Scoping Study Report

Northern British Columbia

Prepared for:

Prepared By:

CROWN CONSULTING

Independent Qualified Persons

May 28, 2010

Scoping Study Report

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EXECUTIVE SUMMARY

Crown Consulting Group (Crown Consulting) was commissioned by Hawthorne Gold Corp. (Hawthorne) in May 2010 to prepare a Canadian National Instrument 43-101 (NI 43-101) compliant Scoping Study for the Taurus Deposit located in British Columbia (B.C.), Canada. This Scoping Study is intended to be used by Hawthorne to further the development of the Taurus Deposit.

Crown Consulting's opinion contained herein and effective May 28, 2010 is based in information provided to Crown Consulting by Hawthorne throughout the course of Crown Consulting's investigation as described in this report.

Property Description

Hawthorne is developing an open pit gold project in the Liard Mining Division in north-central B.C. known as the Taurus Deposit. The Taurus Deposit is located on the 17,500 hectare (ha) Cassiar Gold Property approximately 8 kilometres (km) east of the former town site of Cassiar, B.C., 117 km north of Dease Lake, B.C., and 141 km south of Watson Lake, Yukon Territory.

The Cassiar Property is owned by Hawthorne and Cassiar Gold Corp. (Cassiar Gold) (a wholly owned subsidiary of Hawthorne) and consists of 209 mineral claims containing two mineral deposits; Taurus and Table Mountain (formerly known as Erickson and Cusac mines). All 209 claims are in good standing. Hawthorne completed the consolidation of the Cassiar Gold Property in December 2008.

Exploration and resource estimation work completed to-date indicate 31.6 million tonnes (Mt) with an average grade of 1.50 gold (Au) grams per tonne (g/t). Mineralization occurs as pyritic quartz veins and disseminated pyrite or pyrite carbonate mineralization.

Ore will be mined from ten different open pit mines using front-end loaders for loading and rear-dumb haul trucks for haulage. Daily mine production is planned to be approximately 18,000 tonnes per day (t/d) and daily mill throughput is planned at 6850 t/d.

Metallurgical testing confirms recoveries of 92% gold can be achieved using standard flotation followed by a cyanide leach circuit and Merrill-Crowe metal recovery.

History

The Cassiar area was first explored in 1874, almost 25 years before the Klondike gold rush. Placer miners followed gold up from the Pacific Ocean to McDame Creek and had produced 2.2 million grams by 1895. In 1934, gold-quartz veins were discovered in Troutline Creek, leading to the discovery of many more veins which led to several small gold mining operations.

Between 1980 and 1981, a 135 t/d mill was constructed at the Taurus Mine, treating 220,000 tonnes (t) of ore grading 5.14 gold Au g/t. The Taurus Mine ceased operations in 1988. During this time the Erickson mine also maintained a similar operation.

The previous 20 years of recent exploration on the Taurus Deposit includes induced polarization (IP) and ground magnetic surveys, soil geochemistry, trenching, diamond and reverse circulation drilling. At this time, no exploration, with the exception of diamond drilling, is being performed on the Taurus Deposit by Hawthorne.

Geology

The Taurus deposit is classified as a system of mesothermal quartz-carbonate-gold veins. The Cassiar area has been explored since the 1870's and mined since the 1930's using surface and underground methods.

The deposit lies within the Sylvester Allochthon overlying the Omineca tectonic rock belt. The gold mineralization is hosted in quartz-carbonate veins and veinlets associated with disseminated sulphide minerals such a pyrite, which crosscut altered basalts.

The mineralization is structurally controlled by high angle faults within the altered basalts of the Sylvester Allochthon. There are two types of gold mineralization found on the property:

- Pyritic quartz veins, and
- Disseminated pyrite-carbonate veins

Intense silification, disseminated pyrite and carbonate alteration are associated with the deposit. Each alteration envelope has varying widths within the wall rock.

The Taurus vein system is elongated in a north-south direction, parallel to a set of high angle faults. The mineralization is present over a 1.5km long, 800 meter wide area.

Resources

The grade models and estimation upon which the resources are based were expanded and constructed by Crown Consulting. Crown Consulting generated the models for the Taurus property, including the resources reported in this scoping study.

Crown Consulting constructed the grade model using standard industry practice for estimation of gold bearing quartz vein deposit. Assay data derived from past and recent drilling was composited into 1.5 metre (m) down hole composites. These composites were interpreted into different grade zones by using inverse distance method. Grades of zero were assigned where there are no sample data.

According to the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) – Definitions adopted by CIM Council in August 20, 2000 and thus also in accordance with Canadian National Instrument 43-101, Crown Consulting classified the Taurus deposit as Inferred state due to degree of confidence of geological information and quantitative information.

With a cutoff grade of 0.50 g/t Au, 31.6 M tones of inferred state mineral resources at an average grade of 1.50 g/t Au are present. This equates to 1,409,504 ounces (oz) of gold.

Mining

Small scale and multiple open pit mining will provide process plant feed of 6850 t/day. A total of 86,316,299 tons of rocks will be excavated with 54,725,057 tons of waste and 31,591,242 tons of ore. An overall head grade of gold is estimated to be 1.50 Au g/t. The average strip ratio will be 1.73. The total mine life of the Taurus deposit is 13 year including an additional one year pre-production stage. No-stockpile blending will be commenced in order to deliver uniform gold grade to the mill for optimized process plant performance. Overburden and waste rocks excavated from the pre production stage are planned to be used in the tailing dam construction.

Mining operation will be conducted by two CAT 991 front loaders with 11.5 cubic metres ($m^{3)}$ and four CAT 777 100 ton diesel rear dump haul trucks. Using of electric shovels is inefficient due to the numerous small pits and the shovel's slow traveling time. The front loaders are suitable for the simultaneous distribution of multiple mining operations at various locations.

The deposit has fairly good geological structure, rock mass strength and no changes in rock types. There are minor faults related to the gold mineralization but they are not expected to have significant impact on rock stability. Therefore, the pits have very consistent slope and geotechnical concerns are minimized.

The optimization of the pits is based on maximizing the discounted cash flow of the projects. The locations of the pits are based on the grade of gold and the shape of the ore body. Slope angle is 70 degrees with bench height of 10m. Berms with 8m width will be constructed at every two or three benches. The average gradient of ramp is 10 degree. The haul road in the pit will be designed for one way traffic in order to reduce the amount of waste rock and maximize the exploitation of ore. The ramp width is 17m. Overall slope angle is 52 degree and the interramp slope angle is 45 degree.

Metallurgy and Processing

Three metallurgical test programs have been completed on the ore during the 1980s and 1990s. These test programs were conducted by Westcoast Mineral Testing in 1987 and 1994, and Hazen Research in 1996. The test programs determined the best gold recovery was achieved by gravity concentration, floatation and cyanidation of the floatation concentrate. The recovery in the test program was 79%, through more modern recovery methods this has now increased to 92%.

The 6850 tonne per day mill consists of a crushing and grinding circuit, floatation, thickening and filtering, cyanide leaching and zinc precipitation. The main components of the mill consist of:

- Primary crushing station consisting of a 2.88m by 2.25m - 110 kW jaw crusher
- Secondary crushing station consisting of a 2.73m by 2.73m - 355 kW cone crusher
- Grinding station consisting of a 12.57m by 8.56m - 4101 kW ball mill
- Floatation circuit consisting of a single stage rougher floatation with four 8.5 m^3 cells

- Dewatering and filtration circuit consisting of a 15m diameter thickener and a 30 square metre (m^2) plate and frame filter system
- Cyanide leaching circuit consisting of four 22 m^3 tanks
- Zinc precipitation plant consisting of a Merrill-Crowe plant

The run of the mill ore will be crushed to 80% passing at 130 millimetres (mm) then sent to the secondary crusher where it will be crushed to 80% passing at 8mm. The ore is ground to 80% passing at 74 microns in the ball mill. Approximately 298 tonnes an hour of ore is sent to the floatation circuit. After floatation 8 tonnes an hour of concentrate is produced and 290 tonnes an hour of tails. The concentrate is dewatered and filtered to 45 % solids and leached in the cyanide tanks for a retention time of twelve hours. The pregnant solution is sent to the Merrill-Crowe plant where the gold is separated from the cyanide and sent to the smelter.

Tailings Storage Facility

The Tailings Management Facility (TMF) will be constructed using waste rock from the pre-production period of the mine life. The TMF will be constructed in one single phase at the start of the project. The site selected for the facility accommodates future expansion if need be. A geomembrane liner and low permeable soils at the toe of the dam will be used to provide a high degree of containment for the facility.

Environmental

This project is being designed to meet all laws and regulations of the Canadian government and North American good practices for engineering design and environmental management. Comprehensive environmental and social baseline test are still being conducted to further insure that no negative impact will occur. This area is host to a wide verity of wildlife. Great care will be taken to ensure that no harm will come to wildlife or their habitat. Hazen research has showed that possible acid generation from waste rock is not an issue. Other preliminary acid/base testing has been conducted in 2008 at the old 88 hill pit and showed that there were no water quality issues.

Infrastructure

The project has no existing on site infrastructure to take advantage of, so all infrastructures needed for the project will have to be built. The new construction infrastructure includes:

- Building structures (Mill, offices, warehouse, machine repair shop, assay laboratory, etc.)
- Power supply station
- Fresh water supply station, fire water storage and reclaim water system
- Site roads and parking
- Security, safety and first aid facilities

The explosive plant will be operated and maintained by the explosives contractor after the building is erected. An overhead electrical line will be built to connect the required infrastructure to the diesel power supply station. Since Cassiar is about 8km away from the project site, there will be no on-site housing, as all employees will reside in Cassiar.

Project Schedule

The project schedule consists of 12 months of pre-production for construction followed by a 13 year mine life. Pre-production mining will involve moving 2 million tonnes of waste rock. Production in the first three years of operation will focus on high grade ore.

Capital and Operating Costs

Life of mine capital and operating costs summaries are shown in Tables 1 and 2, respectively.

Table 1 – Life of Mine Operating Cost Summary

Area	CDN$/t ore milled	Total Cost (CDN$)
Mining	8.04	256,649,939
Milling	16.00	505,459,872
General and Administrative	0.58	18,322,920
Total	**24.62**	**780,432,732**

Table 2 – Life of Mine Capital Cost Summary

Area	Cost (CDN$)
Direct Costs	
Pre-Production Waste Mining	16,609,996
Mine Equipment	27,239,678
Process Plant	31,166,575
Buildings & Infrastructure	13,718,696
Tailings Storage	4,888,741
Sub-Total	**93,623,687**
Indirect Costs	
Owner's Costs	5,000,000
EPCM @ 12%	11,234,842
Sub-Total	**16,234,842**
Total	**109,858,529**

Economic Analysis

The parameters used in the economic analysis are shown in Table 3.

Table 3 – Economic Parameters

Parameter	Input
General Assumptions	
Pre-Production Period	1 year
Mine Life	13 years
Operating Days	365 days/year
Production Rate (avg)	6850 tpd
Market	
Gold Price	US$850/oz
Exchange Rate	$0.90 USD per CDN$
NSR Royalty	
Payable to Sable Resources Ltd.	2.50%

Economic results are summarized in Table 4. Over the 13 year mine life, 1,409,500oz of gold will be recovered, averaging 108,400 ounces per year.

The Project has a pre-tax Internal Rate of Return (IRR) of 28.0% and a pre-tax Net Present Value (NPV) at 5.0% discount of $48.4million with recovery of initial capital in 2.2 year.

Table 4 – Economic Results

Description	Units	Input or Result
Production Schedule		
Ore Sent Direct to Mill	tpa	31,591,242
Average Gold Grade	g/t	1.50
Total Ore Mined	tpa	31,591,242
Total Waste Mined	tpa	54,725,057
Strip ratio		1.73
Total Tonnage Mined	tpa	86,316,299
Ore Processed	tpa	31,591,242
Annual Operating Costs		
Mining	$CDNx1000	$256,650
Milling	$CDNx1000	$505,460
G&A	$CDNx1000	$18,323
Total Operating Costs	$CDNx1000	$780,432.73
Metal Production		
Ore Milled	Mtpy	31.591
Gold Produced	oz/a	1,409,504
Exchange rate	$CDN/US	$1.11
Metal Prices		
Gold	$US/oz	$850
Revenue		
Gold	$CDNx1000	1,051,314
Smelter Refining, Transportation	$CDNx1000	(7,611)
Net Smelter Return	$CDNx1000	1,043,703
Project Cash Flow	**Units**	**Input or Results**
Net Smelter Return	$CDNx1000	1,043,703
Operating Cost	$CDNx1000	(780,433)
Royalty as % of NSR	$CDNx1000	(26,093)
Head Office Costs ($/tonne)	$CDNx1000	(843)
Operating Profit	$CDNx1000	236,334
Capital Costs		
Construction Capital Cost	$CDNx1000	(109,859)
Sustaining Capital Cost	$CDNx1000	(31,949)
Closure Costs		
Closure Cost	$CDNx1000	(16,479)
Closure Bond LOC Expense	$CDNx1000	4,449
Working Capital		
Working Capital	$CDNx1000	(16,691)
Cashflow before Tax	$CDNx1000	65,807
Cumulative Cashflow before Tax	$CDNx1000	
IRR and NPV	**Unit**	**Input or Result**
IRR (before tax)	%	27.99%
Pre-tax Payback Period	Years	2.2
Net Present Value before Tax		
0%	$CDNx1000	$ 65,807
5%	$CDNx1000	$ 48,354
8%	$CDNx1000	$ 38,868
10%	$CDNx1000	$ 33,108
20%	$CDNx1000	$ 11,048

Sensitivity analysis suggests that the project is most sensitive to exchange rate and gold price and then in decreasing order, operational costs and initial capital costs.

Interpretations and Conclusions

The Taurus mineral resource is currently classified as inferred due to the lack of complete and verifiable data. The bulk density of the deposit has not been accurately determined and is assumed to be 2.7 for the whole deposit. Much of the data came from reverse circulation drilling which is not as reliable as diamond drilling for determining a mineral resource model.

The project is projected to be a small operation and therefore it has a low initial capital cost. However, the economic viability of the project is marginal. The payback period is very short due to low initial capital cost and mining high grade ore at the beginning of the mine life, but the cash flow after year 4 is poor. The project may be better suited to a shorter mine life. Increasing the cut-off grade might also allow for more selective mining, reducing the amount of waste rock being mined.

The project is very dependent on the foreign exchange rate and gold price. The cost of power is also a major concern. The diesel generated power required to run the mill accounts for approximately one third of all operating costs for the project. If the mine had access to power from BC Hydro at a cost of CDN$0.09/kWhr, the NPV at a 5% discount rate would change from $48.4million to CDN$180.2million.

Recomendations

There must be work done in order upgrade inferred mineral resources to measured and indicated resources. This work should include:

- Infill drilling should be completed as a priority
- Confirm geological interpretation and correlate with mineralization of high and low grade zones
- Investigate the difference in grades between the various drilling methods used
- Obtain bulk density and recovery information based on the lithology and grade

There is has been little reliable metallurgical testwork done on the ore from the Taurus deposit. More thorough test work must done in order to get a better understanding of which process methods might be effective.

A study should be done in order to determine if the capital cost of installing a power line to the mine would be more feasible than using diesel generated power.

Further studies should be done to estimate the economic viability using a shorter mine life as well as a higher cut-off grade.

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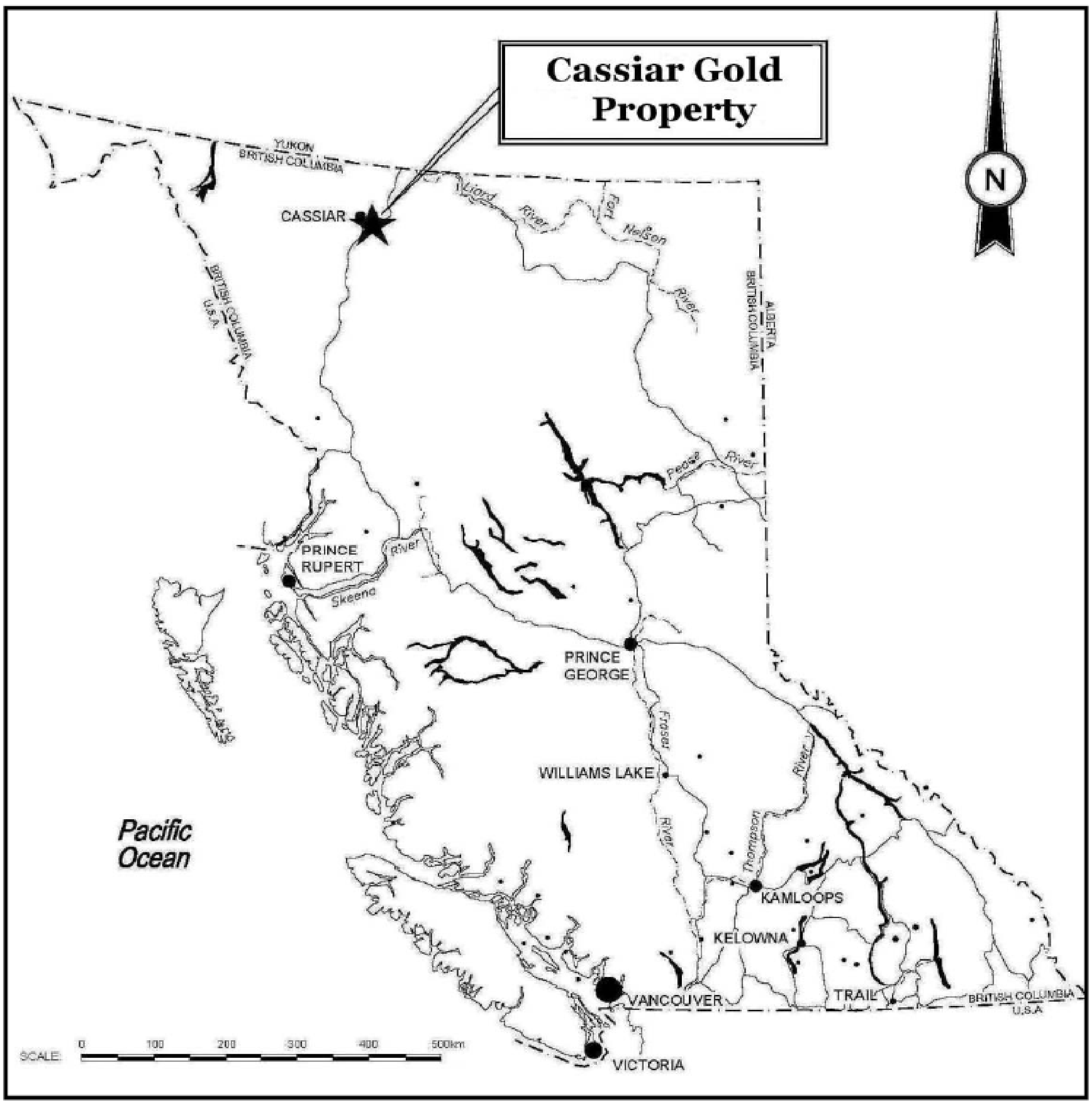
Appendices

1.0 INTRODUCTION

Hawthorne retained Crown Consulting to prepare a Scoping Study that is National Instrument 43-101 (NI 43-101) compliant covering the Taurus Deposit, situated near the former town site of Cassiar in north-central British Columbia (Figure 1.0-1). The deposit is located on the Cassiar Gold Property which is owned 100% by Hawthorne.

Figure 1.0-1 – Property Location Map



1.1 Terms of Reference

Reports entitled “Updated Resource Report on the Taurus Deposit – Liard Mining District, B.C.” by T.C Stubens (2009), “Technical Report on the Taurus Project, Laird Mining District, British Columbia for International Taurus Resources Inc., American Bonanza Gold Mining Inc., Fairstar Exploration Inc. and 0710887 B.C. Ltd” by G. Cavey et al (2005), “Report on Exploration Activities on the Taurus Property” by C. J. Wild (2003), “Technical Report on the Taurus Project, Laird Mining District, Resource Estimate and Metallurgical Review for American Bonanza Gold Mining Inc.” by Palmer and de Ruijter (2006), “Diamond Drilling Report on the Taurus Property” by Lesley C. Hunt (2007), and “Technical Report on the Taurus Deposit – Liard Mining District, B.C.” by Palmer and de Ruijter (2007) have been used as the primary reference sources.

1.2 Reliance on Other Experts

Crown Consulting has followed standard professional procedures in preparing the contents of this technical report. Data used in this report has been verified where possible and Crown Consulting has no reason to believe that the data was not collected in a professional manner. Crown Consulting has relied upon the outline of claim boundaries used in the technical report as provided by Hawthorne.

1.3 Mineral Resource Statement

The effective date of the mineral resource statement in this report is May 2007.

1.4 Price Strategy

In this report, economic analysis is based on a gold price of US$850.

1.5 Qualifications of Consultant (Crown Consulting)

This report has been prepared based on a technical and economic review by a team of consultants sourced from Crown Consulting’s Vancouver office. These consultants are specialists in the fields of geology, finances, metallurgy, and the environment.

Neither Crown Consulting nor any of its employees and associates employed in the preparation of this report has any beneficial interest in Hawthorne or in the assets of Hawthorne. Crown consulting will be paid a fee for the preparation of this report in accordance with normal professional consulting practice.

The key project personnel contributing to this report are listed in Table 1.5-1.

Table1.5-1 – Key Project Personnel

Name	Discipline
Matt Hercun	Mine Economics
Alex Gossen	Geology
KeeUp Ahn	Mining, Mineral Resource
Juho Uuraslahti	Metallurgy, Process
Greg Sotiropoulos	Environmental

1.6 Background

1.6.1 Property Description

The Taurus Deposit sits on the Cassiar Gold Property which covers approximately 17,500 hectares within in the Cassiar Gold Mining Division in north-central British Columbia. The property is situated approximately 8 kilometres east of the former town site of Cassiar, B.C. and 117 kilometres north of Dease Lake. The mineral claims covering the Taurus Deposit are situated on NTS map sheet 104P05E and BCGS map sheet 104P022, at 59°16’28” latitude and 129°41’22” longitude, and UTM coordinates 6570815mN and 460706mE (UTM Zone 09 – NAD 83) (Figure 1.6.1.1-1).

Tailings and waste dumps from previous operations are located on the Cassiar Gold Property. The waste rock dumps are not very substantial and are located next to underground portals. The tailings, composed mainly of quartz with carbonate, are positioned in two locations, approximately 600m east of the old mine workings.

The mine and mill site were reclaimed after closure to the satisfaction of the Province and a $10,000 bond remains in place to pay for any required future reclamation. With effluent being deemed acceptable from all discharge locations by provincial authorities, water quality monitoring of various discharges has been discontinued. Reclamation costs of current exploration programs are covered by an additional $15,000 bond.

Mineral Claims

The Cassiar Gold Property consists of 209 mineral claims owned by Hawthorne Gold Corp and Cassiar Gold Corp as summarized below in Table 1.6.1.1-1. The property contains 2 mineral deposits: Taurus and Table Mountain. Hawthorne completed the consolidation of the Cassiar Gold Property in 2008 by acquiring 46 mineral claims from Cusac Gold Mines, 46 mineral claims from American Bonanza Gold Crop. And 117 mineral claims by staking or other mineral claim purchases.

The Taurus deposit is covered by 106 claims listed in Figure 1.6.1.1-1. All 106 claims are in good standing and 10 of the claims are subject to a 2.5% Net Smelter Return Royalty (NSR) payable to Sable Resources Ltd. The 10 claims subject to a 2.5% NSR are: Mack 1-4, Hopeful 1-4, Hillside and Highgrade.

Table 1.6.1-1 – Taurus Mineral Claim Summary

Owner	Claims	Area (ha)
Cassiar Gold Corp.	22	5139
Hawthorne Gold Corp.	84	14,086
Total	**106**	**19,225**

Figure 1.6.1-1 – Mineral Claim Status

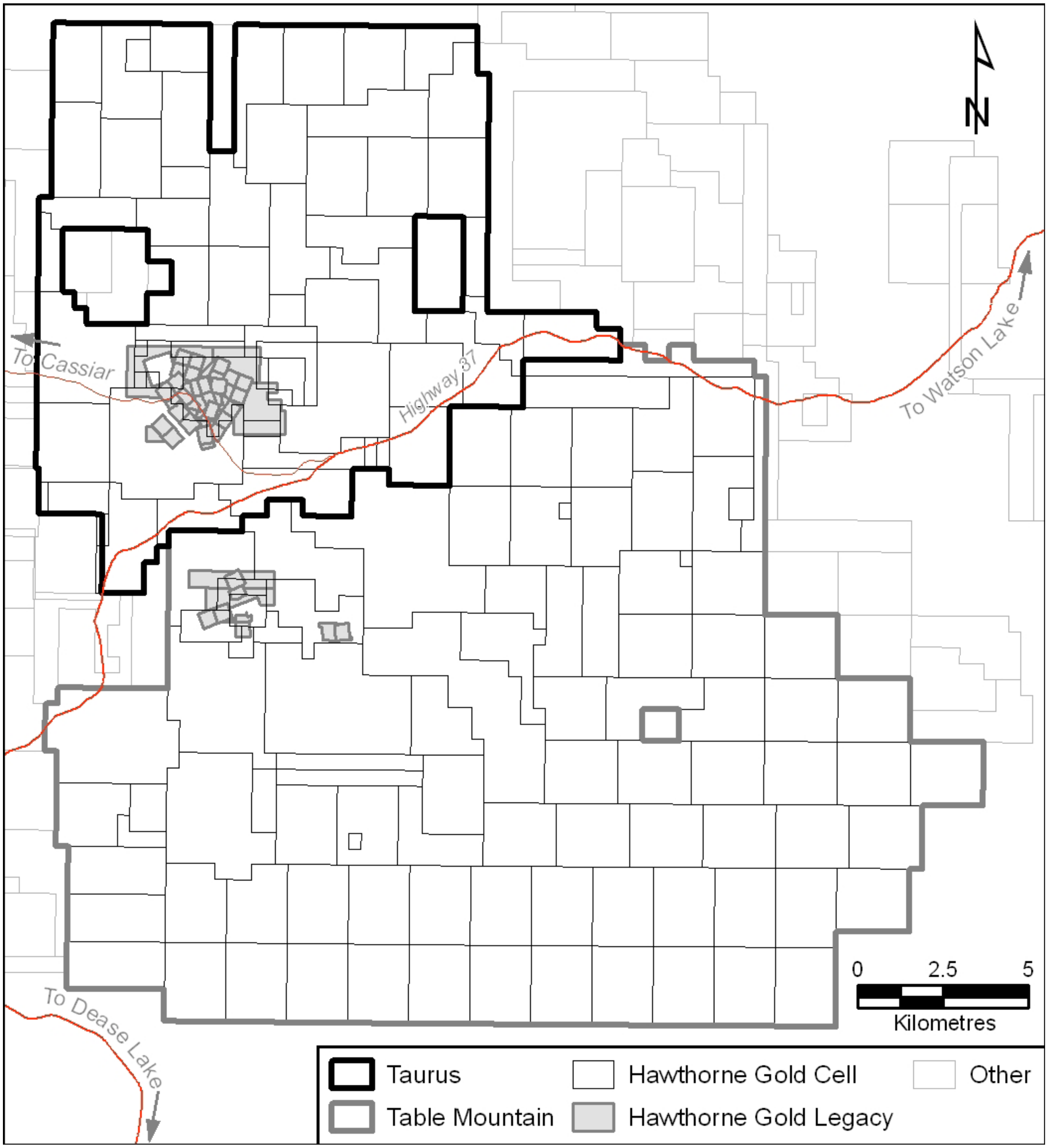


Table 1.6.1-2 – Taurus Deposit Mineral Claims

Tenure						
ID	Name	Type	Good to Date	Owner	Map Sheet	Area (ha)
221785	HANNA 9	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	225
221900	PORTAL 2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	225
221901	PORTAL 1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	375
222080	MM 1 FR.	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226142	MACK #1	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226143	MACK #2	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226144	MACK #3	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226145	MACK #4	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226146	HOPEFULL #1	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226147	HOPEFULL #2	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226148	HOPEFULL #3	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226149	HOPEFULL #4	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226150	HILLSIDE	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226151	HIGHGRADE	Mineral *	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226207	THRUSH	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226208	COPCO #1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226209	COPCO #2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226210	COPCO #3	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226211	COPCO #4	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226212	COPCO #5	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
226213	COPCO #6	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227201	ROY 1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227202	ROY 2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227203	ROY 3	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227204	ROY 4	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227536	TOD #7	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227537	TOD #8	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227694	ATLAS #1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227695	ATLAS #2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227696	ATLAS #3	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227697	ATLAS #4	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227698	ATLAS #5	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227699	ATLAS #6	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227700	ATLAS #7	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227701	ATLAS #8	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227702	ATLAS #9	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227703	ATLAS #10	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227704	ATLAS #11	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227705	ATLAS #12 FR.	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
227708	DOR #1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25

Tenure						
ID	Name	Type	Good to Date	Owner	Map Sheet	Area (ha)
331105	MISS DAISY 1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
331106	MISS DAISY 2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
331167	BES 1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
331168	BES 2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	25
332630	TOR 2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P022	450
394659	WING GOLD 1	Mineral	28/Jun/2013	Cassiar Gold Corp.	104P022	25
394660	WING GOLD 2	Mineral	28/Jun/2013	Cassiar Gold Corp.	104P022	25
394661	WING GOLD 3	Mineral	28/Jun/2013	Cassiar Gold Corp.	104P022	25
395270	FIREWEED	Mineral	11/Sep/2010	Hawthorne Gold Corp.	104P022	25
501587	Darcy	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	99
510750		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	1009
510751		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	132
510766		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	744
510768	OLE' 1-9	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	149
511229		Mineral	30/Jun/2010	Cassiar Gold Corp.	104P	496
511346		Mineral	30/Jun/2010	Cassiar Gold Corp.	104P	431
511352	REDER 1-10	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	166
511359		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	778
511368	GRAB 1-2	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	33
514937		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	447
514945		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	265
517020	NC3	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	17
517048	AUREX	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	33
517063	ARGOLD	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	33
517075	OLEW	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	17
517092	OLEE	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	99
517109	WATT	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	33
517124	AMP	Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	33
562964	BOZO 3	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	116
564560		Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	116
566738		Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	248
566801		Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	50
570687	BOZO 4	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	132
575558	BOZO	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	33
575974	M2	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	281
575975	M1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	347
575977	M4	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
575981	M3	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
575988	M5	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
575992	M6	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	380
575997	M7	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413

Tenure						
ID	Name	Type	Good to Date	Owner	Map Sheet	Area (ha)
576002	M8	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	397
576006	M9	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576009	M10	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	414
576195	HG1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576196	HG1	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	396
576197	HG3	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	396
576198	HG4	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	247
576199	HG5	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	380
576200	HG6	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	330
576201	HG7	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576202	HG8	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576203	HG9	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576204	HG10	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576205	HG11	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	396
576207	HG12	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	413
576208	HG12	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	396
576209	HG13	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	412
576210	HG14	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	363
576211	HG15	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	264
576212	HG16	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	215
576213	HG17	Mineral	01/Mar/2010	Hawthorne Gold Corp.	104P	364
581533		Mineral	01/Mar/2010	Cassiar Gold Corp.	104P	149
591724	HI1	Mineral	22/Sep/2009	Hawthorne Gold Corp.	104P	132
591727	HI2	Mineral	22/Sep/2009	Hawthorne Gold Corp.	104P	248
591728	HI3	Mineral	22/Sep/2009	Hawthorne Gold Corp.	104P	66

**Claims subject to 2.5% NSR Royalty to Sable*

In addition to mineral claims, placer claims have been located on grounds covered by the Taurus claims along the Troutline and Quartzrock creeks. Where these claims are present, they would have rights over alluvial deposits only.

1.6.2 Accessibility, Climate, Local Resources, Infrastructure, & Physiography

Physiography, Climate & Vegetation

The Cassiar Gold Project is located where the Quartzrock and the Troutline Creeks meet, immediately north of McDame Creek. The Troutline creek forms a wide valley ranging in elevation from 1000 m to

1230 m above sea level (masl) in moderate terrain with shallow lakes and swampy sections. Regionally the topography is quite mountainous, with the peak of Mount Robertson rising to an elevation of 2000 masl approximately 3 km to the north.

The property area is covered with moderate-to-heavy growth of poplar, black spruce, jack pine and lodge pole pine. The vegetation thins to buck brush and alpine meadows above the tree line at around 1400 m.

The climate of the area is typical of northern British Columbia and Yukon with long, cold winters and snow at any time of the year. Dease Lake, located 117 km south of the property has daily mean temperatures ranging from -17.7° in January to +12.6° in July. Annual total accumulation of snowfall is approximately 230 cm with snowfall being expected from October to May. Snowfall is relatively easy to remove and allows for year-round operation.

Accessibility, Local Resources & Infrastructure

Paved access to the property is provided by the Cassiar branch of Highway 37, the Stewart-Cassiar Highway. A number of reclaimed roads could be reopened to allow relatively easy access to most of the property.

General supplies and services are available from both Dease Lake (117 km to the south) and Watson Lake, Yukon (141 km to the north). Charter air service is available to and from Dease Lake and Watson Lake. The Cassiar airstrip is available for small charter aircraft. The nearest major centres are Whitehorse, Yukon, approximately 560 km north and Smithers, B.C., approximately 720 km south.

Although the Cassiar Gold Project is located in an area within a district with a rich mining history, there is currently only a small population base, requiring that most personnel for a new mining operation would have to be brought in from elsewhere.

Power has and will be provided by diesel generators unless the B.C. Hydro grid is extended north. Numerous creeks in the area provide sufficient year round flow for any exploration and mining activities. The property itself has enough space to allow for the development of tailings storage areas, waste disposal sites, heap leach sites, and expanding processing facilities.

1.6.3 History

1874 to 1980

The Cassiar area was first explored in 1874 by placer miners, nearly 25 years before the Klondike gold rush. The placer miners followed the gold up from the Pacific Ocean to McDame Creek, and by 1985 the miners had produced 2.2 million grams of gold. In 1934, gold-quartz veins were discovered in Trouline Creek, leading to the discovery of many additional veins that led to the establishment of several small gold mining operations.

The Taurus mine was originally staked by J.C. Simpson in 1935. Simpson carried out stripping, trenching and rock sampling until 1894. Benroy Gold Mines Ltd. Optioned the property the following year and completed over 700 m of trenching and 1500 m of diamond drilling.

A GSC mapping crew first encountered the Cassiar asbestos deposit on McDame Mountain in 1949. By 1952 a small 500 tonnes per day (t/d) plant was built and in operation. The asbestos fibre was shipped to Whitehorse in the Yukon using an access road to the Alaskan Highway. Eventually Highway 37 was built between Stewart and Cassiar, giving access to supplies from either Smithers or Terrace. Supplies were shipped from Stewart with backhauls of diesel for power and heat.

The claims on the Taurus mine were restaked in 1959 by Couture and Copeman, who mined 25 t of high grade ore from an adit. In 1960, Cornucopia Explorations Ltd. was incorporated to acquire the property. Cornucopia Explorations changed their name to Hanna Gold Mines Ltd the following year and proceeded with 1,180 m of drifting and crosscutting, and 1,000 m of diamond drilling. By the end of 1964, an “indicated reserve” of 75,000 t at 22.6 grams per tonne (g/t) gold had been outlined. The reserve estimate did not follow standards outlined in NI 43-101 and can only be described as historical estimates.

Newconex Canadian Exploration Ltd. optioned the property in 1964, and completed an additional 180 metres of drifting and crosscutting, and 210 m of drilling. In 1972, Hanna Gold Mines changed their name to Dorchester Resources Ltd. and rehabilitated and resampled the main 3600 level adit, and completed another 223 m of underground diamond drilling between 1973 and 1975. Ashlu Gold Mines Ltd. optioned the property in 1978 and completed 7.2 km of ground-based magnetometer and electromagnetic surveys. In 1979, United Hearne Resources Ltd. optioned the property and continued underground development and drilling, verifying a “reserve”.

With the exception of Whitehorse, Cassiar provided the best infrastructure north if Stewart and west of Fort Nelson between 1960 and 1990. However, the town was sold off when government loan guarantees were not extended and the mine was forced to cease operations

1980 to Present

In 1980-81, a 135 t/d mill was constructed at the Taurus Mine, treating 220,000 t of ore, averaging 5.14 Au (g/t) prior to closing in 1988. During this time the Ericson mine, which is now owned by Hawthorne, also maintained a similar operation. South of the highway, the Plaza and Sable workings were developed between 1980 and 1994, but with no record of production. During the operation of Taurus Mine, exploration was limited to areas near the existing workings.

Several companies explored areas of mineralization on the property after the closure of the mine. Companies involved included Sable Resources Ltd., International Taurus Resources Inc., Hera Resources Inc., Cyprus, Cusac, and finally Navasota Resources in 2003.

In 1988, diamond drilling discovered 2 vein systems in the 88 Hill area. A small open pit extracted 2,600 t grading 2.6 g/t gold from one of the veins. Between 1993 and 1997, geochemistry, geophysics and 25,000 m of drilling were completed. The 1994 drill program conducted by International Taurus on the Taurus West zone consisted of 88 drill holes totalling 7,592 m. Drilling encountered a locally mineralized zone over 200 feet in width, consisting of a quartz stockwork system in a broad zone of pyritic altered basalt.

In 1995 and 1996, Cyprus conducted and an extensive drill program on the Taurus West, 88 Hill and the Taurus Mine areas. The program consisted of 79 holes totalling 12,692 m in length. Cyprus also drilled five reverse circulation holes totalling 826 m in length. Continuity between holes and poor metallurgical test recoveries resulted in lower emphasis being placed on Taurus West as a target in subsequent programs.

In late 2003, Navasta Resources Ltd. conducted a two-phase drill program which consisted of a general geological compilation with some geochemistry, as well as limited remapping and re-logging of specific core. Phase II of the drill program consisted of 13 holes totalling 1,974 m in length. The holes were designed to test the zones identified by previous programs on the Taurus Deposit.

In mid 2007, Hawthorne completed a drill program consisting of 10 holes totalling 1,639 m in length. The objective of the program was to improve the continuity and confidence of the grade and structure of the 88 Hill Zone portion of the Taurus Deposit and to increase the understanding of the geological setting controls on gold mineralization within the known gold zones on the property.

Hawthorne completed a deal with American Bonanza to acquire a 100% interest in the remainder of the Taurus property in December of 2008.

1.6.4 Historical Resource & Reserves Estimates

These estimates are not compliant with National Instrument 43-101 and are considered conceptual in nature. These resource figures are disclosed on for historical context.

Early resource and reserve work on the Taurus deposit focused only on the Taurus Mine. An "indicated reserve" of 72,500 t grading 22.6 Au (g/t) had been outlined by the end of 1963. Then in 1979, continued drilling and underground development confirmed a "reserve" of 60,000 t grading 16.1 Au (g/t). In late 1993, International Taurus Resources Inc. acquired the Sable ground and drilled 26 tightly spaced holes totalling 1,554 m in length on the east side of 88 Hill. A "potential resource" of 436,000 t grading at 6.99 Au (g/t) was reported in individual narrow quartz veins.

In 1995, Cyprus conducted 78 widely spaced drill holes, confirming that a large, low-grade resource is present. A preliminary resource calculation reported an inferred, undiluted mineral inventory of 38 Mt grading 1.42 Au (g/t) calculated for the Taurus West, 88 Hill and Highway Zones. A second calculation which used the same data but different assumptions calculated a potential resource of 40.6 Mt grading 1.07 Au (g/t). These estimates are considered to have low accuracy but they demonstrate the possible existence of a potentially bulk mineable resource on the property.

In 1999, Cusac completed another resource calculation defining six distinct Zones (88 Hill, 88 West, Plaza, Sable, Highway Zone, and Taurus West) using factors including geography, geology, data density, and apparent amenability to open pit mining methods. Using a database of 130 drill holes, Cusac estimated a total of 23.4 Mt grading at 1.06 Au (g/t) at a reported 1.0 Au (g/t) cutoff for 88 Hill, 88 West, and Highway.

Wardrop generated the first NI 43-101 compliant mineral resource for the Taurus Deposit in May 2007. The Mineral Resource Estimate is summarized below in Table 1.6.4-1

Table 1.6.4-1 - 2007 Taurus Inferred Mineral Resource Estimate at 0.50 Au (g/t) Cutoff

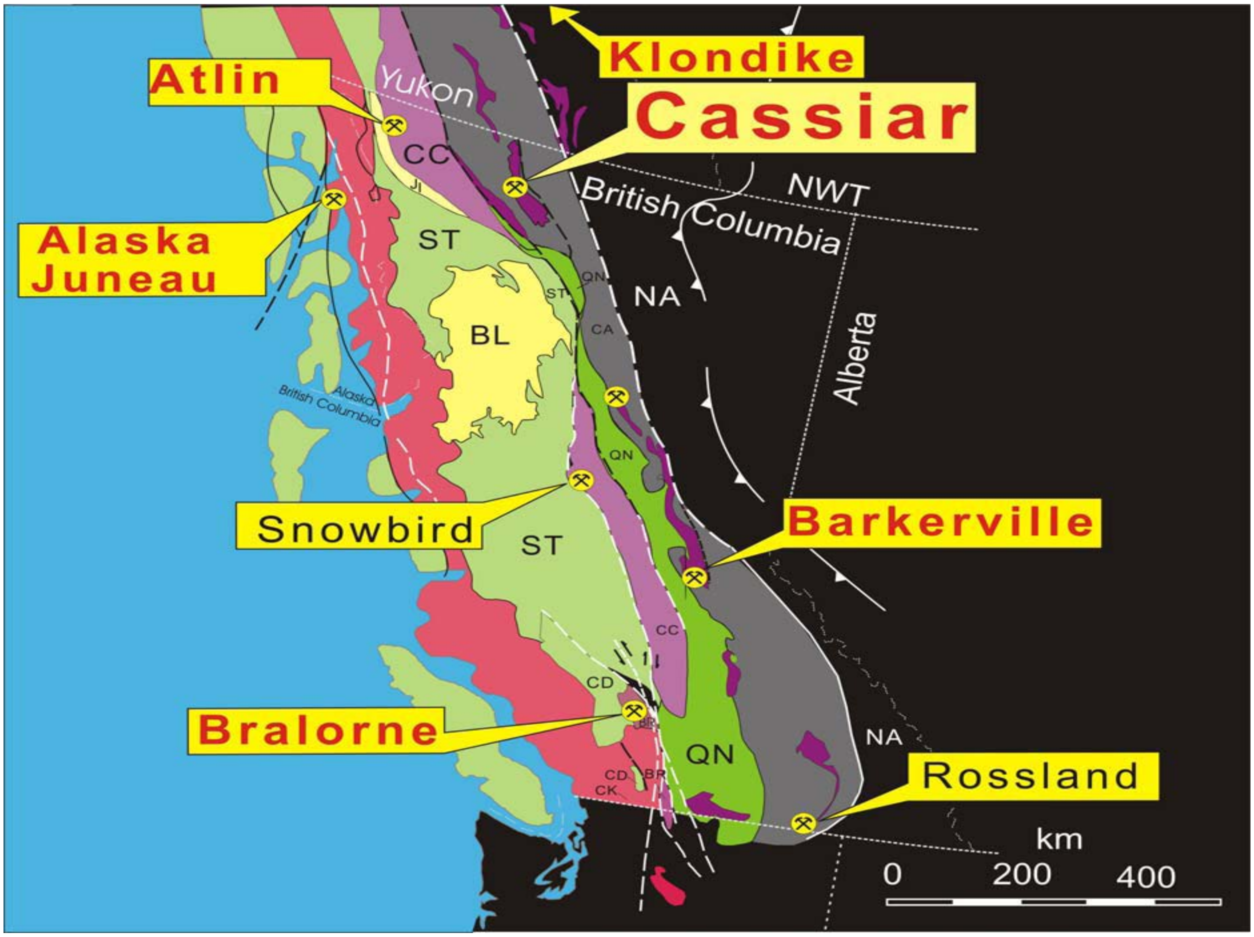
Zone Name	Tonnes (000's)	Average Grade (Au (g/t))	Contained (oz Au)
Sable	1,350	1.32	57,339
88 Hill	8,505	1.15	315,797
88 West	13,102	0.87	366,930
Highway	2,456	0.98	77,276
Taurus West	3,709	1.02	121,056
Taurus	2,348	0.99	74,489
Plaza	917	0.95	27,999
Total	**32,386**	**1.00**	**1,040,886**

2.0 GEOLOGY & MINERALIZATION

2.1 Regional Geology

The Taurus Deposit is found within the Sylvester Allochthon ; a package of rocks not formed in the region where they are found and moved to their present location by tectonic forces. The Sylvester Allochthon sits on top of the Omineca tectonic belt of rocks, which are largely metamorphic rocks derived primarily from sedimentary with amounts of volcanic rocks of Paleozoic to Early Mesozoic age (gsc.nrcan.gc.ca). The Sylvester Allochthon is a telescoped package of marginal basin and island arc material developed along the edges of the ancestral North American continent. The original Sylvester Allochthon involved, from east to west, a subsiding sedimentary basin (Division 1) that passed into a volcanic-sedimentary rift basin (Division 2) with exposed subcrustal mantle, passing further west to an island arc, built on a rifted continental sliver (Division 3).

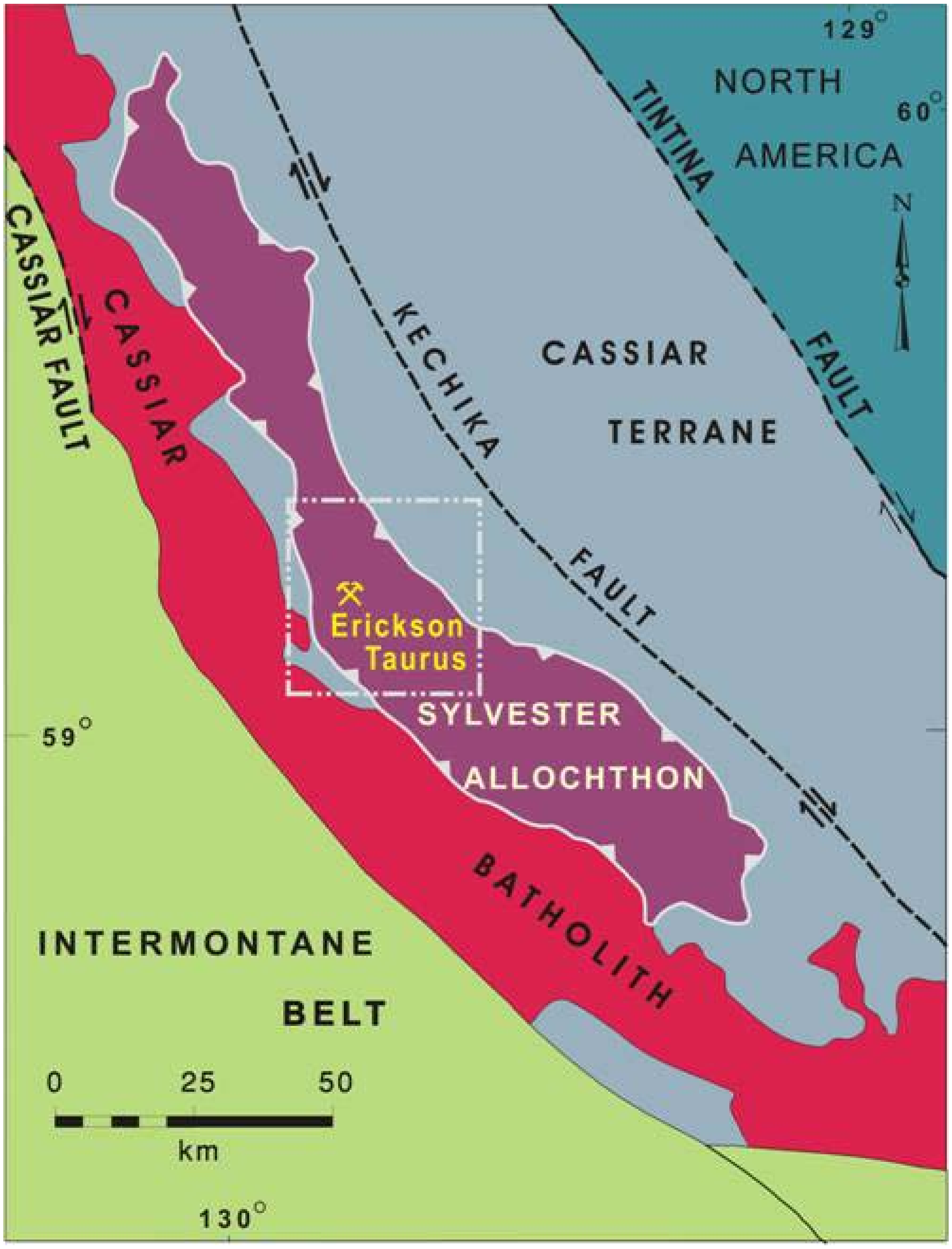
Figure 2.1-1 – Regional Geology showing the accreted terrains



www.canadiangoldmine.com

Figure 2.1-1 - Regional Geology, showing the accreted terrains; ST-Stikinia, CC- Cache Creek and QN-Quesnelia. Also shown here are mesothermal gold mines similar to the Taurus deposit, which is located near the Cassiar mine shown on the map.

Figure 2.1-2 – Regional Geology of the Sylvester Allochthon



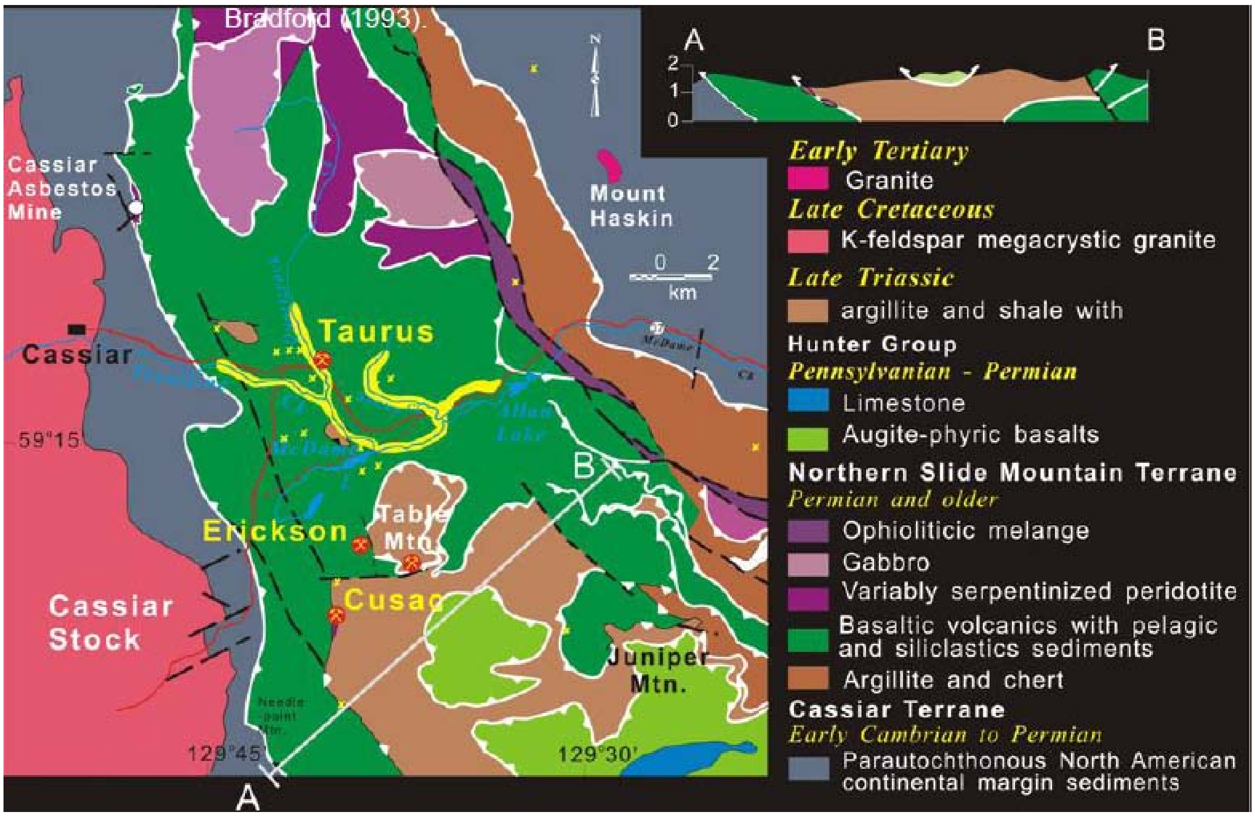
www.canadiangoldmine.com

Figure 2- Regional Geology of Sylvester Allochthon and the location of the Taurus deposit within the Allochthon.

2.2 Local Geology

The Sylvester Allochthon consists of very large-scale fault-bounded slices, overlying North American strata and the Cassiar terrane of Hadrynian to Early Mississippian age. Each slice that makes up the Sylvester Allochthon may include one or several lithologies, which may or may not be repeated within the slice. These slices are commonly thin and pinched out laterally in all directions (www.llbc.leg.bc.ca).

Figure 2.2-1 - Local Geology of Sylvester Allochthon



www.canadiangoldmine.com

The Sylvester Allochthon is described as having three structurally stacked divisions. These divisions form a consistent structural/lithologic packages extending from the Yukon border to the Dease River, a total strike length of 120 kilometres. The following describes the three divisions of the Sylvester Allochthon.

Division *1*

Division 1 is the structurally lowest unit in the Allochthon and is found directly above the master fault that separates it from the Earn Group of the North American strata. Division 1 primarily consists of argillite, black and green chert, bedded grey calcarenite partly to wholly replaced by black chert, sandstone, siltstone, a few diabase/diorite sills and rare quartz-pyrite-barite bedded exhalites. On average Division 1 sedimentary slivers tend to be between 50 metres to no more than 150 metres thick.

Division *2*

Division 2 the “greenstones” is defined as a set of basalt-dykes/sills-sediment packages with ultramafic-gabbro slivers of ocean floor material (ophiolites), structurally higher than Division 1. This division hosts the Taurus deposit, a 23-kilometre long greenstone belt known as the Cassiar Gold Belt.

Four major units comprise Division 2 of the Sylvester Allochthon. In structurally ascending order they are:

1. Cassiar ultramafic-mafic sheet
2. Volcanic-sedimentary sequence of Early Mississippian to Early Permian age
3. Zus Mountain ultramafic-mafic sheet
4. Table Mountain sediments

Volcanic-sedimentary sequence

The majority of Division 2 is volcanic-sedimentary sequences produced from a rift basin. These sequences consist of basalt, basalt breccia, tuff and interbedded diabase sills, as well as argillite, chert, sandstone, siltstone and chert-pebble conglomerate.

Ultramafic-mafic sheets

Division 2 are ocean floor materials (ophiolites), there are two major ultramafic-mafic sheets, which occupy different structural levels. The lower Cassiar sheet consists of block to mountain-sized slivers of gabbro, ultramafic cumulates, harzburgite tectonite, basalt and sediments with serpentinite along the contacts and internal shears. The Zus Mountain sheet contains large amounts of harzburgite tectonite with dunite being the most common lithology. Chromite is scattered throughout this sheet. Lying directly above the ultramafic rocks is a coarse-grained gabbro called the Zus Mountain gabbro body.

Table Mountain sediments

Table Mountain sediments are the structurally highest level within Division 2. They include grey to black slate, thin-bedded, well-laminated calcareous siltstone and grey limestone of Late Triassic age.

Division 3

Overlying the Table Mountain sediments Division 3 is the structurally highest level of the Sylvester Allochthon. This division is of Early Permian, mainly composed of intermediate volcanic rocks, shallow water limestones with interbedded bands of chert and a hornblende gabbro to granodiorite pluton.

The following is a summary of the events that occurred and lead to the placement of the Sylvester Allochthon on top of North American strata.

Devonian-Mississippian

The oldest assemblages found within the Sylvester Allochthon are Early Mississippian, which suggests that the subsidence that began the accumulation of the rocks of Division 1 and Division 2 began at the

Devonian-Mississippian boundary. Divisions 1 and 2 are also represented during this time by a rift trough, which continued rifting until the Mid-Permian.

Permian

Division 1 and 2 have similar sedimentary accumulations during the Permian, both lack the siliciclastic rocks that define the Mississippian sequences. Both divisions contain distinctive bedded chert breccias, which may be a result of sedimentary faulting and submarine slumps of material. A relationship between a thrust fault and the infilling of the fault with tonalite, suggests a discontinuation of basin development and rifting at the time of tonalite emplacement.

Triassic

During the Middle to Late Triassic the Sylvester Allochthon is defined primarily by the carbonates and siliciclastics of the Table Mountain sediments. These sedimentary rocks, although strongly sheared at the base, do overlie the mantle slices of the underlying Mississippian and Permian, interoperated as an unconformity.

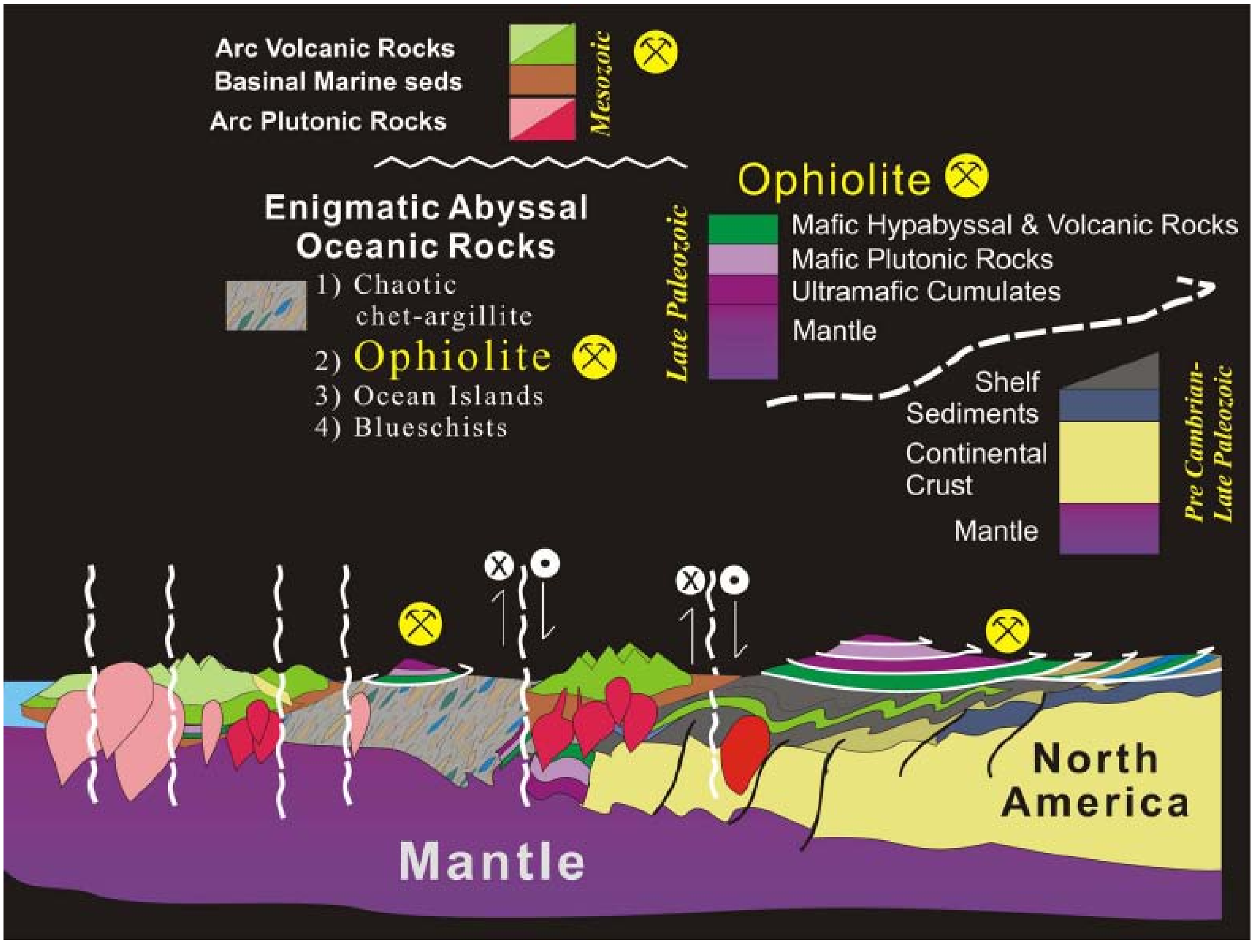
Jurassic

Compressional tectonics during the Jurassic stacked the three divisions to their present order along easterly-directed thrusts.

Cassiar Batholith

The Sylvester Allochthon is locally bound to the west by the Cassiar batholith. The Cassiar batholith is the largest plutonic body in the interior of the Canadian Cordillera. The batholith is part of a widespread middle Cretaceous to Eocene, 100Ma magmatism that occurred in the Omineca belt. The Cassiar batholith is dominated by muscovite-biotite granite and granodiorite.

Figure 2.2-2 – Thrust Faults and Ocean Floor



www.canadiangoldmine.com

Figure 2.2-2 - Section showing the thrust faults and ocean floor (ophiolite) lying on top of the North American strata.

The sequence of lithologies seen in the Sylvester Allochthon is not in stratigraphic order, but is completely a tectonic stratigraphy; it was developed almost entirely by faulting and varies widely from place to place (www.llbc.leg.bc.ca).

2.2.1 Lithology

Gold-bearing quartz-carbonate veins and veinlets associated with disseminated sulphide minerals crosscut altered basalt and are localized along major regional faults and joint systems related to regional compression. The veins usually have sharp contacts with the wall rocks. Five gold veins have contained ore at Taurus; four of them strike nearly east west while the fifth strikes 50°.

Taurus hosts two main types of gold mineralization. The first type is found in pyritic quartz veins that occupy steep fractures in basalts below the base of the sediments, with gold grades increasing toward the contact. The second is a disseminated pyritic or pyrite-carbonate vein, characterized by 10-40% fine-grained pyrite; these veins follow the base of the sediments. Lower bulk-tonnage mineralization has developed in areas marginal to veins with gold associated with disseminated sulphides (www.geology.gov.yk.ca).

www.empr.gov.bc.ca

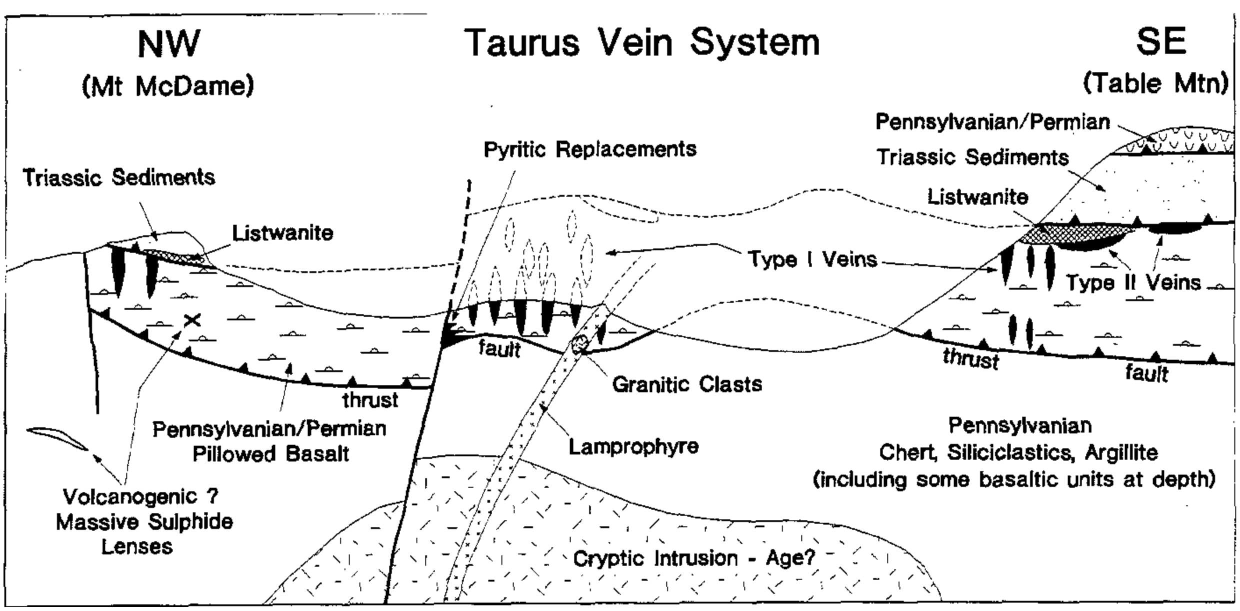
Figure 2.2.1-1- Schematic model for gold mineralization in the Taurus deposit, showing the relationship between type 1 steep volcanic-hosted veins and type 2 carbonaceous veins at volcanic-sediment contacts.

2.2.2 Structure

The autochthonous strata of the Cassiar platform and the Sylvester Allochthon formed duplex stacks with multiple repetitions during the compressional events of the Jurassic. The Taurus vein system is strongly elongated in a north-south direction, parallel to the set of high angle faults. These set of faults are post mineralization as they terminate the vein system; however, they suggest a relationship between them and gold mineralization, whereby mineralization occurred after the formation of the faults, then the faults continued to move after mineralization, thus terminating the mineralization.

The source of the mineralizing fluids in unknown; however, it has been suggested that a cryptic intrusion is the source of the mineralizing fluids, as shown in Figure 2.2.1-1.

Figure 2.2.1-1 - Schematic model for gold mineralization in the Taurus deposit



2.2.3 Mineralization

The Taurus deposit has been classified as a mesothermal quartz-carbonate-gold vein similar to other greenstone belts throughout the world; Bralorne in B.C and the Mother Lode district of California. The proposed formation of the veins and veinlets suggest they were formed where abundant fluid flowed through structurally complex zones in less competent rocks. Typically these systems occur as en echelon veins on all scales. It is also typical to see lower grade bulk-tonnage styles of mineralization within the marginal areas of the veins, with the gold associated with sulphide minerals, as seen with the Taurus deposit. The formation of these types of deposits may also be related to board areas of fracturing with gold and sulphide minerals associated with quartz veinlet networks. (www.geology.gov.yk.ca) (www.llbc.leg.bc.ca).

The age of mineralization of the Taurus deposit is of the Lower Cretaceous between 132 – 136 Ma. The quartz veins are lenticular in shape in an en echelon type structure varying in widths from 50 centimetres to2 metres. The mineralized gold veins have an average depth of about 100 metres against a shallow dipping chert unit overlaying a sequence of basalt in Division 2.

The mineralization found on the property consist of pyrite (FeS_2), tetrahedrite [$(Cu,Fe)_{12}Sb_4S_{13}$] , sphalerite (ZnS), chalcopyrite ($CuFeS_2$) and gold (Au); mineralization is present over an area of 1.5 kilometres in an east-west direction and 800 meters wide with depth ranging from 70 to 150 meters striking 70° and dipping 20° to the southwest.

Alteration at Taurus is characterized by intense silicification, disseminated pyrite and carbonate alteration, forming 1 to 2 metre wide halos within the wall rock. (minfile.gov.bc.ca). The alteration is a result of regional metamorphism, epigenetic hydrothermal activity and contact metamorphism.

The most common alteration type found at Taurus is an epigenetic carbonation of basalt, which occurs as well developed envelopes around gold-bearing quartz veins. The rocks within the carbonate alteration envelopes are composed of quartz, sericite, pyrite and dolomite. Most of the gold at the Taurus deposit is found in these zones of pyritic quartz in larger quartz veins within pyritic bleached, carbonate altered zones, varying in width from 2 to 30 metres. The pyrite mineralization is part of a 15 metre thick alteration zone that formed along a northwest striking reverse fault in the hanging wall.

2.3 Exploration

The Cassiar area was first explored in 1874 by placer miners, who had been following the gold up from the Pacific to McDame Creek. In 1934 gold-quartz veins were discovered in the Troutline Creek which ultimately led to the discovery of many more veins and small gold mining operations. (www.SEDAR.com). Historic exploration on the project has consisted of induced polarization (IP) and ground magnetic surveys, soil geochemistry, trenching and drilling.

IP surveys were conducted in 1988 had outlined 33 anomalies, of which one was trenched and drilled resulting in the discovery of a vein system. Again in 1993 and 1994 further IP surveys were conducted which led to the discovery of three gold-bearing vein systems.

A ground magnetic survey showed a strong north-west trending magnetic high, which runs through magnetic, jasperoidal basalt. Aside from these north-west trending basalt most basalt, chert and argillite all exhibit very weak magnetic susceptibilities.

Geochemistry was conducted on soils and chip samples during the summer of 1995, this survey highlighted areas of significant gold anomalies; however the samples were considered to be contaminated because of the development of the property.

More recently trenching done on the property was done in conjunction with diamond drilling to expose mineralization and vein systems, indentified by the IP surveys.

Located on the same property is a similar deposit, called Table Mountain. Table Mountain is hosted in the same greenstone belt as Taurus; however, unlike Taurus, Table Mountain is a high-grade underground operation. Table Mountain is choosing a shrinkage stope mining method as opposed to open pit like Taurus, because the Table Mountain deposit has a larger number of Type 1 veins and fewer lower grade Type 2 veins.

The level of exploration at Table Mountain is at a mature level, most of the area has had geochemical and ground geophysics done on it with the majority of exploration conducted by diamond drilling and a few sites undergoing seismic surveys and percussion drilling.

3.0 MINERAL RESOURCES

3.1 Sample Preparation, Analyses and Security

3.1.1 Historic Sample Preparation, Analyses, and Security

Core samples collected from the exploration project by Cyprus were split by a conventional core splitter. Half of the split samples were analysed by Chemax Laboratories in Vancouver. The other half of the split core samples came back to the core boxes for a permanent record. Check samples were analyzed by Acme labs located in Vancouver.

In the analysis lab, the core samples were crushed and pulverized to 90 % passing at 60 mesh size. Further pulverization and analysis were done to a 200g sample by fire assay with an atomic absorption finish.

Two standard samples from the reject portion of samples from the first stage drill program, one grading 0.45 Au (g/t) and the other one at 1.40 Au (g/t), were created by Chemex in Reno, Nevada. Every sample batch includes the standards. 10% of the samples went through check assay at Chemex, and every 20th sample was checked at Acme. Split 10cm pieces of core collected every 5 to 10 m were analysed for specific gravity tests using a standard water immersion and weighing technique by Chemex.

Core sampling was properly carried out to meet industry standards. The Cyprus reports does not address chain of custody and security issues, however no concerns have been raised with the nature of the program and the volume of the sample. Sample preparation and analytical procedures meet industry standards. Information regarding the sampling procedure of other drilling program was not provided.

Core samples from the exploration program conducted by Navasota Resources in 2003 were split on site by a mechanical splitter. The split sample were bagged, tagged and transported to Eco-Tech Laboratories sample preparation facility in Stewart, B.C. Crushed, pulverized and split samples produced 200 g pulps shipped to Kamloops for analysis. 30g of the sample was removed to conduct acid digestion and ICP analysis for gold and 29 other elements. Any sample with more than 1 Au (g/t) was analyzed again using 30g fire assay. Eco-Tech ran duplicate samples every 10 to 15 samples as an in-house quality control check.

Furthermore, Navasota introduced blanks and a standard, from West Coast Minerals in Burnaby, in their analysis procedure. Metallic assays of 19 samples revealed results from 0.5 and 11 Au (g/t). Navasota concluded that cross sample contamination is not expected because none of the blanks showed elevated gold values. Duplicate samples of Navasota were mostly within 20% of each other. There were six samples outside the 20% correlation with five of the six samples greater than 0.6 Au (g/t). Eight of the 19 metallic assays run revealed higher value with the largest discrepancy being a 5.82 Au (g/t) fire assay on a 30g sub-sample that came back as 10.76 Au (g/t) after metallic assays.

Navasota indicated that the results are variable because of the presence of relatively coarse gold particles. This indicates that the gold may be underestimated and further check work is warranted.

3.1.2 2008 Sample Preparation, Analyses and Security

Core samples from Cusac drill program in 2007 were split with a conventional core splitter, bagged and transported by a management designated employee to the Eco Tech Prep Lab in Whitehorse. Half of the core samples were stored in case they were needed for further testing.

The mineralized section of the sample interval was marked and recorded according to its geological characteristics. The core samples were split in half along their length using a continuous line to prevent bias. Half of the split core samples were bagged from each marked sample interval.

Standard samples purchased from Canadian Resources Labs were inserted into every tenth sample of the sample sequences. When any sample containing visible gold was found, blank samples were inserted.

For verification of the seal integrity and for detection of possible tampering, sample applications and sample transportation lists with security seals were provided to the lab. Upon receipt of the sample in Whitehorse Eco-Tech provided a hand written and signed letter regarding the security of the samples. The crushed, split and pulverized samples were then delivered to Eco-Tech's lab in Kamloops for analysis.

10% of the samples went through in house assay test by EcoTech, to ensure all assay results were in the upper and lower limit allowed.

One of the blank samples, No. 31442 returned 0.23 Au (g/t) and was believed to be anomaly. Sample No. 31442 returned a result of 6.7 Au (g/t) and would need to be assayed again immediately.

838 samples including standards and blanks were analyzed. 746 samples were drill core samples. A standard 1 assay ton fire assay was conducted on each sample and metallic assays were performed on samples showing a fire assay results of greater than 2.0 Au (g/t)

24 samples of mineralized quartz vein went through metallic assay no matter what the fire assay results were. This process was done in order to detect a nugget effect in the quartz vein which might return anomalous gold values.

72 metallic assays were done to the core sample showing greater than 2.0 Au (g/t).

The difference in gold values in samples that went through metallic screen assaying where the fire assay was greater than 2.0 revealed the unbiased standard deviation of 65.2.

The difference in gold values in samples that went through metallic screen assaying where the fire assay was less than 2.0 revealed the unbiased standard deviation of 48.7.

These results indicate the gold values of the previous samples might be undervalued and further metallic sampling is recommended.

3.2 Data Verification

3.2.1 General Validation

The initial validation of the database noted the drill holes from the year 2003 were missing. These drill holes were stored in the database using a double entry system. Drill hole log's information, collar positions, down hole dips, and lithologies, were extracted. There were minor errors in the logged intervals and these errors were fixed to carry out the estimate.

Assays with unavailable certificates were compared to the assays in the drill logs during the validation of the database. Since there is no documentation of the pre – 1994 drill holes, it is impossible to conduct any validation on the assays and lithologies.

Three diamond drill holes and three RC holes were reviewed during the initial 2006 site visit. Additional five diamond drill holes were examined during the 2007 site visit.

3.2.2 Collar Positions

During the October 2005 site visit, 34 drill hole collars were found. GPS (GARMIN GPS map 76 with average accuracy error of 6 m) was used to take measurements. There were five additional measured locations with no bore hole identification. Their identifications were assumed. During 2007 site visit, because of the depth of the snow, the GPS coordinates were not possible to obtain. However, GPS measurements including position of drill pads, indicated by clearings were taken.

Most of the drill holes reveal acceptable differences in their positions when compared to the collars in the database.

Only five drill holes had notable discrepancy. These holes were located between 11 and 40m above the topography. According to the database, the degree of confidence regarding the source of the error is not significant enough to alter the resource estimate thus there were no changes in the collar positions. It is recommended to resurvey the positions in order to carry on further resource estimates to set up the correct geography and collar position.

3.2.3 Assay

3,477 assay samples of a database of 15,787 were checked out. The database includes a few assay values of zero where no samples were taken. The primary source of the verification of assay data is assay certification. Where there are no assays certificates, drill logs are used to compare the records.

3.3 Composite and Capping

Assay data were composited into 1.5 m down hole composites. Where there are no samples, zero grades were assigned. Assay values below the detection limit have been assigned as zero grades in the database.

Rank disintegration techniques were applied to investigate the data sets with a coefficient of variation of greater than 1.5 which might have the potential risk of grade distortion from higher grade assays.

3.4 Block Model

Block models were built by Gemcom Surpac 6.1.3 for Taurus area. The block models were confined and trimmed to reflect current topography. The block model origin and summary are outlines below.

Table 3.4-1 - Block model summary

Type	Y	X	Z
Minimum Coordinates	6570000	459000	850
Maximum Coordinates	6571200	461250	1250
User Block Size	10	10	10
Min. Block Size	10	10	10
Rotation	0	0	0

Total Blocks	295713
Storage Efficiency %	72.61

Attribute Name	Type	Decimals	Background	Description
AND	Float	2	0	-
AU	Float	2	0	-
CLASS	Integer	-	0	-
NS	Integer	-	0	-
ROCK	Character	-	waste	-
SG	Real	3	2.7	2.7

3.4.1 Block Size

A block model with blocks 10 m x 10 m x 10 m high was superimposed on the geological model for the interpolation. This interpolation was based on the average sampling spacing on the property and reflecting the selectivity of the proposed open pit mine milling 7000 t/d.

3.4.2 Interpolation Plan

The inverse distance method was primarily used to estimate the gold grade and its tonnage. The gold grade estimates per block were combined and weighted by density and rock type proportion.

The parameters and input for the resource estimation is based on drill hole data from the property. Specific gravity (a bulk density) of 2.70 (t/m^3) was used to calculate tonnage and volume. Un-sampled intersections have been assigned zero grades.

The inverse distance technique with all the search parameters and constraint values used are outlined below.

Table 3.4.2-1 - Block model parameters

Rotation Convention	
Surpav ZXY LRL	
Angles of Rotation	
First Axis	0.00
Second Axis	0.00
Third Axis	0.00
Anisotopy Factors	
Semi major axis	1.0
Minor Axis	1.0

3.4.3 Block model visual inspection

Visual inspection verifies that the block model matches with the drill hole data. Figures below reveal representative gold grade estimates of the block model.

Figure 3.4.3-1 - Block model layout with grids

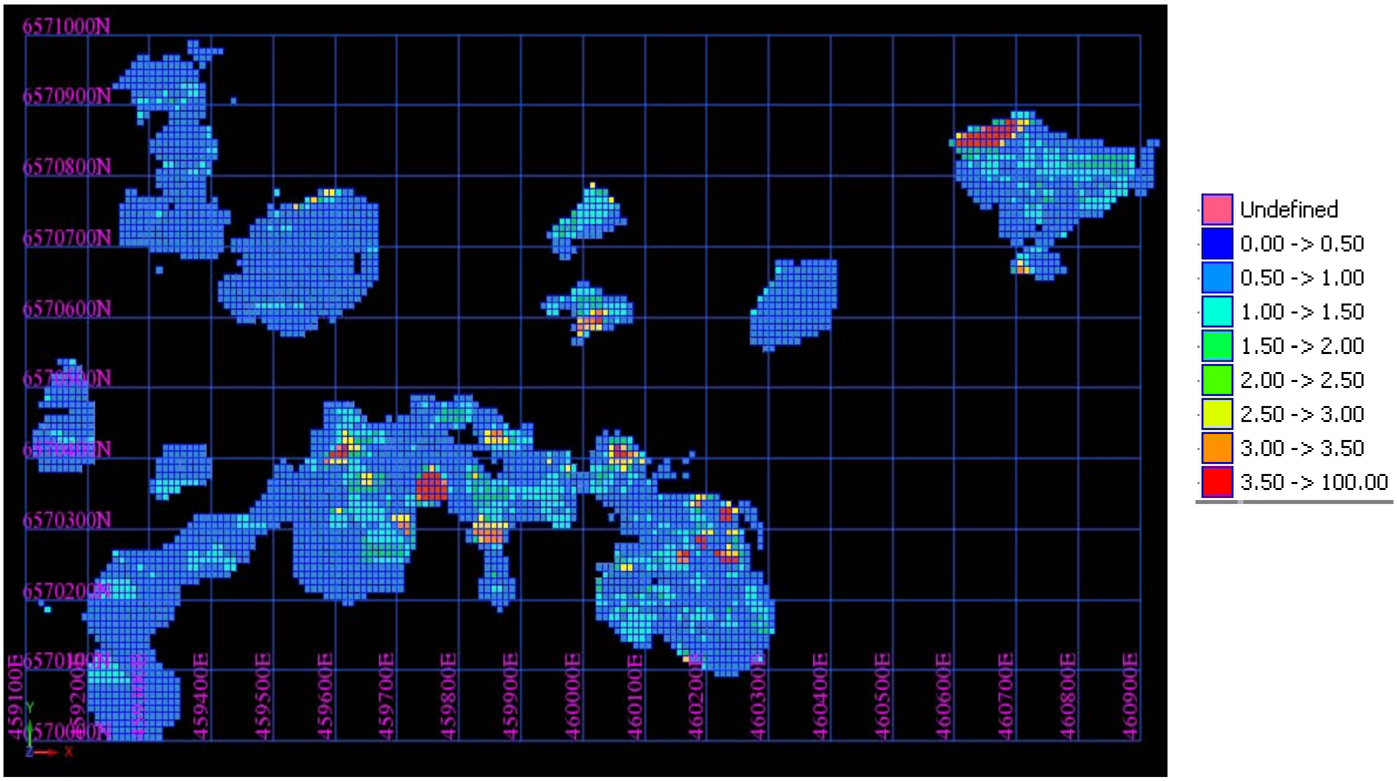


Figure 3.4.3-2 - Block model layout with the pit designs and the topography

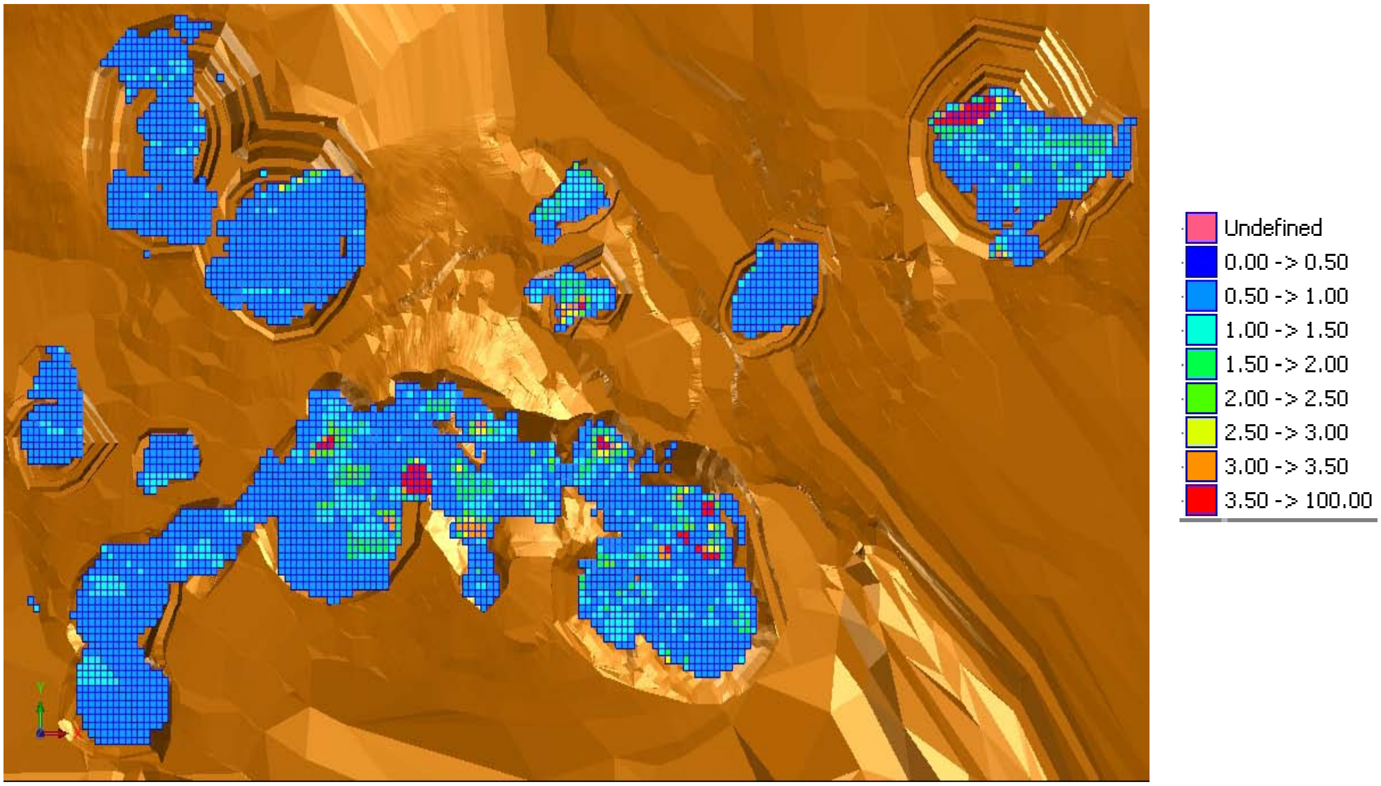


Figure 3.4.3-3 - A section of the block model, section 459350E

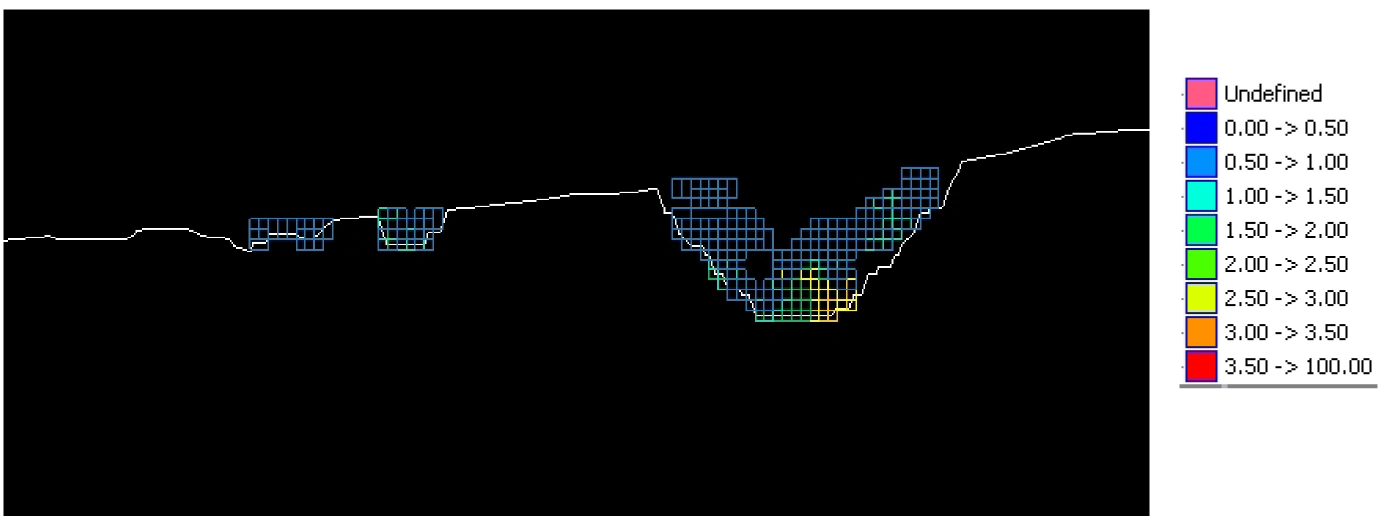


Figure 3.4.3-4 - A section of the block model, section 459600E

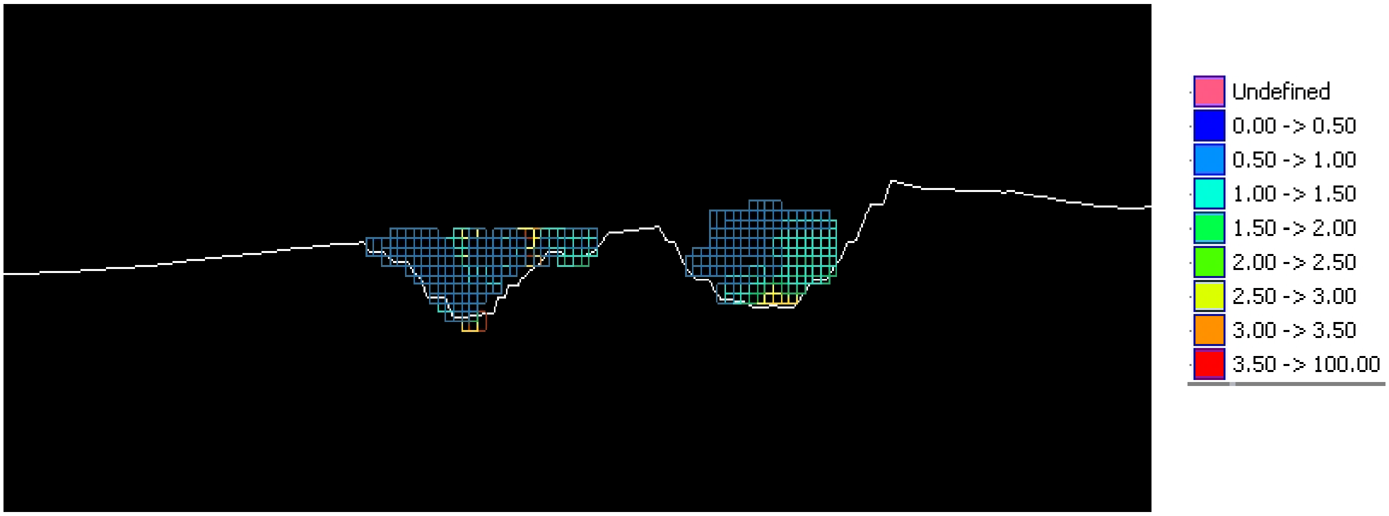


Figure 3.4.3-5 - A section of the block model, section 460050E

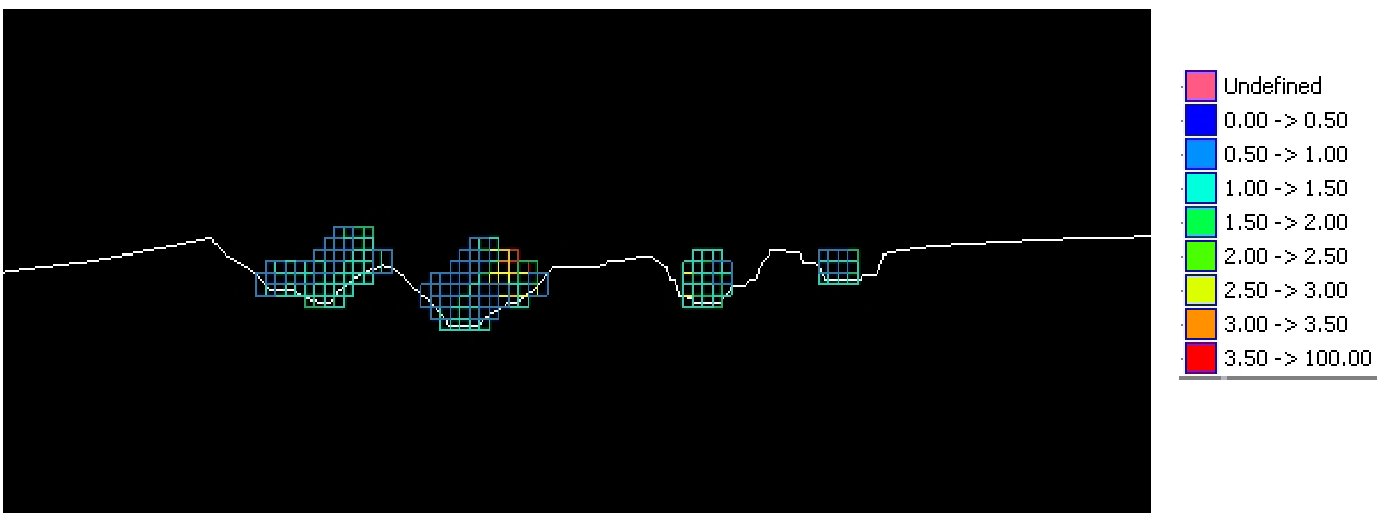


Figure 3.4.3-6 - A section of the block model, section 460350E

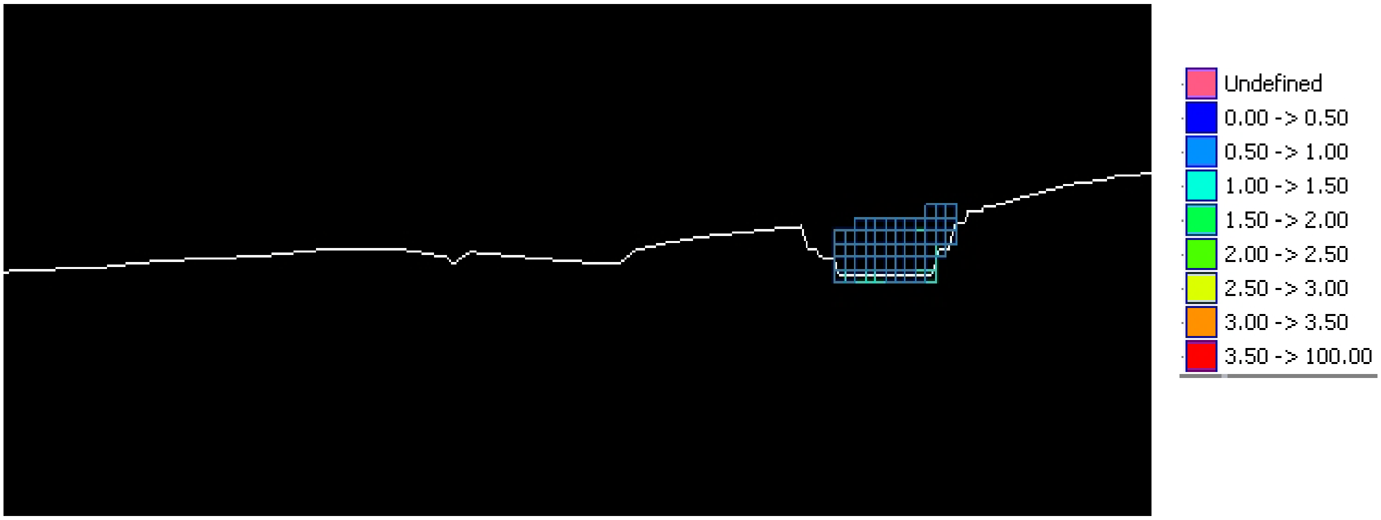


Figure 3.4.3-7 - A section of the block model, section 460700E

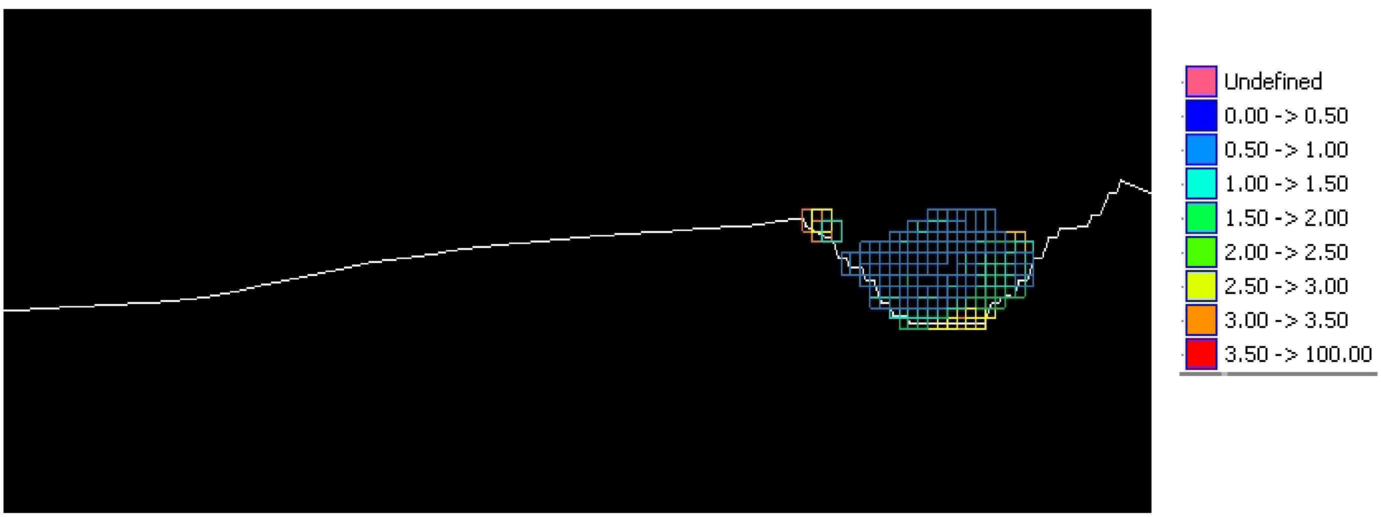


Figure 3.4.3-8 - A section of the block model, section 6570050N

Figure 3.4.3-9 - A section of the block model, section 6570300N

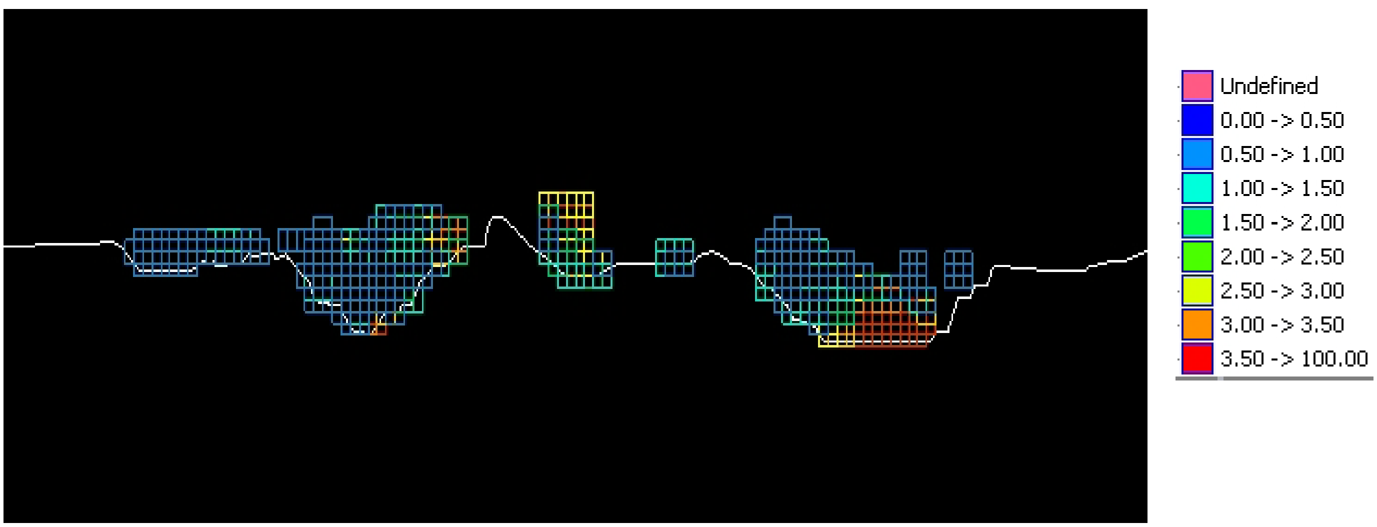


Figure 3.4.3-10 - A section of the block model, section 6570500N

Figure 3.4.3-11 - A section of the block model, section 6570600N

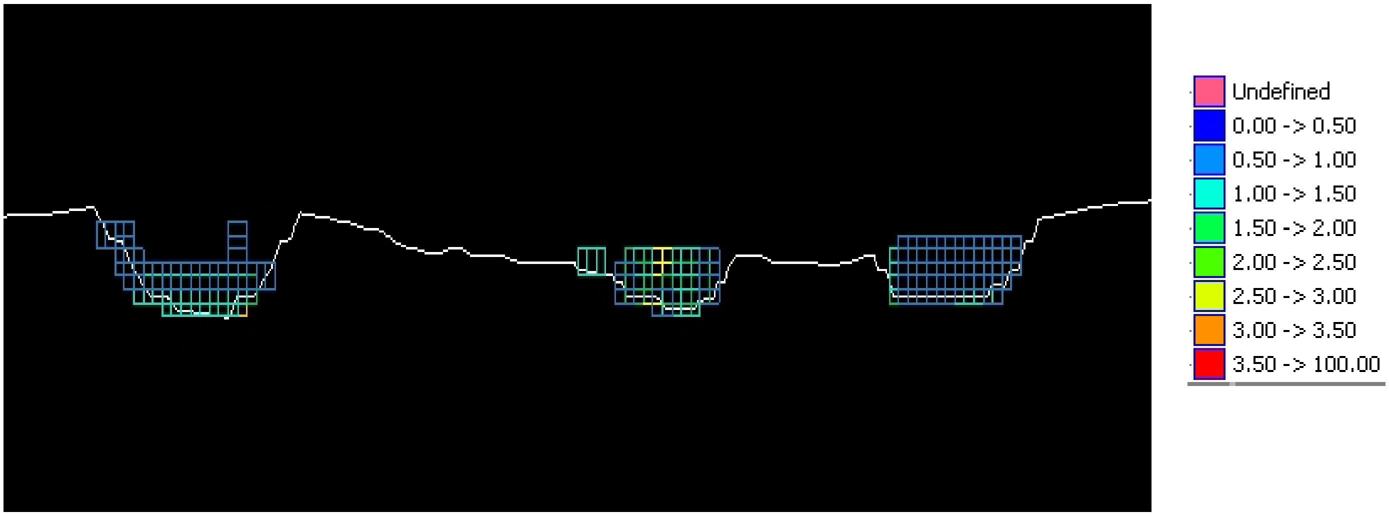
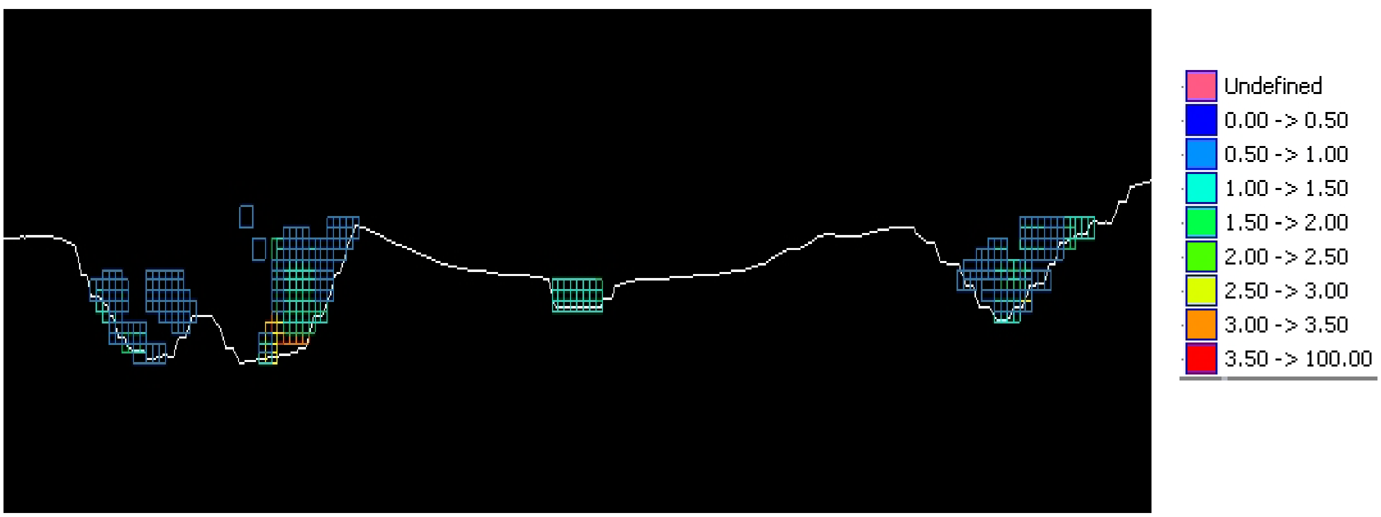


Figure 3.4.3-12 A section of the block model, section 6570750



3.5 Mineral Resource Classification and Estimation

The Taurus Mineral resource has been classified as inferred due to the following reasons.

- The geological model does not have consistent and sufficient core logging information to build and estimate block grades.
- Bulk density data is missing.
- Crown Consulting was unable to verify portions of the database
- Reverse Circuit drilling data is more biased than the diamond drill data.
- More work and collection of data are required to verify the situation.

Resource classification is based on various block model parameters combined with the demonstrated confidence in the assay values. The limit of the Mineral Resources is based on the following criteria: blocks within a specified distance and a minimum number of drill holes are required to estimate the gold grade.

Until 1988, the Taurus mine processed a total of 220,000 t at a grade of 5.14 Au g/t. There is not enough information regarding the exact location of where this tonnage was mined.

The cut-off grade is 0.50 g/t Au, with 31.6M tonnes of inferred mineral resources available at an average grade of 1.50 g/t Au are present. This equates to 1,409,504 oz gold.

Since there are uncertainties regarding the collection of data, the Taurus deposit cannot be considered as an indicated or measured resource. Depending on the results of further exploration and testing, the deposit could be upgraded to indicated or measured. Table 3.5-1 shows the resource estimation for the property and Table 3.5-2 shows the resource report generated by Surpac block modeling.

Table 3.5-1 - Resource estimation of the Taurus property

Cut-off Au (g/t)	Tonnes (*1000)	Grade Au (g/t)	Metal (k/oz)
0.50	31,600	0.99	1,055.50
0.75	19,672	1.24	785.3
1.00	10,871	1.54	537.5
1.50	3,716	2.13	254.1
2.00	1,693	2.63	143.3
3.00	369	3.69	43.7

Table 3.5-2 – Resource report generated by Surpac block modelling

Au	Volume	Tonnes	Au
0.1 -> 0.2	23691000	63,965,700	0.15
0.2 -> 0.3	18104000	48,880,800	0.25
0.3 -> 0.4	13764000	37,162,800	0.35
0.4 -> 0.5	12876000	34,765,200	0.45
0.5 -> 0.6	10260000	27,702,000	0.55
0.6 -> 0.7	7096000	19,159,200	0.64
0.7 -> 0.8	4894000	13,213,800	0.75
0.8 -> 0.9	3946000	10,654,200	0.85
0.9 -> 1.0	3067000	8,280,900	0.95
1.0 -> 1.5	7024000	18,964,800	1.2
1.5 -> 3.0	4020000	10,854,000	2
3.0 -> 100.0	865000	2,335,500	4.87
Grand Total	1.1E+08	295,938,900	0.54

4.0 MINING

The Taurus deposit is made up of pyritic quartz veins and disseminated pyritic mineralization and is located close to the surface. The deposit has an inferred mineral resources of 31.6 Mt averaging 1.50 Au g/t. It has a cut-off grade of 0.50 Au g/t, with a metal content of 1,409,504oz of gold.

4.1 Historical Mining Information

The deposit was first explored by placer miners in 1874. In 1934, gold-quartz veins were discovered. The property was staked and was a gold producing mine from 1981 to March 1988. After the mine was closed, several companies conducted exploration on other mineralized area of the property.

4.2 Open Pit Optimization

Pit optimization was carried out using Surpac provided by Anoush Ebrahimi. The Lerch-Grossman (LG) 3D optimization method accomplishes an optimized pit by operating block models and structures arcs. The values of the blocks are calculated from the resource block models and input parameters supplied by Anoush Ebrahimi.

4.3 Geotechnical Considerations

The completed open pits will be approximately 100m deep when completed. The Stability of the open pit walls depends of the following major factors:

- Geological structure
- Change in rock types
- Intact rock strength
- Rock stress
- Pit geometry
- Groundwater conditions

The rock mass quality of the ore deposit and surrounding rocks are fairly good. There are minor faults associated with gold mineralization. They are expected to have no significant impacts on the rock stability. The deposit and the surrounding rocks are mainly basalts. There are almost no changes in rock types forming the deposit. Therefore, the rock mass and intact rock strength of the deposit and surrounding rocks are fairly consistent. Most of the pits will have a depth of around 100m. Groundwater impacts on the pit stability are not significant. Pits will have fairly consistent pit slope of 70 degree due to consistent rock type.

4.4 Pit Design

With a combination of geotechnical parameters and economical parameters the pit slopes, haulage and accessing requirements are determined. All the parameters form the fundamentals of the initial stage pit design. The optimization process mainly focused on maximizing the discounted cash flow of the project.

The pits are divided into five different zones depending on the grade of gold and the shape of the ore body. The main rock type in the area is basalt, thus the pit slope stability is fairly consistent, and all the pits will have the same slope angle of about 70 degrees. Berms will be left on every two or three benches with a bench height of 10m. Berm width is about 8m as the overall slope angle increases from 65 to 70 degrees. Ramp width allowances provide 17 m of ramp width including berms. The width of the accessing road is designed for two-way traffic to optimize the haulage cycle. In order to maximize the exploitation of ore, single lane accesses are required at the pits with an average 10% gradient.

Figure 4.4-1 - Typical Open Pit Slope Geometry in m and in degree

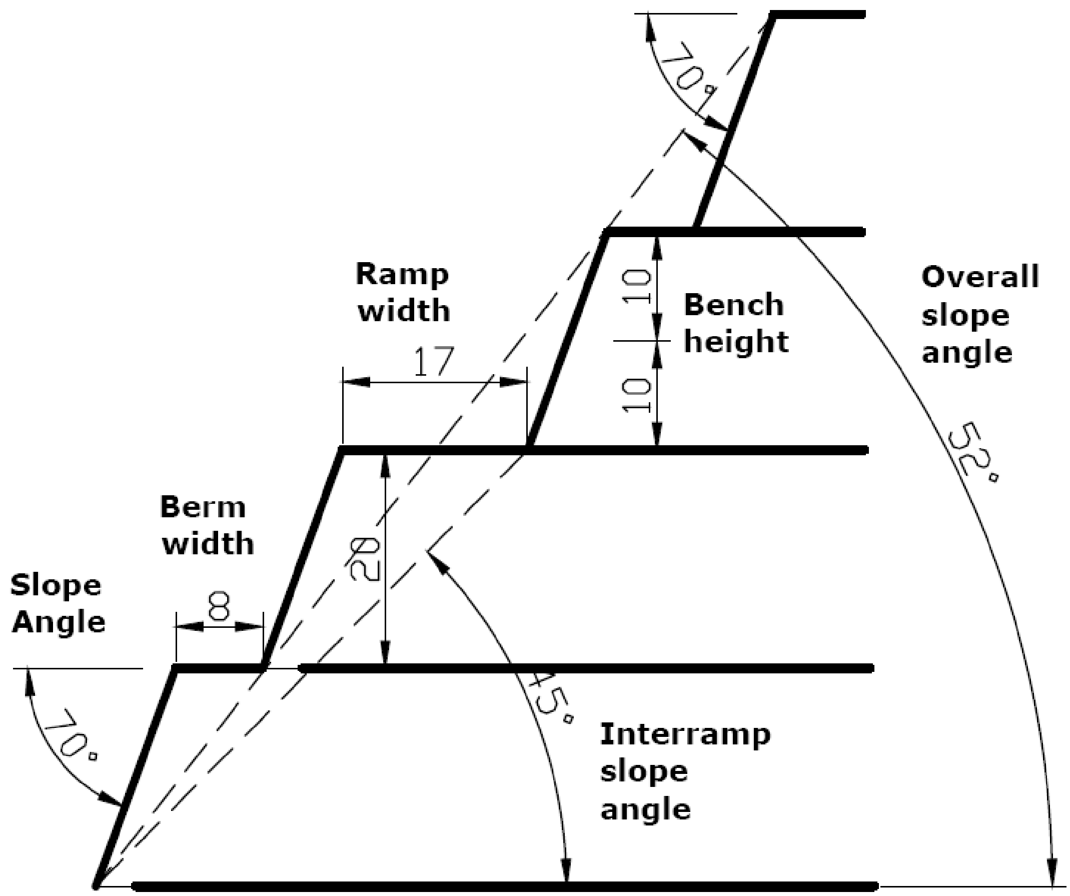


Figure 4.4-2 -Typical design haul road width for one-way traffic in m

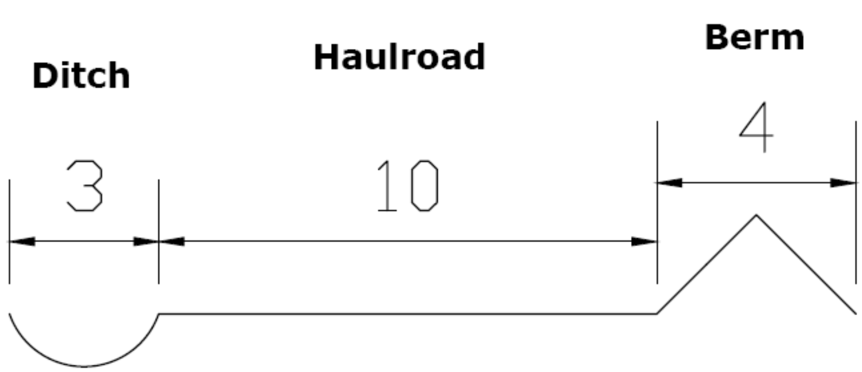


Figure 4.4-3 - Typical design haul road width for two way traffic in m

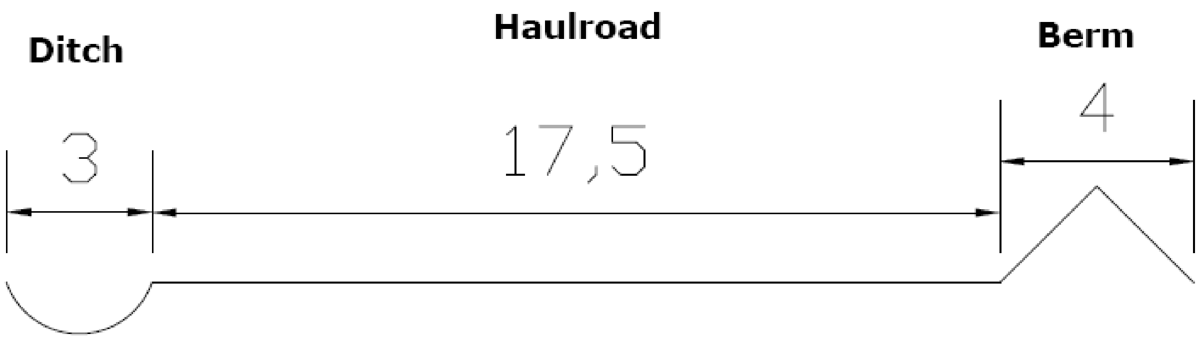


Figure 4.4-4 - Site layout of the pits and the facilities

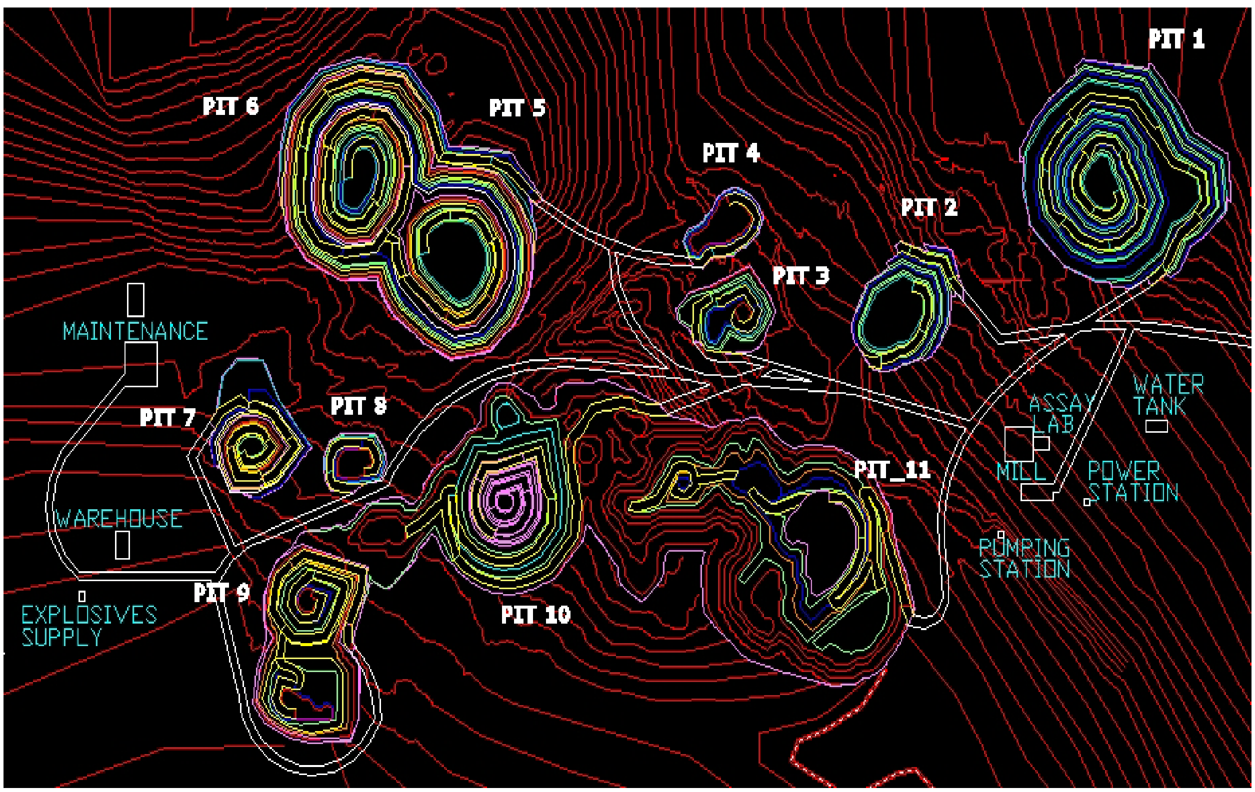


Figure 4.4-5 - Pit # 1

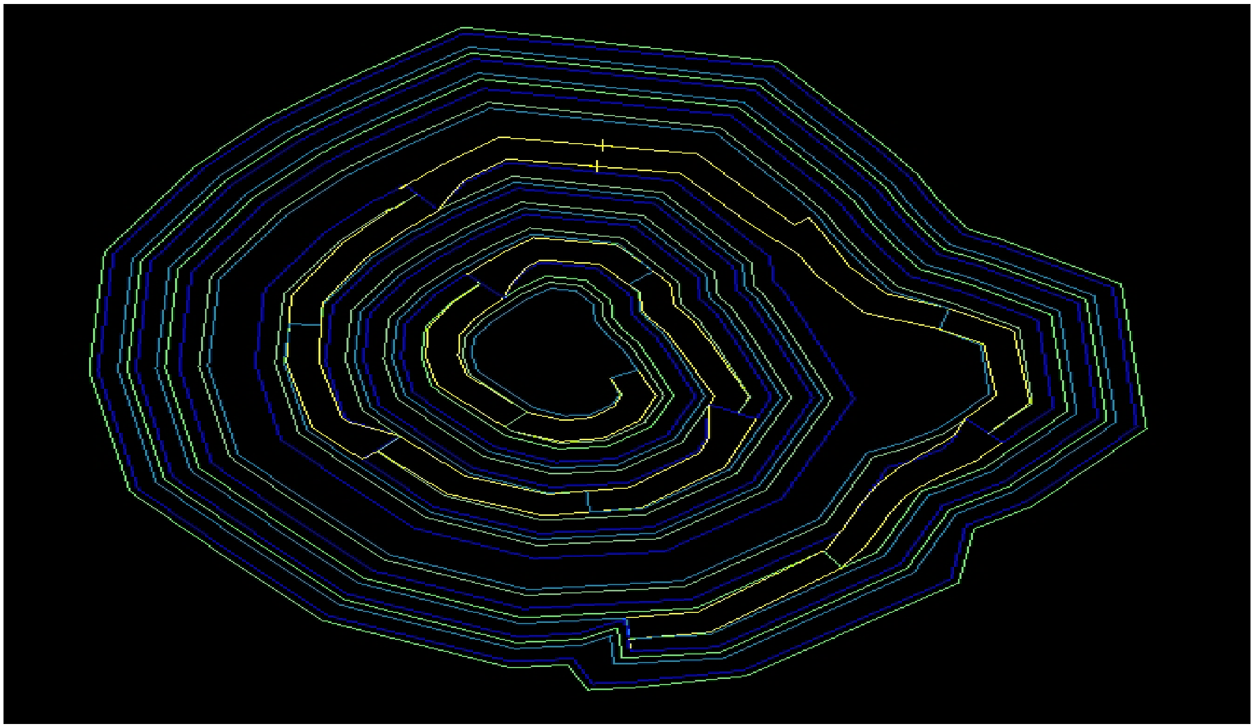


Figure 4.4-6 - Pit # 2

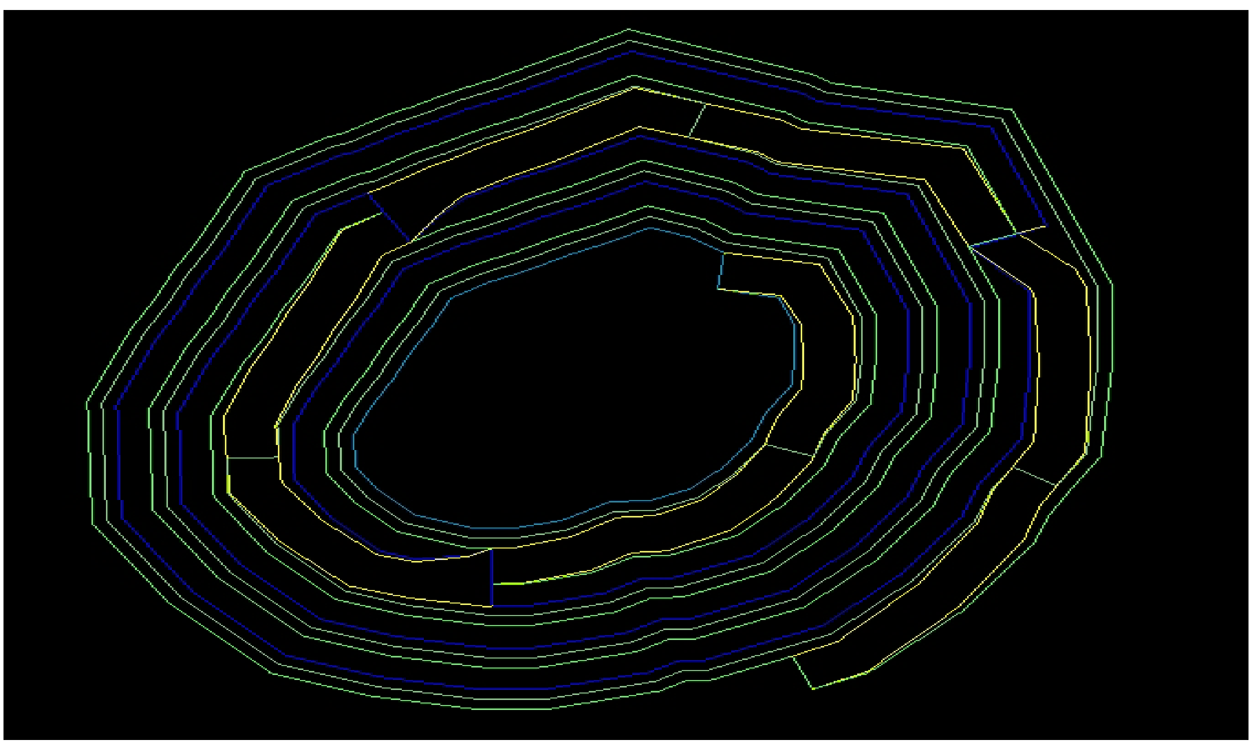


Figure 4.4-7 - Pit # 3 and Pit #4

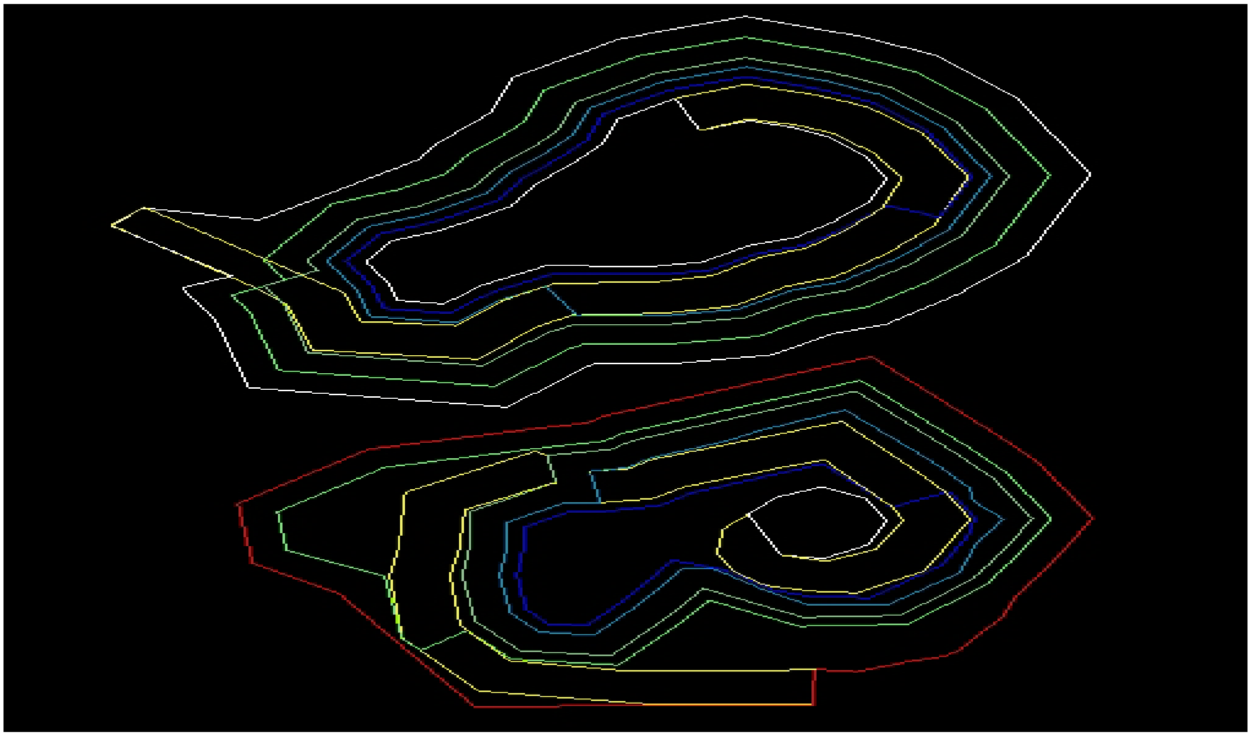


Figure 4.4-8 - Pit # 5 and Pit # 6

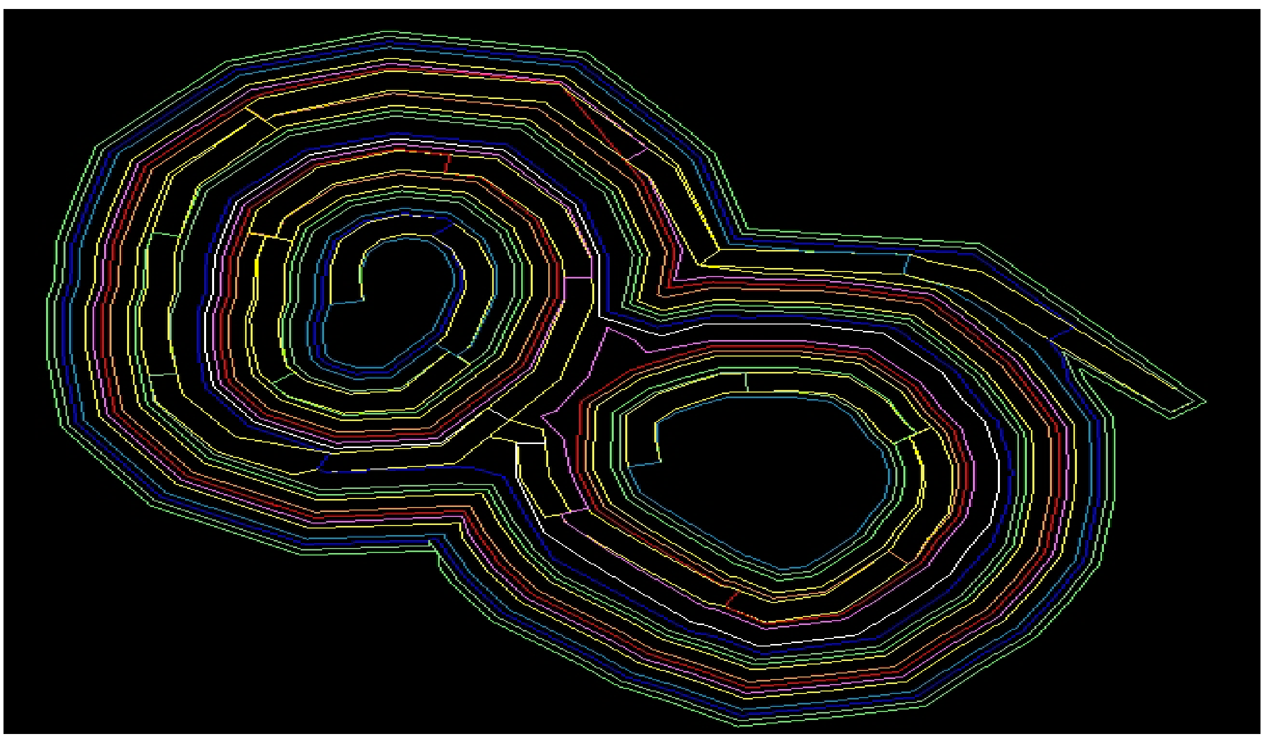


Figure 4.4–9 - Pit # 7 and Pit # 8

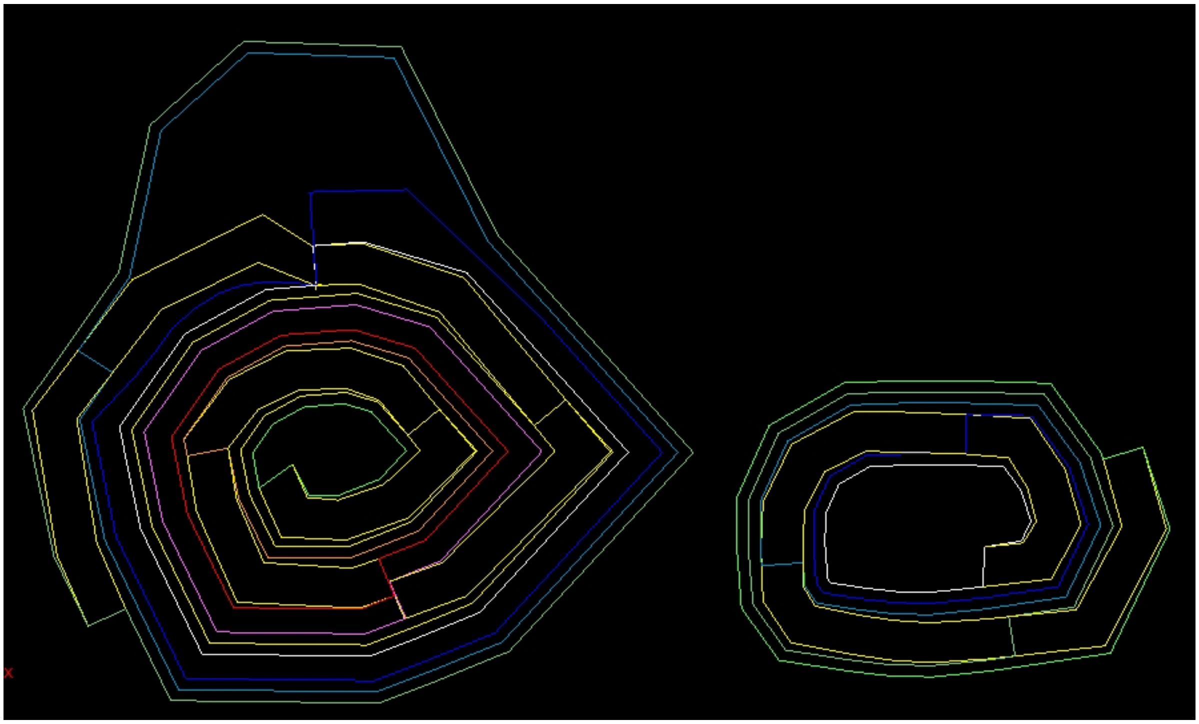


Figure 4.4–10, Pit # 9, Pit # 10 and Pit # 11

4.5 Open Pit Mine Planning

The Taurus mine will be a conventional open pit. The targeted production will entail an average total material movement of 86,316,299 tonnes of rocks over the period of open pit mining. The life of the mine will be 13 years including 1 year pre-production stage. Approximate daily mining rate is 18,000 tpd with 6850 tpd for mill feed.

The total mill feed at a 0.5g/t Au cut-off is about 31.6million tonnes. The total waste mined to provide this mill feed is 55million tonnes. The forecasted overall strip ratio per tonne of ore milled is 1.73: 1. The average head grade of gold for the life of the mine is 1.5 Au g/t. The average planned dilution for ore development is estimated at 5 % by tonnes. Locally, the dilution amount will vary, depending on the vein width.

Table 4.5-1 - Production Forecast

Year	Ore Mined (t)	Waste Mined (t)	Total Tonnage Mined (t)	Strip Ratio	Head Grade Au (g/t)
-1	0	2,000,000	2,000,000		
1	2,500,000	5,490,598	7,990,598	2.20	2.35
2	2,500,000	4,894,173	7,394,173	1.96	2.23
3	2,500,000	4,753,709	7,253,709	1.90	2.71
4	2,500,000	4,631,834	7,131,834	1.85	1.46
5	2,500,000	4,622,914	7,122,914	1.85	1.32
6	2,500,000	4,634,669	7,134,669	1.85	1.22
7	2,500,000	4,506,976	7,006,976	1.80	1.48
8	2,500,000	3,811,163	6,311,163	1.52	1.09
9	2,500,000	3,839,147	6,339,147	1.54	1.11
10	2,500,000	2,775,897	5,275,897	1.11	1.06
11	2,500,000	3,915,180	6,415,180	1.57	1.01
12	2,500,000	4,389,328	6,889,328	1.76	1.20
13	1,591,242	459,469	2,050,711	0.29	1.29
Total	31,591,242	54,725,057	86,316,299	1.73	1.50

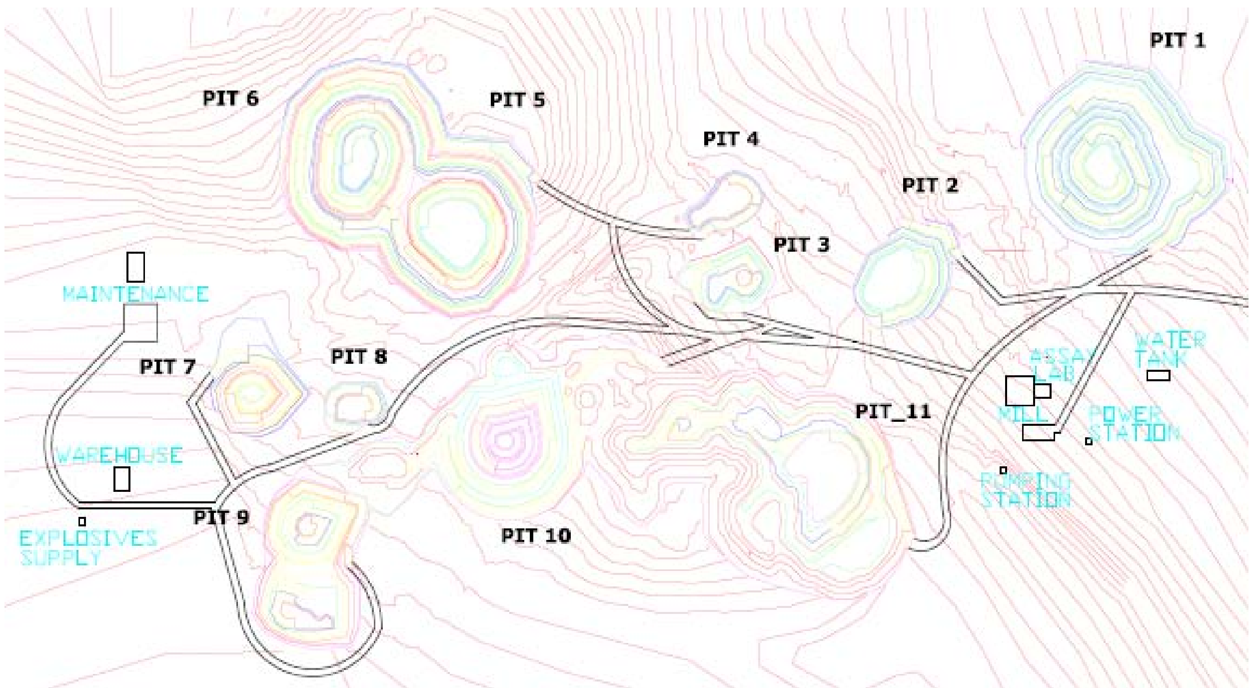
Table 4.5-2 - Dilution Forecast

	Material (t)	Gold (g/t)	Proportion
Planned	1579562.1	1.5	5.00%

The projected pits are divided into multiple development phases. Figure below represent the conceptual location and site layout of the proposed pits and facilities.

The mine operation plan depends on the key design factors. There will be no stock pile blending in order to deliver uniform gold grade to the mill for optimized process plant performance. Overburden and waste rocks from the pre production stage will be used to construct a tailing dam.

Figure 4.5 -1 - Site layout of the pits and the facilities



Ore will be hauled to the mill equipped with a cone crusher and a jaw crusher. Waste rocks will be placed on a run of mine basis to locations best suited to minimizing reclamation and re-handling costs, while avoiding mineralized areas. The mine life is about 13 years including a 1 year pre production stage. After all the pits are mined out the mill feed will continue for an additional few years.

The geometry of the ore deposit with comparatively gentle topography allows flexible pit production sequencing. The open pits will be mined in 3 phases commencing with the pit #9, #3 and #4. The pit #9, #3 and #4 have fewer amounts of overburden, waste rock and relatively higher grade of gold than the other pits. During the pre-production stage, excavated waste rocks will be used to construct the tailing dam.

4.6 Pit Dewatering

Mine dewatering is summarized in this section of the report in terms of the relationship to the mine operations. The basis for capital and operating cost estimates of the water management is not included in this report, but a few recommendations are mentioned.

Depressurization systems are essential in general pit slope design. During the pit development, vertical wells in pit horizontal drains and collection system will be implemented.

4.7 Equipment Selection

With the following considerations, the mining equipment has been selected.

- The simultaneous distribution of multiple mining operations at various locations
- The need to minimize travelling time of excavation equipment
- Use of well established operating system with advanced technology and coordination

Instead of using electric cable shovels, CAT 991 front loaders, with 11.5m^3, will take the primary loading function. Electric shovels will take more time to travel from one place to another than the front loaders. The front loaders have to travel among pits since the pits are relatively small and located at various locations. The front loaders are capable to load 100 ton CAT 777 diesel rear end dump haul trucks. This fleet will be capable of removing 18,000 tpd.

The major mining equipment with an operating efficiency of 85% (51min/hour) will be available 10.2 hours per shift. Mechanical availability of each drill, shovel, and truck were predetermined over the life of the mine. All the operating costs in Section 10 have been calculated according to the life cycle basis of the mine. It is expected that the major mining equipment will be replaced during the life of the mine.

5.0 METALLURGY AND MINERAL PROCESSING

5.1 Metallurgy

5.1.1 Ore Description

The ore is hosted in altered basalt in well-defined mesothermal quartz-carbonate veins. These quartz veins are white to clear bull quartz with minor sulphides. There are two classes of ore in the deposit they are termed T3 and T4. T4 consists of pyritic quartz veins, most of which strike east to west. The T3 ore is disseminated pyritic or pyrite-carbonate mineralization. The T3 ore contains 10-40% fine grained pyrite which is lacking any significant quartz veining.

5.1.2 Metallurgical Test History

Three metallurgical test programs have been completed on the ore during the 1980s and 1990s. Westcoast Mineral Testing in 1987 and 1994, and Hazen Research conducted these test programs in 1996.

Westcoast Mineral Testing, 1987

The material tested during this program was the type T3 ore. The material is a low gold grade high pyrite ore. The testing conducted was gravity concentration, floatation and cyanidation. Table 5.1.2-1 lists the results of the testing program.

Table 5.1.2-1 - Test Results; Westcoast Mineral Testing, 1987

Test Procedure	Head Grade Au (g/t)	Recovery (%)	Remarks
Gravity Concentration	4.4	"low"	
Flotation	2.4	94	30% mass recovery
Cyanidation – Ore, Test 1	2.4	48	
Cyanidation – Ore, Test 2	4.4	60	

There are no records available regarding the sample origin, test procedures and parameters, sampling methods, test data and assaying methods. As the recovery for floatation was so high it can be assumed that the ore type was the higher grade T4 type rather than the low grade T3.

Westcoast Mineral Testing, 1994

Westcoast Mineral Testing conducted more exhaustive testing in 1994. Test details and procedures are not detailed nor is the ore type. It was mentioned that the ore had a pyrite content of up to 10%. The results of the tests are detailed below on Table 5.1.2-2

Table 5.1.2-2 - Test Results; Westcoast Mineral Testing, 1994

Test Procedure	Head Grade Au (g/t)	Conc. Grade Au) g/t)	Recovery (%)	Remarks
Gravity Concentration I	8.8	147	8.3	
Gravity Concentration II	6.8	~120	8 to 31	average of 4 tests
Flotation	8.2	51	94	15% mass recovery; 56% -74 µ
Cyanidation – Ore, Test 1	8.2	-	25	24 hr test; 100% -6730 µ
Cyanidation – Ore, Test 2	2.8	-	74	24 hr test; 100% -6730 µ
Cyanidation – Ore, Test 3	1.8	-	24	24 hr test; 100% -6730 µ
Cyanidation – Ore, Test 4	1.9	-	57	24 hr test; 100% -6730 µ
Cyanidation – Ore, Test 5	5.8	-	70	43% -74 µ
Cyanidation – Ore, Test 6	6.2	-	76	53% -74 µ
Cyanidation – Flotation Conc.	10.3	-	78	39% -74 µ

The results of the gravity concentration were lower than the average obtained by the historic mill previously on the site. The historic mill data reports a recovery of 50% whereas testing produced a high of 31%. This may have been due to the ore samples used as no visible gold was reported in any of the gravity concentrate. A high gold recovery was achieved again in the floatation testing. The cyanide heap leach testing reported results ranging from 24% to 76% recovery. This wide range is probably due to the unknown origin of the samples. Further testing should be done to see if the results range in the typical and desirable +70% range. The cyanide floatation testing of the concentrate yielded results of 78% which is similar to the results of the historic mill of 75%. Though the type of ore is not listed it is thought to be type T4 because of the recovery results obtained.

Hazen Research, 1996

A comprehensive test program was conducted in 1996 by Hazen Research. Eleven samples of type T3 and T4 ore were tested with 8 of them being type T4. Some were listed as type T3A and type T3B, the T3A is regarded as type T4 material and the T3B is regarded as the disseminated pyrite type of T3. Some samples were mixed with type T2 and T1, there is no information available about these samples. The tests conducted were floatation, cyanidation, acid-base accounting tests, diagnostic leach tests, detailed assays using fire assay and Inductively Coupled Spectrometry and X-ray fluorescence. The floatation results are similar to previous tests with results ranging from 88% to 98%. The concentration from the floatation results were reground to minus 37 microns and cyanided for gold extraction. The results varied from 8 to 21% for the refractory T3 ore to 39 to 87% for the T4 ore. The results of these tests may have been adversely influenced by the mixing of the unknown type T1 and T2 ore. The results of the test are detailed on Table 5.1.2-3 below.

Table 5.1.2-3 - Test Results; Hazen Research, 1996

Sample Type	Head Grade Au (g/t)	Conc. Grade Au (g/t)	Flotation Recovery (%)	Cyanidation Extraction (%)	NaCN (kg/t)	Lime (kg/t)	Overall Recovery (%)
Sample #1; T4	3.98	25.0	98.2	84.1	6.5	6.0	82.6
Sample #2; T3A with T2 & T1	1.13	15.2	95.2	73.9	10.8	10.0	70.4
Sample #3; T4 with T2	2.02	18.5	97.4	65.9	8.3	8.5	64.2
Sample #4; T4 with T3A	2.13	24.9	97.4	81.0	10.3	8.0	78.9
Sample #5; T4 with T2	1.75	14.0	96.8	86.3	7.0	5.5	83.5
Sample #9; T4	1.89	25.5	97.4	87.1	10.2	9.5	84.8
Sample #10; T4	0.55	5.0	87.5	39.0	8.0	6.0	34.1
Sample #11; T4 with T2	0.58	8.4	90.0	69.8	12.2	9.5	62.8
Sample #6; T3B	2.98	8.9	96.7	7.5	3.3	8.0	7.3
Sample #7; T3A & T3B	1.30	7.3	88.1	21.1	3.9	7.0	18.6
Sample #8; T3A & T3B	1.03	-	-	-	-	-	-

The cyanide and lime consumption was high in the test cases. The lime consumption was high due to the amount of sulphides in the concentrate.

Two sets of cyanidation tests were conducted by Hazan Research. The first test was a cyanidation leach bottle roll test where 210 micron and 74 micron particle size material was tested. The tests showed that a finer grind resulted in better recovery of both ore types. The T4 ore gave higher incremental returns over the T3 ore. Cyanide consumption rates were consistent with only a slight increase with the finer grind. The second cyanidation test concluded that increasing the temperature or increasing the amount of cyanide improves the recovery of gold. The test had a base case, a case where the temperature was increased to 60 degrees Celsius and a case where the amount of cyanide was doubled. The results showed an extraction of 19 to 69% for the base case, 25 to 84% for the temperature increase test and 38 to 99% for the double cyanidation.

Hazen Research also conducted diagnostic leach tests on the samples of ore. The results showed the T3 type ore is highly refractory and removal of gold with standard cyanide methods is not practical. Some of the T4 ore also exhibit a high degree of refractoriness. The results of the diagnostic leach tests are detailed in Table 5.1.2-4.

Table 5.1.2-4 - Diagnostic Leach Test Results – Hazen Research, 1996

Sample Type	Head Grade Au (g/t)	Cyanide Leach	% Gold Extracted		
			HCl Acid Leach	Nitric Acid Leach	Cumulative Total
Sample #1; T4	3.98	74.0	1.5	23.7	99.2
Sample #2; T3A with T2 & T1	1.13	77.1	3.8	17.4	98.3
Sample #3; T4 with T2	2.02	74.5	1.7	23.2	99.4
Sample #4; T4 with T3A	2.13	74.5	2.3	22.1	98.9
Sample #5; T4 with T2	1.75	88.0	1.4	9.6	99.0
Sample #9; T4	1.89	78.8	2.5	17.0	98.3
Sample #10; T4	0.55	35.7	5.0	56.4	97.1
Sample #11; T4 with T2	0.58	61.0	3.9	31.3	96.2
Sample #6; T3B	2.98	6.5	2.0	90.6	99.1
Sample #7; T3A & T3B	1.30	17.0	2.5	78.7	98.2
Sample #8; T3A & T3B	1.03	13.8	3.9	76.6	94.3

Assay tests using ICP and XRF were conducted on the ore to detect undesirable elements in the ore. Sulphur was the only element which returned a high reading. The high sulphur count is mainly from the presence of pyrite in the ore. The results of the ICP analysis are detailed in Table 5.1.2-5

Table 5.1.2-5 - ICP Analysis of Selected Elements – Hazen Research, 1996

Element	T4 Material (Range)		T3 Material (Range)	
	Low	High	Low	High
As (%)	0.032	0.260	0.092	0.253
Co (ppm)	17	30	26	44
Cu (ppm)	15	62	26	40
Fe (%)	6.73	7.78	7.13	11.20
Hg (ppm)	-	<1	-	<1
Mn (%)	0.053	0.142	0.133	0.140
Mo (ppm)	1	10	2	7
Ni (ppm)	19	27	21	38
Pb (ppm)	<2	4	4	20
S (sulphide, %)	0.93	3.61	5.00	12.99
Zn (ppm)	12	80	28	50

Hazen Research conducted tests to determine the Bond Ball Mill Work Index, the Bond Abrasion Index, and the High Energy Crushing Index. These tests results help to determine the energy requirements of working with the ore. The bond Mill Work Index and High Energy Crushing Index results indicate moderate energy requirements of 13.3kWh/short ton for crushing and grinding which categorizes the sample as a moderately hard quartzite. The Bond Abrasion Index was 0.33 pounds per kilowatt hour which is similar to the lower range of quartzite.

Ten samples were tested for their acid generating potential. It was found the T4 ore did not pose a risk for acid generation. The pyrite rich T3 ore tested as borderline in potential for acid generation. To comply with environmental regulations the T3 material should be mixed with waste rock to comply with environmental regulations.

Process Plant Testing

A process plant was built on the old Taurus mine site in 1981 and was in operation from 1982 to 1988. The mill ran with a throughout of 155 tonnes per day. The mill recovered approximately 3% of the ore as concentrate after floatation. This number was used in determining the size of equipment and amount of tailings sent to the tailings dam. The overall gold recovery during the milling period was 77.5%. There is no data available as to the plant operating conditions such as fineness of grind, floatation procedures, reagents, and cyanidation concentration, so it is not known how efficiently the process plant was run. The results of the production data of the plant from 1986 to 1988 are shown in Table 5.1.2-6

Table 5.1.2-6 - Taurus Process Plant Results

Item	Tons	Grade (Au g/t)	Gold Produced (kg)	Total (%)	Distribution	
					Excluding Gravity (%)	Cyanidation Only (%)
Mill Feed	33,694	4.19	141.15	100.0	100.0	-
Gravity Concentrate	-	-	55.05	39.0	-	-
Flotation Concentrate	909	79.87	72.60	51.4	84.3	-
Cyanide Gold ex. Flot. Conc.	-	-	54.31	38.5	63.1	74.8
Cyanide Tailings ex. Flot. Conc.	909	20.12	18.29	13.0	21.2	25.2
Flotation Tailings	32,785	0.41	13.50	9.6	15.7	-
Gold Produced	-	-	109.36	77.5	-	-

5.1.3 Metallurgical Test History Summary

The test programs determined the highest gold recovery at 79% was achieved by gravity concentration, floatation and cyanidation of the floatation concentrate and 77.5% recovery in the old process plant. Gold recovery can be increased with a finer grind and an increased level of cyanide. Heap leach results gave a very wide range of results and further testing would be ideal to determine the true recovery. The high range gave results comparable with the more expensive option of gravity concentration, floatation and cyanidation of floatation concentrate. The type T3 ore should not be processed with standard cyanide methods, if viable methods such as oxidative pressure treatment, or roasting or biological leaching should be explored.

5.2 Mineral Processing

The Taurus mill is designed to process ore at a rate of 6850 tonnes per day, producing a cyanide-gold solution which will be processed by a Merrill-Crowe plant and smelted into dore bars. The actual daily rate of ore milled is 6849 tonnes per day. All equipment and rates of production are based on the 6850 tonnes per day figure. The mill consists of the following operations:

- Primary Crushing
- Secondary Crushing
- Ball mill Grinding
- Concentrate Floatation
- Concentrate Dewatering and Filtration
- Zinc Precipitation of gold

The ore will be transported to the mill by trucks and placed in the ore storage bins. The bins feed the primary crusher by conveyers which also connected to the secondary crusher, ball mill and floatation circuit. The run of mill ore will be crushed to 80% passing at 130 mm in the primary crusher and then crushed to 80% passing at 8mm in the secondary crusher. The feed will be sent to the ball mill and ground down to 80% passing at 74 microns. The floatation circuit will produce a concentrate which will be dewatered and filtered before being sent to the cyanide leach tanks. After the retention period the pregnant solution is sent to the Merrill-Crowe plant. Figure 5.2-1 shows the flow chart of the milling process. Figure 5.2-2 show the mill layout.

Figure 5.2-1 – Process flow sheet

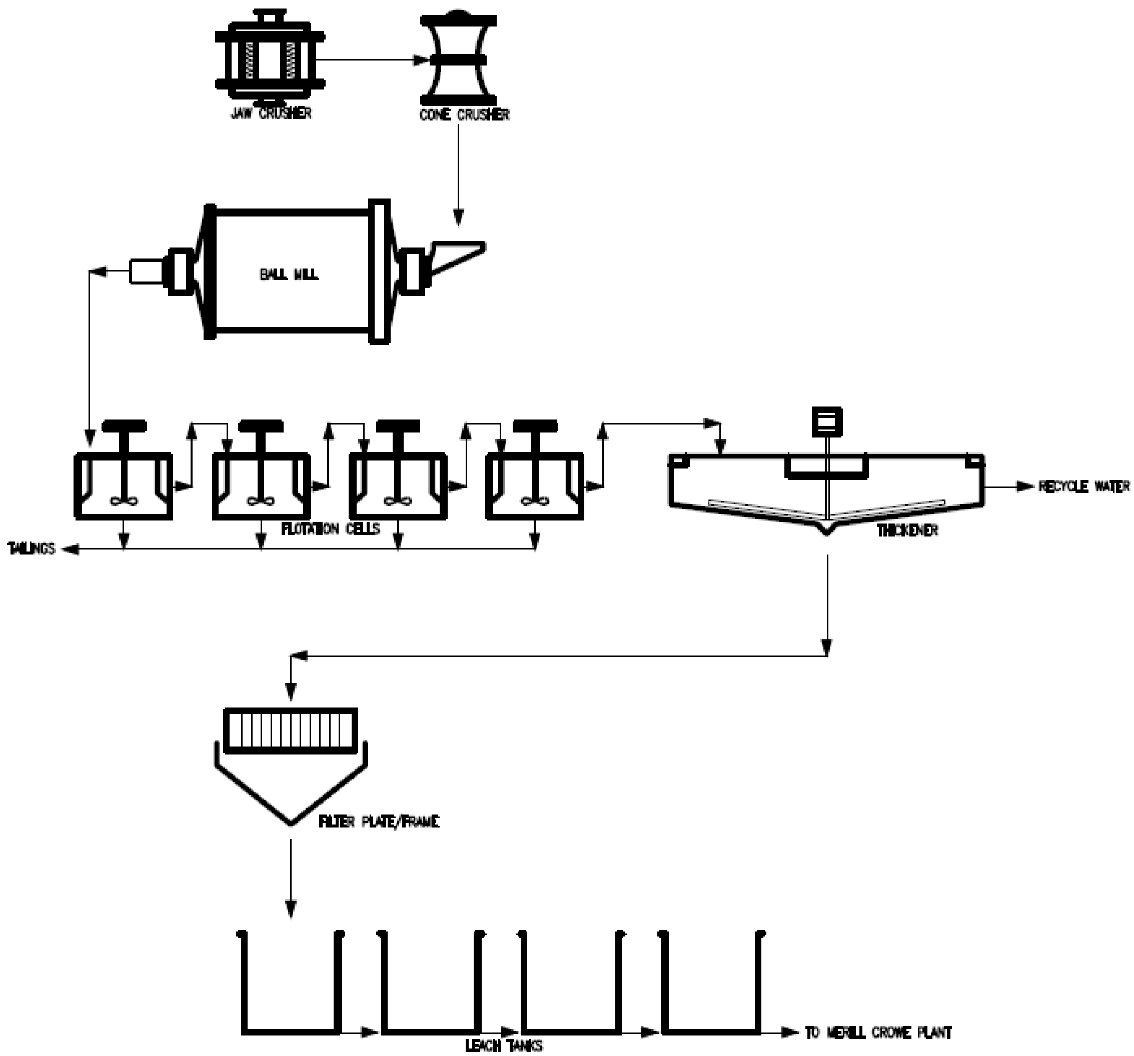
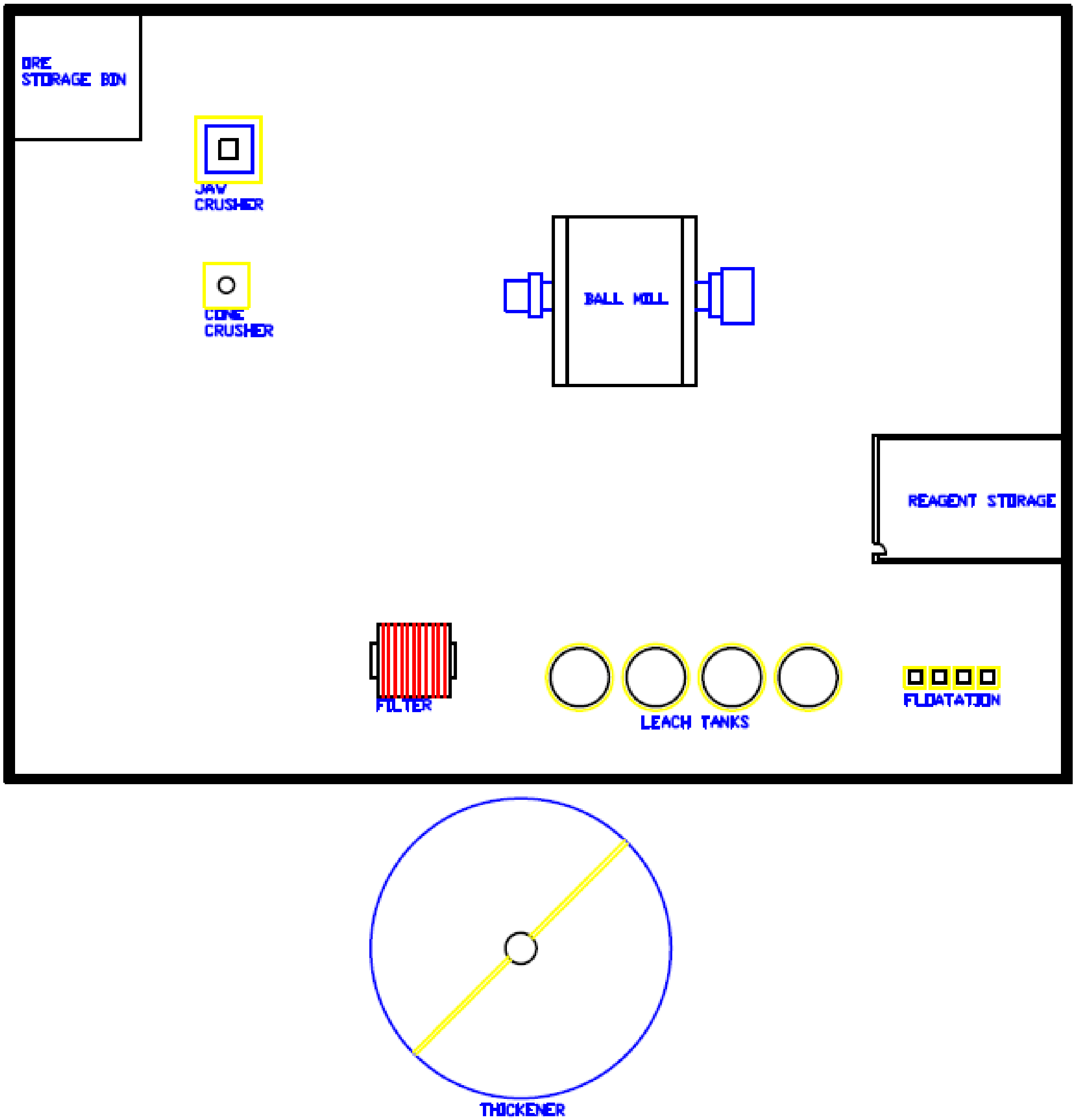


Figure 5.2-2 – Mill layout



5.2.1 Crushing

Primary Crushing

A jaw crusher facility will crush the run of mill ore at an average rate of 298 tonnes per hour. The ore will be transported to the jaw crusher from the ore storage bins by a conveyer. The size of the C- class jaw crusher is 2.88 meters by 2.25 meters and is rated at 110 KW maximum power. The ore will be crushed to 80% passing at 130 mm and sent to the secondary crusher.

Secondary Crushing

A cone crusher facility will crush the feed from the primary crusher. A conveyor system transports the ore from the primary crusher to the cone crusher. The size of the cone crusher is 2.73 meters by 2.73 meters and is rated at 355 KW maximum power. The ore will be crushed to 80% passing at 8mm

5.2.2 Grinding

The grinding stage is a single stage process achieved with a 12.57 meter by 8.56 meter ball mill rated at 4101 KW maximum power. The ore is ground down to 80% passing at 74 microns. The ground feed is then sent to the floatation circuit by a conveyor system.

5.2.3 Floatation

A conveyor system transports the ore from the ball mill to the floatation circuit. The rougher floatation circuit consists of four 8.5 cubic meter floatation cells. Each of the floatation cells will be made up of rougher floatation tank cells. The rougher concentrate is sent to dewatering and filtration circuit. 298 tonnes an hour of feed is sent to the floatation circuit from the grinding circuit. Eight tonnes an hour of concentrate is sent to the dewatering and filtration circuit and 290 tonnes an hour of tailings is sent to the tailings dam. The density of the slurry is 45% solids. The reagents used during floatation are; Potassium Amyl Xanthate and Methyl Isobutyl Carbinol. The concentrate is pumped to the dewatering and filtration circuit.

5.2.4 Dewatering and Filtration

The floatation concentrate will be thickened to 45% solids in a 15 meter diameter thickener. The thickener underflow will be sent to filtration and the overflow water will be collected and reused. The filter is a plate and frame setup approximately 30 square meters in size. The water from the filtration process will be collected and reused and the filtered material is pumped to the leach tanks.

5.2.5 Cyanide Leaching

The dewatered and filtered concentrate is sent to four 22 cubic meter stainless steel leach tanks. The concentrate slurry in the tanks is agitated to enhance the leaching process. The cyanide dissolves the gold and forms a stable gold-cyanide complex. Lime is added to increase the pH to prevent toxic gasses from forming and to keep the cyanide in solution so it will dissolve the gold. The retention time of the leaching process is twelve hours. The pregnant gold-cyanide solution is pumped to the Merrill-Crowe plant. The reagents used in the leach tanks are; Sodium Cyanide and Lime.

5.2.6 Precipitation (Merrill-Crowe)

The pregnant solution is pumped to the Merrill-Crowe Plant to separate the gold from the gold-cyanide complex. In the Merrill-Crowe Plant the solution is first filtered to remove any undisolved solids and the solution is de-aerated to remove a portion of the oxygen. The filtered and de-aerated solution flows through the zinc mixing chamber where zinc dust and lead nitrate are added. The precipitated solution is then filtered to trap the gold precipitate and the barren solution is sent to a storage tank to be reused.

5.2.7 Reagents

The reagents are prepared and stored in a containment area of the mill. This is to ensure the reagents will not contaminate the rest of the mill in case of an accidental spill. The containment area is 110% larger than the largest storage tank to accommodate a spill. The tanks are equipped with level indicators to further prevent accidental spills. The area will have appropriate ventilation and fire safety procedures and will be equipped with Material Safety Data Sheet stations. All the reagents will be labelled in accordance to Workplace Hazardous Materials Information Systems standards.

Collector

The collector Potassium Amyl Xanthate will be received from the supplier in drums and diluted to 10% solution strength in a mixing tank. The diluted solution will be stored into a tank and fed to the required station with a metered pump. The yearly consumption of PAX is approximately 11753 liters.

Frother

Methyl Isobutyl Carbinol will be shipped to the site by a tanker truck and stored in a holding tank. It is pumped to the floatation circuit in its' undiluted form. The yearly consumption of MIBC is approximately 11753 liters.

Lime

Solid pebble lime will be delivered in bulk to the site by truck. It will be stored in 150 tonne capacity silo. The lime will be conveyered to a storage tank where it will be hydrated to form a 15 % solids slurry. From the storage tank it will be pumped to the cyanide leach tanks. The yearly consumption of lime is approximately 117,530 kg.

Sodium Cyanide

The sodium cyanide is transported in a solid briquette form to the site in large bulk plastic bags. The solid is dissolved in a high pH solution. The solution is then pumped to a storage tank. The solution is pumped to the leach tanks by metered pumps. The yearly consumption of sodium cyanide is approximately 705,180 kg.

5.2.8 Water Supply

A fresh water system and process water system will supply the mill with water. The fresh water will be pumped from the creek into a storage tank. The fresh water will be pumped to the mill as it is needed. The fresh water will also be used for dust control and fire suppression. The process water will be reclaimed from the thickener and filter circuit and reused in the mill. Approximately 311 cubic meters and hour is needed by the process mill. Fresh water will account for 214 cubic meters and hour and process reclaim water will account for 97 cubic meters an hour.

5.3 Metallurgical Recovery

Historic testing provided results indicating a maximum recovery of 79%. With the use of modern equipment and techniques the recovery has been increased to 92 %. The head grade fed to the mill is 1.5 grams of gold per tonne. The cutoff grade for the mill is 0.5 grams per tonne.

5.4 Manning

The mill will have a total of 60 employees. There will two twelve hour shifts a day on a two week schedule. The number of employees is listed in Table 5.4-1

Table5.4-1 - Mill Employees

Position	QTY
Mill Superintendent	1
Chief Metallurgist	1
Metallurgist	2
Operations Foreman	4
Maintenance Foreman	4
Maintenance Planner	1
Maintenance Personnel	10
Operator/trainer	20
Purchasing/Warehouse Supervisor	1
Warehouseman/labourer	5
Assayer/Sample bucker	5
Foreman Vanenby Loadout	1
Operators. Vanenby	4
Maintenance Personnel, Vanenby	1
Total	**60**

5.5 Risks & Opportunities

Some preliminary testing was conducted into using heap leach as a method to liberate the gold from the ore. The tests varied quite significantly with lows in 20% recovery range. Further testing could be done to see if heap leach recovery could be improved, but with a portion of the gold being locked in with the pyrite this may not be feasible.

5.6 Smelting

The filtered gold precipitate from the Merrill-Crowe plant is received in the smelter. The gold precipitate is mixed with fluxes and placed in an 1150 to 1450 degrees Celsius furnace for about two hours. A gold and silver alloy is produced which is separated from the slag. This gold and silver alloy is poured to make a dore bar. The dore bar is shipped to the Canadian Mint for further processing.

6.0 TAILINGS STORAGE FACILITY

6.1 Impoundment Characteristic

6.1.1 Stage Capacity Curve

The life of mine and the tailings dam design assumes 13 years of ore production at 6850tpd or 2,500,00t/yr, i.e. a total storage requirement of 31.6Mt. The tailings dam will be constructed in one phase.

The configuration as shown on the drawings with a crest elevation of 1074m and a maximum tailings elevation of 1068m has a total storage volume of 39.4Mt or 86.6 million m^3 (at a density of $2.2t/m^3$).

The site selected for the facility meets the design objective and accommodates future expansion.

An average dry density value of $2.2t/m^3$ was used based on published data. This is an area of uncertainty and Crown Consulting recommends for tailings testing to determine the expected dry density for the tailings at various degree of confinement/consolidation.

The stored density in not ultimately critical as the impoundment has sufficient capacity by raising the height of the embankments and the additional costs to do so would be realized close to the end of the mine life. This will allow for the development of actual operational density for the Tailings Storage Facility (TSF).

6.2 Tailings Characteristics

The tailings come from a mining, milling and Merrill Crowe process and will average approximately 6850tpd. The tailings product particle size distribution is stated to be 80% passing a 74-micron screen.

6.3 Embankment Design

The embankment proposed has a crest length of approximately 910m and a height of 9m from the downstream toe to the crest. The slopes of the embankment are to be 2.5:1 (H:V) on the upstream slope and will accommodate a liner containment system.

6.4 Containment Design

The containment for the facility will be provided by a composite liner system consisting of geomembrane-soil liner system. The liner system will be placed on the upstream face of the embankment and at the base of the impoundment. The soils portion of the composite liner will consist of low permeability silts and clays.

A composite liner system, consisting of a geomembrane in contact with low permeable soils, provides the highest degree of liner containment. A liner system such as this is considered an acceptable and appropriate level of containment design.

Given the nature of foundation soils and embankment fill, any leaks in the liner will lead to downstream contamination. In future design work, efficient monitoring systems, placement of early detection systems and seepage modeling is recommended.

6.5 Tailings Embankment Cost

The report states that the embankment will be fully constructed in a single phase at the start of the project. The initial capital costs are provided by Crown Consulting and shown in Table 6.5.1.

Table 6.5-1 - Tailings Storage Capital Cost

Cost Item Description	Cost (CDN$)
Tailings dam and impoundment foundation preparation	$250,250
Main tailings embankment	$1,597,050
Impoundment liner	$414,960
Access road	$50,000
Contractors and personnel	$392,943
Tailings pipeline	$261,299
Support equipment	$452,452
Miscellaneous	$377,358
Sub-Total	**$3,796,313**
Mobilization/De-mobilization	$126,352
Contingency @ 25%	$966,077
Total	**$4,888,741**

7.0 ENVIRONMENTAL

This Project is designed to meet all Canadian and British Columbia laws and regulations and comply with North American and international good practices engineering design and environmental management. Substantial data on environmental and social baseline studies have been conducted to support the project design and environmental impact study.

7.1 Legal Requirements

7.1.1 Canadian Laws & Regulations

The Environmental Impact Study (EIS) contains a detailed description of Canadian and British Columbian laws and regulations. A brief description is provided below.

The provincial government, federal government or both closely monitor every step in the mining process.

7.1.2 Licenses & Approvals

All previous exploration work on the Taurus property was conducted by Eureka under the BC Ministry Of Energy, Mines and Petroleum Resources (MEMPR). The permitting included trenching, road building, and drill site development and bonds for reclamation. These exploration permits are now closed.

Currently Hawthorne hold's three exploration permits for the Taurus property. These licenses are:

- Permit MX-10-216, Exploration permit covered under the BC MEMPR Mines Act
- Permit 01-1242-07, BC Ministry of Forest Road Use Permit authorizing use of the Forest Service Roads in the MacKay River Valley and the Eureka Mountain area.
- Permit 084, Ministry of Forest has allowed Hawthorne to clear any area for drill pad access and drill pads.

There will be other permits required along the way. Existing permits will form the basis for renewed operations at Copper Mountain. These will be amended as required to represent current operations. Also mines act permit M-29 is required for any major operating mine. For waste management act permit PE-00261 and Water Licence C059533 will be needed for tailings dam and for use of water from nearby stream. The crusher and mill will also need an air emissions permit.

7.1.3 Institutional Capacity

Canada, in particular British Columbia has had mining for over a hundred years now and the regulations are set forth in a very systematic process to get approval. Some area of concerns would be:

- Native land claim conflicts
- Permitting delays

Though these are concerns, they should not pose much of an impact on the overall approval of the mine. Canada is very systematic with a very stable government. This makes it very appealing for mining companies to operate here.

7.2 Hawthorne Gold Requirements

7.2.1 Environmental Policy

Hawthorne's vision to become a gold producer with quality assets is directly related to the growth and success of the communities where we operate, become leaders in environmental and social responsibility, and strive for the safety within a rewarding workplace.

7.2.2 International Good Practices

This project is conducted in accordance of the international good practices for engineering design and environmental management. These guidelines have been set forth by nongovernment organizations (NGOs) such as the World Bank Group. Financial institutions typically require that mining projects looking for funding meet World Bank Group environmental guidelines.

7.3 Environmental Impact Assessment

At this time there are no environmental risks at the property as the previous Taurus mine has been reclaimed.

Hazen Research was contracted to conduct metallurgical test on rock samples as well as acid generating test on the rocks.

The largest potential environmental risks that may occur from open pit mining operation are acidic and/or metal laden effluent from tailings and waste rock dumps.

7.3.1 Environmental & Social Baseline Studies

The baseline studies will cover a range of areas that are in accordance government set guidelines. Some of the areas that will be covered are ambient air quality and noise, water resources, soils and flora and fauna. Testing will be applied to all physical, biological and socioeconomic resources that have the potential to be affected by any stage of the mine life.

Hawthorne has contacted RESCAN eng for the environmental baseline study. This is the baseline data collected thus far:

- Wildlife: This area of British Columbia is home to many animals including bear, moose, deer, and mountain goats and in some areas it is also common to see herds of Bison. In BC there are two different categories for species, red list and blue list. Red list are species that are endangered and blue list are species that are threatened. Red list species in this are Pacific Giant Salamander, Northern Goshawk, Sage Grouse, Spotted Owl and Dall's sheep. Blue list species in the area include Western Rattlesnake, Great Blue Heron, Trumpeter Swan, Bald Eagle, Barn Owl, Steller's jay (British Columbia's official bird), Wolverine and Grizzly Bear.

- Vegetation: Forest of northern British Columbia is boreal in character and dominated by evergreen coniferous, white spruce, black spruce and lodgepole pine. Northern subalpine forest consists primarily of white spruce and subalpine fir.

- Water Quality: Water quality is good in this area, stream waters are all drinkable.

- Soils: There are four types of soils found in BC, they are Brunisol is a normally immature soil commonly found under forested ecosystems. The most identifying trait of these soils is the presence of a B horizon that is brownish in color. The soils under the dry pine forests of southcentral British Columbia are typically brunisols. Luvisol is another type of soil that develops under forested conditions. This soil, however, has a calcareous parent material which results in a high pH and strong eluviations of clay from the A horizon. Organic soil is mainly composed of organic matter in various stages of decomposition. Organic soils are common in fens and bogs. The profiles of these soils have an obvious absence of mineral soil particles. Regosol is any young underdeveloped soil. Many mountain river valleys in British Columbia have floodplains with surface deposits that are less than 3000 years old. The soils in these environments tend to be regosols.

- Terrain Stability: This site lies in the most Northern group of interior mountain ranges in BC, the Cassiar Mountains.

- Existing Contamination on Site: From previous mine activity there are two tailings pounds.

- Climate: Summers are on the short and cool side with temperatures ranging from 20-33 degrees Celsius. Spring and fall seasons average a temperature of around 15 degrees Celsius. Winter months are cold and dry with temperatures around minus 10 degrees Celsius. The average rainfall in this area is between 700-1000mm.

- Current use of the land: The land in northern BC is generally unused. Other then mining and mineral exploration, forestry is the only other industry that operates on a large scale in the north.

7.3.2 Impact Assessment Results

Hazen Research data has indicated that the waste rock samples were not acid generating. The T3 composite samples tested gave the lowest Net Neutralisation Potential values, with one sample recording a negative value. Some T3 sample material was considered as borderline with respect to potential acid generating and would probably have to be mixed with waste rock to ensure compliance with environmental regulations, as regulators prefer average Neutralization Potential Ratios (NPR) in excess of two.

Other preliminary acid/base testing has been conducted in 2008 at the old 88 hill pit and showed that there were no water quality issues.

Baseline test conducted by RESCAN are still being carried out. Results have not been submitted as of this time.

Mine & Ramp Dewatering

There is no serious mine dewatering problem at this location. All pits are very small and will not have any issues.

Tailings impoundment Development & Effluent Discharges

The tailings pounds from previous mines are located on the Cassiar Gold Property near the underground portals, but because it was underground there is very minimal amount.

Tailings are now located in two different locations, both part of the same drainage 600m east of the mine workings.

The flotation tailings are primarily quartz with carbonate, which is essentially inert. Also in the last two years at the Taurus mine has leached flotation tailings on site. These leached tailings were treated with INCO SO2 method for cyanide destruction then buried with phase I tailings impoundment.

7.4 Social Aspects

7.4.1 Social Baseline Studies

Many Native American tribes occupy the northern lands of BC. A baseline of their populations, traditions, and effects on the communities was conducted.

- Population: the Stikine region had the highest population drop for BC in 2009, bringing the population down to 642.

- Housing: The city of Cassiar will be rebuilt to house the employees of the mine. The city was equipped with airport, two schools, two churches and a hospital. Currently there are a few apartment blocks still being used by exploration companies.

- Transportation: Employees of the mine will use a park and ride system to create a more safe work environment. By not allowing all employees to drive to mine site, this will reduce in potential accidents driving to and from mine, due to worker fatigue or weather.

- Native Americans Cultures: BC is rich in history, and the first settlers were the Native Americans. They came some time after the last ice age roughly 6000-8000 years ago. The main tribes that live in this region are the Carrier, Interior Salish and Kootenay.

7.4.2 Public Consultation

When sufficient data is collected there will be a public meeting discussing any issues that may arise. Primary areas to discuses will be water quality, impact on social and economical situation, waste management, impact on land and air/noise.

7.4.3 Social Impact Assessment

Implementation of a Sustainability Management Plan framework will be accomplished through a Community Sustainability Committee comprised of First Nations and local community representatives to ensure benefits from the project are fully maximized and potential negative effects are minimized.

7.4.4 Community Development

With a new mine brings new jobs to this area and the surrounding communities. Northern BC doesn't have as much job opportunities as the lower mainland, because of this there isn't many jobs or much infrastructure in the north.

Education will be another focus of our community development program. Here we will be donating books to libraries in the area and coordinate with existing development plans in the area.

7.4.5 Opposition

Mining Watch Canada is the main host for NGOs to post their concerns and gather support. Hawthorne's Taurus project does not have any direct opposition at this time.

7.5 Environmental & Social Management

In Canada there are very strict government guidelines to follow to keep the environment safe and clean. On top of the Canadian guidelines Hawthorne will see to go above these standards of social and environmental plans, such as:

- Wastewater management
- Mine waste management
- Tailings facility monitoring
- Closure and reclamation
- Accident prevention
- Public information plan
- Health and safety plan

7.6 Environmental Costs

7.6.1 Environmental Management Costs

As of now, the environmental management cost will be $.04 per tonne over the life of this project. This cost is based on other mines with similar output and mine life.

7.6.2 Closure & Reclamation Costs

The closure and reclamation costs will amount to 15% of the initial capital costs. This will equal 16.5 million dollars. It will be placed in a bond at the beginning of operations.

Open Pit Closure

First we will remove all equipment and foreign objects in the pit. Because the mine does not have an ARD issue the pit will be left as is with ongoing environmental checks to ensure there are no contaminations in the future.

Process Plant & Surface Facilities

Proposed closure and reclamation for mill and ancillary facilities are:

- Material and equipment removal
- Plant and building decommissioning
- Removal of foundations
- Debris disposal
- Soils that have been contaminated

This area will then be covered with topsoil and vegetated as needed.

Tailings Storage Facilities

The focus of the tailings storage is to achieve isolation from the surrounding environment. Process water from the impoundment will be treated to meet effluent water quality requirements then discharged. All tailings pipelines will be disconnected and cleaned and disposed of properly. Finally a soil cover will be placed over the tailings surface to permanently enclose them and giving vegetation a medium to grow on.

8.0 Infrastructure

8.1 Site Infrastructure

The ancillary facilities and services for the Taurus Project comprise the following:

- Building structures including (gate house, administration, change room (dry), vehicle maintenance and repair shop, warehouse, assay laboratory and explosive plant);
- Power supply station and distribution;
- Services, including fresh water supply, fire water storage, and reclaim water system and distribution
- Project site access roads;
- Plant site roads, yard areas and parking, and
- Security, safety, and first aid facilities

A capital cost estimate for site buildings and infrastructure is summarized in Table 8.1.1-1.

Table 8.1.1-1 - Site Buildings and Infrastructure Capital Costs

Cost Item Description	Cost (CDN$)
Assay Laboratory	1,214,400
Office	2,208,000
Dry	1,078,332
Gate House	103,914
Maintance Shop	3,401,286
Warehouse	1,498,956
Anfo Storage	193,200
Water Tank	125,000
Roads	200,000
Power Station and Distribution	1,020,814
Sub-Total	**11,043,902**
Excavation	28,055
Contingency @ 25%	2,646,739
Total	**13,718,696**

Site layout plans are shown in figures 8.1.1-1, 8.1.1-2, 8.1.1-3 and 8.1.1-4

Figure 8.1.1-1 - Overview of site layout

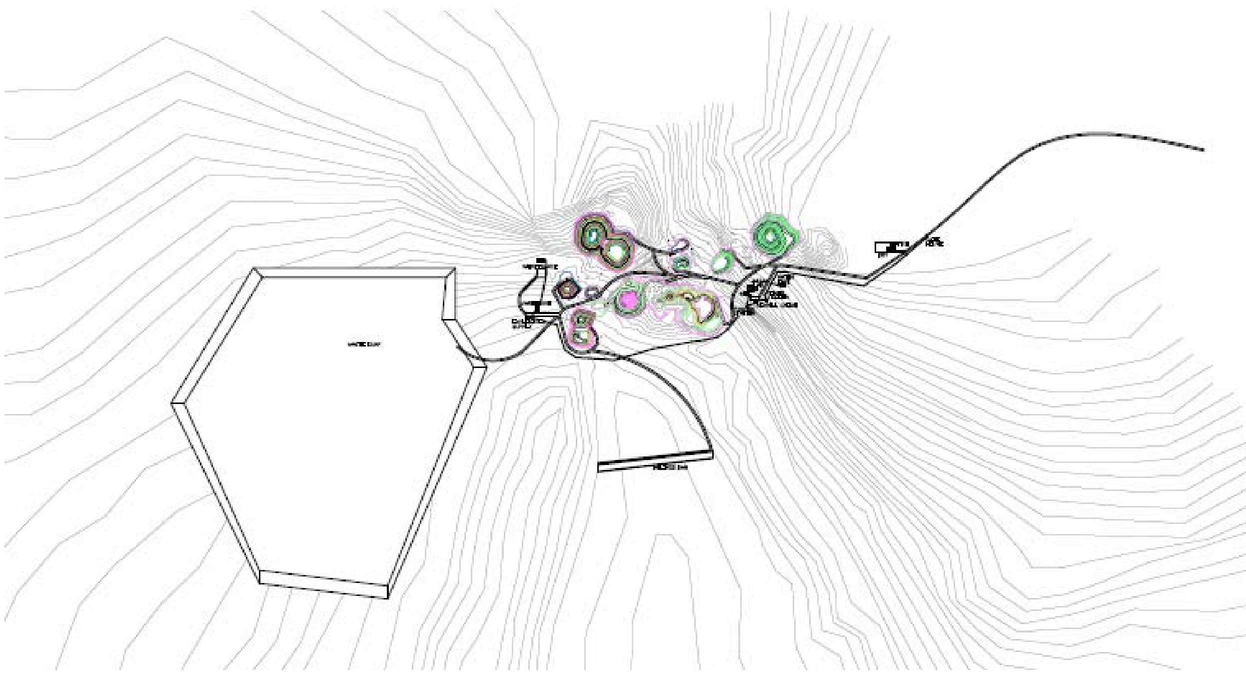


Figure 8.1.1-2 - Detailed site layout focusing the entrance of the project

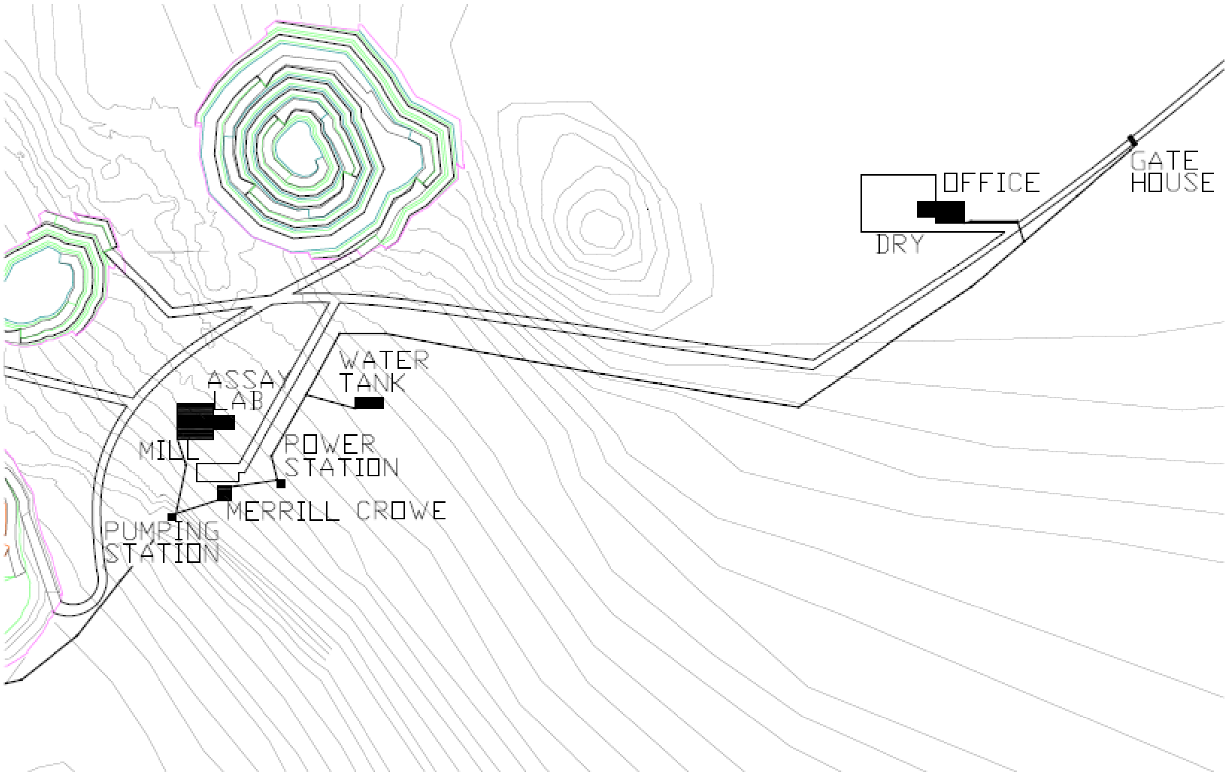


Figure 8.1.1-3 -Detailed site layout of the majority of the infrastructure and open pits

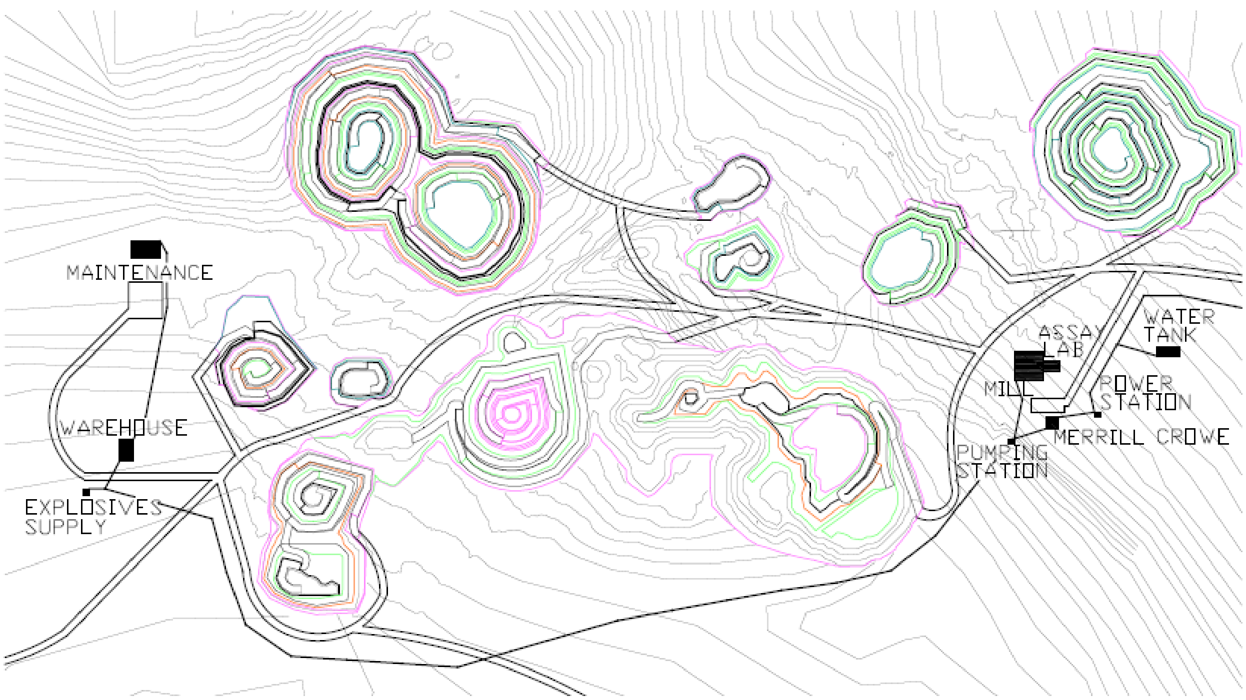


Figure 8.1.1-4 - Overview of the waste dump and tailings management facility

8.2 Site Access Road

At present vehicle access to the site from Cassiar is via Highway 37, the Stewart-Cassiar Highway. The road between Cassiar and the mine site is approximately 8km. This road system will serve as the principle access road during both construction and mine operation. Road rehabilitation work will be required on the present connecting site road to the access road, Highway 37. A new road approximately 4km will be required to provide access to the mine infrastructures.

8.3 Power Supply and Distribution

The supply of power to the Taurus Project is via a 4000 KWh diesel generator supplied to all the required facilities by approximately 4.0kms of onsite overhead power lines. This was chosen after considering the capital of installation for the proposed Northwest Transmission Line by B.C. Hydro, which is estimated at $404 million. The operating cost of the generator over the life of mine will be approximately $253 million.

8.4 Explosives Plant

The explosive plant will be located near the waste dump. The site location will be levelled, the building will be erected and then turned over to the explosives contractor, who will be responsible for operating and maintaining the explosive plant.

8.5 Housing

The mine site is located approximately 8km from Cassiar, British Columbia. The site will not have camp facilities, as all workers will reside off site.

8.6 Water Supply and Distribution

Water will be supplied by a river pumping station on site pumping at $230m^3$ per hour and distributed to the various project facilities. The fresh water system is capable of supplying all the required mill cooling water, reagent fresh water as well as enough to sustain the mill.

8.7 Water Reclaim System

The water reclaim system will reclaim $97m^3$ per hour of water from the milling process, and will be recycled and used in addition with the fresh water throughout the milling process

8.8 Fire Water System

A 40m long x 16m tall water tank with a capacity of approximately 570,000L will be used to store fresh water for the fire water system as well as supply potable water. The tank is located on a hill to facilitate gravity feed.

8.9 First Aid

In addition to mine rescue, there will be two on-site first aid stations, one located in the mill the other in the maintenance shop. An ambulance will be located next to the maintenance shop for the transportation in emergencies or for patients requiring further treatment.

The Dease Lake Hospital is located 117km from the mine site and would provide medical treatment for serious cases via ambulance or air ambulance.

9.0 PROJECT SCHEDULE

An estimated 6,500,000 tonnes will be mined annually by open pit methods, producing 2,500,000 t/y of ore over a mine life of 13 years, with an average stripping ratio of 1.73:1. The project allows for 1 year of pre-production in which 2,000,000 t of waste will be mined and mine facilities will be built.

The work cycle is based on 14 continuous days of work by 12 hour shifts immediately followed by a 14 day rest period. The majority of the employees would be sourced from the Greater Vancouver mainland area and workers would receive a travel allowance for initial and final travel to and from the job site.

10.0 OPERATING COSTS

10.1 Operating Cost Summary

The average operating cost over the 13 year life of mine is estimated to be $24.62/t of ore milled. The estimated life-of-mine average unit costs for each major operating cost area are shown below in Table 10.1-1.

Table 10.1-1 - Life of mine Unit Costs

Area	CDN$/t ore milled	Total Cost (CDN$)
Mining	8.04	256,649,939
Milling	16.00	505,459,872
General and Administrative	0.58	18,322,920
Total	**24.62**	**780,432,732**

Table 10.1-2 summarizes the estimated operating cost per year for each major area.

Table 10.1-2 - Estimated Annual Operating Costs by Area (CDN$000's)

	Year						
Area	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Mining	25,313	23,389	24,042	23,367	22,495	22,496	22,177
Milling	40,000	40,000	40,000	40,000	40,000	40,000	40,000
G&A	1,450	1,450	1,450	1,450	1,450	1,450	1,450
Annual Cost ($000's)	**66,763**	**64,839**	**65,492**	**64,817**	**63,945**	**63,946**	**63,627**

	Year						
Area	**8**	**9**	**10**	**11**	**12**	**13**	**TOTAL**
Mining	18,018	16,166	13,418	16,619	17,053	12,097	256,650
Milling	40,000	40,000	40,000	40,000	40,000	25,460	505,460
G&A	1,450	1,450	1,450	1,450	1,450	923	18,323
Annual Cost ($000's)	**59,468**	**57,616**	**54,868**	**58,069**	**58,503**	**38,480**	**780,433**

10.2 Mine Operating Cost

10.2.1 Direct Mining Operating Unit Costs

The estimated life of mine average direct mining unit cost of $8.04/t ore milled or $3.53/t material is summarized in Table 10.2.1-1

Table 10.2.1-1 - Unit Operating Costs

Area	CDN$t/ore	CDN$/t moved
Drilling	0.54	0.25
Blasting	0.60	0.25
Loading	0.47	0.21
Hauling	1.33	0.53
Haul Roads & Dumps	1.33	0.60
General Services	0.74	0.33
Supervision & Engineering	1.28	0.57
Equipment Maintenance	1.73	0.79
Total	**8.04**	**3.53**

Drilling Costs

The average life of mine drilling labour, equipment and consumables cost for open pit production mining is $0.54/t of ore milled and $0.25/t of material moved. Costs include both rotary and air track drilling.

Blasting Costs

The average blasting cost over the mine life is $0.60/t of ore milled and $0.25/t of material moved. Blasting costs include equipment, labour, explosives and blasting supplies. ANFO is used for blasting both ore and waste rock.

Loading Costs

The average cost of using front-end loaders to load haul trucks with ore and waste is $0.21/t of material moved and $0.47/t of ore milled.

Hauling Costs

The average life of mine cost for hauling mined ore to the mill and waste to waste dumps is approximately $1.33/t of ore milled and $0.53/t of material moved. Haulage costs are based on trucks hauling full and returning empty.

Haul Roads & Dumps

The average cost of maintaining haul roads and waste dumps is $0.53/t of material moved and $1.33/t of ore milled. The maintenance equipment includes tracked dozers, rubber-tired dozers, graders and water trucks.

General Services

The average life of mine general services cost is $0.33/t of material moved and $0.74/t of ore milled. General service includes equipment and labour associated with maintenance and general duties around the site. General equipment includes front end loaders, cable reel trucks, fire trucks, ambulances, pick-up trucks, tractor/trailers and personnel vans. General labour includes loader operators, general labourers and trainees.

Supervision & Engineering

The average cost for supervision and engineering for the project is $1.28/t of ore milled and $0.57/t of material moved. Supervision and engineering costs accounts for supervising and engineering personnel, vehicles and supplies.

Equipment Maintenance

The average life of mine cost for equipment maintenance is $1.73/t of ore milled and $0.79/t of material moved. Equipment used for maintenance includes service/welder trucks, lube and fuel trucks, tire manipulators, mobile cranes, and forklifts. Maintenance labour includes operators, mechanics, electricians and warehouse labourers.

10.2.2 Mining Manpower

At peak production, the workforce will increase to an estimated 155 employees. Manpower costs are divided into two sections; salaried employees and hourly employees.

An allowance of 26% of salary and hourly wages has been used to account for fringe benefits such as:

- Productivity bonus
- RRSP contribution
- Unused vacation payout
- Medical benefits
- Others (training, sick days, gifts, etc.)

Labour salaries, wages and benefits were determined using standard salary scales for similar mines in British Columbia.

Salaried Employees

At peak production, there will be an estimated 31 salaried employees in mine operations and maintenance as shown in Table 10.2.2-1.

Table 10.2.2-1 - Mine Operation and Maintenance Salaried Employees

Position	QTY	Annual Salary (CDN$)	Annual Cost (CDN$)
Mine Operations - Salaried			
Mine Superintendant	1	115,000	144,900
General Mine Foreman	1	90,000	113,400
Shift Foreman	4	85,000	428,400
Chief Engineer	1	105,000	132,300
Mining Engineers	2	95,000	239,400
Chief Geologist	1	105,000	132,300
Mine Geologists	2	85,000	214,200
Surveyors/Draftsmen	4	65,000	327,600
Survey Assistants	2	55,000	138,600
Samplers	4	55,000	277,200
Clerks/Secretaries	1	55,000	69,300
Sub-Total	**23**		**2,217,600**
Mine Maintenance - Salaried			
Maintenance Superintendant	1	115,000	146,800
Shop General Foremen	1	90,000	95,000
Shop Shift Foremen	4	85,000	300,000
Maintenance Planners	1	75,000	70,000
Warehouse Foreman	1	75,000	65,000
Sub-Total	**8**		**676,800**
Total	**31**		**2,894,400**

Hourly Employees

At peak production, there will be an estimated 125 hourly employees in mine operations and maintenance as shown in Table 10.2.2-2.

Table 10.2.2-2 - Mine Operation and Maintenance Hourly Employees

Position	QTY	Hourly Rate (CDN$/hr)	Annual Salary (CDN$)	Annual Cost (CDN$)
Mine Operations - Hourly				
Drillers	8	30	62,400	628,992
Drillers Helpers	4	25	52,000	262,080
Truck Drivers	16	30	62,400	1,257,984
Tracked Dozer Operators	8	28	58,240	628,992
Wheeled Dozer Operators	4	28	58,240	293,530
Loader Operators	8	28	58,240	587,059
Grader Operators	4	28	58,240	293,530
Water Truck Drivers	4	26	54,080	293,530
Blasters	4	30	62,400	272,563
Blaster Helpers	4	25	52,000	314,496
General labour/Oilers	4	23	47,840	262,080
Trainees	2	23	47,840	120,557
Sub-Total	**70**			**5,215,392**
Mine Maintenance - Hourly				
Lube/Fuel Truck Drivers	8	26	54,080	545,126
Mobile Crane/Fork Lift Operators	1	30	62,400	78,624
Shovel & Drill Mechanics	6	31	64,480	454,971
Shop Mechanics/Machinists	15	31	64,480	1,234,921
Mechanics Helpers	8	25	52,000	497,952
Shop Electricians	3	32	66,560	254,951
Electrician Helpers	3	25	52,000	199,181
Tiremen	1	28	58,240	73,382
Millwright - Welders	1	31	64,480	81,245
Light Vehicle Mechanics	6	31	64,480	493,968
Trainees/Janitors	1	23	47,840	60,278
Warehouse/First Aid	2	23	47,840	120,557
Sub-Total	**55**			**4,095,157**
Total	**125**			**9,310,549**

10.3 Process Operating Cost Estimate

Process operating costs total $505,459,872 over the life of mine, and average $16.00/t milled as shown in Table 10.3-1. The process operating costs are split into five areas; labour, mobile equipment, consumables, power and general expenses.

Table 10.3-1 - Process Operating Costs

Area	Unit Cost (CDN$/t milled)	Total Operating Cost (CDN$)
Labour	1.88	59,462,886
Mobile Equipment	0.22	6,945,019
Consumables	2.76	87,068,784
Power	8.03	253,519,717
General Expenses	0.45	14,269,132
Sub Total	**13.33**	**421,265,538**
Contingency @ 20%	2.67	83,445,746
Total	**16.00**	**505,518,646**

10.3.1 Labour

The unit cost for labour is $1.88/t of ore milled. The manpower over the life of the mine is estimated to be 60 employees. Process labour is summarized in Table 10.3.1-1. Labour costs used in the study are the mid to high range rates for major mines in B.C.. The rates used in this study are comparable to Gibraltar, Huckleberry, Kemess, and Mount Polley rates.

A burden averaging 26% of the base rate was used on the study. The burden rate allows for; RRSP contribution, CPP, UIC, life insurance, short term and long term disability, medical services plan, extended health benefits, dental, vacation pay, WCB, statutory holidays, shift premiums, first aid, etc.

Table 10.3.1-1 - Process Labour Costs

Position	QTY	Hourly Rate (CDN$/hr)	Annual Salary (CDN$)	CDN$/Year
Mill Superintendent	1	43.00	118,329	118,329
Chief Metallurgist	1	39.00	107,322	107,322
Metallurgist	2	32.00	88,059	176,118
Operations Foreman	4	33.00	90,811	363,243
Maintenance Foreman	4	33.00	90,811	363,243
Maintenance Planner	1	28.00	77,052	77,052
Maintenance Personnel	10	28.00	77,052	770,515
Operator/trainer	20	28.00	77,052	1,541,030
Purchasing/Warehouse Supervisor	1	29.00	79,803	79,803
Warehouseman/laborer	5	23.00	63,292	316,462
Assayer/Sample bucker	5	25.00	68,796	343,980
Foreman Vanenby Loadout	1	32.00	88,059	88,059
Operators. Vanenby	4	26.00	71,548	286,191
Maintenance Personnel, Vanenby	1	27.00	74,300	74,300
Total	**60**			**4,705,646**

10.3.2 Mobile Equipment

Plant mobile equipment costs total $549,600 annually as shown in Table 10.3.2-1 and are based on an hourly rate which incorporates costs associated with fuel consumption, maintenance and repair rates.

Table 10.3.2-1 - Plant Mobile Equipment Costs

Unit	QTY	Hourly Rate (CDN$/hr)	CDN$/t	CDN$/Year
Light Vehicle(Lease)	4	15	0.046	115,200
Flat bed truck. hyd. Crane	2	50	0.038	96,000
Bob Cat	2	50	0.108	218,400
All terrain fork FLT	1	50	0.019	48,000
Mobile Crane	1	75	0.029	72,000
Total	**10**	**240**	**0.240**	**549,600**

10.3.3 Consumables

Plant consumable costs total $6,890,263 annually as summarized in Table 10.3.3-1. Grinding media and reagent consumption are the major consumable costs.

Table 10.3.3-1 – Plant Consumable Costs

Unit	QTY	Units	Rate/Unit	CDN$/t	CDN$/Year
Site Fuel	4	vehicles	15	0.05	131,040
Office Admin Supplies	1	lump sum	1000	0.00	12,000
Grinding Media inc. liners	1	1.0 kg/t	1250	1.25	3,125,000
Reagents	1	unit consumpt.		0.97	2,422,223
Warehouse Consumables	1	lump sum	50000	0.24	600,000
Spare Parts	1	lump sum	50000	0.24	600,000
Total				**2.76**	**6,890,263**

Reagents

Reagent consumption rates, shown in Table 10.3.3-2, are based on the results from metallurgical testwork.

Table 10.3.3-2 – Mill Reagent Costs

Reagent Description	Consumption (g/t)	Consumption (kg/day)	Consumption (kg/year)	Cost (CDN$/kg)	Cost (CDN$/year)	Remark
Sodium Cyanide [NaCN]	300	2,100	705,180	2.25	1,586,655	bulk bag
Zinc	119	833	279,721	1.98	553,848	tanker truck
Lime[Ca(OH)2]	50	350	117,530	0.26	29,970	bulk truck
PAX	5	35	11,753	2.62	30,793	tanker truck
Lead Nitrate	50	350	117,530	1.58	185,697	bulk bag
MIBC	5	35	11753.00	3	35259	pallet shipment
Total					**2,422,223**	

10.3.4 Power

The power cost for mill operation totals $20,062,500 annually as shown in Table 10.3.4-1 and are based on a consumption of 32.1 kWh per tonne of ore milled. Power will be supplied by diesel generators located on the mine site. Power is a major cost, accounting for 50.2% of process operating costs.

Table 10.3.4-1 – Plant Power Cost

Description	$/kWh	Consumption (kWh/t)	CDN$/t	CDN$/Year
Power (Diesel generated)	0.25	32.1	8.03	20,062,500

10.3.5 General Expenses

General expense costs include training, travel and expenses, safety equipment, consultants and heating, totalling at $1,129,000 annually with a rate of $0.45/t.

10.4 General & Administrative Costs

The estimated average life of mine costs for general and administrative functions are estimated to be $0.58/t ore milled. Included in the general and administrative costs are environmental and plant services.

Major categories against which annual general and administration cost estimates have been detailed are:

- Administrative salaries
- Personnel transportation
- Property assets insurance
- Corporate travel expenses

- Catering
- Communications

10.4.1 Plant Services

An overall average annual cost of approximately $0.10/t or milled has been estimated for plant services operating costs.

Annual cost estimates for plant services include:

- sewage treatment
- site water distribution system
- fuel dispensing systems power
- plant services manpower salaries and wages
- site runoff collection
- service complex building power
- mine services facilities power

10.4.2 Environmental Costs

The average cost for environmental functions over the mine life is estimated at $0.04/t ore milled.

Annual cost estimates include provision for:

- site reclamation costs
- habitat monitoring costs
- environmental staff salaries
- site ARD and baseline water sampling and analysis
- permitting
- consultant's fees

11.0 CAPITAL COSTS

11.1 Capital Cost Summary

The capital costs for the mine, process plant and infrastructure for the project have been developed in accordance with standard industry practices for this level of study, and to a level of definition and intended accuracy of ±35%.

The initial capital cost for development of the Taurus mine is estimated at $109.5 million (excluding working capital) as summarized below in Table 11.1-1

Table 11.1-1 – Taurus Capital Cost Estimate (excluding Working Capital)

Area	Cost (CDN$)
Direct Costs	
Pre-Production Waste Mining	16,609,996
Mine Equipment	27,239,678
Process Plant	31,166,575
Buildings & Infrastructure	13,718,696
Tailings Storage	4,888,741
Sub-Total	**93,623,687**
Indirect Costs	
Owner's Costs	5,000,000
EPCM @ 12%	11,234,842
Sub-Total	**16,234,842**
Total	**109,858,529**

Note: Direct costs include a 25% Contingency

The estimate is based on the following documents:

Capital Cost	Sources
Mine Equipment	Western Mine Engineering/ InfoMine USA
Process Plant	InfoMine USA
Building & Site Infrastructure	Western Mine Engineering
Indirect Costs	Western Mine Engineering

11.2 Direct Costs

11.2.1 Mining Capital Costs

Pre-Production Waste Mining

The pre-production period is 1 year, while the production period is 13 years. No ore will be produced during the pre-production period; only waste rock will be mined. There will be 2,000,000t of waste rock mined in the pre-production period, costing $16.6million based on a rate of $8.14/t of material moved.

Mine Equipment

The Taurus mine initial equipment capital cost estimate totalling $27.2 million is required to begin Year 1 of operation. A summary of initial mine equipment capital costs is shown in Table 11.2.1-1.

Mine equipment costs have been estimated using InfoMine USA database. It is assumed that all primary mining equipment purchased will be new including drills, front end loaders and haul trucks.

Table 11.2.1-1 – Initial Mine Equipment Capital Costs

Equipment Description	Type	Initial No. of units	Initial Capital (CDN$)
Primary Equipment			
Rotary Drills	IR-DMM	2	1,306,588
Rear Dump Trucks	CAT 777	4	6,282,353
Tracked Dozers	CAT D10N	2	2,681,086
Rubber-tired Dozers	CAT 834B	1	367,698
Front End Loaders	CAT 992	2	3,294,118
Motor Graders	CAT 16H	1	526,029
Water Trucks	CAT733B	1	909,412
ANFO Trucks	Mack	1	45,255
Air Track Drills		1	**138,235**
Total			15,550,775
Auxillary Equipment			
Service/Welder Truck	GMC 1 ton	2	1,371,765
Lube & Fuel Trucks	GMC 750Gal	2	188,118
Tire Manipulator	GMC	1	185,882
Mobile Crane	Grove RT528	1	592,941
Light Stands		4	103,529
Pickup Trucks	GMC 1/2t 2x4	11	284,706
Pickup Trucks	GMC 3/4t 4x4	2	65,882
Ambulance	GMC	1	50,000
Personnel Van	GMC Bus	2	90,000
Pumps & Pipe	Various	1	120,000
Blasters Truck	GMC 1 ton	1	33,000
Pump Truck	GMC 1 ton	1	50,000
Cable Reel Truck		1	240,000
Shop Forklift		2	82,000
Fire Truck		1	75,000
Tractor/Trailer		1	110,000
Sub Stations		1	500,000
Switch Gear		2	300,000
Shovel/Drill Cable		2	400,000
Powder Magazines		1	100,000
Cap Magazines		1	10,000
Mobile Radios		1	150,000
Survey Instruments		1	100,000
Computer Hardware		1	50,000
Computer Software		1	100,000
Office Equipment		1	50,000
Total			**5,402,824**
Sub-Total			**20,953,599**
Spare Parts @ 5%			1,047,680
Contingency @ 25%			5,238,400
Total			**27,239,678**

Mine Equipment Replacement Capital

A summary of replacement capital costs is summarized in Table 11.2.1-2. Estimated replacement capital for mine equipment totals $31.9million over the 13 year mine life.

Table 11.2.1-2 – Mine Equipment Replacement Capital Costs (CDN$000's)

List Of Equipment	Model	Unit Cost	Initial	PROJECT YEAR													
		CDN$ x 1000	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
Rotary Drills	IR-DMM	653	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**1,307**
Rear Dump Trucks	CAT 777	1,571	4	0	0	0	0	0	0	0	0	0	4	0	0	0	**12,565**
Tracked Dozers	CAT D10N	1,341	2	0	0	0	0	2,681	0	0	0	0	2,681	0	0	0	**8,043**
Rubber-tired Dozers	CAT 834B	368	1	0	0	0	0	0	368	0	0	0	0	0	368	0	**1,103**
Front End Loaders	CAT 992	1,647	2	0	0	0	0	0	0	0	0	0	3,294	0	0	0	**6,588**
Motor Graders	CAT 16H	526	1	0	0	0	0	0	526	0	0	0	0	0	526	0	**1,578**
Water Trucks	CAT733B	909	1	0	0	0	0	0	0	0	0	0	909	0	0	0	**1,819**
ANFO Trucks	Mack	45	1	0	0	0	0	0	0	0	0	0	45	0	0	0	**91**
Air Track Drills	GD	138	1	0	0	0	0	138	0	0	0	0	138	0	0	0	**415**
Service/Welder Truck	GMC 1 ton	686	2	0	0	0	0	686	0	0	686	0	686	0	0	686	**4,115**
Lube & Fuel Trucks	GMC 750Gal	94	2	0	0	0	0	94	0	0	94	0	94	0	0	94	**564**
Tire Manipulator	GMC	186	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**186**
Mobile Crane	Grove RT528	593	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**593**
Light Stands	Atlas Copco	26	4	0	0	0	0	52	0	0	52	0	52	0	0	52	**311**
Pickup Trucks	GMC 1/2t 2x4	26	11	0	0	285	0	0	285	0	0	285	0	0	285	0	**1,424**
Pickup Trucks	GMC 3/4t 4x4	33	2	0	0	0	0	66	0	0	0	0	66	0	0	0	**198**
Ambulance	GMC	50	1	0	0	0	0	0	0	0	0	0	50	0	0	0	**100**
Personnel Van	GMC Bus	45	2	0	0	45	0	0	90	0	0	90	0	0	90	0	**405**
Pumps & Pipe	Various	120	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**120**
Blasters Truck	GMC 1 ton	33	1	0	0	33	0	0	33	0	0	33	0	0	33	0	**165**
Pump Truck	GMC 1 ton	50	1	0	0	0	0	50	0	0	0	0	50	0	0	0	**150**
Cable Reel Truck	CAT	240	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**240**
Shop Forklift	Various	41	2	0	0	0	0	0	0	0	0	0	82	0	0	0	**164**
Fire Truck	GM	75	1	0	0	0	0	0	0	0	0	0	75	0	0	0	**150**
Tractor/Trailer	Various	110	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**110**
Sub Stations	Various	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**500**
Switch Gear	Various	150	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**300**
Shovel/Drill Cable	Various	200	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**400**
Powder Magazines	Various	100	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**100**
Cap Magazines	Various	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
Mobile Radios	Various	150	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**150**
Survey Instruments	Various	100	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**100**
Computer Hardware	Various	50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**50**
Computer Software	Various	100	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**100**
Office Equipment	Various	50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**50**
Annual Sustaining Capital				0	106	106	106	106	106	106	106	106	106	106	106	106	**1,267**
Sub-Total				**0**	**106**	**468**	**106**	**3,873**	**1,407**	**106**	**937**	**513**	**14,611**	**106**	**1,407**	**937**	**24,576**
Spare parts allowance @ 5%				0	5.28	23	5	194	70	5	47	26	731	5	70	47	**1,229**
Contingency @ 25%				0	26.4	117	26	968	352	26	234	128	3,653	26	352	234	**6,144**
Total				**0**	**137**	**609**	**137**	**5,034**	**1,829**	**137**	**1,218**	**667**	**18,994**	**137**	**1,829**	**1,218**	**31,949**

Salvage Value

Salvage value for all mine equipment is assumed to be zero.

11.2.2 Process Plant

Process plant equipment lists were developed from flowsheets which form the basis for the 7,000 t/d plant design. Prices were taken from InfoMine USA database and an exchange rate of $0.85 USD per CDN$ was applied to equipment prices proposed in US funds. The total capital costs for the process plant is estimated at $31.2million as shown in Table 11.2.2-1

Sketches of the primary and secondary crushing, grinding, flotation, filtration, and cyanidation were used to facilitate an estimate of building dimensions.

Table 11.2.2-1 – Processing Plant Capital Costs

Cost Area	Factor Basis	CDN$
Direct Costs		
Crushing		1,364,118
Ore Storage		841,506
Grinding		3,431,765
Flotation		261,304
Concentrate dewatering circuit		291,529
Reagents and utilities		1,497,807
Metallurgical and assay lab.		1,025,659
Miscellaneous		22,792
Mechanical Equipment Direct Cost		**8,736,480**
Installation	25%	2,184,120
Piping	20%	1,747,296
Electrical	20%	1,747,296
Instrumentation	10%	873,648
Mill Building		3,494,592
Auxiliary buildings (laboratory)	10%	873,648
Plant Services	10%	873,648
Sub-Total PEI & Services		**11,794,248**
Sub-total Direct Costs		**20,530,728**
Indirect Costs		
Construction Indirects	6%	1,231,844
Camp & Catering Costs	4%	821,229
Vendor Representatives	1%	87,365
Freight	3%	262,094
Spare parts and first fill		2,000,000
Sub-Total indirect costs		**4,402,532**
Total Direct & Indirect Costs		**24,933,260**
Contingency	25%	6,233,315
Total		**31,166,575**

11.2.3 Buildings & Infrastructure

The capital costs for buildings and infrastructure are comprised of the project capital components for the site that are not directly related to the mine or process plant. Infrastructure includes:

- Buildings for administration, warehouse, guardhouse and maintenance, etc.
- Water supply
- Power generation and distribution
- Access roads
- Excavation
- Explosive storage

The capital cost for the infrastructure is estimated at $13.7million as detailed in Table 11.2.3-1.

Table 11.2.3-1 – Infrastructure and Site Buildings Capital Costs

Cost Item Description	Cost (CDN$)
Assay Laboratory	1,214,400
Office	2,208,000
Dry	1,078,332
Gate House	103,914
Maintance Shop	3,401,286
Warehouse	1,498,956
Anfo Storage	193,200
Water Tank	125,000
Roads	200,000
Power Station and Distribution	1,020,814
Sub-Total	**11,043,902**
Excavation	28,055
Contingency @ 25%	2,646,739
Total	**13,718,696**

11.2.4 Tailings Storage

The estimated capital cost for building the tailings dam and pipeline that connects to the mill is $4.9million. A breakdown of the estimate is summarized in Table 11.2.4-1.

Table 11.2.4-1 – Tailings Storage Cost Estimate

Cost Item Description	Cost (CDN$)
Tailings dam and impoundment foundation preparation	$250,250
Main tailings embankment	$1,597,050
Impoundment liner	$414,960
Access road	$50,000
Contractors and personnel	$392,943
Tailings pipeline	$261,299
Support equipment	$452,452
Miscellaneous	$377,358
Sub-Total	**$3,796,313**
Mobilization/De-mobilization	$126,352
Contingency @ 25%	$966,077
Total	**$4,888,741**

11.2.5 Closure Costs

Closure costs are estimated to be approximately 15% of initial capital costs. A closure bond of $16.5million will be placed before operation begins. The closure bond will cover the cost of mine closure and reclamation.

11.2.6 Working Capital

An amount equivalent to 25% of first full year project operating costs was charged against the project cash flow in Year 1 to provide for the production of initial product inventories. The estimated working capital totals $16.7million.

11.3 Indirect Costs

11.3.1 EPCM

An engineering, procurement and construction management cost at 12% of total capital cost has been allowed for based on the proposed project staffing plan, including uplift and completion bonuses, office expenses, computer fees, travel costs, and the use of additional consultants.

11.3.2 Owner's Costs

An Owner's Cost of $5,000,000 has been allowed to include items such as:

- project management staff
- training programmes for operations staff
- insurances
- corporate office staff assigned to the project

- sustainability commitments
- environmental testing and monitoring
- owners allowances for field operations offices and supplies
- owners travel costs during construction
- housing allowance
- permitting
- reclamation bonding through construction.

11.4 Contingency

A contingency representing 25% of total direct and indirect costs has been allowed for project development.

The contingency amount is an allowance that has been added to the capital cost estimate to cover unforeseeable costs within the scope of the estimate

12.0 ECONOMICAL ANALYSIS

The economic analysis of the project is based on estimates of revenues, operating costs and capital costs, consistent with project plans.

The metal price used for this economic analysis is US$850/oz gold. As of May 2010, gold price was at US$1204/oz with a trailing 3 year average of US$905/oz. A conservative gold price has been selected for this analysis.

As of May 2010, the foreign exchange rate was at $0.95 USD per CDN$. A conservative exchange rate of $0.90 USD per CDN$ was used for this estimate.

Sensitivity analyses were carried out to the project economics.

12.1 Project Return

The results of the economic analysis, based on a 13 year mine life and a 31.6 Mt resource grading at an average of 1.50g/t Au are shown in Table 12.1-1. The following pre-tax parameters were calculated:

- 28% IRR (internal rate of return)
- 2.2 yr payback on $109 million initial capital cost
- $48.4 million NPV (net present value)at 5% discount

Table 12.1-1 – Summary of Project Returns

Item	Units	Value
Total gold produced	oz	1,409,504
Gold price	$US/oz	850
Exchange rate	$US/$CDN	0.90
NPV (net present value) @ 0% before tax	$CDN million	65.8
NPV (net present value) @ 5% before tax	$CDN million	48.4
NPV (net present value) @ 8% before tax	$CDN million	38.9
NPV (net present value) @ 10% before tax	$CDN million	33.1
NPV (net present value) @ 20% before tax	$CDN million	11.0
Pre-tax payback period	years	2.2
IRR (internal rate of return)	%	28

12.2 Revenue

Revenues are based on the amount of gold recovered and gold price minus a refining charge of US$6.00/oz and a 2.5% Net Smelter Return Royalty (NSR) payable to Sable Resources Ltd.

12.3 Operating Costs

Operating costs were estimated in detail and are presented in Section 11.0. The operating costs for mining, milling, and general and administration are indicated in Table 12.3-1. Life of mine operating costs are estimated to be $24.62/t of ore milled.

Table 12.3-1 – Summary of Operating Costs

Area	CDN$/t ore milled	Total Cost (CDN$)
Mining	8.04	256,649,939
Milling	16.00	505,459,872
General and Administrative	0.58	18,322,920
Total	**24.62**	**780,432,732**

12.4 Capital Costs

The project capital cost estimate used in this economic analysis has been estimated in detail and presented in Section 10.0. Costs have been estimated based on capacity factor and equipment factor estimates. Table 12.4-1 provides a categorization of the estimated initial project capital cost.

Table 12.4-1 – Initial Capital Costs

Area	Cost (CDN$)
Direct Costs	
Pre-Production Waste Mining	16,609,996
Mine Equipment	27,239,678
Process Plant	31,166,575
Buildings & Infrastructure	13,718,696
Tailings Storage	4,888,741
Sub-Total	**93,623,687**
Indirect Costs	
Owner's Costs	5,000,000
EPCM @ 12%	11,234,842
Sub-Total	**16,234,842**
Total	**109,858,529**

12.4.1 Replacement Capital

Estimated replacement capital for mine equipment totals $31.9million over the 13 year mine life.

12.4.2 Working Capital

An amount equivalent to 25% of first full year project operating costs (approximately $1 million) was charged against the project cash flow in Year 1 to provide for the production of initial product inventories.

12.4.3 Closure Costs

Closure costs are estimated to be approximately 15% of initial capital costs. A closure bond of $16.5million will be placed before operation begins. The closure bond will cover the cost of mine closure and reclamation.

12.5 Cash Flow

The cash flow analysis is summarized below in Table 12.5-1 and the discounted annual cash flows are illustrated in Figure 12.5-1.

Table 12.5-1 – Cash Flow Analysis

			Year -1	1	2	3	4	5	6	7
Production Schedule										
Ore Sent Direct to Mill	tpa			2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Gold	g/t			2.35	2.23	2.71	1.46	1.32	1.22	1.48
Total Ore Mined	tpa			2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Total Waste Mined	tpa		2,000,000	5,490,598	4,894,173	4,753,709	4,631,834	4,622,914	4,634,669	4,506,976
Strip ratio				2.20	1.96	1.90	1.85	1.85	1.85	1.80
Total Tonnage Mined	tpa		2,000,000	7,990,598	7,394,173	7,253,709	7,131,834	7,122,914	7,134,669	7,006,976
Ore Processed	tpa			2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Gold	g/t			2.35	2.23	2.71	1.46	1.32	1.22	1.48
Unit Operating Cost										
Mining (per tonned moved)	$CDN/t		8.30	$3.17	$3.16	$3.31	$3.28	$3.16	$3.15	$3.17
Milling (per tonne milled)	$CDN/t			$16.00	$16.00	$16.00	$16.00	$16.00	$16.00	$16.00
G&A (per tonne milled)	$CDN/t			$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58
Total Unit Operating Cost				$26.71	$25.94	$26.20	$25.93	$25.58	$25.58	$25.45
Annual Operating Costs										
Mining	$CDNx1000			$25,313.16	$23,388.99	$24,042.05	$23,366.89	$22,494.72	$22,495.51	$22,177.17
Milling	$CDNx1000			$40,000.00	$40,000.00	$40,000.00	$40,000.00	$40,000.00	$40,000.00	$40,000.00
G&A	$CDNx1000			$1,450.00	$1,450.00	$1,450.00	$1,450.00	$1,450.00	$1,450.00	$1,450.00
Total Operating Costs	$CDNx1000			$66,763.16	$64,838.99	$65,492.05	$64,816.89	$63,944.72	$63,945.51	$63,627.17
Metal Production										
Ore Milled	Mtpy			2.500	2.500	2.500	2.500	2.500	2.500	2.500
Gold Produced	oz/a			173,775	164,901	200,396	107,962	97,610	90,215	109,441
Exchange rate	$1.11									
Metal Prices										
Gold	$US/oz			$850	$850	$850	$850	$850	$850	$850
Revenue										
Gold	$CDNx1000			$129,614	$122,996	$149,470	$80,526	$72,805	$67,289	$81,629
Smelter Refining, Transportation	$CDNx1000			($938)	($890)	($1,082)	($583)	($527)	($487)	($591)
Net Smelter Return	$CDNx1000			$128,676	$122,105	$148,388	$79,943	$72,278	$66,802	$81,038
Net Smelter Return/ tonne milled	$CDN/t				$48.8	$59.4	$32.0	$28.9	$26.7	$32.4

Project Cash Flow			-1	1	2	3	4	5	6	7
Net Smelter Return	$CDNx1000			$128,676	$122,105	$148,388	$79,943	$72,278	$66,802	$81,038
Operating Cost	$CDNx1000			($66,763)	($64,839)	($65,492)	($64,817)	($63,945)	($63,946)	($63,627)
Royalty as % of NSR	$CDNx1000	2.5%		-3,217	-3,053	-3,710	-1,999	-1,807	-1,670	-2,026
Head Office Costs ($/tonne)	$CDNx1000	$0.01		-80	-74	-73	-71	-71	-71	-70
Operating Profit	$CDNx1000			$58,616	$54,140	$79,114	$13,057	$6,455	$1,115	$15,315
Capital Costs										
Construction Capital Cost	$CDNx1000		($109,859)							
Sustaining Capital Cost	$CDNx1000			$0	($137)	($609)	($137)	($5,034)	($1,829)	($137)
Closure Costs										
Closure Cost	$CDNx1000									
Closure Bond	$CDNx1000			($16,479)	($16,479)	($16,479)	($16,479)	($16,479)	($16,479)	($16,479)
Closure Bond LOC Expense	$CDNx1000	2.25%		$371	$371	$371	$371	$371	$371	$371
Working Capital										
Working Capital	$CDNx1000			($16,691)						
Cashflow before Tax	$CDNx1000		($109,859)	$42,296	$54,373	$78,876	$13,290	$1,791	($343)	$15,549
Cumulative Cashflow before Tax	$CDNx1000		($109,859)	($67,563)	($13,189)	$65,686	$78,976	$80,767	$80,424	$95,973

			Year						
			8	9	10	11	12	13	TOTAL
Production Schedule									
Ore Sent Direct to Mill	tpa		2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	1,591,242	31,591,242
Gold	g/t		1.09	1.11	1.06	1.01	1.20	1.29	1.50
Total Ore Mined	tpa		2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	1,591,242	31,591,242
Total Waste Mined	tpa		3,811,163	3,839,147	2,775,897	3,915,180	4,389,328	459,469	54,725,057
Strip ratio			1.52	1.54	1.11	1.57	1.76	0.29	1.73
Total Tonnage Mined	tpa		6,311,163	6,339,147	5,275,897	6,415,180	6,889,328	2,050,711	86,316,299
Ore Processed	tpa		2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	1,591,242	31,591,242
Gold	g/t		1.09	1.11	1.06	1.01	1.20	1.29	
Unit Operating Cost									
Mining (per tonned moved)	$CDN/t		$2.85	$2.55	$2.54	$2.59	$2.48	$5.90	
Milling (per tonne milled)	$CDN/t		$16.00	$16.00	$16.00	$16.00	$16.00	$16.00	
G&A (per tonne milled)	$CDN/t		$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	
Total Unit Operating Cost			$23.79	$23.05	$21.95	$23.23	$23.40	$24.18	
Annual Operating Costs									
Mining	$CDNx1000		$18,018.35	$16,165.84	$13,417.89	$16,619.12	$17,053.19	$12,097.07	$256,650
Milling	$CDNx1000		$40,000.00	$40,000.00	$40,000.00	$40,000.00	$40,000.00	$25,459.87	$505,460
G&A	$CDNx1000		$1,450.00	$1,450.00	$1,450.00	$1,450.00	$1,450.00	$922.92	$18,323
Total Operating Costs	$CDNx1000		$59,468.35	$57,615.84	$54,867.89	$58,069.12	$58,503.19	$38,479.86	$780,432.73
Metal Production									
Ore Milled	Mtpy		2.500	2.500	2.500	2.500	2.500	1.591	31.591
Gold Produced	oz/a		80,602	82,081	78,384	74,686	88,736	60,716	1,409,504
Exchange rate	$1.11								
Metal Prices									
Gold	$US/oz		$850	$850	$850	$850	$850	$850	
Revenue									
Gold	$CDNx1000		$60,119	$61,222	$58,464	$55,707	$66,186	$45,287	1,051,314
Smelter Refining, Transportation	$CDNx1000		($435)	($443)	($423)	($403)	($479)	($328)	(7,611)
Net Smelter Return	$CDNx1000		$59,684	$60,779	$58,041	$55,303	$65,707	$44,959	1,043,703
Net Smelter Return/ tonne milled	$CDN/t		$23.9	$24.3	$23.2	$22.1	$26.3	$28.3	

Project Cash Flow			8	9	10	11	12	13	TOTAL
Net Smelter Return	$CDNx1000		$59,684	$60,779	$58,041	$55,303	$65,707	$44,959	1,043,703
Operating Cost	$CDNx1000		($59,468)	($57,616)	($54,868)	($58,069)	($58,503)	($38,480)	(780,433)
Royalty as % of NSR	$CDNx1000	2.5%	($1,492)	($1,519)	($1,451)	($1,383)	($1,643)	($1,124)	(26,093)
Head Office Costs ($/tonne)	$CDNx1000	$0.01	($63)	($63)	($53)	($64)	($69)	($21)	(843)
Operating Profit	$CDNx1000		($1,340)	$1,580	$1,669	($4,213)	$5,492	$5,335	236,334
Capital Costs									
Construction Capital Cost	$CDNx1000								(109,859)
Sustaining Capital Cost	$CDNx1000		($1,218)	($667)	($18,994)	($137)	($1,829)	($1,218)	(31,949)
Closure Costs									
Closure Cost	$CDNx1000							($16,479)	(16,479)
Closure Bond	$CDNx1000		($16,479)	($16,479)	($16,479)	($16,479)	($16,479)	$0	
Closure Bond LOC Expense	$CDNx1000	2.25%	$371	$371	$371	$371	$371	($0)	4,449
Working Capital									
Working Capital	$CDNx1000								(16,691)
Cashflow before Tax	$CDNx1000		($2,188)	$1,284	($16,954)	($3,979)	$4,034	($12,363)	65,807
Cumulative Cashflow before Tax	$CDNx1000		$93,785	$95,069	$78,115	$74,136	$78,170	$65,807	

Figure 12.5-1 – Discounted Annual and Cumulative Cash Flow

12.6 Taxes

No allowance has been made for Federal and Provincial income tax.

No allowance has been made for GST or provincial sales tax.

12.7 Project Sensitivity

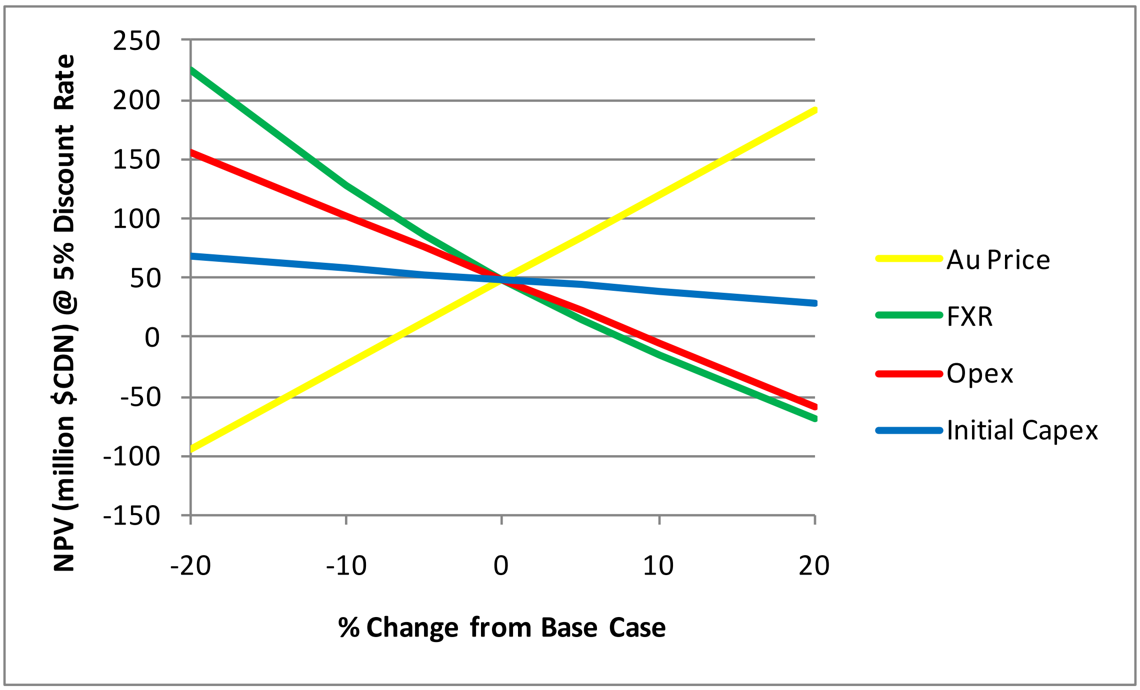
The relative sensitivity of NPV to variations in revenue, capital cost and operating cost has been assessed by means of a "sensitivity analysis" which factors the above variables independently from -20% to +20% of their base case value.

Sensitivity analyses were carried out on the following parameters:

- Operating cost (Opex)
- Initial Capital cost (Initial Capex)
- Exchange rate (FXR)
- Gold price (Au Price)

The analyses are presented graphically as financial outcomes in terms of NPV and IRR. Figure 12.6-1 illustrates that the project NPV (5% discount) is most sensitive to the exchange rate and gold price, and then in decreasing order, operating and initial capital costs.

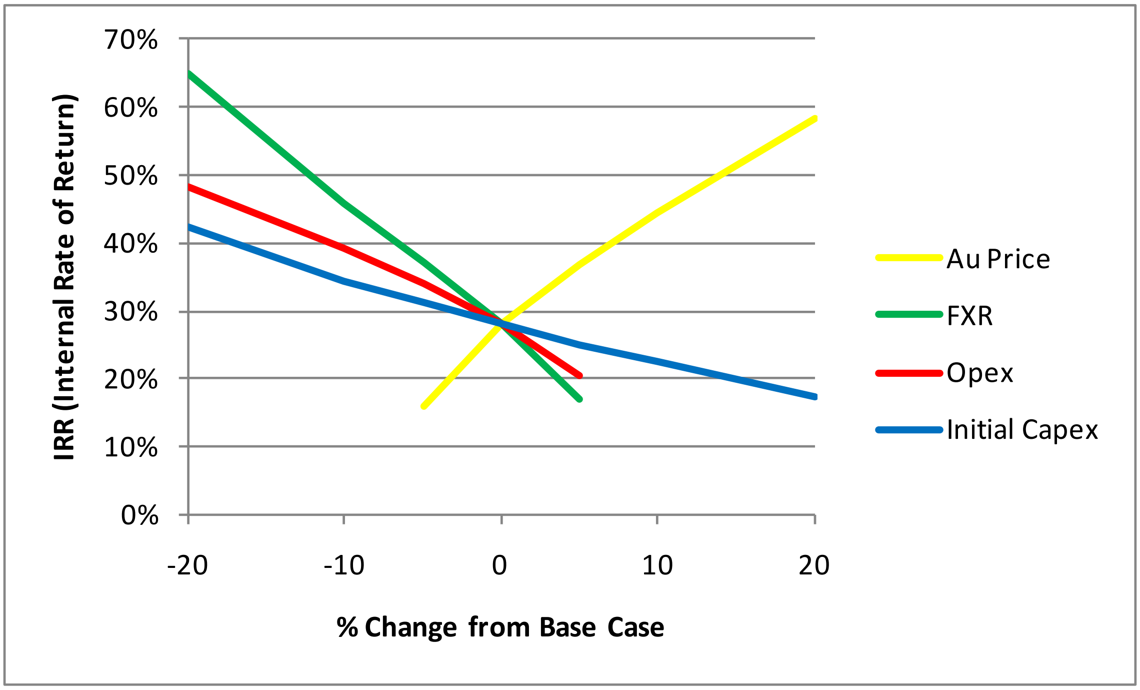
Figure 12.7-1 – NPV Sensitivity Analysis



NPV Sensitivity (million $CDN) @ 5% Discount Rate							
% Change in Base Case	**-20%**	**-10%**	**-5%**	**Base**	**5%**	**10%**	**20%**
Au Price	-94.0	-22.8	12.8	48.4	84.0	119.6	190.8
FXR	225.1	126.9	85.6	48.4	14.7	-15.9	-69.5
Opex	155.2	101.8	75.1	48.4	21.6	-5.1	-58.5
Initial Capex	67.7	58.0	53.2	48.4	43.5	38.7	29.1

Figure 12.6-2 illustrates that the project IRR is also most sensitive to the exchange rate and gold price, followed by operating and initial capital costs which are closely matched.

Figure 12.7-2 – IRR Sensitivity Analysis



13.0 INTERPRETATION AND CONCLUSIONS

The testing and interpretation of the Taurus deposit database meets industry standards for the portions that could be verified. There is no documentation for the pre 1994 data.

The Taurus mineral resource is currently classified as inferred due to the lack of complete and verifiable data. The bulk density of the deposit has not been accurately determined and is assumed to be 2.7 for the whole deposit. Much of the data came from reverse circulation drilling which is not as reliable as diamond drilling for determining a mineral resource model.

The average grade of the deposit is 1.5 g/t and the cut off grade is 0.5 g/t. The tonnage of the deposit is 31.6 million tonnes which equates to 1,409,504 troy ounces of gold. These figures are inferred resource numbers, further testing and drilling is required to upgrade the status of the deposit. Mineralization is close to the surface, allowing for numerous small open pit mines.

The project is projected to be a small operation and therefore it has a low initial capital cost. However, the economic viability of the project is marginal. The payback period is very short due to low initial capital cost and mining high grade ore at the beginning of the mine life, but the cash flow after year 4 is poor. The project may be better suited to a shorter mine life. Increasing the cut-off grade might also allow for more selective mining, reducing the amount of waste rock being mined.

The project is very dependent on the foreign exchange rate and gold price. The cost of power is also a major concern. The diesel generated power required to run the mill accounts for approximately one third of all operating costs for the project. If the mine had access to power from BC Hydro at a cost of CDN$0.09/kWhr, the NPV at a 5% discount rate would change from $48.4million to CDN$180.2million.

14.0 RECOMENDATIONS

In order to improve the confidence in future resource estimates and to establish a uniform sampling method the following recommendations should be implemented:

- Infill drilling should be completed as a priority to improve confidence in order to upgrade inferred resources to measured and indicated resources.
- Confirm geological interpretation and correlate with mineralization of high and low grade zones
- Investigate the difference in grades between the various drilling methods used
- Carry out re-logging in older areas to indentify high grade veins and envelopes of low grade mineralization
- Obtain bulk density and recovery information based on the lithology and grade

There is has been little reliable metallurgical testwork done on the ore from the Taurus deposit. More thorough test work must done in order to get a better understanding of which process methods might be effective. Further testing on the heap leach method should be conducted to determine whether it would be a viable processing method. The results of the previous heap leach testing gave recoveries ranging from 24 to 74 %. If through further testing the recovery is determined to be above 75 %, heap leaching may be a viable alternative. The present small scale mill design and recovery of 92% should be contrasted with the cost of heap leaching once a true recovery is determined.

A study should be done in order to determine if the capital cost of installing a power line to the mine would be more feasible than using diesel generated power.

Further studies should be done to estimate the economic viability using a shorter mine life as well as a higher cut-off grade.

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16.0 GLOSSARY

UNITS OF MEASURE

Above mean sea level .... amsl
Acre .... ac
Annum (year) .... a
Centimetre .... cm
Cubic centimetre cm3
Cubic feet per minute .... cfm
Cubic feet per second ft3/s
Cubic foot ft3
Cubic inch in3
Cubic metre m3
Cubic yard yd3
Day .... d
Degree .... °
Degrees Celsius .... °C
Dollar (American) .... US$

Dollar (Canadian) .... Cdn$
Dry metric ton .... dmt
Foot .... ft
Gallon .... gal
Gallons per minute (US)........ gpm
Gigawatt .... GW
Gram .... g
Grams per litre .... g/L
Grams per tonne .... g/t
Hectare (10,000 m2) .... ha
Hertz .... Hz
Horsepower .... hp
Hour .... h
Hours per day .... h/d
Hours per week .... h/wk
Hours per year .... h/a
Inch .... "
Kilo (thousand) .... k
Kilogram .... kg
Kilometre .... km
Kilometres per hour .... km/h
Kilopascal .... kPa
Kilotonne .... kt
Kilovolt .... kV
Kilovolt-ampere .... kVA
Kilovolts........ kV
Kilowatt .... kW
Kilowatt hour .... kWh
Kilowatt hours per tonne (metric ton) .... kWh/t
Kilowatt hours per year .... kWh/a
Litre L
Litres per minute .... L/m
Megabytes per second .... Mb/s
Megapascal .... MPa
Megavolt-ampere .... MVA
Megawatt .... MW
Metre .... m
Metres above sea level .... masl
Metres Baltic sea level .... mbsl
Metres per minute .... m/min
Metres per second .... m/s
Metric ton (tonne) .... t
Microns .... µm
Milligram .... mg
Milligrams per litre .... mg/L
Millilitre .... mL
Millimetre .... mm
Million .... M

Million tonnes	Mt
Minute (plane angle)	'
Minute (time)	min
Month	mo
Ounce	oz
Parts per million	ppm
Parts per billion	ppb
Percent	%
Pound(s)	lb
Pounds per square inch	psi
Revolutions per minute	rpm
Second (plane angle)	"
Second (time)	s
Specific gravity	SG
Square centimetre	cm2
Square foot	ft2
Square inch	in2
Square kilometre	km2
Square metre	m2
Thousand tonnes	kt
Three Dimensional	3D
Three Dimensional Model	3DM
Tonne (1,000 kg)	t
Tonnes per day	t/d
Tonnes per hour	t/h
Tonnes per year	t/y
Volt	V
Week	wk
Year (annum)	a

Appendix A

LISTING OF DRILL HOLES

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T79-01	460640.26	6570676.9	1137.88	0	10	-48	70.71
T79-01	460581.7	6570683.56	1137.87	70.71	10	-48	65.53
T79-02	460751.73	6570750.23	1161.93	0	357	-50	187.76
T79-02	460709.74	6570758.8	1154.92	65.53	357	-50	120.7
T79-03	460338.91	6570745.41	1104.81	0	357	-60	71.63
T79-03	460950.22	6570215.84	1107.86	187.76	357	-60	60.96
T79-04	460680.2	6570771.9	1144.92	0	357	-60	96.62
T79-04	460936.89	6570733.41	1184.98	120.7	357	-60	121.92
T79-05	460648.62	6570780.84	1141.91	0	352	-45	105.16
T79-05	460581	6570747.37	1137.88	71.63	352	-45	91.44
T79-06	460526.81	6570681.03	1129.85	0	357	-50	99.06
T79-06	460389.47	6570618.67	1131.8	60.96	357	-50	129.54
T79-07	460523.37	6570616.97	1114.84	0	357	-54	91.44
T79-07	460690.63	6570675.83	1136.9	96.62	357	-54	96.01
T79-08	460009.23	6570577.46	1071.68	0	357	-45	91.44
T79-08	460005.6	6570606.36	1074.69	121.92	357	-45	60.96
T79-09	460018.94	6570560.07	1071.68	0	357	-45	121.01
T79-09	459969.68	6570600.19	1074.67	105.16	357	-45	78.03
T79-10	459969.67	6570600.2	1074.67	0	357	-45	76.2
T79-10	460007.83	6570667.2	1077.7	91.44	357	-45	91.14
T80-20	460052.31	6570636.78	1084.71	0	357	-45	60.96
T80-21	460050.75	6570606.35	1082.7	0	357	-45	91.44
T80-22	460349.42	6570560.66	1089.77	0	357	-45	60.96
T80-23	460029.39	6570548.71	1081.68	0	357	-57	60.96
TQR80-01	460060.43	6570568.78	1082.69	0	357	-45	54.86
TQR80-02	460060.43	6570568.78	1082.69	0	357	-45	53.34
TQR80-03	459946.88	6570632.5	1074.67	0	357	-50	96.93
TQR81-04	460092.13	6570566.88	1084.7	0	357	-45	87.17
TQR81-05	459919.69	6570605.36	1074.66	0	177	-45	80.77
TQR81-06	459933.52	6570576.69	1074.66	0	357	-45	76.5
TQR81-07	459898.23	6570575.43	1077.65	0	357	-45	76.2
TQR81-08	459977.79	6570667.79	1084.69	0	357	-45	76.2
TQR81-09	460122.19	6570569.45	1084.71	0	357	-50	87.17
TQR81-10	460749.38	6570609.32	1144.9	0	42	-45	305.41
TQR81-11	460973.28	6570702.24	1184.98	0	352	-45	167.33
TQR81-12	460608.29	6570655.23	1136.87	0	352	-60	123.44
TQR81-13	460416.44	6570728.07	1121.83	0	357	-45	160.02
TQR81-13	460390.02	6570712.18	1107.82	96.93	357	-53	147.83
TQR81-14	460732.73	6570753.5	1154.93	0	357	-45	219.15
TQR81-14	460664.83	6570621.93	1134.88	87.17	357	-53	122.53
TQR81-15	460592.67	6570468.53	1116.82	0	357	-45	114.91

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
TQR81-16	459529.88	6570406.66	1097.5	0	357	-45	90.83
TQR81-17	459523.44	6570450.15	1102.51	0	357	-45	92.05
TQR81-20	460136.49	6570347.61	1081.66	0	357	-45	61.57
TQR81-21	460105.22	6570341.52	1086.65	0	2	-45	56.08
TQR81-21	460139.78	6570314.91	1084.65	87.17	2	-55	52.12
T82-01	460168.15	6570336.63	1074.67	0	357	-46	69.8
T82-01	460073.97	6570341.61	1092.64	60.96	357	-47	48.16
T82-01	460104.03	6570347.03	1086.65	121.92	357	-47	77.72
T82-01	459874.5	6569686.58	1067.87	182.88	357	-46	138.07
T82-01	459964.78	6569679.84	1023.96	243.84	357	-46	154.84
T82-01	459912.41	6569779.57	1016.49	304.8	357	-45	117.96
T82-01	460074.17	6570334.74	1091.64	305.41	357	-45	73.76
T82-02	460088.49	6570352.31	1092.65	0	357	-47	60.96
T82-02	460888.09	6570700.74	1169.96	60.96	357	-47	214.88
T82-02	460889.37	6570618.15	1167.94	121.92	357	-47	223.72
T82-02	460461.44	6570684.42	1124.83	166.12	357	-47	109.73
T82-02	460627.32	6570645.89	1129.87	167.33	357	-47	117.04
T82-03	459783.68	6570644.45	1094.63	0	357	-53	57
T82-03	459783.68	6570644.45	1108.63	60.96	357	-53	85.34
T82-03	459822.18	6570673.57	1108.65	121.92	357	-53	74.68
T82-03	459822.18	6570673.57	1108.65	123.44	357	-53	89.31
T82-04	459758.7	6570632.15	1101.62	0	357	-47	91.44
T82-04	460740.1	6570697.04	1141.92	60.96	357	-46	31.39
T82-04	461012.03	6570697.32	1198.99	121.92	357	-48	173.74
T82-04	461017.96	6570649.33	1191.99	160.02	357	-48	169.16
T82-05	462344.5	6570099.62	1115.31	0	357	-45	114.6
T82-05	462371.92	6570117.91	1124.86	60.96	357	-45	91.74
T82-05	462371.92	6570117.91	1124.86	121.92	357	-45	91.44
T82-05	462405.66	6570112.01	1128.73	147.83	357	-45	120.09
T82-06	461018.33	6570652.74	1191.99	0	357	-64	175.87
T82-06	461049.02	6570670.69	1204	219.15	357	-64	229.21
T82-07	461049.02	6570670.69	1204	0	357	-45	133.2
T82-07	461048.68	6570706.19	1208.01	122.53	357	-45	91.44
T82-08	460411.65	6570902.81	1147.87	0	357	-45	90.22
T82-08	460414.77	6570963.68	1161.89	114.91	357	-45	69.19
T84-01	460417.87	6571024.55	1164.9	0	357	-45	69.19
T84-01	460420.98	6571085.42	1173.92	90.83	357	-45	69.19
T84-02	460740.1	6570697.05	1151.92	0	357	-47	31.39
T84-02	460722.21	6570699.34	1151.91	92.05	357	-47	38.4
T84-03	460725.47	6570700.05	1151.91	0	357	-45	49.07
T84-03	460738.07	6570697.64	1152.92	61.57	357	-45	32.92

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T84-04	460588.86	6570648.4	1131.86	0	357	-45	82.6
T84-04	460588.86	6570648.4	1131.86	56.08	357	-45	73.15
T84-05	460670.54	6570582.89	1138.87	0	357	-45	151.18
T84-05	460724.05	6570553.98	1134.88	52.12	357	-45	85.65
T84-06	460560.42	6570645.97	1131.85	0	357	-45	68.58
T84-06	460560.43	6570646.13	1131.85	69.8	357	-45	91.44
T84-07	460105.07	6570427.2	1069.67	0	357	-45	150.88
T84-07	460039.61	6570340.53	1101.63	48.16	357	-45	103.94
T84-08	462229.19	6570043.94	1119.4	0	357	-45	90.53
T84-08	462419.59	6570186.78	1208.8	77.72	357	-45	149.66
T84-09	462419.59	6570186.78	1208.8	0	357	-45	122.83
T84-09	459391.48	6569761.83	1053.31	138.07	357	-45	91.14
T84-10	459449.65	6570004.5	1075.38	0	357	-45	98.76
T84-10	459691.56	6569662.56	1047.37	154.84	357	-45	91.74
T84-11	459811.74	6569625.91	1062.4	0	357	-45	69.49
T84-11	459601.33	6570381.99	1101.35	117.96	357	-60	76.2
T84-12	459663.77	6570397.15	1113.69	0	357	-60	75.29
T84-12	459725.14	6570382.24	1117.33	73.76	357	-60	84.73
T84-13	459783.61	6570370.25	1116.05	0	357	-45	76.5
T84-13	459850.66	6570386.66	1115.75	60.96	357	-45	76.5
T84-15	460066.57	6570246.98	1104.62	0	357	-55	38.4
T84-16	460066.26	6570247	1104.62	0	357	-55	44.2
T84-17	460093.89	6570231.56	1101.62	0	357	-45	41.45
T84-18	460093.89	6570231.56	1101.62	0	357	-45	39.62
T85-01	460083.42	6570209.93	1101.61	0	352	-45	56.39
T85-02	460122.4	6570216.97	1096.62	0	352	-65	26.21
T85-03	460122.4	6570216.97	1096.62	0	350	-45	44.2
T85-04	460023.76	6570334.93	1104.63	0	350	-65	30.78
T85-05	460023.76	6570334.93	1104.63	0	357	-45	46.02
T85-11	460021.8	6570302.67	1106.62	0	174	-32	86.87
TSC85-01	460076.49	6570333.75	1090.64	0	358	-45	36.57
TSC85-02	460076.49	6570333.75	1090.64	0	359	-45	47.55
TSC85-03	460073.75	6570286.29	1101.63	0	337	-45	49.07
TSC85-04	460073.75	6570286.29	1101.63	0	322	-45	80.16
TSC85-05	460103.39	6570280.8	1092.63	0	322	-60	58.83
TSC85-06	460141.85	6570305.08	1078.65	0	337	-45	49.07
TSC85-07	460141.85	6570305.08	1078.65	0	2	-56	78.03
TSC85-08	460117.25	6570319.16	1084.65	0	357	-45	58.52
TSC85-09	460116.87	6570317.39	1084.65	0	357	-55	95.4
TSC85-10	460117.25	6570319.16	1084.65	0	2	-45	99.67
T86-01	459993.46	6570374.92	1104.63	0	357	-45	31.39

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T86-02	459993.46	6570374.92	1104.63	0	357	-45	43.59
T86-03	459995.4	6570412.96	1097.64	0	357	-45	72.24
T86-04	460121.79	6570330.52	1081.65	0	357	-45	110.95
T86-11	460144.66	6570312.26	1078.65	0	174	-32	88.7
T86-12	460190.11	6570300.94	1077.97	0	205	-18	100.89
T86-13	460191.07	6570300.03	1077.98	0	205	-39	72.85
T86-14	460185.76	6570286.16	1079.47	0	183	-43	48.77
T86-21	460203.17	6570285.4	1078.47	0	357	-55	57.61
T86-22	460200.93	6570270.76	1080.54	0	357	-46	36.58
T86-23	460215.25	6570279.5	1077.99	0	357	-45	55.47
T86-24	460159	6570296.33	1082.88	0	357	-45	60.66
T86-25	460157.79	6570296.1	1083.01	0	357	-45	38.4
T86-26	460144.76	6570297.31	1084.69	0	357	-55	35.36
T87-01	460079.25	6570275.39	1097.36	0	177	-45	48.16
T87-03	460048.03	6570274.31	1101.85	0	177	-45	35.05
T87-05	460147.08	6570203.85	1090.76	0	127	-45	33.22
T87-06	460141.36	6570191.82	1091.37	0	327	-45	57.91
T87-07	460171.04	6570186.57	1088.19	0	127	-45	39.62
T88-01	460161.25	6570173.14	1089.59	0	177	-45	65.84
T88-01	460200.47	6570176.02	1085.81	91.14	177	-45	49.07
T88-02	460194.06	6570164.24	1086.5	0	177	-45	67.97
T88-02	460230.03	6570165.1	1083.54	98.76	177	-45	42.06
T88-03	460222.14	6570150.09	1084.42	0	177	-45	59.74
T88-03	460108.7	6570188.77	1095.48	91.74	177	-45	80.47
T88-04	460108.7	6570188.77	1095.45	0	177	-45	125.27
T88-04	460057.65	6570226.52	1101.81	69.49	177	-45	76.5
T88-05	460095.8	6570203.18	1096.67	0	347	-44	75.29
T88-05	460121.77	6570187.81	1093.84	76.2	347	-44	72.24
T88-06	460070.12	6570217.95	1100.47	0	346	-48	65.84
T88-06	460150.1	6570183.57	1090.63	75.29	346	-48	56.08
T88-07	460143.13	6570170.53	1091.06	0	349	-49	74.98
T88-07	460177.68	6570163.44	1088.11	84.73	349	-49	66.14
T88-08	460209.41	6570158.02	1094.64	0	349	-43	62.79
T88-08	459941.43	6570524.66	1071.52	76.5	349	-43	91.44
T88-09	459658.96	6570486.95	1102.95	0	352	-44	116.13
T88-09	459719.56	6570498.48	1109.43	76.5	352	-45	91.44
T93-01	459779.75	6570507.53	1108.12	0	27	-45	84.43
T93-01	459798.46	6570764.18	1105.66	38.4	27	-45	106.68
T93-02	459799.59	6570746.97	1103.66	0	27	-60	44.81
T93-02	459774.11	6570714.54	1108.64	44.2	27	-60	88.54
T93-03	459742.16	6570697.11	1112.87	0	27	-45	68.28

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T93-03	459742.12	6570697.17	1113.63	41.45	27	-45	96.62
T93-04	459699.78	6570688.72	1115.62	0	27	-60	111.86
T93-04	459662.09	6570681.58	1118.6	39.62	27	-60	69.19
T93-05	459843.95	6570784.24	1101.87	0	27	-45	17.37
T93-05	459867.26	6570785.66	1096.8	56.39	27	-45	75.9
T93-06	459967.53	6570706.98	1086.43	0	27	-45	106.68
T93-06	459972.77	6570692.64	1084.75	26.21	27	-45	40.54
T93-07	459972.77	6570692.64	1084.75	0	27	-60	41.76
T93-07	459998.23	6570700.9	1085.59	44.2	27	-60	29.26
T93-08	459998.23	6570700.9	1085.59	0	357	-45	33.53
T93-09	459952.18	6570698.41	1086.24	0	357	-60	65.63
T93-10	459954.94	6570683.87	1085.31	0	357	-45	62.18
T93-11	459935.3	6570697.75	1084.25	0	357	-45	38.1
T93-12	459935.3	6570697.75	1084.25	0	357	-60	31.7
T93-13	459935.3	6570697.75	1085.69	0	17	-45	50.3
T93-13	459632.89	6570677.34	1120.59	49.07	17	-45	52.1
T93-14	459597.82	6570666.87	1123.58	0	17	-60	59.1
T93-14	459597.82	6570666.87	1123.58	80.16	17	-60	91.4
T93-15	459571.33	6570655.34	1121.57	0	357	-60	54.6
T93-16	459532.11	6570634.45	1120.55	0	197	-47	58.22
T93-16	459501.52	6570632.96	1120.55	49.07	197	-47	89.3
T93-17	459501.52	6570632.96	1120.55	0	197	-63	62.8
T93-17	459315.26	6570633.32	1109.49	78.03	197	-63	229.8
T93-18	459315.48	6570632.28	1109.49	0	197	-45	161.2
T93-18	459310.42	6570681.55	1111.5	58.52	197	-45	153
T93-19	459220.29	6570611.72	1109.46	0	197	-62	124.1
T93-19	459220.29	6570611.72	1109.46	95.4	197	-62	68.6
T93-20	459362.54	6570698.65	1127.52	0	197	-80	144.8
T93-20	459220.29	6570611.72	1109.46	99.67	197	-80	136.2
T93-21	459362.54	6570698.65	1127.52	0	177	-45	172.21
T93-22	459367.49	6570649.51	1120.51	0	177	-65	168.86
T93-23	459372.78	6570597.21	1111.5	0	177	-49	199.95
T93-24	459386.69	6570544.55	1104.49	0	197	-59	105.46
T93-24	459366.04	6570813.36	1133.96	110.95	197	-59	179.83
T93-25	459414.74	6570823.98	1138.83	0	207	-65	162.2
T93-25	459310.39	6570805.44	1120.44	88.7	207	-65	209.1
T93-26	459310.39	6570805.44	1120.44	0	207	-60	169.8
T93-26	459250.09	6570997.55	1158.62	100.89	207	-60	99.1
T94-01	459250.09	6570997.55	1158.62	0	193	-45	114.6
T94-02	459152.63	6570971.59	1162.3	0	193	-45	123.1
T94-03	459250.09	6570997.55	1158.62	0	193	-45	114.9

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T94-04	459152.63	6570971.59	1162.3	0	193	-45	62.18
T94-05	459250.09	6570997.55	1158.62	0	193	-45	120.7
T94-06	459547.1	6570275.07	1089.31	0	177	-45	111.6
T94-07	459482.85	6570283.86	1086.45	0	193	-45	105.5
T94-08	459060.88	6570958.02	1164.8	0	193	-45	96.01
T94-09	459172.6	6570644.18	1071.55	0	197	-45	90.22
T94-10	459426.63	6570570.86	1110.51	0	197	-45	112.78
T94-11	459173.29	6570644.13	1071.45	0	21	-45	58.4
T94-12	459509.79	6570588.32	1114.54	0	21	-45	147.2
T94-13	459173.47	6570640.92	1071.15	0	27	-45	88.39
T94-14	459169.64	6570712.11	1119.47	0	27	-50	71.9
T94-15	459123.03	6570596.12	1095.53	0	22	-45	230.6
T94-16	458975.06	6570621.98	1096.11	0	22	-45	111.56
T94-17	459331.66	6570524.55	1101.98	0	22	-45	206.04
T94-18	459315.03	6570303.25	1082.46	0	22	-45	215.19
T94-19	459356.26	6570128.41	1076.48	0	19	-45	254.8
T94-20	459483.44	6570190.52	1083.16	0	19	-55	187.8
T94-21	459274.8	6570024.52	1059.86	0	17	-45	151.2
T94-21	458489.5	6570286.42	1062.17	76.5	17	-45	180.6
T94-22	458074.01	6570326.31	1063.94	0	20	-45	93.3
T94-23	459423.77	6569184.74	1086.84	0	19	-45	102.4
T94-23	459319.93	6568945.15	1090.62	72.24	19	-45	166.4
T94-24	458280.77	6569015.09	1064.68	0	17	-45	174
T94-24	459353.7	6570482.62	1097.82	65.84	17	-45	329.3
T94-25	457680.73	6570948.94	1146.85	0	21	-45	163.4
T94-26	457964.48	6569127.87	1074.29	0	27	-45	106.1
T94-27	457958.48	6568921.8	1090.32	0	22	-45	78
T94-27	459514.36	6568991.49	1144.83	66.14	22	-45	267
T94-28	459249.74	6570489.33	1094.82	0	22	-45	211.5
T94-28	459256.54	6570492.4	1094.44	62.79	22	-45	130
T94-29	460626.06	6570764.8	1133.4	0	189	-45	160.3
T94-30	460652.38	6570559.51	1125.35	0	154	-45	143.6
T94-31	459148.94	6570453.55	1090.73	0	152	-45	125.2
T94-32	459155.31	6570456.92	1090.4	0	152	-45	126
T94-33	460644.98	6570655.36	1128.4	0	168	-50	180.1
T94-33	459052.42	6570455.48	1088.01	106.68	168	-50	81.1
T94-34	459374.55	6571034.49	1145.65	0	6	-45	155.75
T94-35	460628.85	6570955	1155.89	0	350	-45	139
T94-35	460658.47	6570356.55	1106.22	88.54	350	-45	100.6
T94-36	459328.78	6570878.1	1128.31	0	170	-45	184.8
T94-36	460453.3	6570447.62	1097.55	68.28	170	-45	60.4

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T94-37	459332.33	6570773.01	1119.37	0	346	-45	213.06
T94-38	460454.07	6570539.96	1106.89	0	359	-45	111.6
T94-38	460448.03	6570645.53	1117.51	111.86	359	-45	164.9
T94-39	459340.23	6570674.07	1114.02	0	351	-45	193.1
T94-39	459345.25	6570677	1113.88	69.19	351	-45	190
T94-40	460438.72	6570743.61	1126.4	0	157	-45	139.1
T94-40	460831.4	6570864.71	1182.21	17.37	157	-45	103.9
T94-41	459344.75	6570576.73	1110.55	0	157	-50	245.5
T94-41	459341.88	6570581.09	1110.49	75.9	157	-50	230
T94-42	460833.78	6570764.69	1176.82	0	336	-45	55.2
T94-42	460837.69	6570668.06	1161.48	106.68	337	-45	147.3
T94-43	459429.84	6570793.62	1137.02	0	336	-45	198
T94-43	460931.76	6570764.19	1178.71	40.54	337	-45	192.3
T94-44	459445.7	6570690.25	1131.81	0	336	-60	186.23
T94-44	460065.19	6570223.58	1101.65	41.76	337	-60	153.3
T94-45	459436.56	6570887.1	1145.1	0	337	-45	154.29
T94-45	460060.21	6570323.77	1097.27	29.26	337	-45	135.9
T94-46	459317.76	6570976.38	1140.88	0	337	-65	253.3
T94-46	460053.52	6570473.36	1069.79	33.53	337	-65	100.9
T94-47	459860.77	6570310.67	1118.16	0	339	-45	185.8
T94-48	459258.8	6570388.54	1087.54	0	339	-45	152.7
T94-48	459859.55	6570411.41	1114.03	62.18	337	-45	170.5
T94-49	459856.59	6570412.47	1113.6	0	339	-50	150
T94-49	459857.59	6570483.71	1109.69	38.1	339	-50	146.6
T94-50	459157.2	6570380.76	1085.39	0	339	-60	124.97
T94-50	459861.13	6570214.59	1117.53	31.7	339	-60	190.8
T94-51	459064.15	6570366.31	1078.13	0	337	-45	58.22
T94-51	459166.46	6570265.14	1073.25	50.3	337	-45	74.68
T94-52	459851.22	6570596.31	1076.3	0	357	-45	140
T94-52	459167.56	6570315.04	1078.83	52.1	357	-45	108.5
T94-53	459870.56	6570110.52	1102.01	0	357	-45	158.8
T94-53	459358.8	6570387.06	1091.08	59.1	357	-45	218.2
T94-54	459669.36	6570201.41	1097.93	0	357	-65	155.8
T94-54	459228.33	6570871.91	1135.98	91.4	357	-65	134.4
T94-55	459660.52	6570302.34	1110.98	0	357	-45	152.7
T94-55	459243.27	6570780.8	1121.37	54.6	357	-45	171
T94-56	459656.54	6570383.97	1112.37	0	357	-45	131.3
T94-56	459310.26	6571078.41	1168.6	58.22	357	-45	113.1
T94-57	459647.99	6570495.51	1101.14	0	357	-60	146.6
T94-57	459421.91	6571083.56	1152.98	89.3	357	-60	163.3

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T94-58	459469.92	6570290.49	1087.25	0	357	-45	58.2
T94-58	459469.92	6570290.49	1087.25	62.8	357	-45	258.5
T94-59	459647.73	6570605.28	1112.05	0	357	-45	232
T94-59	459450.47	6570493.46	1105.31	229.8	357	-45	230.7
T94-60	459823.27	6570800.2	1104.66	0	357	-90	166.4
T94-60	459328.05	6570772.99	1119.57	161.2	357	-90	174.4
T94-61	459858.29	6570390.55	1115.84	0	357	-90	188.06
T94-61	459460.34	6570389.34	1094.19	153	357	-90	198.4
T94-62	459965.18	6570210.93	1112.24	0	357	-70	192.33
T94-62	459758.16	6570307.45	1113.18	124.1	357	-70	190.8
T94-63	459957.53	6570320.42	1112.25	0	357	-45	130.15
T94-63	459953.94	6570410.2	1103.33	68.6	357	-45	160.94
T94-64	459765.61	6570210.5	1105.9	0	357	-60	177.09
T94-64	459750.74	6570401.42	1119.1	144.8	357	-60	128.32
T94-65	463033	6569530.63	1000.31	0	177	-70	158.2
T94-65	461723.51	6569210	1039.86	136.2	177	-70	101.5
T94-66	461092.29	6569776.89	1079.81	0	357	-90	78
T94-67	461100.33	6569627.13	1064.77	0	357	-90	105.5
T94-68	461100.33	6569627.13	1064.77	0	357	-90	150
T94-68	459578.57	6569996.02	1079.42	199.95	357	-90	142
T94-69	459586.61	6569846.26	1064.38	0	357	-45	148.1
T94-69	459888.82	6569812.42	1074.47	105.46	357	-45	81.1
T94-70	459888.82	6569812.42	1074.47	0	177	-45	136.5
T94-70	459914.84	6569663.62	1059.44	179.83	177	-45	120.7
T94-71	460096.55	6569673.37	1049.49	0	177	-45	126.8
T94-71	460091.73	6569763.23	1059.51	162.2	177	-45	108.5
T94-72	459857.45	6570260.66	1118.22	0	177	-53	100
T94-72	459856.29	6570311.81	1117.66	209.1	177	-53	162
T94-73	459849.13	6570412.21	1114.11	0	177	-83	150
T94-73	459844.7	6570466.98	1110.77	169.8	177	-83	60
T94-74	459883.89	6570434.2	1108.11	0	177	-45	138
T94-74	459904.95	6570392.19	1111.07	99.1	177	-45	165
T94-75	459913.76	6570308.2	1115.81	0	177	-60	105
T94-75	459896.38	6570260.6	1116.61	114.6	177	-60	103.5
T94-76	459831.94	6570259.68	1117.62	0	177	-45	99
T94-76	459806.57	6570339.37	1115.35	123.1	177	-45	120
T94-77	459853.1	6570357.44	1116.53	0	177	-85	189
T94-77	459883.77	6570442.19	1107.95	114.9	177	-85	75
T94-78	459794.29	6570481.23	1110.53	0	177	-80	91.5
T94-78	459800.04	6570426.04	1115.25	62.18	177	-80	135
T94-79	459802.67	6570380.85	1117.57	0	132	-45	171

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
T94-79	459755.52	6570364.89	1116.43	120.7	132	-45	79
T94-80	459750.47	6570413.38	1117.28	0	357	-45	132
T94-80	459744.54	6570480.8	1110.21	111.6	357	-45	87
T94-81	459704.55	6570462.09	1113.68	0	357	-45	90
T94-81	459701.61	6570427.17	1120.55	105.5	357	-45	121.5
T94-82	459713.3	6570367.98	1117.64	0	177	-45	90
T94-82	459652.16	6570378.47	1113.53	96.01	177	-45	133.5
T94-83	459664.01	6570307	1109.51	0	357	-45	60
T94-83	459603.41	6570353.82	1101.51	90.22	357	-45	51
T94-84	459602.88	6570363.81	1102.51	0	357	-45	70.5
T94-84	459607.15	6570302.95	1100.5	112.78	357	-45	90
T94-85	459607.25	6570300.95	1100.5	0	357	-90	79.5
T94-85	459562.78	6570364.66	1098.5	58.4	357	-90	52.5
T94-86	459562.78	6570364.66	1098.5	0	357	-45	120
T94-86	459566.03	6570322.78	1095.49	147.2	357	-45	113.5
T94-87	459509.88	6570342.79	1091.48	0	177	-45	123
T94-87	459512.51	6570293.87	1089.47	88.39	177	-45	97.5
T94-88	459463.4	6570369.33	1092.47	0	357	-45	142.5
T94-88	459508.04	6570395.76	1094.49	71.9	357	-45	109.5
TT95-01	459586.36	6570429.01	1101.52	0	3	-60	90
TT95-01	459630.22	6570451.38	1106.54	46	7	-58	79.5
TT95-01	459171.97	6570109.37	1041.32	92	8	-59	38.7
TT95-01	459356.03	6570131.27	1074.38	138	15	-58	159.15
TT95-01	459274.65	6570061.81	1063.34	183	21	-58	167.03
TT95-01	459268.32	6570179.63	1071.37	230.6	26	-59	171.34
TT95-02	459163.65	6570264.12	1072.36	0	3	-50	46.33
TT95-02	459481.85	6570119	1082.42	56	10	-49	164.9
TT95-02	459408.51	6570347.36	1089.45	111.56	16	-50	106.7
TT95-03	459412.46	6570292.5	1085.44	0	3	-70	181.7
TT95-03	460488.98	6569544.25	1039.58	61.3	15	-69.5	120.4
TT95-03	460488.88	6569546.24	1039.58	122.2	18	-70	136.9
TT95-03	460478.62	6569643.82	1039.6	198	17	-71	79.2
TT95-03	459242.09	6570780.9	1121.5	206.04	17	-71	208.79
TT95-04	459342.22	6570672.04	1114.51	0	183	-55	206.35
TT95-04	459424.37	6570539.17	1106.5	92	187	-55	227.08
TT95-04	459494.5	6570434.27	1099.5	153	189	-55	175.87
TT95-04	459738.13	6570696.54	1113.63	215.19	193	-54.5	74.68
TT95-05	459562.58	6570359.37	1099.5	0	183	-55	151.48
TT95-05	459730.11	6570710.53	1119.63	63	181	-56.5	178.31
TT95-05	459568.59	6570357.37	1099.5	124	183	-57.5	75.28

Hole Name	X_COLLAR	Y_COLLAR	Z_COLLAR	At	Bearing	Dip	Total Depth
TT95-05	459607.64	6570311.43	1101.5	185	187	-56	142.34
TT95-05	459825.99	6570797.64	1105.68	254.8	191	-55.5	204.22
TT95-06	460013.57	6570322.94	1105.62	0	183	-55	111.86
TT95-06	459946.19	6570623.82	1074.67	187.8	183	-55	108.81
TT95-07	459959.21	6570608.83	1074.67	0	183	-55	108.81
TT95-07	459629.55	6570375.45	1107.52	75	180	-54.5	154.53
TT95-07	459633.6	6570341.46	1107.51	151.2	182	-55	121.05
TT95-08	459655.49	6570419.48	1111.54	0	183	-65	142.34
TT95-08	459694.57	6570358.53	1114.54	55	183	-64	141.4
TT95-08	459719.47	6570431.56	1118.56	116	183	-67	190.8
TT95-08	459770.49	6570412.62	1116.57	177	193	-68	203
TT95-08	459298.43	6570508.01	1099.46	180.6	193	-68	189.28
TT95-09	459821.44	6570440.68	1113.59	0	3	-65	181.66
TT95-09	459822.52	6570376.69	1117.58	61	8	-63	184.4
TT95-09	459883.59	6570317.78	1116.58	93.3	6	-65	130.15