

ECONOMIC POTENTIAL
OF THE
DUTHIE MINE

Omineca Mining Division

NTS Sheet 93L 14

Owner : Silver Standard Mines Limited

Operator: Bishop Resources Development Corp
Suite 806 - 604 W Hastings Street
Vancouver, British Columbia

R. Tim Henneberry, FGAC
April 14, 1988

SUMMARY

Bishop Resources Development Corp. of Vancouver, British Columbia has under option 29 crown grants and mineral claims collectively known as the Duthie Mine. Duthie Mine is located 23 road kilometres from Smithers, British Columbia on NTS map sheet 93L 14. Duthie Mine produced close to 1.7 million ounces of silver, 7.6 million pounds of lead, 6.3 million pounds of zinc and 3200 ounces of gold from silver-lead-zinc quartz veins within andesitic to rhyolitic volcanics of the Jurassic Hazelton Group.

A compilation of existing mapping and sampling data was completed in an effort to establish a mineral inventory for the Duthie Mine and outline an exploration program to firm up the known reserves and locate additional reserves.

Total Proven + Probable economic mineral reserves stand at 26981 tons grading 0.079 ounces per ton gold, 19.13 ounces per ton silver, 4.39 percent lead and 5.52 percent zinc. An additional 80,000 to 100,000 tons of similar grade material can be realistically Inferred based on the available data.

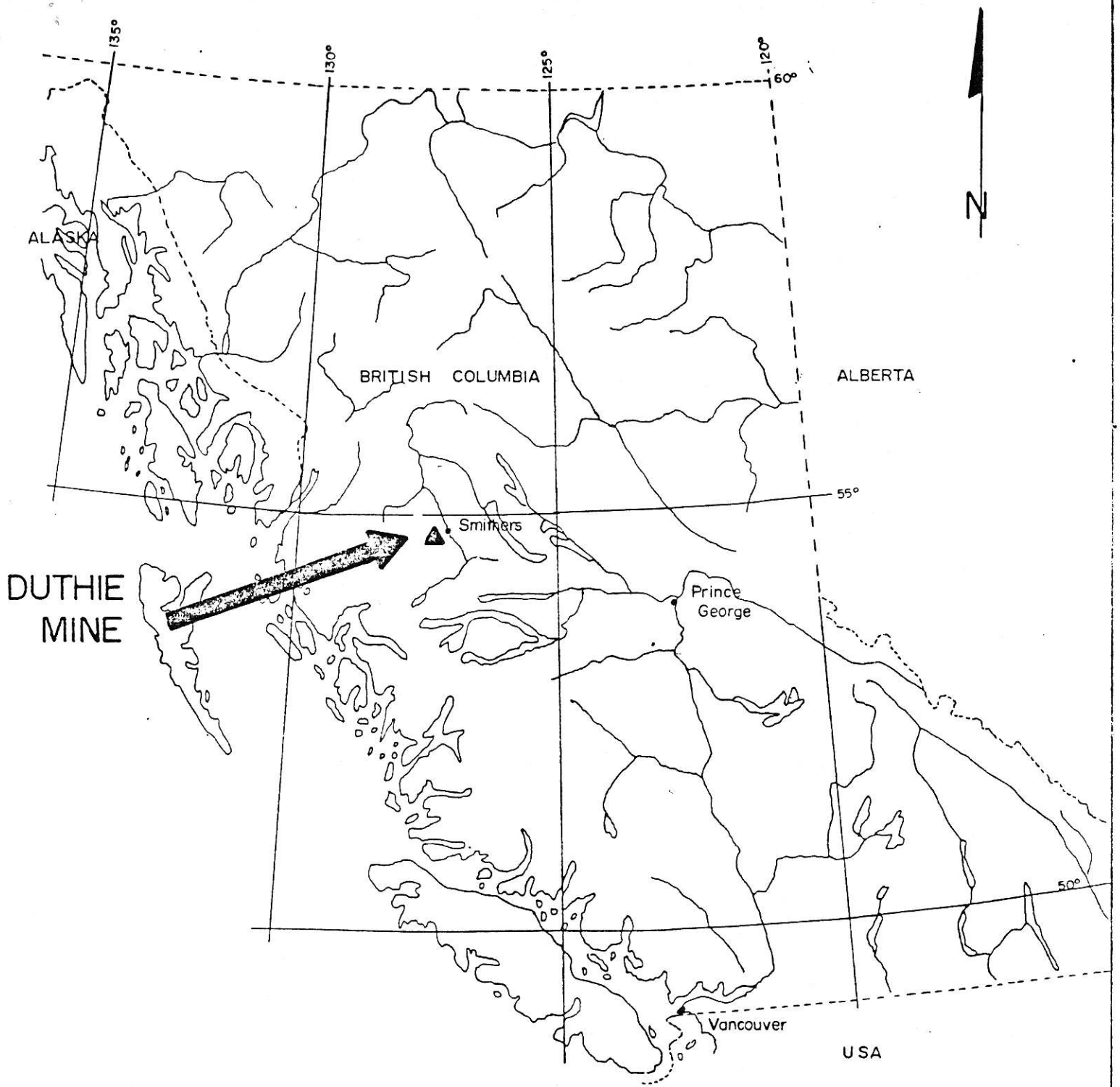
An exploration program of \$950,000 is recommended to firm up the known reserves, to test the geologically inferred reserves and to explore for additional reserves. This program will consist of 3900 feet of surface drilling and 18,600 feet of underground drilling. Approximately 500 feet of cross cut will be required to provide underground drilling stations.

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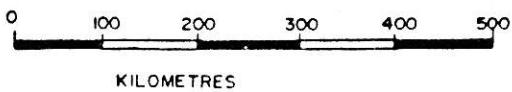
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DUTHIE
MINE



MINTEK RESOURCES LTD.	
LOCATION MAP	
DR. BY: R.T. HENNEBERRY	SCALE:
DATE: APRIL 1988	APPRD. BY:
CHK'D. BY:	REV.:
DWG. NO.	FIGURE: I

INTRODUCTION

The Duthie Mine property, under lease to Bishop Resources Development Corp. and Duthie Holdings Limited (a private company owned by Bishop Resources Development Corp.) is owned by Silver Standard Mines. An joint venture agreement between Bishop Resources Development Corp. and Mintek Resources Ltd since terminated, was in effect in early 1988 with Mintek as operator. The Duthie Mine is located on the western slope of Hudson Bay Mountain approximately 23 road kilometres from the town of Smithers, within the Omineca Mining Division.

This report is based on a compilation of available data for the two periods of production for the Duthie Mine (1924-1930 and 1946-1954) and additional available data. Verification of assay results by Bishop Resources in 1986-1987 and by Mintek Resources in 1988 suggest the assay results available from the earlier operations are valid.

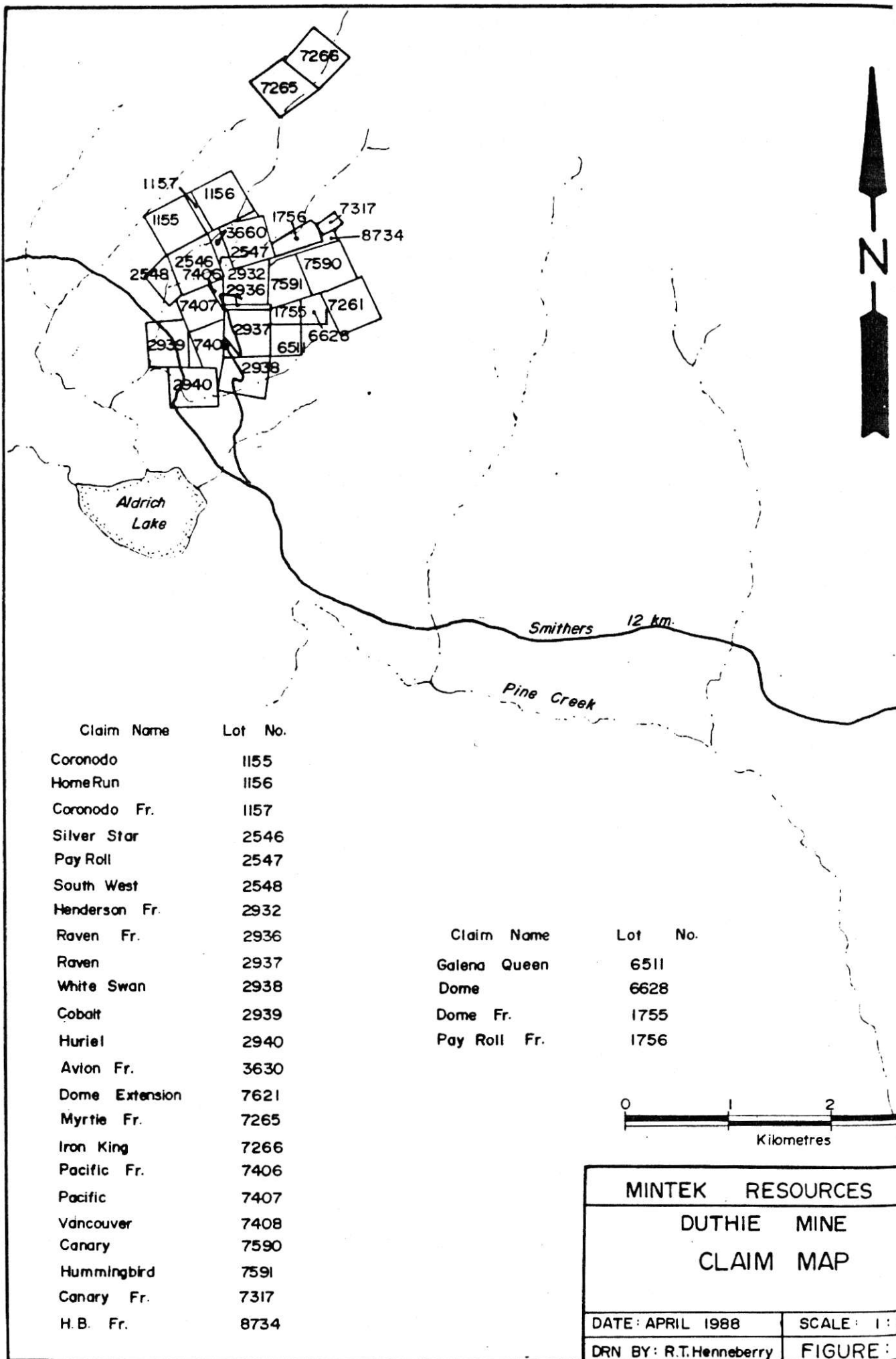
The purpose of this report is to document the results of the previous operations to outline a viable exploration program to firm up the known mineral reserves and to locate new reserves.

LOCATION - ACCESS

The Duthie Property, 12 kilometres southwest of Smithers, is accessible via the Hudson Bay Mountain Ski Hill Road a distance of 23 kilometres. The property is located on the southwest slope of Hudson Bay Mountain on NTS map sheet 93L/14 (Figure 1).

Topography is rugged with a slope ranging between 5% and 15%. Vegetation consists of jackpine with little undergrowth, allowing foot traverses across the limits of the property. Four wheel drive roads connect the portals with the mill.

Climate is typical of the central interior of British Columbia. Winter temperatures can dip as low as -30 Celsius but average closer to 0 to -10. Snow accumulations appear to be in the order of 1 to 1.5 metres. Winter conditions prevail from November to March. Summers are quite comfortable with temperatures ranging from 10 to 30 Celsius.



Claim Name	Lot No.
Coronado	1155
Home Run	1156
Coronado Fr.	1157
Silver Star	2546
Pay Roll	2547
South West	2548
Henderson Fr.	2932
Raven Fr.	2936
Raven	2937
White Swan	2938
Cobalt	2939
Huriel	2940
Avion Fr.	3630
Dome Extension	7621
Myrtle Fr.	7265
Iron King	7266
Pacific Fr.	7406
Pacific	7407
Vancouver	7408
Canary	7590
Hummingbird	7591
Canary Fr.	7317
H.B. Fr.	8734

Claim Name	Lot No.
Galena Queen	6511
Dome	6628
Dome Fr.	1755
Pay Roll Fr.	1756



MINTEK RESOURCES	
DUTHIE MINE	
CLAIM MAP	
DATE: APRIL 1988	SCALE: 1 : 5
DRN BY: R.T.Henneberry	FIGURE :

OWNERSHIP

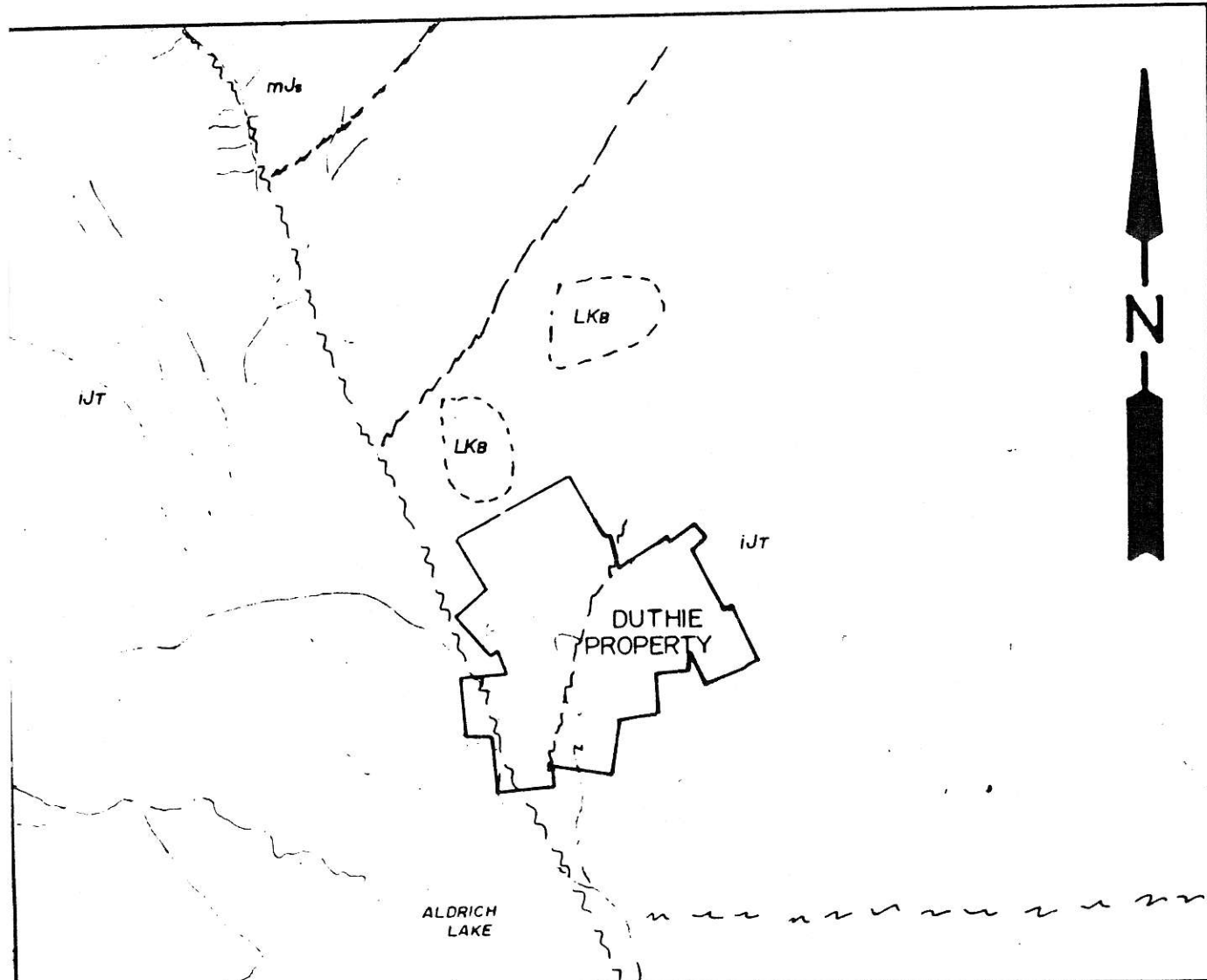
The Duthie Property consists of 29 claims: 21 crown grants and 6 contiguous mineral claims (Figure 2). All claims except Dome Fraction and Payroll Fraction are under lease from Silver Standard Mines Limited of Vancouver. The Dome and Payroll Fractions are owned by Duthie Holdings.

Crown Granted Claims

Coronado	1155	Muriel	2940
Home Run	1156	Avion Fraction	3660
Coronado Fraction	1157	Dome Extension	7261
Silver Star	2546	Myrtle Fraction	7265
Pay Roll	2547	Iron King	7266
South West	2548	Pacific Fraction	7406
Henderson Fraction	2932	Pacific	7407
Raven Fraction	2936	Vancouver	7408
Raven	2937	Canary	7590
White Swan	2938	Hummingbird	7591
Cobalt	2939		

Contiguous Mineral Claims

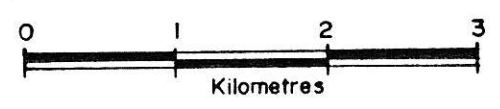
Galena Queen	6511	Canary Fraction	7317
Dome	6628	H.B. Fraction	8734
Dome Fraction	1755	Pay Roll Fraction	1756



LEGEND

- CRETACEOUS**
- LKb BULKLY INTRUSIONS granodiorite
- JURASSIC**
- Hazleton Group
- mJs SMITHERS FORMATION siliclastic sediments
- iJT TELKWA FORMATION basalt to rhyolite
- Contact --- Creek
- Fault --- Road

From: GSC Open File 351



MINTEK RESOURCES LTD

DUTHIE MINE

REGIONAL GEOLOGY

HISTORY

The history of the Duthie Property can be divided into 2 stages. Stage 1 involves the initial discovery and mining from the Front End of the mine (1923-1930). Stage 2 involves the discovery of the Back End of the mine and subsequent mining (1946-1954). The property has been worked intermittently during the time between the main stages of development and subsequent to Stage 2.

Ashman, Henderson and Boyd discovered and staked the Duthie Property in 1908. Stripping and test pitting along the Ashman Vein comprised the early work, until the discovery of the Henderson Vein in 1921. Underground development by Duthie Mines Limited began in 1922 with the driving of three adits on the Henderson Vein: Thompson (presently caved), McPherson (3800 Level) and Compressor (3600 Level). Operations temporarily ceased in 1924, to be resumed in 1925 when a winze was sunk 158 feet below the Compressor Level, establishing 3580 Level and 3500 Level. The Front End mining and development was suspended in 1930. Duthie Mines Limited and subsequent lessors mined approximately 37,000 tons from the Front End of the mine.

Operations on the Back End of the mine began in 1946 with surface and underground diamond drilling, leading to the discovery of the Breccia Zone. 3800 Level was extended under the Breccia Zone, and 4100 Level was driven. Intermediate levels were established as 3950 Level and 4250 Level. Sil-Van Consolidated Mining and Milling Company Limited mined approximately 43,000 tons from the Breccia Zone.

Duthie Mine Production

	Tonnage	^{.04} ounces Au	^{21.0} ounces Ag	^{4.6%} pounds Pb	^{4.0%} pounds Zn
Front End	37,060	1,659	1,504,764	4,182,257	2,683,077
Back End	42,828	1,640	212,641	3,522,080	3,759,877
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Total	79,281	3,240	1,671,437	7,614,127	6,345,877

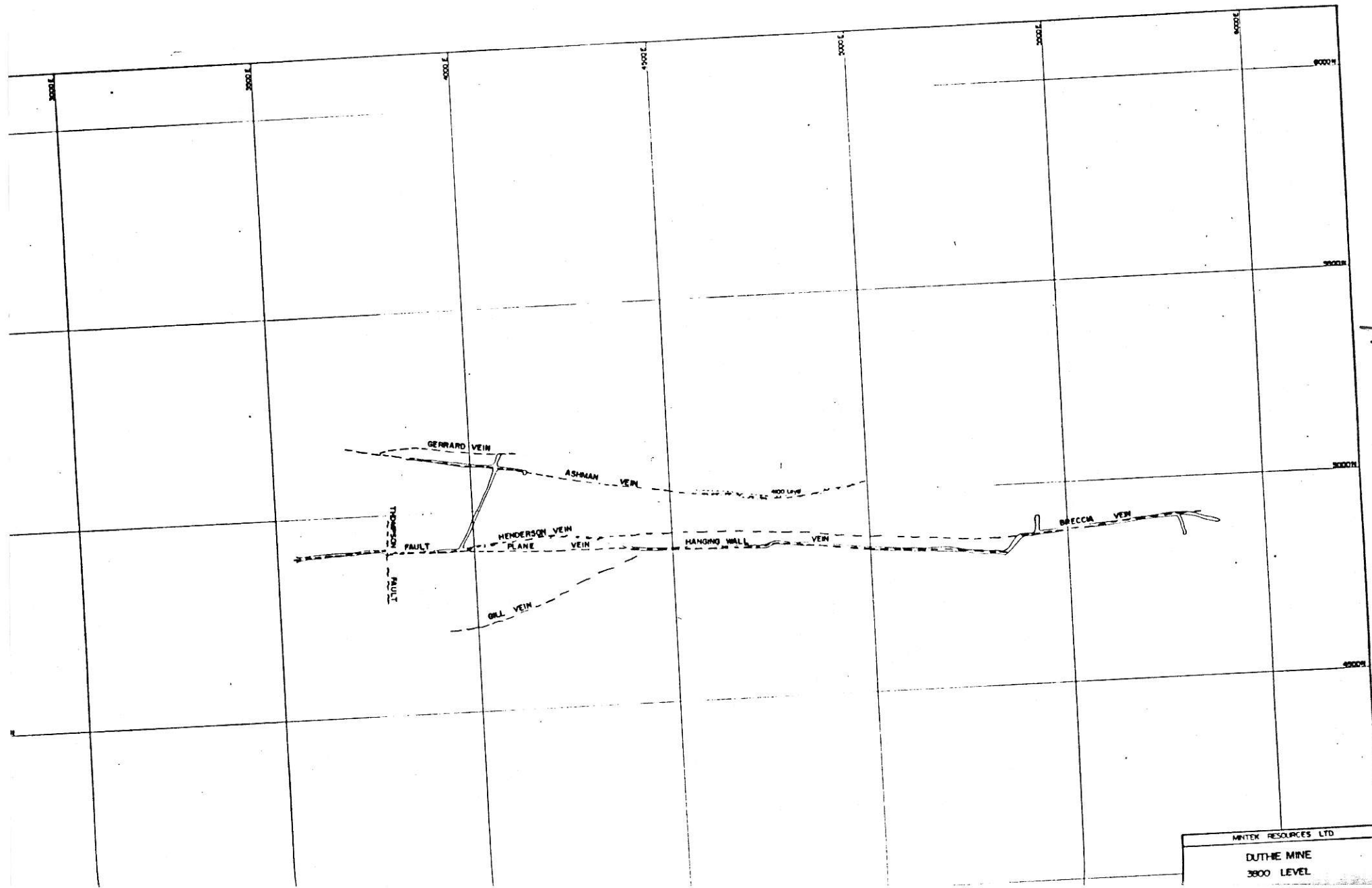
Production data from the British Columbia Ministry of Energy, Mines and Petroleum Resources MINFILE. Front End (093L-088). Back End (093L-089).

REGIONAL GEOLOGY

Hudson Bay Mountain in the area of the Duthie Mine is underlain by Jurassic sediments and volcanics intruded by late Cretaceous plutons (Figure 3). Thrust faulting and northeast trending shearing document the structural history.

Hazelton Group members Telkwa Formation and Smithers Formation are oldest rocks in the area. The Jurassic volcanics of the Telkwa Formation consisting of basaltic to rhyolitic flows, tuffs and breccias. The Telkwa Formation is overlain by the middle Jurassic Smithers Formation comprised of siltstones, greywackes and conglomerates. These rocks are intruded by porphyritic granodiorite and quartz monzonite of the Cretaceous Bulkley Intrusions. (Tipper, 1976).

The Duthie Property is underlain by the Telkwa Formation andesitic to rhyolitic flows, flow breccias and tuffs (Kindle, 1948). A regional propylitic alteration assemblage has been noted within the volcanics on the Duthie Property. Hydrothermal alteration consisting of chlorite, sericite, bleaching and silicification has been noted within and adjacent to the vein structures in the Duthie Mine. The Fault Plane / Breccia Vein trend is parallel to the northeast structural trend noted on Tipper's (1976) map.



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 DUTHIE MINE
 3000 LEVEL

DUTHIE MINE

All of the mining activity has been centred on Henderson Fraction, Raven Fraction, Canary and Hummingbird Crown Grants. For the purposes of this report the Duthie Mine is divided into a two sections: a Front End and a Back End, corresponding to the two major periods of mining activity because the target of each mining period was significantly different.

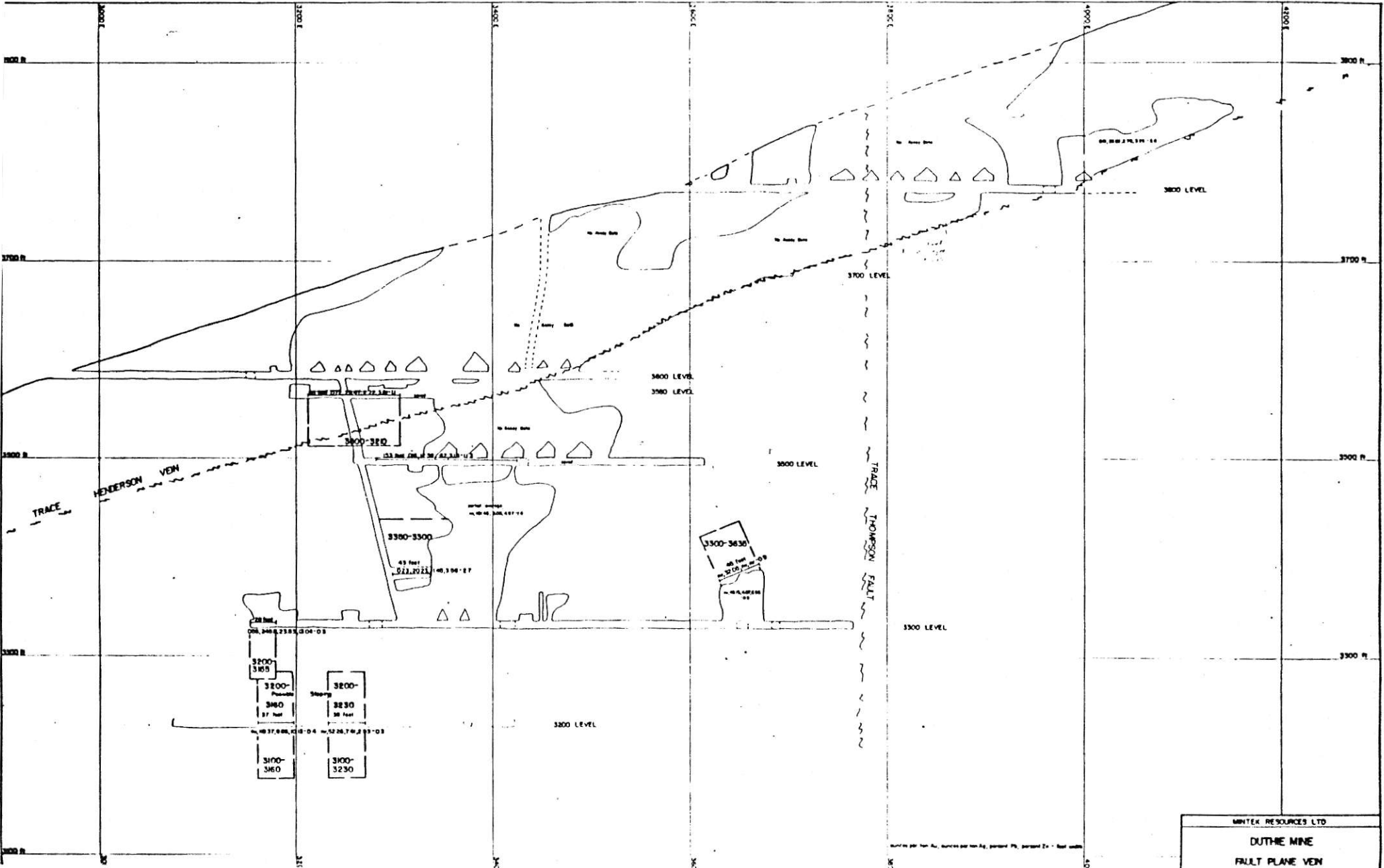
Development in the Front End was concentrated on three structures: the Fault Plane Vein developed on 3200 Level, 3300 Level, 3500 Level, 3580 Level, 3600 Level, 3700 Level and 3800 Level; the Henderson Vein developed on 3200 Level, 3300 Level, 3400 Level, 3500 Level, 3580 Level, 3600 Level, 3700 Level and 3800 Level; and the Ashman Vein developed on 3200 Level, 3300 Level, 3600 Level and 3800 Level. Considerable stoping has taken place on both the Fault Plane Vein and Henderson Vein. A small block of ore has been stoped from the Ashman Vein.

Development in the Back End was concentrated on Breccia Vein and Hanging Wall Vein. The Breccia Vein was developed on 3800 Level, 3950 Level, 4100 Level and 4250 Level while the Hanging Wall Vein was developed on 3800 Level and 3950 Level. The bulk of the stoping has taken place on the Breccia Vein, with small isolated blocks stoped on the Hanging Wall Vein.

In order to properly evaluate the Duthie Mine property 40 Scale Cross Sections were constructed through the known workings at varying 50 foot to 100 foot spacings depending on the volume of available data. All available assay data was compiled and plotted on 40 Scale Assay Level Plans. The Cross Sections and Assay Data allowed the construction of 40 Scale Longitudinal Sections for the 5 major veins. Rather than plotting each individual assay on the longitudinal sections, average grades and widths were calculated for ore grade lengths of drifts and raises. From these Longitudinal Sections a mineral reserve for the Duthie Mine was calculated.

The relationship of the vein structures is plotted on the 100 Scale 3800 Level Plan (Figure 4).

All azimuths given are based on the mine grid. Mine north is 330° (true north) and mine east is 060° (true north).



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FRONT END

The Front End of the Duthie Mine develops the Fault Plane Vein, Henderson Vein and Ashman Vein. Front End workings consist of 3300 Level, 3600 Level and 3800 Level open to surface and intermediate levels 3200 Level, 3400 Level, 3500 Level, 3580 Level and 3700 Level. Front End Cross Sections were constructed between Sections 3200 E and 4100 E at 50 foot spacings and between Sections 4100 E and 4400 E at 100 foot spacings.

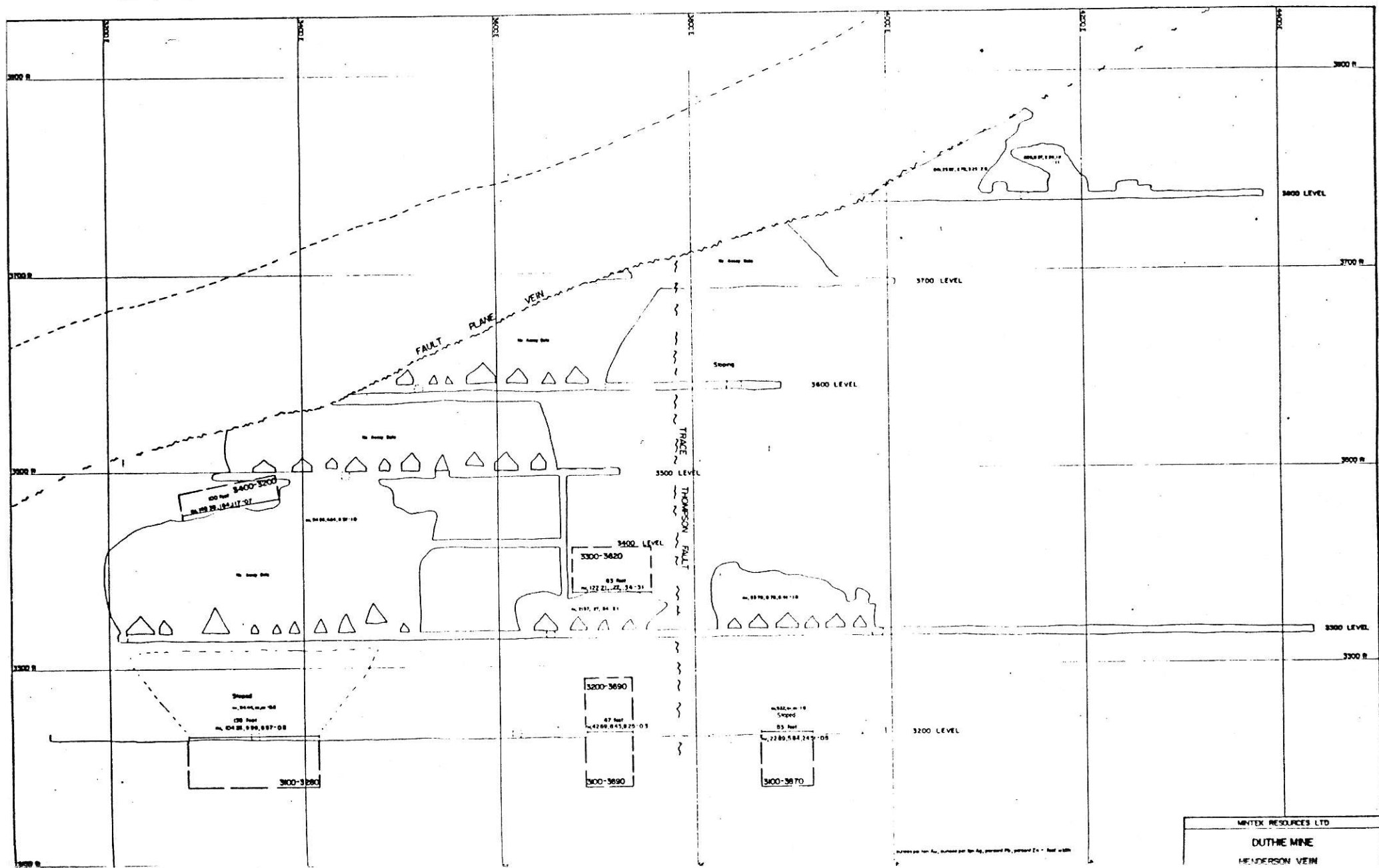
The three developed veins in the Front End range in width from 6 to 48 inches, though for the most part average 12 to 18 inches. Alteration, pronounced within the vein channel, consists of bleaching, silicification, chlorite, sericite and minor epidote and K-feldspar. Wall rock alteration consists predominantly of fracture and groundmass chlorite, possibly a regional propylitic assemblage as opposed to a hydrothermal assemblage. Mineralization consists of pyrargyrite (ruby silver), galena and sphalerite, with lesser arsenopyrite and chalcopyrite.

Fault Plane Vein

The most important structure in the Front End of the mine is the Fault Plane Vein, striking 085° dipping 060° S, though the dip ranges between 045° to 085° South proximal to the Henderson Vein junction. Diamond drilling has tested the Fault Plane Vein down dip of the 3300 Level stope and below 3800 Level near Section 3975 E. Drill logs were not available.

Stoping of the Fault Plane Vein has taken place on all developed Levels. Figure 5 suggests two ore shoot trends based on the stoping. The dominant trend is parallel to the Henderson Vein junction, plunging 15 degrees to the southwest. The second trend is a vertical plunge centred near Section 3400 E.

The Fault Plane Vein has been stoped above the Henderson Vein junction for close to 800 feet, but below the Henderson Vein junction for only 200 feet. So little stope assay data exists from the Front End stopes that estimates of grades cannot be made, though considerable ruby silver has been noted below elevation 3610 (MacLeod, 1928). An examination of Sections 3400 E through 3800 E offers an explanation. Stoping appears to have carried the vertical Henderson Vein to the Fault Plane Vein junction point where stoping continued on the shallower Fault Plane Vein. This relationship (steeper stope swinging to shallower stope, with shallower stope both above and below the junction point) can be seen below the 3600 Level sill on Section 3450 E both on the Section and in the drift.



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All literature researched documented the Henderson Vein as the main structure with the Fault Plane Vein as a hanging wall splay (MacLeod, 1928; Kindle, 1940). Therefore, with most of the effort concentrated on the Henderson Vein, the Fault Plane Vein below the junction point was forgotten.

A possible explanation for the vertical trend is also related to the junction. Above the junction the Fault Plane vein has been stoped to surface (at least 160 feet). The sill of the 3300 Level stope is 220 feet below the junction. Therefore, a possible zone of mineralization 200 feet on either side of the Fault Plane Vein / Henderson Vein junction exists. Development to the east on 3300 Level would quickly lead outside of the lower 200 foot boundary. Based on this argument, the vertical trend appears because this is the only location the Fault plane has been tested below the junction.

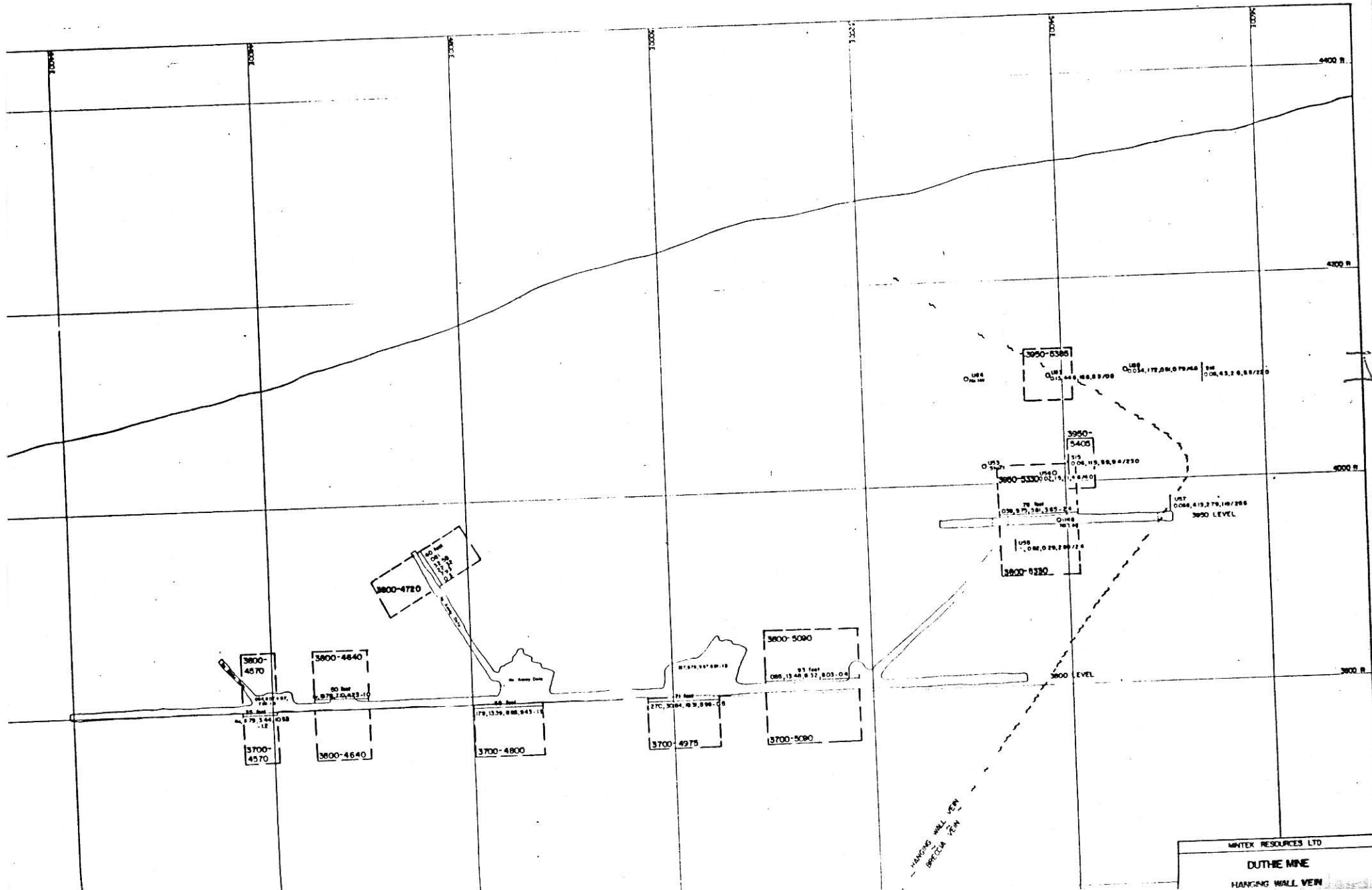
Eight small probable ore blocks exist in the mineral reserve for the Fault Plane Vein. 3200 Level was inaccessible so verification of the 3200 Level and 3100 Level ore blocks was not possible. Mining is in progress on Block 3350-3300. Blocks 3500-3210 and 3300-3635 are of marginal grade at present metal prices. Potential reserves on the Fault Plane Vein could be located below the junction point between Sections 3500 E and 4200 E. Potential reserves also could be located both above and below the junction west of Section 3200 E.

Henderson Vein

The Henderson Vein strikes approximately 060° and dips 85° N to 85° S. The dip swings to 60° N to 70° N as the Henderson Vein splays from the Fault Plane Vein. Diamond drilling has tested the Henderson Vein west of Section 3200 E near 3300 Level elevation and below 3800 Level near Section 3975 E.

Stoping has taken place on all the developed Levels (Figure 6). As with the Fault Plane Vein, the stoping suggests an ore shoot plunge parallel to the plunge of the Fault Plane Vein / Henderson Vein junction. The second vertical plunge is also indicated on the Henderson Vein.

Stoping has taken place over a wider lateral extent as compared to the Fault Plane Vein. Significantly more stope assay data exists for the Henderson Vein stopes. Significant silver values have been obtained from the eastern stopes on 3300 Level suggesting the mineralized zone associated with the junction could be at least 400 feet deep perpendicular to the plunge of the junction in the plane of the Henderson Vein.



Previous reports suggest the Thompson Fault has an important role in the localization of ore shoots (MacLeod, 1928; Kindle, 1940). Stopping has taken place on both sides of the Thompson Fault and the largest stopping block appears to be far removed to the west of the Thompson Fault, suggesting this fault exerted little influence in the localization of ore shoots.

The Thompson Fault has displaced the Henderson Vein and Fault Plane Vein approximately 10 feet to the south with respect to the hanging wall. Vein continuity problems exist proximal to the Thompson Fault on 3600 Level and 3300 Level (see Assay Level Plans). Un-reported stopping has taken place above 3600 Level on the east side of the Thompson Fault, though this stopping was not seen by the author.

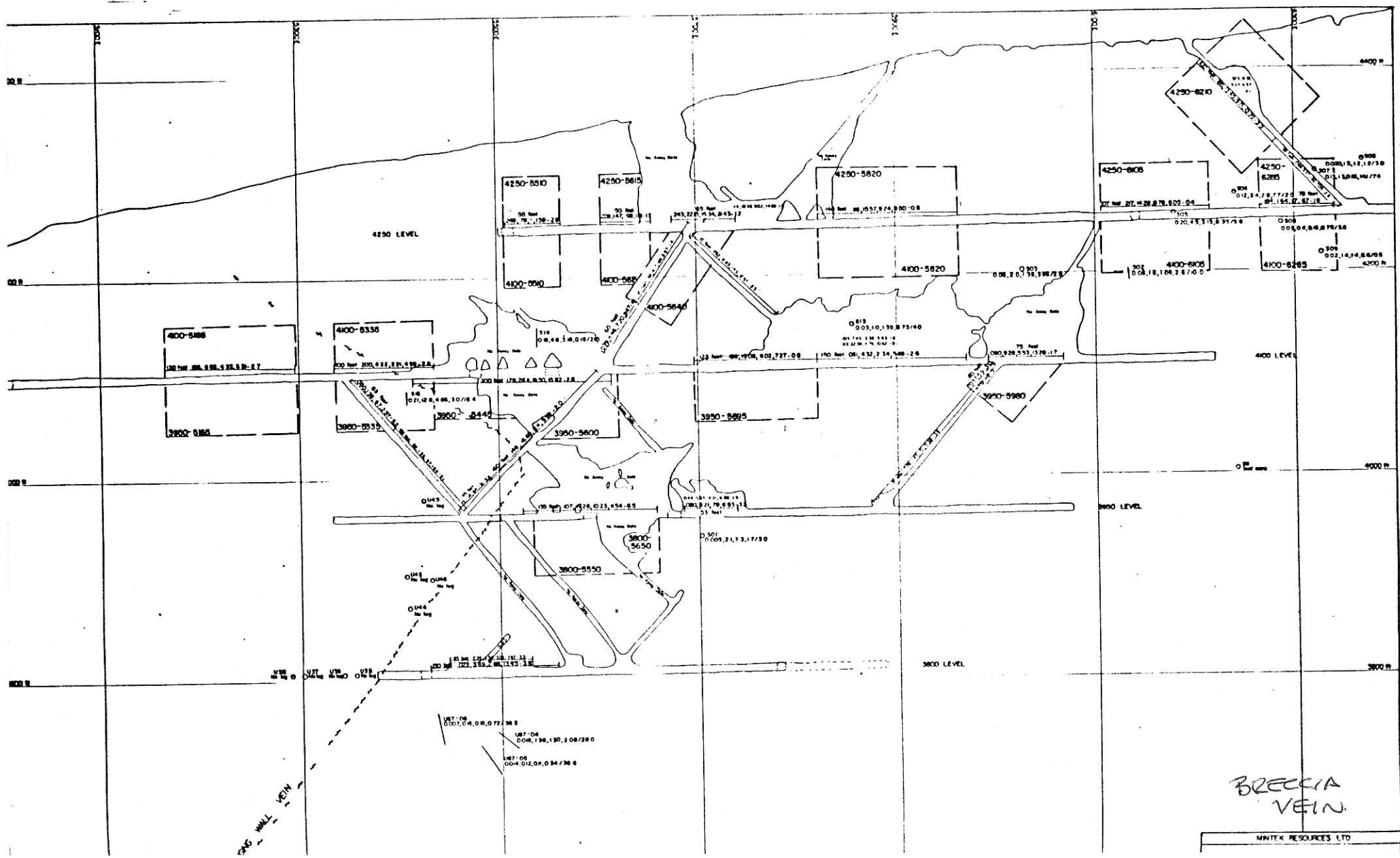
Five probable ore blocks exist on the Henderson Vein. 3200 Level is presently inaccessible so the 3200 Level and 3100 Level ore blocks have yet to be verified. Blocks 3400-3200 and 3300-3620 will be mined as soon as access can be established. Potential ore could be located peripheral to the stopes. Potential ore could be located to the east and to the west along the plunge of the Fault Plane Vein / Henderson Vein junction.

Ashman Vein

The Ashman Vein strikes 070° and dips 85° N to 85° S. Diamond drilling has tested the Ashman Vein below 3800 Level near Section 4060 E and below 3200 Level between Sections 3900 E and 4100 E. Drill logs do not exist for the 3800 Level drilling and a location map does not exist for the 3200 Level drilling.

Small blocks have been stoped on 3800 Level and 3600 Level (Figure 7). A significant block of ore has been stoped between 3200 Level and 3420 elevation. Assay results suggest the large stope was marginal when values were calculated over a minimum 3 foot mining width. Sections 3900E to 4100 E suggest the Ashman Vein rolls (changes dip from south to north) near 3300 Level. The mineralized shoot may be related to this roll. A second roll is suggested between 3600 Level and 3800 Level.

The mineral inventory does not carry any reserve for the Ashman Vein. Potential ore could be associated with the roll between 3600 Level and 3800 Level. Potential ore could be located to the west, where the Ashman Vein appears to be in junction with a lesser structure known as the Gerrard Vein (Figure 4).



BRECCIA
VEIN

BACK END

The Back End of the mine developed the Breccia Vein and the Hanging Wall Vein. The initial 400 feet of 4100 Level developed the Ashman Vein. Adit levels 3800 Level and 4100 Level and intermediate levels 3950 Level and 4250 Level develop the Back End. Back End Sections were constructed at 100 scale spacings between Section 4400 E and 4800 E and between 5100 E and 5300 E and at 50 foot spacings between 4800 E and 5100 E and between 5300 E and 6400 E.

Two structures have been developed in the Back End, the Breccia Vein and the Hanging Wall Vein. Widths ranging from 4 inches to 100 inches have been recorded in the Breccia Vein, while widths from 1 to 24 inches have been noted on the Hanging Wall Vein. Alteration consists of chlorite, sericite, bleaching and silicification, with lesser limonite. Wall rock bleaching has been noted proximal to the vein channels (within 10 feet according to drill logs). Mineralization consists of: sphalerite, argentiferous (?) galena, auriferous (?) arsenopyrite and lesser chalcopyrite. Ruby silver has not been documented in the Back End of the mine.

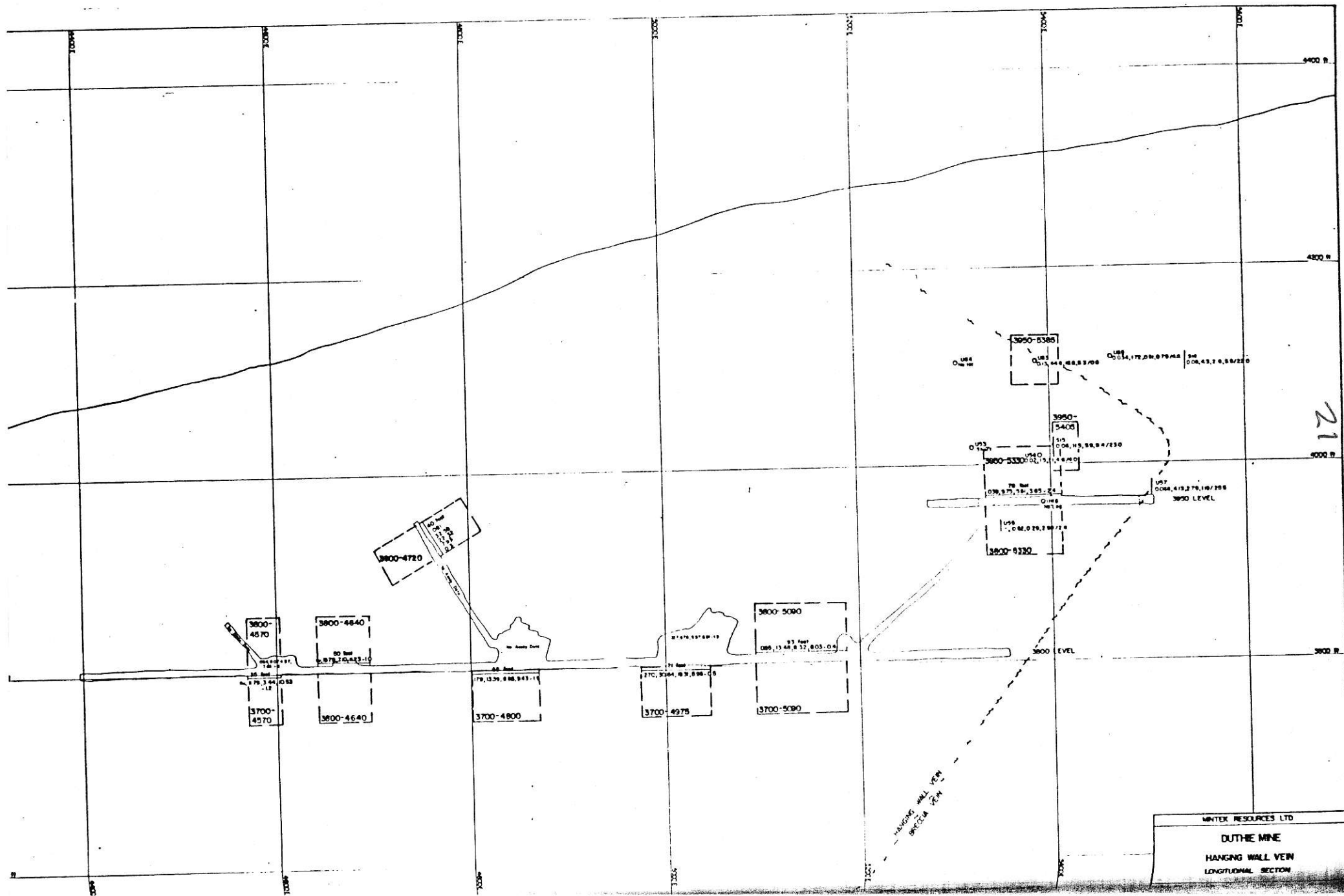
Breccia Vein

The Breccia Vein, the most important structure in the Back End, strikes 085° to 090° and dips 70° S to 90° . Diamond drilling has tested the Breccia Vein sporadically along strike between Sections 4700 E and 6400 E between elevations 3490 and 4300.

Stoping has taken place on all levels. Large stoping blocks have been developed on 3950 Level, 4100 Level and 4250 Level. The western blocks on 3950 Level and 4100 Level range in width to 20 feet developing the so-called "Breccia Ore". Several parallel ore shoot plunges are indicated based on the stoped blocks.

The Breccia Ore plunge appears to parallel the junction of the Hanging Wall Vein with the Breccia Vein. The Breccia Ore on 3800 Level is located where the back is taken down 1 lift (centred on Section 5500) suggesting this junction is not linear. The 1986 - 1987 drilling from 3800-5425 cross cut below 3800 Level also indicates this plunge.

Based on the non-linear plunge of the Breccia Ore Body shoots a parallel plunge is suggested for the second set of stoped blocks (4250-5650, 4100-5800), though nothing of significance was noted in the 3950 Level sampling down plunge. The Breccia Ore at 3800 Level does not carry economic values, suggesting a mineralized horizon sill at elevation 3900.



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 DUTHIE MINE
 HANGING WALL VEIN
 LONGITUDINAL SECTION

A third mineralized shoot is suggested by the 4350-6200 stope. Significant mineralization has also been located on 4250 Level. Workings do not exist down plunge of 4250 Level.

A total of 22 ore blocks comprising most of the present mineral inventory are identified on the Breccia Vein. 4250 Level is presently inaccessible so the 4250 Level and 4100 Level ore blocks associated with 4250 Level have to be verified. Development and/or mining is presently underway on 3800-5550, 3950-5335 and 3950-5445. Blocks 3800-5650 and 3950-5600 will be mined shortly. Further exploration and/or development is required for blocks 5165, 5335, 3950-5695 and 3950-5980. Potential ore could be located up and down plunge of the Breccia Ore Body shoot. Potential ore could be located down plunge of the central shoot. Potential ore could be located down plunge of the third shoot.

Hanging Wall Vein

The Hanging Wall Vein strikes approximately 090° and dips 70° N to 70° S, except near the junction area with the Breccia Vein where it strike 035° and dips vertically. Diamond drilling has tested the Hanging Wall Vein proximal to the Breccia Vein junction only.

Stoping has taken place on 3800 Level, but not on 3950 Level. With stoping confined to one level, indications of ore shoot plunges are not readily apparent. A suggested plunge parallel to the plunge of the junction point may be indicated. For the most part, Hanging Wall Vein stope and assay data indicate the Hanging Wall Vein is narrow, more in character with the Front End Veins.

13 ore blocks are outlined on the Hanging Wall Vein Longitudinal Section. All probable ore blocks are sub-economic when expanded to a minimum 3 foot mining width. The two drill indicated ore blocks (3950-5385 and 3950-5405) require mine exploration or development. Potential ore could be located up and down plunge of the Breccia Vein / Hanging Wall Vein junction. Potential ore could be located up or down dip of the present known blocks. Exploration diamond drilling is required to adequately explore the Hanging Wall Vein for ore.

ORE RESERVES

A mineral reserve for the Duthie Mine has been calculated based on the 5 longitudinal sections incorporating assay data from the 1920's, 1950's and 1980's.. Re-sampling of sections of 4100 Level by Burns in 1986 and 3800 Level by Mintek in 1988 has produced reasonable duplication of the 1920's and 1950's results (Appendix D).

The following criteria was employed for the calculation and classification of ore blocks:

- 1) A tonnage conversion factor of 11 cubic feet per ton
- 2) A minimum stoping width of 3 feet
- 3) Probable classification for one side of block developed
- 4) Proven classification for two or more sides developed
- 5) Drill indicated classification for drill intersections
- 6) 100 feet of influence around workings
- 7) 50 feet of influence around drill intersections
- 8) Sub-economic classification generally under \$150.00 per ton based on \$600.00 gold per ounce, \$10.00 silver per ounce, \$10.00 per percent lead and \$10.00 per percent zinc.

The surface dumps for 3300 Level, 3600 Level, 3800 Level and 4100 Level contain considerable broken material. A surface grid sampling program over the dumps may locate significant lower grade material. MacLeod (1928) has documented the stoping process as follows: Several holes are drilled into the vein and a small cut including the vein material is blasted onto a canvas mat. This material is then shoveled down the ore pass and the remaining material is blasted coarse. MacLeod speculated that a large percentage of the precious metal values would be lost into cracks and into the waste by this blasting method. This material should be checked both on surface and in the old stopes, if possible.

There is a considerable discrepancy between the calculated reserve numbers for gold and silver for the Back End of the mine and the actual production numbers. The low gold and silver values suggest arsenopyrite may have been floated off to produce a concentrate acceptable to the Cominco Smelter in Trail. A significant gold/silver reserve may exist in arsenic rich tailings on the property.

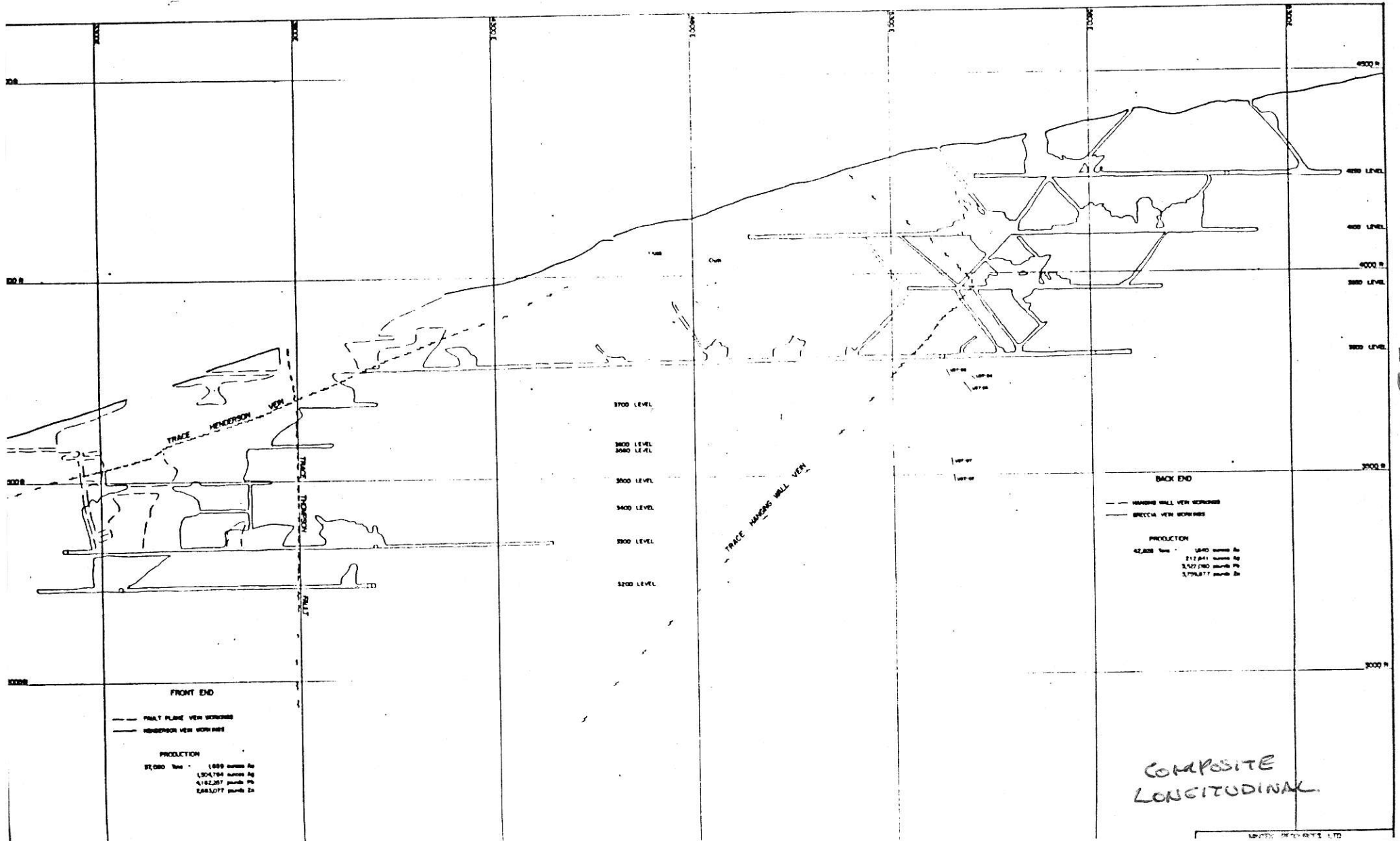
Duthie Mine Mineral Reserve (04-Apr-88)

ECONOMIC

	Vein	Tonnage	opt Au	opt Ag	% Pb	% Zn
Proven						
	Broken	2750	0.046	13.42	4.10	4.84
	Breccia	4692	0.111	17.76	10.15	10.56
Probable						
	Breccia	8391	0.177	7.70	5.00	7.42
	HW	3245		6.56	3.01	4.49
	Henderson	4126		61.53	0.83	0.55
	Stranger	505		9.98	0.64	2.90
	Fault Plane	3272		15.66	1.23	1.68
Indicated						
	Breccia	1023	0.070	11.20	6.10	3.20
	HW	1989	0.051	11.63	5.40	3.26
Proven + Probable						
		26981	0.079	19.13	4.39	5.52
	Indicated	3012	0.057	11.48	5.64	3.24

SUB-ECONOMIC

	Vein	Tonnage	opt Au	opt Ag	% Pb	% Zn
Proven						
	Breccia	3377	0.075	3.39	1.79	3.96
Probable						
	Breccia	13309	0.067	2.73	1.65	1.76
	HW	6723	0.021	4.31	2.66	1.57
	Henderson	2005		4.49	0.97	2.16
	Fault Plane	1650		7.05	0.50	0.19
Proven + Probable						
		27064	0.048	3.60	1.80	1.92



FRONT END

--- FRANT PLANE VIEW WORKING
 --- HENDERSON VIEW WORKING

PRODUCTION

37,080 Nos. 1,659 sheets 2x
 1,502,794 sheets 4x
 4,142,267 sheets 7x
 2,848,077 sheets 2x

BACK END

--- HANING MILL VIEW WORKING
 --- BRECHA VIEW WORKING

PRODUCTION

42,808 Nos. 1,640 sheets 2x
 2,128,841 sheets 4x
 2,527,780 sheets 7x
 2,794,877 sheets 2x

COMPOSITE
 LONGITUDINAL

25

DISCUSSION

The Duthie Mine has considerable potential for further ore grade mineralization. The Back End contains most of the mineral reserve presently carried. An exploration / development program is required to firm up the present reserves from indicated and probable to probable and proven and to open up the ore blocks prior to mining. A longer term exploration program is required to test dip projections of ore shoots and explore for new or presently unknown ore. The Front End presently carries little reserve due primarily to the poor documentation. An exploration program is required to test the area around the presently stoped blocks for near term reserves and to test dip projections and strike projections of ore zones for presently unknown ore.

Short Term - Front End

Two target areas require exploration on the Fault Plane Vein (Figure 5). Blocks 3200-3155, 3160 and 3230 suggest an ore shoot exists centred on Section 3200 E. A small block of ore has been removed above 3300 Level. The up dip projection of this ore shoot to the junction with the Henderson Vein can be drilled from the 3300 Level adit cross cut. (3300-3100 Fault Plane)

The up dip projection of block 3300-3635 is the second target area. Significant silver values with unknown gold, lead and zinc are present in the last lift of the stope. Drilling is recommended from 3300 Henderson Vein. (3300-3635 Fault Plane)

Three key areas require diamond drilling on the Henderson Vein (Figure 6). Stope sample data indicates the back of 3300-3200 stope carries ore grade values (Block 3400-3200). The vein between the back of the stope and the Fault Plane Vein junction is the target between Sections 3150 E and 3450 E. Underground diamond drilling from either 3600 Level (involves rehabilitation of the footwall drift plotted on 3600 Level Assay Plan) or from the 3300 Level adit cross-cut. (3400-3200 Henderson)

The second area is the two large pillars centred on 3300-3600. Henderson Vein stoping has taken place on both sides of the pillars, but not on the pillars themselves. Sampling of the 3400 Level via proper access could provide indications of ore mineralization potential. Diamond drilling from 3300 Level Fault Plane Vein is recommended. (3300-3600 Henderson)

The third area is centred on Section 3725 E between elevations 3350 feet and 3800 feet. Block 3300-3620 indicates ore grade mineralization in the last lift of 3300-3620 stope. Diamond drilling is recommended to test the up dip extension of this ore block west of the Thompson Fault from 3300 Fault Plane Vein. (3300-3620 Henderson)

Although mineral reserves are not documented on the Ashman Vein (Figure 7), a potential target exists above the present back of the 3300 stope. Limited drilling is recommended from the 3300 Ashman cross cut. (3300-4100 Ashman)

Short Term - Back End

Three key areas require diamond drilling on the Breccia Vein (Figure 8) to expand the present reserve base. The most important is the up dip extension of the Breccia Ore Body, between Sections 5300 E and 5500 E between elevation 4100 and surface. Development to date has been concentrated to the east of the projected ore shoot plunge. Blocks 4100-5165 and 4100-5335 have identified ore grade mineralization to the west of the Breccia Ore Body. The up dip projection of these ore shoots and blocks is the target. The area is accessible via surface drilling. (4250-5400 Breccia)

The second area is the 4250-6210 block area. An excellent section of ore has been opened up in the 4250-6350 Raise. The 4250 Level assay values and the limited diamond drilling have failed to locate neither a strike nor dip extension of this shoot. Diamond drilling is recommended between Sections 6100 E and 6400 E between elevations 4000 feet and 4400 feet. A combination of surface and underground drilling is required. A diamond drill cross cut is required on 4250 Level for the underground drilling. (4250-6210 Breccia)

The third area is up and down dip of the 4100-5750 stope. A large block of ore was stoped out on 4100 Level. Blocks 5820 and 6105 indicate significant precious metal values exist in this section of the Breccia vein. Diamond drilling is recommended between sections 5900 E and 6100 E initially between elevations 4200 feet and surface. (4250-6000 Breccia)

Short term on the Hanging Wall Vein ore blocks 4570, 4640 and 3800-4720 require firming up (Figure 9). Up and down dip projections of these ore blocks could be covered by a combination of surface and underground diamond drilling. Initially the up dip projections could be drill tested from 4100 Level between Sections 4500 E and 4900 E between elevations 3800 feet and surface. (4100-4700 Hanging Wall)

Long Term - Front End

Four major long term exploration targets exist in the Front End. The most important is the Fault Plane Vein proximal to the Henderson Vein junction (Figure 10). Two sections of the junction area require drill testing: Sections 3000 E to 3250 E and 3500 E to 4200 E. The target area below the Henderson Vein junction can for the most part be drill tested from the existing Henderson Vein drifts on the different levels. (3500-3800 Fault Plane)

Complementing the Fault Plane Vein, the strike extension of the Henderson Vein proximal to the Fault Plane Vein junction has ore potential. The section of the vein requiring drill testing lies between Sections 3800 E and 4400 E. (3700-4000 Henderson)

Two areas on the Ashman Vein have long term exploration potential (Figure 7). The first lies between 3600 Level and 3800 Level where a roll in the dip of the vein is indicated from Section 4050 E. Underground diamond drilling is recommended from the 3800 Level Ashman cross cut. The second area is the Ashman Vein west near the projected junction with the Gerrard Vein. Vein junctions appear to be important on this property as evidenced by the Fault Plane Vein / Henderson Vein junction. Underground drilling is recommended from the Henderson Vein drifts on any level. (3800-4000 Ashman) and (3300-3500 Ashman)

Long Term - Back End

Two areas of long term potential ore grade mineralization exist on the Breccia Vein. The most important is the down dip extension of the Breccia Ore Body (Figure 10). This body appears to parallel the junction of the Hanging Wall Vein with the Breccia Vein. Underground diamond drilling will have to make note of the plunge of the ore shoot when the underground drilling is laid out. Diamond drill cross cuts will be required at Sections 5000 E and 5250 E to test the down plunge projection to elevation 3000 feet. (3500-5250 Breccia)

The second target is indicated by drill hole U71 intersecting 0.070 opt Au, 11.2 opt Ag, 6.1 % Pb and 3.1 % Zn over a width of 4.5 feet. Sections 4600 E to 5000 E between elevations 3900 feet and surface form the boundaries of the target area. Surface drilling is recommended to adequately cover this section of the Breccia Vein. (4100-4800 Breccia)

A large section of the Hanging Wall Vein remains relatively unexplored (Figure 10). The area is bounded by Sections 4300 E to 5000 E. Several small stopes have been mined on 3800 Level, the only working through the area. Surface and underground drilling with intersections initially at 200 foot centres is recommended to explore the vein. (3950-4650 Hanging Wall)

CONCLUSIONS AND RECOMMENDATIONS

The Duthie Mine Property has undergone considerable development, but very little exploration. Mining was for the most part hit and miss in the early days with a geologist on site only after problems had been encountered at a time when there was little the geologist could do.

A properly directed exploration program has not been undertaken on the Front End of the mine. Sil-Van Consolidated Mining and Smelting Limited mapped, sampled and minimally diamond drilled the Back End in the 1950's. This program outlined approximately 60,000 tons of material, in a small section of the Breccia vein.

A properly directed exploration program on the entire property has the potential to locate approximately 100,000 tons of ore grade material within the mine area. Dip and strike projections of ore shoots have not been tested in either section of the mine. Vein relationships and geometry has been poorly understood in the past. The volume of workings compared to the volume of workings stoped is alarmingly low.

Additional structures outside of the present mine workings (Gerrard Vein, Gill Vein, Dome Vein, Mamie Vein) require an initial evaluation before a detailed exploration program can be recommended.

COST ESTIMATES

The cost estimates are based on the following footage costs:

- 1) Surface drilling - \$30.00 per foot
Base price - \$25.00 per foot
Assay Costs - \$2.00 per foot
Supervision - \$3.00 per foot
- 2) Underground drilling - \$30.00 per foot
Base price - \$22.00 per foot
Assay Costs - \$2.00 per foot
Supervision - \$3.00 per foot
Compressor - \$3.00 per foot
- 3) Diamond drill cross cut - \$250.00 per foot

Block	Surface Drilling	Underground Drilling	Drilling Cross Cut	Cost
3300-3100 FP		500 ft	15 ft	18,750.00
3300-3635 FP		900 ft		27,000.00
3500-3800 FP		2500 ft		75,000.00
3300-3600 H		600 ft		18,000.00
3300-3620 H		700 ft		21,000.00
3400-3200 H		600 ft		18,000.00
3700-4000 H		2000 ft	100 ft	85,000.00
3300-3500 A		800 ft		24,000.00
3300-4100 A		400 ft	15 ft	15,750.00
3800-4000 A		800 ft		24,000.00
3500-5250 B		5000 ft	200 ft	200,000.00
4100-4800 B		1000 ft		30,000.00
4250-5400 B	1000 ft			30,000.00
4250-6000 B	800 ft			24,000.00
4250-6210 B	600 ft	400 ft	50 ft	42,500.00
3950-4650 HW	1500 ft	1500 ft	100 ft	115,000.00
4100-4700 HW		900 ft	20 ft	32,000.00
Totals	3900 ft	18,600 ft	500 ft	800,000.00
			Contingency	150,000.00
			TOTAL PROPOSED BUDGET	950,000.00

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CERTIFICATE

I, R.Tim Henneberry, am a consulting geologist residing at 404 Cambridge Way, Port Moody, British Columbia.

I earned a Bachelor of Science Degree majoring in geology from Dalhousie University graduating in May, 1980.

I have practiced my profession continuously since graduation.

I am a Fellow of the Geological Association of Canada.

I have no interest, either direct or indirect, in Silver Standard Mines Limited, Duthie Holdings Limited, or Bishop Resources Development Corp.

This report is based on a compilation of available data by the author, and an on-going mining and exploration program under the direction of the author.

I hereby grant permission for Bishop Resources Development Corp. to use this report for filing with the Vancouver Stock Exchange as partial requirement for a Statement of Material Facts or for any legal purposes normal to the business of Bishop Resources Development Corp.

Dated this 28th day of June in the city of Vancouver, British Columbia.

