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PROPOSED 1980 EXPLORATION PROGRAM

NORTH ANVIL RANGE JOINT VENTURE

D. S. Jennings

CYPRUS ANVIL MINING CORPORATION

Feburary, 1980

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SUMMARY

A minimum one diamond drill hole, maximum three diamond drill hole exploration program at a maximum total cost of $189,000 is proposed for North Anvil Range. A brief review of recent developments in Anvil Range geology is presented. The results of the spectral I.P. development program are reviewed and proposed exploration program outlined.

GEOLOGY

This section is intended to amend a more in-depth discussion of North Anvil Range geology presented by Simpson and Jennings (1978). Regional mapping, largely at a scale of 1:50,000, has resulted in revisions of the 1"=2,000' geological maps of the joint venture area. Current revisions are included here as Maps 1, 2 and 3 superseding Maps 1, 2 and 3 of the 1978 report. The principal differences in the two sets of maps center on interpretation of the Vangorda/Menzie Creek contact and location of the 3E related "graphite fault".

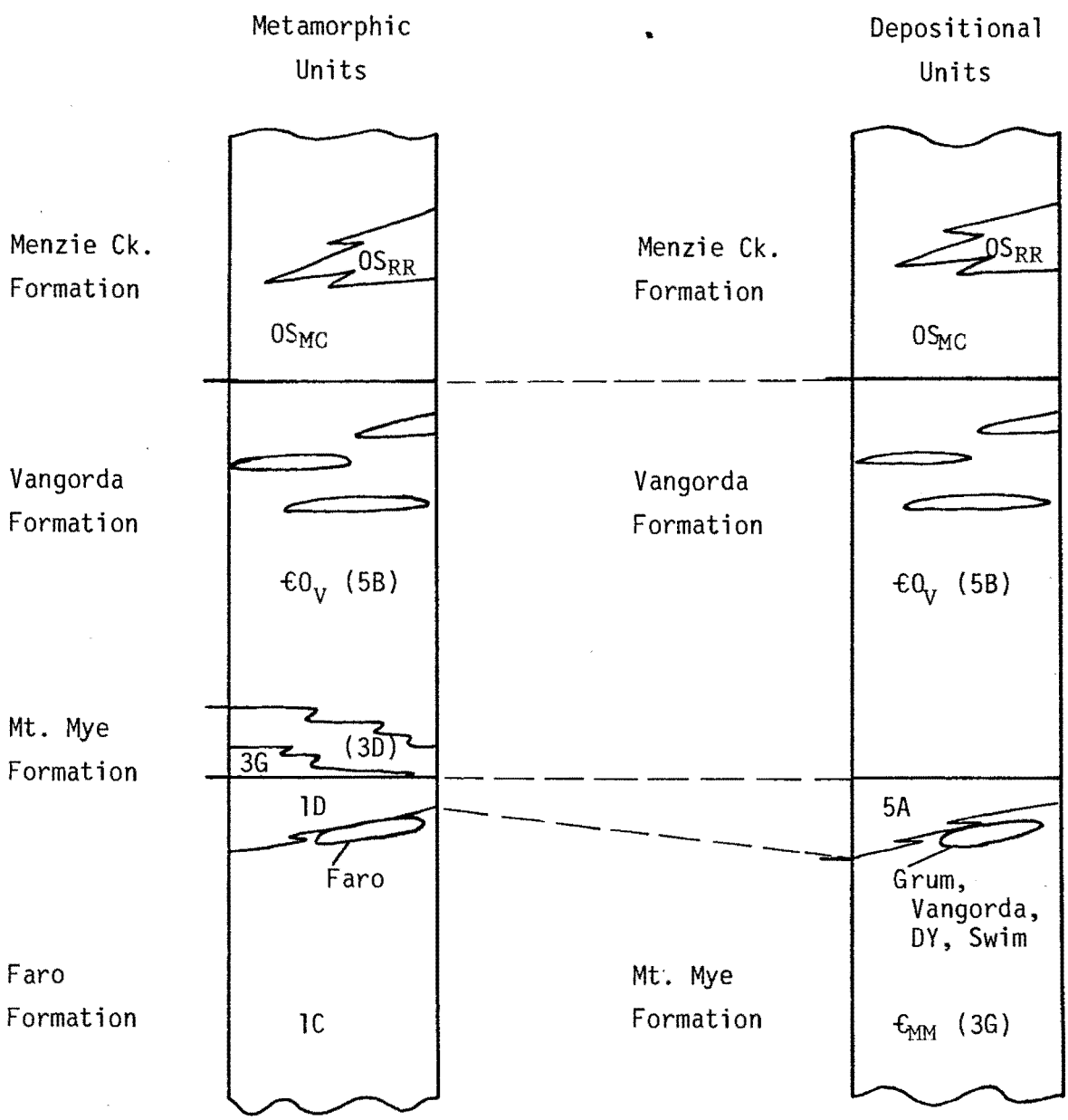
In addition to interpretive map modifications, recent whole rock analytical data strongly suggest that the calc-silicate phyllites, formerly assigned to the Mt. Mye Formation, have an essentially identical bulk composition to the calcareous phyllites of Vangorda Formation. This recent development logically implies that aerially extensively developed calc-silicate phyllites are the higher metamorphic grade equivalent of the calcareous phyllites and therefore

should be included in Vangorda Formation. Maps 4 and 5 (this proposal) show the distribution of Vangorda Formation in this light.

To a first approximation, extensive whole rock data suggest all non-calcareous, pelitic rocks, viz: 1C, 1D, 3G have nearly identical bulk compositions with 1C and 1D, being amphibolite facies equivalents of 3G. Therefore, the metamorphically defined "Faro Formation" (units 1C and 1D) is a purely metamorphic facies superimposed on a nearly homogeneous, non-calcareous pelite host. This equivalence is also shown in Maps 4 and 5.

From these comments, it is evident Maps 1, 2 and 3 depict metamorphic stratigraphic relationships while Maps 4 and 5 show original depositional relationships. A comparative summary of these relationships is given in the following figure. With these realizations comes the need to reappraise the exploration potential of the calc-silicate phyllite (3D)/non-calcareous phyllite (3G) contact in the west central portion of Map 1 for this is the Vangorda/Mt. Mye contact which is host to known sulfide deposits on the south flank of Anvil Arch. Toward this end, terrain corrected gravity anomalies in this area are re-evaluated for possible coverage in the 1980 program.

COMPARATIVE SUMMARY OF METAMORPHIC AND DEPOSITIONAL STRATIGRAPHIC UNITS



SPECTRAL I.P.

Recent reports from Phoenix Geophysics, the developers of the spectral I.P. technique, indicate a protracted delay in the availability of a field portable unit. The basic problem has been one of finding or developing a suitable interface between the digital data acquisition system and the Hewlett-Packard micro-computer. Phoenix's best estimate of field availability is August, 1980 at the earliest. In all probability, this means the best we could hope for would be a unit available for extensive orientation studies by the latter part of the field season. It is our intention to exhaustively test this unit over known occurrences of sulfide mineralization with and without associated graphitic pelites at various depths of burial before applying it (if warranted) to unknown cases.

PROPOSED 1980 EXPLORATION PROGRAM

The 1980 North Anvil program is outlined and budgeted in Cyprus Anvil A.F.E. 80-2200 included as Appendix I of this proposal. Inspection of this A.F.E. shows a recommended minimum program of one diamond drill hole and a maximum program of three diamond drill holes forming a fence, with twenty line miles (32 km) of spectral I.P. testing centered on this fence. Each drill target outlined in this flexible program will be commented on below:

DDH 80-NAR-01: Target is a pronounced, linear, Pb-Zn geochemical anomaly in Vangorda Formation calcareous phyllites (5B) stratigraphically above graphitic phyllites of unit 5A (deposit host on South Anvil). Drill hole is to test possibility that geochemical anomaly

is a steep vein remobilized off of a stratiform sulfide deposit in 5A. Alternatively, the geochemical anomaly may be related to the epigenetic KD "stringer zone" deposit to the north. A 1,500 foot (460 metre) hole is recommended on this target as the minimum 1980 program.

DDH 80-NAR-02: Target is a 0.4 milligal terrain corrected gravity anomaly associated with a small TURAM anomaly in calc-silicate equivalents of Vangorda Formation. Gravity/TURAM combination may reflect massive sulfides associated with 5A graphitic phyllites at the base of Vangorda Formation. Inspection of the gravity data by P. E. Walcott, Consulting Geophysicist, suggests the possibility that the gravity anomaly may itself be created by the terrain correction procedure rendering it a "manufactured" anomaly. Additional problems include depth to Anvil Batholith in this area and the possibility the gravimetric response, if real, may be caused by metabasites as seen immediately east of the target area. Drilling of this 1,500 foot (460 metre) hole should be subject to due consideration by both joint venture partners.

DDH 80-NAR-03: Target is coincident TURAM and ground magnetic anomalies in graphitic phyllites of unit 3E (Mt. Mye Formation). A similar geophysical scenario hosts

the Sea Deposit. A 1,000 foot (300 metre) hole could most logically be drilled after spectral I.P. testing but could be considered without this testing.

These three holes, in conjunction with surface exposure, would be useful to critically define the stratigraphic section, nature of conductive units and structural scenario in this portion of the joint venture area and could serve as a model for further work to the southeast. Spectral I.P. surveys would be contemplated only after adequate testing against known cases. A proposed, maximum budget forming part of the A.F.E. totals $189,000 split 60% or $113,400 to Cyprus Anvil and 40% or $75,600 to Metallgesellschaft. Current mineral claims status for the joint venture area is included as Appendix II.

Respectfully submitted,

D. S. Jennings
Chief Geologist

DSJ/ck

APPENDIX I

APPENDIX I

CYPRUS ANVIL MINING CORPORATION

A.F.E. 80-2200
(Exploration)

TITLE: NORTH ANVIL RANGE

ESTIMATED COST:

01	Salaries and Wages	$ 4,500.00
03	Consulting Fees (computer)	1,000.00
04	Linecutting	2,500.00
06	Geophysical Surveys	8,000.00
08	Drilling	135,000.00
11	Assays and Geochemical Analyses	500.00
14	Fuel	2,000.00
15	Rotary Wing	16,500.00
16	Miscellaneous Transportation	1,000.00
33	Property Maintenance	1,000.00
	Total Direct Cost	$172,000.00
44	Overhead	17,000.00
	TOTAL COST	$189,000.00
	Cyprus Anvil - 60%	$113,400.00
	Metallgesellschaft - 40%	$ 75,600.00

CYPRUS ANVIL

NORTH ANVIL RANGE JOINT VENTURE

PROJECT DESCRIPTION

The North Anvil Joint Venture includes 310 claims covering parts of the Vangorda and Mt. Mye formations on the northeast flank of Anvil Arch. Work in this area was initiated in 1970 on the presumption that the geology of the area was a mirror image of the south flank, which contains important lead-zinc deposits. Geologic mapping in the intervening ten years has shown this presumption to be correct, though differences are apparent, such as the less calcareous nature of the phyllites and smaller volume of metabasite lenses in the Vangorda formation and the more proximal volcanic facies of the Menzie Creek formation in the north. Despite these detailed variations, it is clear that the broad transition zone between the Mt. Mye and Vangorda formations is present and contains discontinuous graphitic phyllites which are the host of sulphide deposits in the south.

First generation exploration of this area emphasized comprehensive geochemical coverage which caused follow-up work to be focused on large anomalies in the Menzie Creek formation and in the Mt. Mye formation below the Vangorda transition zone.

Second generation work, which has formed the basis of the present joint venture, has taken advantage of new stratigraphic findings and work has been focused on the transition zone. This zone has been covered by electromagnetic surveys to define graphitic units that might host sulphides, and conductors thus defined have been covered by gravimetric surveys.

Few targets remain from this direct exploration approach and the project must soon enter a third generation of stratigraphic testing and deep exploration drilling, as has been used successfully in the south for the past several years.

WORK PROGRESS

As a result of work during the present joint venture, electromagnetic coverage of the property is nearly complete and extensive gravity surveys cover most of the favourable conductive units. The 1978 drilling is summarized in the following table:

Hole No.	Claim	Inclination	Depth (m)	Target
78-NA-01	FIN #28	90°	178.2	Unit 3G-3E coincident residual gravity and TURAM anomalies.
78-NA-02	FIN #9	90°	219.8	Unit 1C residual gravity and TURAM anomalies.
78-NA-03	AM #2	90°	190.5	Unit 5A at unit 5/3 contact with coincident TURAM and Pb-Zn-Cu geochemical anomalies.
78-NA-04	IRMA #9*	90°	159.4	Coincident gravity and I.P. anomalies.
			747.9	

*(10 miles north of main property).

Holes 78-NA-01 and 02 encountered unmineralized Mt. Mye formation pelitic schists; the gravity anomalies being due to variable overburden thickness in the first case and an unknown cause in the second. Hole 78-NA-03 cut the favourable stratigraphic sequence but only minor non-stratiform mineralization was found to explain the geochemical anomaly. Hole 78-NA-04 was on a property underlain by a completely different geologic terrane and intersected unmineralized greywackes of Mississippian or Triassic age with no apparent cause for the gravity anomaly except variations in overburden thickness.

PROPOSED PROGRAM

A three-fold approach is proposed for further work on the northwest end of the Mye-Sark property:

(a) drill testing of stratigraphic, gravity and geochemical targets,

(b) investigation of known conductors with spectral I.P., if the instrumentation is available, in an effort to distinguish graphitic conductors from sulphide conductors,

(c) re-interpretation of geological data and new mapping to evaluate the implications of the recent realization that 3D calc-silicates are equivalent to 5B calcareous phyllites.

As part of this work, drilling in (a) should be used to construct a drill fence rigorously defining the stratigraphic section in this area. Preliminary drill hole locations for this fence are given below and a speculative section along the proposed fence is attached.

Drill Hole No.	Approx. Location	Approx. Depth	Target
1	L236W, 28N	1,500'	Intersection of presumed steep vein (causing geochemical anomaly) and 5A horizon and deep test of Mt. Mye/ Vangorda transition. Geochemical anomaly may be related to epigenetic KD deposit "stringer zone" to north.
2	L252W, 51S	1,500'	Gravity/TURAM anomaly near base of Vangorda formation and deep test of Mt. Mye/Vangorda formation transition. (Could terminate early if batholith is shallower than expected. Note terrain corrected gravity anomaly may be produced by correction procedure.)
3	L236W, 7S	1,000'+	Test of TURAM/magnetic anomalies in 3E(?) and stratigraphic test using Sea Deposit as an analogue.

Approximately twenty line miles of spectral I.P. would cover approximately two miles of strike length on 1,600-foot spacings. This work should be centered on the proposed drill fence and expanded in later years.

This drilling proposal should be kept flexible with at least Hole No. 1 to be completed in the 1980 field season. Hole No. 2 should be drilled upon due consideration by both joint venture partners. Hole No. 3 would most logically be drilled after appropriate spectral I.P. testing but could be considered without the I.P. data. Thus a minimum one hole to possible three hole program is recommended. The budget figures cover the three hole contingency.

JUSTIFICATION

The property covers approximately twenty miles of favourable stratigraphy. At the southeast end of this belt is barren stratiform mineralization, the significance of which is unknown, but on the south side of the Anvil Arch this type of mineralization is only found near the known orebodies. The available information is not sufficient to determine where similar mineralization occurs to the northwest and, if so, how this might relate to economic mineralization.

While the exploration work done to date has reduced to near zero the probability of a subcroping, Faro-sized ore deposit, it has not excluded the possibility of base metal-bearing stratiform sulphides and has not answered many important questions of stratigraphy and ore deposition possibilities. Such uncertainty is as unacceptable here as it is in the Swim Basin.

APPENDIX II

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 To	Transfer Information Date	Due Date	Assessment Work and Remarks
JOINT VENTURE - METALLGESELLSHAFT			(North Anvil Range)					
TAF	Cyprus Anvil 100%							Assess. Work Filed Date: Jan. 21, 1977 Amt. $8,308.00 Type: Linecutting Helic. costs * * * * * * * *
23-24	Y62473-Y62474	2	George Bob	Sept. 29, 1971	Cyprus Anvil	May 10, 1976	Mar. 1, 1981	
25-32	Y62483-Y62490	8	Harold Smith	Sept. 29, 1971	"	"	Mar. 1, 1981	
33-38	Y62491-Y62496	6	Cliff McLeod	Sept. 29, 1971	"	"	Mar. 1, 1981	
JET	(Cyprus Anvil 87½%; Mercury Explor. 5%; Giant Yellowknife 7½%)							Assess. Work Filed Date: Aug. 1978 Amt. $22,500.00 Type: DDH 78-NA-03 * * * * * * * *
50	Y3191	1			"	"	Sept. 17, 1981	
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	
MX	(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 To	Transfer Information Date	Due Date	Assessment Work and Remarks
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	March 1, 1981	
	(Cyprus Anvil 100%)							
3-10	YA48308-YA48315	8	G. R. Craft	Oct. 9, 1979			Oct. 9, 1980	
11-15	YA48316-YA48320	5	Richard W. Craft	Oct. 9, 1979			Oct. 9, 1980	
TIM	(Cyprus Anvil 95%; Mercury Explor. 5%)							
3	Y30299	1			Cyprus Anvil	May 10, 1976	March 1, 1981	
5	Y30301	1			"	"	March 1, 1981	
7	Y30303	1			"	"	March 1, 1981	
9-11	Y30305-Y30307	3			"	"	March 1, 1981	
12-20	Y30308-Y30316	9			"	"	March 1, 1981	
21-24	Y30317-Y30320	4			"	"	March 1, 1981	
25-32	Y30321-Y30328	8			"	"	March 1, 1981	
ZAN	(Cyprus Anvil 95%; Mercury Explor. 5%)							
1	Y25973	1			Cyprus Anvil	May 10, 1976	March 1, 1981	
3	Y25975	1			"	"	March 1, 1981	
5-8	Y25977-Y25980	4			"	"	March 1, 1981	
9-12	Y25981-Y25984	4			"	"	March 1, 1981	
13-14	Y25985-Y25986	2			"	"	March 1, 1981	
15	Y26126	1			"	"	March 1, 1981	
16-20	Y25987-Y25991	5			"	"	March 1, 1981	
21-24	Y25992-Y25995	4			"	"	March 1, 1981	
26	Y26128	1			"	"	March 1, 1981	
28	Y26130	1			"	"	March 1, 1981	
33-36	Y26135-Y26138	4			"	"	March 1, 1981	
41-44	Y26143-Y26146	4			"	"	March 1, 1981	

COMPANY CYPRUS ANVIL ..... CLAIM FAT ..... PROPERTY OWNERSHIP Cyprus Anvil 60% Metall. 40% M.D. Whitehorse ..... N.T.S. 105-K-6 & 7 .....

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information To	Transfer Information Date	Due Date	Assessment Work and Remarks
26	Y78315	1	J. M. Graham	April 5, 1974	Cyprus Anvil	April 2, 1976	July 5, 1982	Assess. Work Filed Date: June 29, 1978 Amt. $5,600 Type: DDH 78-NA-01 * * * * * * *
28	Y78317	1	J. M. Graham	April 5, 1974	"	"	July 5, 1982	
30	Y78319	1	J. M. Graham	April 5, 1974	"	"	July 5, 1982	
32	Y78321	1	J. M. Graham	April 5, 1974	"	"	July 5, 1982	
33-36	Y78322-Y78325	4	E. Ennis	April 5, 1974	"	"	July 5, 1982	
41-48	Y78330-Y78337	8	A. Russell	April 5, 1974	"	"	July 5, 1982	
49-56	Y78338-Y78345	8	B. Irving	April 5, 1974	"	"	July 5, 1982	
71-78	Y78360-Y78367	8	N. Welter	April 5, 1974	"	"	July 5, 1982	
79-86	Y78368-Y78375	8	A. Hart	April 5, 1974	"	"	July 5, 1982	
101-108	Y78390-Y78397	8	M. Barker	April 5, 1974	"	"	July 5, 1982	
109-114	Y78398-Y78403	6	O. Peel	April 5, 1974	"	"	July 5, 1982	
129-130	Y78418-Y78419	2	J. F. Welter	April 5, 1974	"	"	July 5, 1982	

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 To	Transfer Information Date	Due Date	Assessment Work and Remarks
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 Amoun t: $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	
55-62	YA19729-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	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 * * * * * * * *

COMPANY CYPRUS ANVIL CLAIM LISA PROPERTY OWNERSHIP Cyprus Anvil 54%, Ridgemont 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 To	Transfer Information Date	Due Date	Assessment Work and Remarks
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	
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: Sept. 1, 1977 Amt. $2,800 Type: Linecutting * * * * * * * *
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	Assess. Work Filed Date: July 11, 1978 Amt. $12,500 Type: DDH 78-NA-02 * * * * * * * *

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

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information To	Transfer Information Date	Due Date	Assessment Work and Remarks
1-8	YA19741-YA19748	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: DDH 78-NA-01 * * * * * * * *
9-16	YA19749-YA19756	8	Louis Tommy	Sept. 12, 1977	"	"	Sept. 12, 1982	
17-22	YA19757-YA19762	6	Gordon Etzel	Sept. 12, 1977	"	"	Sept. 12, 1982	
23-25	YA19763-YA19765	3	Jean Denis	Sept. 12, 1977	"	"	Sept. 12, 1982	

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

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information To	Transfer Information Date	Due Date	Assessment Work and Remarks
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 * * * * * * * *

COMPANY CYPRUS ANVIL ..... CLAIM MING ..... PROPERTY OWNERSHIP

M.D. Whitehorse ..... N.T.S. 105-K-6 .....

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information To	Transfer Information Date	Due Date	Assessment Work and Remarks
OPTION AGREEMENT - CREAM SILVER MINES								
MING CLAIMS - 105-K-6 (North Anvil Range)								
1-16	Y76699-Y76714	16		Aug. 20, 1976			Aug. 20, 1981	Assess. Work Filed Date: Aug. 23, 1978 Amt. $3,200.00 Type: Linecutting * * * * * * * *