Technical Report on the Initial Mineral Resource Estimate for the Vogel/Schumacher Deposit, Bell Creek Complex, Hoyle Township, Timmins, Ontario, Canada

NI 43-101 Report

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1.0 EXECUTIVE SUMMARY

This is a technical report in support of an initial NI 43-101 compliant mineral resource estimate for the Vogel/Schumacher deposit located in Hoyle Township near Timmins, Ontario.

The Vogel/Schumacher properties were acquired in March and December of 2005, respectively and are now part of what Lake Shore Gold Corp. (Lake Shore) calls the Bell Creek Complex. This Complex also includes the former producers Bell Creek and Marlhill Mines.

The Vogel/Schumacher deposit has been explored by several companies starting as early as 1968. Lake Shore's exploration efforts were initiated in late 2005 but the bulk of the drilling was completed in 2010. The gold mineralization at Vogel/Schumacher is hosted by a sequence of variably altered and veined steeply south dipping mafic volcanics. The alteration and veining occurs in two main forms either steeply dipping zones at the contact with ultramafic volcanics or as flat vein systems within the mafic volcanics.

Gold mineralization occurs in eight zones which are associated with quartz veining, pyrite mineralization and ankerite/albite/sericite alteration. Mineralized/altered zones vary from less than a metre to in excess of 20m in width. Gold values are associated with the quartz veining, the mineralized alteration envelopes about the veins and intervals of increased pyrite content. Visible gold where present, is often associated with quartz veining.

The drilling completed by Lake Shore on this deposit was designed to infill gaps in the mineral model and test along strike and at depth from the known mineralization providing enough data that would allow completion of the geological modelling and estimation of this initial resource. The modelling and resource estimation shows the presence of both a broad lower grade pitable resource and a narrower style of mineralization that would be more amenable to underground mining.

1.1 Mineral Resource Estimate

Lake Shore has estimated an Indicated Mineral Resource of 2.2 Mt at an average grade of 1.75 g/t Au containing 125,000 ounces of gold as tabulated in Table 1.1. The estimation process followed CIM guidelines, in accordance with NI 43-101 definitions. The estimate is based on an ID^2 block model constrained by Resource Solids and a preliminary optimized pit shell.

In addition, Inferred Mineral Resources of 1.5Mt grading 3.60 g/t Au containing 168,800 ounces of gold have been estimated for both Pit and Underground Resources. The deposit remains open down-dip.

Table 1.1.1 Vogel/Schumacher Mineral Resource Estimates
(Prepared by Lake Shore – May 2011)

Resource Classification	Tonnes	Capped Grade g/t Au	Contained Gold (ounces)
Indicated Mineral Resources			
Pit Resources	2,219,000	1.75	125,000
Total Indicated	**2,219,000**	**1.75**	**125,000**
Inferred Mineral Resources			
Pit Resources	692,000	1.43	31,700
Underground Resources	767,000	5.56	137,000
Total Inferred	**1,459,000**	**3.60**	**168,800**

Notes:
1. CIM definitions were followed for classification of Mineral Resources.
2. Mineral Resources are estimated at a cut-off grade of 2.9g/t Au for Underground and 0.63g/t Au for Pit Resources.
3. Mineral Resources are estimated using an average long-term gold price of US$1,125 per ounce and a US$/C$ exchange rate of 0.95 and US$1,150 per ounce for Pit Resources.
4. A minimum mining width of approximately two metres was used for Underground Resources.
5. Capped gold grades are used in estimating the Mineral Resource average grade.
6. Sums may not add due to rounding.
7. Mr. Robert Kusins, B.Sc., P.Geo., is the Qualified Person for this resource estimate.

Recommendations for the Vogel/Schumacher deposit would include additional drilling at depth to expand the resource, review models and grade capping as new results become available, evaluate overburden and rock mass quality to determine appropriate pit and overburden slopes, review pit optimization parameters and re-generate optimum pit shell and complete metallurgical test work on drill core / rejects to determine milling characteristics and suitability for processing at the Bell Creek mill.

The Qualified Person's for this report are Mr. Robert Kusins, P.Geo, Mr. Ralph Koch, P.Geo, and Mr Stephen Conquer, P.Geo. who at the time of preparation of this report were all employees of Lake Shore Gold Corp.

2.0 INTRODUCTION

2.1 Introduction

This technical report is being prepared for Lake Shore Gold Corp. with corporate head office at 181 University Ave., Suite 2000, Toronto, ON, Canada M5H 3M7. This report is being prepared as a technical review of the exploration completed on the Vogel/Schumacher deposit and results of which have been used in the preparation of a NI 43-101 compliant resource estimate.

2.2 Sources of Information

During the preparation of this report, the author's relied on technical reports and data available at the Lake Shore exploration office at 1515 Government Road South, Timmins, Ontario.

Historical "T-File" assessment reports were reviewed at the Ministry of Northern Development, Mines and Forestry ("MNDM") office at the Ontario Government Complex, Highway 101 East, Timmins (Porcupine), Ontario. Assessment reports were accessed from the web by searching the Assessment File Research Imaging ("AFRI") (Powers, 2009) at:
www.geologyontario.mndm.gov.on.ca/

The option agreements for the Vogel and Schumacher properties are on file at the Government Rd. Exploration office and have been reviewed by the Author's for the preparation of this report. The information contained in these agreements is consistent with the option information presented in Lake Shore Gold Corp.'s news releases. Press release data has been reviewed and extracted from the company's website. www.lsgold.com

At the present time Lake Shore has an exploration agreement for the Bell Creek Complex, which includes Vogel/Schumacher with the Mattagami, Flying Post, Matachewan and Wahgoshig First Nations.

The Author's involvement with the Vogel/Schumacher deposit consists of the following:

Robert Kusins in his role as Lake Shore's Chief Resource Geologist has been involved with the Vogel/Schumacher property since June 2008, with an initial review of the historical resources. The author as well, has been responsible for the ongoing re-modelling of the zones, which forms the basis for the current report.

Ralph Koch in his role as Chief Mine Geologist for the Bell Creek Complex has audited the geological interpretation, resource estimation methodology and results, and has contributed to select portions of this report. The author as well has been involved in the resource estimates for the Bell Creek and Marlhill Mines.

Stephen Conquer has acted as Senior Project Geologist and QP for the surface exploration at the Bell Creek Complex between June and November, 2009 and since late August, 2010 and specifically with drilling on the Vogel portion of the deposit since late August of 2010.

The Author's completed a site visit to the Vogel/Schumacher properties on April 15, 2011.

A complete list of the documents cited for and used to gather background information and project details during the preparation of this report can be found in the "References" section.

2.3 Units and Currency

Metric and Imperial units are used throughout this report. Canadian dollars **("C$")** is the currency used unless otherwise noted. On May 2, 2011 the exchange rate was approximately $1 C dollar to 0.95 US$.

Common conversions used included converting one ounce of gold to grams gold with a factor of 31.104 grams/troy ounce; and one ounce gold per ton with a conversion factor of 34.29 grams gold per tonne.

Table 2.3.1 lists the common abbreviations that are used in the report.

Table 2.3.1 Abbreviations

Unit or Term	Abbreviation or Symbol
Atomic Absorption	AA
Arsenic	As
Arsenopyrite	aspy
Azimuth	AZ
Billion years ago	Ga
Centimetre	cm
Copper	Cu
Cubic centimetre	cm^3
Cubic metre	m^3
Cubic yard	yd^3
Degree	°
Degree Celsius	°C
Diamond drill hole	ddh
Gold	Au
Gram	g
Grams per litre	g/l
Grams per tonne	g/t, gpt
Greater than	>
Hectare (10,000m^2)	ha
Horsepower	hp
Kilo (1,000)	k
Kilogram	kg
Kilometre	km
Lead	Pb
Metre	m
Metric ton (tonne) (2,000 kg) (2,204.6 pounds)	t
Millimetre	mm
Million	M
Million tonnes	Mt
Million Years	Ma
Minute (plane angle)	min, '
Minute (time)	min
Month	mo
National Instrument 43-101 (Canadian)	NI 43-101

Ounces	oz
Page	p
Parts per billion	ppb
Parts per million	ppm
Percent	%
Potassium	K
Pyrite	py
Pyrrhotite	po
Quality Assurance/Quality Control	QA/QC
Rock Quality Description	RQD
Second (plane angle)	sec, "
Second (time)	s
Short ton (2,000 lb)	st
Short ton (US)	t (US)
Silver	Ag
Sodium	Na
Specific gravity	SG
Square centimetre	cm^2
Square kilometre	km^2
Square metre	m^2
Tonne (1,000 kg)	t
Year (US)	yr

2.4 Disclaimers

This report or portions of this report containing pertinent technical information are not to be reproduced or used for any purpose other than those noted above, without the prior written consent of the authors. The authors do not assume any responsibility, or liability for losses occasioned by any party as a result of the circulation, publication, or reproduction, or use of this report contrary to the provisions of this paragraph.

3.0 RELIANCE ON OTHER EXPERTS

3.1 Reliance on Other Experts

This report has been prepared by Lake Shore Gold Corp (Lake Shore). The information, conclusions, opinions and estimates contained herein are based on:

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

For the purpose of this report ownership information, property title, mineral rights, applicable taxes, royalties and other government levies or interest applicable to revenue comes from records maintained by Lake Shore.

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

This report was prepared using a combination of publicly available and confidential information. Titles of the reports used for source material are listed in the section labelled "References". Lake Shore's Qualified Persons (QP's) for this report are Robert Kusins, P.Geo. Lake Shore's Chief Resource Geologist and QP responsible for the resource estimate, Stephen Conquer, P.Geo. Lake Shore's QP responsible for overseeing and reporting on the exploration programs at the Vogel/Schumacher properties, and Ralph Koch Lake Shore's Chief Mine Geologist for the Bell Creek Complex. Figures for this report have been prepared by Tom Savage, in the employ of Lake Shore Gold Corp. and modified at the request of the authors. Dave Powers was retained by Lake Shore to prepare the framework, gather background and prepare some of the chapters for this report. Under the direct supervision of Stephen Conquer, P. Geo., Laura Mancini and Christina Riddell, both Lake Shore employees assisted in database verification. At the direction of the author's Christina Riddell prepared the data for the check assay and quality control (QC) sections, while Laura Mancini helped edit and prepare the final document.

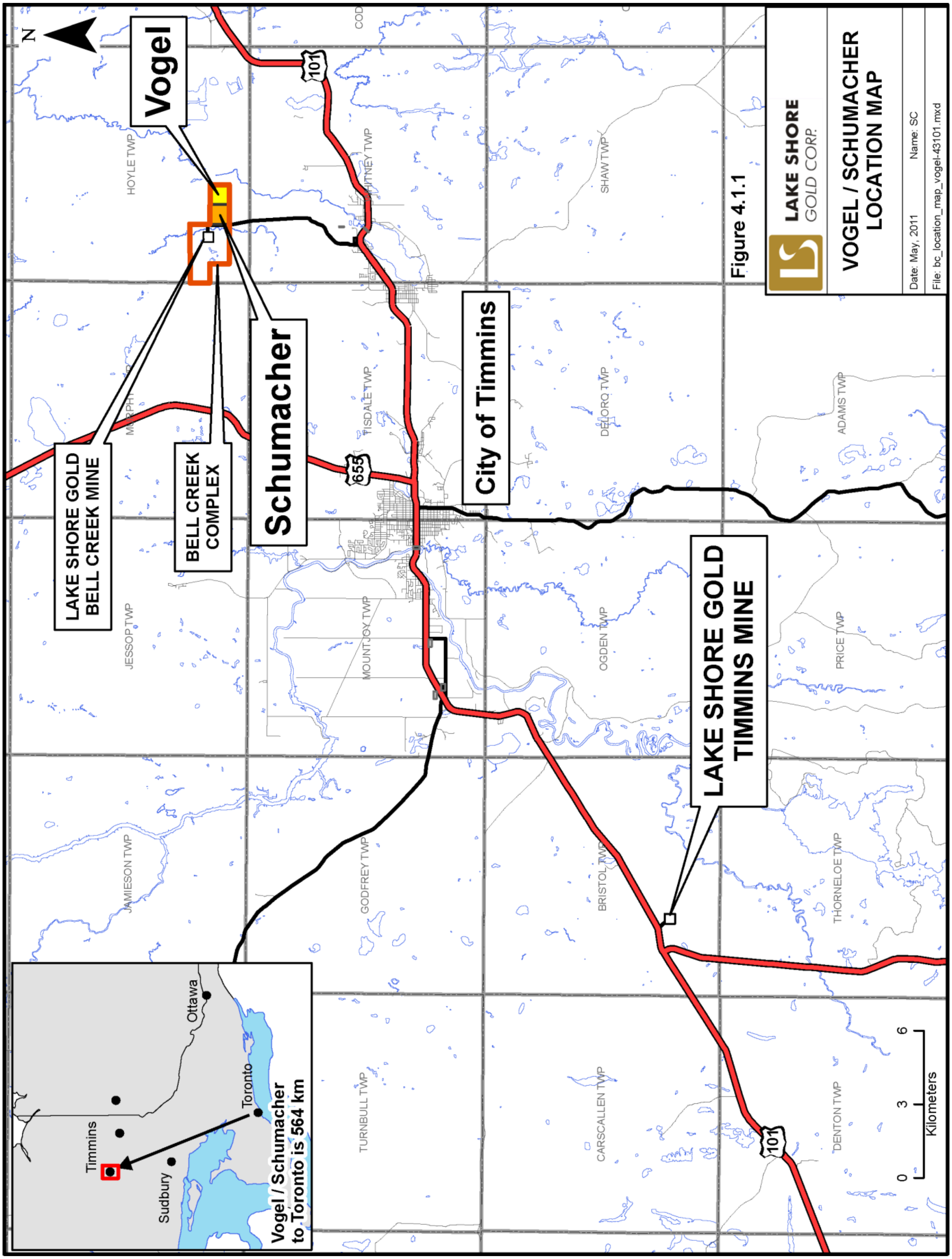
Permit and First Nation agreement information was provided by T. Ternes, Environmental Manager, for Lake Shore Gold Corp.

4.0 PROPERTY LOCATION AND DESCRIPTION

4.1 Location

The Vogel/Schumacher properties are situated approximately 20 kilometres, by road, east of Timmins centre and approximately 564 kilometres north-north-west of Toronto, Ontario. The Vogel/Schumacher Deposit is located in Hoyle Township within National Topography Series Map reference 42-A-11 southeast; at longitude 81° 9' 27.5" west, 48° 33' 31.8" North latitude. Universal Transverse Mercator ("UTM") co-ordinates for the project utilizing projection North American Datum ("NAD") 83, Zone 17 are approximately 486,367.5 metres east, 5,378,428.4 metres north.

Figure 4.1.1 Location Map, illustrates the Project area relative to the highways, City of Timmins and the City of Toronto.


Vogel
Schumacher
BELL CREEK COMPLEX
LAKE SHORE GOLD BELL CREEK MINE
City of Timmins
LAKE SHORE GOLD TIMMINS MINE
101
655
HOYLE TWP
JESSOP TWP
JAMIESON TWP
TURNBULL TWP
GODFREY TWP
MOUNTJOY TWP
TISDALE TWP
SHAW TWP
DELORO TWP
OGDEN TWP
BRISTOL TWP
CARSCALLEN TWP
ADAMS TWP
PRICE TWP
THORNELOE TWP
DENTON TWP
N
0
3
6
Kilometers
Figure 4.1.1
LAKE SHORE GOLD CORP.
VOGEL / SCHUMACHER LOCATION MAP
Date: May, 2011
Name: SC
File: bc_location_map_vogel-43101.mxd
Timmins
Sudbury
Ottawa
Toronto
Vogel / Schumacher to Toronto is 564 km

4.2 Property Description

The Vogel "Vet Lot" and Schumacher III Estate properties are both patent lots being parcels 20011 SEC and 1598 SEC found in the north half of Concession 1, Lots 8 and 9 respectively in Hoyle Township. (Table 4.2.1)

Table 4.2.1 Property Description and Underlying Royalties

Property	Patent	Property	Surface	Mining	Location		Area	Underlying	Royalty
	Claim No.		Rights	Rights	Concession, Lot	Portion	Hectares	Agreement	
Vogel		Parcel 20011 SEC	Freehold	Freehold	1, 8	north half	64	Mary Vogel	2% until recovery of capital then 3% NSR
Schumacher III Estate		Parcel 1598 SEC	Freehold	Freehold	1, 9	north half	64		2% NSR

Figure 4.2.1 is a Claim Map illustrating claim information and boundaries relative to topographic and cultural features.

4.3 Recent Ownership History and Underlying Agreements

Two separate agreements have been executed for the acquisition of the Vogel Boer War "Vet Lot" and the Schumacher III Estate lot. Each agreement was announced to the public through two separate 2005 press releases. These releases and underlying agreements are summarized below.

4.3.1 Vogel Property

On March 07, 2005, Lake Shore announced (NR 2005-03-07) the acquisition of the Vogel property from Black Hawk Mining Inc. (Black Hawk), a wholly owned subsidiary of Glencairn Gold Corporation. Under the terms of the agreement, Lake Shore acquired 100% of Black Hawk's interests under the mining lease on the property by making initial cash payment of $3,000,000 and issuing 100,000 shares of the Company. A further cash payment of $500,000 will be payable to Black Hawk, once a NI 43-101 compliant indicated resource of 600,000 ounces of gold has been confirmed on the property. The property is subject to a 2% net smelter royalty until recovery of capital then 3% net smelter royalty, with annual advance royalty payments of US$50,000. The Vogel property is a freehold patent with both surface and mining rights (granted by the Crown before May 6, 1913) – a Boer War "vet lot" and as such has no requirement to file assessment reports with the Ministry of Northern Development Mines and Forestry ("MNDMF"). As a "vet lot" in a surveyed township, its boundaries are fixed precisely for an area of 64 hectares (~160 acres).

4.3.2 Schumacher Property

In a December 01, 2005 press release (NR 2005-12-01) Lake Shore Gold Corp. reported that it has signed a 20 year lease agreement with the Canada Trust Company (surviving trustee of Frederick William Schumacher) to acquire the Schumacher Estate Property located contiguous to and west of Lake Shore's Vogel Property. Under the terms of the Agreement, Lake Shore will acquire a 100% interest in the mining lease on the Property by making cash payments totalling $150,000, payable over two years, and incurring exploration expenditures of $500,000 over three years. In addition, Lake Shore will pay an advanced annual royalty of $25,000 in years 4-6 and $50,000 in 7-9 years and a production royalty of 2% of net smelter returns.

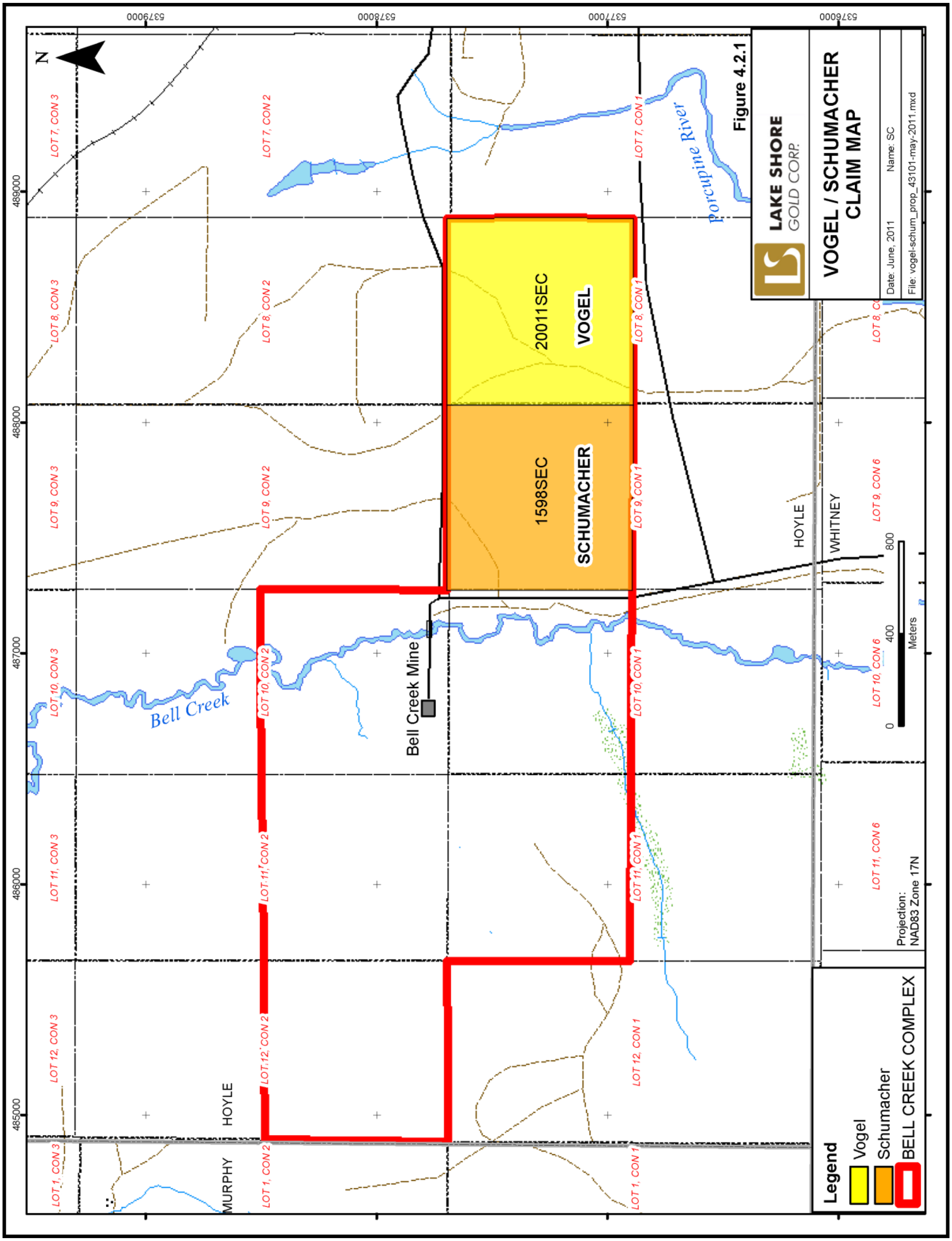


Figure 4.2.1
LAKE SHORE GOLD CORP.
VOGEL / SCHUMACHER CLAIM MAP
Date: June, 2011
Name: SC
File: vogel-schum_prop_43101-may-2011.mxd
Legend
Vogel
Schumacher
BELL CREEK COMPLEX
Projection: NAD83 Zone 17N
0
400
800
Meters
20011SEC
VOGEL
1598SEC
SCHUMACHER
Bell Creek Mine
Bell Creek
Porcupine River
HOYLE
WHITNEY
MURPHY
N

4.4 Past Mining Activity, Environmental Liabilities and Permitting

There have been no past mining activities on the Vogel or Schumacher properties. The exploration programs at the Vogel/Schumacher properties are designed to determine if there are sufficient economic gold resources, which can be mined, milled and refined at a profit. If a positive feasibility study is completed and a production decision made, the Mining Act requirements include notifications, public and First Nations consultation, closure plans and financial assurance. Acceptance of a closure plan by the Ontario Ministry of Northern Development, Mines and Forestry (“MNDMF”) would provide the rights for Lake Shore to proceed under the Mining Act.

An exploration agreement is in place with the Mattagami, Flying Post, Matachewan and Wahgoshig First Nations (T. Ternes, personal communication). A “Desktop Values Study” covering the Vogel and Schumacher properties was conducted by *Blue Heron Solutions for Environmental Management* on behalf of Lake Shore in July, 2006. This study did not identify any Biological Values of Interest; Wetlands; Abandoned, Closed Mines and Aggregate Sites; or Cultural, Heritage and Archaeological Values of Interest for the Vogel/Schumacher properties. At the time of writing of this report Lake Shore is undertaking a Stage 1 Archaeological Study over the Bell Creek Complex. This report should be finished by the end of the summer. (T. Ternes, personal communication)

The Ontario Ministry of the Environment (“MOE”) issues permits to take water (both surface and groundwater) and to emit noise and dust. Wastewater treatment and effluent discharge, including the construction of ditches and/or berms to control water flow, are governed by the Ontario Water Resources Act (“OWRA”), and include the required permits for storm water management. Solid waste management, noise and/or air emissions are provided for under the Environmental Protection Act (“EPA”). The Ontario Ministry of Natural Resources (“MNR”) may require permits for creek crossings or impoundment structures (dams) under the Lakes and Rivers Improvement Act (“LRIA”). The Ontario Ministry of Labour (“MOL”) is mandated to set, communicate, and enforce workplace standards; specifically for Health and Safety under the Occupational Health and Safety Act, Employment Standards and Labour Relations. Prior to the commencement of future activity, Lake Shore would have to serve written notice to the MOL. In the future also, federal permits under the Fisheries Act, the Environmental Protection Assessment Act, and Metal Mining Effluent Regulations would trigger assessment and permitting requirements.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES AND INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Access

Access to the properties is gained via Florence Street, a 6.7 kilometre long asphalt and gravel road situated north of Highway 101 in Porcupine approximately 20 kilometres west of Timmins centre.

Figure 4.1.1 Location Map, illustrates the Project area relative to the highways, City of Timmins and the City of Toronto.

5.2 Climate

The project area, and the City of Timmins experience a continental climate with an average mean temperature range of -17.5°C (January) to +17.4° (July) and an annual precipitation of about 831mm. Table 5.2.1 summarizes the most up to date tabulation from Environment Canada for a 15 year period of average temperatures and precipitation values taken at the Timmins Airport between 1971 and 2000 (Powers, 2009).
(http://www.climate.weatheroffice.ec.gc.ca/climate_normals/index_e.html)

Table 5.2.1 Average Temperatures, Precipitation and Snow Fall Depths for the Timmins Area

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temperature													
Daily Average (°C)	-17.5	-14.4	-7.7	1.2	9.6	14.7	17.4	15.7	10.3	4.2	-4	-13.2	1.3
Daily Maximum (°C)	-11	-7.5	-0.9	7.6	16.6	21.7	24.2	22.3	16.1	8.9	0.1	-7.8	7.5
Daily Minimum (°C)	-23.9	-21.3	-14.5	-5.2	2.5	7.5	10.5	9.1	4.4	-0.6	-8.1	-18.7	-4.9
Precipiation													
Rainfall (mm)	2.9	1.6	14.7	26.6	62.7	89.1	91.5	82	86.7	64	29.5	7	558.1
Snowfall (cm)	61.7	40.6	49.9	27.5	6.7	0.4	0	0	1.6	14	45.7	65.4	313.4
Precipitation (mm)	53.9	36.6	59.4	52.8	69.2	89.4	91.5	82	88.3	76.8	69.6	61.9	831.3
Average Snow Depth (cm)	58	66	58	25	1	0	0	0	0	0	7	29	20

Local lakes start to freeze over in approximately mid November, with spring breakup taking place in early to mid May. Work can be carried out on the Property twelve months a year (Powers, 2009).

5.3 Local Resources and Infrastructure

The local economy of Timmins is dominated by the mining and logging industries. Timmins is one of Canada's largest municipalities with an area of 3,210 square kilometres. The 2006 Census indicates the population to be 42,455 persons. The area is serviced from Toronto via Highways 400, 69 to Sudbury; and Highway 144 to Timmins; or Hwy 11 from Barrie to Matheson and 101 westward to Timmins. The Victor M. Power Airport has scheduled service provided by Air Canada Jazz, Bearskin Airlines and Air Creebec. The Timmins District Hospital is a major referral health care centre for Northeastern Ontario (Powers, 2009).

All weather road access and electrical power transmission lines are established and operational to the Bell Creek mine and mill. An experienced mining labour pool is accessible in the Timmins area (Powers, 2009).

5.4 Physiography

Powers (2009) describes the physiography as:

The Property exhibits low to moderate topographic relief. A base elevation at the junction of Florence Street and the Bell Creek to Hoyle Pond service road is approximately 287 metres above sea level . A peak height of land near the property centre rises to an elevation of 297 metres. Bell Creek ranges in elevation between 285 and 298m. Drainage is characterized by slow, meandering

creeks and rivers into the Arctic watershed. Bell Creek flows north-northwest across the Property into the Porcupine River. Outcrop exposure is less than three (3) percent.
The Timmins area is situated in plant hardiness zone 2a which supports boreal forest tree species and an active timber, pulp and paper industry. In no particular order of significance local trees species include: American Mountain-Ash, Balsam Fir, Black Spruce, Eastern White Cedar, Eastern White Pine, Jack Pine, Pin Cherry, Red, Tamarack, Trembling Aspen, White Birch, White Spruce and Speckled Alder (Powers, 2009).

Timber was harvested from the Vogel and Schumacher properties in 1997.

6.0 HISTORY

6.1 General History

The following paragraph is an excerpt from Powers (2009):

The north and westward extension of the Temiskaming and Northern Ontario railway, and Niven's survey lines from Cobalt allowed new access for the discoveries of gold near Porcupine Lake. In the early 1900's E.M. Burwash noted traces of gold in quartz veins along Niven's baseline while he was employed by the Ontario Bureau of Mines (1896), and was assigned to Niven's survey crew. In 1899 W.A. Parks, also working for the Ontario Bureau of Mines and attached to Niven's survey crew noted an occurrence of gold in quartz veins along the portage route from the Mattagami River to Night Hawk Lake. He reported "I regard the region south of the trail to Porcupine Lake as giving promise to the prospector" (Burrows, A.G., 1911, 1915; Dunbar, R., 1948). While prospecting for the Algoma Central Railway (1901) Charles Camsell worked on a vein occurrence returning low grade gold. This property would later become part of the Hollinger Mine. These gold discoveries helped create interest in the Porcupine area and began a rush that defined the Porcupine Gold Camp. A.G. Hunter in 1908 staked claims along the east shore of Porcupine Lake protecting a native gold showing associated with a shear zone occupied with quartz and schist. 1909 was an important year as major discoveries of the Vipond, Dome and Hollinger were made, ultimately leading to the birth of the Porcupine Gold Camp (Powers, 2009).

Very little geological work is found on the Bell Creek Complex area in public files or in reports by the provincial geological survey prior to the 1960's. Reports and maps were created by the Ontario Geological Survey (OGS) and the Ontario Department of Mines (ODM) in the Hoyle Township area as far back as the 1920's. Rose (1924) produced the first geological map of Hoyle Township. In 1941 Berry mapped Hoyle Township and the southern part of Gowan Township for a geological map of the Bigwater Lake area. Ginn et al. (1964) compiled the first small scale map that covered Hoyle and Gowan townships. This map was revised in 1973.

Hunt and Maharaj (1980) created the Timmins Data Series for a preliminary map of Hoyle Township. A preliminary Quaternary geology map of the Pamour area, Cochrane District, was created by Richard (1983). A 1987 airborne geophysical survey of Hoyle Township was conducted by Geoterrex Limited for a 1988 Hoyle Township magnetic survey map. Kent (1990) produced a Bell Creek and Marlhill Mine area field trip guidebook for the 8th IAGOD Symposium. From 1991 to 2008 several reports and maps of the Timmins area were completed for the OGS and ODM

(Bateman, R., Ayer, J.A., Dubé, B., Hamilton, M.A., 2005; Bateman, R., 2005; Berger, B.R., 1991, 1992, 1998a, 1998b; Butler, H.R., 2008, Pressaco, R., 1999; and Rhys, D.A., 2003).
Historical "T-Files" assessment reports can be reviewed at the Ministry of Northern Development, Mines and Forestry ("MNDMF") office at the Ontario Government Complex, Highway 101 East, Timmins (Porcupine), Ontario; and Assessment File Research Imaging ("AFRI") at: www.geologyontario.mndm.gov.on.ca/. In his Technical Report Hadyn Butler (2008) provides a excellent historical review of the Property (Powers, 2009).

Table 6.1.1 lists the report files with information that have added to the geological understanding and interpretation of the area surrounding the Bell Creek Complex (Powers, 2009). This lists serves as a chronological summary of companies and work performed in the Bell Creek Complex Properties area.

Table 6.1.1: Assessment Reports For the Bell Creek Complex Area

File	Year	Company/Group	Work Type						
"T" Number or AFRI Number			Diamond Drilling		Geophysics		Airborne	Other	Comments
			Number of Holes	Total (m)	EM (Km)	Mag. (Km)	EM-Mag (km²)		
T-0447	1935	Broulan Reef Mines Ltd. (1935 & 1959)						report	Hoyle Twp., Concession II, Lots 9, 10, 11
T-3587	1936	Johnston, T. A.						prospecting	Hoyle Twp., Concession II, Lots 9, 10.
T-0309	1940	Alton, C.B.	1	122					Hoyle Twp., Concession I, Lots 9, 10.
T-3580	1941	Lamothe / Hollinger	14	2,845					Hoyle Twp., Concession II, Lots 7, 8, 9, 10 (Marhill Area)
42A11SE0335	1958	Broulan Reef Mines Ltd.						Trenching	Hoyle Twp., Concession II, Lots 9 & 10.
42A11SE0100	1959	Broulan Reef Mines Ltd.	7	778					Hoyle Twp., Concession II, Lot 9.
42A11SE0112	1964	Copper Reef Mines			22	22			Hoyle Twp., Concession II, Lots 11, 12.
42A11SE0111	1964	Rexton Mines Limited			24.8	25.6			Hoyle Twp., Concession II, Lots 7, 8.
42A11SE0101	1965	Texas Gulf Sulphur Company					10		Hoyle Twp., Concession II, III, Lot 1, 2, 3.
42A11SE0304	1965	Texas Gulf Sulphur Company	4	808					Hoyle Twp., Concession II, Lot 2.
42A11SE0907	1965	Texas Gulf Sulphur Company	3	450					Hoyle Twp., Concession III, Lot 2.
42A11SE0103	1966	Canadian Nickel Company Ltd. (1966-71)	4	856					Hoyle Twp., Concession I, Lot 7.
42A11SE0102	1967	International Nickel Company of Canada	5	1,199					Hoyle Twp., Concession I & II, Lot 5.
42A11SE0902	1967	Texas Gulf Sulphur Company (1967-69)	2	216					Hoyle Twp., Concession II, Lot 4.
T-1321	1967	International Nickel Company of Canada							diamond drilling and resource estimate Owl Creek - M.B. Kremko
42A11SE0903	1969	Texas Gulf Sulphur Company	1	169					Hoyle Twp., Concession II, Lot 5.
42A11SE0901	1969	Texas Gulf Sulphur Company	1	174					Hoyle Twp., Concession II, Lot 5.
T-1316	1969	Consolidated Manitoba Mines Limited						prospecting	Hoyle Twp., Concession II, Lots 7
42A11SE0096	1971	Ralph Allerston (Rexton Mines Ltd.)			8.5	8.5			Hoyle Twp., Concession II, Lot 8.
42A11SE8375	1974	Ralph Allerston				60			Hoyle Twp., Con. III, Lots 11 & 12; Murphy Twp., Con. III, IV, V, Lots 1 & 2.
42A11SE0905	1974	Ralph Allerston (L.P. Industries)	1	171					Hoyle Twp., Concession II, Lot 8.
42A11SE0104	1974	Ralph Allerston (L.P. Industries)			13.9	13.9			Hoyle Twp., Concession II, Lots 7 & 8.
42A11SE0086	1975	Canadian Nickel Company Ltd.	1	244					Hoyle Twp., Concession II, Lot 6.
42A11SE0085	1975	Ralph Allerston (L.P. Industries)			50.4				Hoyle Twp., Con. III, Lots 11 & 12; Murphy Twp., Con. III, IV, V, Lots 1 & 2.
42A11SE0082	1978	Rosario Resources Ltd.	1	152					Hoyle Twp., Concession II, Lot 11.
42A11SE0081	1978	Rosario Resources Ltd. (1978-79)	4	686					Hoyle Twp., Concession II, Lot 8.
42A11SE0083	1979	Rosario Resources Ltd.			107	107			Hoyle Twp., Con. II, III, Lots 7, 8, 11, 12; Murphy Twp., Con. I, II, III Lots 1, 2, 3, 4.
42A11SE0084	1979	Rosario Resources Ltd.				29.44			Hoyle Twp., Con. II, III, Lots 7, 8, 11, 12; Murphy Twp., Con. I, II, III Lots 1, 2, 3, 4.
42A11SE0078	1979	Rosario Resources Ltd.	29	545				OB	Hoyle Twp., Concession II, Lots 7, 8, 11 & 12; Murphy Twp., Con. I, II, Lots 1, 2, 3, 4.
42A11SE0068	1981	Rosario Resources Ltd.	12	268				OB	Hoyle Twp., Concession II, Lots 11 & 12; Murphy Twp., Con. II, Lot 1.
42A11SE0074	1981	Rosario Resources Ltd.	2	193					Hoyle Twp., Concession III, Lot 11.
42A11SE0075	1982	Rosario Resources Ltd.	1	201					Hoyle Twp., Concession II, Lot 11. (Amax Log)
42A11SE0072	1982	Kidd Creek Mines Ltd.	1	124					Hoyle Twp., Concession II, Lot 7.
42A11SE0071	1982	Amax Minerals Exploration	3	401					Hoyle Twp., Concession II, Lot 11.
42A11SE0129	1982	Amax Minerals Exploration							Geological Report for projects within Hoyle and Murphy Twps.
42A11SE0062	1983	Canamax Resources Inc							Bell Creek Project Gold Recovery Study - Report 1
42A11SE0062	1983	Canamax Resources Inc							Bell Creek Project Feasibility Study
42A11SE0059	1983	Canamax Resources Inc	53	8,811					Bell Creek Project, Geological Report also Report of Geological Surveys Murphy Twp.
42A11SE0069	1983	Canamax Resources Inc	1	141					Hoyle Twp., Concession II, Lot 11.
42A11SE0134	1983	Canamax Resources Inc	3	606					Hoyle Twp., Concession II, Lot 10.
42A11SE0062	1983	Canamax Resources Inc							Bell Creek Sample Preparation and Analysis - E.J. Rowe, Amax (Denver)
42A11SE0062	1983	Canamax Resources Inc	48	9,441	12	12			Bell Creek Project, Progress Report 1983, Bell Creek , Wetmore , Rose Properties
42A11SE0064	1984	Canamax Resources Inc	12	2,640					Bell Creek Project, Progress Report 1984.
42A11SE0064	1985	Canamax Resources Inc							Bell Creek Project Gold Recovery Study - Report 2
42A11SE0118	1985	Canamax Resources Inc	43	7,079	3.4				Bell Creek Project, Progress Report 1985. includes geophysics for Schumacher Property
42A11SE0118	1985	Canamax Resources Inc							Underground Exploration Activities, Bell Creek Project, 1985
42A11SE0913	1986	Syngold Exploration Inc. (1986-87)	31	14,207					West Owl Creek Project, Hoyle Twp. Concession 1, Lot 7
42A11SE0115	1987	Syngold Exploration Inc.	10	3,578					West Owl Creek Project, Hoyle Twp. Concession 1, Lot 7
42A11SE0057	1990	Canamax Resources Inc							Underground Exploration Activities, Bell Creek Project, May to December 1990
42A11SE0149	1990	Canamax Resources Inc							Underground Exploration Activities, Bell Creek Project, January to April, 1991
42A11SE0154	1990	Canamax Resources Inc							Underground Exploration Activities, Bell Creek Project, May to August, 1991
42A11SE0008	1995	Pentland Firth Ventrues Ltd.	1	221					Hoyle Twp., Concession I, Lot 10.
42A11SE0046	1995	Pentland Firth Ventrues Ltd.			12.5	12.5			Hoyle Twp., Concession IV, Lots 7 & 8.
T-3852	1995	Black Hawk Mining Inc.	46	15,950				resource estimate	Hoyle Twp., Concession I, Lot 8. (Vogel)
T-4622	1995	Black Hawk Mining Inc.						compilation	Hoyle Twp., Concession I, Lot 8. (Vogel)
42A11SE0125	1997	Pentland Firth Ventrues Ltd.	2	749					Hoyle Twp., Concession V, Lot 9.
T-5409	2004	Porcupine Joint Venture			23.5	47.1			Hoyle Twp., Concession II & III, Lots 5, 6, 7.
T-5340	2005	Porcupine Joint Venture	4	605					Hoyle Twp., Concession III, Lots 5, 6.
T-5456	2005	Porcupine Joint Venture	36	11,469					Hoyle Twp., Concession I, II, Lots 10, 11; Bell Creek West and North A Zones

Overburden drilling (OB)

6.2 Vogel/Schumacher History

6.2.1 Vogel Property

Lapierre (1996) summarizes the history of the Vogel property as follows:

pre 1960	-Mr. M. Howitt owned "Vet Lot" totalling 160 acres. Subsequently, property passed on to Mr. Howitt's daughter Mrs. Vogel. Property eventually was known as the Vogel property.
1968	-The International Nickel Company of Canada optioned the property following the discovery of gold at the Owl Creek property, located 800 meters east of the east boundary of property. Inco tested the southernmost graphite conductor with 2 drill holes totalling 366 meters. Nothing of economic importance was detected. Inco terminated the option.
1987	-In December, Canamax leased property from Mrs. Mary Vogel of Maplewood, New Jersey, USA. The property was then joint ventured to Pamorex. This joint venture lasted till August 1988 when the property reverted back to Canamax.
1988	-Canamax completed field work which included: 1) OLS survey of property boundaries, 2) Linecutting, 3) Geophysical survey consisting of ground Mag & EM 4) Diamond drilling totalling 2,733 meters in 9 drill holes (ddh-01 to ddh-09)
1989	-Canamax completed an additional 7 diamond drill holes (ddh-10 to ddh-16) totalling 2,352 metres. After the drill program the project geologist recommended no further work on the property (October 6, 1989)
1994	-Black Hawk Mining Inc. acquired the right to earn a 100% working interest in the property, subject to royalties.

The post 1994 history of the Vogel property is summarized by A.M. Eastwood (2004) as follows:

1995/1996	-Black Hawk completed 50 drill holes (14,408 metres, BQ core) and in April produced a polygonal drill indicated resource estimate (1,017,009 tonnes at 7.63 g/tonne gold using no cut-off grade and 747,572 tonnes at 9.71 g/tonne gold using a 3 g/tonne cut-off grade). Assays were cut to 200 g/tonne gold. An independent consultant estimated a polygonal drill indicated resource of 793,468 tonnes at 8.44 g/tonne gold using a 3 g/tonne cut-off grade and assays cut to 34.29 g/tonne gold. Black Hawk completed 3 more holes (1,326 metres) subsequent to completion of the resources estimates.
1996	-Black Hawk formed a joint venture with Kinross Gold Corporation ("Kinross") in October. Kinross was required to spend $1,000,000 on diamond drilling, submit a development plan and provide the first $12,000,000 in development financing and operate the project to earn 50% in the project.

1996-1997	-Kinross completed 44 drill holes (20,696 metres) and in September 1997 produced a polygonal drill indicated resource estimate (1,405,848 tonnes at 8.83 g/tonne gold using a 3 g/tonne cut-off grade, uncut assays and 1.5 metre true width) using the Kinross Gemcom drill hole database.
1997	-Kinross completed 21 drill holes (2282.3 metres) in November to provide a detailed test of vein continuity and grade variability over a 100 metre strike length from 7000E to 7100E to a depth of 110 metres. Drill spacing was about 15 metres, Results reportedly demonstrated vein continuity on section but grades were erratic. Updated resources for this area showed a reduction in tonnage and grade to 40,828 tonnes at 7.67 g/tonne gold from 73,721 tonnes at 10.36 g/tonne gold using similar parameters (3 g/tonne cut-off grade, uncut assays and 1.5 metre true width). A similar comparison was made between 6900E and 7200E which also showed a reduction in tonnage and grade versus the previous estimate although less dramatic.
1997-1998	-Kinross completed a feasibility study for the property which provided Black Hawk a preliminary evaluation of a production scenario that would combine operations at the Bell Creek mine and the Vogel project. The joint venture was subsequently terminated.
1999	-A.C.A. Howe International Limited ("A.C.A. Howe") completed a feasibility study for Black Hawk to review the development alternatives for the Vogel gold project. Resources and a mineable resource" were also calculated by A.C.A. Howe.
2003	-Glencairn merged with Black Hawk and Black Hawk became a wholly owned subsidiary of Glencairn.

Black Hawk Mining, a subsidiary of Glencairn Gold Corporation completed 10,012 metres of drilling in 23, NQ drill holes between January and June of 2004. The intent of this drill program was, through in-fill drilling to confirm grade and continuity of a previously reported non NI 43-101 compliant indicated resource above the 300 metre level and start to evaluate the inferred resource below the 300 metre level.

Table 6.2.1 Indicated and Inferred resources by A.C.A. Howe for Glencairn Gold Corp.

Vein Zones	Tonnes	Grade 3.0 gpt cut-off
Indicated to 140 m level	682,672	8.73
Indicated 140 to 320m level	838,903	6.00
Total Indicated	**1,521,574**	**7.22**
Inferred 320 to 720m level	2,213,199	7.22
Total Inferred	**2,213,199**	**7.22**

6.2.2 Schumacher Property

Early in 1985 Canamax Resources Inc. acquired a lease on the Schumacher III Estate lot. During 1985 Canamax completed line cutting, an EM survey and drilling of three BQ sized holes for 1,004 metres. This drilling only encountered low gold values and the lease was dropped.

Falconbridge optioned the Schumacher Lot in 1986 and during the period 1987 to 1990 completed line cutting, geophysical surveys and 24 holes totalling 8,135 metres of BQ drilling. This drilling encountered numerous anomalous gold values between 1.0 and 5.0 gpt over sample lengths of up to 1.5 metres with some of the higher assay results being 25.5 gpt/0.55 m (H1235) and 36.69 gpt/0.3 m (H1219). These better values came from holes drilled on the eastern side of the property near the Vogel/Schumacher property line.

No further work was completed on the Schumacher III Estate lot until Pentland-Firth Ventures Ltd. (Pentland-Firth) entered into a lease agreement on the property in the third quarter of 1995. Pentland-Firth proceed to complete line cutting and a magnetometer survey prior to undertaking a program of BQ sized diamond drilling. Between 1995 and 1997 a total of 8,834 metres of drilling in 30 holes was completed.

The primary focus of the drilling was to test the westerly strike extension of the mineralized zones that Black Hawk had intersected on the Vogel property. The results from this drilling included numerous anomalous assays in the 1.0 – 3.0 gpt range over widths up to 5.0 metres with very high assays such as 131.7 gpt/0.4 m (PSC1) and 34.19 gpt/0.4 m (PSC16) also being encountered. The most significant mineralized interval form the PFV program came from hole PSC1 where a 12.0m interval assayed 5.12 gpt Au.

Exploration work performed by operators prior to Lake Shore is summarized in Table 6.2.2.

Table 6.2.2 Work on the Schumacher Property by Previous Operators

		Work Type				
Company/Group	Year(s)	Diamond Drilling		Geophysics		
		Holes	Total (m)	EM	Mag	IP
Canamax	1984-1985	3	1,004	X		
Falconbridge	1986-1990	24	8,135	X	X	
PFV	1995-1997	30	8,853			X

6.2.2.1 Historic Resource Estimates

Two resource estimates were completed by Pentland-Firth, the first by an independent consultant, Unto Jarvi and the second by Dean Crick a Pentland-Firth employee. Both resources are non NI 43-101 compliant and are quoted for historical purposes in Table 6.2.2.1

Table 6.2.2.1 Historic Resource Estimates for the Schumacher Property

Year	Tonnes	Grade (gpt)	Ounces
1996[1]	156,117	5.99	30,042
1997[2]	673,425	2.89	62,466

Notes:
1. Employed a cut-off grade of 3 g/t Au, a 200 g/t Au top cut. (Jarvi, 1996)
2. Employed a cut-off grade of 3 g/t Au, a 34.29 g/t Au top cut, a minimum 1.5 m width, and allowing for a 15 m crown pillar. (Crick, 1997)

In 1997 Pentland-Firth also hired a consultant, Dean Rogers to complete a review of the mineral resource estimates on the Schumacher property. The conclusions and recommendations from this review are summarized below (Rogers, 1997):

1) Pentland have outlined a modest resource on the Schumacher property.
2) The author concurred with the interpretation of the flat vein set component of the resource and further drilling has been recommended.
3) Pentland acknowledges that further evaluation should proceed in a regional context.
4) With the limitations of deposit size and grade, the resource is regarded by Author as a satellite deposit with modest potential.
5) Support a company recommendation to drill additional holes to evaluate the open pit potential of deposit and further drill evaluation of vertical vein system should await clarification of geology beyond eastern property boundary.

7.0 GEOLOGICAL SETTING

7.1 General Geological Setting

The following section is an excerpt from Powers (2009)

The earliest reports of the geology for the Timmins and Vogel/Schumacher area are from Ontario government geologists: Burrows (1910, 1911, 1912), Hawley (1926a, 1926b, 1926c), Rose (1924), Berry (1941), Ferguson (1957, 1968) and Pyke (1982), supplemented by contributions from Brisbin (1997), Gray, (1994), Melnik-Proud (1992) and van Hees (2000) for their Doctor of Philosophy degrees. Described in these documents are the contributions made by government and mine geologists which detail the evolution of the stratigraphic understanding for the Porcupine Gold Camp. Highlighted herein is a sequential bullet summary of significant observations and interpretations.

- 1896, Burwash assigned Precambrian volcanic and sedimentary rocks of the Timmins area to Huronian defined by Logan in 1847.

- 1911, 1912, 1915, 1925, geological mapping by Burrows, produces the first geological map of the Porcupine Camp and he makes his stratigraphic nomenclature consistent with relationships observed by Lawson (1913) for Lake of the Woods, as well as Miller and Knight (1915) in the Lake Timiskaming area.

- 1925, Burrows established that younger Timiskaming Series of metasedimentary rocks unconformably overly the Keewatin Series volcanic rocks. He identified porphyry dykes and stocks and granitoid plutons in the surrounding area as being Algoman, and post Timiskaming. The observation that Keweenawan olivine diabase dykes crosscut Matachewan quartz diabase was made at this time.

- 1933, Graton et al., proposed a subdivision for Keewatin volcanic rocks in Tisdale Township. The subdivision included, from oldest to youngest, the Northern, McIntyre, Central, Vipond, and Gold Centre Series. The name “99 Flow” was applied to a massive flow at the base of the Vipond Series.

- 1936, 1939, Hurst noted metasedimentary rocks in the Timmins area occur both overlying and underlying an angular unconformity. He places the rocks above the unconformity into the Timiskaming Series and assigns the metasedimentary rocks below the unconformity to the Keewatin Series. Porphyries are interpreted to be sub-volcanic stocks emplaced into volcanic vents from which the felsic volcaniclastics were erupted.

- 1944, Holmes interpreted the porphyries to post date Keewatin volcanic rocks and Timiskaming metasedimentary rocks.

- 1948, Jones, while working at the Hollinger Mine, presented a more detailed classification modified after Graton (1933). Jones introduced the alphanumeric names to the lithological units (e.g. V8E); gave formation status to the Northern, Central, and Vipond Series; and renamed the “McIntyre Series” the “95”, assigning the flows to the base of the Central Formation.

- 1948, Buffam adapts Jones’ Hollinger Mine terminology at the Moneta Mine and adds the term Krist Fragmental and describes the unconformity at the base of the Krist that separates it from the Tisdale Group mafic volcanic flows.

- 1948, Dunbar distinguishes two groups of Keewatin volcanic rocks in the Timmins area and names them Deloro Group and Tisdale Group. He discriminates the Krist Formation from the underlying Tisdale Group and places it into the Hoyle Series.

- 1954, Moore included the Krist Formation with the Timiskaming Group and placed the unconformity between Keewatin and Timiskaming rocks at the base of the Krist. Burrows (1911) was first to present this interpretation.

- 1954, Fuse applied Jones’ (1948) terminology of the Tisdale Group to rocks exposed at the McIntyre Mine.

- 1960, Griffis, at the McIntyre Mine, establishes the most detailed subdivision of the Tisdale Group.

- 1968, Ferguson et al., attempt to correlate the stratigraphy of the Timmins Camp. They assign the Krist Fragmental to the uppermost formation in the Tisdale.

- 1974, Pyke subdivided the Deloro and Tisdale Groups, based upon major oxide geochemical classification of volcanic rocks as per Jensen Cation Plot (Jensen, 1976) His nomenclature divided the two groups into six formations. Numbers I through III are within the Deloro Group and numbers IV through VI are within the Tisdale Group. The Deloro is largely a calc-alkaline sequence approximately 14760 to 16400 feet (4,500 to 5,000 metres) thick and is comprised mainly of flows of andesite and basalt in the lower part, and dacitic flows and rhyolitic pyroclastic rocks toward the top. Iron formation is common at or near the top of the group. Most of the Deloro Group is confined to a large domal structure in the east central part of the area. A major change in volcanism marks the beginning of the Tisdale Group. The base formation consists largely of ultramafic volcanic rocks and basaltic komatiites. This in turn is overlain by a thick sequence of tholeiitic basalt. The uppermost formation is largely volcaniclastic and has a calc-alkaline dacite composition. The total thickness of the Tisdale Group is about 13,120 feet (4,000 metres), (Pyke, 1974).

- 1975, Lorsong subdivided the Porcupine Group into Whitney, Beatty, Dome and Three Nations Formations.

- 1976, Pyke renamed the six formations from youngest as Donut Lake, Redstone, Boomerang, Goose Lake, Schumacher and Krist. He assigns all metasedimentary rocks to Formation VII, the sole unit of the Porcupine Group, which he considers to be a time equivalent, or the upper Deloro and the entire Tisdale Groups.

- 1978, Pyke renamed the Tisdale and Deloro Groups the Upper and Lower subgroups and raised formations I through VI to group status. This terminology did not receive acceptance with subsequent workers (Brisbin, 1997)

- 1986 Frarey and Krough (1986); Mortensen (1987); Corfu et al., (1989) posted U-Pb zircon age dates for intrusives and selected volcanics in the Timmins area.

- 1988, Mason et al., suggested that the highly fractured centres that hydrothermal fluids and gold mineralization subsequently accessed where prepared at the time of porphyry emplacement. Fracturing and brittle faulting generated prior to porphyry intrusion during one or more magmatic tumescence. The eruption of Krist Formation pyroclastic rocks and Keewatin folding and faulting, may have initiated ground preparation and localized magmatic and hydrothermal activity.

- 1991, Jackson and Fyon defined a lithostratigraphic association of rock units in the Western Abitibi Subprovince within the boundaries of 55 tectonic assemblages. An assemblage is defined as stratified volcanic and/or sedimentary rock units built during a discrete interval of time in a common depositional or volcanic setting. They suggest a four stage evolutionary model for the southern Abitibi greenstone belt. 1) Formation of submarine oceanic assemblages in regional complex micro-plate interactions perhaps caught between two larger converging plates located north and south of the micro-plate region. 2) Termination of submarine volcanism by collision of a large continental mass to the south at ~2700 Ma. The collision may have been oblique, involving the 2800 to 3000 million year old Minnesota River Valley gneiss terrane. 3) Tectonic thickening during collision led to emergent sediment source area(s) for post ~2700 Ma turbidite deposits, including both local deposits and a massive sedimentary accretionary wedge.

As collision continued, previously formed volcanic and turbidite deposits, including the Pontiac Subprovince were deformed. Terminal subduction, possibly involving complex plate interactions at 2685 to 2675 Ma, generated alkalic volcanic rocks and alluvial–fluvial sediments in proximity to crustal–scale shear zones (Jackson and Fyon, 1991a and 1991b)

- 1992, Melnik-Proud interprets the gold bearing quartz-carbonate-albite veins to not only be spatially, but temporally and genetically associated with albite dykes in the Hollinger –McIntyre complex

- 1997, Brisbin defines the Krist as a formation within the Hoyle Group. He proposes and assigns a new lithostratigraphic unit termed the Hersey Lake Formation. This unit is composed of intercalated ultramafic and mafic flows that comprise the base of the Tisdale Group in the core of the North Tisdale Anticline. Correlative flows are exposed in the south, on the Delnite, Aunor, and Buffalo Ankerite mine properties. The upper contact of the Hersey Lake Formation is defined as the upper contact of the highest ultramafic flow in the Tisdale Group (Brisbin, 1997)).

- 1999. Pressacco, R., OFR5985, is published Ontario Geological Survey special Project: Timmins Ore Deposits Descriptions.

- 2000, Ayer et al., (2000) with the aid of additional re-mapping and geochronological data proposed a reinterpretation of the Tectonic Assemblages, reducing the 55 assemblages to 7 volcanic assemblages and 2 metasedimentary assemblages. Presently the assemblages are interpreted as autochthonous not allochthonous. Geochemistry of the volcanic units indicates an interaction between plume and subduction zone melts. The Porcupine assemblage is interpreted to be the result of submarine turbidite fans which are coeval with batholith emplacement, regional folding and collision with the Opatica Subprovince. The Timiskaming assemblage is believed to be the result of subaerial alluvial fan-fluvial sedimentation associated with continental arc magmatism.

- The Discover Abitibi Initiative, Ayer et al.,(2003) from 2002 to the present has brought the talents of individuals, geologists, prospectors, the mining industry, the Ontario Geological Survey, and the Geological Survey of Canada to the Timmins - Kirkland Lake Gold Camps to assess the fundamental architecture and processes which were responsible for the gold and base metal endowment. The products of this initiative have not been fully realized as the refined, higher resolution airborne geophysical electromagnetic and magnetic surveys, seismic survey, gravity survey, lithogeochemistry and additional age dating is providing tools that will modify historical interpretations.

7.2 Regional Geology and Structure

This section is described by Powers (2009)

Supracrustal rocks in the Timmins region are assigned as members of nine (9) tectonic assemblages within the Western Abitibi Subprovince, of the Superior Province. The seven volcanic and two sedimentary assemblages are of Archean age. Intrusions were emplaced during

Archean and Proterozoic times. Tectonic Assemblages of the Abitibi Subprovince, east of the Kapuskasing Structural Zone, are illustrated in Figure 7.2.1, after Ayer J.A., Dubé, B., and Trowell, N.F. (2009). Table 7.2.1, is modified after Ayer (1999, 2000, 2003) and summarizes the characteristics of the assemblages, from youngest to oldest.

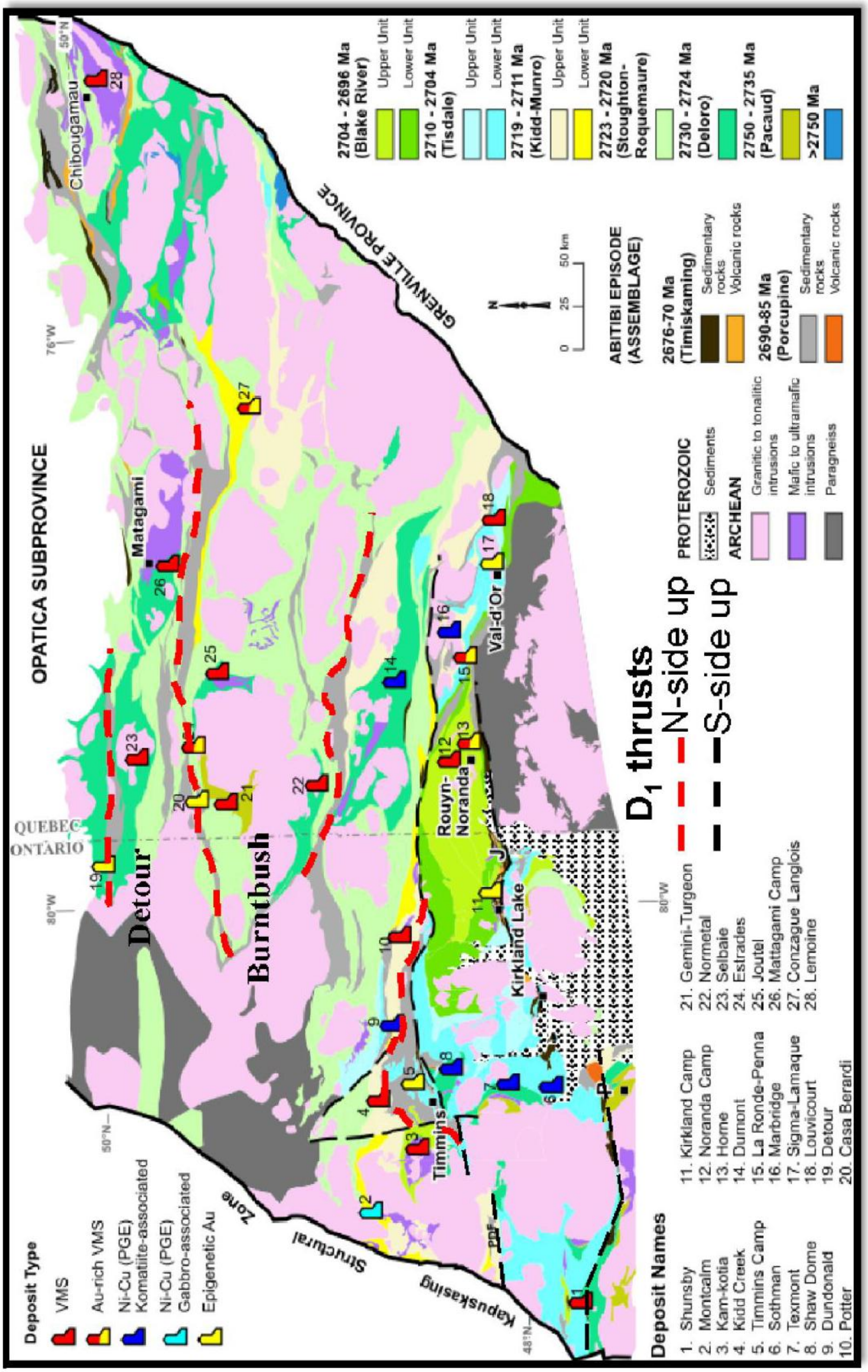


Figure 7.2.1 Tectonic Assemblages of the Abitibi Subprovince East of the Kapuskasing Structural Zone
(after; Ayer, J.A., Dube, B., & Trowell, N.F., NE Ontario Mines and Minerals Symposium, April 16, 2009)

Table 7.2.1. Tectonic Assemblages (Powers, 2009)

Timiskaming Assemblage
- Unconformably deposited from **2680 - 2670 Ma** **(10 Ma)**
- Conglomerate, sandstone, and alkalic volcanics
- Coeval Gold mineralization occurs near regional fault zones (PDF & CLLF)
  Two end member types
  1) Quartz veins (Timmins & Val d'Or)
  2) Sulphide rich Stockworks (Holloway Twp., Kirkland Lake, Matachewan)

Porcupine Assemblage
- Age of **2690 - 2680 Ma** **(10 Ma)**
- Turbidites with minor conglomerates & iron formation locally
- **Krist Formation** is coeval with **calc-alkalic felsic porphyries** 2691+/-3 to 2688+/-2 Ma
- **Alkali Intrusive Complex (Thunder Creek) 2687+/-3 Ma (Barrie, 1992)**

Blake River Assemblage
- Age of **2701 - 2697 Ma** **(4 Ma)**
- Tholeiitic & Calc-alkaline mafic to felsic volcanics
- VMS deposits associated with F3 felsic volcanics at Noranda
- Syngenetic gold & base metals (Horne, Thompson Bousquet)

Kinojevis Assemblage
- Age of **2702 - 2701 Ma** **(1 Ma)**
- Tholeiitic mafic flows
- Interflow Turbidites
- F3 Felsic Volcanics

Tisdale Assemblage
- Age of **2710 - 2703 Ma** **(7 Ma)**
- Tholeiitic to komatiite suite
- Calc-alkaline suite
- VMS Deposit: Kamiskotia – tholeiitic volcanics, gabbros & F3 felsics
  Val d'Or – calc-alkaline volcanics & F2 felsics
  Sheraton Township area – intermediate-felsic calc-alkaline volcanics
- Ni-Cu-PGE: Shaw Dome, Texmont, Bannockburn

Kidd-Munro Assemblage
- Age of **2719 - 2711 Ma** **(8 Ma)**
- Tholeiitic to komatiitic
- Calc-alkaline suite
- VMS deposit: F3 felsic volcanics & komatiites (Kidd Creek)
  Tholeiitic-Komatiitic volcanism (Potter)
- Ni-Cu-PGE (Alexo)

Stoughton-Roquemaure Assemblage
- Age of about **2723 - 2720 Ma** **(3 Ma)**
- Magnesium and iron rich tholeiitic basalts
- Localized komatiites and felsic volcanics
- PGE mineralization in mafic-ultramafic intrusions and komatiites
  (Mann & Boston Townships)

Deloro Assemblage
- Age of about **2730 - 2724 Ma** **(6 Ma)**
- Mafic to felsic calc-alkaline volcanics
- Commonly capped by regionally extensive chemical sediments
- Two different types of VMS deposits
  1) F2 felsic volcanics and synvolcanic intrusion (Normetal)
  2) Localized sulfide-rich facies in regional oxide facies iron formations (Shunsby)

Pacaud Assemblage
- Age of **2750 – 2735 Ma** **(15 Ma)**
- Magnesium and iron rich tholeiitic basalt
- Localized komatiites and felsic volcanics

There is a 55 Ma year time span between the volcanic eruption of the lower Pacaud assemblage (2735 Ma) to the sedimentation and volcanism of the upper Timiskaming assemblage (2680 Ma). Each of the assemblages demonstrates a melt evolution from komatiitic or tholeiitic basalt, to felsic or calc-alkaline volcanics. Within the immediate Timmins area only the Deloro (2730 - 2724 Ma (6 Ma)), Kidd-Munro (2719 - 2711 Ma (8 Ma)), Tisdale (2710 - 2703 Ma (7 Ma)), Porcupine (2690 - 2680 Ma (10 Ma)), and Timiskaming assemblages (2680 - 2670 Ma (10 Ma)) are present. Revised age dates for the Porcupine assemblage indicate that the felsic volcanism of the Krist Formation is coeval with emplacement of calc-alkalic felsic porphyries in Timmins (2692+/-3 to 2688+/-2 Ma).

Figure 7.2.2 The Regional Geology locates the property relative to the regional geology.

Rhys (2003) describes the regional penetrative structures of the Timmins area as being constrained between 2700 Ma and 2670 Ma, and are characterized by pre-metamorphic folds (D1) to a sequence of syn-metamorphic folding events (D2 and D3) which overprint D1 folds. The D1 event is multiphase, recorded by truncation of folds at the unconformable base of the Krist-Porcupine sequence. The Destor Porcupine Fault Zone ("DPFZ") accounts for two stages of deformation: 1) an episode of syn-Timiskaming (2680 to 2677 Ma) brittle faulting which truncates D1 folds and created the basins for Timiskaming sedimentation, and 2) a phase of syn-metamorphic D2-D3 shear zone development, which is represented by a band of highly strained rock, generally several hundred metres wide. The syn-metamorphic D2-D3 events are often characterized by west-northwest trending foliations, steeply dipping stretching and intersection lineations, and shear zones. The displacement along the DPFZ in the Timmins area is sinistral.

A compilation of geochronological age dates for the Southern Abitibi sub province from various sources: Easton, 2000; van Hees, 2000; Anglin, 1992; Melnik-Proud, 1992 and Lucas, St-Onge, 1991 is selectively summarized in Table 7.2.2., A Simplified Sequence Of Geological Events For The Timmins Camp (after Melnik-Proud, 1992).

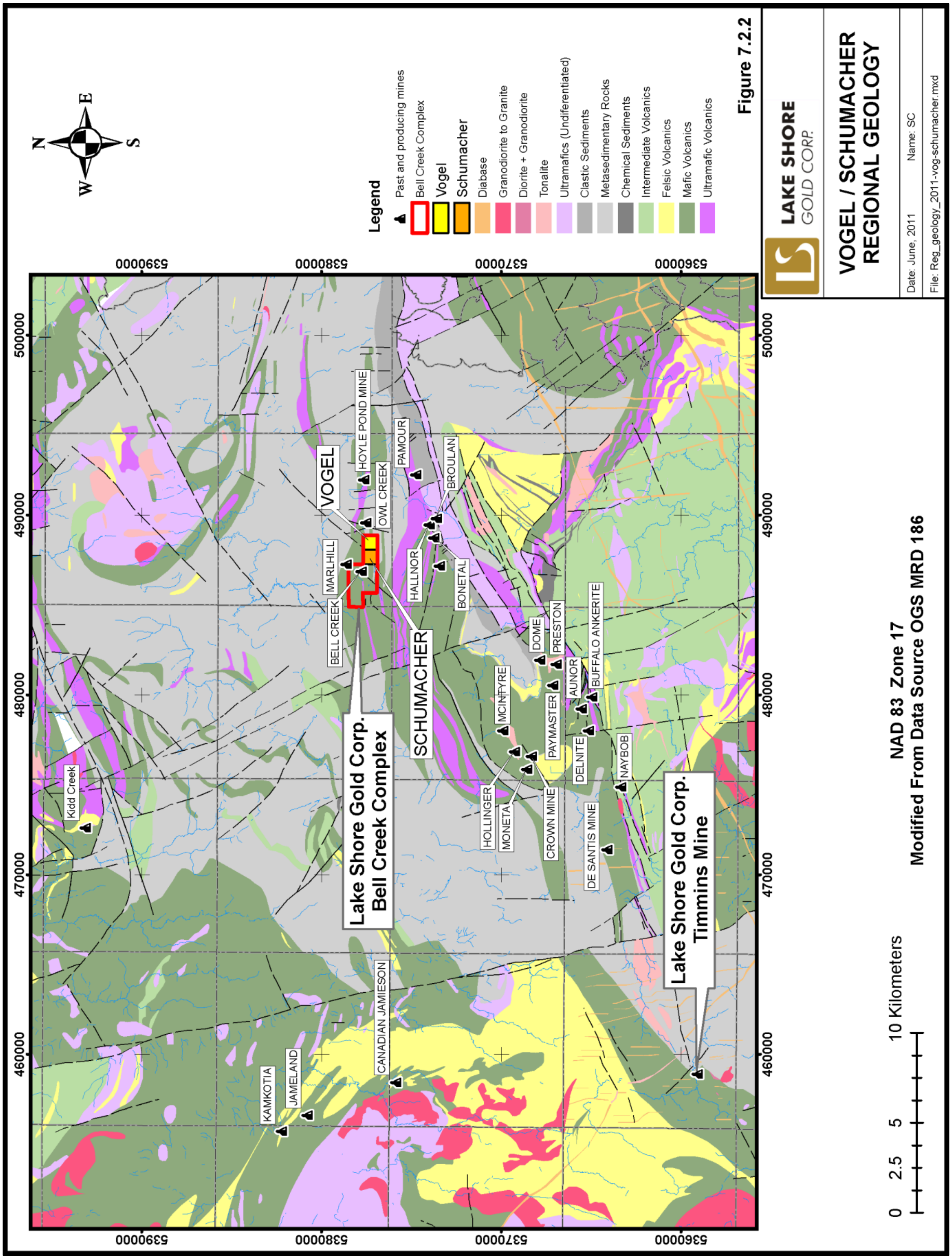

Legend
Past and producing mines
Bell Creek Complex
Vogel
Schumacher
Diabase
Granodiorite to Granite
Diorite + Granodiorite
Tonalite
Ultramafics (Undifferentiated)
Clastic Sediments
Metasedimentary Rocks
Chemical Sediments
Intermediate Volcanics
Felsic Volcanics
Mafic Volcanics
Ultramafic Volcanics
Figure 7.2.2
LAKE SHORE GOLD CORP.
VOGEL / SCHUMACHER REGIONAL GEOLOGY
Date: June, 2011
Name: SC
File: Reg_geology_2011-vog-schumacher.mxd
NAD 83 Zone 17
Modified From Data Source OGS MRD 186
10 Kilometers
0 2.5 5
VOGEL
SCHUMACHER
Lake Shore Gold Corp. Bell Creek Complex
Lake Shore Gold Corp. Timmins Mine
HOYLE POND MINE
OWL CREEK
PAMOUR
BROULAN
MARLHILL
BELL CREEK
HALLNOR
BONETAL
DOME
PRESTON
BUFFALO ANKERITE
AUNOR
MCINTYRE
PAYMASTER
DELNITE
NAYBOB
HOLLINGER
MONETA
CROWN MINE
DE SANTIS MINE
Kidd Creek
CANADIAN JAMIESON
JAMELAND
KAMKOTIA
460000
470000
480000
490000
500000
5360000
5370000
5380000
5390000

Table 7.2.2 A Simplified Sequence of Geological Events for the Timmins Camp (modified from Powers, 2009)

Faulting

Diabase (Matachewan) Dyke Intrusion
(~2461 Ma)

Penetrative Deformation/Greenschist Facies Metamorphism
(~2633 Ma)

Folding /Faulting?

Timiskaming Sedimentation

Unconformity / Folding

Copper and Gold Mineralization and Related Hydrothermal Alteration

Albitite Dyke Intrusion (Algoman) (And Related Hydrothermal Alteration?)
(~2673 Ma)

Porphyry Intrusion (Algoman), Emplacement of Heterolithic Breccias,
And Related Hydrothermal Alteration
(~2690 Ma)

Beatty Sedimentation

Krist (Keewatin) Calc-alkaline Volcanism and Sedimentation
(2691+/-3 to2688+/-2 Ma revised)

Unconformity
Tilting / Folding?

Tisdale Group (Keewatin) Komatiite-Tholeiitic-Calc-alkaline Volcanism
~2707 +/-3

Deloro Group (Keewatin) Komatiite-Tholeiitic-Calc-alkaline Volcanism
(~2725 Ma)

7.3 Property Geology

The Vogel and Schumacher properties are underlain by carbonate altered, greenschist facies Archean, metavolcanic and clastic metasedimentary rock units belonging to the Tisdale and Porcupine assemblages. Strike of the rock units varies across the Schumacher/Vogel properties but is generally west-east (Figure 7.3.1). The rock units generally dip steeply south, however, at depth the dip undulates to vertical and then expresses a steep dip to the north (Figure 7.3.1) (Powers, 2009).

From north to south the Vogel/Schumacher stratigraphy consists of a northern unit of mafic metavolcanics, clastic metasediments, ultramafic metavolcanics, a southern or "central" unit of mafic metavolcanics and a second package of clastic metasediments. The metavolcanic portions of the stratigraphy represent the lower portion of the Tisdale Group with the ultramafic metavolcanic rocks belonging to the Hershey Lake Formation (Brisbin) or Pyke's (1982) lowermost unit, Formation IV. Limited whole rock analyses completed on the lithologies in Hoyle Township indicates the lower ultramafic metavolcanic rock unit to be basaltic komatiite (Berger, 1998, Pressacco, 1999). The mafic metavolcanics are dominated by what are generally described as iron tholeiitic flow units and are interpreted as being characteristic of Pyke's (1982) middle unit, Formation V. The metasedimentary rocks have been classified as being part of the Hoyle formation which is an extensive part of the Porcupine assemblage (Bateman et al., 2005).

Overlying the Archean bedrock is the Quaternary geology unit of the Barlow-Ojibway Formation. This is a sequence of glaciolacustrine deep water varved silts and clays overlain by gravel and clay till of the Matheson till sheet. Recent organic deposits, of black mud, and peat overlie the Quaternary geology.

7.3.1 Mafic Metavolcanics

The two mafic metavolcanic sequences are very similar being comprised of varying amounts of massive, pillowed, variolitic and flow brecciated units that are locally altered, quartz/carbonate veined and mineralized. This alteration can consist of carbon ("grey zones"), ankerite, sericite and albite alteration with the most significant altered and gold bearing intervals being hosted by the "central" sequence of volcanics. These volcanics are generally interpreted to be iron tholeiitic but have also been logged as magnesium tholeiitic.

7.3.2 Clastic Metasediments

The two clastic metasedimentary units are composed of lithic wackes, greywacke/argillite turbidites and graphitic argillites. The graphitic argillites are generally found at major lithologic contacts, specifically the contact between the southern sediments and the "central" mafic volcanics, the contact between the ultramafic volcanics and the northern sediments and locally at the contact between the northern metasediments and northern metavolcanics.

7.3.3 Ultramafic Metavolcanics

The narrow unit of ultramafic volcanics has generally been logged as massive basaltic komatiites with local variolitic sections that are have been variably ankerite, sericite altered.

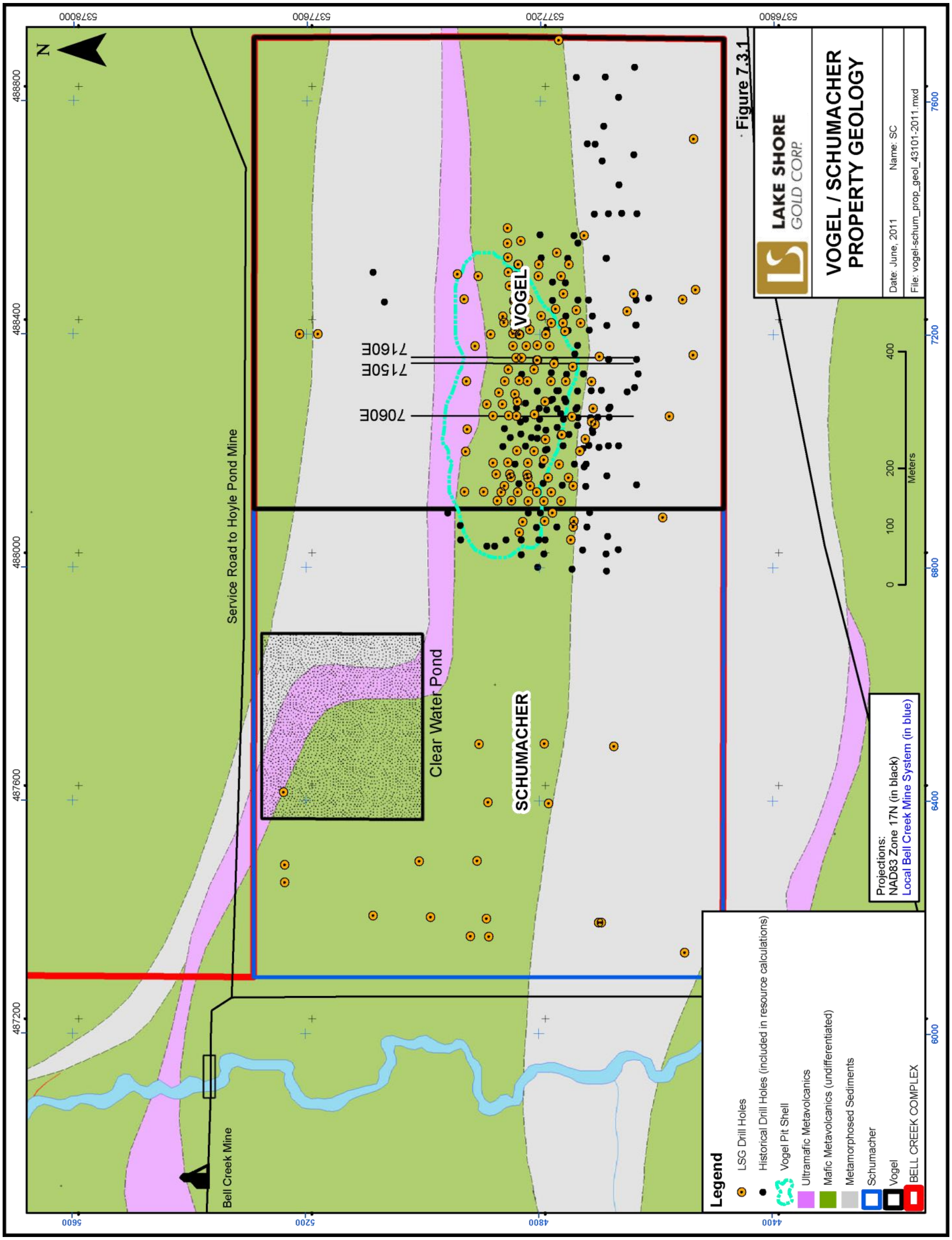


Figure 7.3.1
LAKE SHORE GOLD CORP.
VOGEL / SCHUMACHER PROPERTY GEOLOGY
Date: June, 2011
Name: SC
File: vogel-schum_prop_geol_43101-2011.mxd
N
Service Road to Hoyle Pond Mine
Clear Water Pond
VOGEL
SCHUMACHER
Bell Creek Mine
7060E
7150E
7160E
0 100 200 400
Meters
Projections:
NAD83 Zone 17N (in black)
Local Bell Creek Mine System (in blue)
Legend
LSG Drill Holes
Historical Drill Holes (included in resource calculations)
Vogel Pit Shell
Ultramafic Metavolcanics
Mafic Metavolcanics (undifferentiated)
Metamorphosed Sediments
Schumacher
Vogel
BELL CREEK COMPLEX

7.4 Structural Geology

Powers (2009) describes the structural geology as:

The Vogel/Schumacher properties are situated north of the North Tisdale Anticline, within an Archean metavolcanic and metasedimentary rock synclinal fold/fault sequence, positioned between two D2 reverse faults. Bateman (2005) interprets the thrusting as the formation of the North Tisdale Anticline D2 and F2 events. Strike is parallel to the surface traces of the thrust plane and anticlinal axis. Stratigraphic tops point to the south and near surface the rock units dip steeply south. At depth, the dip undulates to vertical and changes to steep north dipping. Bateman illustrates an F4 northeast-southwest synclinal axis at Hoyle Pond Mine. The overprint and significance of this fold event is not known at the Vogel/Schumacher properties.

8.0 DEPOSIT TYPES

8.1 General Deposit Types

The Porcupine Camp is best known for hosting several styles of Archean mesothermal gold deposits but it is also home to the world class, volcanogenic massive sulphide deposit, Xstrata's Kidd Creek mine. Gold production to the end of 2009, from 49 current and past producers is reported to be 66,659,103 ounces of gold. Table 8.1.1 highlights the twenty-one locations that exceeded production of 100,000 ounces of gold.

Brisbin (1997) summarizes the local Timmins area gold mineralization and stratigraphic association as follows:

> Approximately 4.5 million ounces of gold have been produced from veins spatially associated with small quartz feldspar porphyry stocks and dykes which intrude Hersey Lake Formation flows on the Delnite, Aunor, Buffalo Ankerite, and Paymaster properties. Veins hosted in mafic flows intercalated with ultramafic flows adjacent the Timiskaming unconformity have accounted for a significant portion of 6.1 million ounces of gold produced from Broulan - Hallnor – Pamour mines area. In Hoyle Township gold – bearing veins hosed within mafic flows of the Hersey Lake Formation were mined at Bell Creek, Marlhill, and Owl Creek mines and are being mined at Hoyle Pond Mine. Massive white quartz veins are hosted in a carbonatized peridotitic komatiite unit near the Beaumont Shaft in northeastern Tisdale Township but no gold production from that property is recorded.
>
> Central Formation flows and interflow carbonaceous argillites are very important hosts for gold mineralization. The Central Ore Zone on the Hollinger property, all major gold orebodies in the McIntyre Mine and a number of the vein systems in the Coniaurum Mine all occur within the Central Formation. A black, carbonaceous argillite is the uppermost unit in the Northern member. It is the host for 3, 5, and 25 veins in the McIntyre, 91 veins in the Hollinger Mine and the single vein mined at Moneta Mine (Mason et al 1986).

Member at the McIntyre Mine forms the hangingwall to the important veins hosted by the carbonaceous argillite that caps the Northern Member. The 95C was prominent marker unit at the Moneta, Hollinger, and McIntyre Mines. It hosts 84 Vein in the Hollinger Mine and 7 Vein in the McIntyre Mine which together yielded more than 3 million ounces of gold (Jones, 1985).

The 99 flow of the Vipond Formation is the stratigraphically uppermost unit to be affected by intense alteration in the Central Ore Zone. It is intensely ankeritized, weakly to moderately sericitized and pyritized and hosts gold bearing veins along its strike length on the south limb of the Central Tisdale anticline. Mineralized exposures of the 99 flow occur in open pits of the Hollinger property, on the McIntyre property where it crops out immediately adjacent to Pear Lake porphyry south of Pearl lake and on the Coniaurum property where it hosts number 2, 5, and 10 veins. South Shaft was sunk on sub horizontal white quartz on the Davidson Tisdale property in northeast Tisdale Township but there is no alteration present in this area, nor did any significant production take place from this shaft.

The V8 unit of the Vipond Formation is a complex and variable entity which as a whole forms a consistent stratigraphic unit, but within which there is less consistency due to facies variations. Its economic importance is underscored by the fact that 14 of the 20 quartz ankerite veins which up to 1979 accounted for 20% of gold produced at the Dome Mine (Fryer et al, 1979) were hosted by the Vipond Formation, and that the most important hosts were the Key and Spherulitic subunits of the V8 (Crick, 1991). Very little gold production has been derived from veins hosted with the V8 in the Hollinger-McIntyre- Coniaurum area. A portion of 92 Vein and 20 Vein were hosted in the V8 on the south side of the Hollinger property.

The V9 unit is a black carbonaceous argillite which overlies the V8 unit in the McIntyre (Griffis, 1960), Hollinger (Hall, 1985), Vipond (Dougherty, 1934) and Dome (Holmes, 1968) Mines. Despite its presence over a wide area there are sections where it is absent (Hall, 1985). On the McIntyre property it is up to 6 metres thick but averages 1.5 metres thick. The V9 is an important ore host at the Vipond Mine (Dougherty, 1934). It hosts 20/24 Vein at the McIntyre and Coniaurum Mines, much of the 92 Vein and 44 Vein at the Hollinger Mine, and quartz ankerite veins at the Dome Mine.

The most important orebodies at the Vipond mine occur in the V10A, known there as the 10 Flow (Dougherty, 1934). On the Coniaurum property, 40 Vein occurs in the V10A and adjacent V10B subunits. The V10A hosts portions of the 92, 93, and 44 veins on the Hollinger property. Some of the “Dacite Ore” at the Dome occurs in a V10A. The carbonaceous argillite interval that overlies the V10A is a locus of quartz veining where it is present at the Vipond Mine (Dougherty, 1934) and hosts much of 93 Vein at the Hollinger Mine. The V10B hosts part of 93 and 44 veins at the Hollinger Mine, a portion of 40 Vein on the Coniaurum property and “Dacite Ore” in the Dome Mine. The V10C hosts “Dacite Ore” at the Dome Mine.

The only orebodies hosted by Gold Centre Formation flows are veins systems in the “Northern Flows” at the Dome Mine similar to those in “Dacite Ore” in the underlying Vipond Formation.

The only significant gold mineralization known to be hosted in the Whitney Group occurs in the east end of the Owl Creek Pit in Hoyle Township. Gold bearing veins hosted within Whitney Group have been intersected in diamond drill holes north of Pamour 1 Mine (Duff, per. Com, 1992) and south of Owl Creek pit. Veins in Tisdale Group mafic flows occur immediately south of the contact of these flow with Whitney Formation sedimentary rocks at the Hoyle Pond Mine in Hoyle Township.

No gold mineralization is known to occur within the Krist Formation.

No significant gold mineralization is known to occur within the Beatty Formation. Some of the auriferous veins hosted within the basal conglomerate of the Timiskaming Group at the North Dome Shaft do transgress the contact with the Beatty Formation, but they pinch out within a few metres of the contact (Brisbin, 1997). If Holmes (1944, 1964) and Gray (1994) are correct in their observations within the Sedimentary Trough the Beatty Formation is host to significant gold mineralization.

Approximately 15 % of gold mined to date in the Porcupine Camp has come from bulk tonnage sheeted vein and stockwork orebodies, and to a lesser extent from narrow veins in Timiskaming sedimentary rocks. These orebodies have been mined at the Dome Mine in Tisdale Township, and at the Pamour, Falconbridge Hoyle, Broulan, Hallnor, and Bonetal Mines in Whitney Township. The gold deposits of Whitney Township were not examined during this study and are described by Aitken (1990) (Brisbin, 1997).

Table 8.1.1 Porcupine Gold Camp Operations with >100,000 Ounces of Gold Production

Mine	Kilograms Gold Produced	Ounces Gold Produced
Hollinger	601,158	19,327,691
Dome	494,889	15,911,039
McIntyre Pamour Schumacher	334,423	10,751,941
Pamour #1 (pits 3, 4, 7, Hoyle)	142,890	4,594,018
Aunor Pamour (#3)	77,828	2,502,214
Hoyle Pond	83,674	2,690,184
Hallnor (Pamour #2)	51,193	1,645,892
Preston	47,879	1,539,355
Paymaster	37,082	1,192,206
Coniarum/Carium	34,512	1,109,574
Buffalo Ankerite	29,775	957,292
Delnite (open pit)	28,740	924,006
Pamour (other sources)	21,046	676,645
Broulan Reef Mine	15,519	498,932
Broulan Porcupine	7,582	243,757
Owl Creek	7,368	236,880
Hollinger Pamour Timmins	5,663	182,058
NightHawk	5,468	175,803
Moneta	4,642	149,250
Crown	4,303	138,330
Bell Creek	3,507	112,739
21 Site Total	**2,039,138**	**65,559,806**
The Porcupine Camp Total (49 sites)	**2,073,330**	**66,659,103**

9.0 MINERALIZATION

The following sections are excerpts from Powers (2009):

9.1 General Description of the Mineralization

Gold deposits along the New Mines Trend include: Hoyle Pond Mine, Owl Creek Mine, Marlhill Mine, Bell Creek Mine and the Vogel/Schumacher deposit. The Hoyle Pond Mine is currently in production while the Bell Creek, Owl Creek and Marlhill Mines are past producers. The term New Mines Trend was coined by the persons within Pentland Firth Ventures Ltd., and Kinross Gold Corporation to promote and describe the area of the Hoyle antiform and synform which hosts the previously mentioned gold deposits. These deposits are described in the Ministry Northern Development, Mines and Forestry, mineral deposits inventory with the following identification numbers: Hoyle Pond Mine (MDI42A11SE0002), Owl Creek (MDI42A11SE00006), Marlhill (MDI42A11SE0007), Bell Creek Mine (MDI42A11SE00119), Schumacher III (MDI42A11SE00124), and Vogel (42A11SE00125). The geology and mineralization of these deposits are described in detail by Knutson (1983, 1986), Brisbin (1986, 1998) Kingston (1987) Kent (1990), Coad et al., (1986, 1998), Wilson and Rucklidge, (1986), Labine (1990, 1998), Berger (1998), Pressacco (1999) and Butler (2008). These reports are referenced in the References section of this report.

Berger (1998) describes the gold mineralization as occurring along selvages of quartz veins and wall rocks in stylolitic fractures in quartz veins, in fine grained pyrite, and in association with amorphous carbon. High grade gold mineralization occurs within quartz veins contained in alteration zones. The alteration zones are characterized by carbonate, graphitic and amorphous carbon, fine grained pyrite, sericite and/or paragonite and are enriched in gold, arsenic, bismuth and tungsten. This style of alteration is referred to by mine geologists as grey zones and is an exploration target in Hoyle Township.

9.2 The Vogel/Schumacher Property

The geology underlying the Vogel property is the eastern extension of the metavolcanic and metasedimentary rock stratigraphy described for the Bell Creek Mine. Work completed on the Vogel property before the Lake Shore acquisition included 159 diamond drill holes totalling 54,175 metres drilled by Canadian Nickel Company Ltd., Canamax Resources Inc. Black Hawk Mining Inc., Kinross-Black Hawk Mining Inc. Joint Venture, and Glencairn Gold Corporation.

A. Eastwood, P.Geo. (2004), in an internal Glencairn Gold Corporation memo documents the historic non NI 43-101 compliant resource calculations and describes the mineralization as follows: “Gold mineralization occurs as structurally controlled quartz stringer zones with altered mafic metavolcanic and komatiitic rocks, known as grey zones. There are six vein zones within these wider grey zones that are interpreted by previous workers based on diamond drill holes correlation of alteration and gold mineralization, which from south to north are called V5, V3, V2, V1S, V1N and V4 vein zones. The V1 vein zone is divided into a hanging wall (south) and a foot wall (north) within the wider grey zone where generally well developed zones of auriferous gold veining are developed. However, there are also other gold bearing zones of quartz veining at other positions within the grey zone making correlation between holes difficult.”

The Schumacher property is underlain by the same stratigraphy as the Bell Creek Mine. Portions of the metavolcanic rock units have been explored for the eastward extensions of the Bell Creek North A and North B Horizon mineralized zones. Prior to Lake Shore's acquisition of the property, a total of 58 diamond drill holes where bored into the property between 1984 and 1997 by Canamax Resources Inc., Falconbridge Gold and Pentland Firth Ventures Ltd. for a total of 17,992 metres. Three non NI 43-101 compliant mineralization estimates were completed. In 1996, Unto Jarvi, P. Eng., estimated 156,000 tonnes at 5.99 grams per tonne gold within five sub-vertical zones. Dean Crick's (P.Geo.) estimate totalled 673,000 tonnes @ 2.89 g/tonne Au (Crick, 1997). The third resource estimate is referenced from the MNDM-MDI file for the Schumacher property, and Kinross' 1997 annual report illustrating a resource of 152,000 tonnes of 6.19 grams per tonne gold. These zones are situated at the eastern portion of the property and appear to be the westward continuation of the mineralization underlying the Vogel property (Powers, 2009).

The current interpretation of vein and grey zone alteration systems has divided the mineralized systems into eight gold bearing zones (Underground Model) covering 900m on strike and 500m on dip. The zones remain open down dip with isolated intersections of the zone down to the -700m Level.

The mineralized zones are often defined by a series of narrow quartz veins within a broader zone of albite/ankerite/sericite altered (grey zone) mafic volcanics (Photo 9.2.1). Gold values are associated with veins (Photo 9.2.2) or the pyrite mineralized portions of the altered volcanics. Visible gold is common often occurring internal to the quartz veins. Zone geometry often forms a sigmoidal shaped lens, having near vertical dips adjacent major structural zones at major lithological contacts and gradual flattening of dips as the mineralization moves away from the contact. Vein and alteration pattern often form a complex geometry due to intersections of flat veins with more steeply dipping veins and structures as shown in Figure 9.2.1. Wider alteration and mineralized sections of the deposit are often associated with these intersection areas adjacent the mafic/ultramafic volcanic contact.

Photo 9.2.1 Grey zone alteration about quartz veins, drill hole V-10-60 from 47.0 m to 63.8 m

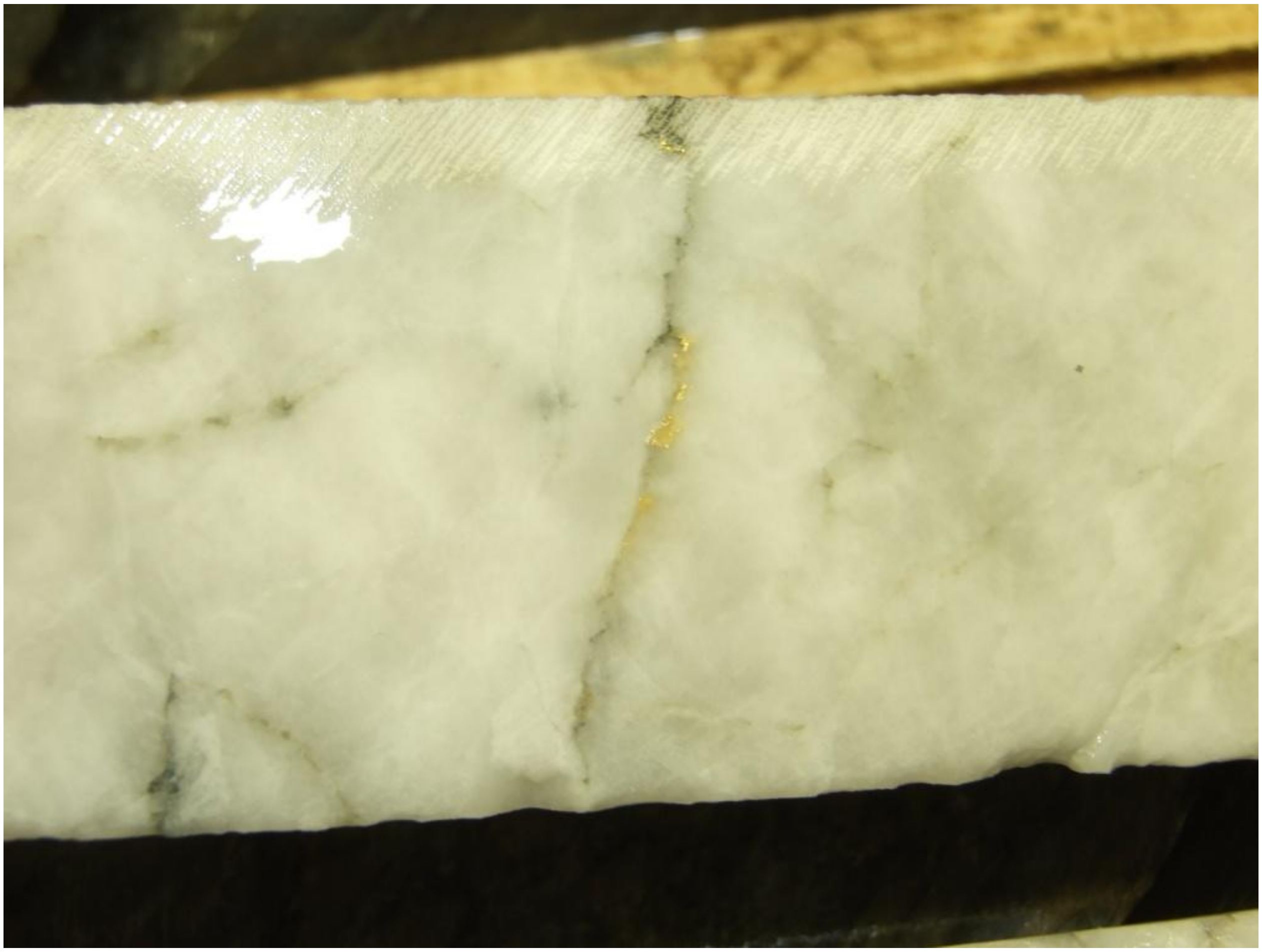
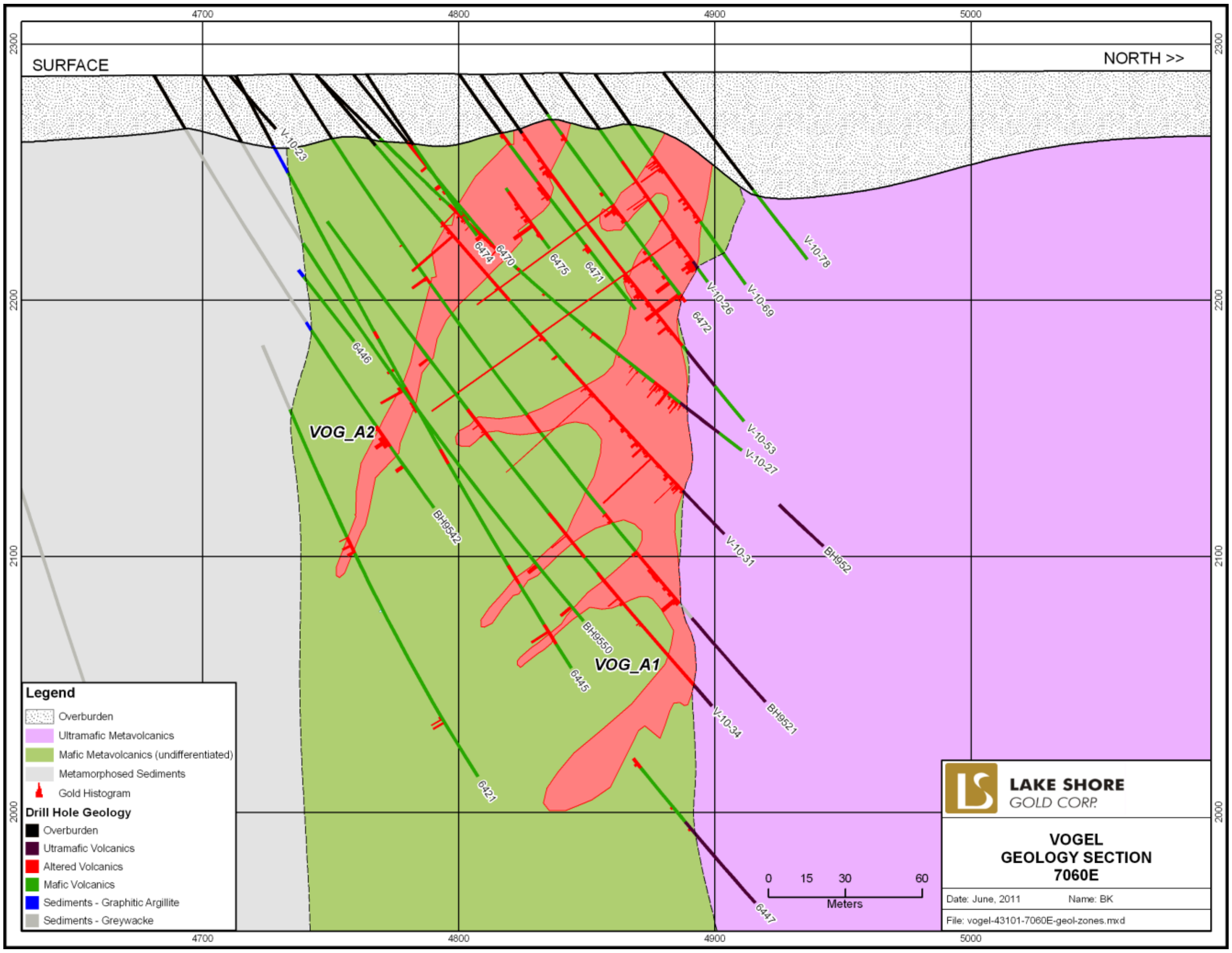


Photo 9.2.2 Visible gold in quartz vein, drill hole V-10-09 at 88.3 m

Figure 9.2.1 Geology Section 7060E



10.0 EXPLORATION

10.1 A General Description of Exploration Programs 2005 to December 31st, 2010

Lake Shore has been actively exploring in the Vogel/Schumacher area since 2005 (Powers, 2009). A control grid using an extension of the Bell Creek coordinate system was established and the property boundaries located and tied into the grid. A magnetometer geophysical survey was completed but was not instrumental in defining stratigraphy. Lake Shore's diamond drill programs tested the stratigraphy, the existence of flat veins, geotechnical information, and overburden depth. After the acquisition of the Schumacher property drilling continued to test the flat veins located in the eastern portion of the property, as well as test the volcanic stratigraphy. Recent drilling has been focused on infill/confirmation drilling of the Vogel/Schumacher mineralization.

Drilling completed before the data cut-off date (December 31, 2010) is summarized in Table 10.1.1.

Table 10.1.1 Lake Shore Gold Corp. Drilling Completed at the Vogel/Schumacher Property 2005 to December 31, 2010

Location	Number of Diamond Drill Holes	Meters	Samples Taken
Vogel	130	28,494	13,421
Schumacher	44	19,813	4,088
Total	**174**	**48,307**	**17,509**

11.0 DIAMOND DRILLING

11.1 General Description of the Diamond Drill Programs

Currently there are no drills operating on the Vogel/Schumacher property. The last exploration program was completed during 2010 with the drilling being completed by either Norex Drilling or Orbit Garant Drilling. This program consisted of 16,010 metres of NQ sized (47.6 mm diameter) coring in 92 holes. The largest portion of this drilling was completed on Vogel (89 holes, V-10-03 to V-10-91 incl.) with a limited number of holes testing the Schumacher portion of the deposit (3 holes, S-10-08 to S-10-10 incl.). A summary of this drilling can be found in Appendix 25.1 – Lake Shore Gold Corp.– Vogel/Schumacher Drill Hole Summary Table. Figure 7.3.1 Vogel/Schumacher Property Geology shows the collar location of all the Lake Shore holes drilled on the Vogel and Schumacher properties while only the historical holes used in the resource estimation are displayed.

11.1.1 Historic Drilling

The earliest drilling in the project area was completed on the Vogel property by Inco in 1968. Since that time a total of 5 companies have drilled Vogel, completing 159 holes (54,178m.) and 3 companies have tested Schumacher with 57 holes (17,973m). The majority of this drilling has been completed to test the Vogel/Schumacher deposit. A summary of the historical, pre-Lake Shore drilling is shown below in Table 11.1.1 and a detailed list of hole information for this pre-Lake Shore drilling can be found in Appendix 25.2 – Vogel/Schumacher Historical Drilling Summary Table.

Table 11.1.1 Summary of Historical Drilling on the Vogel/Schumacher Properties

Property	Company	Year	Hole Numbers	Holes	Metres
Vogel	Inco	1968	32946, 32948	2	366
	Canamax	1988 – 1989	870101 – 870116	16	5,085
	Black Hawk	1995 – 1996	BH951 – BH9550, BH9651 – BH9653	53	15,738
	Kinross	1996 – 1997	6410 – 6481	65	22,978
	Glencairn	2004	GV04-01 – GV04-23	23	10,012
			Vogel Total	**159**	**54,178**
Schumacher	Canamax	1985	C226, C227, C242	3	1,004
	Falconbridge	1987 – 1990	H1216 – H1220, H1235 – 1239, H1243 – H1249, H1247A, H1273 – H1276, H1280 – H1281	24	8,135
	Pentland-Firth	1995 – 1997	PSC1 – PSC30	30	8,834
			Schumacher Total	**57**	**17,973**
			Vogel/Schumacher Total	**216**	**72,151**

11.1.1.1 Vogel Property

The earliest drilling by Inco (2 holes) were drilled from north to south testing a graphite conductor.

The nine hole, 1988 program by Canamax consisted of widely spaced exploration holes which delineated a 200 metre wide sequence of east-west striking and steeply south dipping volcanics situated between two sequences of sediments. The volcanics are comprised of a northerly unit of komatiites overlain by mafic volcanics. Gold values ranging from 1.5 to 10.2 gpt over widths of 1.0 to 3.0 metres were returned from this mafic/ultramafic contact in 5 of 9 holes. In 1989 Canamax conducted further drilling with another seven holes following up on the mineralization discovered with the 1988 program.

It was not until 1995/1996 that a further 53 holes (15,738 metres) were drilled by Black Hawk on the Vogel property. These holes generally followed up on the Canamax drilling and lead to the identification of six main mineralized horizons the V-1 to V5 and the Ultramafic Contact zones. These zones were interpreted to strike east-west and dip steeply to the south. The results of this drilling allowed Black Hawk to prepare the first resource (non NI 43-101 compliant) for the Vogel property of 747,572 tonnes at a grade of 9.71 gpt Au for a total of 233,295 ounces using a 3 gpt cut-off. (Lapierre, 1996)

After optioning the property from Black Hawk, Kinross completed 65 holes for a total of 22,978 metres of drilling in 1996/1997. Again the focus of this drilling was the numerous gold zones discovered by Canamax and further delineated by Black Hawk. Kinross' exploration activities lead to a second non NI 43-101 compliant resources estimate and ultimately a feasibility study. The Kinross was calculated for the V-1N, V-1S and the V-2 to V-5 zones and totalled 1,640,408 tonnes at a grade of 8.81 gpt Au for and estimated 464,692 ounces of gold using a cut off grade of 3.0 gpt Au. (MacRea, 1997)

In 2004 Glencairn completed the final phase of drilling on Vogel prior to the property being optioned by Lake Shore. This drilling consisted of 23 holes for a total of 10,012 metres of drilling and was intended to confirm the gold grade and continuity of a previously reported non NI 43-101 compliant indicated mineral resource to a vertical depth of 300 metres.

11.1.1.2 Schumacher Property

The first exploration to be conducted on the Schumacher property was by Canamax in 1985. The drill component of this work consisted of three holes totalling 1,004 metres, drilled south to north and testing what were found to be unaltered mafic and ultramafic flows and sediments.

Falconbridge next optioned the property and completed a total of 24 holes (8,135 m.) during the period 1987 – 1990. This drilling tested several targets on the property with holes H1219 and H1220 being drilled near the eastern boundary of the property. These holes encountered altered mafic volcanics with quartz stringers which returned gold values ranging from 1.06 gpt to 36.69 gpt over widths of 0.3 to 1.5 metres. These altered, mineralized and quartz veined mafic volcanics were the stratigraphy that Canamax was to drill in 1988 and what was to become the Vogel/Schumacher deposit.

During the period 1995/1997 Pentland-Firth completed 8.834 metres of BQ (3.65 cm diameter) drilling in 30 holes. The bulk of this drilling was completed near the eastern boundary of the Schumacher property testing for the westerly strike extension of the mineralization that had been discovered on the Vogel property. During the course of this drilling two resource estimates were prepared, the first 156,117 tonnes at a grade of 5.99 gpt Au for a total of 30,042 contained ounces (Jarvi, 1996) while the second estimate totalled 673,425 tonnes at a grade of 2.89 gpt for 62,466 contained ounces (Crick, 1997). Both of these resource estimates are non NI 43-101 compliant and are presented for historical perspective only.

11.1.2 Lake Shore Gold Corp Drilling

11.1.2.1 Technical Components of Drilling

The Bell Creek mine grid has been extended to cover the Vogel/Schumacher properties and consequently all of the drilling by Lake Shore has been completed using this grid. For the 2008 and later drilling the proposed collar locations of all holes are spotted or “surveyed in” prior to drilling and once completed the actual collar location is surveyed or tied in to the extended Bell Creek Mine grid.. This survey work is completed by Larry Labelle Surveys of Timmins, Ontario.

Once past the collar, the down hole location of all holes is determined by acquiring a dip and azimuth reading at 50 metre intervals by using a Reflex EZ Shot instrument. Upon completion of a drill hole for the 2010 program the general practice was to “collar” cement each hole before pulling the casing and placing a picket labelled with the hole number at the collar location. A record of the collar status of each hole has been maintained.

11.1.2.2 Vogel Property

All but one of the holes from the 2005, 2006 and 2007 drill programs were completed to further evaluate the nature of mineralization in the “shallow” vein zones. Testing for deep targets or extensions to known mineralization was undertaken by one hole in 2006, H-06-12 and by the holes, V-08-01, V-08-01C, V-08-02 and V-09-01A (Figure 11.1) drilled in 2008 and 2009.

Drilling from 2010 was completed to further define and understand the mineralization at Vogel such that a resource update could be completed. A series of holes V-10-76, -77, -82, -85, -86, -87, -88, -89, -90, -91 were drilled to test the depth to bedrock of overburden thickness.

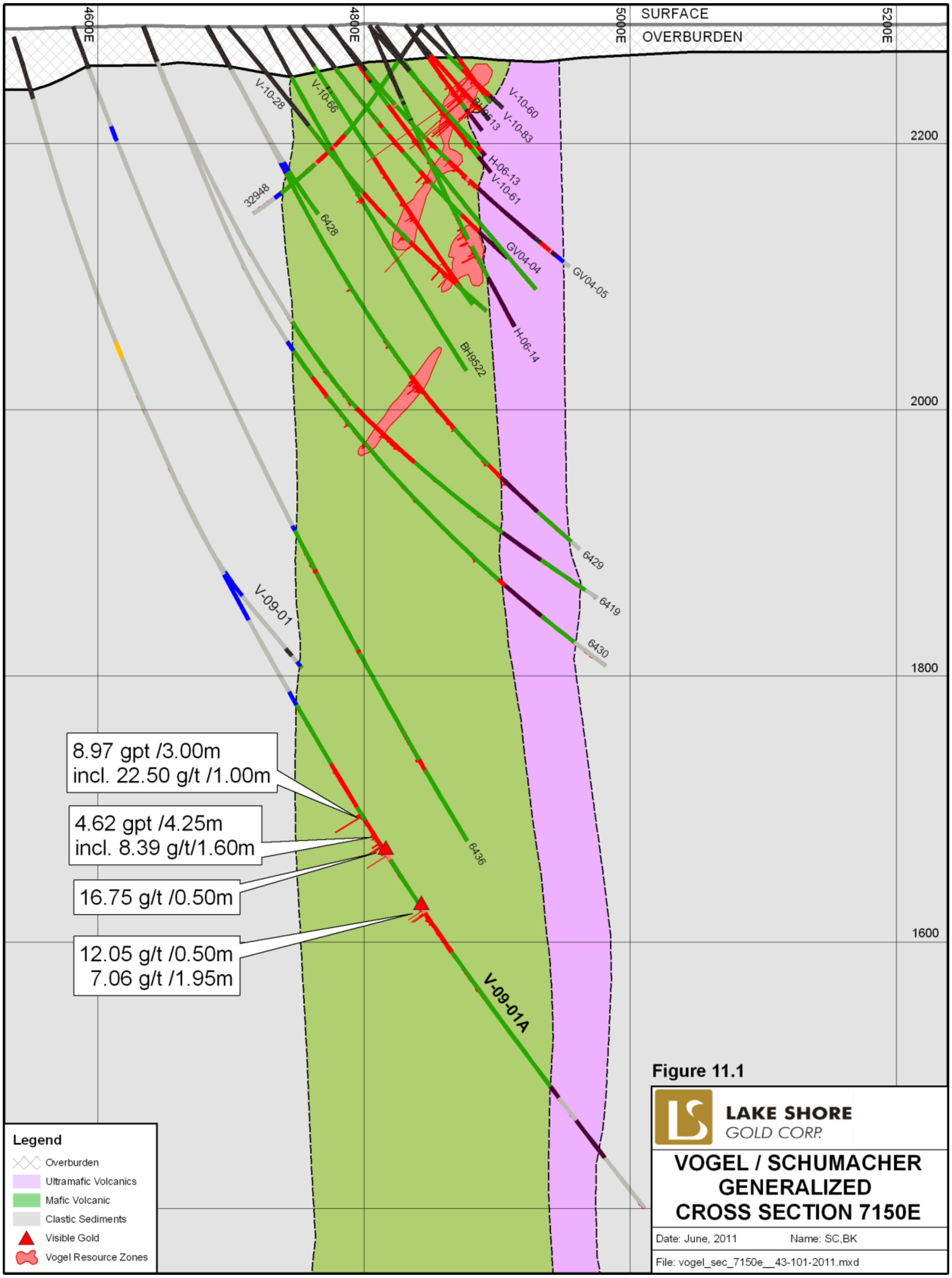
11.1.2.3 Schumacher Property

Drilling on the Schumacher property can be divided into three categories, holes drilled to test the downdip and strike extension of the Bell Creek deposit, holes drilled to evaluate the Vogel/Schumacher deposit and those drilled to test the remainder of the Schumacher property.

Three of the holes drilled in 2006, H-06-08 to H-06-10 and three holes drilled in 2010, S-10-08 to S-10-10 were completed to test the deposit while H-06-01, H-06-02 and H-06-11 were drilled as deep holes to gather information on stratigraphy. The holes prefixed with GT (GT-06-01) were drilled as part of a geotechnical program in an attempt to locate areas of shallow overburden and competent rock that may be used a potential site for a portal to start underground development.

Holes drilled to test the down dip and strike extension of the Bell Creek deposit include the S-09-06, S-09-07 and S-10-11 to S-10-14 series of holes.

Figure 11.1 Vogel/Schumacher Generalized Cross Section 7150E



11.2 Lake Shore Core Handling and Logging Protocols

The core handling and logging procedures for the LSG 2009/2010 drilling program are as follows; Drillers ready core boxes for transport to core logging facility by securely fastening closed core boxes at the diamond drill site. The drill foreman delivers the secured core to the core logging facility located at 1515 Government Road, Timmins, Ontario. At the core logging facility LSG technicians open the core boxes, check the accuracy of the meter blocks then place labels containing drill hole number, box number and meters on the core boxes. The core is short logged by an LSG geologist and placed on core racks within the facility by the technicians. The geologist then completes a detailed log of the core that includes descriptions of the geology, structure, alteration, mineralization, and veining, sampling and photographing of mineralized core. This information is entered directly into Lake Shore's Gemcom database using the Gemslogger logging software. Also, RQD, specific gravity, sample numbers and QA/QC are recorded in the log. The final edited core log is of a professional standard that allows for geological interpretation and characterization of resource block calculations. The above mentioned procedures are carried out under the supervision of senior geologist Keith Green, P.Geo or Stephen Conquer, P.Geo.

12.0 SAMPLING METHOD AND APPROACH

12.1 General

12.1.1 Historic Drilling

The description of the sampling method and approach as used by three companies, Black Hawk, Glencairn and Pentland-Firth, that drilled the Vogel/Schumacher properties were included in the respective summary of work reports. These descriptions are presented below.

Tylee (1995) of Pentland-Firth describes the sampling methodology used for their drilling on the Schumacher property as follows:

> "…Any prospective sulfide mineralization, siliceous veining, or favourable alteration such as silicification or sericitization was sampled. Zones containing visible gold (VG), or otherwise good looking veining, were whole core sampled. This ensured that all of the gold cored was thereby made available for analysis. Intervals showing significant amounts of visible gold were submitted for a pulp metallic assay; a "total gold" method used to determine grain size volume distribution as well as net gold content present. All assay results were reported in metric units (g/t Au: grammes per tonne gold)…"

Lapierre (1996) on behalf of Black Hawk describes the sampling approach used in the 1995/1996 Vogel drill program as follows:

> "…The exploratory drill holes were evenly split by locating the areas of interest then cutting half of the core with a hammer and core splitter. The other half was "dyno tagged" and stored on core racks for future re-examination. The split sample was put in unused heavy duty plastic bags and then collectively put in either plastic containers or burlap bags. The samples were then shipped to or personally transported to Swastika Laboratories. After each sample, the core splitter was cleaned of unwanted rock contaminants.
> Sample Length: In most cases the sample interval was between 0.5 to 1.5 meters. In areas

where quartz veining within the deformation zones occurred, the sample interval reflected the geological parameters up to 1.5 meters at which point a subsequent sample was taken…."

Eastwood (2004) in a memorandum reviews the sampling methods employed during the Glencairn 2004 drill program as:

" Sampling was focused on the mineralized (sulphides, quartz veins) alteration zones known as 'Greyzones' which contain nearly all the known gold zones. Non mineralized altered (i.e. carbonatized) grey basalt at the position of the targeted zone was also sampled, particularly if quartz veining was present. In addition, other mineralized drill core sections, visibly altered sections and quartz veins were sampled where warranted. Bracketing or 'shoulder' samples adjacent to the main mineralized alteration zones were also sampled for gold.

Intervals to be sampled were marked at each end by the geologist with arrows using a red lumber crayon and a sample tag was placed under the core at the end of each sample. The sample number was also written on the core box under the end core piece. A split line was drawn along the axis of the core to guide the core splitter and one side of the core was consistently placed in the sample bag. Sampled intervals ranged from 0.5 to about 1.0 metres in length.

Drill core was cut along the split line marked on the core using a diamond-bladed saw. A brick was used (sawn) between each sample to clean the blade and to prevent any contamination between samples. Consistently one half of the core sample was returned to the core box while the other half was placed in a plastic sample bag with its corresponding sample tag and sealed with a plastic cable tie. The exterior of the plastic bag was also labelled with the sample number and then 10 to 15 samples were bagged in large woven fibre sacks and labelled for shipment. The sample limits and number were marked with a red lumber crayon on the remaining sample in the core box and a duplicate sample tag placed under the core at the end of the sample.

The fibre sacks were sealed with plastic cable ties and secured with a uniquely numbered plastic security tag. Samples were kept under lock and key in the splitting or core logging trailer during the week and were personally transported by truck weekly to Swastika Laboratories Ltd. ("Swastika Labs"), a commercial laboratory in Swastika, Ontario. The core trays with the remaining half-core sample were cross-piled on 5'x5' core pallets near the trailers and moved to the landing at the north end of the property for permanent storage at the end of the program.

Assay results were received electronically from Swastika Labs and brought into spreadsheets for each hole. The quality control samples were separated from the drill core samples and stored on separate sheets. Samples were checked, saved as text files and then merged with the Glencairn database. "

A summary of the significant assay results form the historical or pre-Lake Shore drilling is presented in Appendix 25.3

12.1.2 Lake Shore Gold Corp. Sampling Methodology

The criteria used by Lake Shore in sampling of core on the Vogel/Schumacher property is similar those described above. The drill core is logged by either Lake Shore personnel or contract geologists under the supervision of either Stephen Conquer, P.Geo. or Keith Green, P.Geo. the QP's for the drilling component of this program. While logging the core the geologist notes the rock type, alteration, veining and amount of mineralization, generally sulphides and/or visible gold and selects samples based upon these factors. The geologist ensures that no sample will cross a lithological, alteration or mineralization boundary.

Sample lengths will vary from 0.3 to 1.5 metres based upon the variability of the aforementioned criteria. Using this approach the geologist will be able to understand the relationship between gold content (assay results) and nature of the rocks being explored. While logging the geologist ensures that the core fits together as accurately as possible to ensure consistency and continuity of rock type, alteration and mineralization when sampling is actually completed.

Samples are identified by marking both the start and finish ends with a "china" marker and placing a sample tag under the core at the end of the sample. Three part tags are used in the sampling process. Each part of these tags come pre labelled with a sample number that is sequential for each tag. The geologist adds the date, hole number and from/to intervals on the first part of each tag, which will stay in the book and the from/to intervals on the second part of the tag, which will be stapled into the core box at the end of the sample. The third portion of the tag will be placed in the sample bag with the core.

After logging and sample selection the core is moved to the "cutting" room where a trained and supervised core technician will cut the core along a pre-marked line. The core is cut using a core cutting saw with a blade that has the cutting surface impregnated with diamonds. Each sample is cut independently of the following sample and placed with the sample tag in a pre-numbered (to match the tag) sample bag. This bag is then stapled shut and placed in a "rice" bag with approximately nine other samples and when full the bag is sealed with a numbered security tag. Attached to one of the bags is two copies of the "Chain of Custody" document on which the security tag and sample numbers included in the order have been entered. The geologist responsible for logging and selecting the samples will sign the chain of custody document after ensuring that the recorded information on the form is correct.

When ready the samples are delivered to the assay lab prep facility in Timmins by one of the core technicians. The lab employee that receives the samples signs one copy of the chain of custody document which is returned to the Lake Shore exploration and placed in the chain of custody binder.

After logging and sampling is complete the core is stored in racks or on cross piles at either the Lake Shore exploration office at 1515 Government Road S., Timmins, ON or at the secure core storage farm at the Bell Creek Mine site.

A summary of the previously and recently released significant assay results from the Lake Shore drill programs can be found in Appendix 25.4 and 25.5 respectively.

13.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

13.1 Sample Preparation and Analytical Procedures

13.1.1 Historic Practices

Sample preparation and assay techniques used by Black Hawk and Glencairn are reviewed below:

Lapierre (1996) describes the assaying process used by Swastika Laboratories Ltd. as "

> "…All core samples were analyzed by fire assay using one assay ton portions. Any assay value 5 grams/tonne or greater was re-evaluated or areas that displayed "high grade" potential were evaluated using the pulp and metallic assay method. Swastika's general description of both methods is outlined below:
>
> **Gold by Fire Assay**: A gold analysis begins with a fusion using a flux mixture of litharge (pBO2), sodium carbonate, borax, silica, fluorspar with further oxidants (nitre) or reductants (flour) added as required. The relative concentrations of the fluxing materials are adjusted to suit the type of sample being analyzed. An aliquot of silver is added as a final collection agent. The resultant lead button containing the precious metals is reduced to pbO2 and absorbed into a cupel in a cupellation furnace. The precious metals collected in the silver aliquot are now ready for a gravimetric assay finish. Assays are completed by dissolving the silver of the doré bead in nitric acid and leaving the gold to be weighed on a micro balance. Quality control consists of using in house or Canmet standards, blanks and by repeating at least 10% of the samples. All data is evaluated by the fire assay supervisor and additional checks may be run on anomalous values.
>
> **Pulp** and **Metallic Assay Method:** The pulp and metallic method is used to overcome sampling difficulties caused by coarse particles of gold that do not pulverize very well by conventional assay methods. Swastika's adaption of this method for gold assay is as follows: Pulverize the entire sample if possible, screen through a 100 mesh sieve. Other mesh sizes can be used depending on sample size and allowable deviation. The -100 mesh fraction is weighed, homogenized and assayed in duplicate using 1 assay ton portions. The +100 mesh fraction (approximately 20 grams) is weighed and entirely fused. The correction resulting from gold found in the metallic portion is incorporated in the final calculated result. The weight and grade of both fractions are also reported…."

Eastwood (2004) describes the process used by Glencairn during the 2004 drill program as:

> "…A total of 4,901 drill core samples and 815 control samples were prepared and analyzed at Swastika Labs. All samples were fire assayed using a one-assay ton aliquot (a 29.2 gram sub-sample) with an atomic absorption ("AA") finish for gold concentrations below 1.5 g/tonne and a gravimetric finish for concentrations above 1.5 g/tonne gold. Detection limits for the AA and gravimetric finishes are 0.01 g/tonne gold and 0.03 g/tonne gold respectively. All samples containing visible gold and samples with initial fire assays 5.0 g!tonne gold were also analyzed for gold by pulp and metallic sieve analysis method...
>
> …Quality control was monitored using control samples including blanks, duplicates and several different gold reference standard samples. One of each of these control samples

was randomly inserted in every batch of twenty core samples. In the case of field duplicates, the sample was quartered and both quarters submitted to the laboratory as duplicates with different sample numbers. Field blanks were obtained from split cores samples taken from the greywacke/argillite units in the upper portion of drill holes GVO4-01, 02, 12 and 20. The three gold ore reference standards used were OREAS l8Pa (3.36 g/tonne) from Ore Research & Exploration PTY Ltd., and CDN-GS-5 (20.77 g/tonne) and CDN-GS-6 (9.99 g/tonne), both from CDN Resource Laboratories Ltd.

Swastika Labs regularly conducts repeat or check assays on original pulp and occasionally on second pulp prepared from stored reject. Certified gold reference standards and blanks are also used for quality control samples…"

13.1.2 Lake Shore Gold Corp. Practices

13.1.2.1 Assay Lab – ALS Minerals

Prior to the spring of 2009 Lake Shore sent samples from the Vogel/Schumacher project to Swastika Laboratories of Swastika, ON for analysis. Since that time all drill core samples have been sent to ALS Minerals for sample preparation and assay analysis. The treatment of Lake Shore's drill core samples by ALS Minerals is outlined in the following descriptions, with references to the ALS Minerals procedure codes. Lake Shore's personnel are not involved in the sample preparation or analysis of the samples once they have been delivered to the assay laboratory.

13.1.2.2 Prep Lab Procedures

A hard copy of the sample shipment form, detailing the sample numbers, is sent to the preparation/assaying facility with each shipment. Each drill program is given a separate client number, for example with the Vogel project being LSGEXPV. The preparation/assaying facilities are instructed to keep together and process the samples within each shipment in sequential order as best as possible through the sample preparation stage.

Blank reference materials were submitted to the preparation facility as a bag containing a numbered sample tag and a section of drill core known to be barren of gold being inserted randomly at a frequency of 1 every 20 samples. The blank material was inserted as a section of un-mineralized diabase drill core, having the same diameter as the regular samples and an approximate length of 50 cm. This barren sample is blindly passed through the entire sample preparation procedure in sequential order with the other samples, to check for sample cross-contamination. Whenever possible, the blank was placed after a high-grade sample within the same batch. The blank was not placed after the standard, because the standard was pre-pulverized and therefore not a source for possible contamination in the crushing circuit.

Standard reference materials are submitted to the preparation facility as a bag with a numbered sample tag and a small packet containing 60 grammes of a certified gold standard. The standard was randomly inserted at a frequency of 1 every 20 samples, and whenever possible, was placed within mineralized sections of core. Several different standards are used on each project and alternated in a random fashion to ensure anonymity. All standard reference materials used in the current program are documented in Table 13.1.2.2. The certified standards are prepared by Ore Research & Exploration Pty Ltd of Bayswater North, Victoria, Australia and purchased through

Analytical Solutions of Toronto, Ontario, Canada. These standards come in sealed foil packets and are labelled with the standard type and contain 60 grammes of sample.

Table 13.1.2.2 OREAS Performance Gates for Gold Standards, and the Max and Min values used by Lake Shore

Standard Reference	Mean Value (gpt)	1s	2s	3s	1s Min (gpt)	1s Max (gpt)	2s Min (gpt)	2s Max (gpt)	3s Min (gpt)	3s Max (gpt)
O-2Pd	0.885				0.855	0.914	0.826	0.943	0.797	0.973
O-6Pc	1.520				1.460	1.590	1.390	1.660	1.320	1.720
O-10c	6.660						6.270	6.920	6.110	7.080
O-10Pb	7.150	0.190	0.380	0.580	6.960	7.340	6.770	7.530	6.570	7.730
O-15Pa	1.020	0.030	0.060	0.080	0.990	1.050	0.960	1.080	0.940	1.100
O-15Pb	1.060				1.030	1.090	1.000	1.120	0.970	1.140
O-18c	3.520						3.310	3.730	3.200	3.840
O-18Pb	3.630	0.070	0.140	0.210	3.560	3.700	3.490	3.770	3.420	3.840
O-53Pb	0.623				0.602	0.644	0.581	0.666	0.559	0.687
O-54Pa	2.900				2.790	3.010	2.680	3.120	2.570	3.230
O-60b	2.570				2.460	2.680	2.350	2.780	2.250	2.890
O-61d	4.760	0.140					4.470	5.040	4.330	5.190
O-66a	1.237	0.054					1.129	1.345	1.075	1.399
O-68a	3.890	0.150					3.600	4.180	3.450	4.330

Prior to May, 2010, the analytical Lab had been instructed to take a reject duplicate sample every 25 samples processed. The procedure for processing this duplicate is to take the sample immediately preceding the 25th sample and crush it to -6 mesh, then run it through a riffle splitter to create two samples of approximately equal proportions. One of the halves is then assigned the sample number and the other duplicate sample is placed in a separate plastic bag and labelled with the same sample number and the suffix dup. The two samples are then treated as two entirely separate samples through the rest of the sample preparation and assaying process. Because the position of this reject duplicate is not blind to the lab, in some cases it may be necessary to randomly select a number of the reject duplicates to be re-numbered and analyzed. This part of the check assay program would ensure the integrity of the results. At the present time this is not being done.

This method of selecting reject duplicates was modified starting May, 2010 and a new system was adopted. At the present time, 1 reject duplicate is selected every 20 samples by the geologist logging the drill core. He gives the duplicate sample a sample number and places it in an empty bag; sequentially behind the sample from which it will be cut. When received by the lab, the preceding sample to the duplicate is crushed to -6 mesh, then run through a riffle splitter to create two samples of approximately equal proportions. One half goes back into the original sample bag and the other half is placed into the empty bag, now as a separate sample with a different sample number. From this point on, the sample is now blind to the analytical process.

13.1.2.3 Sample Preparation/Analysis

At ALS Minerals' prep lab, standard LSG drill core sample preparation procedures consist of crushing the samples to >70% passing through a 2 mm screen, pulverizing a 250g sub-sample to >85% passing through 75 microns (minus 200 mesh) screen (ALS code PREP-31), then splitting a 30g sub-sample for analysis. Initial analyses are completed using a standard fire assay with an AA finish to an accuracy of 0.005 ppm (ALS analytical code Au – AA23). If the initial analysis returns an assay greater than 10.0 gpt then a re-assay of sample material from the remaining pulp is completed using the fire assay method with a gravimetric finish (Au – Grav21). Also, all samples that are considered part of a mineralized zone with visible gold (VG) may be selectively assayed using the “pulp and metallic” method where the complete reject is pulverized. This method is utilized for some projects only where coarse gold (nugget effect) is thought to have a high influence on grade (AuAA25, Au-AA25D, AU-SCR21). Close care should be taken to ensure that samples are not flipped in their trays. For select projects, complete sections of mineralization without visible gold are sometimes run using the pulp metallic method.

13.1.2.4 Data Management

Copies of assay certificates are either downloaded from the external lab LIMS system or sent via mail to the LSG database manager, as well as to the project geologist who is the Qualified Person (QP) in charge of the program. Digital data in the form of “csv” files of all assays are received via e-mail by the database manager and the project QP. The database manager passes the assays through a software program to ensure that the results from the QA/QC samples fall within the approved limits of the standard before this data is imported into the database.

13.1.2.5 Accuracy Analysis - Standards and Blanks

Beginning in March 2009, samples results were entered into an Excel spreadsheet to determine if the assay value for the standards falls outside the control limits, if this occurred then these samples would be highlighted for check analysis. Since April 2010 this process has been handled using an ACCESS application developed by Gemcom Software International Inc. called Lab Logger (v.2.0). Sample assay results, internal QC information, shipping data, standards, and duplicate samples were each stored in separate QC database tables, and data can be merged into relevant plot files as needed.

The QC samples in each group were subjected to specific pass/failure criteria, which determined whether a re-assay of the batch was required. A sample group failure was identified whenever the analytical result for any certified standard in the group of 20 was greater than three standard deviations (control limit) from the certified mean value for the standard and for any blank material, a value > 0.100ppm. All failed groups of samples were investigated to attempt to determine the cause of the erroneous result (analytical or clerical). Charts showing the performance of the QC standards for the samples collected during the 2010 drill program are contained in Appendix 25.6. Potential clerical errors are sometimes reconciled by checking against original drill log records or original laboratory data sheets. After the batch pass/failure criteria was applied, a geological override may be applied by the project QP on batches for which re-assay would be of no benefit (i.e. completely barren of gold assay values and mineralization indicators). Sample groups given a geological override were not re-assayed.

Sample groups in which the QC samples were outside the established control limits that did not receive a geological override are not imported into the database. Instead, these samples were requested to be re-run at the analytical lab. In the case that the standard failed, all samples back to either a) the last blank or standard that passed or b) the first sample for the project in the sequence of samples being analyzed, were re-run from the pulp. In the case that the blank failed, all samples back to either a) the last blank or standard that passed or b) the first sample for the project in the sequence of samples being analyzed, were re-run from the reject material as this indicates contamination in the sample preparation stage. If a request is made for re-analysis due to a standard failure then a new standard is sent to the lab to be analysed with the samples in question.

13.1.2.6 Precision Analysis – Duplicates

Prior to April 2010 internal laboratory pulp duplicate data and reject duplicate data were analysed using EXCEL and after April 2010 using the Lab Logger software and were used for comparative statistical analysis. Comparison was made using descriptive statistics and scatter plots. These plots were used primarily to identify project specific problems in assay reproducibility (precision), and individual erratic results, indicating potential sampling problems or clerical errors in the sample order within the batch. When problems were identified in the data precision, the labs were notified and asked to investigate and report back their findings. Erratic sampling results are then noted in monthly reports so that the geologist would be aware of the uncertainty in the sample value and be able to check for potential clerical errors within the samples then as per standard procedures, the first assay result from the pair was accepted into the database.

13.1.2.7 Reporting/Plotting

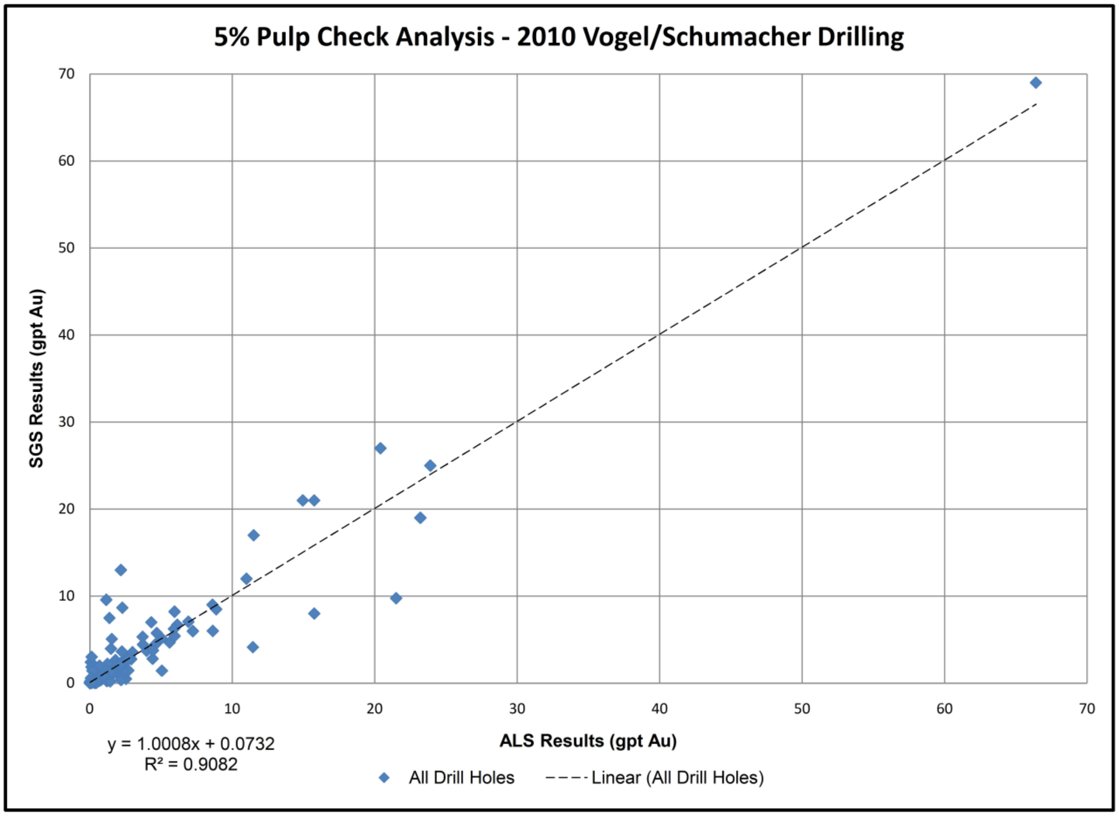
Brief monthly reports are completed during the year to include the number of samples sent to each lab for each project, the number of QC samples that failed, together with the reason why. As well, on a monthly basis, graphs are generated of each individual blind standard and blank, as well as the non-blind reject pairs and pulp duplicate pairs to check for sample bias at the assay lab. All major projects will are summarized individually, either at year end or at the end of the program, as soon as reasonably possible.

13.1.2.8 Check Assay Program

For major programs, or programs leading to resource/reserve calculations, a check assay program will be implemented either during or following completion of drilling. In this program, approximately 5% of the pulps form previously analyzed samples will be selected for re-assay at a neutral assay facility. In order to select these check assays, groups of samples that passed QC but excluding QC samples are picked randomly from samples from a specific program.

To date the 5% pulp check analysis program has been carried out on samples from 26 of the first 67 holes completed during the 2010 Vogel/Schumacher drilling. The pulps were selected randomly by hole ensuring that a wide range of original assay values, from trace to high grade were represented. The samples selected for check analysis were sent to SGS Mineral Services of Toronto for analysis. The pulps were initially analyzed using the fire assay with an AA finish (SGS analysis code FAA313) method and for results greater than 5 gpt a re-assay was conducted by fire assay using a gravimetric finish. Results from both labs were tabulated, compared and presented in a scatter diagram shown in Figure 13.1.2.8. The data shows a strong positive relationship having a correlation coefficient (R^2) value of 0.9082 or nearly 91%.

Figure 13.1.2.8 - 5% Pulp Check Analysis – 2010 Vogel/Schumacher Drilling



13.1.2.9 Procedures for Submitting Samples

Pulps will be selected by LSG project personnel and an electronic list of selected sample numbers will be prepared for the samplers. The samples will be submitted to the analytical facility in groups of 20, with the blind QC consisting of one standard and one previously analysed blank pulp. The laboratory will report their internal pulp duplicate results as part of the assay report. The old and new sample numbers and the positions of the standard and blank pulps will be recorded on the Check Assay excel table as the samples are packed and shipped to the lab for analysis. Once the analysis have been completed the assay lab will report their findings in the standard LSG assay file format, including all of their internal QC data as part of the electronic assay file and will also provide a complete documentation of the means and standard deviation values for all internal reference materials used for the analyses.

When the check assay results are returned, the QC inserted in the check assay batches will be analyzed and comparative statistical analysis will be completed on all possible pairs of data, including, internal non-blind pulp duplicates and original assay vs check assay

Reporting will be completed, after all assays are received, and have passed quality control checks. A master report for each project will be issued documenting the procedures implemented and the QC results for all of the analyses. The check assay results will be reported under separate cover for each individual project.

13.2 Security

Lake Shore ensures the security of the drill core and samples obtained during a drill program in the following manner. As drilling progresses the core is placed in wooden boxes and once filled, covered by a lid which is held closed by several wraps of “fibre” tape placed on either end of the box. The core boxes are then delivered to the Lake Shore exploration office by either a drill foreman or one of the Lake Shore field technicians. When delivered to the exploration office the boxes are opened measured, labelled and placed in racks waiting to be logged. As required, logged and sampled core will be store in racks or stable cross piles at either the Lake Shore exploration office or the core farm at the Bell Creek mine site, both secure location.

Once logging is finished and sampling is complete the samples are shipped to the prep lab in “security” sealed rice bags. Before a shipment of samples is left at the prep lab one of the lab technicians must sign the chain of custody document acknowledging receipt of samples. After the analysis have been completed and the QC checks have been completed the pulps and rejects from the drill program are returned to Lake Shore Gold from the assay lab and stored on shelves in Sea Can metal containers at either the exploration office or the mine site.

Frequent, unscheduled trips are made to visit the drills and the drillers by the field technicians, project geologist and the Health and Safety Department to review drilling and safety procedures, ensure good working practices and drill core security are being employed.

14.0 DATA VERIFICATION AND SITE VISIT

14.1 Data Verification

Verification of the drill data for the Vogel/Schumacher portion of the Lake Shore database was undertaken as part of this resource estimate. A total of 5% of holes from the database were selected by making two separate lists of the drilling, one for the historical holes and one for the Lake Shore drilling. The “5%” lists were created by selecting the first hole and then every 20th hole until the bottom of the list was reached. The holes selected are shown in Figure 14.1.

Table 14.1.1: Drill Holes Selected for Verification of the Vogel/Schumacher Database

Historical Drilling[1]			Lake Shore Drilling[2]	
Property	**Company**	**Hole Number**	**Property**	**Hole Number**
Schumacher	Canamax	C226	Schumacher	S-10-10
	Falconbridge	H1249		H-06-01
	Pentland-Firth	PSC14		
Vogel	Inco	32946	Vogel	V-05-01
	Canamax	870114		H-06-05
	Black Hawk	BH9525		V-09-01A
	Black Hawk	BH9543		V-10-22
	Kinross	6428		V-10-42
	Kinross	6448		V-10-62
	Kinross	6475		V-10-82[3]
	Glencairn	GV04-05		V-10-83

Notes:

1) 5% of 216 (159 Vogel, 57 Schumacher) historical drill holes = 11 for verification
2) 5% of 158 (144 Vogel, 14 Schumacher) Lake Shore drill holes = 9 for verification
3) V-10-82 originally selected but no samples taken, therefore V-10-83 was added to list

The original drill logs for all holes were used to verify that the hole number, collar coordinates; collar dip and azimuth, down hole survey data and the lithology codes had been correctly input into the database. Assay certificates were the primary source for checking the assays in the database. If the certificates could not be found for a particular hole then the drill log was used to verify the assays had been correctly entered into the database.

Minor inconsistencies in the data were encountered during the audit, which did not materially impact the outcome of the mineral resource estimate. During the verification process it was discovered that two of the Pentland holes, PSC10 & PSC-12 and some of the assay results from a Glencairn hole, GV04-02 had not been added to the database. Again the omission of this data did not materially impact this mineral resource estimate. That database manager has been notified and the omission discovered will be corrected in the database.

14.2 Site Visit

A site visit to confirm the field work discussed in this report was conducted by the Authors on April 15, 2011 (see Photo 14.2). A review of the core shack, drill core geology, core logging and assay sampling procedures, core, pulp and reject storage facilities was conducted on an ongoing basis during the 2009 and 2010 exploration by the senior geologists responsible for the drilling programs, Keith Green, P.Geo. and Stephen Conquer, P.Geo.

Photo 14.2 Robert Kusins and Ralph Koch beside collar location BH9503: April 15, 2011

15.0 ADJACENT PROPERTIES

15.1 General

The Vogel resource is situated on the New Mines Trend, 1.5 km south east of the Bell Creek Mine, 1.8 km southeast of the past producing Marlhill Mine, 1 km west of the centre of Goldcorp's past producing Owl Creek Pit, and 3.5 km west of Goldcorp's operating Hoyle Pond Mine. The term New Mines Trend was coined by Pentland Firth Ventures and Kinross to promote and describe the area of the Hoyle antiform and synform from which significant past production has occurred and which hosts unexploited Mineral Resources and Reserves.

Table 15.1.1 summarizes the past production from the New Mines Trend and Table 15.1.2 summarizes existing Mineral Resources and Reserves.

Table 15.1.1 New Mine Trend Production

Deposit	Years	Workings	Oz Produced
Marlhill	1981 to 1989	Underground	28,039[1]
	2002 to 2003	Open Pit	10,155[2]
Bell Creek	1987 to 1994	Underground	112,739
Owl Creek	1981 to 1989	Open Pit	268,587[3]
Hoyle Pond	1985 to Present	Underground	2,690,184[4]

Notes:

1. Based on production of 141,124 t at 6.18 g/t Au (not adjusted for metallurgical recovery).
2. Based on production of 67,785 t at 4.66 g/t Au (not adjusted for metallurgical recovery)
3. Pressacco (1999).
4. Production to 2009 year-end.

Table 15.1.2 Summary of Mineral Resources after Rocque et al. (2006)

Location	Tonnage (t)	Grade (g/t)	Metal Content	
	Measured		**oz**	**kg**
Hoyle Pond UG	116,757	9.064	34,025	1,058.292
Hoyle Pond CP OP	5,034	8.423	1,363	42.398
Owl Creek OP	924,079	2.796	83,069	2,583.725
Marlhill UG 1	0	0	0	0
Bell Creek 2	410,000	4.51	59,300	1,844.436
	Indicated			
Hoyle Pond UG	411,136	9.706	128,292	3,990.322
Hoyle Pond CP OP	11,691	2.285	859	26.710
Owl Creek OP	965,284	2.448	75,973	2,363.015
Marlhill UG 1	395,000	4.520	57,400	1,785.339
Bell Creek 2	1,380,000	4.320	191,800	5,965.647
	Inferred			
Hoyle Pond UG	848,500	9.498	259,093	8,058.679
Hoyle Pond CP OP	84,764	8.048	21,932	682.152
Owl Creek OP	96,123	2.082	6,434	200.128
Marlhill UG 1	0	0	0	2,667.133
Bell Creek 2	1,790,000	4.360	251,200	7,813.193

1Technical Report on the Marlhill Project (March 1, 2011)
2 Technical Report on the Initial Mineral Resource Estimate for the Bell Creek Mine (January 14, 2011)

This information is not necessarily indicative of the mineralization on the property that is the subject of the technical report.

15.2 Bell Creek Mine

The following three paragraphs are modified from Powers (2009):

The Bell Creek mine was in production from 1987 to 1994 with production coming from both the North A zone and the West Zone. The North A zone proved to be the most significant mineralized zone at Bell Creek. (Knutson 1983, Kent 1990).

The North Zone, consists of two sub-parallel, west-northwest striking mineralized horizons termed A (south, or upper) and B (north, or lower). These horizons are approximately 25 metres apart and dip at 70 degrees to the south. The near surface expression of the A-Horizon is situated approximately 200 metres north of the Bell Creek headframe and consists of a quartz marker vein averaging 0.5 metres width. This vein varies in width from 10 centimetres to two metres and parallels the regional schistosity but crosscuts lithology. Bright green hydromuscovite occurs as fractures and slip coatings in the vein. Visible gold occurs with the mica. Brown tourmaline (dravite) is widespread. A-Zone contains the best gold values, averaging six to ten grams over widths of two to ten metres. Surrounding the central quartz vein is grey to buff coloured altered zone which contains five to fifteen percent pyrite, and pyrrhotite, with accessory chalcopyrite, and arsenopyrite. Up to thirty percent of the gold in the North A vein system occurs within the alteration halo, in discrete sulphide zones in vein brecciated wall rock zones that extend up to 5 metres from the margin of the core vein. At the time of active production at Bell Creek the B-horizon was considered too low grade to mine and the presence of active carbon will hinder the gold recovery (Kent, 1990, MNDN-MDI, 2009, Labine, 2009).

Kent (1990) describes the Bell Creek West Zone mineralization as follows:

> The West Zone mineralization occurs on or near the contact of the ultramafic metavolcanic and mafic fragmental metavolcanic rock units. The preferred host is the mafic metavolcanic unit. Mineralization consists of two to ten percent pyrite, with accessory arsenopyrite, pyrrhotite, chalcopyrite and minor quartz veins and veinlets. Approximately ninety percent of the gold is associated with the disseminated sulphides that occur in association with altered quartz-carbonate-sericite-sulphide zones from 0.5 to 7 metres in width. Lenses of about 100 metres in length and 200 metres vertical extent strike west-east and plunge steeply to the east.

15.3 Marlhill Mine

The Marlhill Mine was in production from 1989 to 1991 producing 141,124 tonnes at a grade of 6.18 g/t Au from ramp accessed underground workings. Additionally, 67,785 tonnes at a grade of 4.66 g/t Au were produced between November 2002 and August 2003 from an open cut.

The Marlhill Mine is described by Kent (1990) as follows:

> The Marlhill vein system is located 600 m northeast of the North A Zone, to which it is similar. The Marlhill veins strike north to northwest and dip to the northeast. Some of these quartz veins have been folded and this complex vein deformation history may have contributed to the localization of gold within individual veins systems. Generally, mineralization consists of a 0.1 m to 3 m wide central quartz vein, which contains 2% to 5% fine grained pyrite, arsenopyrite and rarely visible gold. Gold occurs as plates on the

> surfaces of the sulphide minerals, but shows a preference for arsenopyrite. Significant amounts of brown tourmaline (dravite) occur in the veins. Where white mica and sulphides commonly occur on slips and fractures within the vein, gold tenor generally attains economic values. A sericite-sulphide halo extends up to 1 m from the vein. Only about 10% to 20% of the gold occurs associated with this wall rock sulphide. Coarse to medium grained cubic pyrite extends farther away from the vein margin, into the host mafic metavolcanic rocks.

15.4 Owl Creek (West) Pit

The geological host of the Owl Creek (West) Pit was described by Coad *et al*. (1986) as:

> "Gold occurs in epigenetic quartz veins and their pyritic wallrocks in two zones within a package of east striking, steeply north dipping, volcanic and sedimentary rocks. At the West Zone, 1729 603 t of ore with a grade of 4.83 g/t Au (268 587 troy oz.) were produced from an open pit centred on a wedge-shaped unit of Tisdale Group basalt that occurs between two overturned, south facing units of Porcupine Group greywacke and argillite. Basalt/greywacke contacts are locally marked by graphitic-carbonaceous argillite, strike-parallel faults and massive quartz veins. Deformed quartz+ or -ankerite veins occur along the graphitic sedimentary/volcanic contacts and in gently to moderately dipping fractures in basalts, and, to a lesser extent, in greywackes. Veins also occur sub-parallel to steeply dipping 070 degrees foliation. Altered host basalts are composed of iron carbonate, sericite, quartz, carbon, chlorite and disseminated pyrite. Gold occurs as inclusions in pyrite, and less commonly as free gold in fractures and along graphite-quartz grain boundaries in quartz veins."

15.5 Hoyle Pond Mine

The Hoyle Pond and 1060 zones occur within a south-facing sequence of komatiitic and tholeiitic volcanic rocks both underlain and overlain by greywackes. The metavolcanic-metasediment sequence has been regionally drag-folded into a Z-shaped, E-plunging anticlinal form in the mine. A stacked series of gold-bearing veins follow the E-plunging antiform with both steeply dipping limb vein systems and flat vein systems across the axis of the fold. Mineralization usually comprises coarse free gold in white to grey quartz veins within a carbonate-sericite alteration envelope along with pyrite, arsenopyrite, and tourmaline. The 1060 zone is described as a steeply dipping vein set on the south limb of the antiform. Mineralization is generally similar to the vein systems adjacent, but fuchsite and sphalerite have also been noted in the 1060 zone. Gold-bearing veins range in width from 0.2 to 7 m with a minimum mining width set at 1.5 m, Butler (2008).

16.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

16.1 Summary

Lake Shore has prepared a Mineral Resource estimate for the Vogel/Schumacher property based on historical diamond drilling and Lake Shore drilling completed between August 2005 and December 31st 2010. The Schumacher resources modelled in this report are those east of section 6350E adjacent the Vogel property boundary. The resources have been split into broader low grade zones, which are amenable to open pit mining and narrow higher grade zones, which are more suited for an underground mining scenario. The broader low grade zones were modelled with four zones, while the narrow, higher grade zones have been modelled into eight zones. The narrow zones are often continuations or subdivisions of the broader zones, using a higher lower cut-off and a narrower minimum width. The Mineral Resources estimate by category is tabulated in Table 16.1

Table 16.1.1 Vogel/Schumacher Mineral Resource Estimates
(Prepared by Lake Shore – May 2011)

Resource Classification	Tonnes	Capped Grade g/t Au	Contained Gold (ounces)
Indicated Mineral Resources			
Pit Resources	2,219,000	1.75	125,000
Total Indicated	**2,219,000**	**1.75**	**125,000**
Inferred Mineral Resources			
Pit Resources	692,000	1.43	31,700
Underground Resources	767,000	5.56	137,000
Total Inferred	**1,459,000**	**3.60**	**168,800**

Notes:

8. CIM definitions were followed for classification of Mineral Resources.
9. Mineral Resources are estimated at a cut-off grade of 2.9g/t Au for Underground and 0.63g/t Au for Pit Resources.
10. Mineral Resources are estimated using an average long-term gold price of US$1,125 per ounce and a US$/C$ exchange rate of 0.95 and US$1,150 per ounce for Pit Resources.
11. A minimum mining width of approximately two metres was used for Underground Resources.
12. Capped gold grades are used in estimating the Mineral Resource average grade.
13. Sums may not add due to rounding.
14. Mr. Robert Kusins, B.Sc., P.Geo., is the Qualified Person for this resource estimate.

There are no Mineral Reserves present on the property as of the date of this Technical Report.

16.2 Estimation Method

16.2.1 Estimation Methods and Parameters

Lake Shore has generated 2 block models, one for each of the Vogel/Schumacher Pit and Underground Resources. Resources from both models have been combined to estimate the total resources on the property. Separate parameters for each of the block models have been used in the estimation process and are summarized separately below.

The general procedure for developing of the block model Mineral Resource estimate for the Pit Resources includes:

- Database compilation and verification in Gemcom GEMS ("GEMS").
- Interpretation of the zones on 20m spaced plans taking into account continuity of lithology, alteration and mineralization. The plan outlines were projected onto 20m spaced sections and the zones were re-digitized using the projected outlines as a guide and "snapped to" the drill hole assays. Each closed polygon was assigned an appropriate rock type and stored with it's section definition in the GEMS polygon workspace
- Zones are defined by 2 or more intersections that form a continuous band of mineralization.
- The sectional interpretations are then strung together by tie lines and 3-D solids or wireframes are generated that represent the mineralized zones that are used for estimation of tonnes and grade. Outside edges of the 3-D model are extruded half the distance to the next section, or 10.0m. Three 3-D solids were constructed to enable individual volumes, tonnages and grades to be reported with a fourth broad solid constructed to capture isolated zones outside the modelled area. All solids were validated using GEMS validation tools to insure valid solids had been generated. A 3-D view of the interpreted zones is shown in Figure 16.2.1.1.
- Solid intersection composites are generated from all drill holes intersecting the 3-D Mineral Resource Solids. Corresponding entry and exit points are saved to the drill hole workspace and back coded with a zone identifier.
- Individual 1m composites are generated from the assay table based on down-the-hole averaging within the limits of the solid intersection composites.
- The 1m composites are then used to generate a block model grade based on an Inverse Distance Squared ("ID^2") interpolation that encompasses the 3-D wireframes that were assigned a unique rock code. Indicated Mineral Resources were those blocks falling within the limits of the three modelled zones (VOG_A1, VOG_A2 and VOG_A3) above the lower cut-off grade. The grade of the blocks within these zones are largely based on a 30m search radius with individual blocks requiring values from at least two drill holes and not more than 5 composites from the same hole. Inferred Mineral Resources are based on a 60m search radius within the VP10 solid with individual blocks requiring values from only one drill hole and not more than 5 composites from any one hole.
- A property field was interpolated with a numeric value to differentiate blocks located on either the Vogel or Schumacher property.
- The resource block model has been evaluated against a preliminary pit shell generated from an optimized Whittle pit model using costs as outlined in Table 16.2.1.1. Pit discard grade is estimated at 0.63 g/t Au for this model.

Figure 16.2.1.1 3-D View of Pit Resource Solids

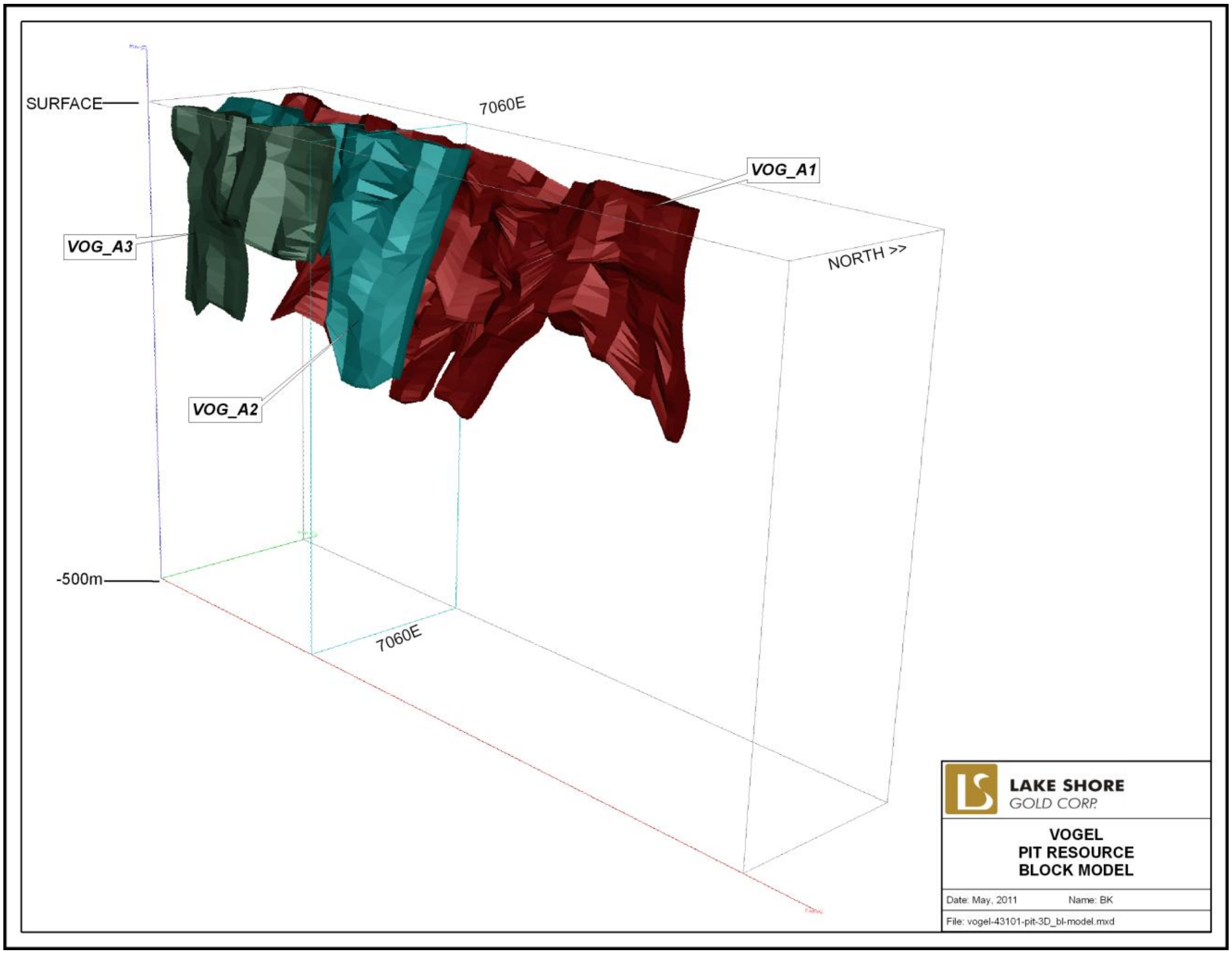


Table 16.2.1.1: Vogel Cut-off Grade Parameters

Item	Units	Costs
Mining		
Overburden	US$/tonne moved	2.00
Waste Rock	US$/tonne moved	2.00
“Ore” Rock	US$/tonne moved	2.75
Pit Slopes		
Overburden	degrees	25
Rock	degrees	50
Processing		
Cost	US$/tonne processed	19.00
Recovery	Percent	95.00
G&A	US$/tonne processed	3.00
Gold Price	US$ per troy ounce	1,150.00

The general procedure for developing of the block model Mineral Resource estimate for the Underground Resource includes:

- Database compilation and verification in Gemcom GEMS (“GEMS”).

- Interpretation of the zones on 20m spaced sections taking into account continuity of lithology, alteration and mineralization. Limits of the zone were defined by a lower cut-off of about 1.0gpt and a minimum mining width of 2.0m within similar geometry as defined by the pit model zones. Each closed polygon was assigned an appropriate rock type and stored with its section definition in the GEMS polygon workspace

- Zones are defined by 2 or more intersections that form a continuous band of mineralization.

- The sectional interpretations are then strung together by tie lines and 3-D solids or wireframes are generated that represent the mineralized zones that are used for estimation of tonnes and grade. Outside edges of the 3-D model are extruded half the distance to the next section, or 10.0m. Eight 3-D solids were constructed to enable individual volumes, tonnages and grades to be reported. All solids were validated using GEMS validation tools to insure valid solids had been generated. A 3-D view of the interpreted zones is shown in Figure 16.2.2.

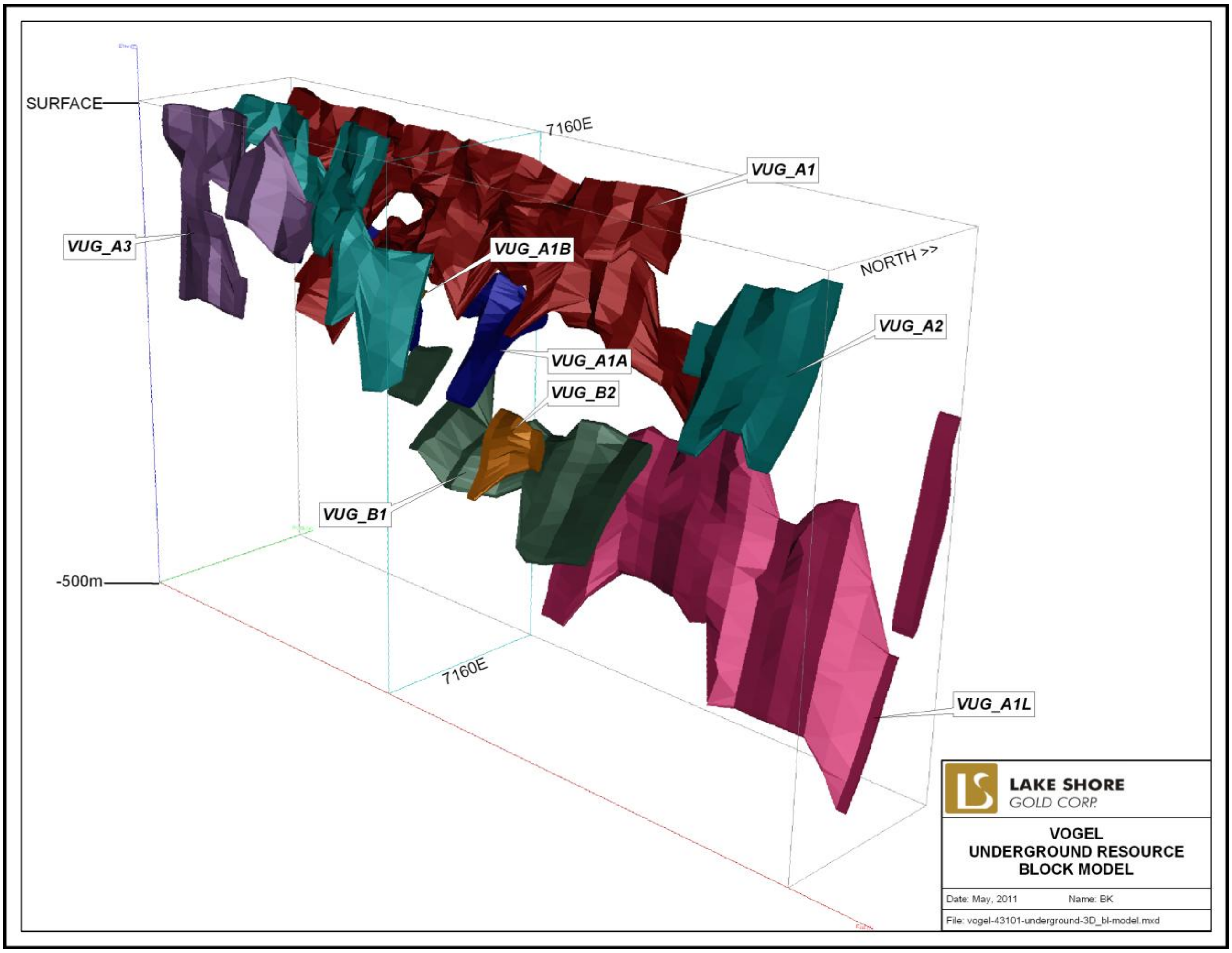
- Solid intersection composites are generated from all drill holes intersecting the 3-D Mineral Resource Solids. Corresponding entry and exit points are saved to the drill hole workspace and back coded with a zone identifier.

- Individual 1m composites are generated from the assay table based on down-the-hole averaging within the limits of the solid intersection composites.

- The 1m composites are then used to generate a block model grade based on an Inverse Distance Squared (“ID^2”) interpolation that encompasses the 3-D wireframes that were assigned a unique rock code (VUG_A1, VUG_A1A, VUG_A1B, VUG_A1L, VUG_A2, VUG_A3, VUG_B1, VUG_B2). Blocks were interpolated utilizing 2 passes. The first pass populated blocks within a 30m search radius requiring 2 holes within the search radius with a maximum of 2 composites from any one hole. The second pass populated blocks within a 60m search radius requiring 1 hole with the search radius with a maximum of 2 composites per hole. Inferred Mineral Resources are based on those blocks interpolated within either pass 1 or 2 within the limits of the defined zones above the lower cut-off. No Measured or Indicated resources were defined within the Underground Resources.

- A property field was interpolated with a numeric value to differentiate blocks located on either the Vogel or Schumacher property

Figure 16.2.1.2 3-D View of Underground Resource Solids



16.2.2 Database

The database used for the current resource estimate is comprised of a Gemcom GEMS (Microsoft SQL) database which was compiled from data received from Black Hawk Mining Inc. (subsidiary of Glencairn Gold Corporation) and work completed by Lake Shore since acquisition of the properties. The GEMS database was used for the Mineral Resource estimation process and consists of tables including header, survey, lithology, and assay data with pertinent fields summarized in Table 16.2.2.1. Other tables and additional fields within the above tables are currently being utilized by Lake Shore in logging of the drill core.

The following validation steps were taken to insure the integrity of the database:

1) Plotting of plans and sections to check for location, elevation and downhole survey errors.

2) Checking for any gaps, overlaps and out of sequence intervals for assay and lithology data using the GEMS validation tools.

3) Random validation of assay and lithology data against the drill logs and assay certificates.

Only minor discrepancies were noted and corrected prior to the estimation of the resources. None of the errors detected would have a significant impact on the Mineral Resource estimate. The database, in the writer's opinion, is appropriate for reporting of the Vogel/Schumacher Resource.

In addition to the drill hole data, other data such as cross-sectional geological interpretation polygons, section and level plan definitions, 3-D geological and pit shells, point area data of assays and composites, as well as the block model, are stored within the GEMS database.

Table 16.2.2.1: Summary of GEMS SQL Database Used by Lake Shore

Table Name	Table Description	Fields
Header	Drill hole collar location data in local grid co-ordinates	Hole-ID Location X Location Y Location Z Length Collar_Az Collar_ Dip
Survey	Down hole survey data of direction measurements at down hole distances	Hole-ID Distance Azimuth Dip
Assays	Sample interval assay data with Au units grams per tonne	Hole-ID From To Sample_NO Au_GPT_FIN Au_GPT_AA Au_GPT_GRA Au_GPT PM
Lithomaj	Major logged rock type intervals down hole	Hole-ID From To Rocktype
Lithomin	Minor logged rock type intervals down hole	Hole-ID From To Rocktype

16.2.3 Grade Capping

Lake Shore has utilized grade capping in its estimation of the Pit and Underground Resources for the Vogel/Schumacher Deposit. Historical cutting values have varied from 34.29 g/t Au (equivalent to 1 ounce/ton) up to 100.0 g/t Au used by A.C.A Howe International (1999) in its evaluation of the Vogel property for Black Hawk Mining Inc.

To evaluate potential cutting factors, assay values were extracted from the database into a GEMS point area cloud and only those assays within the limits of the solid were used in plotting of cumulative distribution plots and log distribution plots. Individual plots were created for each of the Pit Resource Solids for assays above a 0.1 g/t Au lower cut-off and are shown in Figures 16.2.3.1 to 16.2.3.9. In addition, individual statistical reports based on the raw gold assays were generated for each of the four solids and are tabulated in Table 16.2.3.1.

Table 16.2.3.1: Basic Statistics of Raw Au Assays Pit Resource Solids

Zone	Total # Samples	Minimum (gpt Au)	Maximum (gpt Au)	Mean (gpt Au)	99th Percentile	Coefficient of Variation
VOG_A1	6,737	0.025	335.0	2.50	34.50	4.12
VOG_A2	1,440	0.025	487.17	2.87	31.04	6.85
VOG_A3	539	0.025	59.38	1.72	30.77	2.66
VP10	30,022	0.025	487.17	1.91	23.15	5.33

A review of the plots as well as examining the GEMS statistical report to determine discrete breaks in the population at the upper level of the assay data were used in determining appropriate cutting levels for the individual zones. It was determined from the data that the historical cutting factor of 34.29 g/t Au could be used for solids VOG_A2 and VP10, while solid VOG_A1 was adjusted upwards to 55.0 g/t Au and VOG_A3 was adjusted downwards to 16.0 g/t Au.

A total of 30,022 assay samples were utilized in the block model resource estimate and of these 56 were found to be above the 34.29 g/t Au cut-off grade representing 0.2% of the total population. Table 16.2.3.2 summarizes the values for each of the individual zones.

Table 16.2.3.2: Samples Above Grade Cap for Pit Resource Solids

Zone	Capped Grade (gpt Au)	# of Samples Above Cap
VOG_A1	55.0	18
VOG_A2	34.29	7
VOG_A3	16.00	5
VP10	34.29	56

Figure 16.2.3.1 Cumulative Frequency VOG_A1

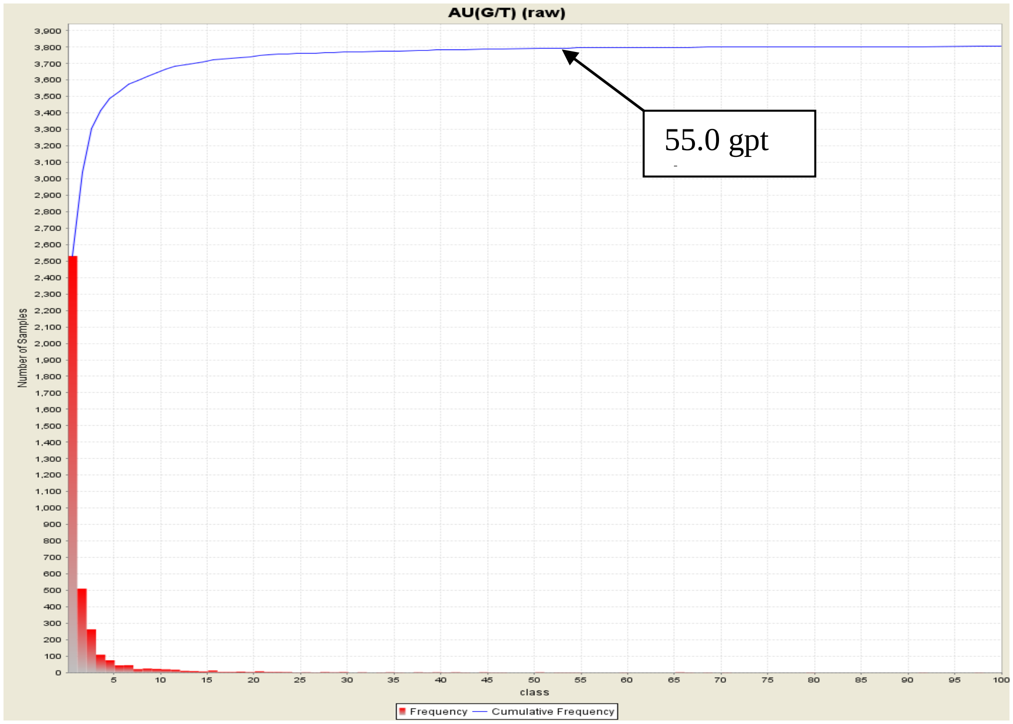


Figure 16.2.3.2 Log Cumulative Frequency VOG_A1

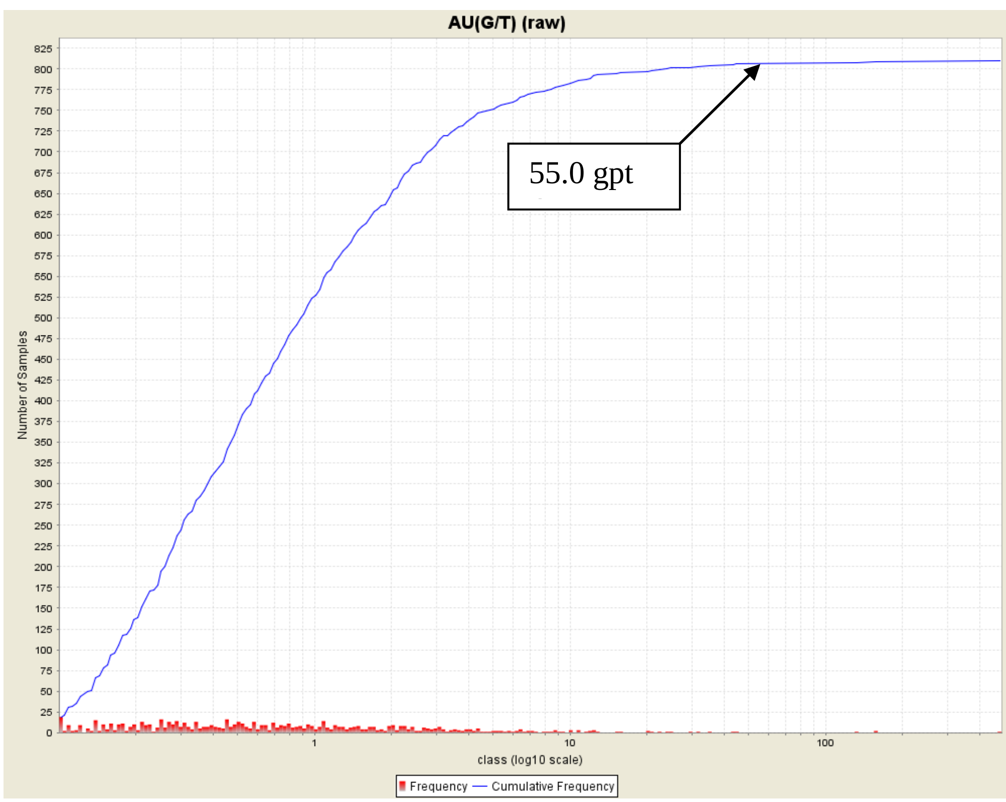


Figure 16.2.3.3 Cumulative Frequency VOG_A2

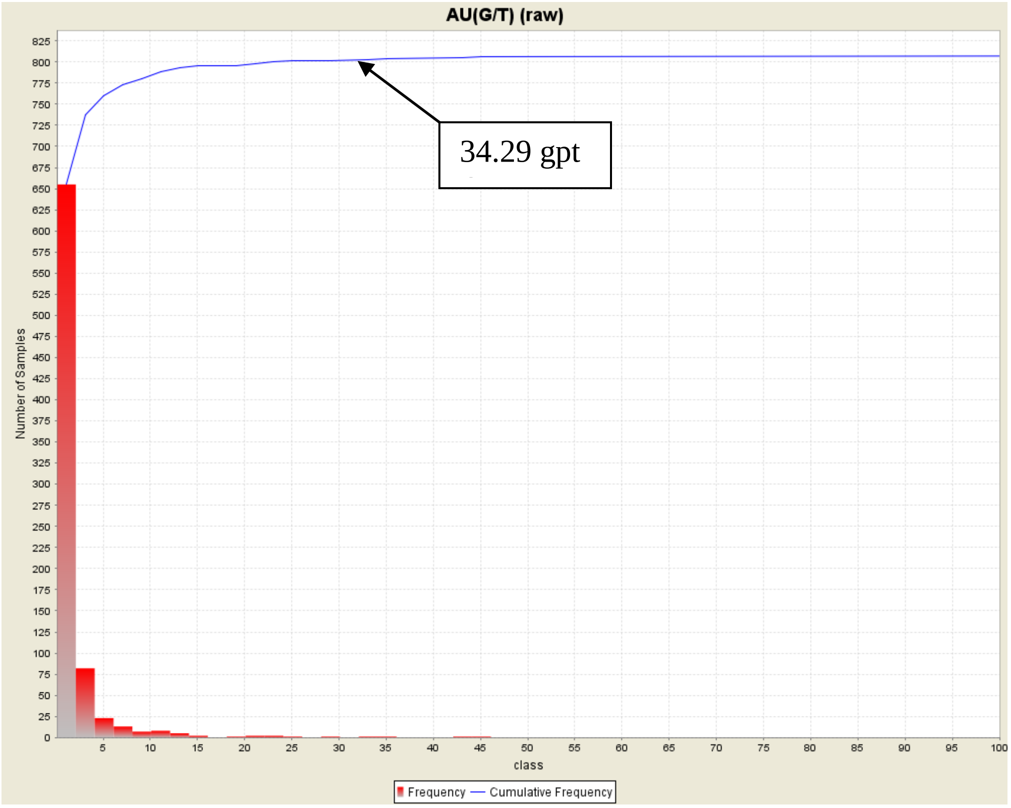


Figure 16.2.3.4 Log Cumulative Frequency VOG_A2

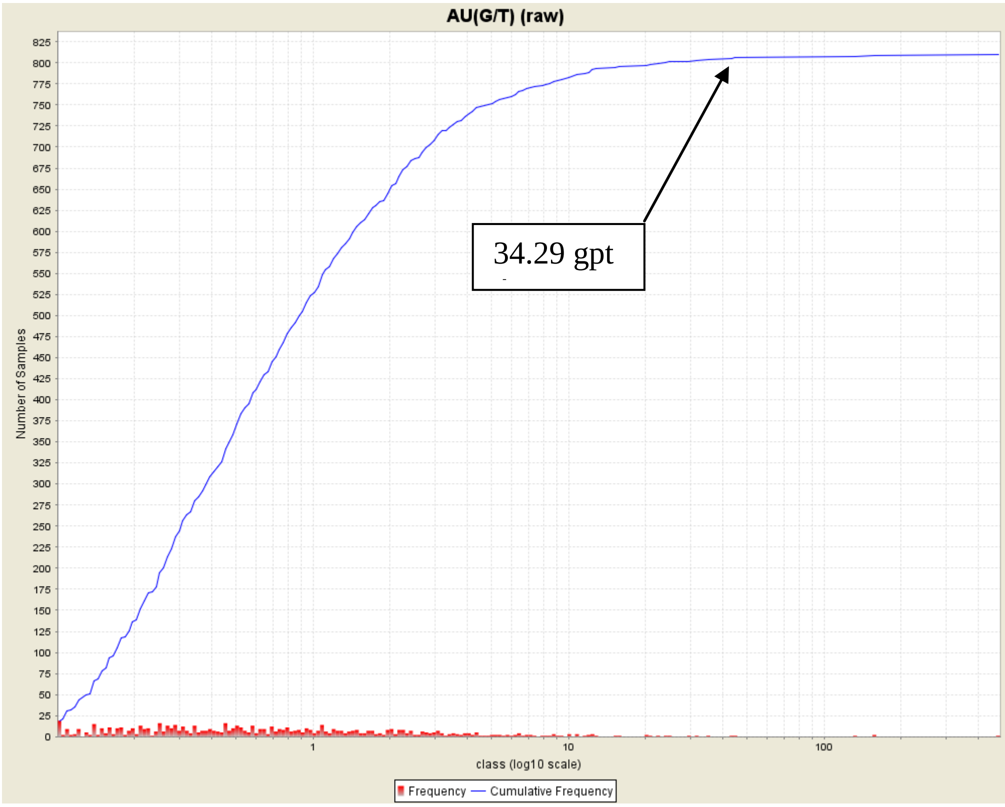


Figure 16.2.3.5 Cumulative Frequency VOG_A3

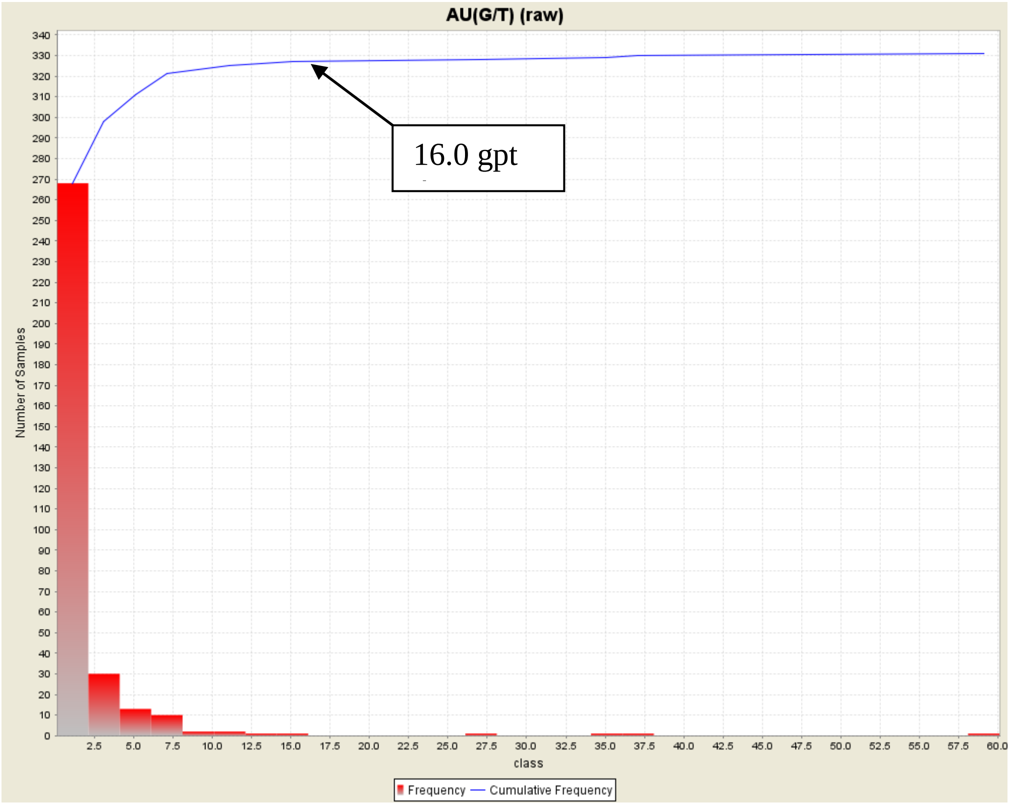


Figure 16.2.3.6 Log Cumulative Frequency VOG_A3

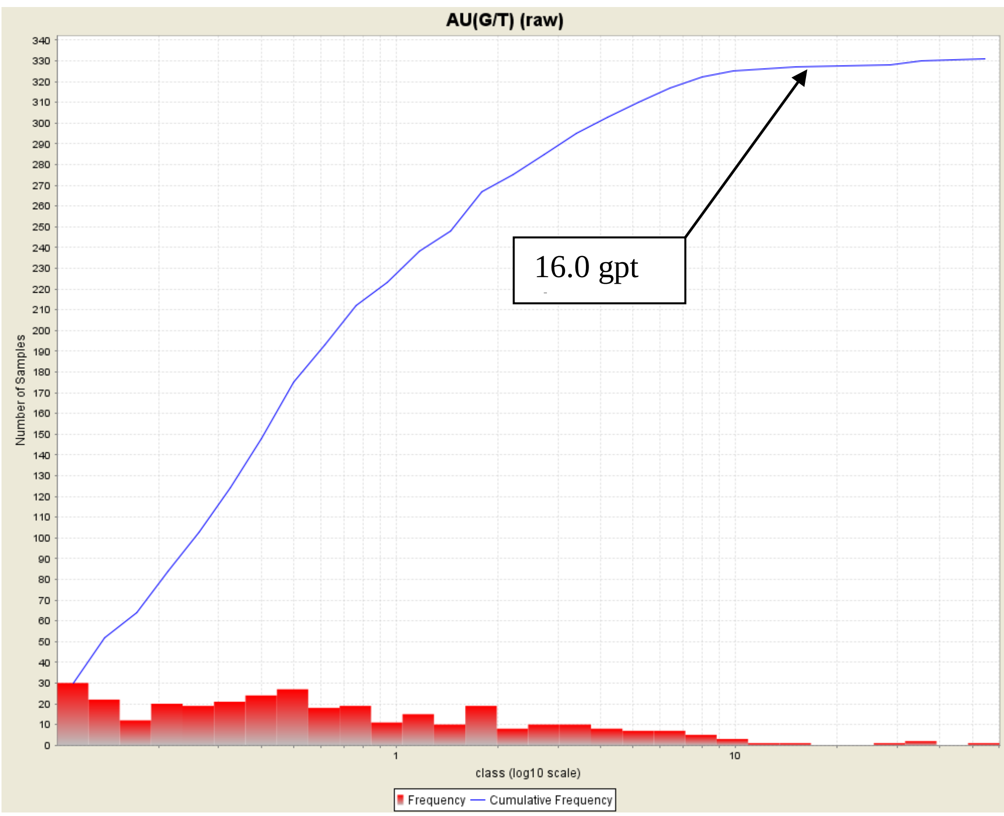


Figure 16.2.3.7 Cumulative Frequency VP10

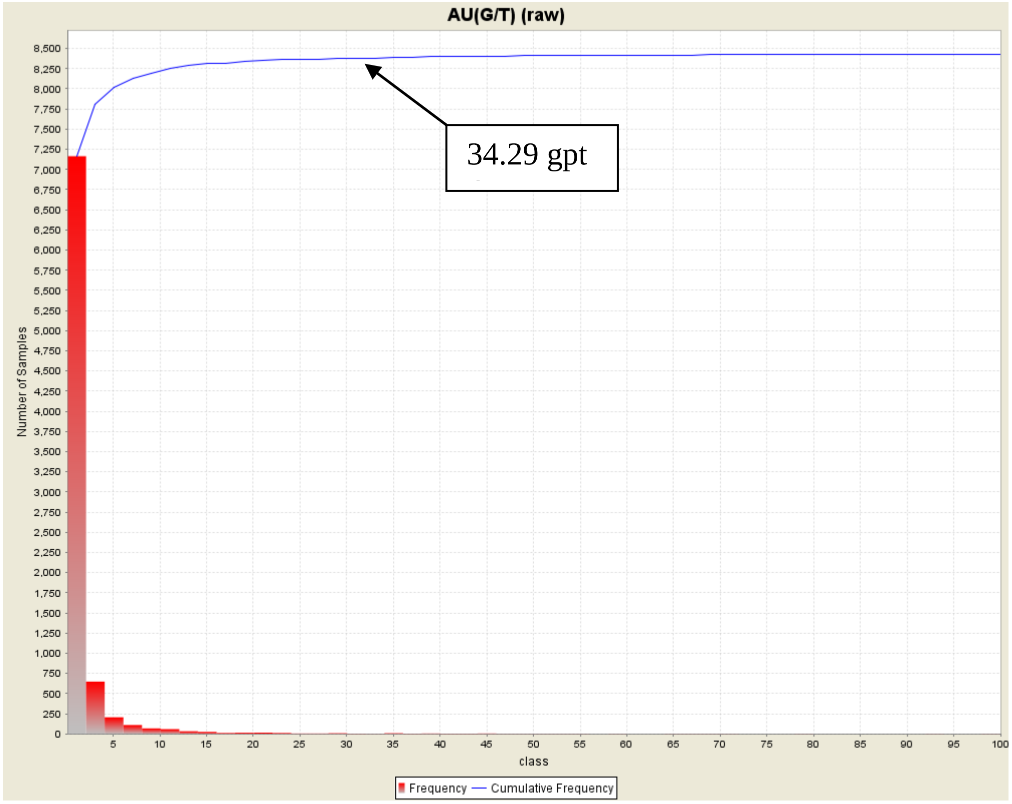
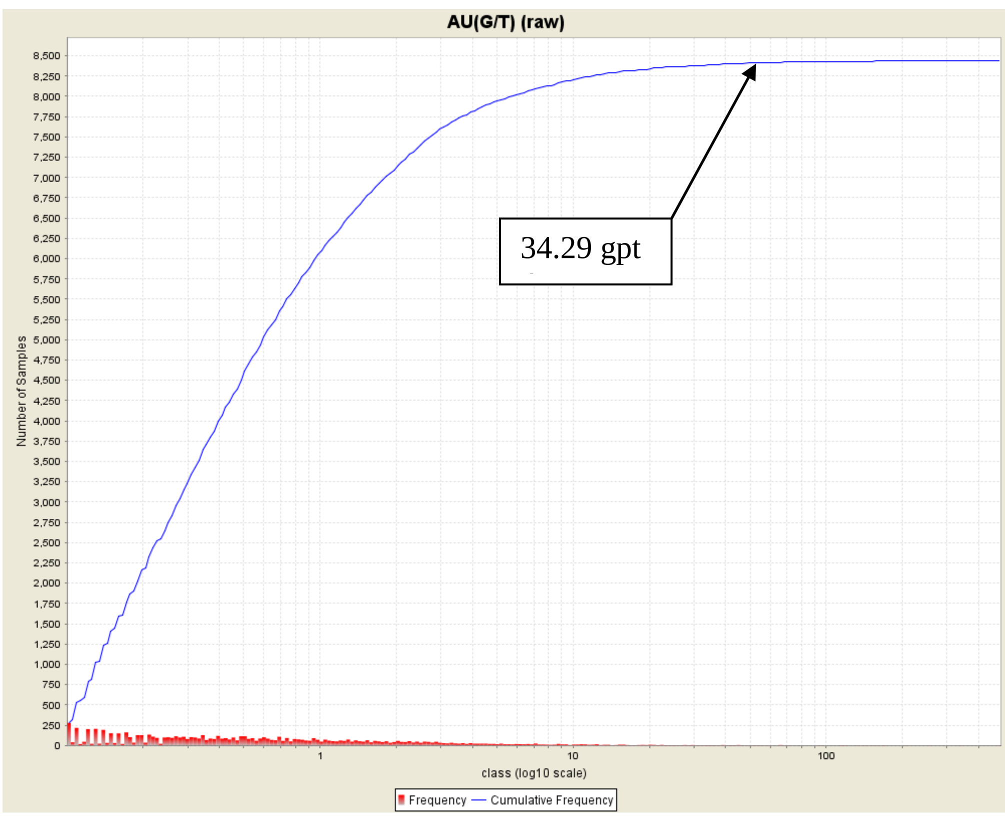


Figure 16.2.3.8 Log Cumulative Frequency VP10



Cutting factors for the Underground Resources were looked at as a group, as the relative number of samples within individual models is relatively small and would not produce meaningful results. Basic statistical data for the assays within the underground solids are tabulated in Table 16.2.3.3. Cumulative frequency plots and log scale plots have been generated and illustrated in Figures 16.2.3.9 and 16.2.3.10. In reviewing the data it was decided to maintain the historical 34.29 g/t capping grade which is shown on the individual plots. A higher capping grade may be justifiable for individual zones and this should be looked at in the future as more data becomes available.

Table 16.2.3.3: Basic Statistics of Raw Au Assays Underground Resource Solids

Zone	# Samples	Minimum (gpt Au)	Maximum (gpt Au)	Mean (gpt Au)	99^{th} Percentile	Coefficient of Variation
All zones	3,826	0.025	487.17	3.06	40.27	4.11

Figure 16.2.3.9 Cumulative Frequency Underground Solids

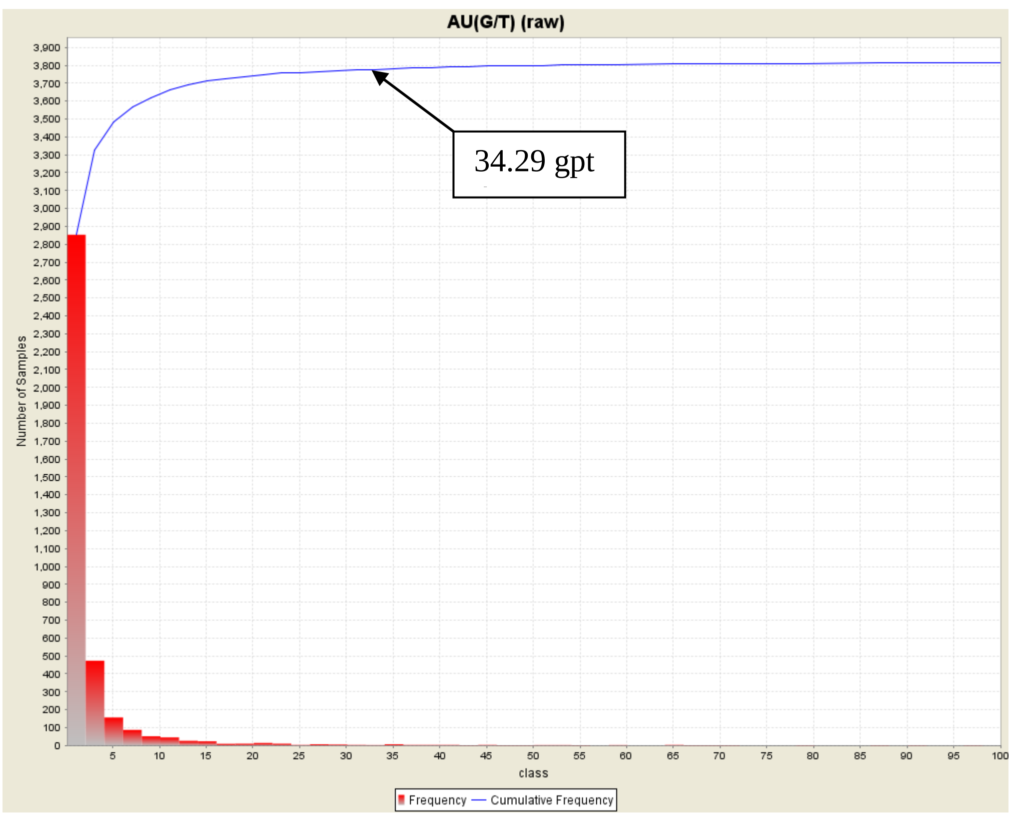
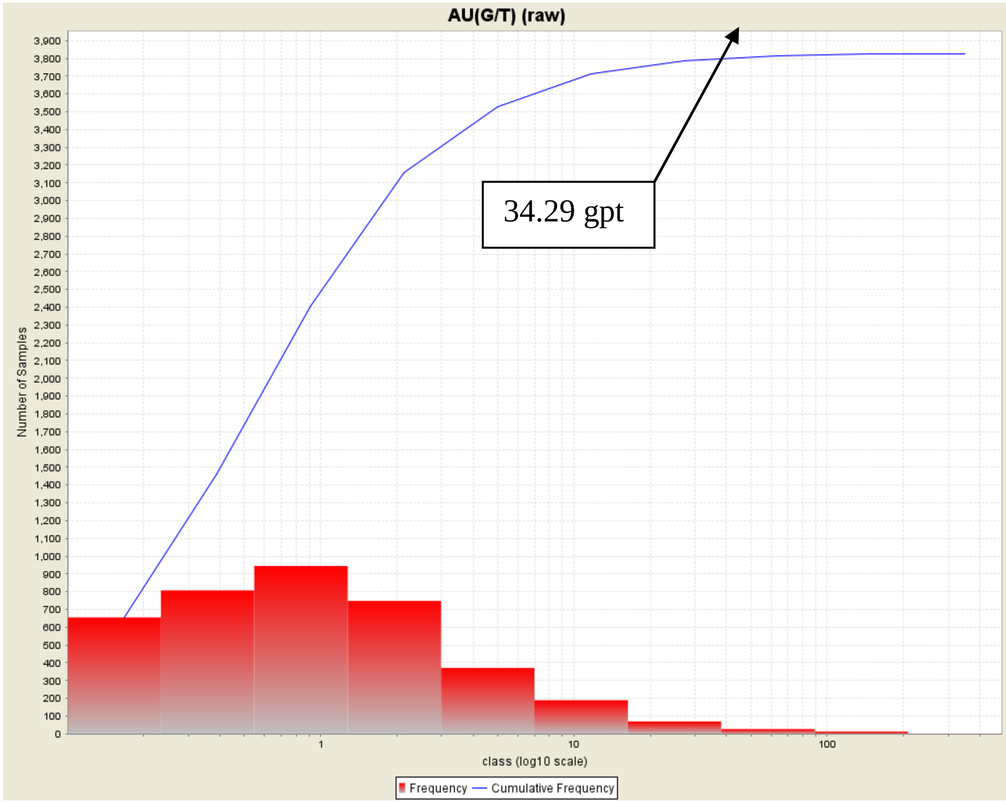


Figure 16.2.3.10 Log Cumulative Frequency Underground Solids



A total of 13 assays were found to be above the 34.29 g/t Au cut-off grade representing 0.3% of the total population. Table 16.2.3.4 summarizes the capped values for each of the individual zones and the number of samples above the capped grade.

Table 16.2.3.4: Samples Above Grade Cap for Underground Resource Solids

Zone	Capped Grade (gpt Au)	# of Samples Above Cap
VUG_A1	34.29	5
VUG_A1A	34.29	1
VUG_A1B	34.29	-
VUG_A1L	34.29	4
VUG_A2	34.29	-
VUG_A3	34.29	2
VUG_B1	34.29	-
VUG_B2	34.29	1

16.2.4 Block Model Assay Compositing

Each 3-D solid for both Pit and Underground were assigned a unique numeric rock code and name which were used to back code a name and rock code into all drill hole solid intersections. This solid intersection table was used to generate a set of equal length composites of 1m length within the limits of the 3-D solid. The 1m composites are stored in a GEMS table and extracted out into a point area cloud for interpolation purposes. Both capped and uncapped composite grades are stored in the point area file.

Basic statistics were compiled for both the four Pit Solids and the eight Underground Solids and are tabulated in Tables 16.2.4.1 and 16.2.4.2.

Table 16.2.4.1: Sample Composite Statistics Pit Solid Samples

	VOG_A1		VOG_A2		VOG_A3		VP10	
Statistic	**Au g/t**	**Au g/t (55)**	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (16)**	**Au g/t**	**Au g/t (34)**
# Samples	4,973	4,973	641	641	498	498	18,801	18,801
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	207.56	54.99	195.49	34.29	17.92	10.19	195.45	34.29
Mean	1.36	1.21	2.09	1.40	0.90	0.83	0.63	0.54
Median	0.33	0.33	0.53	0.53	0.26	0.26	0.07	0.07
Variance	29.49	10.45	116.84	8.17	3.23	2.03	13.14	2.98
Std Dev	5.43	3.32	10.81	2.86	1.80	1.43	3.63	1.73
CV	4.00	2.67	5.18	2.05	2.00	1.72	5.79	3.22

Table 16.2.4.2: Sample Composite Statistics Underground Solid Samples

	VUG_A1		VUG_A1A		VUG_A1B		VUG_A1L	
Statistic	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (34)**
# Samples	3,048	3,048	298	298	35	35	185	185
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	151.17	34.29	31.37	31.37	10.08	10.08	86.98	34.27
Mean	1.78	1.54	1.31	1.29	1.64	1.64	3.11	2.58
Median	0.51	0.51	0.47	0.47	0.52	0.52	1.25	1.25
Variance	33.95	10.80	8.73	7.65	5.86	5.86	81.09	26.31
Std Dev	5.83	3.29	2.95	2.77	2.42	2.42	9.00	5.13
CV	3.28	2.14	2.25	2.15	1.48	1.48	2.90	1.99

Table 16.2.4.2: Sample Composite Statistics Underground Solid Samples (Continued)

	VUG_A2		VUG_A3		VUG_B1		VUG_B2	
Statistic	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (34)**	**Au g/t**	**Au g/t (34)**
# Samples	374	374	228	228	115	115	58	58
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	195.53	20.50	23.78	13.94	19.81	19.81	35.40	34.29
Mean	2.05	1.46	1.63	1.58	2.29	2.29	2.68	2.66
Median	0.52	0.52	0.64	0.64	1.08	1.08	0.86	0.86
Variance	115.49	8.96	6.95	5.38	10.99	10.99	32.21	30.98
Std Dev	10.75	2.99	2.64	2.32	3.31	3.31	5.68	5.57
CV	5.25	2.05	1.62	1.47	1.45	1.45	2.12	2.09

16.3 Specific Gravity

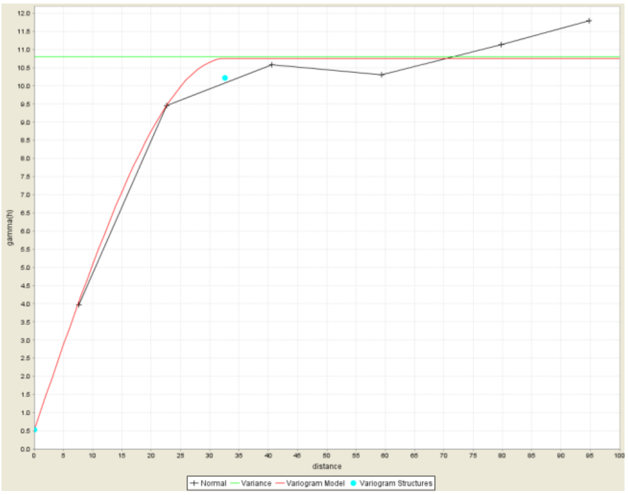
Specific gravity (“SG”) was determined on 120 samples of altered mafic volcanic at the Lake Shore exploration office using the conventional approach of weighing the samples dry and immersed in water. The altered mafic volcanic are the dominant host for mineralization at the Vogel/Schumacher Deposit, with minor variation in density expected depending upon the amount of veining and sulphides that are present. The average SG value of altered mafic volcanic from the twenty-nine different holes sampled was 2.83. Values for SG varied over a range between 2.70 and 3.22. The value of 2.80 was used for all of the zones modelled in the deposit.

16.4 Variography

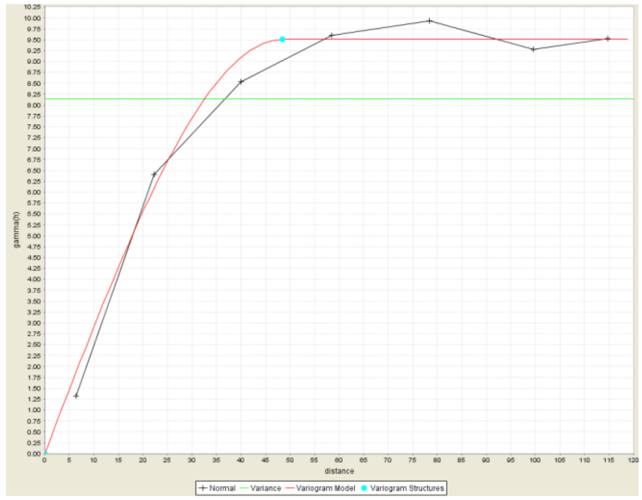
Semi-variograms were created for the Pit Resource Solids as well as the larger zones from the Underground Resource Solids using the 1m composites with the assay intervals capped at 34.29 g/t Au. Meaningful results were obtained from the Pit Resource Solids VOG_A1, VOG_A2 and VOG_A3 and are shown in Figures 16.4.1. The limited number of sample pairs for most of the underground solids did not produce variograms of any value. The variogram for the Underground Resource Solid VUG_A1 is shown in Figure 16.4.1 along with variograms of the Pit Resource Solids.

In general the variography confirmed the general orientation of the models with the primary direction along the strike of the zones between 80 and 110 degrees azimuth. The models typically produced a range for the primary structure from 25 to 40m with sill values from 5 to 10 gammas and low nugget values.

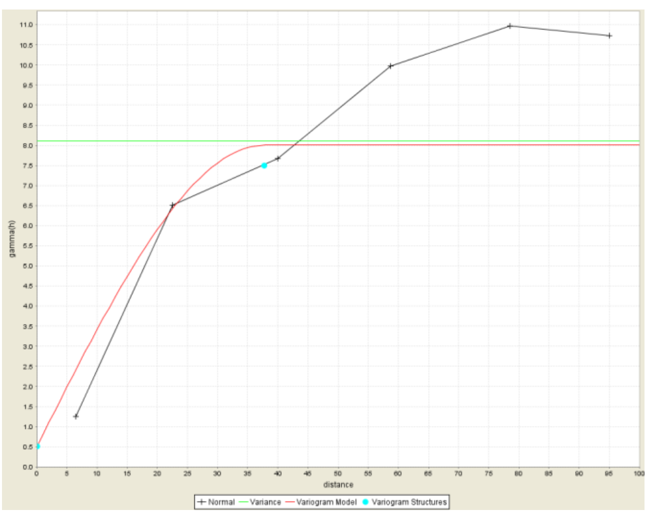
Figure 16.4.1 Variograms



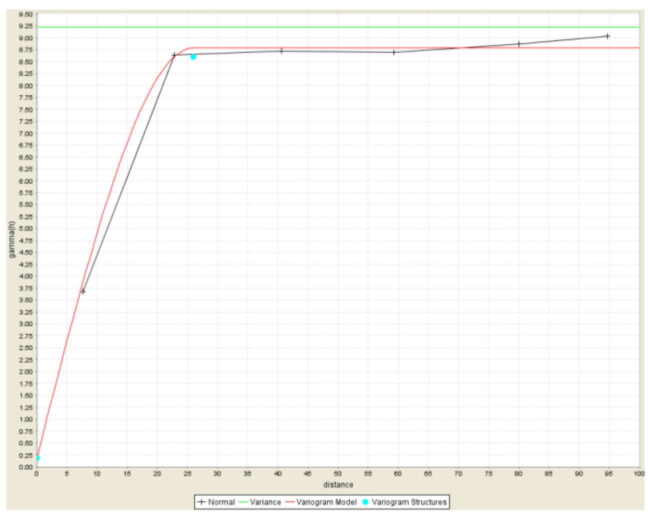
VOG_A1



VOG_A2



VOG_A3



VUG_A1

16.5 Block Model Mineral Resource Modelling

16.5.1 General

The grade of the Mineral Resources for the Pit and Underground was estimated by using the ID² interpolation method. This method interpolates the grade of a block from several composites within a defined distance range from the block. The estimation uses the inverse of the distance between a composite and the block as the weighting factor to determine the grade. Two separate block models were used in the estimation process to separate Pit Resources from the Underground Resources. The block models vary with a different block size and interpolation parameters being used and are discussed in the following sections.

16.5.2 Block Model Parameters

The Mineral Resources have been estimated using separate block models for the Pit and Underground Resources. Both models are based on percentage models with separate folders for each of the modelled solids, as well as a waste folder to capture material outside of the models. The Pit model in addition has an air and overburden folder to capture the quantity of overburden within the model. A summary of the block model grid parameters are shown in Table 16.5.2.

Table 16.5.2.1 Block Model Grid Parameters

Pit Resource Block Model

Model Origin	Grid	Model Dimension		Block Dimension	
X	6650 E	Columns	220	Column width	5.0 m
Y	4600 N	Rows	100	Row width	5.0 m
Z	2300 el	Levels	120	Level height	5.0 m
		Orientation	No rotation		

Underground Resource Block Model

Model Origin	Grid	Model Dimension		Block Dimension	
X	6700 E	Columns	340	Column width	3.0 m
Y	4620 N	Rows	350	Row width	2.0 m
Z	2300 el	Levels	200	Level height	3.0 m
		Orientation	No rotation		

16.5.3 Grade Interpolation

Blocks within the block models were interpolated by a two pass system with the first pass requiring that composites from at least two holes be used in determining the block grade. The primary search distance for this pass was set to 30m which is equivalent to the range as determined from the variography. The second pass was based on only one hole required within the search distance and the distance was expanded to 60m, or twice the range as determined from the variography. The variography as well as the general geometry of zones, alteration and mineralization were used to establish the search ellipse parameters. A summary of the parameters for each of the individual zones within the two models are summarized in Table 16.5.3.

Table 16.5.3.1 Search Ellipse Parameters

Pit Resource

		Search Ellipse Orientation (ZXZ)			Search Ellipse Range			Number of Samples		
Zone	**Pass**	**z**	**x**	**z**	**x**	**y**	**z**	**min**	**max**	**Max/hole**
VOG_A1	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5
VOG_A2	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5
VOG_A3	1	10	80	0	30	30	15	6	15	5
	2	10	80	0	60	60	30	5	15	5
VP10	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5

Underground Resource

		Search Ellipse Orientation (ZXZ)			Search Ellipse Range			Number of Samples		
Zone	**Pass**	**z**	**x**	**z**	**x**	**y**	**z**	**min**	**max**	**Max/hole**
VUG_A1	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5
VUG_A1A	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5
VUG_A1B	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5
VUG_A1L	1	-5	80	0	30	30	15	6	15	5
	2	-5	80	0	60	60	30	5	15	5
VUG_A2	1	17	67	0	30	30	15	6	15	5
	2	17	67	0	60	60	30	5	15	5
VUG_A3	1	10	80	0	30	30	15	6	15	5
	2	10	80	0	60	60	30	5	15	5
VUG_B1	1	17	40	0	30	30	15	6	15	5
	2	17	40	0	60	60	30	5	15	5
VUG_B2	1	-5	50	0	30	30	15	6	15	5
	2	-5	50	0	60	60	30	5	15	5

16.6 Block Model Validation

Plans and sections were cut through the block model and Resource Solids to visually compare the block grades to the drill hole grades. The grade and distribution of the block grade is consistent with drill hole assay data and the interpolation parameters that were used. A typical section for the Pit and Underground Resources are illustrated in Figure 16.6.1 and 16.6.2.

Volumes of the individual solids were compared to volumes of the individual solids from the block model to insure proper coding of the solid.

Figure 16.6.1 Section 7060E – Pit Resource Block Model

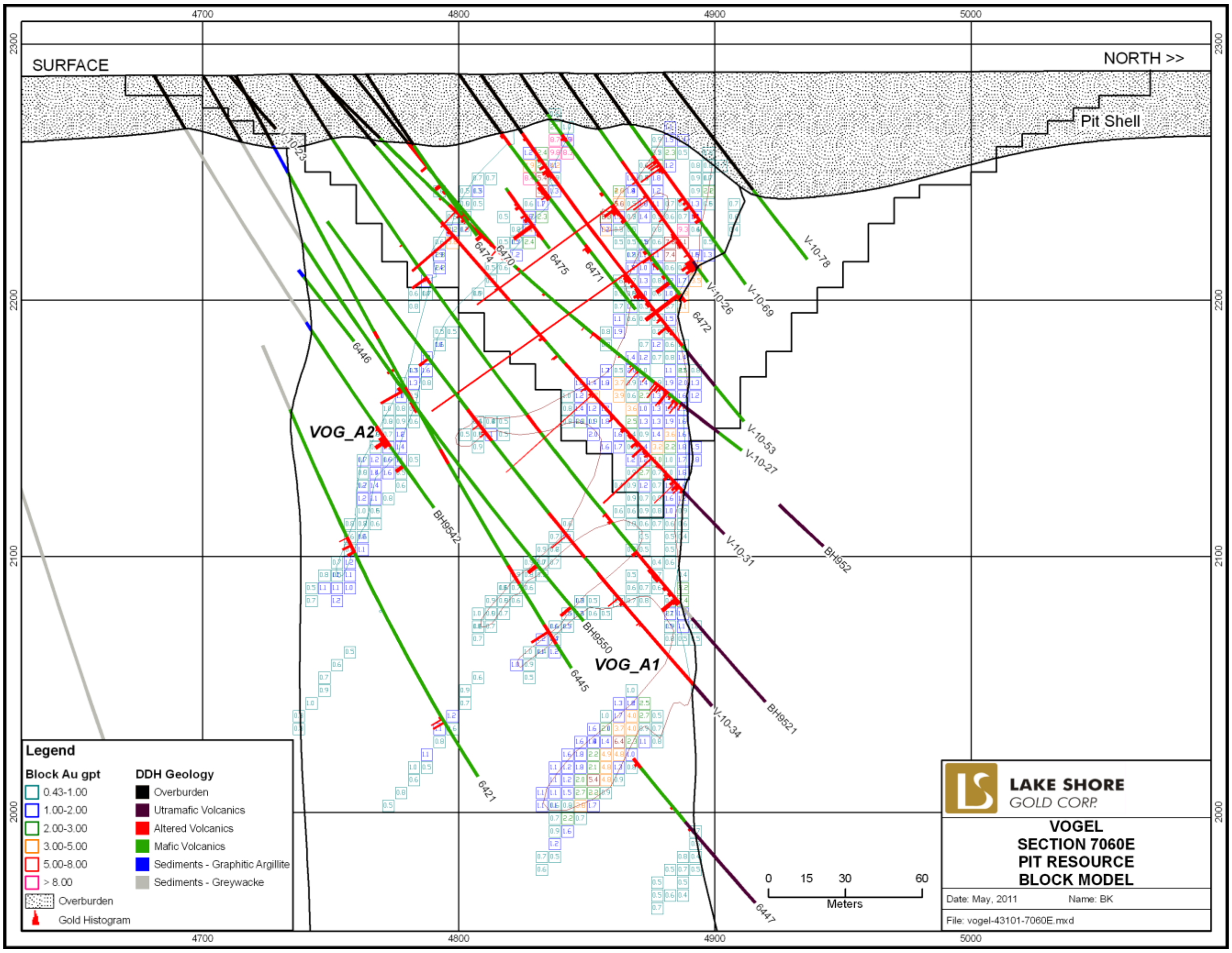
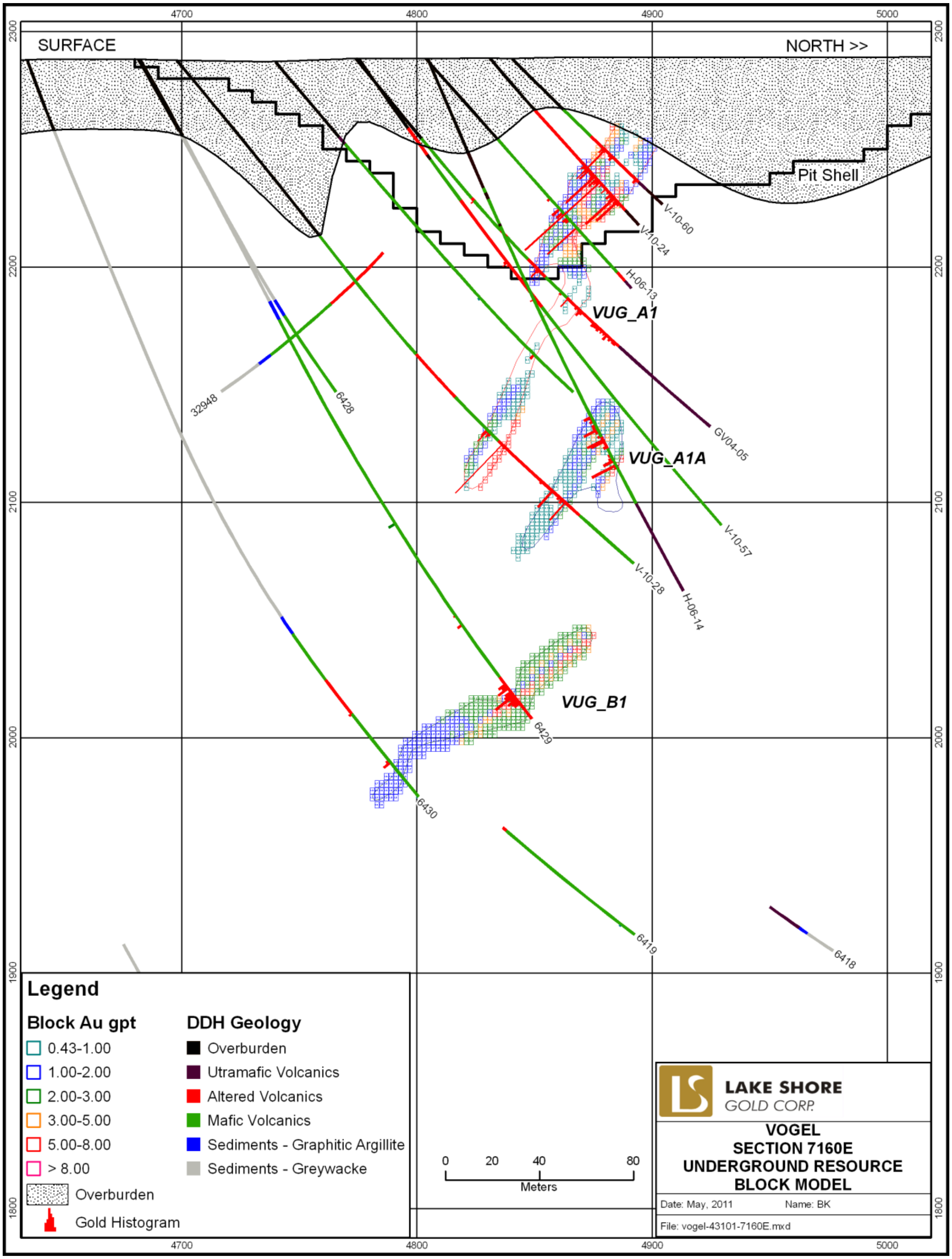


Figure 16.6.2 Section 7160E – Underground Resource Block Model



16.7 Mineral Resources and Classification

16.7.1 General

Lake Shore has separated the resources into Pit and Underground Resources. Pit resources are those blocks within pit solids that fall inside an optimized Whittle pit shell above the lower cut-off. The Underground Resource is defined by those blocks inside the underground solids that are outside the Whittle pit shell above the lower cut-off. The Resources have as well been separated by property, with the Resource straddling the Vogel and Schumacher property boundary. Only the eastern portion (east of 6350E) of the Schumacher Property has been evaluated in this report. Details of the Resources by type are summarized in the following sections.

16.7.2 Pit Resources

The Pit Resources for the Vogel/Schumacher Deposit totals 2.2 million tonnes at 1.75 g/t Au amounting to 125,000 ounces of gold. Table 16.7.2.1 summarizes the Pit Resources at the 0.63 g/t Au cut-off for both the Vogel and Schumacher properties. The effective date of this resource is May 2, 2011. Inferred Resources within the limits of the pit shell are as well summarized in Table 16.7.2.1 and amount to 692,000 tonnes at 1.43 g/t Au totalling 31,700 ounces of gold.

Table 16.7.2.1: Vogel/Schumacher Pit Resources

	Vogel			Schumacher			Total		
Category	**Tonnes**	**Grade (g/t Au)**	**Ounces Au**	**Tonnes**	**Grade (g/t Au)**	**Ounces Au**	**Tonnes**	**Grade (g/t Au)**	**Ounces Au**
Measured	-	-	-	-	-	-	-	-	-
Indicated	1,853,000	1.82	142,200	366,000	1.39	16,400	2,219,000	1.75	125,000
Measured and Indicated	**1,853,000**	**1.82**	**142,200**	**366,000**	**1.39**	**16,400**	**2,219,000**	**1.75**	**125,000**
Inferred	594,000	1.48	28,300	98,000	1.10	3,500	692,000	1.43	31,700

Notes:
1. CIM definitions were followed for classification of Mineral Resources.
2. Mineral Resources are estimated at a cut-off grade of 0.63g/t Au for Pit Resources.
3. Mineral Resources are estimated using an average long-term gold price of US$1,150 per ounce and a US$/C$ exchange rate of 0.95 for Pit Resources.
4. A minimum mining width of approximately five metres was used for Pit Resources.
5. Capped gold grades are used in estimating the Mineral Resource average grade.
6. Sums may not add due to rounding.
7. Mr. Robert Kusins, B.Sc., P.Geo., is the Qualified Person for this resource estimate.

Indicated Resources were those blocks found within the limits of the Resource solids VOG_A1, VOG_A2 and VOG_A3 within the limits of the pit shell above the 0.63 g/t Au cut-off. The bulk of these Indicated Resource blocks would have been interpolated by the first pass search ellipse. The Inferred Resources were defined within the broader Resource solid VP10, which encompasses the mafic volcanic sequence, which hosts the mineralization. The interpolated blocks would have been split between pass1 and pass 2 interpolations. Table 16.7.2.2 summarizes the Indicated and Inferred Resources by Resource Zone. The block model for each of the individual zones is shown in Figure 16.7.2.

Table 16.7.2.2: Vogel/Schumacher Pit Resources By Resource Zone

Zone	Vogel			Schumacher			Total		
	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
VOG_A1	1,606,000	1.87	96,300	230,000	1.47	10,900	1,836,000	1.82	107,200
VOG_A2	173,000	1.67	9,300	97,000	1.37	4,200	270,000	1.56	13,600
VOG_A3	74,000	1.25	3,000	40,000	1.01	1,300	113,000	1.16	4,200
Total Indicated	**1,853,000**	**1.82**	**108,600**	**366,000**	**1.39**	**16,400**	**2,219,000**	**1.75**	**125,000**

Category	Vogel			Schumacher			Total		
	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
VP10	594,000	1.48	28,300	98,000	1.10	3,500	692,000	1.43	31,700
Total Inferred	**594,000**	**1.48**	**28,300**	**98,000**	**1.10**	**3,500**	**692,000**	**1.43**	**31,700**

Notes: Sums may not add due to rounding.

Sensitivities by lower cut-off were run at 0.53 g/t Au, 0.73 g/t Au and 0.83 g/t Au and are illustrated in Table 16.7.2.3 for the Indicated and Inferred Resources.

Table 16.7.2.3: Vogel/Schumacher Pit Resource Sensitivities

Cut-off Grade (gpt Au)	Indicated Mineral Resources			Inferred Mineral Resources		
	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
0.53	2,484,000	1.63	129,900	842,000	1.28	34,500
0.63	**2,219,000**	**1.75**	**125,000**	**692,000**	**1.43**	**31,700**
0.73	1,988,000	1.88	119,900	585,300	1.56	29,400
0.83	1,779,000	2.01	114,700	497,000	1.70	27,200

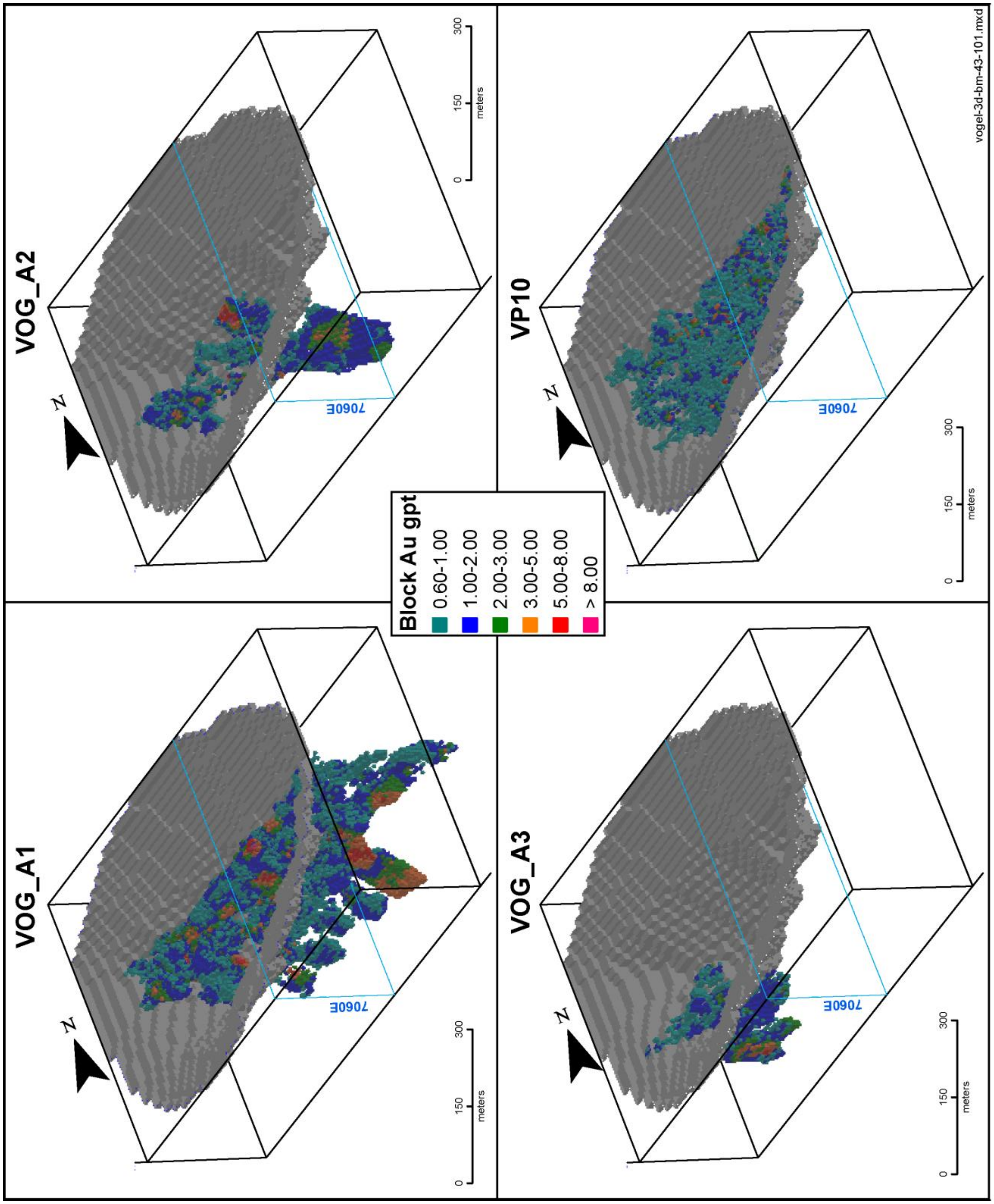


Figure 16.7.2 3D View of Pit Resource Block Model

Uncut gold values were carried for the Pit Resource to determine the effect of the capped grade on the resource. The uncut gold grade for the Resource at the 0.63 g/t Au lower cut-off is 2.25 g/t Au amounting to 160,600 ounces for the Indicated Resource and 2.40 g/t Au, amounting to 53,400 ounces for the Inferred Resource. The grade capping for the Indicated Resource has reduced the total by 35,600 ounces or 28% of the total resource. The large discrepancy in ounce totals would suggest that a higher capping grade would be warranted and this should be investigated with future work

16.7.3 Underground Resources

The Underground Resources for the Vogel/Schumacher Deposit totals 0.8 million tonnes at 5.55 g/t Au amounting to 137,100 ounces of gold. Table 16.7.3.1 summarizes the Underground Resource at the 2.9 g/t Au cut-off for both the Vogel and Schumacher properties. All Underground Resources have been classified as Inferred Resources as it cannot be assumed that all or any part of the Resource can be upgraded to an Indicated or Measured Resource with continued exploration. The effective date of this resource is May 2, 2011.

Table 16.7.3.1: Vogel/Schumacher Underground Resources

Category	Vogel			Schumacher			Total		
	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
Measured	-	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	-	-
Measured and Indicated	-	-	-	-	-	-	-	-	-
Inferred	666,139	5.65	121,000	101,000	4.95	16,100	767,000	5.56	137,100

Notes:
1. CIM definitions were followed for classification of Mineral Resources.
2. Mineral Resources are estimated at a cut-off grade of 2.9g/t Au for Pit Resources.
3. Mineral Resources are estimated using an average long-term gold price of US$1,125 per ounce and a US$/C$ exchange rate of 0.95 for Underground Resources.
4. A minimum mining width of approximately two metres was used for Underground Resources.
5. Capped gold grades are used in estimating the Mineral Resource average grade.
6. Sums may not add due to rounding.
7. Mr. Robert Kusins, B.Sc., P.Geo., is the Qualified Person for this resource estimate.

The Underground Resources were those blocks found outside the limits of the pit shell within the limits of the eight Resource Solids above the 2.9 g/t Au cut-off. The interpolated blocks would have been split between pass 1 and pass 2 interpolations. Table 16.7.3.2 summarizes the Inferred Resources by Resource Zone and a 3-D representation of the block model for each of the zones is illustrated in Figure 16.7.3.

Table 16.7.3.2: Vogel/Schumacher Underground Resources by Resource Zone

Zone	Vogel			Schumacher			Total		
	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
VUG_A1	101,000	5.27	17,100	10,000	3.90	1,300	111,000	5.15	18,400
VUG_A1A	62,000	4.96	9,900	25,000	7.63	6,100	87,000	5.72	16,000
VUG_A1B	5,000	4.11	600	-	-	-	5,000	4.11	600
VUG_A1L	220,000	7.11	50,400	-	-	-	220,000	7.11	50,400
VUG_A2	52,000	4.09	6,800	2,000	4.89	300	54,000	4.12	7,100
VUG_A3	37,000	4.19	5,000	64,000	4.07	8,400	101,000	4.11	13,300
VUG_B1	158,000	4.94	25,100	-	-	-	158,000	4.94	25,100
VUG_B2	31,000	6.15	6,000	-	-	-	31,000	6.15	6,000
Total Inferred	**666,000**	**5.65**	**121,000**	**101,000**	**4.95**	**16,100**	**767,000**	**5.56**	**137,100**

Notes: Sums may not add due to rounding.

Sensitivities by lower cut-off were run at 2.40 g/t Au, 3.40 g/t Au and 3.90 g/t Au and are illustrated in Table 16.7.3.3

Table 16.7.3.3: Vogel/Schumacher Underground Resource Sensitivities

Cut-off Grade (gpt Au)	Inferred Mineral Resources		
	Tonnes	Grade (g/t Au)	Ounces Au
2.40	1,085,000	4.78	163,900
2.90	**767,000**	**5.56**	**137,100**
3.40	579,000	6.35	118,200
3.90	426,000	7.33	100,300

Uncut gold values were carried for the Underground Resource to determine the effect of the capped grade on the resource. The uncut gold grade for the Resource at the 2.90 g/t Au lower cut-off is 6.84 g/t Au amounting to 168,600 ounces for the Inferred Resources. The grade capping for the Inferred Resource has reduced the total by 31,500 ounces or 23% of the total resource. The significant discrepancy in ounce totals would suggest that a higher capping grade would be warranted and this should be investigated with future work.

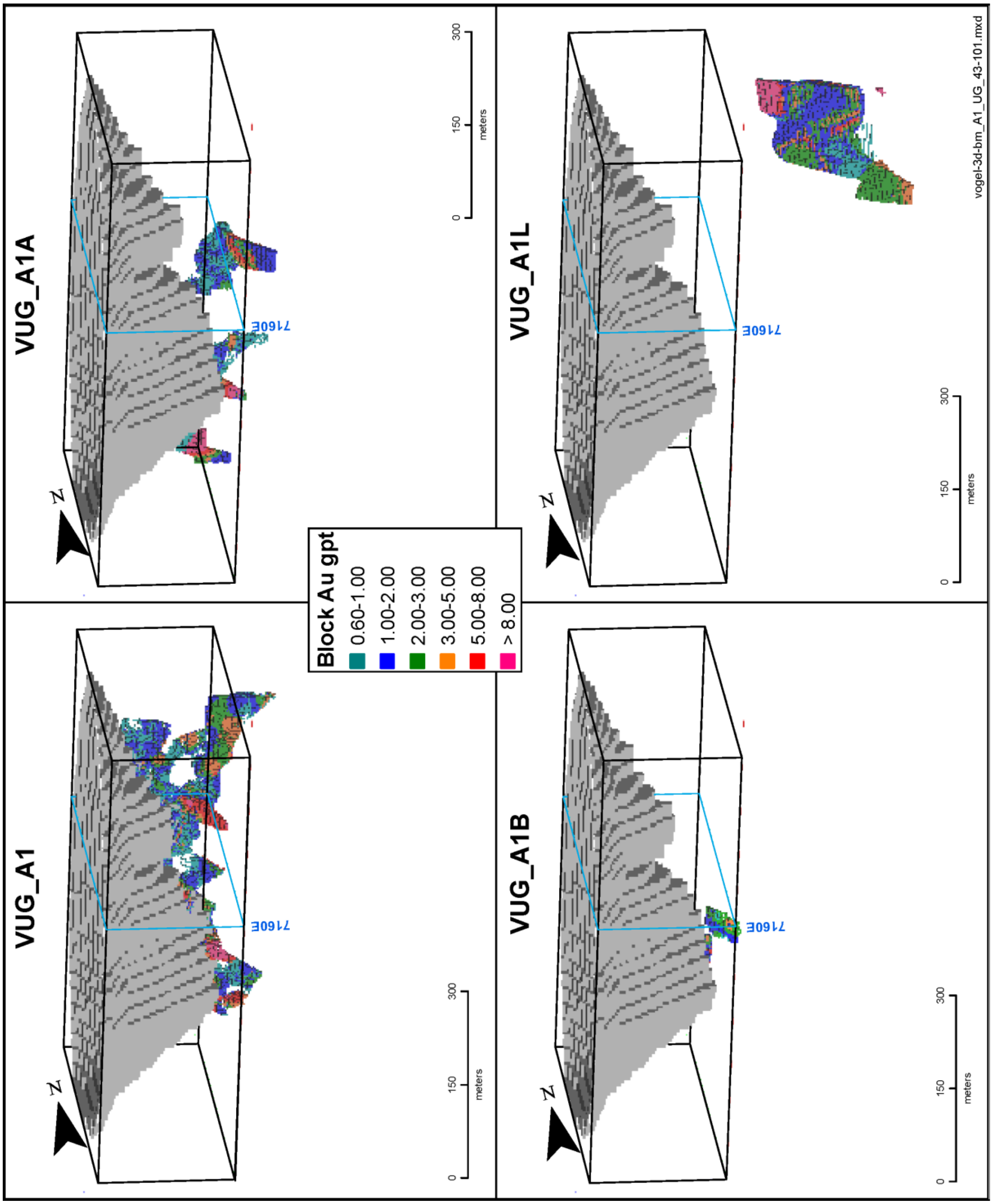


Figure 16.7.3 3D View of Underground Block Model

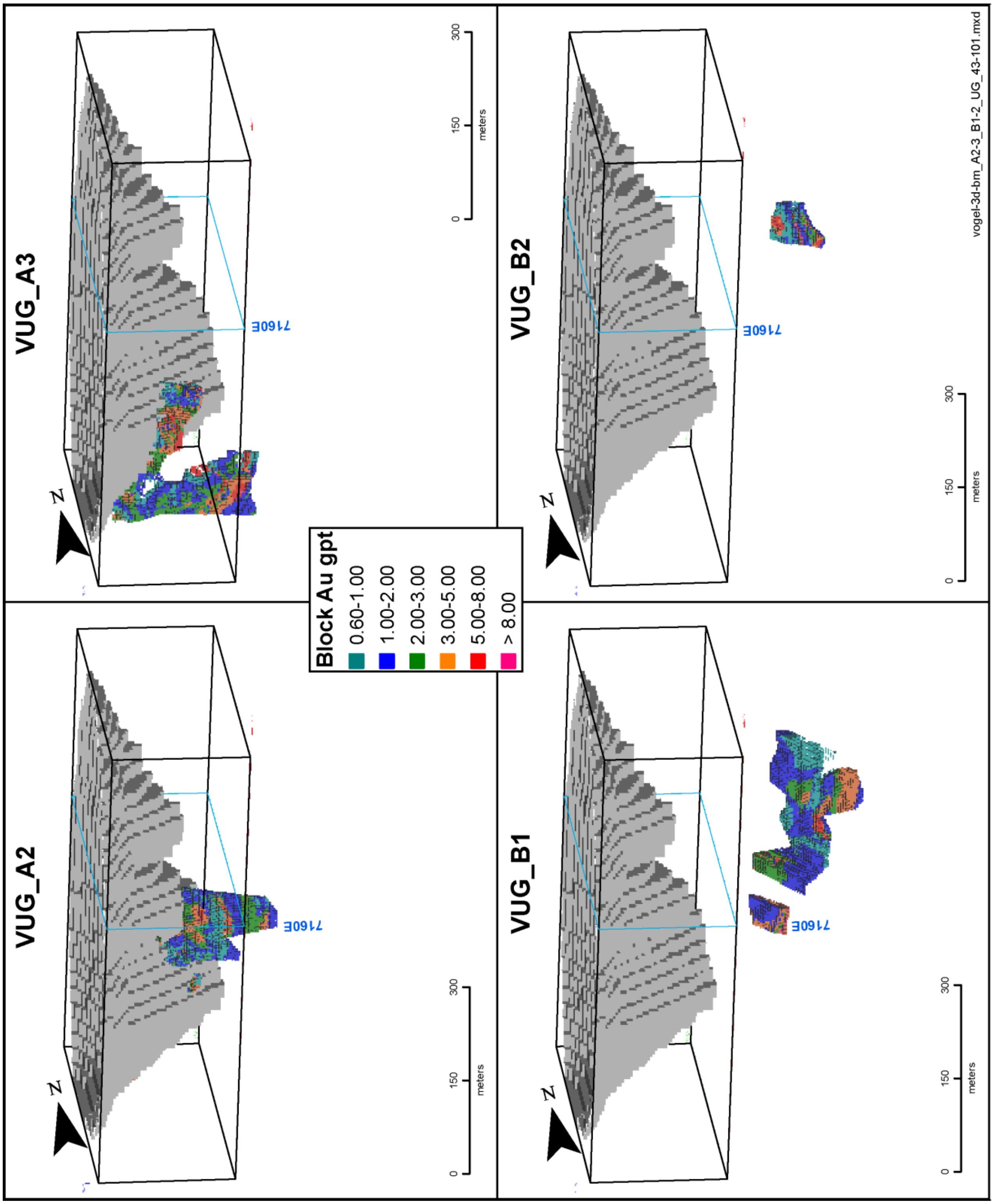


Figure 16.7.3 3D View of Underground Block Model (continued)

16.8 Exploration Potential and Recommendations

The bulk of the current resources have been defined down to a vertical depth of 400m with only limited drilling below these depths. A number of widely spaced mineralized intervals have been intersected by drilling under the current resource, but the intersections are too isolated to be brought into the current models. Additional drilling about these intersections would be required to properly define the limits of the zone so that a proper Resource Solid could be constructed.

A review of the ounces per vertical metre above the -400m produces values in the 700 to 1000 ounce/m range. Extrapolating these values down to the -1200m depth indicates potential for an additional 560,000 to 800,000 ounces to be brought into resources with additional drilling in this area.

17.0 MINERAL PROCESSING AND METALLUGICAL TESTING

No samples from have been submitted for mineral processing or metallurgical testing by Lake Shore Gold Corp.

Lake Shore operates a 2,000 metric tpd Mill facility at the nearby Bell Creek Mine site which could potentially be used to process Vogel Resources.

17.1 Bell Creek Mill Process

The Bell Creek Mill was established as a conventional gold processing plant utilizing cyanidation with gravity and CIP recovery (Pressacco, 2011). Between 1987 and 1994 the mill processed 576,017 short tons of Bell Creek ore grading 0.196 oz/st Au(112,739 recovered ounces). The historical gold recovery was approximately 93%. Additional tonnages from the Marlhill Mine, Owl Creek open pit, and Hoyle Pond Mine were processed prior to the mill being placed on care and maintenance in 2002. During this period several improvements and additions were implemented to increase tonnage throughput from the original 350 tpd to 1,500 tpd. The present mill configuration includes upgrades completed in October 2010 to increase throughput to 2,000 tpd.

Ore is pre-crushed using a portable jaw crusher in the yard and is then fed through a grizzly with a loader. A rock breaker is used to reduce oversize. The ore is fed with a track feeder to a 30 in. by 40 in. Nordberg Jaw Crusher (c100B). The discharge from the jaw is conveyed to the sizing screen. Undersize (-1/2 in.) material reports to the Fine Ore Bin (FOB). The oversize material reports to the Coarse Ore Bin (COB), which feeds a HP 300 Nordberg cone crusher. Material will circulate until it passes through the ½ in. screen and reports to the FOB.

The grinding circuit consists of one 4.0 m by 4.5 m primary mill which is fed from the FOB and an in-series 3.81 m by 4.4 m secondary mill. The primary mill is single pass, and the primary cyclone overflow reports to a thickener feed box; underflow goes to the secondary mill (there is a 30 in Knelson that will take a bleed from this material, for gravity gold collection). The secondary mill is in a closed circuit with the secondary cyclones. Secondary overflow reports to the thickener feed box and underflow reports back to the secondary mill. (There is a 20 in Knelson that will take bleed from this material, for gravity gold collection.) The gravity gold reports to the gravity gold hopper while the Knelson discharge reports to the feed of the secondary mill. Both primary and secondary cyclone packs are made up of high efficiency Cavex cyclones, 80% -200 mesh being achieved.

Lime is added to this circuit to maintain a pH of 11.2, which creates a stable alkaline environment for the addition of sodium cyanide.

Flocculent is added to the combined cyclone overflow from both circuits, and the slurry is pumped to the 20 m diameter thickener. The slurry from the cyclones is 32% solids by weight and the thickener underflow will be approximately 54% solids by weight. The excess water is recovered and used in the process. If cyanide is added to the grinding circuit, this solution will be gold-bearing and will be pumped through carbon columns to recover the gold before returning to the process. The thickened slurry is pumped to the leach circuit. The circuit consists of five agitated tanks in series with a total volume 1,940 m^3. Cyanide is added to tank #1 and each of the leach tanks has air or pure oxygen pumped into it. This maintains a high dissolved oxygen level as is needed for the cyanide to dissolve the gold.

The CIL tank is approximately 1,900 m^3 and contains 15 g of carbon per litre of slurry. There is the ability to add oxygen to the slurry of this tank. Retention time is 19 hrs. The circuit will reach equilibrium for loading of the carbon. Usually the loaded carbon has a gold grade of 4,500 g/t or higher. Loaded carbon is pumped out of #1 CIL tank, screened, and washed. It is then transferred to the loaded carbon tank. A portion of carbon from #1 CIL tank is advanced forward. The strip vessel is located in the CIP circuit.
The slurry from the CIL tank reports to the CIP circuit which consists of six tanks with approximately 4 t of activated carbon in each tank. The retention time is four hours based on 2,000 t. The carbon columns hold 1.3 t of carbon and these are utilized if the practice of grinding in cyanide is used. The carbon from the carbon columns is also pumped across the loaded carbon screen and columns are advanced forward. Recovery of the gold from the carbon is a batch process stripping 3 t per batch. The turnaround time between batches is 24 hrs. Carbon is cleaned with acid and reactivated with the kiln and reused in the circuit.

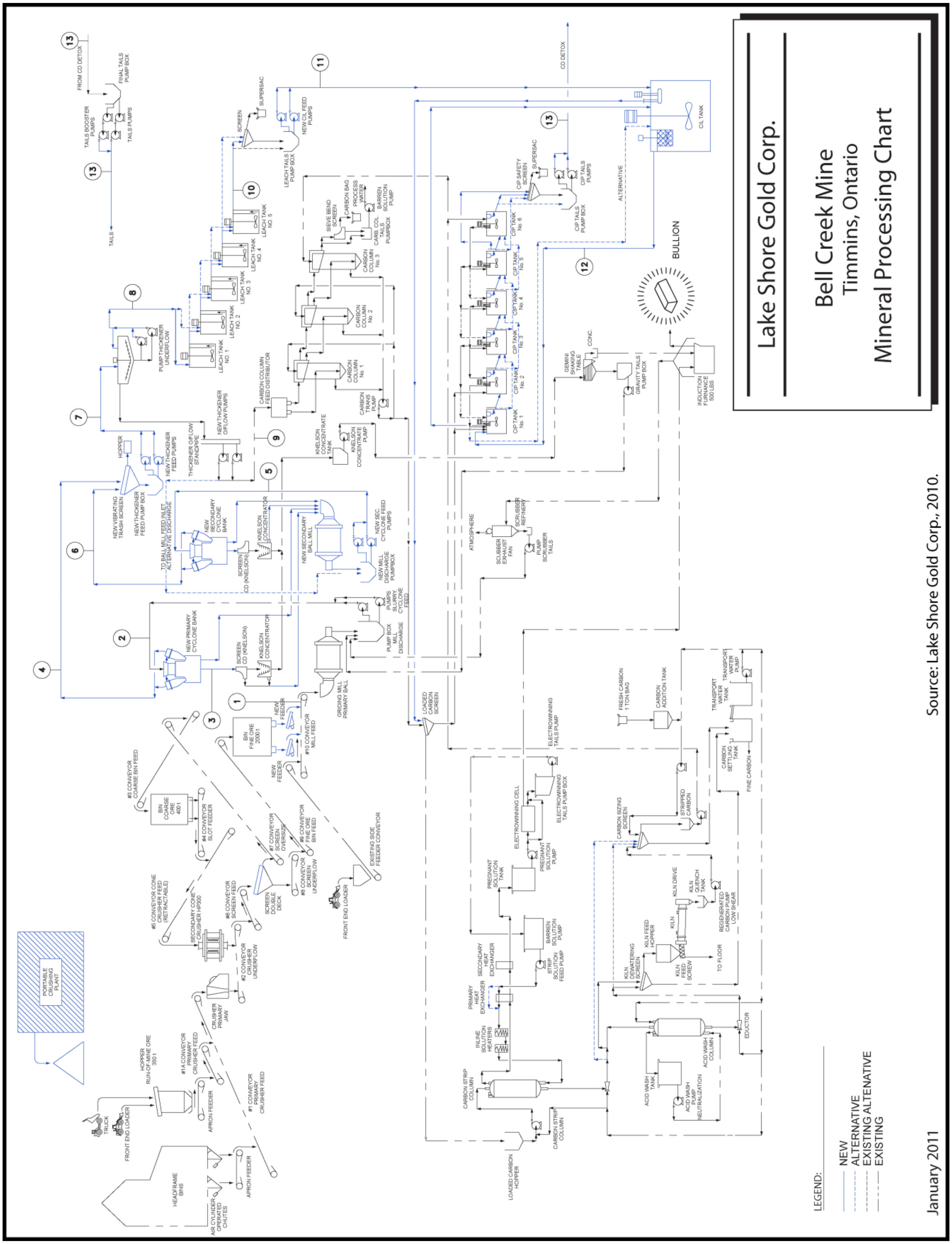
The loaded solution from the strip circuit is passed through the electrowinning cell in the refinery. The gold collects on the cathodes in a sludge form. The cell is washed weekly and the sludge collected in filter bags and dried. The dried sludge is mixed with reagents and melted in the induction furnace. Gold bullion bars are poured when the melt is completed.

The gravity gold material collected from the Knelson is transferred into the refinery where a shaker table is used to upgrade the gold content. The concentrate is dried, reagents are added, and the material is melted in the induction furnace. The gravity concentrate and the CIP gold sludge are melted separately due to different amounts of reagents used.

From the CIP circuit the slurry goes to the cyanide destruction plant. Cyanide level in the slurry is dropped to 2 ppm total cyanide or lower, using the SO_2 air process. The slurry then reports to the outside Bell Creek tailings facility.

Mineral processing is outlined in Figure 17.1, with recent upgrades highlighted in green.

Figure 17.1 Bell Creek Mill – Mineral Processing Chart



18.0 OTHER RELEVANT DATA AND INFORMATION

To the best of the author's knowledge all relevant data has been presented with in this report.

19.0 ADDITIONAL REQUIREMENTS

This section is not applicable.

20.0 INTERPRETATION AND CONCLUSIONS

Based on this report as well as the supporting reference documents, The Authors arrive at the following conclusions.

20.1 Exploration

- Drilling to date has defined a resource down to the -400m Level with additional drilling required to delineate resources below this level.
- Drilling should target potential rolls in structure or intersection of flat vein systems with the mafic/ultramafic contact.

20.2 Mineral Resources

- The Mineral Resource estimate is compliant with NI 43-101 requirements and CIM definitions.
- Indicated Mineral Resource were estimated at 2.2 Mt at an average grade of 1.75 g/t Au containing 125,000 ounces of gold
- Inferred Mineral Resources of 1.5Mt grading 3.60 g/t Au containing 168,800 ounces of gold have been estimated for both Pit and Underground Resources
- Grade capping should be further investigated as additional information, more detailed modelling or test mining of the zones is undertaken.

21.0 RECOMMENDATIONS

The Authors recommend that the following work be considered to progress the Vogel/Schumacher Deposit to a production decision.

- Additional drilling at depth to expand the resource base.
- Review of models and grade capping to incorporate any new drill results.
- Evaluate overburden and rock mass quality to determine appropriate pit and overburden slopes
- Review pit optimization parameters and re-generate optimum pit shell.
- Metallurgical test work on drill core / rejects to determine milling characteristics and suitability to be processed at the Bell Creek mill.

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23.0 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Initial Mineral Resource Estimate for the Vogel/Schumacher Deposit, Bell Creek Complex, Hoyle Township, Timmins, Ontario, Canada" and dated June 14, 2011, was prepared and signed by the following authors:

(Signed & Sealed) "Robert Kusins"

Dated at Timmins, Ontario
June 14, 2011

Robert Kusins, B.Sc., P.Geo.

(Signed & Sealed) "Stephen Conquer"

Dated at Timmins, Ontario
June 14, 2011

Stephen Conquer, B.Sc., P.Geo.

(Signed & Sealed) "Ralph Koch"

Dated at Timmins, Ontario
June 14, 2011

Ralph Koch, B.Sc., P.Geo.

24.0 CERTIFICATES OF QUALIFIED PERSONS

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CERTIFICATE of AUTHOR

I, Robert Kusins, P. Geo., do hereby certify that:

1. I reside at 126 Forest Place, Timmins, Ontario. P4N

2. I graduated with a B Sc degree in Geology from McMaster University in 1978.

3. I am a member of the Association of Professional Geoscientists of Ontario (Registration Number 0196).

4. I have worked continuously as a geologist for a total of 33 years since my graduation from university.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I am responsible for sections 16 and portions of 1, 2, 9, 20 and 21.

7. I have worked on drill hole compilation, interpretation and resource estimates on the Vogel/Schumacher property since June 2008. A site visit was completed on April 15, 2011.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am currently employed by Lake Shore Gold as Chief Resource Geologist. I currently hold 1,000 shares of Lake Shore Gold and options under the Lake Shore Gold's employee stock option plan.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 14th Day of June, 2011

R. Kusins

(Signed and Sealed)
R. Kusins, P. Geo.

PROFESSIONAL GEOSCIENTIST
ROBERT KUSINS
PRACTISING MEMBER
0196
ONTARIO

Ralph Koch P.Geo

CERTIFICATE of AUTHOR

I, Ralph Koch, B.Sc, P.Geo, as an author of this report do herby certify that:

1. I reside at 428 Pine St. North, Timmins Ontario, P4N 6L7
2. I graduated with a B.Sc Degree in Earth Sciences from the University of Waterloo in 1986.
3. I am a member of the Association of Professional Geoscientists of Ontario (Registration Number 0323).
4. I have worked continuously as a geologist for 25 years since graduation.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional Association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101
6. I am responsible for sections 15 and 17 and portions of sections 1, 2, 16, 20 and 21 of the report.
7. I visited the property on April 15th 2011.
8. 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.
9. I am currently employed by Lake Shore Gold Corporation in the capacity of Chief Mine Geologist for the Bell Creek Complex. I currently do not hold any securities of Lake Shore Gold other than options under the Lake Shore Gold's employee stock option plan.
10. I have read National Instrument 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with the instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

Dated this 14th day of June, 2011.

R. Koch, B.Sc, P.Geo

Stephen Conquer, P.Geo.
688 Dieppe St
Timmins, Ontario
P4N 5H2

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E-mail: sconquer@lsgold.com

Certificate of Author

I, Stephen Conquer, P.Geo. do hereby certify that:

1. I reside at 688 Dieppe St, Timmins, Ontario. P4N 5H2.

2. I graduated with a B.Sc. degree in Earth Science from the University of Waterloo in 1979.

3. I am a member of the Association of Professional Geoscientists of Ontario (registration number 0327).

4. I have worked as a geologist for a total of 31 years since my graduation from university.

5. I have read the definition of "qualified person" as set out in the National Instrument 43-101 ("NI 43-101") and certify that by means of my education, affiliation with a professional association (as defined in NI 43-101) and past and relevant work experience, I fulfil the requirements to be a "qualified person" for the purpose of NI 43-101.

6. I am responsible for sections 3, 4, 10, 11, 12, 13, 14, 18, 19, 22, 25 and portions of 1, 2, 6, 7, 8, 9, 20 and 21.

7. I have worked as Senior Project Geologist responsible for the surface exploration at the Bell Creek Complex from June to November 2009 and since August 2010 to the present and specifically for drilling on the Vogel program since August, 2010. A site visit was completed on April 15, 2011.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am currently employed by Lake Shore Gold Corp. as a Senior Geologist. I currently do not hold any securities of Lake Shore Gold Corp. other than options under Lake Shore's employee stock option plan.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 14th Day of June, 2011

PROFESSIONAL GEOSCIENTIST
STEPHEN W. CONQUER
PRACTISING MEMBER
0327
ONTARIO

Stephen Conquer

(Signed and Sealed)
Stephen Conquer, P.Geo.

25.0 Appendices

25.1 Lake Shore Gold Corp. - Vogel/Schumacher Drill Hole Summary Table

Hole ID	Collar								Drill Progress			Number of Samples	
	East (m)	North (m)	Elevation (m)	East (m)	North (m)	Elevation (m)	Azi	Dip	Start	Toe	Drilled		
	UTM	UTM	UTM	Field Grid	Field Grid	Field Grid	degrees	degrees	(m)	(m)	(m)	Assay	QA/QC
Schumacher Property													
GT-06-01	487371.88	5377301.50	286.17	6197.20	4889.67	2286.17	0	-60.00	0	116	116	0	3
GT-06-03	487374.97	5377397.50	285.91	6200.19	4985.77	2285.91	0	-60.00	0	101	101	0	0
GT-06-05	487377.59	5377496.00	286.05	6202.71	5084.40	2286.05	0	-60.00	0	101	101	0	0
GT-06-06	487471.06	5377317.50	289.18	6296.40	4905.72	2289.18	0	-60.00	0	101	101	0	0
GT-06-08	487470.75	5377416.50	289.62	6295.99	5004.95	2289.62	0	-60.00	0	101	101	0	0
GT-06-10	487569.88	5377195.00	290.48	6395.36	4783.68	2290.48	0	-60.00	0	101	101	0	0
GT-06-12	487571.66	5377299.00	290.58	6397.05	4887.61	2290.58	0	-60.00	0	101	101	0	0
GT-06-14	487672.63	5377202.50	289.33	6498.14	4791.27	2289.33	0	-60.00	0	101	101	0	1
GT-06-16	487671.91	5377314.00	289.55	6497.33	4902.76	2289.55	0	-60.00	0	101	101	0	1
H-06-01	488101.69	5376759.50	287.99	6886.00	4588.59	2287.99	0	-72.00	0	1,253	1,253	335	11
H-06-02	487667.44	5377083.50	289.43	6493.07	4672.11	2289.43	0	-70.00	0	1,079	1,079	272	10
H-06-08	488068.31	5377189.00	288.60	6894.03	4777.78	2288.60	0	-68.00	0	161	161	41	1
H-06-09	488044.00	5377153.00	288.61	6869.74	4741.98	2288.61	0	-81.00	0	224	224	106	4
H-06-10	488022.22	5377157.50	288.55	6847.93	4746.13	2288.55	0	-69.00	0	161	161	72	2
H-06-11	487365.63	5377109.00	286.55	6191.12	4697.33	2286.55	0	-69.00	0	975	975	130	5
										2006 Sub-Total	**4,777**	**956**	
S-08-01	487589.01	5377649.23	291.02	6414.09	5237.89	2291.02	2.00	-70.00	0	140	140	16	0
S-08-02	487464.66	5377647.32	288.78	6289.68	5235.86	2288.78	0.00	0.00	0	140	140	24	0
S-08-03	487341.48	5377297.28	285.44	6166.78	4885.55	2285.44	0.00	0.00	0	120	120	51	0
S-08-04	487342.22	5377329.00	285.47	6167.49	4917.29	2285.47	0.00	0.00	0	120	120	39	0
S-08-05	487434.53	5377647.38	287.58	6259.54	5235.90	2287.58	0.00	0.00	0	140	140	22	0
										2008 Sub-Total	**660**	**152**	
S-09-06	487367.00	5377105.50	286.71	6191.00	4693.00	2286.55	3.86	-79.64	0	489	489	11	0
S-09-06A									356	693	337	15	2
S-09-06B									635	1,260	625	56	5
S-09-06C									516	1,260	744	79	8
S-09-07	487315.06	5376960.00	287.94	6140.00	4550.00	2287.00	10.33	-79.74	0	1,420	1,420	157	14
S-09-07A									820	918	98	17	1
S-09-07B									881	1,529	648	234	23
S-09-07C									809	1,526	717	310	36
S-09-07D									700	918	218	0	0
S-09-07E									764	1,396	632	141	25
S-09-07F									530	984	454	34	6
										2009/2010 Deep Drilling Sub-Total	**6,382**	**1,174**	
S-10-08	488033.33	5377245.29	288.68	6860.10	4834.24	2288.68	0.00	-45.00	0	152	152	124	11
S-10-09	488051.88	5377239.86	288.79	6878.68	4828.86	2288.79	0.00	-45.00	0	161	161	134	13
S-10-10	488052.99	5377151.49	288.73	6879.98	4740.44	2288.73	0.00	-45.00	0	272	272	248	23
											585	**506**	
S-10-11	487315.63	5376960.00	288.04	6141.81	4399.94	2288.03	17.01	-80.80	0	978	978	107	15
S-10-11A									528	1,206	678	50	9
S-10-11B									1,135	1,633	498	203	43
S-10-11C									1,128	1,278	150	17	3
S-10-11D									1,101	1,753	652	222	38
S-10-11E									697	821	124	0	0
S-10-12	487351.94	5376170.50	286.95	6180.00	3760.00	2289.00	22.27	-80.00	0	1,660	1,660	442	79
S-10-12A									1,520	2,197	677	187	30
S-10-13	487502.91	5376655.00	291.09	6330.00	4245.00	2289.00	23	-77.24	0	1,799	1,799	192	36
S-10-14	487351.69	5376095.00	286.57	6180.00	3685.00	2289.00	18	-82.00	0	193	193	0	0
44	**Total LSG - Schumacher Drill Holes**									2010 Deep Drilling Sub-Total	**7,409**	**1,673**	
										Schumacher Total	**19,813**	**4,088**	
Vogel Property													
V-05-01	488374.94	5377622.00	289.42	7200.40	5211.39	2289.42	180.00	-69.00	0	300	300	29	1
V-05-02	488374.56	5377590.50	289.27	7200.03	5179.90	2289.27	180.00	-63.00	0	200	200	10	0
V-05-03	488104.00	5377339.50	289.05	6929.58	4928.51	2289.05	344.50	-82.00	0	150	150	42	0
V-05-04	488104.00	5377306.50	288.88	6929.63	4895.62	2288.88	0.00	-83.00	0	150	150	34	1
V-05-05	488103.97	5377276.50	288.94	6929.63	4865.68	2288.94	0.00	-75.00	0	175	175	57	1
V-05-06	488103.56	5377248.50	288.80	6929.23	4837.49	2288.80	0.00	-75.00	0	175	175	51	1
V-05-07	488103.84	5377216.00	288.63	6929.56	4804.74	2288.63	0.00	-75.00	0	175	175	43	1
V-05-08	488104.00	5377191.00	288.53	6929.72	4780.00	2288.53	0.00	-75.00	0	175	175	43	2
V-05-09	488128.31	5377196.50	288.69	6954.28	4785.28	2288.69	0.00	-73.00	0	190	190	52	2
V-05-10	488128.31	5377231.50	288.66	6954.00	4820.27	2288.66	0.00	-75.00	0	300	300	51	1
V-05-11	488129.03	5377259.50	288.80	6954.71	4848.51	2288.80	0.00	-75.00	0	250	250	59	2
V-05-12	488382.38	5377255.00	288.36	7208.16	4842.35	2288.36	0.00	-71.00	0	200	200	43	2
V-05-13	488382.22	5377228.00	288.34	7208.04	4817.23	2288.34	0.00	-73.00	0	240	240	78	3
V-05-14	488405.75	5377208.50	288.29	7231.59	4797.87	2288.29	0.00	-70.00	0	302	302	37	2
V-05-15	488405.88	5377250.00	288.24	7231.70	4837.51	2288.24	0.00	-73.00	0	221	221	50	3
V-05-16	488128.25	5377161.50	288.26	6954.01	4750.43	2288.26	0.00	-74.00	0	395	395	97	3
V-05-17	488151.59	5377177.50	288.38	6977.36	4766.45	2288.38	0.00	-50.00	0	242	242	94	3
V-05-18	488878.81	5377180.50	286.44	7704.89	4768.36	2286.44	356.00	-74.00	0	637	637	109	4
										2005 Sub-Total	**4,477**	**979**	
H-06-03	488088.63	5377174.50	288.53	6914.35	4763.23	2288.53	0.00	-75.00	0	302	302	84	3
H-06-04	488088.34	5377203.50	288.68	6914.06	4792.32	2288.68	0.00	-75.00	0	200	200	74	3
H-06-05	488088.44	5377230.50	288.86	6914.12	4819.41	2288.86	0.00	-75.00	0	251	251	147	5
H-06-06	488088.63	5377259.00	288.93	6914.30	4847.86	2288.93	0.00	-75.00	0	167	167	114	3
H-06-07	488088.63	5377283.50	288.83	6914.25	4872.28	2288.83	0.00	-75.00	0	245	245	140	5
H-06-12	488234.03	5376988.50	287.24	7059.99	4577.72	2287.24	0.00	-71.00	0	1,301	1,301	427	19
H-06-13	488330.19	5377214.50	288.52	7155.99	4803.75	2288.52	0.00	-48.00	0	131	131	63	3
H-06-14	488330.19	5377215.50	288.52	7155.99	4804.56	2288.52	0.00	-67.00	0	251	251	86	2
H-06-15	488355.59	5377215.00	288.52	7181.41	4804.38	2288.52	0.00	-66.00	0	230	230	71	4
H-06-16	488405.28	5377275.50	288.31	7231.06	4863.14	2288.31	0.00	-80.00	0	140	140	49	2
										2006 Sub-Total	**3,218**	**1,255**	
H-07-01	488431.87	5377256.90	288.19	7257.69	4844.45	2288.19	0.00	-66.00	0	152	152	64	3
H-07-02	488457.21	5377264.59	288.01	7283.03	4852.16	2288.01	0.00	-71.00	0	140	140	36	1
H-07-03	488481.02	5377266.41	287.99	7306.85	4854.01	2287.99	0.00	-70.00	0	150	150	54	2
H-07-04	488506.07	5377267.35	288.03	7331.91	4854.97	2288.03	0.00	-59.00	0	140	140	42	2
H-07-05	488530.33	5377267.86	287.71	7356.18	4855.50	2287.71	0.00	-60.00	0	140	140	10	1
H-07-06	488556.79	5377268.05	287.63	7382.66	4855.72	2287.63	0.00	-64.00	0	150	150	20	1
										2007 Sub-Total	**872**	**226**	
V-08-01	488451.08	5376943.66	287.30	7276.84	4532.82	2287.30	4.00	-72.00	0	1,166	1,166	167	14
V-08-01A									611	665	54	0	0
V-08-01B									590	670	80	0	0
V-08-01C									568	1,355	787	177	16
V-08-02	488709.89	5376947.28	286.12	7535.75	4536.69	2286.12	2.00	-72.00	0	1,240	1,240	162	14
										2008 Sub-Total	**3,327**	**506**	

Hole ID	Collar								Drill Progress			Number of Samples	
	East (m)	North (m)	Elevation (m)	East (m)	North (m)	Elevation (m)	Azi	Dip	Start	Toe	Drilled	Assay	QA/QC
	UTM	UTM	UTM	Field Grid	Field Grid	Field Grid	degrees	degrees	(m)	(m)	(m)		
V-09-01	488347.99	5376946.03	286.60	7175.13	4537.87	2286.60	4.00	-72.00	0	527	527	35	4
V-09-01A									359	1,007	648	204	18
										2009 Sub-Total	1,175	239	
V-10-03	488172.91	5377220.13	288.65	6999.81	4809.36	2288.65	0.00	-55.00	0	170	170	150	13
V-10-04	488192.94	5377200.85	288.45	7019.90	4790.11	2288.45	0.00	-55.00	0	200	200	184	20
V-10-05	488113.13	5377153.26	288.42	6940.14	4742.34	2288.42	0.00	-50.00	0	281	281	261	25
V-10-06	488113.31	5377227.09	288.66	6940.17	4816.20	2288.66	0.00	-50.00	0	182	182	149	16
V-10-07	488113.47	5377270.70	288.80	6940.24	4859.84	2288.80	0.00	-50.00	0	122	122	95	10
V-10-08	488133.20	5377261.73	288.90	6960.00	4850.90	2288.90	0.00	-55.00	0	131	131	104	12
V-10-09	unable to locate collar			6980.00	4820.00	2289.00	0.00	-50.00	0	152	152	139	14
V-10-10	unable to locate collar			6999.85	4730.64	2288.16	0.00	-50.00	0	271	271	264	30
V-10-11	488393.26	5377253.81	288.39	7220.21	4843.52	2288.39	0.00	-50.00	0	92	92	36	3
V-10-12	488393.17	5377232.85	288.33	7220.17	4822.54	2288.33	0.00	-55.00	0	131	131	111	11
V-10-13	488392.73	5377190.19	288.27	7219.82	4779.86	2288.27	0.00	-50.00	0	185	185	175	18
V-10-14	488392.79	5377140.27	288.04	7219.88	4729.91	2288.04	0.00	-50.00	0	272	272	216	25
V-10-15	488413.05	5377245.88	288.28	7240.04	4835.63	2288.28	0.00	-55.00	0	111	111	92	11
V-10-16	488193.29	5377132.21	287.93	7020.39	4721.44	2287.93	0.00	-55.00	0	310	310	353	38
V-10-17	488372.88	5377244.87	288.40	7199.84	4834.53	2288.40	0.00	-50.00	0	98	98	75	10
V-10-18	488172.79	5377141.45	288.16	7260.00	4820.00	2289.00	0.00	-45.00	0	120	120	69	8
V-10-19	488372.80	5377245.17	288.37	7199.76	4834.83	2288.37	0.00	-62.00	0	147	147	145	17
V-10-20	488452.81	5377236.85	287.79	7279.83	4826.66	2287.79	0.00	-45.00	0	111	111	88	9
V-10-21	488353.10	5377233.09	288.52	7180.08	4822.70	2288.52	0.00	-50.00	0	110	110	106	14
V-10-22	488473.01	5377212.32	287.90	7300.10	4802.17	2287.90	0.00	-50.00	0	162	162	164	17
V-10-23	488223.11	5377121.33	287.82	7050.25	4710.61	2287.82	0.00	-50.00	0	294	294	360	40
V-10-24	488332.97	5377241.53	288.66	7159.92	4831.10	2288.66	0.00	-50.00	0	95	95	76	7
V-10-25	488473.10	5377251.92	287.89	7300.10	4841.79	2287.89	0.00	-50.00	0	111	111	101	10
V-10-26	488233.25	5377250.14	288.79	7060.13	4839.51	2288.79	0.00	-55.00	0	100	100	85	8
V-10-27	488231.92	5377154.96	288.02	7058.99	4744.28	2288.02	0.00	-45.00	0	222	222	269	29
V-10-28	488334.94	5377108.42	287.78	7162.17	4697.93	2287.78	0.00	-50.00	0	290	290	193	33
V-10-29	488472.83	5377173.68	287.51	7300.00	4763.51	2287.51	0.00	-50.00	0	221	221	195	21
V-10-30	488158.18	5377203.27	288.45	6985.11	4792.46	2288.45	0.00	-50.00	0	190	190	142	24
V-10-31	488231.75	5377154.96	288.07	7058.83	4744.28	2288.07	0.00	-50.00	0	240	240	238	26
V-10-32	488492.99	5377247.12	287.76	7320.02	4837.03	2287.76	0.00	-55.00	0	141	141	110	11
V-10-33	488132.98	5377231.95	288.67	6959.84	4821.10	2288.67	0.00	-55.00	0	171	171	109	18
V-10-34	488245.62	5377118.82	287.53	7072.77	4708.15	2287.53	0.00	-55.00	0	312	312	216	36
V-10-35	488493.01	5377246.84	287.68	7320.03	4836.75	2287.68	0.00	-45.00	0	111	111	74	8
V-10-36	488353.19	5377193.29	288.28	7180.24	4782.87	2288.28	0.00	-55.00	0	212	212	224	27
V-10-37	488492.96	5377211.56	287.66	7320.05	4801.44	2287.66	0.00	-53.00	0	180	180	162	18
V-10-38	488292.96	5377231.16	288.54	7119.90	4820.65	2288.54	0.00	-55.00	0	131	131	117	13
V-10-39	488173.41	5377249.84	288.60	7000.26	4839.09	2288.60	0.00	-50.00	0	111	111	123	23
V-10-40	488513.23	5377181.33	287.53	7340.39	4771.25	2287.53	0.00	-50.00	0	222	222	70	11
V-10-41	488292.90	5377191.48	288.15	7119.93	4780.94	2288.15	0.00	-50.00	0	182	182	112	17
V-10-42	488201.18	5377172.35	288.26	7028.20	4761.61	2288.26	0.00	-55.00	0	249	249	250	44
V-10-43	488052.75	5377202.36	288.63	6879.62	4791.33	2288.63	0.00	-45.00	0	210	210	149	24
V-10-44	488292.40	5377121.76	288.02	7119.57	4711.18	2288.02	0.00	-50.00	0	305	305	140	25
V-10-45	488492.76	5377160.36	287.64	7319.96	4750.22	2287.64	0.00	-57.00	0	282	282	129	21
V-10-46	488270.53	5377252.58	288.43	7097.42	4842.03	2288.43	0.00	-50.00	0	90	90	66	8
V-10-47	488533.33	5377242.77	287.47	7360.38	4832.76	2287.47	0.00	-55.00	0	141	141	67	10
V-10-48	488542.27	5377134.18	287.26	7369.56	4724.13	2287.26	0.00	-47.00	0	300	300	203	37
V-10-49	488414.37	5377147.46	287.97	7241.55	4737.15	2287.97	0.00	-47.00	0	270	270	299	32
V-10-50	488378.33	5377166.77	288.08	7205.45	4756.39	2288.08	0.00	-49.00	0	211	211	209	31
V-10-51	488412.52	5377060.41	287.48	7239.89	4650.05	2287.48	0.00	-55.00	0	452	452	211	35
V-10-52	488432.33	5376965.42	287.11	7259.90	4555.05	2287.11	0.00	-58.00	0	602	602	233	40
V-10-53	488235.87	5377219.32	288.11	7062.81	4808.68	2288.11	0.00	-55.00	0	170	170	105	18
V-10-54	488257.95	5377201.33	288.34	7084.94	4790.73	2288.34	0.00	-55.00	0	230	230	94	16
V-10-55	488417.00	5377183.10	287.91	7244.11	4772.82	2287.91	0.00	-55.00	0	242	242	139	23
V-10-56	488372.92	5377200.06	288.22	7199.97	4789.70	2288.22	0.00	-50.00	0	170	170	115	20
V-10-57	488323.03	5377185.79	288.32	7150.08	4775.31	2288.32	0.00	-55.00	0	251	251	96	15
V-10-58	488292.52	5377165.47	288.05	7119.61	4754.92	2288.05	0.00	-55.00	0	251	251	151	31
V-10-59	488294.26	5377245.29	288.29	7121.18	4834.79	2288.29	0.00	-54.00	0	101	101	64	11
V-10-60	488333.05	5377250.85	288.49	7159.98	4840.43	2288.49	0.00	-45.00	0	89	89	35	7
V-10-61	488313.11	5377219.72	288.39	7140.09	4809.24	2288.39	0.00	-53.00	0	140	140	95	14
V-10-62	488392.87	5377170.68	288.13	7220.00	4760.34	2288.13	0.00	-55.00	0	242	242	138	24
V-10-63	488393.07	5377244.49	288.30	7220.04	4834.19	2288.30	0.00	-53.00	0	122	122	47	6
V-10-64	488413.07	5377254.74	288.20	7240.03	4844.49	2288.20	0.00	-55.00	0	131	131	48	7
V-10-65	488443.01	5377169.72	287.93	7270.17	4759.48	2287.93	0.00	-53.00	0	245	245	198	36
V-10-66	488317.50	5377153.68	288.09	7144.62	4743.18	2288.09	0.00	-57.00	0	251	251	142	25
V-10-67	488374.20	5377256.16	288.40	7201.14	4845.83	2288.40	0.00	-50.00	0	77	77	29	5
V-10-68	488442.42	5377049.35	287.42	7269.83	4639.05	2287.42	0.00	-60.00	0	500	500	244	42
V-10-69	488233.62	5377263.77	288.36	7060.47	4853.15	2288.36	0.00	-55.00	0	101	101	61	11
V-10-70	488153.82	5377264.75	288.83	6980.62	4853.96	2288.83	0.00	-48.00	0	101	101	72	12
V-10-71	488219.00	5377115.65	288.06	7046.14	4704.92	2288.06	0.00	-54.00	0	302	302	103	18
V-10-72	488258.07	5377248.96	288.80	7084.96	4838.38	2288.80	0.00	-50.00	0	146	146	75	11
V-10-73	488253.55	5377274.04	288.81	7080.39	4863.47	2288.81	0.00	-50.00	0	110	110	30	6
V-10-74	488133.26	5377285.07	289.22	6960.01	4874.26	2289.22	0.00	-55.00	0	80	80	26	4
V-10-75	488152.87	5377290.26	288.96	6979.62	4879.49	2288.96	0.00	-55.00	0	71	71	29	4
V-10-76	488172.45	5377336.99	289.05	6999.12	4926.28	2289.05	0.00	-90.00	0	65	65	8	0
V-10-77	488210.43	5377334.72	289.00	7037.12	4924.09	2289.00	0.00	-90.00	0	50	50	4	0
V-10-78	488233.07	5377290.55	288.88	7059.86	4879.94	2288.88	0.00	-53.00	0	92	92	27	3
V-10-79	488253.18	5377301.29	288.87	7079.96	4890.73	2288.87	0.00	-50.00	0	59	59	0	0
V-10-80	Casing not found			7100.00	4870.00	2289.00	0.00	-50.00	0	92	92	0	0
V-10-81	488293.11	5377270.43	288.84	7119.98	4859.93	2288.84	0.00	-55.00	0	62	62	34	6
V-10-82	488293.14	5377335.89	289.18	7119.87	4925.44	2289.18	0.00	-90.00	0	63	63	0	0
V-10-83	488313.11	5377264.30	288.67	7140.00	4853.84	2288.67	0.00	-55.00	0	71	71	47	8
V-10-84	488353.00	5377256.46	288.57	7179.93	4846.08	2288.57	0.00	-45.00	0	92	92	27	5
V-10-85	488353.18	5377321.36	288.78	7179.97	4911.02	2288.78	0.00	-90.00	0	53	53	0	0
V-10-86	488373.23	5377294.60	288.65	7200.08	4884.28	2288.65	0.00	-50.00	0	104	104	0	0
V-10-87	488393.04	5377271.41	288.51	7219.96	4861.12	2288.51	0.00	-45.00	0	101	101	0	0
V-10-88	488432.65	5377253.53	288.46	7259.62	4843.32	2288.46	0.00	-45.00	0	185	185	25	3
V-10-89	488433.45	5377339.61	288.95	7260.25	4929.44	2288.95	0.00	-90.00	0	83	83	0	0
V-10-90	488476.58	5377351.13	288.37	7303.38	4941.06	2288.37	0.00	-90.00	0	62	62	0	0
V-10-91	488472.90	5377315.66	288.21	7299.77	4905.56	2288.21	0.00	-90.00	0	62	62	0	0
130	Total LSG - Vogel Drill Holes									2010 Sub-Total	15,425	10,216	
										Vogel Total	28,494	13,421	
174	Total LSG - Vogel/Schumacher Drill Holes									Total LSG - Vogel/SchumacherMetres	48,307	17,509	

25.2 Vogel/Schumacher Historical Drilling Summary Table

Hole ID	Collar								Hole Length (m)	Assay Samples
	East (m)	North (m)	Elevation (m)	East (m)	North (m)	Elevation (m)	Azi	Dip		
	UTM	UTM	UTM	Field Grid	Field Grid	Field Grid	degrees	degrees		
Schumacher Property										
Canamax										
C226	487450.69	5377315.50	292.00	6235.00	5145.00	2292.00	0	-50	264.0	11
C227	487914.69	5377065.50	292.00	6699.00	4895.00	2292.00	0	-50	290.0	52
C242	487687.69	5377112.50	292.00	6472.00	4942.00	2292.00	0	-50	450.0	7
							Sub-Total Canamax		**1,004.0**	**70**
Falconbridge										
H1216	487375.31	5377105.00	287.15	6200.79	4693.29	2287.15	0	-50	318.8	72
H1217	487372.59	5377304.00	286.10	6197.88	4892.28	2286.10	0	-50	309.7	83
H1218	487723.69	5376860.50	293.00	6508.00	4690.00	2293.00	0	-50	315.8	112
H1219	488010.03	5376856.00	288.90	6794.33	4685.25	2288.90	0	-50	394.2	118
H1220	488016.28	5376974.00	289.20	6800.58	4803.07	2289.20	0	-50	300.5	160
H1235	488013.41	5376914.50	289.20	6797.71	4743.91	2289.20	0	-50	356.0	160
H1236	487980.00	5376886.50	289.30	6764.29	4715.74	2289.30	0	-50	407.0	133
H1237	487953.16	5376916.50	289.30	6737.46	4745.67	2289.30	0	-50	381.0	117
H1238	488039.34	5376856.50	288.90	6823.65	4685.82	2288.90	0	-55	344.0	140
H1239	488069.56	5376853.50	288.90	6853.85	4682.88	2288.90	0	-55	362.0	154
H1243	487777.16	5376870.00	289.30	6561.46	4699.52	2289.30	0	-50	337.1	45
H1244	487825.72	5376870.00	288.90	6610.03	4699.09	2288.90	0	-50	337.1	45
H1245	487886.56	5376870.00	289.00	6670.86	4699.09	2289.00	0	-50	334.8	39
H1246	487979.78	5376846.50	288.80	6764.09	4675.78	2288.80	0	-65	398.1	38
H1247	488039.34	5376836.50	288.90	6823.65	4665.82	2288.90	0	-65	99.9	0
H1247A	488039.28	5376815.00	288.70	6823.57	4644.46	2288.70	0	-68	541.3	74
H1248	487973.88	5377441.00	290.70	6758.17	5270.40	2290.70	180	-50	270.1	47
H1249	487559.47	5376889.00	290.20	6343.78	4718.27	2290.20	0	-50	276.2	21
H1273	487940.34	5376848.00	288.80	6724.63	4677.52	2288.80	0	-50	312.7	28
H1274	487982.84	5376795.50	288.80	6767.15	4624.97	2288.80	0	-55	483.4	37
H1275	487587.19	5377360.00	291.20	6371.49	5189.55	2291.20	220	-50	312.7	57
H1276	487692.38	5377226.50	290.60	6476.66	5055.60	2290.60	245	-50	312.7	3
H1280	488013.75	5376794.50	288.50	6798.06	4623.85	2288.50	0	-65	118.9	0
H1281	488013.75	5376764.50	288.50	6798.06	4593.85	2288.50	0	-65	510.9	40
							Sub-Total Falconbridge		**8,135.1**	**1,723**
Pentland-Firth										
PSC1	488110.09	5376948.50	288.71	6894.38	4777.71	2288.71	0	-50	284.0	93
PSC2	488110.34	5376885.00	288.56	6894.63	4714.16	2288.56	0	-50	368.0	120
PSC3	488109.88	5376969.50	288.64	6894.19	4798.73	2288.64	0	-50	236.0	99
PSC4	488085.69	5376940.50	288.00	6870.00	4770.00	2288.00	0	-50	257.0	101
PSC5	488109.75	5376989.50	288.91	6894.04	4819.00	2288.91	0	-50	218.0	61
PSC6	488085.06	5376976.00	288.79	6869.35	4805.06	2288.79	0	-50	233.0	91
PSC7	488085.69	5376913.50	288.00	6870.00	4743.00	2288.00	0	-50	315.0	142
PSC8	488085.81	5376889.00	288.15	6870.11	4718.36	2288.15	0	-52	380.0	152
PSC9	488063.59	5376961.00	288.85	6847.89	4790.12	2288.85	0	-51	257.0	102
PSC10		not available		6848.23	4746.40	2288.54	0	-50	320.0	
PSC11	488063.53	5377002.00	289.09	6847.82	4831.24	2289.09	0	-50	203.0	95
PSC12		not available		6200.00	4479.00	2288.00	0	-45	220.0	
PSC13	488046.03	5376896.50	288.51	6830.33	4725.66	2288.51	0	-50	356.0	109
PSC14	488037.88	5377002.00	289.21	6822.19	4831.22	2289.21	0	-50	200.0	63
PSC15	488063.13	5377028.00	289.35	6847.42	4857.52	2289.35	0	-50	146.0	16
PSC16	488046.78	5376835.50	288.39	6831.08	4664.71	2288.39	0	-65	317.0	76
PSC17	488046.78	5376835.50	288.39	6831.08	4664.71	2288.39	0	-60	407.0	109
PSC18	488039.41	5376962.50	289.06	6823.70	4791.95	2289.06	0	-50	254.0	47
PSC19	487815.69	5377180.50	288.00	6600.00	5010.00	2288.00	0	-50	375.0	81
PSC20	487765.69	5377102.50	288.00	6550.00	4932.00	2288.00	0	-50	402.0	33
PSC21	487565.69	5377295.50	288.00	6350.00	5125.00	2288.00	0	-50	221.0	19
PSC22	488063.50	5376971.50	289.01	6847.79	4800.98	2289.01	0	-90	143.0	82
PSC23	488064.00	5376916.50	288.85	6848.29	4745.76	2288.85	0	-90	122.0	49
PSC24	488062.84	5377105.50	289.75	6847.13	4934.98	2289.75	180	-50	284.0	185
PSC25	487865.69	5377235.50	288.00	6650.00	5065.00	2288.00	270	-50	281.0	26
PSC26	488094.19	5376807.50	288.00	6878.50	4637.00	2288.00	357	-65	698.0	294
PSC27	488109.19	5377127.50	288.00	6893.50	4957.00	2288.00	182	-45	317.0	205
PSC28	488087.69	5377106.50	288.00	6872.00	4936.00	2288.00	181	-45	299.0	152
PSC29	488052.69	5377060.50	288.00	6837.00	4890.00	2288.00	295	-65	396.0	132
PSC30	488052.69	5377047.50	288.00	6837.00	4877.00	2288.00	295	-70	325.0	164
57	**Total Historical - Schumacher Drill Holes**						**Sub-Total Falconbridge**		**8,834.3**	**2,898**
							Total Schumacher		**17,973.4**	**4,691**
Vogel Property										
Inco										
32946	488738.50	5376997.00	287.06	7522.81	4826.36	2287.06	175.00	-55.00	172.2	42
32948	488357.44	5377015.00	289.12	7141.73	4844.41	2289.12	172.00	-55.00	193.6	63
							Sub-Total Inco		**365.8**	**105**
Canamax										
870101	488892.94	5376917.50	286.16	7677.23	4746.71	2286.16	359.00	-50.00	234.0	33
870102	488895.09	5376792.00	285.56	7679.40	4621.05	2285.56	0.00	-55.00	330.0	57
870103	488889.72	5377016.50	286.37	7674.01	4845.89	2286.37	0.00	-50.00	240.0	13
870104	488623.69	5376830.50	287.00	7408.00	4660.00	2287.00	0.00	-50.00	405.0	105
870105	488505.06	5376912.00	287.52	7289.37	4741.07	2287.52	0.00	-62.00	360.0	54
870106	488625.06	5376969.50	287.11	7409.36	4798.57	2287.11	2.00	-50.00	228.0	22
870107	488742.75	5376916.00	286.43	7527.04	4745.46	2286.43	0.00	-50.00	267.0	50
870108	488193.69	5376910.50	287.00	6978.00	4740.00	2287.00	0.00	-50.00	321.0	70
870109	488742.97	5376889.50	286.44	7527.26	4718.90	2286.44	0.00	-55.00	348.0	94
870110	488193.69	5376890.50	287.00	6978.00	4720.00	2287.00	0.00	-55.00	375.0	164
870111	488774.50	5376885.50	286.28	7558.80	4714.89	2286.28	0.00	-55.00	354.0	77
870112	488713.31	5376864.50	286.35	7497.60	4693.66	2286.35	0.00	-65.00	510.0	103
870113	488318.75	5376905.50	287.00	7103.05	4734.86	2287.00	0.00	-50.00	321.0	92
870114	488317.69	5376820.50	287.00	7102.00	4650.00	2287.00	0.00	-55.00	381.0	116
870115	488382.63	5376910.50	287.00	7166.94	4740.00	2287.00	0.00	-50.00	189.0	73
870116	488260.03	5376906.00	287.00	7044.32	4735.15	2287.00	0.00	-50.00	222.0	138
							Sub-Total Canamax		**5,085.0**	**1,261**

Hole ID	Collar								Hole Length (m)	Assay Samples
	East (m)	North (m)	Elevation (m)	East (m)	North (m)	Elevation (m)	Azi	Dip		
	UTM	UTM	UTM	Field Grid	Field Grid	Field Grid	degrees	degrees		
Black Hawk										
BH951	488287.69	5376908.50	288.31	7071.98	4737.89	2288.31	0.00	-50.00	312.0	107
BH952	488288.56	5376940.50	288.34	7072.86	4770.00	2288.34	0.00	-50.00	284.0	64
BH953	488288.91	5376971.50	288.60	7073.22	4800.76	2288.60	0.00	-50.00	161.0	54
BH954	488319.69	5376938.50	288.00	7104.00	4768.00	2288.00	0.00	-50.00	113.0	25
BH955	488319.59	5376941.50	288.51	7103.88	4770.69	2288.51	0.00	-50.00	293.0	96
BH956	488318.44	5376974.50	288.68	7102.74	4803.81	2288.68	0.00	-50.00	171.0	48
BH957	488256.44	5376940.50	288.56	7040.75	4769.84	2288.56	0.00	-50.00	290.0	123
BH958	488255.59	5376974.00	288.51	7039.90	4803.37	2288.51	0.00	-50.00	233.0	83
BH959	488224.81	5376930.50	288.65	7009.11	4760.03	2288.65	0.00	-50.00	287.0	91
BH9510	488224.03	5376995.00	288.95	7008.33	4824.38	2288.95	0.00	-50.00	152.0	52
BH9511	488254.03	5377031.00	289.02	7038.32	4860.34	2289.02	0.00	-50.00	104.0	12
BH9512	488350.13	5376951.00	288.71	7134.43	4780.08	2288.71	0.00	-50.00	182.0	45
BH9513	488347.59	5377002.00	288.90	7131.90	4831.12	2288.90	0.00	-55.00	98.0	29
BH9514	488289.50	5377010.50	289.00	7073.80	4839.83	2289.00	0.00	-50.00	80.0	22
BH9515	488223.66	5377034.00	289.12	7007.95	4863.22	2289.12	0.00	-50.00	105.0	7
BH9516	488193.19	5377012.50	289.04	6977.49	4841.89	2289.04	0.00	-50.00	122.0	24
BH9517	488159.66	5377006.00	289.10	6943.96	4835.36	2289.10	0.00	-50.00	138.0	32
BH9518	488157.31	5376931.50	288.62	6941.60	4760.91	2288.62	0.00	-50.00	291.0	81
BH9519	488155.63	5376891.00	288.38	6939.93	4720.48	2288.38	0.00	-55.00	329.0	57
BH9520	488225.38	5376886.50	288.26	7009.67	4715.78	2288.26	0.00	-52.00	372.0	116
BH9521	488273.16	5376905.00	288.39	7057.46	4734.43	2288.39	0.00	-58.00	308.0	73
BH9522	488348.16	5376896.00	287.78	7132.47	4725.06	2287.78	0.00	-62.00	300.0	52
BH9523	488423.19	5376958.50	288.46	7207.48	4787.87	2288.46	0.00	-50.00	203.0	88
BH9524	488423.19	5376885.50	288.21	7207.49	4715.00	2288.21	0.00	-50.00	354.0	94
BH9525	488474.31	5376949.00	288.24	7258.60	4778.18	2288.24	0.00	-50.00	260.0	52
BH9526	488474.81	5376905.50	287.79	7259.10	4734.68	2287.79	0.00	-50.00	312.0	90
BH9527	488505.41	5376949.50	287.71	7289.72	4778.56	2287.71	0.00	-50.00	272.0	37
BH9528	488546.94	5376968.50	287.67	7331.23	4797.60	2287.67	0.00	-50.00	248.0	44
BH9529	488546.44	5376923.00	287.41	7330.73	4752.36	2287.41	0.00	-50.00	292.0	74
BH9530	488586.59	5376971.00	287.57	7370.90	4800.07	2287.57	0.00	-50.00	227.0	43
BH9531	488585.81	5376912.50	287.30	7370.10	4741.75	2287.30	0.00	-50.00	293.0	88
BH9532	488672.25	5376966.00	286.69	7456.55	4795.24	2286.69	0.00	-50.00	251.0	59
BH9533	488672.31	5376882.00	286.63	7456.62	4711.35	2286.63	0.00	-50.00	376.0	118
BH9534	488713.25	5376909.00	286.47	7497.56	4738.25	2286.47	0.00	-50.00	305.0	85
BH9535	488772.56	5376941.50	286.63	7556.86	4770.70	2286.63	0.00	-50.00	281.0	90
BH9536	488822.78	5376954.00	286.61	7607.07	4783.33	2286.61	0.00	-48.00	254.0	27
BH9537	488823.06	5376876.00	286.43	7607.37	4705.05	2286.43	0.00	-50.00	357.0	83
BH9538	488857.91	5376859.00	286.28	7642.21	4688.34	2286.28	0.00	-53.00	444.0	126
BH9539	488856.69	5376908.50	286.47	7641.00	4737.91	2286.47	0.00	-50.00	335.0	75
BH9540	488173.63	5376855.00	288.26	6957.94	4684.50	2288.26	0.00	-60.00	398.0	112
BH9541	488225.41	5376835.00	287.68	7009.72	4664.48	2287.68	0.00	-60.00	431.0	100
BH9542	488274.13	5376851.50	287.80	7058.43	4681.00	2287.80	0.00	-60.00	410.0	100
BH9543	488325.28	5376807.50	287.55	7109.57	4636.93	2287.55	0.00	-65.00	502.0	68
BH9544	488422.69	5376855.50	288.00	7207.00	4685.00	2288.00	355.00	-62.00	164.0	0
BH9545	488423.13	5377259.00	289.27	7207.42	5088.50	2289.27	180.00	-57.00	506.0	64
BH9546	488470.88	5377237.50	289.03	7255.19	5066.56	2289.03	180.00	-55.00	470.0	69
BH9547	488522.19	5377256.50	288.71	7306.48	5085.57	2288.71	180.00	-55.00	495.0	65
BH9548	488572.16	5377256.00	288.10	7356.46	5085.42	2288.10	180.00	-55.00	423.0	80
BH9549	488225.19	5376853.00	287.88	7009.50	4682.21	2287.88	0.00	-57.00	399.0	133
BH9550	488274.13	5376871.00	287.88	7058.42	4700.11	2287.88	0.00	-60.00	425.0	113
BH9651	488197.69	5376801.50	288.00	6982.00	4631.00	2288.00	0.00	-66.00	155.0	32
BH9652	488202.81	5376802.00	287.77	6987.11	4631.36	2287.77	0.00	-75.00	614.5	274
BH9653	488747.69	5376860.50	288.00	7532.00	4690.00	2288.00	8.00	-68.00	556.5	149
							Sub-Total Black Hawk		**15,738.0**	**3,925**
Kinross										
6410	488225.94	5376804.00	287.74	7010.24	4633.49	2287.74	0.00	-62.00	272.0	13
6411	488431.41	5376856.00	288.08	7215.70	4685.08	2288.08	0.00	-50.00	154.0	0
6412	488431.41	5376856.00	288.08	7215.70	4685.08	2288.08	0.00	-55.00	443.0	44
6413	488226.09	5376786.50	287.59	7010.38	4615.69	2287.59	0.00	-65.00	602.0	80
6414	488773.34	5376861.50	286.40	7557.64	4691.01	2286.40	0.00	-70.00	658.0	196
6415	488623.13	5376853.50	286.87	7407.41	4682.87	2286.87	0.00	-55.00	454.0	85
6416	488623.66	5376831.00	286.96	7407.95	4660.05	2286.96	0.00	-60.00	512.0	346
6417	488623.44	5376804.00	285.96	7407.75	4633.42	2285.96	358.75	-63.00	527.0	159
6418	488432.47	5376806.00	287.67	7216.78	4635.10	2287.67	355.00	-60.00	517.0	89
6419	488432.47	5376805.50	287.88	7216.76	4634.73	2287.88	355.00	-70.00	572.0	116
6420	488158.44	5376804.50	287.97	6942.74	4633.95	2287.97	0.00	-60.00	548.0	183
6421	488288.44	5376852.00	288.44	7072.75	4681.40	2288.44	356.75	-70.00	604.0	158
6422	488315.38	5376807.50	287.59	7099.68	4636.64	2287.59	0.00	-73.00	750.0	182
6423	488348.25	5376801.50	287.48	7132.54	4631.04	2287.48	358.00	-58.50	566.0	99
6424	488822.78	5376836.50	286.36	7607.08	4665.70	2286.36	0.00	-60.00	608.0	78
6425	488822.84	5376836.00	286.39	7607.13	4665.18	2286.39	5.00	-70.00	778.0	174
6426	488874.28	5376808.50	286.42	7658.59	4638.01	2286.42	358.50	-60.00	527.0	87
6427	488724.38	5376809.50	286.47	7508.66	4639.04	2286.47	355.50	-70.00	686.0	108
6428	488373.13	5376853.00	288.06	7157.41	4682.37	2288.06	0.00	-60.00	164.0	22
6429	488373.25	5376852.50	288.22	7157.56	4681.56	2288.22	359.18	-60.00	489.0	113
6430	488373.50	5376805.00	288.05	7157.79	4634.30	2288.05	4.00	-70.00	608.0	103
6431	488475.16	5376887.00	288.29	7259.45	4716.39	2288.29	0.75	-65.00	521.0	105
6432	488475.13	5376805.50	287.59	7259.43	4634.56	2287.59	0.00	-64.00	529.0	90
6433	488572.94	5376905.50	287.84	7357.23	4734.69	2287.84	0.83	-65.00	508.0	130
6434	488546.91	5376857.00	287.57	7331.22	4686.50	2287.57	0.75	-58.00	485.0	147
6435	488546.94	5376857.00	287.59	7331.23	4686.13	2287.59	1.00	-68.00	527.0	117
6436	488424.03	5376752.50	287.59	7208.32	4581.65	2287.59	0.00	-70.00	683.0	79
6437	488624.53	5376707.50	286.19	7408.82	4536.68	2286.19	0.00	-70.00	926.0	172
6438	488192.00	5376966.50	288.39	6976.31	4795.95	2288.39	0.00	-53.00	251.0	108
6439	488189.09	5376894.50	288.07	6973.40	4723.57	2288.07	0.00	-54.00	350.0	200
6440	488252.75	5376880.00	288.04	7037.04	4709.40	2288.04	0.00	-51.00	302.0	104
6441	488247.97	5376880.00	287.91	7032.28	4709.13	2287.91	0.00	-57.00	394.0	256
6442	488248.00	5376879.50	287.97	7032.31	4708.80	2287.97	0.00	-66.00	450.0	358
6443	488222.13	5376869.00	287.98	7006.42	4698.33	2287.98	0.00	-55.00	407.0	323
6444	488220.22	5376896.00	287.89	7004.51	4725.22	2287.89	0.00	-65.00	450.2	317
6445	488273.44	5376883.50	287.84	7057.74	4712.89	2287.84	0.00	-62.00	401.0	212

Hole ID	Collar								Hole Length (m)	Assay Samples
	East (m)	North (m)	Elevation (m)	East (m)	North (m)	Elevation (m)	Azi	Dip		
	UTM	UTM	UTM	Field Grid	Field Grid	Field Grid	degrees	degrees		
6446	488291.78	5376850.00	287.72	7076.08	4679.54	2287.72	354.00	-53.00	131.0	2
6447	488291.66	5376850.50	287.73	7075.96	4679.62	2287.73	0.00	-56.00	401.0	204
6448	488320.38	5376865.00	287.59	7104.67	4694.47	2287.59	0.00	-54.00	401.0	184
6449	488320.38	5376865.00	287.62	7104.67	4694.09	2287.62	0.00	-58.00	401.0	155
6455	488221.75	5377234.00	289.57	7006.04	5063.44	2289.57	180.00	-70.00	326.0	0
6456	488221.19	5377335.50	289.73	7005.50	5164.68	2289.73	185.00	-70.00	272.0	0
6457	488221.47	5377435.00	290.21	7005.77	5264.45	2290.21	185.00	-70.00	270.0	0
6458	488219.16	5377535.50	290.42	7003.46	5364.91	2290.42	185.00	-70.00	270.0	14
6461	488217.69	5376960.50	288.40	7002.00	4790.00	2288.40	0.00	-48.00	165.0	66
6462	488241.69	5376935.50	288.24	7026.00	4765.00	2288.24	0.00	-55.00	83.0	40
6463	488237.69	5376974.50	288.48	7022.00	4804.00	2288.48	0.00	-57.00	110.0	43
6464	488237.69	5376974.50	288.48	7022.00	4803.90	2288.48	1.00	-52.00	158.0	56
6465	488238.69	5376984.50	288.49	7023.00	4814.00	2288.49	1.00	-48.00	131.0	51
6466	488238.69	5377020.50	288.71	7023.00	4850.00	2288.71	0.00	-54.00	74.0	35
6467	488244.69	5376920.50	287.87	7029.00	4750.00	2287.87	0.00	-57.00	101.0	43
6468	488251.69	5376959.50	288.17	7036.00	4789.00	2288.17	0.00	-50.00	110.0	43
6469	488244.69	5377002.50	288.60	7029.00	4832.00	2288.60	2.00	-48.00	101.0	42
6470	488270.69	5376929.50	288.13	7055.00	4759.00	2288.13	0.00	-52.00	86.0	38
6471	488270.69	5376970.50	288.46	7055.00	4800.00	2288.46	0.00	-55.00	115.0	42
6472	488270.69	5376994.50	288.50	7055.00	4824.00	2288.50	0.00	-57.00	110.0	60
6473	488265.69	5377003.50	288.54	7050.00	4833.00	2288.54	0.00	-50.00	98.0	44
6474	488279.69	5376934.50	288.28	7064.00	4764.00	2288.28	0.00	-57.00	76.3	32
6475	488286.69	5376958.50	288.27	7071.00	4788.00	2288.27	0.00	-56.00	83.0	40
6476	488300.69	5376925.50	288.08	7085.00	4755.00	2288.08	0.00	-54.00	119.0	42
6477	488302.69	5376951.50	288.16	7087.00	4781.00	2288.16	0.00	-48.00	146.0	48
6478	488297.69	5376994.50	288.13	7082.00	4824.00	2288.13	0.00	-53.00	107.0	33
6479	488305.69	5376927.50	288.15	7090.00	4757.00	2288.15	0.00	-50.00	140.0	19
6480	488304.69	5376948.50	288.18	7089.00	4778.00	2288.18	0.00	-45.00	119.0	40
6481	488218.69	5376957.50	288.40	7003.00	4787.00	2288.40	352.00	-48.00	50.0	81
						Sub-Total Kinross/Blackhawk			**22,977.5**	**6,650**
Glencairn										
GV04-01	488672.56	5376835.50	286.84	7456.85	4664.69	2286.84	358.70	-52.00	434.0	209
GV04-02	488672.56	5376835.00	286.78	7456.85	4664.21	2286.78	360.00	-69.00	585.0	369
GV04-03	488319.66	5376882.50	287.97	7103.96	4711.60	2287.97	0.00	-54.00	326.0	138
GV04-04	488347.56	5376924.50	288.21	7131.86	4753.82	2288.21	0.00	-52.00	233.0	130
GV04-05	488372.56	5376944.50	288.58	7156.85	4774.00	2288.58	0.00	-51.00	257.0	129
GV04-06	488672.44	5376925.00	286.52	7456.75	4754.18	2286.52	0.00	-51.00	274.5	123
GV04-07	488742.34	5376876.00	286.46	7526.65	4705.46	2286.46	0.00	-62.50	480.0	271
GV04-08	488397.16	5376906.00	287.80	7181.47	4735.47	2287.80	0.00	-55.00	363.0	156
GV04-09	488622.41	5376877.50	286.93	7406.71	4706.72	2286.93	358.40	-52.00	363.0	158
GV04-10	488397.59	5376975.00	288.60	7181.88	4804.05	2288.60	0.00	-52.50	240.0	103
GV04-11	488422.63	5376922.00	288.08	7206.92	4751.46	2288.08	0.00	-52.00	295.0	152
GV04-12	488622.47	5376743.50	286.70	7406.78	4572.86	2286.70	0.00	-67.50	918.0	254
GV04-13	488447.59	5376969.00	288.02	7231.88	4798.15	2288.02	0.00	-50.00	227.0	81
GV04-14	488447.50	5376926.00	288.22	7231.80	4755.44	2288.22	0.00	-50.00	300.0	171
GV04-15	488475.47	5376906.00	287.69	7259.78	4735.40	2287.69	0.00	-60.00	351.0	279
GV04-16	488504.41	5376926.50	287.49	7288.71	4755.89	2287.49	0.00	-55.00	313.0	167
GV04-17	488290.66	5376906.00	288.06	7074.97	4735.45	2288.06	0.00	-53.00	296.0	166
GV04-18	488482.56	5376747.00	287.56	7266.87	4576.16	2287.56	0.41	-65.00	783.0	302
GV04-19	488160.38	5376964.50	288.65	6944.67	4794.00	2288.65	0.00	-49.00	264.0	188
GV04-20	488623.50	5376761.00	286.39	7407.79	4590.34	2286.39	0.83	-63.00	708.0	353
GV04-21	488747.53	5376801.50	286.47	7531.83	4630.91	2286.47	357.37	-72.00	930.0	316
GV04-22	488447.66	5376881.00	288.66	7231.96	4710.09	2288.66	1.27	-53.00	383.0	235
GV04-23	488478.38	5376784.00	287.86	7262.67	4613.36	2287.86	359.45	-62.50	688.0	294
159	**Total Historical - Vogel Drill Holes**						**Sub-Total Glencairn**		**10,011.5**	**4,744**
								Total Vogel	**54,177.7**	**16,685**
217	**Total Historical - Vogel/Schumacher Drill Holes**				**Total Historical - Vogel/SchumacherMetres**				**54,275.7**	**16,714**

25.3 Vogel/Schumacher Property – Significant Historical Assay Results

Hole Number	From (m)	To (m)	Length (m)	Assay (gpt)	Comments
Schumacher Property					
Falconbridge					
H1219	150.65	151.00	0.35	3.36	
	151.00	152.00	1.00	2.61	
	159.00	159.30	0.30	8.82	
	160.70	161.00	0.30	36.69	
	164.25	164.60	0.35	4.59	
	167.50	169.00	1.50	3.43	
	277.10	278.00	0.90	4.21	
H1220	127.45	127.70	0.25	13.34	
	130.50	132.00	1.50	347.00	
	146.50	147.00	1.00	2.40	
H1235	31.85	32.35	0.50	5.69	
	32.35	33.00	0.65	4.51	
	41.00	41.70	0.70	7.06	
	229.00	299.55	0.55	25.50	
H1236	242.60	244.00	1.40	2.14	
H1237	80.00	81.50	1.50	2.13	
H1238	121.50	123.00	1.50	2.12	
	123.00	124.00	1.00	3.54	
	132.50	134.00	1.50	2.59	
	300.75	301.35	0.60	3.75	
H1239	208.45	209.00	0.55	4.75	
H1245	114.80	115.50	0.70	9.23	
H1246	330.32	331.31	0.99	3.34	
H1247A	301.00	302.50	1.50	5.23	
Pentland-Firth					
PSC-1	71.00	83.00	12.00	5.12	
includes	75.20	78.50	2.80	19.71	
includes	75.20	75.60	0.40	131.37	VG
	137.00	151.40	14.00	1.71	
includes	146.00	151.00	5.00	2.64	VG
PSC-2	82.50	85.50	3.00	2.86	
includes	82.50	83.50	1.00	6.74	
	105.20	105.70	0.50	12.39	
	147.70	148.70	1.00	5.56	
PSC-3	92.00	111.50	19.50	1.13	
includes	108.80	111.50	2.70	5.29	
includes	108.80	109.80	1.00	13.06	
	127.60	131.90	4.30	3.33	VG
includes	127.60	128.20	0.60	11.50	VG
	139.60	142.00	2.40	2.90	
	148.50	151.80	3.30	1.71	
	156.10	160.60	4.50	1.73	
includes	159.60	160.60	1.00	6.37	
PSC-4	64.00	69.50	5.00	4.77	
includes	64.00	64.50	0.50	32.31	VG
	109.20	111.00	1.80	2.98	
	137.90	139.50	1.60	12.21	
	150.50	151.50	1.00	7.97	
	161.00	162.80	1.80	5.16	
PSC-5	73.80	82.70	8.90	1.21	
includes	78.60	79.50	0.90	3.48	
	97.30	102.60	5.30	1.33	
includes	102.00	102.60	0.60	3.70	
PSC-6	52.80	53.80	1.00	2.42	
	75.10	93.60	10.00	0.96	VG
includes	78.10	78.40	0.30	23.20	VG
	99.60	100.20	0.60	7.70	
	156.50	158.10	1.60	3.14	
PSC-7	54.00	58.00	4.00	0.92	
	63.00	65.30	2.30	2.24	
includes	63.00	63.50	0.50	7.93	VG
	88.60	88.90	0.30	20.01	VG
	97.80	98.50	0.70	6.51	
	210.40	211.40	1.00	1.09	
	212.90	213.40	0.50	2.74	
	221.90	222.65	0.75	35.66	VG
PSC-8	93.80	98.50	4.70	2.38	
includes	93.80	94.30	0.50	7.76	
and	96.30	96.55	0.25	7.13	VG
	116.00	120.00	4.00	1.22	
includes	119.70	120.00	0.30	8.70	
	283.40	283.70	0.30	4.96	VG
	294.80	298.80	4.00	3.10	
includes	294.80	295.80	1.00	10.93	
PSC-13	66.00	67.00	1.00	5.42	
	77.80	78.20	0.40	3.47	VG
	156.00	158.60	2.60	1.93	
	265.80	266.60	0.80	4.66	
	272.20	272.50	0.30	3.89	VG
PSC-14	45.00	45.60	0.60	2.85	
	48.50	49.00	0.50	2.82	
	77.60	79.70	2.10	2.49	VG
	100.00	100.30	0.30	11.92	
	110.00	112.00	2.00	2.01	

Hole Number	From (m)	To (m)	Length (m)	Assay (gpt)	Comments
Vogel Property					
Canamax					
870101	122.20	122.70	0.50	287.74	VG
870104	322.00	325.00	3.00	3.99	
	337.00	339.00	2.00	2.11	
	359.00	360.00	1.00	108.21	VG
	384.00	386.00	2.00	6.43	VG
870107	127.00	129.00	2.00	7.20	VG
	158.50	159.50	1.00	19.00	VG
870108	129.00	130.00	1.00	115.79	VG
	218.50	220.50	2.00	5.15	VG
	230.00	233.00	3.00	2.51	
870109	169.00	172.00	3.00	2.29	VG
	188.50	190.50	2.00	11.15	VG
	217.00	218.00	1.00	8.15	VG
870110	86.00	87.00	1.00	8.02	
	211.00	212.00	1.00	6.86	VG
870112	213.00	214.00	1.00	8.90	VG
	222.00	224.00	2.00	3.00	
	431.00	432.00	1.00	3.29	
870113	148.00	155.00	7.00	5.38	
	170.00	177.00	7.00	9.73	
870114	207.50	209.50	2.00	7.88	
870116	84.00	90.00	6.00	1.19	
	171.00	173.00	2.00	3.79	VG
	175.00	178.00	3.00	2.61	VG
	187.00	193.00	6.00	7.62	VG
	212.00	214.00	2.00	5.71	VG
Blackhawk					
BH951	175.50	218.15	42.65	3.67	9 areas w/ VG
includes	187.00	194.00	7.00	6.18	
BH952	137.00	174.10	37.10	1.19	
BH953	101.50	116.00	14.50	2.36	1 area w/ VG
BH955	118.80	143.00	24.20	1.15	5 areas w/ VG
BH958	122.00	135.75	13.75	2.09	VG
BH9510	92.90	111.50	18.60	2.23	3 areas w/ VG
BH9513	54.50	72.10	17.60	1.14	
BH9514	53.00	73.70	20.70	1.63	
BH9516	72.60	89.10	16.50	6.37	3 areas w/ VG
BH9523	94.80	118.50	23.70	6.35	areas w/VG
includes	112.00	118.50	6.50	11.81	
BH9523	127.00	137.00	10.00	6.05	7 areas w/ VG
BH9533	199.00	207.40	8.40	4.37	2 areas w/ VG
BH9538	338.00	357.25	19.25	2.60	
Glencairn					
GV04-01	295.20	295.70	0.50	4.13	
GV04-02	280.90	284.00	3.10	12.63	VG
includes	281.40	281.90	0.50	37.82	
	287.00	290.00	3.00	9.08	VG
includes	287.00	287.50	0.50	49.86	
GV04-03	182.30	183.30	1.00	3.08	
	289.50	290.00	0.50	9.50	VG
GV04-04	144.20	145.20	1.00	6.84	
	148.40	149.40	1.00	3.59	
GV04-05	118.40	119.00	0.60	3.72	
	136.10	136.60	0.50	3.94	
GV04-06	263.50	264.50	1.00	2.58	
GV04-07	253.00	254.50	1.50	2.00	
	279.50	280.00	0.50	7.10	
	325.00	328.00	3.00	1.84	VG
	368.40	369.65	1.25	19.62	VG
	393.50	394.10	0.60	7.46	VG
GV04-08	186.00	186.50	0.50	5.36	VG
	234.00	234.50	0.50	3.38	VG
	237.00	237.50	0.50	1.49	VG
GV04-09	183.00	184.00	1.00	3.22	
	289.00	289.50	0.50	3.41	VG
GV04-11	162.00	162.50	0.50	2.67	VG
	183.90	185.25	1.35	7.68	VG
GV04-13	114.85	128.10	13.25	1.88	VG
includes	119.75	120.25	0.50	14.89	
GV04-14	87.00	87.50	0.50	3.00	
	152.00	193.00	41.00	1.81	VG
includes	153.50	156.50	3.00	13.55	
GV04-15	99.70	100.70	1.00	5.33	
GV04-16	201.00	201.70	0.70	2.65	
	216.50	217.10	0.60	2.52	VG
GV04-17	113.00	115.50	2.50	1.45	
	217.00	218.00	1.00	4.82	
GV04-19	35.00	37.50	2.50	1.29	VG
	158.00	158.50	0.50	3.15	
GV04-20	410.00	410.50	0.50	5.64	
	538.50	541.00	2.50	1.78	
GV04-22	203.00	206.60	3.60	14.73	
includes	204.50	205.10	0.60	79.11	
GV04-23	415.50	417.50	2.00	3.69	
	504.50	509.50	5.00	2.78	

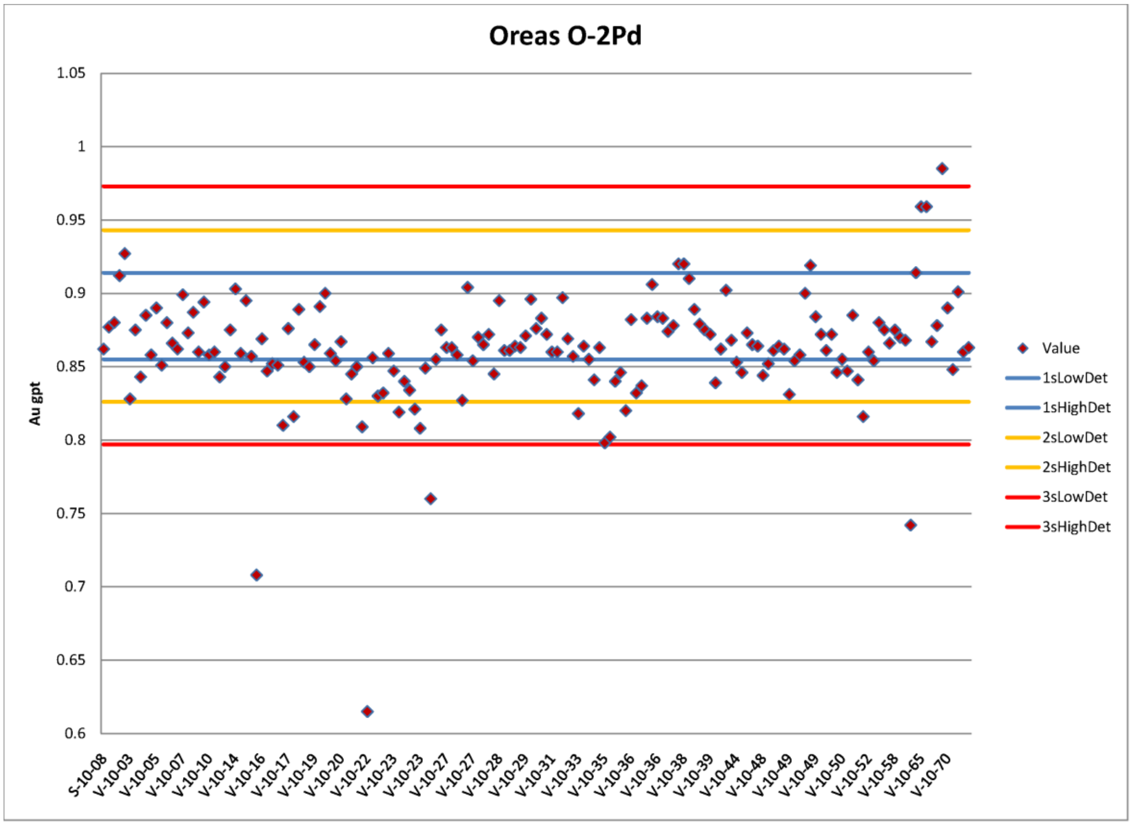
25.4 Lake Shore Gold Corp. - Vogel/Schumacher Property - Previously Released Assay Results

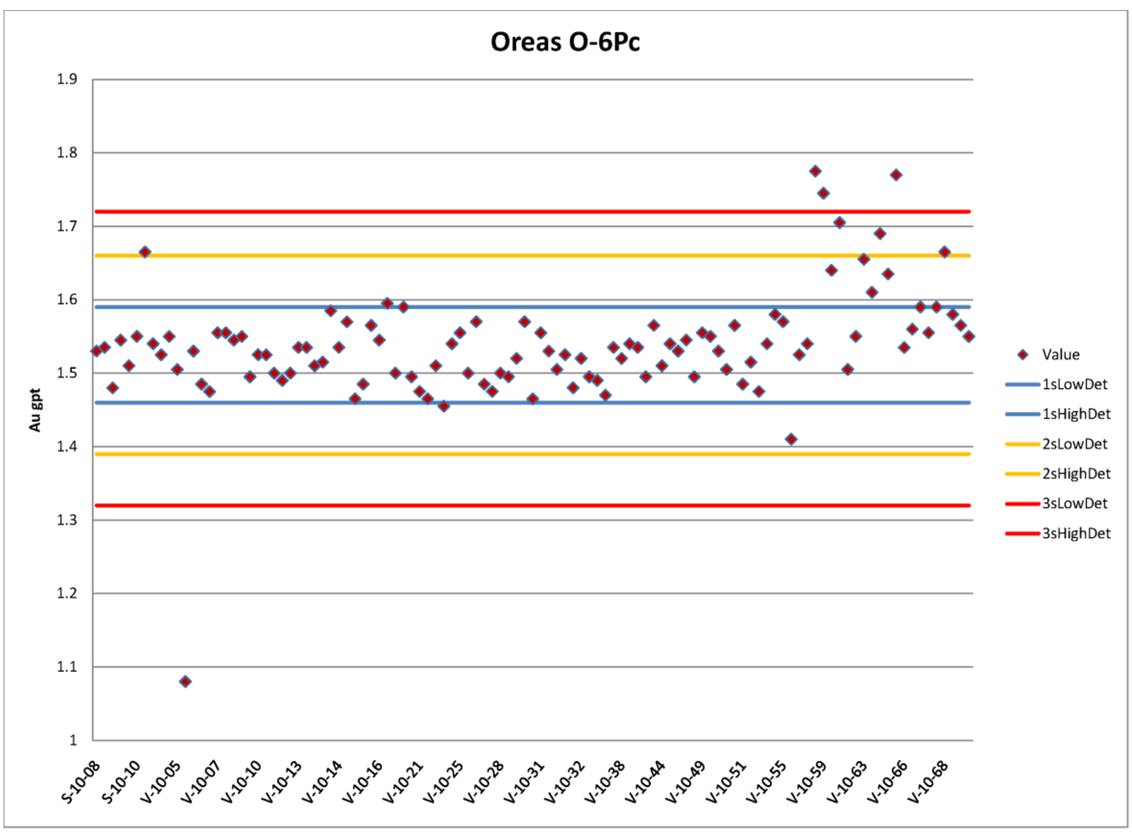
Hole Number	From (m)	To (m)	Length (m)	Assay (gpt)	Comments
Schumacher Property					
H-06-01	582.00	582.40	0.40	4.11	
H-06-08	41.52	41.88	0.36	2.68	VG
	95.80	96.55	0.75	6.04	
H-06-09	106.30	107.08	0.78	1.85	
	122.07	122.40	0.33	5.34	VG
	215.10	215.50	0.40	27.35	VG
H-06-10	70.00	70.50	0.50	6.34	
S-10-08	79.00	81.00	2.00	4.60	
S-10-09	89.00	91.00	2.00	11.11	
includes	89.00	90.00	1.00	22.20	
S-10-10	62.00	63.00	1.00	1.54	VG at 62.8, 69.8m
	69.40	70.00	0.60	3.73	
Vogel Property					
V-05-04	51.75	52.65	0.90	9.42	
	85.55	85.90	0.35	4.80	
	95.00	96.50	1.50	3.15	
V-05-05	89.80	90.30	0.50	98.08	
V-05-06	68.25	69.40	1.15	4.25	
	87.70	87.92	0.22	208.85	
	131.25	131.95	0.70	2.06	
V-05-08	101.00	101.50	0.50	6.22	
V-05-09	94.00	94.50	0.50	12.90	
	180.02	180.80	0.78	166.79	
	113.50	114.90	1.40	3.28	
V-05-10	207.50	209.00	1.50	3.76	
V-05-11	168.85	170.00	1.15	3.58	
	139.25	139.60	0.35	33.17	
V-05-12	96.25	96.70	0.45	22.50	
	102.50	103.90	1.40	13.60	
	137.60	138.70	1.10	4.49	
V-05-13	114.80	116.10	1.30	28.88	
	130.00	130.65	0.65	10.23	
	138.25	139.20	0.95	3.06	
	149.00	149.55	0.55	7.36	
	150.30	151.60	1.30	5.14	
V-05-15	93.50	94.00	0.50	9.64	
	104.70	106.30	1.60	3.25	
	106.30	107.80	1.50	13.30	
	142.10	144.00	1.90	5.00	
V-05-16	53.00	54.00	1.00	12.07	
V-05-18	414.50	415.20	0.70	11.04	
	428.00	430.00	2.00	2.97	
	434.00	435.00	1.00	18.10	
	441.00	442.00	1.00	32.98	
H-06-03	81.50	81.80	0.30	1.40	VG
	101.30	101.65	0.35	1.77	
	160.20	161.00	0.80	1.10	
H-06-04	55.00	55.40	0.40	487.20	VG
	98.00	99.00	1.00	3.98	
	186.94	190.00	3.06	1.79	VG
H-06-05	81.50	82.00	0.50	7.53	VG
	84.00	84.50	0.50	7.62	VG
	100.98	101.61	0.63	3.15	VG
H-06-06	74.00	76.00	2.00	28.36	
	110.50	111.20	0.70	1.25	
	88.00	89.50	1.50	5.73	
	129.30	130.30	1.00	2.55	
H-06-07	58.90	60.00	1.10	3.47	VG
	97.50	98.50	1.00	5.01	
H-06-13	90.00	91.00	1.00	2.16	VG
	91.00	92.00	1.00	1.52	
	95.90	96.60	0.70	16.09	
H-06-14	167.00	168.00	1.00	2.83	
	173.00	174.00	1.00	5.96	
	177.90	179.60	1.70	6.19	
	189.90	191.00	1.10	10.89	VG
H-06-15	115.00	116.00	1.00	2.27	VG
	116.00	117.00	1.00	1.32	VG
	123.00	124.00	1.00	3.26	
	148.00	149.00	1.00	3.70	
H-06-16	75.40	76.60	1.20	18.64	VG
H-07-01	74.00	75.00	1.00	1.05	VG
	84.00	86.00	2.00	106.90	VG
	96.00	97.00	1.00	11.74	VG
	104.00	105.00	1.00	4.80	VG
	105.00	106.00	1.00	4.51	VG
H-07-02	95.00	96.00	1.00	2.91	VG
	96.00	97.00	1.00	4.51	
H-07-04	63.00	64.00	1.00	4.63	VG
	67.00	68.00	1.00	1.49	VG
	75.00	76.00	1.00	1.71	VG
H-07-05	50.00	51.20	1.20	4.55	VG
V-08-01C	724.20	725.70	1.50	1.66	
V-08-02	789.90	790.40	0.50	1.58	VG @ 789.35
	868.00	868.50	0.50	0.25	VG @ 868.35m
V-09-01A	643.15	644.15	1.00	22.50	
	670.15	671.75	1.60	8.39	
	678.40	678.90	0.50	16.75	VG @ 678.50
	727.55	728.05	0.50	12.05	VG @ 727.8, 727.9
	729.75	731.70	1.95	7.06	
V-10-04	32.50	33.50	1.00	3.40	
	46.00	47.00	1.00	5.18	VG at 46.0m
V-10-05	93.00	95.00	2.00	6.39	
includes	94.00	95.00	1.00	12.60	
	143.00	145.00	2.00	6.75	
	223.00	225.00	2.00	15.87	
	224.00	228.00	1.00	31.40	
V-10-06	84.00	87.00	3.00	6.15	
includes	84.00	85.00	1.00	14.90	
	102.00	111.00	9.00	3.00	
includes	102.00	103.00	1.00	11.35	
V-10-08	65.00	68.00	3.00	15.04	
includes	67.00	68.00	1.00	42.80	VG at 67.0, 67.5m
V-10-09	87.60	90.00	2.40	57.55	VG at 87.5, 89.0m
includes	88.00	88.40	0.40	335.00	
	110.00	111.00	1.00	8.33	VG at 110.0m
V-10-10	202.00	204.00	2.00	6.95	
includes	203.00	204.00	1.00	13.90	
V-10-11	66.80	69.00	2.20	17.47	
includes	67.50	68.00	0.50	66.40	
V-10-12	101.50	102.00	0.50	5.04	
	106.00	107.80	1.80	7.59	
V-10-13	114.00	130.00	16.00	2.18	
includes	114.00	116.00	2.00	7.96	
V-10-14	204.40	204.80	0.40	7.17	VG at 204.5m
V-10-15	80.00	101.00	21.00	2.03	VG at 101.5m
includes	83.20	83.50	0.30	21.50	
and includes	97.50	99.00	1.50	7.92	
V-10-17	81.50	83.00	1.50	4.81	VG at 82.0m
includes	82.00	82.40	0.40	11.65	
V-10-18	79.70	81.30	1.60	9.05	VG at 81.0m
	80.70	81.00	0.30	45.70	
includes	84.00	85.00	1.00	2.35	VG at 85.0m
V-10-21	82.30	85.20	2.90	3.35	
includes	84.80	85.20	0.40	11.00	
V-10-23	109.50	111.00	1.50	6.91	
	129.80	131.60	1.80	2.66	
	236.50	238.00	1.50	5.11	
	244.70	245.00	0.30	8.78	
V-10-24	60.50	83.00	22.50	4.09	VG at 60.9m, 70.3m
includes	66.60	70.70	4.10	12.04	
includes	70.00	70.70	0.70	42.40	
and includes	79.00	82.00	3.00	9.38	
V-10-25	60.00	60.30	0.30	17.90	VG at 60.0, 60.1m
V-10-26	58.70	60.40	1.70	3.23	VG at 58.9m
	78.00	80.00	2.00	29.39	
includes	78.50	79.00	0.50	116.50	
	89.00	93.50	4.50	3.52	
V-10-27	76.00	76.50	0.50	7.88	175.3m
	178.90	181.00	2.10	2.65	
	184.50	185.60	1.10	5.75	
V-10-28	204.90	206.10	1.20	3.80	VG at 205.5, 207.9m
	213.60	215.00	1.40	6.03	VG at 2l4.0m
includes	214.20	214.50	0.30	28.00	
	243.00	244.00	1.00	8.57	
	250.60	251.20	0.60	9.35	
V-10-31	82.00	8400.00	2.00	10.35	
includes	82.00	83.00	1.00	20.50	
	164.00	165.50	1.50	12.46	VG at 165.0, 165.1m
includes	164.80	165.20	0.40	45.00	
	198.60	199.20	0.60	25.20	
V-10-33	119.00	121.00	2.00	4.31	VG at 119.4, 120.9m
includes	119.60	120.00	0.40	15.75	
V-10-35	58.50	60.00	1.50	5.25	
includes	58.50	59.00	0.50	15.65	
	78.00	81.00	3.00	9.82	
includes	80.00	81.00	1.00	28.00	
V-10-36	121.70	123.00	1.30	7.67	
V-10-37	106.50	108.20	1.70	4.47	
	110.10	111.60	1.50	6.60	
includes	111.00	111.60	0.60	15.20	
V-10-38	82.00	84.00	2.00	9.97	
	82.00	83.00	1.00	18.45	
	89.30	89.60	0.30	13.80	
	93.00	9450.00	1.50	7.88	
V-10-40	175.50	178.60	3.10	3.87	
includes	176.00	176.50	0.50	14.10	
V-10-41	112.00	115.00	3.00	4.40	VG at 114.95m
	148.00	150.00	2.00	6.49	
V-10-42	139.50	141.10	1.60	8.90	VG at 158.9, 161.5m
includes	139.50	140.00	0.50	25.20	
	160.80	183.00	22.20	3.22	
includes	166.00	170.00	4.00	8.37	
	166.50	166.90	0.40	17.20	
V-10-43	59.00	59.50	0.50	35.00	VG at 59.3m
V-10-45	202.00	208.00	6.00	13.90	
includes	205.20	205.80	0.60	119.00	VG at 129.9m
	219.65	219.85	0.20	8.86	VG at 2l9.7m
V-10-46	55.00	60.00	5.00	3.08	
includes	59.40	60.00	0.60	11.35	
V-10-48	250.50	252.00	1.50	5.66	258.6m
includes	251.60	252.00	0.40	15.40	
V-10-49	168.70	170.40	1.70	13.47	VG at 169.9m
includes	169.60	170.00	0.40	50.60	
	192.20	195.80	3.60	5.15	
includes	192.20	192.50	0.30	44.80	
V-10-50	146.00	177.00	31.00	3.96	
includes	147.50	158.00	10.50	9.66	VG at 149.0m, 152.9m
	149.00	150.00	1.00	80.04	
	183.00	185.00	2.00	4.46	VG at 184.8m
includes	184.70	185.00	0.30	21.40	
V-10-52	518.30	518.60	0.30	2.34	VG at 407.4, 453.1, 518.5m

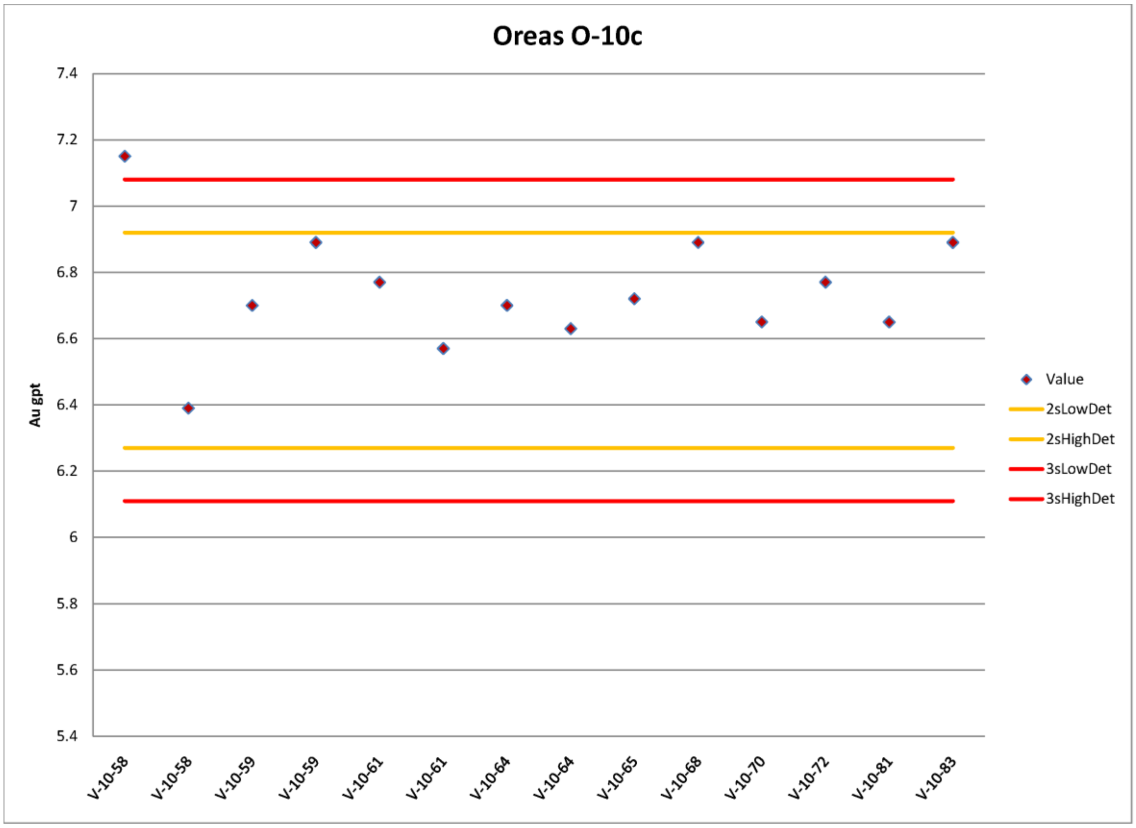
25.5 Lake Shore Gold Corp. - Vogel/Schumacher Property - Recently Released Assay Results

Hole Number	From (m)	To (m)	Length (m)	Assay (gpt)	Comments
V-10-53	40.00	50.70	10.70	0.84	VG at 45.8m
	96.00	126.00	30.00	0.74	
V-10-54	65.00	76.50	11.50	2.30	
incl	65.70	66.30	0.60	23.90	
	119.00	126.20	7.20	1.82	
	135.20	160.00	24.80	2.00	
and	151.00	158.00	7.00	5.45	
incl	154.70	156.00	1.30	22.75	
V-10-55	148.20	195.80	47.60	1.10	
incl	152.20	152.90	0.70	12.30	
and incl	189.20	189.80	0.60	19.15	
V-10-56	105.00	119.00	14.00	1.15	VG at 108.2m
and incl	118.00	118.70	0.70	11.43	VG at 118.5, 118.55m
	133.00	134.00	1.00	2.09	
	141.00	142.00	1.00	2.39	
V-10-58	140.00	157.00	17.00	2.96	VG at 119.8m
and incl	156.00	157.00	1.00	24.80	
	185.00	218.00	33.00	1.42	VG at 191.15, 192.5m
incl	190.70	198.20	7.50	3.09	VG at 195.65, 195.7, 195.75m
incl	195.00	196.20	1.20	9.47	VG at 200.3, 200.9, 203.0m
					VG at 207.45, 209.7m
V-10-59	56.50	68.00	11.50	1.01	
V-10-60	54.00	62.00	8.00	1.63	
incl	55.00	55.60	0.60	15.05	VG at 55.4m
V-10-61	87.50	93.00	5.50	8.50	
incl	88.00	88.50	0.50	34.80	
and	90.80	91.80	1.00	16.60	
V-10-62	146.50	150.00	3.50	1.53	
	212.00	213.00	1.00	5.16	VG at 180.5m
V-10-64	85.00	102.20	17.20	1.20	
incl	95.50	96.20	0.70	11.50	
V-10-65	190.30	209.40	19.10	1.05	VG at 194.95, 197.3m
incl	191.90	192.45	0.55	12.45	
V-10-66	157.60	161.00	3.40	1.10	
	170.50	173.50	3.00	2.08	VG at 219.57, 219.60, 219.63m
V-10-67	69.50	70.00	0.50	6.23	
V-10-68	334.00	350.00	16.00	0.89	
	369.00	371.50	2.50	2.86	VG at 370.30m
	385.80	386.30	0.50	7.15	VG at 396.50m
V-10-69	41.00	72.00	31.00	0.77	
incl	41.00	47.00	6.00	2.37	
V-10-71	276.00	276.60	0.60	3.79	VG at 172.63, 177.70m
V-10-72	48.80	72.20	23.40	3.15	
incl	56.70	71.70	15.00	4.59	VG at 57.00m
incl	59.30	63.70	4.40	9.38	VG at 62.80m
V-10-73	30.00	42.50	12.50	1.61	
incl	30.00	37.50	7.50	2.38	
incl	37.00	37.50	0.50	18.50	
V-10-81	30.00	41.00	11.00	1.31	
V-10-83	40.00	56.40	16.40	3.48	
incl	50.10	53.70	3.60	13.84	
V-10-84	51.80	59.00	7.20	6.28	
incl	51.80	52.50	0.70	50.90	
V-10-70				NSV	VG at 67.10, 67.20, 69.80m

25.6 Charts of Standard Performance - Vogel 2010 Drilling



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7.2
7
6.8
6.6
6.4
6.2
6
5.8
5.6
5.4
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V-10-58
V-10-58
V-10-59
V-10-59
V-10-61
V-10-61
V-10-64
V-10-64
V-10-65
V-10-68
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Value
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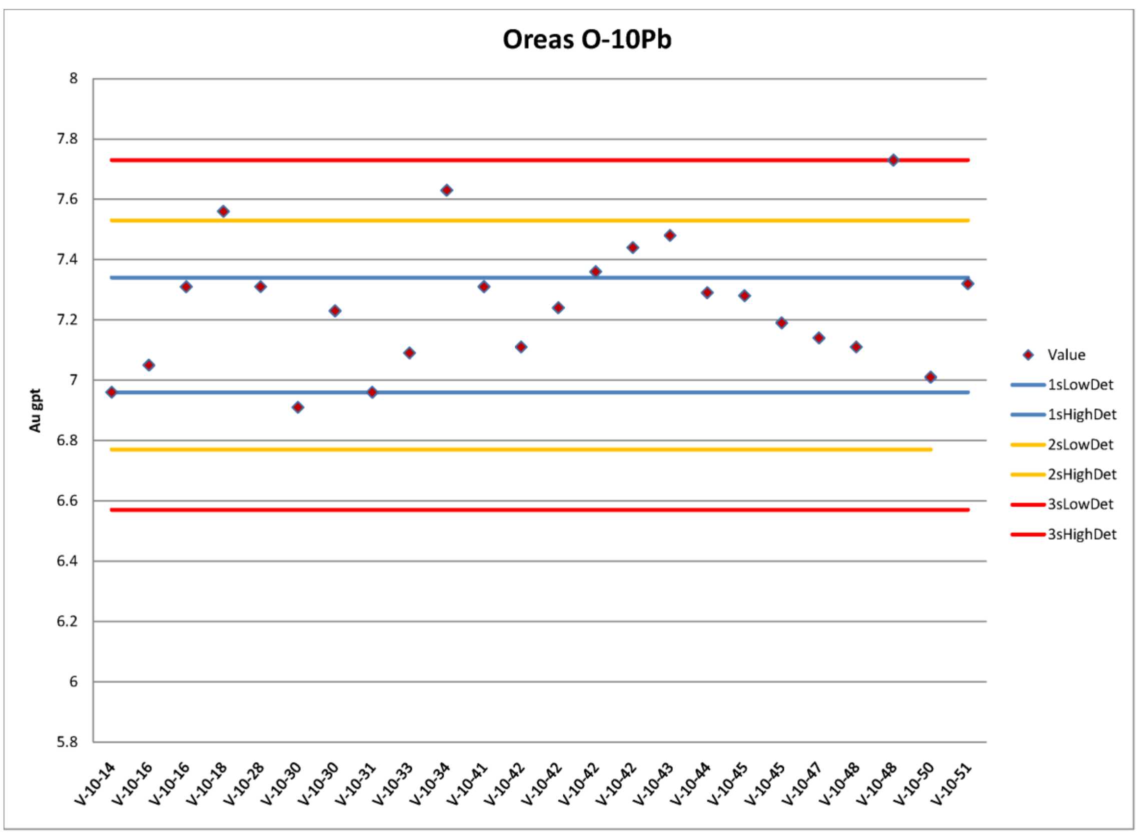
2sHighDet
3sLowDet
3sHighDet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7.8
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7.2
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6.8
6.6
6.4
6.2
6
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Au gpt
V-10-14
V-10-16
V-10-16
V-10-18
V-10-28
V-10-30
V-10-30
V-10-31
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V-10-45
V-10-47
V-10-48
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Value
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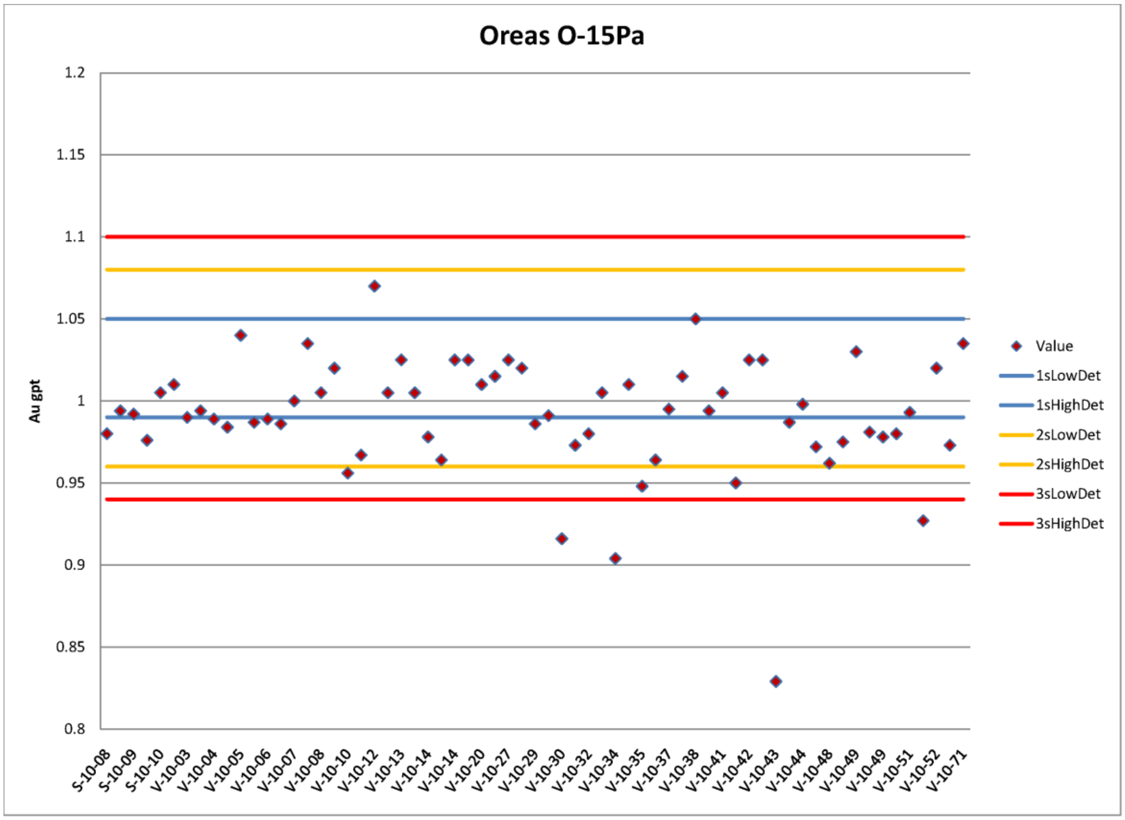
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1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
Value
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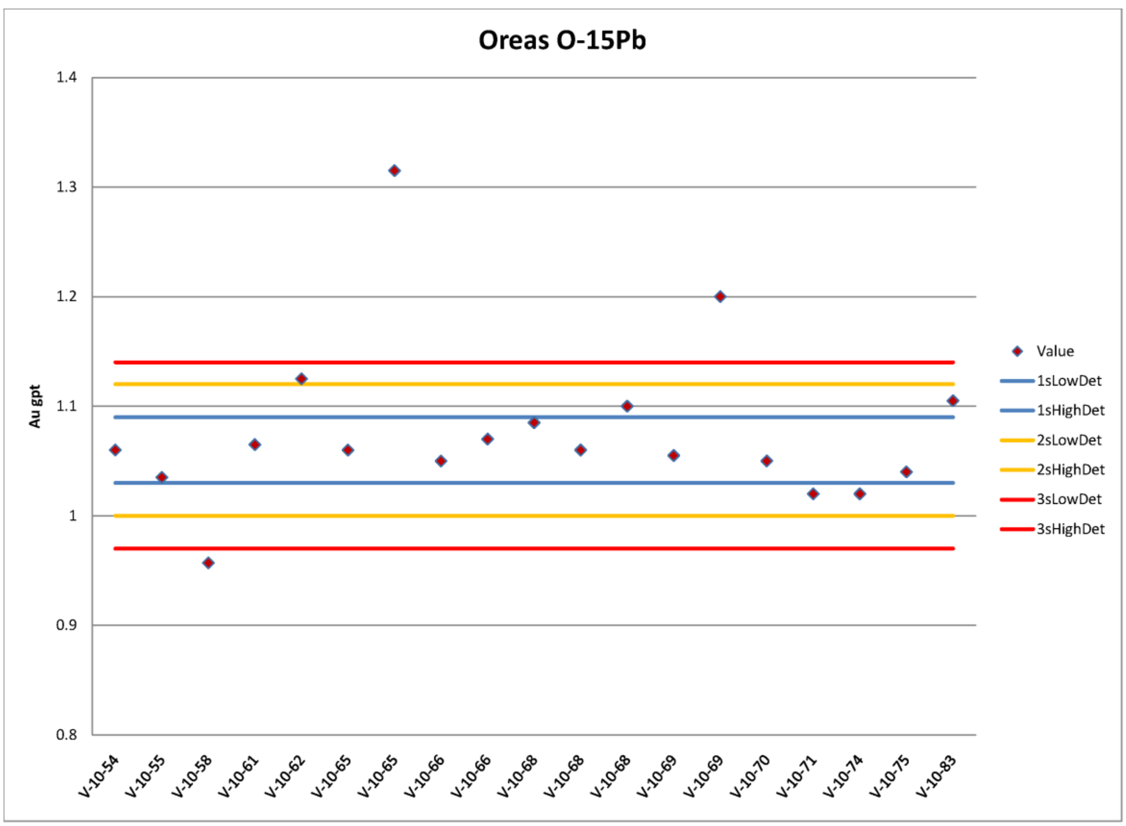
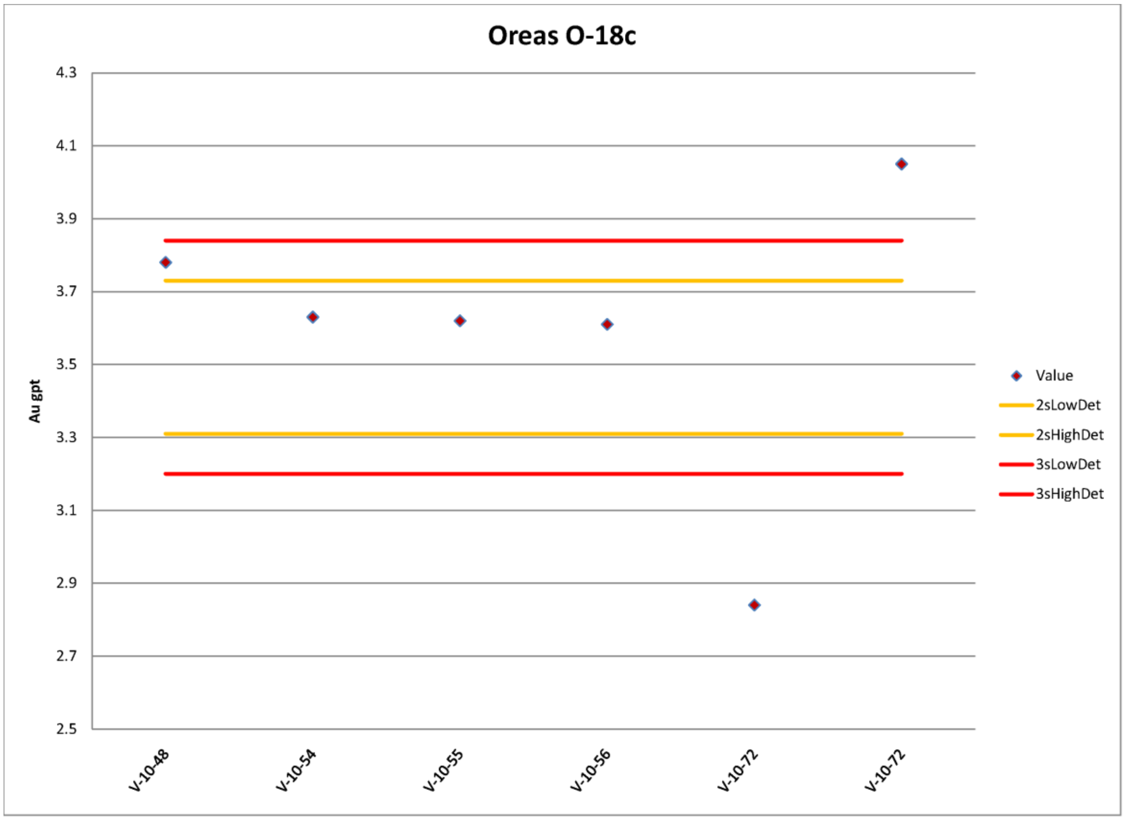
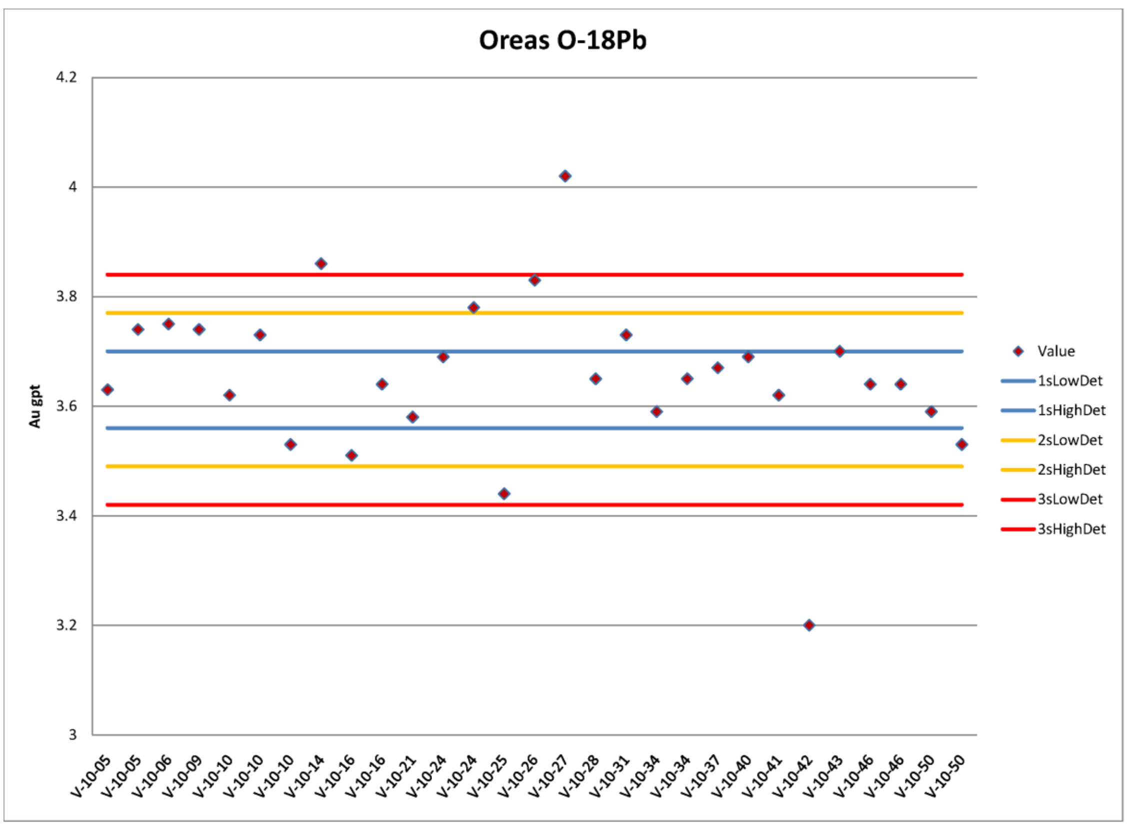
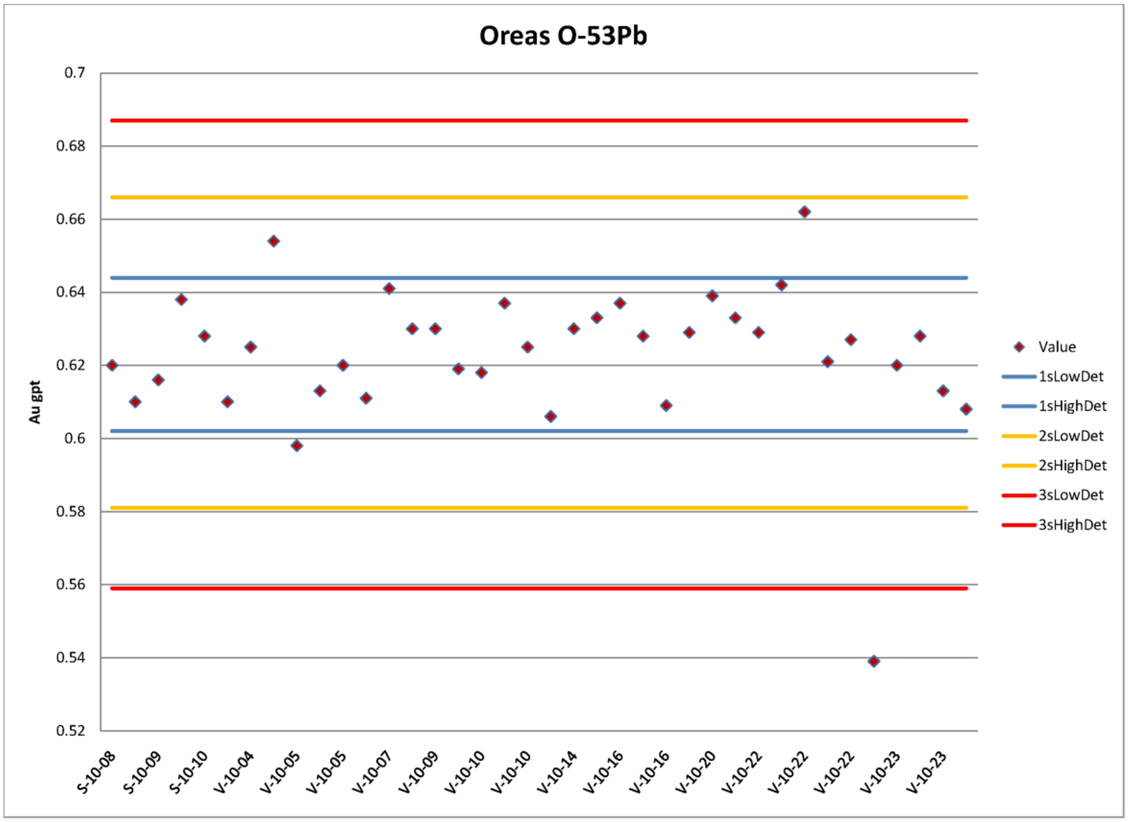
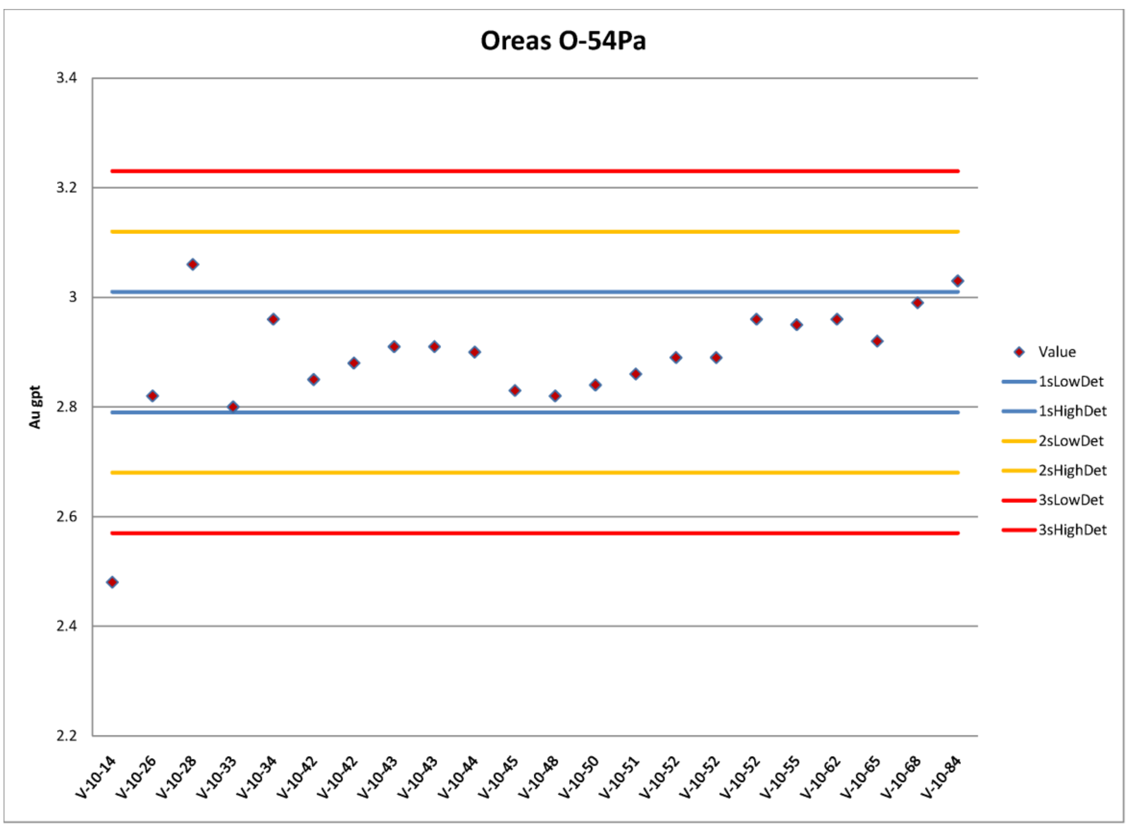
1sHighDet
2sLowDet
2sHighDet
3sLowDet
3sHighDet

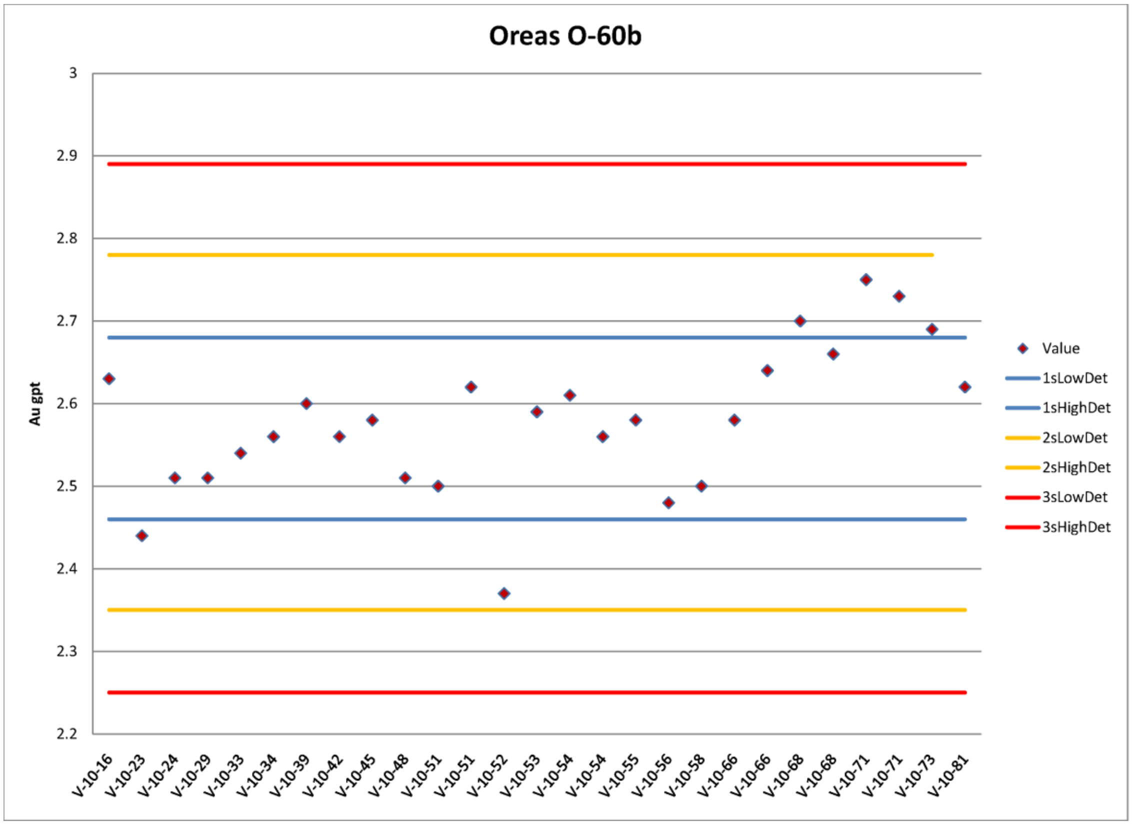

Oreas O-15Pb
Au gpt
1.4
1.3
1.2
1.1
1
0.9
0.8
Value
1sLowDet
1sHighDet
2sLowDet
2sHighDet
3sLowDet
3sHighDet

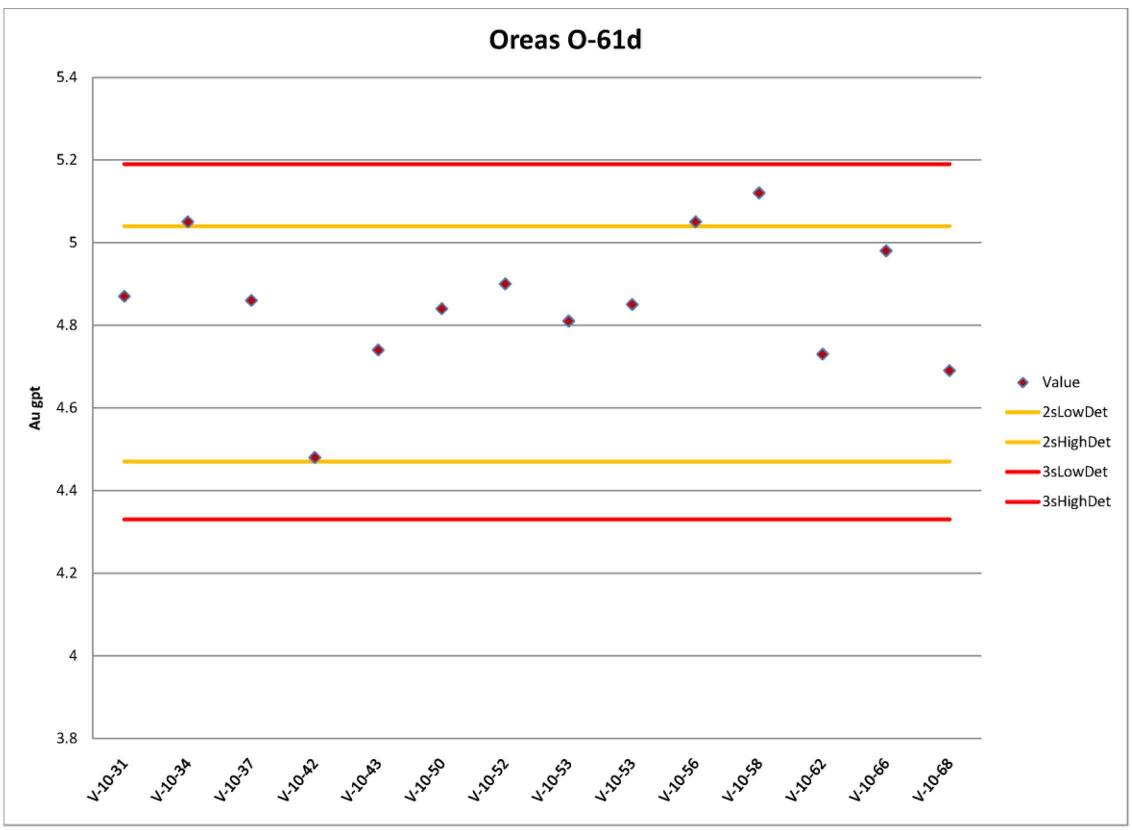

Oreas O-18c
Au gpt
4.3
4.1
3.9
3.7
3.5
3.3
3.1
2.9
2.7
2.5
V-10-48
V-10-54
V-10-55
V-10-56
V-10-72
V-10-72
Value
2sLowDet
2sHighDet
3sLowDet
3sHighDet

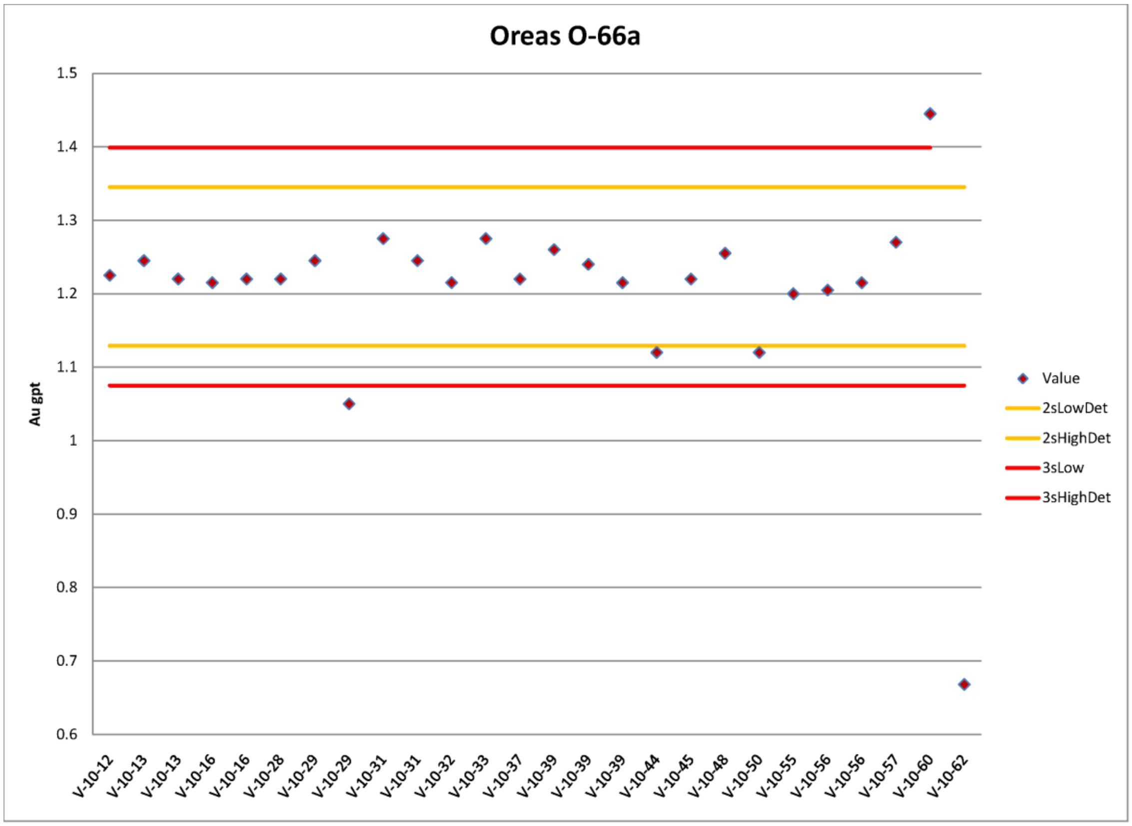

Oreas O-18Pb
Au gpt
4.2
4
3.8
3.6
3.4
3.2
3
V-10-05
V-10-05
V-10-06
V-10-09
V-10-10
V-10-10
V-10-10
V-10-14
V-10-16
V-10-16
V-10-21
V-10-24
V-10-24
V-10-25
V-10-26
V-10-27
V-10-28
V-10-31
V-10-34
V-10-34
V-10-37
V-10-40
V-10-41
V-10-42
V-10-43
V-10-46
V-10-46
V-10-50
V-10-50
Value
1sLowDet
1sHighDet
2sLowDet
2sHighDet
3sLowDet
3sHighDet

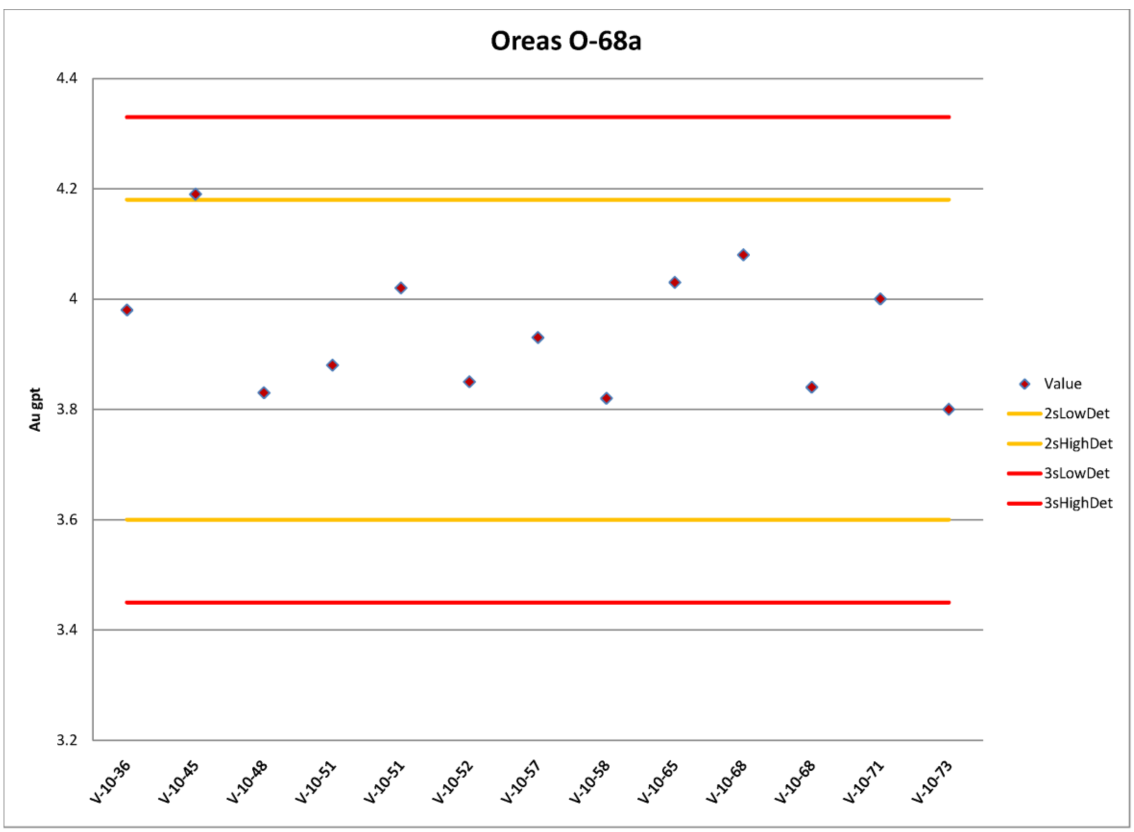

Oreas O-53Pb
Au gpt
0.7
0.68
0.66
0.64
0.62
0.6
0.58
0.56
0.54
0.52
S-10-08
S-10-09
S-10-10
V-10-04
V-10-05
V-10-05
V-10-07
V-10-09
V-10-10
V-10-10
V-10-14
V-10-16
V-10-16
V-10-20
V-10-22
V-10-22
V-10-22
V-10-23
V-10-23
Value
1sLowDet
1sHighDet
2sLowDet
2sHighDet
3sLowDet
3sHighDet


Oreas O-54Pa
Au gpt
3.4
3.2
3
2.8
2.6
2.4
2.2
V-10-14
V-10-26
V-10-28
V-10-33
V-10-34
V-10-42
V-10-42
V-10-43
V-10-43
V-10-44
V-10-45
V-10-48
V-10-50
V-10-51
V-10-52
V-10-52
V-10-52
V-10-55
V-10-62
V-10-65
V-10-68
V-10-84
Value
1sLowDet
1sHighDet
2sLowDet
2sHighDet
3sLowDet
3sHighDet


Oreas O-60b
Au gpt
3
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
V-10-16
V-10-23
V-10-24
V-10-29
V-10-33
V-10-34
V-10-39
V-10-42
V-10-45
V-10-48
V-10-51
V-10-51
V-10-52
V-10-53
V-10-54
V-10-54
V-10-55
V-10-56
V-10-58
V-10-66
V-10-66
V-10-68
V-10-68
V-10-71
V-10-71
V-10-73
V-10-81
Value
1sLowDet
1sHighDet
2sLowDet
2sHighDet
3sLowDet
3sHighDet


Oreas O-61d
Au gpt
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
V-10-31
V-10-34
V-10-37
V-10-42
V-10-43
V-10-50
V-10-52
V-10-53
V-10-53
V-10-56
V-10-58
V-10-62
V-10-66
V-10-68
Value
2sLowDet
2sHighDet
3sLowDet
3sHighDet


Oreas O-66a
Au gpt
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
V-10-12
V-10-13
V-10-13
V-10-16
V-10-16
V-10-28
V-10-29
V-10-29
V-10-31
V-10-31
V-10-32
V-10-33
V-10-37
V-10-39
V-10-39
V-10-39
V-10-44
V-10-45
V-10-48
V-10-50
V-10-55
V-10-56
V-10-56
V-10-57
V-10-60
V-10-62
Value
2sLowDet
2sHighDet
3sLow
3sHighDet


Oreas O-68a
Au gpt
4.4
4.2
4
3.8
3.6
3.4
3.2
V-10-36
V-10-45
V-10-48
V-10-51
V-10-51
V-10-52
V-10-57
V-10-58
V-10-65
V-10-68
V-10-68
V-10-71
V-10-73
Value
2sLowDet
2sHighDet
3sLowDet
3sHighDet