Holt-Holloway Property, Ontario, Canada

Updated NI 43-101 Technical Report

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SUMMARY

This National Instrument 43-101 technical report was triggered by the disclosure of the Annual Information Form (AIF) for the year 2014 (section 4.2 (1) (f) of the Instrument) and the disclosure of an increase in mineral resources that constitutes a material change for SAS (i.e. greater than 100% increase, as per section 4.2 (1) (j) (ii) of the Instrument).The updated mineral resources and mineral reserves (as of December 31, 2014) are presented in Summary Table 1 and Summary Table 2 respectively.

Summary Table 1: Mineral resources at Holt and Holloway mines (as of Dec 31, 2014).

Mineral Resources Estimates - As at December 31, 2014												
Project	Measured			Indicated			Measured + Indicated			Inferred		
	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)
Holt	3,702	3.97	473	3,861	3.90	485	7,563	3.94	957	7,866	4.67	1,181
Holloway	310	4.71	47	482	4.54	70	792	4.61	117	2,479	4.88	389
Total	4,012	4.03	520	4,343	3.97	555	8,355	4.00	1,075	10,345	4.72	1,571

Notes

- CIM definitions (2010) were followed in the calculation of Mineral Resource
- Mineral Resource estimates were prepared under the supervision of Douglas Cater, P. Geo. (SAS Vice President, Exploration)
- Mineral Resource estimates were undertaken according to SAS Policy for Mineral Reserve and Resources
- Mineral Resources were estimated at a block cut-off grade of 2.5g/t
- Mineral Resources are estimated using a long term gold price of US$1,250/oz.
- A minimum mining width of 3m was applied
- A bulk density of 2.84 t/m^3 was used
- Totals may not add exactly due to rounding

Summary Table 2: Mineral reserves at Holt and Holloway mines (as of Dec 31, 2014).

Mineral Reserves Estimates - As at December 31, 2014									
	Proven			Probable			Proven + Probable		
Project	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)
Holt	1,452	4.26	199	2,414	5.05	392	3,866	4.75	591
Holloway				233	5.35	40	233	5.35	40
Total	1,452	4.26	199	2,647	5.08	432	4,099	4.79	631

Notes

- Mineral Reserves were estimated according to CIM Definition Standards - November 2010
- Price of gold = US$1,250 per ounce
- Currency exchange rate used was CAN$1.08 = US$1.00
- Cut-off grades vary by deposit; economic assessments were completed for all stopes, costs based on 2015 Budget. COG at Holt = 3.02 g/t; Holloway = 4.11 g/t;
- Tonnes and gold ounce information is rounded to the nearest thousands. As a result, rows and columns may not add up exactly due to rounding.
- Work was done under the supervision of Keyvan Salehi, P. Eng., MBA (SAS Vice President , Corporate Development & Technical Services)

1 INTRODUCTION

This National Instrument 43-101 technical report was triggered by the disclosure of the Annual Information Form (AIF) for the year 2014 (section 4.2 (1) (f) of the Instrument) and the disclosure of an increase in mineral resources that constitutes a material change for SAS (i.e. greater than 100% increase, as per section 4.2 (1) (j) (ii) of the Instrument).

The technical report was prepared by employees of SAS and under the supervision of Douglas Cater, P. Geo. and Keyvan Salehi, P. Eng. both qualified persons (QP) who are not independent of SAS, as allowed under section 5.3 (3) of the Instrument.

Information was obtained through operation and technical work related to the Holt and Holloway mines over the past few years.

The two QPs frequently visited the Holt and Holloway mines throughout the year.

The units of measures used in this report conform to the metric system. Unless stated otherwise, the Canadian Dollar (CDN$) is the currency used in this technical report. A list of abbreviations is displayed in Figure 1-1.

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

Figure 1-1: List of abbreviations.

2 RELIANCE ON OTHER EXPERTS

Material information contained in this report was prepared by, or under the direct supervision of Douglas Cater, P. Geo. and Keyvan Salehi, P. Eng. As a result, no other experts were relied upon.

3 PROPERTY DESCRIPTION AND LOCATION

The following sections are copied (and updated) from the previous technical reports (SAS 2013 and SWRPA, 2008).

3.1 Location

The Holloway-Holt Project is located in north-eastern Ontario, adjacent to the Quebec border (Figure 31). The property package involved stretches through NTS areas 42D9 and 42D12 and includes an irregularly shaped, east-west elongate assemblage of claims, patents, and mining leases that more or less straddles Ontario Provincial Highway 101 east for 40 km, beginning 32 km east of Matheson and extending to the Quebec border. The main assets, the adjacent Holt and Holloway Mine properties, are centred approximately 45 km northeast of Kirkland Lake, 96 km northwest of Rouyn-Noranda, and 58 km by road east of Matheson. The UTM coordinates for the Holloway head-frame are 592,505 East and 5,374,929 North.

Figure 3-1: Location map.

3.2 Mineral Tenure and Encumbrances

On November 1, 2006, St Andrew purchased 100% of the shares of Holloway Mining Company, a wholly owned subsidiary of Newmont Canada Limited. Holloway Mining Company's assets consisted of the property, facilities and equipment of the Holloway Mine and the Holt Mine and Mill, including 48 separate property groups extending from eastern Marriott Township west into eastern Michaud and McCool townships in Northeastern Ontario.

The land package comprises 48 separate property groups totalling 691 claims distributed as 257 mineral claims, 176 leased claims, and 258 patented claims. The aggregate area is 15,172 ha. There are at least 16 different property agreements with individuals or corporate entities. Titles to the leased and patented claims mostly include both surface and mineral rights. Included in the land package is the Holloway-Holt Mine and Mill complex and tailings facility.

Property groups and individual claims location are shown in Figure 3-2. A detailed list of mineral claims is listed in Appendix A. The claim list is a tabulation of the relevant claim information including claim group, township, claim number, parcel number, surface right (SR) or Mineral Right (MR) Owner, percentage owned, area (hectares), pin number and relevant royalty schedule.

The single most significant royalty is a sliding scale royalty on all production from the Holt and Holloway mines payable to Franco-Nevada (that was assigned by Newmont, the former owner, effective 2008). The royalty rates vary along a gold price sliding scale, as shown in Table 3-1.

Table 3-1: Royalties sliding-scale by property (includes most significant royalties only).

Price of gold	Holt	Holloway
Less than US$500/oz	2%	2%
Less than US$600/oz	3%	2%
Less than US$700/oz	4%	2%
Less than US$800/oz	5%	2%
Less than US$900/oz	6%	3%
Less than US$1,000/oz	7%	4%
Less than US$1,100/oz	8%	5%
Less than US$1,200/oz	9%	6%
Less than US$1,300/oz	10%	7%
Less than US$1,400/oz	10%	8%
Less than US$1,500/oz	10%	9%
Less than US$1,600/oz	10%	10%
Less than US$1,700/oz	10%	11%
Less than US$1,800/oz	10%	12%
Less than US$1,900/oz	10%	13%
Less than US$2,000/oz	10%	14%
Less than US$2,100/oz	10%	15%
Over US$2,200/oz	10%	15%

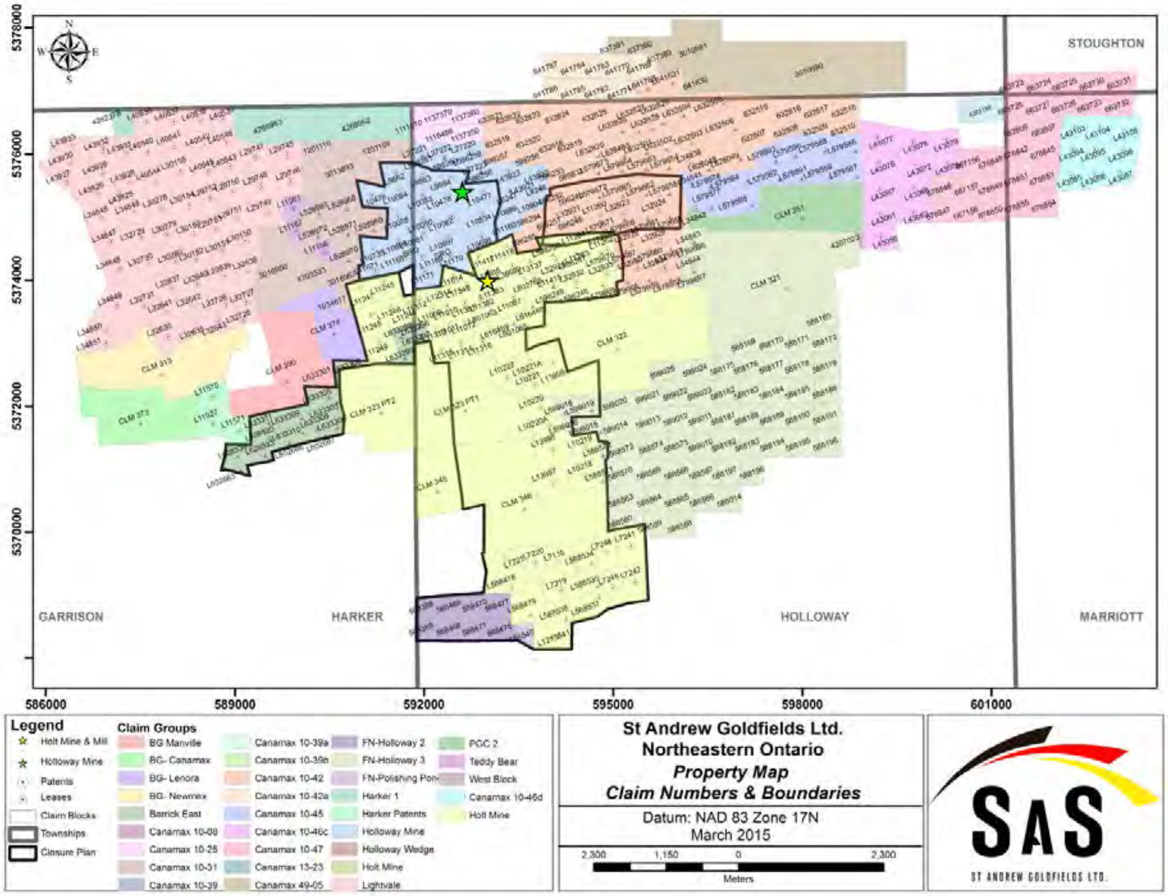

Figure 3-2: Mineral claim properties map (Holt and Holloway properties).

All properties are maintained in good status and there are no encumbrances on the properties.

3.3 Permit Status

All permits and certificates are in good standing with the appropriate regulatory offices. Updates or modifications are performed in compliance with current legislation.

3.4 Environmental Liability and Other Potential Risks

In the Qualified Person's (QP) opinion, there are no significant factors or risks that may affect access, title or the right or ability of SAS to perform work on the Holt-Holloway property.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The following sections are copied (and updated) from the previous technical reports (SAS 2013, & SWRPA, 2008).

4.1 Climate, Topography and Physiography

The climate of the area is typical of northern Ontario with cold winters, warm summers and only moderate precipitation. Climatic conditions in Timmins have been described based on meteorological information from Environment Canada (2010) during the period from 1971 to 2000. The average daily temperature in the Timmins area is recorded as 1.3°C with a daily average low of -17.5°C in the month of January, and a daily average high of 17.4°C in the month of July. An extreme low of -45.6°C was recorded on February 1st, 1962 and the extreme high of 38.9°C occurred on July 31st, 1975. The yearly average precipitation for the Timmins area is 831.3 mm with approximately 67% as rain and 33% as snow. The record daily amount of rainfall, 87.6 mm, occurred on July 29th, 1990 and the record daily amount of snowfall, 48.2 cm, occurred on March 19th, 1983.

All of the property is covered by flat lying to gently rolling terrain with average topographic relief of approximately 40 m. Overburden depths range for 3 to 60 m, with average overburden depth on the property ranging from 5 m to 10 m. Elevations range from approximately 200 m to 300 m above sea level. The area is reasonably well drained by creeks and small rivers, and there are numerous small swamps and marsh areas. Outcrop is limited due to an extensive blanket of overburden, mostly sand with lesser amounts of clay from the northerly trending Munro esker. The area is located within the Boreal Shield zone: tree cover is normally thick and predominantly coniferous (with black spruce and jack pine being the most common species), with lesser stands of poplar and birch. The current cover is believed to be a mix of second and third growth forest as a result of logging operations and forest fires.

4.2 Means of Access to the Property

The Holt-Holloway property is located in the District of Cochrane, 58 km east of Matheson on Ontario provincial highway 101 and 68 km by road northeast of Kirkland Lake via Ontario provincial highway 66 and Ontario provincial road 672. To reach the property from Toronto, there are daily scheduled flights to Timmins, which is 126 km by road west of the property. From Montreal, there are daily scheduled flights to Rouyn-Noranda, which is 96 km by road east of the property. Access to various parts of the property package can be achieved by various bush roads and logging roads that join

Ontario provincial highway 101. In the summer months, these roads are normally passable. The Trans-Canada Highway (Highway 11) goes through the town of Matheson. The Holloway and Holt surface facilities are secured behind fenced and gated facilities. Twenty-four hour security service is provided with all personnel and visitors signed in and out of the facilities. Employee and visitor parking are provided outside the gated facilities.

4.3 Infrastructure and Local Resources

The infrastructure is well developed and can support mining activities in the area. Power, fuel sources and water are already available at the Holt-Holloway property. Water is plentiful in the area and can be sourced from rivers and small lakes. An electric power line connects the mine property to the provincial power grid connecting Kirkland Lake and Larder Lake. The area is well serviced with an array of major roads and two airports (in Timmins and Rouyn-Noranda). The ore is treated at the company's Holt mill. Tailings are managed in four adjoining tailings ponds, two sludge precipitate pond, one water treatment/holding pond (pre-polishing), and one polishing pond, all located southeast of the milling facility. Current capacity of the tailings facility is approximately 7.0 million tonnes, with one minor phase of dam construction remaining. Waste rock is not typically hoisted to surface as it can be used as a source of backfill material for the underground stopes, as needs arise.

The Black River-Matheson Township (116,167 ha) has an approximate population of 2,800 residing mainly in the towns of Matheson, Shillington, Holtyre and Ramore. Further to the west are the towns and cities of Porcupine, South Porcupine, Schumacher and Timmins (approximately 45,000 residents). To the north are the towns of Iroquois Falls and Cochrane. To the south is the Town of Kirkland Lake (approximately 10,000 residents).

SAS owns an office building in Matheson that is being used as its Regional Exploration Department base. Additionally, SAS acquired two former motels in Matheson that are operated as temporary housing for relocated employees. SAS uses many local residents as support staff and local contractors to maintain the facilities.

The primary First Nations community living close to the Holt-Holloway property is the Wahgoshig First Nation (WFN). The WFN is an Anishinaabe (Algonquin and Ojibwa) and Cree First Nation located near Matheson, in the Cochrane District of north-eastern Ontario, Canada. The reserve covers 7,770.1 ha (Abitibi 70 Indian Reserve) on the south end of Lake Abitibi. The First Nation community has approximately 270 registered people; 121 people live on the reserve, where they provide the following services: band office, health clinic, warehouse / fire hall, public works garage and a community hall. Wahgoshig is policed by the Nishnawbe-Aski Police Service, an Aboriginal staffed service.

In February 2013, SAS signed an IBA (Impact Benefit Agreement) with the Wahgoshig First Nation and in December 2014 SAS signed a Memorandum of Understanding (MOU) with the Matachewan First Nation.

SAS does not anticipate opposition from the local communities to continued operation of the Holt and Holloway mines.

5 HISTORY

The following sections are copied (and updated) from the previous technical report (SAS, 2013 and SWRPA, 2008).

Because of the duality of original ownership of the Holloway and Holt mining operations, the history of each is treated separately in this section.

5.1 Holt Property Prior Ownership

In 1922, P.A. McDermott discovered gold in northwestern Holloway Township and, over the next four years, did some trenching and limited drilling on the prospect. McDermott Gold Mines Ltd. was incorporated and eventually ten contiguous claims were patented. A small drilling program was carried out in 1937; however, no further work was done until Sylvanite Gold Mines Ltd. optioned the property in 1948-1950 and drilled 11 holes totalling 925 m along 76 m of strike. In 1950, McDermott Gold Mines Ltd. became McDermott Mines Ltd.

In 1981, Camflo Mines Ltd. formally optioned the McDermott claims and staked a large surrounding area. Through 1983, Camflo carried out exploration, drilled 53 holes, and optioned the adjacent Worvest, Lenora, Canamax, and Newmex claims. In 1984, Barrick (then Barrick Resources Corp.) amalgamated with Camflo and, by year end, 120 holes had been drilled. By October 1985, encouragement was sufficient to begin an exploration shaft to an initial depth of 420 m, with development work on two levels. A production decision was made in October 1986, and production at 1,400 tpd began in 1988. In September 2004, the mine was shut down, having produced 1.32 million ounces of gold from 7.5 Mt of ore with a recovered grade of 5.5 g/t Au. SAS declared commercial production at the Holt mine in 2011.

5.2 Holloway Property Prior Ownership

In 1922, gold was discovered on claims adjacent to the current property. From that time until the late 1930s, Teddy Bear Valley Mines, Ltd. (Teddy Bear) carried out an exploration program that included some underground development. This work did not generate any interest in the property. In the mid-1980s, Teddy Bear renewed exploration drilling on its claims and Noranda Exploration Company, Limited (Noranda) began drilling on adjacent claims. These new programs encountered significant sericite-ankerite alteration and weak gold mineralization at depth.

In 1988, drill holes from both properties intersected the upper portion of the deposit, now known as the Lightning Zone, which tops out at approximately 150 m below surface. Noranda then formed a joint venture to earn an interest in the Teddy Bear property. In July 1991, Hemlo Gold Mines Inc. (Hemlo) acquired Noranda's interest in the Holloway project and surrounding claims. The Holloway Joint Venture was formed in 1992 to fund, develop, and operate the two properties as one mine.

The underground validation program in 1992 included a 441 m exploration shaft, 25,600 m of additional diamond drilling, and an 8,500 t bulk sample to study the ore metallurgy. A feasibility study completed in 1994 moved the property ahead into the production-development phase. A total of $55 million was committed to build the surface and underground infrastructure. The mine went into full production on October 1, 1996. That same year, Hemlo Gold Mines Inc. merged with Battle Mountain Gold Company. In January 2001, Newmont merged with Battle Mountain Gold and the Holloway Mine was operated by Newmont Canada Limited. In October of 2004, Newmont acquired the Holt-McDermott Mill and Mine assets from Barrick Gold Corporation (Barrick) and thus controlled 100% of the Holloway-Holt Project assets and land position. To date, the Holloway Mine has produced 0.90 million ounces of gold from 5.1 Mt of ore with a recovered grade of 5.5 g/t Au. In early 2006, Newmont placed the Holloway Mine on care and maintenance. SAS re-opened the Holloway mine in 2009.

5.3 Historical Mineral Resources and Mineral Reserves

In April 2006 Scott Wilson RPA estimated mineral resources (Table 5-1) using polygonal and sectional methods, depending on the diamond drill density.

Table 5-1: Holt-Holloway mineral resources, as of April 30, 2006 (After SWRPA, 2008).

		Tonnes ('000 t)	Grade (g/t)	Cont. Gold ('000 oz)
Holloway Mine	Measured	537	6.7	115
	Indicated	500	8.9	144
	Measured + Indicated	1,037	7.8	259
	Inferred	477	6.3	97
Holt Mine	Measured	191	8.1	50
	Indicated	2,794	7.3	655
	Measured + Indicated	2,985	7.3	704
	Inferred	677	7.9	173
Holloway + Holt	Measured	728	7	165
	Indicated	3,294	7.5	799
	Measured+Indicated	4,022	7.4	963
	Inferred	1,154	7.3	270

Notes:
1) CIM definitions were followed for Mineral Resources.
2) Mineral Resources were estimated at a marginal cutoff grade of 3.0 g/t Au and a block cutoff grade of 4.5 g/t Au.
3) Mineral Resources were estimated using an average long-term gold price of US$500 per ounce, and a US$/C$ exchange rate of 1.25.
4) A minimum mining width of 2.0 to 3.0 metres was used.
5) Columns may not add exactly due to rounding.

Following the April 2006 mineral resource estimate, SAS has diamond drilled and/or re-interpreted approximately 75% of the mineralized zones on the Holloway-Holt Project. The remaining 25% was not re-assessed and thus the 2006 estimate remained current for that portion.

Mineral resources were updated in June 2008 by SAS staff and endorsed by SWRPA (Table 5-2). Mineral reserves were updated in June 2008 by SAS staff and endorsed by SWRPA (Table 5-3).

Table 5-2: Holt historical mineral resource estimate, as of 2008 (After SWRPA, 2008).

		Tonnes (000 t)	Grade (g/t Au)	Contained Gold (000 oz)
Holloway Mine	Measured	850	7.2	196
	Indicated	81	7.0	18
	Meas + Ind	931	7.1	214
	Inferred	447	6.3	91
Holt Mine	Measured	1,323	6.6	283
	Indicated	1,914	6.8	422
	Meas + Ind	3,237	6.7	705
	Inferred	1,066	7.7	265
TOTAL Holloway and Holt	Measured	2,173	6.8	479
	Indicated	1,995	6.8	440
	Meas + Ind	4,168	6.8	919
	Inferred	1,513	7.3	356

Notes.
1) CIM definitions were followed for Mineral Resources.
2) Mineral Resources were estimated at a marginal cutoff grade of 3.0 g/t Au and a block cutoff of 4.5 g/t Au.
3) A minimum mining width of 2.0 m to 3.0 m was used.
4) Columns may not add exactly due to rounding.
5) Mineral Resources are inclusive of the Mineral Reserves.

Table 5-3: Holt-Holloway historical mineral reserves estimate, as of 2008.

			Tonnes ('000)	Grade (g/t)	Ounces ('000)
Holloway	Blacktop Footwall Upper	Proven	288	6.7	62
	Blacktop Footwall Upper	Probable	40	6.7	9
	Blacktop Footwall Lower	Probable	170	5.6	31
	Blacktop Lightning	Probable	53	5.8	10
	Lightning Zones	Probable	181	5.4	31
		Proven	288	6.7	62
		Probable	444	5.6	80
	Subtotals	Proven+Probable	732	6.1	142
Holt	C103	Proven	102	6.3	21
	C103	Probable	19	6	4
	Zone 4	Probable	1,250	5.2	208
	Zone 6	Probable	905	5.7	166
	Tousignant	Probable	150	7.9	38
	Zone 1, 5, 8, 8F & Stope 4, 5	Probable	254	6.1	50
		Proven	102	6.3	21
		Probable	2,578	5.6	466
	Subtotals	Proven+Probable	2,680	5.6	486
	Stockpile	Proven	5	3.3	1
		Proven	395	6.6	84
		Probable	3,022	5.6	546
Totals		Proven+Probable	3,420	5.7	629

Notes:
1) CIM definitions were followed for Mineral Reserves.
2) Mineral Reserves are estimated using an average long-term gold price of US$775 per ounce and an exchange rate of C$1.00 = US$0.87.
3) A minimum mining width of two metres was used.
4) Rows and columns may not add exactly due to rounding.
5) Mineral Reserves are included within the Mineral Resources

5.4 Exploration and Development Work on the Holt-Holloway Property

Mineral exploration and development on and around the subject properties began with prospecting around 1918 and have continued to this day through episodes of exploration and occasional production. The initial and very general geological map of the area was produced by the Ontario Bureau of Mines in 1909. This was followed with better detail in the reconnaissance mapping of the Abitibi-Night Hawk gold area in 1918. Prospecting and exploration in the various local townships began in earnest thereafter and continued through the 1940s, with occasional underground programs and minor local production mostly from surface workings. Interest in the area was greatly accelerated in 1944-1945, when it was demonstrated that the Destor-Porcupine fault zone traversed the area. Significant production has only been in recent times from the Holloway and Holt-McDermott mines.

The current land package, more recently known as the Golden Highway property, extends eastwards 40 km along Highway 101 from eastern McCool and Michaud townships, through Garrison, Harker, and Marriott townships to the Quebec border. Apart from the main Holloway and Holt-McDermott properties, the bulk of the remaining holdings derive from claim packages assembled over the years by Noranda Exploration Company, Limited (Noranda), Canamax Resources Inc. (Canamax), and Lightval Mines Limited (Lightval). The Golden Highway – Moneta claim blocks in Garrison, Holloway, and Marriott townships were originally staked by the Noranda associate company, Mining Corporation. In 1945, Moneta Porcupine Gold Mines entered into an agreement with Noranda and subsequently attained a 40% interest in the property. Work completed included prospecting, magnetic surveys, and a total of 13 holes drilled mostly on the Garrison Township claims. In 1980, Noranda completed more work on the Garrison block and drilled one hole to test an electromagnetic (EM) anomaly. Canamax entered into an agreement with Noranda-Moneta in 1983, and between 1984 and 1988 completed extensive geophysics and drilling on the Moneta properties.

Much of the Golden Highway property was assembled in the mid-1980s through staking and work options by Rosario Resources, subsequently Canamax. In January 1990, Noranda entered into an option agreement with Canamax covering 411 patented, unpatented, and leased mining claims. In mid-1991, Noranda assigned its rights to earn an interest in the properties and operatorship to Hemlo. In January 1993, Canamax amalgamated with Canada Tungsten Mining Corp. and Minerex Resources Ltd. to form Canada Tungsten Inc. (Canada Tungsten). In late 1996, Canada Tungsten merged with Aur Resources and, at the time, Aur had a 50% interest in the joint venture properties. In January 1996, Hemlo became vested as a 50/50 joint venture partner after having fulfilled all the required work commitments and having made all the necessary option payments. In July 1996, Hemlo merged with Battle Mountain Gold Company and the Golden Highway assets were vested in Battle Mountain Canada Ltd. (BMC). Battle Mountain Gold subsequently merged with Newmont Mining Corporation in January 2001 and the BMC interests were transferred to Newmont.

The 60 claim Lightval property was under option to Newmont Mines Limited (Canada) in 1986-1989 and Noranda in 1989-1992, but was ultimately acquired by Newmont through a 1999 option agreement. Newmont acquired the Holt-McDermott Mine and Mill assets from Barrick in October of 2004.

Throughout the period described above, a variety of conventional exploration techniques were employed to investigate the gold potential of the various properties. Considerable ground geophysics was done, mostly magnetometer and induced polarization (IP) surveys. Soil and humus sampling for gold was done locally and trenching was attempted in certain areas of shallow overburden. The most useful and definitive exploration procedure was diamond drilling and core assaying. This was the only way that altered, and gold-mineralized zones were located and delineated.

5.5 Historical Production from the Property

Production records for the Holt-Holloway Property are shown in Table 5-4.

Table 5-4: Holt-Holloway property historical production.

Year	Holt Mine Tonnes Processed	Holt Mine Ounces Gold Recovered	Holt Mine Recovered Grade (g/t)	Holloway Mine Tonnes Processed	Holloway Mine Ounces Gold Recovered	Holloway Mine Recovered Grade (g/t)
1988	219,526	23,993	3.40	-	-	-
1989	507,148	63,354	3.89	-	-	-
1990	466,708	59,164	3.94	-	-	-
1991	594,572	60,727	3.18	-	-	-
1992	418,999	47,481	3.52	-	-	-
1993	388,116	64,219	5.15	-	-	-
1994	367,699	59,872	5.06	8,556	1,844	6.70
1995	382,470	66,389	5.40	79,701	10,750	4.20
1996	438,894	117,621	8.34	190,075	37,149	6.08
1997	418,795	116,368	8.64	381,459	62,793	5.12
1998	497,122	134,379	8.41	467,134	94,781	6.31
19 99	501,794	106,701	6.61	487,317	107,780	6.88
2000	487,127	91,470	5.84	530,865	109,918	6.44
2001	449,793	83,142	5.75	551,963	105,417	5.94
2002	471,427	83,947	5.54	552,064	103,633	5.84
2003	506,905	89,514	5.49	506,633	79,245	4.87
2004	357,521	55,014	4.79	516,134	79,966	4.82
2005	-	-	-	531,012	71,747	4.20
2006	-	-	-	136,151	20,748	4.74
2007	Included in Holloway			153,163	14,471	2.94
2008	3,485	416	3.71	4,966	592	3.71
2009	-	-	-	101,941	18,712	5.71
2010	23,257	2,022	2.70	340,594	57,459	5.25
2011	232,330	32,376	4.33	204,258	21,461	3.27
2012	316,487	50,444	4.96	191,471	21,629	3.51
2013	369,657	58,898	4.96	177,005	21,330	3.75
2014	442,108	62,633	4.41	186,238	23,780	3.97
Total	8,861,940	1,530,144	5.37	6,298,700	1,065,206	5.26

6 GEOLOGICAL SETTINGS AND MINERALIZATION

6.1 Regional Geology

The Holloway and Holt mines lie within the southern Abitibi greenstone belt (SAGB) of the Superior Province in north-eastern Ontario The 40 km long, mostly contiguous Holt-Holloway property package is a grouping of strategically located claims straddling the Destor-Porcupine Deformation Zone (DPDZ) midway along its 260 km length. The defining structural characteristic of the property package and the most important feature from an economic geology viewpoint is the DPDZ, around which a multitude of gold showings and prospects are clustered. The Holloway and Holt mines are located opposite each other, approximately one kilometre apart, on the north and south sides of the DPDZ, respectively (Figure 6-1).

In very general terms, the Abitibi Sub-province consists of Late Archaean metavolcanic rocks, related synvolcanic intrusions, and clastic metasedimentary rocks, intruded by Archaean alkaline intrusions and Paleoproterozoic diabase dikes. The traditional Abitibi greenstone belt stratigraphic model envisages lithostratigraphic units deposited in autochthonous successions, with their current complex map pattern distribution developed through the interplay of multiphase folding and faulting.

The structural grain is also dominated by east-west trending Archaean deformation zones and folds. The regional deformation zones commonly occur at assemblage boundaries and are spatially closely associated with long linear belts representing the sedimentary assemblages. The dominant regional fault in this area is the Destor-Porcupine, hereafter referred to as the Destor-Porcupine Deformation Zone (DPDZ).

The southern part of the Abitibi greenstone belt, in the general vicinity of the Holt-Holloway mines, consists of three major volcanic lithotectonic assemblages and two unconformably overlying primarily metasedimentary assemblages.

The evolution of the SAGB in the region of the Holloway-Holt Project spans a period of at least 60 Ma from approximately 2,723 Ma to approximately 2,660 Ma and includes volcanism, sedimentation and plutonism. All rocks are at greenschist to upper greenschist grade of metamorphism.

After 2,696 Ma, the tectonic regime shifted from volcanic construction to that dominated by deformation, plutonism and erosion accompanied by development of localized basins infilled by sedimentary and volcanic rocks.

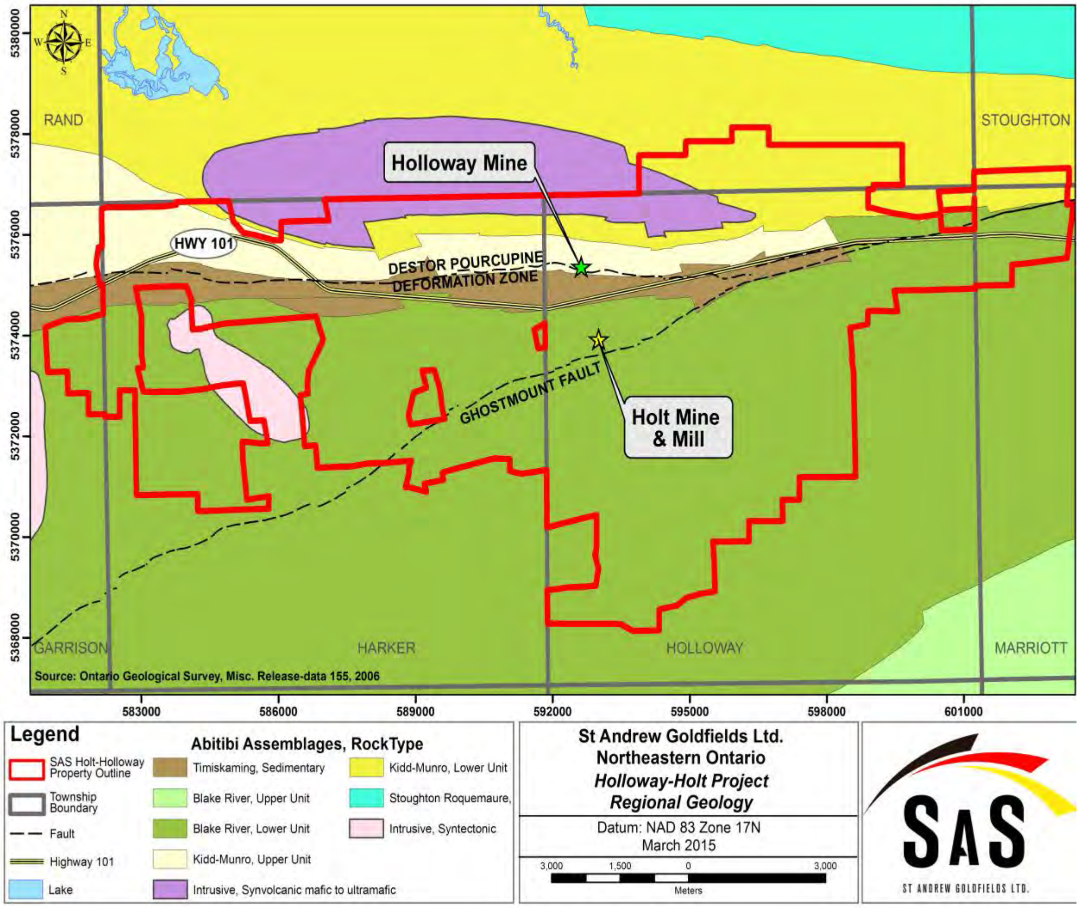

Figure 6-1: Holt and Holloway mines regional geology.

6.2 Local and Property Geology

6.2.1 Local Geology

The deformation history of the area is defined by five events. The earliest episode of regional D1 deformation (compression and extension) predated the Porcupine angular unconformity at 2,690 Ma. The D2 event (compression and extension) post-dated the Porcupine assemblage and resulted in localized folding and thrusting and early south-side up, dip-slip, ductile deformation on regional deformation zones. Broadly synchronous with the syntectonic opening of the Timiskiming basins in dilational jogs was D3 folding that resulted in significant left lateral slip movement along the DPDZ. The D4 folding event created synclines within the Timiskaming assemblage rocks and right-lateral strike-slip displacement along the DPDZ. The D4-D5 event represents the final stage of transpressional deformation along the DPDZ. Gold mineralization in the Holt-Holloway area is interpreted to be early D3 in age. Lightning Zone replacement mineralization is cut by an inter-mineral dike with an age of 2672 ± 1.9Ma, which is overprinted by a later auriferous quartz-carbonate veining event. The bulk of the gold in the Timmins area was related to late D3 events.

Gold mineralization at the Holt and Holloway mines comprises replacement carbonate-pyrite-albite-quartz alteration that overprints mafic volcanic rocks in, and adjacent to, D3-D4 high strain zones (Figure 6-2).

6.2.2 Holt Property Geology

At the Holt Mine, mineralized zones are hosted by the McDermott shear zone, a 10 m to 50 m thick, south-southeast dipping carbonate-chlorite ± albite ± sericite altered ductile D3-D4 shear zone, which, in turn, is hosted by otherwise massive, low strain mafic volcanic rocks. Mineralization typically occurs in its hanging wall (south) side as areas of fine-grained, massive to crudely banded grey replacement quartz-carbonate-albite pyrite that contain diffuse quartz veinlet networks with fine-grained breccia fragments.

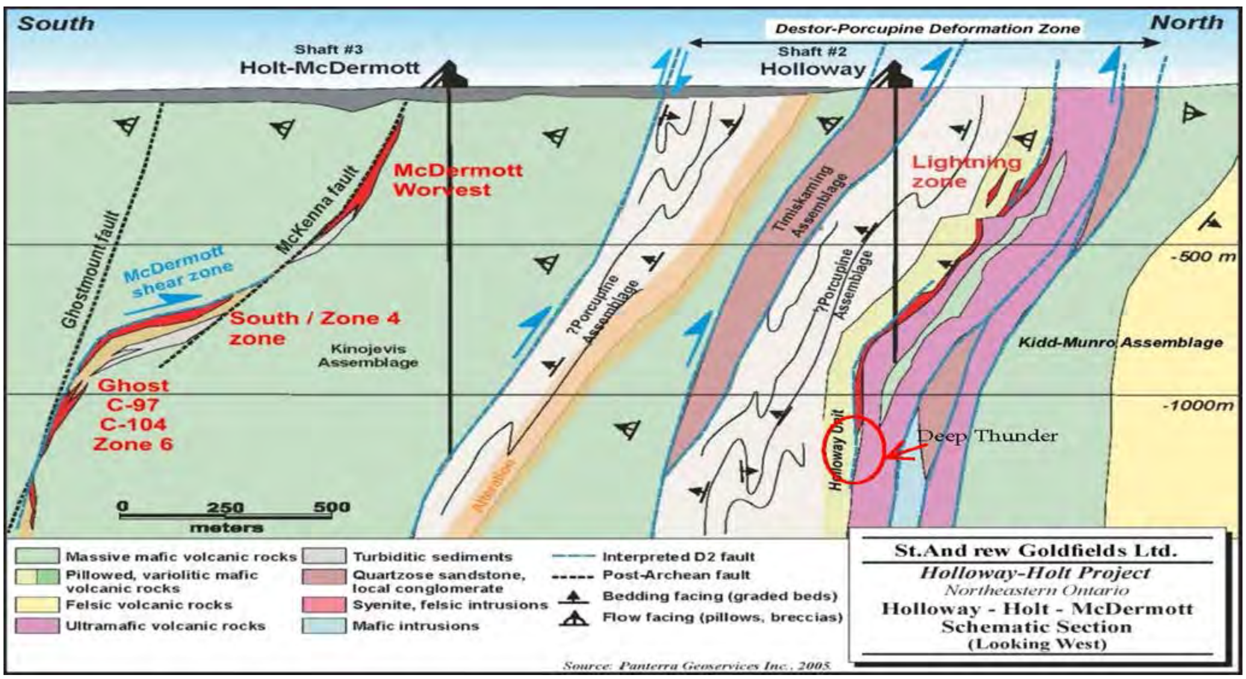

Figure 6-2: Holt and Holloway property geology (cross sectional view looking west).

South Zone / Zone 4

Zone 4 (the down plunge extension of the South Zone) at the Holt Mine is flatter lying than the other property deposits, which occur on the McKenna and Ghostmount faults, and are typically vertical to sub-vertical. Zone 4 occurs where the shear zones rolls to a moderately shallow southerly dip. This zone is related to a zone of more intense alteration, including sericite, chlorite, hematite and silicification, and elevated concentrations of sulphides within an overall lower grade envelope. This higher grade zone, typically three to 20 m thick, is almost exclusively located along the hanging wall of the deposit, against the hanging wall fault or any associated fault splay. This zone extends over 1,000 m along strike and 400 m down dip. Gold values in Zone 4 die out laterally, over several metres within the envelope of altered rock. There is generally a fairly sharp boundary on the hanging wall side along the hanging wall fault structure, but a more gradational decrease of gold values on the footwall side. During 2014, a total of 271,276 tonnes of ore were mined from Zone 4 at an average grade of 5.15 g/t Au.

Zone 6

Zone 6 is one of the more recently discovered deposits hosted by the McDermott shear zone. Mineralization occurs in steeply south dipping sections of the shear zone. This higher grade zone, typically three to eight metres thick, is almost exclusively located along the hanging wall of the deposit, against the Ghostmount fault, with less consistent lens of mineralization along the gradational foot wall contact, where the contacts of the mineralization are generally sharp with the surrounding mafic volcanic rocks.

This zone typically extends over a 200 m strike length and 400 m down dip and is open to the east and down dip below the 1075 m level. During 2012 over 21,000 m of diamond drilling was completed above the 775 m level to confirm and expand Zone 6 up dip and to the East. During 2013 an additional 564 m of diamond drilling was completed to confirm mineralization above the 775m level. No further drilling has been conducted on Zone 6 since 2013.

Ghost Zone

The Ghost Zone mineralization was discovered in 2000 approximately one kilometre east-northeast of the Mattawasaga mineralized zone. The discovery hole, drilled 250 m east of the Holt property boundary, intercepted the zone at a vertical depth of 450 m and encountered a broad zone of mineralization returning 3.47 g/t Au. over 32 m and 5.47 g/t Au. over 4 m. Subsequent drilling at approximately 200 m offsets encountered lesser values; however, notable intercepts included 2.64 g/t Au. over 13 m and 2.12 g/t Au. over 14 m, and broad low-grade composites, including 0.68 g/t Au. over 23 m, defined the extremity of the system.

In 2001, Newmont drilled two holes to test the extent of the Ghost Zone. One hole, approximately 1.7 km to the east, tested 300 m below surface and the second hole, 500 m east of previous drilling, tested to 520 m below surface, in the plunge direction of the zone. Both holes encountered modest alteration with weak gold values but did not particularly define any limits to the Ghost Zone. In 2005, Newmont drilled five more holes totalling 2,480 m to the west of the zone. Each hole intersected good alteration and modest gold values, such as 3.49 g/t Au. over 2.0 m. Similar to the Mattawasaga and Zone 6 deposits, mineralization is hosted by the McDermott shear zone, and occurs in steeply south dipping sections of the shear zone. This higher grade zone, typically three to eight metres thick, is almost exclusively located along the hanging wall of the deposit, against the Ghostmount fault. During 2010 and 2011 SAS drilled 55 holes for over 30 km of drilling. In late 2012, a new mineral resource was calculated, a portion of which was upgraded to Mineral Reserves in 2014.

Tousignant

The Tousignant Zone (Figure 6-3) was modelled using a combination of spatial variation between gold and an understanding of the physical geology. Gold grade, lithology, structure, veining and alteration were all considered in the construction of the 3 dimensional solids representing Tousignant mineralization. This information was taken out of drill logs, the electronic database and from the re-evaluation and verification of the actual drill core.

Gold mineralization is typical Holt mineralization and is very similar to that of Zone 4 and C-103. Gold is associated with disseminated pyrite and intense albite/silica alteration. The zone is characterized by two structural components: a flat south west dipping component in the form of a lens shaped alteration package and a steep south dipping component concordant to a fault belonging to the Ghostmount shear. There is an apparent thickening of the mineralization envelope near to where the two aforementioned structural components intersect.

A 3 g/t Au. envelope is completely haloed by a lower grade envelope in the flat zone whilst the vertical zone is typically thinner but, unlike the thicker flat zone, a continuous higher grade envelope cannot be distinguished. The flat zone is typically two to five metres thick whilst the vertical zone is about one to three metres in thickness, thickening slightly towards its upper limits.

Although the flat zone was fairly continuous, some lower grade material was included for the purpose of realizing a continuous mineralized zone. No exploration activity took place at Tousignant in the last two years.

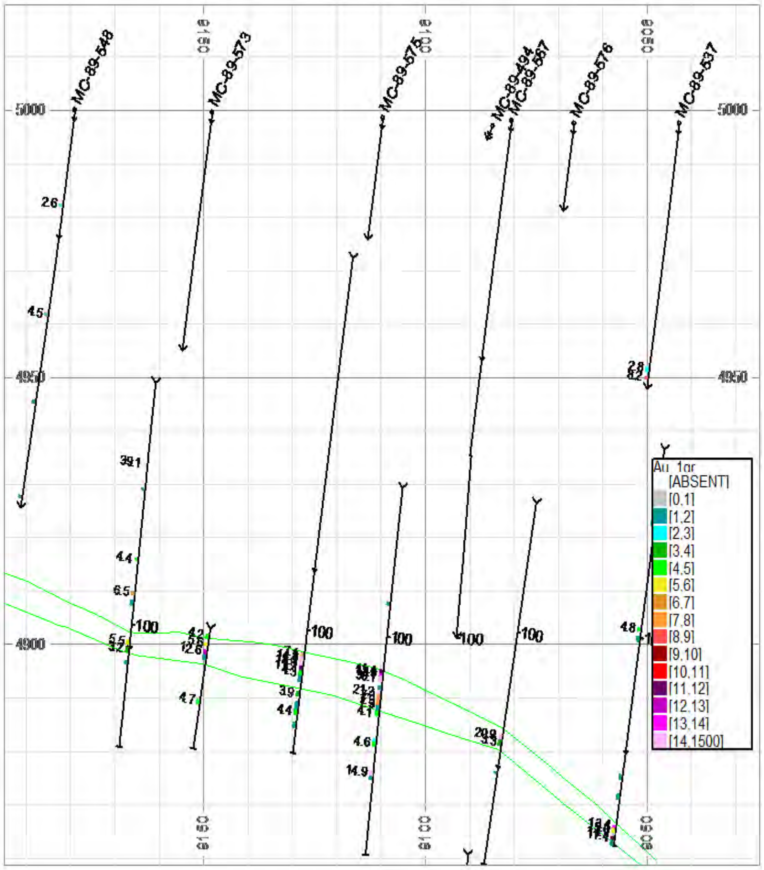

Figure 6-3: Typical cross section from the Tousignant Zone (looking east).

6.2.3 Holloway Property Geology

The Holloway deposit is hosted by the 30 m to 150 m wide Holloway unit, a south dipping band of Fe-tholeiitic mafic volcanic rocks that is bounded to the south and north by south facing turbiditic sedimentary rocks and komatiitic ultramafic volcanic rocks, respectively. Mineralization occurs where a 200 m to 300 m wide corridor of east-northeast trending D2-D3 high strain zones obliquely crosses the Holloway unit, resulting in a deflection in its strike to east-northeast trends, from east to west-northwest trends that are more typical at the property scale.

Lightning and Blacktop

Lightening and Blacktop mineralization at the Holloway Mine comprises replacement carbonate-quartz albite-pyrite zones developed adjacent to and within the high strain zones that overprint earlier formed albite-hematite alteration that preferentially replaces variolitic flow units. Mineralized bodies trend east-northeast.

Smoke Deep

The Smoke Deep mineralized zone is hosted within mafic-volcanic rocks that display varying textures and structures. Within the mafic-volcanic lithologies the mineralized area is hosted within an alteration assemblage that has a variable composition. The alteration ranges from strongly silicified, with accessory sericite, albite and hematite to a less silicified, strongly sericitized unit. The majority of mineralization occurs within a dark to light grey silicified host where the gold mineralization is associated with pyrite and occupies a stock work within the host rock. Unlike the Blacktop zone, the alteration zone and associated gold mineralization does not always lie in direct contact with the lower ultramafic suite of rocks; however, in some locations the alteration zone does come in contact with the lithological boundary between the ultramafics and mafic-volcanics and, as a result, so does the mineralized zone. Despite the alteration zone and resulting gold mineralization not consistently being in direct contact with the above mentioned lithological contact the orientation of the mineralized zone closely mimics the orientation of this lithological boundary.

Sediment Zone

Deep surface drilling was initiated in late 2012 to test the down-dip component of the Smoke Deep Zone. During this program, drilling intersected a steeply south dipping, silicified, pyritic zone hosted within the sedimentary unit and SAS has named this new zone the Sediment Zone. During 2013, 15 underground holes totalling 4,505m were drilled from the 550 level to test the mineral potential of the Sediment Zone. This drilling confirmed that the Sediment Zone has a 45° south dip. The zone exhibits both strong alteration and anomalous gold values and has been drill traced over a 750m strike length.

7 DEPOSIT TYPE

At Holt-Holloway, the gold mineralization is quite unlike the classical Superior province auriferous quartz vein systems resulting from deformed, extensional fracture arrays. Rather, it is associated with disseminated sulphides in altered rock, sometimes described as replacement mineralization. Mineralization typically consists of moderately to steeply dipping tabular zones of disseminated pyrite (generally less than 5 per cent per volume) and gold in intensely altered tholeiitic basalt, with variably developed microveinlet stockworks. The ore is gold rich (Au:Ag is greater than 5) and contains concentrations of arsenic. The mineralized zones occur in a variety of geological settings reflecting a variety of controls on the localization of the mineralization: along low-strain lithological contacts (Lightning, Blacktop and Smoke Deep zones at Holloway), along brittle and/or ductile faults (McDermott, Worvest and Mattawasaga zones), and as shallowly dipping discordant zones (Tousignant, South Zone and Zone 4) of which the South Zone (Holt) is spatially coincident with an array of shallowly dipping syenitic dykes.

Mineralized zones are coincident with zones of intense albite-ankerite alteration of the host basalt, which, in turn, are partly fringed by sericite alteration haloes at Holloway and fringed by broader zones of calcite alteration. Disseminated specular hematite can be present within or outboard of mineralized zones.

Gold mineralization at the Holt and Holloway Mines is associated with replacement carbonate-pyrite-albite-quartz alteration that overprints mafic volcanic rocks in, and adjacent to, D3-D4 high strain zones. The overprinting of multiple mineralization phases in the same area suggests that mineralization was long lived and spanned syn-tectonic deformation during exploitation of the same fluid channel ways.

7.1 Holt

At the Holt Mine, mineralized zones that have been historically mined are hosted by the McDermott shear zone, a 10 m to 50 m wide south-southeast dipping carbonate-sericite-chlorite ± albite altered ductile D3-D4 shear zone, which is hosted by otherwise massive, and generally low strain mafic volcanic rocks. The McDermott shear zone has been traced laterally for approximately 10 km along strike, joining the Destor-Porcupine corridor to the northeast. It has been traced by drilling at least eight kilometres west of the Holt Mine headframe. The shear zone may be localized along an older D2 thrust plane that has structurally emplaced lenses of fine-grained clastic sedimentary units along it. Principal mineralized zones that have been mined to date along the structure include the South, C-104, McDermott, Worvest/Three Star, Mattawasaga, and C-97 zones, which occur over a strike length of three kilometres and have been mined to depths of over one kilometre below surface.

More recently, the C-103, Zone 4 and Zone 6 gold mineralization has been identified along these geologic structures and are host to the bulk of the existing gold mineralization. All but the South Zone and Zone 4 occur in steeply south dipping sections of the shear zone. The South Zone and Zone 4 occur where the shear zone rolls to moderate to shallow southerly dips (Rhys, 2005a). Prominent within the Holt Mine geology are two northeast to east-northeast trending brittle faults: the Ghostmount and the McKenna. Although once interpreted as mineralization controlling structures, they offset mineralization and are in fact the youngest structural elements in the region (Rhys, 2005a).

Mineralization frequently occurs within the upper (hanging-wall/south) portions of the McDermott shear zone, often in areas where the structure defined by its carbonate-sericite-quartz altered high strain zone widens from a thickness of generally less than 10 m to locally greater than 50 m wide. The widening may in part be controlled by the interaction of the shear zone with lenses of carbonaceous sedimentary rocks in its footwall. Mineralization occurs in massive to banded quartz-carbonate-pyrite-albite alteration that occurs within the McDermott shear zone and may extend a short distance into adjacent, unfoliated, massive mafic volcanics. Diffuse quartz veinlet networks and matrix are commonly developed, locally imparting breccia textures in sheared rocks. The apparent overprinting of foliation by alteration, and rotation of shear zone fabrics in breccia fragments, collectively suggest that mineralization overprints portions of the McDermott shear zone, and that it formed during or after most shear zone fabric development. An early phase of hematite-bearing carbonate-albite-quartz alteration is often preserved as lenses and domains within and adjacent to the Holt Mine mineralized zones (Rhys, 2005a).

Zones 4, 6 and C-103 at the Holt Mine have a well- established higher grade gold zone (i.e., greater than 3 g/t Au) related to a zone of more intense alteration, including sericite, chlorite, hematite and silicification, and elevated concentrations of sulphides within an overall lower grade envelope. This higher grade zone, typically three to five metres thick, is almost exclusively located along the hanging wall of the deposit, against the Ghostmount fault or any associated fault splay. The zones typically extend over 100 m along strike and 100 m down dip.

Ghost Zone

The Ghost Zone is similar to the Mattawasaga and Zone 6 deposits: mineralization is hosted by the McDermott shear zone and occurs in steeply south dipping sections of the shear zone. This higher grade zone, which is typically three to eight metres thick, is almost exclusively located along the hanging wall of the deposit, against the Ghostmount fault. A Mineral Resource was calculated by SAS which utilized the 2011 –

2013 drilling results. In 2014 a portion of the mineral resource was converted to mineral reserve.

Native gold in mineralized zones at Holt occurs as fine grains spatially associated with pyrite, in fractures, on grain boundaries, or encapsulated in pyrite grains. Microscopically, gold grain distribution can be clustered; however, assays do not reveal erratic or “nuggety” gold concentrations. Gold values in mineralized zones die out laterally, over several metres within the envelope of altered rock. There is generally a fairly sharp boundary on the hanging-wall side, but a more gradational die off of values on the footwall side. This is particularly evident in the Zone 4 and C-103 and less evident in Zone 6 where the contacts of the mineralization are generally sharp with the surrounding mafic volcanic rocks.

Mineralized zones at Holt display two pronounced shoot plunges:

- Moderate to steep east plunges that outline the major zones; and,
- Alignment of zones and chains of small mineralized shoots along shallow west plunging axes.

The latter plunge is parallel to the plunge line of dip changes in the McDermott shear zone. The patterns are similar to Holloway.

7.2 Holloway

The Holloway deposit is hosted by the 30 m to 150 m wide Holloway unit, a south dipping band of Fe-tholeiitic mafic volcanic rocks which is bounded to the north and south by south facing turbiditic sedimentary rocks and komatiitic ultramafic volcanic rocks, respectively. Mineralization occurs where a 200 m to 300 m wide corridor of east-northeast trending D2-D3 high strain zones obliquely crosses the Holloway unit, resulting in a deflection in its strike to east-northeast trends from east to west-northwest trends that are more typical at the property scale (Rhys, 2005a). Mineralization in the Holloway Mine comprises the Lightning, Middle, and Blacktop zones.

Lightning Zone

The Lightning Zone is host to by far the largest zone at the Holloway Mine. It comprises a series of generally interconnected lenses of pyritic replacement mineralization localized at and near the northern portions of the Holloway Unit, frequently within variolitic units. Two stages of alteration are evident: pre-mineralization albite-hematite-quartz and syn-mineralization pyrite-quartz-albite-carbonate-sericite. Gold mineralization occurs as native grains associated with fine-grained clustered pyrite occurring as stringers and veinlets, irregular clumps, and dense vein haloes. Quartz veins are generally not mineralized. “Typical” ore contains on average 10 % to 55% clustered pyrite. Gold most often occurs along the pyrite grain boundaries or, less often, along fractures in pyrite grains. Accessory arsenopyrite, chalcopyrite, sphalerite, and scheelite are very minor constituents overall. Gold grain sizes average 5 µm to 9 µm and visible gold is rare.

The deposit has a strike length of approximately 800 m, a minimum indicated vertical extent of 750 m (150 m to 900 m below surface) and an average true width of 8 m. It is open to depth along most of its strike length. In longitudinal section, an overall moderate easterly plunge is evident, with subsidiary internal steep and shallow plunging mineralized shoots/trends. In plan view, mineralized bodies within the Lightning Zone collectively have east-northeast trends and steep dips. On upper levels, the zone comprises two separate subzones located between coordinates 5400E to 5600E and 5750E to 5959E. Within the overall southeast plunge of the Lightning Zone, main stage albite-pyrite mineralization in these subzones occurs in steeply plunging second order shoots, which correspond both with the intersection line of high strain zones with the Holloway Unit and the dominant plunge of the L3 stretching lineation developed on foliation surfaces.

Lightning Zone replacement mineralization is overprinted by a stacked set of shallow dipping, semi-brittle faults, with top to north-northwest displacements of up to 100 m, which cause segmentation of the Holloway Unit and offset mineralized shoots. These structures are partially filled with quartz veins, and are coeval with a set of moderate to shallow north-northwest dipping quartz extension veins that are developed orthogonal to the stretching lineation. On longitudinal section, elevated areas of grade times thickness in the Lightning Zone form shallow plunging zones that correspond with the passage of these structures through the zone. The shallow plunging zones probably represent areas of upgrading where new gold mineralization was introduced in the pyritic envelopes of quartz veins that occur within, and as haloes of, more abundant veining surrounding the flat faults. Since the flat faults offset earlier disseminated mineralization, they are natural boundaries to stope and resource blocks (Rhys, 2005a).

At the Holloway Mine, the so-called Holloway Deep mineralization provides a potential exploration target to be investigated along the southwest plunge extent of the Lightning Zone below the lowest level.

Middle Zone

In addition to the quartz vein related mineralization associated with the flat faults, a series of north-trending, moderate to steep east-dipping quartz-tourmaline shear veins occurs in the Middle Zone, west of the main Lightning Zone mineralized body. The veins are developed in narrow reverse shear zones and are probably intermediate in age between the Lighting Zone and flat fault related quartz veining episodes. These veins are quartz dominated and contain variable quantities of black tourmaline as ribbons and stylolites. They have auriferous pyritic envelopes and outer sericite-carbonate alteration. The veins are cut by the shallow quartz extension veins associated with the flat faults, and their local development in areas of the Lightning Zone style disseminated mineralization suggests that they overprint it, forming an intermediate mineralizing phase. The veins are affected by open and ptygmatic F3/F4 folds, and by F5 folds, consistent with the earlier timing than the less strained quartz extension veins that cut them. At their northern end at least, the quartz-tourmaline veins penetrate into Lightning Zone style replacement mineralization and split up or dissipate as they enter it. Other evidence suggests that they bend into parallelism with the east-northeast trending dominant foliation. Lightning Zone style mineralization with lower albite and higher sericite content is also present in the Middle Zone, and probably forms the bulk of the resource there. Its mineralogical proportions, different from the Lightning Zone, may reflect its non-variolitic host rocks which may have not been affected to the same degree by early albite-pyrite alteration (Rhys, 2005a).

The Middle Zone has an east-west strike length of 90 m, an overall thickness of 20 m and a depth extent of 100 m. There are three north-trending quartz-tourmaline veins within the zone and they have an average thickness of two metres.

Blacktop Zone

Located 2.4 km due east of the Holloway shaft, the Blacktop Zone is developed in an east-northeast trending high strain zone, or network of high strain zones, associated with intense S3-S4 development and sericite-carbonate-chlorite alteration of mafic volcanic rocks. As is the case at the Lightning Zone, the area of high strain at Blacktop is associated with an east-northeast trending deflection in the otherwise dominantly east-west to west-northwest trend of lithologies. The Blacktop Zone is a tabular (typically two metres to seven metres thick) and shallow southerly dipping zone which is hosted by and cuts obliquely across the Holloway Unit. The zone may be at least 100 m in strike length. The mineralization coincides with an apparent 20 m to 80 m top to the north (reverse) displacement of the northern contact of the Holloway Unit with ultramafic volcanic rocks, and of subunits internal to the Holloway Unit. Mineralization may extend along this structure into the Holloway Unit for more than 100 m southward from the northern mafic-ultramafic contact, and on some sections could potentially penetrate southward to the southern contact of the Holloway Unit with turbiditic sediments. At the northern margin of the Holloway Unit, mineralization may also extend upward from the shallow dipping structure in altered hyaloclastite, forming steeply dipping to irregularly shaped extensions to the mineralization. Widest and highest grade portions of the mineralized shallow southerly dipping zone also occur at the northern ultramafic-mafic contact, often in the immediate fault hanging wall, in the overthrust above ultramafic rocks (Rhys, 2005a). Intersections of more than 12 g/t over possible true thicknesses of 20 m have been encountered in this area.

The Blacktop "flat fault" falls within the range of orientation of flat faults in the Holloway Mine, although it has slightly steeper southerly dips than most of these. Mineralization along the flat fault at the Blacktop Zone is predominantly Lightning Zone in style, comprising a tabular zone of grey albite-carbonate-pyrite-quartz mineralization. In general, the gold mineralization and associated alteration and sulphide mineralization at the Blacktop zones has sharp boundaries with the surrounding volcanic rocks with higher grade values (i.e. more than 10 g/t Au) disseminated throughout. As such, the entire mineralized – altered zone was modelled and it is envisioned that the entire mineralized zone from hanging wall to footwall would be mined given that it would be difficult to predict any higher grade trends within this mineralized zone. Overall, there is good continuity of the extent of mineralized zones from hole to hole.

In several drill holes, in addition to Lightning Zone style replacement mineralization, quartz veining is also abundant in the zone and forms the bulk of the intercept. This suggests that the mineralization represents a composite style composed of the earlier replacement mineralization with upgrading by later phases of vein mineralization, as has been suggested for portions of the Lightning Zone that are affected by similar flat faulting (Rhys, 2005a).

The Blacktop Zone seems to offer considerable scope for expansion. For example, the footwall mineralization along the shallowly south dipping (flat) fault requires follow-up drilling to the south. As within the Lightning Zone alteration package, there may be potential, above and below, for parallel (stacked) zones along other flat faults. To the west of Blacktop, at remucks #6 and #7, there is good potential to follow up around good grade mineralization as encountered in hole 550-384, approximately 200 m below the 550 level.

Smoke Deep Zone

The Smoke Deep Zone is located half way between the Lightning and Blacktop deposits. The mineralized zone is hosted within mafic-volcanic rocks that display varying textures and structures. Within the mafic-volcanic lithologies the mineralized area is hosted within an alteration assemblage that has a variable composition. The alteration ranges from strongly silicified, with accessory sericite, albite and hematite to a less silicified, strongly sericitized unit. The majority of mineralization occurs within a dark to light grey silicified host where the gold mineralization is associated with pyrite and occupies a stock work within the host rock. Unlike the Blacktop Zone, the alteration zone and associated gold mineralization does not always lie in direct contact with the lower ultramafic suite of rocks; however, in some locations the alteration zone does come in contact with the lithological boundary between the ultramafic and mafic-volcanic units and as a result so does the mineralized zone. Despite the alteration zone and resulting gold mineralization not consistently being in direct contact with the above mentioned lithological contact the orientation of the mineralized zone closely mimics the orientation of this lithological boundary. Gold mineralization is associated with tabular replacement bodies of albite-quartz-pyrite, often bounded in the hanging wall by a narrow shear zone. The steeply-plunging mineral stretching lineation in high strain and shear zones indicate dominant dip-slip kinematics during brittle-ductile deformation associated with gold mineralization. Stacked shallow dipping graphitic fault planes cross-cut gold mineralization and potentially offset the ore zone. In addition a moderate easterly plunge can be observed from drill section interpretation.

Deep Thunder/Canamax

Surface drilling at the Deep Thunder Zone in 2011 was successful in expanding the zone of gold mineralization to the east and has confirmed the presence of higher grade gold structures within a broader zone of alteration. Gold mineralization is concentrated within several sub-parallel zones along steeply dipping structures, from true depths of 620 m to 1,100 m, over a strike length of 350 m.

In 2014, SAS conducted an infill drilling program consisting of 10 holes / 2,400m. Historical drill core was located and re-analyzed. 2014 re-assay results correlated very well with the historical assays. SAS also re-established survey control on the property. In 2015, additional drilling is planned to test the “gap” (an area of sparse drill coverage) below the Canamax zone which extends down to the Deep Thunder deposit mineral resource.

Sediment Zone

Deep surface drilling was initiated in late 2012 to test the down-dip component of the Smoke Deep Zone. During this program, drilling intersected a steeply south dipping, silicified, pyritic zone hosted within the sedimentary unit and SAS has named this new zone the Sediment Zone. The first hole of the program (GH12-001) returned assays grading 5.60 g/t Au. over 8.1 m. Follow-up drilling has continued to intercept the newly discovered zone with recent drilling extending the mineralization over a strike length of 750 m with a 250 m vertical height. The new Sediment Zone is situated approximately 250 m in the hanging wall (south) of Smoke Deep. In 2013 SAS targeted the Sediment zone using existing development from the 550 m drift at the Holloway Mine. The underground drilling concluded that the Sediment Zone dips at 45° south and remains open both to the west and to depth. Drill results returned anomalous gold grades associated with this zone, however the zone appears to be too narrow to warrant additional follow-up.

8 EXPLORATION

The Holt-Holloway property has a mix of mining and exploration assets. The property package comprising claims, patents, and mining leases covers an area of 148 km^2, straddling 40 km of the regionally important DPDZ. This large and coherent land holding in an old and productive gold belt, with numerous gold deposits and showings focused along the DPDZ speak to the excellent exploration potential of the area. With three operating mines and a mill in the district provide SAS with a substantial advantage in the belt.

The exploration potential on the Holt-Holloway property can be divided into three equally prospective areas:

- Within the immediate mine areas, typically strike and dip extensions;
- Within and immediately adjacent to the gold mineralization previously discovered, namely at Holloway on the Smoke Deep, Blacktop, Canamax and Seagar Hill property segments and at Holt on the Zone 4 west extension, V-93 (vertical extension) and McKenna zones;
- In new areas where conceptual exploration targets have been generated based on both past and recent theories that predict the controls on the location of gold mineralization. Holloway mineralized plunge junction, west of Tousignant, and associated with the Howey-Couchenour trend.

8.1 Mine Area

In addition, there remains excellent potential to add to the current mineral resource base immediately adjacent to the Holloway and Holt deposits that can be accessed from the present underground workings. This includes, but is not limited, to the following areas (Figure 8-1 and Figure 8-2):

- Down plunge extension of Zone 4, V93 and McKenna zones at the Holt Mine;
- Westwards along the hinge line formed by the known deposits within the Holt Mine where additional zones of mineralization may exist;
- Zone 6B: Potential to the east of this zone, beyond current mine workings;
- Zone 1: There is potential to investigate in this zone, 50 m below the 1075 Level;
- Up and down plunge of the Holloway – Lightning and Blacktop zones;
- Between the Lightning and Blacktop zones at the Holloway Mine where limited drilling has returned significant gold values from underground drilling.

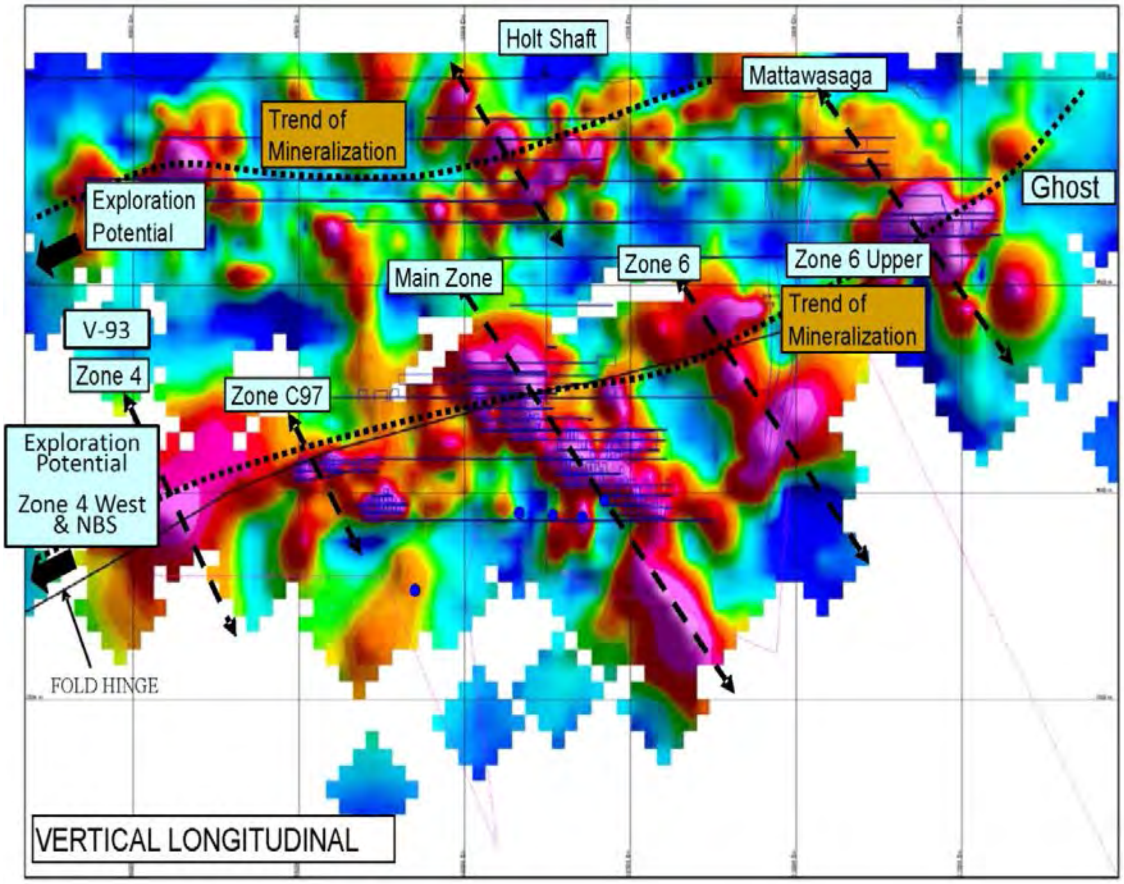

Figure 8-1: Vertical longitudinal section showing grade x thickness contour of Holt deposits.

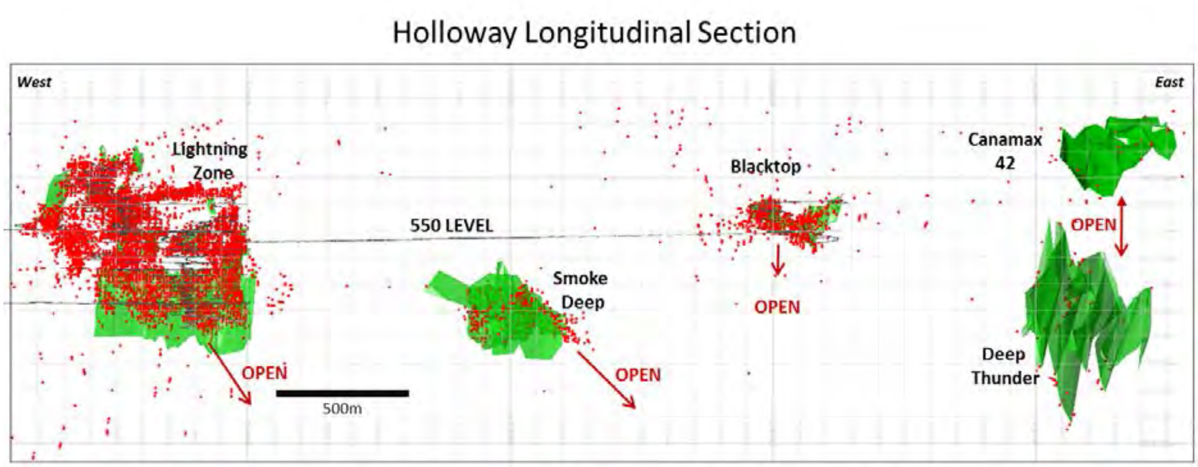

Figure 8-2: Vertical longitudinal section of Holloway to Canamax / Deep Thunder Zones Longitudinal shows mineral resource solids and indicates potential exploration target areas. (Assay intervals > 4 g/t Au are shown in red).

8.2 Within and Immediately Adjacent to Previously Discovered Areas

8.2.1 Lightval

In the period 1986-1989, Newmont Mines Limited (Canada) conducted a significant exploration program that included line cutting, geological mapping, lithogeochemical sampling of all rock outcrops, outcrop stripping, channel sampling of stripped areas, ground magnetic surveying, IP and limited HLEM surveying. Diamond drilling of 37 holes totalling 11,316 m was completed. Significant intersections include 2.85 g/t Au. over 9.95 m from hole LV88-8B (green carbonate altered ultramafic) and 1.42 g/t Au. over 14.0 m from hole LV87-2 (altered zone at sediment/porphyry contact). Noranda optioned the ground during 1989-1992 and completed 5.5 line kilometres of IP surveying on five lines on the northern half of the property. Drilling over a three year period amounted to 30 holes completed for a total of 8,621 m. Significant intersections from this program include 29.85 g/t Au. over 1.5 m from hole LV89-51 (sediment/ultramafic contact) and 3.64 g/t Au. over 2.0 m (Lightning Zone style mineralization, mafic/ultramafic contact).

During October 2001, Newmont carried out a diamond drilling program comprised of two holes totalling 475 m on the southern portion of the Lightval property. The program was designed to test geological targets with coincident IP chargeability anomalies and, in the case of hole LV01-68, anomalous Au in humus geochemistry. Previous IP surveying (1986) on the Lightval Property, by Newmont Mines Limited (Canada), had outlined a number of untested IP trends in favourable geological settings. No economic gold values were returned from the drilling, although both holes intersected weak to moderately altered zones with low gold values. The highest value obtained was 0.51 g/t Au over 1.0 m from a calcite and hematite altered mafic volcanic from drill hole LV01-69. A moderate to strongly altered section over 13.8 m of silica and lesser albite and ankerite alteration in hole LV01-68, returned only weakly anomalous values of 0.17 g/t Au. over 1.0 m. Following this program, two areas of interest were recommended for follow-up, namely the Lightning Zone volcanics package in the northern half of the property and the silica/albite altered interval in LV01-68 in the southern half of the property. The Lightning Zone stratigraphy has not been fully tested at depths below 200 m from surface due to gaps in the potentially more prospective areas of up to 800 m between drill holes. Only one hole tests the 1.8 km long package at a depth of 500 m below surface, which is a favourable zone for flat fault-hosted gold mineralization in the Holloway Mine. The silica/albite altered interval intersected in LV01-68 remains open ended, having possibly been intersected in one historic hole to the west. The zone has been traced for a distance of 300 m in outcrops and pits before disappearing under overburden. More drilling is required here, particularly to investigate the potential of the footwall stratigraphy to the north of the equivalent Lightning volcanic package.

8.2.2 Newmex

An 813 m surface hole was drilled in 2005 to follow up on a series of good intersections. More work is needed to follow up this mineralization.

8.2.3 Pumphouse (now known as Deep Thunder)

Drilling on the Pumphouse Zone to the east of the Blacktop Zone has encountered interesting gold values. More work is needed to follow up this mineralization.

8.2.4 42 E (Canamax Zone)

Drilling on the 42 E Zone to the east of the Pumphouse Zone has also encountered interesting gold values. More work is needed to follow up this mineralization.

8.3 New Exploration Targets

Based on aeromagnetic patterns, and the locations of known alteration-high strain zones, examination of property geological and geophysical maps, in combination with known drill hole data, suggests that several east-northeast trending shear zones are developed across the area, including in the Lightval property area west of Holloway, and at least three structures developed in the mafic volcanic sequence to the northwest of the McDermott shear zone.

The sequence of mineralization at Holloway is comparable to deposits in the Timmins area, evolving from early disseminated mineralization styles through later quartz-tourmaline veins, and late flat quartz extension veins associated with semi-brittle faults. The endowment of mineralization, however, differs in each stage: at Holloway, most gold mineralization was introduced in early replacement phases, while in the Timmins area, the later stage vein systems associated with shallow dipping extension vein arrays introduced the bulk of gold mineralization. The flat fault-related and quartz-tourmaline vein systems at Holloway illustrate the potential for development of Timmins and Val d'Or style vein systems in the local area.

8.3.1 Holt Mine

Zone 4 – Upper and Lower strike extensions

Historical production from the Holt mine was derived from an area known as the South Break. SAS site personnel have named the westerly strike extension of the South Break, as Zone 4. Zone 4 is noted to possess similar geological, mineralogical and structural characteristics to the South Break. In recent years, SAS has focused a considerable amount of exploration attention on drilling the westerly strike extension of

Zone 4 from drill platforms located on both surface and underground. The up-dip strike extension of Zone 4 contains exploration potential with two historical drill holes returning significant assay results and mineral widths which warrant follow-up.

A composite longitudinal view of the Holt mine indicating the historical diamond drill coverage, the gold grade assay histograms (red bars adjacent to the drillhole trace represent assay results > 4 g/t Au) and the areas for potential drill follow-up, namely the down plunge extension of the Worvest zone and the westerly strike extension of Zone 4 is displayed in Figure 8-3.

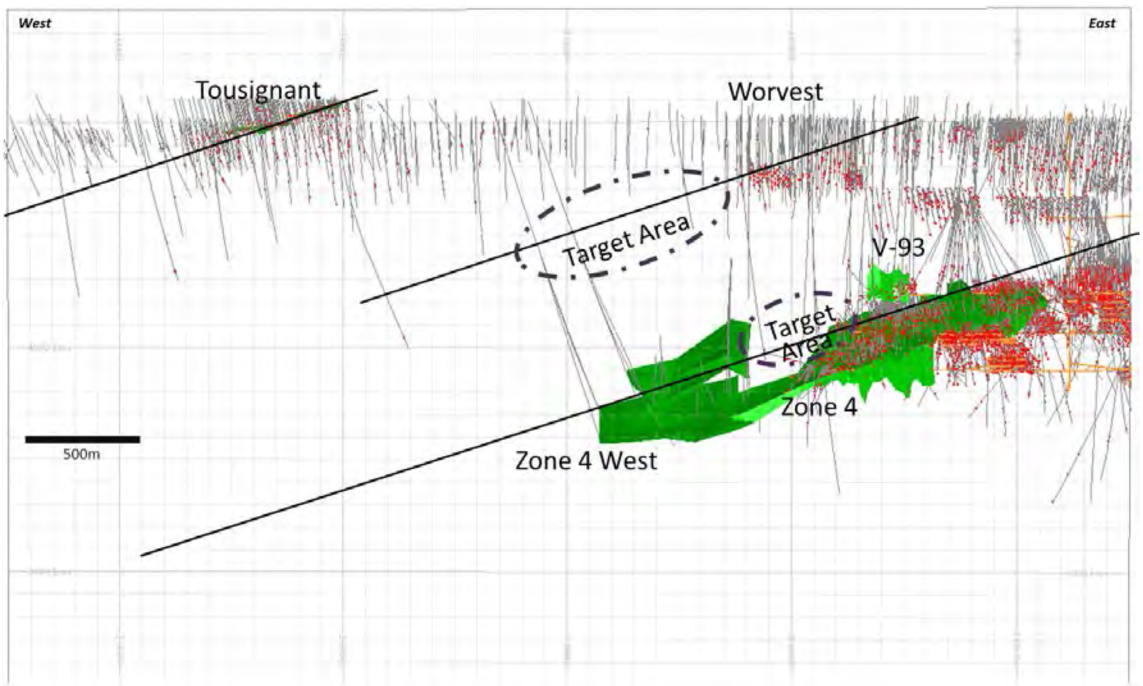

Figure 8-3: Holt mine longitudinal showing mineral resource solids and indicating potential exploration target areas. Assay intervals > 4 g/t Au shown in red.

8.3.2 Holloway

The following new exploration targets are being examined by SAS geological personnel at the Holloway mine.

Smoke Deep – Easterly / depth extension

SAS has been actively drilling the Smoke Deep target from both surface and underground drill set-ups. Recent drill results from Smoke Deep were disclosed in a July, 8 2015 press release, “SAS provides an Exploration Update for the Smoke Deep Zone at the Holloway Mine” to test the possible eastern and down dip extension of the zone from the underground drift on the 865, 905, 925 and 945m Levels. The drill program continues to extend the Smoke Deep deposit both along strike and further to the east. This drilling has effectively extended the known mineralized strike length of the deposit to a total strike length of 650 m. These recent drill intersections are typical of Smoke Deep mineralization, associated with the mafic volcanic-ultramafic volcanic contact and are approximately 400 m directly above the current Smoke Deep resource model and approximately 200 m below surface.

Smoke Deep remains open both along strike to the east and both up-dip to surface and down plunge at depth. Recent drill intercepts from the Smoke Deep east extension drill program are illustrated in Figure 8-4.

A plan view of the Smoke Deep Zone 945 sub-level showing the exploration potential available along strike to the east is displayed in Figure 8-5.

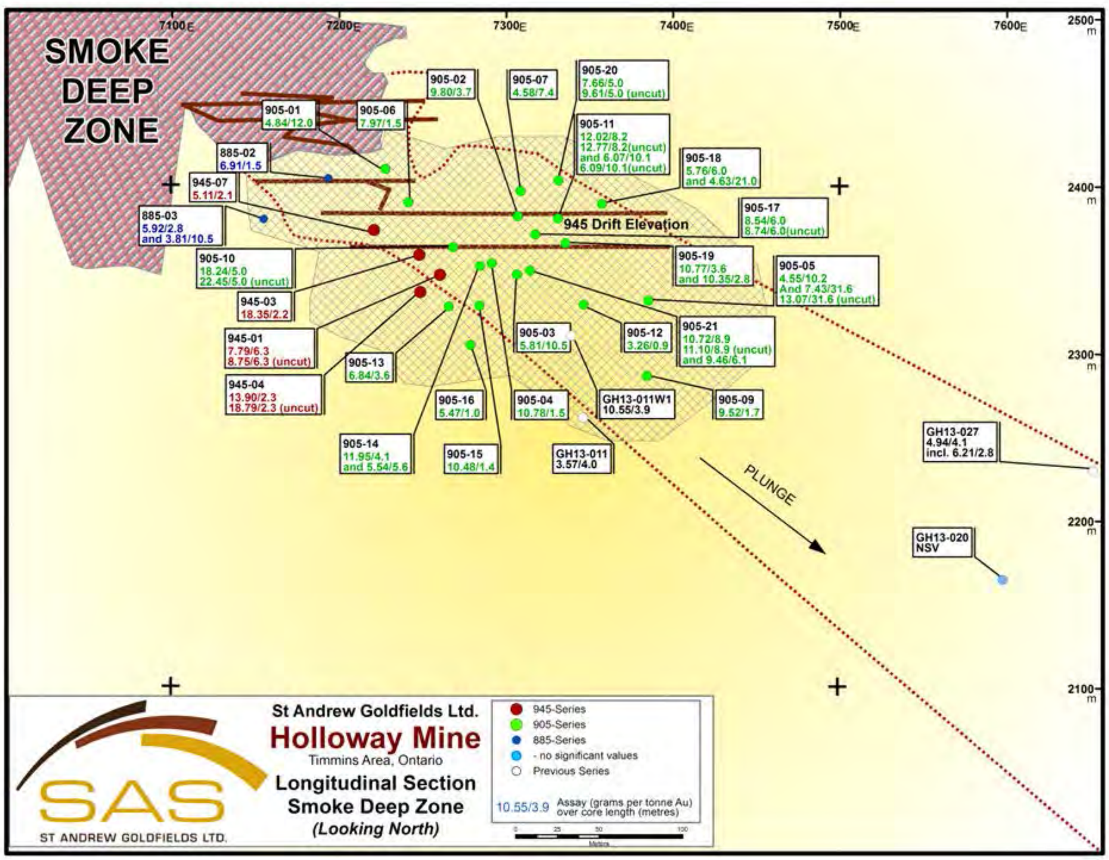

Figure 8-4: Recent drill intercepts at Smoke Deep (east extension).

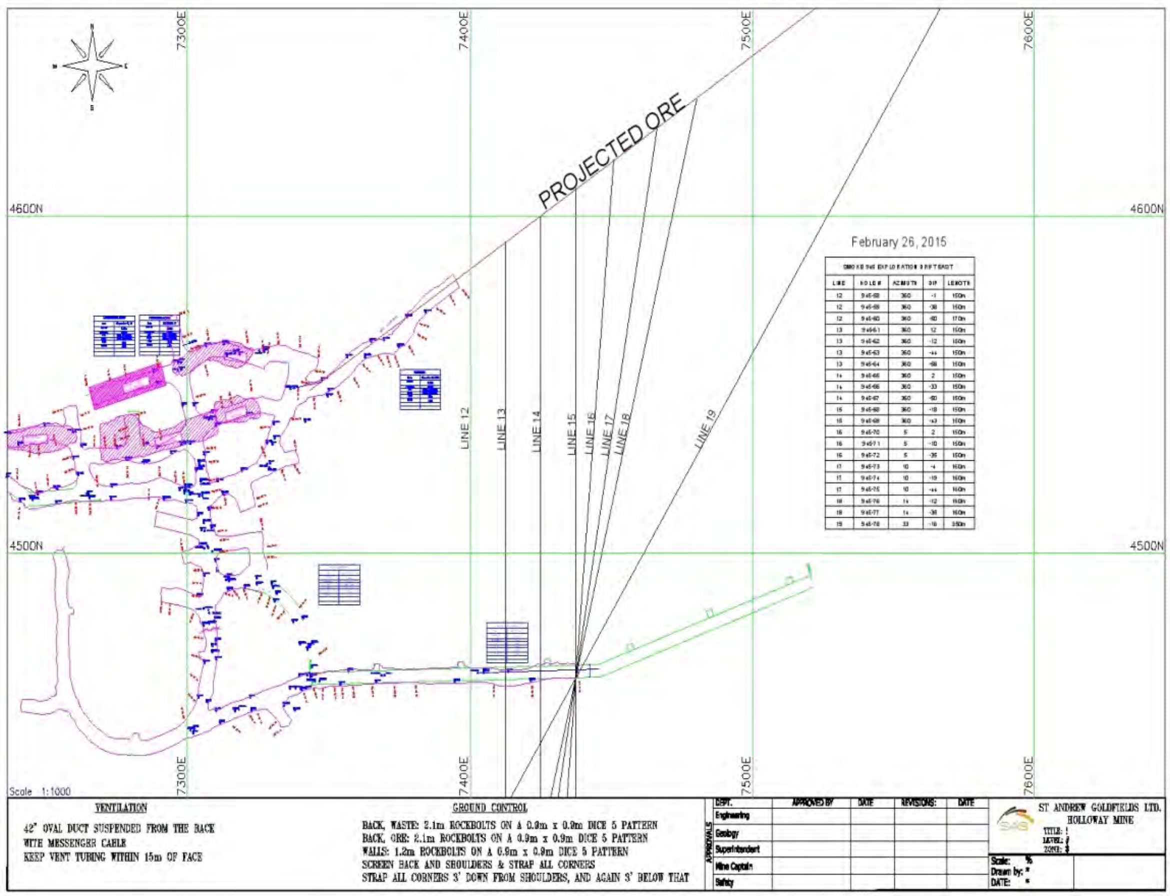

Figure 8-5: 945 Sub-level access drill plan – Smoke Deep extension.

Sediment zone

In March 2013 SAS reported that "Deep surface drilling was initiated in late 2012 to test the down-dip component of Smoke Deep. During this program, drilling intersected a steeply south dipping, silicified, pyritic zone hosted within the sedimentary unit. The first hole of the program, Hole GH12-001 returned assays grading 5.60 g/t Au. over 8.1 m, and has named this new zone the Sediment Zone. Additional follow-up drilling by SAS has continued to intercept the newly discovered zone with recent drilling extending the mineralization over a strike length of 750 m with a 250 m vertical height. The new Sediment Zone is situated approximately 250 m in the hanging wall (south) of Smoke Deep. The zone is significant because it can be easily accessed and drilled using existing development from the 550 m drift or 780 m level at the Holloway Mine. The Sediment Zone remains open to the west and at depth.

A geological cross-section highlighting recent assay results and showing both the geological and spatial relationship of the Sediment Zone to Smoke Deep is displayed in Figure 8-6 and Figure 8-7.

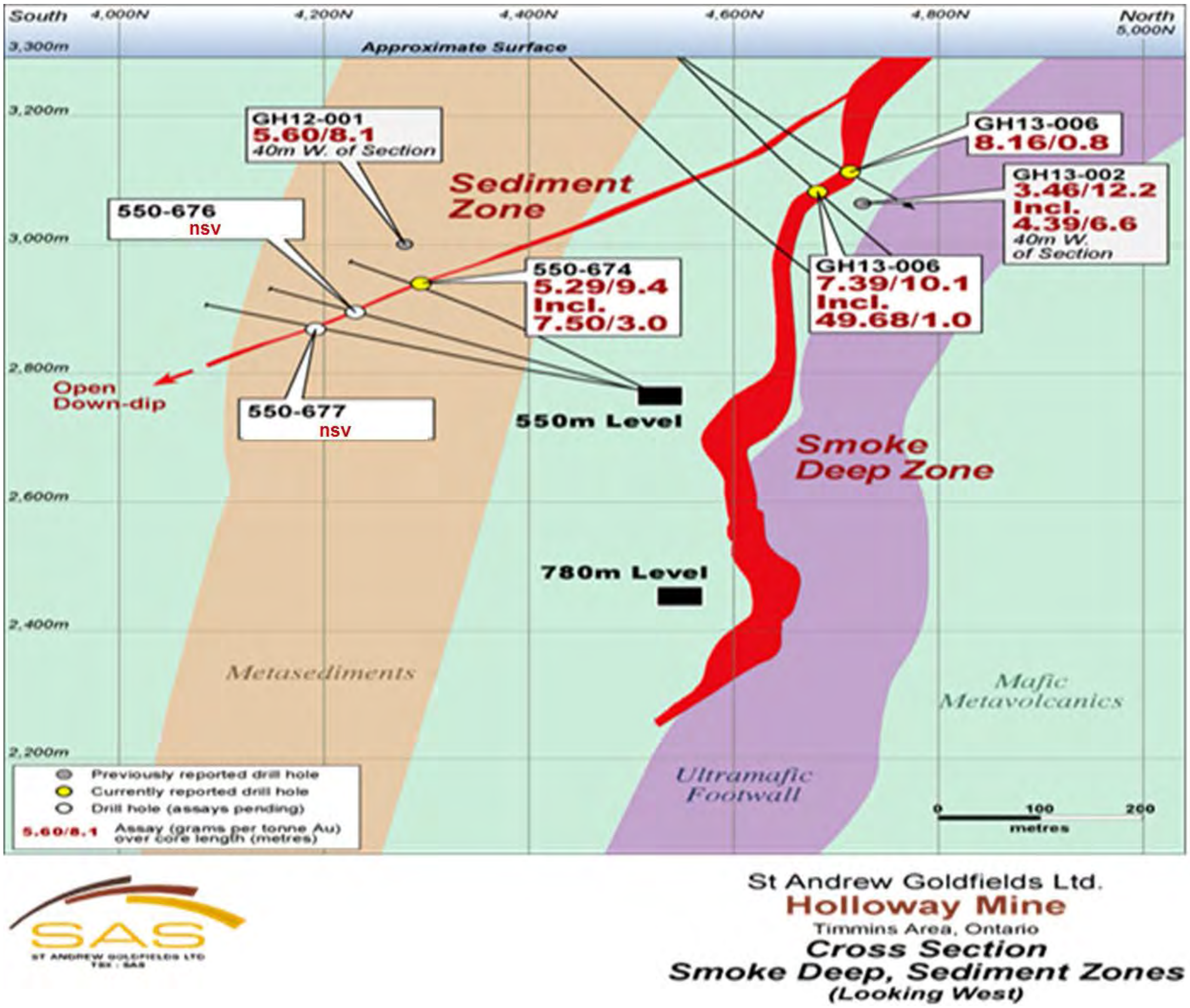

Figure 8-6: Cross section (looking west) showing location of Sediment Zone.

8.3.3 Generative Targets Compilation and Evaluation

SAS geological personnel are actively working up exploration targets on the Holt and Holloway properties and the potential for a repetition of the mineralized zones and the extension of most zones remains open along strike and or at depth. These extensions are regarded as high potential targets by SAS Exploration personnel. In many instances, underground diamond drill platforms are required to facilitate the orderly exploration of these zones where possible. Surface drilling will also be used to support the mine exploration effort where warranted.

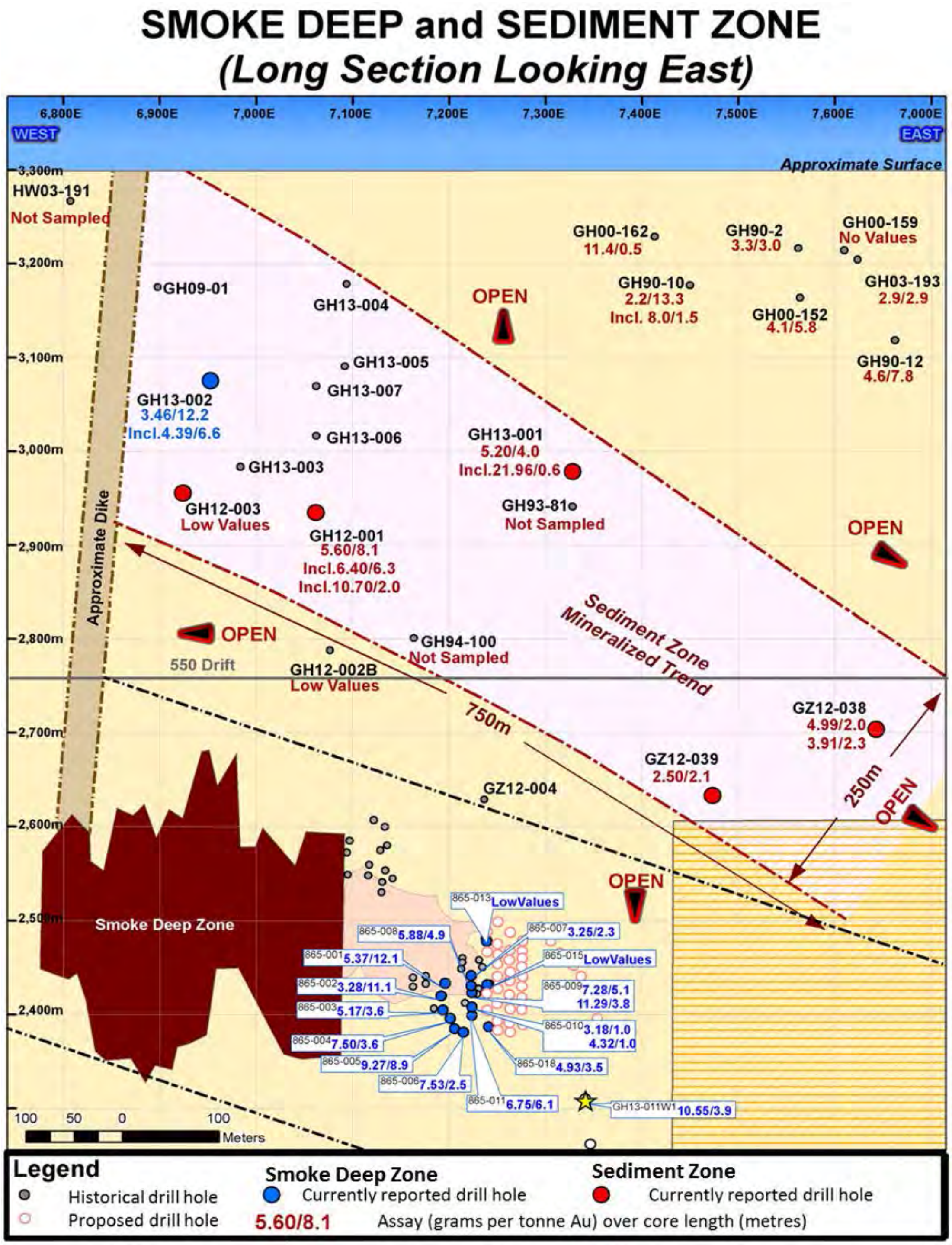

Figure 8-7: Sediment Zone Longitudinal with Smoke Deep trend superimposed. The Smoke Deep trend is situated ~ 250m north of Sediment zone.

8.4 2013-2014 Exploration Programs

8.4.1 Holt-Holloway Mines

Throughout 2014, exploration in the vicinity of the Holloway-Holt mines continues to be a priority, in order to identify and replenish mineral resources. Recent exploration programs were focused at Holt Deep Zone 4 West Extension, at Smoke Deep, and at Canamax / Deep Thunder (Figure 8-8).

8.4.2 Ghost Zone

The Ghost Zone is located approximately 400 m east of the Holt mine workings, along the Ghostmount Fault Zone. Follow-up drilling in 2013 will be targeting extensions of the zone at depth and along strike. Additional in-fill drilling may be required to increase the mineral resource classification and confidence. A substantial amount of drilling was conducted on the Ghost target in 2011-13, which resulted in a mineral resource being disclosed for the zone. An isometric longitudinal section for the Ghost Zone is displayed in Figure 8-9.

SAS actively drilled off the Ghost zone in 2011-2013. The Ghost zone is located two kilometres east of the Holt shaft. Surface drilling effectively defined the Ghost zone as being mineralized over a 1,500 m strike length, which was brought into a resource by SAS in 2012 and upgraded to a Mineral Reserve in 2014. The Ghost mineralization remains open to the east – towards an area known as the Plato Gold option, and also to the west and possibly links up with the Mattawasaga zone along strike. The mineral potential of this zone will be drill tested by SAS in 2015.

8.4.3 Blacktop East Zone

The Blacktop East Zone is located immediately east of the Blacktop Zone, where current mining activities are completed.

Surface drilling in 2011 was completed to extend the gold mineralization further to the east along strike. The holes were drilled from surface approximately 80 m to the east and intersected a similar style of gold mineralization, consisting of silicified mafic volcanics with minor disseminated sulphides. One hole returned 5.04 g/t Au. over 17.7 m, which is similar to the results received from the underground drilling.

No recent exploration activity was conducted on this target. Noteworthy surface drilling intercepts are summarized in Table 8-1 and Figure 8-10.

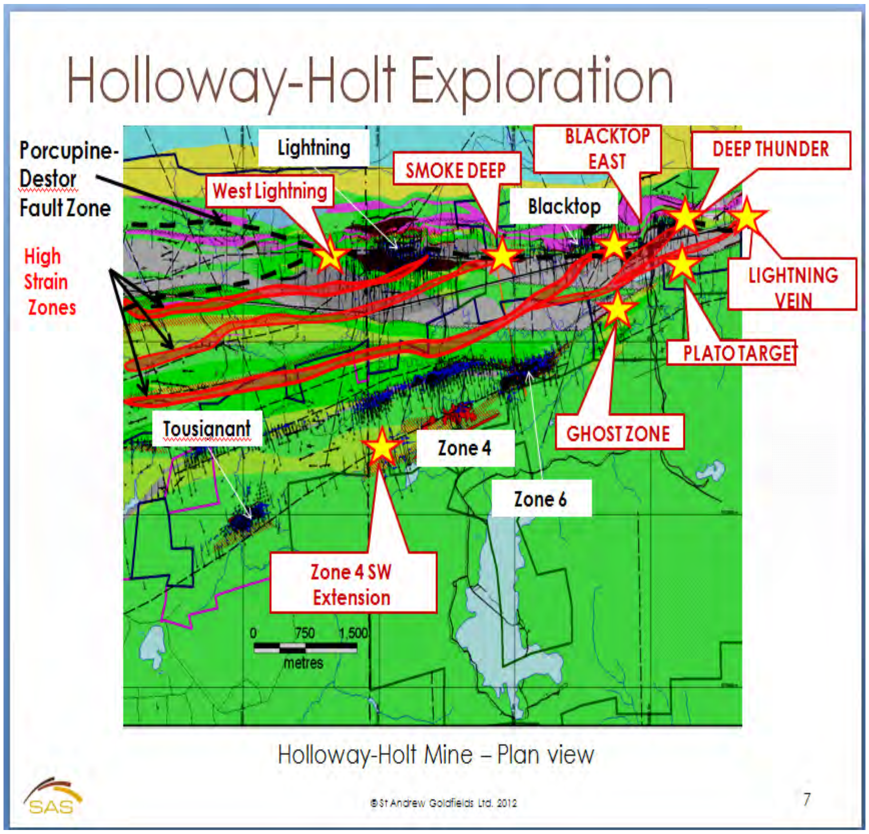

Figure 8-8: Holt-Holloway exploration targets (plan view).

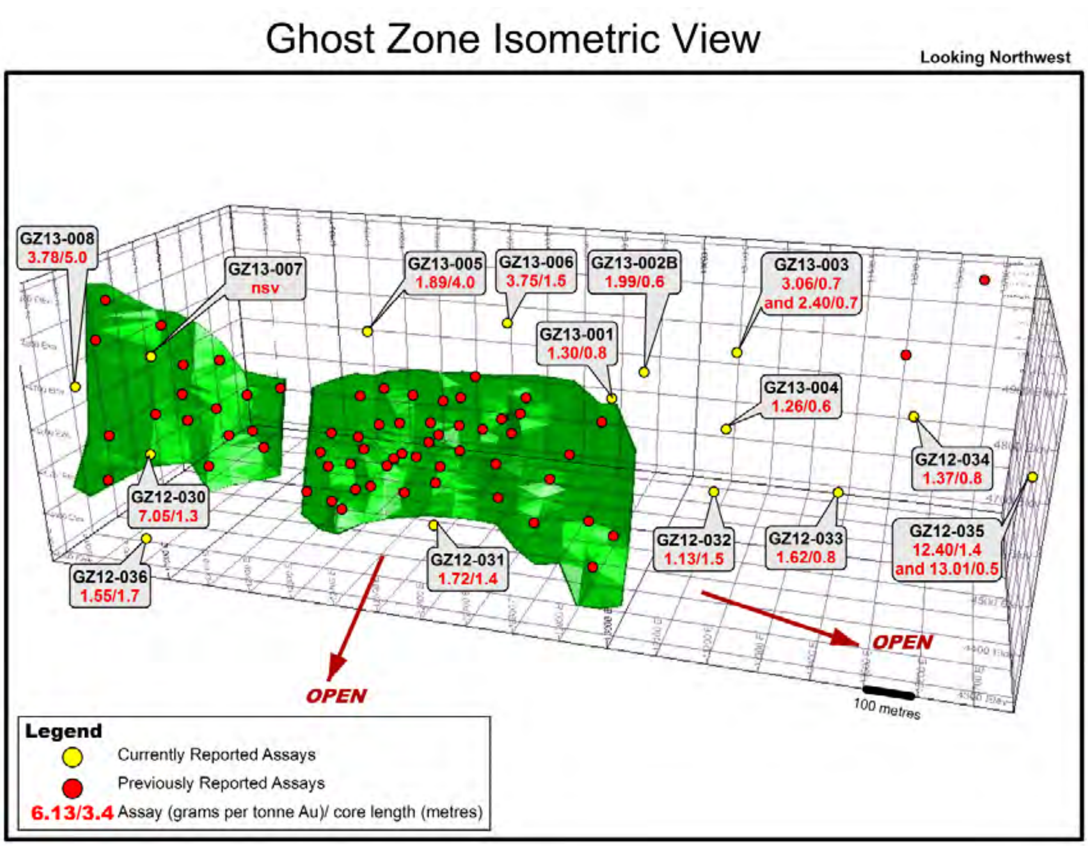

Figure 8-9: Ghost Zone longitudinal section showing recent drill results.

Table 8-1: Blacktop East highlights from the 2011 drilling campaign.

Hole Number	Intersection (m) From	To	Core Length (m)	Gold Grade (g/t)
GH11-008	470.1	487.7	17.7	5.04
including	*475.0*	*487.7*	*12.7*	*6.20*
GH11-015	626.2	630.8	4.2	3.85
including	*629.2*	*630.4*	*1.2*	*9.79*

Notes:
All lengths are reported as core length as true width is not available at this time.
Gold grades capped to 30 g/t Au.

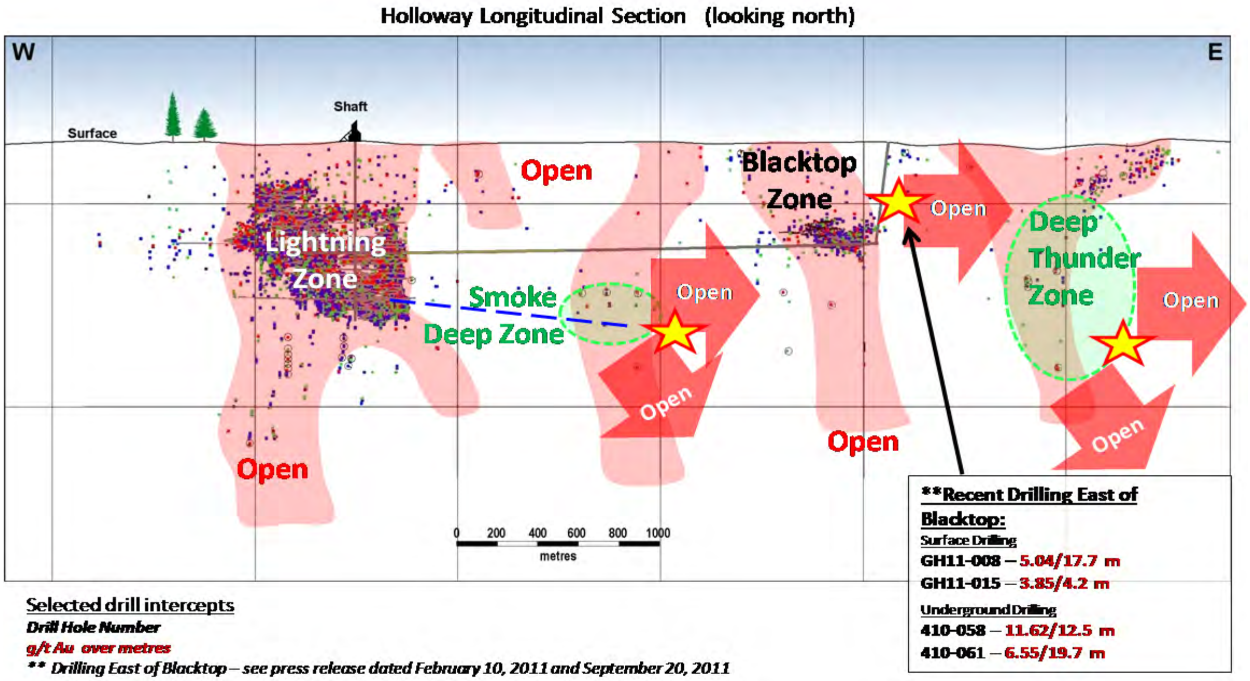

Figure 8-10: Blacktop East longitudinal view.

8.4.4 Deep Thunder Zone and Canamax 42 Zone

Surface drilling at the Deep Thunder Zone in 2011 was successful in expanding the zone of gold mineralization to the east and has confirmed the presence of higher grade gold structures within a broader zone of alteration. Gold mineralization is concentrated within several sub-parallel zones along steeply dipping structures, from true depths of 620 m to 1,100 m, over a strike length of 350 m.

This phase of exploration resulted in a mineral resource estimate and preliminary assessment of various development scenarios. Further drilling is required to expand the zone especially at depth and along strike to the east (Figure 8-11). No recent work has taken place on the Deep Thunder Zone.

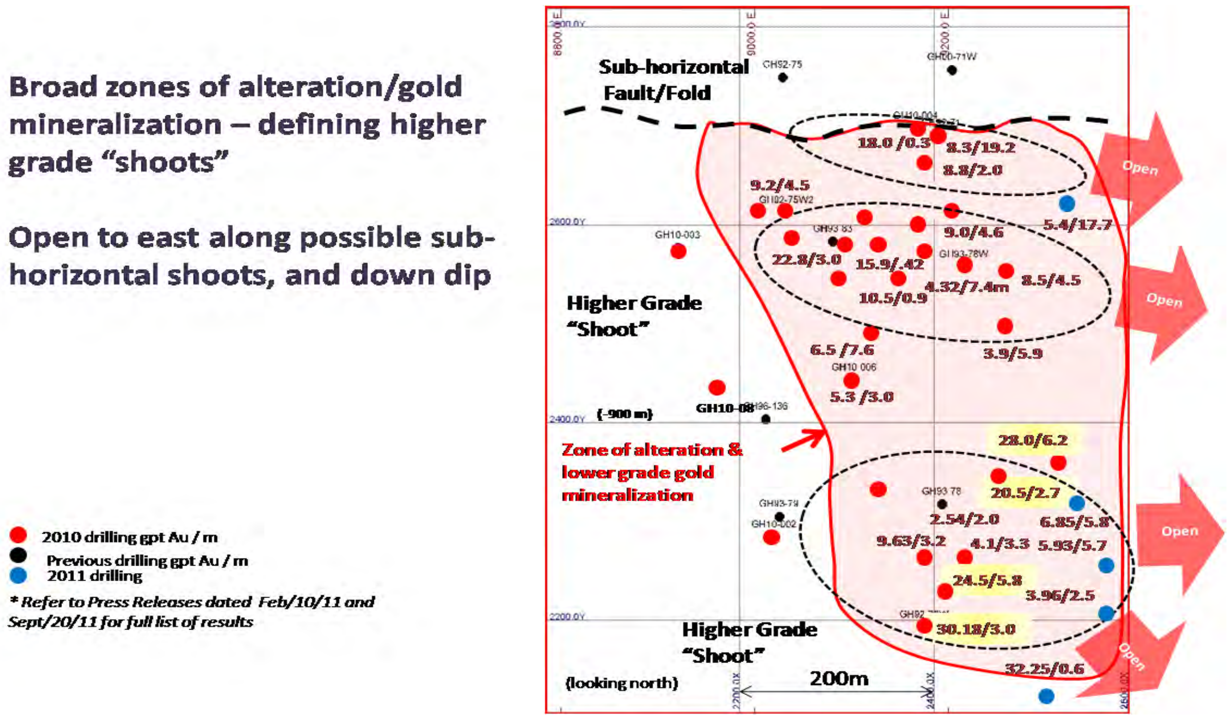

Figure 8-11: Deep Thunder Zone longitudinal view.

Canamax East / 42 Zone

Canamax East or Canamax 42 Zone ("Canamax") is situated 3 km east of the Holloway headframe. In the late 1980's, after drill defining the Canamax deposit, Canamax drove a decline on the property down to the 150m sublevel and conducted a bulk sampling program. A total of 47,588 tonnes having an average grade of 4.51 g/t Au. were toll milled at three area mills. Mill recovery from mineralized rock processed at the McBean Mill was estimated to be 76% (Roussain, 1989). The project is currently flooded and portal is remediated with fill. In 2014 SAS, located and re-sampled historical drill core, drilled a total of 10 surface holes / totalling 2,400m designed to verify the tenure and style of mineralization, and re-established survey control on the property. The 2014 drill program resulted in SAS generating a NI 43-101 mineral resource for the property.

Figure 8-12 is a longitudinal view of the Canamax zone which shows the underground development currently in place at the project site, the historical drill coverage, SAS 2014 infill drilling, and the mineralized zones.

The significant benefit of Canamax zone is that it is readily accessible, contains advanced development and could be re-established at minimal cost. Mineral potential of the area is significant in that surface drilling effectively defined the Deep Thunder deposit at depth which contains a mineral resource totalling 350 Koz. The Canamax zone appears to remain open at depth and spatially is situated immediately above the Deep Thunder deposit. A substantial "gap" exists between the two deposits which measures 250m high and 400m along strike which is sparsely drilled. This will be a prime exploration target for SAS in 2015. Figure 8-13 shows the spatial distribution of the two mineral deposits, the gap, and identifies proposed pierce points for drill testing during 2015.

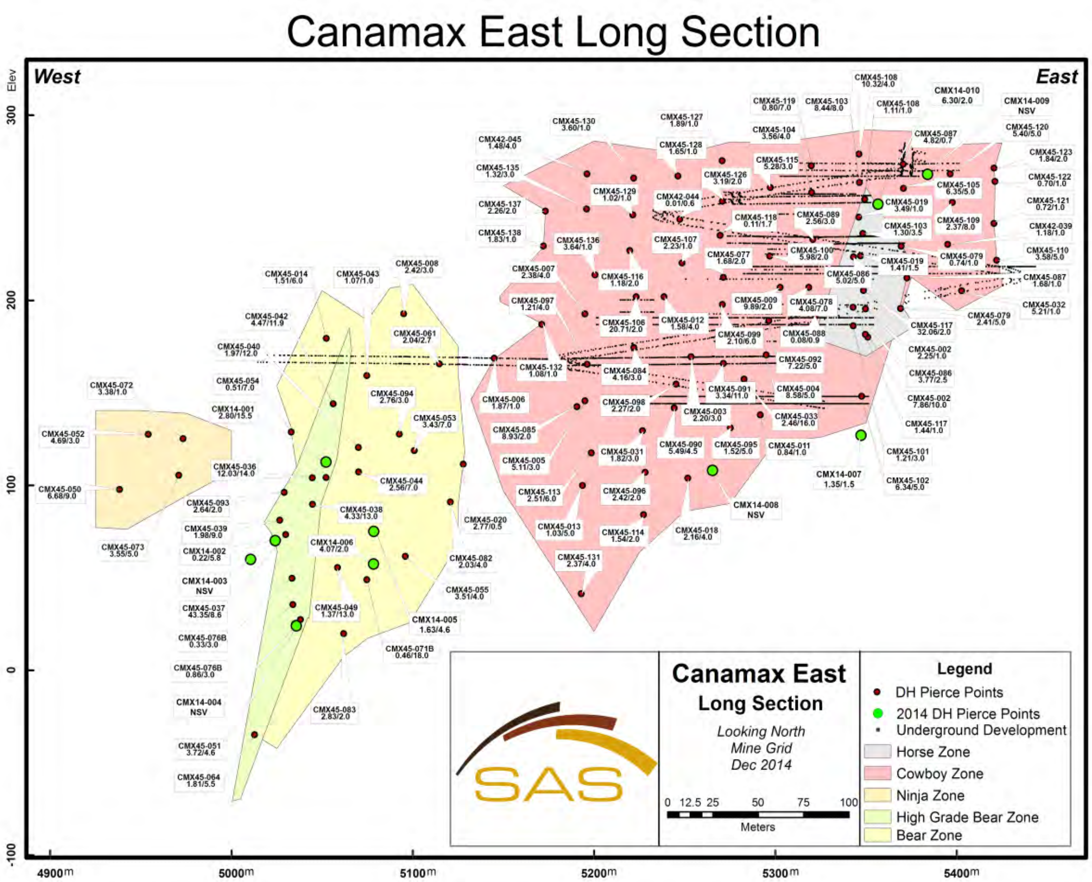

Figure 8-12: Canamax East long section.

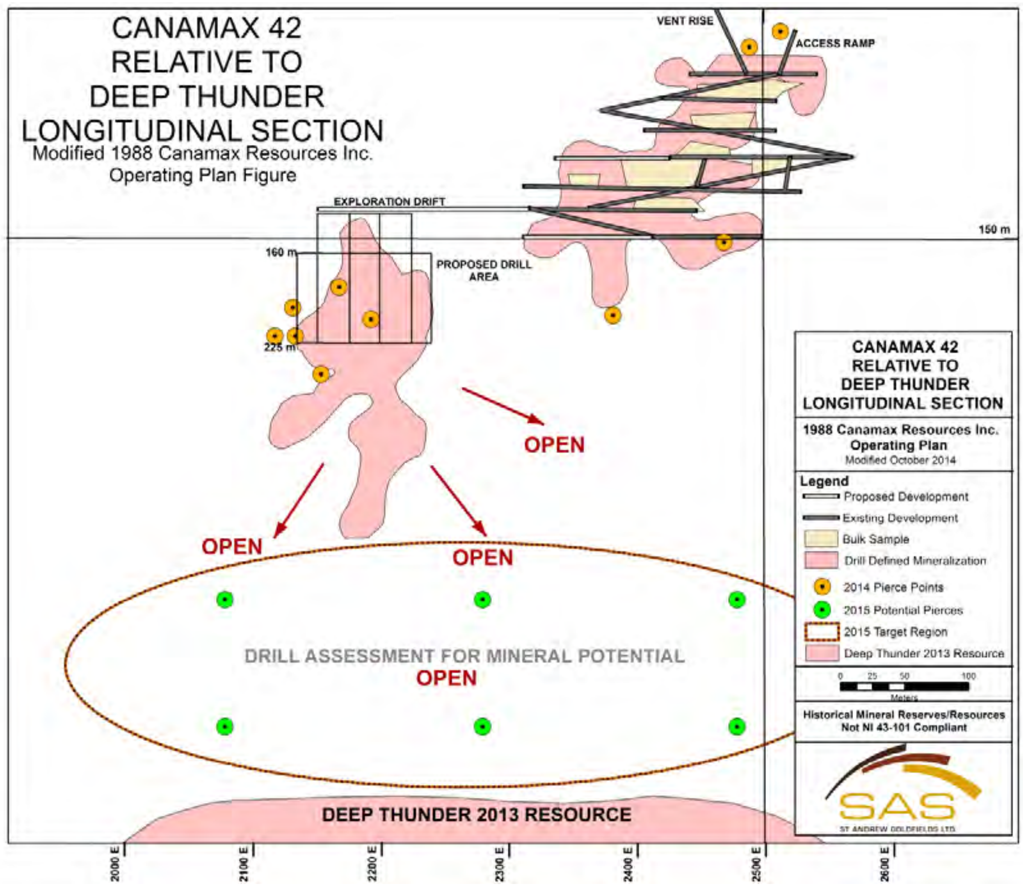

Figure 8-13: Canamax East longitudinal section.

8.4.5 Smoke Deep Exploration

The Smoke Deep Zone is considered to have excellent potential for resource expansion. In 2012, underground exploration to test the eastward, down plunge and down dip extension of the Smoke Deep Zone was completed successfully. An underground exploration drift was driven to assess the eastward potential. Recent drill intercepts for the Smoke Deep target are displayed in Figure 8-14. A study by SRK completed in the summer of 2012 identified the potential for repetitive targets both up and down dip from the current zone (Figure 8-15 and Figure 8-16).

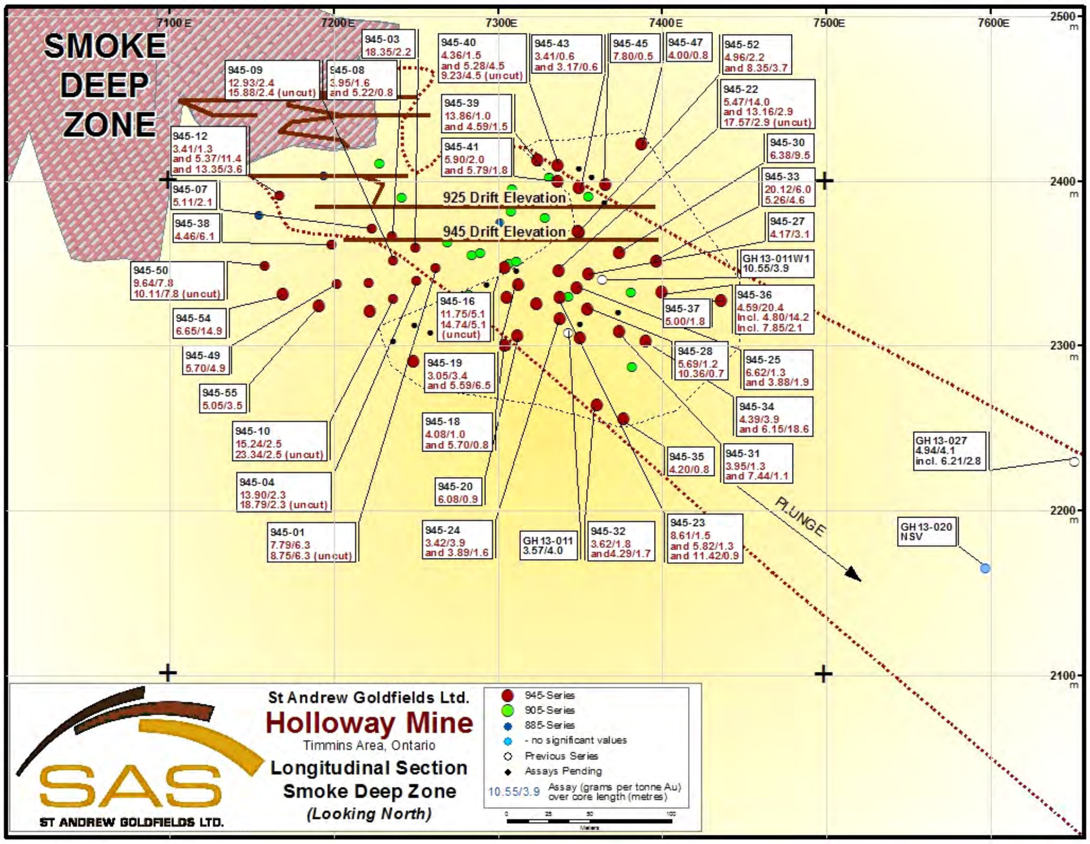

Figure 8-14: Smoke Deep Zone - Recent underground drillhole assay intercepts.

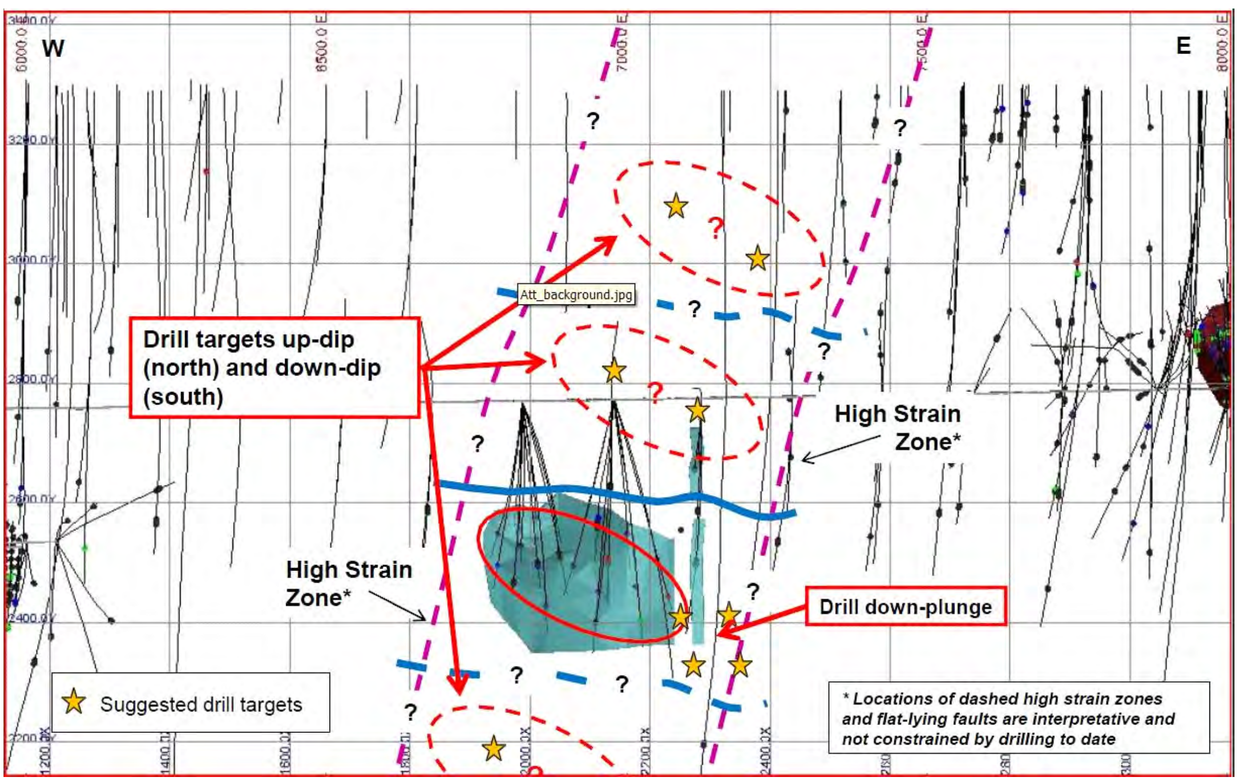

Figure 8-15: Smoke Deep Zone longitudinal view of exploration targets.

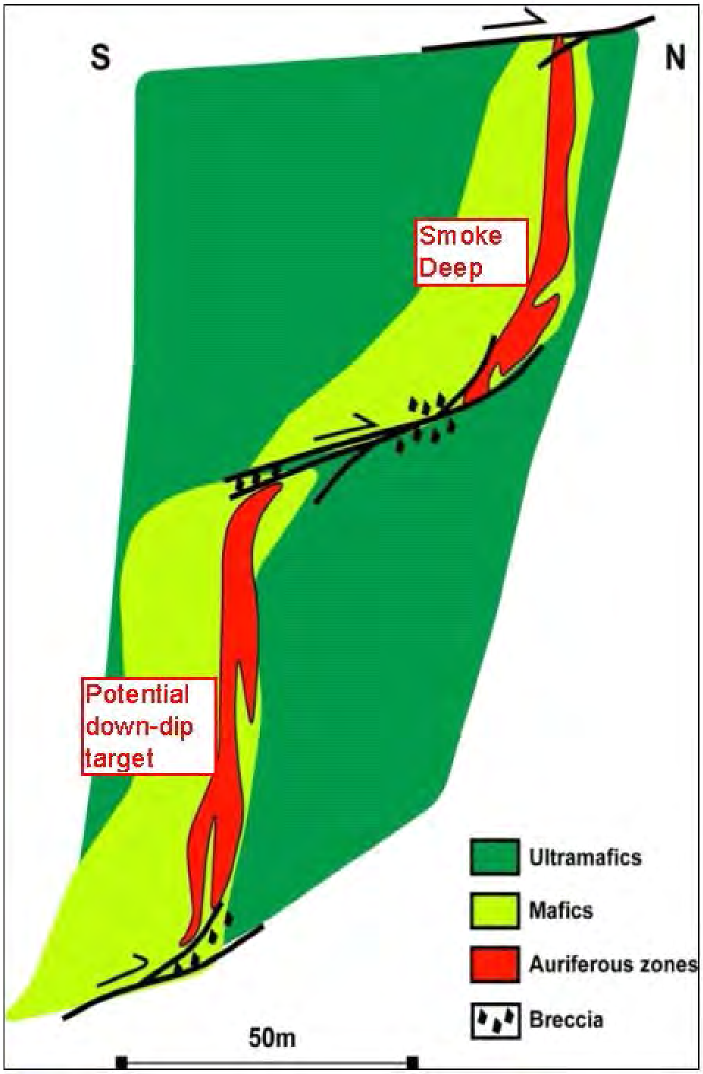

Figure 8-16: Smoke Deep Zone sectional view of exploration targets (looking west).

8.4.6 Holt Zone 4 – Southwest Extension

In mid- April 2014, the Exploration group recommended that a 1,600m deep hole be collared on the Holt property situated approximately 600m west of the known Zone 4 extension in order to explore the westerly / down plunge extension of multiple mineralized zones. This hole was collared on mine section 8100E, some 2 km west of the Holt headframe. The hole was collared some 600m west of the last Zone 4 surface drillhole drilled by SAS in 2012 which returned an assay result of 4.5 g/t Au. over 6.0 m. The drill site was accessed from the Holt infrastructure. Figure 8-17 shows a surface plan of the hole collar location relative to the Holt property.

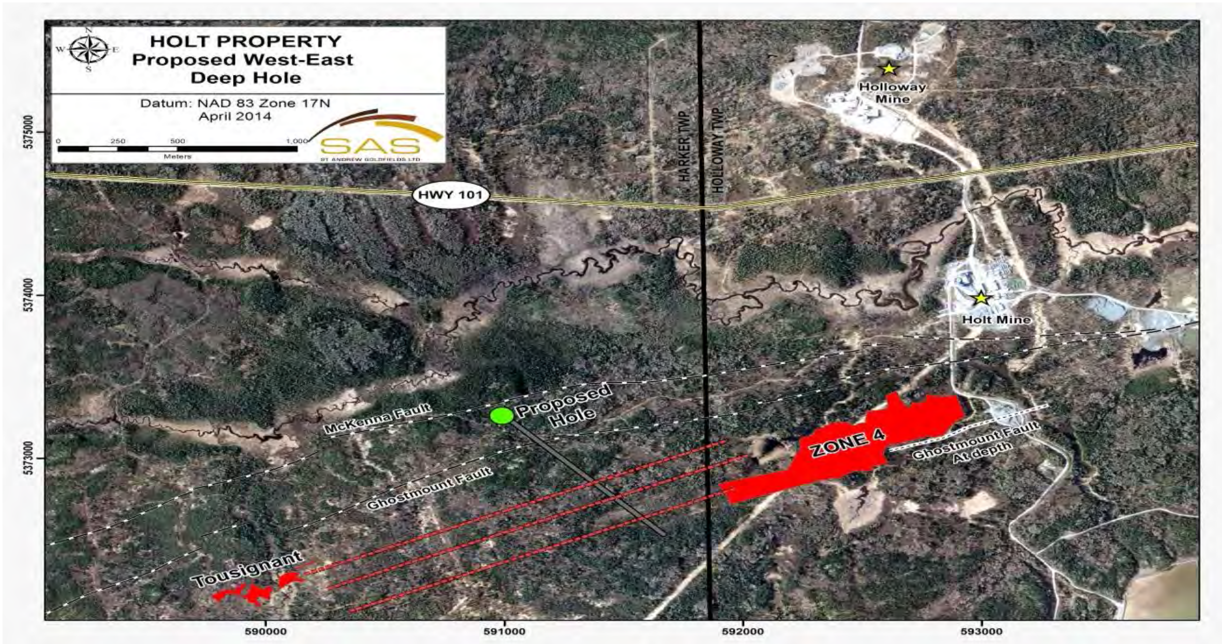

Figure 8-17: Holt surface collar plan of Zone 4 extension drill program.

The hole was collared in mafic volcanics and was situated between the McKenna and Ghostmount fault traces. The hole was designed such that it would run parallel to the Ghostmount Fault at an optimum distance of 80 to 100m north of the fault. The exploration target of the hole was to intersect numerous en-echelon flat cross-over mineralized zones (targets), associated with a possible Riedel shear (structural cross-over) with the most anticipated zone being the westerly depth extension of Zone 4 – which was projected to be intercepted at a depth of 1,400 – 1,500 m.

A total of four (4) mineralized zones were intersected in the first hole of the program, the results of which were reported by SAS in a press release on October 9, 2014. In the release, SAS reported the assay results from the first hole WE14-001 of 9.97 g/t Au. (9.28 g/t Au. cut) over 11.2 metres including 19.45 g/t Au. over 4.6 metres (17.77 g/t Au. cut), and for associated wedge cut WE14-001W1 of 4.38 g/t Au. over 22.9 metres, 8.92g/t Au. over 10.5 metres and 7.89 g/t Au. over 19.3 metres (3 distinct zones of mineralization). The first hole of the program was a technical success, intersecting multiple en-echelon shallow dipping mineralized zones, yielding a mineralized intersection on the westerly strike extension of Zone 4, approximately 600m west of the 1075m drift, the closest development heading and intersecting the Ghostmount Fault.

The successful assay results of the drill program triggered the Exploration Group to employ a total of 4 surface rigs and one underground drill in order to accelerate Phase 1 this program, with the overall objective of the program being to define the limits of Zone 4 mineralization, and if possible to generate an inferred mineral resource at the year end Mineral Reserve / Mineral Resource update. A drillhole collar plan for Phase 1 Zone 4 west extension is found in Figure 8-18.

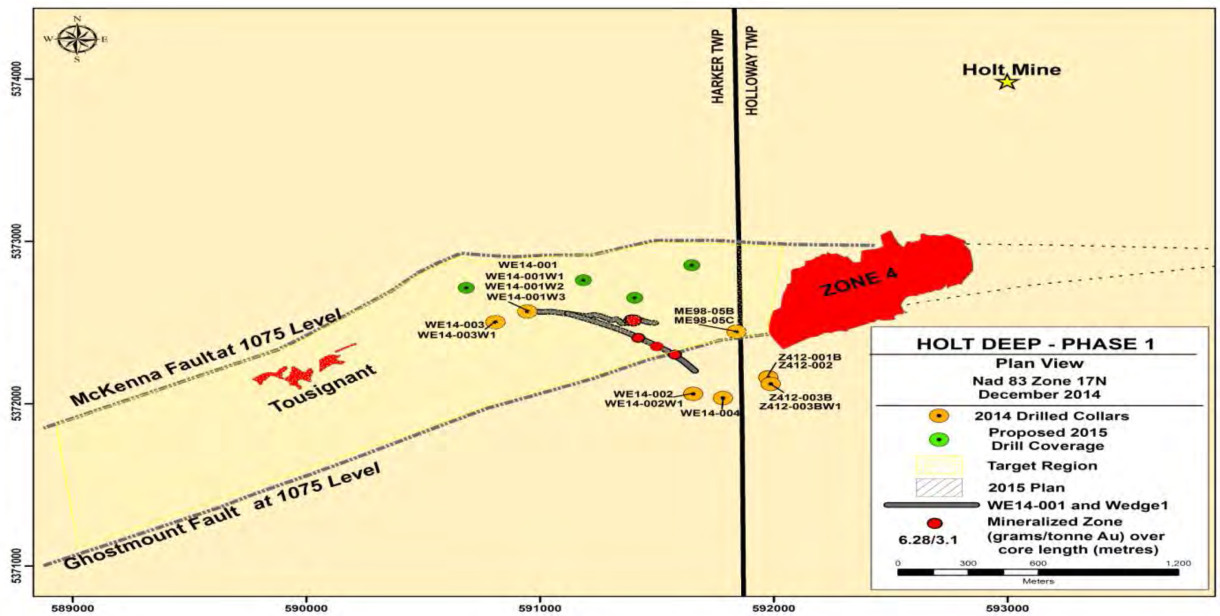

Figure 8-18: Holt Zone 4 West Phase 1 drillhole collar plan.

In January 2015, SAS reported that as of year end, Phase 1 drilling as of December 31, 2014, consisted of a total of 19 surface holes and associated wedge cuts totalling approximately 15,100 metres and 11 underground holes totalling 1,450 metres, were completed. Surface drilling also extended and wedged off of two historical holes, one drilled in 1998, and the other in 2012. Hole ME98-05, which stopped short of Zone 4 mineralization, was wedged above (ME98-05B) and returned assays of 6.71 g/t Au. over 5.7 metres. A subsequent wedge, ME98-05C intercepted the same zone approximately 40 metres north of ME98-05B, returned 4.02 g/t Au. over 37.3 metres including 7.64 g/t Au. over 11.3 metres. Wedge cuts were also obtained on surface hole Z4-12-002 which yielded additional assay intercepts on the Zone 4 extension which returned 3.77 g/t Au. over 14.3 metres including 5.95 g/t Au. over 4.3 metres and 7.95 g/t Au. over 2.6 metres. Diagrams showing the location of the Zone 4 west extension target relative to the mine infrastructure are found in Figure 8-19. Phase 1 assay results are found in Figure 8-20.

A compilation and interpretation of the Phase 1 program results, indicated that multiple mineralized zones are present in the area, which vary in dip from shallow dipping flat zones (Zone 4 Upper, Lower and NBS) to sub-vertical trending such as V-93 and Zone 4 vertical.

Core Samples for the Zone 4 West extension drill program were analyzed by Expert Laboratory located in Rouyn – Noranda QC. As part of SAS' quality control program, a series of blanks and certified reference standards were inserted into the sample stream.

In addition a laboratory / laboratory check was performed on sample rejects from this drill program (the results of which are summarized in Chapter 9).

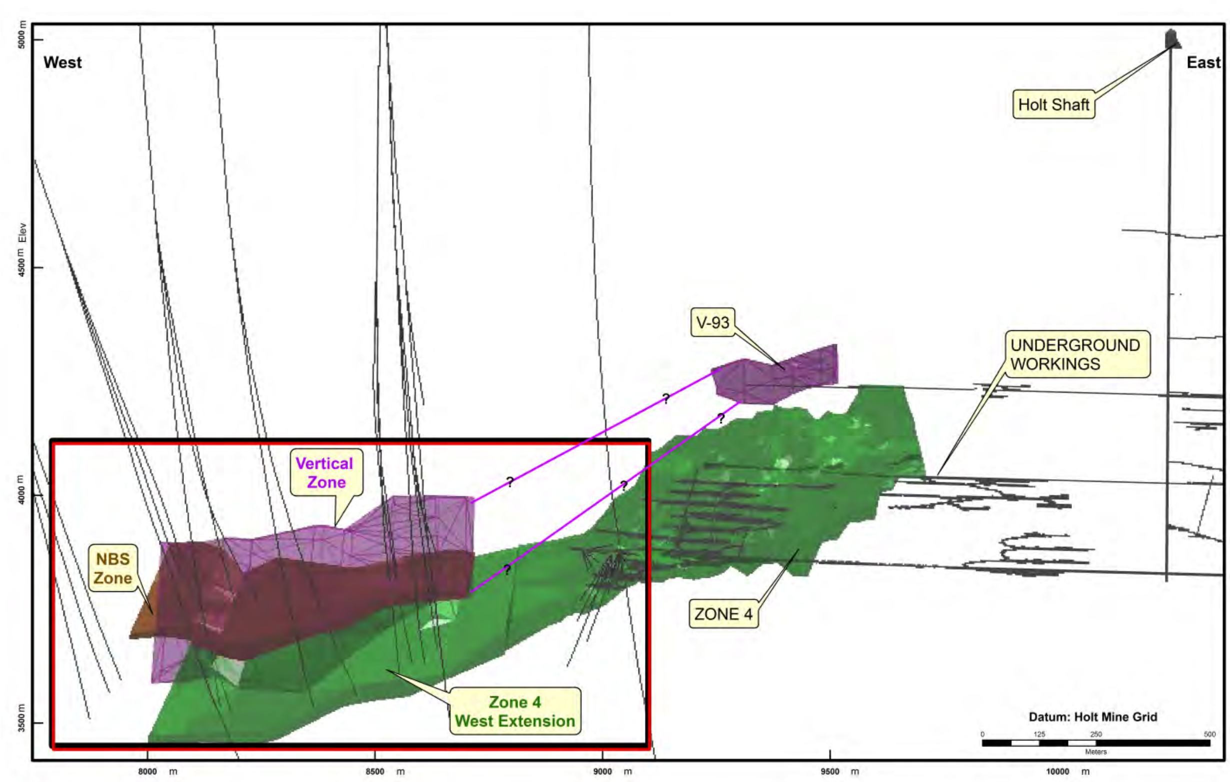

Figure 8-19: Holt Zone 4 south-west extension isometric view.

Resource modelling of the mineralized zones at Zone 4 west extension was conducted by SAS personnel and is discussed in detail in Chapter 13. The mineral resource estimations were audited by an external source that validated the estimation process.

Phase 1 drilling resulted in a significant increase (1 million ounces) in the overall inferred mineral resources reported at the mine, but it also triggered a re-examination of the mineralized setting and mineral potential of the Holt West / Tousignant deposit area by SAS Geological personnel.

Phase 2 drilling which is currently underway, has three primary purposes, namely i) to infill significant gaps and confirm mineral zone orientations of the first pass Phase 1 drilling, ii) to assess the northern half of the fault corridor (McKenna Fault) for mineral potential, and iii) to apply the same exploration model to the west and even west of the Tousignant deposit.

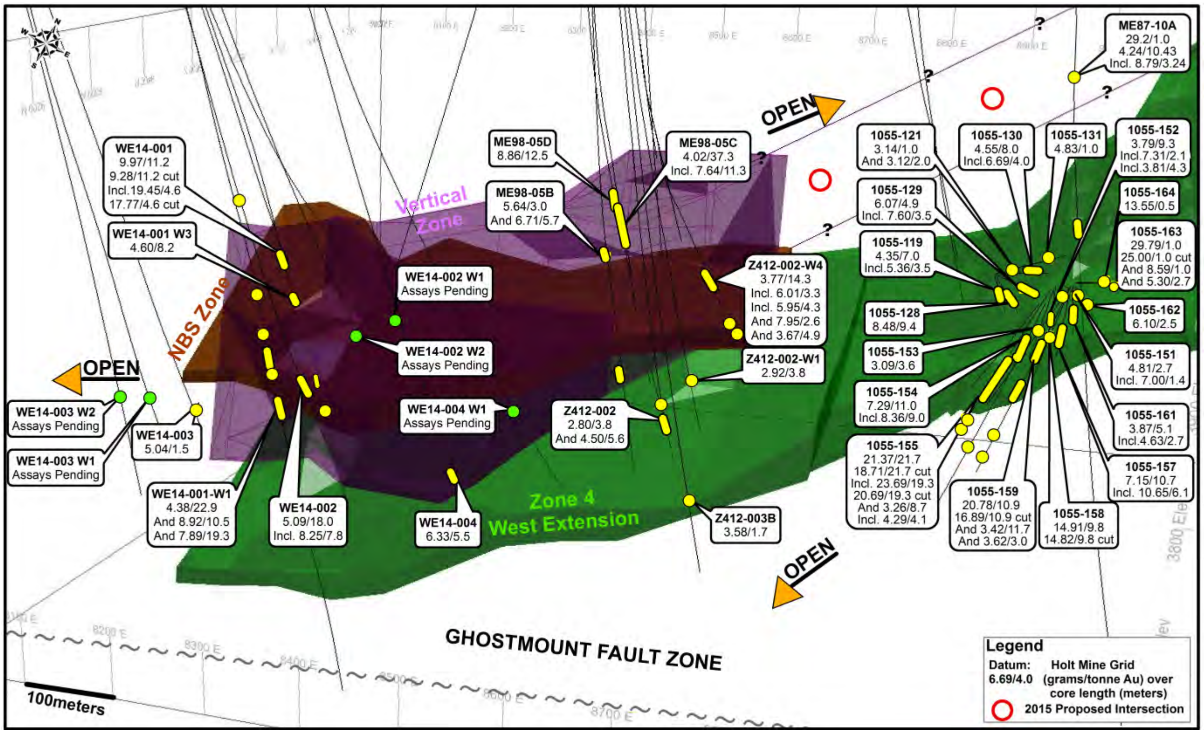

Figure 8-20: Holt Zone 4 south-west extension isometric view.

8.4.7 Regional Holt-Holloway Targets

The 2015 exploration program also includes surface drilling on several targets where historical drilling has returned anomalous gold values and/or where gold mineralization occurs at or near the intersection between ENE trending High Strain Zones ("HSZ") with other E-W trending structures or lithological contacts, as per the current geological model for gold mineralization in the region. The primary targets include:

- Lightning Zone: underground drilling on the 780m level will target the potential mineral plunge junction of both the Lightning and Smoke Deep zones. The mineral plunge intersection is projected to occur at 6500E / 2400m elevation, which is a sparsely drill tested area situated some 100m below the 780m level.
- Plato Gold Anomaly: drilling intersected several gold values over narrow intervals along the northeastern extension of the Ghostmount Fault (i.e. 52.4 g/t Au. over 0.30 m and 64.8 g/t Au. over 0.43 m); SAS is currently compiling all geological data from the area and will establish an exploration program for the target.
- Canamax 42 "Gap": located approximately one kilometre east of the Blacktop Zone. Previous underground exploration defined a high grade gold resource within altered ultramafic volcanics, somewhat similar to that of the Deep Thunder Zone, and could possibly represent its offset, up-dip extension. Deep Thunder contains an Inferred mineral resource totalling 2.2 Million tonnes at an average grade of 4.90 g/t Au. for a total of 350 Koz. Drilling in 2015 is designed to

evaluate the sparsely drilled gap located below the Canamax zone, and above Deep Thunder.

- Holloway West Area: located west of the Holloway Mine, the Seagar Hill area is under explored along the mafic/ultramafic contact, which hosts the Lightning Zone. Ground geophysics (walking magnetics) and field work will be compiled and diamond drilling will be conducted in 2015;
- Holt West Zone 4: Phase 1 surface drilling conducted in 2014 was highly successful in defining the mineralized strike extension 800 m to the west of the present mine infrastructure. The zones remain open to the west with limited historical surface drilling between Zone 4 and the Tousignant Zone has been conducted. Phase 2 follow-up drilling in 2015 will test both the vertical potential along the Ghostmount Fault and the potential for repetitive flat lying mineralization such as Zone 4 and Tousignant; SAS also plans to test for mineralized extensions to the west of Tousignant.
- Howey Cochenour trend: The Howey Couchenor zone (Figure 8-21) is situated 3 km south of the Holt headframe. Anomalous grab samples were obtained from a muck pile adjacent to a historical shaft and pit. In 2013, SAS stripped and channel sampled the bedrock 70m due east of the pit. Stripping exposed a narrow mineralized shear which corresponded with the pillowed basalt / felsic volcanic contact. In 2014, SAS drill tested the target with 7 holes totalling 1,573m. Anomalous gold mineralization was encountered in every hole over narrow widths. The drillhole plan with corresponding assay results is found below. The mineralized although narrow, remains open along strike and at depth.

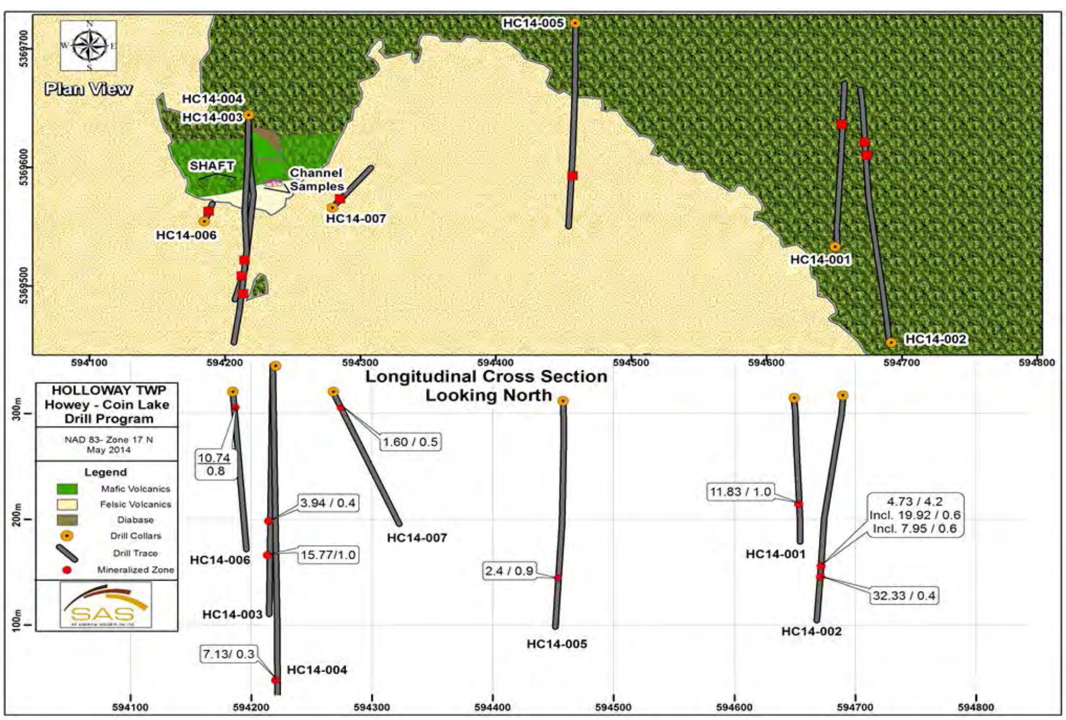

Figure 8-21: Howey-Couchenour trend drill plan and longitudinal section.

9 DRILLING

The current database for Holt-Holloway consists of 15,000 surface and underground core holes totalling approximately 1,699 km. The drilling was completed essentially continuously since the initial discovery of the deposits, and most recently by SAS from late 2006 to date. Since acquiring the Holt-Holloway properties in late 2006, SAS has drilled 878 holes totalling 97 km of core at the Holt Mine in Zone 4, Zone 6, C-99 Zone, C-95, DL zone and Zone V-93. At the Holloway Mine, since late 2006, SAS has drilled 1,110 holes totalling 115 km of core on the Blacktop, Lightning, Middle and Smoke Deep zones. Drill spacing is typically 12.5 m along strike and 15 m up or down dip. This spacing has proven to provide enough data to produce grade estimates that reconcile well to the actual milling results.

The drilling was completed by a combination of contract drillers, namely, Heath and Sherwood, CABO, Boreal (formerly Azimut), Orbit-Garant, and SAS-owned drills. Only the surface and underground drill core is used in the resource estimate; no underground muck samples or chip samples are used because of their limited distribution.

Drill data for Holt-Holloway consist of drill sections aligned north-south, with the majority of drilling completed along the section lines. The control grid has been used for all coordinates in this report, unless otherwise expressed. The section lines are spaced at 12.5 m intervals. The majority of the holes have been drilled along the direction of the section lines, intersecting the mineralized zones at as close to perpendicular as possible. Mineralized zones at the Holloway and Holt mines tend to have a generally tabular geometry and variably steep to shallow dips. The relationship between the sampled interval of mineralization and the true width is usually best determined from cross sections showing resource definition drill holes.

Historically drill core was BQ size (i.e. 36.5 mm diameter core). Since late 2006, underground drilling is almost exclusively BQ size core, while surface drilling is typically NQ size (48 mm core diameter). All of the diamond drill hole collar locations have been surveyed in the local mine grid, either by a contractor surveyor or SAS personnel, historically using a theodolite and more recently using a total station survey instrument. Down-hole surveying of the drill holes, which is necessary to accurately plot the position of the drill hole trace, has been completed for all of the holes. Downhole deviation in the majority of new holes was measured by a REFLEX down-hole survey instrument that measures the deviation and records the results digitally. Downhole deviation in historic holes not surveyed by REFLEX was measured by one of the following: Sperry-Sun Single Shot instrument that photographed a compass and inclinometer reading at selected intervals down the hole or older Tropari instruments that mechanically locked a compass and inclinometer after a designated time period.

The database includes the survey, assay and geological data for each drill hole. All relevant information available as of December 31, 2014, has been included. The drill logs provide sufficient description and recognition of the lithology, alteration, geological structures and mineralization to correlate geologic boundaries between drill holes and surface outcrops. The database is maintained at SAS mine sites utilizing DATAMINE computer software program.

Underground drilling was performed at both the Holt and Holloway mine sites by Boreal Drilling (formerly Azimut) based out of Val d'Or (QC). In early 2015, the contract for surface and underground drilling was awarded to Asinii Drilling. A total of four trackless underground drills are used and operated two shifts per day (10 hour shifts), four days per week. Typical underground daily core production is 70m/drill/day.

Surface drilling is conducted two shifts per day (12 hour shifts) on a 10 days on-4 days off schedule. Typical surface daily core production is 100 m per day. A total of two surface drills are active on the Holt-Holloway mine properties.

Drilling since 2007 at the Holt and Holloway mine sites is summarized in Table 9-1 and Table 9-2.

Table 9-1: Summary of underground drilling at the Holt Mine.

YEAR	ZONE	HOLES	METRES
2007	Zone 6	31	6,024
	Zone 4	33	2,191
	Zone 4	37	4,966
2008	Zone 6	17	3,138
	Zone 4	7	439
	Zone 4	38	2,636
2009	No drilling		
2010	C-103	22	1,981
	Zone 4	11	1,105
	Zone 4	23	1,174
2011	Zone 4	2	34
	Zone 4	50	3,454
	Zone 4	99	9,977
	C-99	7	1,320
2012	C-99	2	127
	C-99	3	290
	Zone 6	105	20,874
	Zone 6	7	1,412
	Zone 4	107	11,928
	Zone 4	4	572
	V-93	4	403
	Zone 4	6	1,289
2013	Zone 6	3	564
	V-93	45	5002
	Zone 4	96	7448
2014	V-93	9	786
	Zone 4	89	5500
	C-95	10	1330
	C-99	9	739
	DL Zone	2	438
TOTAL		878	97,138

Table 9-2: Summary of underground drilling at the Holloway Mine.

YEAR	ZONE	HOLES	METRES
2007	Blacktop	87	7,776
	Blacktop	83	468
2008	Lightning	6	1,852
	Lightning	25	117
	Blacktop	5	138
2009	Lightning	40	164
	Blacktop	39	4,424
	Blacktop	26	109
2010	Lightning	1	495
	Smoke Deep	15	5,030
	Blacktop	61	6,819
	Blacktop	29	153
	Lightning	9	41
2011	Middle Zone	32	3,544
	Smoke Deep	20	6,795
	Blacktop	31	2,793
	Lightning	28	3,055
2012	Smoke Deep	132	17,989
	Middle Zone	33	1,688
	Smoke Deep	118	14,888
2013	Smoke Deep	91	9,240
	Middle Zone	41	4,885
	Lightning Zone	37	2,643
	Sediment Zone	15	4,505
2014	Smoke Deep	85	11,623
	Black Top	21	3,368
TOTAL		1110	114,601

10 SAMPLE PREPARATION, ANALYSES AND SECURITY

10.1 Sampling Method

A standardized protocol for sampling of diamond drill core, as well as for underground sampling of chip and muck samples, for gold analyses, is employed by SAS. With drill core, a maximum interval of 1.5 m is sampled unless variation in mineralization, lithology or alteration dictates that a smaller interval should be used. A minimum sample interval of 0.3 m is also applied to sampling procedures. Visual recognition of variation of auriferous (sulphide) mineralization concentration, strength of alteration mineralization and lithological host are keys used by the geology personnel in determination of an appropriate sample length to be employed. More specifically, samples are begun or ended at the interface of different lithology, alteration assemblages, or concentrations in auriferous mineralization. Sampling extends into barren rock at a minimum of one sample at the beginning and end of any sampled interval. Core logging set-up at the Holt mine is shown in Figure 10-1.

All drill core sampled from definition drilling that falls within stated reserves shapes is bagged whole and typically assayed at SAS' Holt assay lab. Remaining core outside the sample interval is kept in storage racks at Holloway Mine pending review of final gold analyses of sampled material. Once values are received and reviewed by a geologist and no further sampling of an individual drill hole has been determined to be necessary, the remaining drill core is discarded.

Figure 10-1: Holt mine core logging facility.

For all drill core sampled for definition drilling that falls outside current reserves shapes, the same protocols are applied with the exception that some core is split using a hydraulic splitter, with one half forming the sample and the other half remaining in the core box. This remaining core is stored in racks at the Holloway Mine site, where sample tags remain in the boxes at the appropriate intervals for future review. Determination of what material should be split and stored is performed by a geologist (e.g. the project, senior or chief geologist) in charge of overseeing the drilling program. All drill core obtained from underground exploration drilling is sampled under the same protocol, with the exception that all samples and core are split and stored permanently as described above.

Chip sampling of development faces underground also abide by the above described protocol in that sample lengths can range from a minimum of 0.3 m to a maximum of 1.5 m and are delineated by lithological and alteration assemblage, as well as by concentration of auriferous minerals. Chip sample orientations are chosen so that an optimal cross-section of observed material on the face is represented, when logistically possible. Once gold values for obtained samples are received, they are incorporated into drawings and may be used as additional data for evaluations of grade control shapes compiled to maximize gold recovery.

Chip samples are analyzed at the Holt Mine assay lab and have a typical turnaround time of 5 days.

The drill core samples are delivered from the core room to the sample preparation room by the geology technician (Figure 10-2). Each core sample plastic bag was previously identified by the technician from the geology department. The plastic tag includes the sample number and the location of the sample (diamond drill hole number, from-to in metres). The weight of the sample varies from two to ten kg depending of the length of the core sample, its nature (massive sulphides, chloritic waste rocks), and depending if the core sample has been split in two.

Equipment and facilities used for samples preparation and analysis are shown in Figure 10-3 to Figure 10-5. Flow sheet of the sample preparation and assay analysis process is displayed in Figure 10-6.

Figure 10-2: Sample receiving (left) and preparation room (right).

Figure 10-3: Sample dryer (top left), drying pan (top right) and jaw crushers (bottom).

Figure 10-4: Sample riffle splitter (left) and pulverizer bowl (right).

Figure 10-5: Assay lab samples assay balance (left) and cupellation (right).

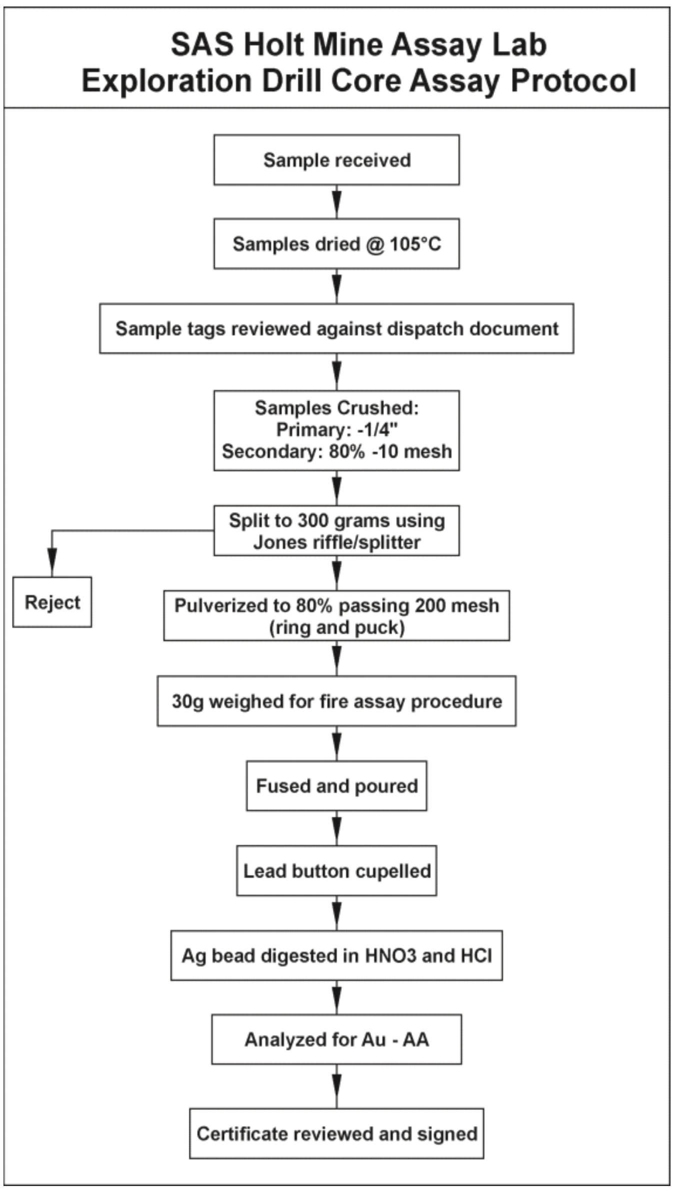

Figure 10-6: Sample process flow sheet for the Holt assay laboratory.

10.2 QC/QA Comparative Assay Laboratory Program

In late 2014 and early 2015, as part of a Quality Control check program, sample rejects from the Holt-Holloway surface and underground exploration programs were collected and submitted for comparative “Lab-Lab” analysis. A total of three (3) independent comparative lab / lab assay check programs were conducted on core samples from the Zone 4 west extension drill programs.

Also in 2014, a re-assay check program of historic core from the Canamax property was conducted by SAS in 2014. The re-analysis demonstrated a strong assay correlation.

Additional details and Sample results from the QC/QA check programs are found in the QC/QA report located in Appendix BB.

10.3 Sampling

A total of eighteen holes that were drilled and sampled throughout 2014 were randomly selected to be re-assayed, based on a mixture of high grade and low grade samples. The surface drill core check programs consisted of a total of 101 sample rejects with 7 standards and 5 blanks for a total of 113 samples that were sent to the AGAT Laboratories in Mississauga, Ontario. The purpose of this process was to randomly check assay results from the year 2014. All assays for this project for 2014 were originally assayed at Lab Expert in Rouyn-Noranda QC.

The 1055 underground drill program comparative check assay program consisted of 46 samples from the mineralized zones in 2 holes (holes 1055-155 and 1055-159). Initial assay results were obtained from the Holt Mine lab. Check assays were completed at Cattarello Labs. The conclusion of the comparative check program was that the assay results compared quite well when compared between the two assay laboratories.

10.4 Process

In mid-December 2014 sample rejects from the 2014 Exploration drill program were sorted and samples were randomly selected. The sample rejects were re-marked and re-bagged if necessary and put in rice bags for easy transfer to AGAT Labs. Sample sequences containing blanks simply used the reject. Sample sequences containing standards had a new standard of similar value re-inserted into the sequence.

10.5 Results

The “Lab-Lab” check program had a two week sample turn around for results. When compared to Lab Expert assays results, the values are relatively close (generally within +/-10%). The highest variation, as expected, is seen within the highest grade samples; All certified reference standards and blanks were found to be within their respective performance limits.

Overall, this process verified the presence of high grade, confirmed low grade values and provided confidence that the primary lab is producing accurate, consistent results.

A comparative assay plot of “Lab-Lab” samples is found in Figure 10-7.

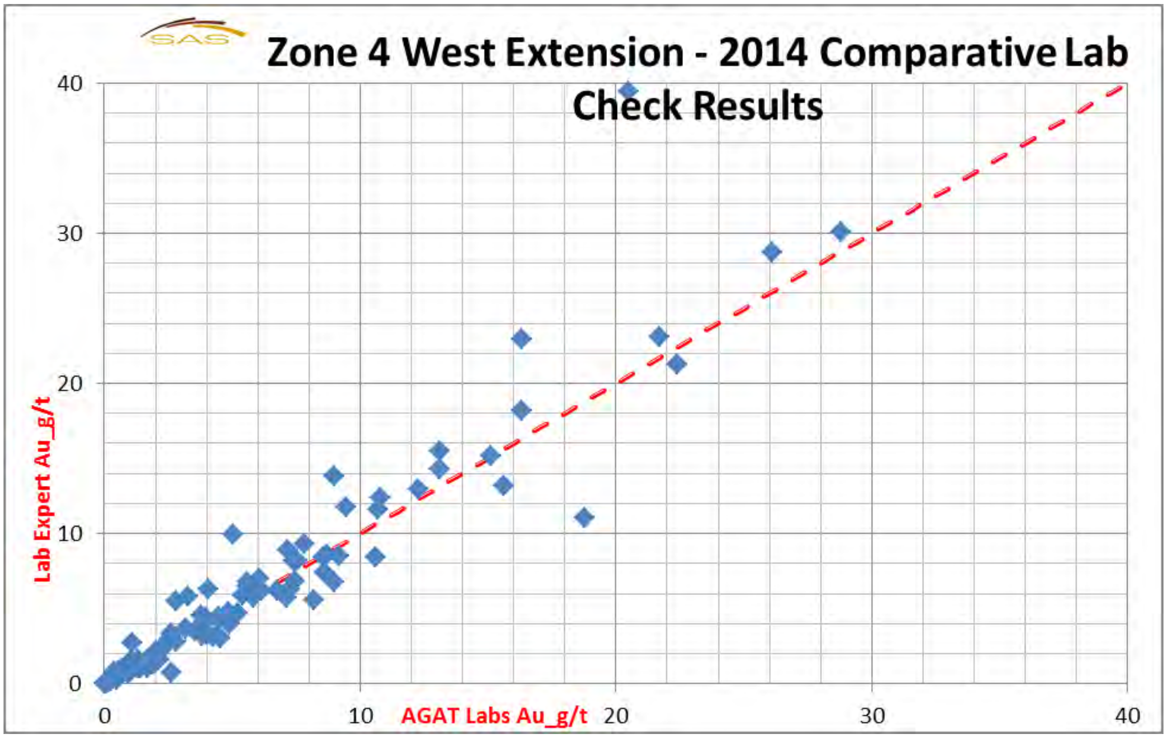

Figure 10-7: Comparative “Lab-Lab” sample analysis program for surface drill core.

10.6 QC/QA Holt Mine Assay Lab

The assay lab at the Holt Mine is used to analyze BQ calibre core samples generated from the underground drill programs on the Holt and Holloway mine sites. Certified reference standards are inserted by the lab staff as part of the quality control checks. The performance grade range for all QC samples analyzed at the Holt assay lab for the period Q4 – 2014 is shown in Figure 10-8.The QC/QA records are retained by the Mill Metallurgist.

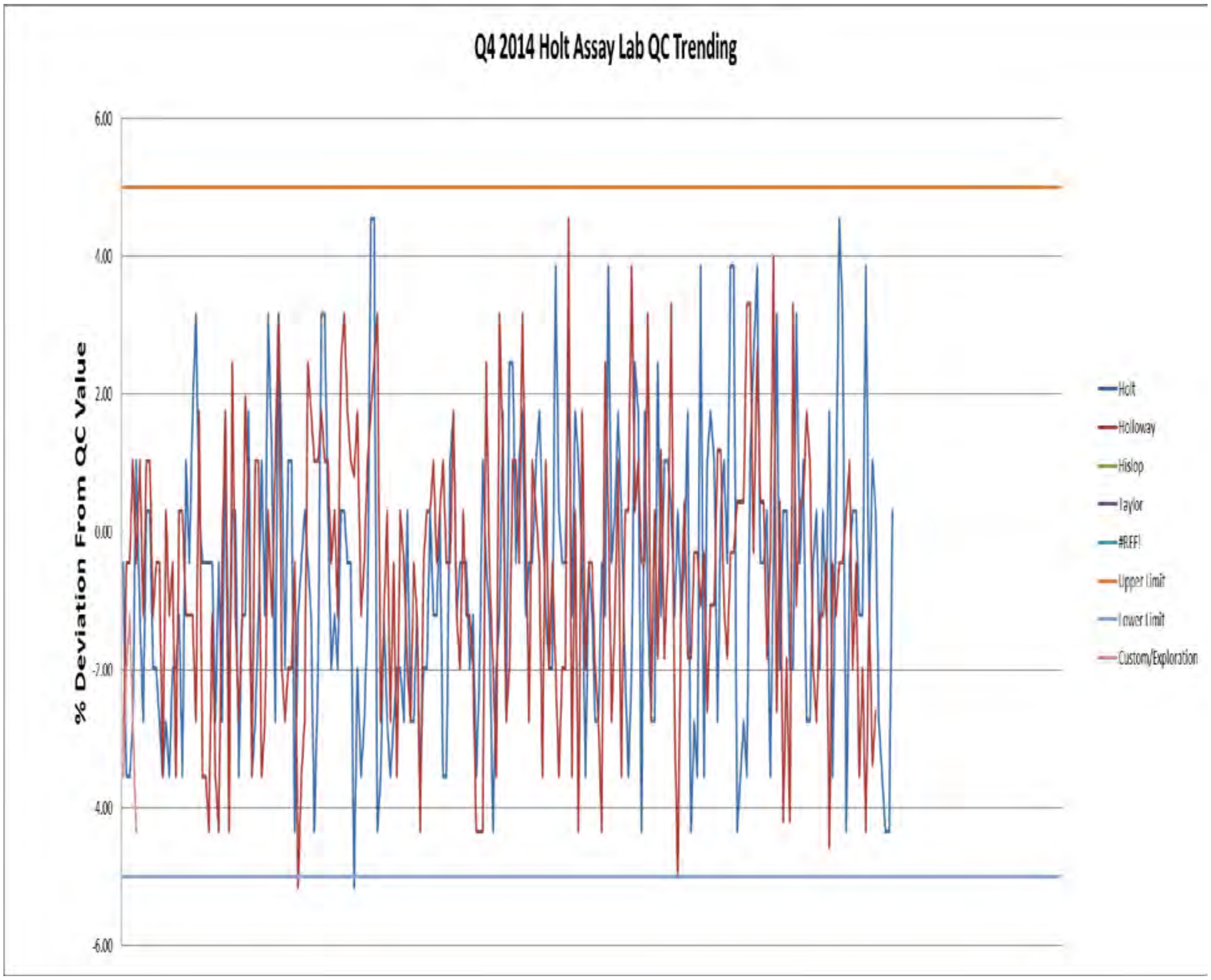

Figure 10-8: Holt Mine assay lab performance standards (Q4 – 2014).

10.7 Assay Laboratory Site Audits

SAS personnel conducted laboratory audits of both the assay lab situated at the Holt Mine and at Lab Expert. Both of these laboratories conduct all of the assay analysis for drill core and sample chips used in the mineral resources calculation at the Holt and Holloway mines.

On September 27, 2012, SAS personnel visited the Holt Mine site assay lab. SAS samples were observed in every stage of preparation and analysis during the visit and no concerns were noted as a result of the visit.

On December 18, 2012, SAS personnel visited Lab Expert based in Rouyn-Noranda (QC) and were given a site tour by the laboratory manager. SAS core samples were observed in every stage of preparation and analysis during the visit. No concerns were noted as a result of the visit.

On December 17 2014, the author conducted a lab visit of the Lab Expert assay laboratory in the company of Mr. Joe Landers, the Lab Manager. SAS core samples were observed in every stage of preparation and analysis during the visit. No concerns were noted during the visit.

On January 6, 2015, the author conducted a lab visit of the AGAT preparation laboratory in Sudbury accompanied by Mr. Ron Spina, the Lab Manager. No concerns were noted during the visit.

11 DATA VERIFICATION

The Holloway-Holt operation has a long history of gold production. Consequently there was minimal independent sampling of drill core or working faces to confirm the presence of gold values.

The delineation drilling completed within the Blacktop Zone at the Holloway Mine and Zones 4 and Zone 6 at the Holt Mine has produced results in agreement in terms of grade and geometry with the results obtained from the previous, wider spaced drilling.

Assay results are received from either the Holt Mine assay lab, Laboratoire Expert or other third party commercial lab by email, followed by a signed paper copy of the assay certificate. Data are transferred to the diamond drill logs and database electronically, thereby reducing the chance of error.

SAS has verified 20 drill holes from both Holt and Holloway mines against the database. There were no errors found in the assays and two small errors in the collar coordinates (those were found to be insignificant; highlighted). A summary of database check is shown in Table 11-1 and Table 11-2.

Table 11-1: Validation checklist for Holt Mine drill hole database (partial).

BHID	DATABASE	LOGGED DATE	COLLAR							GEOLOGY		ASSAY
			EASTING	NORTHING	ELEVATION	DIP	AZI	LENGTH				
775-149	FUSION CENTRAL	13/03/2013	10975	9442.2	4236.5	82	180	277		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	13/03/2013	10975	9442.2	4236.5	82	180	277				
775-353	FUSION CENTRAL	08/07/2013	9250.01	9364.5	4233.42	-4	197	119		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	08/07/2013	9364.5	9250.01	4233.42	-4	197	119				
775-373	FUSION CENTRAL	23-Oct-13	9351.36	9364.54	4234.26	34	180	96		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	23-Oct-13	9350	9366.1	4234.8	34	180	96				
885-126	FUSION CENTRAL	17-Jun-13	9493.41	9327.26	4117.67	53	200	33.7		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	17-Jun-13	9493.41	9327.26	4117.67	53	200	33.7				
885-151	FUSION CENTRAL	20-Feb-13	9446.53	9343.62	4116.72	45	200	34		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	20-Feb-13	9447	9344	4117.1	45	200	34				
1035-107	FUSION CENTRAL	29-Apr-13	9036.8	9222.3	3973.88	80	5	30		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	29-Apr-13	9036.8	9222.3	3973.88	80	5	30				
1035-135	FUSION CENTRAL	05-Jun-13	9087.05	9195.22	3973.03	65	28	30.4		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	05-Jun-13	9087.05	9195.22	3973.03	65	28	30.4				
1075-237	FUSION CENTRAL	02-Apr-13	9398.69	9212.18	3934.61	67	277	146		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	02-Apr-13	9398.69	9212.18	3934.61	67	277	146				
1075-259	FUSION CENTRAL	21-Mar-13	9398.86	9212.98	3934.57	42	200	157		Both show the same exact data		Both show the same exact data
	HISTORICAL LOG	21-Mar-13	9398.86	9212.98	3934.57	42	200	157				

Table 11-2: Validation checklist for Holloway Mine drill hole database (partial).

BHID	DATABASE	LOGGED DATE	COLLAR						GEOLOGY	ASSAY
			EASTING	NORTHING	ELEVATION	DIP	AZI	LENGTH		
905-21	FUSION CENTRAL	09-Apr-14	7273.56	4495.08	2396.22	-38	50	162	both show the same exact data	both show the same exact data
	PRINTED LOG	09-Apr-14	7273.56	4495.08	2396.22	-38	50	162		
945-47	FUSION CENTRAL	06-Oct-14	7344.59	4465.31	2366	32	25	150	both show the same exact data	both show the same exact data
	PRINTED LOG	06-Oct-14	7344.59	4465.31	2366	32	25	150		
945-01	FUSION CENTRAL	05-Jun-14	7246.61	4456.44	2375.71	-18	12	100	both show the same exact data	both show the same exact data
	PRINTED LOG	05-Jun-14	7246.61	4456.44	2375.71	-18	12	100		
500-51	FUSION CENTRAL	23-Oct-14	8154.741	4648.83	2795.559	-75	46	70.5	both show the same exact data	both show the same exact data
	PRINTED LOG	23-Oct-14	8154.741	4648.83	2795.559	-75	46	70.5		
550-779	FUSION CENTRAL	20-Oct-14	7843.903	4508.159	2789.375	10	10	229.8	both show the same exact data	both show the same exact data
	PRINTED LOG	20-Oct-14	7843.903	4508.159	2789.375	10	10	229.8		

1- Chose 5% of drilled holes out at random from historical printed logs.
2- In Fusion printed off the above holes using the Central database.
3- Created a table with the the Hole number, Database used, Date, Collar coordinates, Geology and Assay
4-Entered in the date, and collar coodinates of each hole using the individual databases
5- With logs side by side, comparing geological , sampling and assay information to see if there were any discrepancies.

12 MINERAL PROCESSING AND METALLURGICAL TESTING

12.1 Metallurgical Testing

In 2014, a series of 30 kg bulk samples were collected from representative core samples for both the Ghost and Tousignant zones for use in grinding test studies. SGS Minerals Services was requested to perform metallurgical testing to evaluate St Andrew Goldfields Ltd.'s Tousignant Lense and Ghost Zone ore body samples. From the assaying protocol applied it was determined that the gold head grades were 3.60 g/t Au. for Ghost Zone sample GZ11-002, 3.83 g/t Au. for Ghost Zone sample GZ12-014, 3.52 g/t Au. for Ghost Zone sample GZ12-017B, 6.21 g/t Au. for Tousignant Lense sample 1 and 5.74 g/t Au. for Tousignant Lense sample 2. The samples contained between 1.16% to 1.66% sulphide sulphur and 7.04% to 12.4% carbonate.

The Bond ball mill grindability tests performed were categorized as hard to very hard with Bond ball mill work indices (BWI) ranging from 19.0 kWh/t to 22.7 kWh/t.

For the CIL tests performed on the Ghost Zone samples gold extractions ranged from an average of 87% for samples GZ11-002 and GZ12-014 to 90% for sample GZ12-017B. The final residue gold grades ranged from an average of 0.41 g/t Au. for sample GZ12-017B to 0.48 g/t Au. and 0.49 g/t Au. for samples GZ11-002 and GZ12-014, respectively. For the CIL tests performed on the Tousignant Lense samples gold extractions ranged from an average of 93% for sample Tousignant Lense 1 to an average of 94% for sample Tousignant Lense 2. The final residue gold grades ranged from an average of 0.32 g/t Au for sample Tousignant Lense 2 to an average of 0.39 g/t Au. for sample Tousignant Lense 1.These samples were shipped to SGS Mineral Services Lakefield, where the metallurgical test work was completed. The SGS report is found in Appendix C.

At Canamax, recent infill drill program core was collected and used to conduct bottle roll testwork on representative mineralization from the Project site. The four bottle roll tests indicated that recovery rates range from 93.8 – 95.4% can be expected on a 6.85 g/t Au. grade material. Bottle roll test details for this program are summarized in Appendix B.

A summary of test work completed on ore from the various zones is presented in Table 12-1 and a summary recent bottle roll test results for Canamax is presented in Table 12-2.

Table 12-1: Recent metallurgical test work on Holloway ore.

Test	Zone 5	Zone 6	Zone 8	Blacktop Lightning	Blacktop Footwall	Holloway
Standard leach tests at different grinds (48 hours)	3 tests	3 tests	3 tests	5 tests		
Carbon in leach test (different carbon concentrations)				3 tests	3 tests	
Flotation and leach of flotation tail				1 test	1 test	
Ball mill work index				1 test		1
Preg-robbing test				1 test	1 test	
Diagnostic test				1 test		
ICP analysis	1	1	1	1	1	
Whole rock assay				1		
Carbon analysis				1	1	

Table 12-2: Metallurgical Canamax standard leach test results.

TestID	BottleNumber	SolidsWeight	AssayHeadAv	AssayTailsAv	Calc. Head	Head Abs Difference	Total Recovery
		grams	g/t Au	g/t Au	g/t Au		
2014 11 12 - 0904	B16	299.7	6.875	0.244	4.2268	2.648	93.76%
2014 11 12 - 0903	B15	303.1	6.875	0.245	4.717	2.158	94.33%
2014 11 12 - 0902	B14	302.02	6.875	0.287	5.9993	0.876	94.87%
2014 11 12 - 0901	B13	304.5	6.875	0.247	5.8596	1.015	95.35%

Leach test recoveries varied between 86% and 95% depending on the zone. Blacktop Lightning and Footwall samples had the lowest recoveries. Results indicated that the Blacktop Footwall ore, which contains preg-robbing graphite, should be treated by a CIL process to attain higher recovery. This is the process used at the Holt Mill. Recent Canamax bottle roll tests returned recovery rates ranging from 93.8 – 95.35%.

Gold in the tails of the Blacktop Lightning ore is thought to be associated exclusively with sulphides. Finer grinding offers limited recovery increases. Mineralogical studies may help to understand the gold occurrence in these samples. Process alternatives to offset this problem seem limited as oxidation processes are not considered to provide an economic alternative, taking into account the limited gold recovery increase and the proportion of tonnage involved.

All leaching tests were based on 48 hours residence time. At the planned production rate of 1,500 tpd, the residence time in the pre-aeration and leach circuit would be 48 hours. A kinetic leaching test, by type of ore, versus a residence time relationship should be considered as a method to determine if recoveries could be improved.

The results obtained are based on lab scale tests on small samples from a limited quantity of ore.

12.2 Mineral Processing

There has been production from the Holt and Holloway mines which provides records of metallurgical performance (Table 5-4). The ores from the two mines were blended and processed with other ore in the past.

12.2.1 Holloway Mine Ore

Process plant statistics from the previous 5 years of operation are presented in Table 12-3. Metallurgical recoveries varied from 85.17% in 2010 to 91.2% in 2014.

Table 12-3: Mineral processing statistics for the Holloway ore (2010 - 2014).

Holloway Mine		2010	2011	2012	2013	2014	Total
Tonnes milled	(t)	340,594	204,258	191,471	177,005	186,238	1,099,566
Grade	(g/t)	5.25	3.27	3.51	3.75	3.97	4.67
Contained ounces	oz	66,122	25,199	23,990	23,520	26,086	164,917
Recovery rate	%	86.90%	85.17%	90.16%	90.70%	91.20%	88.32%
Recovered ounces	oz	57,459	21,461	21,629	21,330	23,780	145,660

12.2.2 Holt Mine Ore

Process plant statistics since re-starting the operation in 2010 are presented in Table 12-4. Metallurgical recoveries varied from 92.5% in 2010 to 95.0% in 2013.

Table 12-4: Mineral processing statistics for the Holt ore (2010 - 2014).

Holt Mine		2010	2011	2012	2013	2014	Total
Tonnes milled	(t)	23,257	232,330	316,487	369,657	442,108	1,383,839
Grade	(g/t)	2.70	4.33	4.96	4.96	4.41	4.64
Contained ounces	oz	2,185	34,611	53,444	62,014	66,097	218,352
Recovery rate	%	92.52%	93.54%	94.39%	95.00%	94.80%	94.51%
Recovered ounces	oz.	2,022	32,376	50,444	58,898	62,633	206,373

13 MINERAL RESOURCE ESTIMATES

The Mineral Resources effective as of December 31, 2014 are summarized in Table 13-1. Several of the zones within the Holt-Holloway mine complexes have not changed since the previous Technical Report (P. Rocque / D. Cater 2013) dated March 15, 2013. The reader is referred to that report for information on the details of the mineral resources for those zones. The focus of this report will be on the significant new zones, as of December 31, 2014.

Table 13-1: Mineral Resources for the Holt and Holloway properties (as of Dec 31, 2014), reported exclusive of Mineral Reserves.

Mineral Resources Estimates - As at December 31, 2014												
Project	Measured			Indicated			Measured + Indicated			Inferred		
	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)
Holt	3,702	3.97	473	3,861	3.90	485	7,563	3.94	957	7,866	4.67	1,181
Holloway	310	4.71	47	482	4.54	70	792	4.61	117	2,479	4.88	389
Total	4,012	4.03	520	4,343	3.97	555	8,355	4.00	1,075	10,345	4.72	1,571

Notes

- CIM definitions (2010) were followed in the calculation of Mineral Resource
- Mineral Resource estimates were prepared under the supervision of Douglas Cater, P. Geo. (SAS – Vice President Exploration)
- Mineral Resource estimates were undertaken according to SAS Policy for Mineral Reserve and Resources
- Mineral Resources were estimated at a block cut-off grade of 2.5g/t
- Mineral Resources are estimated using a long term gold price of US$1,250/oz.
- A minimum mining width of 3m was applied
- A bulk density of 2.84 t/m^3 was used
- Totals may not add exactly due to rounding

13.1 Database

The current drillhole database for the Holt and Holloway mines consists of approximately 350 km of surface core and approximately 1690 km of underground core. The majority of underground drilling was done with BQ diameter core, the surface drilling was a mix of BQ and NQ diameter. The drill hole database used for all resource estimates updated by the current report was complete as of December 31, 2014. The database used in the mineral resource estimates consisted only of diamond drill hole data; no underground chip samples were used.

The Holt and Holloway mines have a history of production and good reconciliation between the mill and block model grades. This indicates that the historical drillhole database is reliable and can be used with confidence. Spot checks of drill logs during 2013 and 2014 included 37 underground holes. No issues were found in the random checks.

Spot checks were conducted on the original assays against the Datamine drill hole database for at least 5% of drill holes from each zone, randomly selected from 2013-2014 drilling. Collar locations of underground DDH were surveyed using Leica TPS 1200 and Leica TS 15 instruments. Downhole surveys were collected 12m from the collar, and at 50m increments to the end of hole for underground holes. Surface drillholes took downhole surveys 20m from the end of casing, then every 50m to the end of hole. Where rock magnetism was anomalous, the azimuth was averaged between the tests above and below. Surface drillhole collars were surveyed using differential GPS upon completion of each drilling campaign.

Several historical diamond drillholes (surface and underground) were removed from the Holt Zone 4 resource estimate because the locations of the collars or the downhole deviation were known to be incorrect. The holes removed from the database were: 775-255, TS-7-21, W-22-391, W-22-392, T-17-31-W1, 775-255, TS-7-21, W-22-391, W-22-392, T-17-31-W1, F-02-3-W1, F-02-3, W-03-1-W1, W-03-2, W-03-1-W1, W-03-2, 775-870A and 775-870B.

13.2 Geological Interpretation and 3D Solid Modelling

Geologic interpretation and 3D modelling was completed by the Senior Geologists for the respective mines, for all major mining horizons. 3D modelling for exploration resource lenses was completed by the Resource Geologist or by the Project Geologist for Holt-Holloway regional exploration. The main criteria for inclusion within a mineralized zone were: lithology, alteration, major structures and gold grade. The cut-off grade used for 3D modelling was 1.0 g/t Au, with exceptions allowed to follow alteration, lithology or structural contacts. All 3D modelling of mineralized envelopes was done using the CAE Studio3 software by creating bounding strings on cross-section, then linking those strings to create closed 3D shapes. The shapes were verified by the Chief Mine Geologist and by the Resource Geologist.

3D models of underground lateral development and stoping were verified and imported into Datamine from AutoCAD by the Mine Engineering Department personnel.

Geological modelling of new zones is discussed in more detail in the following sub-sections for the new Mineral Resources added in 2014.

13.2.1 Zone 4 Deep Extension

The locations of the Zone 4 Extension, NBS and Vertical Extension zones are shown in context with the Holt Mine in Figure 13-1.

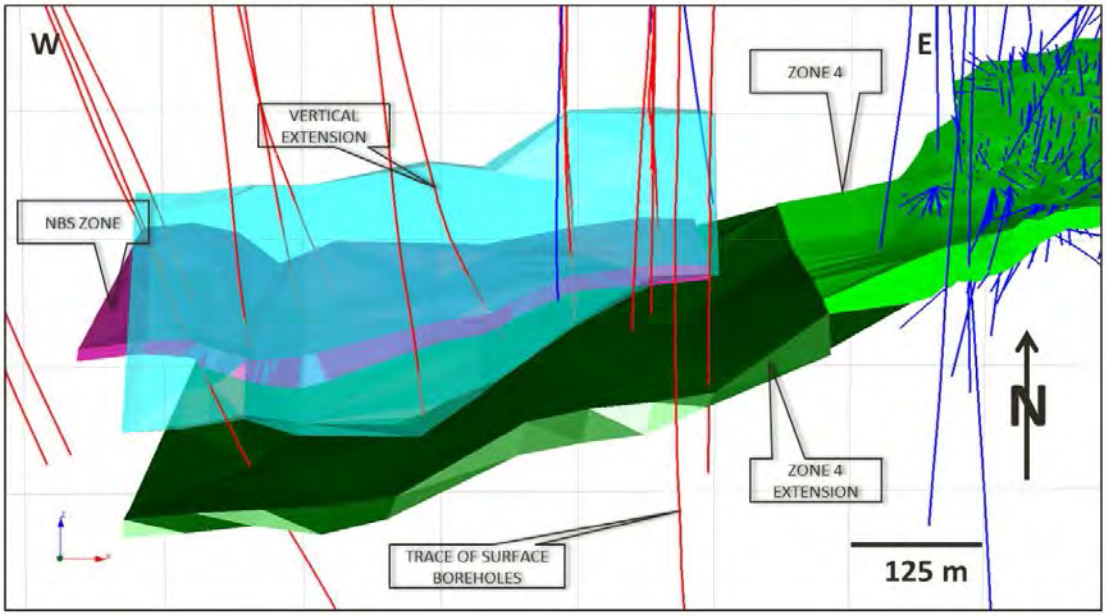

Figure 13-1: 3D longitudinal section looking north, showing the three new "Holt Deep" zones.

The Zone 4 Extension and NBS zones appear to be a direct continuation of the Zone 4 domain at Holt. The two lenses are parallel to each other, with a gap of 15-20m between the two. The mineralized zones are hosted within a large package of mafic volcanic protoliths. The alteration assemblage within the two lenses is similar to Zone 4 (albite-chlorite-sericite, with up to 5% disseminated sulphide and locally up to 20%). The NBS zone is distinguished by the presence of a black mineral that is assumed to be biotite/tourmaline/chlorite; a mineralogical study is currently being undertaken to clarify the assemblages in the three zones. The NBS zone typically contains coarser grained sulphides, along with clustered pyrite in areas of strong sericite alteration. Fine visible gold has been noted, something that is usually absent from typical Zone 4.

The main Zone 4 mineralization is controlled by a planar fault, dipping approximately 30^o south and plunging at about 15^o to the west. This fault is often poorly developed, with little - no clay fault gouge, and is often difficult to identify in drill core. No obvious controlling structure was observed in the Zone 4 Extension or NBS zones.

The Vertical Extension zone dips steeply to the south (~80^o) and is interpreted to follow the same sub-vertical structure as the v-93 zone within the Holt Mine. The two zones are separated by approximately 450m; no drilling is present between them. Alteration in the Vertical Extension zone is also similar to Zone 4 and V-93, with an assemblage of albite-sericite-chlorite and disseminated sulphide varying from 5-20% in well mineralized areas.

No obvious controlling structure has been identified in the V-93 or Vertical Extension zones, although it is likely that mineralizing fluid flow was concentrated along a structure, particularly given the alignment of the V-93 and Vertical Extension zones, over a long strike length.

13.2.2 Canamax

Four lenses were interpreted at Canamax (Figure 13-2). The largest lens (#3) was mined by Canamax Resources between 1987 and 1989, when 47,588 tonnes were extracted at a grade of 4.51 g/t Au. Two of the lenses are small and inconsistently mineralized and were kept in the inferred category (lenses 1 and 3). Lens 2 was interpreted to have a high grade shoot at an oblique angle to the main mineralization. It is believed that this shoot follows a secondary structure, but follow up drilling is required to verify this interpretation. The high grade shoot was modelled as a subdomain, separate to the remainder of lens 2.

The mineralization at Canamax is hosted within a quartz vein and silica-albite alteration zone, typically 1 to 5 m wide. Gold occurs as fine free gold, often associated with sulphides, including pyrite and/or arsenopyrite. Host rocks are typically volcanic (ultramafic, mafic and volcaniclastic), but some sedimentary units are also reported. Mineralization dips at approximately 45^{o} south, striking approximately east-west. The orientation of the vein is modified locally by cross-cutting late structures, typically oriented northeast-southwest or northwest-southeast.

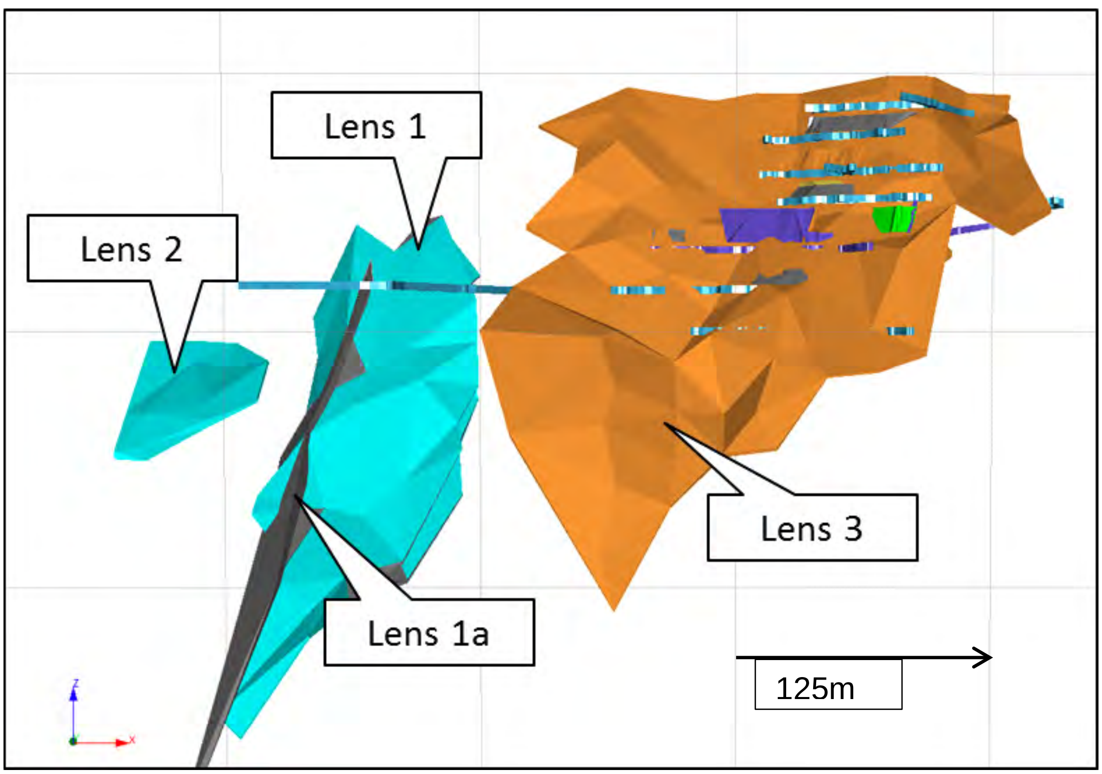

Figure 13-2: 3D long section looking north, showing the locations of the lenses at Canamax. Lens 4 is subparallel to Lens 3, and is located north (behind) in this view. Surface is located approximately at the top of the field of view.

13.2.3 DL Zone

This Zone is located above the 775 level on the western edge of the mine workings and occurs just north of the hinge of the V-93 Zone This zone is flat lying at approximately 25-35^o South and strikes roughly East-West. Mineralization occurs as an altered mafic volcanic with increased albite-sercite and silica. Typically disseminated pyrite occurs as fine grains ranging from 5 to 15%. There has been no obvious controlling structure noted in drill core. The zone is typically 4-6 meters thick, 500 meters long, and 175 meters high.

13.2.4 West McKenna Zone

This zone is located above and north of the DL zone and appears to be the vertical component above the hinge of the flat-lying DL zone and against the McKenna fault. The zone is typically steeply dipping at 75-80^o south and generally striking east-west. Mineralization occurs as altered mafic volcanics with increased silica-sericite and albite, along with finely disseminated pyrite ranging from 5 to 15% in drill core. This zone is approximately 300 meters long, 2 to 4 meters thick and 200 meters high.

13.2.5 Blacktop Footwall (Lower)

The Blacktop Footwall Lower Zone occurs in the footwall of the main Blacktop mineralization on the eastern edge of the mine workings. The zone is flat-lying at approximately 30-35^o, strikes east-northeast, and is bounded by a flat-lying fault. The zone occurs as an alteration envelope of mafic volcanic rocks predominately sericite-carbonate-chlorite. Pyrite occurs as coarse euhedral cubes to finely disseminated grains typically 5% to 15% in the higher grade areas. This zone measures approximately 150m long, 75m high and 2-4 meters thick.

13.2.6 Blacktop East

Blacktop East Zone occurs on the eastern flank of the Blacktop zone and is an extension of the Blacktop zone with similar mineralization which occurs as sericite-carbonate-chlorite alteration of mafic volcanic rocks. Sulphides as coarse euhedral blebs occur up to 15% in higher grade areas. Blacktop East strikes approximately east-northeast and ranges in dip from moderately to steeply south dipping at 60^o to 75^o. The zone is approximately 150 meters long, typically 3-5 meters wide and 75 meters high.

13.3 Density Data

The density used for mineral resource estimation is 2.84 t/m^3, which corresponds to historical density determinations at both the Holloway and Holt deposits. These density determinations seem appropriate for a sulphide replacement style of deposit within a sequence of mafic volcanic – ultramafic rocks. No correlation exists between gold grade and density and, therefore, a bulk density by rock type was considered appropriate for this deposit.

During the SAS drilling campaign between 2006 and 2008, in excess of 1,030 samples from the mineralized zones were sent to Laboratoire Expert for specific gravity determination (i.e. sample dried and weighed (D) and then immersed in water and weighed (W), SG=D/(DW)). The average density determination by the lab was 2.81 t/m^3, a difference of approximately 1% compared with historical results. The recent work is not considered sufficient to modify the density estimate for the current resource estimation.

13.4 Assay Composites

Samples used in the resource calculation process at the Holt and Holloway mines consisted of drill core samples only. Chip samples were not used in the grade estimation procedure. Typical underground drill core is BQ (37 mm) in size.

Samples were taken at the discretion of the geologist. They were identified with a sample number, securely sealed and transported to the assay lab. Underground definition samples were analyzed at the SAS lab, located at the Holt mine site. Core samples from the surface drill program were typically NQ calibre (48mm) in size, were sawed in half and shipped to Laboratoire Expert for gold analysis, located in Rouyn-Noranda, (QC).

Quality control (QC) samples consisting of both certified reference standards and blanks were inserted into the sample stream for exploration samples only. The labs also use internal calibration standards to act as a QC check; these were considered sufficient QC for underground definition drilling.

Assay results were returned to the geologist by the lab in excel format and the results were uploaded into the drillhole / mine sample database.

Composite lengths for drillhole data were determined on a zone by zone basis by creating histograms of sample length through each mineralized zone. In most cases, the sample lengths were clustered around 1.0 m, with a maximum sample length of 1.5 m (consistent with SAS Standard Operating Procedure for core sampling). Some historic core was sampled with a maximum length of 2 m. Samples were composited to between 1 and 2 m, depending on the zone being modelled. Orphan samples (residual composites at the edge of the zone) were distributed evenly with the other composites of each drillhole, maintaining a composite length as close to the composite length as possible. This method prevents any data from being discarded at the margins of the mineralized envelope.

No correlation between density and grade has been identified, so only sample length was used to weight the grades during compositing. Missing or un-sampled areas were assumed to have trace gold grade and were assigned a grade of 0.0025 g/t Au.

13.5 Assay Statistics

Exploratory Data Analysis (EDA) was conducted on the assay populations of each zone. Summary statistics are included in Table 13-2 to Table 13-4. Histograms and probability plots of gold grade were created (e.g. Figure 13-3 and Figure 13-4). Gold grade capping of 25 g/t Au. has been used in historical estimates for the Holt and Holloway mines and has been shown to reconcile well on a stope-by-stope basis. Probability plots indicate that 25 g/t Au. is a suitable capping value based upon inflection points in the sample population in the area of the 95^{th} to 99^{th} percentile; it has been used in the majority of the grade estimates in this report. Capping was applied prior to compositing.

The number of samples capped was less than 1% for most of the zones at Holt. At Holloway the number of capped samples was higher, as more free gold is typically observed there. Resource estimates at Holt and Holloway were insensitive to capping values, due to the low numbers of capped samples and the absence of anomalously high gold grades. The difference in total tonnes and grade for all categories in Zone 4 (exclusive of reserves), with capping of 25 g/t Au. and un-capped is shown in Table 13-5. It demonstrates that the effect of high grade gold assay capping on the mineral resource estimation process at the Holt and Holloway mines is minimal. This is attributed to the fact that most assay results for the zones were less than 25 g/t Au. and from the lack of high grade “nugget” outliers.

Table 13-2: Summary statistics of uncapped assays for the main zones at Holt and Holloway.

Zone	# Samples	Cap (gpt)	Min (gpt)	Max (gpt)	Mean (gpt)	Standard Deviation	Variance	CV
Holt								
Ghost Lens 1	178	10	0.001	16.22	2.89	2.91	8.46	1.03
Ghost Lens 2	742	17	0.01	35.14	2.50	3.52	12.41	1.36
Zone 4	21,410	25	0	545.9	3.03	5.86	34.37	1.94
Zone 4 East	8,421	25	0	78.80	2.54	3.51	12.35	1.38
Zone 4 Ext.	390	25	0.02	30.06	2.13	3.39	11.51	1.59
DL Zone	141	-	0	19.87	3.28	4.04	16.32	1.23
West McKenna	973	25	0	34.30	2.54	3.39	11.50	1.33
Vert.Extension	263	25	0	39.46	3.38	5.01	39.46	1.48
NBS	216	25	0	38.18	3.27	5.99	35.82	1.83
V-93	564	25	0	28.17	2.80	4.18	17.49	1.50
Tous. Lens 1	240	20	0	62.30	4.10	7.27	52.87	1.77
Tous. Lens 2	200	20	0.001	53.40	6.10	7.28	52.94	1.19
Holloway								
Cmx. Lens 1	100	25	0	10.28	1.75	1.96	3.84	1.12
Cmx. Lens 1a	101	50	0	293.6	7.63	30.10	906.2	3.95
Cmx. Lens 2	18	25	0.05	53.91	5.30	12.29	151.1	2.32
Cmx. Lens 3	223	25	0	62.00	3.89	6.58	43.25	1.69
Cmx. Lens 4	27	25	0.01	44.76	4.29	8.73	76.16	2.03
Smoke Deep	1,909	25	0	511.0	4.99	14.01	196.38	2.81
Blacktop FW Lo.	154	25	0.01	63.00	7.78	9.79	95.86	1.26
Blacktop East	331	25	0	36.77	6.60	6.95	48.24	1.05

Table 13-3: Summary statistics of capped assays at Holt and Holloway.

Zone	Cap (gpt)	# Capped	% Capped	Mean (gpt)	Standard Deviation	Variance	CV
Holt							
Ghost Lens 1	10	8	4.47	2.84	2.76	7.65	1.02
Ghost Lens 2	17	7	0.94	2.44	2.99	8.97	1.23
Zone 4	25	131	0.61	2.93	3.90	15.19	1.33
Zone 4 East	25	25	0.30	2.51	3.23	10.43	1.29
Zone 4 Extension	25	2	0.51	2.10	3.22	10.38	1.53
DL Zone	25	0	0	3.28	4.04	16.32	1.23
West McKenna	25	2	0.20	2.52	3.23	10.46	1.28
Vert. Extension	25	1	0.38	3.33	4.69	21.96	1.41
NBS	25	5	2.31	3.16	5.49	30.09	1.73
V-93	25	2	0.35	2.79	4.14	17.17	1.48
Tous. Lens 1	20	8	3.33	3.79	5.56	30.91	1.46
Tous. Lens 2	20	12	6.00	5.87	6.28	39.46	1.07
Holloway							
Cmx. Lens 1	25	0	0	1.75	1.96	3.84	1.12
Cmx. Lens 1a	50	2	1.98	4.29	7.21	51.97	1.68
Cmx. Lens 2	25	1	5.56	3.69	6.23	38.83	1.69
Cmx. Lens 3	25	3	1.34	3.64	5.11	26.09	1.40
Cmx. Lens 4	25	1	3.70	3.56	5.55	30.85	1.56
Smoke Deep	25	42	2.20	4.39	5.51	30.35	1.25
Blacktop FW Lo.	25	7	4.54	6.97	6.51	42.37	0.93
Blacktop East	25	12	3.62	6.39	6.22	38.71	0.97

Table 13-4: Summary statistics for capped composites at Holt and Holloway.

Zone	# Comps	Min (gpt)	Max (gpt)	Mean (gpt)	Standard Deviation	Variance	CV
Holt							
Ghost Lens 1	116	0.0025	10.00	2.91	2.53	6.39	0.87
Ghost Lens 2	366	0.0025	17.00	2.52	2.80	7.82	1.11
Zone 4	20,944	0.0025	25.00	2.78	3.43	11.79	1.24
Zone 4 East	7,096	0.0025	25.00	2.43	2.81	7.92	1.16
Zone 4 Extension	339	0.0025	25.00	1.99	2.90	8.40	1.46
DL Zone	98	0.0326	16.42	3.30	3.63	13.19	1.10
West McKenna	882	0.0025	21.88	2.22	2.51	6.30	1.13
Vert. Extension	216	0.0025	20.82	3.03	3.83	14.67	1.26
NBS	207	0.0025	25.00	2.62	4.36	19.04	1.66
V-93	518	0.0025	19.23	2.46	3.25	10.59	1.32
Tous. Lens 1	98	0.0025	20.00	3.99	3.92	15.40	0.98
Tous. Lens 2	76	0.0010	20.00	6.28	4.59	21.08	0.73
Holloway							
Cmx. Lens 1	118	0.0025	8.12	1.47	1.83	3.36	1.25
Cmx. Lens 1a	98	0.0025	50.00	5.12	9.84	96.83	1.92
Cmx. Lens 2	18	0.0500	25.00	3.69	6.23	38.83	1.69
Cmx. Lens 3	227	0.0025	25.00	3.61	5.08	25.84	1.41
Cmx. Lens 4	24	0.0050	25.00	3.76	5.83	34.01	1.55
Smoke Deep	1,538	0.0010	25.00	4.05	4.57	20.88	1.13
Blacktop FW Lo.	153	0.0121	25.00	7.01	5.78	33.36	0.82
Blacktop East	318	0.0100	25.00	6.15	5.47	29.88	0.89

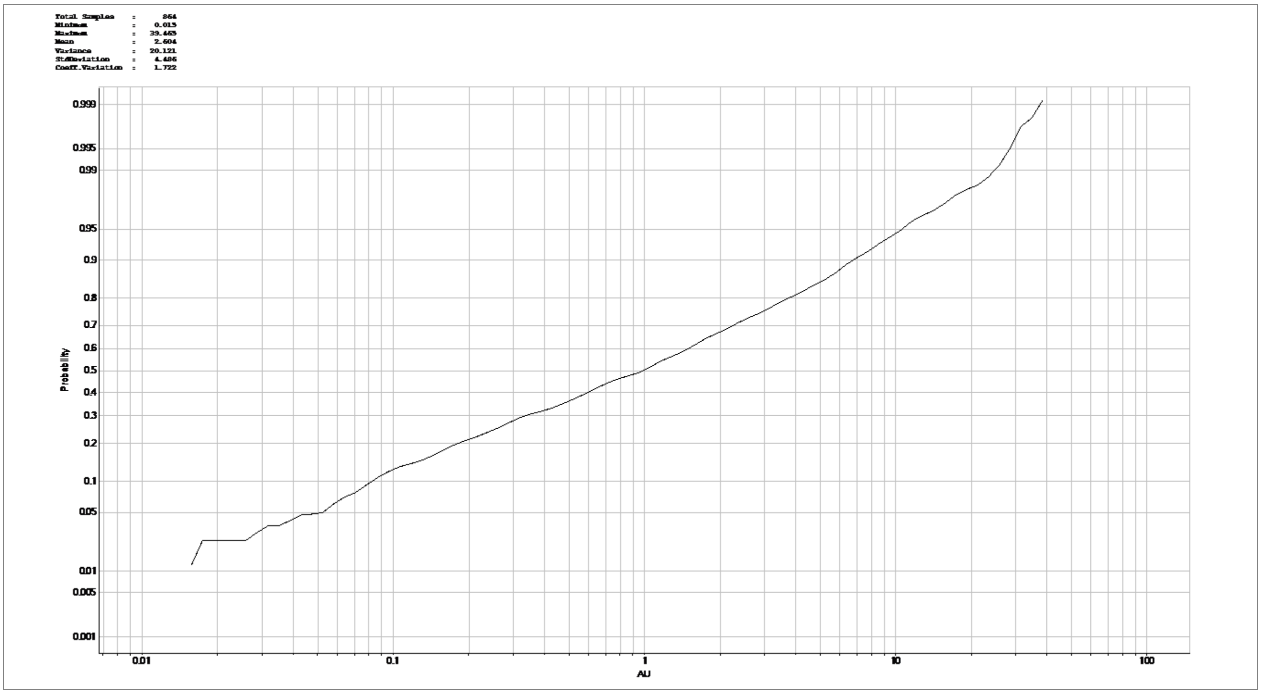

Figure 13-3: Combined Au log-probability plot for the three Holt Deep zones (Zone 4 Extension, NBS and Vertical Extension).

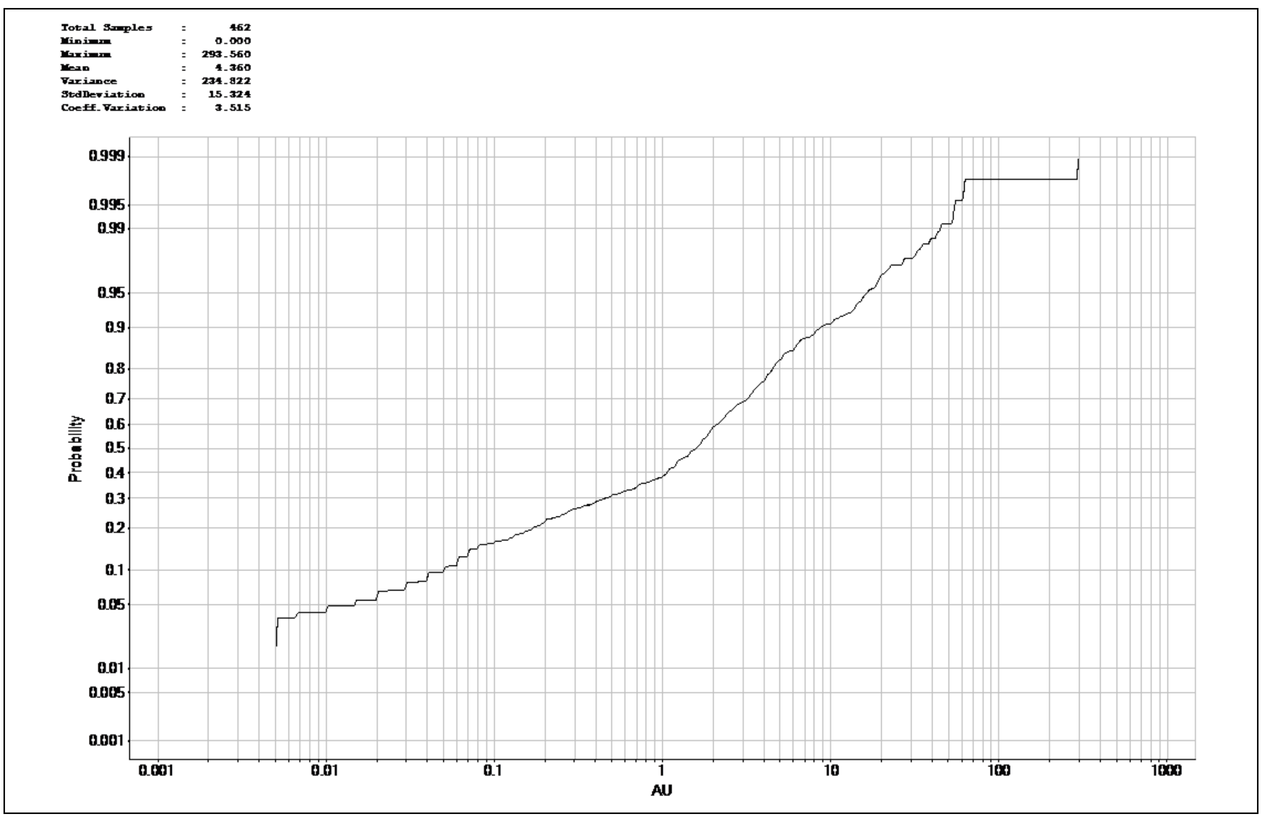

Figure 13-4: Combined Au log-probability plot for the four Canamax lenses.

Table 13-5: Capped and uncapped results for Zone 4, all categories, exclusive of reserves

Cutoff (gpt)	Uncapped			Capped at 25 gpt		
	Tonnes	Grade (gpt)	Ounces	Tonnes	Grade (gpt)	Ounces
2.50	2,987,111	4.18	401,025	2,964,604	4.04	385,385

13.6 Semi-Variograms

Where possible, semi-variograms were created for each zone or grouped zone using capped composite values (e.g. Figure 13-5). Anisotropic semi-variograms were created for the zones where drill density and size were sufficient to create reliable models. Where reliable anisotropic semi-variogram directions could not be determined, omni-directional semi-variograms were examined to see if effective ranges for grade interpolation could be determined. Omni-directional semi-variograms were also used as a guideline for effective distances to categorize mineral resources as measured, indicated or inferred. The Holt Deep exploration zones were too sparsely drilled for any kind of reliable variogram to be modelled. At Canamax, omni-variograms were created for the larger zones, with a range of 24m.

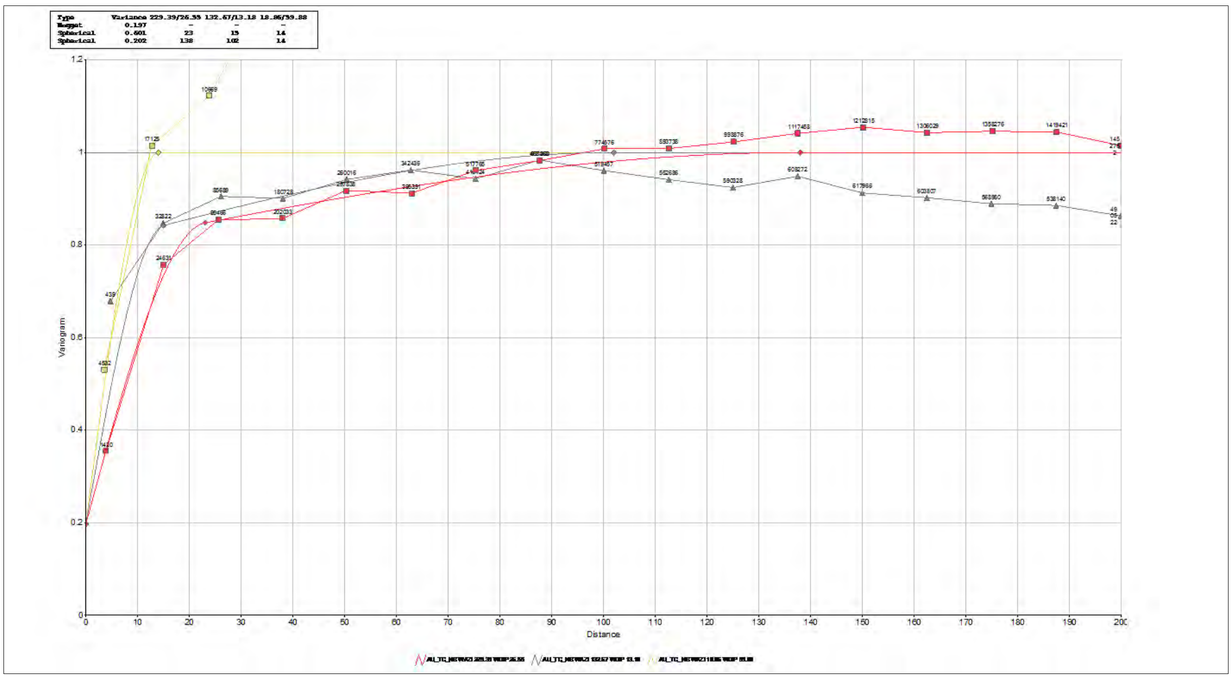

Figure 13-5: Anisotropic semi-variogram for Zone 4.

13.7 Block Model

Three-dimensional block models were calculated using Studio3 for each zone to interpolate gold grade between drillholes. The block models were created by filling the mineralization envelopes for each zone with cells of a predefined size; the cells were oriented to follow the strike and dip of the zone.

For all zones the block size was chosen to correspond to approximately ¼ of the average drillhole spacing, with the exception of the Tousignant and Middle zones. For Tousignant, a number of spatial irregularities were observed with larger block sizes, so a smaller size was used. It is recommended that some definition drilling be completed there, to minimize the adverse effects of using a small block size with relatively wide drill spacing (approximately 25 m by 25 m), such as over-smoothing of data, particularly at the limits of the search ellipsoid radius from a composite.

13.8 Grade Interpolation

Gold grades were interpolated into the block model using ordinary kriging (OK) whenever reliable anisotropic semi-variogram models could be fit to the data. Where the sample dataset lacked sufficient data, inverse distance squared (ID^2) was used. The parameters used in the grade estimation calculation are displayed in Table 13-6 (Holt) and Table 13-7 (Holloway).

Table 13-6: Block model parameters for Holt models that have been modified since the previous Technical Report for Holt-Holloway. (issued 15 March, 2013).

Zone	Interp	Rot'n	Ellipsoid Radii (m)			# Comps.		2nd SV Mult.	# Comps.		3rd SV Mult.	# Comps.		Max. Comps
			X	Y	Z	Min	Max		Min	Max		Min	Max	
Zone 4 Upper	OK	Static	23	15	7	6	12	2	5	15	5	4	16	3
Zone 4 East	OK	Static	7	10	3	5	12	2.5	3	12	5	2	16	2
Zone 4 Lower	OK	Static	45	18	10	3	10	2	4	16	3	2	12	2
Zone 4 Extension	ID^2	Static	130	130	30	8	18	-	-	-	-	-	-	6
V-93	ID^2	Static	26	26	8	3	12	2	3	16	3	2	16	2
Tous. Lens 1	ID^2	Static	30	50	10	3	12	2	4	20	-	-	-	2
Tous. Lens 2	ID^2	Static	30	30	10	3	10	2	4	20	-	-	-	2
Ghost Lens 1	ID^2	Static	50	70	10	3	12	2	4	20	-	-	-	2
Ghost Lens 2	ID^2	Static	50	70	10	3	12	2	4	20	-	-	-	2
DL Zone	ID^2	Static	80	80	20	6	15	1.5	3	15	-	-	-	3
West McKenna	ID^2	Static	45	45	20	5	10	2	5	16	-	-	-	3
Vertical Extension	ID^2	Static	130	130	30	8	18	-	-	-	-	-	-	6
NBS Zone	ID^2	Static	130	130	30	9	15	-	-	-	-	-	-	6

Table 13-7: Block model parameters for Holloway models that have been modified since the previous Technical Report for Holt-Holloway. (issued 15 March, 2013).

Zone	Interp	Rot'n	Ellipsoid Radii (m)			# Comps.		2nd SV Mult.	# Comps.		3rd SV Mult.	# Comps.		Max. Comps
			X	Y	Z	Min	Max		Min	Max		Min	Max	
Smoke Deep	ID^2	Dynamic	17	17	9	7	12	2	5	15	3	4	15	3
Blacktop FW Lower	ID^2	Static	16	16	10	7	12	2	6	20	-	-	-	3
Blacktop East	ID^2	Dynamic	15	15	6	6	14	2	6	18	-	-	-	3
Canamax	ID^2	Dynamic	40	40	9	7	12	1.5	6	15	2	3	12	3

To facilitate the resource estimation process, a number of zones with similar orientations were grouped together for EDA and block modelling. Zone 4 (Holt Mine) was grouped with Zone 4 East, which is an extension of the zone to the east. Zone 4 itself was split into two domains with different orientations:

- Zone 4 “upper” lies on a moderately dipping cross fault; this domain was grouped with Zone 4 East.
- Zone 4 “lower” is sub-vertical and follows the Ghostmount fault. Zone 4 “lower” was grouped with C-95, C-97 and C-99 for modelling, as they are adjacent zones following the same structure.

The two domains were modelled with a soft boundary, to make interpolation as continuous as possible. Similarly, Zone 4 and Zone 4 East were both modelled with a soft boundary as the zone is geologically continuous (the two zones are only distinguished for reporting, as the continuity between them was not always known).

The search ellipsoid orientations were determined by both visualization of the zones and the orientations of the anisotropic semi-variograms. In the majority of cases, where no reliable anisotropic semi-variogram was found, the search ellipsoid was visually oriented parallel to the strike and dip of the zone. In some cases (e.g. Smoke Deep Zone), the zone was folded. In those cases the search ellipsoid orientation was dynamic, following the orientation of the wireframe. The dynamic orientation was defined by digitizing two sets of strings on closely spaced sections that followed the strike and the dip of the mineralized lens. The Studio3 software uses these strings to create a “net” of points, each with dip and dip direction attributes. During grade estimation, the closest points to each cell are used to define the orientation of the search ellipsoid.

For most of the zones modelled, three estimation passes were completed for each cell estimated. The first pass was more restrictive, designed to populate only cells where there was a high confidence in the grade estimate. This pass was designed to populate the measured or indicated categories, depending on the zone being modelled. At least two drillholes were required to populate the first search volume. Smoothing was minimized close to sampled locations (drillhole intersections) by reducing the maximum number of composites that were considered for each estimated cell. The second pass was less restrictive but cells were also populated by at least two drillholes. This pass increased the smoothing of the model by allowing a larger number of composites to be considered in the grade estimation. When used, the third pass was designed to interpolate grades for outlying areas of the mineralization envelope, and typically only required one drillhole to populate cells with grades. Cells populated by the third search volume were restricted to the inferred category.

Zones with a high drillhole density used composites from at least two octants of the search ellipsoid to populate cells for all estimation passes. This method helps reduce the effects of oversampling in certain directions, particularly for zones where ID^2 was used.

13.9 Model Checks

A number of checks were performed to verify that each model was producing a reliable estimate. Visual inspection of each block model in cross-section and in 3D helped to ensure that block model grades agreed with composite grades, and that the continuity of the model was consistent with the drill hole data. Visual inspection also verified that the parameters used in the model were reasonable, such as search ellipsoid orientation and constraining parameters.

The drill hole data was declustered and the mean grade of the model (at zero cutoff) was compared to the mean grade from the declustered drill holes. Several iterations of each model were made, adjusting the minimum and maximum number of composites, until agreement was maximized between the declustered drill holes and the block model (e.g. Table 13-8 and Table 13-9 for the three “Deep Holt” Zones). The declustered input from drill holes was 2.63 gpt Au. for the three zones combined, which compared well to the overall block model grade of 2.61 gpt Au. at zero cutoff.

SWATH plots were created to compare the spatial distribution of different models by calculating the mean grade along the three major directions in the model. Depending on the zone NN, ID^2 and OK models were compared: spatial agreement was good between the models for all zones compared.

Kriging efficiency (“KE”) was calculated for Zone 4 and other lenses estimated with ordinary kriging (e.g. Figure 13-6). Kriging efficiency, defined in Equation (13.1), below, serves as a tool to measure the effectiveness of a kriging estimate.

The KE of a cell is a way of determining the confidence of the kriging estimate of that cell. It is a measure of the difference between variance within blocks (constant for the entire zone, and determined from the model variogram) and the kriging variance of the cell in question. Figure 13-6 shows the kriging efficiency of Zone 4 block model, although only blocks on the surface of the wireframe are visible. In general, values greater than zero are considered acceptable, and values greater than approximately 0.5 are considered to be reliably estimated cells.

$$KE = \frac{(BV - KV)}{BV} \qquad (13.1)$$

Where:

BV = variance within blocks, determined from the model semi-variogram,
KV = kriging variance, calculated as part of the kriging process in Studio3.

Table 13-8: Comparison of assay statistics at different levels of support for "Holt Deep" zones.

Zone	Statistics	Min (gpt)	Max (gpt)	Mean (gpt)	Standard Deviation	Variance	CV
Zone 4 Extension	Raw uncapped	0.02	30.06	2.13	3.39	11.51	1.59
	Capped Comps.	0.00	25.00	1.99	2.90	8.40	1.46
	Declustered Comps.	0.80	7.38	2.60	1.80	3.44	0.69
NBS	Raw uncapped	0.00	38.18	3.27	5.99	35.82	1.83
	Capped Comps.	0.00	25.00	2.62	4.36	19.04	1.66
	Declustered Comps.	0.36	8.90	2.70	2.33	5.44	0.86
Vertical Extension	Raw uncapped	0.00	39.46	3.38	5.01	39.46	1.48
	Capped Comps.	0.00	20.82	3.03	3.83	14.67	1.26
	Declustered Comps.	0.36	8.90	2.70	2.33	5.44	0.86

Table 13-9: Comparison of data input versus block output grades for "Holt Deep."

Domain	Inputs	Outputs	Reconciliation
	Declustered Mean (gpt)	Block Mean (gpt)	Variance (%)
Zone 4 Ext.	2.60	2.37	-8.80%
NBS Zone	2.70	2.79	3.30%
Vertical Ext.	2.70	2.85	5.60%
Average	2.63	2.61	-0.80%

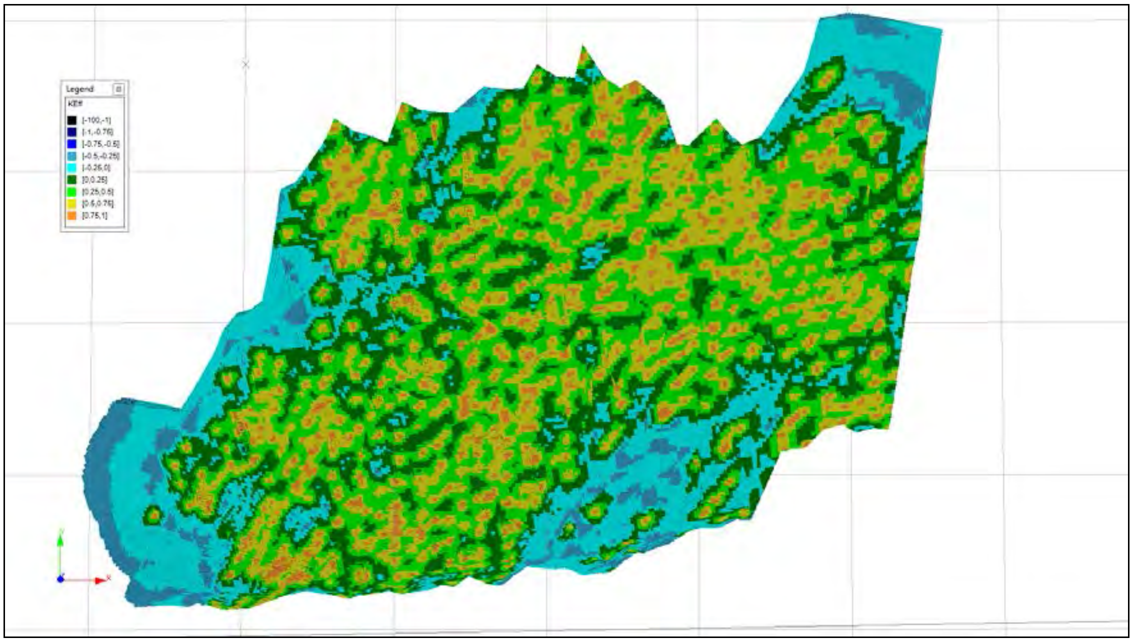

Figure 13-6: Kriging efficiency map for Zone 4. Note that the KE is only displayed on the surface of the model. KE values > 0 indicate reasonable confidence in the estimate.

13.10 Resource Estimate and Classification

Resource classification was based upon both drill hole density (spacing between drill holes) and gold grade continuity. Cut-offs between the Measured, Indicated and Inferred categories were determined for each zone. The block model for each zone was viewed perpendicular to the zone, with the cells coloured by search volume. A closed string was created enclosing search volume 1 (and sometimes 2). The model was then re-coloured to show grade and the string was adjusted to enclose only areas where grade continuity was good. The string was used to “cut” an Indicated resource shape out of the low-grade mineralization envelope. The remainder of the low-grade envelope was categorized as Inferred. The Measured category was defined by “cutting” a shape from within the Inferred resource, where confidence in the grade continuity was highest. The area of the Measured category varied from zone to zone, based on past mining activity and reconciliation between the block models and mill. For example, in Zone 4 at the Holt Mine there is an established history of good reconciliation, so the majority of the Indicated shape was upgraded to Measured resources. In the Smoke Deep Zone at Holloway, resources were only classified as Measured if there was development above and below the region being classified.

The Measured and Indicated shapes for each zone were used to create mining shapes. Underground development, mined stopes, and the shapes that were added to mineral reserves were removed from the resource by assigning “absent” grade to the resource model where it is intersected by those shapes, then copying only grades above 0 gpt into a new model. Remnant and unrecoverable pillars (as identified by the Mine

Engineering group) were removed from the mineral resource using a similar technique. Mineral resources are reported exclusive of mineral reserves for each zone.

In the QP's opinion, there are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that could materially affect the mineral resources estimate.

14 MINERAL RESERVES ESTIMATE

The Mineral Reserves effective as of December 31, 2014 are summarized in Table 14-1.

Table 14-1: Mineral reserves for the Holt and Holloway properties (as of Dec 31, 2014).

Mineral Reserves Estimates - As at December 31, 2014									
	Proven			Probable			Proven + Probable		
Project	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)	Tonnes ('000)	Grade (g/t Au)	Ounces Au ('000 oz)
Holt	1,452	4.26	199	2,414	5.05	392	3,866	4.75	591
Holloway				233	5.35	40	233	5.35	40
Total	1,452	4.26	199	2,647	5.08	432	4,099	4.79	631

Notes

- CIM definitions (2010) were followed in the calculation of Mineral Reserves
- Mineral Reserves estimates were prepared under the supervision of K. Salehi, P. Eng. SAS Vice President Corporate Development & Technical Services)
- Mineral Reserves estimates were undertaken according to SAS Policy for Mineral Reserve and Resources
- Cut-off grades vary by deposit; economic assessments were completed for all stopes, cost based on 2015 Budget
- Mineral Reserves were estimated using a price of gold of US$1,250/oz
- Currency exchange rate used was CAN$1.08 = US$1.00
- Cut-off grade at Holt = 3.02 g/t; Holloway = 4.11 g/t
- Totals may not add exactly due to rounding

In the QP's opinion, there are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that could affect materially the mineral reserves estimate.

15 MINING METHODS

15.1 Holt

15.1.1 Design Criteria

Mining activities at the Holt mine are planned to occur in multiple zones concentrated in two regions within the mine. The western region of the mine contains Zone 4 (Upper and Lower), Zone 4 East, and V-93 (Figure 15-1). The eastern region contains Zone 6, Zone 6B and the remnant pillars of the C-104 Zone. All of the planned zones are accessed from existing rail haulage development headings; therefore, the equipment used in each zone remains captive. The Tousignant Zone will be mined as an autonomous zone from surface via a decline access.

The main accesses for all zones are concentrated on three rail haulage levels: 775, 925 and 1075. Ore is transported on these haulage levels to the shaft ore pass system. Ramp access is available between 925 and 775 haulage levels. Zone 6B, Zone 6 and C-104 have limited access between mining fronts. Zone 4 is accessed from both 925 and 1075 haulage levels as there is no ramp connection from the 1075 level to the upper levels in the mine. It is planned to connect the 1075 and 925 haulage levels through Zone 4, as mining progresses.

Zone 4

Zone 4 represents the bulk of the mining since resuming operations at the Holt mine in 2010. This zone presents several design challenges due to its geometry: the zone dips at 30° south to the horizontal and plunges from the east to the west at approximately 10° west. The plunge, in particular, makes the installation of service raises and holes challenging. Ore passes in the zone consist of a series of conventional raises dipping at 49 that feed chutes on the 925 and 1075 haulage levels. Due to the plunge, a transfer point will be needed at the 990 level, in the lower portion of Zone 4 to facilitate ore delivery to the 1075 level. The mining method in Zone 4 is open stoping with delayed backfill.

Backfill for Zone 4 will be delivered from the 775 level. A conventional raise from 775 level will be needed to access the existing backfill system on the 760 level near the junction of the 775 shaft access drift and the C-104 ramp. Backfill will then be transferred from a conventional raise, approximately 1,000 m to an Alimak raise from 775 level to 925 level. For stopes below 925 level, backfill will be transferred approximately 250 m to another Alimak raise joining 1055 and 925 levels. Slurry for cemented backfill will be delivered to 775 level via a diamond drill hole from surface and then to 870 level through an existing diamond drill hole. Slurry to mining areas below

925 level will be delivered via additional diamond drill holes to 1020, 1005 and 990 levels as mining progresses.

Due to the shallow dipping nature of the ore body, sublevels within Zone 4 are spaced 17 m apart to minimize the length of exposed hanging wall during mining.

Ventilation for Zone 4 is provided via a 160 m long ventilation raise from 1075 level to 925 level. Fresh air is distributed from the Shaft and fed up the 1075 Zone 4 ramp. The air is then exhausted up the Zone 4 ventilation raise to the 925 level. The air is then distributed up the 925 Zone 4 ramp and exhausted back to the 925 level via a series of internal raises. The air then flows to the C-104 ramp on 925 level and exhausts up the ramp to the 650 level. From the 650 level, the exhaust air travels up raises to the 435 level where it is pulled to surface via the main return air raise.

Zone 6

Zone 6 dips at 68° south from the horizontal and proves much more conducive to installing services than Zone 4. Zone 6 ore will report to the 925 and 775 rail haulage levels through a series of ore passes developed with Alimak raise climbers. Chutes will be installed on both rail haulages to facilitate rail car loading. The mining method in Zone 4 is open stoping with delayed backfill.

Delivery of backfill to stopes below the 775 level will be accomplished through the development of an Alimak raise from 925 level to 775 level. Backfill will be transferred from the conventional raise developed to 760 level, as mentioned previously in the Zone 4 section above. For stopes above 775 level, backfill will be delivered from the 550 level by means of a backfill raise to be developed from the 750 sublevel.

Sublevels are spaced 20 m apart in the “conventional” open stoping portions of Zone 6 and 80 m to 100 m in the portions planned to be extracted via the Alimak stoping method.

Tousignant

The Tousignant Zone is located 3.5 km to the west of the Holt shaft and approximately 2 km west of the westernmost extents of Zone 4 underground workings. Tousignant extends from surface to a vertical depth of approximately 150 m. The ore body is shallow dipping (approximately 20° from the horizontal) and is composed of two lenses. There is a sub-vertical component to the ore body located to the north of the two flatter lenses; additional diamond drilling is needed to upgrade this vertical component to measured or indicated resources. As a result, the sub-vertical lens (i.e. inferred resources) was not included in the mine plan. Infrastructure, such as a road from the portal to the mill, power line extensions, security building, etc. will need to be constructed as part of the project. Ore will be trucked from the stopes to surface and transferred to the Holt mill via surface trucks.

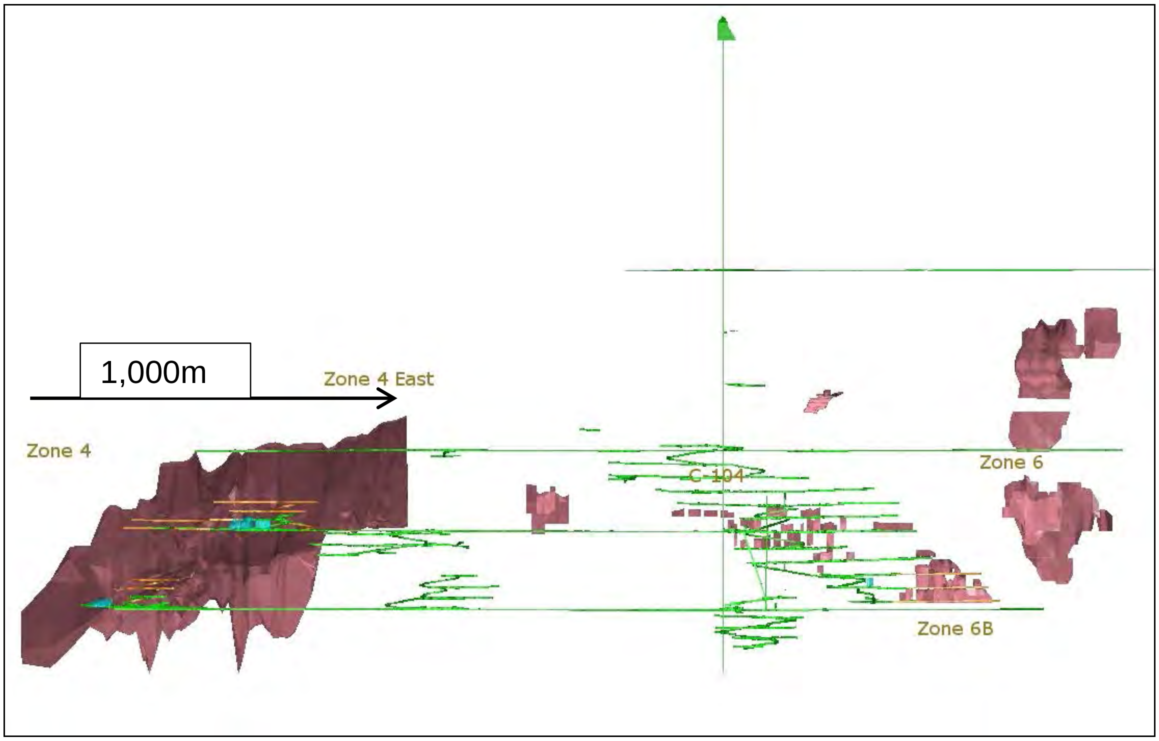

Figure 15-1: Holt mine vertical longsection (looking North). Tousignant is located near surface and to the west of this view.

15.1.2 Mining Shapes

Mineral resources were modelled in 3D using Datamine Studio 3. Mining shapes were then created within the Measured or Indicated Resource shapes on sections.

The block model was then run against the mining shapes. Dilution and mining extraction were then applied. Finally, each resulting shape was assessed independently and only the shapes that returned a positive operating cash flow were included in the mineral reserves.

15.1.3 Mining Method

The primary stoping method at the Holt Mine is mechanised long hole drilling and blasting within the mining blocks with rail transport to the shaft ore passes. The spacing between sublevels for longhole stoping varies between 20 m and 17 m, depending on the dip of the ore. Mechanized longhole stoping is planned to be used in all zones at the Holt mine. The secondary stoping method for the Holt mine will be Alimak stoping within a portion of Zone 6. “Drift and pillar” stoping may be needed in some areas where the ore is too shallow and not amenable to longhole methods. Drilling is performed with top-hammer drills, with hole sizes ranging from 64 mm to 76 mm in diameter.

The Tousignant Zone is planned to be mined using a combination of a modified room and pillar and overhand cut and fill.

Zone 4

Zone 4 is a large ore zone dipping at approximately 30° from the horizontal and is located on the western extremity of the Holt mine. The zone is bounded by the C-97 mining block on the east and is located between 1075 level and 775 level. Mineral reserves for Zone 4 are estimated at 1.32 million tonnes grading at 4.81 g/t Au. SAS mined an estimated 372,000 tonnes grading 5.43 g/t au since commercial production in Zone 4 re-started in 2011.

Zone 4 is accessed by mechanised equipment via ramps and sublevels connected to two main rail haulage levels 925 and 1075. Zone 4 is divided into two mining blocks: the upper mining block represents the stopes reporting to the 925 haulage level and the lower mining block represents the stopes reporting to the 1075 haulage level. The use of both haulage levels provides increased flexibility to the overall Holt mine plan.

The mine extraction sequence for Zone 4 is using a primary-secondary stoping arrangement with cemented rock fill being used in the primary stopes. Strike length is set at 17 m for the primary stopes and 20 m for the secondary stopes. Sublevels in Zone 4 are spaced 17 m apart due to the shallow dipping nature of the ore within the zone. The current mine plan includes stopes being mined using up holes, with the remainder of the stope being mined using down holes. This method of combining up and down hole configurations helps minimizing hole length and increases accuracy of hole drilling. A typical production ring section is shown in Figure 15-2.

A dilution factor of 15% was applied to mining shapes. Dilution material was assigned a grade of 0.3 g/t Au. Mining extraction was set at 90%. Cable bolts will be used in the stope hanging wall to help mitigate dilution.

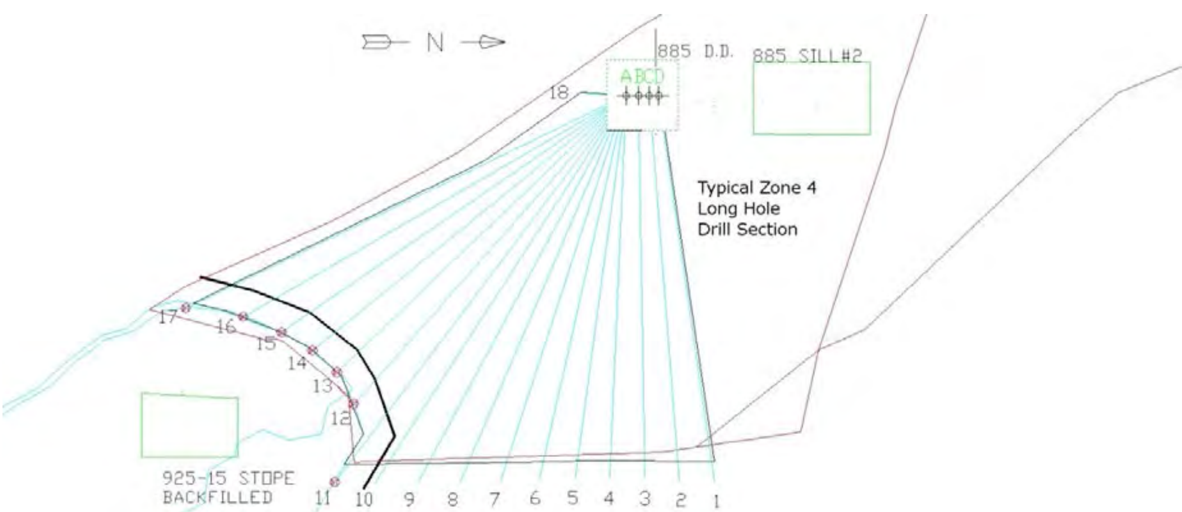

Figure 15-2: Typical Zone 4 long hole ring section view.

Zone 6

Zone 6 is a steeply dipping ore body located on the east side of the Holt mine, centred near the 10850 easting coordinate (Figure 15-3). The mineral reserves for Zone 6 are estimated at 826,000 tonnes grading at 5.85 g/t Au.

Zone 6 is planned to be accessed via a ramp system and sublevels spaced at 20 m intervals for the “conventional longhole” portion and spaced 80 m to 100 m apart for the Alimak stoping portion. Accesses will be connected to haulage levels on 925, 775 and 1075 via drifts and ore passes. An extension of the existing 550 backfill level is planned to facilitate the delivery of cemented rock fill to the zone as mining progresses. Initial stopes are planned to be filled with rock fill produced during development of the ramp and footwall drifts.

Ore will report to one of three rail haulage levels (775, 925, or 1075 level, depending on the stopes elevation) via an internal ore pass system. Ore will then be trammed on rail to the shaft ore pass system.

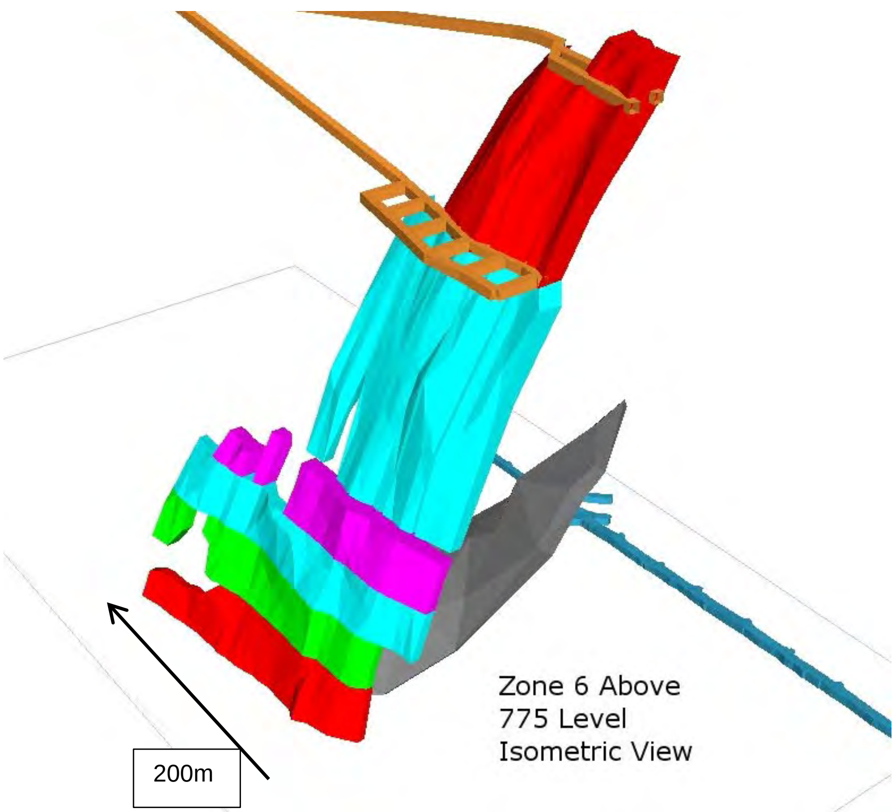

Figure 15-3: Zone 6 isometric, looking northwest.

Zone 6B

Zone 6B is located to the east of the C-104 Zone between 1062 level and 1005 level. The mineral reserves for Zone 6B are estimated at 120,821 tonnes grading at 3.63 g/t.

The zone is accessed by drifts extending from C-104 Zone on 1062, 1030, and 1005 levels. The ore is steeply dipping and is planned to be mined longitudinally in a retreat fashion. The zone is planned to be back filled with rock fill and pillars will be left in lower grade areas of the zone to improve local ground stability. A typical cross section of a longhole drill ring is shown in Figure 15-4.

Ore from Zone 6B reports to the 1075 rail haulage level via the C-104 ore pass system. The ore is then trammed to the shaft ore pass system.

A dilution factor of 15% has been applied to Zone 6B mining shapes, with a dilution grade of 0.3 g/t Au. Mining extraction has been set at 90%.

V-93 Zone

V-93 is a steeply dipping ore body located to the south of Zone 4 and above 775 level on the west end of the mine. The mineral reserves for V-93 are estimated at 63,655 tonnes grading at 4.92 g/t Au.

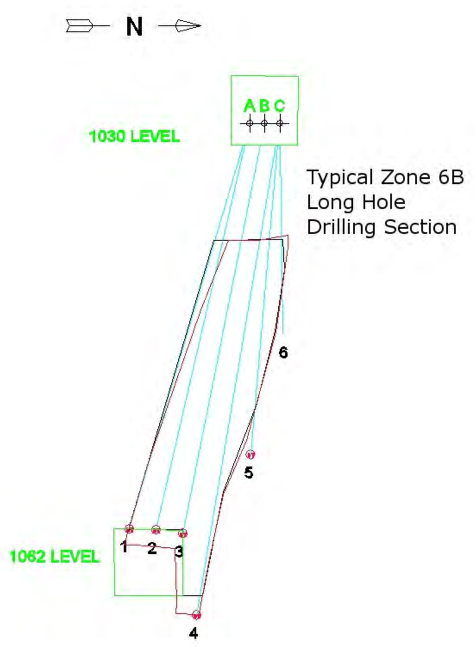

Figure 15-4: Typical Zone 6B long hole drill ring section view.

V-93 Zone is planned to be accessed from a ramp system connected to the 775 level with sublevels spaced at 25 m intervals. The zone is planned to be mined using longitudinal longhole retreat method. The stopes will be backfilled using cemented rock fill from the planned 775 level backfill system. Rock fill will be provided from development headings or could be trammed from Zone 6 development when available.

15.1.4 Geomechanical

Reports by Golder Associates related to the Holt Mine and dated from 1994 to 1999 are available on site. These reports provide relevant background information but are for the most part related to older areas of the mine, which will only be subject to some remnant mining. No adverse ground conditions have been reported throughout the mine. The planned mining methods all incorporate backfill or pillars and the stope dimensions are based on local experience.

Hanging wall support of longhole stopes are planned on a stope by stope basis. Based on the outcome of empirical analysis (i.e. Stability Graph) or geological information, hanging wall support may be required. In this case, 7 m long cable bolts (typically) will be installed.

Ground support in headings typically consists of 1.2 m friction bolt (e.g. Split Sets) in the walls and alternating rows of 0.5 m friction bolts and 1.8 m rebar in the back with wire mesh (Figure 15-5). In intersections and localized areas requiring extra support, 8 ft. rebar and 10 ft. swellex bolts are used. (Depending on the size of opening).

15.1.5 Mine Access and Development

The Holt Mine is accessed by a single shaft, which extends to a depth of 1,195 m from surface. It has three compartments from surface to the 350 m level and four compartments to the 1,195 m level. The shaft has been deepened on several occasions. The shaft is rectangular and has timber sets and guides.

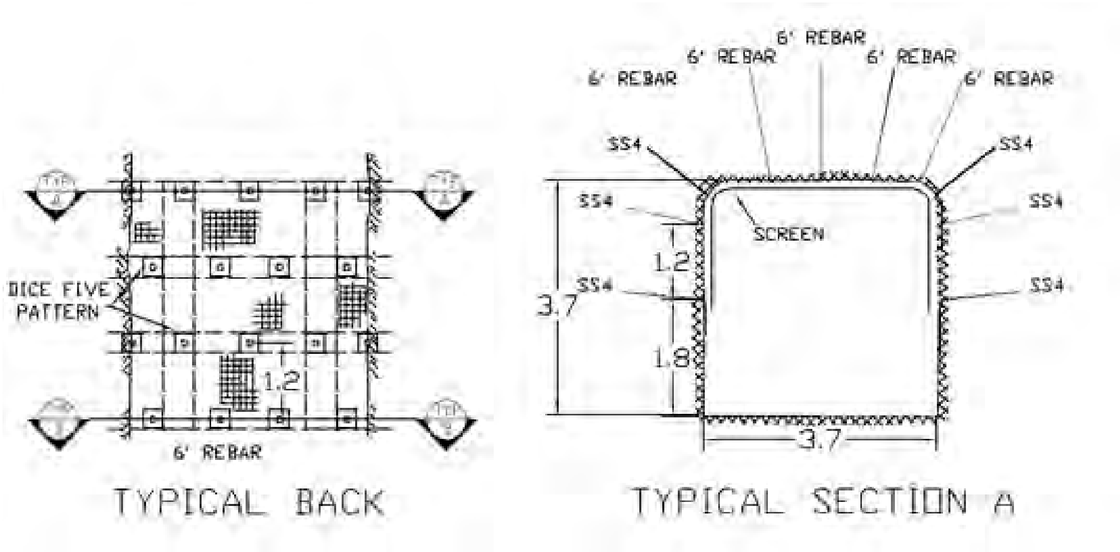

Figure 15-5: Ground support standard for development headings at Holt.

Access to planned mining areas is gained from the three main rail haulage levels: 775, 925 and 1075 levels. The rail haulage drifts were developed 3 m wide by 3 m high, making access between mining zones with large equipment a difficult task. An existing main ramp system is located within the C-104 Zone and extends from 650 level to 1062 level. Sublevel accesses from the main ramp were developed by previous owners at intervals of 20 m vertically. The main ramp has shaft access on four levels: 650, 700, 775 and 925 levels. The 1075 main haulage level is connected to the main ramp system via a 2 m by 2 m raise from the 1062 level. A ramp system was also developed by previous owners in the C-97 zone. The C-97 ramp consists of two ramps: one is a decline from the 925 main haulage and extends to the 970 level, the other is an incline extending from 1075 level to 1010 level. For both ramp systems, there is no connection between the 1075 haulage level and the haulage levels above.

An internal ramp system is being developed in Zone 4 from the 925 haulage level and the 1075 haulage level. The Zone 4 ramp is planned to connect the 1075 haulage level with the 925 haulage level as mining progresses. An internal ramp system will also be established in Zone 6 from the 925 and 775 haulage levels, but will not include a connection between 1075 level and the haulage levels above.

The Tousignant Zone is planned to be accessed via a portal and decline ramp, which will be located approximately 3 km west of the Holt shaft. A main ramp is planned to be developed in ore through lens 1 to access mining areas and in lens 2, thus minimizing development costs. Mining will retreat from the deeper area (i.e. lens 2) to the shallower area (i.e. lens 1), progressively losing the ramp access to the bottom area.

Development requirements are shown in Table 15-1 and Table 15-2.

Table 15-1: Holt Mine development requirements.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total Lateral Dev Metres	5,838	6,010	5,963	6,272	6,264	3,512	0	0	0	33,859
		0	0	0	0	0	0	0	0	0
Total Lateral Dev Waste Tonnes	151,313	169,048	184,504	190,395	172,554	109,487	0	0	0	977,301
		0	0	0	0	0	0	0	0	0
Total Lateral Dev Ore Tonnes	89,607	50,126	47,335	53,273	70,973	27,058	0	0	0	338,371
Longhole Production Tonnes	378,441	435,919	452,665	446,727	428,624	439,912	188,255	184,045	69,028	3,023,617
		0	0	0	0	0	0	0	0	0
Total Ore Tonnes	**468,048**	**486,045**	**500,000**	**500,000**	**499,597**	**466,970**	**188,255**	**184,045**	**69,028**	**3,361,988**
Total Grade	4.49	4.27	4.88	4.53	5.30	5.16	4.58	4.68	4.36	42
Total Ounces	**67,492**	**66,802**	**78,486**	**72,742**	**85,078**	**77,523**	**27,711**	**27,680**	**9,682**	**513,197**

Table 15-2: Tousignant Zone development requirements.

	Year 1	Year 2	Year 3	Total
Total Capital Development	862	662	0	1,524
Total Operating Development	963	3,450	962	5,375
Total Development	1,825	4,112	962	6,899

15.1.6 Capital Development

Details of capital development are listed in Table 15-3 and Table 15-4.

Table 15-3: Capital development at Holt Mine.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total Capital Development	2,386	3,568	3,656	3,676	2,805	2,193	0	0	0	18,283

Table 15-4: Capital development at Tousignant.

	Year 1	Year 2	Year 3	Total
Ramps	612	462	0	1,074
Raising	150	0	0	150
Lateral	100	200	0	300
Total	862	662	0	1,524

15.1.7 Operating Development

Details of operating development are listed in Table 15-5 and Table 15-6.

Table 15-5: Operating development at Holt Mine.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total Operating Develop	3452	2,443	2,307	2,596	3,459	1,319	0	0	0	15,576

Table 15-6: Operating development at Tousignant.

	Year 1	Year 2	Year 3	Total
Lateral	963	3,450	962	5,375
Raising	0	0	0	0
Total	963	3,450	962	5,375

15.1.8 Equipment

The list of major mobile equipment is shown in Table 15-7. The 3.5 yd^3 Load-Haul-Dump (LHDs) and single boom jumbos will be the primary development and production units at the Holt Mine followed by the locomotives and four tonne rail cars for the transport of the ore to the shaft. It may be necessary to replace locomotives and batteries at the Holt Mine as the need arises.

Table 15-7: Major mobile equipment inventory at Holt.

Equipment #	Equipment description/ Model	Year
MNCR010	UPC MAN CARRIER	2009
MNCR012	KUBOTA MANCARRIER RTV900XT	2012
MNCR013	KUBOTA MANCARRIER RTV900XT	2012
MNCR018	KUBOTA MANCARRIER RTV900XT	2012
MNCR019	KUBOTA MANCARRIER RTV900X	2014
JMBO101	MTI JUMBO CDJ120/HC80	1995
JMBO102	MTI JUMBO CDL120 HC40	1995
JMBO104	MTI JUMBO CDL 124 HC80	1989
JMBO105	MTI JUMBO CDL 124 HC80	1989
SCOP200	2 YARD ST2D	
SCOP202	2 YARD JCI250M	
SLFT300	SCISSOR TRUCK	
HLTK307	EJC 416 HAUL TRUCKS	
BH007	KUBOTA DITCH DIGGER KX41-3V	2010
BH015	KUBOTA DITCH DIGGER KX41-3V	2012
BH017	KUBOTA DITCH DIGGER KX41-3V	2013
RB009	KUBOTA ROCK BREAKER KX057-4	2010
RB011	KUBOTA ROCK BREAKER KX080-3	2009
SCOP351	WAGNER SCOOP 3.5	1996
SCOP354	WAGNER SCOOP 3.5	1996
SCOP355	WAGNER SCOOP 3.5	1996
SCOP357	WAGNER SCOOP 3.5	1996
SCOP358	WAGNER SCOOP 3.5	1996
SCOP359	SCOOP 3.5 Caterpillar	2010
SCOP360	SCOOP 3.5 Caterpillar	2010
SCOP361	WAGNER SCOOP 3.5	1996
SCOP363	SCOOP 3.5 Caterpillar	13-Aug-12
SCOP364	SCOOP 3.5 Caterpillar	13- Feb-2013
SCOP365	SCOOP 3.5 Caterpillar	2013

SCOP366	SCOOP 3.5 Caterpillar	07-Nov-2013
SCOP401	JCI SCOOP 2.5 YARD	
SLFT410	SCISSOR TRUCK	2012
SLFT412	SCISSOR TRUCK	1995
MNCR425	KUBOTA MANCARRIER	2011
SLFT428	SCISSOR TRUCK	2012
MNCR512	KUBOTA MAN CARRIER M6800	
FKLT577	KUBOTA MNEMASTER FORKLIFT R420	
FKLT578	KUBOTA MNEMASTER FORKLIFT R520	
FKLT579	KUBOTA MNEMASTER FORKLIFT R420	
DIESEL WELDER	MILLER WEDLING MACHINE	
DIESEL WELDER	MILLER WEDLING MACHINE	
Rock Breaker1020	Teledyne Rock Breaker	
Rock Breaker900	Teledyne Rock Breaker	
LONGTOM #1	Longtom Air Drill	
LONGTOM #2	Longtom Air Drill	
Oil SatStat	Oil SatStat	
Fuel SatStat	Fuel SatStat	2013
Oil SatStat	Oil SatStat	2012
Fuel SatStat	Fuel SatStat	2011
Oil SatStat	Oil SatStat	2012
Fuel SatStat	Fuel SatStat	2011
Loci 02	Single Locomotive	
Loci 03	Single Locomotive	
Loci 04	Single Locomotive	
Loci 05	Mansha Locomotive	
Loci 06	Single Locomotive	
Loci 07	Single Locomotive	
Loci 08	Single Locomotive	
Loci 09	Single Locomotive	
Loci 10	Single Locomotive	2010
Loci 11	Single Locomotive	2011
Loci 12	Mansha Locomotive	2011
Loci 13	Single Locomotive	2011
Loci 14	Single Locomotive	2012
Loci 15	Single Locomotive	2012
Loci 16	Single Locomotive	2012
Loci 17	Single Locomotive	2012
Loci 18	Single Locomotive	2012
Loci 19	Single Locomotive	2013
Loci 20	Single Locomotive	2013
Ore Cars	Ore Cars~50 Total on all 3 levels	1988-2014

15.1.9 Production Rate and Life of Mine Plan

Production from the Holt Mine will increase from 1,260 tpd to 1,400 tpd over the next few years. For 2013 and 2014, production will rely heavily on Zone 4.

Zone 4 ore is delivered to the lowest loading pocket in the mine. The skipping time from this loading pocket coupled with the 1.5 km tramming distance from Zone 4 to the shaft maximizes a sustained production rate of approximately 1,000 tpd. As additional mining areas become available, the production rate will increase to approximately 1,400 tpd. For example, Zone 6 ore will report, in part, to the 890 m loading pocket rather than the 1110m; skipping time will be greatly reduced and will allow for the production rate increase. An average mining rate of 1,255 tpd is planned over the six year mine life (based on mineral reserves only). Since the Holt Mine is currently in production, no additional time is needed for activities typically associated with operation start up.

The Life of Mine plan (LOM) for the Holt Mine is shown in Table 15-8. The LOM plan for the Tousignant Zone is shown in Table 15-9.

15.2 Holloway

15.2.1 Design Criteria

Mining activities at the Holloway mine are planned to be concentrated in two zones: Smoke Deep, which is located between the Lightning Zone to the west and the Blacktop Zone to the east, and the Lightning/Middle Zone which is the main portion of the mine developed by previous owners. A vertical longitudinal section is shown in Figure 15-6.

Table 15-8: Holt Mine LOM plan.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total Ore Tonnes	**468,048**	**486,045**	**500,000**	**500,000**	**499,597**	**466,970**	**188,255**	**184,045**	**69,028**	**3,361,988**
Total Grade	**4.49**	**4.27**	**4.88**	**4.53**	**5.30**	**5.16**	**4.58**	**4.68**	**4.36**	**42**
Total Ounces	**67,492**	**66,802**	**78,486**	**72,742**	**85,078**	**77,523**	**27,711**	**27,680**	**9,682**	**513,197**
Mining Rate (tpd)	**1,282**	**1,332**	**1,370**	**1,370**	**1,369**	**1,279**	**516**	**504**	**189**	

Table 15-9: Tousignant Zone LOM plan.

(in 000)	Year 1	Year 2	Year 3	Total
Tonnes	37	134	37	208
Grade	6.68	6.68	6.68	6.68
Ounces	8	29	8	45

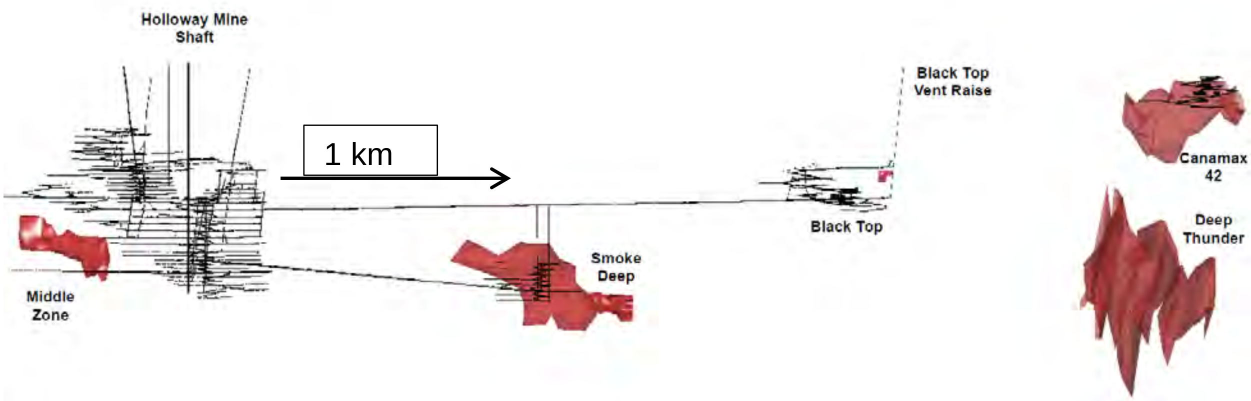

Figure 15-6: Holloway Mine vertical longitudinal section. (looking north)**.**

The Smoke Deep Zone extends vertically from 765 m to 945 m and is mostly open at depth and to the east. The zone is accessed via a 1.4 km long ramp from the 730 level at the Lightning Zone. The zone consists of steeply dipping ore and is amenable to long hole stoping mining method.

Ore is transported in the zone via an internal ore pass reporting to a chute on the 845 level. Ore is then transferred by 26 and 30 tonne trucks to the main ore pass on the 730 level in the Lightning Zone. In areas mined below the 845 level, the ore will need to be trucked up to the 845 level and then on to the 730 ore pass. Hauling of waste to the 730 level at the Lightning Zone is minimized by scheduling stopes so that waste can be used as backfill. Smoke Deep is serviced by a single vent raise. It extends from the 845 level to the 505 Blacktop access drift. Fresh air is forced down the main access ramp and up the internal Smoke Deep ramp system. Auxiliary fans feed individual levels from the ramp and the air is exhausted to the 505 level via the internal ventilation raise. Exhaust air splits on the 505 level with approximately half returning to the Lightning Zone and half travelling to the Blacktop return air raise.

Smoke Deep stopes access consists of a singular level access bisecting the ore sill (Figure 15-7). Stopes are mined longitudinally in a retreat fashion. Sublevels are spaced approximately 20 m apart vertically.

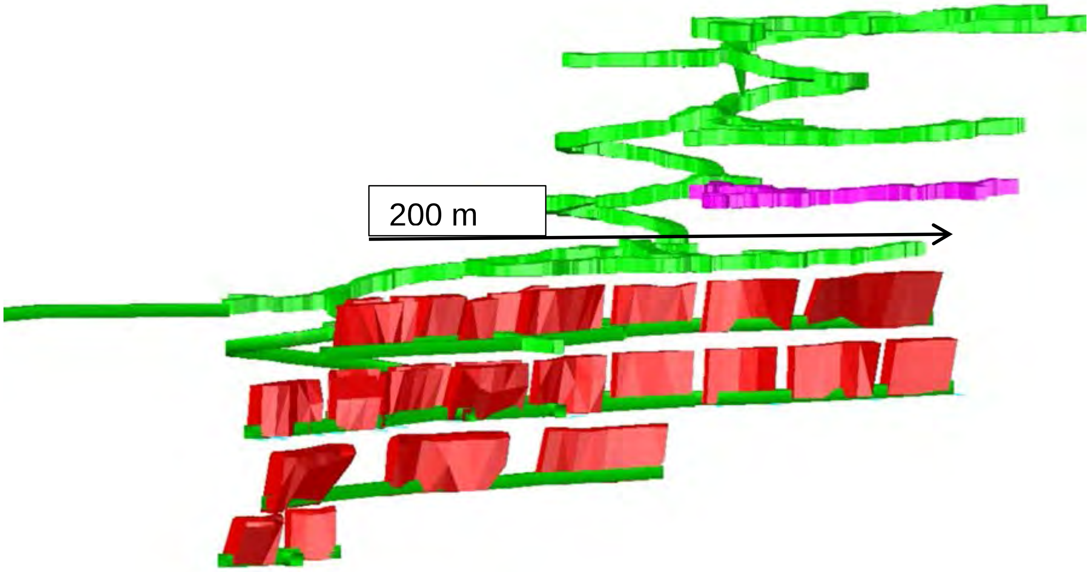

Figure 15-7: Smoke Deep vertical longitudinal section. (looking north)

Lightning / Middle Zone

The Lightning/Middle Zone extends from the 820 m level to the 150 m level and together they make up the main portion of the Holloway Mine. Remnant pillars made up the bulk of the 2013 production from the Lightning Zone, while the Middle Zone is a mixture of remnant pillar mining located between the 400 m and 650 m levels and new stoping areas on the 780 m level.

Mining activities in the Lightning/Middle Zones will benefit from existing infrastructure developed during previous mining activities. Access is via an existing ramp, which extends from the 870 m level to the 260 m level. Ore transport will be accomplished via the existing ore pass system using LHDs, with the exception of planned mining below the 730 m level, which will require the ore to be hauled to the 730 m level ore pass using 26 t and 30 t trucks.

15.2.2 Mining Shapes

Mineral resources were modelled in 3D using Datamine Studio 3. Mining shapes were then created within the indicated resource shapes on sections.

The block model was then run against the mining shapes and dilution and mining recoveries were then applied. Finally, each resulting shape was assessed independently and only the shapes that returned a positive cash flow were included in the mineral reserves.

15.2.3 Mining Method

The primary mining method at the Holloway Mine is open stoping. This has been the historical mining method used at the mine by previous owners. A steeply dipping ore body (60 to 70) is amenable to using this method. Drilling will be performed by top hammer drills with hole diameters ranging between 64 mm and 76 mm. Stoping is performed in a longitudinal retreat in order to minimize development costs. Rock is planned for use as backfill during stoping activities. Pillars have been designed to be left within low grade areas. A dilution factor of 15% has been applied to mining shapes at the Holloway Mine and a grade of 0.3 g/t was applied to dilution material. Mining recovery has been set at 90%.

15.2.4 Geomechanical

Reports by 1990 to 2003 authored by Noranda Technology Centre, Mines & Aggregates Safety & Health Association (MASHA) and Canmet related to the Holloway Mine are available on site. These reports provide relevant background information but are for the most part related to older areas of the mine. No adverse ground conditions have been reported throughout the mine. The planned mining methods all incorporate backfill or pillars and the stope dimensions are based on local experience.

Hanging wall support of longhole stopes are planned on a stope by stope basis. Based on the outcome of empirical analysis (i.e. Stability Graph) or geological information, hanging wall support may be required. In this case, 7 m long cable bolts (typically) will be installed.

Ground support in headings typically consists of 1.2 m friction bolt (e.g. Split Sets) in the walls and alternating rows of 0.5 m friction bolts and 2.1 m mechanical rock bolts in the back with wire mesh (Figure 15-8). In intersections and localized areas requiring extra support, 2.4 m resin-grouted rebars are used.

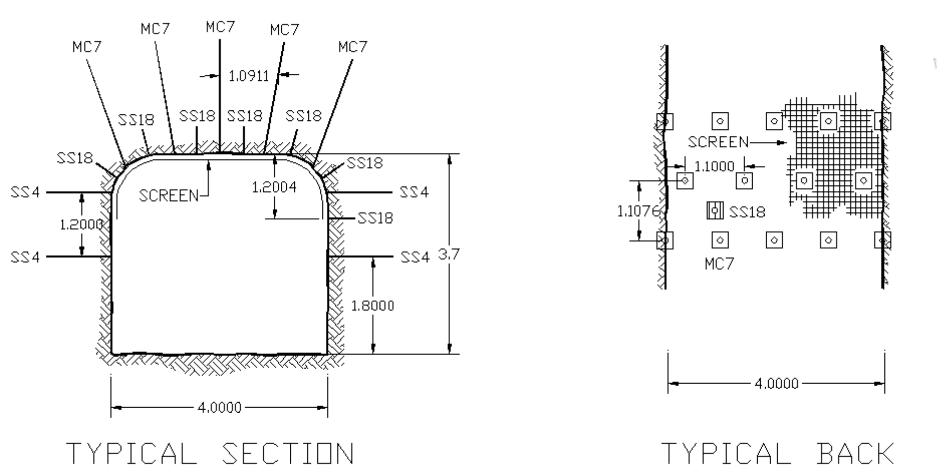

Figure 15-8: Ground support standard for typical Holloway drift.

15.2.5 Mine Access and Development

The mine is accessed by a 5.5 m diameter shaft that is 867 m deep and contains two hoisting compartments and a manway. The shaft is circular with concrete rings on a 1.5 m spacing and steel hardware. The main hoist is a 932 kW (1,250 hp) double drum (3.7 m) equipped with a 15 person cage over a ten tonne skip in balance with a second ten tonne skip. The production hoist is a refurbished 1957 Ingersoll Rand hoist. It can be run on automatic setting, with the hoistman controlling the loading pocket operation. The conveyance run on timber guides throughout the shaft at speeds of 7.6 m/s for skipping and 5.1 m/s for personnel travel. The hoisting system has a skipping capacity in excess of 200 tph. There is a smaller 4.9 m diameter shaft from surface to a depth of 441 m. This shaft was sunk for exploration but is now primarily used for ventilation and as an escape way. This shaft is equipped with an Ingersoll Rand 373 kW (500 hp) AC powered, double drum, double clutch hoist.

The hoist room is equipped to monitor compressed air and pumping.

Ramps

Development from the shaft is for rubber tire equipment (i.e. no track headings). There is no ramp connection to surface, but there are three internal ramp systems that provide access to the mine workings:

The West Block is serviced by a ramp from the 260 to 520 levels.

The East Block ramp extends from the 445 East level to the 650 level, ending on the 870 level. A haulage drift on the 505 level connects the East and West blocks.

The third ramp system services the Smoke Deep Zone and extends from the 865 level to the 765 level. The Smoke Deep Zone is connected to the East Block ramp via a 1.4 km incline from the 845 level to the 730 level.

Smoke Deep Zone

Planned development in the Smoke Deep Zone will be concentrated on completing existing levels above 945 sub-level and establishing ramp connection to the 965 sub level, and 985 sub-level

Lightning/Middle Zone

Planned development in the Lightning/Middle Zone will be concentrated in two areas:

- Establishing a 770 level and 750 level mining front to the west of the previously mined areas on 780 level. This will include the development of a ramp and the widening of existing workings.

- Development headings will also be driven on the 550 level and 650 level where the remainder of the planned development will be needed.

Total development requirements for the Holloway Mine are shown in
Table 15-10.

15.2.6 Capital Development

No planned capital development requirements for the Holloway mine.

15.2.7 Operating Development

Details are provided in Table 15-11.

15.2.8 Equipment

The equipment fleet consists of 7 yd^3 LHDs for production and development, single and two boom electrical hydraulic jumbos, longhole drills, 26 t haulage trucks, 30 t haulage trucks and support equipment (cable reel handler and a vehicle with a lift bucket). The equipment was, for the most part, in service and in use at the suspension of operations by Newmont. The equipment has been used since that time for the service, development and exploration work carried out by SAS.

The list of major mobile equipment is shown in Table 15-12.

Table 15-10: Development requirements at the Holloway Mine.

Type	2015	2016
Total Capital Development	**0**	**0**
Total Operating Development	**2,058**	**0**
Total Development	**2,058**	**0**

Table 15-11: Operating development at the Holloway Mine.

Type	2015	2016
Total Capital Development	0	0
Total Operating Development	2,058	0
Total Development	**2,058**	**0**

Table 15-12: Major mobile equipment inventory at Holloway.

Equipment #	Equipment description/ Model	Year
JMBO103	MTI JUMBO CDJ120 /HC80	1995
JMBO111	JC Jumbo - HC80	
107Boart	Boart Longyear	
108CUBEX	CUBEX 6200LH1	1996
HLTK303	WAGNER 426 HAUL TRUCK	2003
HLTK304	WAGNER 426 HAUL TRUCK	2003
HLTK305	EJC 430 HAUL TRUCK	
HLTK306	EJC 430 HAUL TRUCK	
SCPS356	JCI 300M SCOOP	1989
SCPS372	700M MTI SCOOP	1996
SCPS374	700M MTI SCOOP	1997
SCPS376	700M MTI SCOOP	1990
BMTK411	MARCOTTE BOOM TRUCK	1995
SLFT413	MARCOTTE SCISSOR LIFT	1995
SLFT414	MARCOTTE SCISSOR LIFT	1978
BMTK417	DUX BOOM TRUCK	1990
SLFT420	SCISSOR TRUCK	1995
MNCR507	TOYOTA MAN CARRIER	2009
MNCR508	TOYOTA MAN CARRIER	
MNCR509	KUBOTA MAN CARRIER M6800	
MNCR510	KUBOTA MAN CARRIER M6800	
MNCR511	KUBOTA MAN CARRIER M6800	
MNCR514	TOYOTA MAN CARRIER	2011
MNCR515	TOYOTA MAN CARRIER	2012
FKLT576	KUBOTA MINEMASTER FORKLIFT R420	2000
GRDR580	CAT GRADER 120G	1987
RB016	KUBOTA ROCK BREAKER KX161-3	2013
SCPS600	EJC210 SCOOP	
DIESEL WELDER	MILLER WEDLING MACHINE	
Asinii	KUBOTA MANCARRIER RTV900XT	2012
Cable Reeler	Fuzhou Launtop	

15.2.9 Production Rate and Life of Mine Plan

Based on the current level of mineral reserves, Holloway is nearing the end of its mine life (i.e. 2016). The mining rate is planned at approximately 500 tpd. The LOM plan includes the Smoke Deep Zone and the remaining stopes in the Black Top Zone. As it has been the case in the past few years, SAS is confident that conversion of mineral resources into mineral reserves will extend the mine life at Holloway.

The LOM plan is shown in Table 15-13.

Table 15-13: Holloway Mine LOM plan.

	2015	2016	Total
Tonnes	190,980	54,894	245,874
Grade	5.18	5.7	5.30
Ounces	31,822	10,060	41,882
Mining Rate	523	457	

16 RECOVERY METHODS

16.1 Process Plant Flow Sheet

Description of the current milling process is summarized from the previous NI 43-101 technical report. The SAS Metallurgist confirmed that no significant changes have been made to either the Mill or Mine site assay laboratory since the last technical report. The Holt Mill was constructed in 1988 and was originally designed for a throughput of 1,360 tpd. Expansions in 1988 and 2001 increased the throughput to 2,500 tpd and 3,000 tpd, respectively.

Surface ore storage is a total of 4,900 t in three silos, the Holt headframe bin (900 t) and two other separate storage bins (1,000 t and 3,000 t). Ore can be delivered to the mill from the Holt Mine by conveyor or from a separate surface dump that enters a 100 tonne hopper, and then can be fed to either of the two storage bins.

The grinding circuit consists of a 5 m diameter by 6.1 m long Allis Chalmers ball mill, converted to a SAG mill, a 4 m diameter by 5.5 m long Allis Chalmers ball mill (a converted rod mill) and a 3.6 m diameter by 4.9 m long tertiary ball mill, all operating in series and in closed circuit. The details of the grinding circuit are shown below in Table 16-1. The grinding circuit is controlled by a Wonderware system and Modicom programmable logic.

The primary cyclone cluster consists of six 381 mm (15”) Krebs D15B cyclones. A secondary cyclone cluster consists of twelve 254 mm (10”) Krebs gMAX cyclones with an Outokumpu PSI-200 online analyzer. The secondary cyclone cluster feeds a 27 m (90 ft) Eimco thickener. The thickener underflow feeds a pre-aeration tank, which gravity feeds five carbon-in-leach (CIL) tanks in series. The tank system is conventional gravity flow for slurry with counter-current carbon advancement

Precious metal stripping is performed in batch operations, advancing 2.7 t of loaded carbon through a 1.2 m by 2.4 m (4 ft x 8ft) Simplicity screen. Carbon is transferred to an adsorption column where a Zadra process is utilized as the gold elution method. Barren solution is circulated through two shell and tube heat exchangers and a 360 kW electric inline heater.

The resulting pregnant solution is pumped from the solution tank to an electro-winning cell. The gold precipitate is further refined using a 125 kW Inductotherm furnace and the doré bars are poured in a seven mould cascade arrangement. After stripping, the carbon is regenerated in a rotary kiln, quenched, screened and returned to the process. Carbon fines are collected in a tank, filtered in a Perrin press, and packaged for sale.

The process flow sheet is shown in Figure 16-1*.*

Reagents and operating supplies for the mill, such as process chemicals and grinding steel, are stored in the reagent storage building attached to the concentrator at the south end of the building.

Tailings Disposal

The tailings storage facility is located 2.5 km south of the process facilities. Tailings are pumped (at about 50% solids) via primary and booster pumps in a 254 mm HDPE pipe. The tailings pipe is equipped with two magnetic flow meters – one at the mill and the other at the tailings pond to monitor pressure differential. Excessive differences in flow will trigger an audible alarm. The tailings pipe is laid in a secondary containment capable of handling rock slurry in the event of a line burst.

The tailings storage facility is subdivided into four separate areas to receive the mill tailings and treat the solution that results from the milling of up to 3,000 tpd*.*

The quality of water discharge relies on natural degradation of cyanide and precipitants of other metals through the use of ferric sulphate. The annual discharge to the environment is closely monitored. The annual allowable discharge is a function of the water quality in the polishing pond and the flow rate in the receiving waters*.*

All of the tailings dams were designed by Golder Associates, and Golder has carried out the dam safety inspections. The tailings management facility (TMF) is divided into a series of four basins: the North basin, the Southwest Basin, the Southeast Basin and the Polishing Pond *(*Figure 16-2*).* The North Basin was originally formed in a valley by the construction of perimeter dams. The capacity of the North Basin was increased in 1995 by raising the dams and constructing additional dams. The Southwest Basin, Southeast Basin and the Polishing Pond are all contained by dams*.*

To date all of the tailings deposition has been into the North and Southwest basins. The current practice is to transfer tailings contact water from the North and Southwest basins into the Southeast Basin by pumping. Water is then transferred to the Polishing Pond from which it is released to the Magusi River. The effluent discharge is not permitted to exceed one-tenth of the flow in the Magusi River in the summer months and one-fifth during spring and in the fall.

There are five stages of TMF development, with associated permitted water levels and tailings levels. Up to 3.6 Mt of the tailings will be deposited in the Southwest and Southeast basins. Tailings deposition design is based upon an in situ void ratio of 1.0, a specific gravity of 2.65 and an inferred dry density of 1.33 t/m^3. Slopes of 0.6% were assumed for sub-aerial deposition and slopes underwater were assumed to be 2.5% slopes.

The ultimate storage capacity of the Southwest Basin is calculated to be 1.43 Mt of tailings. There is space for the deposition of 0.7 Mt before the dam heights must be increased. The Southeast Basin has the capacity for 2.17 Mt of tailings. Golder has also developed the water management plan to be used with the deposition plan.

Laboratory

The assay laboratory is located at the Holt site in an area near but separate from the mill and previously used as an assay lab. The building was renovated and a sample preparation area, fire assay facilities and an AA facility were established to provide analytical services for the site.

Table 16-1: Details of the grinding circuit.

Data	Primary SAG mill	Secondary Ball mill #1	Tertiary Ball mill #2
Diameter (m)	5.0	4.0	3.6
Length (m)	6.1	5.5	4.9
Motor (hp)	3,400	1,650	1,250
Ball charge (%)	8-12	45	40
Grinding media	5" balls	2" balls	1" balls
Media consumption (kg/t)	0.75	0.30	0.45
Speed (rpm)	13.9	16.2	17.3
Critical speed (%)	72.5	76.5	71.0
Circulating load (%)	10-15	350	225
Power draw (kWh)	2,250	1250-1450	750-900
Lifters	Polymet	Rubber	Rubber
Liners	Polymet	Rubber	Rubber
Discharge grates (mm)	18-30 mm by 40 mm	Overflow mill	

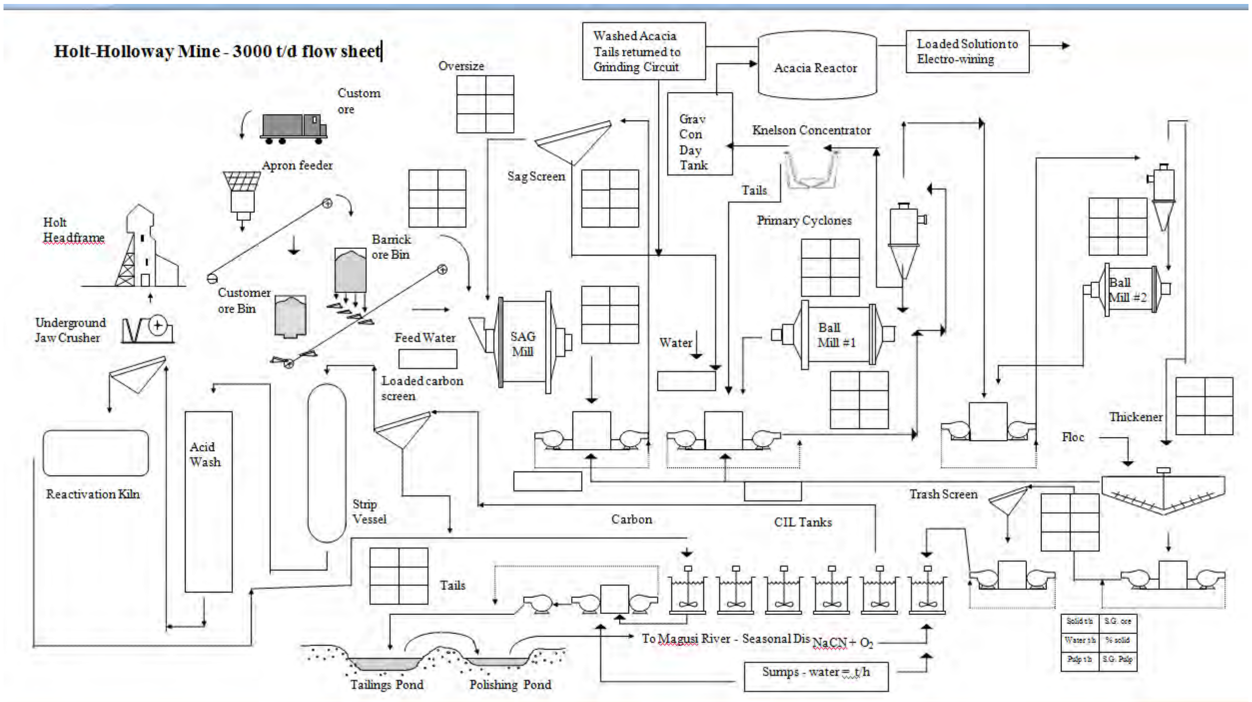

Figure 16-1: Process flow sheet.

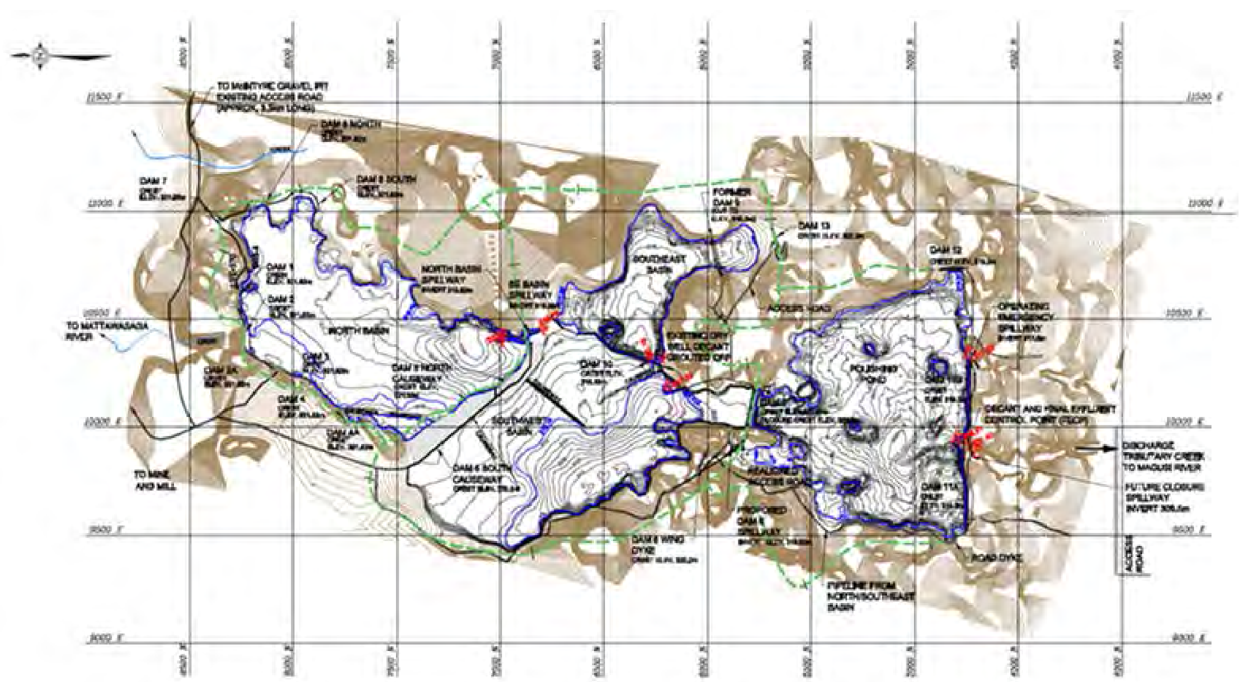

Figure 16-2: Tailings management facilities.

In the QP's opinion, there are no processing factors or deleterious elements that could have a significant effect on potential economic extraction at the Holt-Holloway mines.

17 PROJECT INFRASTRUCTURE

17.1 HOLT

17.1.1 Surface Buildings

Surface buildings at the Holt property were erected by previous owners. The main ones are:

- A security gate house;
- A hoist house;
- A headframe;
- Administration building (housing Engineering, Geology, Operations, Administration, two dries and conference rooms);
- Surface Maintenance Shop and offices;
- Assay lab building;
- Exploration Trailer;
- Mill building (including two bins, conveyor and thickener);
- Surface sub-station and control room;
- Various storage buildings;
- Backfill Plant and Silos; and,
- A scale house.

The Holt surface general layout is shown in Figure 17-1.

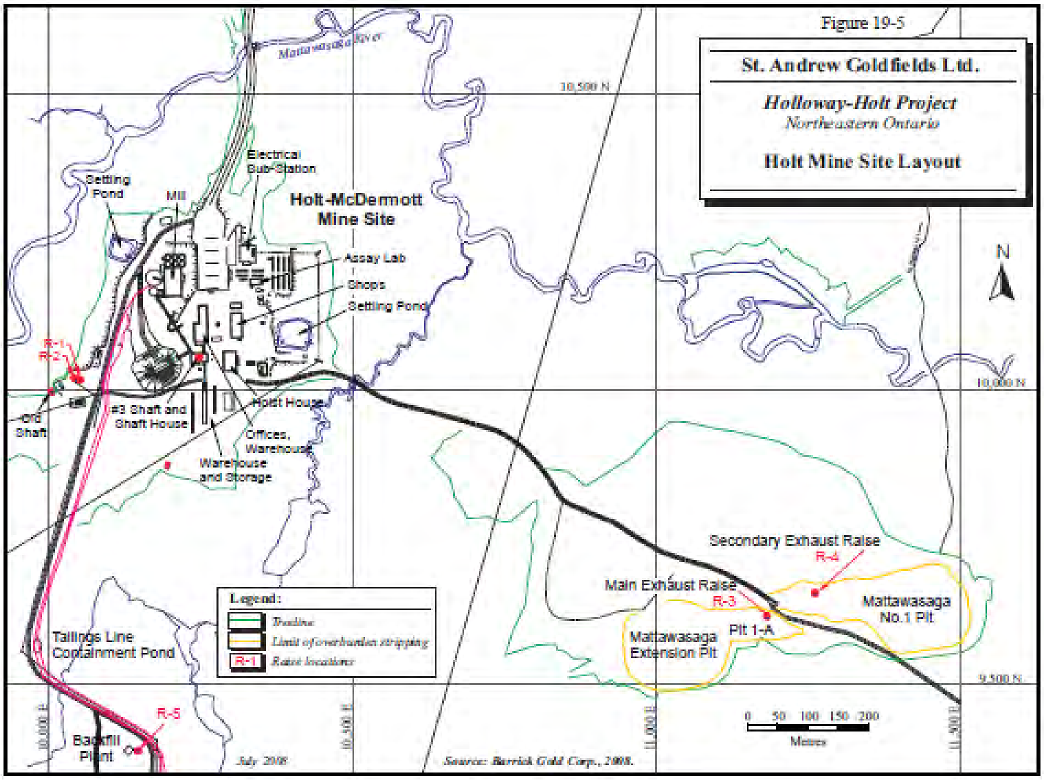

Figure 17-1: Holt property surface general arrangement (After SWRPA, 2008).

17.1.2 Road Upgrade and Ore Transportation

Ore from the Holt Mine is dumped directly into the surface ore bins from the skips via a conveyor belt. Construction of an approximately 3 km long haulage road will need to occur once the Tousignant project commences. The road will start at the portal and end at the grizzly already established near the Holt Mill.

17.1.3 Power

Power is supplied from the provincial electrical grid by Ontario Power Generation (OPG) and is delivered to transformers for the mine and mill at Holt. The site has a limited amount of emergency standby diesel generation capacity to maintain critical items in the mine and mill. There is one 800kW generator at the Holt Mine. The underground is serviced by two feeders. Power is supplied to the mine and distributed at 4,160 V with 4,160 V/600 V transformers as needed, to supply areas. The feeder cables have been expanded to Zone 4 and Zone 6.

17.1.4 Underground Mine Dewatering and Fresh Water Requirements

Fresh Water

Water from the abandoned upper workings is directed via a ditch flow and a series of drain holes to the 400 m level and the 530 discharge pump staging level. A dam is located on the 400 m level. It supplies all of the required clean water to the levels below 400 m level. The excess water is sent to the 530 pump staging area.

Dewatering

All active heading water discharge is directed via a series of drain holes to a clean and dirty water sump complex in each mining area. Excess fine particles are removed from the dirty water sumps by LHDs. Clean water from these sumps is pumped by air or electric pumps. The water is discharged to each levels main sump. From the main sumps water is pumped by electric pumps to the 1110 m Geho pump dam or the 1075 m Jet pump dam.

The 1110 m Geho pump discharges to the 530 m pump staging area at a rate of 35 m^3/h and can handle up to 60% solids. The 149 kW (200 hp) 1075 m jet pump is a backup system for the Geho and can pump up to 40 m^3/h of clean water. It also discharges to the 530 m pump staging area.

All discharge water from the Geho or Jet pump report to a cone sump on the 530 m level. A flocculent is added to the cone sump to precipitate solids to the bottom of the sump. These solids are then pumped via a SLR pump to abandoned stopes in the south zone. The clean water overflow is pumped to surface via two 149 kW (200 hp) Jet pumps capable of pumping 40 m^3/h each.

Total mine discharge averages 1,200 m^3/day to 1,500 m^3/day.

17.1.5 Underground Mine Ventilation

Primary ventilation at Holt is delivered by a 3-stage push-pull system, as described in Table 17-1.

Table 17-1: Primary ventilation system at the Holt Mine.

Stage	Power	Location
1st Stage	250 hp	Surface fresh air raise
	125 hp	Surface fresh air raise
2nd stage	100 hp	650 Level
	100 hp	650 Level
	75 hp	700 Level
3rd stage	250 hp	Surface return air raise
	125 hp	Surface return air raise

The primary ventilation system delivers a total airflow of 117 m^3/s to the underground workings. Both fresh air raise intake fans are equipped with propane burners (capacity of 117 MWh or 40 MBTU), which are used to heat the mine air during winter. The 186 kW (250 hp) surface fresh air fan feeds a 3.0 m diameter fresh air raise (FAR) to the 350 m level. The 93 kW (125 hp) surface fresh air fan feeds a 1.8 m diameter FAR to the 300 m level. Fresh air then travels through a series of raises to the 1075 m level.

At the 1075 m level, the fresh air stream splits: the first air stream ventilates the mining areas of C-104 and Zone 6, while the second air stream ventilates the mining areas of Lower Zone 4, then ascends an Alimak raise to 925 level, where it ventilates the mining areas of Upper Zone 4.

Both air streams join and ascend the C-104 ramp and stopes to the 2^{nd} stage fans. After the 2^{nd} stage fans the air ascends raises to the 435 m level, 350 m level, and upwards to the 3^{rd} stage Return Air Raise (RAR) fans.

17.1.6 Underground Material Handling

Ore and Waste Handling

In Upper and Lower Zone 4 and in Zone 6, ore and waste from development headings are mucked with 3.5 yd^3 LHDs. Stope ore is mucked via remote controlled 3.5 yd^3 LHDs. The ore and waste is dumped into an ore or waste pass system. Waste is re-mucked into excavated stopes and used as back fill. Ore is re-mucked with another 3.5 yd^3 LHD and loaded into ore cars.

Zone 6B ore is mucked to an ore pass equipped with a grizzly and a mobile rock breaker located on each level. This ore reports to a series of chutes on the 1075 level where it is pulled into ore cars.

Ore from both Zone 6, Upper and Lower Zone 4 will report to a central ore pass system with grizzlies and rock breakers and will be pulled from a chute into ore cars.

Muck is transported from the active zones on 40 lb rail using tandem five ton Warren Loci's and five ton ore cars. These tandem Loci's can pull as many as eight ore cars at a time.

This muck is dumped using a Teledyne car dumpers near the shaft stations into the main ore pass, which reports to the 1110 crusher where the muck is reduced to an appropriate size for the mill grinder. From the crusher the muck is sent to the 1145 loading pocket where it is skipped to surface in eight ton skips.

The ore from Zone 6 will be transported by the same system but will report the 845 crusher and then to the 890 loading pocket.

Material Handling

Supplies required daily are sent underground via flat cars. Fuel and oils are sent via fuel/oil tanks mounted on flat cars and pumped into satellite fueling stations. All supplies are trammed to the active headings via locomotives.

Large gear and equipment are stripped down to fit in the shaft and are slung under the cage and re-assembled in the underground shops.

17.1.7 Communications

The communication network allows interfacing between the telephone system and the fibre optic system. A site-wide leaky feeder communication system has been installed. Communication facilities include site wide two-way radios, underground and surface paging phones, digital telephone service to offices and specific areas underground, and a cellular phone for the security staff.

17.2 HOLLOWAY

17.2.1 Surface Buildings

Surface buildings at the Holloway property were erected by previous owners. The main ones are:

- A security gate house;
- A main shaft hoist house;
- The production shaft headframe;
- The exploration shaft Headframe;
- The exploration shaft hoistroom;
- An administration building (housing Engineering, Geology, Operations, Administration, dry, maintenance shop, core shack and conference rooms);
- A surface sub-station and control room;
- A backfill plant and silos;
- A Quonset hut; and,
- A contractor’s garage.

The Holloway surface general layout is shown in Figure 17-2.

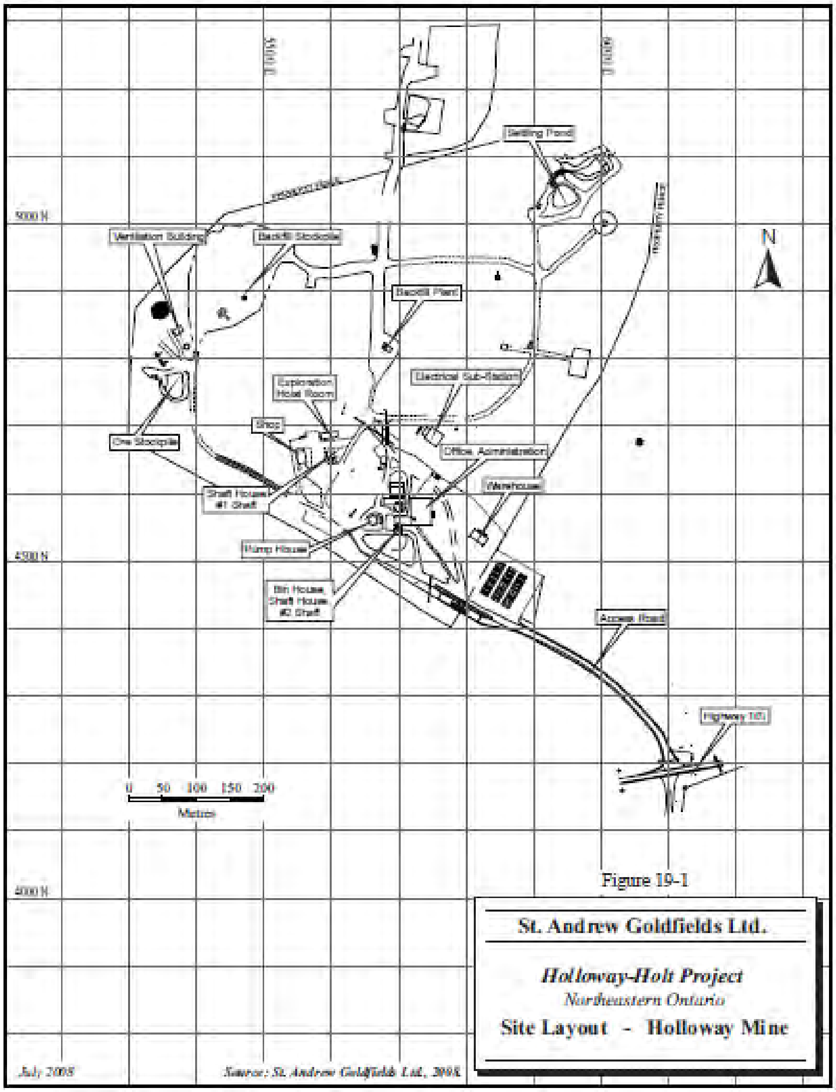

Figure 17-2: Holloway property surface general arrangement (After SWRPA, 2008).

17.2.2 Road Upgrade and Ore Transportation

Ore is transported from the Holloway shaft ore pile to the Holt mill via 20 t truck via the mine site access road.

17.2.3 Power

Power is supplied from the provincial electrical grid by OPG and delivered to separate transformers, one at each of the sites. The Holloway surface power substation is equipped with two matched 115 kV to 4,160 V, 7.5 MVA step down transformers, a primary circuit interrupter and five kV switchgear. The substation also includes a tie breaker, which allows the plant to be operated from one transformer, and a 600 kW generator, which can operate essential services such as pumping and heating.

Two 4,160 V feeder cables in the shaft supply electricity to underground substations. Transformers located underground distribute electricity throughout the mine. None of the existing work areas will require any significant changes to the power distribution system in the near future.

17.2.4 Underground Mine Dewatering and Fresh Water Requirements

Fresh water comes from a well for utility purpose (e.g. shower, taps). Water is processed through a water softener and chlorine is added. Water is transferred to two 2.3 m^3 (500 gallons) tanks. Water goes to hot water tanks and services.

All active heading water discharge is directed via a series of drain holes to a clean and dirty water sump complex in each mining area. Excess fine particles are removed from the dirty water sumps by LHDs. Clean water from these sumps is pumped by air or electric pumps. The water is discharged to each levels main sump.

Two Flygt pumps at shaft bottom pump to the 750 conical sump down to the 780 level dam. From the 780 level the water is pumped to the 505 level dam (one Jet pump and one Mather Platt pump). On the 505 level, the water is pumped to surface with two Mather Platt pumps. Water on surface is directed to the Holloway pond. The water in the pond is pumped to a 9.1 m^3 (2,000 gallons) tank while the excess water in the pond is directed to Holt East pond. The water on the 505 level supplies the water for mine services purpose as well. The water is then pumped to the 400 level #1 shaft dam via one jet pump. The water on the 400 level #1 shaft dam is pumped to the 400 water box at #2 shaft. The water supplies underground mine services. If there is not sufficient water available, water will be drawn from a 9.1 m^3 (2,000 gallons) tank on surface to the 200 water box down to 400 to mine services.

The 9.1 m^3 (2,000 gallons) surface tank supplies water in case of fire (75% of the tank).

17.2.5 Underground Mine Ventilation

The mine ventilation system has a capacity of 212 m^3/s and uses one fresh air raise. The airflow is distributed independently to the east and west sides of the mine using two internal ventilation raises. Return air is exhausted through the ramps to the two shafts and one exhaust ventilation raise. The main surface fans have variable speed motors. As a result, the amount of air sent to the underground workings can be adjusted based on the operating requirements, yielding power and propane savings.

The fans are 2.1 m diameter fixed blade Alpha Air fans, driven by two variable speed, 373 kW (500 hp) squirrel cage motors. Six vertical propane heaters provide direct firing capacity to 11.7 MWh (40 MBTU per hour). The fan speeds and stench gas injection system can be controlled from the hoist room. Monitoring of the plant includes measurement of carbon dioxide and temperature in the air stream, fan vibration, and speed output of the fans.

With production from all areas simultaneously, there is sufficient capacity in the ventilation system to service the mine. A system of auxiliary ventilation using portable fans and ducting and short ventilation raises are used to move air to work places.

17.2.6 Underground Material Handling

Ore and Waste handling

The ore and waste material from development headings are mucked with 7 yd^3 LHDs. Stope ore is mucked via remote controlled 7 yd^3 LHDs.

The ore and waste is dumped into an internal ore or waste pass system. The material from the Smoke Deep Zone is hauled with 426 truck to the shaft ore and waste pass system. The capacity of the trucks is 20 t. The waste material is either used as back fill or is hauled to the shaft waste pass depending on stopes availability. The material from the Middle and Lightning Zones is hauled with 7 yd^3 LHDs into internal pass system. The material is transferred to the shaft pass system with an LHD. The ore material is crushed (~89 mm diameter) via a jaw crusher and loaded into a 9.6 tonnes skip.

Material handling

Supplies required daily are sent underground via the cage. Fuel and oils are sent via fuel/oil tanks mounted and pumped into satellite fueling stations. All supplies are moved to the active headings via a forklift.

Large gear and equipment are stripped down to fit in the shaft and are slung under the cage and re-assembled in the underground shops.

17.2.7 Communications

The communication network allows interfacing between the telephone system and the fibre optic system. A site-wide leaky feeder communication system has been installed. Communication facilities include site wide two-way radios, underground and surface paging phones, digital telephone service to offices and specific areas underground, and a cellular phone for the security staff.

18 MARKET STUDIES AND CONTRACTS

18.1 Market for the Product

The QP has reviewed SAS contract with the refiner and he is satisfied that the contract reflects industry norms and reasonable market terms for selling Holt and Holloway gold production.

18.2 Material Contracts

Surface and Underground contract drilling was recently awarded to Asinii Diamond Drilling based in Notre dame du Nord (QC). The contractor possesses the necessary equipment, well trained personnel, replacement part inventory and have well documented drill experience on the property. These contracts can be discontinued by SAS at any time with advance written notification.

Mine contractors used at the Holt and Holloway operations are Dumas Mine Contracting (underground development) and Boart (Production drilling). Explosives products are provided by Nordex Explosives. The main products used are: ANFO, cartridge explosives and detonators. Mill reagents are supplied by Cyanco. Fuels are provided by Co-op, and ground support products are provided by Jennmar Canada.

Security services at the Holt and Holloway sites are provided by Garda. Security personnel are always available on site, 24 hours per day.

Contracts are awarded through a tender process. The duration of the contracts is usually less than two years.

19 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The Holt-Holloway mine site utilizes an Environmental Management System (EMS). This system embodies a recurrent review process of site environmental policies and procedures, permits and approvals. The EMS system repeatedly audits and sustains waste and hazardous waste management, recycling, landfill management, water and wastewater treatment and monitoring programs throughout the site.

This process is kept current though EMS revisions included as part of the continuous improvement review cycle. The EMS thus forms the basis for the monitoring, sampling, and reporting program requirements under each of the pertinent governmental agencies. More importantly, this allows verification that all the activities at the Holt and Holloway mines comply with government and company standards.

The Holt and Holloway mines utilize underground and surface water as part of the mining and milling process, in addition to domestic consumption. Water is collected, monitored, treated and released through an approved, regulated industrial sewage works.

19.1 Summary of Environmental Studies

19.1.1 Terrestrial Environment

Surveys have been undertaken to provide further details on terrestrial vegetation and wildlife in areas that may be affected by mining activity, such as in the vicinity of the overburden and waste rock storage piles. Depending on the final detailed designs, additional studies may be undertaken.

19.1.2 Hydrogeological Characterization

Regional Surface Water Hydrology

Holt (Shaft #3)

The Holt Mine traverses two drainage systems, the Mattawasaga River system to the north and the Magusi River system to the south. The mine and mill site drains into the Mattawasaga River, which has an upstream drainage basin of approximately 45 km^2. The Tailings Management Facilities (TMF) area drains into the Magusi River system, which has a drainage basin of approximately 215 km^2. Both systems carry heavy suspended solids loading during high water, owing to the prevalence of clay and silt substrates.

Water Survey of Canada stream flow records for two non-regulated watercourses (the Porcupine River - watershed area of 410 km^2 near Timmins - and the Blanche River - watershed area of 1,780 km^2 near Englehart) are available to calculate average runoff yield for the region. For the period between 1977 and 1993, the mean annual runoff was measured at 439.0 mm for the Porcupine River at Hoyle, and 400.5 mm for the Blanche River above Englehart. The average runoff value from the two watersheds is 420 mm.

The majority of runoff occurs in the spring, coincident with the snow melt. A second, much smaller, runoff peak typically occurs in October or November. Lowest runoff conditions normally occur during the mid-winter months (January through March), when precipitation is accumulated and held as snow and ice. A second period of relatively low flow occurs in mid to late summer.

Holloway (Shaft #2)

The Holloway project site straddles two watersheds: the Lightning River watershed and the Mattawasaga River watershed, both of which drain into Lake Abitibi.

Water pumped from the Holloway Mine is discharged into a settling pond system. The decant in the settling pond system allows the clarified mine water to either be discharged through a MISA control point into the Lightning River watershed. Alternatively, it can be pumped through a pipeline into the Holt Tailings Management Facility (TMF) permitted municipal industrial sewage works. In recent years, all mine water discharge has been directed into the Holt TSF.

Surface runoff from the Holloway yard area drains into the Mattawasaga River.

Mine discharge contributes approximately 250 m^3/day during normal operations. The baseline flow is estimated at 150 m^3/day during periods without mining operations.

Results of a baseline study suggest that the flow in the Lightning River averaged 2,500 m^3/day. This provides a minimum dilution ratio of 10:1 during normal operations and 16.7:1 during temporary suspension or inactivity.

The hydrological characteristics of the Lightning River watershed drains an area of 105 km^2, directly to the north and encompassing a portion of the project site. There are three main tributaries, Trollope Creek and two un-named branches (Branch 1 and Branch 2), which drain the western and southern portions of the watershed.

The upper system is characterized by a hydrograph, which peaks rapidly in response to rainfall and snow melt events.

Very little base flow is evident in the system and can be related to the predominance of relatively impervious clay solids with a high run-off coefficient and limited groundwater inputs.

The Mattawasaga watershed drains an area of 45 km^2, opposite the mine site, and is of strongly meandering form and low gradient.

Surface Water Quality – Pre-Development Conditions

In general, the pre-discharge conditions for the Magusi and Mattawasaga rivers are characterized by brown coloured water imparted by humic acids and turbid conditions. Suspended solids levels range from lows of less than 5 mg/L during periods of ice cover and low flows, to highs in the range of 30 mg/L to 60 mg/L during high flow conditions. Elevated suspended solids values are characteristic of local rivers flowing over a predominantly clay and silt substrate.

Closely associated with elevated suspended solids levels are high background concentrations of iron. Average iron concentrations during the pre-discharge monitoring period ranged from 0.90 mg/L to 1.55 mg/L. These background levels are higher than the Provincial Water Quality Objective (PWQO) for iron of 0.3 mg/L, but are typical of local river systems.

Copper concentrations in the Magusi and Mattawasaga Rivers during the pre-discharge period were also characteristically high, ranging from 0.001 mg/L to 0.044 mg/L, frequently exceeding the PWQO value of 0.005 mg/L. Concentrations of nickel were generally low and below the PWQO objective of 0.025 mg/L. Zinc concentrations fluctuated markedly throughout the year with mean values of 0.008 mg/L to 0.025 mg/L, with values exceeding occasionally the PWQO value of 0.030 mg/L. Arsenic concentrations were quite low, being less than 0.02 mg/L and generally less than 0.002 mg/L.

High variability in water temperature was observed, with spring and summer temperatures reaching 24°C in May 1991. Dissolved oxygen levels were between 7 mg/L and 12 mg/L, which are consistent with what might be expected in a northern watershed. Turbid conditions were observed on the Lightning River with Secchi depth measurements of 7 cm to 49 cm. Branch 1 was notably clearer, with Secchi depths of up to 50 cm to 70 cm.

Streams in the project vicinity are described as neutral to slightly acidic, with pH values ranging between 5.5 and 8.3. Only three samples taken during field sampling were outside of the PWQO values of between 6.5 and 8.5. Alkalinity ranged from 3 mg/L to 180 mg/L, while hardness ranged from 17 mg/L to 162 mg/L.

Nitrogen content, (in the form of nitrite, nitrate, Total Kjeldahl Nitrogen and total ammonia), was measured at all stations. Ammonia concentration tended to increase during winter months when ice cover leads to lower oxygen levels.

All monitoring stations along the Lightning River during the baseline study showed iron levels greater than the PWQO of 0.3 mg/L. The average iron concentration was 1.6

mg/L, ranging from 0.54 mg/L to 11 mg/L. These levels are naturally occurring and are common in northern Ontario. They are commonly associated with high suspended solids levels. Suspended solids levels ranged from less than2 mg/L to 44 mg/L.

19.1.3 Hydrological and Aquatic Habitat Assessments

Hydrological assessments in the past were in large part developed by pro-rating regional flow data to the local watershed areas. Current studies are focusing on developing more accurate estimates of stream flows, runoff volumes and site drainage patterns associated with the existing mine site and future developments. Efforts include detailed watershed mapping initiatives, as well as the development of a stream flow monitoring station on the Magusi River. This information will be important in assessing potential adverse environmental effects to the downstream aquatic receiving environment and assisting in storm water management planning activities. Aquatic habitat assessments undertaken in the past were based on data collection initiatives recommended in prior studies, in the context of the proposed project, and additional sampling of stream sediments, water chemistry and benthic macro invertebrates were also undertaken. As well, future aquatic assessment programs will be expanded to include areas that could potentially be affected by future mining activity. Of particular importance is the thorough assessment of potential fisheries habitat areas in the areas of proposed mine development.

19.1.4 Waste Characterization Studies

A comprehensive geochemical characterization of all mine waste materials is to be completed to support the development of an integrated water and waste management plan for the site. In developing the mine model, waste and host rock materials have undergone a comprehensive geological classification to ascertain the total volumes of materials that will be generated. Representative samples from each type of waste material were selected and tested for their acid generating and metal leaching potential as per the relevant guidance documents.

19.2 Tailing Management Plan

Ore will be processed at the Holt site process plant where there are four individual ponds: two tailing ponds, one sludge precipitate pond and one polishing pond. Within these tailings facilities are 18 individual dam structures, a total of 465.4 ha of watershed area and 212 ha of tailings area. The remaining storage capacity is approximately 4.2 Mm^3. The tailings facilities are in compliance with all governmental regulations.

19.3 Permits Status and Posted Bonds

Permits related to the operation of the Holt and Holloway mines and mill complex are displayed in Table 19-1.

Table 19-1: Permits related to the Holt and Holloway mines and mill complex.

Agency	Item	Description	Site	Expiration	Status
MOE	CA# 3380-8JBGKZ	Tailings Basin	Shaft #3	N/A	Active
MOE	CA # 7071501	Waste Disposal Site (WDS)	Shaft #3	N/A	Active
MOE	CA # A770114	Landfill	Shaft #2	N/A	Active
MOE	CA # 4-0077-85-006	East Settling Pond	Shaft #3	N/A	Active
	CA # 4-0077-85-006 Rev.1	East Settling Pond	Shaft #3	N/A	Active
	CA # 4-0077-85-006 Notice 1	East Settling Pond	Shaft #3	N/A	Active
MOE	CA # 3-0013-87-958	Sewage Treatment Plant	Shaft #3	N/A	Active
	CA # 3-0013-87-958 Notice 1	Sewage Treatment Plant	Shaft #3	N/A	Active
MOE	CA # 4-0135-94-956	Mine Water Settling Pond	Shaft #2		Active
MOE	Use Permit No. T-94-170	Raised Septic System	Shaft #2	N/A	Active
MOE	Use Permit No. M-92-13	Ten Man Camp and Kitchen	Shaft #2	N/A	Inactive
MOE	Use Permit No. M-92-14	Twenty Man Camp and Dry	Shaft #2	N/A	Inactive
MOE	CA # 70-0008-87-006	Potable Water Plant	Shaft #3	N/A	Active
MOE	CA# 7-0657-95-006	Potable Water Treatment System	Shaft #2	N/A	Active
MOE	CA #6148-6G8GMP	Mine Ventilation System & Blacktop Exhaust Raise	Shaft #2	-	Active
MOE	CA # 3388-4U4KB7 Revoked	Shaft #3 (Holt-McDermott Air Emission)	Shaft #3	N/A	Active
	CA # 5756-65ZNG7 Notice 1			Permit Pending	
MOE	CA # 8-5075-94-006	Service Building Ventilation Exhausts	Shaft #2	N/A	Active
MOE	CA# 8-6010-95-006	Diesel Engine for Fire Pump	Shaft #2	N/A	Active
MOE	CA # 8-6061-95-006	Mine Ventilation System	Shaft #2	N/A	Active
MOE	CA # 8-5085-93-957	Backfill Baghouse and Scrubbers	Shaft #2	N/A	Active
MOE	CA # 4518-4WRNJS	Fire Equipment, Welding Exhausts, Diesel Generators	Shaft #2	N/A	Revoked
MOE	PTTW # 00-P-6063	Construction 2000	Shaft #3	Oct. 31/01	Inactive
	PTTW # 01-P-6013	Construction 2001		May 1/02	Inactive
MOE	PTTW #5261-6UXJKV	Holt-McDermott Mine Dewatering Camp and Drill Water	Shaft #3	Oct.. 27/16	Renewal
MOE	PTTW # 7855-9JEKBC	Mattawasaga & Holloway Lake Water Supply	Shaft #3	Apr 30/19	Active
MOE	PTTW # 5356-9JEKZN	Holloway Mine Dewatering	Shaft #3	Apr 30/19	Active
MOE	PTTW # 2083-9JEKRH	Potable Water Supply	Shaft #3	Apr 30/19	Renewal
MOE	PTTW # 5681-6UYNHJ	Mine Dewatering and Diamond Drill Hole	Shaft #2	Nov. 01/15	Active
MOE	PTTW # 5024-6UXQRW	Well #1	Shaft #2	Nov. 01/15	Active
MOE	PTTW # 4408-6UYP2J	Well #2	Shaft #2	Nov. 01/15	Active
MOE	MOE Letter	Name Change	Shaft #3	N/A	Active
MOE	MOE Letter	Waste Registration Numbers	Shaft #3	N/A	Active
		On Line Registration for 2002/2003 HWIN			
MOE	Waste Generator Registration	Generator No. ON2610201	Shaft #2	N/A	Active
MOE	MOE Letter	Magusi River Flow Calibration	Shaft #3		Active
MOE	CA # 8-5025-92-006	Underground Backfill	Shaft #3	N/A	Active
TC	Transportation of Dangerous Good Registration	TDG Registration	Shaft #2	N/A	Active
MNR	No. 15622 No. 33724 No. 17950	Aggregate Permit	Shaft #3	Each Year End Dec. 31st	Active
MNR	No. TM-KL-77	Polishing Pond Expansion	Shaft #3		Inactive
MNR	Permit # KLK-05-13	Fire Permit	Shaft #2 & 3	Annual	Active
MNR	Work Permit KL01-01	Construction 2001	Shaft #3	Mar. 31/02	Active
	Work Permit	Construction 2002-2003		TBA	
DFO	Authorization and Amendment	Polishing Pond Expansion	Shaft #3	Oct. 1/05	Active
DFO	Sediment and Erosion Protection Acceptance	Polishing Pond Expansion	Shaft #3	N/A	Inactive
AECB	No. 08957-1-09.1	Radioisotope License	Shaft #3	Sept. 30/12	Active
MOL	T148 C, D,&E	Hoist Permit	Shaft #3	N/A	Active
MOL	96047A&B, 96048U,J&K	Explosive Magazines	Shaft #3	N/A	Active
MNDM	Closure Plan 2006	Director Acceptance	Shaft #2	N/A	Active
MNDM	Closure Plan 2006	Director Acceptance	Shaft #3	N/A	Active
MNDM	Closure Plan 2005	Director Acceptance	Blacktop	N/A	Active

19.4 Social and Community

As part of the Closure Plan process Aboriginal and Public consultation informs the communities of the project.

SAS has signed an Impact and Benefit Agreement (IBA) with the Wahgoshig First Nation and a Memorandum of Understanding (MOU) with the Matachewan First Nation.

19.5 Closure Plan

As part of the Holloway Mine development phase, a Closure Plan was submitted to government agencies as required under the Mining Regulations. The mine received government approval of this Closure Plan in 1996. In 2005, an addendum to the Holloway Shaft #1 and #2 Closure Plan included additional closure costs for the Blacktop Project and was submitted to government agencies as required, under the Mining Regulations. In 2006, an addendum to the Holloway Shaft #1 and #2 Closure Plan cost update was submitted to government agencies as required under the Mining Regulations.

In addition, an addendum to the Holt Shaft #3 (former Holt McDermott) Closure Plan was also submitted for a cost update, to government agencies as required under the Mining Regulations.

SAS is currently in the process of compiling detailed updated closure plans for all sites located within the Holt and Holloway property. All sites will be amalgamated under one closure plan.

20 CAPITAL AND OPERATING COSTS

20.1 Capital Costs

20.1.1 Basis of Estimate

Capital costs estimate for major items is based on historical costs at the Holt and Holloway mines, costs included in the 2015 Budget or budgetary quotations from suppliers in the industry.

20.1.2 Cost Estimate

Holt Mine

Capital expenditures budgeted for the Holt Mine amounts to $18 M in 2015. The majority of these expenditures, $9.6 M (53% of Holt budgeted capital expenditures), will be incurred developing the Zone 4 and the Zone 6 (vertical and lateral). In addition to the deferred development, a further $7.5 M (42% of Holt budgeted capital expenditures) will be spent on purchasing fixed and mobile equipment. The remaining amount will be spent on infrastructure, mainly in Ghost Zone.

Details on capital expenditures for 2015 are provided in Table 20-1.

Table 20-1: LOM capital expenditures breakdown for the Holt Mine.

	2015	2016	2017	2018	2019	2020	Total
Development	$8.2	$7.0	$7.0	$5.0	$5.0	$2.0	$34.2
Equipment	$2.9	$2.0	$2.0	$1.0	$1.0	$1.0	$9.9
Infrastructure	$3.3	$3.0	$3.0	$3.0	$3.0	$2.0	$17.3
Sub-Total	*$14.5*	*$12.0*	*$12.0*	*$9.0*	*$9.0*	*$5.0*	*$61.5*
Ghost Zone							
Development	$2.0	$9.9	$3.5	$0.1	$0.0	$0.0	$15.6
Equipment	$0.5	$2.4	$2.9	$2.9	$0.0	$0.0	$8.6
Infrastructure	$0.8	$5.0	$3.0	$0.9	$0.0	$0.0	$9.8
Sub-Total	*$3.3*	*$17.4*	*$9.5*	*$3.9*	*$0.0*	*$0.0*	*$34.0*
Tousignant Project							
Development		$5.3	$0.1	$0.1			$5.4
Equipment							$0.0
Infrastructure		$0.4	$2.6				$2.9
Sub-Total	*$0.0*	*$5.6*	*$2.6*	*$0.1*	*$0.0*	*$0.0*	*$8.3*
Total ($M)	$17.8	$35.0	$24.1	$12.9	$9.0	$5.0	$103.8

Holloway Mine

Capital expenditures budgeted for Holloway Mine in 2015 are approximately $0.8 M. Based on current reserves and LOM plan, there are no capital expenditures planned beyond 2015.

The majority of the capital expenditures will be spent on fixed equipment ($0.4 M) and mobile equipment. Approximately $0.3 M is budgeted for exploration diamond drilling at the Smoke Deep Zone.

Details of the capital expenditure program at the Holloway mine are presented in Table 20-2.

Table 20-2: Capital expenditures breakdown for the Holloway Mine in 2015.

Holloway Mine Capital	2015
Development	*$0.1*
Equipment	*$0.3*
Infrastructure	*$0.4*
Total	*$0.9*

20.2 Operating Costs

20.2.1 Basis for Estimate

Operating costs for units of work that will be carried out by SAS personnel were based on SAS budget figures for 2015.

20.2.2 Cost Estimate

Holt Mine

Operating unit costs for the Holt Mine average $104/t, based on the 2015 Budget, or $122/t when including royalties. Details are provided in Table 20-3.

Table 20-3: Holt Mine operating unit cost breakdown.

Holt Mine	2015 Budget Unit Cost ($/t)
Definition drilling	$1.8
Stope preparation (lat. + vert. dev.)	$23.7
Stoping	$14.6
Services (Indirects + Maintenance)	$52.5
General and Administration	$10.1
Milling	$21.9
Deferred Development	-$20.7
Total Operating Cost (w/o royalties)	**$103.9**
Royalities	$18.3
Total Operating Cost (w royalties)	**$122.2**

Holloway Mine

Operating unit costs for the Holloway Mine average $147/t, based on the 2015 Budget, or $163/t when including royalties. Details are provided in Table 20-4.

Table 20-4: Holloway Mine operating unit cost breakdown.

Holloway Mine	2015 Budget Unit Cost ($/t)
Definition drilling	$1.3
Stope preparation (lat. + vert. dev.)	$21.3
Stoping	$7.4
Services (Indirects + Maintenance)	$85.5
General and Administration	$10.1
Milling	$21.4
Deferred Development	$0.0
Total Operating Cost (w/o royalties)	**$147.0**
Royalities	$15.9
Total Operating Cost (w royalties)	**$162.8**

21 ECONOMIC ANALYSIS

SAS is a producing issuer and, following instructions contained in Form 43-101F1 Technical Report, may exclude information required under Item 22 (Economic Analysis) for technical reports on properties currently in production unless the technical report includes a material expansion of current production.

22 ADJACENT PROPERTIES

SAS' Timmins properties are centrally located in the Abitibi greenstone belt in the Superior Province of the Canadian Shield. The Abitibi Belt is the largest Archaean belt of its kind in the world and one of the most prolific in terms of mining production. It is a 750 km long by 250 km wide belt of deformed and metamorphosed volcanic and sedimentary rocks and granitoid batholiths ranging in age from approximately 2,745 to 2,680 Ma.

The major structural features in the area are the DPDZ and the Pipestone Fault. Gold deposits are commonly localized within and proximal to the DPDZ along its 200 km length from west of Timmins through the Matheson area and eastward beyond the Destor area of Québec. The fault zone was recognized in the early 1900s with the discovery of the gold deposits in the Timmins area. Numerous gold deposits occur in the vicinity of the DPDZ and related structures such as the Pipestone Fault. These include the major mines of the Timmins camp (Dome, Hollinger, McIntyre, Pamour and Hoyle Pond), which have produced over 70 million ounces of gold since 1910. A number of gold deposits have been discovered in more recent years, including the Holt-McDermott Mine and Holloway Mines (now operated by SAS), Owl Creek Mine, Bell Creek Mine, Aquarius Mine (SAS), Stock, Taylor (SAS), Clavos (60% Sage Gold / 40% SAS Joint Venture), Hislop (SAS), Black and Grey Fox (Primero Mining), Fenn-Gib deposit (Lake Shore Gold), Southwest Zone (Moneta Porcupine), Jonpol (Northern Gold) and a number of other prospects. Location and status of gold properties in northeastern Ontario and northwestern Québec in the mineral endowed Abitibi greenstone belt is displayed in Figure 22-1.

Figure 22-1: Mines and exploration properties in the Abitibi Greenstone belt.

23 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information on the Holt-Holloway property known to the QPs that, if undisclosed, would make this NI 43-101 technical report misleading or more understandable.

24 INTERPRETATION AND CONCLUSIONS

24.1 General

The general consensus from an exploration perspective is that many of the mineral deposits at the Holt-Holloway property remain open or are poorly drill tested along strike and dip and therefore they offer excellent potential for both surface and underground exploration programs. One sign of a robust project or mine is its ability to replenish and grow its mineral resources and mineral reserves. This has been the case at both the Holt and Holloway sites since SAS re-started the operations in 2009-10.

This technical report was compiled by SAS employees.

24.2 Opportunities

Opportunities at the Holt and Holloway mine are as follows:

- Significant mineralized Extensions to Zone 4, Worvest, Tousignant to the west at Holt, and extensions of the Smoke Deep to the east at Holloway;
- Significant increase in mineralized extensions of the C97, C104 mineral zones. These sub-vertical tabular zones are structurally associated with the McKenna Fault zone;
- Discovery of a repetition of any one of the mineralized zones being actively developed at the Holt-Holloway operation;
- A new mineral discovery on the Holt-Holloway property ideally one situated proximal to the Holloway shaft;
- Potential for en-echelon flat mineralized zones similar to Zone 4 either above the present Zone 4 location or at depth;
- Reduction or re-negotiation of the underlying production royalties;
- Increase in production rate by de-bottlenecking the ore flow system at Holt and Holloway;
- Reduction in capital or operating costs by improving the planning and mining processes via the Company Continuous Improvement Program;
- A higher gold price and lower operating costs could lower the cut-off grade, enhance cash flow and likely increase mineral reserves replacement rate;
- Higher development productivity than budgeted will create more flexibility in the production plan as ore may become available sooner than originally planned;
- Increase of productivity in general could results in additional lower grade ore mining on an incremental basis; and,

- On-going exploration near the mines could result the discovery of new ore zone(s) near the operations and be brought into production quickly with lower capital expenses than another zone located further away from the Company current infrastructure.

24.3 Risks

Risks that could be present at the operation are summarized as follows:

- Future exploration programs are unable to keep pace with mining that in turn results in mineral resources and mineral reserves being depleted;
- Mineral resources may not be converted up to mineral reserves due to a lack of economic support;
- Drop in gold price to a level whereby it becomes uneconomic to continue mining and developing the mine complex;
- Increased costs for skilled labour, power, fuel, reagents, trucking, etc. could lead to an increase the cut-off grade and decrease the level of mineral resources and mineral reserves;
- Mechanical breakdown of critical equipment (hoist, conveyance, mill, etc.) or infrastructure that could decrease or halt the production throughput at the mine;
- Cost pressure on materials required to sustain development and production could impact negatively the profitability of the operations; and,
- Production throughput relies on completing development activities as per the mining plan schedule. If lower development productivity than budgeted are encountered, this will likely affect the production profile of the current mining plan.

25 RECOMMENDATIONS

A number of recommendations arising from the Technical Report are found below:

- Phase 2 drill follow-up is warranted on the Zone 4 west extension. Given the magnitude of the Zone 4 west mineral resources, the overall cost of and lack of survey accuracy associated with the deep surface drill holes, an underground exploration drift with associated underground infill drill program is justified.
- On-going exploration data compilation and target work-ups;
- Work to standardize mine grids (local mine grids Holt-Holloway vs. UTM grids);
- Follow-up on SRK's and Rhys' report recommendations. The key recommendation being the exploration for repetitions of mineral deposits at Holloway;
- Annual Mineral Resources and Mineral Reserves updates should be presented on longitudinal sections.
- Given SAS' recent exploration success, it is recommended to develop the Holt and Holloway mines through the continued use of high quality mine exploration programs to assess the mineral potential of targets surrounding the operations. It is believed that the land package near the mines is hosting a number of superior under-explored targets (Figure 25-1).
- The technical team on site should continue to optimize the LOM plan with a view to maximize profitability and minimize potential shortage of mill feed.

In 2015, the Company's exploration efforts will continue to focus on identifying additional mineral resources near existing operations. SAS will also initiate "grass roots" exploration on high priority targets, based on a compilation and assessment of targets currently in SAS' extensive database.

The 2015 exploration program, at a cost of $5.7M, consists primarily of core drilling, as summarized in Table 25-1. Approximately 65% of the 2015 budget is planned for drilling on the Holt and Holloway properties.

The 2015 exploration program plans to utilize three drills operating throughout the year.

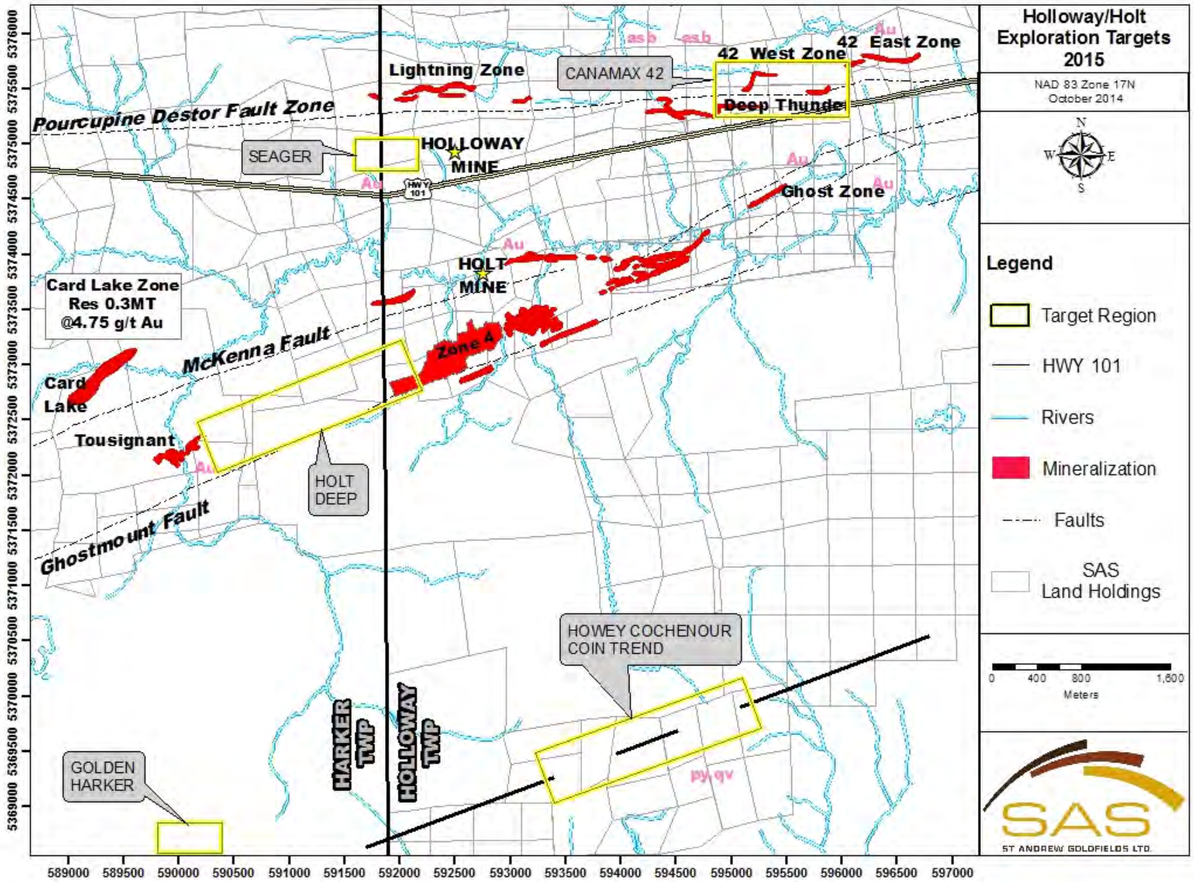

Figure 25-1: 2015 Exploration Targets – Holt / Holloway.

Table 25-1: Exploration drilling program for 2015.

Property / Target	Priority	Total
St Andrew Properties		
Holloway - Surface targets	new discovery	3,200
Holt - Tousignant / Card trend	Enhances project	5,000
Holt - Zone 4 - SW Extension	Top Priority	10,000
Aquarius	Discovery focus	1,000
Hislop North	Required	3,000
Hislop - V2 and Associated Zones (Yo / Ho)	Required	1,500
Holloway-Deep Thunder / Canamax " Gap"	Priority	6,000
Taylor Property	Shaft / Extensions	3,500
Grass Roots/ New Acquisitions	Future Targets	3,000
Garrison Creek	Future Mine	1,000
Total		**37,200**

26 REFERENCES

Ayer, J.A., Amelin, Y., Kamo, S.L., Ketchum, J.W.F., Kwok, K. and Trowell, N. 2002: Evolution of the southern Abitibi greenstone belt based on U-Pb chronology: autochthonous volcanic construction followed by plutonism, regional deformation and sedimentation; Precambrian Research, v. 115, pp. 63-95.

Ayer, J.A., Thurston, P.C., Bateman, R., Dube, B., Gibson, H.L., Hamilton, M.A., Hathway, B., Hocker, S.M., Houle, M.G., Hudak, G., Ispolatov, V.O., Lafrance, B., Lesher, C.M., MacDonald, P.J., Peloquin, A.S., Piercy, S.J., Reed, L.E. and Thompson, P.H., 2005: Overview of results from the Greenstone Architecture Project: Discover Abitibi Initiative: OGS, Open File 6154, 146 p.

Ayer, J.A., Trowell, N.F., Amelin, Y. and Corfu, F. 1999: Geological Compilation of the Abitibi Greenstone Belt in Ontario: Toward a revised Stratigraphy Based on Compilation and New Geochronology Results; in Summary of Field Work and Other Activities 1998: OGS MP169, pp. 14-24.

Barrick Gold Corporation, 2002: Information Document “Holt-McDermott Gold Processing Operation”.

Born, P. 1995: A sedimentary basin analysis of the Abitibi greenstone belt in the Timmins area, northern Ontario, Canada; Unpublished Ph. D. Thesis, Carlton University, Ottawa, 489 p.

Brown, A. Harwood B. 2015: Holt Mine Resource Update Audit - prepared by Aurum Global Exploration, prepared for SAS February 5, 2015.

CANMET (2004), Review of Geomechanical Stope Design at Holloway Mine, May 2004, Proj # 602713, Report MMSL 04-020(CR)

Cook, R.B., Valliant, W.W, and Pearson J.L. (2006): Technical Report on the Holloway-Holt Mining Project, Northeastern Ontario, Canada, NI 43-101 Technical Report prepared for St Andrew Goldfields Ltd., October 2, 2006, 170 p.

Corfu, F., Jackson, S.L., and Sutcliffe, R.H., 1991: U-Pb ages and tectonic significance of late alkalic non-marine sedimentation: Timiskaming Group, southern Abitibi belt. Canadian Journal of Earth Sciences, vol. 28, pp. 489-503.

Environment Canada, http://www.climate.weatheroffice.gc.ca

Golder Associates (1998): Review Visit to Holt McDermott Mine January 1998, ref 981-1701

Golder Associates (1999): Review Visit to Holt McDermott Mine April 1999, ref 991-1708

Golder Associates (2008): Draft Closure Plan Holloway Complex St Andrew Goldfields LTD. January 2008.

Golder Associates (2008): Draft Report on Conceptual Deposition Plan Southwest and Southeast Basins Tailings Management Facility Holloway Mine, Ontario June 2008 ref 07-1118-0052.

Goldfarb, R.J., Groves,D.I., Gardoll, S. 2001: Orogenic gold and geologic time: a global synthesis: Ore Geology Reviews, vol 18, pp. 1-75.

Heather, K.B. 1998: New insights on the stratigraphy and structural geology of the southwestern Abitibi greenstone belt: Implications for the tectonic evolution and setting of mineral deposits in the Superior Province: in The first age of giant ore formation: stratigraphy, tectonics and mineralization in the Late Archean and Early Proterozoic; Papers presented at the PDAC, pp. 63-101.

Jensen, L.G., 1978: Stoughton and Marriott Townships, District of Coachrane. Ontario Geological Survey, report 173, 72 pages plus map.

Jensen, L.S., and Langford, F.F., 1985: Geology and Petrogenesis of the Archean Abitibi belt in the Kirkland Lake area, Ontario. Ontario Geological Survey, Miscellaneous

Lelièvre J., 2006: Metallurgical Tests on Holloway Ore, Unité de Recherche et de Service en Technologie Minérale (URSTM), January 16, 2006.

Newmont, 2006: Confidential Information Memorandum “Holloway-Holt Mining Camp, Ontario, Canada”, March 2006.

Noranda Technology Centre (1997): Design Guidelines for the Holloway East Zone (Draft), August 1997 Paper 123, 130 p.

Poulsen, K.H., Robert, F., and Dube, B., 2000: Geological classification of Canadian gold deposits; geological Survey of Canada, Bulletin 540, 106 p.

Rhys, D.A., 2005a: Structural study of the Holloway and Holt-McDermott deposits, Ontario, with exploration implications; unpublished report for Newmont Canada Ltd., 79 pages plus appendices.

Rhys, D.A., 2005b: October 2005 Site Visit: observations and implications; unpublished Memo to Newmont Canada Ltd., 15 p.

Robert, F. Syenite associated disseminated Gold Deposits in the Abitibi Greenstone Belt, Canada 2001.

Ropchan, J.R., Luinstra, B., Fowler, A.D., Benn, K., Ayer, J., Berger, B., Dahn, R. Lebine, R. & Amelin, Y., 2002: Host rock and structural controls on the nature and timing of gold mineralization at the Holloway Mine, Abitibi Subprovince, Ontario. Economic Geology, 97, pp. 291-309.

Roussain, R.J., 1989 Project 010 Matheson Mine (East Gold Zone) A Review. 1989: Report prepared for Canamax – 36 pages.

Satterly, J., 1949: Geology of Garrison Township. Ontario Department of Mines, Annual report, vol. LVIII, part IV, 31 pages and map.

Satterly, J., 1952: Geology of Harker Township. Ontario Department of Mines, Annual report, vol. LX, part VII, 47 pages and map.

Satterly, J., 1954: Geology of the north half of Holloway Township. Ontario Department of Mines, Annual report, vol. LXII, part VII, 38 pages and map.

SGS Mineral Services Lakefield., 2014: An Investigation into Tousignant lense and Ghost zone samples prepared for St Andrew Goldfields Ltd. December 3, 2014.

SRK Consulting (Canada) Ltd. Regional Structural Geology Interpretation of Aeromagnetic Data, Timmins District, Northern Ontario. 2011: Report prepared for St. Andrew Goldfields. November 21, 2011.

St. Andrew Goldfields, 2015 Budget book submission – Internal document Dec, 2014.

W. V. Valliant, R.D. Bergen, SWRPA (2008) Technical Report on the Holloway-Holt Project, Ontario, Canada. NI 43-101 report, prepared for St Andrew Goldfields Ltd. July 2008. 263 pages.

Weather data for Timmins – web reference:

http://www.weather.com/outlook/travel/businesstraveler/wxclimatology/monthly/CAXX0501.

27 SIGNATURE PAGE AND DATE

The undersigned prepared this technical report titled "Holt-Holloway Property, Ontario, Canada, Updated NI 43-101 Technical Report". The effective date of this Technical report is March 19, 2015 and the disclosure date is March 27, 2015.

Signed,

"signed and sealed"		
Doug Cater, P. Geo.	March 27, 2015	St Andrew Goldfields Ltd. 20 Adelaide Street East, Suite 1500 Toronto, Ontario, M5C 2T6 Canada

Signed,

"signed and sealed"		
Keyvan Salehi, P. Eng.	March 27, 2015	St Andrew Goldfields Ltd. 20 Adelaide Street East, Suite 1500 Toronto, Ontario, M5C 2T6 Canada

CERTIFICATE OF QUALIFIED PERSON

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I, Douglas Cater, P.Geo., am employed as the Vice President Exploration with St Andrew Goldfields Ltd.

This certificate applies to the technical report entitled “Holt-Holloway Property, Ontario, Canada, Updated NI 43-101 Technical Report” with an effective date of March 19, 2015.

I am a member in good standing of the Association of Professional Geoscientist of Ontario (APGO #0161) and with NAPEG in the Northwest Territories and Nunavut (L-2238).

I graduated in 1981 from the University of Waterloo at Waterloo, ON Canada with an Honours B.Sc. specializing in Earth Science.

I have practiced my profession for over thirty years. I have held the title of Exploration Manager / Chief Geologist at several gold mines and advanced stage exploration projects since 1991 and have been responsible for all geological functions including calculating and reporting of Mineral Resources. I have been Vice President Exploration responsible for surface exploration activities on the company’s extensive land package since June 2012.

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 for this report.

I have visited the Holt and Holloway properties on numerous occasions since June 2012.

I am responsible for the preparation of the Summary and Sections 1 to 13, 18-19 and 21 to 25 of the technical report entitled “Holt-Holloway Property, Ontario, Canada, Updated NI 43-101 Technical Report” dated March 27, 2015 and with an effective date of March 19, 2015.

I am not independent of St Andrew Goldfields Ltd. Independence is not required under Section 5.3 (3) of NI 43–101. I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

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 be disclosed to make the technical report not misleading.

"Signed and Sealed"

Douglas Cater, P. Geo.

Vice President Exploration

CERTIFICATE OF QUALIFIED PERSON

Keyvan Salehi, MBA, P. Eng.

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I, Keyvan Salehi, P. Eng., MBA, am employed as the Vice President Corporate Development and Technical Services with St Andrew Goldfields Ltd.

This certificate applies to the technical report entitled “Holt-Holloway Property, Ontario, Canada, Updated NI 43-101 Technical Report” with an effective date of March 19, 2015.

I am a member of Professional Engineers of Ontario. I have a bachelor’s degree in Mining Engineering from University of Toronto and an MBA from Kellogg-Schulich School of Management. I have practiced my profession for fifteen years. I have been directly involved in mine design of underground gold mines and, since 2002 I have overseen the mining engineering department at various gold and base metals underground gold mines, providing relief to the Mine Manager and General Manager on site. Since 2008, I have provided corporate direction for the Technical Services and Corporate Development functions at junior exploration and producing companies.

I have read the definition of “qualified person” set out in National 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 for this report.

I visited the Holt-Holloway property on numerous occasions since 2013. I am responsible for the preparation of Sections 14-17 inclusive and 20 of the technical report entitled “Holt-Holloway Property, Ontario, Canada, Updated NI 43-101 Technical Report” dated March 27, 2015 and with an effective date of March 19, 2015.

I am not independent of St Andrew Goldfields Ltd. Independence is not required under Section 5.3 (3) of NI 43–101. I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

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 be disclosed to make the technical report not misleading.

“Signed and Sealed”

Keyvan Salehi, P. Eng. MBA

Appendix A: Mineral Claim list – Holt and Holloway properties

Claim #	Township	Claim Type	Size ha)	Expiry Date	Surface/Mining Rights
L 3010890	Frecheville Twp	Unpatented Claim	224.0	12/03/2018	Mining Rights
L 3010891	Frecheville Twp	Unpatented Claim	80.0	12/03/2018	Mining Rights
L 641630	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641631	Frecheville Twp	Leased Claim	13.9	30/04/2030	Surface & Mining Rights
L 641768	Frecheville Twp	Leased Claim	16.3	30/04/2030	Surface & Mining Rights
L 641769	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641770	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641771	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641782	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641783	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641784	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641785	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641786	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 641787	Frecheville Twp	Unpatented Claim	16.0	28/04/2018	Mining Rights
L 837389	Frecheville Twp	Unpatented Claim	16.0	07/03/2018	Mining Rights
L 837390	Frecheville Twp	Unpatented Claim	16.0	07/03/2018	Mining Rights
L 837391	Frecheville Twp	Unpatented Claim	16.0	07/03/2018	Mining Rights
CLM 313	Harker Twp	Leased Claim	177.8	31/12/2029	Surface & Mining Rights
CLM 323 PT2	Harker Twp	Leased Claim	149.4	n/a	Surface & Mining Rights
CLM 373	Harker Twp	Leased Claim	155.5	31/12/2032	Surface & Mining Rights
CLM 374	Harker Twp	Leased Claim	86.0	31/05/2033	Surface & Mining Rights
CLM 390	Harker Twp	Leased Claim	151.3	31/05/2033	Surface & Mining Rights
L 10084	Harker Twp	Patented Claim	17.4	n/a	Mining Rights
L 10085	Harker Twp	Patented Claim	16.0	n/a	Mining Rights
L 1034617	Harker Twp	Unpatented Claim	16.0	14/04/2018	Mining Rights
L 10478	Harker Twp	Patented Claim	15.5	n/a	Mining Rights
L 10696	Harker Twp	Patented Claim	15.3	n/a	Mining Rights
L 10735	Harker Twp	Patented Claim	16.3	n/a	Mining Rights
L 11081	Harker Twp	Patented Claim	13.1	n/a	Surface & Mining Rights
L 11166	Harker Twp	Patented Claim	11.2	n/a	Surface & Mining Rights
L 11167	Harker Twp	Patented Claim	9.0	n/a	Surface & Mining Rights
L 11168	Harker Twp	Patented Claim	7.5	n/a	Mining Rights
L 11244	Harker Twp	Patented Claim	6.6	n/a	Surface & Mining Rights
L 11245	Harker Twp	Patented Claim	17.6	n/a	Surface & Mining Rights
L 11246	Harker Twp	Patented Claim	15.9	n/a	Surface & Mining Rights
L 11247	Harker Twp	Patented Claim	15.8	n/a	Surface & Mining Rights
L 11248	Harker Twp	Patented Claim	21.4	n/a	Surface & Mining Rights
L 11249	Harker Twp	Patented Claim	21.4	n/a	Surface & Mining Rights
L 11570	Harker Twp	Patented Claim	20.6	n/a	Surface & Mining Rights
L 11571	Harker Twp	Patented Claim	14.9	n/a	Surface & Mining Rights
L 11671	Harker Twp	Patented Claim	11.6	n/a	Mining Rights
L 11927	Harker Twp	Patented Claim	24.1	n/a	Surface & Mining Rights

L 1201109	Harker Twp	Unpatented Claim	32.0	30/06/2018	Mining Rights
L 1201110	Harker Twp	Unpatented Claim	16.0	30/06/2018	Mining Rights
L 29745	Harker Twp	Patented Claim	17.1	n/a	Surface & Mining Rights
L 29746	Harker Twp	Patented Claim	18.4	n/a	Surface & Mining Rights
L 29747	Harker Twp	Patented Claim	24.7	n/a	Surface & Mining Rights
L 29748	Harker Twp	Patented Claim	23.9	n/a	Surface & Mining Rights
L 29749	Harker Twp	Patented Claim	20.7	n/a	Surface & Mining Rights
L 29750	Harker Twp	Patented Claim	18.9	n/a	Surface & Mining Rights
L 29751	Harker Twp	Patented Claim	20.0	n/a	Surface & Mining Rights
L 29752	Harker Twp	Patented Claim	14.3	n/a	Surface & Mining Rights
L 29753	Harker Twp	Patented Claim	10.0	n/a	Surface & Mining Rights
L 3013893	Harker Twp	Unpatented Claim	112.0	10/12/2018	Mining Rights
L 30150	Harker Twp	Patented Claim	16.6	n/a	Surface & Mining Rights
L 30151	Harker Twp	Patented Claim	12.2	n/a	Surface & Mining Rights
L 30152	Harker Twp	Patented Claim	13.5	n/a	Surface & Mining Rights
L 30153	Harker Twp	Patented Claim	20.4	n/a	Surface & Mining Rights
L 30154	Harker Twp	Patented Claim	23.1	n/a	Surface & Mining Rights
L 30155	Harker Twp	Patented Claim	26.3	n/a	Surface & Mining Rights
L 3016950	Harker Twp	Unpatented Claim	112.0	10/12/2018	Mining Rights
L 3016967	Harker Twp	Unpatented Claim	32.0	10/12/2018	Mining Rights
L 30278	Harker Twp	Patented Claim	17.2	n/a	Surface & Mining Rights
L 30279	Harker Twp	Patented Claim	15.2	n/a	Surface & Mining Rights
L 30280	Harker Twp	Patented Claim	15.4	n/a	Surface & Mining Rights
L 32635	Harker Twp	Patented Claim	10.4	n/a	Surface & Mining Rights
L 32636	Harker Twp	Patented Claim	19.7	n/a	Surface & Mining Rights
L 32637	Harker Twp	Patented Claim	16.8	n/a	Surface & Mining Rights
L 32638	Harker Twp	Patented Claim	17.3	n/a	Surface & Mining Rights
L 32639	Harker Twp	Patented Claim	25.4	n/a	Surface & Mining Rights
L 32640	Harker Twp	Patented Claim	13.9	n/a	Surface & Mining Rights
L 32641	Harker Twp	Patented Claim	17.7	n/a	Surface & Mining Rights
L 32642	Harker Twp	Patented Claim	15.2	n/a	Surface & Mining Rights
L 32643	Harker Twp	Patented Claim	13.4	n/a	Surface & Mining Rights
L 32726	Harker Twp	Patented Claim	11.9	n/a	Surface & Mining Rights
L 32727	Harker Twp	Patented Claim	8.8	n/a	Surface & Mining Rights
L 32728	Harker Twp	Patented Claim	9.6	n/a	Surface & Mining Rights
L 32729	Harker Twp	Patented Claim	17.3	n/a	Surface & Mining Rights
L 32730	Harker Twp	Patented Claim	20.5	n/a	Surface & Mining Rights
L 32731	Harker Twp	Patented Claim	25.9	n/a	Surface & Mining Rights
L 34845	Harker Twp	Patented Claim	19.0	n/a	Surface & Mining Rights
L 34846	Harker Twp	Patented Claim	24.2	n/a	Surface & Mining Rights
L 34847	Harker Twp	Patented Claim	21.3	n/a	Surface & Mining Rights
L 34848	Harker Twp	Patented Claim	27.1	n/a	Surface & Mining Rights
L 34849	Harker Twp	Patented Claim	38.9	n/a	Surface & Mining Rights
L 34850	Harker Twp	Patented Claim	14.1	n/a	Surface & Mining Rights

L 34851	Harker Twp	Patented Claim	11.8	n/a	Surface & Mining Rights
L 40536	Harker Twp	Patented Claim	17.4	n/a	Surface & Mining Rights
L 40537	Harker Twp	Patented Claim	20.4	n/a	Surface & Mining Rights
L 40538	Harker Twp	Patented Claim	13.7	n/a	Surface & Mining Rights
L 40539	Harker Twp	Patented Claim	12.7	n/a	Surface & Mining Rights
L 40540	Harker Twp	Patented Claim	20.1	n/a	Surface & Mining Rights
L 40541	Harker Twp	Patented Claim	15.6	n/a	Surface & Mining Rights
L 40542	Harker Twp	Patented Claim	16.0	n/a	Surface & Mining Rights
L 40543	Harker Twp	Patented Claim	10.7	n/a	Surface & Mining Rights
L 40544	Harker Twp	Patented Claim	17.6	n/a	Surface & Mining Rights
L 40545	Harker Twp	Patented Claim	17.2	n/a	Surface & Mining Rights
L 40546	Harker Twp	Patented Claim	13.6	n/a	Surface & Mining Rights
L 4203533	Harker Twp	Unpatented Claim	32.0	07/02/2018	Mining Rights
L 4262378	Harker Twp	Unpatented Claim	16.0	17/08/2019	Mining Rights
L 4268962	Harker Twp	Unpatented Claim	80.0	18/06/2018	Mining Rights
L 4268963	Harker Twp	Unpatented Claim	64.0	18/06/2018	Mining Rights
L 43925	Harker Twp	Patented Claim	6.8	n/a	Surface & Mining Rights
L 43926	Harker Twp	Patented Claim	14.8	n/a	Surface & Mining Rights
L 43927	Harker Twp	Patented Claim	20.8	n/a	Surface & Mining Rights
L 43928	Harker Twp	Patented Claim	15.0	n/a	Surface & Mining Rights
L 43929	Harker Twp	Patented Claim	13.7	n/a	Surface & Mining Rights
L 43930	Harker Twp	Patented Claim	20.7	n/a	Surface & Mining Rights
L 43931	Harker Twp	Patented Claim	18.0	n/a	Surface & Mining Rights
L 43932	Harker Twp	Patented Claim	17.3	n/a	Surface & Mining Rights
L 43933	Harker Twp	Patented Claim	16.1	n/a	Surface & Mining Rights
L 528967	Harker Twp	Leased Claim	18.5	31/01/2020	Mining Rights
L 528968	Harker Twp	Leased Claim	18.6	31/01/2020	Mining Rights
L 528969	Harker Twp	Leased Claim	19.7	31/01/2020	Mining Rights
L 528970	Harker Twp	Leased Claim	18.1	31/01/2020	Mining Rights
L 528971	Harker Twp	Leased Claim	16.5	31/01/2020	Mining Rights
L 528972	Harker Twp	Leased Claim	17.9	31/01/2020	Mining Rights
L 628520	Harker Twp	Leased Claim	8.3	31/12/2029	Surface & Mining Rights
L 628533	Harker Twp	Leased Claim	10.9	31/12/2029	Surface & Mining Rights
L 628534	Harker Twp	Leased Claim	15.8	31/12/2029	Surface & Mining Rights
L 633298	Harker Twp	Leased Claim	8.2	31/12/2029	Surface & Mining Rights
L 633299	Harker Twp	Leased Claim	11.2	31/12/2029	Surface & Mining Rights
L 633300	Harker Twp	Leased Claim	5.0	31/12/2029	Surface & Mining Rights
L 633301	Harker Twp	Leased Claim	3.4	31/12/2029	Surface & Mining Rights
L 633303	Harker Twp	Leased Claim	4.0	31/12/2029	Surface & Mining Rights
L 633305	Harker Twp	Leased Claim	11.9	31/12/2029	Surface & Mining Rights
L 633306	Harker Twp	Leased Claim	5.6	31/12/2029	Surface & Mining Rights
L 633308	Harker Twp	Leased Claim	18.2	31/12/2029	Surface & Mining Rights
L 633309	Harker Twp	Leased Claim	15.4	31/12/2029	Surface & Mining Rights
L 633310	Harker Twp	Leased Claim	12.7	31/12/2029	Surface & Mining Rights

L 633311	Harker Twp	Leased Claim	8.1	31/12/2029	Surface & Mining Rights
L 802663	Harker Twp	Leased Claim	2.9	31/12/2029	Surface & Mining Rights
L 802666	Harker Twp	Leased Claim	6.2	31/12/2029	Surface & Mining Rights
L 802667	Harker Twp	Leased Claim	3.9	31/12/2029	Surface & Mining Rights
L 9862	Harker Twp	Patented Claim	15.9	n/a	Surface & Mining Rights
CLM 321	Holloway Twp	Leased Claim	341.0	30/11/2030	Surface & Mining Rights
CLM 322	Holloway Twp	Leased Claim	367.9	31/05/2031	Surface & Mining Rights
CLM 323 PT1	Holloway Twp	Leased Claim	218.3	30/11/2030	Surface & Mining Rights
CLM 345	Holloway Twp	Leased Claim	73.3	31/12/2032	Surface & Mining Rights
CLM 346	Holloway Twp	Leased Claim	276.4	31/12/2032	Surface & Mining Rights
CLM 351	Holloway Twp	Leased Claim	156.1	31/12/2032	Surface & Mining Rights
L 10080 MRO	Holloway Twp	Patented Claim	8.8	n/a	Mining Rights
L 10080 SRO	Holloway Twp	Patented Claim	8.8	n/a	Surface Rights
L 10081 MRO	Holloway Twp	Patented Claim	14.4	n/a	Mining Rights
L 10081 SRO	Holloway Twp	Patented Claim	14.4	n/a	Surface Rights
L 10082 MRO	Holloway Twp	Patented Claim	21.7	n/a	Mining Rights
L 10082 SRO	Holloway Twp	Patented Claim	21.7	n/a	Surface Rights
L 10083 MRO	Holloway Twp	Patented Claim	14.2	n/a	Mining Rights
L 10083 SRO	Holloway Twp	Patented Claim	14.2	n/a	Surface Rights
L 10218	Holloway Twp	Patented Claim	23.5	n/a	Surface Rights
L 10219	Holloway Twp	Patented Claim	19.0	n/a	Surface Rights
L 10220 SRO	Holloway Twp	Patented Claim	16.2	n/a	Surface Rights
L 10220A	Holloway Twp	Patented Claim	13.9	n/a	Surface & Mining Rights
L 10221 SRO	Holloway Twp	Patented Claim	16.5	n/a	Surface Rights
L 10221A SMR	Holloway Twp	Patented Claim	14.6	n/a	Surface & Mining Rights
L 10222 SRO	Holloway Twp	Patented Claim	22.4	n/a	Surface Rights
L 10476 SMR	Holloway Twp	Patented Claim	17.6	n/a	Surface & Mining Rights
L 10477	Holloway Twp	Patented Claim	16.1	n/a	Surface & Mining Rights
L 10534	Holloway Twp	Patented Claim	16.5	n/a	Surface & Mining Rights
L 10697 MRO	Holloway Twp	Patented Claim	16.4	n/a	Mining Rights
L 10697 SRO	Holloway Twp	Patented Claim	16.4	n/a	Surface Rights
L 10698	Holloway Twp	Patented Claim	15.2	n/a	Surface & Mining Rights
L 10699	Holloway Twp	Patented Claim	9.5	n/a	Surface & Mining Rights
L 10904	Holloway Twp	Patented Claim	6.3	n/a	Mining Rights
L 11009	Holloway Twp	Patented Claim	8.4	n/a	Surface & Mining Rights
L 11010	Holloway Twp	Patented Claim	5.7	n/a	Surface & Mining Rights
L 11011	Holloway Twp	Patented Claim	6.1	n/a	Surface & Mining Rights
L 11012	Holloway Twp	Patented Claim	3.4	n/a	Surface & Mining Rights
L 11087	Holloway Twp	Patented Claim	22.6	n/a	Surface & Mining Rights
L 1111610	Holloway Twp	Unpatented Claim	16.0	27/12/2018	Mining Rights
L 11160	Holloway Twp	Patented Claim	12.3	n/a	Surface & Mining Rights
L 1116486	Holloway Twp	Unpatented Claim	16.0	27/12/2018	Mining Rights
L 11169	Holloway Twp	Patented Claim	11.0	n/a	Surface & Mining Rights
L 11170	Holloway Twp	Patented Claim	12.9	n/a	Surface & Mining Rights

L 11171	Holloway Twp	Patented Claim	16.3	n/a	Surface & Mining Rights
L 11260 PT2	Holloway Twp	Patented Claim	14.1	n/a	Surface Rights
L 11261	Holloway Twp	Patented Claim	6.5	n/a	Surface Rights
L 11262	Holloway Twp	Patented Claim	17.8	n/a	Surface Rights
L 11263 (L 32926)	Holloway Twp	Patented Claim	16.2	n/a	Surface Rights
L 11264	Holloway Twp	Patented Claim	9.6	n/a	Surface Rights
L 11265 PT1	Holloway Twp	Patented Claim	14.7	n/a	Surface Rights
L 11312	Holloway Twp	Patented Claim	9.1	n/a	Surface & Mining Rights
L 11313	Holloway Twp	Patented Claim	8.8	n/a	Surface & Mining Rights
L 11314	Holloway Twp	Patented Claim	15.8	n/a	Surface & Mining Rights
L 11315	Holloway Twp	Patented Claim	11.7	n/a	Surface & Mining Rights
L 11316	Holloway Twp	Patented Claim	13.9	n/a	Surface & Mining Rights
L 1137350	Holloway Twp	Unpatented Claim	16.0	27/12/2018	Mining Rights
L 1137360	Holloway Twp	Unpatented Claim	16.0	27/12/2018	Mining Rights
L 1137370	Holloway Twp	Unpatented Claim	16.0	27/12/2018	Mining Rights
L 11381	Holloway Twp	Patented Claim	10.3	n/a	Surface & Mining Rights
L 11382	Holloway Twp	Patented Claim	8.4	n/a	Surface & Mining Rights
L 11383	Holloway Twp	Patented Claim	9.2	n/a	Surface & Mining Rights
L 11415	Holloway Twp	Patented Claim	12.2	n/a	Surface Rights
L 11417	Holloway Twp	Patented Claim	16.5	n/a	Surface & Mining Rights
L 11418	Holloway Twp	Patented Claim	7.8	n/a	Surface & Mining Rights
L 11535	Holloway Twp	Patented Claim	10.6	n/a	Surface & Mining Rights
L 11548	Holloway Twp	Patented Claim	9.4	n/a	Surface & Mining Rights
L 11614	Holloway Twp	Patented Claim	9.0	n/a	Surface & Mining Rights
L 1213841	Holloway Twp	Leased Claim	24.5	31/10/2027	Surface & Mining Rights
L 12314	Holloway Twp	Patented Claim	7.7	n/a	Surface & Mining Rights
L 13137	Holloway Twp	Patented Claim	12.4	n/a	Surface & Mining Rights
L 13403	Holloway Twp	Patented Claim	17.4	n/a	Surface Rights
L 13997 SRO	Holloway Twp	Patented Claim	23.5	n/a	Surface Rights
L 13998 SRO	Holloway Twp	Patented Claim	30.8	n/a	Surface Rights
L 13999 SRO	Holloway Twp	Patented Claim	24.0	n/a	Surface Rights
L 27220 SRO	Holloway Twp	Patented Claim	16.3	n/a	Surface Rights
L 27221 SRO	Holloway Twp	Patented Claim	10.9	n/a	Surface Rights
L 27222 SRO	Holloway Twp	Patented Claim	16.5	n/a	Surface Rights
L 27223 SRO	Holloway Twp	Patented Claim	17.5	n/a	Surface Rights
L 32923	Holloway Twp	Patented Claim	21.1	n/a	Surface Rights
L 32924	Holloway Twp	Patented Claim	38.0	n/a	Surface Rights
L 32928	Holloway Twp	Patented Claim	14.9	n/a	Surface Rights
L 32929	Holloway Twp	Patented Claim	26.0	n/a	Surface Rights
L 32930	Holloway Twp	Patented Claim	15.7	n/a	Surface Rights
L 32932	Holloway Twp	Patented Claim	19.3	n/a	Surface Rights
L 32933	Holloway Twp	Patented Claim	17.6	n/a	Surface Rights
L 32934	Holloway Twp	Patented Claim	16.9	n/a	Surface Rights
L 34838	Holloway Twp	Patented Claim	9.0	n/a	Surface Rights

L 34841	Holloway Twp	Patented Claim	10.0	n/a	Surface Rights
L 34842	Holloway Twp	Patented Claim	23.4	n/a	Surface Rights
L 34843	Holloway Twp	Patented Claim	19.6	n/a	Surface Rights
L 34844	Holloway Twp	Patented Claim	14.8	n/a	Surface Rights
L 36699	Holloway Twp	Patented Claim	8.2	n/a	Surface & Mining Rights
L 4207023	Holloway Twp	Unpatented Claim	16.0	28/07/2018	Mining Rights
L 4283159	Holloway Twp	Unpatented Claim	32.0	23/01/2017	Mining Rights
L 43058	Holloway Twp	Patented Claim	21.5	n/a	Surface & Mining Rights
L 43061	Holloway Twp	Patented Claim	17.2	n/a	Surface & Mining Rights
L 43062	Holloway Twp	Patented Claim	19.4	n/a	Surface & Mining Rights
L 43067	Holloway Twp	Patented Claim	24.5	n/a	Surface & Mining Rights
L 43068	Holloway Twp	Patented Claim	21.2	n/a	Surface & Mining Rights
L 43072	Holloway Twp	Patented Claim	19.8	n/a	Surface & Mining Rights
L 43073	Holloway Twp	Patented Claim	15.2	n/a	Surface & Mining Rights
L 43076	Holloway Twp	Patented Claim	21.2	n/a	Surface & Mining Rights
L 43077	Holloway Twp	Patented Claim	23.5	n/a	Surface & Mining Rights
L 43078	Holloway Twp	Patented Claim	24.8	n/a	Surface & Mining Rights
L 43079	Holloway Twp	Patented Claim	15.1	n/a	Surface & Mining Rights
L 43921	Holloway Twp	Patented Claim	9.4	n/a	Surface & Mining Rights
L 43922	Holloway Twp	Patented Claim	7.2	n/a	Surface & Mining Rights
L 43923	Holloway Twp	Patented Claim	11.4	n/a	Surface & Mining Rights
L 579576	Holloway Twp	Leased Claim	14.5	31/08/2029	Surface & Mining Rights
L 579577	Holloway Twp	Leased Claim	15.7	28/02/2029	Surface & Mining Rights
L 579586	Holloway Twp	Leased Claim	15.5	28/02/2029	Surface & Mining Rights
L 579587	Holloway Twp	Leased Claim	19.4	28/02/2029	Surface & Mining Rights
L 579588	Holloway Twp	Leased Claim	15.5	28/02/2029	Surface & Mining Rights
L 579589	Holloway Twp	Leased Claim	16.6	28/02/2029	Surface & Mining Rights
L 579590	Holloway Twp	Leased Claim	16.9	28/02/2029	Surface & Mining Rights
L 579591	Holloway Twp	Leased Claim	16.9	28/02/2029	Surface & Mining Rights
L 579592	Holloway Twp	Leased Claim	12.6	28/02/2029	Surface & Mining Rights
L 579593	Holloway Twp	Leased Claim	12.3	28/02/2029	Surface & Mining Rights
L 579594	Holloway Twp	Leased Claim	17.8	28/02/2029	Surface & Mining Rights
L 579595	Holloway Twp	Leased Claim	29.6	28/02/2029	Surface & Mining Rights
L 579654	Holloway Twp	Leased Claim	15.7	31/08/2029	Mining Rights
L 579654-PT	Holloway Twp	Leased Claim	3.1	31/08/2029	Surface & Mining Rights
L 579655	Holloway Twp	Leased Claim	14.0	31/08/2029	Surface & Mining Rights
L 579656	Holloway Twp	Leased Claim	17.2	31/08/2029	Surface & Mining Rights
L 579657	Holloway Twp	Leased Claim	23.0	31/08/2029	Surface & Mining Rights
L 579658	Holloway Twp	Leased Claim	11.3	31/08/2029	Surface & Mining Rights
L 579659	Holloway Twp	Leased Claim	11.4	31/08/2029	Surface & Mining Rights
L 579660	Holloway Twp	Leased Claim	21.6	31/08/2029	Surface & Mining Rights
L 579661	Holloway Twp	Leased Claim	14.0	31/08/2029	Surface & Mining Rights
L 579662	Holloway Twp	Leased Claim	14.5	31/08/2029	Surface & Mining Rights
L 579663	Holloway Twp	Leased Claim	17.7	31/08/2029	Mining Rights

L 579663-PT	Holloway Twp	Leased Claim	4.0	31/08/2029	Surface & Mining Rights
L 579664	Holloway Twp	Leased Claim	13.8	31/08/2029	Mining Rights
L 579664-PT	Holloway Twp	Leased Claim	1.5	31/08/2029	Surface & Mining Rights
L 579665	Holloway Twp	Leased Claim	13.6	31/08/2029	Surface & Mining Rights
L 579666	Holloway Twp	Leased Claim	13.6	31/08/2029	Surface & Mining Rights
L 579667	Holloway Twp	Leased Claim	23.1	31/08/2029	Surface & Mining Rights
L 579668	Holloway Twp	Leased Claim	14.0	31/08/2029	Surface & Mining Rights
L 579669	Holloway Twp	Leased Claim	17.7	31/08/2029	Surface & Mining Rights
L 579670	Holloway Twp	Leased Claim	24.9	31/08/2029	Surface & Mining Rights
L 579671	Holloway Twp	Leased Claim	15.0	31/08/2029	Surface & Mining Rights
L 579672	Holloway Twp	Leased Claim	15.5	31/08/2029	Surface & Mining Rights
L 579673	Holloway Twp	Leased Claim	14.5	31/08/2029	Surface & Mining Rights
L 586632	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 588014	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588165	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588169	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588170	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588171	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588172	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588175	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588176	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588177	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588178	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588179	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588182	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588183	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588184	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588185	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588186	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588187	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588188	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588189	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588190	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588191	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588192	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588193	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588194	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588195	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588196	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588197	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588198	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588388	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588389	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588468	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights

L 588469	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588470	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588471	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588476	Holloway Twp	Unpatented Claim	16.0	16/07/2018	Mining Rights
L 588477	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588478	Holloway Twp	Leased Claim	25.0	31/10/2027	Surface & Mining Rights
L 588479	Holloway Twp	Leased Claim	28.6	31/10/2027	Surface & Mining Rights
L 588534	Holloway Twp	Leased Claim	16.0	31/10/2027	Surface & Mining Rights
L 588535	Holloway Twp	Leased Claim	12.2	31/10/2027	Surface & Mining Rights
L 588536	Holloway Twp	Leased Claim	20.9	31/10/2027	Surface & Mining Rights
L 588537	Holloway Twp	Leased Claim	18.3	31/10/2027	Surface & Mining Rights
L 588540	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588558	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588559	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588560	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588563	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588564	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588565	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588566	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588567	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588568	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588569	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588570	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588571	Holloway Twp	Leased Claim	2.3	31/03/2031	Surface & Mining Rights
L 588572	Holloway Twp	Leased Claim	3.0	31/03/2031	Surface & Mining Rights
L 588573	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588574	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 588575	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 596245	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596246	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596247	Holloway Twp	Leased Claim	25.2	30/09/2030	Mining Rights
L 596248	Holloway Twp	Leased Claim	16.4	31/08/2029	Surface & Mining Rights
L 596249	Holloway Twp	Leased Claim	16.4	31/08/2029	Surface & Mining Rights
L 596250	Holloway Twp	Leased Claim	21.9	30/09/2030	Mining Rights
L 596251	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596252	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596253	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596254	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596255	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596256	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596257	Holloway Twp	Unpatented Claim	16.0	05/02/2018	Mining Rights
L 596258	Holloway Twp	Leased Claim	17.5	31/05/2032	Mining Rights
L 596259	Holloway Twp	Leased Claim	16.3	31/05/2032	Mining Rights
L 596260	Holloway Twp	Leased Claim	16.5	31/05/2032	Mining Rights

L 596261	Holloway Twp	Leased Claim	10.9	31/05/2032	Mining Rights
L 599010	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599011	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599012	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599013	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599014	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599015	Holloway Twp	Leased Claim	14.6	31/03/2031	Surface & Mining Rights
L 599016	Holloway Twp	Leased Claim	2.9	31/03/2031	Surface & Mining Rights
L 599018	Holloway Twp	Leased Claim	7.5	31/03/2031	Surface & Mining Rights
L 599019	Holloway Twp	Leased Claim	16.4	31/03/2031	Surface & Mining Rights
L 599020	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599021	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599022	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599023	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599024	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 599025	Holloway Twp	Unpatented Claim	16.0	16/02/2018	Mining Rights
L 616488	Holloway Twp	Leased Claim	24.0	31/01/2029	Surface & Mining Rights
L 616489	Holloway Twp	Leased Claim	8.7	31/01/2029	Surface & Mining Rights
L 628048	Holloway Twp	Leased Claim	22.9	31/08/2029	Surface & Mining Rights
L 628049	Holloway Twp	Leased Claim	29.4	28/02/2029	Surface & Mining Rights
L 628463	Holloway Twp	Leased Claim	16.2	30/04/2030	Surface & Mining Rights
L 632501	Holloway Twp	Leased Claim	10.2	30/04/2030	Surface & Mining Rights
L 632502	Holloway Twp	Leased Claim	12.7	30/04/2030	Surface & Mining Rights
L 632503	Holloway Twp	Leased Claim	19.6	30/04/2030	Surface & Mining Rights
L 632504	Holloway Twp	Leased Claim	21.7	30/04/2030	Surface & Mining Rights
L 632505	Holloway Twp	Leased Claim	18.6	30/04/2030	Surface & Mining Rights
L 632506	Holloway Twp	Leased Claim	31.7	30/04/2030	Surface & Mining Rights
L 632507	Holloway Twp	Unpatented Claim	16.0	28/09/2018	Mining Rights
L 632508	Holloway Twp	Unpatented Claim	16.0	28/09/2018	Mining Rights
L 632509	Holloway Twp	Unpatented Claim	16.0	28/09/2018	Mining Rights
L 632510	Holloway Twp	Unpatented Claim	16.0	28/09/2018	Mining Rights
L 632515	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632516	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632517	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632518	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632519	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632520	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632818	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632819	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632820	Holloway Twp	Leased Claim	15.2	31/07/2030	Surface & Mining Rights
L 632821	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632822	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632823	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632824	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights

L 632825	Holloway Twp	Unpatented Claim	16.0	08/12/2018	Mining Rights
L 632826	Holloway Twp	Leased Claim	17.7	30/04/2030	Surface & Mining Rights
L 632827	Holloway Twp	Leased Claim	11.8	30/04/2030	Surface & Mining Rights
L 632828	Holloway Twp	Leased Claim	5.3	30/04/2030	Surface & Mining Rights
L 632829	Holloway Twp	Leased Claim	12.5	30/04/2030	Surface & Mining Rights
L 633296	Holloway Twp	Leased Claim	2.7	31/12/2029	Surface & Mining Rights
L 633297	Holloway Twp	Leased Claim	4.4	31/12/2029	Surface & Mining Rights
L 667156	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 667157	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 667158	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678846	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678847	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678848	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678849	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678850	Holloway Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 7135	Holloway Twp	Patented Claim	27.7	n/a	Surface & Mining Rights
L 7219	Holloway Twp	Patented Claim	18.1	n/a	Surface & Mining Rights
L 7220	Holloway Twp	Patented Claim	16.3	n/a	Surface & Mining Rights
L 7221	Holloway Twp	Patented Claim	19.9	n/a	Surface & Mining Rights
L 7241	Holloway Twp	Patented Claim	28.3	n/a	Surface & Mining Rights
L 7242	Holloway Twp	Patented Claim	22.3	n/a	Surface & Mining Rights
L 7246	Holloway Twp	Patented Claim	20.2	n/a	Surface & Mining Rights
L 7248	Holloway Twp	Patented Claim	19.5	n/a	Surface & Mining Rights
L 799696	Holloway Twp	Leased Claim	15.2	30/04/2030	Surface & Mining Rights
L 799697	Holloway Twp	Leased Claim	15.3	30/04/2030	Surface & Mining Rights
L 801063	Holloway Twp	Leased Claim	8.8	31/01/2029	Surface & Mining Rights
L 801065	Holloway Twp	Leased Claim	4.9	31/01/2029	Surface & Mining Rights
L 802768	Holloway Twp	Leased Claim	3.5	31/01/2029	Surface & Mining Rights
L 8246	Holloway Twp	Patented Claim	7.9	n/a	Surface & Mining Rights
L 8247	Holloway Twp	Patented Claim	12.3	n/a	Surface & Mining Rights
L 9863	Holloway Twp	Patented Claim	8.8	n/a	Surface & Mining Rights
L 9864	Holloway Twp	Patented Claim	10.0	n/a	Surface & Mining Rights
L 43085	Marriott Twp	Patented Claim	18.8	n/a	Surface & Mining Rights
L 43086	Marriott Twp	Patented Claim	15.9	n/a	Surface & Mining Rights
L 43087	Marriott Twp	Patented Claim	17.5	n/a	Surface & Mining Rights
L 43094	Marriott Twp	Patented Claim	15.6	n/a	Surface & Mining Rights
L 43095	Marriott Twp	Patented Claim	8.2	n/a	Surface & Mining Rights
L 43096	Marriott Twp	Patented Claim	16.7	n/a	Surface & Mining Rights
L 43103	Marriott Twp	Patented Claim	13.7	n/a	Surface & Mining Rights
L 43104	Marriott Twp	Patented Claim	14.8	n/a	Surface & Mining Rights
L 43105	Marriott Twp	Patented Claim	18.2	n/a	Surface & Mining Rights
L 663726	Marriott Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663727	Marriott Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663728	Marriott Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights

L 663732	Marriott Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663733	Marriott Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 678842	Marriott Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678845	Marriott Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678851	Marriott Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678853	Marriott Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678854	Marriott Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 678855	Marriott Twp	Unpatented Claim	16.0	31/01/2018	Mining Rights
L 682807	Marriott Twp	Unpatented Claim	16.0	22/10/2018	Mining Rights
L 682808	Marriott Twp	Unpatented Claim	16.0	22/10/2018	Mining Rights
L 663723	Stoughton Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663724	Stoughton Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663725	Stoughton Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663730	Stoughton Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights
L 663731	Stoughton Twp	Unpatented Claim	16.0	14/10/2018	Mining Rights

Appendix B

QC / QA Update Report

Holt Zone 4 Deep and Holloway Canamax

Background:

As part of the 2014 surface drill exploration program SAS completed a total of 18 pierces of the Zone 4 West deep target area using a combination of 4 new pilot holes and associated wedges and 5 wedges off previously drilled holes for a total of 14,453m. All drill hole collars were located in the field using a Garmin E-trex handheld GPS in UTM NAD 83 and subsequently surveyed by SAS survey personnel in local Holt mine grid using a Trimble R8 model 3. A Reflex downhole instrument was used to conduct downhole surveys along the trace of the hole in 50m intervals. All downhole tests were recorded digitally, transferred to the survey sheets, verified by an SAS Geologist and entered into the logging software. As is standard and per SAS' drilling procedure, tests are taken no more than 20m after the last run of casing and on the 50m intervals thereafter. Any test deemed to be inaccurate was re-taken at the Geologist's request.

Comments on Drill Programs:

- Core logging and sampling was conducted in accordance with the procedures set out in the SAS Exploration Procedures Manual and meets industry standards for gold exploration
- Collar and downhole surveys have been performed using industry standard equipment
- Drill holes were designed to obtain a high angle intersection with the mineralized zones with the exception of "Target Drilling" namely holes WE14-001 and 003, which were collared at 90° to traditional orientation. They were drilled West to East as opposed to the typical South to North drilling orientation
- Core sampling, handling and assaying procedures have met or exceeded industry standards
- Comparative assay laboratory analysis (Lab / Lab checks) was completed on both 2014 surface and 1055 underground drilling programs for the Zone 4 West extension. Comparative assay results from these check programs correlated very well, and were in-line with exploration personnel expectation.

Sampling Method:

Exploration industry Quality Control programs recommend that approximately 5% of samples submitted to analytical laboratories be comprised of known blank material (Blanks) and certified reference material (Gold Standards). Core was sampled according to mineralization and alteration by an SAS Geologist with typical sample lengths ranging from 0.5m and 1.5m. (minor exceptions to this rule were used for veins or narrow alteration packages). All drill core is cut on site by SAS geotechnical staff using a typical diamond blade core cut saw. Half core samples are packaged for analysis in durable plastic sample bags which are sealed for transport to the lab. The other half of the cut core is retained in the tagged boxes for future reference. Samples are sent via Dicom Couriers to Laboratoire Expert, situated in Rouyn-Noranda QC and accompanied by a Chain of Custody, of which a copy is filed by the Project Geologist. An inventory of all samples sent for analysis is kept. All certificate information, sample turnaround time, QC / QA analysis, standard or blank failures and any other technical information including assay values and QC plots are kept in the Analytical Master excel document, as well as imported into logging software.

Quality assurance Quality Control Sampling Procedure

- Blanks were inserted every 20th sample (or 5%) and were all limestone sourced from New Liskeard Ontario.
- OREAS certified reference standards in pulp form were selected based on best assumed grade and lithological matches and inserted every 20th sample (5%).
- All samples were inserted by the core cutters as per instructions given by the Geologist on the associated sample tags.
- All samples were checked by the Logging or Project Geologist before shipment to the Lab

Samples

A total of 3,874 saw cut core samples, 210 certified reference standards and 210 blanks for a total of 4,294 samples were processed in 2014 and early 2015 at Laboratoire Expert. Over 99% of the standard material was within the allowable limits (3 standard deviations). A detection limit of (less than) <0.03 grams per tonne Au (g/t Au) is used in our analysis. As is industry practice, SAS uses one half of the detection limit which is 0.015 g/t Au. 100% of the Blanks sent for analysis came back at or below detection limit. A total of 484 duplicates were also returned and plot well and within a satisfactory tolerance against one other along a 1:1 line. Comparative charts of all blanks sent, as well as 2 most commonly used standards are found below.

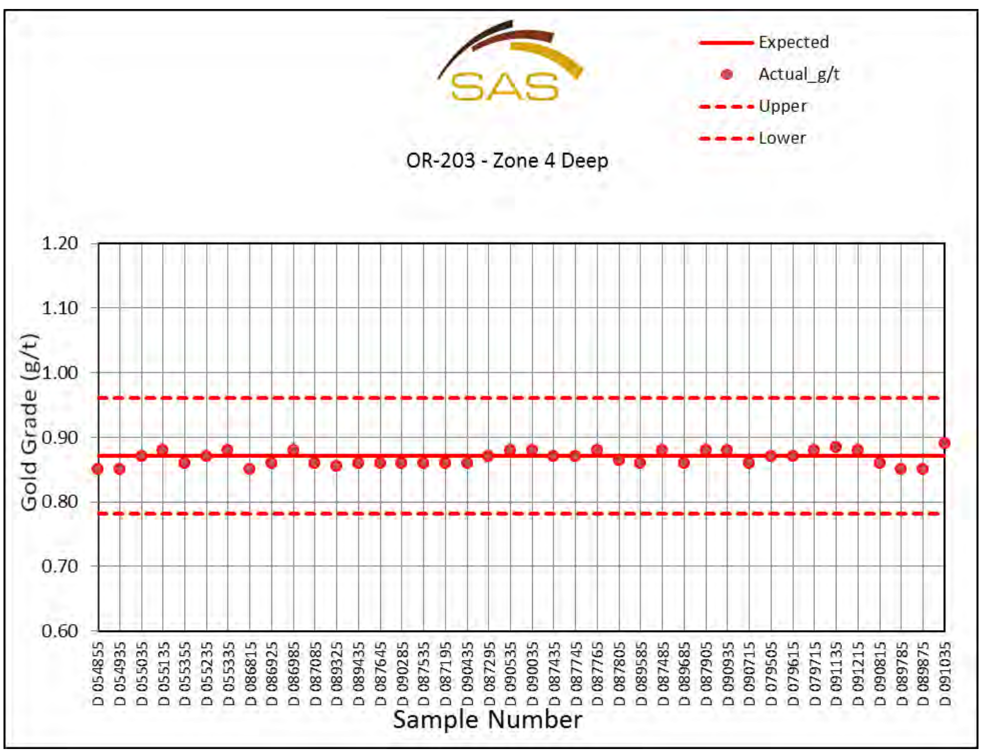
Comparative Analytical Lab- Lab Check

In 2014, SAS Exploration drilling on the Holt Zone 4 Deep west extension target was very successful in effectively extending the known mineralized zones approximately 800m west of the current underground development. As a result of the overall magnitude of the drill program, SAS sought to verify Lab results by conducting three (3) separate Lab checks using sample material in and surrounding targeted zones. The surface exploration drill check program consisted of a total of 101 sample rejects with 7 standards and 5 blanks for a total of 113 samples which were sent to AGAT Laboratories in 2 separate batches in October 2014 and January 2015. A graphical analysis of the respective assay results from this check program was considered acceptable by SAS geological personnel.

As part of the first Lab check programs, SAS sent a total of 63 samples to AGAT Laboratories for a check of two mineralized intersections from holes WE14-001W1 and W2. Reject material was used in the analysis. Results are charted below. There is less than a 5% difference in the weighted average from both intervals sent. Though there is noticeable discrepancies between select ore grade numbers, the indication is that overall the differences are well within statistical allowances. The mineralized intercepts that were cross checked are found below.

Hole number	Assay intercept (Lab Expert)	Assay intercept (AGAT Labs)	Difference
WE14-001 W1	7.89 g/t Au / 19.3m	7.55 g/t Au / 19.3m	4.34%
WE14-001 W2	4.16 g/t Au / 24.4m	4.09 g/t Au / 24.4m	1.77%

The respective Quality Assurance graphs for the Zone 4 Deep drill program are found below:



Holt 1055 Underground Drilling QC / QA check - 2014

As part of the Lab check programs for underground core from the 1055 sub-level drilling, SAS sent a total of 63 samples to Cattarello Laboratories for a check of two mineralized intersections from holes 1055-0155 and 1055-1059. Reject material was used in the analysis. Results are charted below. There is less than a 10% difference in the weighted average from both intervals sent. Though there is noticeable discrepancies between select ore grade numbers, the indication is that overall the differences are well within statistical allowances. The mineralized intercepts that were cross checked are found below.

Hole number	Assay intercept (Holt Mine Lab)	Assay intercept (Cattarello Labs)	Difference
1055-155 Using 25 g/t Cut	21.37 g/t Au / 21.7m 18.70 g/t Au	22.70 g/t Au / 21.7m 18.73 g/t Au	+6.2% 0%
1055-155 Lower	3.26 g/t Au / 8.7m	2.85 g/t Au / 8.7m	-14.4%
1055-159 Using 25 g/t Cut	20.78 g/t Au / 10.9m 16.89 g/t Au	22.88 g/t Au / 10.9m 17.36 g/t Au	+10.1% +2.8%

Canamax 2014

As part of the SAS check program, in June 2014, a total of 42 samples of historical drill core including 4 quality control samples were collected from 4 historical drill holes and sent to Lab Expert for a comparative assay check. Historic drill core from the property had been stored on the Holloway mine site, the core was verified to be intact and historical sample lab numbers were legible. Historical saw cut reference core was collected and was submitted for assay analysis. Results are found in both table and graphical format below. There is reasonable correlation amongst the weighted averages from the samples intervals. Although there is noticeable discrepancies between select ore grade assay results, the indication is that overall the differences are within statistical allowances.

BHID	Sample No.	From	To	Length	Reported Value	Historic Assay Value	Difference
010-45-33	D 086501	139.54	140	0.46	0.04	1.71*	1.67
010-45-33	D 086502	140	141	1	5.31	8.14	2.83
010-45-33	D 086503	141	142	1	0.58	0.39	-0.19
010-45-33	D 086504	142	143	1	0.03	0.07	0.04
010-45-33	D 086506	143	144	1	0.015	0.015	0
010-45-33	D 086507	144	145	1	0.015	0.015	0
010-45-33	D 086508	145	146	1	0.03	0.05	0.02
010-45-33	D 086509	146	147	1	0.95	1.85	0.9
010-45-33	D 086510	147	148	1	10.496	10.02	-0.476
010-45-33	D 086511	148	149	1	0.1	0.15	0.05
010-45-33	D 086512	149	150	1	0.015	0.05	0.035
010-45-3	D 086513	174	175	1	2.74	2.43	-0.31
010-45-3	D 086514	175	176	1	0.07	0.16	0.09
010-45-3	D 086516	176	177	1	2.33	2.91	0.58
010-45-3	D 086517	177	178	1	0.015	0.05	0.035
010-45-3	D 086518	178	179	1	0.015	0.015	0
010-45-42	D 086519	159	160	1	0.09	0.09	0
010-45-42	D 086520"	160	161	1	22.714	30.24	7.526
010-45-42	D 086521"	161	162	1	1.112	1.45	0.338
010-45-42	D 086522	162	163	1	3.81	2.54	-1.27
010-45-42	D 086523	163	164	1	1.37	4.25	2.88
010-45-42	D 086524	164	165	1	3.84	3.77	-0.07
010-45-42	D 086526	165	166	1	4.7	4.32	-0.38
010-45-42	D 086527	166	167	1	4.49	5.07	0.58
010-45-42	D 086528	167	168	1	2.125	3.77	1.645
010-45-42	D 086529	168	169	1	0.16	0.07	-0.09
010-45-50	D 086530	216	217	1	0.85	0.82	-0.03
010-45-50	D 086531	217	218	1	1.47	1.71	0.24
010-45-50	D 086532	218	219	1	1.3	0.49	-0.81
010-45-50	D 086533	219	220	1	1.54	1.81	0.27
010-45-50	D 086534"	220	221	1	0.922	0.46	-0.462
010-45-50	D 086536	221	222	1	0.015	0.21	0.195
010-45-50	D 086537	222	223	1	0.015	0.05	0.035
010-45-50	D 086538	223	224	1	0.27	0.01	-0.26
010-45-50	D 086539	224	225	1	2.37	1.37	-1
010-45-50	D 086540"	225	226	1	55.556	53.91	-1.646
010-45-50	D 086541	226	227	1	0.03	0.07	0.04
010-45-50	D 086542	227	228	1	0.015	0.015	0

*1.71 gpt Au over 1m interval. The complete original interval was not recovered and therefore 0.46m was sampled

"Visible Gold

Sample No.	STD Type	Expected	Reported	Upper Limit
D 086505	OR - 204	1.043	1.06	1.158
D 086515	BLANK	0.015	0.015	0.08
D 086525	OR - 206	2.197	2.19	2.44
D 086535	BLANK	0.015	0.12	0.08

In summary, SAS personnel were pleased with the close assay correlation, with recent re-analysis confirming the presence of anomalous gold grades in the historical core samples.

The bottle roll test results for a Canamax drill core sample are found summarized in the table below. The material was ground to 84.2 % - 400 mesh. The ground pulp was split 4 ways as representatively as possible. The residual cyanide was very low when compared to other bottle rolls. The total leach time was 33.5 hrs.

Canamax Zone - Bottle Roll testwork - SAS 2014							
Test ID	Bottle Number	Solids Weight grams	Assay Head Ave. g/t Au	Assay Tails Ave. g/t Au	Calc. Head g/t Au	Head Abs Difference	Total Recovery
2014 11 12 – 0904	B16	299.7	6.875	0.244	4.2268	2.648	93.76%
2014 11 12 – 0903	B15	303.1	6.875	0.245	4.717	2.158	94.33%
2014 11 12 – 0902	B14	302.02	6.875	0.287	5.9993	0.876	94.87%
2014 11 12 – 0901	B13	304.5	6.875	0.247	5.8596	1.015	95.35%

Overall this process, verified the presence of high grade, confirmed low grade values and gave confidence that Lab Expert is producing accurate, consistent results. In the future we may need to re-check standards against their given values and possibly reconsider which standards are beings used. A summary of comparative assay results for lab check samples from the Holt Deep Zone 4 surface drill program is found below.

Drill Hole #			
WE14-001W1	D 055380	3.00	4.51
WE14-001W1	D 055381	3.00	2.56
WE14-001W1	D 055382	3.16	4.48
WE14-001W1	D 055383	5.58	8.20
WE14-001W1	D 055384	1.01	1.43
WE14-001W1	D 055385	0.015	0.01
WE14-001W1	D 055386	5.50	2.79
WE14-001W1	D 055387	1.33	1.08

WE14-001W1	D 055388	2.12	2.02
WE14-001W1	D 055389	22.955	16.30
WE14-001W1	D 055390	0.155	0.242
WE14-001W1	D 055391	0.80	0.411
WE14-001W1	D 055392	4.11	3.96
WE14-001W1	D 055393	0.14	0.175
WE14-001W1	D 055394	15.515	13.10
WE14-001W1	D 055395	2.20	2.16
WE14-001W1	D 055396	5.85	5.41
WE14-001W1	D 055397	0.24	0.506
WE14-001W1	D 055398	0.71	0.704
WE14-001W1	D 055399	1.18	1.23
WE14-001W1	D 055400	0.77	0.771
WE14-001W1	D 055401	1.21	1.68
WE14-001W1	D 055402	0.095	0.095
WE14-001W1	D 055403	0.015	0.072
WE14-001W1	D 055404	0.03	0.028
WE14-001W1	D 055405	0.015	0.007
WE14-001W1	D 055406	6.30	4.04
WE14-001W1	D 055407	5.83	3.29
WE14-001W1	D 055408	1.08	1.68
WE14-001W1	D 055409	21.305	22.40
WE14-001W1	D 055410	6.28	7.25
WE14-001W1	D 055411	4.02	4.89
WE14-001W1	D 055412	13.185	15.60

WE14-001W1	D 055413	1.08	1.32
WE14-001W1	D 055414	0.69	2.62
WE14-001W1	D 055415	1.06	1.04
WE14-001W2	D 086715	2.26	2.26
WE14-001W2	D 086716	2.73	1.08
WE14-001W2	D 086717	4.40	4.44
WE14-001W2	D 086718	5.72	7.13
WE14-001W2	D 086719	8.45	10.6
WE14-001W2	D 086720	6.85	7.47
WE14-001W2	D 086721	8.19	7.41
WE14-001W2	D 086722	3.12	4.25
WE14-001W2	D 086723	3.63	3.20
WE14-001W2	D 086724	4.70	5.22
WE14-001W2	D 086725	0.015	0.023
WE14-001W2	D 086726	1.61	1.31
WE14-001W2	D 086727	8.43	8.57
WE14-001W2	D 086728	1.30	1.51
WE14-001W2	D 086729	2.81	2.79
WE14-001W2	D 086730	0.36	0.34
WE14-001W2	D 086731	1.55	1.06
WE14-001W2	D 086732	6.74	5.58
WE14-001W2	D 086733	3.50	3.53
WE14-001W2	D 086734	6.445	5.59
WE14-001W2	D 086735	1.04	1.01

WE14-001W2	D 086736	8.16	7.54
WE14-001W2	D 086737	9.28	7.80
WE14-001W2	D 086738	28.70	26.10
WE14-001W2	D 086739	30.065	28.80
WE14-001W2	D 086740	18.175	16.30
WE14-001W2	D 086741	4.39	3.97
WE14-004W1	D 090770	6.24	6.13
WE14-004W1	D 090771	11.02	18.80
WE14-004W1	D 090772	39.465	20.50
WE14-004W1	D 090773	9.925	5.05
WE14-004W1	D 090774	13.80	8.99
WE14-004W1	D 090775	0.87	0.963
WE14-004W1	D 090776	1.07	1.37
WE14-004W1	D 090777	0.95	0.678
WE14-004W1	D 090778	1.28	1.86
WE14-004W1	D 090779	7.37	8.62
WE14-004W1	D 090780	4.42	4.50
WE14-004W1	D 090781	4.46	5.05
WE14-004W1	D 090782	12.96	12.30
WE14-004W1	D 090783	11.775	9.43
WE14-004W1	D 090784	6.17	6.77
WE14-004W1	D 090785	0.015	0.002
WE14-004W1	D 090786	15.17	15.10
WE14-004W1	D 090787	2.995	4.55

WE14-004W1	D 090788	3.27	4.02
WE14-004W1	D 090789	0.84	0.529
WE14-004W1	D 090790	8.91	7.16
WE14-004W1	D 090791	4.80	4.87
WE14-004W1	D 090792	1.14	1.39
WE14-004W1	D 090793	0.14	0.17
WE14-004W1	D 090794	5.73	5.83
WE14-004W1	D 090795	0.52	0.505
WE14-004W1	D 090796	6.79	8.99
ME98-05C	D 087780	0.13	0.171
ME98-05C	D 087781	0.325	0.344
ME98-05C	D 087782	12.36	10.80
ME98-05C	D 087783	8.61	8.71
ME98-05C	D 087784	8.54	9.17
ME98-05C	D 087785	0.51	0.512
ME98-05C	D 087786	14.28	13.10
ME98-05C	D 087787	23.105	21.70
ME98-05C	D 087788	11.625	10.70
ME98-05C	D 087789	3.18	3.83
ME98-05C	D 087790	4.19	4.49
ME98-05C	D 087791	1.52	1.70
ME98-05C	D 087792	4.54	3.80
ME98-05C	D 087793	1.065	0.964
ME98-05C	D 087794	3.32	2.63

ME98-05C	D 087795	0.015	0.003
ME98-05C	D 087796	0.92	1.03
ME98-05C	D 087797	0.10	0.121
ME98-05C	D 087798	1.37	1.97
ME98-05C	D 087799	0.64	0.955
ME98-05C	D 087800	6.99	6.08
ME98-05C	D 087801	1.63	2.17
ME98-05C	D 087802	1.43	1.59

Note QC / QA samples were inserted and denoted by sample numbers ending in “5” and are shaded.

Appendix C: Holt Mine Resource Update Audit

AURUM
GLOBAL EXPLORATION

Holt Mine Resource Update Audit

Ashley Brown, CFSG, PGeo (AES)

Ben Harwood, PGeo (SAS)

February 5, 2015

AEX-15-06

Holt Mine Resource Update Audit

Holt Mine and Mill, Ontario

Prepared For:

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Doug Cater
20 Adelaide Street East, Suite 1500
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CANADA

4th February 2015

Prepared By:
Ashley Brown, CFSG, PGeo
Aurum Exploration Services

Ben Harwood, PGeo
St Andrew Goldfields

INTRODUCTION AND SCOPE OF AUDIT

St Andrew Goldfields ("SAS") has engaged the services of Aurum Exploration Services ("Aurum") to perform an independent review of the in-house estimate of the Zone 4 Extension of Holt Mine. The scope of this study was to give an opinion on the reasonableness of the estimation methodology. This was based upon the assumption that the QA/QC was in good order. The block model was to be validated and advice was to be given upon the declaration of resources. SAS would then review these results and see if this area merited being accessed by underground development from existing underground infrastructure. This would allow follow up underground delineation drilling so that targets could be further proved up for mining activities. Thus this process is part of a logical stepwise brownfields exploration approach for the delineation of future resources and reserves at Holt Mine. This audit was performed by Ashley Brown an Associate of Aurum who is an Independent Qualified Person in good standing with the Association of Professional Geologists of Ontario (APGO, #1683). He met the Holt Mine Senior Resource Geologist Ben Harwood at the SAS Toronto Head Office for this review on Saturday January 31, 2015 where this review was conducted. Subsequent communication by e-mail facilitated the write-up of this report.

OVERVIEW

The main part of Zone 4 at Holt Mine currently forms the principal location for the bulk of SAS's reserves, containing approximately 200,000 oz of gold. These reserves have been delineated with a drill spacing of 12.5 x 12.5 metres.

The Zone 4 Extension also includes the NBS Zone and the Vertical Extension, which have been intersected by 14, 12 and 11 boreholes, respectively, with 5 to 20m long intersections for 763 metres within the three zones (see Figure 1).

These mineralized zones are bounded by the Ghost Mount Fault, which lies to the South in the hangingwall, and the McKenna Fault to the North in the footwall. The mineralization lies on these faults and well-mineralized zones tend to have albite-sulphide-chlorite alteration.

Currently the mining method of choice is longhole stoping which has a limitation of using a 3 metre stoping width at best when steep. Zone 4 is being accessed by track drifts on 925 Level and 1075 Level and drilled by fan drilling. The resource block model covering Zone 4 has block dimensions of 3 x 3 x 3 metres.

The three above mentioned zones of interest are not accessible as yet by underground development. The purpose of this review is to validate the resources delineated by the current 2014 phase of surface drilling.

REVIEW OF ZONE 4 EXTENSION GEOLOGY

The three Zones of interest, which have been intersected by the 2014 drilling campaign are the Zone 4 Extension, NBS Zone and the Vertical Extension.

Table 1 – Dimension of Mineralised Zones in this review

ZONE NAME	STRIKE EXTENTS (m)	DIP EXTENTS (m)	THICKNESS (m)
ZONE 4 EXTENSION	550	300	5-20
NBS ZONE	550	200	5-20
VERTICAL EXTENSION	500	200	5-15

The NBS Zone mineralization appears to extend into the vertical Zone, but not beyond it. The Vertical Extension extends into the Zone 4 Extension, but it is not known if it extends beyond it, nor has it been modeled beyond.

The gold mineralization tends to be concentrated of the upper bounds of each zone, and to a lesser extent on the bottom bounds of each zone.

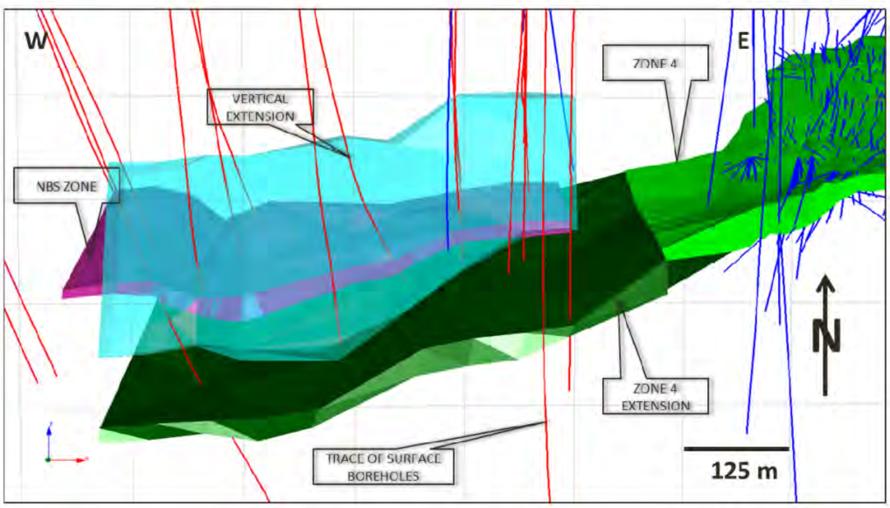


Figure 1. Showing a longitudinal section looking north

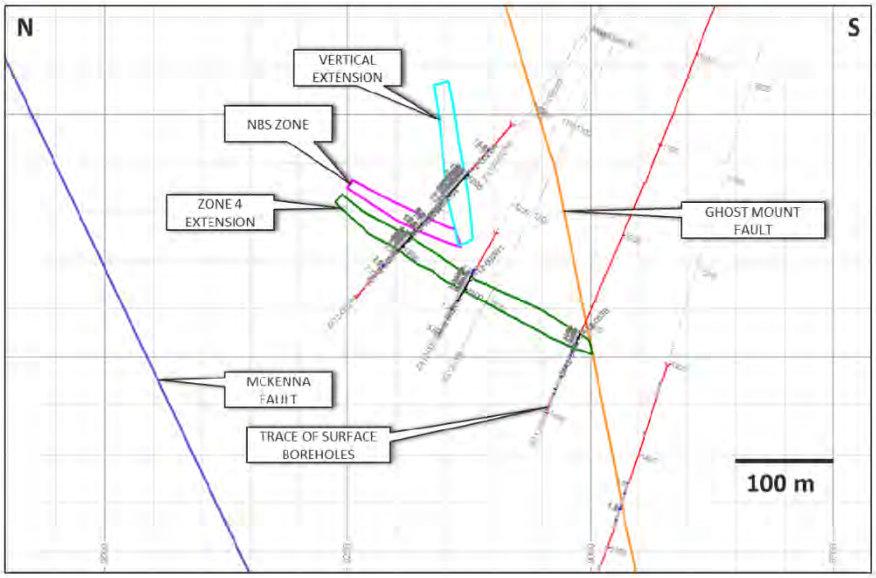


Figure 2. Section of the three zones in relation the surrounding structure.

DATA MANIPULATION

The Zone 4 extension drilling completed to date comprises 20 boreholes with 5 to 20 metre long intersections for a total of 30,057 metres in all, including all pilot holes and wedge cuts. For reasons of access these boreholes have been drilled directly from the surface and are on average 1,400 metres in length.

The borehole sampling lengths were mostly sampled on a one (1) metre basis, but could be as little 30 cm and as much as 1.5 metres in length. All samples below the detection limit of 0.005 gpt gold have been assigned a gold grade of 0.0025 gpt. In order to restrict the extrapolation of gold grades any unsampled sections have also been assigned a gold grade of 0.0025 gpt gold. Data was selected per domain and per wireframe. A cap of 25 gpt gold has been applied to the gold grades. The samples were then composited (modal composites) and declustered statistics (declustered upon 100 x 50 x 100 m squares) were performed per zone and these statistics were averaged for the area of study as a whole. These statistics are summarized in Table 2 shown below. These statistics were length weighted.

Table 2 – Base statistics of current (2014) drilling campaign

Domain	Statistics	Min	Max	Mean	Std Dev.	Variance	COV
Zone4 Ext	Raw uncapped	0.02	30.06	2.02	3.42	11.73	1.69
Zone4 Ext	Composited capped	0.02	25.00	1.99	2.90	8.40	1.46
Zone4 Ext	Declustered capped	0.80	7.38	2.60	1.80	3.44	0.69
NBS Zone	Raw uncapped	0.02	38.18	3.07	5.86	34.28	1.91
NBS Zone	Composited capped	0.00	25.00	2.62	4.36	19.04	1.66
NBS Zone	Declustered capped	0.36	8.90	2.70	2.33	5.44	0.86
Vertical Ext.	Raw uncapped	0.02	38.18	3.07	5.86	34.28	1.91
Vertical Ext.	Composited capped	0.00	25.00	2.62	4.36	19.04	1.66
Vertical Ext.	Declustered capped	0.36	8.90	2.70	2.33	5.44	0.86
All	Raw uncapped	0.02	39.46	2.60	4.49	20.12	1.72
All	Composited Capped	0.00	25.00	2.46	3.64	13.27	1.48
All	Declustered capped	0.42	8.68	2.63	2.05	4.19	0.78

REVIEW OF DATA MANIPLUATION

The data was selected within the respective wireframe zones ensuring that the data clipped the samples as precisely as possible. A script was written to ensure precise clipping of the data. Applying the cap to raw samples is a conservative practice. The normal industry practice is to cap composited gold grades. The application of half the background grade to unsampled areas is a good practice and is also conservative.

BLOCK MODEL VALIDATION

The block model was validated by the following checks:

Comparison of inputs and outputs:

This involves comparing the declustered mean on a reasonable block size (100x15x100 m) with the global mean of the output blocks at zero cut-off.

Swath plots:

This is a more spatial check of the performance of the block model on a local basis. It is a good practice to perform swath plots in the X, Y and Z directions.

Visualisation on Section and plan:

The borehole samples and block outputs were viewed side by side to compare the inputs and output visually in plan and on a sectional basis to ensure that the blocks are interpolated correctly. That is to say that the low grade samples inform low grade blocks and that high grade samples inform high-grade blocks.

REVIEW OF THE BLOCK MODEL VALIDATION

The mean of the declustered input boreholes at zero grade was 2.63 gpt gold, whereas the mean of the output blocks was 2.61 gpt gold. This shows that the block model estimate varies by 3.2% but it is within the 5% of the input data. This is an acceptable result. Swath plots were made of the NN and ID2 block outputs to check the performance of the model locally. It was recommended that this be done as a further local rather than global check.

The model was viewed on section and on plan and found to be in order.

Table 3 – Comparison of data input versus block output grades

Domain	Inputs	Outputs	Reconciliation
	Declustered Mean - Gold (gpt)	Block Mean - Gold (gpt)	Variance (%)
Zone 4 Ext.	2.6	2.37	-8.8%
NBS Zone	2.7	2.79	3.3%
Vertical Ext.	2.7	2.85	5.6%
Average	**2.63**	**2.61**	**-0.8%**

CHOICE OF BLOCK MODEL ESTIMATION PARAMETERS

The area of study has broadly been drilled by boreholes on a 100 metre distance apart on strike and a 50 metre distance on dip. Due to the dimensions of the wireframes, the block model dimensions chosen were documented in Table 4 shown below. The same block size was used on the Vertical Extension, but with a block rotation of Z=-6.2°, Y=16.9°, X=18.9°.

Table 4 – Holt Zone 4 Extension and NBS Block Model Parameters

Parameter	X	Y	Z
Model Origin	8197.99	8985.16	3522.63
Dimension	15	15	6
N blocks	50	37	35
Extents (m)	750	555	210
Rotated?	Yes	Yes	Yes
Rotation	3.415	6.830	-35.759
Sub-blocks	5	5	3
Percent model	No	No	No

REVIEW OF BLOCK MODEL PARAMETERS

The choice of the block size of 15 x 15 x 6 metres is a necessary evil due to the dimensions of the mineralized zones. Although the estimation variance will likely be high, globally the estimate should be reasonable. At this stage we are more interested in estimating global resources to motivate for capital for primary access development being put in place. It is understood that should this project be viable a logical stepwise approach will be taken to drive further development, which will allow further delineation drilling to take place prior to mining operations.

CHOICE OF ESTIMATION PARAMETERS

Due to the paucity of data it was not possible to calculate a variogram. It was decided to interpolate the data with inverse distance to the power of two ("ID2"). In addition the nearest neighbor ("NN") search algorithm was used as a check estimate. A search range in excess of the maximum distance between boreholes was chosen as the search range with a vertical search in excess of the thickness. The minimum and maximum number of samples was adjusted by several iterations until the global mean of the block outputs was within 5% of the declustered mean of the borehole inputs. The density applied to the model was 2.84, which conforms to the density found to give good mill reconciliation in all mined horizons within the Holt Mine. The search parameters used to interpolate the each zone were summarized in Tables 4-7 below.

Table 5 – Search parameters chosen to interpolate the Holt Zone 4 extension

SEARCH PARAMETERS	
Interpolation algorithms	ID2, NN
Search ranges (X, Y, Z)	130, 130, 30
Rotation (X, Y, Z)	110, -33, 0
Minimum sample number	8
Maximum sample number	18
Max per borehole	6
Number of search passes	1
Octant Search?	No
Discretization	3 x 3 x 3

Table 6 – Search parameters chosen to interpolate the NBS Zone

SEARCH PARAMETERS	
Interpolation algorithms	ID2, NN
Search ranges (X, Y, Z)	130, 130, 30
Rotation (X, Y, Z)	105, -30, 0
Minimum sample number	9
Maximum sample number	15
Max per borehole	6
Number of search passes	1
Octant Search?	No
Discretization	3 x 3 x 3

Table 7 – Search parameters chosen to interpolate the Vertical Extension Zone

SEARCH PARAMETERS	
Interpolation algorithms	ID2, NN
Search ranges (X, Y, Z)	130, 130, 30
Rotation (X, Y, Z)	90, -73, 0
Minimum sample number	8
Maximum sample number	18
Max per borehole	6
Number of search passes	1
Octant Search?	No
Discretization	3 x 3 x 3

REVIEW OF SEARCH PARAMETERS

Given the fact that there is paucity of data the choice of the ID2 estimator is reasonable to derive a global estimate. Several iterations of the interpolation of the blockmodel were made until the mean of the output block estimates at zero cut-off was within 5% of the mean of the input drillhole samples. This is an important validation test to ensure that the model is not biased globally. The choice of the max key of 6 is important as it ensures that the 1 metre modal composites nearest to a block are chosen to inform upon a block. The use of a minimum of eight samples is also important as it ensures that no block is informed by less than two boreholes. The choice of a maximum of 18 is also reasonable as it attempts to ensure that the blocks are not over smoothened. The choice of a discretization of 3 x 3 x 3 is reasonable for blocks of dimension 15 x 15 x 6 metres. The choice not to use an octant search is also reasonable since the data is drilled on what approximates to a regular drilling grid. The block models of the three zones are displayed in Figures 3-5, showing interpolated grade.

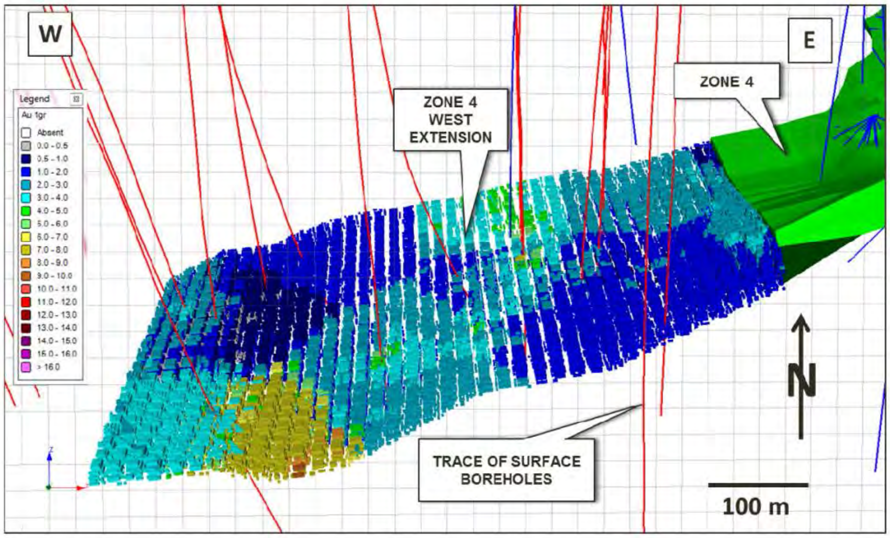


Figure 3. A longitudinal section looking north, Zone 4 West Extension block model, showing grade.

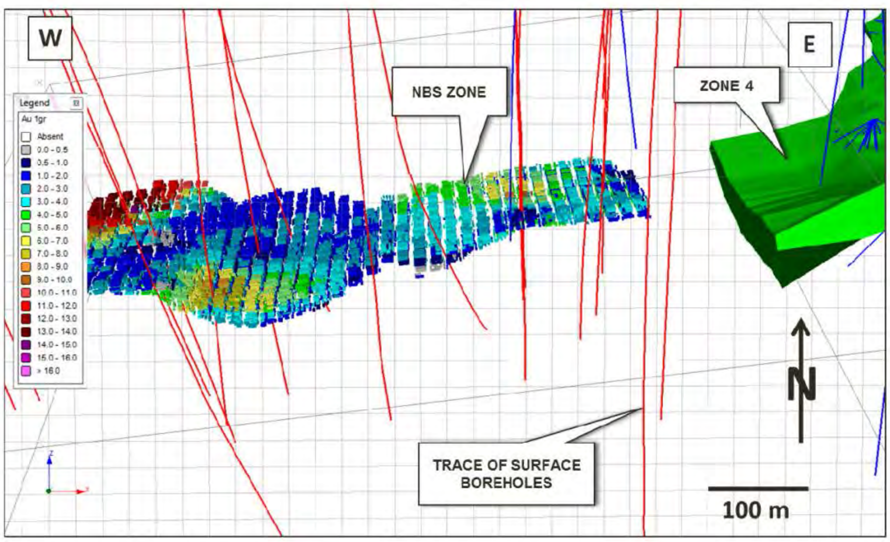


Figure 4. A longitudinal section looking north, NBS block model, showing grade.

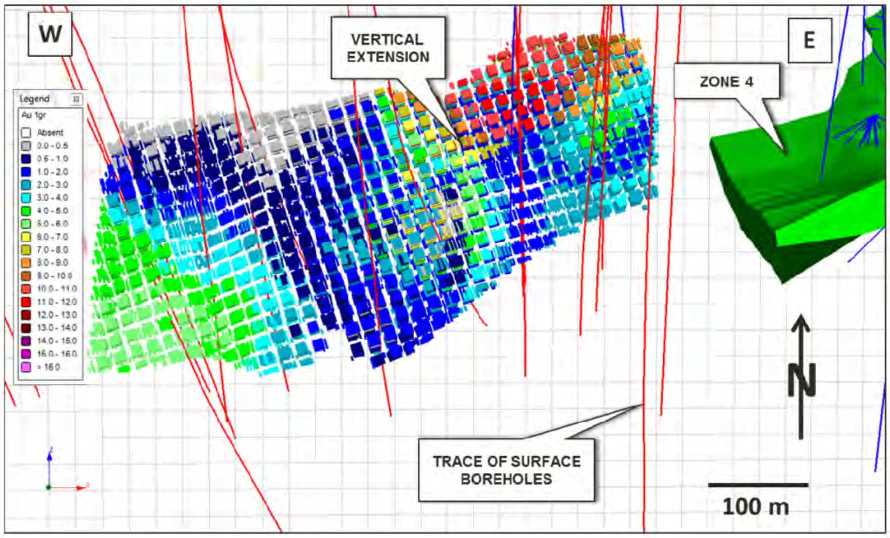


Figure 5. A longitudinal section looking north, Vertical Extension block model, showing grade.

RESOURCE CLASSIFICATION

The declaration of resources is normally accompanied by cautionary language. A host of requirements must be fulfilled to allow the declaration of resources. These are technical, social, legal and environmental reasons that need to be complied with before a resource can be declared. However, there are also the economic aspects and the primary requirement that needs to be satisfied is the reasonable expectation of economic viability. Upon review of the geology and mineralisation continuity in the light of an adjacent but similar style of mineralization, the current 100 x 50 drill spacing merits that the material targeted within this resource estimate could be at best classified as Inferred Resources.

The Zone 4 extension seems to be a continuation of Zone 4 and a variogram calculated upon that domain had a maximum range of 80 metres. It is deemed that this range is reasonable and conservative enough measure of the mineralization continuity to be used as a guide to delineate inferred resources. It is easy to apply this as a resource classification criterion. It allows for the delineation of contiguous resource blocks. Thus, at a distance greater than 80 metres from the boreholes should be classified as "mineral inventory" (see Figures 6-8).

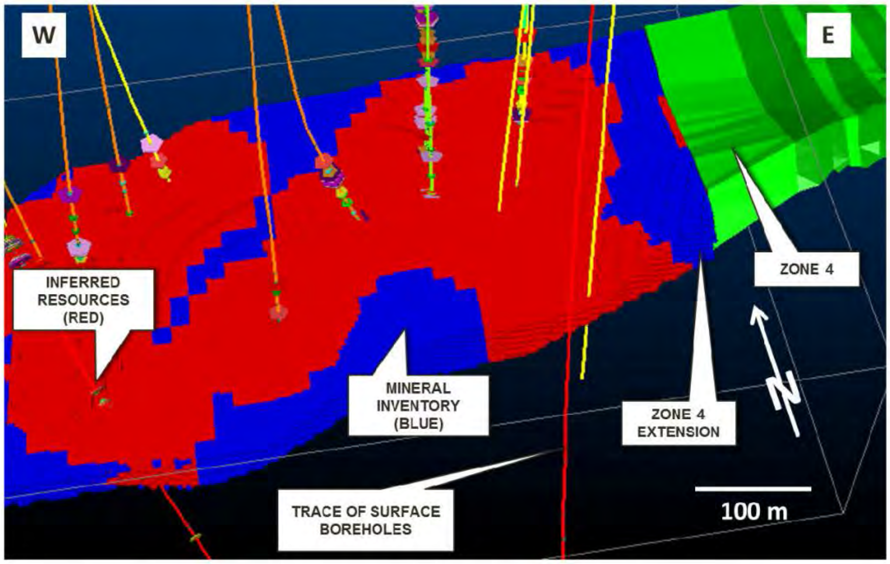


Figure 6. Longitudinal section of Zone 4 West Extension, looking north.

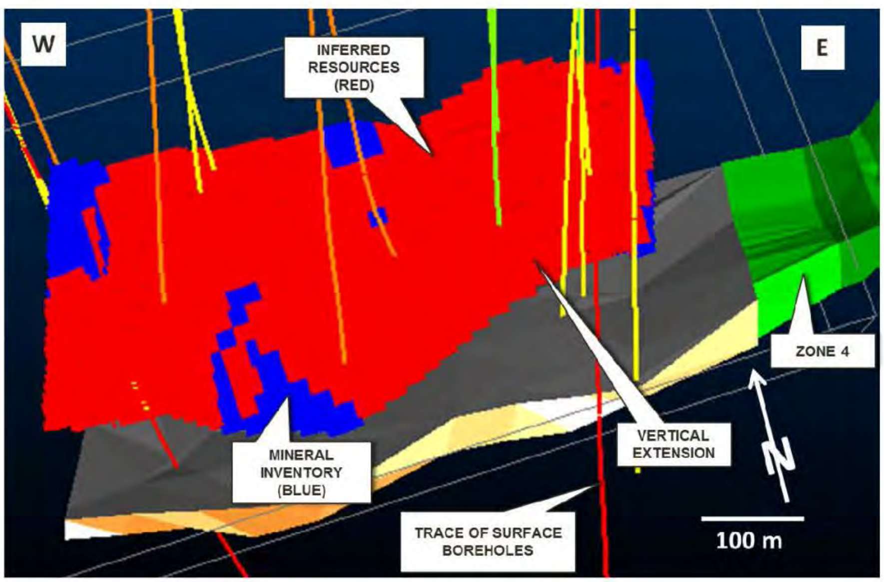


Figure 7. Longitudinal section of Vertical Extension, looking north.

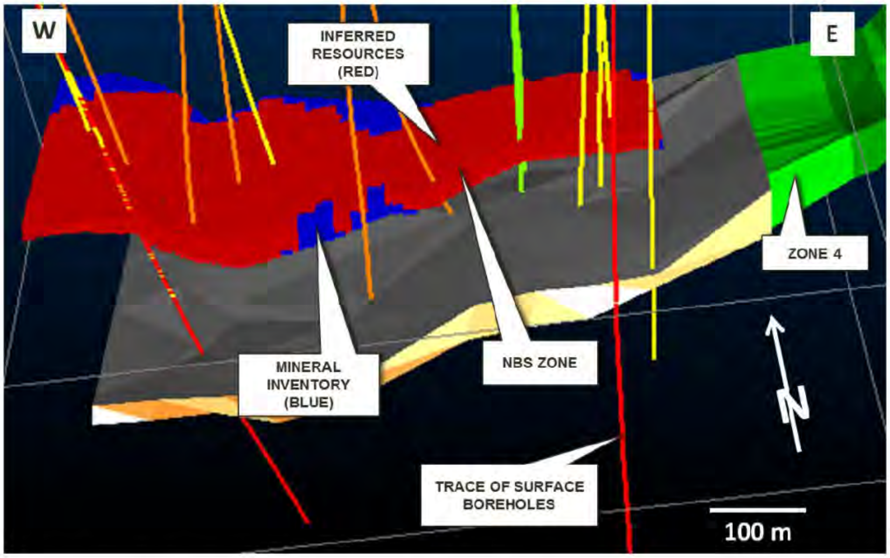


Figure 8. Longitudinal section of NBS Zone, looking north.

The areas assigned to mineral inventory can be upgraded by further infill drilling.

REVIEW OF THE RESOURCE CLASSIFICATION

These recommendations are conservative guidelines. NI 43-101 leaves the declaration of resource to the interpretation of the reviewing QP. The QP typically takes into account the geological and grade continuity and the quality of the informing data (location and QA/QC). If there is a lack of conservatism at this stage it is difficult to retract resources when more data becomes available when follow up drilling occurs.

RESOURCES DELINEATED IN 2014 DRILLING CAMPAIGN

Using the recommended guidelines SAS Ben Harwood of SAS provided the following sensitivity tables (see Tables 8 to 19 below) for the totals of each block model, which is further subdivided into Inferred resources and Mineral Inventory delineated in the 2014 Holt Deep exploration drilling. The mean grade of 2.61 gpt compares very well with the declustered mean of the composites from all zones (Table 2) of 2.63 gpt (0.8% difference). Given the very limited drilling data available the data inputs and block outputs compare well.

Table 8 – Sensitivity table for total Zone 4 Extension block model

CUT-OFF (AU gpt)	TONNES (t)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	8,227,304	2.84	2.37	627,791
0.5	7,882,474	2.84	2.46	623,791
1.0	6,661,728	2.84	2.77	593,472
1.5	5,010,195	2.84	3.28	527,948
2.0	3,797,270	2.84	3.76	459,447
2.5	**2,653,895**	**2.84**	**4.43**	**378,312**
3.0	2,008,633	2.84	4.98	321,764
3.5	1,522,481	2.84	5.54	271,233
4.0	1,137,164	2.84	6.15	224,772
4.5	838,266	2.84	6.84	184,277
5.0	663,895	2.84	7.39	157,734
5.5	531,162	2.84	7.94	135,646

Note all figures are quoted within the limitations caused by rounding

Table 9 – Sensitivity table for Inferred Resource in Zone 4 Extension

CUT-OFF (AU gpt)	TONNES (t)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	6,784,186	2.84	2.29	499,238
0.5	6,440,277	2.84	2.39	495,249
1.0	5,328,263	2.84	2.73	467,836
1.5	3,861,835	2.84	3.30	409,720
2.0	2,903,642	2.84	3.81	355,915
2.5	**2,095,741**	**2.84**	**4.43**	**298,803**
3.0	1,581,142	2.84	4.99	253,652
3.5	1,196,821	2.84	5.56	213,805
4.0	879,980	2.84	6.21	175,646
4.5	634,220	2.84	6.98	142,299
5.0	495,583	2.84	7.61	121,220
5.5	420,897	2.84	8.03	108,714

Table 10 – Sensitivity table for Mineral Inventory in Zone 4 Extension

CUT-OFF (AU gpt)	TONNES (t)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	1,443,118	2.84	2.77	128,553
0.5	1,442,197	2.84	2.77	128,542
1.0	1,333,465	2.84	2.93	125,636
1.5	1,148,360	2.84	3.20	118,228
2.0	893,629	2.84	3.60	103,532
2.5	**558,154**	**2.84**	**4.43**	**79,509**
3.0	427,491	2.84	4.96	68,112
3.5	325,660	2.84	5.48	57,427
4.0	257,185	2.84	5.94	49,126
4.5	204,045	2.84	6.40	41,978
5.0	168,313	2.84	6.75	36,515
5.5	110,266	2.84	7.60	26,931

Note all figures are quoted within the limitations caused by rounding

Table 11 – Sensitivity table for total NBS Zone block model

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	4,064,347	2.84	2.79	364,657
0.5	3,990,427	2.84	2.84	363,726
1.0	3,408,503	2.84	3.18	348,983
1.5	2,605,740	2.84	3.77	316,091
2.0	1,911,249	2.84	4.51	276,832
2.5	**1,517,190**	**2.84**	**5.09**	**248,217**
3.0	1,201,959	2.84	5.70	220,457
3.5	1,015,933	2.84	6.15	201,038
4.0	873,232	2.84	6.56	184,075
4.5	634,374	2.84	7.42	151,431
5.0	502,637	2.84	8.14	131,534
5.5	416,449	2.84	8.74	117,051

Note all figures are quoted within the limitations caused by rounding

Table 12 – Sensitivity table for Inferred Resource in NBS Zone

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	3,936,905	2.84	2.79	353,351
0.5	3,862,985	2.84	2.84	352,420
1.0	3,281,751	2.84	3.20	337,698
1.5	2,514,184	2.84	3.79	306,226
2.0	1,830,888	2.84	4.55	267,614
2.5	**1,453,699**	**2.84**	**5.14**	**240,213**
3.0	1,155,951	2.84	5.76	214,013
3.5	977,900	2.84	6.22	195,444
4.0	835,199	2.84	6.65	178,480
4.5	609,683	2.84	7.53	147,685
5.0	501,947	2.84	8.14	131,410
5.5	415,759	2.84	8.75	116,927

Table 13 – Sensitivity table for Mineral Inventory in NBS Zone

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	127,442	2.84	2.76	11,306
0.5	127,442	2.84	2.76	11,306
1.0	126,752	2.84	2.77	11,285
1.5	91,556	2.84	3.35	9,865
2.0	80,361	2.84	3.57	9,217
2.5	**63,491**	**2.84**	**3.92**	**8,004**
3.0	46,008	2.84	4.36	6,444
3.5	38,033	2.84	4.57	5,594
4.0	38,033	2.84	4.57	5,594
4.5	24,691	2.84	4.72	3,746
5.0	690	2.84	5.60	124
5.5	690	2.84	5.60	124

Note all figures are quoted within the limitations caused by rounding

Table 14 – Sensitivity table for total Vertical Extension Zone block model

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	5,002,833	2.84	2.85	459,029
0.5	4,700,024	2.84	3.01	455,299
1.0	3,996,485	2.84	3.41	438,186
1.5	3,356,514	2.84	3.82	412,305
2.0	2,705,807	2.84	4.32	375,925
2.5	**2,049,656**	**2.84**	**4.99**	**328,679**
3.0	1,709,734	2.84	5.43	298,722
3.5	1,424,561	2.84	5.87	268,698
4.0	1,099,284	2.84	6.50	229,616
4.5	929,438	2.84	6.91	206,523
5.0	708,447	2.84	7.58	172,572
5.5	516,363	2.84	8.47	140,650

Table 15 – Sensitivity table for Inferred Resource in Vertical Extension

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	4,780,691	2.84	2.87	441,811
0.5	4,507,174	2.84	3.03	438,497
1.0	3,829,783	2.84	3.43	421,968
1.5	3,227,308	2.84	3.83	397,571
2.0	2,599,069	2.84	4.34	362,520
2.5	**1,977,270**	**2.84**	**5.00**	**317,781**
3.0	1,651,994	2.84	5.44	289,067
3.5	1,372,419	2.84	5.88	259,619
4.0	1,065,392	2.84	6.50	222,688
4.5	903,750	2.84	6.91	200,716
5.0	685,366	2.84	7.59	167,143
5.5	497,116	2.84	8.50	135,843

Note all figures are quoted within the limitations caused by rounding

Table 16 – Sensitivity table for Mineral Inventory in Vertical Extension

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	222,142	2.84	2.41	17,218
0.5	192,850	2.84	2.71	16,802
1.0	166,702	2.84	3.03	16,218
1.5	129,206	2.84	3.55	14,734
2.0	106,739	2.84	3.91	13,405
2.5	**72,386**	**2.84**	**4.68**	**10,898**
3.0	57,740	2.84	5.20	9,655
3.5	52,142	2.84	5.42	9,079
4.0	33,893	2.84	6.36	6,927
4.5	25,688	2.84	7.03	5,807
5.0	23,081	2.84	7.32	5,429
5.5	19,247	2.84	7.77	4,807

Table 17 – Sensitivity table for total block models of all three zones

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	17,294,484	2.84	2.61	1,451,476
0.5	16,572,925	2.84	2.71	1,442,816
1.0	14,066,716	2.84	3.05	1,380,642
1.5	10,972,448	2.84	3.56	1,256,345
2.0	8,414,326	2.84	4.11	1,112,204
2.5	**6,220,742**	**2.84**	**4.78**	**955,208**
3.0	4,920,326	2.84	5.32	840,943
3.5	3,962,976	2.84	5.82	740,968
4.0	3,109,681	2.84	6.39	638,462
4.5	2,402,078	2.84	7.02	542,231
5.0	1,874,979	2.84	7.66	461,840
5.5	1,463,975	2.84	8.36	393,346

Note all figures are quoted within the limitations caused by rounding

Table 18 – Sensitivity table for total Inferred Resource of all three zones

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	15,501,782	2.84	2.60	1,294,400
0.5	14,810,435	2.84	2.70	1,286,166
1.0	12,439,796	2.84	3.07	1,227,503
1.5	9,603,327	2.84	3.61	1,113,518
2.0	7,333,599	2.84	4.18	986,050
2.5	**5,526,711**	**2.84**	**4.82**	**856,797**
3.0	4,389,087	2.84	5.36	756,732
3.5	3,547,140	2.84	5.87	668,868
4.0	2,780,570	2.84	6.45	576,814
4.5	2,147,653	2.84	7.11	490,699
5.0	1,682,896	2.84	7.76	419,773
5.5	1,333,772	2.84	8.43	361,484

Table 19 – Sensitivity table for total Mineral Inventory of all three zones

CUT-OFF (AU gpt)	TONNES (000's)	DENSITY	AU (gpt)	GOLD (oz.)
0.0	1,792,702	2.84	2.73	157,077
0.5	1,762,490	2.84	2.76	156,650
1.0	1,626,920	2.84	2.93	153,139
1.5	1,369,121	2.84	3.24	142,827
2.0	1,080,728	2.84	3.63	126,154
2.5	**694,031**	**2.84**	**4.41**	**98,411**
3.0	531,239	2.84	4.93	84,211
3.5	415,836	2.84	5.39	72,100
4.0	329,111	2.84	5.83	61,647
4.5	254,424	2.84	6.30	51,532
5.0	192,083	2.84	6.81	42,067
5.5	130,203	2.84	7.61	31,862

Note all figures are quoted within the limitations caused by rounding

Using the above sensitivity tables, grade tonnage curves for the potential Inferred Resources are shown in Figures 9 to 12 below.

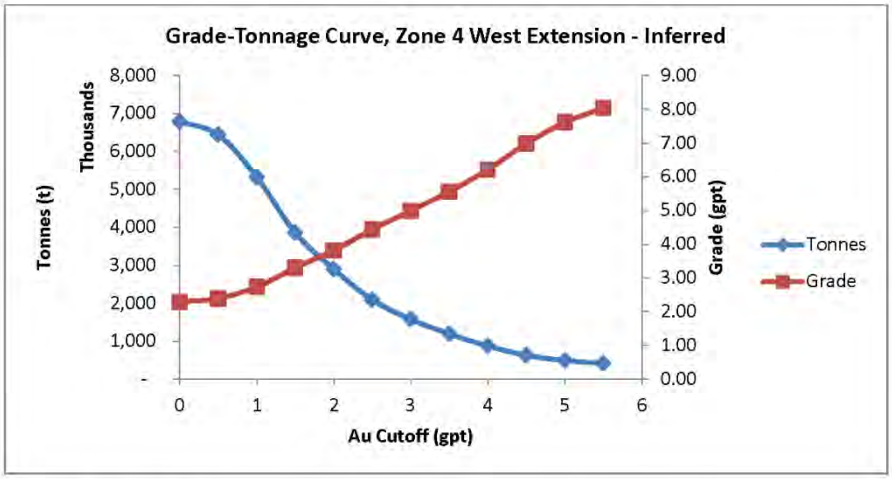


Figure 9. GT curve for Inferred Resources in Holt Zone 4 West Extension

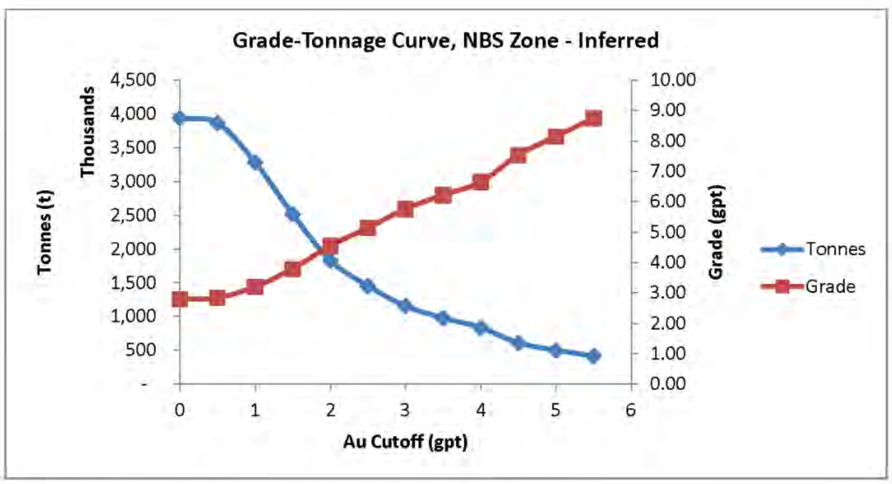


Figure 10. GT curve for Inferred Resources in Holt NBS Zone

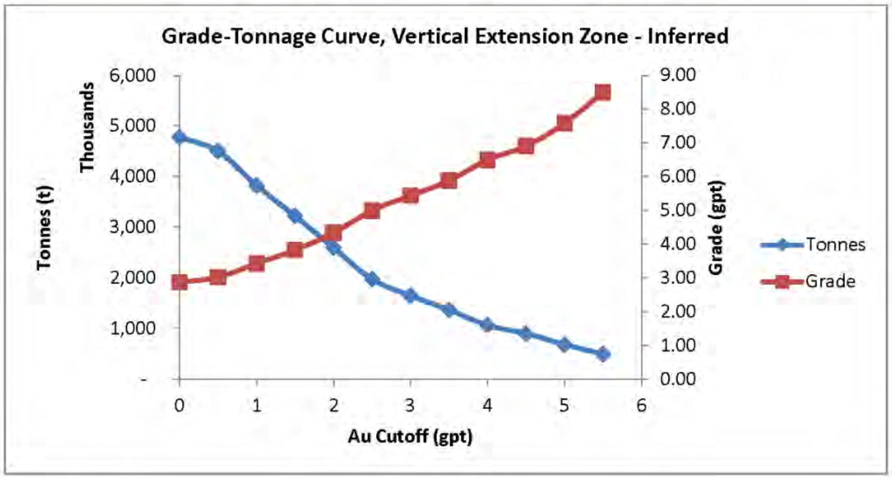


Figure 11. GT curve for Inferred Resources in Holt Vertical Extension Zone

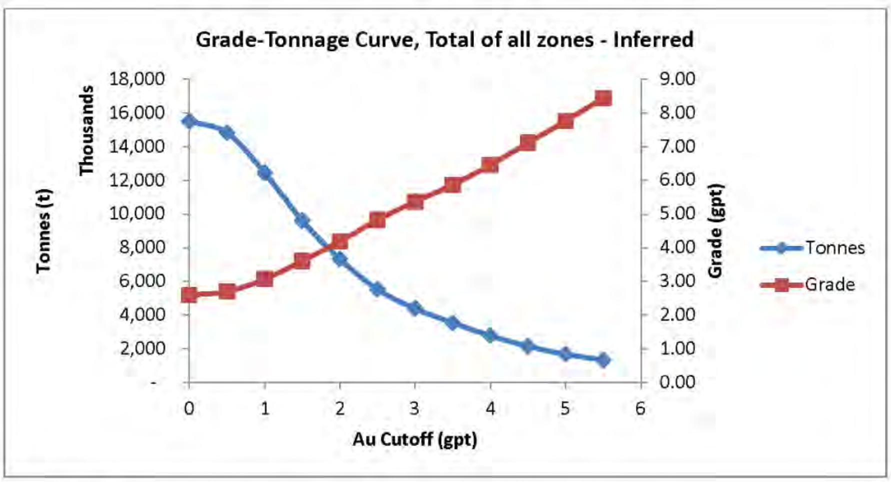


Figure 12. GT curve for all Inferred Resources in Holt deep exploration

CONCLUSION

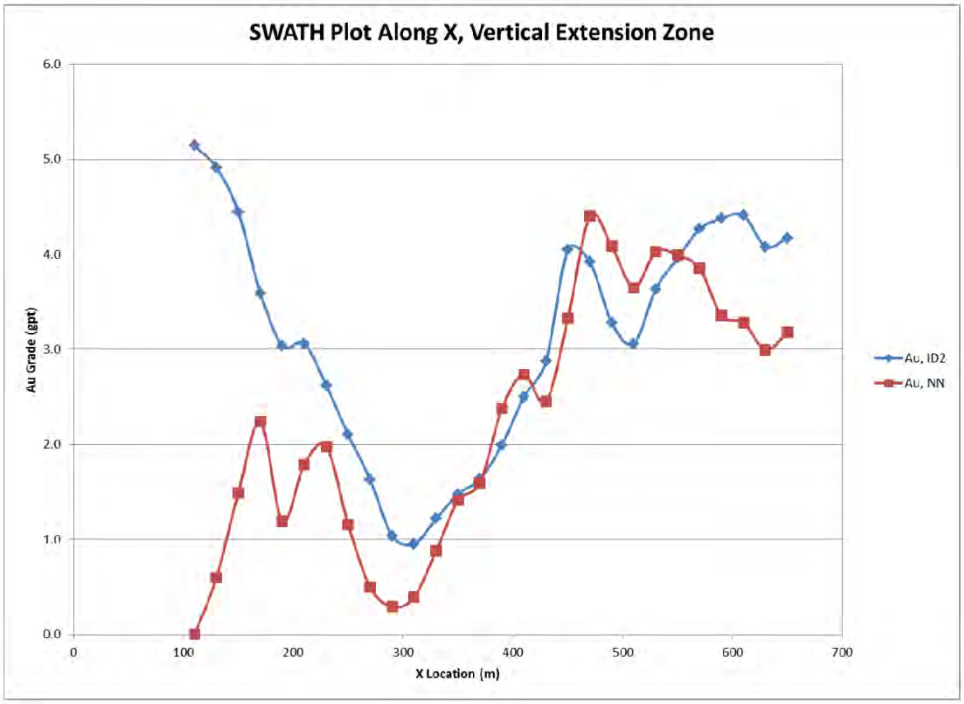
It is the opinion of the authors that the resource has been correctly estimated using the information at hand and following due procedure. Without additional drilling and assay data the current estimation is considered sufficient to show grade and continuity of gold mineralization, and provide a first approximation of the metal content of the area of interest.

Signed by,

ASHLEY BROWN P.Geo, CFSG

BEN HARWOOD P.Geo.

APPENDIX


SWATH Plot Along X, Vertical Extension Zone
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Au Grade (gpt)
0
100
200
300
400
500
600
700
X Location (m)
Au, ID2
Au, NN

Appendix D

An Investigation into Tousignant Lense and Ghost Zone Samples conducted by SGS Canada Inc.

An Investigation into

TOUSIGNANT LENSE AND GHOST ZONE SAMPLES

prepared for

ST. ANDREW GOLDFIELDS LTD.

Project 14756-001 – Final Report
December 3, 2014

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Executive Summary

SGS Minerals Services was requested to perform metallurgical testing to evaluate St. Andrew Goldfields Ltd.'s Tousignant Lense and Ghost Zone ore body samples.

From the assaying protocol applied it was determined that the gold head grades were 3.60 g/t for Ghost Zone sample GZ11-002, 3.83 g/t for Ghost Zone sample GZ12-014, 3.52 g/t for Ghost Zone sample GZ12-017B, 6.21 g/t for Tousignant Lense sample 1 and 5.74 g/t for Tousignant Lense sample 2. The samples contained between 1.16% to 1.66% sulphide sulphur and 7.04% to 12.4% carbonate.

The Bond ball mill grindability tests performed were categorized as hard to very hard with Bond ball mill work indices (BWI) ranging from 19.0 kWh/t to 22.7 kWh/t.

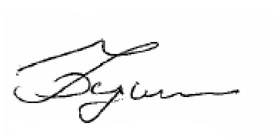
For the CIL tests performed on the Ghost Zone samples gold extractions ranged from an average of 87% for samples GZ11-002 and GZ12-014 to 90% for sample GZ12-017B. The final residue gold grades ranged from an average of 0.41 g/t Au for sample GZ12-017B to 0.48 g/t Au and 0.49 g/t Au for samples GZ11-002 and GZ12-014, respectively. For the CIL tests performed on the Tousignant Lense samples gold extractions ranged from an average of 93% for sample Tousignant Lense 1 to an average of 94% for sample Tousignant Lense 2. The final residue gold grades ranged from an average of 0.32 g/t Au for sample Tousignant Lense 2 to an average of 0.39 g/t Au for sample Tousignant Lense 1.

Introduction

St. Andrew Goldfields Ltd. is currently investigating the metallurgical response of their Tousignant Lense and Ghost Zone ore body samples. SGS Minerals Services was requested to perform a scoping level metallurgical test program to evaluate the basic processing for the samples shipped to Lakefield. The samples were received in a shipment consisting of ten bags inside one wooden crate on July 21, 2014.

The test program was designed in conjunction with Mr. Kevin Rowe of St. Andrew Goldfields Ltd. The results were forwarded as they became available via e-mail.

Peter A. DiLauro
Metallurgist, Gold Group
Metallurgical Operations



Inna Dymov, P.Eng.
Manager, Gold Group, Metallurgical Operations

Experimental work by: Olena Gordiyenko
Report preparation by: Peter DiLauro
Reviewed by: Cheryl Mina, Inna Dymov

Testwork Summary

A scoping test program was undertaken on behalf of St. Andrew Goldfields Ltd. to examine the potential for processing the Tousignant Lense and Ghost Zone ore samples for the extraction of gold.

Five composite samples were prepared for metallurgical evaluation, three Ghost Zone and two Tousignant Lense.

Testing on the samples included comminution and metallurgical work. Comminution work included Bond ball mill work index testing. Metallurgical testing included head assaying and carbon-in-leach cyanidation testing.

The evaluation for the recovery of gold was the main objective of this test program.

The results of the test program are summarized in the following sections, and full details of the described work are appended.

1. Sample Receipt and Characterization

On July 21, 2014, ore samples were received from St. Andrew Goldfields Ltd. from their Tousignant Lense and Ghost Zone ore bodies for comminution and metallurgical testing. The samples arrived in a single shipment containing ten bags inside one wooden crate (SGS receipt number 0328-JUL14).

1.1. Sample Inventory

In the shipment, five samples, each containing two separate bags were found. There were three Ghost Zone samples (6 bags) and two Tousignant Lense samples (4 bags). The full inventory list can be viewed in Table 1.

Table 1: Sample Inventory

Sample	Weight (kg)	Total Wt. (kg)
GZ11-002 Bag #1	15.395	34.630
GZ11-002 Bag #2	19.235	
GZ12-014 Bag #1	17.704	34.288
GZ12-014 Bag #2	16.584	
GZ12-017B Bag #1	17.759	39.519
GZ12-017B Bag #2	21.76	
Tousignant Lense 1	15.702	30.449
Tousignant Lense 1	14.747	
Tousignant Lense 2	13.895	29.071
Tousignant Lense 2	15.176	

1.2. Sample Preparation

Both bags of each of the five samples were stage crushed to minus 10 mesh with 10 kilograms of blended material removed at minus 6 mesh which was forwarded to the comminution testing. Representative minus 10 mesh portions were removed from the five samples and submitted for head analyses. Test charges were also prepared and forwarded to metallurgical testing.

1.3. Head Analysis

Representative portions that were removed at minus 10 mesh, were submitted for head analyses by way of screened metallics protocol for gold, as well as for assay for arsenic, carbon speciation, sulphur speciation, and a semi-quantitative Inductively Coupled Plasma (ICP) scan.

The gold head grades of the five samples were determined by applying a screened metallics protocol at +/- 150 mesh. The screened undersize product was sampled by riffling and assayed in duplicate. The screened oversize product was assayed to extinction. From the assaying protocol applied it was determined that the gold head grades were 3.60 g/t Au for Ghost Zone sample GZ11-002, 3.83 g/t Au for Ghost Zone sample GZ12-014, 3.52 g/t Au for Ghost Zone sample GZ12-017B, 6.21 g/t Au for Tousignant Lense sample 1 and 5.74 g/t Au for Tousignant Lense sample 2. The detailed results from the screened metallics method for the composite can be viewed in Table 2.

Table 2: Screened Metallics Summary

Sample	Head Grade Au, g/t	Total Weight g	+150 Mesh			-150 Mesh			% Au Distribution	
			% Mass	g Mass	Au g/t	% Mass	Au, g/t a	Au, g/t b	+150 Mesh	-150 Mesh
GZ11-002	**3.60**	538.8	5.17	27.9	3.79	94.8	3.65	3.53	5.4	94.6
GZ12-014	**3.83**	526.3	5.76	30.3	4.05	94.2	3.82	3.81	6.1	93.9
GZ12-017B	**3.52**	521.1	5.50	28.7	2.43	94.5	3.51	3.65	3.8	96.2
Tousignant Lense 1	**6.21**	501.6	5.50	27.6	7.74	94.5	6.35	5.89	6.9	93.1
Tousignant Lense 2	**5.74**	503.3	5.61	28.2	2.56	94.4	6.34	5.51	2.5	97.5

The results showed that 93% to 98% of the gold reported into the high weight finer fraction for the five samples tested.

Another smaller head sample was submitted for an arsenic assay as well as sulphur and carbon speciation and for a semi-quantitative ICP scan analysis, and the results are shown in Table 3.

Table 3: Head Assay Results

Element	Unit	GZ11-002	GZ12-014	GZ12-017B	Tousignant Lense 1	Tousignant Lense 2
Au	g/t	3.60	3.83	3.52	6.21	5.74
Ag	g/t	<2	<2	<2	<2	<2
S	%	1.53	1.43	1.27	1.33	1.81
$S^{=}$	%	1.37	1.35	1.23	1.16	1.66
SO_4	%	<0.1	<0.1	<0.1	<0.1	<0.1
S°	%	<0.05	<0.05	<0.05	<0.05	<0.05
C_T	%	2.57	2.01	2.00	2.12	1.44
C_G	%	0.03	0.02	0.02	0.03	0.03
TOC (leco)	%	0.28	0.22	0.14	0.10	0.14
CO_3	%	12.4	9.65	9.56	10.3	7.04
Cu	g/t	24.1	17.9	13.6	76.4	73.7
Zn	g/t	39	60	35	83	79
ICP Scan						
Al	g/t	59900	54500	56200	55800	55600
As	%	0.006	0.005	0.006	<0.001	<0.001
Ba	g/t	19.9	139	28.9	95.2	153
Be	g/t	< 0.8	0.9	< 0.8	0.8	1.1
Bi	g/t	< 20	< 20	< 20	< 20	< 20
Ca	g/t	92100	72500	71300	69900	49600
Cd	g/t	< 2	< 2	< 2	< 2	< 2
Co	g/t	47	37	38	47	24
Cr	g/t	37	144	45	44	46
Fe	g/t	57500	80300	78700	96300	82800
K	g/t	472	3890	963	2860	4420
Li	g/t	< 6	14	< 6	< 6	< 6
Mg	g/t	8320	20200	12400	26900	13300
Mn	g/t	728	1030	840	1370	1380
Mo	g/t	96	119	169	22	64
Na	g/t	39400	20300	31400	25900	31600
Ni	g/t	35	45	24	42	< 20
P	g/t	1190	1270	1200	1050	1080
Pb	g/t	< 20	< 20	< 20	< 20	< 20
Sb	g/t	< 10	< 10	< 10	< 10	< 10
Se	g/t	< 30	< 30	< 30	< 30	< 30
Sn	g/t	< 20	< 20	< 20	< 20	< 20
Sr	g/t	118	96.9	95.7	209	162
Ti	g/t	9860	5860	7570	8040	5160
Tl	g/t	< 30	< 30	< 30	< 30	< 30
U	g/t	< 20	< 20	< 20	< 20	< 20
V	g/t	249	263	284	379	150
Y	g/t	23.0	20.4	22.4	20.5	36.1

The assays showed that the samples contained between 1.16% to 1.66% sulphide sulphur and 7.04% to 12.4% carbonate.

2. Comminution Testing

Bond ball mill work index tests (BWi) were performed to characterize the hardness of samples. The tests were performed using standard laboratory procedures.

2.1. Bond Ball Mill Work Index (BWi) Testing

The Bond ball mill grindability tests were performed on five samples at 100 mesh of grind (150 microns). The test results are summarized in Table 4 and compared to the SGS database in Figure 1. The test details are appended. The samples were categorized as hard to very hard with Bond ball mill work indices (BWI) ranging from 19.0 kWh/t to 22.7 kWh/t.

Table 4: Bond Ball Mill Grindability Test Results

Sample Name	Mesh of Grind	F_{80} (µm)	P_{80} (µm)	Gram per Revolution	Work Index (kWh/t)	Hardness Percentile
Tousignant Lense 1	100	2,296	109	1.10	19.2	89
Tousignant Lense 2	100	2,350	114	0.92	22.7	97
GZ11-002	100	2,548	109	1.09	19.0	88
GZ12-014	100	2,657	109	1.03	19.7	91
GZ12-017B	100	2,674	108	0.96	20.8	95

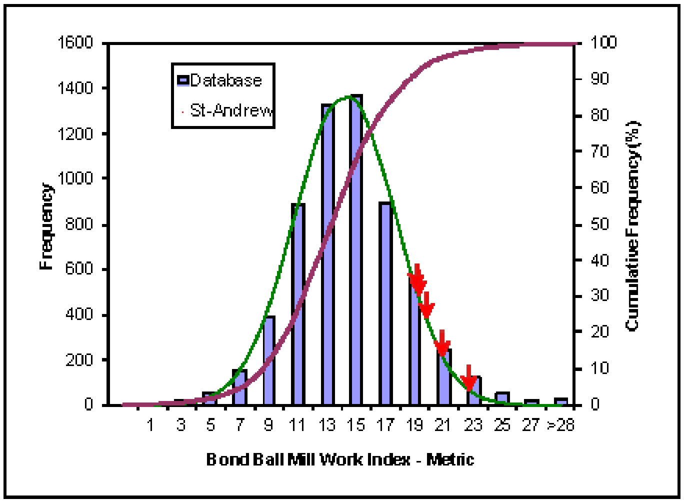


Figure 1: Bond Ball Mill Work Index Database

3. Metallurgical Testing

The metallurgical test program examined the response of the samples to carbon-in-leach cyanidation testing.

The metallurgical tests performed are discussed in the following section and the details for each are appended.

3.1. Carbon-In-Leach (CIL) Cyanidation Testing

Each of the five samples was subjected to a series of three, 2 kilogram exploratory grinds in a laboratory rod mill in order to determine a grind curve. Carbon-in-leach bottle roll cyanidation tests (CIL) were completed on 2 kilogram charges of whole ore at a P_{75} grind size of ~45 µm. Duplicate tests were performed for each of the five samples. The conditions applied were 50% solids with a 6 hour pre-aeration period consisting of air sparging the sample at a rate of 1 L/min. The pH was maintained between 10.5 and 11.0 with lime added as calcium hydroxide. The cyanide concentration was added at a dosage of 300 ppm CN added as NaCN at the start of the test only. No further cyanide was added during the 24 hour leach period. For the CIL tests, no solution sub-sampling was performed as 20 g/L of carbon was added. Upon completion of the tests, the final residues, carbons and barren leach solutions were submitted for gold assay.

For the CIL tests performed on the Ghost Zone samples the average P_{75} grind size was 46 µm. Gold extractions after 24 hours ranged from an average of 87% for samples GZ11-002 and GZ12-014 to 90% for sample GZ12-017B. The final residue gold grades ranged from an average of 0.41 g/t Au for sample GZ12-017B to 0.48 g/t Au and 0.49 g/t Au for samples GZ11-002 and GZ12-014, respectively. Reagent consumptions for all six tests performed on the Ghost Zone samples ranged from 0.13 kg/t NaCN to 0.18 kg/t NaCN and 0.51 kg/t CaO to 0.64 kg/t CaO. For the CIL tests performed on the Tousignant Lense samples the average P_{75} grind size was 52 µm. Gold extractions after 24 hours went from an average of 93% for sample Tousignant Lense 1 to an average of 94% for sample Tousignant Lense 2. The final residue gold grades went from an average of 0.32 g/t Au for sample Tousignant Lense 2 to an average of 0.39 g/t Au for sample Tousignant Lense 1. Reagent consumptions for all four tests performed on the Tousignant Lense samples ranged from 0.12 kg/t NaCN to 0.16 kg/t NaCN and 0.74 kg/t CaO to 0.80 kg/t CaO. Table 5 shows the test results summary for the carbon-in-leach cyanidations.

Table 5: Carbon-In-Leach (CIL) Cyanidation Summary

Comp	CN Test No.	Feed Size P_{75}, µm	Reagent Addition kg/t of CN Feed		Reagent Consumption kg/t of CN Feed		Au % Recovery	Residue g/t Au	Head Au, g/t	
			NaCN	CaO	NaCN	CaO			CN Calc	Direct
GZ11-002	CN-1	44	0.64	0.56	0.15	0.55	**86.8**	0.48	3.73	3.60
	CN-2		0.64	0.51	0.15	0.51	**86.2**	0.48	3.56	
GZ12-014	CN-3	48	0.64	0.57	0.18	0.57	**86.8**	0.50	3.81	3.83
	CN-4		0.64	0.54	0.16	0.54	**87.7**	0.48	3.94	
GZ12-017B	CN-5	46	0.64	0.65	0.13	0.64	**91.0**	0.42	4.74	3.52
	CN-6		0.64	0.60	0.13	0.59	**88.5**	0.40	3.58	
Tousignant Lense #1	CN-7	50	0.64	0.75	0.16	0.74	**93.1**	0.40	5.91	6.21
	CN-8		0.64	0.77	0.16	0.76	**93.6**	0.38	6.12	
Tousignant Lense #2	CN-9	54	0.63	0.82	0.12	0.80	**94.2**	0.31	5.48	5.74
	CN-10		0.64	0.80	0.14	0.78	**94.3**	0.32	5.71	

Appendix A – Sample Receipt and Characterization Test Details

8

SGS

SAMPLE RECEIPT : 0328-JUL14

001

Receipt #:	0328-JUL14	**Project Number:**	14756-PR1
Received Date:	21-Jul-14	**Project Manager:**	DILAURO, PETER
Received By:	mcmillanj	**Attention:**	Pete DiLauro
		Department:	MetOps

Client Info

Name:	St. Andrew Goldfields LTD
Contact:	Kevin Rowe
Address:	Hwy 101 East R.R#2, Matheson, ON P0K 1N0, CANADA Phone: 705-266-5616 Fax:

Description:	1 wooden crate
Reference:	
Carrier:	Meyers Transport
Waybill #:	1277442169
Payment:	PrePaid
Shipping Wt(kg):	200lbs
Actual Wt(kg):	90.9kg
Hazards:	None
Geiger Count:	0 µSv/h

Sample Preparation

Pulverized : ____ Crushed : ____

Notes

Printed Date: 21-Jul-14 15:15

Appendix B – Comminution Test Details

SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.: 14756-001 Date: 15-Sep-14
Sample: Tousignant Lense 1 Laboratory: Lakefield (Canada)

Purpose: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:
Feed 100% Passing 6 mesh
Mesh of grind: 100 mesh
Test feed weight (700 mL): 1,174 grams
Equivalent to : 1,677 kg/m³ at Minus 6 mesh
Weight % of the undersize material in the ball mill feed: 8.0%
Weight of undersize product for 250% circulating load: 335 grams

Results: Gram per Rev Average for the Last Three Stages = **1.10** g
Circulation load = **251%**

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{ \frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}} \right\}}$$

P1 = 100% passing size of the product	150	microns
Grp = Grams per revolution	1.10	grams
P_{80} = 80% passing size of product	109	microns
F_{80} = 80% passing size of the feed	2,296	microns

BWI = **17.4** kWh/ton (Imperial)

BWI = **19.2** kWh/tonne (metric)

Comments:

Stage No.	# of Revs	New Feed (grams)	Product in Feed (grams)	Material to Be Ground (grams)	Material Passing 100 mesh in Product (grams)	Net Ground Material (grams)	Material Ground Per Mill Rev (grams)
1	100	1,174	94	241	211	117	1.17
2	273	211	17	318	292	275	1.01
3	310	292	23	312	352	328	1.06
4	290	352	28	307	353	324	1.12
5	274	353	28	307	330	301	1.10
6	281	330	26	309	332	305	1.09
7	284	332	27	309	341	314	1.11
		Average for Last Three Stages =			334 g		1.10 g

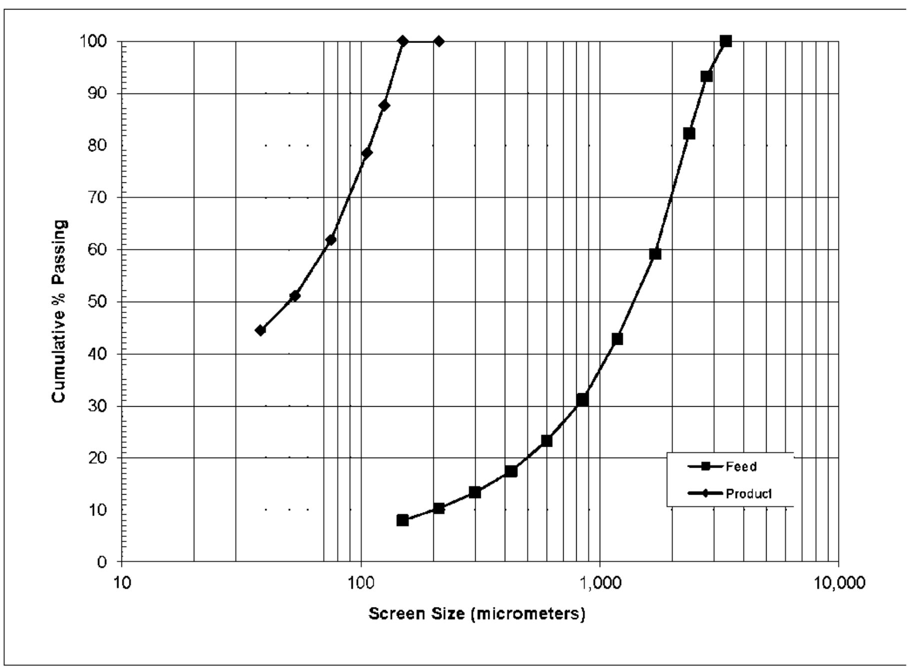
SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.:	14756-001	Date:	15-Sep-14
Sample:	Tousignant Lense 1	Laboratory:	Lakefield (Canada)

Size		Feed Particle Size Analysis				Product Particle Size Analysis			
		Weight	% Retained		% Passing	Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative	grams	Individual	Cumulative	Cumulative
6	3,360	0.00	0.00	0.00	100.0				
7	2,800	46.1	6.68	6.68	93.3				
8	2,360	76.5	11.1	17.8	82.2				
10	1,700	159.3	23.1	40.8	59.2				
14	1,180	112.5	16.3	57.1	42.9				
20	850	80.4	11.6	68.8	31.2				
28	600	54.6	7.91	76.7	23.3				
35	425	40.6	5.88	82.6	17.4				
48	300	28.2	4.09	86.7	13.3				
65	212	21.1	3.06	89.7	10.3	0.00	0.00	0.00	100.0
100	150	15.7	2.27	92.0	8.00	0.00	0.00	0.00	100.0
115	125	-	-	*93.0*	*6.96*	19.1	12.4	12.4	87.6
150	106	12.6	1.83	93.8	6.17	14.1	9.13	21.5	78.5
200	75					25.7	16.6	38.1	61.9
270	53					16.6	10.7	48.9	51.1
400	38					10.3	6.67	55.5	44.5
Pan	-	42.6	6.2	100.0	-	68.7	44.5	100.0	-
Total	**-**	**690.2**	**100.0**	**F_{80}:**	**2,296**	**154.5**	**100.0**	**P_{80}:**	**109**

Values in italics were interpolated



SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.: 14756-001 Date: 15-Sep-14
Sample: Tousignant Lense 2 Laboratory: Lakefield (Canada)

Purpose: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:
Feed 100% Passing 6 mesh
Mesh of grind: 100 mesh
Test feed weight (700 mL): 1,140 grams
Equivalent to : 1,628 kg/m³ at Minus 6 mesh
Weight % of the undersize material in the ball mill feed: 6.1%
Weight of undersize product for 250% circulating load: 326 grams

Results:
Gram per Rev Average for the Last Three Stages = **0.92** g
Circulation load = **251%**

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{\frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}}\right\}}$$

P1 = 100% passing size of the product	150	microns
Grp = Grams per revolution	0.92	grams
P_{80} = 80% passing size of product	114	microns
F_{80} = 80% passing size of the feed	2,350	microns

BWI = **20.6** kWh/ton (Imperial)

BWI = **22.7** kWh/tonne (metric)

Comments:

Stage No.	# of Revs	New Feed (grams)	Product in Feed (grams)	Material to Be Ground (grams)	Material Passing 100 mesh in Product (grams)	Net Ground Material (grams)	Material Ground Per Mill Rev (grams)
1	100	1,140	70	256	178	108	1.08
2	292	178	11	315	264	253	0.87
3	357	264	16	309	330	314	0.88
4	348	330	20	305	350	330	0.95
5	321	350	21	304	318	296	0.92
6	332	318	20	306	321	301	0.91
7	337	321	20	306	335	315	0.94
		Average for Last Three Stages =			325 g		0.92 g

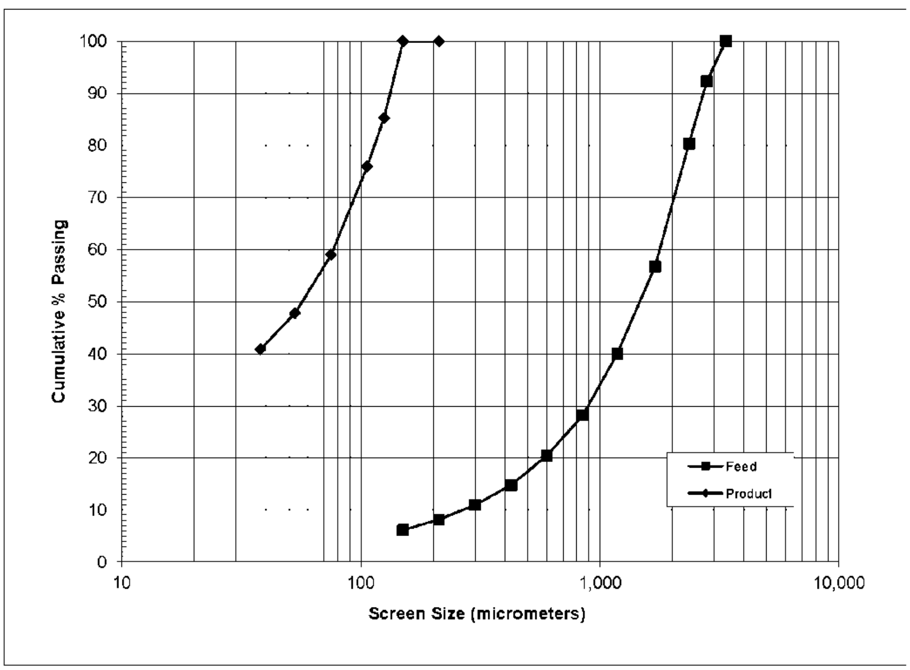
SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.:	14756-001	Date:	15-Sep-14
Sample:	Tousignant Lense 2	Laboratory:	Lakefield (Canada)

Size		Feed Particle Size Analysis				Product Particle Size Analysis			
		Weight	% Retained		% Passing	Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative	grams	Individual	Cumulative	Cumulative
6	3,360	0.00	0.00	0.00	100.0				
7	2,800	51.0	7.71	7.71	92.3				
8	2,360	79.0	11.9	19.6	80.4				
10	1,700	156.4	23.6	43.3	56.7				
14	1,180	110.9	16.8	60.0	40.0				
20	850	77.6	11.7	71.8	28.2				
28	600	51.6	7.80	79.6	20.4				
35	425	37.3	5.64	85.2	14.8				
48	300	25.5	3.85	89.1	10.9				
65	212	18.4	2.78	91.8	8.16	0.00	0.00	0.00	100.0
100	150	13.4	2.03	93.9	6.14	0.00	0.00	0.00	100.0
115	125	-	-	*94.8*	*5.24*	22.9	14.7	14.7	85.3
150	106	10.5	1.59	95.4	4.55	14.6	9.38	24.1	75.9
200	75					26.3	16.9	41.0	59.0
270	53					17.4	11.2	52.2	47.8
400	38					10.8	6.94	59.1	40.9
Pan	-	30.1	4.6	100.0	-	63.6	40.9	100.0	-
Total	**-**	**661.7**	**100.0**	F_{80}:	**2,350**	**155.6**	**100.0**	P_{80}:	**114**

Values in italics were interpolated



SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.: 14756-001 Date: 12-Sep-14
Sample: GZ11-002 Laboratory: Lakefield (Canada)

Purpose: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:
Feed 100% Passing 6 mesh
Mesh of grind: 100 mesh
Test feed weight (700 mL): 1,156 grams
Equivalent to : 1,652 kg/m³ at Minus 6 mesh
Weight % of the undersize material in the ball mill feed: 5.8%
Weight of undersize product for 250% circulating load: 330 grams

Results:
Gram per Rev Average for the Last Three Stages = **1.09** g
Circulation load = **251%**

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{ \frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}} \right\}}$$

P1 = 100% passing size of the product	150	microns
Grp = Grams per revolution	1.09	grams
P_{80} = 80% passing size of product	109	microns
F_{80} = 80% passing size of the feed	2,548	microns

BWI = **17.2** kWh/ton (Imperial)

BWI = **19.0** kWh/tonne (metric)

Comments:

Stage No.	# of Revs	New Feed (grams)	Product in Feed (grams)	Material to Be Ground (grams)	Material Passing 100 mesh in Product (grams)	Net Ground Material (grams)	Material Ground Per Mill Rev (grams)
1	100	1,156	67	264	187	121	1.21
2	265	187	11	320	278	268	1.01
3	311	278	16	314	334	318	1.02
4	304	334	19	311	349	330	1.09
5	286	349	20	310	332	312	1.09
6	285	332	19	311	332	313	1.10
7	283	332	19	311	323	304	1.07
		Average for Last Three Stages =			329 g		1.09 g

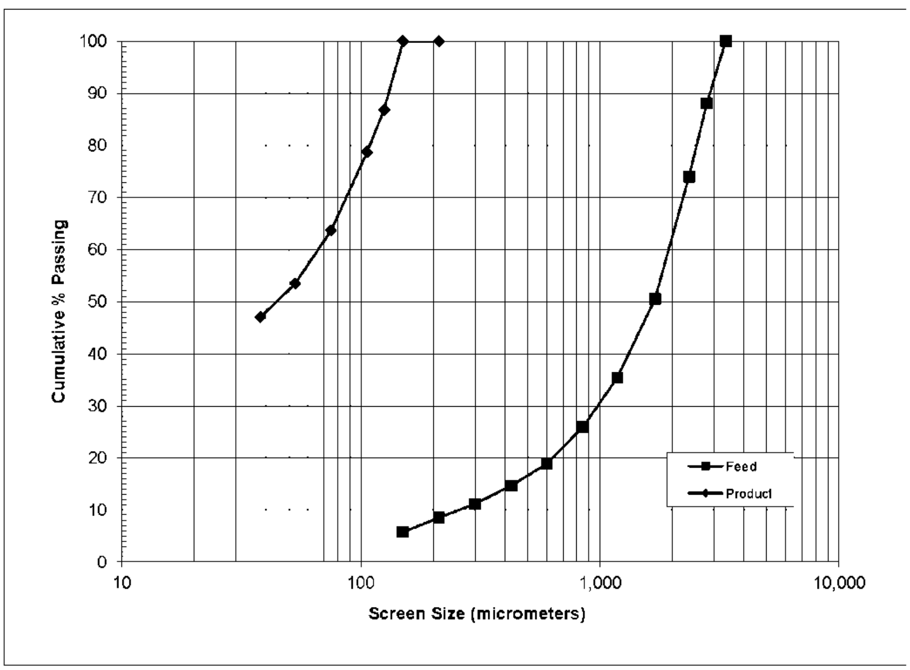
SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.:	14756-001	Date:	12-Sep-14
Sample:	GZ11-002	Laboratory:	Lakefield (Canada)

Size		Feed Particle Size Analysis: Weight	Feed: % Retained		Feed: % Passing	Product Particle Size Analysis: Weight	Product: % Retained		Product: % Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative	grams	Individual	Cumulative	Cumulative
6	3,360	0.00	0.00	0.00	100.0				
7	2,800	76.0	11.9	11.9	88.1				
8	2,360	89.6	14.1	26.0	74.0				
10	1,700	149.7	23.5	49.5	50.5				
14	1,180	96.6	15.2	64.7	35.3				
20	850	59.9	9.40	74.1	25.9				
28	600	45.0	7.06	81.1	18.9				
35	425	27.0	4.24	85.4	14.6				
48	300	22.1	3.47	88.8	11.2				
65	212	17.0	2.67	91.5	8.51	0.00	0.00	0.00	100.0
100	150	17.5	2.75	94.2	5.76	0.00	0.00	0.00	100.0
115	125	-	-	*94.7*	*5.33*	21.6	13.2	13.2	86.8
150	106	4.80	0.75	95.0	5.01	13.3	8.11	21.3	78.7
200	75					24.7	15.1	36.3	63.7
270	53					16.7	10.2	46.5	53.5
400	38					10.5	6.40	52.9	47.1
Pan	-	31.9	5.0	100.0	-	77.2	47.1	100.0	-
Total	**-**	**637.1**	**100.0**	F_{80}:	**2,548**	**164.0**	**100.0**	P_{80}:	**109**

Values in italics were interpolated



SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.:	14756-001	Date:	12-Sep-14
Sample:	GZ12-014	Laboratory:	Lakefield (Canada)

Purpose: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:
Feed 100% Passing 6 mesh
Mesh of grind: 100 mesh
Test feed weight (700 mL): 1,149 grams
Equivalent to : 1,642 kg/m³ at Minus 6 mesh
Weight % of the undersize material in the ball mill feed: 5.8%
Weight of undersize product for 250% circulating load: 328 grams

Results:
Gram per Rev Average for the Last Three Stages = **1.03** g
Circulation load = **248%**

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{ \frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}} \right\}}$$

P1 = 100% passing size of the product	150	microns
Grp = Grams per revolution	1.03	grams
P_{80} = 80% passing size of product	109	microns
F_{80} = 80% passing size of the feed	2,657	microns

BWI = **17.9** kWh/ton (Imperial)

BWI = **19.7** kWh/tonne (metric)

Comments:

Stage No.	# of Revs	New Feed (grams)	Product in Feed (grams)	Material to Be Ground (grams)	Material Passing 100 mesh in Product (grams)	Net Ground Material (grams)	Material Ground Per Mill Rev (grams)
1	100	1,149	66	262	179	113	1.13
2	281	179	10	318	277	267	0.95
3	329	277	16	312	335	319	0.97
4	318	335	19	309	346	327	1.03
5	300	346	20	308	324	304	1.01
6	305	324	19	310	337	319	1.04
7	296	337	19	309	328	309	1.04
		Average for Last Three Stages =			330 g		1.03 g

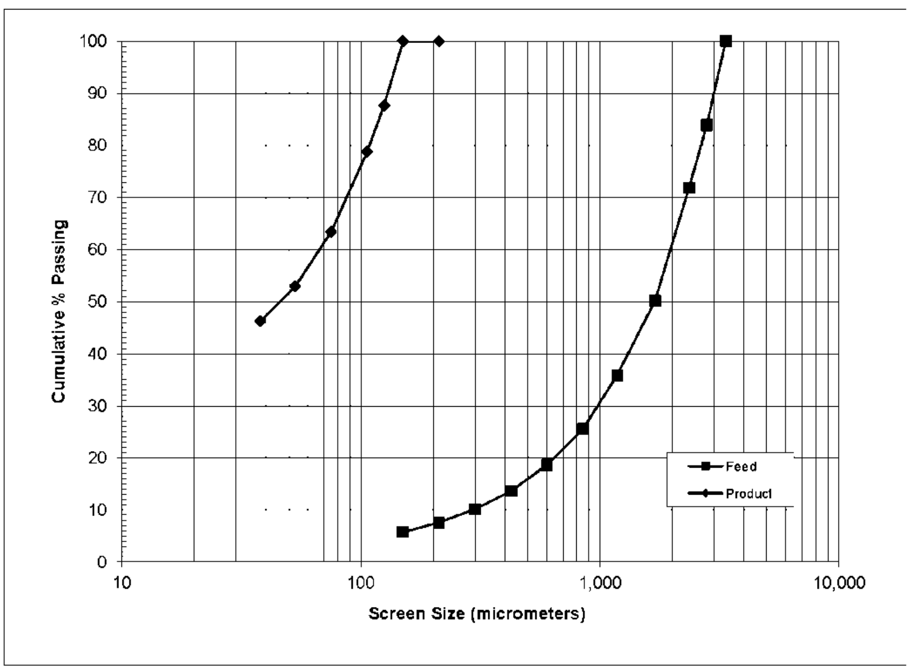
SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.:	14756-001	Date:	12-Sep-14
Sample:	GZ12-014	Laboratory:	Lakefield (Canada)

Size		Feed Particle Size Analysis: Weight	% Retained		% Passing	Product Particle Size Analysis: Weight	% Retained		% Passing
Mesh	μm	grams	Individual	Cumulative	Cumulative	grams	Individual	Cumulative	Cumulative
6	3,360	0.00	0.00	0.00	100.0				
7	2,800	107.1	16.1	16.1	83.9				
8	2,360	80.3	12.1	28.2	71.8				
10	1,700	144.4	21.7	49.9	50.1				
14	1,180	95.2	14.3	64.2	35.8				
20	850	68.3	10.3	74.4	25.6				
28	600	46.0	6.91	81.3	18.7				
35	425	33.6	5.05	86.4	13.6				
48	300	23.1	3.47	89.9	10.1				
65	212	16.9	2.54	92.4	7.60	0.00	0.00	0.00	100.0
100	150	12.3	1.85	94.2	5.76	0.00	0.00	0.00	100.0
115	125	-	-	*95.1*	*4.91*	18.6	12.3	12.3	87.7
150	106	9.90	1.49	95.7	4.27	13.4	8.89	21.2	78.8
200	75					23.2	15.4	36.6	63.4
270	53					15.8	10.5	47.1	52.9
400	38					10.0	6.63	53.7	46.3
Pan	-	28.4	4.3	100.0	-	69.8	46.3	100.0	-
Total	**-**	**665.5**	**100.0**	**F_{80}:**	**2,657**	**150.8**	**100.0**	**P_{80}:**	**109**

Values in italics were interpolated



SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.:	14756-001	Date:	12-Sep-14
Sample:	GZ12-017B	Laboratory:	Lakefield (Canada)

Purpose: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Procedure: The equipment and procedure duplicate the Bond method for determining ball mill work indices.

Test Conditions:
Feed 100% Passing 6 mesh
Mesh of grind: 100 mesh
Test feed weight (700 mL): 1,154 grams
Equivalent to : 1,648 kg/m^3 at Minus 6 mesh
Weight % of the undersize material in the ball mill feed: 5.8%
Weight of undersize product for 250% circulating load: 330 grams

Results:
Gram per Rev Average for the Last Three Stages = **0.96** g
Circulation load = **250%**

CALCULATION OF A BOND WORK INDEX

$$BWI = \frac{44.5}{P1^{0.23} \times Grp^{0.82} \times \left\{\frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}}\right\}}$$

P1 = 100% passing size of the product	150	microns
Grp = Grams per revolution	0.96	grams
P_{80} = 80% passing size of product	108	microns
F_{80} = 80% passing size of the feed	2,674	microns

BWI = **18.9** kWh/ton (Imperial)

BWI = **20.8** kWh/tonne (metric)

Comments:

Stage No.	# of Revs	New Feed (grams)	Product in Feed (grams)	Material to Be Ground (grams)	Material Passing 100 mesh in Product (grams)	Net Ground Material (grams)	Material Ground Per Mill Rev (grams)
1	100	1,154	66	263	169	102	1.02
2	313	169	10	320	290	280	0.89
3	350	290	17	313	346	329	0.94
4	330	346	20	310	337	317	0.96
5	323	337	19	310	334	314	0.97
6	319	334	19	310	323	303	0.95
7	327	323	19	311	333	314	0.96
		Average for Last Three Stages =			330 g		0.96 g

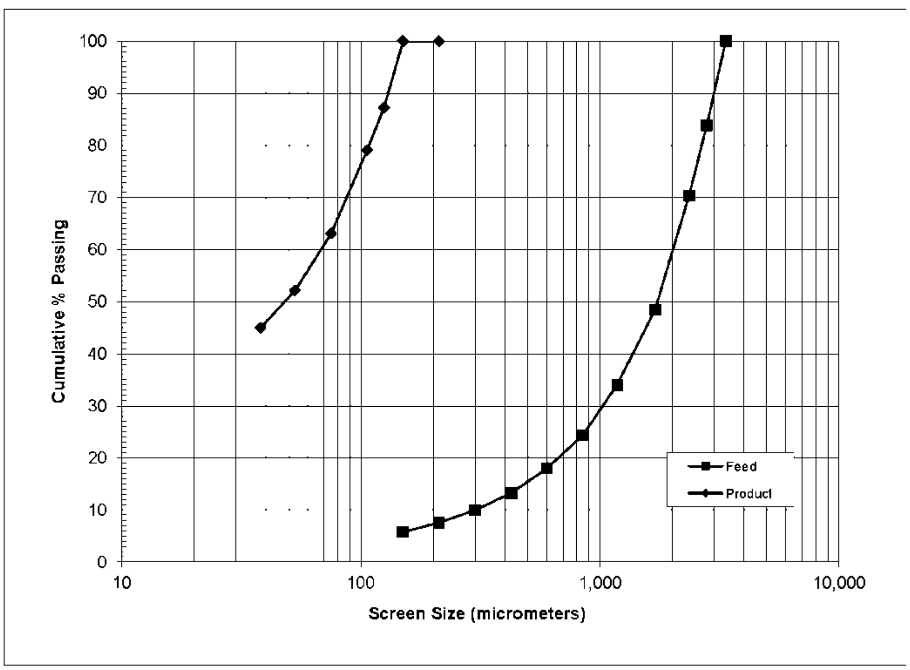
SGS Minerals Services

Standard Bond Ball Mill Grindability Test

Project No.: 14756-001 Date: 12-Sep-14
Sample: GZ12-017B Laboratory: Lakefield (Canada)

Size		Feed Particle Size Analysis				Product Particle Size Analysis			
		Weight	% Retained		% Passing	Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative	grams	Individual	Cumulative	Cumulative
6	3,360	0.00	0.00	0.00	100.0				
7	2,800	105.2	16.1	16.1	83.9				
8	2,360	88.2	13.5	29.6	70.4				
10	1,700	143.2	21.9	51.6	48.4				
14	1,180	94.0	14.4	66.0	34.0				
20	850	62.5	9.58	75.6	24.4				
28	600	42.1	6.45	82.0	18.0				
35	425	30.8	4.72	86.7	13.3				
48	300	21.5	3.30	90.0	9.96				
65	212	15.7	2.41	92.4	7.56	0.00	0.00	0.00	100.0
100	150	11.7	1.79	94.2	5.76	0.00	0.00	0.00	100.0
115	125	-	-	*95.0*	*4.97*	21.1	12.8	12.8	87.2
150	106	9.10	1.39	95.6	4.37	13.4	8.13	20.9	79.1
200	75					26.4	16.0	36.9	63.1
270	53					18.0	10.9	47.8	52.2
400	38					11.8	7.16	55.0	45.0
Pan	-	28.5	4.4	100.0	-	74.2	45.0	100.0	-
Total	**-**	**652.5**	**100.0**	**F_{80}:**	**2,674**	**164.9**	**100.0**	**P_{80}:**	**108**

Values in italics were interpolated



Appendix C – Metallurgical Test Details

Test: CN-1 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 9, 2014**

Purpose: To determine the gold recovery from Ghost Zone 011-002 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **GZ011-002 Comp**

Leach Duration: 24 **h**

Solution Volume: 2000 mL

Pre-conditioning: 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN

Carbon Concentration: 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg
85 min/2kg 2 kg mill #4

Final Residue Size (P_{75}) = 44 µm

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.56
Reagent Consumption (kg/t of cyanide feed) NaCN: 0.15 CaO: 0.55

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.7	
0 - 1		0.45		0.34					11.0-10.0	
1 - 3		0.26		0.19					11.0-9.6	5.4
3 - 5		0.29		0.22					11.0-10.5	
5 - 6		0.16		0.12					11.0-10.6	
Cyanidation:										
0 - 2	1.30	0.14	1.28	0.10					11.0-10.7	
2 - 18		0.11	0.00	0.08					11.0-10.5	
18 - 24		0.08	0.00	0.06	0.98	0.03	0.29	1.10	10.8-10.5	7.7
Total	1.30	1.48	1.28	1.13	0.98	0.03	0.29	1.10		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,038	<0.01	0.3
Carbon	40	163	**86.8**
Final Residue	2,010	0.48	12.9
Head (calc.)	2,010	3.73	100.0
Head (dir.)		3.60	

Duplicate residue assays, Au, g/t = 0.47
0.49
Average, Au, g/t = 0.48

Duplicate carbon assays, Au, g/t = 162
163
Average, Au, g/t = 163

Test: CN-2 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 9, 2014**

Purpose: To determine the gold recovery from Ghost Zone 011-002 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **GZ011-002 Comp**

Leach Duration: 24 **h**

Solution Volume: 2000 mL

Pre-conditioning: 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN

Carbon Concentration: 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg
85 min/2kg 2 kg mill #4

Final Residue Size (P_{75}) = 44 µm

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.51
Reagent Consumption (kg/t of cyanide feed) NaCN: 0.15 CaO: 0.51

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.8	
0 - 1		0.42		0.32					11.0-10.1	
1 - 3		0.27		0.21					11.0-9.7	5.0
3 - 5		0.30		0.22					11.0-10.6	
5 - 6		0.15		0.11					11.0-10.7	
Cyanidation:										
0 - 2	1.30	0.11	1.28	0.08					11.0-10.7	
2 - 18		0.09	0.00	0.07					11.0-10.5	
18 - 24		0.00	0.00	0.00	0.98	0.00	0.29	1.02	10.5-10.4	7.8
Total	1.30	1.34	1.28	1.02	0.98	0.00	0.29	1.02		

Cyanidation Results:

Product	Amount	Assays, mg/L, g/t	% Distribution
	g, mL	Au	Au
Pregnant Solution	2,041	<0.01	0.3
Carbon	40	154	**86.2**
Final Residue	2,008	0.48	13.5
Head (calc.)	2,008	3.56	100.0
Head (dir.)		3.60	

Duplicate residue assays, Au, g/t = 0.48
0.48
Average, Au, g/t = 0.48

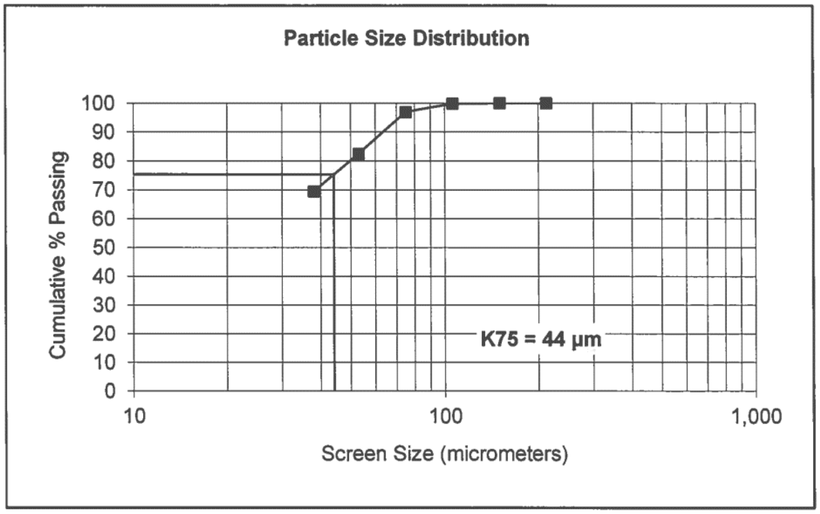
Duplicate carbon assays, Au, g/t = 157
151
Average, Au, g/t = 154

SGS Minerals Services
Size Distribution Analysis

Project No. **14756-001**

Sample: **Res** Test No.: **CN 1**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.0	0.0	0.0	100.0
150	106	0.2	0.2	0.2	99.8
200	75	3.8	2.9	3.0	97.0
270	53	19.2	14.5	17.5	82.5
400	38	17.3	13.0	30.5	69.5
Pan	-38	92.1	69.5	100.0	0.0
Total	**-**	**132.6**	100.0	-	-
K75	**44**				



Test: CN-3 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 9, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **GZ012-014 Comp**

Leach Duration: 24 **h**

Solution Volume: 2000 mL

Pre-conditioning: 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN

Carbon Concentration: 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg
90 min/2kg 2 kg mill #4

Final Residue Size (P_{75}) = 48 µm

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.57
Reagent Consumption (kg/t of cyanide feed) NaCN: 0.18 CaO: 0.57

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.7	
0 - 1		0.60		0.45					11.0-10.3	
1 - 3		0.19		0.15					11.0-9.9	5.6
3 - 5		0.27		0.21					11.0-10.6	
5 - 6		0.14		0.11					11.0-10.6	
Cyanidation:										
0 - 2	1.30	0.12	1.28	0.09					11.0-10.7	
2 - 18		0.10	0.00	0.08					11.0-10.4	
18 - 24		0.08	0.00	0.06	0.92	0.00	0.36	1.15	10.6-10.4	7.5
Total	1.30	1.52	1.28	1.15	0.92	0.00	0.36	1.15		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	1,931	<0.01	0.3
Carbon	40	166	**86.8**
Final Residue	2,009	0.50	13.0
Head (calc.)	2,009	3.81	100.0
Head (dir.)		3.83	

Duplicate residue assays, Au, g/t = 0.49
0.50
Average, Au, g/t = 0.50

Duplicate carbon assays, Au, g/t = 166
166
Average, Au, g/t = 166

Test: CN-4 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 9, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **GZ012-014 Comp** **Leach Duration:** 24 **h**

Solution Volume: 2000 mL **Pre-conditioning:** 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN **Carbon Concentration:** 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg **Final Residue Size (P_{75}) =** 48 µm

90 min/2kg 2 kg mill #4

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.54

Reagent Consumption (kg/t of cyanide feed) NaCN: 0.16 CaO: 0.54

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.7	
0 - 1		0.59		0.45					11.0-10.3	
1 - 3		0.19		0.14					11.0-9.8	5.2
3 - 5		0.26		0.20					11.0-10.5	
5 - 6		0.15		0.11					11.0-10.6	
Cyanidation:										
0 - 2	1.30	0.17	1.28	0.13					11.0-10.8	
2 - 18		0.07	0.00	0.05					11.0-10.5	
18 - 24		0.00	0.00	0.00	0.95	0.00	0.33	1.08	10.5-10.3	7.6
Total	1.30	1.43	1.28	1.08	0.95	0.00	0.33	1.08		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,032	<0.01	0.3
Carbon	38	183	**87.7**
Final Residue	2,006	0.48	12.0
Head (calc.)	2,006	3.94	100.0
Head (dir.)		3.83	

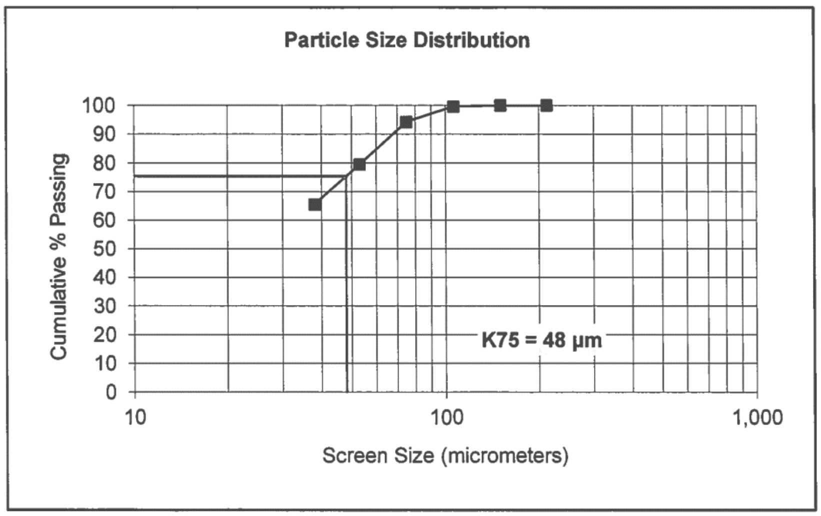
Duplicate residue assays, Au, g/t = 0.48 Duplicate carbon assays, Au, g/t = 183
0.47 183
Average, Au, g/t = 0.48 Average, Au, g/t = 183

SGS Minerals Services
Size Distribution Analysis

Project No.
14756-001

Sample: **Res** Test No.: **CN 4**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.0	0.0	0.0	100.0
150	106	0.5	0.4	0.4	99.6
200	75	7.4	5.3	5.7	94.3
270	53	20.6	14.8	20.5	79.5
400	38	19.3	13.9	34.4	65.6
Pan	-38	91.1	65.6	100.0	0.0
Total	-	**138.9**	100.0	-	-
K75	**48**				



Test: CN-5 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 10, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **GZ12-017B Comp** **Leach Duration:** 24 **h**

Solution Volume: 2000 mL **Pre-conditioning:** 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN **Carbon Concentration:** 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg **Final Residue Size (P_{75}) =** 46 µm

90 min/2kg 2 kg mill #4

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.65

Reagent Consumption (kg/t of cyanide feed) NaCN: 0.13 CaO: 0.64

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.2	
0 - 1		0.51		0.39					11.0-9.8	
1 - 3		0.37		0.28					11.0-10.1	
3 - 5		0.29		0.22					11.0-10.1	
5 - 6		0.26		0.20					11.0-10.4	4.3
Cyanidation:										
0 - 2	1.30	0.24	1.28	0.18					11.0-10.8	
2 - 18		0.05	0.00	0.04					11.0-10.7	
18 - 24		0.00	0.00	0.00	1.01	0.02	0.26	1.29	10.7-10.5	7.9
Total	1.30	1.72	1.28	1.30	1.01	0.02	0.26	1.29		

Cyanidation Results:

Product	Amount	Assays, mg/L, g/t	% Distribution
	g, mL	**Au**	**Au**
Pregnant Solution	2,027	<0.01	0.2
Carbon	38	230	**91.0**
Final Residue	2,012	0.42	8.8
Head (calc.)	2,012	4.74	100.0
Head (dir.)		3.52	

Duplicate residue assays, Au, g/t = 0.42
0.41
Average, Au, g/t = 0.42

Duplicate carbon assays, Au, g/t = 232
228
Average, Au, g/t = 230

Test: CN-6 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 10, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **GZ12-017B Comp**

Leach Duration: 24 **h**

Solution Volume: 2000 mL

Pre-conditioning: 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN

Carbon Concentration: 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg
90 min/2kg 2 kg mill #4

Final Residue Size (P_{75}) = 46 µm

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.60
Reagent Consumption (kg/t of cyanide feed) NaCN: 0.13 CaO: 0.59

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.6	
0 - 1		0.50		0.38					11.0-9.9	
1 - 3		0.30		0.23					11.0-10.1	
3 - 5		0.28		0.21					11.0-10.2	
5 - 6		0.27		0.21					11.0-10.5	3.9
Cyanidation:										
0 - 2	1.30	0.16	1.28	0.12					11.0-10.8	
2 - 18		0.07	0.00	0.05					11.0-10.6	
18 - 24		0.00	0.00	0.00	1.02	0.02	0.26	1.19	10.6-10.5	7.1
Total	1.30	1.59	1.28	1.21	1.02	0.02	0.26	1.19		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,018	<0.01	0.3
Carbon	38	169	**88.5**
Final Residue	2,010	0.40	11.2
Head (calc.)	2,010	3.58	100.0
Head (dir.)		3.52	

Duplicate residue assays, Au, g/t = 0.40
0.40
Average, Au, g/t = 0.40

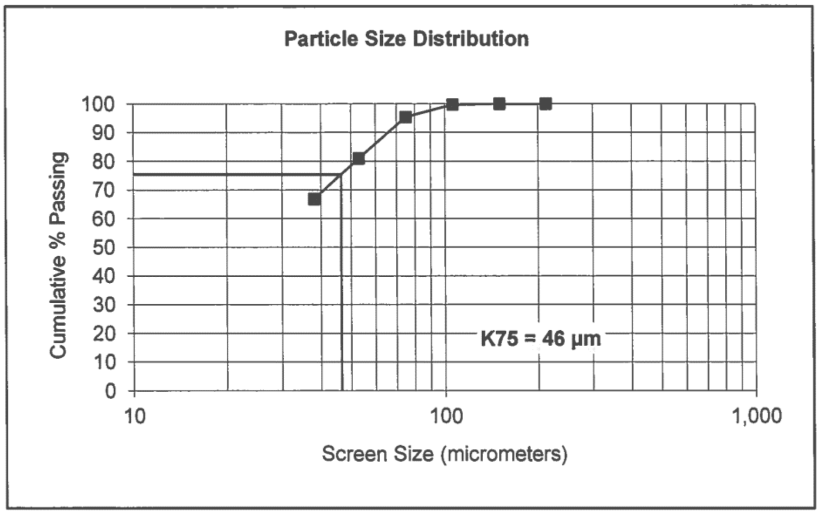
Duplicate carbon assays, Au, g/t = 169
168
Average, Au, g/t = 169

SGS Minerals Services
Size Distribution Analysis

Project No.
14756-001

Sample: **Res** Test No.: **CN 15**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.0	0.0	0.0	100.0
150	106	0.4	0.3	0.3	99.7
200	75	6.9	4.3	4.6	95.4
270	53	22.9	14.4	19.0	81.0
400	38	22.5	14.2	33.1	66.9
Pan	-38	106.3	66.9	100.0	0.0
Total	**-**	**159.0**	100.0	-	-
K75	**46**				



Test: CN-7 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 10, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g TL-**1 Comp** **Leach Duration:** 24 **h**

Solution Volume: 2000 mL **Pre-conditioning:** 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN **Carbon Concentration:** 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg **Final Residue Size (P_{75}) =** 45 µm

90 min/2kg 2 kg mill #4

Reagent Addition (kg/t of cyanide feed)	NaCN:	0.64	CaO:	0.75
Reagent Consumption (kg/t of cyanide feed)	**NaCN:**	**0.16**	**CaO:**	**0.74**

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.5	
0 - 1		0.71		0.54					11.0-10.0	
1 - 3		0.38		0.29					11.0-10.2	
3 - 5		0.27		0.21					11.0-10.2	
5 - 6		0.23		0.18					11.0-10.5	4.8
Cyanidation:										
0 - 2	1.30	0.19	1.28	0.15					11.0-10.8	
2 - 18		0.08	0.00	0.06					11.0-10.4	
18 - 24		0.13	0.00	0.10	0.95	0.02	0.32	1.50	10.8-10.4	7.7
Total	1.30	1.99	1.28	1.51	0.95	0.02	0.32	1.50		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,020	0.01	0.2
Carbon	34	325	**93.1**
Final Residue	2,012	0.40	6.7
Head (calc.)	2,012	5.91	100.0
Head (dir.)		6.21	

Duplicate residue assays, Au, g/t =	0.39	Duplicate carbon assays, Au, g/t =	326
	0.40		324
Average, Au, g/t =	0.40	Average, Au, g/t =	325

Test: CN-8 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 10, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **TL-1 Comp**

Leach Duration: 24 **h**

Solution Volume: 2000 mL

Pre-conditioning: 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN

Carbon Concentration: 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg
90 min/2kg 2 kg mill #4

Final Residue Size (P_{75}) = 45 µm

Reagent Addition (kg/t of cyanide feed) NaCN: 0.64 CaO: 0.77
Reagent Consumption (kg/t of cyanide feed) NaCN: 0.16 CaO: 0.76

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.6	
0 - 1		0.85		0.64					11.0-10.3	
1 - 3		0.30		0.23					11.0-10.3	
3 - 5		0.28		0.21					11.0-10.2	
5 - 6		0.31		0.23					11.0-10.7	4.8
Cyanidation:										
0 - 2	1.30	0.12	1.28	0.09					11.0-10.8	
2 - 18		0.07	0.00	0.05					11.0-10.4	
18 - 24		0.10	0.00	0.07	0.96	0.02	0.32	1.52	10.7-10.4	7.7
Total	1.30	2.02	1.28	1.54	0.96	0.02	0.32	1.52		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,033	<0.01	0.2
Carbon	35	327	**93.6**
Final Residue	2,009	0.38	6.2
Head (calc.)	2,009	6.12	100.0
Head (dir.)		6.21	

Duplicate residue assays, Au, g/t = 0.37
0.39
Average, Au, g/t = 0.38

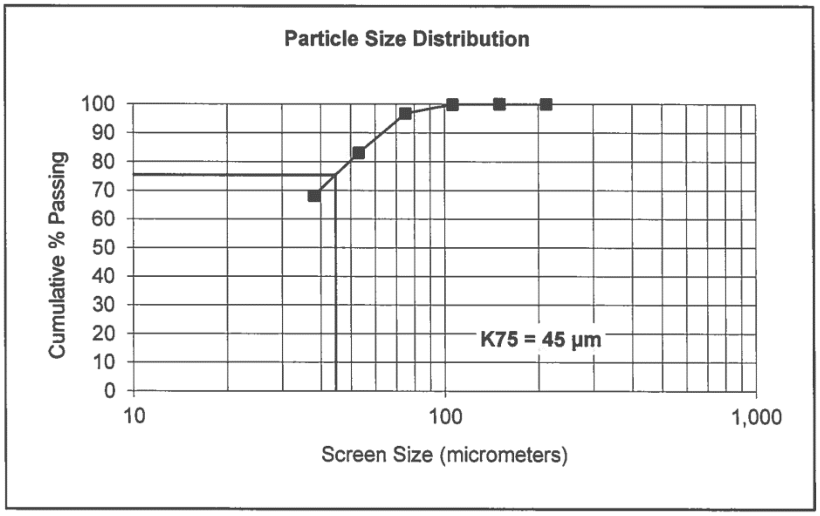
Duplicate carbon assays, Au, g/t = 327
326
Average, Au, g/t = 327

SGS Minerals Services
Size Distribution Analysis

Project No. **14756-001**

Sample: **Res** Test No.: **CN 7**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.0	0.0	0.0	100.0
150	106	0.2	0.1	0.1	99.9
200	75	4.9	3.1	3.2	96.8
270	53	21.8	13.7	16.9	83.1
400	38	23.7	14.9	31.8	68.2
Pan	-38	108.3	68.2	100.0	0.0
Total	-	**158.9**	100.0	-	-
K75	**45**				



Test: CN-9 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 16, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g **TL-2 Comp** **Leach Duration:** 24 **h**

Solution Volume: 2000 mL **Pre-conditioning:** 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN **Carbon Concentration:** 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg **Final Residue Size (P_{75}) =** 54 µm

95 min/2kg 2 kg mill #4

Reagent Addition (kg/t of cyanide feed) NaCN: 0.63 CaO: 0.82

Reagent Consumption (kg/t of cyanide feed) NaCN: 0.12 CaO: 0.80

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.3	
0 - 1		0.76		0.58					11.0-10.0	
1 - 3		0.50		0.38					11.0-10.3	
3 - 5		0.40		0.30					11.0-10.5	4.1
Cyanidation:										
0 - 2	1.30	0.28	1.28	0.21					11.0-10.8	
2 - 18		0.11	0.00	0.08					11.0-10.6	
18 - 24		0.11	0.00	0.09	1.04	0.04	0.24	1.61	10.9-10.7	8.3
Total	1.30	2.17	1.28	1.65	1.04	0.04	0.24	1.61		

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,028	<0.01	0.2
Carbon	34	309	94.2
Final Residue	2,013	0.31	5.7
Head (calc.)	2,013	5.48	100.0
Head (dir.)		5.74	

Duplicate residue assays, Au, g/t = 0.32
0.30
Average, Au, g/t = 0.31

Duplicate carbon assays, Au, g/t = 308
309
Average, Au, g/t = 309

Test: CN-10 **Project:** 14756-001 **Operator:** O. Gordiyenko **Date: September 16, 2014**

Purpose: To determine the gold recovery from Ghost Zone 012-014 Comp.

Procedure: The test feed was ground as per the desired conditions below. The slurry was then transferred to a bottle and pulped with water to the proper percent solids. The pH of the pulp was adjusted with lime. The pulp was conditioned as described below. Carbon and sodium cyanide was added and the pulp was placed on the rolls. The pH was maintained for the duration of the test. The dissolved oxygen was monitored at various intervals during the test. At the end of the leach, the carbon was screened, the pulp was filtered and the residue was washed with three displacements of water. The wash water was discarded. The final products were submitted for the required assays.

Feed: 2000 g TL-2 Comp

Leach Duration: 24 h

Solution Volume: 2000 mL

Pre-conditioning: 6 hours with air sparged into the pulp at rate of 1L/min

Pulp Density: 50 % solids

NaCN Concentration: 0.3 g/L CN added as NaCN

Carbon Concentration: 20.0 kg/t

pH Range: 10.5-11.0 maintained with lime as required

Grind: 2 kg
95 min/2kg 2 kg mill #4

Final Residue Size (P_{75}) = 54 µm

Reagent Addition (kg/t of cyanide feed)	NaCN:	0.64	CaO:	0.80
Reagent Consumption (kg/t of cyanide feed)	**NaCN:**	**0.14**	**CaO:**	**0.78**

Time	Added, Grams				Residual		Consumed		pH	DO
	Actual		Equivalent		Grams		Grams			mg/L
hours	NaCN	$Ca(OH)_2$	NaCN	CaO	NaCN	CaO	NaCN	CaO		
Pre-aeration:									8.5	
0 - 1		0.68		0.52					11.0-9.7	
1 - 3		0.53		0.40					11.0-10.0	
3 - 5		0.33		0.25					11.0-10.2	4.5
Cyanidation:										
0 - 2	1.30	0.35	1.28	0.26					11.0-10.7	
2 - 18		0.14	0.00	0.11					11.0-10.5	
18 - 24		0.08	0.00	0.06	1.00	0.02	0.27	1.58	11.0-10.5	8.1

Total	1.30	2.11	1.28	1.60	1.00	0.02	0.27	1.58

Cyanidation Results:

Product	**Amount**	**Assays, mg/L, g/t**	**% Distribution**
	g, mL	**Au**	**Au**
Pregnant Solution	2,022	<0.01	0.2
Carbon	35	313	94.3
Final Residue	2,012	0.32	5.5
Head (calc.)	2,012	5.71	100.0
Head (dir.)		5.74	

Duplicate residue assays, Au, g/t =	0.31	Duplicate carbon assays, Au, g/t =	312
	0.32		314
Average, Au, g/t =	0.32	Average, Au, g/t =	313

SGS Minerals Services
Size Distribution Analysis

Project No.
14756-001

Sample: **Residue** Test No.: **CN 9**

Size		Weight	% Retained		% Passing
Mesh	µm	grams	Individual	Cumulative	Cumulative
65	212	0.0	0.0	0.0	100.0
100	150	0.1	0.1	0.1	99.9
150	106	1.0	0.6	0.7	99.3
200	75	13.2	8.0	8.6	91.4
270	53	28.6	17.3	25.9	74.1
400	38	22.9	13.8	39.8	60.2
Pan	-38	99.7	60.2	100.0	0.0
Total	-	**165.5**	100.0	-	-
K75	**54**				

Particle Size Distribution