HudBay Minerals Inc.

TOM AND JASON PROJECT

PRELIMINARY ECONOMIC ASSESSMENT

FOR DISCUSSION ONLY
FOR INTERNAL USE ONLY

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1. INTRODUCTION

The Tom/Jason mineral properties are located at Macmillan Pass, on the Canol road, near the Yukon/Northwest Territories border. The Tom property was discovered by, and has been 100% owned by HBMS for many years. In 2006 an option became available from MacPass Resources for HBMS to purchase the immediately adjacent Jason mineral property. The mineral resources on both properties have been determined by Scott Wilson/RPA in compliance with NI 43-101. The potential environmental liabilities and permitting requirements have been identified by Gartner Lee and the economic viability has been determined by an HBMS team to the scoping level of accuracy. SRK Consulting has determined the closure costs to a scoping level of accuracy.

The combined properties were examined by Abermin Resources and HBMS and a feasibility report, including a capital cost estimate by Bechtel, was published in April 1986. This report concluded that the property contained geological reserves (which it appears included resources) of 21.9M tons at 6.9% Pb, 7.7% Zn and 2.3 oz/ton silver. The mineable tonnage was calculated at 20.2M tons at 6.35% Pb, 6.64% Zn and 2.20 oz/ton Ag. The determination of dilution and recovery was not illustrated but appears to be minimal. The 1986 feasibility at 4500 tons/day was negative but showed encouraging results based on metal price sensitivity and the potential for greater volumes of higher-grade ore from additional exploration. Prior to 1985 a total of 57,600 metres of diamond drilling was concluded on the combined properties, and on the Tom property 3,523 meters of drift and decline was driven. Since 1985 both properties have had minimal exploration activity.

On September 07, 2006 HBMS concluded a protracted negotiation with MacPass Resources for a six month option at a cost of $100,000 for a six month due diligence window before March 07, 2007 and aquisition of 100% of the Jason property after payment of an additional $900,000.

The two tonnage cases considered for the scoping study included a camp, concentrator and diesel electrical power generator at site, each with two concentrate transport options. The two scenarios tested were a 5300 tpd (high tonnage) case and at 2000 tpd (high grade) case. Concentrate transport options were truck haulage ~800 km to the port of Skagway for ocean shipping to Asia for treatment, or trucking 230 km to Ross River, and from there by rail to Skagway for shipping to Asia. This alternative is consistent with a

proposed rail link from the lower 49 US states to Alaska which is currently being studied by the State of Alaska and the Yukon Territory, which will route through Ross River.

In all cases the cost of upgrades of the Canol road and construction of bridges has been assumed to be done by the Yukon government at no cost to the project. Similarly, costs for port concentrate storage were not included, nor were site closure costs, estimated by SRK Consulting, at ~$59M.

2. SCOPING STUDY CONCLUSIONS

Abermin 1986 Feasibility Study

Geological Reserves (undiluted)[1]		Tons	% Pb	%Zn	oz/t Ag
Tom	Proven	7,371,000	7.46	8.43	2.60
	Probable	2,516,000	5.99	8.80	1.55
	Possible	-	-	-	-
	Total	9,887,000	7.09	8.53	2.33
Jason	Proven	-	-	-	-
	Probable	9,268,000	5.90	8.33	2.20
	Possible	2,710,000	9.72	2.96	2.43
	Total	11,978,000	6.76	7.12	2.25
Total	Proven	7,371,000	7.46	8.43	2.60
	Probable	11,784,000	5.92	8.44	2.06
	Possible	2,710,000	9.72	2.96	2.43
	TOTAL	21,865,000	6.91	7.76	2.29
Global Dilution[2]		10% to 15%			
Global Recovery		80%			
1986 Mining Ore Reserves all categories (diluted/recovered)		20,246,300	6.35	6.64	2.20

[1] Pre 43-101 terminology. Polygonal estimate of undiluted mineral resource.
[2] Not reported. Estimated from geological reserve to mining reserve Pb and Zn grade ratios.

HudBay/RPA Reserve/Resource – March 2007 Scoping Study

Mineral Resource (undiluted)		Tonnes	% Pb	%Zn	g/t Ag
Tom	Measured	-	-	-	-
	Indicated	5,700,886	4.03	6.52	43.41
	Inferred	11,747,196	2.86	6.31	28.19
Total		17,448,082	3.24	6.38	33.16
Jason	Measured	-	-	-	-
	Indicated	1,459,721	8.02	5.12	86.56
	Inferred	10,534,121	4.08	6.83	37.82
Total		11,993,842	4.56	6.63	43.75
Total	Measured	-	-	-	-
	Indicated	7,160,608	4.84	6.23	52.21
	Inferred	22,281,317	3.44	6.56	32.74
TOTAL RESOURCE (undiluted)		**29,441,924**	**3.78**	**6.48**	**37.48**

Global Dilution	Tom	25%
	Jason	36%
Global Recovery	Tom	80%
	Jason	82%

Mineable Resource[3] (diluted/recovered)		Tonnes	% Pb	%Zn	g/t Ag
Tom	Measured	-	-	-	-
	Indicated	6,117,047	2.78	4.64	29.44
Total diluted/recovered Resource		6,117,047	2.78	4.64	29.44
Jason	Measured	-	-	-	-
	Indicated	1,559,018	5.92	3.79	63.86
Total diluted/recovered Resource		1,559,018	5.92	3.79	63.86
Total	Measured	-	-	-	-
	Indicated	7,676,065	3.41	4.47	36.43
TOTAL MEASURED & INDICATED RESOURCE (DILUTED/RECOVERED)		7,676,065	3.41	4.47	36.43

Mineable Resource (diluted/recovered)		Tonnes	% Pb	%Zn	g/t Ag
Tom	Inferred	10,653,938	2.34	5.39	22.46
Jason	Inferred	11,515,759	2.96	5.01	27.29
TOTAL INFERRED RESOURCE (DILUTED/RECOVERED)		22,169,697	2.66	5.19	24.97
TOTAL MEASURED, INDICATED & INFERRED RESOURCE (DILUTED/RECOVERED)		29,845,762	2.86	5.01	27.92

[3] Resource is not converted to reserves due to economics.

SCOPING STUDY CONCLUSIONS	**5300 tpd case**	**2000 tpd case**
Diluted Recoverable Resource Tonnes (millions)	29.8	4.4
% Zn	5.01	6.07
%Pb	2.86	6.65
g/t Ag	27.9	90.4
US $lb Zn	$0.57	$0.57
US $lb Pb	$0.35	$0.35
US $ oz/Ag	$7.00	$7.00
Mine Production years	18	7
Preproduction Capital cost	$369.2M	$76.5M
Sustaining Capital cost	$279.4M	$50.3M
Operating cost tonne (site)	$56.34	$57.66
Cost/tonne conc haulage to port	$132	$132
Port costs tonne conc	US$14	US$14
Shipping cost to smelter tonne conc	US$40	US$49
Treatment charge zinc	US$136[(4)]	US$136[(4)]
Treatment charges lead	US$175[(4)]	US$175[(4)]
Environmental permitting time frame	7 yrs	7 yrs
Cash flow Trucking conc. (Cdn)	(-$1.50Bn)	(-$0.19Bn)
Benefit Rail Haulage	+$300M	+$60M
Cash flow Rail conc. (Cdn)	(-$1.21Bn)	(-$0.13Bn)
Payback	None	None
ROI	None	None

Breakeven metal price (truck to port)		
US $lb Zn	*$0.99*	*$0.80*
US $lb Pb	*$0.61*	*$0.49*
US $ oz/Ag	*$12.18*	*$9.85*
Rail from Ross River Option		
Trucking cost to Ross River tonne conc.	$28	$28
Railing cost to Port tonne conc.	$18	$18
Ocean freight & Port Costs tonne conc.	$54	$63
Breakeven metal price (truck to Ross River)		
US $lb Zn	*$0.93*	*$0.72*
US $lb Pb	*$0.57*	*$0.44*
US $ oz Ag	*$11.41*	*$8.86*
Metal prices at 10% IRR (truck to Ross River)		
US $lb Zn	*$1.10*	*$0.77*
US $lb Pb	*$0.68*	*$0.47*
US $ oz Ag	*$13.50*	*$9.45*

Sensitivity analyses are in the report attachments.

The deposits have been determined to contain an aggregate geological in-situ un-diluted and un-recovered mineral resource compliant with NI 43-101 of 29,441,924 tonnes at 6.48% Zn, 3.78% lead and 37 g/t silver based on an in-situ cut-off value of $50/tonne using metal prices, without premiums, of US $0.57/lb. Zn, $0.35/lb. Pb and $7.00/oz silver.

[4] At long term metal prices.

The country rock and mineralized zones RQD has been rated as poor and additionally the hydrological conditions are expected to be manageable but significant. These factors have been taken into account during the scoping study.

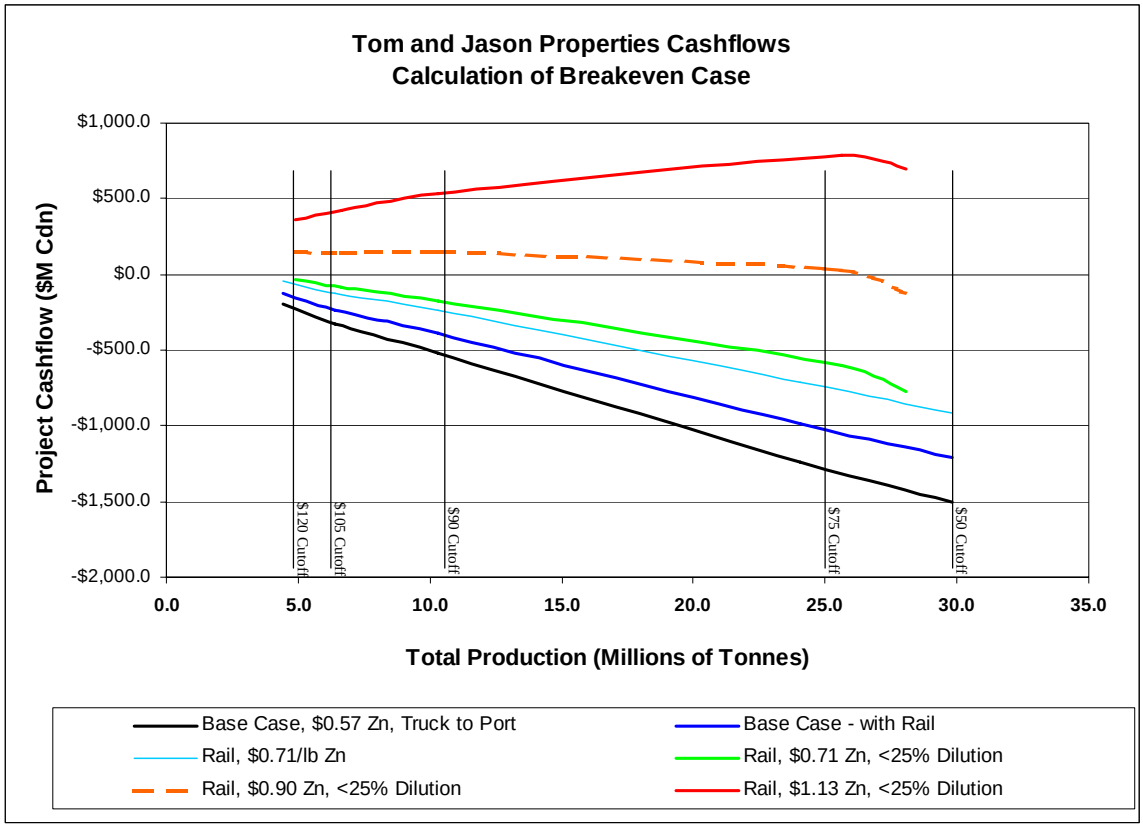
The deposits comprise several steeply dipping lenses between 2 and 30 metres width (average 7 to 9 metres) that are inclined at 45 to 85 degrees and plunge at 50 to 90 degrees. They extend from surface to a depth of ~700 meters. 1.7M tonnes of high grade resource (9.7% Zn, 11.5% Pb undiluted) is located above the adit level at the Tom site.

Grade tonnage determinations suggest that opportunities do exist to mine a higher grade portion of the deposits as examined in the 2000 tpd higher grade case and for viability this may well prove to be the preferred approach.

Project Scenario Cashflows

Insitu Cutoff Value	Production (Diluted/Recovered)			Project Cashflows ($M Cdn)					
	Tonnes	Zn%	Pb%	Base Case	Rail from Ross River	Increase Prices $0.71 Zn $0.44 Pb	Reduce Dilution 25%	Prices $0.90 Zn $0.55 Pb	10% IRR $1.13 Zn $0.69 Pb
$120	4,402,762	6.07	6.65	-$194	-$126	-$39	-$29	$150	$365
$105	6,415,032	5.49	5.80	-$325	-$238	-$126	-$86	$143	$418
$90	10,331,130	5.47	4.67	-$518	-$389	-$234	-$171	$149	$535
$75	24,027,305	5.18	3.08	-$1,237	-$991	-$715	-$602	$28	$784
$50	29,845,766	5.01	2.86	-$1,500	-$1,208	-$918	-$778	-$127	$691

Cashflow Comparison – Calculation of Breakeven Case



The Tom Property is under environmental review by HBMS, to develop a long term effluent management programme, essentially related to effluent discharge from the adit. The environmental review of the Jason Property has concluded that many diamond drill holes are flowing water, indicate potential acid generation, and have elevated concentrations of metals. It is believed the water quality represents natural groundwater at the site. Potential environmental issues created by historical exploration activities, in and of themselves, do not appear to represent a significant limitation to the permitting of future development activities at the property. Effective management of acid rock drainage will be a significant challenge to be addressed in development of either property.

The socio-economic studies identified the stakeholders who would be involved with or potentially impacted by mine development, particularly the Ross River Dena Council (RRDC) of the Kaska First Nation. The RRDC has a long history with mining, at the

Faro lead/zinc mine. The RRDC view their involvement with mining activity as a key component of their economic future. They wish to be closely and actively involved with all phases of mineral development within their traditional territory. The current government of the Yukon has issued a discussion paper presenting the government's vision of the economy that anticipates the contribution of mining, oil and gas to the Yukon GDP increasing from 6% in 2004 to 15% in 2025.

Permitting of the Tom & Jason site is likely to take in the order of seven years and cost an order of magnitude of $7M .

This project can benefit from greater analysis of the mineral resources available to the high grade 2000 tpd case, especially concerning the application of different mining techniques to improve dilution and recovery.

Further work is required to define:

- Opportunities to increase the ore resources through exploration
- Opportunities to reduce dilution and increase recovery of the mineral resource.
- Opportunities to include the project with other zinc/lead projects in this district of the Yukon and Northwest Territories.
- Opportunities to influence the establishment of a railway and it's routing through Ross River.
- Opportunities to advance the project through the potentially protracted permitting process.
- Opportunities to initiate a hedging program once the permitting process is well advanced.
- Opportunities to rail haul the high grade production plan to Flin Flon.

The work in 1985 and the work today has concluded that the properties are not economic at HudBay long term metal prices, excluding premiums of US $0.57/lb. Zn, $0.35/lb. Pb and $7.00/oz silver. The properties would approach a breakeven scenario at metal prices above $0.90Zn and $0.57 Pb if a rail line were available at Ross River, and dilution was improved.

Based on the magnitude of the resources, the low carrying cost, the sensitivity of the project to additional exploration discoveries, the high prospectivity in the immediate area, the 100M tonnes plus Howard's Pass Zn deposit immediately to the south of these properties, the ability to include the resources in HudBay's resource bank, the additional acquisition cost of $900,000 is appropriate.

3. DUE DILIGENCE

The due diligence of the Tom and Jason deposits was done by Hudson Bay Mining and Smelting Co., Limited (HBMS), and comprises:

- An internal economic assessment of the properties in the form of a Scoping Study. The Scoping Study considers two cases; a 5,300 tonne per day (tpd) case called the Base Case, and a 2,000 tpd high grade option called the High Grade Case.
- Calculation of NI 43-101 compliant mineral resources for each property by Scott Wilson Roscoe Postle Associates (RPA), with supporting technical reports. Delivery of the technical reports is outstanding, and is expected by the end of February, 2007. Although the supporting technical reports are not complete at this time, the resource has been signed off as meeting 43-101 standard by RPA.
- A Preliminary Environmental Investigation of the Jason property, performed by Gartner Lee Limited, and
- A review of Socio-Economic, Environmental, and Statutory Approvals required to advance the projects, performed by Gartner Lee Limited. This report includes timelines and cost estimates.

4. PROJECT LOCATION & HISTORY

The Tom and Jason deposits are located in the Yukon Territory, about 13 km Southeast of the MacMillan Pass, which is located on the Yukon - Northwest Territories border. The properties are located 400 air km Northeast of Whitehorse, and are accessible by the seasonal North Canol road. A 700 metre gravel airstrip is situated near the Tom deposit providing fixed wing aircraft access.

The properties are situated at the tree line, near the South MacMillan river in mountainous terrain. The South MacMillan river valley is 1150 metres above sea level (ASL). Mountain peaks in the area generally rise 500 to 700 metres above the river valley.

Mineralization was first discovered at the Tom property by Hudson Bay Exploration and Development in 1951. Results of surface diamond drilling done in 1952-53, and 1967-68, led to 1,887 metres of underground development (located 1440 m ASL), and 3,617 metres of underground diamond drilling. Surface diamond drilling continued in 1978-79, that was followed by underground work in 1981 that involved widening a portion of the adit, decline development to 1300 m ASL, and deep diamond drilling. Development ceased in March 1982. The underground workings are now flooded below the adit level.

A total of 3,523 metres of underground development, 5,200 metres of underground diamond drilling, and 26,400 metres of surface diamond drilling have been complete to date.

The Jason property was staked in 1974 by the Ogilvie Joint Venture (OJV), and was subsequently optioned by Pan Ocean Oil, Ltd., Pan Ocean Oil was acquired by Aberford Resources in 1981. Following the 1985 joint feasibility study, Aberford Resources transferred its interest to Abermin Corporation. Abermin was acquired by CSA Gold Corp in 1991. At that time, the owners of the property transferred their interest to a private Yukon corporation, MacPass Resources Ltd, the current property owners. Phelps Dodge Corporation of Canada optioned the property between 1990 and 1992.

128 surface diamond drill holes, totalling 37,900 metres have been completed on the Jason property to date. There has been no activity at the property since 1992.

Prior work done includes a joint feasibility study of the combined properties, issued by HBMS and Abermin Resources in April 1986. The study is in two parts and is of good quality. It comprises a detailed capital cost estimate prepared by Bechtel Canada Engineers Limited in April 1985, and mine schedules, cost estimates and cash flow projections completed by Abermin/HBMS in April 1986.

The 1986 study determined that the combined properties were non-economic under the following conditions:

- at metal prices of the day, US $0.44/lb Zn and US $0.20/lb Pb,

- at 1,575,000 tons per year production

at a total combined production of 20.2M tons grading 6.35% Zn, 6.64% Pb and 2.2 oz/ton Ag.

5. SCOPING STUDY

A scoping study was performed to determine if the expenditure to exercise the option is warranted. The study was done to determine if there were compelling opportunities to make both the Tom and Jason properties economic either by:

- Mining large volumes from both deposits simultaneously, or
- Selectively mining high grade portions of both deposits simultaneously.

Within the scoping study, options were considered for large cost components, particularly:

- Trucking vs. rail haulage from Ross River, for concentrate haulage to ocean ports for shipment to Asian zinc smelters. Ross River is located about 200 road km from the Tom and Jason properties.
- Comparing the cost of diesel generators vs. a power line connected to the Yukon hydroelectric grid. The hydroelectric grid terminates about 280 km from the Tom and Jason properties.

The scoping study will also assist in determining if the increased geological and exploration potential for the combined properties would improve the prospect of an eventual sale to another party. This sale would include environmental liabilities, especially those associated with mining done on the Tom property done in the early 1970's and 1980's.

Base Case production is 5,300 tonnes per day (tpd) with mine contractors selected for both mine development and mine production. The mined ore will be processed onsite at the Tom mine concentrator and dewatered tailings deposited in a dammed natural basin near the concentrator.

The deposits are economically challenged by moderate grades and remoteness. Concentrate haulage is a major cost component in the scoping study. With present infrastructure, concentrate will be required to be hauled by truck from the mine to the

port at Skagway, Alaska. A North-South rail line, linking the Southeast Yukon to Fairbanks, Alaska is being jointly evaluated by the Yukon and Alaska governments. This rail line would pass through Ross River, and would provide a rail link to the port at Skagway, Alaska. In the scoping study Base Case, the financial impact of rail haulage vs. truck haulage is $300M. For the High Grade Case, the impact is about $70M. The scoping study financials reflect the benefit of the rail line.

At present, insufficient hydroelectric grid power is available in the Yukon to operate the Tom & Jason mines. If hydroelectric grid power were available at the site, it would have a positive impact of $50M to $100M on the Base Case. The scoping study financials assume diesel power generators at the site.

The Base Case plan is uneconomic at HBMS's 2007 long-term metal prices of Ag US$7US/oz, Zn US$0.57/lb, and Pb US$0.35/lb. The Base Case (5,300 tpd case) becomes economic with a rail line at Ross River, some 230 km from the property, and metal prices of Zn US$1.13/lb, and Pb US$0.69/lb. The alternate High Grade case becomes economic at metal prices of Zn US$0.90/lb and Pb US$0.55/lb.

Base Case mining and concentration costs including capital and onsite mine/mill overheads are $83 tonne. The all in cost per lb. of zinc, net of by product credits, shipping and treatment/refining charges is Cdn$0.93/lb, or about US$0.84/lb at the long term exchange rate of 0.90 $Cdn/$US.

The High Grade Case mining and concentration costs are $95/tonne. The all in cost per lb. of zinc, net of byproduct credits , shipping, and TC/RC is Cdn$0.75/lb, or US$0.68/lb. The main reason for the all in cost reduction is an non proportional increase of byproduct (lead/silver) credits.

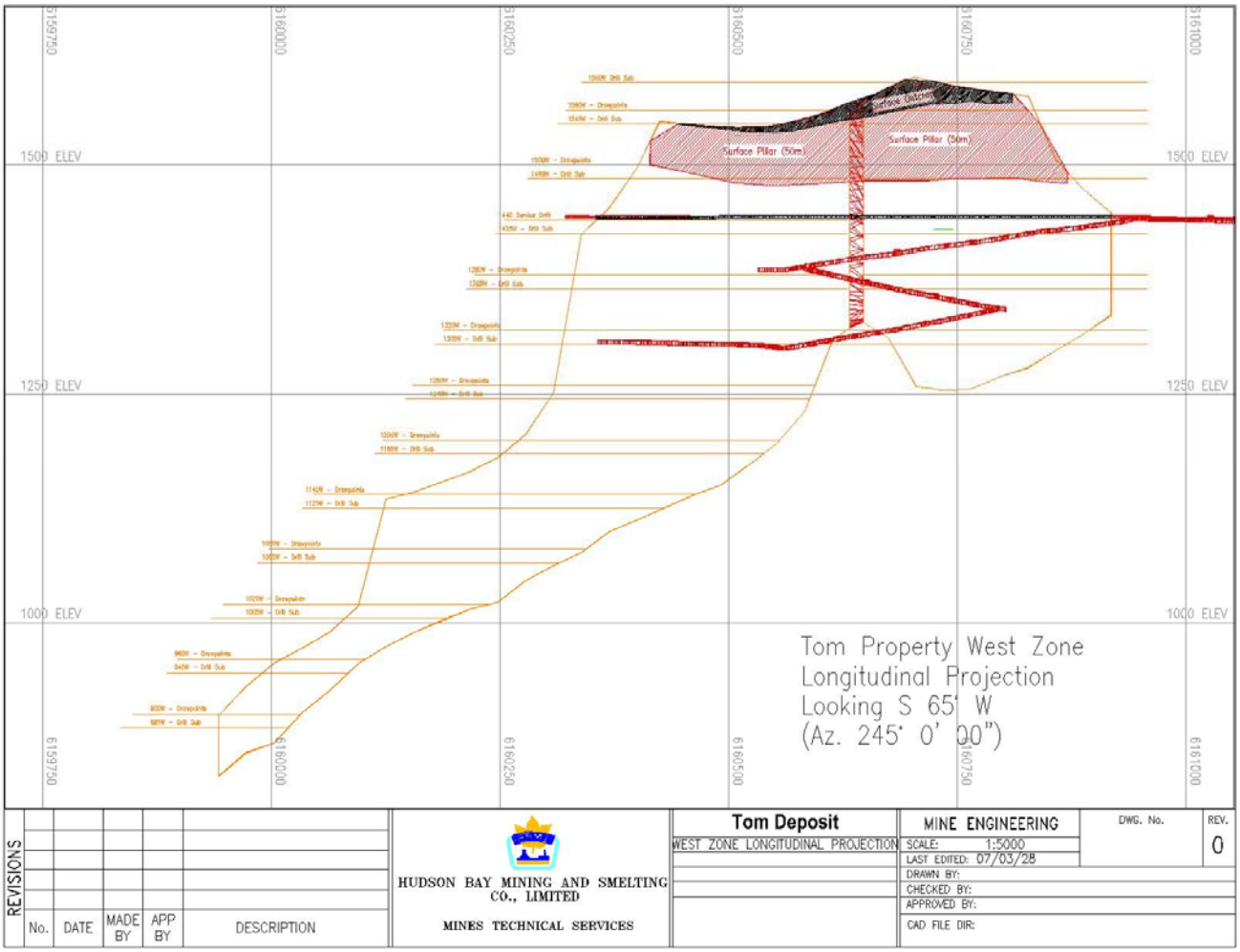
5.1 *Mineral Resources*

Mineral resources for both deposits have been estimated by RPA. Drillhole data has been validated at HBMS with checks by RPA. RPA has completed the work required to estimate a NI 43-101 compliant resource, and is in the process of compiling supporting Technical Reports for both the Tom and Jason properties. Drafts of the Technical Reports are expected before the end of February, 2007. The Tom deposit consists of three lenses, the West zone, the East zone, and the Southeast zone. The Jason deposit consists of two zones, the Main zone which includes the Main and Main HW lenses, and the

South zone, which includes three stacked lenses called the South Upper, South Middle and South Lower lenses.

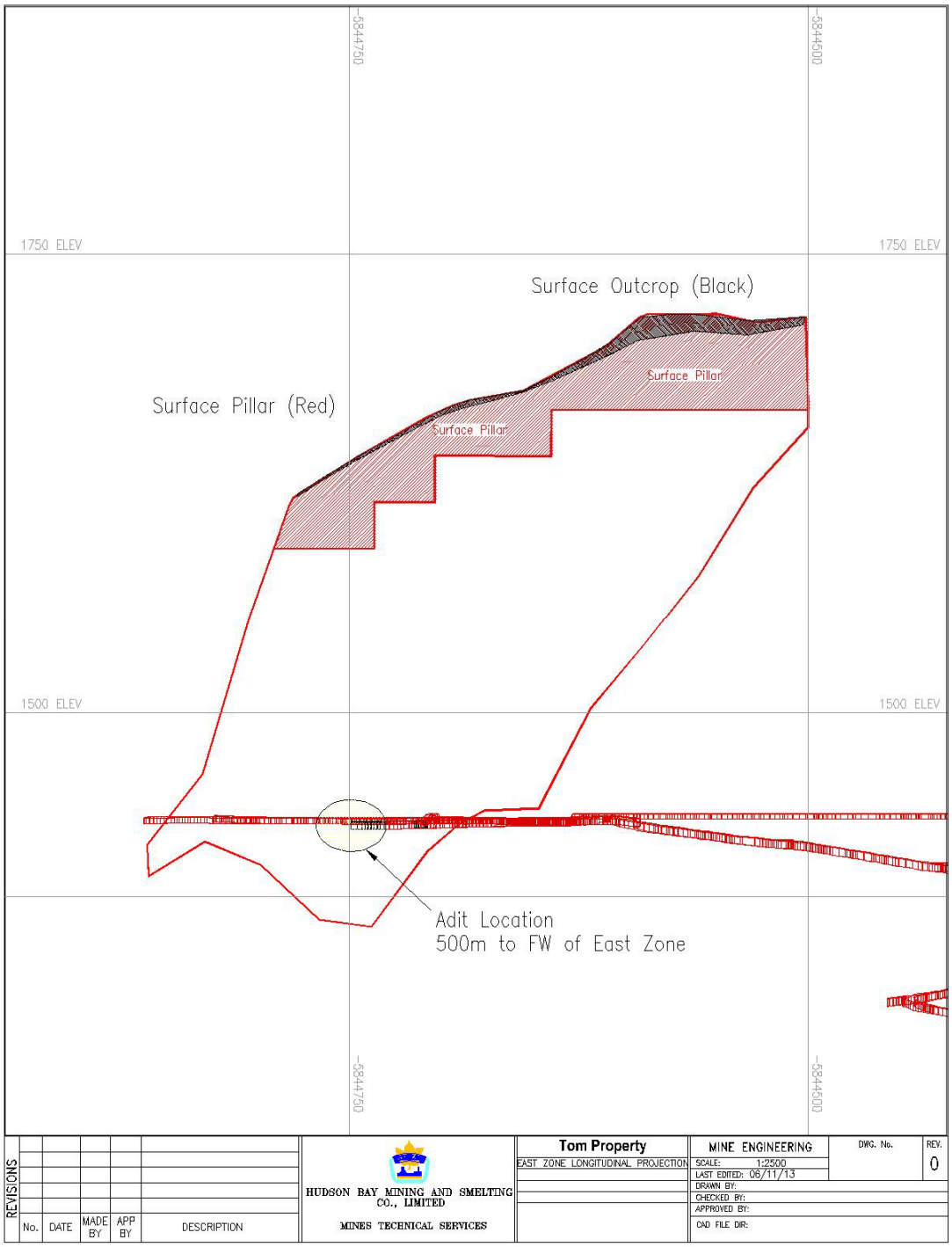
The vertical extent of the Tom West Zone is from 830m ASL to 1600m ASL. The zone has primary ramp access between 1440m ASL and 1300m ASL. The ore has been undercut along its entire length at 1440m ASL, and has been cross cut at 1300m ASL. The zone dips between 60 and 65 degrees, with localized dips as low as 45 and as high as 70 degrees. The resource plunges at between 25 and 50 degrees. The West zone is largest between about 1330 and 1440m ASL where it is 560m long and has horizontal widths exceeding 40m (average width 26 to 28m). Below 1330m ASL, the resource is split into two troughs. The North trough extends from 1330m ASL down to 1245m ASL. The South trough extends from 1330m ASL to below 850m ASL. Between 1330 and 1200, the zone is about 300m long, with horizontal widths up to 50m (average 27m to 35m). Below 1200m ASL, the ore zone gradually decreases in both length and width, and changes strike direction. At 1000m ASL, the zone is reduced in size to 160m long and 13m wide. 20% of the zone's resource volume is above the current mine access at 1440m ASL. A substantial portion of the resource above 1440 will be classified as a non recoverable surface pillar. The West Zone outcrops at surface between 1535 and 1590m ASL.

Figure 1: Tom West Zone - Longitudinal Projection



The vertical extents of Tom East Zone are 1380 to 1720m ASL. The zone has been accessed by a single drift, and has been undercut at the 1440 Level. The zone is steeply dipping at 65 to 70 degrees, with a plunge of between 55 and 70 degrees. The strike direction is variable with the zone rotating about 60 degrees between 1380 and 1665m ASL. The zone is largest between 1680 and 1500m ASL, where 70% of the resource volume is located. Between these levels, the zone is between 200 and 240 metres long along strike, and averages 12m horizontal width. The zone is thickest and shortest near the bottom, at 50 to 60m long along strike, and up to 20m horizontal width. 90% of the zone's resource volume is above the current mine access at 1440 Level. The East Zone outcrops at surface between 1620 and 1715m ASL.

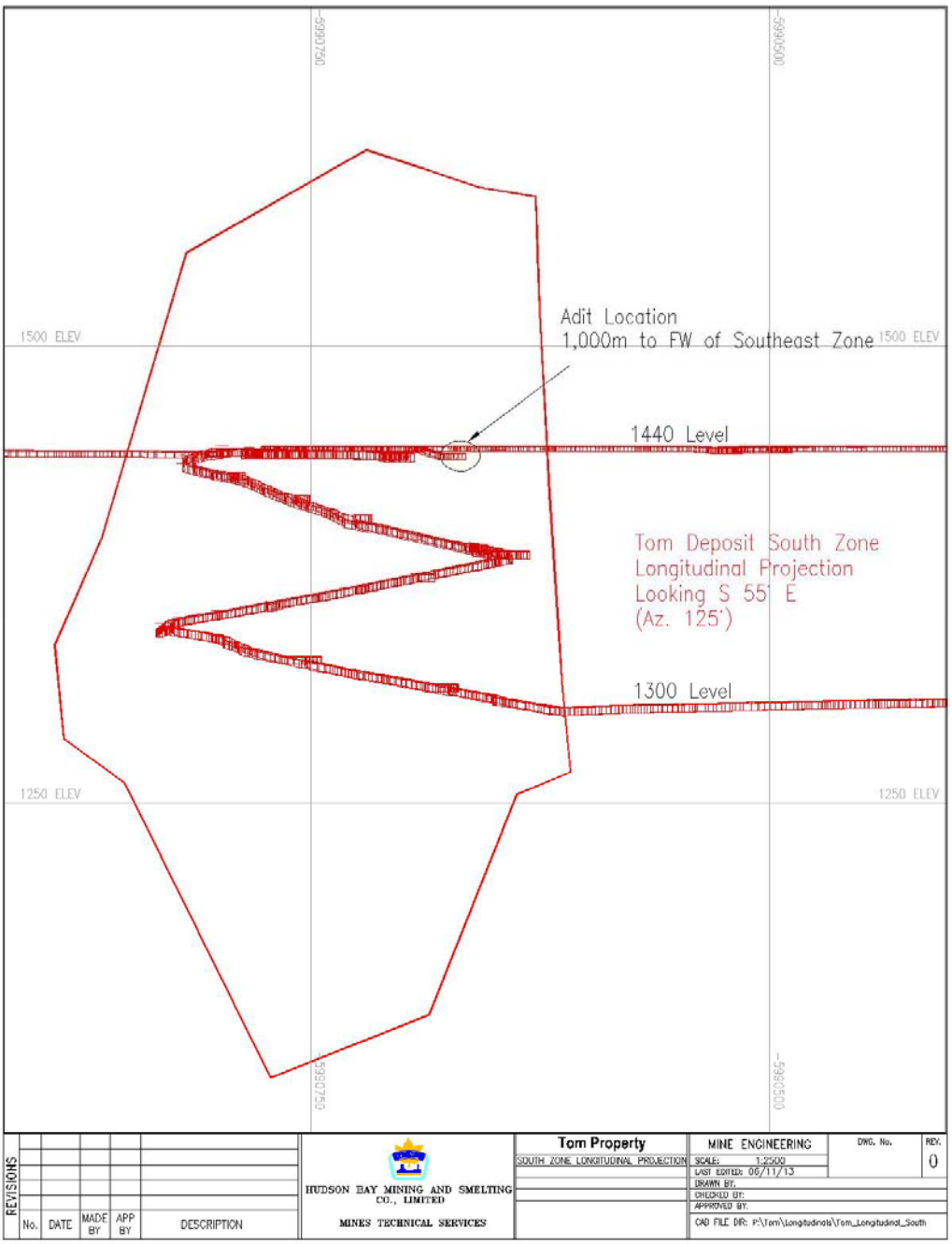
Figure 2: Tom East Zone Longitudinal Projection



The vertical extents of the Tom Southeast zone are 1100 to 1600m ASL. The zone is flatter than the West or South, with a dip estimated at about 45 degrees, and a near vertical plunge. The zone is estimated to be largest near the bottom, averaging about

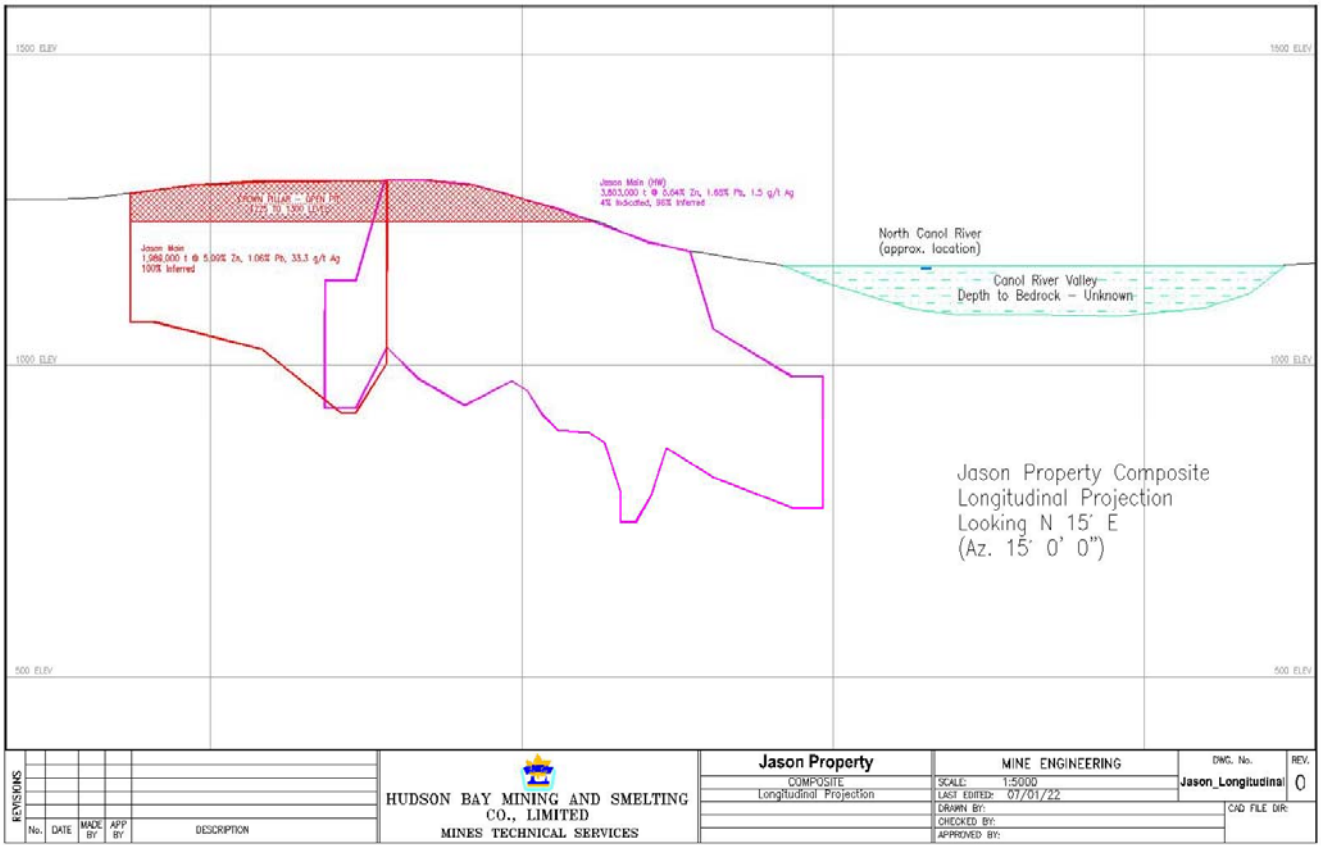
10m horizontal width. At 1400m ASL, the width is reduced to 6m, and at 1500m ASL, the HW is under 4m thick. 17% of the zone's volume is above the current mine access at 1440m ASL.

Figure 3: Tom Southeast Zone Longitudinal Projection



The vertical extents of Jason Main Zone are 1300 to 750m ASL. The zone is steeply dipping at +85 degrees, with a near vertical plunge. The strike direction is consistent. The zone is largest between 1225 and 1000m ASL, where 75% of the resource volume is located. In this area, the combined strike length of the Main and Main HW lenses is up to about 800m long. Resource widths are generally between 5.0m and 9.0m horizontal width, with the resource narrowing to 2.0m to 4.0m below 1000m ASL. The Jason Main and Main HW Zone outcrops at surface between about 1175 and 1300m ASL.

Figure 4: Jason Main & Main HW Zones - Longitudinal Projection



The Jason South zone comprises three lenses, the South Upper, South Middle and South Lower. The South zone is located about 400m laterally from the Main zone. The zone is about 400 metres long, and up to 100 metres thick in areas where the three lenses are stacked.

The vertical extents of Jason South Zone are 1100 to 500m ASL. The zone is fairly steeply dipping at 65 to 70 degrees, with a near vertical plunge. The strike direction is fairly consistent. The zone is interpreted as being crosscut by three faults which cause

the resource to be shifted laterally 5 to 15 metres in three locations. The zone is largest between 775 and 500m ASL, where 85% of the resource volume is located.

The South Upper lens is by far the largest and highest grade of the three, and is located in the hangingwall of the zone. The South Middle is the second largest of the lenses, and is located 5 to 25 metres in the footwall of the Upper lens. The small South Middle lens is located a further 5 to 25 metres in the footwall of the South Middle lens.

Resource widths vary dramatically, with the South Upper lens ranging between 3 and 30 metres horizontal width, the South Middle lens ranging between 5 and 30 metres horizontal width and the South Lower lens ranging between 3 to 8 metres width. The Jason South zone does not outcrop to surface.

Figure 5: Jason South Zone Upper, Middle and Lower Lenses Longitudinal Projection

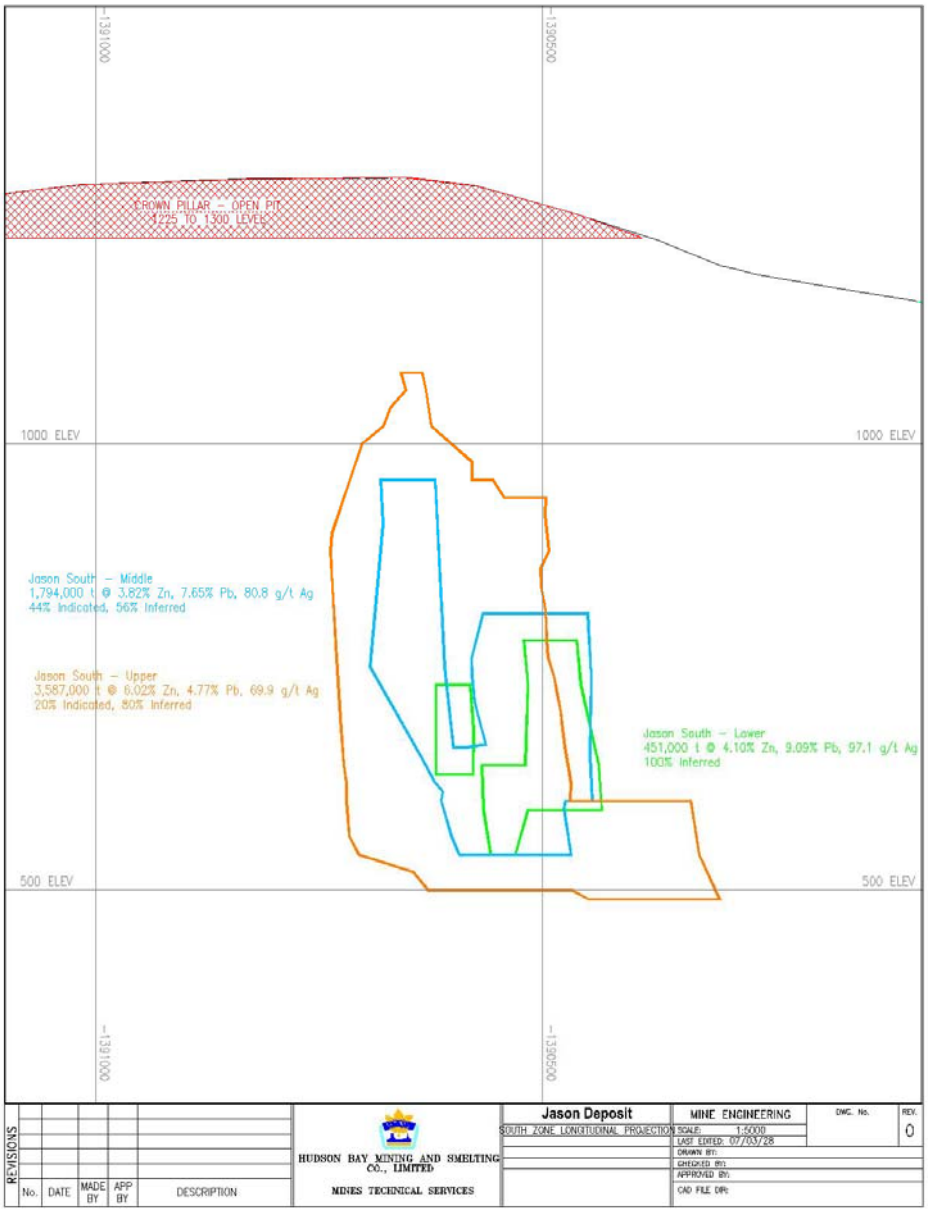
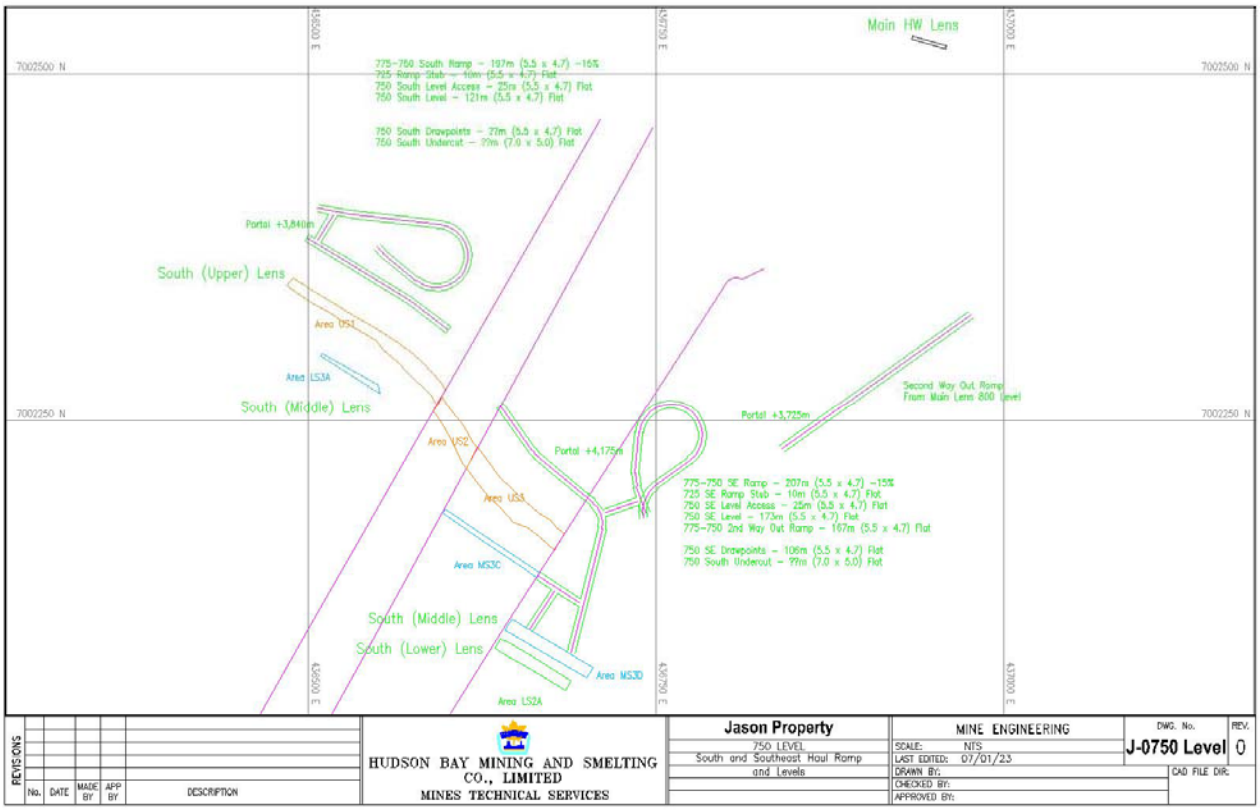


Figure 6: Jason South Zone Composite Plan View Showing Resource Proximity and Faults



The geological mineral resource (undiluted) of the Tom deposit, as estimated by RPA is:

	Tonnes	Zn %	Pb %	Ag (g/t)
Tom Indicated	5,700,890	6.52	4.03	43.41
Tom Inferred	11,727,200	6.31	2.86	28.19

Table 1: Tom Deposit Mineral Resource -Undiluted

Zone	Category	Tom Mineral Resource				
		Tonnes	Zn (%)	Pb (%)	Ag (g/t)	S.G.
West	Indicated	4,748,154	6.16	2.94	27.31	2.85
West	Inferred	10,296,391	5.82	1.88	13.23	2.96
East	Indicated	952,733	8.32	9.43	123.65	3.02
East	Inferred	890,241	11.20	13.71	189.79	3.22
Southeast	Inferred	560,564	7.65	3.65	46.37	2.90
Total		**17,448,082**	**6.38**	**3.24**	**33.16**	**2.94**

The geological mineral resource (undiluted) of the Jason deposit, as estimated for the Jason deposit is:

	Tonnes	Zn %	Pb %	Ag (g/t)
Jason Indicated	1,459,721	5.12	8.02	86.56
Jason Inferred	10,534,121	6.83	4.08	37.82

Table 2: Jason Deposit Mineral Resource - Undiluted

Zone	Category	Jason Mineral Resource				
		Tonnes	Zn (%)	Pb (%)	Ag (g/t)	S.G.
Main	Inferred	2,018,276	5.58	1.26	2.21	3.54
Main HW	Indicated	178,568	10.51	2.70	1.52	3.15
Main HW	Inferred	4,019,609	8.93	1.72	1.61	2.99
South Upper	Indicated	784,167	6.13	6.85	103.84	3.47
South Upper	Inferred	2,982,773	6.71	6.75	89.45	3.42
South Middle	Indicated	496,986	1.58	11.80	89.86	3.58
South Middle	Inferred	1,019,909	2.72	8.82	71.83	3.37
South Lower	Inferred	493,554	4.11	8.96	96.06	3.25
Total		**11,993,842**	**6.63**	**4.56**	**43.75**	**3.28**

Table 3: 2007 RPA vs 1986 Abermin/HBMS Resource Comparison (Undiluted)

Resource & Cutoff Criteria	Resource (Undiluted)			
	Tons	Zn %	Pb %	Ag oz/t
Tom 2007 @ $100/tonne Cutoff	7,419,926	8.40	6.45	2.26
Tom 1985 @ 7% Zn + Pb Cutoff	9,887,000	8.53	7.09	2.33
Tom Variance (%) 2007 vs. 1986	**-25%**	**-26%**	**-32%**	**-27%**
	Tons	Zn %	Pb %	Ag oz/t
Jason @ $100/tonne Cutoff	7,047,629	8.11	5.79	1.68
Jason 1985 @ 8% Zn + Pb Cutoff	11,978,000	7.12	6.76	2.25
Jason Variance (%) 2007 vs. 1986	**-38%**	**-32%**	**-45%**	**-54%**

Variances between the 1986 estimate and the 2007 resource estimate are substantial. Items which may contribute to the variance include:

- The Jason End Zone was not included in the 2007 RPA resource estimate, resulting in a reduction of 606,000 tons grading 10.3% Pb and 2.8% Zn.

- The resource cutoff criteria used in 1986 was a combined Pb + Zn grade cutoff of either 7% or 8% combined. In the 2007 RPA estimate, economic cutoffs were used, assigning different values to Zn, Pb and Ag grades to determine the in-situ value of the resource. Resources were calculated for $25/tonne increments, between $25 and $100/tonne. A comparison between the 1986 resource, and the 2007 RPA estimate using $100/tonne cutoff is shown in the table above.

- Core not recovered during diamond drilling (lost core) in the 2007 RPA estimate was treated as waste for resource estimating purposes, even though some of the lost core was inside the resource boundary. If this lost core was mineralized, this would have the effect of understating both tonnes and grade. It is unspecified how lost core was treated in the 1986 estimate.

- S.G.'s used in determination of the Tom resource may be understated due to lack of iron and barium assays. The average S.G. for the $100/tonne Tom resource is 2.98.

At Jason, where a number of barium and iron assays are available, the S.G. is 3.26, or about 10% higher.

- The interpretation of Jason South has changed, resulting in less resource volume. The 2007 interpretation assumes three faults cross cut the ore zone, in order to reconcile the location of drillhole intercepts. This interpretation resulted in a number of narrow bands of ore, offset at the fault locations. The 1986 polygonal estimate assumed the resource was continuous between drillhole intercepts.

This study considers all mineral resources in the Tom deposit, with an insitu, undiluted value of US$50/tonne or higher (4% Zn equivalent at $0.57/lb Zn). $50/tonne was selected as the cutoff value for mineral resources based on estimated minimum mining cost criteria, prior to the scoping study. Minimum costs include: Direct mining (ore extraction, ore removal, and operating development), operating milling (excluding concentrate transport), and allocated mine, mill, and plant overhead costs (GME).

The calculated minimum costs for the Tom deposit resulting from the scoping study are CDN$53/tonne (US$48/tonne). The calculated minimum costs for the Jason deposit are CDN$61/tonne (US$55/tonne).

Mineral resources were converted to mineable resources by applying dilution and recovery.

Recovery is the total mineral resource that will be extracted from a mining block. There is a portion of the mineral resource considered non-recoverable due to pillar design. Pillars include rib, sill and surface crown pillars. Tom mineral resources included in the Base Case mining plan have an average 17% loss to pillars. Jason mineral resources have an average 16% loss to pillars.

Table 4: Tom & Jason Planned Losses to Pillars

Deposit	Zone	Category	Mineral Resource Tonnes	Planned Recovery After Pillars %	Mineral Resource Excluding Pillars		
					Tonnes	Zn %	Pb %
Tom	West	All	15,044,545	84%	12,658,760	5.93	2.21
Tom	East	All	1,842,973	69%	1,272,604	9.71	11.50
Tom	SE	All	560,564	87%	488,359	7.65	3.65
Jason	Main	All	2,018,276	87%	1,763,585	5.58	1.26
Jason	Main HW	All	4,198,177	85%	3,558,434	9.00	1.76
Jason	South	All	5,777,389	83%	4,795,233	5.27	7.75
Total			**29,441,924**	**83%**	**24,536,975**	**6.45**	**3.67**

Dilution is estimated from three sources. Mining dilution is the waste mined with the ore inside defined mining lines. The mining lines are generally determined by the width of the lens and the minimum width required for mining.

Wall dilution is waste that falls off the hangingwall and footwall during the course of mining, due to the quality of the wall rock. At Tom and Jason, several visual Rock Quality Designation (RQD) estimates were made by HBMS of the unsplit core from the two properties, stored at Whitehorse. Photographs of Jason core up to 1988, taken at the time of logging were also available for inspection. Estimated RQD's for the Jason Main Zone were 0% to 25%. Jason South Zone RQD's were 0% to 35%, with one RQD of 90% in the wall conglomerate. Generally, comments were the core was very poor to poor quality. Estimated RQD's for the wall rock in the Tom West Zone were better, at 10% to 50%. RQD's for the Tom East Zone were the best, with wall rock RQD's ranging from 20% to 85%. The opinion of HBMS' ground control engineer is that the stope hangingwall will generally slough to vertical in poor ground.

Based on the poor RQD's at both Tom and Jason, longhole open stope mining with rib pillars and waste backfill has been selected as the principal mining method for both deposits, to limit unsupported wall spans. Undercuts will be cablebolted to limit hangingwall failure over multiple levels.

VCR mining has been selected for the Tom West zone due to the excessive width of the zone. Following primary stope mining, the hangingwall will be allowed to relax.

Hangingwall slough will be mucked out to create drawpoint cones, and sill pillars will be mined on retreat. No backfill is required for the Tom West Zone, however it is expected that development waste will be dumped into open stopes.

In all cases, it is assumed that lenses are located that they can be mined separately from each other.

In the case of Tom and Jason, mining dilution was applied per mining level, using a minimum mining width of 5.00 metres.

An additional 2.0 to 3.0 metres of wall dilution (falloff) was applied, depending on the zone, the rock quality, and the mining method selected for that zone.

Backfill dilution is dilution from mucking backfill during the course of mucking the stope to recover all blasted ore and drill fines. Backfill dilution has been applied to Tom East, and Tom Southeast zones, which will be mined using longhole open stope mining methods. All Jason resources will be mined using longhole open stope mining, with waste backfill and have backfill dilution applied.

For the Base Case, the average dilution applied to Tom is 25%, and the average dilution applied to Jason is 36%.

The diluted mineral resources, excluding losses to pillars included in this mining plan total 13.8M tonnes at Jason, and 18.0M tonnes at Tom. Details of diluted mineral resources for each mining block are shown below:

Table 5: Tom & Jason Diluted Mineral Resource

Deposit	Cat.	Mineral Resource Tonnes*	Min. Width (m)	Dilution				Diluted Mineral Resource		
				Mining %	External %	Fill %	Total %	Tonnes	Zn %	Pb %
Tom – West	All	12,658,760	**5.0**	9%	12%	0%	21%	15,303,085	4.90	1.83
Tom – East	All	1,272,604	**5.0**	32%	7%	5%	43%	1,820,239	6.79	8.04
Tom – SE	All	488,359	**5.0**	53%	15%	3%	70%	832,618	4.49	2.14
Jason – Main	All	1,763,585	**5.0**	26%	11%	2%	39%	2,443,151	4.03	0.91
Jason – HW	All	3,558,434	**5.0**	25%	12%	3%	40%	4,992,347	6.41	1.25
Jason – South	All	4,795,233	**5.0**	16%	14%	3%	33%	6,361,692	3.97	5.84
Total		**24,536,975**					**29%**	**31,753,133**	**4.98**	**2.84**

* Excluding losses to pillars.

The next step of mineable resource estimation is to apply stope mucking recoveries to the diluted, recoverable mineral resource. Mucking losses are incurred when blasted ore is left in a stope, due to ground conditions (generally hangingwall falloff), or stope geometry, where the ore cannot be reached with the selected stope mucking equipment. A mucking recovery of 95% has been applied, as shown in the table below:

Table 6: Tom & Jason Diluted/Recovered Mineral Resource

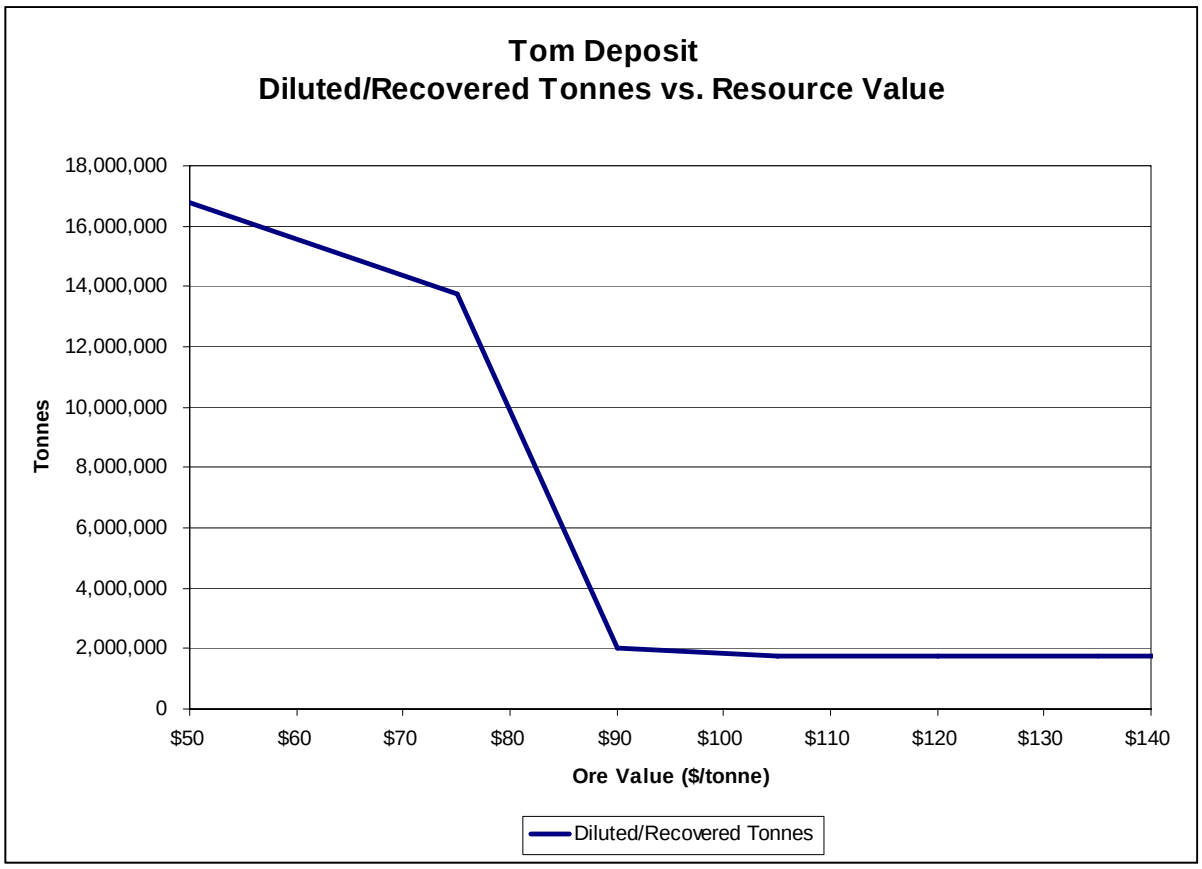
Deposit	Category	Diluted Mineral Resource Tonnes*	Mucking Recovery %	Base Case Diluted/Recovered Mineral Resource		
				Tonnes	Zn %	Pb %
Tom – West	All	15,303,085	95%	14,537,931	4.90	1.83
Tom – East	All	1,820,239	95%	1,729,227	6.79	8.04
Tom – SE	All	832,618	95%	790,987	4.49	2.14
Jason – Main	All	2,443,151	96%	2,350,066	4.04	0.92
Jason – HW	All	4,992,347	95%	4,742,730	6.41	1.25
Jason – South	All	6,361,692	95%	6,043,607	3.97	5.84
Total		**31,753,133**		**30,194,548**	**4.98**	**2.84**

*Excluding losses to pillars.

The final step of the reserving process is the application of economics to the diluted/recovered mineral resources. In the case of Tom and Jason, the scoping study requires reserves for both the large tonnage Base Case, and the High Grade Case. For the Base Case, a US$50/tonne (diluted/recovered) contained metal cutoff (at $0.57/lb Zn, $0.35/lb Pb, $7.00/oz Ag) was used as the minimum cost for total direct mining, operating milling and allocated overhead costs. Cutoff values were applied in $15/tonne increments to generate ore value vs. tonnage curves (grade-tonnage) curves for each deposit.

The graph for the Tom Deposit demonstrates the low value of the West Zone. It comprises the bulk of the Tom mineral resource, and is cut off at US$75/tonne value. Most of the Southeast Zone is less than US$100/tonne material and is 100% inferred resource. The High Grade ($120/tonne cutoff) Case diluted/recovered resource for Tom will be the East Zone 1.73M tonnes @ 6.8% Zn, 8.0% Pb, and 108.8 g/t Ag (52% Indicated, 48% Inferred). The average diluted/recovered value for Tom East is US$172/tonne.

Figure 7: Tom Deposit Grade-Tonnage Curve



The value-tonnage graph for the Jason deposit is linear, with portions of all zones being cut off at each $15 increment. At $100/tonne, most of the Main, Main HW, South Middle, and South Lower zones are cut off. The High Grade Case uses a $120/tonne cutoff and will comprise only the Upper South zone (2.7M tonnes @ 5.60% Zn, 5.75% Pb, 78.5 g/t Ag diluted/recovered). The Upper South zone is 20% Indicated and 80% Inferred resource. There is potential upside to the high grade resource, which will require additional diamond drilling to identify high grade areas within the South Middle and South Lower zones.

Figure 8: Jason Deposit Grade-Tonnage Curve

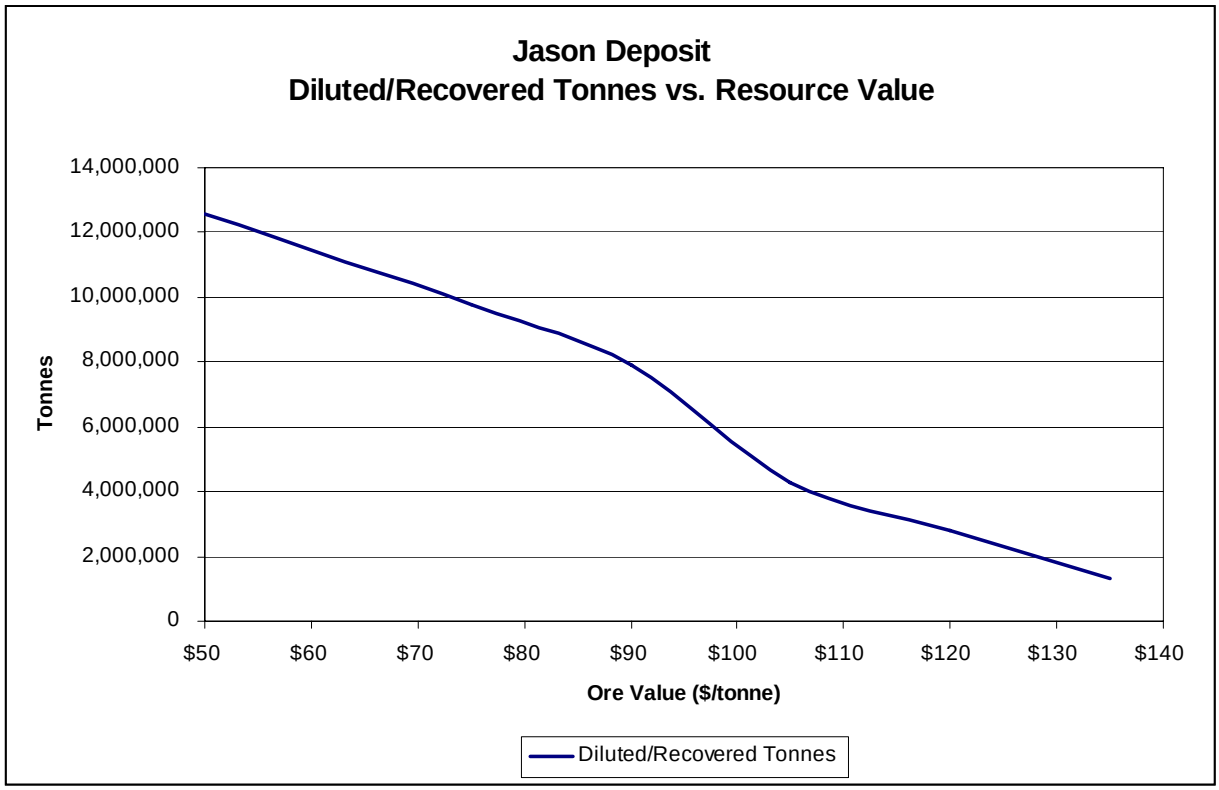


Table 7: High Grade Resource (Diluted/Recovered)

Deposit	Category	Resource Value $50/tonne Cutoff	Resource Value at $100/tonne Cutoff	High Grade Case Diluted/Recovered Mineral Resource		
				Tonnes	Zn %	Pb %
Tom – West	All	$79	n/a*	0	0.00	0.00
Tom – East	All	$172	$172	1,729,227	6.79	8.04
Tom – SE	All	$84	n/a	0	0.00	0.00
Jason – Main	All	$60	n/a	0	0.00	0.00
Jason – HW	All	$91	$113	0	0.00	0.00
Jason – South	All	$113	$125	2,673,535	5.60	5.75
Total				**4,402,762**	**6.07**	**6.65**

* No diluted/recovered resources above $100/tonne cutoff.

5.2 *Mining - Tom*

Maximum Base Case mine production is 2,800tpd or 1,020,000 tonnes per annum (tpa). Underground access will be by a 6.0m wide by 5.0m high, -16% conveyor ramp from surface at 1250m ASL, driven in waste to 800m ASL. A secondary ramp will be driven up from the conveyor ramp to connect to the existing West Zone ramp at 1300m ASL. This ramp, which connects 1300 to 1440 will be extended up to 1665m ASL to provide access to the East Zone. Access to the Southeast Zone will be from each main level in the West Zone. Production rates have been estimated by HBMS, and will be confirmed in further prefeasibility or feasibility studies.

Mining in the East and Southeast zones will be by sublevel longhole open stoping at 25m vertical sublevel intervals using 8yd^3 scooptrams. 5 metre wide rib pillars in ore will be left for support every 30 metres along strike. Stope mining will be from the lowest to highest sublevel. Stoped ore will be mucked from drawpoints by 8yd^3 scooptrams to 40 tonne trucks for haulage to ore passes. Drawpoint mucking will be a combination of manual and remote control. Ore will be transferred to a crusher at 825m ASL, where it will be crushed, and conveyed directly to the Tom concentrator coarse ore bin.

Mining in the West zone will be by vertical crater retreat (VCR) stoping at 60m mucking level intervals. Drill drifts, for the next level down, will be 15m below the drawpoint levels. Primary mining will be 45m vertical stopes, with drawpoints driven every 25 metres along strike to maximize mucking recovery. When primary mining is complete, the 15m thick sill pillars will be recovered by longhole drilling from the drawpoints and blasting the sill pillar into the drawpoints below.

5.3 *Mining - Jason*

Maximum Base Case mine production is 2,500tpd or 907,000 tonnes per annum (tpa). Underground access will be by a 5.5m wide by 4.7m high, -15% haulage ramp from surface at 1175m ASL, driven in waste down to 1000m ASL. At 1000, a secondary ramp will be driven to the South zone, while the main ramp continues down to 800m ASL. The secondary South zone ramp will continue down to 500m ASL, or 675m below the portal. Production rates have been estimated by HBMS based on trucking productivity, and will be confirmed in further prefeasibility or feasibility studies.

Mining in Jason will be by sublevel longhole open stoping at 25m vertical sublevel intervals using 8yd^3 scooptrams. 5 metre wide rib pillars in ore will be left for support

every 30 metres along strike. Stope mining will be from the lowest to highest sublevel. Stoped ore will be mucked from drawpoints by 8yd^3 scooptrams to 40 tonne trucks for haulage to a surface run of mine coarse ore stockpile. Drawpoint mucking will be a combination of manual and remote control. At surface, run of mine ore will be loaded to surface haul trucks, and hauled to the Tom concentrator, where it will be sized (crushed). Crushed ore will be hauled by front end loader to the concentrator coarse ore bin.

All work at the Tom and Jason sites will be contracted, with the exception of company management. Project costs are based on company supplied mining and milling equipment.

At full production Tom & Jason will require approximately 375 contract employees and 23 company employees.

Table 8: Tom & Jason - Manpower

Location	Operating	Maintenance	Tech, Admin &Supv	Total
Tom	93	40	37	170
Jason	92	33	29	154
Mill	32	12	6	50
Plant/Mgmt	0	16	8	24
Total	**217**	**101**	**80**	**398**

5.4 *Geotechnical and Hydrological Aspects*

A preliminary geotechnical assessment of the Tom and Jason deposits was done by HBMS on 3 drill holes from the Jason property and 2 drill holes from the Tom property at the Bostock core storage facility in Whitehorse. The assessment was based on visual inspection of diamond drill core only.

The five holes reviewed intersected the mineral resource in the Jason Main and South zones, and the Tom West and East zones. The review indicated that the immediate wall rock and the ore zones generally have a poor to very poor rock quality designation (RQD). A number of faults were interpreted in the 1986 study, that crosscut the Tom East and West zones. 3 faults were also interpreted by RPA, that crosscut the Jason South zone.

No unconfined compressive strength tests were performed.

There are hydrological concerns at both Tom and Jason. The adit at Tom is flowing an estimated 300 gpm, at 1440m ASL. A number of diamond drill holes at Jason have been observed flowing water, with one estimated at 10+ gpm. These holes are located well above the South Macmillan River valley. Further hydrological investigations will be required as part of any future prefeasibility or feasibility studies.

The proposed mining plan considers the poor rock quality. Higher than average support requirements are expected. Wall rock is expected to substantially dilute the mineral resource. The mining plan also considers possible moderate to high water inflows of 500+ gpm at both deposits. Further geotechnical and ground support investigation will be required as part of an future prefeasibility or feasibility studies.

5.5 *Surface Facilities*

Surface facilities at the Jason property will be minimal, as the site is expected to be serviced from the main camp. Buildings will include a 150 person changehouse/dry, a small equipment repair shop, and a compressor building. These buildings will be trailer/folding style. Services will include process water, compressed air and power. Power will be supplied by a 25 kV line from the Tom property generating plant, which is located about 4km from the site. It is expected a 5 MVA 25/4.16 kV primary site

transformer will be required. Jason surface installations will include intake fans and propane direct fired mine air heaters capable of supplying a total of 750,000 CFM of mine ventilation air. Propane tanks, for mine air heating will be provided by a propane supplier.

Process water supply will be from the South Macmillan river. Due to turbidity and pH of the South Macmillan river water, a settling/treatment sump for process water will be excavated underground near the portal. A mine process water settling pond will be constructed on site.

Surface facilities for the Tom mine will be minimal, as most of the facilities and services will be provided by the main service complex. Process water and compressed air will be provided by the service complex systems, and will be piped to underground via utilidors. Power will be by a 13.8 kV feeder from the Tom Mine substation located at the main camp. The main installation at the Tom mine portal will be a mine air intake fan capable of supplying a total of 750,000 CFM of mine ventilation air, and propane direct fired mine air heaters. Mine discharge water will be pumped directly to the tailings pond.

Additional surface facilities for the concentrator will be minimal, as power, heat, and compressed air will be provided by the main service complex.

Services and facilities provided by the service complex are similar to those identified in the Bechtel Capital Cost Study done in 1985, and will include all services and facilities required to operate the mine/mill complex as a remote camp. The surface plant will include a power generating station that will house 12 x 1800 kW diesel generators, capable of generating sufficient power at peak demand for Tom, Jason and the concentrator. The power generating station will have an associated fuel storage bunker capable of storing 250,000 liters of diesel fuel (one week supply). Other main services include:

- One 5 MVA electrical substation for Tom mine, and one 7.5 MVA electrical substation for the concentrator.
- Heating plant, using diesel fired boilers and reclaimed heat from the generators and compressors.
- Heat traced utilidors for distributing compressed air, process water and heat to the concentrator, maintenance and service buildings, and the accommodation complex.

- Mill/Tom process water pump station and settling pond at the South Macmillan river.
- Compressor building with 5,000 cfm compressor.
- 50,000 square foot maintenance and rebuild shop.
- 40,000 square foot mine, plant and mill warehouse.
- Garages for parking surface mobile equipment.
- Fuel oil pumphouse.
- Low sulphur diesel storage bunker and mine equipment fuelling station.
- Gasoline storage tank and fuelling station.
- Run of mine ore storage stockpile and crusher.
- 250 person accommodation complex, including dining and entertainment facilities.
- 250 person changehouse/dry facility for Tom, mill and plant employees.
- Office building.
- Fire/Ambulance/Security/Nursing station.
- Sewage treatment plant.
- Potable water treatment plant.
- Satellite voice and data communications system.
- Water storage tanks for the concentrator and Tom mine.
- Airstrip lighting and navigation system.
- Propane tanks. (vendor provided).
- Explosive and detonator magazines.

Where feasible, the complex will be designed to minimize power consumption and heating requirements.

5.6 *Ore Concentration & Tailings*

Ore concentration requirements and costs are derived from the 1986 Feasibility Study and Capital Cost Study. Further metallurgical testwork will be necessary to complete detailed plant design.

The concentrator will process a feed of Zn/Pb ore from the Tom and Jason mines at 5,300 tpd. The design for the 1986 study was fully-autogenous primary grinding and secondary pebble milling, that can be converted to semi-autogenous grinding and ball milling if required.

Coarse lead flotation is incorporated into the grinding circuit to prevent overgrinding of galena. The design of the other flotation and dewatering circuits conform to standard lead/zinc practice.

Concentrates will be thickened and then pressure filtered to eliminate the need for drying.

A full report of the concentrator design parameters, and flowsheets are contained in Section 3 of the Bechtel Engineers Capital Cost Study (1985). The concentrator design and flowsheet have been reviewed by HBMS mill personnel.

Up to 25,000,000 tonnes of tailings will be produced during the mine life. Tailings disposal will be to a small natural basin, sealed off with two relatively small dams. Tailings will be thickened prior to disposal. Upon mine closure, water diversion ditches will be excavated around the tailings pad to reduce potential water treatment requirements, and the pad will be capped with rock from the local area.

Preliminary concentrator recoveries for Tom and Jason ore are estimated at Ag 58%, Zn 86% and Pb 89%.

Concentrate production and quality will be 145,000 tonnes Zn concentrate at 56.3% Zn, and 73,000 tonnes Pb concentrate at 68% Pb per year.

Concentrate will be dried to 6% to 9% moisture content using pressure filtration techniques, in combination with compressed air.

There are expected to be 50 concentrator employees.

5.7 *Metallurgical Treatment*

For the purpose of the scoping study, it is assumed that concentrate produced will be trucked to a rail line loadout at Ross River, about 230 km from the minesite. Concentrate will be rail hauled to the ocean port at Skagway, Alaska. From there it will be sold and shipped to Asian smelters.

At full production Tom & Jason will produce 145,000 tonnes of zinc concentrate and 73,000 tonnes of lead concentrate annually.

5.8 *Environmental & Permitting & Closure*

A review of the permitting process has been undertaken as part of the due diligence process for the Jason option. A report of the permitting and review processes, including timelines and estimated costs were prepared by Gartner Lee Limited for both the Tom and Jason properties. The report is titled *Preliminary Review of Required Socio-Economic, Environmental, and Statutory Approvals – Tom/Jason Properties, Near Macmillan Pass, Yukon.* The report details the permitting process and applicable legislation for advancing a mining project in the Yukon. Highlights of the report include:

- The current project assessment regime is in it's infancy. No major mining project has yet negotiated the assessment process.
- The Tom and Jason properties are in the Kaska First Nation traditional territory. The Kaska have unsettled land claims with Canada.
- The Yukon Environmental and Socio-Economic Assessment Board (YESAB) is an independent board which must assess all projects in the Yukon for environmental and socio-economic effects under the Yukon Environmental and Socio-Economic Assessment Act.
- Estimate the preparatory period at 6 months to 1 year, prior to submission for YESAA screening.
- The preliminary YESAA screening process will take 1 ½ to 3 years.
- Up to 3 complete field season will be require for baseline environmental monitoring. This work may be done concurrently with the YESAA screening process.

- Following the YESAA screening process and baseline environmental monitoring, up to 3 years will be required for the Quartz Mining Licence process, the Water Licence process and other regulatory approvals.

- Total permitting period will be up to 7 ½ years, and will cost $7.3M (-25%/+50% estimate).

5.9 *Exposure to Potential Liability – Jason Property*

The exposure to potential liability, if any, that would be incurred for reclamation associated with the existing flowing bore holes previously drilled by third parties on the Jason property has been considered. Although there may be exposure incurred by acquisition of the claims, it has been concluded that, during the exploration period and prior to acquisition of surface rights, the potential liability is remote respecting these bore holes.

The *Quartz Mining Act* (Yukon) provides comprehensively for exploration of mineral claims, reclamation of the explored land and release of the miner from future liability for further reclamation of explored or mined land. This Act is silent with respect to the activities of previous miners on a site and there does not appear to be any provision in the Act pursuant to which it is likely that a miner could be held responsible for the reclamation needed as a result of adverse effects caused by the exploration program of another miner.

Under the *Environment Act* (Yukon) the Minister may issue environmental protection orders to a person in control of a development or activity if the development or activity is causing or is likely to cause a "significant adverse effect." It appears unlikely that this provision would be applied to flowing bore holes.

Though it would require application of the criteria set out in the Contaminated Sites Regulation by an expert to rule it out, it does not appear likely that the necessary criteria, either for designation as a contaminated site or issuance of a remediation order, apply to these claims.

The other relevant Yukon statutes are the Waters Act *(Yukon) and the* Fisheries Act *(Canada). In addition,* An Act to amend the Fisheries Act *has passed first reading in the House of Commons and it may result in new requirements to report deposits of deleterious substances.*

Liability under both of these regimes for contaminated water flowing or seeping out of bore holes into a waterway is dependent on the degree of control that the miner is found to have with respect to the flowing bore holes. During the exploration phase and prior to acquiring surface rights, it does not appear that HudBay would have the requisite control.

5.10 *Closure*

Mine closure requirements and costs are currently under review by SRK Consulting, and are projected to be $59M. Closure costs include the removal of all surface structures, and capping of the tailings pad. Costs for steel and building removal from the site are assumed to be paid for by their salvage value. Potentially acid generating rock will be hauled to open stopes underground, including mine waste used for site construction. It is assumed that long term water treatment will be required for outflows from the Tom mine, the Jason mine and the tailings pad. The cost of long term maintenance is expressed in the form of a bond or other security that will provide sufficient funds to maintain the water treatment plant in the long term.

5.11 *Yukon Territory Infrastructure*

In conjunction with the *Preliminary Review of Required Socio-Economic, Environmental, and Statutory Approvals – Tom/Jason Properties, Near Macmillan Pass, Yukon,* HBMS requested a review of Territorial infrastructure that will be required to efficiently mine the Tom & Jason properties.

The North Canol road is a seasonal gravel road that accesses both properties. The road was constructed in the 1950's. At present, the North Canol road is a public road 4 to 5 metres wide, that can be safely travelled at speeds up to 40 km/hr. The road would require significant upgrading to be capable of handling B-train tractor trailer configurations that would be required for truck haulage of concentrate through to Ross River. The Yukon Government suggests a budgetary cost of $400,000/km to upgrade the road to an 80 km/hr road, or a total cost of Cdn$90M. These costs have not been included in the Tom and Jason scoping study.

At present, a barge is used to cross the Pelly River to access the North Canol road from the community of Ross River. In 1983, a cost of $5.9M was estimated for a bridge across the river. A current estimate would be in the $10M to $15M range. Costs for bridge construction are not included in the Tom and Jason scoping study.

The port at Skagway, Alaska will be used for shipping concentrate to Asian smelters. The port was used to ship Faro Mine concentrate until 1998. Since then, some of the port facility has deteriorated, or been decommissioned. Current cost estimates to recommission the port to be able to handle 500,000 tonnes of concentrate per year are in the $22M to $30M range. Costs for port reconstruction are not included in the Tom and Jason scoping study.

The Tom and Jason scoping study assumes the construction of a rail link through Ross River to Skagway, Alaska. The concept is undergoing a detailed feasibility study by the governments of Yukon and Alaska. There is no timeline available for this project.

An airstrip is required for routine travel to and from the Tom and Jason properties, and for medical emergencies. The government owned 1500' x 50' airstrip near the Tom minesite is not maintained. Costs for maintaining the airstrip are included in the Tom and Jason scoping study.

The Tom and Jason mines, plant and mill are estimated to require some 65,000,000 kWh of electric power per year, with a peak demand of 15 to 18 MW at full production. The scoping study assumes the power will be generated using 12 x 1.8 MW diesel generators in a power plant at the property. The capital cost of the generators is expected to be $48M, with ongoing generating costs of $0.21/kWh at $1.00/litre diesel cost. The total power costs over the mine life will be between $200M and $240M. This is the cost used in the scoping study. The availability of grid power from Yukon Energy Corp. or Yukon Electrical Company Ltd. was investigated. A 138 kV line terminates at Faro, 280 km from the properties. A 25 kV line extends from Faro to Ross River, some 230 km from the minesite. At present, it is felt that there is insufficient generating capacity on the Whitehorse – Aishihik – Faro (WAF) grid (which feeds Faro) to service the mines. If grid power were available, the cost would be about $0.10/kWh. A very recent decision (Feb 2007) to open a mine near Carmacks will result in connection of the WAF power grid to the northern Dawson power grid, which might change the future assumptions about grid power. Further study will be required for a prefeasibility or feasibility study.

5.12 *Project Schedule*

The scoping study Base Case assumes a 28 year project and mine life, from the start of the permitting process to the end of mine production. Decommissioning is not included in the schedule.

The following gives an overview of the camp, mine and concentrator construction schedule, followed by mine production.

5.12.1 Permitting, Main Complex, and Concentrator Schedule

- Year 1. Preliminary engineering and submissions for permitting.
- Year 2 to Year 5. Baseline environmental studies and consultations. Preliminary engineering and feasibility studies.
- Year 6 to Year 8. YESAB executive screening. Approval of Quartz Mining Licence. Approval of Water Licence. Final project engineering. Contracts and mobilization.
- Year 8 to Year 9. Main complex, mill and Tom earthwork. Power plant and main complex construction. Start concentrator construction.
- Year 10 to Year 11. Complete concentrator and tailings dam construction.

5.12.2 Jason Mine Schedule

- Year 9. Jason site clearing and civil work. Construct process water building and pipeline. Install surface electrical substation, site power distribution and lighting. Construct changehouse/dry, compressor building, mine ventilation air and heating building. Equipment procurement.
- Year 10. Complete surface construction. Install mine discharge pipeline and settling pond, with pumps/pipeline to tailings area. Construct lined coarse ore storage area. Start ramp and level development.
- Year 11. Continue ramp development. Construct u/g dewatering station, explosives and cap magazine, u/g electrical substations, fuelling station and refuge station. Install leaky feeder. First ore production.
- Year 12. Continue ramp development to South zone. Increase ore production to demonstrate commercial production.

- Year 14. Start waste stripping for crown pillar recovery. Waste disposed of as backfill.
- Year 22. Start crown pillar recovery. Continue longhole mining.
- Year 27. End of production.

5.12.3 Tom Mine Schedule

- Year 9. Tom site civil work. Connect to mill process water and compressed air system. Install surface electrical substation and site power distribution and lighting. Construct mine ventilation air and heating building. Equipment procurement.
- Year 10. Start conveyor ramp development. Rehabilitate existing 1440m ASL to 1300m ASL ramp and levels, accessing from Tom valley adit. Mine 150,000 tonnes ore for concentrator commissioning, and metallurgical testwork. Install surface conveyor gallery.
- Year 11. Complete conveyor ramp development and install conveyor. Complete crusher station. Construct explosives and cap magazine, u/g electrical substations, fuelling station and refuge station. Install leaky feeder. First ore production from lower levels.
- Year 12. Develop ore pass system. Install crusher/rockbreaker and mine dewatering system. Continue ramp development up to 1300m ASL, and above 1440m ASL.
- Year 13. Connect 1300m ASL ramp to lower ramp. Finalize ventilation system and ore pass systems. Start VCR mining in West zone. Demonstrate commercial production, and increase production to 2,800 tonnes/day.
- Year 28. End of production.

5.12.4 Yukon/Alaska Infrastructure Schedule

The cost for the following items is not included in the scoping study, and are intended to demonstrate project lead times only.

- Year 3 to Year 5. Bridge over Pelly River at the community of Ross River.
- Year 6 to Year 10. 230 km North Canol road upgrade.
- By Year 11. Rail link from Ross River to Skagway, Alaska.
- By Year 11. Skagway port recommissioning or expansion.

5.13 *Major Project Capital Cost Estimate*

A substantial portion of Major Project Capital (MPC) quantities have been identified using the Bechtel Engineers 1985 Capital Cost Study. Labour costs have been escalated to 2006 rates, and, materials costs have been increased by 50%. Advancements, particularly in mining equipment since 1985 have allowed changes to mining methods that affect the MPC costs. These items have been costed using recent HBMS costs. The MPC is subdivided into 4 components: Environmental, Permitting and Feasibility, Main Complex and Concentrator, Tom Mine and Jason Mine. Major Project Capital is estimated at a scoping level of accuracy. Costs are expressed in constant 2006 CDN$.

5.13.1 Environmental, Permitting and Feasibility

Jason Acquisition	$0.9M
Engineering and Feasibility Studies	$1.4M
Environmental and Permitting	$7.3M
Sub Total	**$9.5M**

5.13.2 Mine Complex and Concentrator Construction

Complex/Mill Site Prep & Earthworks, Roads, Crusher	$7.3M
Site Water, Piping, Utilidors and Heat Tracing	$3.1M
Site Power Distribution and Lighting	$1.6M
Site Other	$0.1M
Accommodation Complex	$14.0M

Warehousing, Service Building and Shops	$0.8M
Fire/Ambulance Garage	$0.2M
Diesel/Gasoline Fuel Storage	$0.5M
Surface Mobile Equipment	$0.7M
Surface Communications	$0.4M
Diesel Power Generating Station	$21.8M
Diesel Power Generators	$22.1M
Concentrator	$54.1M
Tailing Pond, Pipeline and Reclaim Water Line	$14.9M
Construction Indirects	$15.6M
Critical Spares and First Fill	$0.8M
Contingency	$0.0M
Sub Total Complex & Concentrator	**$158.0M**

5.13.3 Jason Mine

Site Prep, Earthworks, Roads, Bridges, Culverts	$1.9M
Water Systems, Piping, Utilidors and Heat Trace	$2.2M
Site Power Distribution & Lighting	$1.0M
Office, Mine Dry, Communications	$2.3M
Cold Storage & Fuel Storage	$0.2M
Compressor Building and Compressors	$0.8M
Mine Air Heater Presink, Heaters, Fan, Building	$5.0M
Main Electrical Substation	$2.0M
UG Dewatering Station	$7.5M
Explosives Magazines	$0.1M
Fuel Station	$0.4M
Refuge Station	$0.1M
UG Ventilation Installations	$0.5M
UG Process Water Supply	$0.2M
UG Power Distribution, including Substations	$3.5M
UG Leaky Feeder Communication System	$1.8M
Mine Equipment	$26.6M
Construction Indirects	$9.2M
Critical Spares and First Fill	$1.4M
Diamond Drilling	$1.5M
Mine Access, Haul Ramp, Levels, Raises	$17.3M
Contingency	$0.0M
Sub Total Jason Mine	**$85.5M**

Jason Major Project capital cost includes mine development of 6,151m of drift and 500m of ventilation raises at a cost of $17.3M.

5.13.4 Tom Mine

Site Prep & Earthworks & Roads	$1.1M
Water System, Piping, Utilidors and Heat Trace	$2.2M
Site Power Distribution & Lighting	$1.0M
Cold Storage and Fuel Bunker	$0.2M
Compressor Building and Compressors	$0.8M
Surface Communications	$0.1M
Mine Air Heater, Plenum, Heaters, Fan, Building	$3.3M
Main Electrical Substation	$2.0M
UG Dewatering Station	$7.5M
Crusher/Rockbreaker/Ore & Waste Bin Excavation	$10.2M
Explosives Magazines	$0.1M
Fuel Station	$0.4M
Refuge Station	$0.1M
Truck Dumps, Chutes, Grizzlies	$1.8M
Crusher Installation	$4.0M
Conveyor Installation	$12.0M
UG Ventilation Installations	$0.5M
UG Process Water Supply	$0.2M
UG Power Distribution, including Substations	$4.5M
UG Leaky Feeder Communication System	$2.0M
Mine Equipment	$26.8M
Construction Indirects, EPCM, QA/QC	$9.2M

Critical Spares and First Fill	$1.4M
Diamond Drilling	$1.5M
Conveyor Ramp, Raises, Rehab.	$23.3M
Contingency	$0.0M
Sub Total Tom Mine	**$116.2M**

Tom Major Project capital cost includes mine development of 6,350m of drift and 1,258m of ore pass and ventilation raises at a cost of $23.3M

GRAND TOTAL MAJOR PROJECT CAPITAL	**$369.2M**

5.14 *Operating and Total Costs*

HBMS has estimated operating costs, based on Flin Flon Mines 2007 Budget costs, with escalation for remoteness, and camp operation. These are tabulated below.

Table 9: Tom & Jason Mine Operating Cost

Mine Operating Cost ($/tonne)	Tom	Jason	Total
Ore Extraction	$14.96/tonne	$17.85/tonne	$16.23/tonne
Operating Development	$2.76/tonne	$6.09/tonne	$4.22/tonne
General Mine Expense	$17.09/tonne	$19.26/tonne	$18.04/tonne
$/Tonne Ore	***$34.81/tonne***	***$43.20/tonne***	***$38.49/tonne***

Total onsite mining and concentration costs including capital are $58 tonne. Concentrate transportation to port, assuming rail haulage is $5.23/tonne of ore. All costs to the port at Skagway are $63/tonne. The all in cost per pound of zinc contained in concentrate net of by product credits, concentrate shipping and treatment/refining charges is C$0.90 per lb. of zinc.

5.15 *Concentration and Metallurgical Treatment Costs*

Concentration costs are expected to be $25.24 per tonne of ore treated, which includes the haulage of concentrates to port at Skagway, Alaska. The operating costs are based on manhours and consumables estimated for the Tom/Jason mill in the 1986 study, with labour and materials costs escalated to 2006 Canadian dollars.

Table 10: Tom & Jason Mill Operating Cost

Mill Operating Cost ($/tonne)	Total
Direct Labour & Materials	$11.57/tonne
Power	$6.67/tonne
Indirects (Camp/Accommodation for Mill Employees)	$1.77/tonne
Concentrate Transport to Port (Truck & Rail)	$5.23/tonne
$/Tonne Ore	***$25.24/tonne***

Treatment charges used in the Base Case are $175/tonne for Zn US$0.57/lb. This results in a TC/RC of US$0.19/lb which is within the historical (1992 to 2002) range for European Custom Zinc contracts (Brook Hunt). Zinc terms used were 85% payable, with penalties applied for Fe/Hg, and price participation ($1,000/tonne base). Zinc concentrate is expected to be sold to Asian smelters. Shipping costs from the port at Skagway to Asian smelters used were US$35/tonne concentrate.

Lead treatment charges are applied at US$175/tonne of Pb concentrate. Terms used were 92% of Pb payable, 93% of Ag payable, with no price participation or penalties. Lead TC's historically vary substantially. TC's between 1992 and 2005 ranged between $125 and $195/tonne of concentrate (Brook Hunt). Shipping costs used for Pb concentrate are $US85/tonne, assuming additional port handling/storage charges in Vancouver, and rail haulage inland to the Trail smelter for processing.

5.16 *Sustaining Capital Costs*

Sustaining capital is capitalized development and equipment purchases after the major project capital is complete, and includes allocated overhead costs.

Table 11: Tom & Jason Mine Sustaining Capital Cost

Mine Sustaining Capital Cost	Tom $,000's	Jason $,000's	Total
Capital Development	$35,993	$64,454	$100,447
Major Mine Equipment	$0	$0	$0
Replacement Equipment	$51,040	$51,040	$102,080
Major Installations	$2,790	$2,790	$5,580
Normal Capital	$0	$0	$0
GME Allocated to Capital	$28,025	$30,809	$58,834
Total $ x 000	$117,848	$149,093	$266,941
$/Tonne Ore	***$7.03***	***$11.40***	***$8.94***

6. FINANCIAL EVALUATIONS

6.1 *Base Case (5,300 tpd)*

The deposits are economically unattractive based on long-term metal prices. Due to the long (7 to 10 year) lead time to production, there is no opportunity to take advantage of forward selling.

The Base Case assumes the Yukon government will construct a bridge over the Pelly River and upgrade the North Canol road, and that a rail link to Skagway will be constructed. Cashflow generated by the deposits in the Base Case is Cdn$ -1.2 Billion at long term metal prices of Ag $7US/oz, Zn $0.57US/lb, Pb US$0.35/lb. Closure costs are not yet included in the Base Case.

Initial investment in the properties would be $0.9M to option the Jason property, and $7M to $10M for permitting, environmental studies and detailed engineering. If it is decided to proceed with the option and permitting, methods to take advantage of pricing should be investigated near the end of the permitting process (Year 5 to Year 7).

6.2 *High Grade Case (2,000 tpd)*

Due to distinct high grade zones within each deposit, a High Grade Case was run concurrently, as a sensitivity to the Base Case to determine the financial impact of eliminating lower value resources from the mine plan. Main assumptions for the High Grade Case are:

- Mineable resources (diluted/recovered) are selected areas of the Tom East zone (1.7M tonnes @ 6.79% Zn, 8.04% Pb, 108.8 g/t Ag) and the Jason South Upper zone (2.7M tonnes @ 5.60% Zn, 5.75% Pb, 78.5 g/t Ag), assuming an insitu ore value of $120/tonne at long term metal prices.

- Access to the Tom deposit will be via the existing adit at 1440m ASL. The majority of the Tom East ore is above the adit. Access to the Jason deposit will be via ramp from 1175m ASL.

- A 2,000 tpd mill, power generating station, service buildings, and accomodations will be constructed at the same location as in the Base Case.

- The Yukon government will construct a bridge over the Pelly River and upgrade the North Canol road, and that a rail link to Skagway will be constructed.

- Closure and long term environmental liability costs are not included in the evaluation.

The all in cost of zinc, for the High Grade Case is Cdn$0.75/lb (US$0.68/lb).

The all in cost is quite sensitive to the price of lead and silver. Increasing the Pb byproduct credits by 25% (Pb $US0.44/lb, Ag $US8.75/oz) reduces the all in cost to Cdn$0.63/lb, or very near HBMS long term zinc price ($US0.57/lb @ 0.90 Cdn/US exchange = $Cdn0.63/lb).

The deposits remain economically unattractive based on long-term metal prices.

As in the Base Case, initial investment in the properties would be $0.9M to option the Jason property, and $7 to $10M for permitting, environmental studies and detailed engineering.

Diamond drilling at both the Tom and Jason property may identify high grade resources, that can be included in the High Grade evaluation, particularly in the Jason South Middle and South Lower lenses.

6.3 *Breakeven Case*

It was determined during the scoping study that mining all of the Tom and Jason deposit resources would likely be non economic using Base Case assumptions and long term pricing scenarios. An evaluation was run to attempt to determine a case in which the deposits would be economic using a reasonable set of assumptions layered on to the Base Case. IRR and NPV calculations were not performed as part of this exercise. A table and graph of the results are shown below.

The study determined that the High Grade Case would become economic, using the selected criteria, before the Base Case.

Methodology

A baseline series of cashflows was established for resource cutoff values ranging from US$50/tonne insitu (Base Case) to US$120/tonne insitu (High Grade Case). The baseline cashflow assumed that the rail line connecting Ross River to Skagway would not be available. Baseline cashflows ranged from $-194M for the High Grade Case to $-1,500M for the Base Case.

The impact of a rail line from Ross River to Skagway was tested. Cashflows improved to $-126M for the High Grade Case and $-1,208M for the Base Case.

A 25% metals price increase was layered on as the next test. Prices used were Zn US$0.71/lb, Pb US$0.44/lb and Ag US$8.75/oz. Cashflows improved to $-40M for the High Grade Case, and $-918M for the Base Case.

A 25% dilution reduction was then layered on. The dilution reduction improved the grade by about 2.5% in the High Grade Case, and allowed about 10% more tonnes to exceed the $120/tonne cutoff value. In the Base Case, the grade improved by 6.5%, with 6% less tonnes mined due to the dilution reduction. Cashflow improved to $-29M for the High Grade Case, and $-778M for the Base Case.

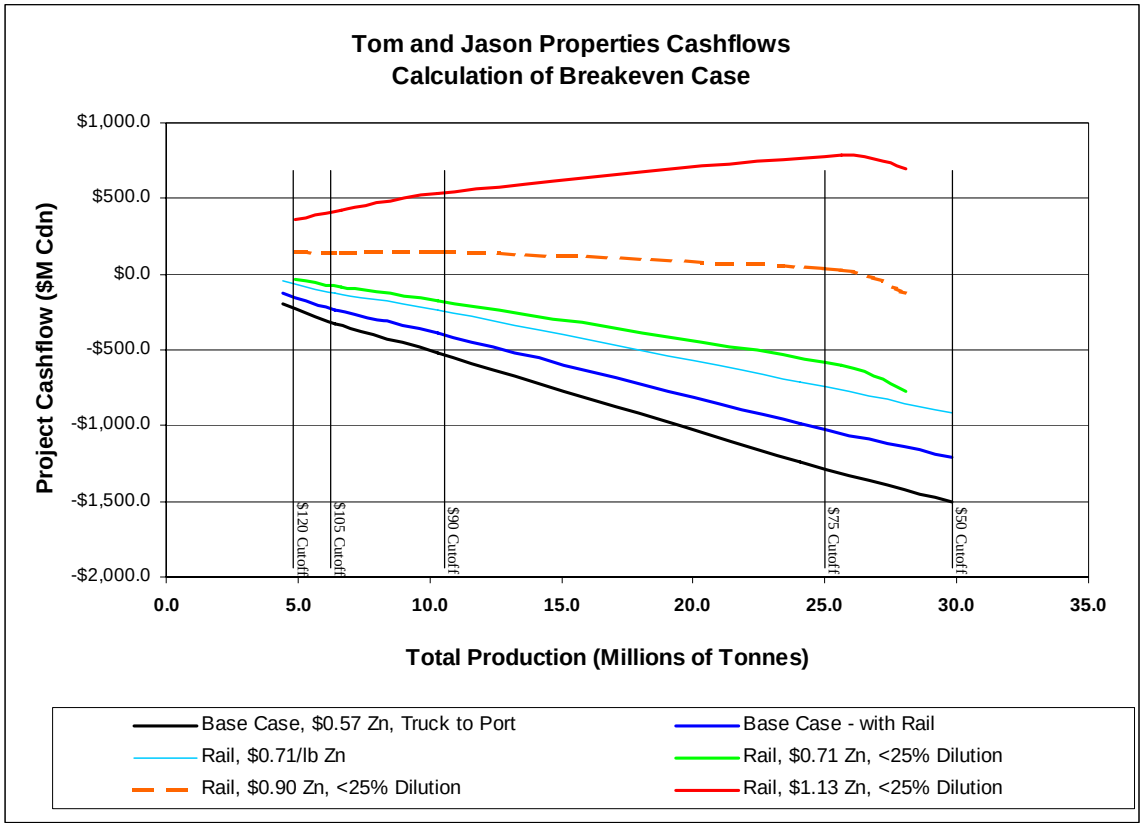
A further price increase was layered on to determine a “break even” metal price scenario for the properties. Metal prices were increased to Zn US$0.90/lb, Pb US$0.55/lb, and Ag US$10.93/oz. Cashflow improved to $+150M for the High Grade Case, and $-127M for the Base Case. This case was notable in that the High Grade Case generated the best cashflow.

The last case was to layer on a further metal price increase to determine prices that would be required to generate a 10% project IRR for the Base Case. Metal prices required to achieve 10% IRR were Zn US$1.13/lb, Pb US$0.69/lb and Ag US$13.80/oz, very nearly double the long term prices used by HBMS.

Table 12: Project Scenario Cashflows

Insitu Cutoff Value	Production (Diluted/Recovered)			Project Cashflows ($M Cdn)					
	Tonnes	Zn%	Pb%	Base Case	Rail from Ross River	Increase Prices $0.71 Zn $0.44 Pb	Reduce Dilution 25%	Prices $0.90 Zn $0.55 Pb	10% IRR $1.13 Zn $0.69 Pb
$120	4,402,762	6.07	6.65	-$194	-$126	-$39	-$29	$150	$365
$105	6,415,032	5.49	5.80	-$325	-$238	-$126	-$86	$143	$418
$90	10,331,130	5.47	4.67	-$518	-$389	-$234	-$171	$149	$535
$75	24,027,305	5.18	3.08	-$1,237	-$991	-$715	-$602	$28	$784
$50	29,845,766	5.01	2.86	-$1,500	-$1,208	-$918	-$778	-$127	$691

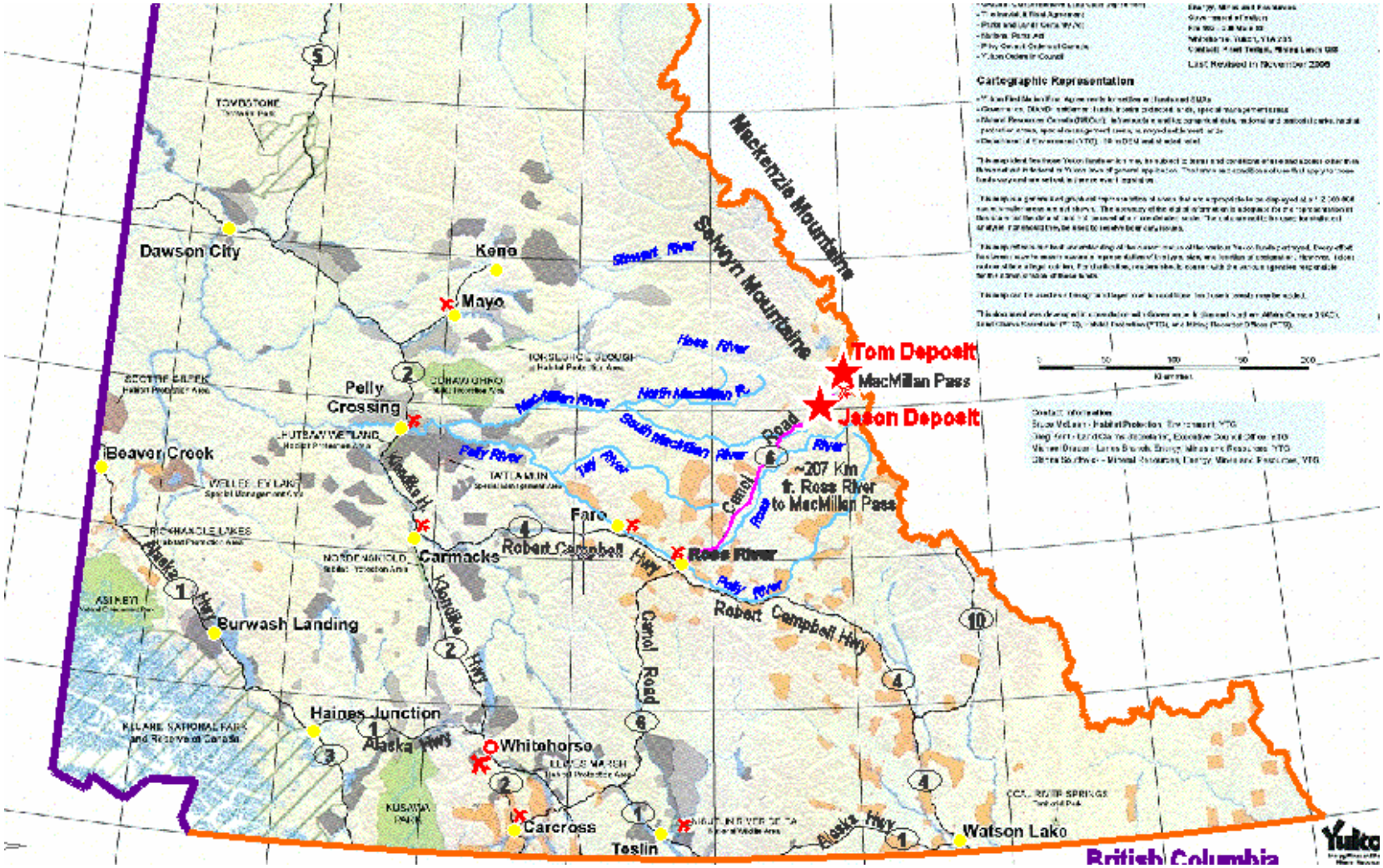
Figure 9: Cashflow Comparison – Calculation of Breakeven Case



ATTACHMENTS

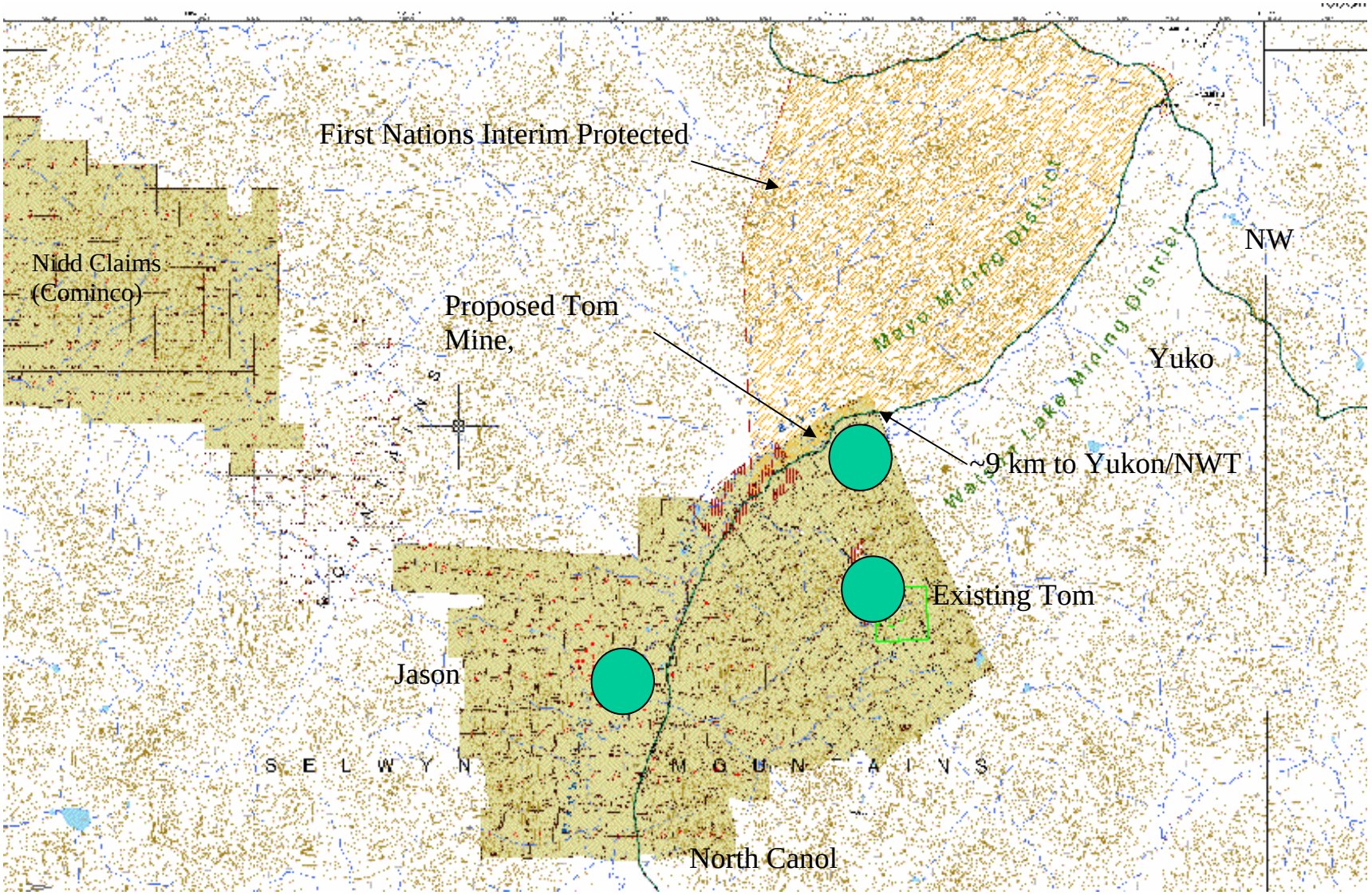
Location Map

ATTACHMENT I



Mayo-Watson Location Map

ATTACHMENT II



South MacMillan River near Jason Property

ATTACHMENT III

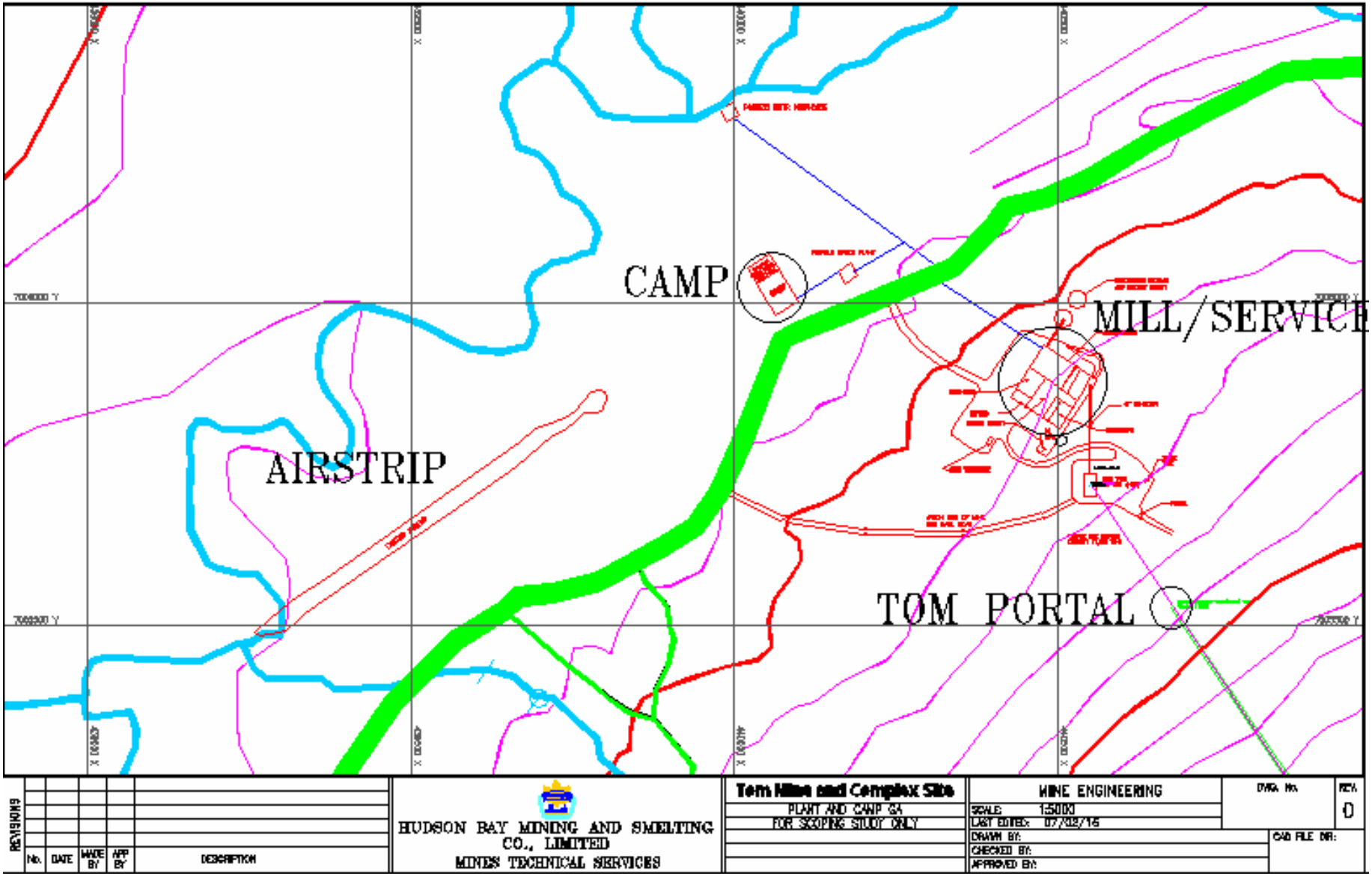
Jason Property – Near Ore Outcrop

ATTACHMENT IV

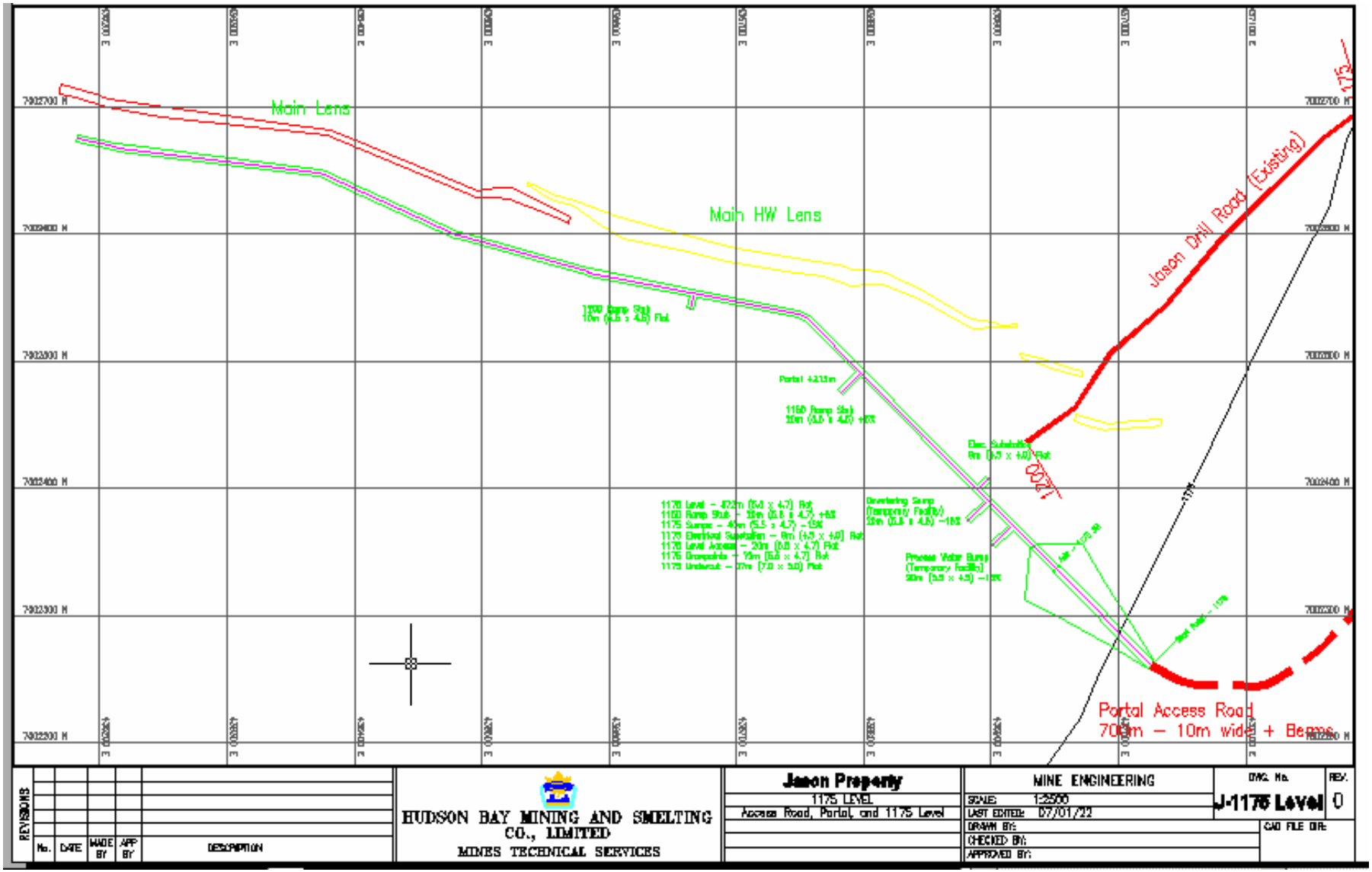
Tom Mine Site

ATTACHMENT V

Tom Mine & Mill Site Plan – with Topo **ATTACHMENT VI**

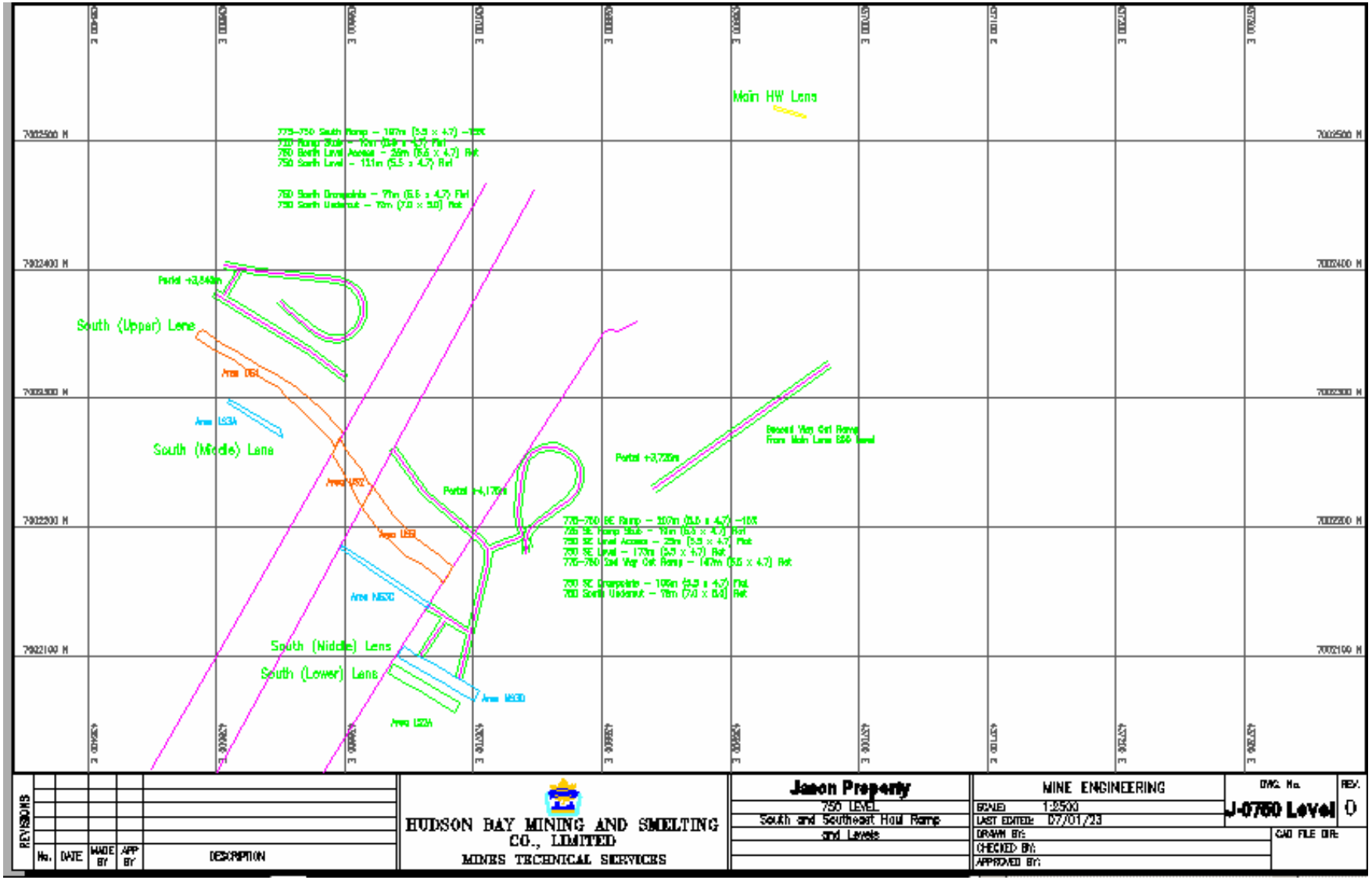


Jason Deposit – Main & HW Zones Plan View **ATTACHMENT VII**

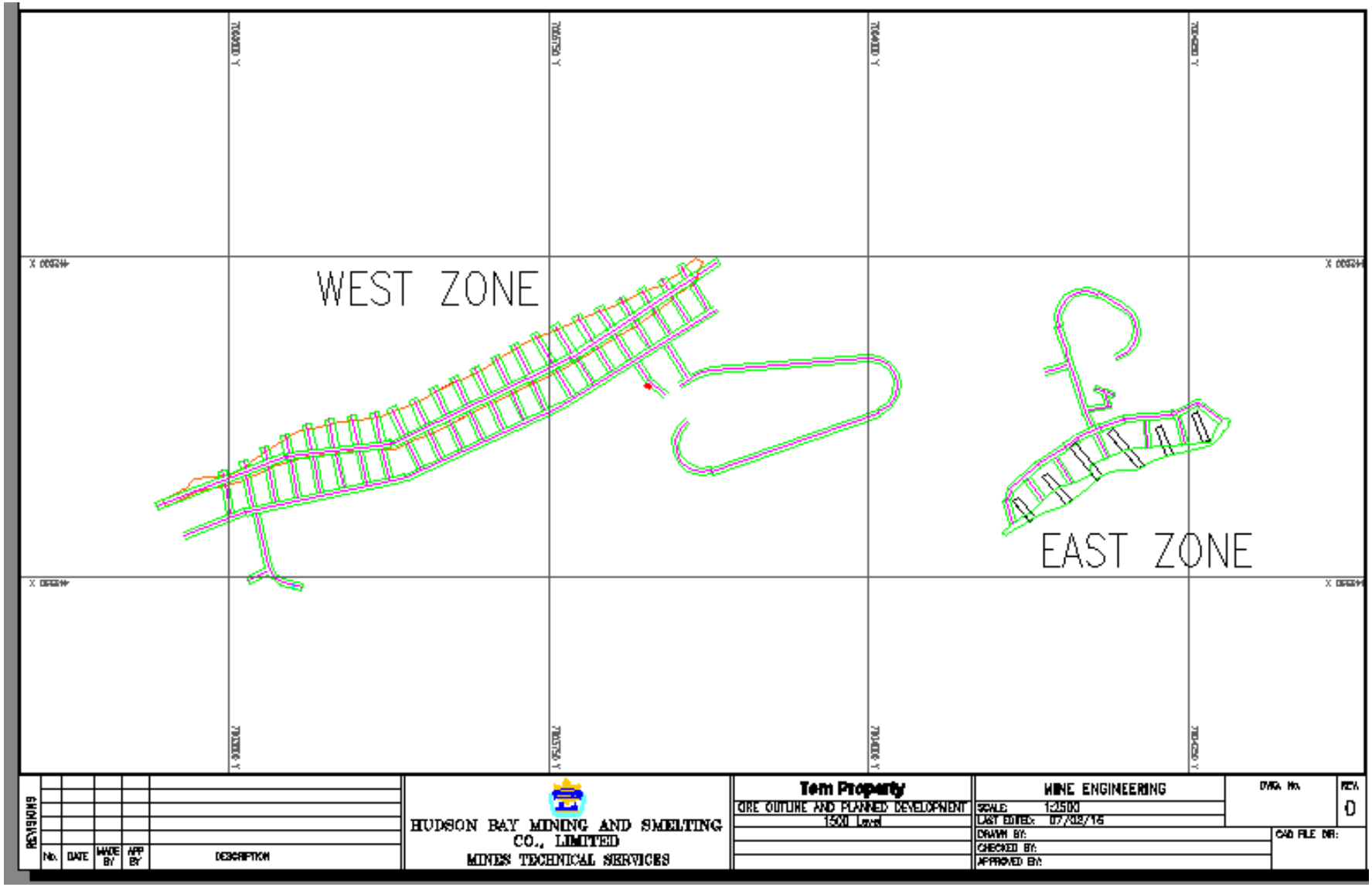


Jason Deposit – South Zone Plan View

ATTACHMENT VIII



Tom Deposit – West and East Zones Plan View **ATTACHMENT IX**



Environmental Approval Schedule

ATTACHMENT X

Figure 4. Preliminary Timeline for Project Assessment and Regulatory Approvals

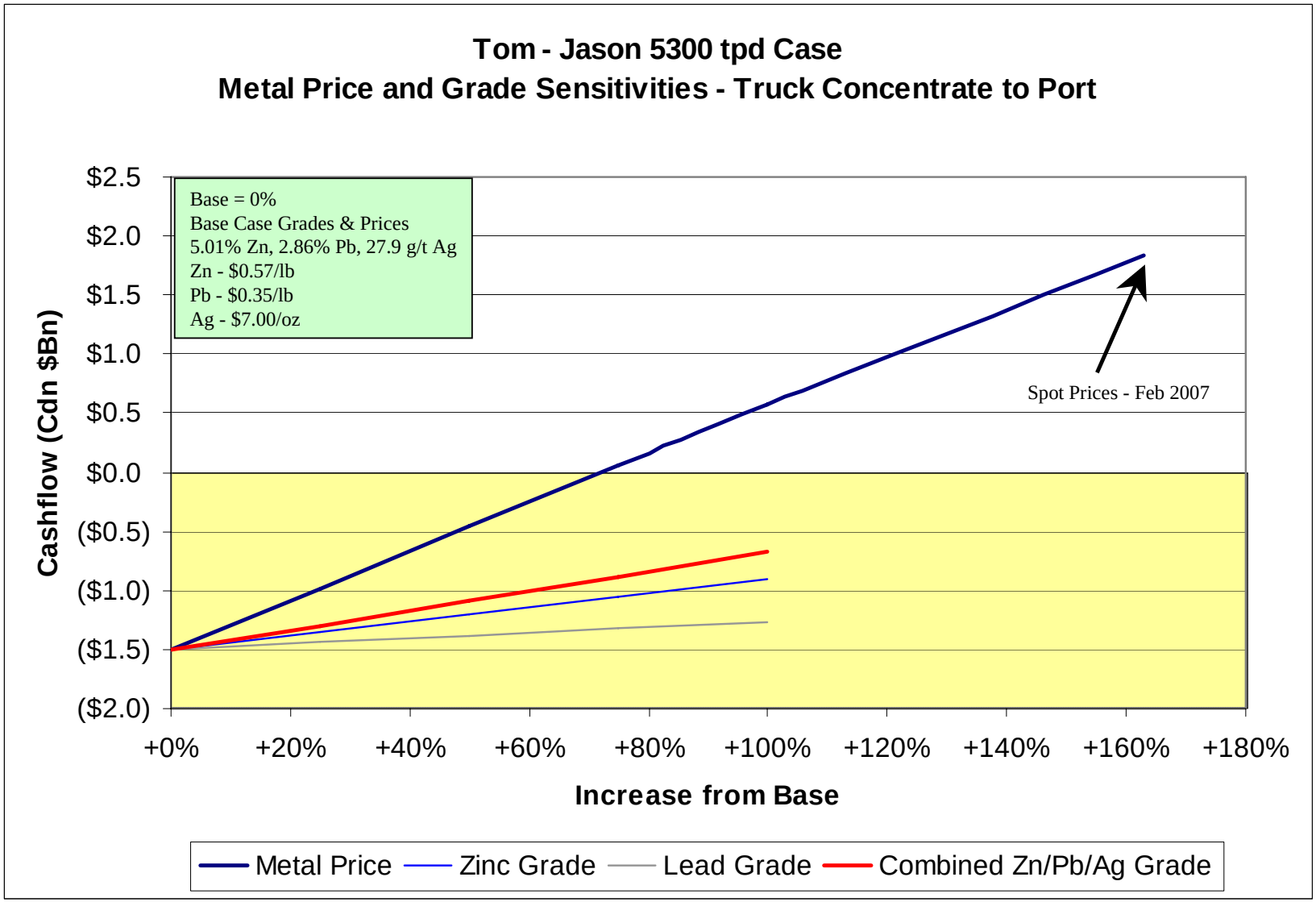
Assessment or Permitting Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Advanced Exploration Permitting																																
Prepare YESAA DO level project proposal																																
Assessment process																																
Prepare permit applications (mining land use permit and Type"B" water licence applications																																
Permit/License review process																																
Baseline Environmental/Socio-economic Studies																																
Consultation (First Nation, Communities, Regulators, YESAB)																																
Comprehensive Baseline studies (biophysical, socio-economic)																																
Supplemental Baseline Studies																																
Preparation of Mine Project Proposal for YESAA																																
Project Scoping, Team Development, Compile Existing Information, Identify Data Gaps and Needs																																
Define VEC's, Delinate Study Limits, Draft Terms of Reference, Prepare EIS Framework																																
Preparation of impact statements, Finalize EIS framework																																
Revise Terms of Reference, Draft EIS Outline, Incporate Cumulative Effects																																
Prepare Project Proposal (including final project description)																																
YESAB Executive Committee Screening																																
Quartz Mining License Process																																
Preparation of application																																
Approvals Process																																
Water License Process																																
Preparation of application																																
Approvals Process																																
Other Regulatory Approvals																																
Preparation of application																																
Approvals Process																																

LEGEND: timeframe/duration controlled by others

Notes
Assumptions related to this time estimate are presented in Section 6.1.1

Gartner Lee

Financial Sensitivity – Metal Prices & Grades **ATTACHMENT XI**



Financial Sensitivity –5300 tpd Case Costs **ATTACHMENT XII**

Cost Item	Cash Flow
Concentrate Transport	
Truck to Port (Base Case)	($1.501) Bn Cdn
Rail from Ross River to Port	($1.210) Bn Cdn
Power Supply	
Diesel Generators (Base Case)	($1.501) Bn Cdn
Grid Power - HB Powerline	($1.282) Bn Cdn
Grid Power - YK Powerline	($1.233) Bn Cdn
Operating Costs - incl. Conc. Haul	
Base Case - $71.27/t	($1.501) Bn Cdn
-10% Operating Cost - $64.15/t	($1.288) Bn Cdn
-20% Operating Cost - $57.02/t	($1.076) Bn Cdn

Sensitivity –2000 tpd Metal Prices & Grades **ATTACHMENT XIII**