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1981 PROGRESS REPORT

NORTH ANVIL RANGE JOINT VENTURE

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and

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CYPRUS ANVIL MINING CORPORATION

April, 1982

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SUMMARY:

1981 field work over the joint venture area is discussed in two reports amalgamated to form this review.

A follow-up program of heavy mineral sampling was undertaken over much of the subject area, focusing particularly in the area of anomalous barite concentrations found in 1980. Additional sampling and prospecting failed to specifically locate a source for the barite. Further work, followed ultimately by drilling, is indicated.

Forty-eight (48) Foo claims were staked and grid soil sampled over the Mt. Mye/Vangorda Formation contact in an area of no prior geochemical coverage. Subanomalous lead and zinc results broadly confirm a previously known anomaly (Foo/MX) near this contact requiring specific evaluation.

Twenty-nine (29) Fin mineral claims have been dropped as they are in the Mt. Mye Formation, well below the host horizon. All other claims remain in good standing. Expenditures for the 1981 program total $43,521.25.

Recommendations for continued exploration of the joint venture area include follow-up soil geochemical surveys in the area of the Foo/MX anomaly and in the area of high $BaSO_4$ heavy mineral samples. Several potential deep drilling strategies are suggested.

A care and maintenance program totalling $24,500 (Cyprus Anvil 60%, $14,700; Metallgesellschaft 40%, $9,800,) is planned for 1982.

REPORT ON A HEAVY MINERAL SAMPLING SURVEY

North Anvil Range Joint Venture

Cyprus Anvil Mining Corporation

and

Metallgesellschaft Canada Limited

N.T.S. 105-K-6, 7

G. A. Jilson
CYPRUS ANVIL MINING CORPORATION

April, 1982

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Approximately 10 kg of sample was collected from each site, this being the residue of 20 - 50 kg of raw sediment. Experience shows that smaller samples give less reproducible results and larger samples cause problems during sieving at the laboratory (C. Fipke, personal communication). The samples were collected in large, doubled plastic bags with the sample number placed on each bag and on a wet proof paper slip between the bags. Samples were shipped to the laboratory of C.F. Mineral Research in Kelowna, B.C. in five gallon plastic pails which hold two samples each. Of 1,200 samples shipped this way in 1981, only two were lost and not a single sample was damaged. Shipping was by truck as air freight bills easily mount during routine programs, but it should be noted that this adds a two to four week delay in turnaround time.

Transport in the field was by helicopter (Hughes 500D being the optimum machine in Yukon), leapfrogging from site to site. Crews of two samplers were usually used; however, once the samplers were more experienced, they worked alone. A sample generally took at least 30 to 45 minutes to collect, but some particularly difficult ones took 1 1/2 to 2 hours. Communication between samplers and the helicopter by radio greatly expedited sampling and helped save helicopter time. Once routine operating efficiency was achieved, four to five samplers were serviced by one helicopter, depending on conditions, and they collected six to ten, mostly eight, samples each per day. One of the major operating problems was the accumulation of samples as they easily reached the practical operating payload of the 500D and a scheme of ferrying samples out of the sampling area during fuel-ups must be worked out. Clearly, the helicopter pilot was critical to the smooth operation of this type of program. The most common pilot problems were the difficulty of keeping the samplers' location in mind and planning refueling and sample movements efficiently. Surprisingly, contrary to popular opinion, almost any stream in the Yukon can be worked by a sufficiently skilled pilot and experienced sampler. The reason most missed samples were missed was inadequate silt due to organic sludge, usually the direct responsibility of the Yukon's more than healthy beaver population or the fact that particularly swift or steep streams may have no sediment finer than a small boulder accessible to the sampler. The 27 samples reported herein were collected in 1.5 days by two crews of two samplers, hence routine efficiency had not yet been reached.

Laboratory Methods

The samples were treated by two separate laboratories, namely C.F. Mineral Research of Kelowna, B.C., who were responsible for sample preparation, and Chemex Labs of North Vancouver, B.C., who were responsible for chemical analysis.

At the C.F. Minerals lab, the sample was wet sieved through 20, 35, 60 and, in some cases, 150 mesh screens using a patented apparatus designed by C.F. Minerals. The sieving procedure gravity stratifies the subsamples on each sieve; all but 1.5 litres of the resulting accumulation was discarded from each sieve. After sizing, that 1.5 litre subsample was run through a two stage heavy liquid separation using bromoform (S.G. $\simeq$ 2.8) and methylene iodide (S.G. $\simeq$ 3.2) to produce a light, intermediate and heavy fraction. Depending on the results of previous orientation work, one or more of these samples was separated electromagnetically into a nonmagnetic, paramagnetic and magnetic fraction using a combination of rotary magnetic separator for the latter fraction and then a Frantz isodynamic separator for the former two fractions. The settings used on the Frantz are proprietary.

INTRODUCTION

Twenty-seven heavy mineral samples were taken along the northeast margin of the Anvil Batholith in the vicinity of the North Anvil Range Joint Venture. The purpose of the sampling was:

(a) to cover the Mt. Mye/Vangorda formation contact to provide both direct exploration and geochemical background information,

(b) to evaluate the possibility of tin/tungsten deposits related to the Anvil Batholith,

(c) to check high barium results obtained on an earlier survey at the Mt. Mye/Vangorda formation contact at the east edge of the Zan/Mx claims,

(d) to evaluate the drainage basin in the north central portion of the area where a weak, probably hydromorphic, soil anomaly was found earlier (Jilson, 1974),

(e) to evaluate the possibility of gold related to the Fe/Cu massive sulphide showing in Ace Canyon on the Lisa claims,

(f) to check overall reproducibility of the technique.

METHODS AND PROCEDURES

Field Methods

Samples were collected from major streams with basins of 5 - 10 km^2 or larger, with the exception of areas where more detailed sampling was done to evaluate specific concepts.

Sediment was collected from the active channel of the stream at a site favorable to accumulation of heavy minerals. In most cases, the leading edge of a point bar or a back eddy downstream from a large boulder or other obstacle in the stream was used. At most sites, one hole was dug by shovel, with considerable effort made to clean the bottom of the hole and to minimize disturbance of the sediment. Experience shows these to be the major losses of heavy minerals by downward infiltration. After each shovel full was dumped into the sieve, the top and the bottom of the blade was carefully rinsed to remove any infiltrating heavies that accumulate or adhere there. The sample was sieved in water to which a small amount of soap is added to reduce surface tension without causing excessive foaming. A 20-mesh screen of 45 cm diameter constructed of stainless steel was used, with collection in an aluminum pan of about ten liters capacity. To eliminate or minimize chances of cross contamination, the screen, pan, shovel and any other tools were scrubbed carefully with soap after the sample was taken and before the next sample was taken at the next site. Care was taken to ensure that no activity is carried out upstream from the sample site. The nature of the technique and Yukon streams necessitates use of rubber gloves and boots by samplers - special care was taken to ensure the gloves are cleaned between samples as they are a potentially major source of cross contamination.

In the Anvil District, the -60 HN (passed through 60 mesh screen = -60, sank through heaviest liquid = H, and nonmagnetic, i.e. not affected by Frantz = N) fraction and -35 + 60 IP (passed through 35 mesh screen stopped on 60 mesh screen = -35 + 60, sank through lighter liquid but floated on heavier = I, paramagnetic, i.e. deflected by Frantz but not affected by rotary separator, = P) fraction gave best results. The former fraction accumulates most major sulphide ore minerals, pyrite, smithsonite, cerrusite, anglesite, barite and other Ba species, gold, silver, scheelite, cassiterite, diamond, as well as kyanite, sillimanite, rutile, most zircon, apatite, spinel and sphene, some carbonates, monazite and garnet; it is thus clearly directed at detrital dispersion by fine sand and smaller grains from exposed deposits or marginal mineralization. The latter fraction accumulates more rock forming minerals, such as pyroxenes and amphiboles, some micas, some lithics, and composite gossan fragments or precipitated FeMn oxide species, thus it is more sensitive to hydromorphic scavenging of metals and clastic dispersion from heavily oxidized deposits or transported gossans. The grain size of this fraction is mainly medium sand, theoretically this fraction might be expected to give more reproducible and meaningful results than a conventional silt sample, since the possible variable sources of metal are lessened by elimination of clays and organics and the upper and lower size limits restrict somewhat variations due to surface chemical effects.

The fractions were weighed to the nearest hundredth gram and the -60 HN checked by UV light for scheelite, then both fractions were shipped to Chemex Labs.

The cost for one fraction is about $50 per sample, inclusive of all laboratory charges. The need for a second, different size fractions ups the cost to about $70 per sample, since a second heavy liquid separation is needed. These costs are for separation alone.

The fractions were analysed by Chemex for the following elements:

-60 HN	Cu, Pb, Zn, Mo, Ag, As, Fe, Mn, Cd, Au, Ba, W, Sn, Sb, total extraction.
-60 HP	Cu, Pb, Zn, Mo, Ag, As, Fe, Mn, Cd, Sh, total extraction.
-35 + 60 IP	Cu, Pb, Zn, Mo, Ag, As, Fe, Mn, Cd, both total and partial extraction.

Due to the small size of many fractions compared to that needed for analysis, the following priority system was set up for -60 HN or any other fraction requiring several different digestions.

(1)	Au	1.0 gm
(2)	Cu, Pb, Zn, Mo, Ag, Cd, Fe, As	0.5 gm
(3)	Ba	0.2 gm
(4)	W	0.25 gm
(5)	Sb	0.5 gm
(6)	Sn	0.25 gm
		2.65 gm

Chemex's normal sample size was severely cut to the minimum their chief chemist felt would produce reproducible results at anomalous levels, with consequent increase of detection limits. About 70% of -60 HN fractions contain enough material for the complete analytical scheme.

Analysis of -60 HN Fraction

The sample was ground to -100 mesh maximum (75% of sample then at -150 mesh) so that a homogeneous set of subsamples could be taken per the above order of priority. Grinding was by ring grinder, except for samples weighing less than 3 grams, which were ground by hand using an agate morter and pestal in order to minimize loss during grinding, in any case, sample loss was not great. While sample cross contamination during grinding is possible, Chemex claims it is not generally significant and the negative effect of grinding is more than offset by the risks of not grinding and facing the nugget effect in subsampling the fraction for gold.

Analysis for Au:

A 1.0 gram sample was fused in litharge, carbonate and siliceous flux. The resulting lead button containing any gold in the sample was cupelled in a muffle furnace to produce a precious metals bead.

Sample beads, plus standard and blank beads, were irradiated in a thermal neutron flux. The gamma emissions of the irradiated beads were counted utilizing a Ge (Li) detector and quantified for gold. The detection limit for a 1.0 gram sample is 10 ug/kg (ppb).

Analysis for Cu, Pb, Zn, Mo, Ag, Cd, Fe, Mn:

1. A 0.5 gram portion of the sample was weighed into a calibrated test tube. The sample was digested using hot 70% $HClO_4$ and concentrated HNO_3. Digestion time = 2 hours.

2. Sample volume was adjusted to 25 mls. using demineralized water. Sample solutions were homogenized and allowed to settle before being analysed by atomic absorption procedures.

3. Detection limits using Techtron A.A.5 atomic absorption unit:

	Copper	- 2.0 ppm
	Molybdenum	- 2.0 ppm
	Zinc	- 2.0 ppm
*	Silver	- 0.4 ppm
*	Lead	- 2.0 ppm
	Manganese	- 10.0 ppm
	Iron	- 4.0 ppm
	Cadmium	- 0.2 ppm

* Ag and Pb are corrected for background absorption.

4. Elements present in concentrations below the detection limits were reported as one half the detection limit, i.e. Ag - 0.2 ppm.

Analysis for As:

An aliquot of the above digest was acidified, reduced with KI and mixed. A portion of the reduced solution was converted to arsine with $NaBH_4$ and the arsenic content determined using flameless atomic absorption.

Detection limit: 2 ppm.

Analysis for Ba:

A 0.20 gram sample was digested with a mixture of HF - $HClO_4$ - NHO_3 acids to dryness. The baked residue is leached with 25 ml of 10% HCl with NaCl added to reduce ionization effects in the A.A. flame. Analysis is by AAS using an N_2O - C_2H_2 gas mixture.

Analysis for W:

A 0.25 gram sample was fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten was complexed with toluene 3, 4 dithiol and extracted into an organic phase. The resulting color was visually compared to similarly prepared standards.

Detection limit: 4 ppm.

Analysis for Sb:

A 0.5 gram sample was digested with concentrated HCl in hot water bath. The iron was reduced to Fe^{+2} state and the Sb complexed with I^-. The complex was extracted with TOPO-MIBK and analysed via A.A. Correcting for background absorption 0.2 ppm $\pm$ 0.2.

Detection limit: 0.8 ppm.

Analysis for Sn:

A 0.25 gram sample was sintered with ammonium iodide. The resulting tin iodide was leached with a dilute HCl - ascorbic acid solution. The TOPO complex was then extracted with MIBK and analysed via A.A.

Detection limit: 4 ppm.

All of the above schemes should be considered total extractions.

Analysis of -60 HP Fraction

The -60 HP fractions were analysed using the same methods outlined above, where applicable.

Analysis of -35 + 60 IP Fractions

This fraction was not pulverized since the nugget effect causes no problem, and it was felt advisable to not alter the natural particle size distribution. Both a total and partial extraction were determined for comparative purposes. Total extraction for Cu, Pb, Zn, Mo, Ag, Fe, Mn, As is as outlined above.

Partial extraction was accomplished using 1.5N oxalic acid in a hot water bath for five minutes, followed by the A.A. finish outlined above.

RESULTS

Plates 1 and 2 present the results of the surveys in map view. Plate 3 summarizes much of the results by metal and fraction in histogram form. Appendix I gives the chemical results on individual fractions, together with weights of fractions and other information about the sample and sample site.

The number of samples is too small to allow definitive statements to be made but the patterns displayed on Plate 3 are a microcosm of some of the results of a larger survey and, as such, are worth discussion.

Table 2 attempts to put these results in perspective by comparing them to a larger set of samples which is from a slightly different lithologic and stratigraphic terrane. These threshholds are indicated on Plate 3 by arrows.

Reproducibility

Table 1 lists those samples taken at the same or close by sites in 1980 and 1981. Unfortunately, only three samples are exactly comparable, the remainder being slightly different fractions (-60 HNN in 1980 versus -60 HN in 1981; HNN indicates that a stronger Frantz field setting was used than is normal for the HN fraction) which should increase Ba, W and Au substantially and, not surprisingly, does.

Those three samples show fair reproducibility in most elements, with some notable exceptions. Silver is problematic; this is common with this method and may be due to a nugget effect involving supergene(?) native silver or another Ag-rich phase.

Gold in Sample 81G0007 and SOS29 is at least detectable in both samples, but a clear discrepancy exists; this is probably due to a nugget effect as well. Duplicate sampling with all heavy mineral techniques involving gold is a problem; this method reportedly gives more reproducibile results than most but still has its problems. None of these samples is very high in gold and they are ot good tests, comparisons elsewhere show general correspondence of high results, but it is by no means 100%. It is not wise to attach much significance to the difference between 1,000, 10,000 and 100,000 ppb Au, all may be equally anomalous.

This discrepancy in Ba between 81G0008b and SOS28 may be due to the fact that the samples are not quite in the same spot, SOS28 was taken up hill from 8b and above till benches, thus the higher value in 8b could be due to a decrease of the stream gradient or a source of barite in the till.

The summary impression of checks on this method is that Au and Ag pose persistent problems. The remaining elements, especially abundant base metals, generally give good correspondence, at least good enough that the order of anomaly almost always checks out.

TABLE 1

Comparison of Results of Samples Taken on the Same Locations in 1980 and 1981

-60HN

Sample No.	(ppm) Ba	Ag	Pb	Zn	Cd	Cu	Mo	W	(ppb) Au
81-C-0003	450	0.8	29	46	0.6	14	1	290	10
50535	1,290	0.4	48	46	0.5	24	2	>2,000	145
81-G-0004b	NSS	4.7	255	76	1.0	69	3	NSS	600
50534	NSS	1.3	76	74	0.7	51	<1	>2,000	<25
(Conventional Silt)	(1,220)	(0.2)	(22)	(144)	(0.6)	(18)	(2)	(3)	(<5)
81-G-0016	1,100	0.2	20	70	0.2	22	4	440	<10
50533	15,500	1.5	31	40	0.5	29	<1	>2,000	3,290
81-G-0006	708	2.6	208	104	1.8	18	4	150	<10
50532	1,240	3.9	110	170	1.6	93	4	790	<15
(Conventional Silt)	(960)	(0.5)	(104)	(530)	(2.7)	(19)	(2)	(3)	(15)
81-G-0008b	9,500	1.6	48	88	0.4	20	4	275	<10
50528	770	0.2	59	65	1.6	29	1	225	<15
(Conventional Silt)	(800)	(0.2)	(12)	(104)	(0.4)	(14)	(1)	(2)	(<5)
81-G-0007	NSS	1.2	48	84	0.4	365	2	NSS	60
50529	NSS	7.6	18	60	0.3	118	1	765	1,155
81-G-0009	>50,000	0.2	14	154	0.2	100	2	140	<10
50526	340,000	1.3	56	64	0.7	35	2	270	<5
(Conventional Silt)	(2,470)	(0.3)	(25)	(138)	(0.5)	(28)	(3)	(4)	(<5)
81-G-0033	2,950	7.4	146	170	0.8	196	2	85	40
50525	1,230	0.2	34	105	0.9	50	<1	1,035	440

TABLE 2

Geochemical Threshhold (by Inspection of Histograms)

Based on 650 Samples

	-60HN TOT	-60HP TOT	-35+60IP TOT	-35+60IP OX	-80 TOT
Pb	120	125	90	40	40
Zn	300	800	600	200	400
Ag	2.0	1.2	1.3	0.3	1.0
Cu	300	150	140	60	100
Mo	14	15	15	5	10
Fe (%)	6.5	20.2	18.5	3.4	4.5
Mn	1,300	9,500	3,000	1,200	2,000
As	100	140	130	75	55
Sb	-	7.5	-	-	1,300
Ba	10,000 *	-	-	-	-
W	≈2,000(?)***	-	-	-	-
Sn	≈1,000(?)***	-	-	-	-
Cd	1.5	3.0	2.0	1.2	≈2.0
Au (ppb)	500 **	-	-	-	-

* Ba values below 50,000 ppm are not considered very high if black shales or Pb/Zn/Ba deposits are in the drainage basin.

** Au ranges to ≈100,000 ppb but any sample over 500 ppb is considered interesting.

*** Not from histograms, W values of ≈5,000 ppm not related to major mineralization are not uncommon, as are very high Sn results in major streams remote from mineralization.

Choice of Fraction

Several fractions were analysed in this survey in order to check which fraction and analysis gives best results in areas other than those draining the Anvil Range orebodies. Partial and total extractions were attempted on the -35 + 60 IP fraction (OX = 1.5 N warm oxalic acid TOT = perchloric + nitric acids) and the -60 HP fraction was tested to see if it would give the same information as the -35 + 60 IP, resulting in a $22 per sample saving.

The oxalic acid leach did not disclose new anomalies or enhance relief of known anomalies over background, in fact, in several cases it actually supressed anomalous response where other fractions show anomalies which are related to bedrock features. The -35 + 60 IP OX and TOT histograms for zinc provide an interesting comparison; the subanomalous population is clearly bimodal with a total extraction, while the trend is not so clear with a partial extraction. The higher peak on the TOT histogram proves to be mainly due to samples that drain the Mt. Mye/Vangorda contact and may reflect higher zinc in black shales at that horizon which soil sampling has shown previously (Jilson, 1974). Other problems with the oxalic acid leach relate to its susceptibility to time of leaching, which is difficult to control in a mass production laboratory, and its specificity for Fe oxides may have caused partly oxidized pyrite or sphalerite in that fraction not to contribute metal to the lachate.

The -60 HP fraction gave less than optimum results on the southwest side of the Anvil Range but it did indicate the major Pb/Zn deposits. As a long term cost savings, it was thought that this fraction might provide the same information as the IP but with slight suppression of anomaly relief. Plate 3 shows (as does other work to date) that the suppression is so complete that most low order anomalies become background, thus the -60 HP fraction should not be used further.

The -35 + 60 IP and -60 HN fractions continue to give optimum response in and near the Anvil Range, neither is sufficient but must be examined as a pair, each directed at its own objectives. Comparison with conventional silt samples collected over the years in this area suggests that down-stream dispersion and, in most cases, anonmaly relief, is better with the heavy mineral technique, which makes it a more thorough survey when only one sample per drainage is collected during rapid reconnaissance. The cost of the method is high but it must be realized that the data is more comparable to that obtained by traversing streams at close intervals with conventional silts (except of course when it comes time to follow-up anomalies!). Due to the smaller number of samples and the more efficient use of helicopter time and labor, the method becomes quite competitive in terms of cost effectiveness.

The following paragraphs comment on the results by major metals.

Copper

Only one stream gives a very high copper response (81-G-0014). It and its neighhors 81-G-0015 and 7 give elevated copper values coincident with slight Zn, Au, As, Sb and Ag response. All these streams drain mainly Menzie Creek formation and upper Vangorda formation, thus the high copper may be due to high background from the basalts of Menzie Creek formation, or perhaps minor exhalative mineralization in interflow sediments. The stream from which sample 0014 comes also has a Tertiary (?) rhyolite plug which has some associated veinlets of barite and pyrite and could be the source of the Cu and Au values.

Zinc

High values in zinc are found in samples 6, 14, 22, 31, 32, 33 and 34. Most streams high in zinc drain known vein-type mineralization on the Mur claims or are part of the situation noted above. The obvious discrepancy between Zn response in the -60 HN and -35 + 60 IP fractions is not completely understood but probably relates to the ready oxidation of sphalerite such that the IP fraction contains oxidized or mostly oxidized grains or possibly Zn scavenged on Fe hydroxides, while the HN fraction contains only rarely preserved sphalerite or smithsonite.

The reason sample 81-G-0022 is slightly high in Pb and Zn, as well as Cu, Ag and As, is not understood, but may be due to a small vein near the batholith contact as seen commonly further to the southeast. This stream drains rocks near the favorable horizon and is immediately across the batholith from the Faro deposit.

As noted previously, streams draining the favourable horizon tend to be slightly higher in zinc. This is in accord with more detailed geochemical studies done to date. All these studies show that while zinc may be higher in that unit, there is no evidence of mineralization cropping out.

Lead

Any sample over 100 ppm should be regarded as interesting, especially if the barium content of the fraction is high. In this case, the high samples are 4b, 5, 6, 22, 31 and 33. Most high lead stations here are related to known lead-bearing veins in and near the batholith, with some uncertainty about sample 22 as noted above. Sample 4b may have detected the KD hill mineralization 5 km upstream, but that stream also crosses the Mt. Mye/Vangorda contact; soil sampling over the drainage basin has not provided much encouragement, although small anomalies were found (Jilson, 1974).

Silver

Samples 6, 4b and 33 are highest in silver. Again, silver anomalies may be mainly related to Pb/Ag-bearing veins in and near the batholith. Sample 0033 is quite far downstream from known mineralization and separated from it by a non-anomalous sample, thus a second source of Pb and Ag may be indicated (this sample is upstream from known showings in Ace Creek).

Barium

Only sample 9 is very high in Ba. This sample confirms the high Ba response found there last year. Of the three samples which checked tributaries to that stream, only sample 10 is relatively high and this is not comparable to Ba response from known stratiform Ba-Pb-Zn mineralization. Sample 10 is upstream from the favorable horizon, thus it is possible that a source of $BaSO_4$ occurs northeast of a line connecting samples 9 and 10. No lead or zinc response is coincident with the high Ba, however, sample 9 should be checked as Ba values over 5% characteristically give subdued Pb results from the same concentrate.

Tungsten and Tin

None of the samples is anomalous in tungsten but several are fairly high in tin. These samples cluster near the best Pb/Zn/Ag veining in the batholith, thus more complete sampling for Sn may be warranted. The Anvil Batholith is a prime target for tin-tungsten deposits but the results to date are inconclusive.

CONCLUSIONS

The heavy mineral survey has provided no support for the existence of mineralization related to the soil geochemical anomaly between the FOO and MX claims in the north central portion of the area.

Samples that were taken from streams draining the favorable horizon show elevated but subanomalous Zn and Ba results in some cases but, as expected, no subcropping mineralization is suggested by the data except for the possibility of barren barite near sample 9.

The high barium results in the central area were followed up by sampling the tributaries to that stream, none gave comparable results, suggesting the source of barium is just upstream from sample 9. Prospecting by the author in the creeks that samples 11 and 13 are on did not disclose any barite, but these results show that is not a surprise; my major conclusion here is that I should have gone the other direction.

The available gold results in Ace Creek lend no support to the possibility that the Fe/Cu-bearing sulphides in Ace Canyon contain gold.

The intention of evaluating the tin potential of the Anvil Batholith was scuttled by lack of time and inadequate sample material. The results obtained certainly do not detract from the possibility of tin-bearing mineralization in the batholith.

RECOMMENDATIONS

Further prospecting and soil sampling is needed near sample 9 to locate the source of barium in the heavy mineral concentrates. If the source is stratiform barite at the Mt. Mye/Vangorda contact, then deep drilling in the general area may be required to evaluate the mainly buried (both stratigraphically and tectonically) potential to the east.

The tin potential of the Anvil Batholith is still inadequately evaluated. This should be remedied when funding permits.

References

Jilson, G.A. (1974) Summary of Exploration on the Mt. Mye Prospect during 1970, 1971, 1972 and 1973; unpublished report, Kangaroo Exploration Corporation.

APPENDIX I

Analytical Results and

Sample Site Information

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 15MAR82
-EASTING 591100E ------- SAMPLERS : NM/
-NORTHNG 919600N G
NTS- 105K06

SAMPLE 81G0003

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CO PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT g
-60 HN TOT	450	0.8	29	46	0.6	14	1	290	92	1.70	555	6	0.4		10	11.30
-60 HP TOT		0.1	15	90	0.1	15	2			4.48	2700	4	0.2			31.45
-35+60 IP OX		0.1	8	34	0.1	4	1			1.30	95	10				
-35+60 IP TOT		0.2	18	195	0.1	10	2			5.65	600	24				1.90

STREAM WIDTH= 3.6M WATER LEVEL= NORMAL FLOW RATE= SLOW TURBULENCE= SLIGHT GRADIENT= NOT RECORDED
DEPTH= 0.3M
PH = SUSPENDED MATTER= NOT RECORDED WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= STABLE BOTTOM STREAM TYPE= MEANDR/STRAIGHT SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2		x	x	x			
LITTLE(<10%)	1	x	x	x	x	x	x	x
NONE	0	x	x	x	x	x	x	x

MAX. BOULDER SIZE= 0.9M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = HIGH
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 6.0KM**2

NTS-105K06

SAMPLE 81G0003

EX033 HEAVY MINERALS 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 06MAY81
-EASTING 594400E ------- SAMPLERS : NP/CM
-NORTHNG 920100N G
NTS- 105K06

SAMPLE 81G0004

ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 MN TOT	8400	1.4	21	68	0.6	25	3	540	80	2.05	655	10	2.4		50	7.69
-60 HP TOT		0.1	25	140	0.2	17	2			6.65	7000	15	3.6			15.99
-35+60 IP OX		0.1	1	42	0.1	6	1			1.45	480	14				
-35+60 IP TOT		0.1	27	325	0.4	35	5			8.50	1150	39				3.36

STREAM WIDTH= 4.5M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BETWEEN BOULDERS STREAM TYPE= STRAIGHT SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= SLIGHT ORGANIC SLIME
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3		X					
MODERATE(10-50%)	2		X					
LITTLE(<10%)	1		X			X	X	X
NONE	0		X			X	X	X

MAX. BOULDER SIZE= 0.9M
SEDIMENT SORTING = GOOD
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 7.0KM**2

NTS-105K06

SAMPLE 81G0004

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 15MAR82
-EASTING 597700E ------- SAMPLERS : NM/
-NORTHING 917200N G
NTS- 105K06

SAMPLE 81GOC05

SAMPLE 81GOC05 ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CO PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	MT G
-60 HN TOT	2000	1.6	104	52	0.4	14	6	190	180	2.70	660	4	0.8	<	10	3.61
-60 HP TOT		0.1	42	87	0.1	24	3			4.65	3700	12	1			9.65
-35+60 IP OX		0.1	6	20	0.1	4	1			.70	145	5				
-35+60 IP TOT		0.1	5	85	0.1	9	4			2.70	330	15				.38

STREAM WIDTH= 3.0M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= NOT RECORDE SEDIMENT COLOR= BROWN GREY

SAMPLE SITE= SIDE BAR STREAM TYPE= MEANDERING SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = POSSIBLE EXOTIC TILL

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2		X	X	X			
LITTLE(<10%)	1	X	X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= NOT RECORDED
WEIGHT=
BASIN AREA = 10.0KM**2

NTS-105K06

SAMPLE 81GOC05

EX033 HEAVY MINERALS 21APR92

LOCATION
UTM-ZONE 09
-EASTING 598500E
-NORTHNG 917400N
NTS- 105K06

PROJECT
G

DATE SAMPLED: 06MAY91
SAMPLERS : NM/

SAMPLE 81GD006

SAMPLE 81GD006

ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT	700	2.6	208	104	1.8	18	4	150	940	2.80	615	20	4.8	<	10	5.20
-60 HP TOT		0.1	66	110	0.2	8	2			3.95	3750	15	0.6			11.53
-35+60 IP OX		0.2	500	770	5	20	2			11.50	1500	225				
-35+60 IP TOT		1	875	4900	7	80	15			55.00	6000	525				2.01

STREAM
WIDTH= 3.0M
DEPTH= 0.3M
PH =
WATER LEVEL= NORMAL
FLOW RATE= SLOW
TURBULENCE= SLIGHT
GRADIENT= LOW
SUSPENDED MATTER= NONE
WATER COLOR= NOT RECORDE
SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR
STREAM TYPE= MEANDERING
SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2					X	X	
LITTLE(<10%)	1			X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = MODERATE
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE
STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 19.0KM**2

NTS-105K06

SAMPLE 81GD006

EX033 H E A V Y M I N E R A L S 21APR92

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 06MAY91
-EASTING 600500E ------- SAMPLERS : CH/NP
-NORTHNG 9203OON G
NTS- 105K06

SAMPLE																	
81G0008		A S S A Y R E S U L T S															
TEST		BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60	MN TOT	2300	0.2	92	84	0.8	28	4	30C	640	3.90	445	6	1.6	<	1C	8.40
-60	MP TOT		0.1	29	115	0.1	20	2			5.55	296C	14	1.2			62.14
-35+60	IP OX		0.1	13	44	0.2	15	1			1.6O	240	4				
-35+60	IP TOT		0.1	39	390	0.8	65	5			14.00	995	5O				16.5O

STREAM WIDTH= 0.9M WATER LEVEL= NOT REC'D FLOW RATE= MODERATE TURBULENCE= SLIGHT GRADIENT= NOT RECORDED
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= NOT RECORDED STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NONE
CONTAMINATION = PROBABLE EXOTIC TILL

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2		X	X			X	
LITTLE(<10%)	1	X	X	X		X	X	
NONE	0	X	X	X		X	X	

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = GOOD
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 2.0KM**2

NTS-105K06

SAMPLE 81G0008

EX033 HEAVY MINERALS 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 06MAY81
-EASTING 6011COE ------- SAMPLERS : NM/
-NORTHNG 918900N G
NTS- 105K06

SAMPLE	81G0009

ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	MT G
-60 HN TOT	<50000	0.2	14	154	0.2	100	2	140	364	2.10	275	24	10.4	<	10	11.02
-60 HP TOT		0.1	47	145	0.3	29	2			4.80	3650	23	3			35.51
-35+60 IP OX		0.1	23	52	0.3	16	1			2.10	485	15				
-35+60 IP TOT		0.1	54	392	0.7	77	5			11.00	1075	59				2.97

STREAM WIDTH= 1.5M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= HIGH GRADIENT= STEEP
DEPTH= 1.5M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= ORANGE BROWN

SAMPLE SITE= POINT BAR STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= VARIABLE MODERATE FE HYDROXIDES/RUST
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2		X	X	X			
LITTLE(<10%)	1	X	X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 13.0KM**2

NTS-105K06

SAMPLE 81G0009

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 06MAY81
-EASTING 604100E G SAMPLERS : NM/
-NORTHNG 918800N
NTS- 105K07

SAMPLE	81G0010

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT	15400	0.4	58	230	0.2	150	6	85	104	4.65	645	10	0.8		380	3.57
-60 HP TOT		0.1	10	105	0.1	8	2			4.15	3590	5	0.4			15.83
-35+60 IP OX		0.1	6	86	0.1	12	1			2.20	670	6				
-35+60 IP TOT		0.2	12	252	0.2	38	4			8.10	1010	30				1.13

STREAM WIDTH= 0.9M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.0M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BACK EDDY STREAM TYPE= NOT RECORDED SAMPLE POSITION= CENTER

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2				X	X	X	
LITTLE(<10%)	1			X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = MODERATE
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 3.0KM**2

NTS-105K07

SAMPLE	81G0010

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 09 PROJECT DATE SAMPLED: 15MAR82
-EASTING 603800E -------
-NORTHNG 9186000N G SAMPLERS : NM/
NTS- 105K07

SAMPLE	81GD011	BA	AG	PB	ZN	CO	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	WT
TEST		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPB	G
-60	HN TOT	700	0.2	36	90	0.2	22	2	100	104	2.45	350	10	0.4	<	10	66.60
-60	HP TOT		0.1	17	72	0.1	12	1			3.03	2900	9	0.2			314.95
-35+60	IP OX		0.1	12	59	0.1	12	1			1.50	585	30				
-35+60	IP TOT		0.1	70	235	0.1	52	1			9.50	1100	57				0.35

STREAM WIDTH= 1.2M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.0M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= POINT BAR STREAM TYPE= MEANDERING SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = POSSIBLE EXOTIC TILL

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2			X	X			
LITTLE(<10%)	1		X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = MODERATE
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 6.0KM**2

NTS-105K07

SAMPLE 81GD011

EX033 — HEAVY MINERALS — 21APR82

LOCATION
UTM-ZONE 09
-EASTING 603400E
-NORTHNG 9188OON
NTS- 105K06

PROJECT
G

DATE SAMPLED: 15MAR82
SAMPLERS : NM/

SAMPLE 81GOC12

SAMPLE 81GOC12 — ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT	3500	0.2	50	92	0.6	32	2	150	220	2.60	500	4	0.8	< 10		7.99
-60 HP TOT		0.1	5	85	0.1	11	1			3.20	2330	2	0.1			66.86
-35+60 IP OX		0.2	15	75	0.2	10	1			2.00	435	4				
-35+60 IP TOT		0.1	45	340	0.1	37	2			9.40	935	29				3.65

STREAM
WIDTH= 1.2M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH=
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = NOT RECORDED

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2			X	X			
LITTLE(<10%)	1		X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = HIGH
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE
STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 2.0KM**2

NTS-105K06

SAMPLE 81GOC12

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 06MAY81
-EASTING 603800E ------- SAMPLERS : CH/ND
-NORTHING 5917000N G
NTS- 105K07

SAMPLE 81G0013																	
TEST		BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	MT G
-60	HN TOT	800	0.6	70	108	0.2	30	2	140	344	3.45	490	114	1.6	<	10	21.42
-60	HP TOT		0.1	38	130	0.1	25	2			5.00	2740	30	1			113.56
-35+60	IP OX		0.1	11	49	0.1	13	1			1.25	360	14				
-35+60	IP TOT		0.1	51	405	0.2	80	2			13.00	1100	170				13.94

STREAM WIDTH= 1.8M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= HIGH GRADIENT= STEEP
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR STREAM TYPE= MEANDERING SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

	LOTS(>50%)	MODERATE(10-50%)	LITTLE(<10%)	NONE
BOULDERS	3	X	1	0
COBBLES		X	X	X
PEBBLES		X	X	X
GRANULES			X	X
SAND		X	X	X
SILT			X	X
CLAY				

MAX. BOULDER SIZE= 1.5M
SEDIMENT SORTING = GOOD
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 3.0KM**2

NTS-105K07

SAMPLE 81G0013

EX033 — HEAVY MINERALS — 21APR82

LOCATION
UTM-ZONE 08
-EASTING 603000E
-NORTHING 9214000N
NTS- 105K06

PROJECT
G

DATE SAMPLED: 06MAY81
SAMPLERS : CM/NP

SAMPLE 81GC014

ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CO PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	MT G
-60 MN TOT	NSS	1.6	60	240	2	1600	2	NSS	NSS	7.50	350	44	NSS		5830	1.32
-60 MP TOT		0.6	50	1250	5.2	500	37			32.00	1090	120	25			5.82
-35+60 IP 0X		0.1	1	360	0.2	65	7			4.90	740	11				
-35+60 IP TOT		0.4	10	1000	2.8	210	24			16.00	1100	57				13.45

STREAM
WIDTH= 1.5M
DEPTH= 0.3M
PH =
WATER LEVEL= NORMAL
FLOW RATE= FAST
TURBULENCE= HIGH
GRADIENT= MODERATE
SUSPENDED MATTER= NONE
WATER COLOR= CLEAR
SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR
STREAM TYPE= MEANDERING
SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3	X						
MODERATE(10-50%)	2	X		X				
LITTLE(<10%)	1	X	X	X		X	X	
NONE	0	X	X	X		X	X	

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = MODERATE
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE
STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 8.0KM**2

NTS-105K06
SAMPLE 81GC014

EX033 — H E A V Y M I N E R A L S — 21APR82

LOCATION — UTM-ZONE 08; -EASTING 605300E; -NORTHNG 9227OON; NTS- 105K07
PROJECT: G
DATE SAMPLED: 15MAR82
SAMPLERS : MP/DC

SAMPLE	81GD015

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT	19000	0.8	78	98	0.2	280	4	140	NSS	3.80	430	12	4.4		520	2.44
-60 HP TOT		0.5	73	280	1.7	160	6			15.00	2390	57	31			9.19
-35+60 IP OX		0.1	1	84	0.1	54	2			4.35	510	27				
-35+60 IP TOT		0.4	33	373	1.1	175	11			13.00	1125	83				6.02

STREAM — WIDTH= 1.2M; DEPTH= 0.1M; WATER LEVEL= NORMAL; FLOW RATE= MODERATE; TURBULENCE= MODERATE; GRADIENT= MODERATE
PH = ; SUSPENDED MATTER= NONE; WATER COLOR= CLEAR; SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR; STREAM TYPE= STRAIGHT; SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NONE
CONTAMINATION = PROBABLE; EXOTIC TILL

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X	X	X
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X			

MAX. BOULDER SIZE=
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE — STATUS= ROUTINE SAMPLE; WEIGHT=
BASIN AREA = 5.0KM**2

NTS-105K07

SAMPLE	81GD015

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 15MAR82
-EASTING 595000E ------- SAMPLERS : NM/
-NORTHNG 920000N G
NTS- 105K06

SAMPLE 81G0016

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	mT G
-60 HN TOT	1100	0.2	20	70	0.2	22	4	440	48	3.60	860	4	3.2	<	10	7.68
-60 HP TOT		0.1	16	125	0.2	23	2			7.00	6750	22	2			14.94
-35+60 IP OX		0.1	12	57	0.2	15	1			1.80	615	10				
-35+60 IP TOT		0.1	26	365	0.5	53	3			10.00	1100	53				9.67

STREAM WIDTH= 3.0M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= POINT BAR STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NONE
CONTAMINATION = POSSIBLE ROAD

SEDIMENT LOTS(>50%) 3
MODERATE(10-50%) 2
LITTLE(<10%) 1
NONE 0

BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
			X	X	X	
			X	X	X	
X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = GOOD
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 14.0KM**2

NTS-105K06

SAMPLE 81G0016

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 596600E G SAMPLERS : NP/DC
-NORTHNG 922400N
NTS- 105KC6

SAMPLE 81GC017

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	mT G
-60 HN TOT	1100	1.4	20	70	0.4	30	6	480	100	3.85	1040	4	0.4	<	10	3.96
-60 HP TOT		0.1	50	200	0.9	56	2			12.20	>10000	36	6.4			8.60
-35+60 IP OX		0.3	5	47	0.1	14	1			1.70	560	6				
-35+60 IP TOT		0.1	26	385	0.6	83	5			11.00	1250	79				4.58

SAMPLE 81GC017

STREAM WIDTH= 0.6M WATER LEVEL= NORMAL FLOW RATE= SLOW TURBULENCE= SLIGHT GRADIENT= LOW
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR STREAM TYPE= STRAIGHT SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= MODERATE ORGANIC SLIME
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X	X	X
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 4.0KM**2

NTS-105KC6

SAMPLE 81GC017

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 597000E ------- SAMPLERS : NP/DC
-NORTHNG 922400N G
NTS- 105KC6

SAMPLE	81G0018

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT	700	0.6	30	78	0.2	32	2	400	76	3.80	910	6	1.6	<	10	5.10
-60 HP TOT		0.1	28	155	0.3	30	2			8.40	7900	22	4.2			10.57
-35+60 IP OX		0.1	10	55	0.3	15	1			1.70	510	10				
-35+60 IP TOT		0.1	28	365	0.4	50	1			11.00	1200	45				6.26

STREAM WIDTH= 1.2M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN BLACK/DAR

SAMPLE SITE= POINT BAR STREAM TYPE= STRAIGHT SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= SLIGHT FE HYDROXIDES/RUST
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X	X	X
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X	X	X	

MAX. BOULDER SIZE= 0.6M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 6.0KM**2

NTS-105KC6

SAMPLE	81G0019

EX033 — HEAVY MINERALS — 21APR82

LOCATION
UTM-ZONE 08
-EASTING 594200E
-NORTHING 918800N
NTS- 105K06

PROJECT
G

DATE SAMPLED: 07MAY81
SAMPLERS : CH/NM

SAMPLE 81G0019

SAMPLE 81G0019

ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	mT %
-60 HN TOT	500	0.6	74	90	0.6	16	4	100	NSS	2.90	800	4	1.8	< 10		2.52
-60 HP TOT		0.1	18	85	0.1	10	3			4.00	2900	5	0.9			6.20
-35+60 IP OX		0.1	7	38	0.4	7	1			1.55	300	5				
-35+60 IP TOT		0.2	13	184	0.2	11	2			7.44	1120	13				.90

STREAM
WIDTH= 1.5M
DEPTH= 0.6M
PH =
WATER LEVEL= HIGH
FLOW RATE= SLOW
TURBULENCE= SLIGHT
GRADIENT= LOW
SUSPENDED MATTER= NONE
WATER COLOR= CLEAR
SEDIMENT COLOR= BROWN

SAMPLE SITE= POINT BAR
STREAM TYPE= MEANDERING
SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = POSSIBLE
ROAD

SEDIMENT

	BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%) 3						X	
MODERATE(10-50%) 2						X	
LITTLE(<10%) 1					X	X	
NONE 0					X	X	

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = HIGH
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE
STATUS= NOT RECORDED
WEIGHT=
BASIN AREA = 6.0KM**2

NTS-105K06

SAMPLE 81G0019

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 591100E ------- SAMPLERS : NP/DC
-NORTHNG 917300N G
NTS- 105K06

SAMPLE 81GD020

SAMPLE 81GD020 — A S S A Y R E S U L T S

TEST		BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60	HN TOT	700	NSS	NSS	NSS	NSS	NSS	NSS	57C	NSS	NSS	NSS	NSS	NSS	<	10	.92
-60	HP TOT		0.1	35	55	0.7	9	3			3.75	374C	3	0.1			4.2C
-35+60	IP OX		0.1	5	21	0.1	3	1			1.45	165	8				
-35+60	IP TOT		0.2	8	139	0.2	8	3			5.90	910	8				.79

STREAM WIDTH= 4.5M WATER LEVEL= HIGH FLOW RATE= FAST TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.4M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= OTHER STREAM TYPE= STRAIGHT SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= MODERATE FE HYDROXIDES/RUST
CONTAMINATION = NONE

SEDIMENT
LOTS(>50%) 3 X
MODERATE(10-50%) 2 X
LITTLE(<10%) 1 X
NONE 0 X
BOULDERS COBBLES PEBBLES GRANULES SAND SILT CLAY

MAX. BOULDER SIZE= C.9M
SEDIMENT SORTING = GOOD
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 0.0KM**2

NTS-105K06

SAMPLE 81GD020

EX033 HEAVY MINERALS 21APR82

LOCATION UTM-ZONE 09 PROJECT DATE SAMPLED: 16MAR82
-EASTING 589000E ------- SAMPLERS : NM/
-NORTHING 9245000N G
NTS- 105K06

SAMPLE 81G0021

ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 MN TOT	2900	0.8	36	116	0.2	32	4	190	NSS	3.40	655	8	NSS	<	10	2.15
-60 MP TOT		0.1	23	118	0.1	22	3			4.30	1680	6	2.8			4.52
-35+60 IP OX		0.2	8	92	0.2	21	2			3.60	600	16				
-35+60 IP TOT		0.3	32	332	0.3	52	8			10.80	1260	48				.48

STREAM WIDTH= 1.5M WATER LEVEL= NORMAL FLOW RATE= SLOW TURBULENCE= SLIGHT GRADIENT= LOW
DEPTH= 0.1M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BACK EDDY STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2		X	X	X			
LITTLE(<10%)	1	X	X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 8.0KM**2

NTS-105K06

SAMPLE 81GC021

x033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT
-EASTING 587700E
-NORTHNG 924000N G
NTS- 105K06

DATE SAMPLED: 07MAY81
SAMPLERS : CH/NM

SAMPLE 81G0022

SAMPLE 81G0022

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT		1.6	116	540	0.4	132	2	NSS	NSS	4.50	1000	580	NSS	< 17		.93
-60 HP TOT		0.1	27	215	0.1	37	1			5.65	4600	16	1.2			3.46
-35+60 IP OX		0.1	1	26	0.1	11	1			1.25	340	11				
-35+60 IP TOT		0.1	13	152	0.1	50	1			5.95	825	36				4.42

STREAM WIDTH= 2.4M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= SLIGHT GRADIENT= LOW
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BACK EDDY STREAM TYPE= STRAIGHT SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2							
LITTLE(<10%)	1					X	X	
NONE	0	X	X	X	X	X	X	

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = MODERATE
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 14.0KM**2

NTS-105K06

SAMPLE 81GDC22

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 16MAR82
-EASTING 598700E ------- SAMPLERS : NM/
-NORTHNG 899900N G
NTS- 105K03

SAMPLE		BA	AG	PB	ZN	CD	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	mT
TEST		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPB	S
-60	HN TOT	7700	1	72	164	0.2	166	2	520	NSS	7.60	620	220	1.6		10	2.24
-60	HP TOT		0.1	44	120	0.1	28	2			5.68	2500	17	1.2			9.63
-35+60	IP OX		0.1	8	20	0.1	5	1			1.15	240	11				
-35+60	IP TOT		0.1	38	142	0.1	22	1			5.85	840	23				11.45

STREAM WIDTH= 1.8M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.1M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= NOT RECORD

SAMPLE SITE= BACK EDDY STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = POSSIBLE ROAD

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2			X	X	X		
LITTLE(<10%)	1	X	X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 9.0KM**2

NTS-105K03

SAMPLE 81GD0023

<033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 602300E ------- SAMPLERS : NP/DC
-NORTHNG 903000N G
NTS- 105K03

SAMPLE		BA	AG	PB	ZN	CD	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	mT
TEST		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPB	G
81G0024																	
-60	HN TOT	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS		11	.56
-60	HP TOT		0.1	27	95	4.1	20	1			5.25	6350	14	0.4			2.52
-35+60	IP OX		0.1	8	21	0.1	7	1			1.40	145	10				
-35+60	IP TOT		0.1	25	262	0.1	32	1			10.00	1500	24				2.49

STREAM WIDTH= 1.8M WATER LEVEL= HIGH FLOW RATE= FAST TURBULENCE= HIGH GRADIENT= STEEP
DEPTH= 0.6M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BAFFLED BOTTOM STREAM TYPE= STRAIGHT SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = PROBABLE ROAD

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X		
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.6M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 17.0KM**2

NTS-105K03

SAMPLE 81G0024

EX033 — HEAVY MINERALS — 21APR82

LOCATION — UTM-ZONE 08 — -EASTING 604400E — -NORTHING 904500N — NTS- 105K07

PROJECT — G

DATE SAMPLED: 07MAY81 — SAMPLERS : CH/NN

SAMPLE 81GCC25

SAMPLE 81G0025

ASSAY RESULTS

TEST		BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60	HN TOT	10000	0.8	68	114	0.2	188	2	400	NSS	5.55	635	430	NSS		10	2.26
-60	HP TOT		0.1	42	116	0.5	30	2			6.65	3450	24	1.8			11.79
-35+60	IP OX		0.1	10	40	0.1	11	1			1.70	290	10				
-35+60	IP TOT		0.1	32	300	0.4	44	1			11.00	1150	55				6.00

STREAM — WIDTH= 1.8M — DEPTH= 0.4M — WATER LEVEL= HIGH — FLOW RATE= MODERATE — TURBULENCE= MODERATE — GRADIENT= MODERATE

PH = — SUSPENDED MATTER= NONE — WATER COLOR= CLEAR — SEDIMENT COLOR= BROWN

SAMPLE SITE= SIDE BAR — STREAM TYPE= BRAID/MEANDR — SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= NONE

CONTAMINATION = POSSIBLE — CAMP SITE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3					X		
MODERATE(10-50%)	2	X			X	X		
LITTLE(<10%)	1	X			X	X		
NONE	0	X			X	X		

MAX. BOULDER SIZE= 1.5M

SEDIMENT SORTING = MODERATE

DECAYED ORGANICS = LOW

GJ-SORTING PARAMETER =

GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE

WEIGHT=

BASIN AREA = 7.0KM**2

NTS-105K07

SAMPLE 81GCC25

4033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 606100E ------- SAMPLERS : NP/DC
-NORTHNG 907600N G
NTS- 105K07

SAMPLE		BA	AG	PB	ZN	CD	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	WT
81G0026	TEST	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPB	G
-150	HM TOT																.60
-60+150	HM TOT																.37
-35+60	HM TOT																.10
-20+35	HM TOT																.04
-60	IM TOT																.01
-150	HN TOT	NSS	0.6	54	108	0.2	30	6	NSS	NSS	1.20	240	22	NSS		120	1.53
-60+150	HN TOT	3600	0.6	28	56	0.2	16	4	750	20	2.20	790	22	1.6		1730	6.36
-35+60	HN TOT	1800	0.2	16	62	0.2	16	4	700	16	2.50	820	10	0.8	<	10	10.19
-20+35	HN TOT	1800	0.6	38	64	0.2	34	6			2.80	790	8				15.97
-60	IN TOT																2.74
-150	HP TOT																2.15
-60+150	HP TOT																13.14
-60	HP TOT		0.1	22	115	0.5	22	3			6.00	4780	16	1.8			15.29
-35+60	HP TOT																14.46
-20+35	HP TOT																22.96
-60	IP OX		0.1	14	51	0.8	13	2			1.90	370	14				
-60	IP TOT		0.1	26	250	1	43	2			6.60	833	24				2.54

STREAM WIDTH= 3.0M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= HIGH GRADIENT= STEEP
DEPTH= 0.4M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN BLACK/DAR

SAMPLE SITE= BETWEEN BOULDERS STREAM TYPE= STRAIGHT SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3	x						
MODERATE(10-50%)	2	x	x	x	x	x	x	x
LITTLE(<10%)	1	x	x	x	x	x	x	x
NONE	0	x	x	x	x	x	x	

MAX. BOULDER SIZE= 1.2M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = NONE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 17.0KM**2

NTS-105K07

SAMPLE 81G0026

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 605400E SAMPLERS : MP/DC
-NORTHNG 9077CON G
NTS- 105KC7

SAMPLE 81GCC27

SAMPLE 81GCC027 — A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-150 HM TOT																.73
-60+150HM TOT																.30
-35+60 HM TOT																.11
-20+35 HM TOT																.03
-60 IM TOT																< .01
-150 HN TOT	3400	0.2	96	156	0.2	30	2	250	NSS	1.60	500	10	2		2370	1.68
-60+150HN TOT	3600	0.2	66	88	0.2	34	4	700	52	1.80	460	12	0.8		10	2.92
-35+60 HN TOT	3100	0.2	84	54	0.2	22	2	250	8	1.60	400	6	0.8	<	10	4.53
-20+35 HN TOT	3200	0.2	4	62	0.2	12	4			1.60	360	4				17.23
-60 IN TOT																5.51
-150 HP TOT																3.54
-60+150HP TOT																15.96
-60 HP TOT		0.1	15	115	0.1	13	3			3.00	2000	5	0.4			19.50
-35+60 HP TOT																34.82
-20+35 HP TOT																53.57
-60 IP OX		0.1	12	47	0.4	10	2			1.80	300	7				
-60 IP TOT		0.1	16	200	0.4	34	1			6.00	680	12				2.97

STREAM WIDTH= 1.2M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.3M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BETWEEN BOULDERS STREAM TYPE= STRAIGHT SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X		
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.9M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 7.0KM**2

NTS-105KC7

SAMPLE 81GCC027

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 16MAR82
-EASTING 606000E G SAMPLERS : NM/
-NORTHNG 906800N
NTS- 105K07

SAMPLE 81G0028

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-150 HM TOT																.50
-60+150HM TOT																.19
-35+60 HM TOT																.01
-20+35 HM TOT																.08
-60 IM TOT																.13
-150 HN TOT	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS		4770	.47
-60+150HN TOT	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	NSS	<	10	1.07
-35+60 HN TOT	NSS	0.3	44	160	0.3	16	4	NSS	NSS	3.20	760	18	NSS		20	1.38
-20+35 HN TOT	5100	0.2	20	80	0.2	18	4			3.00	630	14				.76
-60 IN TOT																6.09
-150 HP TOT																1.23
-60+150HP TOT																3.25
-60 HP TOT		0.1	30	115	0.6	24	3			4.55	1890	30	1.4			3.48
-35+60 HP TOT																3.43
-20+35 HP TOT																1.98
-60 IP OX		0.1	8	44	0.4	9	1			1.60	230	14				
-60 IP TOT		0.1	23	220	0.6	38	1			6.90	720	32				6.89

STREAM WIDTH= 1.2M WATER LEVEL= NORMAL FLOW RATE= SLOW TURBULENCE= SLIGHT GRADIENT= LOW
DEPTH= 0.1M
PH = 0.0 SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= BETWEEN BOULDERS STREAM TYPE= NOT RECORDED SAMPLE POSITION= NOT RECORDED

PRECIPITATE OR STAIN= NOT RECORDED
CONTAMINATION = NOT RECORDED

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2			X	X			
LITTLE(<10%)	1	X	X	X	X	X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = MODERATE
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 4.0KM**2

NTS-105K07

SAMPLE 81G0029

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 07MAY81
-EASTING 606500E ------- SAMPLERS : CH/NM
-NORTHNG 906200N G
NTS- 105K07

SAMPLE	
	B1G0029

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-150 HM TOT																.39
-60+150HM TOT																.25
-35+60 HM TOT																.08
-20+35 HM TOT																.07
-60 IM TOT																< .01
-150 HN TOT	NSS	0.3	135	105	0.3	27	3	NSS	NSS	1.65	430	66	NSS		70	1.29
-60+150HN TOT	3200	0.4	54	70	0.2	30	2	800	52	2.10	620	134	1.6	<	10	5.57
-35+60 HN TOT	2800	0.4	56	72	0.2	18	4	500	40	2.50	760	66	0.8		10	12.70
-20+35 HN TOT	3000	0.2	24	60	0.2	10	6			2.40	680	32				20.53
-60 IN TOT																3.04
-150 HP TOT																1.77
-60+150HP TOT																13.59
-60 HP TOT		0.1	24	95	0.4	22	2			4.10	2460	15	1			15.36
-35+60 HP TOT																31.60
-20+35 HP TOT																37.36
-60 IP OX		0.1	11	41	0.6	12	1			1.80	330	11				
-60 IP TOT		0.1	24	220	0.8	38	3			6.80	830	24				2.60

STREAM WIDTH= 6.1M WATER LEVEL= HIGH FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= LOW
DEPTH= 0.7M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= POINT BAR STREAM TYPE= MEANDERING SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = PROBABLE CAMP SITE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2			X		X		
LITTLE(<10%)	1	X	X	X		X	X	
NONE	0	X	X	X		X	X	

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = MODERATE
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 30.0KM**2

NTS-105K07

SAMPLE	
	B1G0029

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT
-EASTING 607600E
-NORTHNG 906800N G
NTS- 105KC7

DATE SAMPLED: 10JUN81
SAMPLERS : CS/NP

SAMPLE	81GD030

SAMPLE 81GD030 — ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	mT G
-60 HN TOT	3300	0.2	48	60	0.2	26	2	420	28	2.30	370	20	0.8	<	10	10.52
-60 HP TOT		0.1	9	62	0.1	12	2			2.65	1850	5	0.2			47.09
-35+60 IP OX		0.1	3	26	0.1	7	1			1.20	375	3				
-35+60 IP TOT		0.1	16	147	0.3	29	1			7.15	985	17				18.85

STREAM WIDTH= 1.8M WATER LEVEL= NORMAL FLOW RATE= FAST TURBULENCE= SLIGHT GRADIENT= MODERATE
DEPTH= 0.4M
PH = SUSPENDED MATTER= LIGHT/SLIGHTLY CLOUDY WATER COLOR= CLEAR GREEN SEDIMENT COLOR= BROWN BLACK/DAR

SAMPLE SITE= SIDE BAR STREAM TYPE= MEANDERING SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= SLIGHT ORGANIC SLIME
CONTAMINATION = POSSIBLE GOSSAN

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X	X	
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 24.0KM**2

NTS-105KC7

SAMPLE	81GDC30

x033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 10JUN81
-EASTING 603800E SAMPLERS : CM/DC
-NORTHNG 9142C0N G
NTS- 105K07

SAMPLE 81GC031

A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 MN TOT	600	0.4	128	180	1.8	34	4	155	NSS	3.70	740	30	NSS	<	10	1.85
-60 HP TOT		0.1	44	115	0.1	5	2			2.33	1900	16	0.4			11.30
-35+60 IP OX		0.1	72	330	1.1	6	1			2.70	470	55				
-35+60 IP TOT		0.5	128	950	1.2	18	2			9.70	1150	180				3.00

STREAM WIDTH= 0.6M WATER LEVEL= NORMAL FLOW RATE= SLOW TURBULENCE= STILL GRADIENT= LOW
DEPTH= 0.8M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BLACK/DARKORANGE

SAMPLE SITE= OTHER STREAM TYPE= MEANDERING SAMPLE POSITION= CENTER

PRECIPITATE OR STAIN= NONE
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3					X		
MODERATE(10-50%)	2					X	X	
LITTLE(<10%)	1					X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= C.C"
SEDIMENT SORTING = GOOD
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 12.0KM**2

NTS-105K07

SAMPLE 81GC031

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 10JUN81
-EASTING 606800E ------- SAMPLERS : CS/NM
-NORTHNG 916000N G
NTS- 105K07

SAMPLE		BA	AG	PB	ZN	CO	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	WT
81G0032	TEST	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPB	G
-60	HN TOT	950	0.2	54	276	1.2	36	2	140	NSS	2.55	780	12	2	<	10	1.79
-60	HP TOT		0.1	11	270	0.3	16	2			4.10	3250	10	0.2			10.26
-35+60	IP CX		0.1	10	465	1.5	11	1			1.65	1600	16				
-35+60	IP TOT		0.1	17	940	1.8	54	3			11.00	2000	46				11.76

STREAM WIDTH= 3.0M WATER LEVEL= HIGH FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.1M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= POINT BAR STREAM TYPE= MEANDERING SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= SLIGHT ORGANIC SLIME
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3					X		
MODERATE(10-50%)	2		X	X		X		
LITTLE(<10%)	1	X	X	X		X	X	
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 33.0KM**2

NTS-105K07

SAMPLE	81G0032

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 10JUN81
-EASTING 609600E ------- SAMPLERS : CH/DC
-NORTHNG 9145OON G
NTS- 105K07

SAMPLE		BA	AG	PB	ZN	CD	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	WT
TEST		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPB	G
-60	HN TOT	2950	7.4	146	170	0.8	196	2	85	112	3.25	485	166	2.4		40	6.96
-60	HP TOT		0.1	5	125	0.1	18	1			3.28	2000	10	0.1			55.00
-35+60	IP CK		0.1	5	139	0.5	14	1			3.70	1050	24				
-35+60	IP TOT		0.1	13	650	1.4	92	1			13.00	1900	61				28.60

SAMPLE 81GDC33

STREAM WIDTH= 3.0M WATER LEVEL= HIGH FLOW RATE= MODERATE TURBULENCE= MODERATE GRADIENT= MODERATE
DEPTH= 0.9M
PH = SUSPENDED MATTER= NONE WATER COLOR= CLEAR SEDIMENT COLOR= BROWN

SAMPLE SITE= POINT BAR STREAM TYPE= MEANDERING SAMPLE POSITION= RIGHT SIDE

PRECIPITATE OR STAIN= NONE
CONTAMINATION = POSSIBLE CAMP SITE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2					x	x	
LITTLE(<10%)	1	x				x	x	
NONE	0	x	x	x	x	x	x	x

MAX. BOULDER SIZE= 1.5M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 41.0KM**2

NTS-105K07

SAMPLE 81GDC33

EX033 — HEAVY MINERALS — 21APR82

LOCATION — UTM-ZONE 08 — -EASTING 612300E — -NORTHING 9178000N — NTS- 105K07

PROJECT: G

DATE SAMPLED: 10JUN81
SAMPLERS : CS/NM

SAMPLE 81G0034

SAMPLE 81G0034 — ASSAY RESULTS

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 MN TOT	950	0.4	48	128	0.6	28	2	100	68	2.70	415	8	0.8	<	10	20.86
-60 MP TOT		0.1	6	88	0.1	11	1			2.20	1540	4	0.1			192.22
-35+60 IP OX		0.1	10	186	0.2	10	1			2.00	565	9				
-35+60 IP TOT		0.2	15	570	0.5	44	1			12.00	1200	35				22.94

STREAM
WIDTH= 2.4M — WATER LEVEL= HIGH — FLOW RATE= MODERATE — TURBULENCE= SLIGHT — GRADIENT= STEEP
DEPTH= 0.3M
PH = — SUSPENDED MATTER= LIGHT/SLIGHTLY CLOUDY WATER COLOR= CLEAR YELLOW — SEDIMENT COLOR= GREEN

SAMPLE SITE= SIDE BAR — STREAM TYPE= MEANDERING — SAMPLE POSITION= LEFT SIDE

PRECIPITATE OR STAIN= VARIABLE SLIGHT ORGANIC SLIME
CONTAMINATION = NONE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2			X				
LITTLE(<10%)	1	X	X	X	X	X		
NONE	0	X	X	X	X	X		

MAX. BOULDER SIZE= 0.0M
SEDIMENT SORTING = POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE
STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 55.0KM**2

NTS-105K07
SAMPLE 81G0034

EX033 H E A V Y M I N E R A L S 21APR82

LOCATION UTM-ZONE 08 PROJECT DATE SAMPLED: 10MAY81
-EASTING 614500E SAMPLERS : GJ/NP
-NORTHING 911800N G
NTS- 105K07

SAMPLE 81GOC35

SAMPLE 81GOC035 — A S S A Y R E S U L T S

TEST	BA PPM	AG PPM	PB PPM	ZN PPM	CD PPM	CU PPM	MO PPM	W PPM	SN PPM	FE %	MN PPM	AS PPM	SB PPM	HG PPM	AU PPB	WT G
-60 HN TOT	2000	0.6	26	56	0.2	24	2	105	12	2.50	270	18	0.4	<	10	10.15
-60 HP TOT		0.1	11	53	0.1	12	1			4.00	2500	2	1			61.68
-35+60 IP OX		0.1	4	30	0.1	11	1			1.80	370	3				
-35+60 IP TOT		0.3	22	155	0.2	80	1			13.00	1050	29				14.63

STREAM WIDTH= 2.4M WATER LEVEL= NORMAL FLOW RATE= MODERATE TURBULENCE= SLIGHT GRADIENT= LOW
DEPTH= 0.1M
PH = SUSPENDED MATTER= LIGHT/SLIGHTLY CLOUDY WATER COLOR= WHITE/LIGHTBROWN SEDIMENT COLOR= BROWN

SAMPLE SITE= BACK EDDY STREAM TYPE= STRAIGHT SAMPLE POSITION= CENTER

PRECIPITATE OR STAIN= NONE
CONTAMINATION = POSSIBLE CAMP SITE

SEDIMENT

		BOULDERS	COBBLES	PEBBLES	GRANULES	SAND	SILT	CLAY
LOTS(>50%)	3							
MODERATE(10-50%)	2	X	X	X	X	X		X
LITTLE(<10%)	1	X	X	X	X	X	X	X
NONE	0	X	X	X	X	X	X	X

MAX. BOULDER SIZE= 0.3M
SEDIMENT SORTING = VERY POOR
DECAYED ORGANICS = LOW
GJ-SORTING PARAMETER =
GJ-COARSENESS PARAMETER =

SAMPLE STATUS= ROUTINE SAMPLE
WEIGHT=
BASIN AREA = 9.0KM**2

NTS-105K07

SAMPLE 81GOC035

PROVISIONAL MAP
105 K/6

CANADA

EDITION 1

CARTE PROVISOIRE
105 K/6

1:50,000

Joins 105 K/11

Joins 105 K/6

Joins 105 K/3

Fens 4 Miles

MOUNT MYE
YUKON TERRITORY

Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Milles

Metres 1000 0 1000 2000 3000 4000 Mètres

Yards 1000 0 1000 2000 3000 4000 Verges

Refer to this map as: 105 K/6 EDITION 1 MCE SERIES A 722

SAMPLE Nº. — ppm — % — ppm — ppb — FRACTION WEIGHT gms

CONVENTIONAL SILT SAMPLE

HEAVY MINERAL FRACTION

CONVERSION SCALE FOR ELEVATIONS

Metres

Feet

T.N.

1°33' or 28 Mils

31°08' or 553 Mils

Grid North

Magnetic North

Use diagram only to obtain numerical values.
APPROXIMATE MEAN DECLINATION 1972
FOR CENTRE OF MAP
Annual change decreasing 4.1'

ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 8

GRID ZONE DESIGNATION	100,000 M. SQUARE IDENTIFICATION
8 V	NE PE 6

EXAMPLE OF METHOD USED TO GIVE A REFERENCE TO NEAREST 100 METRES

THE FOLLOWING GRID REFERENCE IS A SAMPLE ONLY AND DOES NOT REFER TO A POINT ON THIS MAP

REFERENCE POINT	CHURCH (as above)
EASTING. Read number on grid line immediately to left of point	97
Estimate tenths of a square from this line eastward to point	5
	975
NORTHING. Read number on grid line immediately below point	98
Estimate tenths of a square from this line northward to point	4
	984

EXAMPLE MILITARY GRID REFERENCE 975984

Nearest similar grid reference 100,000 metres (about 63 miles)

inches 0 1 2

centimetres 0 1 2 3 4 5

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

CYPRUS ANVIL MINING CORPORATION

N.A.R. JOINT VENTURE

YUKON TERRITORY

HEAVY MINERALS SURVEY

N.T.S. 105-K-6	SCALE: 1:50,000
BY. G.J.	DATE: APRIL 21/1982 PLATE 1

105 K/6
EDITION 1

105 K/7

CANADA

1:50,000

EDITION 1

105 K/7

Joins 105 K/10

604000m. E. 628000m. E.

62°30' 133°00' 132°30'

Refer to this map as: 105 K/7 EDITION 1 MCE SERIES A722

SAMPLE Nº. — ppm — % — ppm — ppb — FRACTION WEIGHT

SAMPLE Nº.	BA	AG	PB	ZN	CO	CU	MO	W	SN	FE	MN	AS	SB	HG	AU	WT
B160439																
-60 HM TOT	550	0.2	10	30	0.2	20	2	840	40	2.90	290	4	0.2		< 10	
-60 NP TOT		0.1	105	260	0.7	82	6			4.50	2100	6	7.4			
-35+60 LP HX		0.1	13	31	0.1	36	1			1.58	232	4				
-35+60 LP TOT		0.7	26	320	0.1	36	1			16.50	2100	10				6.83
-60 TOT	10	0.1	17	71	1	10	2	4		2.10	354	2				

CONVENTIONAL SILT SAMPLE

HEAVY MINERAL FRACTION

CONVERSION SCALE FOR ELEVATIONS

Metres 1000 500 0 500 1000 1500 2000 2500 3000 3500

Feet 3000 2500 2000 1500 1000 500 0 500 1000

T.N. 2.00° or 36 Mils — 30.49° or 548 Mils — Grid North — Magnetic North

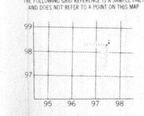
Use diagram only to obtain numerical values.
APPROXIMATE MEAN DECLINATION 1972
FOR CENTRE OF MAP
Annual change decreasing 4.2'

ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 8

GRID ZONE DESIGNATION	100,000 M. SQUARE IDENTIFICATION
8V	PE

EXAMPLE OF METHOD USED TO GIVE A REFERENCE TO NEAREST 100 METRES

THE FOLLOWING GRID REFERENCE IS A SAMPLE ONLY AND DOES NOT REFER TO A POINT ON THIS MAP



REFERENCE POINT	CHURCH (as above)	
EASTING. Read number on grid line immediately to left of point	97	
Estimate tenths of a square from this line eastward to point		5
		975
NORTHING. Read number on grid line immediately below point	98	
Estimate tenths of a square from this line northward to point		4
		984

EXAMPLE MILITARY GRID REFERENCE 975984

Nearest similar grid reference 100,000 metres (about 63 miles)

inches 0 1 2 — centimetres 0 1 2 3 4 5

YUKON GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will not be at same scale as the image, therefore it can be used as a reference for the original size.

CYPRUS ANVIL MINING CORPORATION

N.A.R. JOINT VENTURE

YUKON TERRITORY

HEAVY MINERALS SURVEY

N.T.S. 105-K-7	SCALE: 1:50,000
BY. G.J.	DATE: APRIL 21/1982
	PLATE 2

105 K/7
EDITION 1

BLIND CREEK
YUKON TERRITORY

Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 Mètres

Yards 1000 0 1000 2000 3000 4000 Verges

69Q4000m. N. 69Q5000m. N.

605000m. E. 629000m. E.

62°15' 133°00' 132°30'

Joins 105 K/2

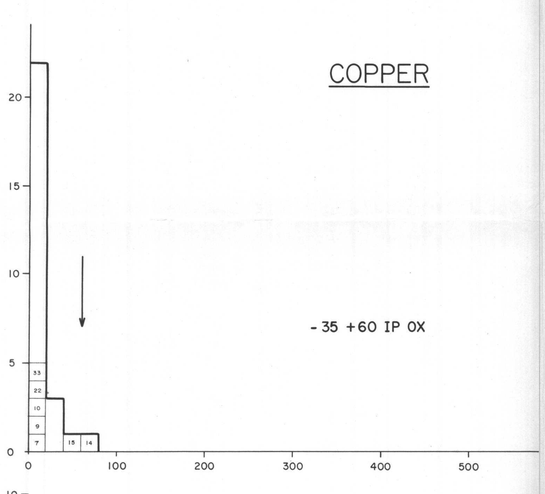
ANVIL RANGE

RIVER

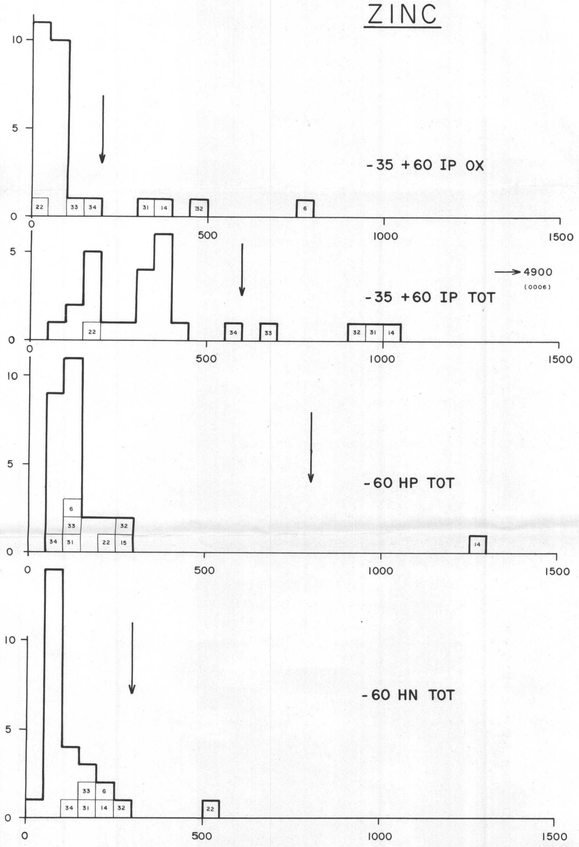
Blind Lakes

PE

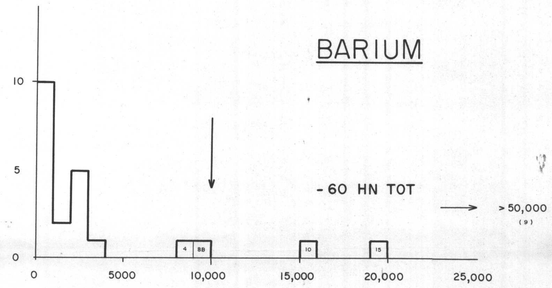
COPPER



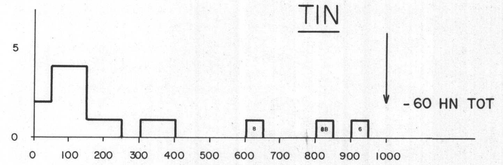
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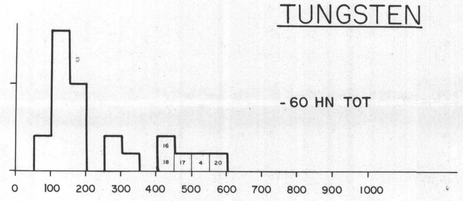
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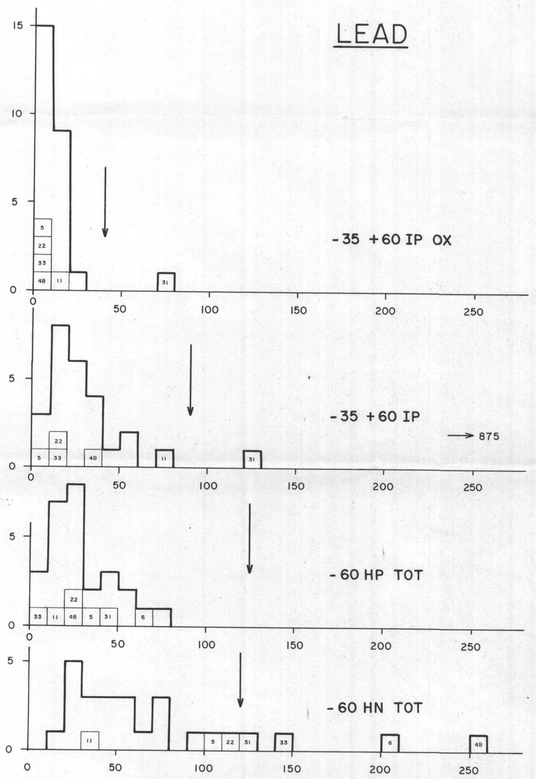
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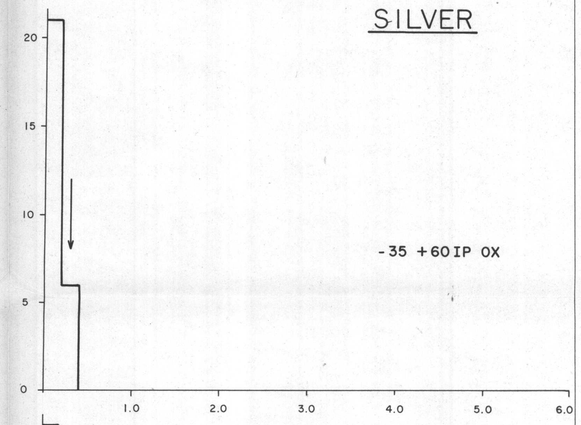
TUNGSTEN

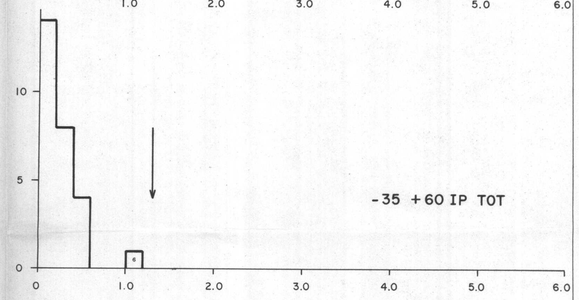


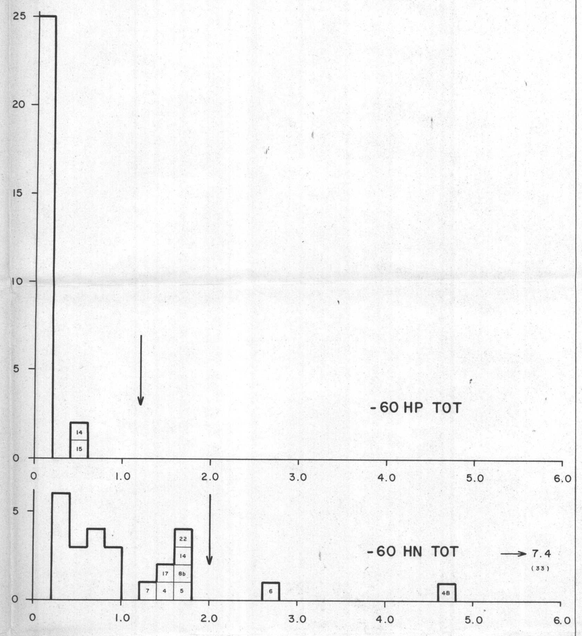
LEAD



SILVER







CYPRUS ANVIL MINING CORPORATION

NORTH ANVIL RANGE JOINT VENTURE

YUKON TERRITORY

HEAVY MINERALS SURVEY

Histograms of Results

NTS. 105 - K - 6, 7

SURVEY BY: G. J.

DRAWN BY: C. L. C.

DATE: APRIL 23, 1982

PLATE 3

inches
centimetres
This reference scale bar has been added to the original image. It will therefore be found on the image; therefore it can be used as a reference for the original size.
YUKON GEOLOGICAL SURVEY

REPORT ON FOO CLAIMS SOIL GEOCHEMICAL SURVEY

NORTH ANVIL RANGE JOINT VENTURE

Cyprus Anvil Mining Corporation

and

Metallgesellshaft Canada Limited

N.T.S. 105-K-6, 7

D. S. Jennings

CYPRUS ANVIL MINING CORPORATION

April, 1982

TABLE OF CONTENTS

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SAMPLING AND ANALYTICAL TECHNIQUES	13
RESULTS AND CONCLUSIONS	13
APPENDIX II Claim Summary	
APPENDIX III Summary of Total 1981 Costs	

Plates

No. IV	Claim Surveys	(E5)
V	Claim Surveys	(F5)
VI	Geochemical Survey - Copper	(E5)
VII	Geochemical Survey - Copper	(F5)
VIII	Geochemical Survey - Lead	(E5)
IX	Geochemical Survey - Lead	(F5)
X	Geochemical Survey - Zinc	(E5)
XI	Geochemical Survey - Zinc	(F5)

INTRODUCTION:

Forty-eight (48) Foo claims were staked to cover the previously mapped contact of the Mt. Mye and Vangorda Formations in an area of incomplete geochemical coverage (Plates IV and V). This contact is known to host lead-zinc sulfide mineralization in Anvil District along the southwest flank of Anvil Range. Sixty claims were originally planned to cover this area in the 1981 proposal, but twelve (12) were found to overlap the pre-existing Wynne claims (Getty/Welcome North) and hence not recorded.

A 9.9 kilometer (32,500 foot) cut and picketed baseline was established through the central portion of the Foo group and adjacent Ming and Rog claims. Line cutting costs were filed as representation work on the Rog and Ming. Picket lines were turned by compass and topofil chain every 305 meters (1,000 feet) with samples collected from the B horizon at 30.5 meters (100 foot) intervals along each line. Samples were flagged and given grid co-ordinates. The base line was sampled in the same manner. The soil survey covered the entire Foo block and the relevant portions of Ming, Rog and Wynne. Costs related to this survey were filed on the Foo claims.

Alternate samples along the established picket and base lines were analysed for copper, lead and zinc by conventional atomic absorption techniques. A total of 1,054 samples was collected. The field work was carried out in September, 1981 with geochemical analysis and compilation of results during the period 5 October, 1981 to 30 April, 1982. Samples are located at Acme Analytical Laboratories in Vancouver.

SAMPLING AND ANALYTICAL TECHNIQUES:

Soil samples were collected by conventional mattock pitting along the cut or topofil-chained grid. Samples were taken from the medium to dark brown soil layer above regolith and beneath the pervasive "White River" ash layer common to the area. Bagged samples were air dried and shipped to Acme Analytical Labs in Vancouver where they were kiln dried and sieved, with the -80 mesh fraction digested in hot aqua regia. The resultant solutions were analysed by conventional atomic absorption techniques with a background correction applied to lead results.

RESULTS AND CONCLUSIONS:

Results are plotted on the 1" = 2,000' orthophotographic base maps (E-5, F-5) included as Plates VI through XI. Since the Foo samples were subjected to a total hot acid digestion and AA analysis (lead corrected), the results are directly comparable to the older data generated on the Mye/Sark claim block (sheet E-5) by Cyprus Exploration Corp. Ltd. They should be closely comparable to the 1973 total extraction AA analyses (lead uncorrected) shown for the Fat, Fin and present-day Wynne claims area on sheet F-5 as well. There is some uncertainty as to the exact location of this 1973 grid, hence only the data from the Foo claims survey is contoured and interpretted. Since the methods of analysis in the various surveys are reasonably comparable, the same contour intervals are maintained for the Foo data viz: 50 and 100 ppm for copper and lead; 100, 200 and 500 ppm for zinc.

Inspection of the data shows uniformly low values in all three metals, suggesting no near surface occurrence of sulfide mineralization. No compelling geochemical response typical of sulfides in the main deposit area (approximately 1,000 ppm Pb+Zn) is apparent except for one spot high at L110E/2S (450 lead and 1,400 zinc) and an area of moderately anomalous samples at the north end of L60W of the old Cyprus Exploration grid (E-5).

The 1981 Foo claims data neither confirms nor negates the anomalous older data on L60W since the two surveys do not directly overlap. It is puzzling that higher results were not obtained on L170W and L180W on the south half of the Foo grid since they straddle the highly anomalous results on L60W (Cyprus Exploration). Because the older results are clearly anomalous and near the Mt. Mye/Vangorda contact, this area should be resampled off the Foo baseline at closer spacings to effect final evaluation.

Recommendations for further exploration in the joint venture area comprise the third section of this report. A current claims status summary is included as Appendix II and a summary of total 1981 costs is given in Appendix III.

APPENDIX II

NORTH ANVIL RANGE JOINT VENTURE

CLAIM SUMMARY

COMPANY CYPRUS ANVIL MINING ..... 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 60%; Metall.40%)							
23-24	Y62473-Y62474	2	George Bob	Sept. 29, 1971	Cyprus Anvil	May 10, 1976	March 1, 1984	EXPENDITURES
25-32	Y62483-Y62490	8	Harold Smith	Sept. 29, 1971	"	"	March 1, 1984	Dec. 31, 1981 -
33-38	Y62491-Y62496	6	Cliff McLeod	Sept. 29, 1971	"	"	March 1, 1984	Current Y.T.D. -
JET	(Cyprus Anvil 52.5%; Metall.35%; Mercury Explor. 5%; Giant Yellowknife 7.5%)							
50	Y3191	1			Cyprus Anvil	May 10, 1976	March 1, 1984	
52	Y3193	1			"	"	March 1, 1984	Assess. Work Filed
54	Y3195	1			"	"	March 1, 1984	Date: Aug. 29, 1980
56	Y3197	1			"	"	March 1, 1984	Amt.: $36,100.00
58-63	Y3199-Y3204	6			"	"	March 1, 1984	Type: DDH 80-NAR-01
64	Y3205	1			"	"	March 1, 1984	* * * * * * * *
93	Y3234	1			"	"	March 1, 1984	
95	Y3236	1			"	"	March 1, 1984	
97-104	Y3238-Y3245	8			"	"	March 1, 1984	
MX	(Cyprus Anvil 57%; Metall.38%; Mercury Explor. 5%)							
178-185	Y30637-Y30644	8			Cyprus Anvil	May 10, 1976	March 1, 1984	
119	Y30591	1			"	"	March 1, 1984	
AM	(Cyprus Anvil 57%; Metall.38%; Mercury Explor. 5%)							
1-2	Y63877-Y63878	2	G. Jilson	Nov. 5, 1971	Cyprus Anvil	May 10, 1976	March 1, 1984	
	(Cyprus Anvil 60%; Metall.40%)							
3-10	YA48308-YA48315	8	G. R. Craft	Oct. 9, 1979	Cyprus Anvil	Dec. 21, 1979	March 1, 1984	
11-15	YA48316-YA48320	5	R. W. Craft	Oct. 9, 1979	"	"	March 1, 1984	

COMPANY CYPRUS ANVIL MINING ..... 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 - METALLGESELLSCHAFT			(Contd.)					
TIM	(Cyprus Anvil 57%; Metall.38%; Mercury Explor. 5%)							
3	Y30299	1			Cyprus Anvil	May 10, 1976	March 1, 1984	
5	Y30301	1			"	"	March 1, 1984	
7	Y30303	1			"	"	March 1, 1984	
9-11	Y30305-Y30307	3			"	"	March 1, 1984	
12-20	Y30308-Y30316	9			"	"	March 1, 1984	
21-24	Y30317-Y30320	4			"	"	March 1, 1984	
25-32	Y30321-Y30328	8			"	"	March 1, 1984	
ZAN	(Cyprus Anvil 57%; Metall.38%; Mercury Explor. 5%)							
1	Y25973	1			Cyprus Anvil	May 10, 1976	March 1, 1984	
3	Y25975	1			"	"	March 1, 1984	
5-8	Y25977-Y25980	4			"	"	March 1, 1984	
9-12	Y25981-Y25984	4			"	"	March 1, 1984	
13-14	Y25985-Y25986	2			"	"	March 1, 1984	
15	Y26126	1			"	"	March 1, 1984	
16-20	Y25987-Y25991	5			"	"	March 1, 1984	
21-24	Y25992-Y25995	4			"	"	March 1, 1984	
26	Y26128	1			"	"	March 1, 1984	
28	Y26130	1			"	"	March 1, 1984	
33-36	Y26135-Y26138	4			"	"	March 1, 1984	
41-44	Y26143-Y26146	4			"	"	March 1, 1984	

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	EXPENDITURES
28	Y78317	1	J. M. Graham	April 5, 1974	"	"	July 5, 1982	Dec. 31, 1981 -
30	Y78319	1	J. M. Graham	April 5, 1974	"	"	July 5, 1982	Current Y.T.D. -
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	Assess. Work Filed
41-48	Y78330-Y78337	8	A. Russell	April 5, 1974	"	"	July 5, 1982	Date: June 29, 1978
49-56	Y78338-Y78345	8	B. Irving	April 5, 1974	"	"	July 5, 1982	Amt.: $5,600.00
71-78	Y78360-Y78367	8	N. Welter	April 5, 1974	"	"	July 5, 1982	Type: DDH 78-NA-01
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 MINING. CLAIM FIN ..... PROPERTY OWNERSHIP Cyprus Anvil 60% Metall. 40% 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
15	YA4228	1	L. Ladue	April 26, 1976	Cyprus Anvil	May 27, 1976	April 26, 1983	EXPENDITURES
17	YA4230	1	G. MacMillan	April 26, 1976	"	"	April 26, 1983	Dec. 31, 1981 -
19	YA4232	1	G. MacMillan	April 26, 1976	"	"	April 26, 1983	Current Y.T.D. -
21	YA4234	1	G. MacMillan	April 26, 1976	"	"	April 26, 1983	Assess. Work Filed
23	YA4236	1	G. MacMillan	April 26, 1976	"	"	April 26, 1983	Date: July 11, 1978 Amt.: $7,500.00
25-32	YA4238-YA4245	8	E. Albert	April 26, 1976	"	"	April 26, 1983	Type: DDH 78-NA-02
33-40	YA4246-YA4253	8	R. Voisine	April 26, 1976	"	"	April 26, 1983	* * * * * * * *
41-48	YA4254-YA4261	8	R. Carlick	April 26, 1976	"	"	April 26, 1983	April 14, 1982 Payment in lieu of assess. work in amt. of $3,675.00 to hold claims for 1 yr.
49-54	YA4262-YA4267	6	L. Bill	April 26, 1976	"	"	April 26, 1983	CERTIFICATES OF WORK NOT RECEIVED

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	EXPENDITURES
9-14	Y75081-Y75086	6	Penny Sills	March, 1973	"	"	Aug. 28, 1982	Dec. 31, 1981 -
15-22	Y75087-Y75094	8	P. Burke	March, 1973	"	"	Aug. 28, 1982	Current Y.T.D. -
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	March 1, 1984	EXPENDITURES
9-16	YA19749-YA19756	8	Louis Tommy	Sept. 12, 1977	"	"	March 1, 1984	Dec. 31, 1981 -
17-22	YA19757-YA19762	6	Gordon Etzel	Sept. 12, 1977	"	"	March 1, 1984	Current Y.T.D. -
23-25	YA19763-YA19765	3	Jean Denis	Sept. 12, 1977	"	"	March 1, 1984	
								Assess. Work Filed Date: Feb. 16, 1982 Amt.: $3,750.00 Type: Linecutting
								CERTIFICATES OF WORK NOT RECEIVED

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	March 1, 1984	EXPENDITURES
9-16	YA4323-YA4330	8	Don Lindgren	April 30, 1976	"	"	March 1, 1984	Dec. 31, 1981 -
17-24	YA4331-YA4338	8	Raymond Morin	April 30, 1976	"	"	March 1, 1984	Current Y.T.D. -
25-32	YA4339-YA4346	8	Hector Vallee	April 30, 1976	"	"	March 1, 1984	
33-40	YA4347-YA4354	8	A. Carlos	April 30, 1976	"	"	March 1, 1984	
41-42	YA4355-YA4356	2	Bernard L. Locke	April 30, 1976	"	"	March 1, 1984	Assess. Work Filed Date: April 15/77 Amount: $12,600.00 Type: Gravity Surv. July 1-Sept. 30/76 * * * * * * * * Assess. Work Filed Date: Aug. 29, 1980 Amt.: $12,600.00 Type: DDH 80-NAR-01 * * * * * * * *

COMPANY .....CYPRUS ANVIL... CLAIM .....FOO..... PROPERTY OWNERSHIP 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
16	YA74100	1	Gordon Clark	October 5, 1981	Cyprus Anvil	Feb. 12, 1982	Oct. 5, 1982	
17-24	YA74101-YA74108	8	Andy McDonald	October 5, 1981	"	"	Oct. 5, 1982	
25-32	YA74109-YA74116	8	B. Hall	October 5, 1981	"	"	Oct. 5, 1982	
33	YA74117	1	Klondike Elston	October 5, 1981	"	"	Oct. 5, 1982	
34-35	YA74118-YA74119	2	Klondike Elston	October 5, 1981	"	"	Oct. 5, 1982	
37-40	YA74120-YA74123	4	Klondike Elston	October 5, 1981	"	"	Oct. 5, 1982	
41-44	YA74124-YA74127	4	Alain Hardy	October 5, 1981	"	"	Oct. 5, 1982	
46-47	YA74128-YA74129	2	Alain Hardy	October 5, 1981	"	"	Oct. 5, 1982	
50-56	YA74130-YA74136	7	J. Tomlinson	October 5, 1981	"	"	Oct. 5, 1982	
57-58	YA74165-YA74166	2	R. Tolbert	October 5, 1981	"	"	Oct. 5, 1982	
64	YA74191	1	P. Naki	October 5, 1981	"	"	Oct. 5, 1982	
65-72	YA74157-YA74164	8	D. S. Jennings	October 5, 1981	"	"	Oct. 5, 1982	

COMPANY CYPRUS ANVIL ..... CLAIM MING ..... PROPERTY OWNERSHIP Cyprus Anvil 48%, Cream Silver 20%, Metall. 32% 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			Feb. 20, 1984	EXPENDITURES Dec. 31, 1981 - Current Y.T.D. - Aug. 10, 1981 Payment in lieu of assessment work in amount of $1,680.00 to hold claims to Aug. 20, 1982. * * * * * * * * Assess. Work Filed Date: Feb. 16, 1982 Amt.: $2,400.00 Type: Linecutting CERTIFICATES OF WORK NOT RECEIVED

APPENDIX III

NORTH ANVIL RANGE JOINT VENTURE

1981 COST SUMMARY

Salaries and Wages	$ 5,130.49
Staking Costs	6,300.00
Consulting Fees	380.37
Linecutting	2,500.00
Surveys - Geochemical	5,876.00
Surveys - Other	103.39
Geochemical Analysis	2,988.09
Field Equipment and Supplies	256.00
Camp Maintenance	1,153.19
Fuel	2,816.17
Rotary Wing	8,805.35
Miscellaneous Transportation	230.00
Property Maintenance (Assessment)	2,840.00
District Expense	186.00
Total Direct Expense	39,565.05
Administration	3,956.20
	$43,521.25

Cyprus Anvil - 60%	$26,112.75
Metallgesellschaft - 40%	$17,408.50

62° 30' 00" 300,000' E 22,740,000' N 133° 10' 00" 310,000' E 320,000' E 22,730,000' N 133° 05' 00"

133° 15' 00" 62° 30' 00" 22,740,000' N 290,000' E 22,730,000' N 133° 20' 00" 280,000' E 22,720,000' N 62° 25' 00" 22,710,000' N 133° 15' 00" 300,000' E 22,700,000' N 133° 50' 00" 62° 25' 00" 22,720,000' N 133° 00' 00" 310,000' E

280,000' E 133° 20' 00" 22,700,000' N 290,000' E 133° 15' 00" 300,000' E

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

LEGEND

CLAIM POSTS AND LEGAL SURVEYS (Located in the field) — FARO 58

PRELIMINARY CLAIM POST AND LINE SURVEYS (Located in the field) — LORNA

APPROXIMATE PLAN OF CLAIM POST LOCATIONS (Not located in the field) — 205 GAL

Note: Claim posts with the indicated marker ⊣ have been located in the field, plotted unto 1974 photography and transferred to the orthophoto.

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale 1" = 16 miles

ALL WEATHER ROADS
SECONDARY ROADS
TOTE TRAILS
BRIDGES
PRIMARY STREAMS
SECONDARY STREAMS
SWAMPS
CAMP LOCATIONS
DIAMOND D.H. SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET • 3067

CYPRUS ANVIL MINING CORPORATION

CLAIM SURVEYS

REVISED BY
- JAN/82

1000 0 1000 2000
Scale 1" = 1000'

N.T.S. 105K - 6
DRAWN BY: C.L.C.
DATE: NOV. 15, 1976

PLATE IV

EXISTING MAPPING BY
McELHANNEY SURVEYING & ENGINEERING LTD.

330,000'E
133° 00' 00"
22,720,000'N
340,000'E
62° 25' 00"
350,000'E
132° 55' 00"
22,710,000'N
360,000'E
22,700,000'N
133° 05' 00"
62° 20' 00"
310,000'E
133° 10' 00"
22,690,000'N
320,000'E

LEGEND

CLAIM POSTS AND LEGAL SURVEYS
(Located in the field)

PRELIMINARY CLAIM POST AND LINE SURVEYS
(Located in the field)

APPROXIMATE PLAN OF CLAIM POST LOCATIONS
(Not located in the field)

Note. Claim posts with the indicated marker ⊣⊢ have been located in the field; plotted unto 1974 photography and transferred to the orthophoto.

MAP INDEX

1 ANVIL MINE
2 AEK & JANGORDA
3 SWIM LAKES

Scale 1" = 16 miles

ALL WEATHER ROADS
SECONDARY ROADS
TOTE TRAILS
BRIDGES
PRIMARY STREAMS
SECONDARY STREAMS
SWAMPS
CAMP LOCATIONS
DIAMOND D H SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET • 3067

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

6763' MOUNT MYE
6519' △

CYPRUS ANVIL MINING CORPORATION

CLAIM SURVEYS

REVISED BY
C. L. C. JAN. 82

1000 0 1000 2000
Scale in Feet

N.T.S. 105K-6&11
DRAWN BY C.L.C.
DATE NOV. 5, 1976

PLATE V

EXISTING MAPPING BY
McELHANNEY SURVEYING &
ENGINEERING LTD.

62° 30' 00" | 133° 15' 00" | 300,000'E | 22,740,000' N | 133° 10' 00" | 310,000'E | 320,000'E | 22,730,000' N | 133° 05' 00"

290,000'E | 22,740,000' N | 133° 20' 00" | 280,000'E | 22,730,000' | 133° 26' 00" | 280,000'E | 22,720,000' N | 62° 25' 00" | 22,710,000' N

22,720,000' N | 133° 50' 00" | 62° 25' 00" | 22,710,000' N | 320,000'E | 22,700,000' N | 310,000'E | 300,000'E

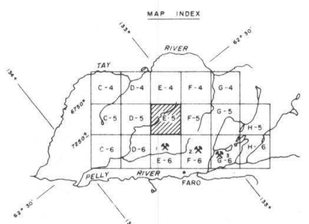
280,000'E | 133° 20' 00" | 22,700,000' N | 290,000'E | 133° 15' 00" | 300,000'E

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale 1" = 16 miles

ALL WEATHER ROADS	
SECONDARY ROADS	
TOTE TRAILS	
BRIDGES	
PRIMARY STREAMS	
SECONDARY STREAMS	
SWAMPS	
CAMP LOCATIONS	■
DIAMOND D H SITES	○
ROTARY DRILL SITES	□
TRIANGULATION STATIONS	△ 5241
SPOT ELEVATION IN FEET	+ 3067

CYPRUS ANVIL MINING CORPORATION

GEOCHEMICAL SURVEY COPPER

CONTOUR INTERVAL 50 & 100 ppm

REVISED BY
C. L. C. JAN/82

1000 0 1000 2000
Scale 1" = 1000'

N.T.S. 105K-6
DRAWN BY C. L. C.
DATE

PLATE VI

330,000'E
133° 00' 00"
22,720,000'N
340,000'E
62° 25' 00"
350,000'E
132° 55' 00"
22,710,000' N
360,000'E

EXISTING MAPPING BY
McELHANNEY SURVEYING & ENGINEERING LTD.

FOO GRID - ONLY 1981 GEOCHEM. RESULTS CONTOURED at 50 & 100 p.p.m.

6763 MOUNT MYE

6519

22,720,000' N
133° 05' 00"
62° 25' 00"
22,710,000' N
22,700,000' N
310,000' E
22,690,000' N
62° 20' 00"
310,000'E
133° 10' 00"
22,680,000'N
320,000' E
133°05'00"
330,000'E
22,700,000' N
360,000' E
22,690,000' N
350,000'E
22,680,000' N
133° 00' 00"
340,000'E

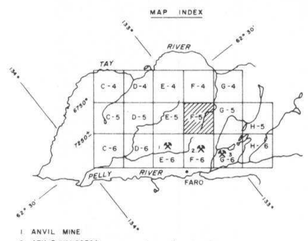
inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

* 14/17/84 SAMPLE LOCATION SHOWING Cu, Pb, Zn CONTENT IN P.P.M.

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale 1" = 16 miles

ALL WEATHER ROADS
SECONDARY ROADS
TOTE TRAILS
BRIDGES
PRIMARY STREAMS
SECONDARY STREAMS
SWAMPS
CAMP LOCATIONS
DIAMOND D.H. SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET • 3067

CYPRUS ANVIL MINING CORPORATION

GEOCHEMICAL SURVEY COPPER

REVISED BY: E.L.C. JAN/82

1000 0 1000 2000
Scale 1" = 1000'

N.T.S. 105K-6&11
DRAWN BY CLC/RDH
DATE: SEPT. 1977

PLATE VII

EXISTING MAPPING BY
McELHANNEY SURVEYING & ENGINEERING LTD.

62° 30' 00" 300,000' E 22,740,000' N 133° 10' 00" 310,000' E 320,000' E 22,730,000' N 133° 05' 00"

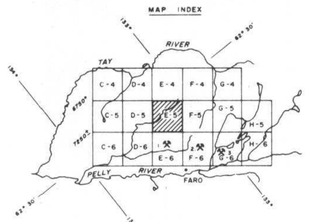
62° 30' 00" 133° 15' 00" 290,000' E 22,740,000' N 133° 50' 00" 62° 25' 00" 320,000' E 22,710,000' N 133° 20' 00" 280,000' E 22,730,000' 22,720,000' N 62° 25' 00" 22,700,000' N 310,000' E 22,710,000' N 300,000' E 280,000' E 133° 20' 00" 22,700,000' N 290,000' E 133° 15' 00" 300,000' E

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale: 1" = 16 miles

ALL WEATHER ROADS
SECONDARY ROADS
TOTE TRAILS
BRIDGES
PRIMARY STREAMS
SECONDARY STREAMS
SWAMPS
CAMP LOCATIONS
DIAMOND D H SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET • 3067

CYPRUS ANVIL MINING CORPORATION

GEOCHEMICAL SURVEY LEAD

CONTOUR INTERVAL 50 & 100 ppm

REVISED BY: JAN/82

1000 0 1000 2000
Scale: 1" = 1000'

N.T.S. 105K - 6
DRAWN BY: C. L. C.
DATE:

PLATE VIII

EXISTING MAPPING BY
MCELHANNEY SURVEYING & ENGINEERING LTD.

6763 MOUNT MYE

6519

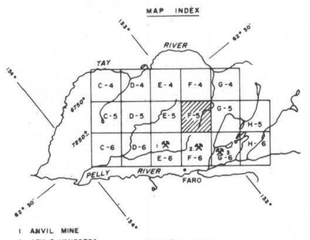
inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

* 14/17/84 SAMPLE LOCATION SHOWING Cu, Pb, Zn CONTENT IN P.P.M.

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale: 1" = 16 miles

ALL WEATHER ROADS
SECONDARY ROADS
TOTE TRAILS
BRIDGES
PRIMARY STREAMS
SECONDARY STREAMS
SWAMPS
CAMP LOCATIONS
DIAMOND D.H. SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET * 3067

CYPRUS ANVIL MINING CORPORATION

GEOCHEMICAL SURVEY LEAD

CONTOUR INTERVAL 50, 100, 200, 400 & 600 ppm

REVISED BY:
G.L.C. JAN/82

1000 0 1000 2000
Scale 1" = 1000'

N.T.S. 105K-6&11
DRAWN BY: CLC-R.D.H.
DATE: SEPT. 1977

PLATE IX

EXISTING MAPPING BY
McELHANNEY SURVEYING & ENGINEERING LTD.

62° 30' 00" 300,000'E 22,740,000' N 133°10'00" 310,000'E 320,000'E 22,730,000' N 133° 05' 00"

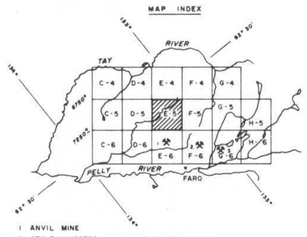
62° 30' 00" 133° 15' 00" 22,720,000' N 133° 50' 00" 62° 25' 00" 320,000' E 22,710,000' N 22,730,000' 133° 20' 00" 22,700,000' N 280,000' E 290,000' E 22,720,000' N 62° 25' 00" 22,710,000' N 280,000'E 133° 20' 00" 22,700,000' N 290,000'E 133° 15' 00" 300,000'E

inches
0 1 2
0 1 2 3 4 5
centimetres

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YUKON GEOLOGICAL SURVEY

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale 1" = 16 miles

ALL WEATHER ROADS
SECONDARY ROADS
TOTE TRAILS
BRIDGES
PRIMARY STREAMS
SECONDARY STREAMS
SWAMPS
CAMP LOCATIONS
DIAMOND D H SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET • 3067

CYPRUS ANVIL MINING CORPORATION

GEOCHEMICAL SURVEY ZINC

CONTOUR INTERVAL 100, 200, & 500 ppm

REVISED BY
R.W.R. & C.L.C.
JAN./82

1000 0 1000 2000
Scale 1" = 1000'

N.T.S. 105K-6
DRAWN BY C.L.C.
DATE

PLATE X

330,000'E
133° 00' 00"
22,720,000'N
340,000'E
62° 25' 00"
350,000'E
132° 55' 00"
22,710,000' N
360,000'E
22,700,000' N
360,000' E
22,720,000' N
133° 05' 00"
62° 25' 00"
22,710,000'N
22,690,000' N
350,000'E
62° 20' 00"
22,700,000'N
133° 10' 00"
310,000'E
22,680,000'N
22,690,000'N
133° 00' 00"
340,000'E
320,000' E
133° 05' 00"
330,000'E
62° 20' 00"
310,000'E
133° 10' 00"
22,680,000'N

EXISTING MAPPING BY
McELHANNEY SURVEYING & ENGINEERING LTD.

FOO CLAIMS - ONLY 1981 GEOCHEM. RESULTS ARE CONTOURED.

6763 MOUNT MYE

6519

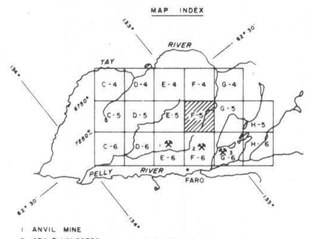
inches
0 1 2
0 1 2 3 4 5
centimetres

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YUKON GEOLOGICAL SURVEY

• 14/17/84 SAMPLE LOCATION SHOWING Cu, Pb, Zn CONTENT IN P.P.M.

MAP INDEX



1 ANVIL MINE
2 AEX & VANGORDA
3 SWIM LAKES

Scale 1" = 16 miles

ALL WEATHER ROADS
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SECONDARY STREAMS
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CAMP LOCATIONS
DIAMOND D.H. SITES
ROTARY DRILL SITES
TRIANGULATION STATIONS △ 5241
SPOT ELEVATION IN FEET • 3067

CYPRUS ANVIL MINING CORPORATION

GEOCHEMICAL SURVEY ZINC

CONTOUR INTERVAL: 100, 200 & 500 ppm

REVISED BY
C.L.C. JAN. '82

1000 0 1000 2000
Scale 1" = 1000'

N.T.S. 105K-6&11
DRAWN BY: C.L.C. - R.D.H.
DATE: SEPT. 1977

PLATE XI

RECOMMENDATIONS FOR FURTHER EXPLORATION

North Anvil Range Joint Venture

Cyprus Anvil Mining Corporation

and

Metallgesellschaft Canada Limited

D. S. Jennings
G. A. Jilson

CYPRUS ANVIL MINING CORPORATION

April, 1982

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MX/FOO GEOCHEMICAL ANOMALY	15
ANOMALOUS $BaSO_4$ RESULTS	15
ACE CANYON SULFIDE OCCURRENCE (LISA CLAIMS)	16
1982 PROPOSED WORK	17
References	18

Plates

No. XII	Preliminary Geology
XIII	Section A-B; Through the Area North of the Fat Claims

INTRODUCTION:

At this writing, most near surface (<500'/150m) exploration targets have been evaluated in the joint venture area. The most interesting finds resulting from this relatively shallow initial exploration phase are the KD hill deposit and the Ace Canyon sulfide occurrence. The KD deposit, an epigenetic stringer zone-like deposit in the Menzie Creek Formation, has been evaluated and returned to the vendor and was never included in the present joint venture. Sulfides in Ace Canyon have been known since the latter 1960's and are presently covered by the Lisa claims in the joint venture area. In addition to these known occurrences, only the intriguing barite signatures near station 81G0009 of the 1981 heavy mineral sampling program and the soil geochemical anomaly in the MX/Foo claims area near L60W (Cyprus Exploration Co. grid) warrant further consideration by the current joint venture. These possibilities are discussed below.

MX/FOO GEOCHEMICAL ANOMALY:

As indicated in the section covering the Foo claims, a tightly spaced soil geochemical survey should be re-run over L170W, L180W of the Foo grid and L60W of the old Cyprus grid to be certain of the nature and extent of the old Cyprus anomaly. Because of the proximity of this anomaly to the Mt. Mye/Vangorda contact, this precaution is advisable. It should be noted that the 1981 Foo survey straddling this anomaly failed to generate strongly anomalous results in the same area and that the 1981 heavy mineral survey has also provided no support for mineralization associated with the anomaly.

ANOMALOUS $BaSO_4$ RESULTS:

At least two stations (80-26 and 80-27) gave extremely high $BaSO_4$ results in the 1980 heavy minerals orientation survey of Anvil Range. As documented in this report, samples 81G0009 and 81G0010 generally confirm part of the 1980 results (insufficient sample remained in 81G0014 to confirm 80-27). Preliminary prospecting southeast and upstream of the most anomalous sample, 81G0009, failed to locate a source of the barite. Further prospecting is required near 81G0009 and the Foo grid soil samples between L0 and L100E should be analysed for Ba in an attempt to trace a baritic horizon between 81G0009 and 81G0010. The importance of the exercise becomes apparent when the anomalous samples (81G0009, 81G0010) are plotted on the geological map (Plate X11). Clearly both samples lie very close to the Mt. Mye/Vangorda contact and may represent material derived from a barren baritic horizon that could be related to mineralization in this important stratigraphic interval. Certainly the results from the Foo claims soil survey and the heavy mineral data do not suggest a subcropping sulfide deposit in this area, but the possibility of a deep drill target related to an Anvil-type deposit with a baritic distal facies becomes appealing.

The notion of a barren baritic distal facies to a deposit is not completely unrealistic in light of relationships seen in Middle to Upper Devonian deposits, e.g. Meggen, Cirque. However, in the case of both Meggen and Cirque, the distal or peripheral facies of the ore zones are not entirely barren (Meggen more barren than Cirque), suggesting some lead-zinc geochemical response would have been observed in the North Anvil case. Also, there is no presently known case of a barren distal baritic facies to an Anvil deposit. A more plausible scenario is the inferred baritic horizon may be exhalative in nature and peripheral to a deposit such as the barren barite deposits in the hanging and footwall porcelanites at Cirque.

Speculation on the significance of this barite could continue indefinitely. The only resolution to the problem is to complete the proposed prospecting and detailed geochemical surveys to refine a model and test by drilling. Assuming a geochemical signature defining a baritic horizon associated with the Mt. Mye/Vangorda transition zone, a drilling program to test down-dip sulfide possibilities should be initiated. Inspection of cross section A-B (Plate XIII) drawn through or near 81G0009 shows the probability of deep targets requiring drill hole depths of 2,000 to 3,000+ feet. Clearly evaluation of such a model would be a costly and long term commitment, as numerous holes could be required.

ACE CANYON SULFIDE OCCURRENCE (LISA CLAIMS):

Mineralization in the Ace Canyon (Lewis and Simpson, 1973) is very similar to cupriferous, pyrrhotite-rich rocks of the alteration facies surrounding Anvil-type deposits (see discussion in Mustard and Jennings, 1981). An inclined drillhole 300 meters in length was recommended in this report to test the dip extent of the known showing. This hole is still recommended as the showing may improve at depth. Additionally, if the showing is related to a multi-layered deposit, e.g. Grum, DY, the following scenario should be considered.

It is possible to re-interpret the fault relationships bounding the package of Siluro-Devonian clastic rocks (units 7A, B, C, Plate XII) north of the Ace Canyon showing such that the contact of 6A - F and 7A, B, C on the western side of the panel is a normal fault rather than an overthrust or gravity slide. With normal movement on the southern boundary fault ("graphite fault") as well, this re-interpretation suggests the entire Siluro-Devonian section is preserved in a down-dropped normal fault-bounded block. If the Ace Canyon showing is part of a multi-layered deposit, it is conceivable that the upper portions could be contained in the down-dropped block. Clearly, this possibility would require very deep drill testing and would appear in a more favorable light if encouraging results were encountered in the proposed inclined hole through the Ace Canyon showing.

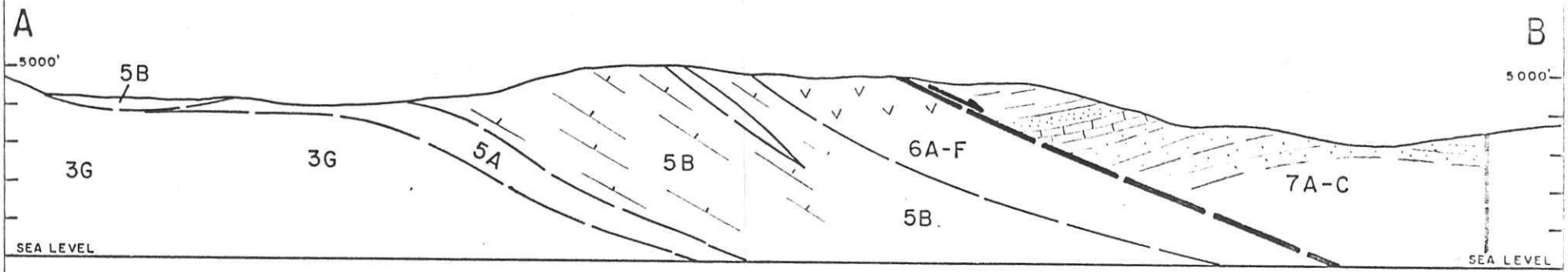
1982 PROPOSED WORK:

A care and maintenance program totalling $24,500 (Cyprus Anvil $14,700; Metallgesellschaft $9,800) is planned for the North Anvil Joint Venture. This program would only cover payments in lieu of assessment work, data compilation and analysis of approximately 400 soil samples for Ba on the Foo grid, as recommended. No provision is made for soil geochemical coverage of the anomalous Foo/MX area or for drill testing of any targets.

References:

Lewis, P.F. and Simpson, J.G. (1973) A Geological Report on the Lisa Claims, Whitehorse Mining District, Yukon Territory; Unpub. Rpt. for Ridgemont Mining Corp., 10p.

Mustard, J.W. and Jennings, D.S. (1981) Progress Report - 1980 with Proposed 1981 and 1982 Exploration Programs, North Anvil Range Joint Venture; Unpub. Rpt. for Cyprus Anvil Mining Corporation and Metallgesellschaft Canada Ltd., 15p.



SCALE 1:50,000

CYPRUS ANVIL MINING CORPORATION	
NORTH ANVIL RANGE	
YUKON TERRITORY	
SECTION A-B ; THROUGH THE AREA NORTH OF THE FAT CLAIMS	
NTS: 105-K-6,7 SURVEY BY: DSJ DRAWN BY: rwr	DATE: MAY 1982

PLATE XIII

CYPRUS ANVIL MINING CORPORATION

NORTH ANVIL RANGE JOINT VENTURE

YUKON TERRITORY - NTS 105-K-6,7

PRELIMINARY GEOLOGY

SCALE 1:50,000 DSJ/rwr MAY, 1982

PLATE XII

NORTH ANVIL RANGE PROVISIONAL LITHOSTRATIGRAPHIC CODE

PRISMACOLOR PENCIL NO.			
921	12	PORPHYRITIC RHYOLITIC PLUG/DIKE	INTRUSIVE ROCKS
938	11Q	BULL QUARTZ VEIN, POD	
932	11G	PYROXENITE AND SERPENTINIZED EQUIVALENTS	
937	11F	SMOKEY QUARTZ - FELDSPAR PORPHYRY	
934	11E	PORPHYRITIC HB - BIO QUARTZ DIORITE	
936	11D	EQUIGRANULAR HB - BIO QUARTZ DIORITE	
939	11C	QUARTZ MONZONITE PEGMATITE DIKES	
929	11B	PORPHYRITIC, BIOTITE - QUARTZ MONZONITE	
928	11A	MUSCOVITE - BIOTITE GRANODIORITE	
	8	UNDIVIDED VARIABLE CARBONACEOUS PELITIC METASEDIMENTS — EARN GROUP	
919	7C	NODULAR, GREY-BROWN, DOLOMITIC LIMESTONES	ASKIN / SANDPILE GROUP
917	7B	MASSIVE, LIGHT GREY ORTHOQUARTZITES	
962	7A	GRAPHITIC TO CARBONACEOUS, BLACK, THIN-BEDDED PHYLLITES/SLATES	
961	6Q	VARICOLORED PHYLLITIC CHERTS	KECHIKA GROUP
	6P	GREY PHYLLITIC CHERTS	
	6O	GREEN PHYLLITIC CHERTS	
	6N	METABASITE	
	6M	VOLCANIC SANDSTONES/SANDY LIMESTONES/DOLOMITES/CONGLOMERATES IN 6L (6J?)	
909	6L	MASSIVE FLOWS/FLOW BRECCIAS (EQUIVALENT TO 6J?)	
	6K	BLACK, SILICEOUS PHYLLITE IN 6J (EQUIVALENT TO 6H)	
	6J	MASSIVE, VOLCANIC BRECCIAS/MINOR FLOWS	
916	6I	MASSIVE, WHITE TO LIGHT GREY, MATURE ORTHOQUARTZITE IN 6H (ROAD RIVER)	MENZIE CK. FM.
965	6H	BLACK, GRAPTOLITIC, CARBONACEOUS PHYLLITES/SLATES (ROAD RIVER)	
912	6G	MASSIVE, VOLCANIC BRECCIAS OF DIVERSE ORIGIN	
917	6F	BEDDED TUFFS/VOLCANIC SEDIMENTS IN 6E	
909	6E	PILLOW LAVAS/MINOR FLOWS	
908	6D	INTRUSIVE, SUB-VOLCANIC FEEDERS TO 6A	
912	6C	VOLCANIC BRECCIA INTERBANDED IN 6A	
917	6B	BEDDED TUFFS/VOLCANIC SEDIMENTS IN 6A	
911	6A	AMYGDALOIDAL CHLORITIC PHYLLITE/PILLOW LAVAS/MINOR FLOWS	
949	5G	VARIABLY CALCAREOUS, GRAPHITIC PHYLLITE	VANGORDA FM.
945	5F	CHLORITIC PHYLLITE	
904	5E	PHYLLITIC MARBLE AND SILICATED MARBLE	
910	5D	LAMINARLY BANDED, VARIABLY CALCAREOUS, CHLORITIC PHYLLITE	
908	5C	METABASITE	
920	5B	CALCAREOUS MUSCOVITE CHLORITE ± BIOTITE PHYLLITE	
936	5A	VARIABLY CALCAREOUS, GRAPHITIC PHYLLITE HOST TO UNIT 4	
923	4	GRUM, VANGORDA, DY, FIRTH, SWIM, SB, SEA SULPHIDE DEPOSITS UNDIFFERENTIATED	
916	3I	GRAPHITIC QUARTZITE IN NON-CALCAREOUS PHYLLITE/SCHIST	MT MYE FM.
913	3H	TUFFACEOUS CALC-SILICATE PHYLLITE/SCHIST (ASSOCIATED WITH 3D)	
941	3G	NON-CALCAREOUS, MUSCOVITE-CHLORITE ± BIOTITE PHYLLITE/SCHIST, UNDIFFERENTIATED	
906	3F	MARBLE AND SILICATED MARBLE	
963	3E	GRAPHITIC PHYLLITE/SCHIST	
913	3D	CALC-SILICATE PHYLLITE/SCHIST	
908	3C	METABASITE	
946	3B	CHLORITIC PHYLLITE/SCHIST	
912	3A	TRANSITION ZONE WITH UNIT 1	
923	2	FARO SULPHIDE DEPOSIT UNDIFFERENTIATED	METAMORPHIC FARO FM.
901	1G	MARBLE AND SILICATED MARBLE	
908	1F	METABASITE	
967	1E	GRAPHITIC SCHIST	
947	1D	CARBONACEOUS, BIOTITE - MUSCOVITE - ANDALUSITE SCHIST	
948	1C	QUARTZO-FELDSPATHIC, BIOTITE MUSCOVITE GNEISS/SCHIST	
902	1B	TACTITE AND SILICATED MARBLE	
943	1A	UNDIFFERENTIATED UNIT 1	

MYE CREEK FAULT B

inches

centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY