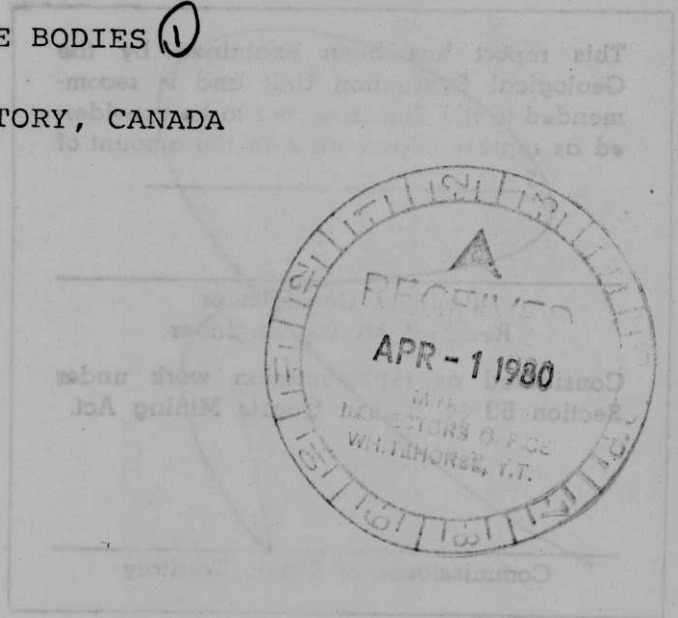




RESERVE ESTIMATE
OF THE
FARO ORE BODIES (1)
YUKON TERRITORY, CANADA



Submitted to:

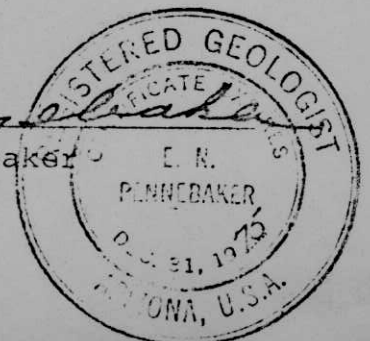
Cyprus Anvil Mining Corporation, Ltd.

July 8, 1975

By

E. N. Pennebaker

090941





for info only.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ _____

Resident Geologist or
Resident Mining Engineer

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

Submitted for:

Cyrus Anvil Mining Corporation, Ltd.

July 8, 1975



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TABLE OF CONTENTS

	Page
SUMMARY	1
INTRODUCTION	3
METHOD USED IN MAKING THE ESTIMATE	4
THE ORE	6
RESULTS OF THE ESTIMATE	7
The Large Faro Ore Body	7
The Small Faro Ore Body	10
The Combined Ore Bodies	11
Ore "Robbed" by Dike Zone	12
CATEGORIES OF RELIABILITY	12
DISCUSSION	14
RECONCILIATION	16
RECOMMENDATIONS	18
APPENDIX	At Back

SUMMARY

The results of the estimate described in this report, as of January 1, 1975, are as follows:

THE LARGE FARO ORE BODYWITHIN THE "L.K. ULTIMATE PIT"TONNAGES OF PROVED PLUS PROBABLE ORE

(Ore Bodies 1 + 3)

Estimate by Longitudinal Sections

Category	Cubic Yards	Short Tons	% Pb	% Zn	Combined Pb + Zn
Proved	4,839,712	15,245,076	3.5	5.8	9.3
Probable	6,041,978	19,032,207	3.0	5.0	8.0
	<u>10,881,690</u>	<u>34,277,283</u>	<u>3.2</u>	<u>5.4</u>	<u>8.6</u>

OUTSIDE OF THE "L.K. ULTIMATE PIT"TONNAGES OF PROVED PLUS PROBABLE ORE

(Ore Bodies 1 + 3)

Estimate by Longitudinal Sections

Category	Cubic Yards	Short Tons	% Pb	% Zn	Combined Pb + Zn
Proved	527,961	1,663,075	3.3	6.4	9.7
Probable	1,902,655	5,993,363	2.7	5.5	7.7
	<u>2,430,616</u>	<u>7,656,438</u>	<u>2.9</u>	<u>5.7</u>	<u>8.6</u>

TOTAL PROVED PLUS PROBABLE ORE

(Inside and Outside of the "L.K. Ultimate Pit")

	Cubic Yards	Short Tons	% Pb	% Zn	Combined Pb + Zn
	<u>13,312,306</u>	<u>41,933,721</u>	<u>3.2</u>	<u>5.4</u>	<u>8.6</u>

THE SMALL FARO ORE BODYWITHIN THE GIVEN PIT OUTLINEAverage of Results by Longitudinal and Cross SectionsTONNAGE OF PROBABLE ORE

(Ore Body 2)

Cubic Yards	Short Tons	% Pb	% Zn	Combined Pb + Zn
1,099,664	3,463,942	3.4	5.0	8.4

OUTSIDE THE GIVEN PIT OUTLINEAverage of Results by Longitudinal and Cross SectionsTONNAGE OF PROBABLE ORE

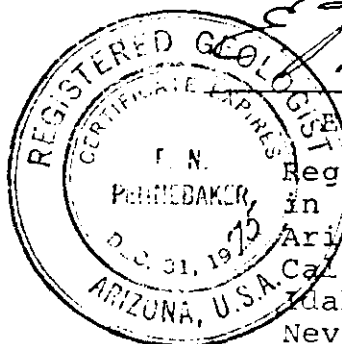
(Ore Body 2)

Cubic Yards	Short Tons	% Pb	% Zn	Combined Pb + Zn
184,855	582,296	2.8	4.6	7.4

TOTAL PROBABLE ORE

(Ore Body 2)

Cubic Yards	Short Tons	% Pb	% Zn	Combined Pb + Zn
1,284,519	4,046,238	3.3	4.9	8.2



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ORE RESERVE
OF THE
FARO ORE BODIES

INTRODUCTION

The Faro mineralized zone contains two ore deposits. One is the large Faro ore body, made up of what was formerly known as the No. 1 and No. 3 ore bodies; the other is the small Faro ore body, once known as No. 2.

The Faro ore bodies are valuable for their lead, zinc and silver content. A minor amount of copper is also present and some day may become a by-product. The present estimate is for the amount of contained lead and zinc only. From past estimates silver is known to amount to a little over one troy ounce per ton.

The large ore body trends about N40°W and is about 4,800 feet long by 1,500 feet wide in plan view. It varies from about 50 to 300 feet in vertical thickness. It dips gently toward the southwest and plunges irregularly. The large Faro ore body is cross-cut by a steep zone of barren quartz diorite dikes at about its mid-point. This dike zone is about 100 to 200 feet wide at the horizon of the ore zone, and it "robs" the deposit of a considerable amount of ore.

The small Faro ore body is found southeast of the large body, distant about 700 feet. It strikes about N45°W and is approximately 1,600 feet long by 1,000 feet wide. It averages from

about 20 to 50 feet in thickness and dips to the southwest.

In 1967 the writer estimated the tonnage and grade of both the Faro ore bodies based on about 93 vertical diamond drill holes. Since that time some 76 additional holes have been drilled in or near the ore bodies.

The 1967 estimate was made prior to mining. Since then 13.8 million tons of better than average grade have been mined and milled.

The ore bodies are covered and masked by glacial sands and gravels with an average thickness of about 55 feet, under which the ore crops out on the buried bedrock surface. From this sub-outcrop the northwesterly part of the large Faro ore body plunges down to the southeast under bedrock and attains a rock cover of some 300 feet where it meets the dike zone. Beyond the dike zone, to the southeast, it is dropped down about 150 feet. Farther to the southeast the ore body rises toward the surface and approaches it on the far southeast.

METHOD USED IN MAKING THE ESTIMATES

The large Faro ore body was estimated in two segments: one is northwest of the dike zone where the ground is more closely drilled; the other is to the southeast.

For this estimate a set of 11 longitudinal and 19 cross-sections were furnished by Cyprus Anvil's engineering department. These sections showed the profiles of the so-called "L.K. Ultimate Pit," including the profile of the mined section as of

January 1, 1975. Also shown were the vertical diamond drill holes, and bench intervals at 40 foot spacing.

Diamond drill hole logs were supplied, including bench interval average assays at 40 feet (20 feet for the small ore body). The writer did not systematically re-calculate all of these assay averages, but many were re-calculated for various reasons, and it is believed that all such averages are accurate.

From the above data horizontal ore blocks 40 feet thick, from bench to bench, were constructed from the drill holes shown on the sections, each block extending laterally from one drill hole halfway to the adjacent holes shown on a section. The ore body was extended out only 50 feet from marginal holes.

Thus for the purpose of the estimate the ore lenses are distorted to form flat blocks bounded by open pit bench levels. Tonnages so derived are reliable, but the ore has been moved somewhat out of its true position, depending upon the amount of dip and/or plunge of the ore layers.

A cut-off grade of 5.0% combined lead plus zinc was used along with a tonnage factor of 1 cubic yard contains 3.15 short tons of ore in place. This approximately equals 8.50 cubic feet per ton, the factor used in 1967. The specific gravity of the ore is now being given close study, but the results of this study are not yet available. When they are, the following estimates can be adjusted accordingly.

Where a block 40 feet thick averaged below cut-off but was made up of one part below ore grade and another part above ore grade, the ore part was carried into the estimate as ore if the two could be separated by visual differences, such as white barren schist in contact with massive sulfides. In these cases it was assumed that the ore could be separated from the waste and sent to the mill. Otherwise the entire bench interval was considered to be waste.

The ore blocks derived on the cross-sections were measured by scaling where of regular shape or by planimeter if irregular. These measurements were reduced to cubic yards and to tons. The average metal content of the various blocks was then used to obtain the weighted average grade for lead and zinc.

THE ORE

Faro ore is mostly a massive sulfide mixture of pyrite, pyrrhotite, galena, and sphalerite with a little chalcopyrite. A small amount of silver is present, and some barite has been determined to be present. Magnetite is found in places.

A subordinate amount of ore appears as banded or disseminated sulfides in quartzite.

Granular pyrite occurs as lenses and zones of internal waste associated with the massive sulfides, and close-spaced drilling is required to outline them.

RESULTS OF THE ESTIMATE

THE LARGE FARO ORE BODY

The tonnage and grade of the segment of the large Faro ore body lying northwest of the dike zone was derived from some 75 vertical diamond drill holes. Most of these were drilled at the corners of a grid pattern that is 141 feet on a side, but there is some irregularity in the pattern and there are some gaps, where the holes are 282 feet apart.

Southeast of the dike zone, drill hole spacing for the most part is on or close to a 282-foot grid with a few holes at closer but irregular intervals. For this segment the estimate is based on some 45 vertical diamond drill holes.

Because the plunge of the ore layers is somewhat flatter than their dip, ore blocks on the longitudinal sections give a truer picture than do the cross-sections. Furthermore, longitudinal sections cross the barren dike zone at about right angles, whereas it falls between two cross-sections and was not properly considered in the writer's earlier estimates. Consequently the longitudinal sections give a more reliable estimate. Also, it has been determined by the Cyprus Anvil staff that grade zones are more regular along the NW-SE longitudinal direction.

For the large Faro ore body three items were estimated:

1. Ore within the "L.K. Ultimate Pit."
2. Ore below and outside of this pit.
3. Ore layers less than 40 feet in thickness that were

"diluted to waste" by being averaged with the waste making up the remainder of the bench interval.

The results of the estimate for the northwest part of the large Faro ore body by longitudinal and by cross-sections, as of January 1, 1975, are as follows:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
By Cross Sections	15,653,285	3.46	5.73	9.2%
By Long. Sections	15,245,076	3.48	5.80	9.3%
Average	15,449,180	3.47	5.76	9.2%

For the southeast part of the large Faro ore body, as of January 1, 1975:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
By Cross Sections	19,351,127	3.02	4.98	8.0%
By Long. Sections	19,032,207	3.02	5.02	8.0%
Average	19,191,667	3.02	5.00	8.0%

Combining the results from the longitudinal sections for the northwest and southeast sectors we have:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
NW Sector	15,245,076	3.48	5.80	9.3%
SE Sector	<u>19,032,207</u>	<u>3.02</u>	<u>5.02</u>	<u>8.0%</u>
Total	34,277,283	3.22	5.37	8.6%

This is the ore now remaining within the "L.K. Ultimate Pit." These are the figures set forth in the SUMMARY.

For that portion of the large Faro ore body that lies below and outside of the "L.K. Ultimate Pit" we have from the cross-sections:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
NW Sector	2,229,241	3.22	6.31	9.5
SE Sector	<u>5,651,088</u>	<u>2.85</u>	<u>5.69</u>	<u>8.5</u>
Total	7,880,329	2.95	5.87	8.8

From the longitudinal sections:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
NW Sector	1,663,075	3.30	6.45	9.7
SE Sector	<u>5,993,363</u>	<u>2.74</u>	<u>5.50</u>	<u>7.7</u>
Total	7,656,438	2.86	5.70	8.6

This is the ore below and outside of the "L.K. Ultimate Pit." These figures derived from longitudinal sections are set forth in the SUMMARY.

For the ore that is "diluted to waste" we have from the cross-sections:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
NW Sector	332,050	2.80	5.04	7.8
SE Sector	<u>1,383,853</u>	<u>2.52</u>	<u>4.36</u>	<u>6.9</u>
Total	1,715,903	2.57	4.49	7.1

From the longitudinal sections:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
NW Sector	208,340	2.35	4.78	7.1
SE Sector	<u>1,445,662</u>	<u>2.28</u>	<u>4.39</u>	<u>6.7</u>
Total	1,654,002	2.29	4.44	6.7

Results from the longitudinal sections are believed to be the more reliable.

THE SMALL FARO ORE BODY

The tonnage and grade of the small Faro ore body, as yet unmined, were derived from some 45 vertical diamond drill holes.

For the estimate a set of seven N-S and seven E-W sections were furnished by the Cyprus Anvil engineering department. On these were plotted the upper and lower profiles of an open pit with bench levels at intervals of 20 feet. The sections are spaced at 200 feet and run at 45 degrees to the NW-SE trend of the ore body. Consequently an average of the results obtained from the two sets of sections are presented.

The estimate was made for ore within and for ore falling outside of the open pit design provided by the Cyprus Anvil engineering department.

The ore within the pit design, as of January 1, 1975, is as follows:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
N Sections	3,770,087	3.38	4.93	8.3%
E Sections	<u>3,157,797</u>	<u>3.46</u>	<u>5.03</u>	<u>8.5%</u>
Average	3,463,942	3.41	4.98	8.4%

The ore below and outside the pit design is as follows:

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
N Sections	479,941	2.65	4.61	7.3%
E Sections	<u>217,349</u>	<u>2.83</u>	<u>4.61</u>	<u>7.4%</u>
Average	582,296	2.76	4.61	7.4%

No estimate was made of "ore diluted to waste" for the small Faro ore body because of the 20-foot bench interval and the scarcity of internal waste.

THE COMBINED ORE BODIES

Within the Two Pit Designs

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
Large Ore Body	32,305,743	3.4	5.7	9.1
	34,277,283	3.22	5.37	8.6
Small Ore Body	3,424,003	3.4	5.1	8.5
	<u>3,463,942</u>	<u>3.41</u>	<u>4.98</u>	<u>8.4</u>
Total	35,732,796	3.4	5.6	
	37,741,225	3.24	5.33	8.6

revised by Cyprus Anvil staff to omit certain areas included by Pennebaker but not currently mineable.

Within and Outside the Two Pit Designs

	<u>Short Tons</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Pb + Zn</u>
Large Ore Body	41,933,721	3.16	5.43	8.6
Small Ore Body	<u>4,046,238</u>	<u>3.32</u>	<u>4.92</u>	<u>8.2</u>
Total	45,979,959	3.17	5.38	8.6

ORE "ROBBED" BY DIKE ZONE

That portion of the ore zone invaded by the post-mineral quartz diorite dikes has been estimated by the writer and converted into short tons to give an approximate measure of the ore lost.

This amounts to:

3,321,184 short tons

This item can be subtracted from the writer's ore reserve estimate of October 3, 1967.

CATEGORIES OF RELIABILITY

The results of ore reserve estimates are generally grouped in several categories, reflecting varying degrees of reliability. Many terms and definitions have been proposed for these categories, but those set forth many years ago by Herbert Hoover are, in the writer's opinion, the simplest and the best for defining "proved ore" and "probable ore."

Proved ore is defined by Mr. Hoover* as "ore where there is practically no risk of failure of continuity."

Probable ore, according to his definition, "is ore where there is some risk, yet warrantable justification for assumption of continuity."

Possible ore is a term generally employed where there are few if any samples or measurements, and where assumed continuity is mostly based on geologic evidence.

*Hoover -- "Principles of Mining", 1909, pg. 19.

These various degrees of reliability were really set up for veins that were exposed in underground mines by drifts, cross-cuts and raises. In the case of large deposits explored by vertical diamond drill holes, the drill holes are analogous to raises, but we are lacking horizontal exposures analogous to those in drifts. Consequently we have to rely on the drill hole spacing considered with respect to the structure and variability of the ore body.

What may seem to be proper drill hole spacing before some mining of the deposit has been carried out may turn out to be too wide after the deposit has been exposed.

This is somewhat the case at Faro where mining has shown the internal waste to be more erratic and more abundant than was originally expected. This problem has been solved, in part, by the holes more recently drilled. Nevertheless, the writer's earlier categories of reliability need to be re-examined.

In the large Faro ore body in the sector northwest of the dike zone, we now have 32 additional holes in addition to the original 43. These and their spacing, along with the experience gained by mining, influence the writer to believe that the ore estimated for the Northwest Sector should now be designated "proved."

In the Southeast Sector, on the other hand, there are only 27 old holes plus 19 drilled since 1970. These are widely spaced (mostly at 282 feet). In view of this, ore estimated for the

Southeast Sector should, in the writer's opinion, be designated as "probable," along with the recommendation that many more holes be drilled at half-intervals to aid in ore control during mining and to provide a more secure ore reserve estimate.

In the small ore body, there are 23 old holes plus 22 new ones. These together give a much better definition of the small ore body than was possible in 1967. Nevertheless, because of the thinness of the ore body, the number of bench intervals that are only partially filled by ore, and with hole intervals greater than 200 feet in a number of places, the estimated tonnage is designated as "probable."

DISCUSSION

The writer's estimate of reserves of the large Faro ore body in the "L.K. Ultimate Pit" (34.3 million tons @ 3.2% Pb and 5.4% Zn) is larger than that estimated by Cyprus Anvil engineering department (32.3 million tons @ 3.4% Pb plus 5.7% Zn). These are about equal as regards the gross poundage of lead plus zinc (294.8 million vs. 293.93 million grade tons).

The larger ore tonnage of the writer is probably due to his including in the reserve many ore blocks whose vertical thickness is less than the bench interval of 40 feet. To realize this tonnage sharp ore control will need to be exercised during mining.

The writer's estimate of ore below and outside of the "L.K. Ultimate Pit" (7.7 million tons by longitudinal section or 7.9 million tons by cross-sections) is much greater than that estimated by the Cyprus Anvil engineering department (3.1 million tons). This is possibly because the writer's estimate includes a great many small blocks below all parts of the ore body. It is not confined to places where the outside ore is abundant and offers the best opportunities for being included in a revised pit design. Obviously, all of the writer's tonnage cannot be recovered in a modified open pit layout.

The writer's estimate for the small ore body (4.0 million tons) is less than that obtained in 1967 (5.2 million tons). This is because the more recent drilling has invalidated some of the longer projections made in 1967 and because for the present estimate ore was projected only 50 feet beyond marginal holes.

The writer's estimate of ore "lost" in the dike zone (3.3 million tons) is greater than that obtained by Cyprus Anvil's engineering department (2.2 million tons). Probably the Cyprus Anvil tonnage was derived from more geologic information than that used by the writer, and the figure of 2.2 million tons is accepted.

In the writer's 1967 estimate the large Faro deposit was estimated as a geologic body (not confined to a given pit layout) and without dilution. Thirty percent of the estimated internal waste was then added as a diluent.

In the present estimate, the averaging of assays for bench intervals gives a certain amount of "built in" dilution. Additional dilution for interfaces where the ore block is less than 40 feet (20 feet for the small ore body) and for dilution at the lateral ends of blocks have not been taken because Cyprus Anvil's mining is very close to expected grade. Consequently, as far as dilution is concerned, the writer's figures should be between the 1967 undiluted and diluted ore.

If ore block data from the writer's sections of the large ore body are projected onto bench level plans, the longitudinal sections should be favored.

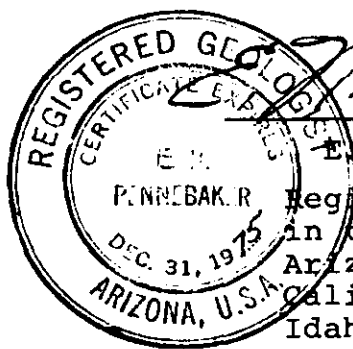
RECONCILIATION

The present minable reserves do not include all of the ore embraced by the writer's 1967 estimate. Excluded items are ore outside of the open pits, the tonnage mined out, ore stored in stockpiles, and ore "diluted to waste." The ore "robbed" by the dike zone was also not apparent in 1967. These various items are summarized below.

	<u>Million of Tons</u>	<u>E.N.P. 1967 Estimate</u>
Reserves, 1/1/75		
Large Ore Body	34.3	
Small Ore Body	3.5	
<hr/>		
Ore Outside of Pits		
Large Ore Body	7.7	
Small Ore Body	0.6	
Ore mined and milled	13.8	
Ore in stock piles	2.4	
Ore lost in dike zone	2.2	
Ore "diluted to waste"	<u>1.7</u>	
	66.2	62.1 Not Diluted 63.5 Diluted
If we accept the Cyprus Anvil tonnage of ore outside the "L.K. Ultimate Pit" as mostly recoverable (3.1 million tons), the total is	61.6	

RECOMMENDATIONS

1. Review the open pit design to determine how much of the ore below and outside of the "L.K. Ultimate Pit" can be recovered.
2. Also determine if bench intervals less than 40 feet are economic. It may be possible to recover more of the reserve if this be feasible.
3. The small ore body is still open on the southeast. Drill the holes proposed in this area by the writer in 1967.
4. Segregate the low-grade sulfide waste in a separate stockpile. In the future it may become valuable. The available tonnage and grade of this material can be readily estimated from the sections submitted.
5. Only carry ore reserves for a few years "by subtraction of annual production." Re-estimate every two or three years.
6. Drill the Southeast Sector of the large Faro ore body at intermediate locations to facilitate ore control during mining and to improve the reserve estimate.



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APPENDIX

The copy of this report going to the engineering department of Cyprus Anvil has at its back the summary calculation sheets for the estimate.

Also, a full set of ore body sections will be delivered to the engineering department.

The following legend applies to the calculation sheets and to the sections:

<u>Material</u>	<u>Abbreviation</u>	<u>Color on Sections</u>
Sulfide ore, NW Sector of large Faro ore body	NWS	Yellow
Sulfide ore, SE Sector	SES	Yellow
Sulfide waste	ws	Bright green
Parts of sulfide waste above cut-off	Dotted	Bright green
Sulfide ore outside of "L.K. Ultimate Pit"	WSB&ESB	Red
Sulfide waste outside of "L.K. Ultimate Pit"	ws	Grayish green or uncolored
Sulfide ore, small Faro ore body	S	Yellow
Sulfide ore, small Faro ore body, outside of pit	B	Red
Ore "robbed" by dike zone	Cross-hatched	Red
Rock waste	w	Uncolored

.7%

Section 112
Within Ultimate Pit Outline

Factor 3.5

<u>Block Volume</u>	<u>Tonnage</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Tonnage x Pb%</u>	<u>Tonnage x Zn%</u>
2,010	7,037	4.18	7.90	29,414	55,592
799	2,797	4.78	9.34	13,367	26,119
783	2,741	1.0	2.57	2,741	7,046
44,076	154,264	4.3	7.70	663,337	1,187,836
27,547	96,415	1.50	3.11	144,622	299,851
(11,018)	(38,566)	(0.39)	(0.65)		
50,759	177,658	6.78	10.05	1,204,519	1,785,460
58,906	206,173	5.08	6.43	1,047,360	1,325,694
43,867	153,533	3.69	5.03	566,537	772,272
58,906	206,173	3.06	4.47	630,890	921,594
58,906	206,173	3.46	5.40	713,359	1,113,336
58,906	206,173	4.90	7.07	1,010,249	1,457,645
33,422	11,698	2.28	4.19	26,670	49,014
8,773	30,706	4.02	6.98	123,441	214,332
38,853	135,987	3.23	5.92	439,237	805,041
44,076	154,264	5.46	9.98	842,283	1,539,559
44,076	154,264	2.33	5.45	359,436	840,741
26,320	92,120	2.07	4.27	190,688	393,352
11,541	40,394	1.48	3.90	59,783	157,536
26,320	92,120	1.59	4.26	146,471	392,431
29,453	103,086	1.95	6.46	201,019	665,940
26,320	92,120	1.80	5.53	165,816	509,424
8,355	29,244	4.07	8.39	119,024	245,361
15,463	54,121	3.30	6.92	178,598	374,513
9,139	31,986	1.80	5.05	57,575	161,530
697,496	2,441,247	3.66	6.27	8,936,436	15,301,219

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Section 124Ore Within Ultimate Pit Factor
3.5

<u>Volume</u>	<u>Tonnage</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Tonnage x % Pb</u>	<u>Tonnage x % Zn</u>
52,953	185,337	3.08	4.88	570,837	904,442
103,400	361,900	2.73	3.89	987,987	1,407,791
114,889	402,111	3.66	4.74	1,471,727	1,906,007
40,211	140,739	2.86	4.88	402,513	686,806
59,533	208,367	3.53	2.90	735,534	604,263
80,370	281,295	3.78	7.76	1,063,295	2,182,849
119,067	416,733	2.68	6.33	1,116,845	2,637,922
12,220	42,770	1.50	4.78	64,155	204,441
108,204	378,716	1.45	4.18	549,138	1,583,031
<u>116,978</u>	<u>409,422</u>	<u>3.16</u>	<u>4.59</u>	<u>1,293,774</u>	<u>1,879,248</u>
807,825	2,827,390	2.92	4.95	8,255,805	13,996,800

Agrees within 2% with E.N.P.

Cyprus Anvil Mining Corporation

Post Office Box 1000

Telex 036-8-208

Faro, Yukon Territory

Y0B 1K0

Telephone 403) 994-2600

May 22, 1975

Dr. D. B. Craig
Yukon Resident Geologist
Building 200, Takhini
Whitehorse, Yukon Territory

Dear Doug:

Last October your department removed 335 boxes of core from the Cyprus Anvil property to be stored in the H.S. Bostock Core Library in Whitehorse. At that time, you requested any additional geological information that we could provide.

Better late than never! Please find enclosed the following:

- 1) Copies of the original drill logs for the holes removed
- 2) A geological interpretation of Section 22
- 3) A 1971 pit geology plan

I hope you will find this material a useful complement to the core. Sorry for any inconvenience caused by the delay.

Yours sincerely,



D. J. Hanson
Mine Geologist

DJH/mm

Encs.

CYPRUS

<u>Hole #</u>	<u>Interval</u>	<u>No. of boxes</u>
66-8	Complete	90
66-15	"	24
66-17	309-414	8
66-18	Complete	24
66-26	350-556	16
66-33	Complete	24
66-35	"	27
66-44	"	32
		<u>246</u>

Holes not picked up:

* 66-4 ✓	~ 44
(66-54	~ 40)
* 66-2 ✓	~ 20
* 66-25 ✓	~ 22
(67-34 HH	~ 40)
	<u>~ 169</u>

65-8	} These holes were not located
65-13	
65-5A	
65-11	

* These holes were picked up Oct. 23/74

Total No. boxes: 385 (Oct 23/74)

Anvil Drill Holes

SECTION 112

66-8	(1300 Ft)	
66-4	(703 Ft)	
66-35	486	
66-28	486	
65-8	615	
66-26	350 - 556	} desired intervals
66-54	400 - 500	

65-13 418

66-33 - bott

66-7 581

65-5A bott

66-15 463

65-11 555

66-44 600

66-25 ~420

67-34 609

66-17 Bottom 100 Ft.

- 1 Sect 22 - with deletions
- 1 Pit Plan
- 1 Sect. 112

LOCATION Zone 1

SECTION -

CO-ORDINATES (N) - 9,599.70 (E) - 13,999.88

ELEVATION 4,136.93

PROPERTY Faro

page 1 of 6

DIAMOND DRILL CORE LOG

CORE SIZE - NQ to 307

AXF to 581

DDH 66-2

DIP 90°

STARTED JAN 8, 1966

FINISHED FEB 1, 1966

Logged by D.W. Tully

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
0	85	Overburden (NK casing to 98' - H casing to 30')	
	97.1	(150 feet NQ rods recovered - 157 feet left in hole) Hornfels, dark bluish grey, brecciated, blocky	
			Lost core
	102.0	Hornfels with quartz veining and graphitic schist	
			Lost core
	115.0	Hornfels, dark grey, brecciated and foliated.	
			Lost core
	213.0	Hornfels, pale grey, brecciated and foliated, some calc-silicate introduced, fault zones and quartz veining at 120-122, 130-146, 163-172, 182-192, 204-213, talc noted on shear planes, shearing at 35-50° CA, some augen-like structures or fragments, fine pyrite at 165', fine galena and quartz 201 - 204'.	Lost core
	217.7	Hornfels, pale grey, sericitized, sheared at 50-70° CA, fine pyrite seams filling and replacing host rock.	
	222.5	As above.	
	226.0	As above	
	230.8	As above, sericitized, with calc-silicate veining and fine pyrite.	
	235.5	" " " "	
	240.0	As above, sericitized, weak veining and 1" pyrite seam at 239' (core ahead of footage tags - 3.0' at 240').	
	244.9	As above with calc-silicate veining and fine dark mineralization.	
	249.7	As last sample.	

DIAMOND DRILL CORE LOG

LOCATION
 SECTION
 CO-ORDINATES (N) - (E) -
 ELEVATION
 PROPERTY Faro

66-02

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
249.7	254.6	As last sample.	
	259.0	As above with graphitic zones and fine pyrite.	
	264.0	Lost core (accumulated loss from 213')	
	269.0	Hornfels and graphitic schist zones with calc-silicate veining at 60° CA, some fine pyrite.	
	274.0	Hornfels, pale bluish grey - 25% mineralization	
	278.8	50% pyrite with fine sphalerite and galena, remainder hornfels remnants.	
	283.6	Massive sulphides, fine sphalerite and galena, possibly fine magnetite, few quartz remnants.	
	288.5	As last sample with evidence of two ages of pyrite.	
	293.2	Graphitic schist, dragfolded, pyrite seams.	
	297.8	" " " " " very blocky.	
	302.0	Hornfels, sericitized, blocky, sheared at 45°CA, fine disseminated galena, sphalerite and pyrite in hornfels.	
	307.0	75% massive sulphides, hornfels remnants 25% with disseminated galena, considerable sphalerite.	
		NOTE: (1) Core is 2.0' ahead of footage tags at this point. (2) NQ rods stuck in hole at 307'. Hole continued with AXF rods inside NQ - AXF core below.	
	312.0	Open fault zone	No core
	317.0	Massive sulphides, mostly pyrite, very blocky.	Lost core
	322.0	Ditto, fine dark mineral visible.	Lost core
	327.0	Ditto, more sphalerite and galena with fine magnetite.	Lost core

DIAMOND DRILL CORE LOG

LOCATION
 SECTION
 CO-ORDINATES (N) - (E) -
 ELEVATION
 PROPERTY Faro

66-02

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
327	332.0	Ditto, sphalerite, galena, magnetite, quartz vein remnants.	Lost core
	337.0	As last sample	Lost core
	342.0	As last sample	
	347.0	As last sample with more pyrite.	
	352.0	Considerable sphalerite and galena, very blocky.	
	357.0	Massive sulphides with Zns - Pbs	Lost core
	362.0	" " " " "	Lost core
	367.0	" " vuggy, blocky, quartz veining.	Lost core
	372.0	As last sample.	Lost core
	377.0	" " " pyrite content increasing.	Lost core
	382.0	Massive pyrite, coarser-grained, minor Zns - Pbs.	Lost core
	387.0	Massive pyrite, similar to last sample	Lost core
	392.0	Massive sulphides, sphalerite, galena, magnetite.	Lost core
	397.0	As last sample.	

LOCATION

SECTION

CO-ORDINATES (N) - (E) -

ELEVATION

PROPERTY Paro

page 4 of 6

DIAMOND DRILL CORE LOG

66-02

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
397	402.0	As last sample, very blocky, considerable	
	407.0	sphalerite and galena in bands. Massive sulphides, more pyrite, very blocky.	
			Lost core
	412.0	Massive sulphides, disseminated sphalerite and galena.	Lost core
	417.0	As last sample with minor hornfels inclusions.	
			Lost core
	422.0	Ditto, pyrite dominant and coarser-grained.	
	427.0	Ditto, as last sample, disseminated Zns - Pbs	Lost core
		variegated	
	432.0	Ditto, /salt and pepper aspect, blocky.	Lost core
			Lost core
	437.0	As last sample.	
	442.0	As last sample with more Pbs - Zns.	Lost core
	447.0	As last sample with more Pbs - Zns.	Lost core
			Lost core
	452.0	Ditto with hornfels inclusions and very blocky.	Lost core
	457.0	Ditto with hornfels inclusions and very blocky.	Lost core
			Lost core

457	462.0	Ditto - massive coarsely crystalline pyrite. <u>MJD SFAM REPORTED</u>	Lost core
	467.0	Mostly massive crystalline pyrite - blocky.	Lost core
	472.0	Ditto with porous, vuggy areas.	Lost core
	477.0	Same as last sample with hornfels inclusion.	Lost core
	482.0	Same as last sample.	Lost core
	486.0	Same as last sample, very blocky.	Lost core
	490.0	Hornfels, slaty banded phase, blue-grey, sphalerite and galena in fine seams and disseminations.	Lost core
	495.0	Ditto	
	500.0	60% massive sulphides, fair Zns - Pbs.	
	506.0	Hornfels blue grey phase, disseminated Zns - Pbs with fine quartz veining.	
	511.0	As last sample.	Lost core
	516.0	As las. sample.	

FORM NO. 2 DE (WS) 9/10/65

		END OF HOLE	
		% Recovery - (Overall - 76.6) (NQ - 76.4)	(AXF - 75.9)
		SLUDGES ON FILE	

FORM NO. 2 DE (WS) 9/10/65

LOCATION Zone 1

SECTION -

CO-ORDINATES (N) - 9,999.70 (E) - 14,000.00

ELEVATION 4,275 4192.75

PROPERTY Faro

DIAMOND DRILL CORE LOG

CORE SIZE NQ 70

DD# 66-04

DIP: 90°

STARTED Feb. 1, 66

COMPLETED Feb 22/66

Logged by D.W. Tully

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
0	46	Overburden (NX casing removed from hole)	
	76.0	Hornfels, brown biotite phase, very rusty along fractures, sericite common, schistose at 30 - 55° CA. Fault zones 62-69, minor quartz veining.	Lost core
	90.0	Hornfels, brown biotite phase, augen-textured sericitized.	Lost core
	92.5	Fault zone	Lost core
	139.5	Hornfels as above, augen-textured, crenulated mylonitized, minor quartz veining increasing downward, rusty fractures at 98', 111-113'.	
	189.0	Hornfels, pale grey, brown biotite subordinate to absent, fragments suggest augen-structure, highly sheared and blocky at 45° (FAULT ZONE)	Lost core
	216.0	Ditto with less shearing at varying angles.	Lost core
	219.0	Fault zone - schistose and friable	Lost core
	233.0	Hornfels, brown biotite plus garnetiferous augens or fragment-like structures, more sericite towards bottom of section.	
	238.0	Sericite schist and quartz, pyrite in fine seams and aggregates	Lost core

LOCATION

SECTION

CO-ORDINATES (N) -

(E) -

DIAMOND DRILL CORE LOG

66-04

ELEVATION

PROPERTY Faro

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION	SAMPLE NO
FROM	TO			
238	243.0	As above - grading to blue-grey hornfels with disseminated sphalerite towards bottom of sample.	Lost core	063
	248.0	Hornfels, blue-grey phase, 40% pyrite with minor sphalerite, galena mineralization.	Lost core	063
	253.0	90% massive pyrite with weak Pb - Zn mineralization	Lost core	063
	258.0	95% massive pyrite as last sample	Lost core	064
	263.0	Sericite and hornfels with finely disseminated pyrite	Lost core	064
	302.0	Hornfels, highly sericitized, augen-textured, minor quartz veining, associated pyritic seams, some schistosity at 50 - 80° CA.	Lost core	-
	306.0	Fault zone in sericite schist with quartz veining with minor pyritic mineralization, some talcost material in fault gouge.	Lost core	065
	311.0	Massive sulphides, few hornfels remnants, fine sphalerite and galena, very blocky	Lost core	070
	316.0	Ditto	Lost core	070
	321.0	Ditto	Lost core	070
	326.0	Ditto	Lost core	070

DIAMOND DRILL CORE LOG

66-04

LOCATION
 SECTION
 CO-ORDINATES (N) - (E) -
 ELEVATION
 PROPERTY Faro

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
326	331.0	Massive sulphides, few hornfels remnants, fine sphalerite and galena, very blocky	Lost core
	336.0	Ditto	Lost core
	341.0	Ditto	Lost core
	346.0	Ditto	Lost core
	351.0	Ditto	Lost core
	356.0	Hornfels and sulphides, very blocky	Lost core
	361.0	Massive sulphides, finely divided sphalerite - galena pyrite coarser-grained.	Lost core
	366.0	Ditto	Lost core
	371.0	Ditto, blocky, porous, crumbly	Lost core
	376.0	Ditto as last sample (footage tags wrongly placed in core box)	
	381.0	" " " " " " "	
	386.0	" " " " " " " hornfels, remnants	

LOCATION

SECTION

CO-ORDINATES (N) - (E) -

ELEVATION

PROPERTY Faro

DIAMOND DRILL CORE LOG

66-05

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
386	391.0	Ditto as last sample hornfels remnants	
	396.0	" " " " " "	Lost core
	401.0	" " " " " "	Lost core
	406.0	" " " " " "	Lost core
	411.0	Massive sulphides, minor quartz veining	
	416.0	Ditto	Lost core
	421.0	Ditto	Lost core
	426.0	Massive sulphides, lesser amounts ZnS - PbS, crumbly and porous, blocky	
	431.0	Ditto	Lost core
	436.0	Ditto	
	441.0	Ditto with increasing Zns - Pbs	Lost core
	446.0	" " " " " ", blocky	Lost core

LOCATION

SECTION

CO-ORDINATES (N) - (E) -

ELEVATION

PROPERTY Faro

Logged by

page 5 of 7

DIAMOND DRILL CORE LOG

66-04

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
446	451.0	Ditto with increasing Zns - Pbs, blocky	Lost core
	456.0	Ditto, very blocky	Lost core
	461.0	"	
	466.0	Ditto, blocky and porous	Lost core
	471.0	Ditto, " " "	Lost core
	476.0	Ditto, blocky, coarser-grained pyrite.	Lost core
	481.0	" " " " "	Lost core
	486.0	" " " " "	Lost core
	491.0	Ditto, very blocky, vuggy areas, coarse-grained pyrite	Lost core
	496.0	Ditto, blocky, porous, coarse-grained pyrite	Lost core
	501.0	" " " " "	Lost core
	506.0	" " " " "	Lost core

LOCATION

SECTION

CO-ORDINATES (N) -

(E) -

ELEVATION

PROPERTY Faro

DIAMOND DRILL CORE LOG

66-04

Logged by

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
506	511.0	Ditto, blocky, porous, coarse-grained pyrite	
	516.0	" " " " " "	
	521.0	" " " " " "	
	526.0	" " " " " "	Lost core
	531.0	Ditto, blocky, pyrite finer-grained	Lost core
	536.0	" " " fine-grained	Lost core
	539.0	" " " " "	
	545.0	Hornfels, grey, calc-silicates, talcose, sericitized, sheared at 45° CA, sparse Pb - Zn mineralization	
	550.0	As above, bullish quartz veining, Pb - Zn pyrite (weak) mineralization in fractures.	Lost core
	555.0	Ditto	Lost core
	560.0	Ditto	Lost core
	565.0	Ditto with massive sulphides (561 - 562)	Lost core
	570.0	Ditto, sparse mineralization, sheared at 60° CA	Lost core

LOCATION

SECTION

CO-ORDINATES (N) - (E) -

ELEVATION

PROPERTY Faro

Logged by

page 7 of 7

DIAMOND DRILL CORE LOG

66-04

FOOTAGE		DESCRIPTION	MINERALIZATION
FROM	TO		
570	583.0	Sericite schist and hornfels, calc-silicates	
	588.0	Ditto, bullish quartz veining, fracture filling with fine Pb - Zn pyrite	
	593.0	As last sample	
	598.0	As last sample	
	628.0	Sericite schist and hornfels, weak sulphide mineralization in fractures associated with quartz veining 620 - 628'.	
	703.0	Hornfels and sericite schist, augen-like structures of brown biotite and possibly garnets common through section, sericitized zones dominant, shearing and foliation at 45 - 70° CA. Greenish alteration associated with shearing at 653-654', minor quartz veining.	Lost core
		END OF HOLE	
		% Recovery (Total hole - 88.6) (Ore zone 82.6)	
		Sludges on file.	

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

PROPERTY NAME **FARO** ZONE No. 1

LOCATION **ROSE CRÉEK YUKON**

DATE DRILLED **MARCH 12 - 1966**

SCALE OF LOG **1" = 40'** LOGGED BY **R.S.A**
 Assayed sec. **1" = 10'** **235-550**

90° dip

HOLE NO. **66-8** DEPTH **1382'**

COLLAR ELEVATION **4189.49** COR

BEARING (MAG OR TRUE

CO-ORDINATES **9799.61** N **13.798**

SURFACE OR UNDERGROUND

TOTAL RECOVERY **1365.3** or **99 %**
 IN ORE **230.1** or **95.5 %**

page 1 of 9

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS
OVERBURDEN 0 - 86' Nx casing to 98' 80'		
86' METAPHYLLITE AUGEN 86-107, clots of biotite with 104' minor garnet developments in clots.	98' Mud seam reported	98
BIOTITE SCHIST same as previous formation except no clotting, increased foliation.	Intensely crenulated & dragfolded to 120'; foliation indefinite	108 118
125' SERICITE - QUARTZ SCHIST pale gray with local patches & bands 144' of biotite.	120-160 Foliation - 25° moderately dragfolded	125 1/2 127 1/2 137
SERICITE BIOTITE SCHIST 160' med. Brn. well foliated to almost	Sulfide lenses up to 1/4" 139-144' ZnS, Py	147 153 159 1/2
a schist biotite banding with considerable sericite	160-200 Foliation - 40° Local dragfolding	170 1/2 177 184 1/2
200' 225 contact gradational	200-240 Foliation - 30°	195 199 201 206 209 211 216 221
235 SERICITE SCHIST 240 very sericitic, pale gray - becomes		231 235
darker as formation grades into graphitic schist	240-280 Foliation - 30°	244
250		

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS
260		- 253
265		- 262
270 GRAPHITE SCHIST		- 267 1/2 - 268 1/2
272.5		- 273
280 GRAPHITIC PHYLLITE limy bands	272.5 - 286 Bands of massive sulfide may selectively replace limy	- 278
286	horizons in phyllite pyrite bands in phyllite Foliation - 20°	- 281
290 PHYLLITE? bleached?		- 298
300 Gray white thin banded largely replaced by sulfides	Bedded Sulfides almost massive to 303.4 At 303.4 "Massive" sulfides except for local patches of bleached phyllite (?)	- 297 1/2
310 301.4 - 303.4 LS Bx., matrix replaced by sulfides		
320		- 315

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	%
330	Sulfides distinctly bedded in many places 320-360 Replacement banding -20°	-322	100
340		-331 -335	100
350		-345	100
360		-257 1/2 -358	100
370 Occasional chert like relicts to 470	360-400 Banding not recognizable sulfide massive texture, characterized by oolitic texture of pyrite	-367	C
380		-377 1/2	C
390		-387	C

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS
400		391 394
410	400-440 Sulfides massive	400 ¹ / ₂ 407
420		411 417
430		425 430
440		437 439
450	440-480 Sulfides massive hint of ghostly flat banding	441 448
460		453 ¹ / ₂ 460

PROPERTY NAME FARO ZONE N° 1 BEARING (MAG OR TRUE DIP -90°)
 LOCATION ROSE CREEK, YUKON CO-ORDINATES 10,199.88 N. 13,400.09 E.
 DATE DRILLED MAR. 20th. To APRIL 11th., 1966 SURFACE Y. OR UNDERGROUND
 SCALE OF LOG 1" = 40' LOGGED BY DATE TOTAL RECOVERY 341.3 = 87.7%
ORE SEC. 1" = 10' (240-453) IN ORE 170.1 = 87.2%

ROCK TYPES AND ALTERATION		MINERALIZATION AND STRUCTURES		FOOTAGE BLOCKS	% RECOVERY	SAMPLE NO
0	0 - 74 OVERBURDEN					
40						
74				74		
80	PHYLLITE			80	100	
	black thinbedded to 93 even becomes increasingly sericitic and lighter coloured grey	14-120	Foliation - 40°	6-0 0.6-1.4 1-0 7.7-1.3 10-0 2-0 7-1	92.5 100 96.3 100 100 87.5	
20				107 09		
		120-160	Foliation - 40°	10-0	100	
136				127 130 5.4-.6 1.4-.6 5.5-2.5	93.3 90 70 68.7	
	QUARTZ SCHIST increasing sericitic down section	=	Broken core segg at 145 to 146	3.5-.4 6.0-.5 1.2-.3	88.6 92.3 80	
60				149 2		
		160-200	Foliation - 50° dragfolding near faults	9.5-0 2.7-2.3 8.0-1.0	100 54 88.9	
195				167 172		
200	SERICITIC METAPHYLITE	-	FAULT gg 195 to 196	7.0-0 5.3-3.2	100 62.4	
	208 somewhat brn. biotitic banded SERICITIC QUARTZ SCHIST			203 213 10.0-0 1.5-0 1.0-.5 1.0-0 6-0	100 100 66.6 100 100	
240		200-240	Foliation - 60°	234 240		

ION LIMITED

HOLE NO. 66-17 DEPTH 414

SHEET 1 OF 2

ZONE No1
KON

COLLAR ELEVATION 4359.89 CORE SIZE NQ

INCLINATION TESTS

BEARING (MAG OR TRUE DIP -90°

At 400' hole deviated from
-90° to -88° 30'

CO-ORDINATES 10,801.74 N. 12,800.82 E.

to APRIL 2-1966

SURFACE OR UNDERGROUND

GED BY R.S.A.

DATE APRIL 1966

TOTAL RECOVERY 354.6' = 98%

ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE							
				NO.	INTERVAL						
					FROM	TO					
		52									
		57									
		65 66	100%								
stals and black		76									
		83									
a granodiorite		88									
		95									
		99									
		103 106	100%								
		116									
		125									
		135									
		140	100%								
		147									
		155									
		162									
		168									
		176	100%								
		186									
		192 1/2									
		198 1/2									
		205 1/2									
		215									
		216									
		222	100%								
		232									
		238									

alteration

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

PROPERTY NAME FARD ZONE No 1

LOCATION ROSE CREEK, YUKON

DATE DRILLED MAR. 31st. to APR. 13th. 1966

SCALE OF LOG 1" = 40' LOGGED BY D.M. DATE APR. 9 / 66

1" = 10 from 112-240

HOLE NO. 66-18 DEPTH 486'
 COLLAR ELEVATION 4180.55 CORE NO
 BEARING (MAG OR TRUE D)
 CO-ORDINATES 10,199.67 N. 14,199.9
 SURFACE OR UNDERGROUND
 TOTAL RECOVERY 335.5 = 89.8 %
 Total Recovery in DRE 59.7' = 94.6 %

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS
0-112' OVERBURDEN DB = 45.0'		
40		
80		1.0-0 -112 1.0-0 -113 3.0-0 -114 -117
112 120 QUARTZ SCHIST Weakly foliated almost banded Quartzite. Medium light grey in colour becomes increasingly darker	120-160 Foliation ~ 50° Massiv sulphides become banded sulphides 125-130; Massive 130-137.5	8.2-1.8 -127
130 137.5 contact gradational		12.0-0 -139
140 SERICITE SCHIST buff white colour, some minor banding		6.5-0 4.0-0 -147
150		

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS
150		151-154
160	2.8-0.2 4.0-0.5 3.2-0	93 88 100
170	160 - 200 Foliation - flat lying 2.5 - 0 2.3 - .7 3.4 - .6	161.5 164 167 85
180	MASSIVE SULPHIDES 169.5 - 192.0 cut off by fault 2.0 - 0 1.0 - 0 3.6 - .4 4.0 - 0	171 173 174 90 178 100
190		182 184 187.5 100 100 100
192 SERICITE QUARTZ SCHIST Local & minor biotite banding & biotite clotting, buff-grey in colour	192-193 Fault zone, Gouge, -20° cuts off mineralization 2.0-0 5.0-0	191 193 100 100
200	200 - 240 Foliation - flat lying minor foliation - 40° drag folding & crenulations around 240° 200.3 - 204, 213-215.5 Disseminated sulphides 204-213 MASSIVE SULPHIDES	198 204.5 208 100 97.1
218	215.5 - 218 Gouge & Brecciation - 55° Fault zone 5.0-0 2.9-.1 2.0-0	100 213 216 218 96.7 100
220 SERICITE, QUARTZ SCHIST		

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

PROPERTY NAME **FARO ZONE No 1**

LOCATION **ROSE CREEK, YUKON.**

DATE DRILLED **APRIL 20, 1966** **APRIL 28, 1966**

SCALE OF LOG **1" = 40'** LOGGED BY **D.M.** DATE **MAY 1/66**
1" = 10' in ore zone

HOLE NO. **66-25** DEPTH **396'**

COLLAR ELEVATION **4321.21** CORE SIZE

BEARING **—** (MAG OR TRUE DIP)

CO-ORDINATES **10,601.28** N. **13,000.27**

SURFACE OR UNDERGROUND

TOTAL RECOVERY **298.1 = 90.01%**

Total Recovery - Ore Zone = 90.05%

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY
0-65 OVERBURDEN			
65			
80 BANDED QUARTZITE - light grey in color, hydrothermal quartz, sericitic rusty stained	Foliation -60° to -50°	67 72.5 79.0	100%
110 At 73' QUARTZITE, not banded, light blue grey in color, sericitic in places, rusty stained, hydrothermal quartz	91.0 to 98' FAULT ZONE, broken core, brecciation	85 90.5 97 99 104 107 109 112 115	c c 2.0 c c c c c
125 120 QUARTZ VEIN - bull quartz	Quartz vein, mineralization in fractures	117 119 122.0 123.0 125	1.0 c 0.5 3
130 QUARTZITE - massive, light grey in color.	Banded and disseminated sulphides 126-133	129 130	3.5 0.5 3
140	138-150.0 Weak sporadic sulphides		3.2 3
146	145.5-146.5 FAULT ZONE, brecciation, gouge, slight alteration	141	0.3 3

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

 PROPERTY NAME **FARO ZONE N^o 1**

 LOCATION **ROSE CREEK YUKON**

 DATE DRILLED **APRIL 29, 1966 to MAY 18, 1966**

 SCALE OF LOG **1" = 40'** LOGGED BY **D.M.** DATE **May 17/66**
1" = 10' in ore zone

 HOLE NO. **66-26** DEPTH **556'**

 COLLAR ELEVATION **4150.05** CORE SIZE **N.S.**

BEARING _____ (MAG OR TRUE DIP _____)

 CO-ORDINATES **9,399.91 N. 13,397.97 E.**

 SURFACE OR UNDERGROUND _____

 TOTAL RECOVERY **505.2' = 95.0%**
 Total Recovery Dr 2 **58.7' = 97.8%**

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE NO.
0-24 OVERBURDEN				
24-36.0 - Quartzite Phyllitic - blue grey in color		24 31.5 34 37		
36.0-86.0 Dacite { Intrusive; m. grained, 5% mafics (biotite mostly k. feldspar, 15% Quartz; sub-hedral, light grey blue in color	67.0-68.5 - Fault Zone, gouged, broken core.	41 46 48 49 52 53 56 58 61 62 65 71 77	4.5	
86-94 QUARTZITIC PHYLLITE.	Foliation 80-120' -20° to -30°	80 82 85.5 86 86.5 87 89 90 91 92 95 99 101 104 107 115 120		
94-101.5 - Intrusive - v. dark in color, fine grained with laths of feldspars slightly altered. BASIC DYKE	87.0-92.0 - Crenulated			
101.5-122.0 - Biotitic Meta Phyllite - blue brown in color. at 122.0' grades almost Graphitic Meta Phyllite in 120 several places.	90.0-91.0 - Fault, gouged, brecciation 96.5-99.0 - Fault Zone, broken core, gouged		2.5	
122.0-132.0 - BANDED QUARTZITE - light, blue grey in color.	Foliation 120-160' -20° to -30° (to -40°) 131.5-138.5 - gouged, Brecciation, broken core - Fault Zone	124 132 139 142 145 146 152 160		
132.0-181.0 - BIOTITIC METAPHYLITE			5.8	
181.0-213.0 - GRAPHITIC METAPHYLITE - cut by small QUARTZ veins - hydrothermal, grey-black in colors	Foliation 160-200' -20° 165-170' - Fault Zone - Brecciated, broken core	165 167 171 173 176 181 189 195 198		
213.0-270.0 - METAPHYLITE (or SERICITE METAPHYLITE) - light blue-grey in color.	Foliation 200-240' -25°	209 218 226 232	8.5	
240				

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE No.
430				3408 4
440 GRAPHITIC PHYLLITE very dark grey in color, slightly quartzitic	Foliation: 440-480: -40°	440	9.6	3409 4
450		475	7.2	3410 4
460 463 contact gradational SERICITE SCHIST (slightly graphitic?) light buff colored becomes increasingly sericitic	Crenulated: 468-556	475	c	3411 4
470 474 contact gradational BIOTITIC METAPHYLLITE medium grey-brown in color, quartzitic 477.5-478 QUARTZ VEIN } cut by small quartz 485-485.3 QUARTZ VEIN } veins 1"-2" wide 495 494 contact gradational garnet clots at contact	Foliation: 480-520: -25°	475	c	3412 4
509 contact gradational BIOTITE SCHIST: brown grey in color BIOTITIC METAPHYLLITE: cut by quartz veins, garnet clots at contact with metaphyllite	Foliation: 520-560: -30° 530-532 FAULT ZONE: gouge, broken core,	497	c	3413 4
535 QUARTZITIC METAPHYLLITE: - blue grey in color, biotitic, minor pyrite in foliations from 538'	brecciated, alteration. Attitude, -55°	506	509	3414 4
556 END OF HOLE.		527	527	3415 4
		532	532	3416 4
		538	538	3417 4
		556	556	3418 4

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

PROPERTY NAME FARO ZONE N^o 1

LOCATION Rose Creek, Yukon

DATE DRILLED June 15-

SCALE OF LOG 1" = 40' LOGGED BY D.M. J.F. DATE June 30/66

Ore Zone: 1" = 10'

page 1 of 4

HOLE NO. 66-33 DEPTH 452' In process being deflected

COLLAR ELEVATION 4,078.63 CORE SIZE NQ

BEARING (MAG OR TRUE DIP 90°)

CO-ORDINATES 9,399.31 N. 14,197.27 E.

SURFACE OR UNDERGROUND

TOTAL RECOVERY 88.6% from 72-452

Ore Zone: 96.5% from 311-452

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE	
				NO.	FR.
0 OVERBURDEN: 0-59.					
40					
59 TRICONE: 59-72					
72					
80 BIOTITIC METAPHYLITE: 72-109: medium brown grey in color, quartzitic, graphitic in places - minor pyrite.	FOLIATION: 74-100: 30°-35°	74 77	2.4 3.2		
109					
120 BIOTITE SCHIST: 109-162: medium brown grey in color - hydrothermal quartz.	FOLIATION: 100-140: 30° 109.5-111: Drag Golding.	83 88 93 99.5 100.5 105 109.5 115 120	3.0 3.0 6.5 0.9 4.0 3.4 3.0 2.3		
160					
162 ALTERED QUARTZ DIORITE 162-195: greenish. Feldspars → clays.	125.5-126.5 } Drag Golding. 129-130 } FOLIATION: 140-180: 0°-10° 152-162: FAULT ZONE.	127 135 144 152	1.8 8.0 8.6 5.8 5.3		
195					
200					
BIOTITE SCHIST: 195-214.5: medium grey in color. 214.5 contact gradational.					
GRAPHITE SCHIST: medium grey: 214.5-236.5: 236.5 Contact Gradational.	FOLIATION: 220-260: 25° 230-232: Drag folding	162 170 173 176 178 23 23 189 192 195 198 202.5 210.5 212.5 214.5 224 226 229 235 237	8.0 3.0 3.0 2.0 3.6 3.0 3.0 3.0 2.8 2.4 1.0 3.0 7.4 2.0 2.0 9.0 2.0 3.4 0.6 5.8 1.7		

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE: BLOCKS:	% RECOVERY	SAMPLE	INT
				NO.	FROM
240 BIOTITIC SERICITE SCHIST: 236.5-280:	256-259: FAULT ZONE - brecciation, gouge broken core, minor alteration FOLIATION: 260-300: 20° 270-272.5: FAULT ZONE: 50°, brecciation gouge.	247	5.4		
		249	2.0(6)		
		250	3.0(6)		
		251	1.7		
		252	2.0(6)		
		253	2.8		
		256	6.2		
		266	3.9		
280		272.5	4.0		
		277	2.5(6)		
		272.5	2.5		
280 Contact Gradational.		282.5	7.0		
SERICITE SCHIST: 280-311: medium light grey buff in color - graphitic from 305.	FOLIATION: 300-340: unobtainable.	290	4.0(6)		
		294	5.5		
		300	80(6)		
308.75	311-329.5: Weak siliceous sulphides	308	20(6)	3151	305
311 Contact Gradational.	311-342: Zone of brecciation.	310			
QUARTZITE: 311-329.5: medium grey.	311.5-312.5: FAULT ZONE - brecciation gouge.		70(6)	3152	310
		317	3.0(6)	3153	315
318.75		320			
			75(6)	3154	320
328.75 Contact Gradational		327.5		3155	325
329.5	329.5-335.5: Massive Sulphides - pyrr hotite, chalcocite, galena, minor chalc.	332.5	4.5	3156	330
335.5 Contact Gradational.	335.5-354.5: Weak banded sulphides sphalerite, pyrite, minor chalc.	337.5	5.0(6)	3157	335
QUARTZITE: 335.5-354.5: light medium grey.		339	1.5(6)		
	FOLIATION: 340-380: 20°		80(6)	3158	340
348.75		347		3159	345
			70(6)		
354.5	354.5-452: Massive sulphides - main- ly pyrite with galena and sphalerite - siliceous in places.	354	6.8	3160	350
358.75				3161	355

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTCUBIC BLOCKS	% RECOVERY	SAM- NO
358.75		-361		
368.75			4.8	316
		-367		316
378.75			4.0	
		-372	4.0(e)	316
388.75			7.5	
		-384	7.3	316
398.75				
		-392	7.0(e)	316
408.75				
		-399	7.5(e)	316
418.75				
		-406.5		316
428.75				
		-416	9.5(e)	316
428.75				
		-427	11.0(e)	316

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE NO.	INT. FROM
428.75					
		434	7.04	3176	430
438.75			8.3	3177	435
		443 446	3.00	3178 3179	440 445
448.75			5.00		
		451 456	5.00	3180	450
458.75			5.50	3181	455
		461.5		3182	460

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

PROPERTY NAME FARO ZONE N^o 1

LOCATION Rose Creek, Yukon

DATE DRILLED June 26 - July 8, 1966

SCALE OF LOG 1" = 40' LOGGED BY J.F. DATE July 21, 1966

Ove Zone: 1" = 10'

HOLE NO. 66-35 DEPTH 486'

COLLAR ELEVATION 4178.85 CORE SIZE N.Q.

BEARING _____ (MAG OR TRUE DIP 90°)

CO-ORDINATES 10,095.84 N. 14,099.59 E.

SURFACE OR UNDERGROUND _____

TOTAL RECOVERY 93.0%

Ove Zone: 98.5%

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	RECOVERY %	SAMPLE	
				NO.	F
0					
40					
46					
QUARTZ DIORITE - Altered - greenish grey - brown.			1.3		
52 TRACONE BIT: 52-102.		47 49 52	0.7 1.5		
80					
	FOLIATION: 80-120: 25° 80-120: Slight crenulations				
102 SERICITE SCHIST: 102-126.5 - light grey - quartzitic in places.		102 108 115 118	1.9 0.8 0.0		
120					
126.5	FOLIATION: 120-160: 20°-40° 120-160: Slight to moderate crenulations. 126: Possible slip - 60° 126.5-128.5: Bx. ore qtz. fragments cemented with sulphides. 128-131: Disseminated sulphides	127	4.2	3205	12
128.5 SERICITE SCHIST - Brecciated 131.0 light grey. QUARTZITE - medium grey.	131-140.5: Banded sulphides - some magnetite. Possible slip - 133.5' - 60°		11.0 (c)	3206	13
133.75					
140.5	139: Broken core.	138		3207	13
ALTERED SERICITE SCHIST: 140.5-146 light grey			10.0 (c)	3208	14
143.75					
146.	144.5-146: Broken core. 146-149: Massive pyrrhotite & some pyrite				
				3209	14
149 CHLORITIC SERICITE SCHIST: 149-158 light grey - eyes of chlorite and biotite - quartzitic with some	151.5-152.5: Broken core.	148	3.6		
153.75 snowball garnets - Alteration to 152		152 153.5	1.2	3210	15

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE
				No.
153.75				
SERICITE SCHIST: 158-186.5: eyes of chlorite and biotite - med. grey 171-174: quartzitic with snow-ball garnets. - eyes of quartz throughout.	FOLIATION: 160-200: 30°-40° 160-200: Slight to moderate crenulations - crenulations stronger in the quartzitic banded ore - minor drag folding.	155 163 171 174	1.5 (6) 8.0 (6) 8.0 (6) 2.5	3211
186.5	173-194: Broken core.	183.5	9.5 (6)	
GRAPHITIC QUARTZITE - dark grey	186.5-200.7: Banded sulphides	187	3.2 3.0 (6)	3212
192.25		190 191.5	1.2	
QUARTZITE: 194.5-200.7: med. grey			8.5 (6)	3213 3214
200.7	FOLIATION: 200-240: 45°-60°	200		
202.25 SERICITIC QUARTZ SCHIST 200.7-214.5: light grey.			6.0 (6)	3215
212.25	205.8: Possible fault - 70° - gouge, bx ⁿ 210.5: Possible fault - gouge.	206	7.0 (6)	3216
214.50	214.5-224.5: Banded sulphides.	213		3217
QUARTZITE: 214.5-224.5: med. grey.	215.5: Possible slip - 70° 216.0: Possible slip - 70° 217-219: Possible FAULT ZONE - gouge, broken core.		8.0 (6)	3218
222.25	221.5-224.5: FAULT - slicken sides - unable to get proper attitude.	221	2.0 (6)	
224.50	224.5-228: Banded sulphides - bands of sphalerite & pyrite with some galena.	223	4.4	3219
228.0	228-284: Massive Sulphides - pyrite, sphalerite and galena.	228	4.5 (6)	3220
232.25				3221
	234.5-241.5: Broken core.	232.5 236 239	3.5 (6) 2.0 (6)	3222
242.25			8.8	3223

ANVIL MINING CORPORATION LIMITED Whitehorse, Yukon
 PROPERTY NAME FARO ZONE N^o 1..... HOLE NO. 66-35

SCALE OF LOG 1" = 40'
 Ore Zone: 1" = 10'

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE	
				NO.	F
389.75					
391	391-396: Massive sulphides	393		3251	3
396	396-404.8: Banded sulphides.		10.5%	3252	3
399.75					
404.8		403.5		3253	4
QUARTZITE: 396-404.8: med. grey.			10.0%	3254	4
409.75	QUARTZITIC SERICITE SCHIST: 404.8-486: med. grey - clots of biotite with some snow ball garnets.				
433	FOLIATION: 410-450: where measurable. 40° 410-450: Strong crenulations	413.5	9.5%	3255	4
	430.6-433: FAULT ZONE - broken core - some gouge.	423	10.0%		
		433			
	448: Slip - 45° slickensides. 450-480: Strong crenulations.	443	10.0%		
		453	4.5		
		458	2.2		
		460	10.0%		
473.		470			
	473-486: FAULT ZONE - broken core, slickensides, gouge, b x #	476	6.0%		
		480	4.0%		
			5.2		
486 - END OF HOLE.					

ANVIL MINING CORPORATION LIMITED

Whitehorse, Yukon

PROPERTY NAME FARO ZONE N# 1

LOCATION Rose Creek, Yukon

DATE DRILLED July 23 - Aug 1, 1966

SCALE OF LOG 1" = 40' LOGGED BY J.F. DATE Aug 20, 1966

Ore Zone: 1" = 10'

HOLE NO. 66-44 DEPTH 600'

COLLAR ELEVATION 4,298.61 CORE SIZE NQ

BEARING (MAG OR TRUE DIP 90°)

CO-ORDINATES 10,502.10 N. 13,100.91 E.

SURFACE OR UNDERGROUND

TOTAL RECOVERY 97.8%

Ore Zone: 96.5%

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE NO.	INTER FROM
0 OVERBURDEN: 0-61:					
40					
61					
71					
80 SERICITIC QUARTZ SCHIST: 71-206.3: light to med grey-clots of brown biotite - some chlorite associated with the biotite - minor pyrite along foliations and in fractures. Small qz veins containing pink mineral.	FOLIATION: 70-110: 40° 70-110: Slight crenulations. 71.3-75: FAULT ZONE - broken core gouge, bx.	72 83 93 103 113 118	1.8 8.7 100% 10.0% 10.0% 4.8 6.0%		
120					
160	124.8-126.8: Broken core. FOLIATION: 150-190: 50-60° 150-190: Moderate to strong crenulations.	124 126 131 141 150 160	2.0% 4.9 10.0% 9.0% 10.0%		
196	181-184.3: FAULT - near vertical, gouge. FOLIATION: 190-230: 60° where obtainable 190-230: Strong crenulations.	176.5 181 183 193 196	9.9 4.5% 7.4 5.0% 3.0%		
206	191.5-193: Broken core. 200.3: FAULT - 70°, gouge, slickensides. 203-205: FAULT ZONE - broken core gouge.		6.5% 9.9 4.5% 7.4 5.0% 3.0% 10.0%	3470	195
				3471	200
		206			

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE NO.	INTER FROM
206					
211.2 SERICITE SCHIST - altered.	206.3-211.2: Massive sulphides - pyrrhotite, sphalerite and galena.		7.0%	3472	205
214.9 216	212.5-218: FAULT ZONE - broken core gouge, some slickensides	213		3473	210
216			5.0%		
QUARTZITE: 214.9-249.3: light grey-sericitic in places.	216-249.3: Siliceous sulphides - sphalerite, galena and pyrite 216-236: Disseminated 236-249.3: Banded.	218		3474	215
226	222.5-230.5: FAULT ZONE - broken core breccia, gouge, slickensides	226	8.0%	3475	220
				3476	225
236		236	10.0%	3477	230
				3478	235
246		236.5	2.5%	3479	240
			10.0%		
249.3 Contact = 40°	249.3-326.5: Massive Sulphides sphalerite, galena, pyrite between 249.3-314.3.	248.5		3480	245
256	314.3-326.5: Massive pyrrhotite with sphalerite and galena. - minor chalc.	253.5	4.5%	3481	250
			5.0%		
266	250-289: Brecciated sulphides - sulphide fragments cemented with sulphides	258.5		3482	255
			8.2%	3483	260
276	267.8-269.3: FAULT ZONE - gouge, broken core.	267		3484	265
			4.2%		
		273		3485	270
			4.0%		

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	INTERVAL	
				SAMPLE NO.	FROM TO
276		-277			
	△ △ △ △ △ △	-281	2.7	3486	275 280
286			8.0(6)	3487	280 285
	△ △ △ △	-289		3488	285 290
296		-295	6.0(6)	3489	290 295
			5.5(6)	3490	295 300
306		-300.5		3491	300 305
			11.5(6)	3492	305 310
316	312-316: FAULT ZONE - gouge, broken core - brecciated sulphide frags. cemented with sulphides.	-312	5.2	3493	310 315
		-317.5		3494	315 320
			10.0(6)	3495	320 325
326					
326.5 ALTERED QUARTZ DIORITE :326.5-337: white → butt.		-327.5		3496	325 330
			10.0(6)	3497	330 335
336					
337 QUARTZITE: 337-353: medium grey - being replaced by sulphides.	337-353: Siliceous sulphides - banded pyrite with minor sphalerite and galena.	-337.5		3498	335 340
			5.5(6)		
346		-343		3499	340 345
			9.0		

WIL MINING CORPORATION Limited Whitehorse, Yukon

PROPERTY NAME ..F.A.R.O..Z.O.N.E...N^o.1... HOLE NO.66-44

SCALE OF LOG 1" = 40'
Over Zone: 1" = 10'

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE NO.	INTER FROM
416				4793	415
			10.4	4794	420
426					
		427-428.5	1.5	4795	425
			9.0(6)	4796	430
436					
		437.5		4797	435
			9.4	4798	440
446					
		447		4799	445
			10.0(6)	4800	450
456					
459.3		457		0996	455
QUARTZITE: 459.3-469.3: medium grey - being replaced by sulphides - sericitic between 466-469.	459.3-469.3: Siliceous sulphides, galena, sphalerite & pyrite some marcasite (?)	461	3.9	0997	460
466	469.3-474: Massive sulphides from 469.3-472.8 - pyrrhotite minor sphalerite, galena and chalc. 472.8-474: Magnetite.	467	6.0(6)	0998	465
469.3	FOLIATION: 470-510: 10° 470-510: Slight to moderate crenulations.		8.8	0999	470
474					
476 SERICITIC QUARTZ SCHIST	475.5-480: FAULT ZONE - near vertical, broken core, gouge slicken sides	476			
474-600: light grey - the odd band of biotite - some chlorite - sporadic garnet. 525.3-527: Qtz vein - Pink mineral. 529.3-530.5: Qtz vein - Pink mineral.		480	4.0(6)	1000	475
490	483.5-486: FAULT - near vertical, gouge, broken core. 487.5-488.5: FAULT - gouge, broken core, bx.	489	9.0(6)	3300	480

ROCK TYPES AND ALTERATION	MINERALIZATION AND STRUCTURES	FOOTAGE BLOCKS	% RECOVERY	SAMPLE INTERVAL	
				NO.	FROM
490 Small Fe_3O_4 veins throughout this section containing pink mineral(?) - less than 1" wide.	496.5: FAULT - 60°, gouge. 507.5: FAULT - 25°, gouge, broken core. FOLIATION: 510-550: 10° where obtainable. 510-550: slight to strong crenulation.	495 501 510 520 530	5.7 6.0(6) 9.0(6) 10.0(6) 10.0(6)		
530					
570	FOLIATION: 550-590: 10°-15° where obtainable. 550-590: strong crenulations. 557.8-560.5: FAULT gouge, bx, broken core. 569.5: FAULT - 70°, gouge.	540 550.5 560.5	10.0(6) 10.5(6) 10.0 10.5(6)		
600	586.7-587.7: FAULT - gouge, broken core.	571 581.5 592 600	10.4 10.5(6) 8.0(6)		
END OF HOLE: 600'					

CROSS-SECTIONS - LARGE OBE BODY - NW. OF DIKE ZONE

NWS

WSB

WL

STATION	TONS		% Pb		% Zn		TONS		% Pb		% Zn		TONS		% Pb		% Zn	
	TONS	% Pb	% Zn	TONS	% Pb	% Zn	TONS	% Pb	% Zn	TONS	% Pb	% Zn	TONS	% Pb	% Zn	TONS	% Pb	% Zn
106	251,462 ✓	3.88 ✓	7.53 ✓	976,380 ✓	1,892,870 ✓	115,218 ✓	2.93 ✓	5.75 ✓	337,707 ✓	662,475 ✓	11,268 ✓	2.93 ✓	9.49 ✓	33,015 ✓	106,733 ✓	106		
107	422,956 ✓	3.29 ✓	5.61 ✓	1,390,707 ✓	2,373,821 ✓	135,418 ✓	2.43 ✓	5.14 ✓	329,150 ✓	696,386 ✓	—	—	—	—	—	107		
108	588,199 ✓	3.50 ✓	6.48 ✓	2,060,319 ✓	3,576,683 ✓	155,677 ✓	2.46 ✓	5.03 ✓	382,375 ✓	783,554 ✓	—	—	—	—	—	108		
109	506,755 ✓	2.67 ✓	5.54 ✓	1,353,878 ✓	2,808,316 ✓	20,592 ✓	1.91 ✓	3.69 ✓	39,366 ✓	76,064 ✓	19,898 ✓	3.90 ✓	1.23 ✓	77,602 ✓	24,474 ✓	109		
110	823,353 ✓	3.63 ✓	5.85 ✓	2,786,344 ✓	4,830,378 ✓	152,621 ✓	4.01 ✓	6.10 ✓	612,053 ✓	930,993 ✓	—	—	—	—	—	110		
111	1,670,076 ✓	3.81 ✓	6.18 ✓	6,371,149 ✓	10,319,715 ✓	127,770 ✓	3.53 ✓	6.17 ✓	451,242 ✓	790,502 ✓	—	—	—	—	—	111		
112	2,026,344 ✓	3.73 ✓	5.91 ✓	7,559,365 ✓	11,972,363 ✓	182,549 ✓	3.65 ✓	6.28 ✓	666,054 ✓	1,146,046 ✓	11,551 ✓	2.60 ✓	5.00 ✓	30,033 ✓	57,755 ✓	112		
113	1,889,835 ✓	3.64 ✓	5.72 ✓	6,877,755 ✓	10,813,807 ✓	214,745 ✓	3.51 ✓	5.82 ✓	754,374 ✓	1,250,538 ✓	98,204 ✓	3.91 ✓	6.07 ✓	383,563 ✓	597,923 ✓	113		
114	2,662,771 ✓	3.18 ✓	5.10 ✓	8,460,193 ✓	13,585,022 ✓	501,591 ✓	3.39 ✓	7.05 ✓	1,701,535 ✓	3,534,573 ✓	85,654 ✓	1.83 ✓	3.94 ✓	156,589 ✓	337,105 ✓	114		
115	2,625,360 ✓	3.49 ✓	5.70 ✓	9,176,912 ✓	14,957,784 ✓	459,549 ✓	3.29 ✓	7.16 ✓	1,514,025 ✓	3,288,157 ✓	51,512 ✓	2.52 ✓	5.70 ✓	129,745 ✓	293,672 ✓	115		
116	2,181,174 ✓	3.20 ✓	5.73 ✓	6,997,674 ✓	12,522,957 ✓	163,511 ✓	2.33 ✓	5.54 ✓	321,778 ✓	926,202 ✓	53,955 ✓	2.21 ✓	4.76 ✓	119,137 ✓	256,650 ✓	116		
	15,653,285 ✓	3.46 ✓	5.73 ✓	54,210,876 ✓	89,643,918 ✓	2,229,241 ✓	3.22 ✓	6.31 ✓	7,169,637 ✓	14,065,510 ✓	332,050 ✓	2.70 ✓	5.04 ✓	929,684 ✓	1,674,512 ✓			

C.U.VDS

106	79,829 ✓
107	134,272 ✓
108	186,729 ✓
109	160,675 ✓
110	261,382 ✓
111	530,182 ✓
112	643,281 ✓
113	599,948 ✓
114	845,325 ✓
115	833,448 ✓
116	674,024 ✓
	4,969,295 ✓

C.U.VDS

106	36,577 ✓
107	42,989 ✓
108	49,421 ✓
109	6,537 ✓
110	48,451 ✓
111	40,562 ✓
112	57,952 ✓
113	68,173 ✓
114	159,235 ✓
115	145,889 ✓
116	51,908 ✓
	707,694 ✓

C.U.VDS

106	3,577 ✓
107	—
108	—
109	6,317 ✓
110	—
111	—
112	3,667 ✓
113	31,176 ✓
114	27,191 ✓
115	16,353 ✓
116	17,132 ✓
	105,413 ✓

III

III

III

CROSS SECTIONS - LARGE ORE BODY - SE OF DIKE ZONE

ELEVATION	JES						ESB						EL						
	TONS	% Pb	% Zn	TONS x % Pb	TONS x % Zn		TONS	% Pb	% Zn	TONS x % Pb	TONS x % Zn		TONS	% Pb	% Zn	TONS x % Pb	TONS x % Zn		
118	4,079,378	3.26	5.43	13,307,379	22,165,293		904,988	2.40	4.95	2,174,239	4,476,418		181,644	2.49	5.17	451,963	939,263		118
120	2,649,517	3.57	5.05	9,450,358	13,371,160		1,521,895	2.79	5.46	4,249,074	8,308,344		37,753	3.99	4.10	150,634	154,787		120
122	3,494,475	3.05	4.63	10,649,072	16,190,874		290,594	3.24	6.25	941,336	1,815,610		267,277	3.05	3.29	816,444	880,299		122
124	2,498,086	2.99	4.95	7,471,145	12,367,781		453,278	2.50	5.75	1,132,430	2,608,054		361,703	1.89	4.63	683,390	1,677,250		124
126	3,589,409	2.60	4.51	9,343,461	16,176,573		714,041	3.39	5.48	2,418,546	3,914,777		245,385	28.2	3.81	691,986	934,917		126
128	1,575,823	2.51	5.45	4,013,242	8,692,684	1,203,192	3.30	6.86	3,973,045	8,250,154		143,549	1.50	5.87	215,323	842,633		128	
130	946,556	2.52	4.81	2,384,464	4,554,639	563,100	2.16	4.74	1,215,465	2,781,735		146,322	3.27	4.15	479,008	607,147		130	
132	497,883	3.50	5.69	1,740,129	2,835,399														132
	19,351,127	3.02	4.98	58,359,250	96,378,603	5,651,088	2.85	5.69	16,104,135	32,155,474		1,383,853	2.52	4.36	3,488,748	6,036,296			

CU. YDS

118	1,295,040
120	841,116
122	1,109,357
124	793,043
126	1,139,494
128	506,610
130	300,494
132	158,058
	<u>6,143,212</u>

IV

CU. YDS

118	287,298
120	483,141
122	92,252
124	143,898
126	226,680
128	381,966
130	178,762
132	
	<u>1,793,997</u>

IV

CU. YDS

118	57,665
120	11,985
122	84,856
124	114,890
126	77,900
128	45,571
130	46,451
132	
	<u>439,318</u>

IV

SECTION NO.

ORE "LOST" IN DIKE ZONE

SECTION NO.	MATERIAL BLOCK	MEASUREMENT	x 2500 AREA: SQ. FT.	(X INFLU)	VOL: CU. FT.	: 27	VOL: CU. YDS.	T. FACTO.	SHORT TONS
19	19NW-1	2.07 - 4.19 - 2.095	5,237 ✓	(120.71)	4.471 ✓		23,415 ✓	3.15	
20	20NW-1	5.40 - 10.82 - 5.41	13,525 ✓	(141.42)	5.238		70,844 ✓		
	20SE-1	1.91 - 3.90 - 1.95	4,875 ✓	(141.42)	5.238		25,535 ✓		
22	22SE-1	7.43 - 14.72 - 7.46	18,650 ✓	(353.55)	13,094 ✓		244,203 ✓		
24	24NW-1	5.80 - 11.65 - 5.825	14,562 ✓	(282.84)	10,476		152,552 ✓		
	24SE-1	10.88 - 21.79 - 10.88	27,237 ✓	(282.84)	10,476		285,335 ✓		
26	26NW-1	98 x 229	22,442 ✓	(212.13)	7.857		176,327 ✓		
	26SE-1	0.77 - 1.54 - 0.77	1,725 ✓	(212.13)	7.857		15,125 ✓		
	26SE-2	2.48 - 4.96 - 2.48	6,200 ✓	(212.13)	7.857		48,713 ✓		
27	27SE-1	1.12 - 2.20 - 1.10	2,750 ✓	(120.71)	4.471		12,295 ✓		
							1,054,344 ✓	x 3.15	= 3,321,184 ✓
			(V)				(V)		

VI

ORE RESERVE IN THE L-K- ULTIMATE PIT

LARGE ORE BODY

NW SECTOR

		TONS	% Pb	% Zn	TONS x % Pb	TONS x % Zn		
1	(NWS) BY CROSS SECTIONS	15,653,285 ✓	3.46 ✓	5.73 ✓	54,210,876 ✓	89,643,918 ✓	BY CROSS-SECTION	
2	NWS							
3	(NWS) BY LONG SECTIONS	15,245,076 ✓	3.48 ✓	5.80 ✓	52,983,540 ✓	88,402,461 ✓	NWS	15,653,285 ✓
4							SES	19,351,127 ✓
5		30,898,361			107,194,416	178,046,379		35,004,412 ✓
6	÷ 2 =							
7		15,447,180	3.47 ✓	5.76 ✓	53,597,208	89,023,189	TAKE BY LONG. SECTIONS	
8								
9								
10								
11								
12								
13								
14	(SES) BY CROSS SECTIONS	19,351,127 ✓	3.02 ✓	4.98 ✓	58,359,250 ✓	96,378,603 ✓	15,245,076	
15	SES BY LONG. SECTIONS	19,032,207 ✓	3.02 ✓	5.02 ✓	57,486,806 ✓	95,591,638 ✓	19,032,207	
16								
17		38,383,334			115,846,056	191,970,241 ✓	34,277,283	
18	÷ 2 =						GRADE	
19		19,191,667 ✓	3.02 ✓	5.00 ✓	57,923,028	95,985,120 ✓	LONG. SECTIONS	
20								
21								
22								
23								
24	NWS	15,447,180 ✓	3.47 ✓	5.76 ✓	53,597,208 ✓	89,023,189 ✓	Pb- 52,983,540 ✓	
25							57,486,806 ✓	
26	SES	19,191,667 ✓	3.02 ✓	5.00 ✓	57,923,028 ✓	95,985,120 ✓	110,470,346 = 3.22 % Pb	
27								
28		34,640,847 ✓	3.22 ✓	5.34 ✓	111,520,236 ✓	185,008,309 ✓	Zn 88,402,461 ✓	
29							95,591,638 ✓	
30	ANVIL ENG. DEPT.	(32,368,793)	(3.4)	(5.7)			183,994,099 = 5.37	
31								
32								
33								
34								
35								

BY CROSS-SECTIONS

NWS	15,653,285 ✓	3.46 ✓	5.73 ✓	54,210,876	89,643,918	
SES	19,351,127 ✓	3.02 ✓	4.98 ✓	58,359,250 ✓	96,378,603 ✓	
	35,004,412 ✓	3.22	5.31	112,570,126 ✓	186,022,521 ✓	35.0

BY LONG. SECTIONS

NWS	15,245,076 ✓	3.48 ✓	5.80 ✓	52,983,540	88,402,461	
SES	19,032,207 ✓	3.02 ✓	5.02 ✓	57,486,806 ✓	95,591,638 ✓	
	34,277,283 ✓	3.22 ✓	5.37	110,470,346 ✓	183,994,099 ✓	→ TAKE 34.3

VI

ORE BELOW AND OUTSIDE OF L.V. ULTIMATE PIT
LARGE OPI BODY

(VII)

NW. SECTOR

1	2	3	4	5	6	7	8	9	10
	TONS	% Pb	% Zn	TONS x % Pb	TONS x % Zn				
1	WSB BY CROSS-SECTIONS	2,229,241 ✓	3.22 ✓	6.31 ✓	7,169,639 ✓	14,065,510 ✓			
3	WSB BY LONG-SECTIONS	1,663,075 ✓	3.30 ✓	6.45 ✓	5,480,686 ✓	10,721,069 ✓			
4		3,892,316			12,650,325	24,786,579			
5	÷ 2 =	1,946,158 ✓	3.25 ✓	6.37 ✓	6,325,162 ✓	12,393,289 ✓			

SE SECTOR

10	ESB BY CROSS-SECTIONS	5,651,088	2.85	5.69	16,104,135	32,155,494			
11	ESB BY LONG-SECTIONS	5,973,363	2.74	5.50	16,435,223	32,947,683			
12		11,644,451			32,539,358	65,103,177			
13	÷ 2 =	5,822,225 ✓	2.79 ✓	5.59 ✓	16,269,679 ✓	32,551,885 ✓			

COMBINED (NW & SE SECTORS AVERAGE)

20	WSB	1,946,158 ✓	3.25	6.37	6,325,162	12,393,289			
21	+								
22	ESB	5,822,225 ✓	2.79	5.59	16,269,679	31,050,396			
23		7,768,383 ✓	2.91	5.59	22,594,841 ✓	43,443,685 ✓			7.7

BY CROSS-SECTIONS

7	WSB	2,229,241 ✓	3.22 ✓	6.31 ✓	7,169,639 ✓	14,065,510 ✓			
8	ESB	5,651,088 ✓	2.85 ✓	5.69 ✓	16,104,135 ✓	32,155,494 ✓			
9		7,880,329 ✓	2.75 ✓	5.87 ✓	23,273,774 ✓	46,221,004 ✓			7.7

BY LONG-SECTIONS

2	WSB	1,663,075 ✓	3.30 ✓	6.45 ✓	5,480,686 ✓	10,721,069 ✓			
3	ESB	5,973,363 ✓	2.74 ✓	5.50 ✓	16,435,223 ✓	32,947,683 ✓			7.7
4		7,656,438 ✓	2.86	5.70	21,915,909 ✓	43,668,752 ✓			TAKE

(VII)

X

X

ORE "DILUTED OUT" BY MIXTURE WITH WASTE

WITHIN L.K. ULTIMATE PIT

LARGE ORE BODY

NEW SECTOR

	TONS	% Pb	% Zn	% Pb x TONS	% Zn x TONS	
BY CROSS-SECTIONS	332,150 ✓	2.80 ✓	5.04 ✓	929,684 ✓	1,674,512 ✓	
BY LONG-SECTIONS	208,340 ✓	2.35 ✓	4.78 ✓	488,637 ✓	995,897 ✓	
	<u>540,390 ✓</u>			<u>1,418,321 ✓</u>	<u>2,670,409 ✓</u>	
÷ 2 =	270,195 ✓	2.62 ✓	4.94 ✓	709,160 ✓	1,335,204 ✓	

JE SECTOR

BY CROSS-SECTIONS	1,383,853 ✓	2.52 ✓	4.36 ✓	3,488,748 ✓	6,036,296 ✓	
BY LONG-SECTIONS	1,445,662 ✓	2.28 ✓	4.39 ✓	3,303,012 ✓	6,341,456 ✓	
	<u>2,829,515 ✓</u>			<u>6,791,760 ✓</u>	<u>12,377,752 ✓</u>	
	1,414,757 ✓	2.40 ✓	4.37 ✓	3,395,880 ✓	6,188,876 ✓	

NE & SW SECTORS COMBINED

WL	270,195 ✓	2.62 ✓	4.94 ✓	709,160 ✓	1,335,204 ✓	
EL	1,414,757 ✓	2.40 ✓	4.37 ✓	3,395,880 ✓	6,188,876 ✓	
	<u>1,684,952 ✓</u>	2.44	4.47	<u>4,105,040 ✓</u>	<u>7,524,080 ✓</u>	1.7

BY CROSS-SECTIONS

EL	1,383,853 ✓	2.52 ✓	4.36 ✓	3,488,748 ✓	6,036,296 ✓	
WL	332,050 ✓	2.80 ✓	5.04 ✓	929,684 ✓	1,674,512 ✓	
	<u>1,715,903 ✓</u>	2.57 ✓	4.49 ✓	<u>4,418,432 ✓</u>	<u>7,710,808 ✓</u>	1.7

BY LONG SECTIONS

WL	208,340 ✓	2.35 ✓	4.78 ✓	488,637 ✓	995,897 ✓	
EL	1,445,662 ✓	2.28 ✓	4.39 ✓	3,303,012 ✓	6,341,456 ✓	1.7
	<u>1,654,002 ✓</u>	2.29 ✓	4.44 ✓	<u>3,791,649 ✓</u>	<u>7,337,353 ✓</u>	TAKE

VIII

VIII

THE SMALL ORE BODY

IX

MATERIAL	SECTIONS	CU. YDS	TONS	% Pb	% Zn	TONS x % Pb	TONS x % Zn
S	N-	1,196,853 ✓	3,770,087 ✓	3.38 ✓	4.93 ✓	12,728,916 ✓	18,580,889 ✓
	E-	1,002,476 ✓	3,157,797 ✓	3.44 ✓	5.03 ✓	10,913,273 ✓	15,871,160 ✓
		2,199,329 ✓	6,927,884 ✓			23,642,189 ✓	34,472,049 ✓
	÷ 2	1,099,664 ✓	3,463,942 ✓	3.41 ✓	4.98 ✓	11,821,094 ✓	17,236,024 ✓
B	N	152,362 ✓	479,941 ✓	2.65 ✓	4.61 ✓	1,269,945 ✓	2,210,802 ✓
	E	217,349 ✓	684,652 ✓	2.83 ✓	4.61 ✓	1,938,844 ✓	3,158,526 ✓
		369,711 ✓	1,164,593 ✓			3,208,789 ✓	5,369,328 ✓
	÷ 2	184,855 ✓	582,296 ✓	2.76 ✓	4.61 ✓	1,604,394 ✓	2,684,664 ✓
<u>THE SMALL GEOLOGIC ORE BODY</u>							
S + B		1,099,664 ✓	3,463,942 ✓	3.41 ✓	4.98 ✓	11,821,094 ✓	17,236,024 ✓
		184,855 ✓	582,296 ✓	2.76 ✓	4.61 ✓	1,604,394 ✓	2,684,664 ✓
		1,284,519 ✓	4,046,238 ✓	3.32 ✓	4.92 ✓	13,425,488 ✓	19,920,688 ✓

IX

E-W-SECTIONS - SMALL ORE BODY

(X)

S

114A 1 2 3 4 5 6 7 8 9 10 11

SECTION RUN E-W	CU. YDS	TONS	% Pb	% Zn	TONS % Pb	TONS % Zn
N-8	16,001 ✓	50,403 ✓	4.50 ✓	6.20 ✓	226,813 ✓	312,499 ✓
N-10	184,266 ✓	580,438 ✓	3.93 ✓	5.23 ✓	2,282,573 ✓	3,035,186 ✓
N-12	331,076 ✓	1,042,887 ✓	3.26 ✓	4.79 ✓	3,397,406 ✓	4,995,462 ✓
N-14	232,672 ✓	732,982 ✓	3.09 ✓	5.40 ✓	2,262,531 ✓	3,955,906 ✓
N-16	222,491 ✓	700,847 ✓	3.60 ✓	4.57 ✓	2,524,139 ✓	3,205,621 ✓
N-18	182,731 ✓	575,602 ✓	3.20 ✓	4.52 ✓	1,719,366 ✓	2,602,467 ✓
N-20	27,596 ✓	86,928 ✓	3.64 ✓	5.45 ✓	316,088 ✓	473,748 ✓
	<u>1,196,853 ✓</u>	<u>3,770,087 ✓</u>	<u>3.38 ✓</u>	<u>4.93 ✓</u>	<u>12,728,916 ✓</u>	<u>18,580,889 ✓</u>

B

N-8	— ✓	—	—	—	—	—
N-10	43,553 ✓	137,193 ✓	2.10 ✓	4.07 ✓	288,239 ✓	559,063 ✓
N-12	29,613 ✓	93,281 ✓	2.32 ✓	5.10 ✓	216,408 ✓	475,679 ✓
N-14	53,641 ✓	168,969 ✓	3.06 ✓	4.98 ✓	517,647 ✓	840,742 ✓
N-16	15,665 ✓	49,345 ✓	2.84 ✓	4.11 ✓	140,226 ✓	202,794 ✓
N-18	2,667 ✓	8,401 ✓	4.50 ✓	5.70 ✓	37,804 ✓	47,886 ✓

(X)

N-20	7,223 ✓	23,752 ✓	3.06 ✓	3.72 ✓	69,621 ✓	84,638 ✓
	<u>152,362 ✓</u>	<u>479,941 ✓</u>	<u>2.65 ✓</u>	<u>4.61 ✓</u>	<u>1,269,945 ✓</u>	<u>2,210,802 ✓</u>

N-S SECTIONS - SMALL DRIF BODY

(XI)

3 7114A

JONES

SECTION	CU. YDS	TENS	% PD	% Zn	TONS x % PD	TONS x % Zn		
			<u>S</u>					
E-6	108,482 ✓	341,719 ✓	2.54 ✓	4.83 ✓	869,646 ✓	1,651,750 ✓		
E-8	150,274 ✓	473,363 ✓	3.78 ✓	5.34 ✓	1,789,338 ✓	2,529,408 ✓		
E-10	220,322 ✓	694,014 ✓	3.58 ✓	5.59 ✓	2,482,494 ✓	3,882,407 ✓		
E-12	166,783 ✓	525,366 ✓	3.76 ✓	5.14 ✓	1,977,306 ✓	2,701,438 ✓		
E-14	206,435 ✓	650,270 ✓	3.86 ✓	3.76 ✓	2,511,689 ✓	2,445,517 ✓		
E-16	54,011 ✓	170,135 ✓	2.67 ✓	5.14 ✓	454,463 ✓	874,057 ✓		
E-18	96,169 ✓	302,930 ✓	2.73 ✓	5.96 ✓	828,337 ✓	1,806,583 ✓		
	1,002,476 ✓	3,157,797 ✓	3.46 ✓	5.03 ✓	10,913,273 ✓	15,891,160 ✓		

SECTION	CU. YDS	TENS	% PD	% Zn	TONS x % PD	TONS x % Zn		
			<u>B</u>					
E-6	21,362 ✓	67,291 ✓	2.86 ✓	5.19 ✓	192,792 ✓	349,419 ✓		
E-8	65,612 ✓	206,679 ✓	3.15 ✓	4.75 ✓	650,700 ✓	981,270 ✓		
E-10	32,347 ✓	101,894 ✓	3.29 ✓	5.17 ✓	335,173 ✓	526,530 ✓		
E-12	16,148 ✓	50,866 ✓	3.09 ✓	4.46 ✓	157,285 ✓	226,621 ✓		
E-14	29,325 ✓	92,374 ✓	2.66 ✓	3.93 ✓	246,178 ✓	363,481 ✓		
E-16	41,332 ✓	130,196 ✓	2.7 ✓	4.17 ✓	269,841 ✓	543,367 ✓		
E-18	11,223 ✓	35,352 ✓	2.46 ✓	4.75 ✓	86,875 ✓	167,835 ✓		
	217,349 ✓	684,652 ✓	2.83 ✓	4.61 ✓	1,938,844 ✓	3,158,526 ✓		

(XI)

