956	12/03/2031	
YA17395	NM00638	Active	Lem 1	Alexco Keno Hill Mining Corp. - 100%	04/11/1977	14/11/1977	23/02/2030	
YA17404		Active	Lem 10	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
YA17405		Active	Lem 11	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
YA17396	NM00639	Active	Lem 2	Alexco Keno Hill Mining Corp. - 100%	04/11/1977	14/11/1977	23/02/2030	
YA17397	NM00640	Active	Lem 3	Alexco Keno Hill Mining Corp. - 100%	04/11/1977	14/11/1977	23/02/2030	
YA17398		Active	Lem 4	Alexco Keno Hill Mining Corp. - 100%	04/11/1977	14/11/1977	31/12/2021	
YA17399		Active	Lem 5	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
YA17400		Active	Lem 6	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
YA17401		Active	Lem 7	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
YA17402		Active	Lem 8	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
YA17403		Active	Lem 9	Alexco Keno Hill Mining Corp. - 100%	10/11/1977	14/11/1977	31/12/2021	
61635		Active	LEO	Elsa Reclamation & Development Company Ltd. - 100%	10/06/1951	11/06/1951	31/12/2020	
59710		Active	LEO 1	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59850		Active	LEO 10	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59851		Active	LEO 11	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59852		Active	LEO 12	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59853		Active	LEO 13	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59854		Active	LEO 14	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59855		Active	LEO 15	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59856		Active	LEO 16	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59857		Active	LEO 17	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
59941		Active	LEO 18	Elsa Reclamation & Development Company Ltd. - 100%	09/10/1950	12/10/1950	31/12/2020	
59942		Active	LEO 19	Elsa Reclamation & Development Company Ltd. - 100%	09/10/1950	12/10/1950	31/12/2020	
59711		Active	LEO 2	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59712		Active	LEO 3	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59714		Active	LEO 4	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59715		Active	LEO 5	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59716		Active	LEO 6	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59717		Active	LEO 7	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59718		Active	LEO 8	Elsa Reclamation & Development Company Ltd. - 100%	23/09/1950	26/09/1950	31/12/2020	
59849		Active	LEO 9	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1950	02/10/1950	31/12/2020	
16512	NM00671	Active	LILL	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1924	09/09/1924	24/11/2033	
14222	NM00501	Active	LILY	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1921	24/09/1921	31/03/2026	
55442	NM00284	Active	LIME	Elsa Reclamation & Development Company Ltd. - 100%	21/07/1946	30/07/1946	27/06/2024	
15364	4258	Active	LINK	Elsa Reclamation & Development Company Ltd. - 100%	07/06/1929	16/07/1929	3/22/2017*	Renewed Oct 4, 2016
12830	NM00750	Active	LION	Elsa Reclamation & Development Company Ltd. - 100%	27/08/1919	23/10/1919	24/10/2036	
82289	NM00589	Active	LITE FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	01/08/1962	07/08/1962	02/11/2027	

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14229	NM00077	Active	LITTLE CHARLIE	Elsa Reclamation & Development Company Ltd. - 100%	18/08/1921	24/09/1921	08/08/2021	
15329	4255	Active	LITTLE FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	07/04/1929	16/05/1929	3/8/2017*	Renewed Oct 4, 2016
55269	NM00045	Active	LITTLE GIRL	Elsa Reclamation & Development Company Ltd. - 100%	28/06/1943	09/11/1943	14/11/2020	
12821	NM00423	Active	LIZZIE	Elsa Reclamation & Development Company Ltd. - 100%	07/09/1919	20/10/1919	26/11/2025	
YD63291		Active	LJ 1	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63300		Active	LJ 10	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YC90548		Active	LJ 11	Alexco Keno Hill Mining Corp. - 100%	31/08/2011	02/09/2011	31/12/2020	
YD63292		Active	LJ 2	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63293		Active	LJ 3	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63294		Active	LJ 4	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63295		Active	LJ 5	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63296		Active	LJ 6	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63297		Active	LJ 7	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63298		Active	LJ 8	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
YD63299		Active	LJ 9	Alexco Keno Hill Mining Corp. - 100%	20/12/2010	22/12/2010	22/12/2020	
12965	NM00030	Active	LONE STAR	Elsa Reclamation & Development Company Ltd. - 100%	02/09/1919	01/03/1920	20/02/2020	
59673	NM00396	Active	LOON	Elsa Reclamation & Development Company Ltd. - 100%	07/09/1950	08/09/1950	12/06/2025	
56516	NM00321	Active	LOOS	Elsa Reclamation & Development Company Ltd. - 100%	18/04/1948	21/04/1948	02/02/2025	
55495	NM00025	Active	LORNE	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	12/10/2019	
13019	NM00625	Active	LOTUS	Elsa Reclamation & Development Company Ltd. - 100%	22/02/1920	04/05/1920	25/11/2029	
56405	NM00433	Active	LOUIS 1	Elsa Reclamation & Development Company Ltd. - 100%	29/03/1947	18/04/1947	26/11/2025	
56406	NM00596	Active	LOUIS 2	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1947	18/04/1947	26/11/2027	
56407	NM00434	Active	LOUIS 3	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1947	18/04/1947	26/11/2025	
56408	NM00435	Active	LOUIS 4	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1947	18/04/1947	26/11/2025	
14219	NM00078	Active	LOUISE	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1921	24/09/1921	08/08/2021	
55501	NM00300	Active	LOVIE	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1946	01/02/1947	30/01/2025	
16585	2198	Active	LUCKY	Elsa Reclamation & Development Company Ltd. - 100%	09/06/1925	11/06/1925	3/29/2017*	Renewed Oct 4, 2016
13021	NM00674	Active	LUCKY QUEEN	Elsa Reclamation & Development Company Ltd. - 100%	18/02/1920	04/05/1920	17/02/2035	
16552	2204	Active	LUCKY STRIKE	Elsa Reclamation & Development Company Ltd. - 100%	22/05/1925	15/06/1925	6/14/2017*	Renewed Oct 4, 2016
13586	NM00637	Active	LUNA	Elsa Reclamation & Development Company Ltd. - 100%	09/09/1920	12/11/1920	31/12/2029	
38857	NM00632	Active	M.T.	Elsa Reclamation & Development Company Ltd. - 100%	22/08/1935	01/10/1935	06/12/2029	
2201	OM00028	Active	MABEL	Elsa Reclamation & Development Company Ltd. - 100%	23/02/1913	17/03/1913	15/02/2018	
62202	NM00464	Active	MAGGIE	Elsa Reclamation & Development Company Ltd. - 100%	31/07/1952	05/08/1952	26/11/2025	
14233	NM00659	Active	MAGGIE	Elsa Reclamation & Development Company Ltd. - 100%	28/06/1921	24/09/1921	24/09/2031	
56529	NM00502	Active	MALCOM	Alexco Keno Hill Mining Corp. - 100%	12/06/1948	14/06/1948	28/11/2025	
YC02774		Active	Man	Alexco Keno Hill Mining Corp. - 100%	09/07/2001	10/07/2001	31/12/2021	
12829	NM00747	Active	MAPLE LEAF	Elsa Reclamation & Development Company Ltd. - 100%	27/08/1919	23/10/1919	15/10/2036	
59520	NM00385	Active	MARG	Elsa Reclamation & Development Company Ltd. - 100%	10/12/1949	14/12/1949	22/05/2025	
56530	NM00508	Active	MARIE ELENA	Elsa Reclamation & Development Company Ltd. - 100%	11/06/1948	17/06/1948	01/11/2026	
55385	NM00049	Active	MARMOT	Elsa Reclamation & Development Company Ltd. - 100%	09/08/1945	26/10/1945	14/11/2020	
13787	NM00618	Active	MARY	Elsa Reclamation & Development Company Ltd. - 100%	09/05/1921	21/06/1921	31/01/2030	
YB29002		Active	Mary 1	Alexco Keno Hill Mining Corp. - 100%	10/09/1902	25/09/1992	31/12/2023	
YB29003		Active	Mary 2	Alexco Keno Hill Mining Corp. - 100%	10/09/1992	25/09/1992	31/12/2023	
YB29004		Active	Mary 3	Alexco Keno Hill Mining Corp. - 100%	10/09/1902	25/09/1992	31/12/2027	
YB29005		Active	Mary 4	Alexco Keno Hill Mining Corp. - 100%	10/09/1902	25/09/1992	31/12/2027	
YB29394		Active	MARY 6	Alexco Keno Hill Mining Corp. - 100%	18/11/1992	18/11/1992	31/12/2023	
YC10995		Active	Mary A 0	Alexco Keno Hill Mining Corp. - 100%	19/08/2003	02/09/2003	31/12/2020	

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YC10996		Active	Mary B 0	Alexco Keno Hill Mining Corp. - 100%	19/08/2003	02/09/2003	31/12/2020	
59014	NM00136	Active	MARY L.	Elsa Reclamation & Development Company Ltd. - 100%	28/08/1948	01/09/1948	07/05/2022	
14168	NM00690	Active	MASTIFF	Elsa Reclamation & Development Company Ltd. - 100%	10/07/1921	14/09/1921	14/11/2035	
12937	4163	Active	MATHOLE	Elsa Reclamation & Development Company Ltd. - 100%	12/10/1919	03/01/1920	9/7/2016*	Renewed Aug 16, 2016
59255	NM00271	Active	MATTAGAMI	Elsa Reclamation & Development Company Ltd. - 100%	01/06/1949	03/06/1949	18/01/2024	
38748	4162	Active	MAY	Elsa Reclamation & Development Company Ltd. - 100%	25/07/1932	15/08/1932	9/3/2016*	Renewed Aug 16, 2016
16093	NM00245	Active	MAY G	Elsa Reclamation & Development Company Ltd. - 100%	09/11/1925	07/12/1925	28/02/2024	
55497	NM00027	Active	MAYO	Elsa Reclamation & Development Company Ltd. - 100%	12/09/1946	01/02/1947	12/10/2019	
56573	NM00438	Active	MAYO	Elsa Reclamation & Development Company Ltd. - 100%	22/06/1948	12/07/1948	26/11/2025	
12919	NM00752	Active	MAYO	Elsa Reclamation & Development Company Ltd. - 100%	09/09/1919	22/12/1919	21/12/2036	
38619	OM00026	Active	McCARTHY FRACTI	Elsa Reclamation & Development Company Ltd. - 100%	15/08/1929	19/09/1929	08/01/2018	
62131	NM00006	Active	METEOR	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1952	16/06/1952	27/07/2019	
14088	NM00693	Active	MIDWAY	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	26/07/1921	30/12/2035	
56590	NM00568	Active	MIKE	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1948	18/08/1948	02/11/2027	
59764	NM00571	Active	MIKE	Elsa Reclamation & Development Company Ltd. - 100%	21/09/1950	26/09/1950	02/11/2027	
16571	NM00755	Active	MINERVA	Elsa Reclamation & Development Company Ltd. - 100%	29/05/1925	07/07/1925	22/03/2037	
16040	NM00756	Active	MINERVA JR.	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1925	23/09/1925	14/04/2037	
62837	NM00406	Active	MINK FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	26/07/1955	03/08/1955	12/06/2025	
12814	NM00633	Active	MINTO	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1919	17/08/1919	16/12/2029	
12920	NM00424	Active	MINTO 2	Elsa Reclamation & Development Company Ltd. - 100%	10/09/1919	22/12/1919	26/11/2025	
12879	NM00039	Active	MIRAMICHI	Elsa Reclamation & Development Company Ltd. - 100%	30/08/1919	26/09/1919	16/09/2020	
81227	NM00654	Active	Mo	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1962	26/06/1962	12/03/2031	
15236	NM00757	Active	MOHAWK	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1928	13/06/1928	20/04/2037	
YC32221		Active	Mom 1	Alexco Keno Hill Mining Corp. - 100%	19/08/2004	23/08/2004	31/12/2018	
YC32222		Active	Mom 2	Alexco Keno Hill Mining Corp. - 100%	19/08/2004	23/08/2004	31/12/2018	
YC32223		Active	Mom 3	Alexco Keno Hill Mining Corp. - 100%	19/08/2004	23/08/2004	31/12/2018	
YC32224		Active	Mom 4	Alexco Keno Hill Mining Corp. - 100%	19/08/2004	23/08/2004	31/12/2018	
YC32225		Active	Mom 5	Alexco Keno Hill Mining Corp. - 100%	17/08/2004	23/08/2004	31/12/2018	
YC32226		Active	Mom 6	Alexco Keno Hill Mining Corp. - 100%	17/08/2004	23/08/2004	31/12/2018	
YC32227		Active	Mom 7	Alexco Keno Hill Mining Corp. - 100%	18/08/2004	23/08/2004	31/12/2018	
YC32228		Active	Mom 8	Alexco Keno Hill Mining Corp. - 100%	18/08/2004	23/08/2004	31/12/2018	
55443	NM00432	Active	MONARCH	Elsa Reclamation & Development Company Ltd. - 100%	22/07/1946	26/08/1946	26/11/2025	
16568	NM00672	Active	MONOPLY	Elsa Reclamation & Development Company Ltd. - 100%	28/05/1925	07/07/1925	24/11/2033	
16569	NM00673	Active	MONTE CARLO	Elsa Reclamation & Development Company Ltd. - 100%	05/06/1925	07/07/1925	24/11/2033	
55312	NM00165	Active	MONTY	Elsa Reclamation & Development Company Ltd. - 100%	24/07/1944	13/02/1945	12/06/2022	
12819	NM00037	Active	MOOSE	Elsa Reclamation & Development Company Ltd. - 100%	02/09/1919	20/10/1919	21/08/2020	
62267	NM00339	Active	MORGAN	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1952	17/09/1952	15/02/2025	
55332	NM00374	Active	MOSS	Elsa Reclamation & Development Company Ltd. - 100%	22/05/1945	16/10/1945	22/05/2025	
62366	NM00358	Active	MOSSBACK	Elsa Reclamation & Development Company Ltd. - 100%	30/05/1954	08/06/1954	30/03/2025	
38642	4176	Active	MOTH	Elsa Reclamation & Development Company Ltd. - 100%	10/10/1929	13/11/1929	12/8/2016*	Renewed Aug 16, 2016
62297	NM00388	Active	MUD	Elsa Reclamation & Development Company Ltd. - 100%	25/10/1952	05/11/1952	22/05/2025	
62298	NM00389	Active	MUD	Elsa Reclamation & Development Company Ltd. - 100%	25/10/1952	05/11/1952	22/05/2025	
62299	NM00390	Active	MUD 2	Elsa Reclamation & Development Company Ltd. - 100%	30/10/1952	05/11/1952	22/05/2025	
13025	NM00012	Active	NABOB	Elsa Reclamation & Development Company Ltd. - 100%	07/03/1920	05/05/1920	27/07/2019	
14990	NM00359	Active	NAETHING	Elsa Reclamation & Development Company Ltd. - 100%	10/06/1924	09/07/1924	12/04/2025	
59341	NM00019	Active	NANCE	Elsa Reclamation & Development Company Ltd. - 100%	14/07/1949	19/07/1949	27/07/2019	
15374	NM00427	Active	NANCY	Elsa Reclamation & Development Company Ltd. - 100%	21/06/1929	24/07/1929	26/11/2025	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
12880	NM00033	Active	NAPOLEON	Elsa Reclamation & Development Company Ltd. - 100%	16/09/1919	28/11/1919	13/03/2020	
38873	NM00630	Active	NEIN	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1935	04/12/1935	06/12/2029	
59169	NM00443	Active	NEWLYWED 1	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	26/11/2025	
59170	NM00444	Active	NEWLYWED 2	Elsa Reclamation & Development Company Ltd. - 100%	16/01/1949	25/01/1949	26/11/2025	
55583	NM00566	Active	NIKKA	Elsa Reclamation & Development Company Ltd. - 100%	23/10/1946	20/03/1947	02/11/2027	
83004	NM00591	Active	NIP FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	10/06/1963	12/06/1963	02/11/2027	
62235	NM00576	Active	NM	Elsa Reclamation & Development Company Ltd. - 100%	26/08/1952	27/08/1952	02/11/2027	
16511	NM00670	Active	NO CASH	Elsa Reclamation & Development Company Ltd. - 100%	09/08/1924	09/09/1924	24/11/2033	
YC39585		Active	No name	Alexco Keno Hill Mining Corp. - 100%	24/08/2005	01/09/2005	31/12/2019	
16170	OM00023	Active	NOD FR.	Elsa Reclamation & Development Company Ltd. - 100%	13/06/1926	13/07/1926	15/12/2017	
38658	NM00504	Active	NOIDER	Elsa Reclamation & Development Company Ltd. - 100%	07/01/1930	27/01/1930	01/11/2026	
YC10897		Active	North F.	Alexco Keno Hill Mining Corp. - 100%	07/08/2003	08/08/2003	31/12/2020	
83010	NM00592	Active	NORTH FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	24/06/1963	25/06/1963	02/11/2027	
13415	NM00173	Active	NORTH STAR	Elsa Reclamation & Development Company Ltd. - 100%	24/07/1920	25/09/1920	13/11/2022	
16012	NM00347	Active	NORTH STAR	Elsa Reclamation & Development Company Ltd. - 100%	08/07/1925	14/08/1925	30/03/2025	
YC57135		Active	O No Fr.	Alexco Keno Hill Mining Corp. - 100%	22/08/2007	22/08/2007	31/12/2018	
Y 33741		Active	O.K. 1	Alexco Keno Hill Mining Corp. - 100%	10/12/1970	11/12/1970	31/12/2019	
Y 85968		Active	O.K. 10	Alexco Keno Hill Mining Corp. - 100%	02/10/1973	10/10/1973	31/12/2019	
Y 33742		Active	O.K. 2	Alexco Keno Hill Mining Corp. - 100%	10/12/1970	11/12/1970	31/12/2019	
Y 56174		Active	O.K. 3	Alexco Keno Hill Mining Corp. - 100%	11/09/1971	15/09/1971	31/12/2019	
Y 56175		Active	O.K. 4	Alexco Keno Hill Mining Corp. - 100%	11/09/1971	15/09/1971	31/12/2019	
Y 85963		Active	O.K. 5	Alexco Keno Hill Mining Corp. - 100%	02/10/1973	10/10/1973	31/12/2019	
Y 85964		Active	O.K. 6	Alexco Keno Hill Mining Corp. - 100%	02/10/1973	10/10/1973	31/12/2019	
Y 85965		Active	O.K. 7	Alexco Keno Hill Mining Corp. - 100%	02/10/1973	10/10/1973	31/12/2019	
Y 85966		Active	O.K. 8	Alexco Keno Hill Mining Corp. - 100%	02/10/1973	10/10/1973	31/12/2019	
Y 85967		Active	O.K. 9	Alexco Keno Hill Mining Corp. - 100%	02/10/1973	10/10/1973	31/12/2019	
80360	NM00582	Active	OBOE	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1959	22/07/1959	02/11/2027	
56566	NM00168	Active	OHIO	Elsa Reclamation & Development Company Ltd. - 100%	26/06/1948	28/06/1948	12/06/2022	
13094	NM00556	Active	OK FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	18/04/1920	09/06/1920	02/11/2027	
YC01994		Active	One	Alexco Keno Hill Mining Corp. - 100%	23/09/1999	28/09/1999	09/09/2018	
61596	NM00461	Active	ONEK	Elsa Reclamation & Development Company Ltd. - 100%	15/05/1951	21/05/1951	26/11/2025	
14086	NM00697	Active	ORANGE	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	25/07/1921	21/01/2036	
62950		Active	ORCHID 1	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
62959		Active	ORCHID 10	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
62960		Active	ORCHID 11	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
62961		Active	ORCHID 12	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
80123	NM00490	Active	ORCHID 13	Elsa Reclamation & Development Company Ltd. - 100%	07/12/1956	13/12/1956	26/11/2025	
80124	NM00491	Active	ORCHID 14	Elsa Reclamation & Development Company Ltd. - 100%	07/12/1956	13/12/1956	26/11/2025	
62962	NM00477	Active	ORCHID 15	Elsa Reclamation & Development Company Ltd. - 100%	21/05/1956	30/05/1956	26/11/2025	
62963	NM00478	Active	ORCHID 16	Elsa Reclamation & Development Company Ltd. - 100%	21/05/1956	30/05/1956	26/11/2025	
62964		Active	ORCHID 17	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
62965		Active	ORCHID 18	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
62966		Active	ORCHID 19	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
62951		Active	ORCHID 2	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
62967		Active	ORCHID 20	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2018	
62968		Active	ORCHID 21	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2020	
62969		Active	ORCHID 22	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2020	
62970		Active	ORCHID 23	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2020	
62971		Active	ORCHID 24	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1956	30/05/1956	31/12/2020	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
62972	NM00479	Active	ORCHID 25	Elsa Reclamation & Development Company Ltd. - 100%	21/05/1956	30/05/1956	26/11/2025	
62973	NM00480	Active	ORCHID 26	Elsa Reclamation & Development Company Ltd. - 100%	21/05/1956	30/05/1956	26/11/2025	
62974	NM00481	Active	ORCHID 27	Elsa Reclamation & Development Company Ltd. - 100%	21/05/1956	30/05/1956	26/11/2025	
62975	NM00482	Active	ORCHID 28	Elsa Reclamation & Development Company Ltd. - 100%	19/05/1956	30/05/1956	26/11/2025	
62976	NM00483	Active	ORCHID 29	Elsa Reclamation & Development Company Ltd. - 100%	19/05/1956	30/05/1956	26/11/2025	
62952		Active	ORCHID 3	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
80179	NM00500	Active	ORCHID 30	Elsa Reclamation & Development Company Ltd. - 100%	07/05/1957	10/05/1957	26/11/2025	
80117	NM00484	Active	ORCHID 31	Elsa Reclamation & Development Company Ltd. - 100%	04/12/1956	13/12/1956	26/11/2025	
80118	NM00485	Active	ORCHID 32	Elsa Reclamation & Development Company Ltd. - 100%	04/12/1956	13/12/1956	26/11/2025	
80119	NM00486	Active	ORCHID 33	Elsa Reclamation & Development Company Ltd. - 100%	04/12/1956	13/12/1956	26/11/2025	
80120	NM00487	Active	ORCHID 34	Elsa Reclamation & Development Company Ltd. - 100%	04/12/1956	13/12/1956	26/11/2025	
80121	NM00488	Active	ORCHID 35	Elsa Reclamation & Development Company Ltd. - 100%	07/12/1956	13/12/1956	26/11/2025	
80122	NM00489	Active	ORCHID 36	Elsa Reclamation & Development Company Ltd. - 100%	07/12/1956	13/12/1956	26/11/2025	
80162	NM00492	Active	ORCHID 37	Elsa Reclamation & Development Company Ltd. - 100%	26/03/1957	03/04/1957	26/11/2025	
80163	NM00493	Active	ORCHID 38	Elsa Reclamation & Development Company Ltd. - 100%	26/03/1957	03/04/1957	26/11/2025	
80164	NM00494	Active	ORCHID 39	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	26/11/2025	
62953		Active	ORCHID 4	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
80165	NM00495	Active	ORCHID 40	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	26/11/2025	
80166	NM00496	Active	ORCHID 41	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	26/11/2025	
80167	NM00497	Active	ORCHID 42	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	26/11/2025	
80168	NM00498	Active	ORCHID 43	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	26/11/2025	
80169		Active	ORCHID 44	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	31/12/2020	
80170		Active	ORCHID 45	Elsa Reclamation & Development Company Ltd. - 100%	27/03/1957	03/04/1957	31/12/2020	
Y 68364		Active	Orchid 46	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
Y 68365		Active	Orchid 47	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
Y 68366		Active	Orchid 48	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
Y 68367		Active	Orchid 49	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
62954		Active	ORCHID 5	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
Y 68368		Active	Orchid 50	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
Y 68369		Active	Orchid 51	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
Y 68370		Active	Orchid 52	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
Y 68371		Active	Orchid 53	Elsa Reclamation & Development Company Ltd. - 100%	12/07/1972	19/07/1972	31/12/2020	
62955		Active	ORCHID 6	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
62956		Active	ORCHID 7	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
62957		Active	ORCHID 8	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
62958		Active	ORCHID 9	Elsa Reclamation & Development Company Ltd. - 100%	16/05/1956	30/05/1956	31/12/2018	
12852	NM00179	Active	ORPHAN	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1919	31/10/1919	18/01/2023	
13542	NM00530	Active	OUTCAST FRACTIO	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1920	25/10/1920	18/11/2026	
56581	NM00187	Active	OVERTIME 1	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1948	13/08/1948	09/02/2023	
56583	NM00439	Active	OVERTIME 13	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1948	13/08/1948	26/11/2025	
56584	NM00440	Active	OVERTIME 14	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1948	13/08/1948	26/11/2025	
56585	NM00441	Active	OVERTIME 15	Elsa Reclamation & Development Company Ltd. - 100%	09/08/1948	13/08/1948	26/11/2025	
56586	NM00442	Active	OVERTIME 16	Elsa Reclamation & Development Company Ltd. - 100%	09/08/1948	13/08/1948	26/11/2025	
59453	NM00445	Active	OVERTIME 17	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	26/11/2025	
59454	NM00446	Active	OVERTIME 18	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	26/11/2025	
59455	NM00447	Active	OVERTIME 19	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	26/11/2025	
56582	NM00188	Active	OVERTIME 2	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1948	13/08/1948	09/02/2023	
59456	NM00448	Active	OVERTIME 20	Elsa Reclamation & Development Company Ltd. - 100%	17/08/1949	19/08/1949	26/11/2025	
59040	NM00285	Active	OXO	Elsa Reclamation & Development Company Ltd. - 100%	18/09/1948	21/09/1948	27/06/2024	

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14999	NM00700	Active	PACIFIC	Elsa Reclamation & Development Company Ltd. - 100%	18/06/1924	14/07/1924	29/01/2036	
59294	NM00178	Active	PACSAX	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1949	30/06/1949	29/12/2022	
59313		Active	Paddy	Alexco Keno Hill Mining Corp. - 100%	29/06/1949	08/07/1949	31/12/2019	
83253		Active	Paddy 2	Alexco Keno Hill Mining Corp. - 100%	09/10/1963	16/10/1963	31/12/2019	
83254		Active	Paddy 3	Alexco Keno Hill Mining Corp. - 100%	09/10/1963	16/10/1963	31/12/2019	
83721		Active	Paddy 4	Alexco Keno Hill Mining Corp. - 100%	25/10/1964	26/10/1964	31/12/2019	
83722		Active	Paddy 5	Alexco Keno Hill Mining Corp. - 100%	25/10/1964	26/10/1964	31/12/2019	
14093	NM00089	Active	PAGODA	Elsa Reclamation & Development Company Ltd. - 100%	04/05/1921	26/07/1921	20/08/2021	
16564	OM00031	Active	PAL OF MINE	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1925	30/06/1925	28/05/2018	
14091	NM00362	Active	PASCO	Elsa Reclamation & Development Company Ltd. - 100%	04/05/1921	26/07/1921	30/04/2025	
2203	NM00318	Active	PATRICIA	Elsa Reclamation & Development Company Ltd. - 100%	25/03/1913	08/04/1913	01/02/2025	
12820	NM00360	Active	PEACH	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1919	20/10/1919	30/04/2025	
55206	NM00562	Active	PEARL	Elsa Reclamation & Development Company Ltd. - 100%	14/08/1941	30/10/1941	02/11/2027	
12873	OM00010	Active	PERRY FRACTIONA	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1919	14/11/1919	28/12/2017	
13158	NM00684	Active	PHOENIX	Elsa Reclamation & Development Company Ltd. - 100%	01/05/1920	17/06/1920	27/02/2034	
55500	NM00299	Active	PIL	Elsa Reclamation & Development Company Ltd. - 100%	14/09/1946	01/02/1947	30/01/2025	
12785	NM00688	Active	PINOCHLE	Elsa Reclamation & Development Company Ltd. - 100%	30/07/1919	11/09/1919	29/10/2035	
55561	NM00166	Active	PIRATE	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	12/06/2022	
55562	NM00167	Active	PIRATE 1	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	12/06/2022	
55563	NM00333	Active	PIRATE 2	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	08/02/2025	
55564	NM00334	Active	PIRATE 3	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	15/02/2025	
55565	NM00335	Active	PIRATE 4	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	15/02/2025	
55566	NM00336	Active	PIRATE 5	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	15/02/2025	
55567	NM00337	Active	PIRATE 6	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	15/02/2025	
55568	NM00338	Active	PIRATE 7	Elsa Reclamation & Development Company Ltd. - 100%	31/10/1946	17/02/1947	15/02/2025	
59299	NM00172	Active	PIRATE EAST	Elsa Reclamation & Development Company Ltd. - 100%	22/06/1949	30/06/1949	12/06/2022	
16499	NM00349	Active	PLATA	Elsa Reclamation & Development Company Ltd. - 100%	07/08/1924	28/08/1924	30/03/2025	
13182	NM00615	Active	POCA PLATA	Elsa Reclamation & Development Company Ltd. - 100%	07/05/1920	21/06/1920	30/09/2029	
56559	NM00239	Active	POO FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	23/06/1948	25/06/1948	29/08/2023	
16553	4265	Active	PORCUPINE	Elsa Reclamation & Development Company Ltd. - 100%	28/05/1925	15/06/1925	6/20/2017*	Renewed Oct 4, 2016
12875	NM00686	Active	PORCUPINE	Elsa Reclamation & Development Company Ltd. - 100%	03/10/1919	15/11/1919	21/01/2035	
55389	NM00052	Active	PORKY	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1945	26/10/1945	14/11/2020	
55029	NM00183	Active	PREMIER	Elsa Reclamation & Development Company Ltd. - 100%	19/01/1937	15/02/1937	02/02/2023	
55308	NM00506	Active	PRINCE	Elsa Reclamation & Development Company Ltd. - 100%	18/06/1944	12/02/1945	01/11/2026	
62558	NM00473	Active	PRINCESS FRACTI	Elsa Reclamation & Development Company Ltd. - 100%	10/10/1954	27/10/1954	26/11/2025	
55588	NM00295	Active	PRO	Alexco Keno Hill Mining Corp. - 100%	08/10/1946	28/03/1947	23/02/2025	
59387	NM00569	Active	PUEBLO	Elsa Reclamation & Development Company Ltd. - 100%	21/07/1949	29/07/1949	02/11/2027	
16558	OM00040	Active	PUNCH	Elsa Reclamation & Development Company Ltd. - 100%	28/05/1925	18/06/1925	29/12/2019	
59275	NM00541	Active	QUAIL	Alexco Keno Hill Mining Corp. - 100%	13/06/1949	22/06/1949	02/11/2027	
59824	NM00547	Active	QUAIL FRACTION	Alexco Keno Hill Mining Corp. - 100%	22/09/1950	02/10/1950	02/11/2027	
62269	NM00341	Active	QUEEN	Elsa Reclamation & Development Company Ltd. - 100%	13/09/1952	17/09/1952	15/02/2025	
56522	NM00111	Active	QUEST	Alexco Keno Hill Mining Corp. - 100%	05/06/1948	08/06/1948	19/06/2021	
59273	NM00112	Active	QUILL	Alexco Keno Hill Mining Corp. - 100%	12/06/1949	21/06/1949	19/06/2021	
81721	NM00658	Active	R.J.	Elsa Reclamation & Development Company Ltd. - 100%	02/07/1962	10/07/1962	10/07/2031	
13073	NM00042	Active	RAM	Elsa Reclamation & Development Company Ltd. - 100%	10/04/1920	04/06/1920	17/10/2020	
55436	NM00283	Active	RAND	Elsa Reclamation & Development Company Ltd. - 100%	10/06/1946	24/06/1946	27/06/2024	
55022	NM00561	Active	RANDO	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1936	28/10/1936	02/11/2027	
YB43729		Active	Raven	Elsa Reclamation & Development Company Ltd. - 100%	18/10/1994	18/10/1994	31/12/2017	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
14227	NM00090	Active	READY CASH	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1921	24/09/1921	20/08/2021	
62309	NM00405	Active	RENO	Elsa Reclamation & Development Company Ltd. - 100%	02/07/1952	15/07/1952	12/06/2025	
12800	NM00749	Active	RENO	Elsa Reclamation & Development Company Ltd. - 100%	05/08/1919	01/10/1919	19/10/2036	
84617	2231	Active	REVENGE FRACTIO	Elsa Reclamation & Development Company Ltd. - 100%	06/08/1965	24/08/1965	08/10/2017	
55586	NM00293	Active	REX	Alexco Keno Hill Mining Corp. - 100%	08/10/1946	28/03/1947	23/02/2025	
55387	NM00051	Active	REX	Elsa Reclamation & Development Company Ltd. - 100%	10/08/1945	26/10/1945	14/11/2020	
56578	NM00354	Active	REX (F)	Elsa Reclamation & Development Company Ltd. - 100%	25/07/1948	03/08/1948	30/03/2025	
12780	NM00619	Active	RICO	Elsa Reclamation & Development Company Ltd. - 100%	21/07/1919	27/08/1919	18/02/2030	
13452	NM00643	Active	RICO	Evelyn Crandall Exec Est.Bessie E.Stewart - 50%, Elsa Reclamation & Deve	02/08/1920	02/10/1920	28/03/2030	
16350	NM00036	Active	RING	Alexco Keno Hill Mining Corp. - 100%	31/07/1927	27/08/1927	19/08/2020	
14898	NM00677	Active	RIO	Elsa Reclamation & Development Company Ltd. - 100%	12/10/1923	15/11/1923	14/04/2035	
55384	NM00507	Active	ROAD	Elsa Reclamation & Development Company Ltd. - 100%	06/08/1945	26/10/1945	01/11/2026	
55341	NM00048	Active	ROBIN	Elsa Reclamation & Development Company Ltd. - 100%	09/06/1945	17/10/1945	14/11/2020	
59683	NM00546	Active	ROCK	Alexco Keno Hill Mining Corp. - 100%	11/09/1950	19/09/1950	02/11/2027	
62339	NM00291	Active	ROCKET FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1953	02/10/1953	13/07/2024	
55526	NM00376	Active	ROSE	Elsa Reclamation & Development Company Ltd. - 100%	18/09/1946	04/02/1947	22/05/2025	
55271	NM00529	Active	ROSEMARY	Elsa Reclamation & Development Company Ltd. - 100%	01/07/1943	09/11/1943	09/11/2026	
12779	NM00616	Active	ROULETTE	Elsa Reclamation & Development Company Ltd. - 100%	10/07/1919	27/08/1919	26/01/2030	
13709	NM00558	Active	ROY	Elsa Reclamation & Development Company Ltd. - 100%	12/04/1921	28/05/1921	02/11/2027	
61976	NM00575	Active	ROZ FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	19/09/1951	19/09/1951	02/11/2027	
62199	NM00402	Active	RUBE	Elsa Reclamation & Development Company Ltd. - 100%	21/07/1952	04/08/1952	12/06/2025	
14989	NM00667	Active	RUBY	Elsa Reclamation & Development Company Ltd. - 100%	09/06/1924	09/07/1924	24/11/2033	
59528	NM00395	Active	RUTH	Elsa Reclamation & Development Company Ltd. - 100%	05/01/1950	07/01/1950	12/06/2025	
13038	NM00634	Active	SADIE	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1920	06/05/1920	17/12/2029	
55327	2221	Active	SAM	Elsa Reclamation & Development Company Ltd. - 100%	10/04/1945	16/10/1945	15/12/2017	
55214	NM00009	Active	SANTIAGO	Elsa Reclamation & Development Company Ltd. - 100%	06/11/1941	23/02/1942	27/07/2019	
14090	NM00091	Active	SAXON	Elsa Reclamation & Development Company Ltd. - 100%	03/05/1921	26/07/1921	20/08/2021	
13591	NM00557	Active	SCOT	Elsa Reclamation & Development Company Ltd. - 100%	06/01/1921	18/02/1921	02/11/2027	
12783	NM00621	Active	SCOTTY	Elsa Reclamation & Development Company Ltd. - 100%	29/07/1919	10/09/1919	24/01/2030	
56534	NM00437	Active	SEGLE	Elsa Reclamation & Development Company Ltd. - 100%	09/06/1948	23/06/1948	26/11/2025	
14288	NM00648	Active	SEXTANT	Elsa Reclamation & Development Company Ltd. - 100%	08/08/1921	04/10/1921	15/05/2030	
55309	NM00428	Active	SHAMROCK	Elsa Reclamation & Development Company Ltd. - 100%	27/06/1944	12/02/1945	26/11/2025	
12803	NM00704	Active	SHAMROCK	Elsa Reclamation & Development Company Ltd. - 100%	04/08/1919	08/10/1919	28/04/2036	
12931	NM00177	Active	SHEPHERD	Elsa Reclamation & Development Company Ltd. - 100%	15/10/1919	31/12/1919	19/11/2022	
12990	NM00661	Active	SILVER BELL	Elsa Reclamation & Development Company Ltd. - 100%	20/02/1920	15/04/1920	28/09/2031	
38730	2223	Active	SILVER FR.	Elsa Reclamation & Development Company Ltd. - 100%	20/08/1931	16/09/1931	15/12/2017	
13069	NM00013	Active	SILVER HOARD	Elsa Reclamation & Development Company Ltd. - 100%	07/03/1920	31/05/1920	27/07/2019	
14216	NM00079	Active	SILVER SPOON	Elsa Reclamation & Development Company Ltd. - 100%	17/07/1921	24/09/1921	08/08/2021	
55039	NM00631	Active	SIS	Elsa Reclamation & Development Company Ltd. - 100%	13/08/1937	03/09/1937	06/12/2029	
59027	NM00068	Active	SISTER	Elsa Reclamation & Development Company Ltd. - 100%	11/09/1948	13/09/1948	24/07/2021	
12915	NM00040	Active	SIWASH	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1919	19/12/1919	13/08/2020	
38882	NM00629	Active	SLIVER	Elsa Reclamation & Development Company Ltd. - 100%	16/03/1936	31/03/1936	06/12/2029	
59436	NM00249	Active	SLOPE 2	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
13009	NM00199	Active	SMILES	Alexco Keno Hill Mining Corp. - 100%	13/02/1920	28/04/1920	29/07/2023	
62946	NM00476	Active	SNOW	Elsa Reclamation & Development Company Ltd. - 100%	08/02/1956	10/02/1956	26/11/2025	
Y 88686		Active	Snowdrift	Elsa Reclamation & Development Company Ltd. - 100%	31/05/1974	05/06/1974	31/12/2021	
Y 87462		Active	Snowdrift 1	Elsa Reclamation & Development Company Ltd. - 100%	15/03/1974	21/03/1974	31/12/2021	
Y 87471		Active	Snowdrift 10	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2021	
Y 87472		Active	Snowdrift 11	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2021	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
Y 97219		Active	Snowdrift 12	Elsa Reclamation & Development Company Ltd. - 100%	18/12/1974	23/12/1974	31/12/2021	
Y 97220		Active	Snowdrift 13	Elsa Reclamation & Development Company Ltd. - 100%	18/12/1974	23/12/1974	31/12/2020	
Y 97221		Active	Snowdrift 14	Elsa Reclamation & Development Company Ltd. - 100%	18/12/1974	23/12/1974	31/12/2020	
Y 97222		Active	Snowdrift 15	Elsa Reclamation & Development Company Ltd. - 100%	18/12/1974	23/12/1974	31/12/2020	
Y 97223		Active	Snowdrift 16	Elsa Reclamation & Development Company Ltd. - 100%	18/12/1974	23/12/1974	31/12/2020	
YA01412		Active	Snowdrift 17	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1975	08/10/1975	31/12/2021	
YA01413		Active	Snowdrift 18	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1975	08/10/1975	31/12/2020	
YA01414		Active	Snowdrift 19	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1975	08/10/1975	31/12/2021	
Y 87463		Active	Snowdrift 2	Elsa Reclamation & Development Company Ltd. - 100%	15/03/1974	21/03/1974	31/12/2021	
YA01415		Active	Snowdrift 20	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1975	08/10/1975	31/12/2020	
YA01416		Active	Snowdrift 21	Elsa Reclamation & Development Company Ltd. - 100%	22/09/1975	08/10/1975	31/12/2021	
Y 87464		Active	Snowdrift 3	Elsa Reclamation & Development Company Ltd. - 100%	15/03/1974	21/03/1974	31/12/2021	
Y 87465		Active	Snowdrift 4	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2020	
Y 87466		Active	Snowdrift 5	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2020	
Y 87467		Active	Snowdrift 6	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2020	
Y 87468		Active	Snowdrift 7	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2020	
Y 87469		Active	Snowdrift 8	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2020	
Y 87470		Active	Snowdrift 9	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1974	21/03/1974	31/12/2021	
YC90547		Active	Snowdrift Fr. 17	Alexco Keno Hill Mining Corp. - 100%	31/08/2011	02/09/2011	31/12/2017	
55446	NM00536	Active	SOL	Alexco Keno Hill Mining Corp. - 100%	20/08/1946	21/08/1946	02/11/2027	
12816	NM00620	Active	SOLO 2	Elsa Reclamation & Development Company Ltd. - 100%	15/08/1919	18/10/1919	18/02/2030	
59630	NM00459	Active	SOLO FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	18/07/1950	21/07/1950	26/11/2025	
55445	NM00535	Active	SOLOMAN	Alexco Keno Hill Mining Corp. - 100%	16/08/1946	16/08/1946	02/11/2027	
YC32218		Active	Son 1	Alexco Keno Hill Mining Corp. - 100%	17/08/2004	23/08/2004	31/12/2018	
YC32219		Active	Son 2	Alexco Keno Hill Mining Corp. - 100%	17/08/2004	23/08/2004	31/12/2018	
YC32220		Active	Son 3	Alexco Keno Hill Mining Corp. - 100%	17/08/2004	23/08/2004	31/12/2018	
YC39676		Active	Son 4	Alexco Keno Hill Mining Corp. - 100%	26/08/2005	01/09/2005	31/12/2019	
YC39586		Active	Son 5	Alexco Keno Hill Mining Corp. - 100%	08/09/2005	12/09/2005	31/12/2019	
YC39587		Active	Son 6	Alexco Keno Hill Mining Corp. - 100%	08/09/2005	12/09/2005	31/12/2019	
YC01212		Active	South F	Alexco Keno Hill Mining Corp. - 100%	04/07/1998	06/07/1998	31/12/2020	
14893	NM00698	Active	SPENCER	Elsa Reclamation & Development Company Ltd. - 100%	01/10/1923	14/11/1923	27/01/2036	
YC02773		Active	Spider	Alexco Keno Hill Mining Corp. - 100%	06/07/2001	10/07/2001	31/12/2021	
38813	NM00160	Active	SPOT	Elsa Reclamation & Development Company Ltd. - 100%	08/10/1934	12/11/1934	02/06/2022	
55307	NM00184	Active	STANWIX	Elsa Reclamation & Development Company Ltd. - 100%	06/06/1944	12/02/1945	02/02/2023	
13721	NM00108	Active	STAURT	Elsa Reclamation & Development Company Ltd. - 100%	26/04/1921	07/06/1921	26/08/2021	
13035	NM00503	Active	STONE	Elsa Reclamation & Development Company Ltd. - 100%	18/03/1920	06/05/1920	01/11/2026	
83023	NM00595	Active	STONE FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1963	16/07/1963	02/11/2027	
59457	NM00250	Active	SUDDO 1	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59466	NM00259	Active	SUDDO 10	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59467	NM00260	Active	SUDDO 11	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59458	NM00251	Active	SUDDO 2	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	18/08/1949	19/12/2023	
59459	NM00252	Active	SUDDO 3	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59460	NM00253	Active	SUDDO 4	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59461	NM00254	Active	SUDDO 5	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59462	NM00255	Active	SUDDO 6	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59463	NM00256	Active	SUDDO 7	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59464	NM00257	Active	SUDDO 8	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
59465	NM00258	Active	SUDDO 9	Elsa Reclamation & Development Company Ltd. - 100%	16/08/1949	19/08/1949	19/12/2023	
55433	NM00534	Active	SUNRISE	Alexco Keno Hill Mining Corp. - 100%	15/06/1946	20/06/1946	02/11/2027	

Grant	Lease	Status	Claim Name	Owner	Staked	Recorded	Expiry	Comment
84580	2228	Active	SURPLOMB 2	Elsa Reclamation & Development Company Ltd. - 100%	07/07/1965	14/07/1965	08/10/2017	
84581	2229	Active	SURPLOMB 3	Elsa Reclamation & Development Company Ltd. - 100%	10/07/1965	14/07/1965	08/10/2017	
81225	NM00652	Active	SUSY Q.	Elsa Reclamation & Development Company Ltd. - 100%	15/06/1962	26/06/1962	12/03/2031	
15303	OM00037	Active	SWISS	Elsa Reclamation & Development Company Ltd. - 100%	29/09/1928	26/10/1928	18/08/2018	
59293	NM00080	Active	SYLDIX	Elsa Reclamation & Development Company Ltd. - 100%	17/06/1949	30/06/1949	08/08/2021	
14307	NM00241	Active	SYLVIA	Elsa Reclamation & Development Company Ltd. - 100%	20/07/1921	06/10/1921	28/02/2024	
55334	NM00240	Active	TAKU	Elsa Reclamation & Development Company Ltd. - 100%	23/05/1945	16/10/1945	07/09/2023	
59327	NM00407	Active	TALISMAN	Elsa Reclamation & Development Company Ltd. - 100%	13/07/1949	19/07/1949	19/06/2025	
61601	NM00552	Active	TARM	Alexco Keno Hill Mining Corp. - 100%	13/05/1951	25/05/1951	02/11/2027	
83132	NM00623	Active	TECH	Elsa Reclamation & Development Company Ltd. - 100%	06/08/1963	13/08/1963	28/02/2030	
84628	2233	Active	TESS	Elsa Reclamation & Development Company Ltd. - 100%	27/08/1965	09/09/1965	08/10/2017	
16313	NM00182	Active	THELMA	Elsa Reclamation & Development Company Ltd. - 100%	14/03/1927	07/04/1927	02/02/2023	
16204	NM00626	Active	THISTLE	Elsa Reclamation & Development Company Ltd. - 100%	16/07/1926	12/08/1926	03/12/2029	
55520	NM00538	Active	THUNDER BIRD	Alexco Keno Hill Mining Corp. - 100%	15/09/1946	04/02/1947	02/11/2027	
15207	NM00281	Active	TICK	Elsa Reclamation & Development Company Ltd. - 100%	31/03/1928	28/04/1928	27/06/2024	
12807	NM00751	Active	TIGER	Elsa Reclamation & Development Company Ltd. - 100%	27/08/1919	10/10/1919	27/10/2036	
14885	NM00069	Active	TILLY	Elsa Reclamation & Development Company Ltd. - 100%	02/09/1923	22/10/1923	24/07/2021	
13027	NM00007	Active	TIN CAN	Elsa Reclamation & Development Company Ltd. - 100%	07/03/1920	05/05/1920	27/07/2019	
59335	NM00010	Active	TIP TOP	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	15/05/2020	
16253	NM00678	Active	TIPPY	Elsa Reclamation & Development Company Ltd. - 100%	20/09/1926	06/10/1926	14/04/2035	
59295	NM00110	Active	TIPTOE	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1949	30/06/1949	29/08/2021	
55065	NM00010	Active	TIPTOP	Elsa Reclamation & Development Company Ltd. - 100%	04/03/1938	28/03/1938	27/07/2019	
56505	NM00092	Active	TOM BOY	Elsa Reclamation & Development Company Ltd. - 100%	06/10/1947	10/10/1947	22/08/2021	
38741	NM00680	Active	TOMTOM	Elsa Reclamation & Development Company Ltd. - 100%	30/05/1932	20/06/1932	14/04/2035	
Y 31586		Active	Toni 1	Alexco Keno Hill Mining Corp. - 100%	29/11/1968	02/12/1968	31/12/2019	
Y 31587		Active	Toni 2	Alexco Keno Hill Mining Corp. - 100%	29/11/1968	02/12/1968	31/12/2019	
16079	NM00683	Active	TOO GOOD	Elsa Reclamation & Development Company Ltd. - 100%	12/09/1925	29/11/1925	14/06/2035	
56504	NM00093	Active	TOPOLO	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1947	26/09/1947	22/08/2021	
13622	NM00644	Active	TRAVICE	Elsa Reclamation & Development Company Ltd. - 100%	12/03/1921	23/04/1921	22/04/2030	
59161	NM00016	Active	TREASURE ISLAND	Elsa Reclamation & Development Company Ltd. - 100%	18/11/1948	22/11/1948	27/07/2019	
62281	NM00345	Active	TREY	Elsa Reclamation & Development Company Ltd. - 100%	27/09/1952	02/10/1952	15/02/2025	
14332	NM00604	Active	TRIANGLE	Elsa Reclamation & Development Company Ltd. - 100%	24/08/1921	18/10/1921	11/07/2029	
12838	NM00043	Active	TUNDRA	Elsa Reclamation & Development Company Ltd. - 100%	06/09/1919	27/10/1919	01/11/2020	
14833	NM00662	Active	TUNNEL	Elsa Reclamation & Development Company Ltd. - 100%	04/06/1923	19/07/1923	30/09/2031	
YC02322		Active	Twins 7	Alexco Keno Hill Mining Corp. - 100%	14/12/1999	29/12/1999	29/12/2021	
55525	NM00375	Active	U. N.	Elsa Reclamation & Development Company Ltd. - 100%	18/09/1946	04/02/1947	22/05/2025	
83533	NM00657	Active	U.K. No. 17	Elsa Reclamation & Development Company Ltd. - 100%	14/07/1964	17/07/1964	12/03/2031	
62723	NM00606	Active	UK 1	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1955	29/03/1955	30/04/2029	
62735	NM00610	Active	UK 13	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1955	29/03/1955	30/04/2029	
62736	NM00611	Active	UK 14	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1955	29/03/1955	30/04/2029	
62835	NM00612	Active	UK 15	Elsa Reclamation & Development Company Ltd. - 100%	06/07/1955	08/07/1955	30/04/2029	
62836	NM00613	Active	UK 16	Elsa Reclamation & Development Company Ltd. - 100%	06/07/1955	08/07/1955	30/04/2029	
62724	NM00607	Active	UK 2	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1955	29/03/1955	30/04/2029	
62729	NM00608	Active	UK 7	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1955	29/03/1955	30/04/2029	
62730	NM00609	Active	UK 8	Elsa Reclamation & Development Company Ltd. - 100%	22/03/1955	29/03/1955	30/04/2029	
12923	NM00675	Active	UNCLE SAM	Elsa Reclamation & Development Company Ltd. - 100%	12/10/1919	26/12/1919	12/03/2035	
14002	NM00029	Active	UPTON	Elsa Reclamation & Development Company Ltd. - 100%	07/05/1921	25/06/1921	05/02/2020	
55270	NM00505	Active	V.D.	Elsa Reclamation & Development Company Ltd. - 100%	29/06/1943	09/11/1943	01/11/2026	
56503	NM00352	Active	V.O.	Elsa Reclamation & Development Company Ltd. - 100%	17/09/1947	24/09/1947	30/03/2025	

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59338	NM00142	Active	VALLEY	Elsa Reclamation & Development Company Ltd. - 100%	15/07/1949	19/07/1949	07/05/2022	
16271	NM00194	Active	VAN KEUREN	Elsa Reclamation & Development Company Ltd. - 100%	01/09/1926	23/10/1926	22/02/2023	
13258	NM00211	Active	VANGUARD FRAC.	Alexco Keno Hill Mining Corp. - 100%	19/06/1920	28/07/1920	13/09/2023	
16375	NM00282	Active	VENTURE	Elsa Reclamation & Development Company Ltd. - 100%	04/09/1927	18/10/1927	27/06/2024	
Y 33308		Active	Venus 3	Elsa Reclamation & Development Company Ltd. - 100%	05/04/1970	06/04/1970	31/12/2018	
Y 97333		Active	Venus 4	Elsa Reclamation & Development Company Ltd. - 100%	08/05/1975	09/05/1975	31/12/2018	
80227	NM00527	Active	VENUS FRACTION 1	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1957	03/07/1957	07/11/2026	
80228	NM00528	Active	VENUS FRACTION 2	Elsa Reclamation & Development Company Ltd. - 100%	20/06/1957	03/07/1957	07/11/2026	
13156	OM00034	Active	VERNA	Elsa Reclamation & Development Company Ltd. - 100%	05/05/1920	17/06/1920	18/08/2018	
15346	NM00426	Active	VIMY	Elsa Reclamation & Development Company Ltd. - 100%	31/05/1929	21/06/1929	26/11/2025	
38723	NM00560	Active	VIOLA	Elsa Reclamation & Development Company Ltd. - 100%	27/07/1931	14/08/1931	02/11/2027	
13153	NM00676	Active	VIOLA	Elsa Reclamation & Development Company Ltd. - 100%	18/05/1920	16/06/1920	14/03/2035	
14092	NM00081	Active	WALL EYE	Elsa Reclamation & Development Company Ltd. - 100%	04/05/1921	26/07/1921	08/08/2021	
12998	NM00032	Active	WALSH	Elsa Reclamation & Development Company Ltd. - 100%	28/02/1920	17/04/1920	28/02/2020	
55361	NM00161	Active	WANDERER	Elsa Reclamation & Development Company Ltd. - 100%	04/07/1945	25/10/1945	02/06/2022	
55496	NM00131	Active	WARREN	Elsa Reclamation & Development Company Ltd. - 100%	15/09/1946	01/02/1947	03/02/2022	
13367	NM00703	Active	WARRIOR	Elsa Reclamation & Development Company Ltd. - 100%	12/08/1920	12/10/1920	27/02/2036	
15365	2201	Active	WASP	Elsa Reclamation & Development Company Ltd. - 100%	11/06/1929	11/07/1929	3/27/2017*	Renewed Oct 4, 2016
13109	NM00130	Active	WATCH	Elsa Reclamation & Development Company Ltd. - 100%	27/04/1920	10/06/1920	18/07/2021	
62945	NM00475	Active	WEATHER FRACTIO	Elsa Reclamation & Development Company Ltd. - 100%	30/12/1955	06/01/1956	26/11/2025	
YB65005		Active	Webfoot	Elsa Reclamation & Development Company Ltd. - 100%	28/09/1995	29/09/1995	31/12/2017	
YC10946		Active	Wedge 1	Alexco Keno Hill Mining Corp. - 100%	09/09/2003	09/09/2003	31/12/2020	
YC10993		Active	Wedge 2	Alexco Keno Hill Mining Corp. - 100%	10/09/2003	18/09/2003	31/12/2020	
YC10994		Active	Wedge 3	Alexco Keno Hill Mining Corp. - 100%	10/09/2003	18/09/2003	31/12/2020	
16557	NM00754	Active	WESTON	Elsa Reclamation & Development Company Ltd. - 100%	30/05/1925	18/06/1925	07/03/2037	
14231	NM00094	Active	WETT	Elsa Reclamation & Development Company Ltd. - 100%	18/07/1921	24/09/1921	20/08/2021	
14081	OM00011	Active	WHIPSAW	Elsa Reclamation & Development Company Ltd. - 100%	11/06/1921	23/07/1921	15/12/2017	
13110	OM00032	Active	WHITEHORSE	Elsa Reclamation & Development Company Ltd. - 100%	27/04/1920	10/06/1920	05/08/2018	
14095	NM00082	Active	WIGWAM	Elsa Reclamation & Development Company Ltd. - 100%	04/05/1921	26/07/1921	08/08/2021	
56500	NM00185	Active	WILD CAT	Elsa Reclamation & Development Company Ltd. - 100%	18/09/1947	22/09/1947	02/02/2023	
56417	NM00378	Active	WILD MAN	Elsa Reclamation & Development Company Ltd. - 100%	05/06/1947	10/06/1947	22/05/2025	
55426	NM00532	Active	WILDCAT	Alexco Keno Hill Mining Corp. - 100%	25/05/1946	03/06/1946	02/11/2027	
14404	NM00605	Active	WILLIAM FOURTH	Elsa Reclamation & Development Company Ltd. - 100%	20/09/1921	05/11/1921	11/07/2029	
55519	NM00537	Active	WILLOW	Alexco Keno Hill Mining Corp. - 100%	05/09/1946	04/02/1947	02/11/2027	
16083	NM00083	Active	WINFRED	Elsa Reclamation & Development Company Ltd. - 100%	11/09/1925	20/11/1925	08/08/2021	
16498	NM00095	Active	WINSOME	Elsa Reclamation & Development Company Ltd. - 100%	04/08/1924	28/08/1924	20/08/2021	
12871	NM00689	Active	WOLVERINE	Elsa Reclamation & Development Company Ltd. - 100%	03/10/1919	13/11/1919	30/10/2035	
80518	NM00585	Active	WREN FRACTION	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1960	04/08/1960	02/11/2027	
55392		Active	YUKON	Elsa Reclamation & Development Company Ltd. - 100%	03/11/1945	30/01/1946	31/12/2017	
56515	NM00096	Active	YUKON	Elsa Reclamation & Development Company Ltd. - 100%	15/04/1948	19/04/1948	22/08/2021	
62312	NM00391	Active	ZELMA 1	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1953	31/07/1953	22/05/2025	
62313	NM00392	Active	ZELMA 2	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1953	31/07/1953	22/05/2025	
62314	NM00356	Active	ZELMA 3	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1953	31/07/1953	30/03/2025	
62315	NM00357	Active	ZELMA 4	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1953	31/07/1953	30/03/2025	
62316	NM00371	Active	ZELMA 5	Elsa Reclamation & Development Company Ltd. - 100%	19/07/1953	31/07/1953	30/04/2025	

** Renewal in progress and awaiting updated expiry date*