

PROGRESS REPORT - 1978NORTH ANVIL RANGE JOINT VENTURE

By:

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November, 1978

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PROGRESS REPORT - 1978

NORTH ANVIL RANGE JOINT VENTURE

SUMMARY

As a result of terrain-corrected gravity data, three diamond drillholes were proposed and drilled in the MYE-FIN blocks during 1978. In addition, the partly-coincident I.P.-uncorrected gravity anomaly on the IRMA claims was also tested. Although largely undiagnostic as far as explaining the gravity anomalies, one of the three MYE-FIN holes cut a classic Vangorda Formation section of calcareous phyllites (5B), graphitic phyllites (5A) and non-calcareous, chloritic and tuffaceous phyllites (3G-3D) with minor galena and sphalerite occurrences. Some fifty miles of horizontal loop E.M. survey was carried out to trace the 5B/5A contact and additional claims were staked to cover the area of interest. As part of a larger regional mapping program, more detailed mapping of the Menzie Creek Formation was completed in the northern portion of the TIM-MING-ROG claims and a re-interpretation of some facets of North Anvil Range geology is presented.

Experimental spectral I.P. surveys conducted on C.A.M.C. ground south of the Anvil Batholith indicate this may be a favourable tool for differentiating graphitic and sulphide conductors in the Faro-Vangorda sequence and may be applicable on the known conductors in the North Anvil Range. It seems likely that for 1979 this work will be restricted to field tests on better-known areas south of the batholith and, except for minor house-keeping costs, no expenditures are planned on North Anvil Range for 1979.

Apart from the IRMA claims, which have been dropped as a result of the negative drill findings, and recently-acquired MING claims (1980), all other claim units are good to at least 1981.

Total field costs to 30 September, 1978 were \$154,886.00.

GEOLOGY

1. General

The principal objective of the 1978 mapping program in the North Anvil Range Joint Venture area was an understanding of the internal stratigraphy of the newly-named Menzie Creek Formation (formerly unit 5H, amygdaloidal chloritic phyllite, KD or Mag Mountain volcanic rocks) and its external relationships to rocks of Earn Group. Mapping in the immediate joint venture area was confined to the northern portion of the FAT-FIN-LISA claim block. Since results of the regional program bear on the interpretation of the claim areas, the regional results are reviewed, followed by specifics of the mapping on FAT-FIN.

2. Regional Program

Mapping of the Menzie Creek Formation, at a scale of 1"=2,000', was completed from peak 6608 southeast to the northwestern margin of Orchay Batholith (Maps 1, 2 and 3). By virtue of its volcanic origin, the Menzie Creek shows complex internal stratigraphy, as expected, with many facies changes.

Internal stratigraphic relationships are summarized on the accompanying schematic longitudinal section (Figure 1) from Mag Mountain southeast to the area of a prominent Tertiary rhyolite plug. From this long section, the basal member of the Menzie Creek is seen to be a variably metamorphosed unit of basaltic pillow lavas fed, in this area, by what appears to be two separate vent systems, one between 6608 and KD hill and one system beneath KD hill. At the top of this unit west of Mag Mountain, a thin tongue of calcareous, muscovite-chlorite phyllite of unit 5B (Vangorda Formation) separates the lower pillow lava unit from

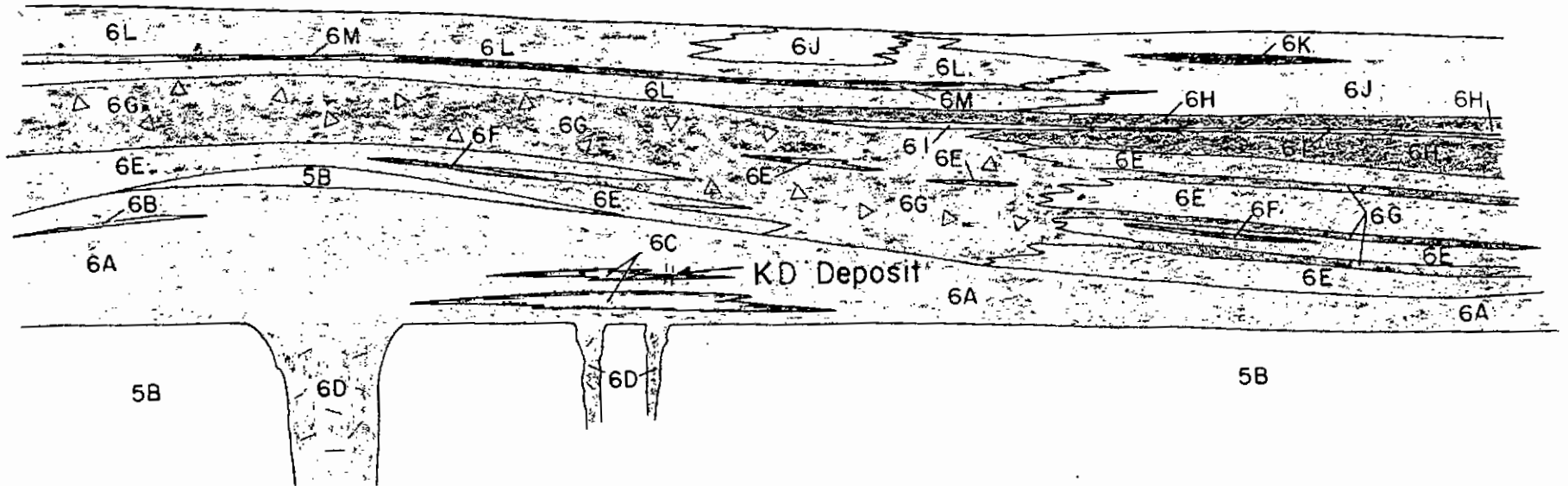
NW

SE

Mag Mtn.

KD Lake

Tertiary Plug Area



Schematic Longitudinal Section Through Menzie Creek Formation
 Schematic Only, Scale Approx.

FIGURE 1

an overlying pillow lava package with numerous breccia interbands. This second basaltic, pillowed unit with prominent breccia bands is best developed in the area of the Tertiary plug. To the northwest, the upper part of this unit is equivalent to a thick package of breccias best developed on Mag Mountain and the ridge south of KD Lake. These breccias are of diverse origin including flow breccias, minor pillow and avalanche breccias and in-situ breccias probably representing throat breccias of a vent system. The throat breccias are developed on the west-central summit of Mag Mountain and are here associated with a probable strand-line facies of carbonate cemented mafic sandstones and/or grits; sandy, medium crystalline limestone; massive, orange dolomite and cross-bedded, red, quartzites. This strand-line facies occurs within a package of massive volcanics (flows?) directly overlying the thick breccia unit. The sequence pillow lava → breccia (with throat facies) → massive flows → carbonate-rich clastic facies suggests the evolution and upward-shoaling of a shield-type, volcanic cone developed from a relatively shallow, basin floor on which the tongue of unit 5B accumulated. This cone-building episode succeeded the regionally developed basal pillow lava package seen at the base of the Menzie Creek throughout the entire Anvil Range.

Coeval with this cone-building episode, the area between Mag Mountain and the Tertiary plug witnessed the deposition of black, graptolitic shales in a shallow basin flanking the cone to the southeast. These shales overlie the pillow lava sequence forming the base of the cone and are succeeded upward by breccias equivalent to the massive flows(?) capping the cone. It is interesting to note the development of sub-aerial "spindle" and "breadcrust" bombs in parts of this breccia sequence. This correlates well with the notion of an emergent cone

with strand-line facies to the northwest.

Inspection of graptolite collections from the black shale sequence by officers of the Geological Survey of Canada (Tempelmen-Kluit, 1972) suggests a Middle Ordovician to Lower Silurian (or Road River) age for the shales. Detailed field observations demonstrate the gradational or intertonguing nature of the upper and lower contacts of this shale horizon with the enclosing volcanic rocks. Concerted study of the Vangorda/Menzie Creek contact conclusively demonstrates interleaved and apparently conformable contact of these two formations. Taken together, these stratigraphic relationships define a sub-Middle Ordovician age to the basal Menzie Creek volcanic rocks and underlying Vangorda Formation. This age assignment to the sulfide deposit bearing portion of the Anvil stratigraphic sequence viz: units 1 to 5, is now felt to be proven beyond reasonable doubt and is corroborated by regional correlation of other Anvil District units with well-dated map units in Selwyn Basin and by lead-lead isotope dating of the Faro deposit (Kuo, 1976).

The intertonguing of "Road River" and Menzie Creek lithologies is not restricted to the Mag Mountain/KD Hill area alone. North of the Orchay Batholith, vari-colored cherts of probable "Road River" (Middle Ordovician to Lower Devonian) affinity are found interbanded with massive flows and pillow lavas of the basal unit of the Menzie Creek. It is interesting to speculate that these cherty facies are the southwesternmost extension of the regionally developed "chert basin" within the Road River further to the northeast in Selwyn Basin.

Clearly, this interpretation differs from previous ones obviating the need for a major overthrust (KD allochthon) to account for the thickened

volcanic section in the area of Mag Mountain. It also clarifies the earlier G.S.C. interpretation (Tempelman-Kluit, 1972, p.11) wherein the correct upper age limit was assigned to map units now known as Vangorda, Mt. Mye and Faro Formations but for totally incorrect reasons.

The contact relations of the Menzie Creek Formation and younger units, including the Pisswick Pond Formation (or Sandpile Group) and Earn Group are now well defined as an overthrust relationship. Critical areas demonstrating the overthrusting of sub-Middle Ordovician Menzie Creek onto carbonaceous clastic rocks of either Pisswick Pond or Earn Group include areas near the following stations (shown in entirety only on 1:50,000 geological maps): 4659, 4863, 5446, 5623 and 5606. At each of these areas, either "older over younger" relationships (5446, 5623, 5606) or "truncated" or "missing section" relationships (4659, 4863) are seen. It is uncertain whether the "black clastic" lithologies north and northwest of the Tertiary plug area are Middle Devonian Pisswick Pond (Sandpile) or basal Earn Group (Upper Devonian⁺; unit 10 of Campbell, 1967). More fossil collections are needed in this area to resolve this problem, but the overall structural overthrust picture remains clear in this area.

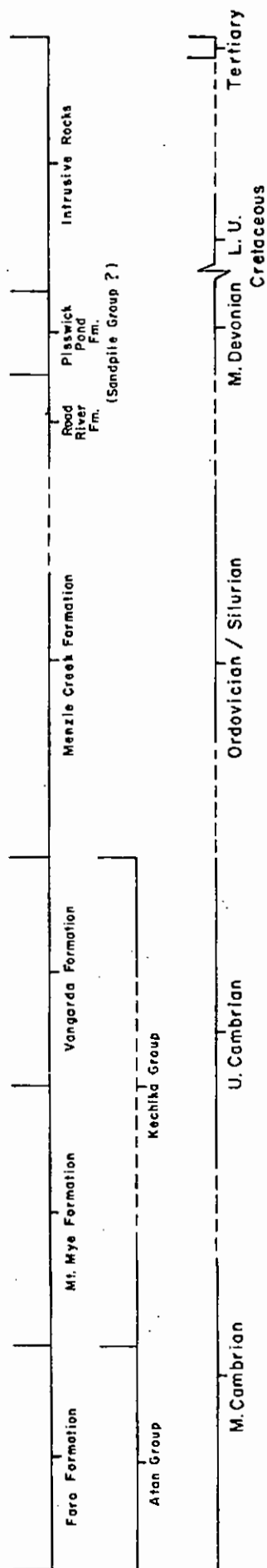
3. FAT-FIN-LISA Area

Results of the 1"=2,000' scale mapping in this area are presented in Maps 2 and 3. The interpretation in this area is radically different and more comprehensive than that of Franzen (1977). The present interpretation strongly supports a similar and earlier interpretation by Lewis (1973). The main tenets of the present interpretation include: (1) Menzie Creek conformable on Vangorda Formation, (2) Menzie Creek and the sub-Middle Ordovician "Anvil" package overthrust onto Middle Devonian

TABLE 1

NORTH ANVIL RANGE PROVISIONAL LITHOSTRATIGRAPHIC CODE

12	PORPHYRITIC RHYOLITIC PLUG/DIKE
110	BULL QUARTZ VEIN, POD
11G	PYROXENITE AND SERPENTINIZED EQUIVALENTS
11F	SMOKEY QUARTZ - FELDSPAR PORPHYRY
11E	PORPHYRITIC HB - BIO QUARTZ DIORITE
11D	EQUIGRANULAR HB - BIO QUARTZ DIORITE
11C	QUARTZ MONZONITE PEGMATITE DIKES
11B	PORPHYRITIC, BIOTITE - QUARTZ MONZONITE
11A	MUSCOVITE - BIOTITE GRANODIORITE
7C	NODULAR, GREY-BROWN, DOLOMITIC LIMESTONES
7B	MASSIVE, LIGHT GREY ORTHOQUARTZITES
7A	GRAPHITIC TO CARBONACEOUS, BLACK, THIN-BEDDED PHYLLITES/SLATES
6Q	VARICOLORED PHYLLITIC CHERTS
6P	GREY PHYLLITIC CHERTS
6O	GREEN PHYLLITIC CHERTS
6N	METABASITE
6M	VOLCANIC SANDSTONES/SANDY LIMESTONES/DOLOMITES/CONGLOMERATES IN 6L (6J?)
6L	MASSIVE FLOWS/FLOW BRECCIAS (EQUIVALENT TO 6J?)
6K	BLACK, SILICEOUS PHYLLITE IN 6J (EQUIVALENT TO 6H)
6J	MASSIVE, VOLCANIC BRECCIAS/MINOR FLOWS
6I	MASSIVE, WHITE TO LIGHT GREY, MATURE ORTHOQUARTZITE IN 6H (ROAD RIVER)
6H	BLACK, GRAPTOLITIC, CARBONACEOUS PHYLLITES/SLATES (ROAD RIVER)
6G	MASSIVE, VOLCANIC BRECCIAS OF DIVERSE ORIGIN
6F	BEDDED TUFFS/VOLCANIC SEDIMENTS IN 6E
6E	PILLOW LAVAS/MINOR FLOWS
6D	INTRUSIVE, SUB-VOLCANIC FEEDERS TO 6A
6C	VOLCANIC BRECCIA INTERBANDED IN 6A
6B	BEDDED TUFFS/VOLCANIC SEDIMENTS IN 6A
6A	AMYGDALOIDAL CHLORITIC PHYLLITE/PILLOW LAVAS/MINOR FLOWS
5G	VARIABLY CALCAREOUS, GRAPHITIC PHYLLITE
5F	CHLORITIC PHYLLITE
5E	PHYLLITIC MARBLE AND SILICATED MARBLE
5D	LAMINARLY BANDED, VARIABLY CALCAREOUS, CHLORITIC PHYLLITE
5C	METABASITE
5B	CALCAREOUS MUSCOVITE CHLORITE ± BIOTITE PHYLLITE
5A	VARIABLY CALCAREOUS, GRAPHITIC PHYLLITE HOST TO UNIT 4
4	GRUN, VANGARDA, DY, FIRTH, SKIN, SD, SEA SULPHIDE DEPOSITS UNDIFFERENTIATED
3I	GRAPHITIC QUARTZITE IN NON-CALCAREOUS PHYLLITE/SCHIST
3H	TUFFACEOUS CALC-SILICATE PHYLLITE/SCHIST (ASSOCIATED WITH 3D)
3G	NON-CALCAREOUS, MUSCOVITE-CHLORITE ± BIOTITE PHYLLITE/SCHIST, UNDIFFERENTIATED
3F	MARBLE AND SILICATED MARBLE
3E	GRAPHITIC PHYLLITE/SCHIST
3D	CALC-SILICATE PHYLLITE/SCHIST
3C	METABASITE
3B	CHLORITIC PHYLLITE/SCHIST
3A	TRANSITION ZONE WITH UNIT 1
2	FARO SULPHIDE DEPOSIT UNDIFFERENTIATED
1G	MARBLE AND SILICATED MARBLE
1F	METASITE
1E	GRAPHITIC SCHIST
1D	CARBONACEOUS, BIOTITE - MUSCOVITE - ANDALUSITE SCHIST
1C	QUARTZ-FELDSPATHIC, BIOTITE MUSCOVITE GNEISS/SCHIST
1B	TACTITE AND SILICATED MARBLE
1A	UNDIFFERENTIATED UNIT 1



rocks of the Pisswick Pond (Sandpile?), (3) Pisswick Pond conformable(?) on "Road River" cherts (at station 5610 et al), (4) Mt. Mye, Vangorda, Menzie Creek, Road River "cherts" and Pisswick Pond Formations truncated by a D_4 (?) decollement or "gravity slide" along the upper contact (and within) graphite phyllites of unit 3E (Mt. Mye Formation). This detachment is interpreted as a D_4 "gravity slide" with the northeast block down dropped in response to "diapiric" upwelling and intrusion of Anvil Batholith. The "critical" Jaye Exploration diamond drill holes near this detachment zone have been re-logged and are appended to this report (Appendix I).

DRILLING

A total 747.9m, BQ core, was drilled in four holes to test the following targets:

<u>Hole No.</u>	<u>Claim</u>	<u>Inclination</u>	<u>Depth (m)</u>	<u>Target</u>
78-NA-01	FIN #28	90 ⁰	178.2	Unit 3G-3E coincident residual gravity and TURAM anomalies.
78-NA-02	FIN #9	90 ⁰	219.8	Unit 1C residual gravity and TURAM anomalies.
78-NA-03	AM #2	90 ⁰	190.5	Unit 5A at unit 5/3 contact with coincident TURAM and Pb-Zn-Cu geochem anomalies.
78-NA-04	IRMA #9	90 ⁰	159.4	Coincident gravity and I.P. anomalies.

Detailed stratigraphic logs and structural summary logs are included with this report as Appendix II.

Hole 78-NA-01 was drilled entirely in non-mineralized 3G phyllites. The relatively shallow 7.2m overburden appears to be the only explanation for the residual gravity anomaly, particularly as 30 to 50 metres of overburden

would be more common as experienced in previous borings in this valley area. Hole 78-NA-02 was drilled entirely in unit 1C, Faro quartzo-feldspathic schist. Minor pyrrhotite and chalcopyrite associated with vein quartz sweats was noted, but appears to be of no economic significance. A thin, graphitic schist horizon from 191.2 to 191.5m may explain the weak surface TURAM response coincident with the gravity anomaly. No clear explanation of the gravity residual is apparent, particularly as the thin overburden cover is extensive at this side hill location. Possibly very irregular local topography, not discriminated by the new line mapping, bears on the gravimetric response.

Hole 78-NA-03 cut an almost classical Vangorda-Grum-DY stratigraphic section, from 5B calcareous phyllite, through 5A graphitic phyllite (TURAM conductor) to non-calcareous and somewhat tuffaceous unit 3 phyllites. Minor sphalerite, galena, chalcopyrite and pyrrhotite were noted in unit 3 rocks associated with vein quartz sweats. Thus the TURAM and geochemical responses would appear to be adequately explained. Confirmation of the Vangorda-type stratigraphic model is encouraging.

Hole 78-NA-04 was drilled on the IRMA claims some ten miles northeast of the main North Anvil Range block on a coincident gravity-I.P. target. The hole cut mainly medium-grained greywacke and siltstone of Triassic age, for all of the 159.4m length. A 3M band of graphitic chert at 99m depth is undoubtedly the cause of the I.P. response. The reason for the uncorrected gravity anomaly remains unexplained.

The conclusion from results on corrected gravity anomalies must be that the varying and often rapid changes in overburden thickness is too large a factor to allow accurate quantitative assessment of low order residual anomalies.

GEOPHYSICAL SURVEYS

On the basis of the geological section cut in 78-NA-03 and provisional mapping of the unit 5/3 boundary, a horizontal loop electromagnetic survey was carried out to trace the 5A graphitic unit occurring at the contact. This survey covered some 48 line miles (77 km) and extended from the known contact on the AM claims easterly across the northern extension of the TIM claims and through the MING and ROG groups.

The 5A conductor does not appear to be continuous and weakens progressively east of 78-NA-03 for about 3,000 feet (1,000m) and does not reappear until the eastern section of the ROG claims, where a strong response is traceable for about 3,000 feet (1,000m) on the very southern edge of the claim group where it overlaps onto WYNNE claims held by Welcome North Mines Ltd. Additional claims were staked to acquire open ground covering the eastern extension of the AM conductor. It might be assumed that the weak electromagnetic response flanking the very high anomalies on the AM and ROG claims might result from sulphides which are the lateral depositional equivalent of the thick graphitic horizons. These targets would be ideal for testing with spectral I.P. equipment when this becomes available.

A complete set of revised and updated TURAM and horizontal loop electromagnetic data is included with this report (Maps 4 to 9).

SUMMARY

The drilling results indicate that the terrain-corrected gravity survey is not sufficiently diagnostic to differentiate low-order gravity anomalies caused by either weakly mineralized country rock or deeply buried massive sulphides in the range 10 - 20 million tons. It is considered that the rough terrain and overall poor topographic control, coupled with rapid changes in overburden thickness, introduces factors beyond the limits of the survey and

calculation methods available. It is, however, equally certain that no near-surface (i.e. to 150m depth) massive sulphide of similar proportions to the Faro orebodies (gross 80 - 90 million short tons) would have escaped notice in the area covered by the gravity survey.

Several clearly-defined electromagnetic anomalies indicate graphitic horizons within both unit 3 (3E graphitic phyllite) and unit 5 (5A graphitic phyllite). These targets may be amenable to further testing with multi-spectral I.P. equipment, which has had some success in experimental surveys over the Faro-Vangorda-DY deposits, but awaits construction of a suitable portable system before work can be carried out on the North Anvil Range block. Field tests with a portable unit are expected in the better-known areas south of the Anvil Batholith during 1979.

Apart from general housekeeping costs, no major expenditures are anticipated in 1979.

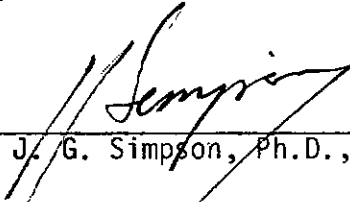
CLAIM STATUS

Updated claim summary sheets are enclosed as Appendix III. The IRMA claims will be allowed to expire on their due date and details of newly-staked claims east of AM and north of TIM will be made available as soon as they are assigned by the Mining Recorder, Whitehorse. All other claims are good to 1981 with the exception of the recently-acquired MING claims, which are good to 1980. It should be noted that, with the exception of the ROG and AM extension claims, all units will be subject to physical work only (i.e. line cutting or drilling) by 1980, although new legislation in process might change this ruling to allow any type of work, including I.P. surveys, before the indicated expiry dates. Copies of up-to-date claim maps are included with this report (Maps 10, 11 and 12).


COST SUMMARY

Total costs to 30 September, 1978 were \$170,375. This exceeds the estimated amount of \$129,800 by \$40,575, of which the most part was taken up by the line cutting and horizontal shootback E.M. surveys, not scheduled in the original budget. Costs for 1979 will be nominal, unless spectral I.P. test equipment becomes available much sooner than anticipated. A summary of costs for 1978 is included as Appendix IV.

Respectfully submitted,



J. G. Simpson, Ph.D., P.Eng.



D. S. Jennings, Ph.D.

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APPENDIX I

Jaye Exploration Diamond Drill Hole Logs

DIAMOND DRILL HOLE SUMMARY

COMPANY: Jaye Explorations Limited,
 PROPERTY: Vangorda Creek Area, Yukon Territory.

Hole No: 4
 Claim No: Bin 49 - 94627 Location: _____
 Coords: 16 + 00W, 11 + 00S Elev: _____
 Bearing: S 10° W Angle: -55°
 Depth: 561.5' Core Size: AXJ'
 Started: August 19, 1966. Completed: August, 22 1966.
 Drilled By: Inspiration Diamond Drilling Limited.
 Core Recovery: 80% Logged By: W. Pelette.

Dip Tests
 200' - 54°
 560' - 75°

Depth: _____

			INTERSECTION		
FROM	TO	DESCRIPTION	FROM	TO	LENGTH
0.0	79.0	Overburden, sand and talus boulders.			
79.0	131.0	Graphite schist, dark grey to black, interbedded quartzite, 60% L. C. badly broken, abundant qtz. str.			
131.0	144.0	Quartzite, medium grey (l.g.)			
144.0	152.8	Graphite schist, as above 45% L. C.			
152.8	169.4	Quartzite as above.			
169.4	189.0	Graphitic schists as above 50% L. C.			
189.0	202.2	Quartzite, as above, 45% L. C.			
202.2	240.0	Graphite schist, as above, 50% L. C. banding 85° at 215'.			
240.0	246.5	Quartzite, as above.			
246.5	385.0	Argillite, graphitic, 25% L. C., banding 50° at 270', 50° at 300', 60° at 328', 40° at 355'.			
385.0	561.5	Argillite, occ. seams near massive py. and po., 10% L. C. banding 40° at 400', 40° at 440', 55° at 500', 55° at 538', 75° at 560'.			
561.5		END OF HOLE.			
<p>NOTE: DDH JAYE-04 was not re-logged due to poor condition of core. 1966 log by W. Pelette of Jaye Explorations suggests entire hole in unit 7 (Pisswick Pond/Sandpile?).</p>					

APPENDIX II

Stratigraphic and Structural Summary Logs

78-NA-01, 78-NA-02, 78-NA-03, 78-NA-04

CYPRUS ANVIL MINING CORPORATIONDIAMOND DRILL CORE LOG

Hole Number: 78-NA-01 Fabric Orientation Diagram:

Project: North Anvil Range

Location: Fin Group

Claim: Fin No. 28

Terr. Plane
Co-ords.: _____ N
_____ E

Grid
Co-ords.: 192W 43+00N

Inclination: Vertical All symmetry determinations looking
NW with S2 dipping

Elevation: _____ NNE with dip azimuth _____

Total Depth: 178.2

Purpose: Test terrain corrected gravity.

Logged by: J. G. Simpson Date(s) Logged: 16 June, 1978

Drilling Contractor: Arctic Diamond Drilling Core: Size From To Collar Cased and Capped: _____

Core	Size	From	To	Collar Cased and Capped
	<u>B0</u>	<u>0</u>	<u>178.2</u>	

Started: 1 June Completed: 7 June/78

SUMMARY LOG

DDH 78-NA-01

<u>Metres</u>		
0.0 - 7.2		Overburden.
7.2 - 76.0	3G0	Non-calcareous, grey, chloritic phyllite strongly developed S_2 and incipient S_3 foliations, minor quartz sweats parallel to S_2 .
76.0 - 76.5	0Q0	Bull quartz vein contacts parallel to S_2 .
76.5 - 80.3	3G/Q0	Non-calcareous, grey, chloritic phyllite with numerous vein quartz sweats subparallel S_1 to 1 cm, thicker veins subparallel S_2 to 30 cm, one bleb pyrite 77.3 m.
80.3 - 101.7	3G0	Non-calcareous, chloritic phyllite, grey, three foliations prominent, $S_1 - 65^\circ$, $S_2 - 25^\circ$, $S_{3/5} - 80^\circ$.
101.7 - 101.8	0Q0	Bull quartz with very minor pyrite.
101.8 - 102.7	3G0	Non-calcareous grey phyllite.
102.7 - 103.2	0Q0	Bull quartz vein, inclusions of phyllite.
103.2 - 120.8	3G/Q0	Non-calcareous, grey, chloritic phyllite - with numerous quartz vein sweats - chlorite clots and selvages to quartz veins.
120.8 - 155.8	3G0	Non-calcareous phyllite less vein quartz but still present up to 30 cm wide, 145 m calcite on late fracture only - nothing in rock itself.
155.8 - 156.0	3G	Breccia fault gauge.
156.0 - 176.2	3G0	Non-calcareous grey phyllite, minor bull quartz veins.

END OF HOLE

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STRUCTURAL LOG

DDH 78-NA-01

S_1 steeper $S_0 = Z$

$S_1/S_2 = Z$ $S_2/S_1 = Z$

Depth	Dominant Feature	S_1		S_2		Description
		Dip °	Dir. °	Dip °	Dir. °	
13.3	S_2	85	0	85	0	$50^\circ/0^\circ$ S_1 band sub-parallel $S_2 - 85^\circ$ S_{3-5} kink folds both S_1, S_2 . Assume S_2 dip N, looking NW.
15.0	S_2	70	0	72	0	S
27.1	S_2	90		65	0	
28.0	S_2			50	0	S_3 corregation horizontal. S_2 fold plunge NW 15-20°.
34.4	S_2			80	0	
35.8	S_2	80	0	60	0	Z
41.2	S_2			50		
48.8	S_2			55	0	
				65	0	S_3 corregation and incipient cleavage 45° N. Z sym.
60.7	S_1	60	0	50	0	S_1 dom. Could be S_2/S_3 .
63.2	S_2	60	0	45	0	Z
70.0	S_2			45	0	
84.0	S_2			30	0	
88.0	S_2	15	0	20	0	M
100.0	S_2	20		35	0	S
116.0	S_2	20		40	0	S

STRUCTURAL LOG
DDH 78-NA-01

-2-

126.0	S ₂			30	0	
136.0	S ₂			30	0	
143.3	S ₂	50	50	20	0	Z
	S ₂	60	0	25	0	Z
160.6	S ₂			15	0	
		50	0	30	0	
164.6	S ₂	50	0	30	0	Z
173.0		30	0	20	0	Z

SUMMARY LOG

DDH-78-NA-02

<u>Metres</u>		
0.0 - 2.0		Overburden.
2.0 - 40.0	1C7	Pelitic garnet-staurolite?-biotite quartz-muscovite schist - quartzo feldspathic band inclusions to 40 m.
40.0 - 68.0	1C1	More leuco - less pelitic quartzo-feldspathic schist, 30 c intervals garnet-staurolite-biotite as above, thin 10 cm gouge zone fault at 53.0 m.
68.0 - 109.7	1C7	Pelitic schist as 2.0 - 40.0, more quartzo feldspathic to 109 m.
109.7 - 109.8	1C9	Silicate quartzite with sulphide zones + (pyrite) pyrrhotite + chalcopyrite.
109.8 - 110.8	1C1	Quartzo feldspathic schist.
110.8 - 111.0	1C9	Quartz-rich band + pyrrhotite + chalcopyrite - interval 109-111 spits pyrrhotite + 2 bands could, if continues, be cause of very weak TURAM response.
111.0 - 112.4	1C7	Garnet staurolite schist.
112.4 - 112.6	1C6	Biotite band.
112.6 - 127.5	1C7	Quartzo-feldspathic schist, staurolite prominent, large crystals.
127.5 - 134.7	1C1	Leuco quartzo-feldspathic schist, more siliceous as 40.0 - 68.0.
134.7 - 139.9	1C7	More pelitic staurolite-quartz-biotite schist.
139.9 - 140.8	0Q0	Quartzite, micaceous.
140.8 - 153.5	1C1	Very leuco quartzo-feldspathic schist, possibly 1 - 2 cm + andalusite.
153.5 - 176.3	1C0/7	Quartzo-feldspathic staurolite prominent schist.
176.3 - 183.0	1C1	Leuco-mica quartzite + minor biotite staurolite.
183.0 - 191.2	1C0/7	Quartzo-feldspathic schist + garnet + staurolite + biotite.
191.2 - 191.5	1C9	Graphitic schist - possibly very weak conductor but probably too thin and impersistent and too deeply buried.

SUMMARY LOG
DDH 78-NA-02

-2-

191.5 - 199.4	1C1	Leuco quartzo-feldspathic schist.
199.4 - 219.8	1C0/7	Quartzo-feldspathic schist + garnet-stauroilite-biotite.

END OF HOLE

CYPRUS ANVIL MINING CORPORATION

STRUCTURAL LOG

DDH 78-NA-02

S₁/S₂=Z S₂/S₁=S

Depth	Dominant Feature	S ₁		S ₂		Description
		Dip °	Dir. °	Dip °	Dir. °	
10.0	S ₂			18	0	S ₂ parallel S ₁ .
40.0	S ₂			10	0	
54.5	S ₂	20	0	05	0	Z
66.0	S ₂			10	0	S ₂ parallel S ₁ .
85.0	S ₂			10	0	
95.5	S ₂			15	0	
115.5	S ₂			05	0	
124.5	S ₂			05	0	
133.0	S ₂			10	0	
150.4	S ₂			05	0	
169.5	S ₂	40	0	10	0	Z
178.3	S ₂			30	0	
181.5	S ₂			10	0	
186.0	S ₂			10	0	
194.5	S ₂			05	0	Same 05° S ₂ to end of hole.

S₂ relative to S₁, difficult to determine, coarse schistosity with general recrystallation on S₂, metamorphic banding generally parallel S₂ with minor undiagnostic F₂ folds.

CYPRUS ANVIL MINING CORPORATIONDIAMOND DRILL CORE LOGHole Number: 78-NA-03

Fabric Orientation Diagram:

Project: North Anvil RangeLocation: AM Claim GroupClaim: AM No. 2Terr. Plane
Co-ords.: _____ N

E

Grid
Co-ords.: 204 E 45NInclination: Vertical

All symmetry determinations looking

NW with S2 dipping

Elevation: _____

NNE with dip azimuth _____.Total Depth: 190.5 mPurpose: To test TURAM-Geochem Pb-Zn-Cu at 5B/5A contact.Logged by: J. G. SimpsonDate(s) Logged: 18 June, 1978Drilling
Contractor: Arctic Diamond Drilling Core: Size From To Collar Cased
and Capped: _____BQ _____

Started: _____ Completed: _____

SUMMARY LOGDDH 78-NA-03

<u>Metres</u>			
0.0 -	5.0		Overburden.
5.0 -	15.0	5B0	Calcareous muscovite-chlorite \pm biotite phyllite.
15.0 -	18.0	5B6	Non-calcareous muscovite-chlorite \pm biotite phyllite.
18.0 -	19.3	5B7	Slightly calcareous, laminarly banded, tuffaceous phyllite.
19.3 -	19.8	5B6	Non-calcareous phyllite.
19.8 -	23.0	5A0	Variably calcareous, graphitic phyllite + bull quartz vein. TURAM CONDUCTOR.
23.0 -	28.0	0D0	Medium-grained, diorite porphyry dyke. Upper contact 45° to core axis parallel to S ₂ .
28.0 -	60.0	5B6 /3G	Non-calcareous phyllite; very minor calcite associated with quartz vein sweats 10-20 cm with minor pyrrhotite and sphalerite in 20 cm vein at 43.5-43.7.
60.0 -	61.4	3G0	Non-calcareous phyllite.
61.4 -	61.9	3B3/7	Laminarly banded, chloritic tuffaceous phyllite + calcite and quartz vein sweats.
61.9 -	67.4	3G0	Non-calcareous phyllite with minor quartz vein sweats to 10 cm with chloritic selveges at 61.4; 2 m vein pyrrhotite-pyrite-sphalerite.
67.4 -	67.8	3G0	Non-calcareous phyllite with numerous quartz vein sweats; minor sulphides at 67.5; 3 cm black sphalerite-pyrrhotite-pyrite in quartz vein, at 67.7 black sphalerite-pyrrhotite-chalcopryrite-galena, 3 cm vein sheared.
67.8 -	70.5	3G0	Non-calcareous phyllite with minor quartz vein sweats.
70.5 -	70.9	3G3/8	Non-calcareous chloritic phyllite and tuffaceous bands with minor calcite associated quartz sweats.
70.9 -	71.9	3G0	Non-calcareous chloritic phyllite + minor calcite and quartz veins.
71.9 -	90.8	3G0	Non-calcareous phyllite with minor quartz veins.

SUMMARY LOG
DDH 78-NA-03

-2-

90.8 - 91.4	3B7/3	Slightly calcareous, chloritic, tuffaceous phyllite; minor quartz veins.
91.4 - 102.2	3G8	Non-calcareous chloritic phyllite.
102.2 - 102.3	0Q0	Vein quartz + minor pyrrhotite and chlorite.
102.3 - 103 0	3G8	Non-calcareous, chloritic phyllite.
103.0 - 114.3	3B7/3	Slightly calcareous, chloritic, laminarly banded, tuffaceous phyllite; calcite and quartz veins 112.1 - 2 mm zinc-pyrrhotite, 112.2 - 3 mm zinc-pyrrhotite.
114.3 - 120.8	3G0	Non-calcareous chloritic phyllite.
120.8 - 124.6	3G8	Non-calcareous chloritic phyllite + quartz vein sweats with minor pyrrhotite and sphalerite.
124.6 - 155.4	3B7/3	Calcareous, chloritic, tuffaceous phyllite; 143.2-143.3 minor fault gouge.
155.4 - 190.5	3G/B7	Non-calcareous phyllite + chlorite.

END OF HOLE

CYPRUS ANVIL MINING CORPORATION

STRUCTURAL LOG

DDH 78-NA-03

S₁/S₂=Z S₂/S₁=S

Depth	Dominant Feature		S ₁		S ₂		Description
			Dip °	Dir. °	Dip °	Dir. °	
8.5	S ₂	S ₅			60	0	S ₅ kink - 70°S. Assume S ₂ dip N.
12.5	S ₁	S ₂	30	0	60	0	S
17.0		S ₂			80	0	Before dykes, C.A. 45° parallel to S ₂ .
28.1		S ₂			25	0	i.e. after dyke.
38.3		S ₂			50	0	
47.5		S ₂			40	0	
53.0	S ₁	S ₂	60	180	45	0	Z
64.6	S ₁	S ₂	90		35	0	St. S ₁ NW.
69.1		S ₂			50	0	
83.5	S ₁	S ₂	80	180	55	0	Z
99.7	S ₁	S ₂	80	0	40	0	Z
110.4		F ₂ S ₂	90		25	0	M/S
118.5		S ₂			25	0	
130.9	S ₁	S ₂	80	180	35	0	
136.6	S ₁	S ₂	80	180	20	0	Z
147.8		S ₂			15	0	
151.6	S ₁	S ₂	80	0	30	0	Z

CYPRUS ANVIL MINING CORPORATIONDIAMOND DRILL CORE LOG

Hole Number: 78-NA-04 Fabric Orientation Diagram: _____

Project: North Anvil Range Joint Venture

Location: Irma Group

Claim: Irma No. 9

Terr. Plane
Co-ords.: _____ N
_____ E

Grid
Co-ords.: 8E, 7+50N

Inclination: Vertical All symmetry determinations looking
_____ NW with _____ dipping

Elevation: _____ with dip azimuth _____.

Total Depth: 159.4 m

Purpose: To test coincident gravity and I.P. anomalies.

Logged by: J. G. Simpson Date(s) Logged: 10 July, 1978

Drilling Contractor: Arctic Diamond Drilling Core: Size From To Collar Cased and Capped: _____

Core	Size	From	To	Collar Cased and Capped
	<u>80</u>	<u>0</u>	<u>159.4</u>	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Started: 22 July Completed: 28 July

SUMMARY LOG

DDH 78-NA-04

<u>Metres</u>		
0.0 - 16.2		Overburden clay and boulders.
16.2 - 25.6		Overburden gravel.
25.6 - 31.1	9H0	Medium to coarse-grained greywacke.
31.1 - 31.5	9H0	Fault breccia in greywacke.
31.5 - 33.2	9H0	Medium-grained greywacke, ill-sorted.
33.2 - 47.3	9H1	Fine-grained siliceous greywacke, first 3m sedimentary breccia. Graded bedding apparent 34m - 40° dip, 42.6m - 30° dip. Probable Triassic age. Occasional blue quartz grains suggest deviation from Hadrynian Grit Unit.
47.3 - 47.9	9H1	In situ contemporaneous sedimentary breccia of fine to medium-grained greywacke.
47.9 - 50.0	9H0	Medium to coarse-grained greywacke. Minor amounts of scattered pyrrhotite may be cause of I.P. anomaly.
50.0 - 61.3	9H1	Fine-grained cherty greywacke, bedding undulating parallel to core axis. 53.4m - 15° bedding dip.
61.3 - 70.0	9H0	Coarse to medium-grained greywacke, sedimentary brecciation on all scales visible, bedding 15-20° dip. Very minor scattered pyrrhotite and pyrite grains.
70.0 - 78.0	9H1	Fine-grained chert greywacke, with variable bedding angles, probably result of disoriented large breccia blocks.
78.0 - 99.0	9H0	Medium to coarse-grained greywacke at 95.8m, bedding 40°-50° dip.
99.0 - 101.9	9C2	Graphitic chert, TURAM and I.P. CONDUCTOR. Bedding 50° dip.
101.9 - 109.5	9H0	Coarse to medium-grained greywacke, large breccia blocks.
109.5 - 112.4	9H1	Fine-grained, well-bedded greywacke with incipient chert bands, bedding at 111.0m - 60° dip.

<u>Metres</u>		
112.4 - 140.0		Medium to coarse-grained greywacke with sedimentary brecciation apparent. 126.0m - bedding 10° dip.
140.0 - 143.2	9H1	Fine to medium-grained greywacke, bedding at 142.9m - 40° dip. Scour and fill with rip-up clasts evident. Graded bedding indicate tops up.
143.2 - 153.6	9H0	Medium to coarse-grained greywacke. Bedding 60° dip.
153.6 - 156.0	9H1	Fine-grained greywacke, 155.5m bedding parallel to core axis.
156.0 - 159.4	9H0	Medium to coarse-grained greywacke.

END OF HOLE.

III-004

APPENDIX III

Claim Summary Sheets

COMPANY CYPRUS ANVIL MINING CLAIM ROG PROPERTY Cyprus Anvil 60% OWNERSHIP Metall. 40% M.D. Whitehorse N.T.S. 105-K-6

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	YAL9741-YAL9748	8	Lash Ladue	Sept. 12, 1977	Cyprus Anvil	Nov. 8, 1977	Sept. 12, 1982	Assess. Work Filed Date: June 29, 1978 Amt. \$10,000 Type: DCH 78-NA-01 * * * * *
9-16	YAL9749-YAL9756	8	Louis Tommy	Sept. 12, 1977	"	"	Sept. 12, 1982	
17-22	YAL9757-YAL9762	6	Gordon Etzel	Sept. 12, 1977	"	"	Sept. 12, 1982	
23-25	YAL9763-YAL9765	3	Jean Denis	Sept. 12, 1977	"	"	Sept. 12, 1982	

COMPANY CLAIM PROPERTY OWNERSHIP M.D. Whitehorse N.T.S. 105-K-6

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
<u>JOINT VENTURE - METALLGESELLSCHAFT</u>								
(North Anvil Range)								
<u>TAF</u>	Cyprus Anvil 100%							
23-24	Y62473-Y62474	2	George Bob	Sept. 29, 1971	Cyprus Anvil	May 10, 1976	Mar. 1, 1981	Assess. Work Filed Date: Jan. 21, 1977 Amt. \$8,308.00
25-32	Y62483-Y62490	8	Harold Smith	Sept. 29, 1971	"	"	Mar. 1, 1981	Type: Linecutting
33-38	Y62491-Y62496	6	Cliff McLeod	Sept. 29, 1971	"	"	Mar. 1, 1981	Helic. costs *****
<u>JET</u>	(Cyprus Anvil 87%; Mercury Explor. 5%; Giant Yellowknife 7%)							Assess. Work Filed Date: Aug. 1978 Amt. \$22,500.00 Type: DDH 78-NA-03
50	Y3191	1			"	"	Sept. 17, 1981	CERTIFICATES OF WORK NOT RECEIVED
52	Y3193	1			"	"	Sept. 17, 1981	
54	Y3195	1			"	"	Sept. 17, 1981	
56	Y3197	1			"	"	Sept. 17, 1981	
58-63	Y3199-Y3204	6			"	"	Sept. 17, 1981	
64	Y3205	1			"	"	Sept. 17, 1981	
93	Y3234	1			"	"	Mar. 1, 1981	
95	Y3236	1			"	"	Mar. 1, 1981	
97-104	Y3238-Y3245	8			"	"	Mar. 1, 1981	
<u>MX</u>	(Cyprus Anvil 95%; Mercury Explor. 5%)							
178-185	Y30637-Y30644	8			"	"	Mar. 1, 1981	
119	Y30591	1			"	"	Mar. 1, 1981	

COMPANY CLAIM PROPERTY OWNERSHIP

M.D. N.T.S.

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
Page 2								
METALLGESELLSCHAFT JOINT VENTURE (Contd.)								
AM	(Cyprus Anvil 95%; Mercury Explor. 5%)							
1-2	Y63877-Y63878	2	G. Jilson	Nov. 5, 1971	Cyprus Anvil	May 10, 1976	Mar. 1, 1981	
TIM	(Cyprus Anvil 95%; Mercury Explor. 5%)							
3	Y30299	1			Cyprus Anvil	May 10, 1976	Mar. 1, 1981	
5	Y30301	1			"	"	Mar. 1, 1981	
7	Y30303	1			"	"	Mar. 1, 1981	
9-11	Y30305-Y30307	3			"	"	Mar. 1, 1981	
12-20	Y30308-Y30316	9			"	"	Mar. 1, 1981	
21-24	Y30317-Y30320	4			"	"	Mar. 1, 1981	
25-32	Y30321-Y30328	8			"	"	Mar. 1, 1981	
ZAN	(Cyprus Anvil 95%; Mercury Explor. 5%)							
1	Y25973	1			Cyprus Anvil	May 10, 1976	Mar. 1, 1981	
2	Y25974	1			"	"	Mar. 1, 1979	
3	Y25975	1			"	"	Mar. 1, 1981	
4	Y25976	1			"	"	Mar. 1, 1979	
5-8	Y25977-Y25980	4			"	"	Mar. 1, 1981	
9-12	Y25981-Y25984	4			"	"	Mar. 1, 1981	
13-14	Y25985-Y25986	2			"	"	Mar. 1, 1981	
15	Y26126	1			"	"	Mar. 1, 1981	
16-20	Y25987-Y25991	5			"	"	Mar. 1, 1981	
21-24	Y25992-Y25995	4			"	"	Mar. 1, 1981	
26	Y26128	1			"	"	Mar. 1, 1981	
28	Y26130	1			"	"	Mar. 1, 1981	
33-36	Y26135-Y26138	4			"	"	Mar. 1, 1981	
41-44	Y26143-Y26146	4			"	"	Mar. 1, 1981	

COMPANY ANVIL MINING CLAIM FAT PROPERTY Cyprus Anvil 60% Whitehorse M.D. 105-K-6
 OWNERSHIP Metall. 40% N.T.S.

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
26	Y78315	1	J. M. Graham	April 5/74	Cyprus Anvil	April 2/76	July 5/ 82	Assess. Work Filed
28	Y78317	1	J. M. Graham	April 5/74	"	"	July 5/ 82	Date: April 7th, 1975
30	Y78319	1	J. M. Graham	April 5/74	"	"	July 5/ 82	Amount: \$6,351.00
32	Y78321	1	J. M. Graham	April 5/74	"	"	July 5/ 82	Type: Linecutting
33-36	Y78322-Y78325	4	E. Ennis	April 5/74	"	"	July 5/ 82	***** Payment in lieu of
41-48	Y78330-Y78337	8	A. Russell	April 5/74	"	"	July 5/ 82	assess. work to
49-56	Y78338-Y78345	8	B. Irving	April 5/74	"	"	July 5/ 82	common date for 3 mo. to July 5, 1976
71-78	Y78360-Y78367	8	N. Welter	April 5/74	"	"	July 5/ 82	*****
79-86	Y78368-Y78375	8	A. Hart	April 5/74	"	"	July 5/ 82	Assess. Work Filed
101-108	Y78390-Y78397	8	M. Barker	April 5/74	"	"	July 5/ 82	Date: July 9, 1976
109-114	Y78398-78403	6	D. Peel	April 5/74	"	"	July 5/ 82	Type: Linecutting (Fin claims)
129-130	Y78418-Y78419	2	J. F. Welter	April 5/74	"	"	July 5/ 82	***** Assess. Work Filed Date: April 15/77 Amount: \$22,400 Type: Gravity Surv. July 10-Oct. 31/76 ***** Assess. Work Filed Date: June 29, 1978 Amt. \$5,600 Type: DDH 78-NA-01 *****

COMPANY ... CYPRUS ANVIL ... CLAIM ... FIN

PROPERTY OWNERSHIP

Cyprus Anvil 60%
Metall. 40%

Whitehorse N.T.S. 105-K-7

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	YA4214-YA4221	8	R. Hill	April 26, 1976	Cyprus Anvil	May 27, 1976	April 26/82	Assess. Work Filed Date: April 15/77 Amount: \$12,400 Type: Gravity Surv. July 10-Oct. 31/76 Amount: \$9,200 Type: Turam & Mag. June 22-Oct. 31/76 *****
9-16	YA4222-YA4229	8	L. Ladue	April 26, 1976	"	"	April 26/82	
17-24	YA4230-YA4237	8	G. MacMillan	April 26, 1976	"	"	April 26/82	
25-32	YA4238-YA4245	8	E. Albert	April 26, 1976	"	"	April 26/82	
33-40	YA4246-YA4253	8	R. Voisine	April 26, 1976	"	"	April 26/82	
41-48	YA4254-YA4261	8	R. Carlick	April 26, 1976	"	"	April 26/82	
49-54	YA4262-YA4267	6	L. Bill	April 26, 1976	"	"	April 26/82	***** Assess. Work Filed Date: June 29, 1978 Amt. \$1,900 Type: DDH 78-NA-01 ***** Assess. Work Filed Date: July 11, 1978 Amt. \$7,500 Type: DDH 78-NA-02 *****
55-62	YA19724-YA19731	8	Francois Busque	Sept. 12, 1977	Cyprus Anvil	Nov. 8, 1977	Sept. 12, 1982	
63-64	YA19732-YA19733	2	Jean Denis	Sept. 12, 1977	"	"	Sept. 12, 1982	

COMPANY CYPRUS ANVIL CLAIM LISA PROPERTY OWNERSHIP Cyprus Anvil 54%
 Ridgemoat 10%
 Metall. 36% M.D. Whitehorse N.T.S. 105-K-7

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	Y75073-Y75080	8	R. Bjork	March, 1973	Cyprus Anvil	May 27, 1976	Aug. 28, 1982	Assess. Work Filed Date: April 15, 1977 Type: Turam & Mag. June 22-Oct. 31/76
9-14	Y75081-Y75086	6	Penny Sills	March, 1973	"	"	Aug. 28, 1982	*****
15-22	Y75087-Y75094	8	P. Burke	March, 1973	"	"	Aug. 28, 1982	Assess. Work Filed Date: Sept. 1, 1977 Amt. \$2,800 Type: Linecutting
23-28	Y75095-Y75100	6	S. Kanayama	March, 1973	"	"	Aug. 28, 1982	*****
29-36	Y80441-Y80448	8	G. Jilson	Aug. 28, 1974	"	May 10, 1976	Aug. 28, 1982	Assess. Work Filed Date: July 11, 1978 Amt. \$12,500 Type: DDH 78-NA-02
37-38	Y80449-Y80450	2	A. Jilson	Aug. 28, 1974	"	"	Aug. 28, 1982	*****
39-41	Y80451-Y80453	3	A. Jilson	Aug. 28, 1974	"	"	Aug. 28, 1982	*****

COMPANY CYPRUS ANVIL CLAIM SARK PROPERTY OWNERSHIP Cyprus Anvil 60% Metall. 40% Whitehorse M.D. N.T.S. 105-K-6

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	YA4315-YA4322	8	John McLeod	April 30, 1976	Cyprus Anvil	June 29, 1976	April 30/81	Assess. Work Filed Date: Sept, 1976 Amount: \$23,761.54 Type: Linecutting *****
9-16	YA4323-YA4330	8	Don Lindgren	April 30, 1976	"	"	April 30/81	
17-24	YA4331-YA4338	8	Raymond Morin	April 30, 1976	"	"	April 30/81	
25-32	YA4339-YA4346	8	Hector Vallee	April 30, 1976	"	"	April 30/81	
33-40	YA4347-YA4354	8	A. Carlos	April 30, 1976	"	"	April 30/81	
41-42	YA4355-YA4356	2	Bernard L. Locke	April 30, 1976	"	"	April 30/81	
								Assess. Work Filed Date: April 15/77 Amount: \$12,600.00 Type: Gravity Surv. July 1-Sept. 30/76 *****

App. IV

APPENDIX IV

Summary of Project Costs
to 30 September, 1978

APPENDIX IV

NORTH ANVIL RANGE PROJECT COSTS

FOR THE PERIOD 1 JANUARY, 1978 TO 30 SEPTEMBER, 1978

Salaries and Wages	\$ 5,652.00
Staking Costs	22.00
Consulting Fees	8,250.00
Linecutting	5,400.00
Surveys - Geophysical	32,776.00
Surveys - Other	886.00
Drilling	59,243.00
Field Equipment and Supplies	741.00
Camp Maintenance	1,638.00
Fuel	2,876.00
Rotary Wing	33,120.00
Miscellaneous Transportation	927.00
Property Maintenance	3,355.00
	<hr/>
	\$154,886.00
Administration - 10%	15,489.00
	<hr/>
	\$170,375.00
	<hr/> <hr/>