

REPORT

on

URN BARITE PROPERTY

NTS 105K/5,6 62°19.5'N 133°30'W

Owned By

CYPRUS ANVIL MINING CORPORATION

in the

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

CANADA

For

DOME PETROLEUM LIMITED

By

W.S.Read, B.Sc., P.Eng.

Cobble Hill, B.C.

Canada



January 1982

091369

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 3,800.

P. Watton

for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

WAYLAND S. READ, B.SC., P.ENG.
CONSULTING GEOLOGIST

AREA CODE 604-TELEPHONE 743-2279

851 CHERRY POINT ROAD, COBBLE HILL, B.C. V0R 1L0 CANADA

15 January 1982

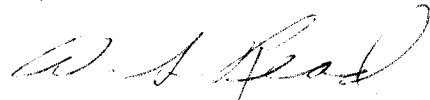
Mr. R. A. Buckley, P.Eng.,
Dome Petroleum Limited,
Box 200,
Calgary, Alberta
T2P 2H8

Dear Mr. Buckley:

Please find attached my report on the investigation of the
Urn barite property owned by Cyprus Anvil Mining Corporation, and
located near their operation at Faro, Yukon Territory.

The barite tested needs beneficiation to meet minimum
specific gravity specifications due to excessive silica content.
The metallurgists advise that they think it may be sufficiently
upgraded by a relatively inexpensive gravity method. This
testing is the next logical step in assessing the property, and
I recommend that it be started as soon as possible.

Respectfully submitted,


Wayland S. Read, P.Eng.

WSR:m

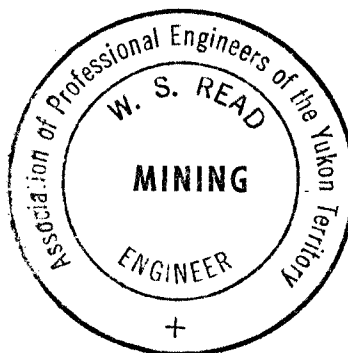


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INTRODUCTION:

This report covers the preliminary examination, sampling and testing of the Cyprus Anvil Mining Corporation Urn barite deposits, as a potential source of barite for Dome Petroleum Limited's Beaufort Sea drilling.

The writer, accompanied by an experienced two-man sample crew, examined and sampled the barite prospects covered in this report from the 14 - 16 September, 1981.

Of the ten Urn prospects referred to as the Urn 1, Urn 2, etc., only three (Urn 2, 7 and 9) were selected for immediate consideration because of access, grade and open pit potential. Of these three, the Urn 9 stands out as it is a natural quarry site and may well be mined at the lowest cost.

These are all raw prospects with no development work or detailed geology. From this preliminary examination, the Urn 9 has a partially exposed area of 60 X 25 metres, that, if projected to 30 metres deep, would contain 180,000 tonnes and a potential from one million to several million tonnes.

Sample analysis determined that the specific gravity is below the 4.20 minimum requirement for direct shipping barite. The chief impurity is silica. The metallurgist indicates, from microscopic examination of two samples, that the barite may be able to be beneficiated to acceptable weight by removing part of the silica by gravity methods.

2

DOMESTIC PETROLEUM LIMITED

(NORTHERN BARITE PROJECT)

URN MINERAL SHOWING-FARO, Y.T.

NTS 108 K/5.6

62° 19.5 N.

133° 30' W

LOCATION MAP

MILES 20 0 20 40 60 80 100

KILOMETRES 50 25 0 50 100

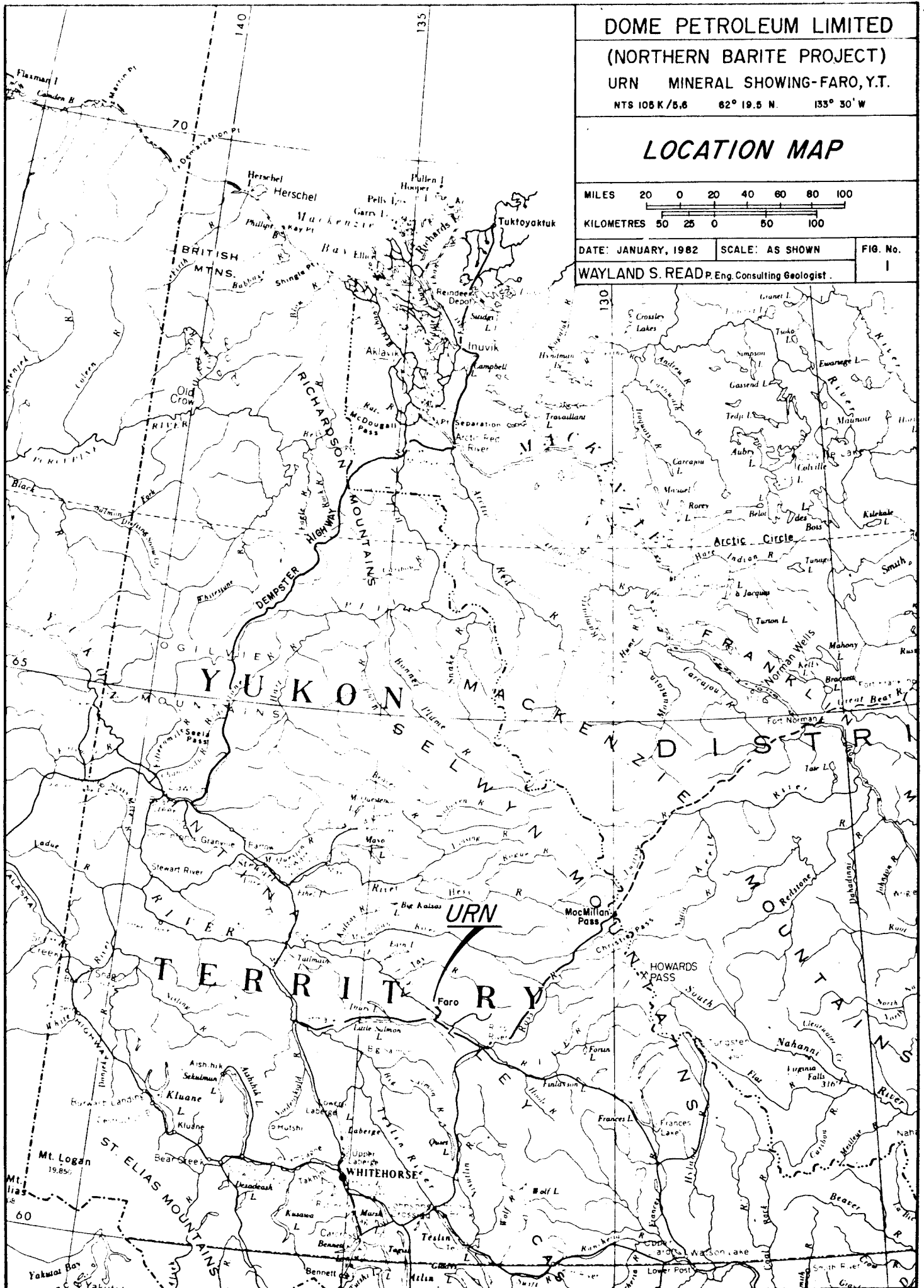
DATE: JANUARY, 1982

SCALE: AS SHOWN

FIG. No.

WAYLAND S. READ P. Eng. Consulting Geologist.

1



LOCATION:

The Urn group of claims is located north of Faro in the central Yukon Territory, Canada. It is about 6 km. west southwest from the Cyprus Anvil Mining Ltd., concentrator and open pit.

The Urn 9 prospect is situated at about latitude $62^{\circ}19.5'N$ and longitude $133^{\circ}30'W$, on map sheets 105K/5,6 of the National Topographic System. Elevation is near timberline at 4400 feet (1341 metres).

Topography varies from rolling hills to mountainous.

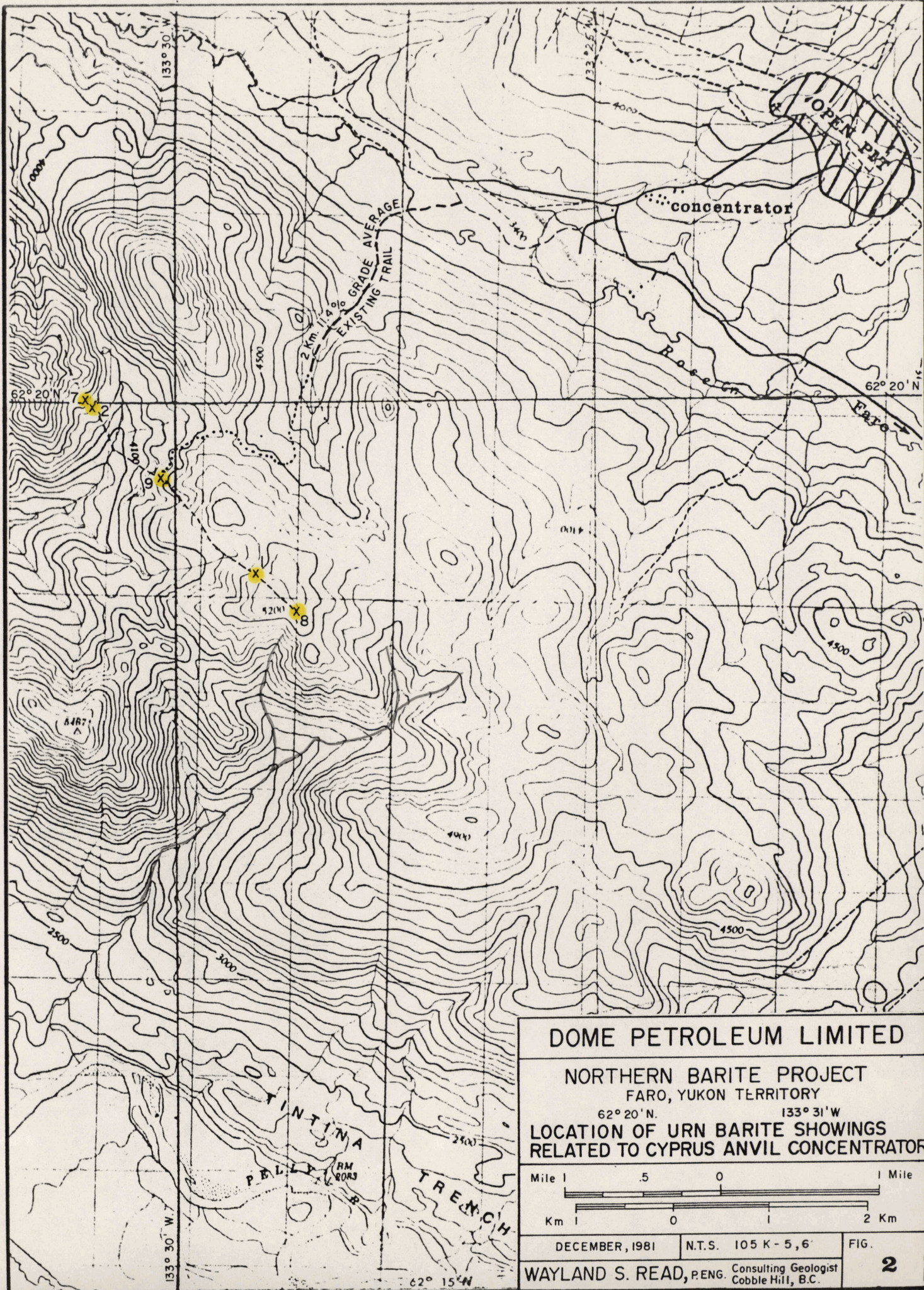
The ten barite occurrences, referred to as the Urn 1-10, trend in a southeast direction for about 9 kilometers from a point on the northeast slope of Rose Mountain.

The Urn 2, 7 and 9, dealt with in this report, are located in the southeast one-third of this trend. Emphasis is on the Urn 9 which is on a northwest facing slope of a valley draining southwest to the Pelly River some 7 km. away. The Urn 2 and 7 showings are across the valley to the northwest, a distance of about 1.1 km. from the Urn 9.

ACCESS:

Access during this investigation was by helicopter from the office site near the Faro concentrator. The Urn 9 occurrence was about 6 km. to the west southwest from the concentrator.

Part of the Cyprus Anvil expansion is the enlargement of the tailings area at Rose Creek, (elevation about 3350 feet) between the



DOME PETROLEUM LIMITED		
NORTHERN BARITE PROJECT FARO, YUKON TERRITORY 62° 20' N. 133° 31' W LOCATION OF URN BARITE SHOWINGS RELATED TO CYPRUS ANVIL CONCENTRATOR		
Mile 1 .5 0 1 Mile Km 1 0 1 2 Km		
DECEMBER, 1981	N.T.S. 105 K - 5, 6'	FIG.
WAYLAND S. READ, P.ENG. Consulting Geologist Cobble Hill, B.C.		2

concentrator and the Urn property. From this area, construction of a road of about 5 km. would give road access to the Urn 9 showing. There is an existing bulldozer trail for the first 2 km. west of Rose Creek, which, if extended, would take advantage of a pass (elevation about 4650 feet) about 1 km. northeast of the Urn 9.

The whole route would need to be checked carefully on the ground to determine the best grades and site as some wet areas, springs, drainages and permafrost were indicated by an air examination.

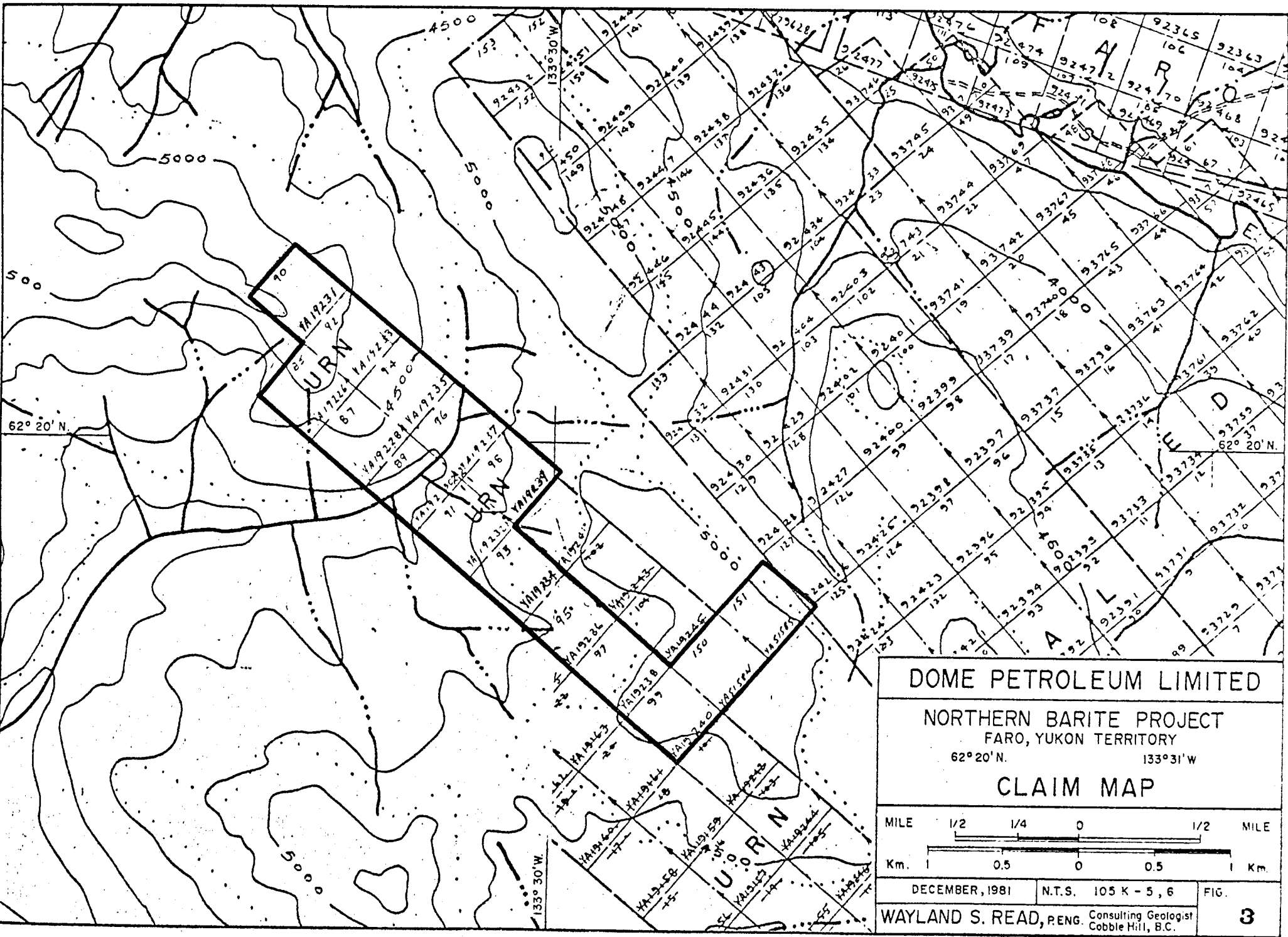
It is anticipated that the total road distance from the Urn 9 to the concentrator would be 8 km. From the concentrator an all-weather road leads into the Yukon highway system. From Faro by road, Whitehorse is 356 km., Dawson 534 km., and Watson Lake 423 km.

Faro is serviced by scheduled air service, bus and truck freight from Whitehorse.

CLAIMS:

A search of records at the Mining Recorder's Office, Whitehorse, on 18 September 1981, showed 15 Urn claims in good standing. Of the 15 claims, 13 were registered in the name of Cyprus Anvil Mining Corp., and two (Urn 150,151) were still registered in the name of the original staker, Lee Pigage.

Claim Name & Numbers	Grant Numbers	No. of Claims	Due Date
Urn 85	YA19226	1	13 July 1982
Urn 87	YA19228	1	13 July 1982
Urn 89	YA19230	1	1 March 1984
Urn 90	YA19231	1	13 July 1982

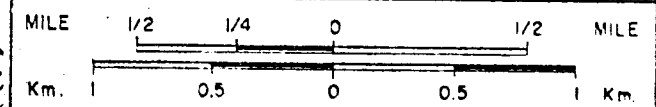


DOME PETROLEUM LIMITED

NORTHERN BARITE PROJECT
FARO, YUKON TERRITORY

62° 20' N. 133° 31' W

CLAIM MAP



DECEMBER, 1981 N.T.S. 105 K - 5, 6 FIG. 3
WAYLAND S. READ, PENG. Consulting Geologist
Cobble Hill, B.C.

Claim Name & Numbers	Grant Numbers	No.of Claims	Due Date	(Continued)
Urn 91	YA19232	1	1 March 1984	
Urn 92	YA19233	1	13 July 1982	
Urn 93	YA19234	1	1 March 1984	
Urn 94	YA19235	1	13 July 1982	
Urn 95-99	YA19236- YA19240	5	1 March 1984	
Urn 150,151	YA51584, YA51585	<u>2</u>	1 March 1984	

Total: 15

The common claim corner, No.2 posts for Urn 89 & 96. and No.1 posts for Urn 91 & 98 was found near the Urn 9 showing and is plotted in relation to the showing on the Map 5 Preliminary Sketch Plan and Section. There is some discrepancy in the claim location plotted on the official claims map compared to the true position as found in the field.

GEOLOGY:

Bedded barite occurrences were discovered in the Eastern Selwyn Basin by Cyprus Anvil Mining Corp., personnel during an on-going regional mapping program in the Faro area in 1977, and are covered by a short report of J.P. Franzen dated May 26, 1978.

It is believed that this zone of barite occurrences extending for a distance of about 9 km. southeast from the northeast slope of Rose Mountain, and about 6 km. west southwest from the Faro concentrator, may represent two and possibly three separate horizons. These horizons are found in and restricted to strata of the Earn Group of Lower Devonian - Mississippian Age. Wall rocks are described as being



#1

URN 2 & 7 Showings Looking Northwest



#2

URN 7 Showing Looking Southeast
Sampling In Progress 14 September 1981
URN 2 in background behind Sampler on left.

phyllitic chert.

Northeast of Rose Mountain, the lower barite horizon, Unit 6B has a reported potential strike length through three known exposures of 3.7 km. The two occurrences in this unit, sampled and referred to as Urn 4 and Urn 10, are at elevations of about 4300 and 4100 feet respectively, and dip about 30° into the hillside. Cyprus Anvil assays returned for Urn 4 are BaSO_4 63%, S.G. 3.58, across 10 metres and Urn 10 are BaSO_4 48% across 5 metres, with a true barite thickness not exceeding 15-20 metres. There is some potential for subcropping barite with open pit potential if grades warranted. Road construction of greater distance would be required than to Urn 9.

Higher on the slope from Urn 4 towards the peak of Rose Mountain are found Urn 3, 6 and 5 showings in a continually exposed 1.2 km upper barite horizon, Unit 6D. This unit is 600 metres immediately up-section from Unit 6B and dips into the very rugged mountainside at angles varying from 25° to 55° . Elevations are between 4700 feet and 4900 feet. Access would be difficult and open pit mining impractical as the bed dips into the steep mountainside.

An average of the Cyprus Anvil assays for the Urn 3 showing returned BaSO_4 53.1% and S.G. 3.36 across 12 metres. The samples for the Urn 5 and 6 had been lost in transit. It was estimated that Unit 6D has a true thickness of approximately 10-12 metres, with most outcrops in the 1.5 -4.5 metres range.

Barite float is reported along strike to the west for 3 km. past the last outcrop. To the east, Unit 6D appears to have been eroded shortly after deposition since barite cobbles (nodules?) occur in phyllitic chert wall rock.



#3

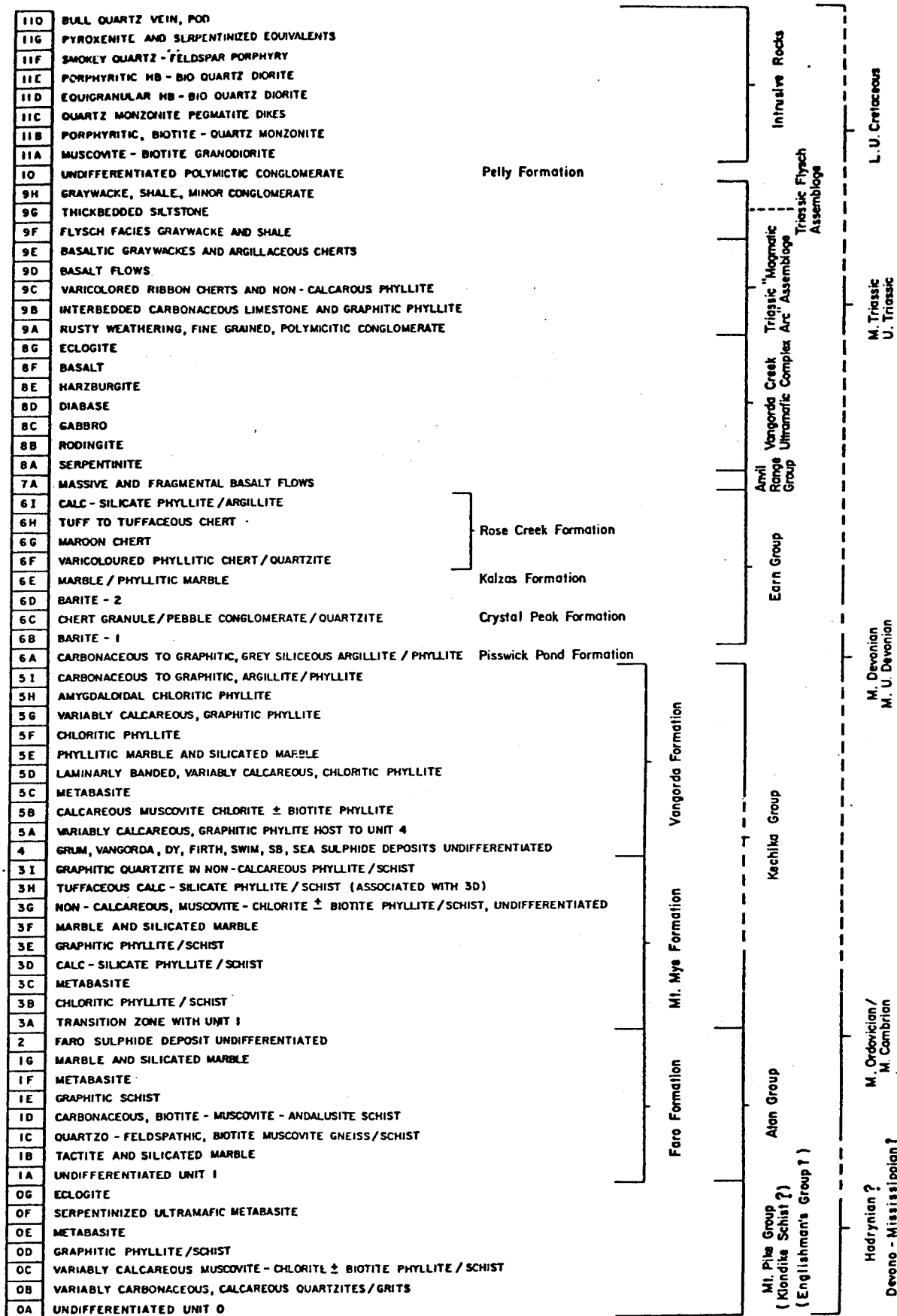
URN 9 Looking West Southwest
Showing Trenched & Sampled Area

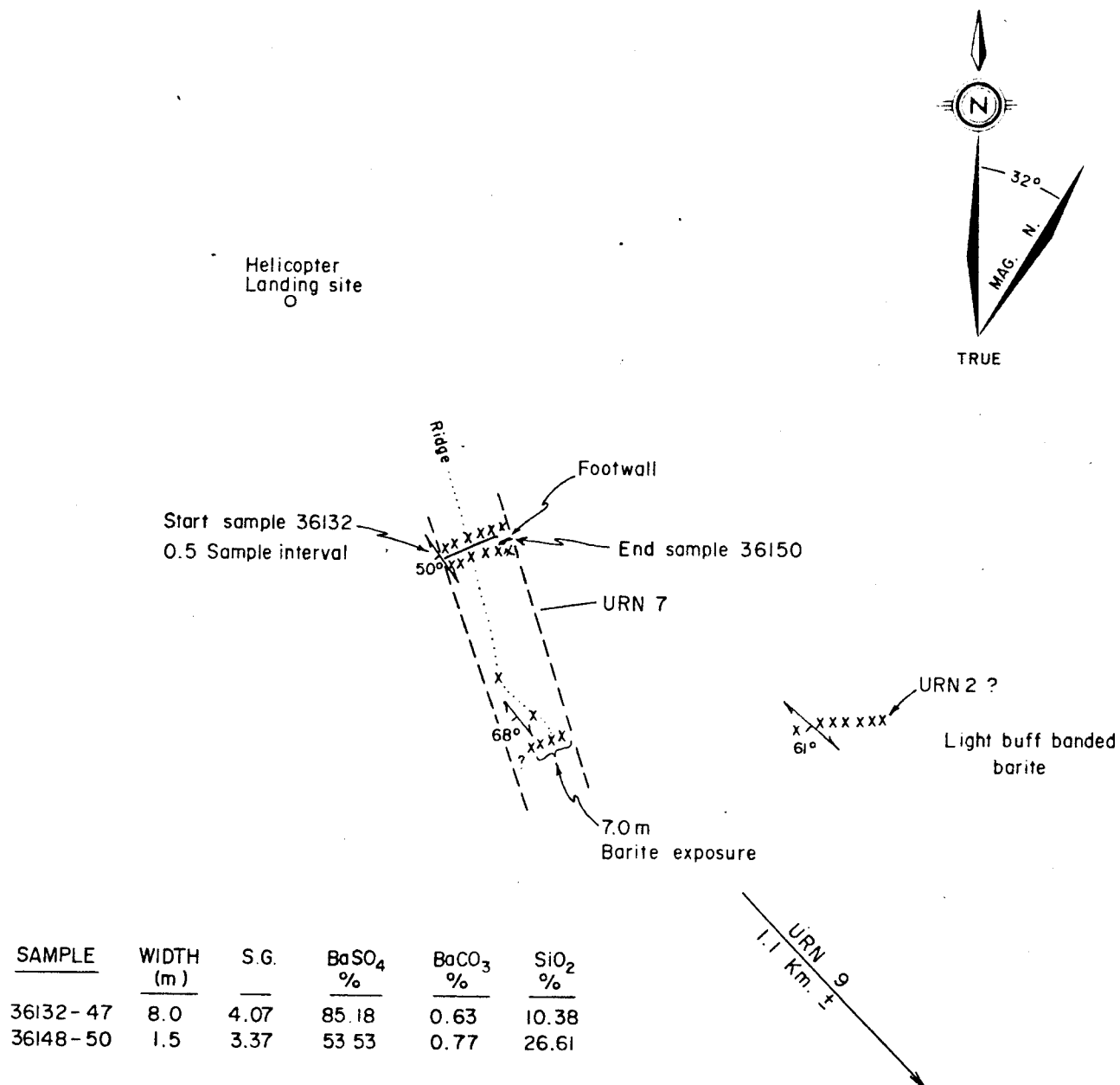


#4

URN 9 Looking Southwest
Trench Area Near Top of Hill in Foreground.

ANVIL RANGE LITHOSTRATIGRAPHIC CODE





SAMPLE	WIDTH (m)	S.G.	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36132-47	8.0	4.07	85.18	0.63	10.38
36148-50	1.5	3.37	53.53	0.77	26.61

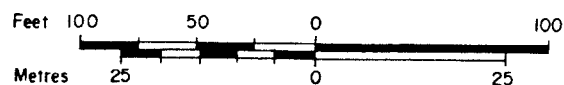
DOME PETROLEUM LIMITED

NORTHERN BARITE PROJECT FARO, YUKON TERRITORY

62°20'N.

133°31'W.

PRELIMINARY SKETCH PLAN OF SAMPLE SITE URN 7



DECEMBER, 1981

N.T.S. 105 K / 5, 6

FIG.

WAYLAND S. READ, P.ENG.

Consulting Geologist
Cobble Hill, B.C.

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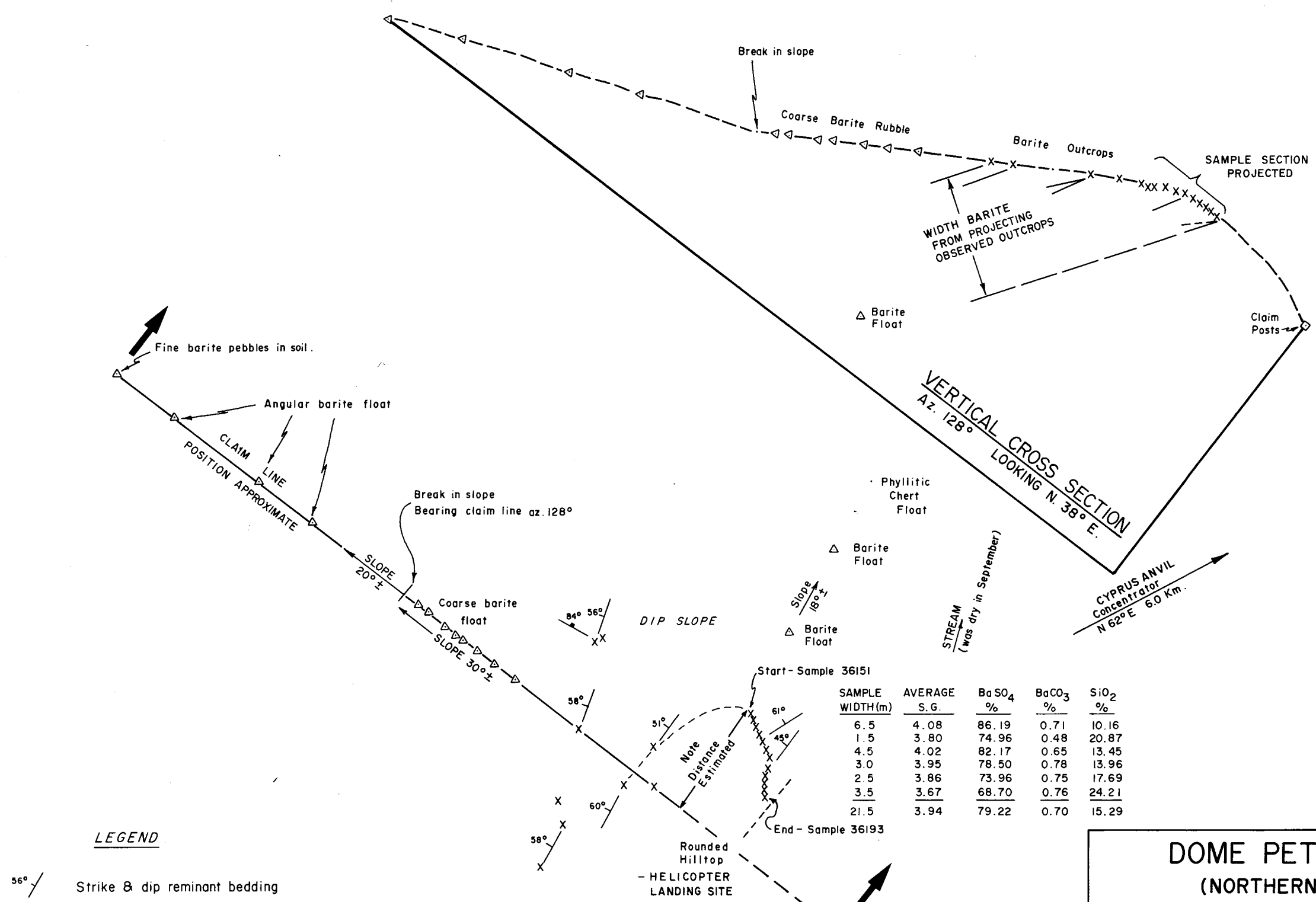
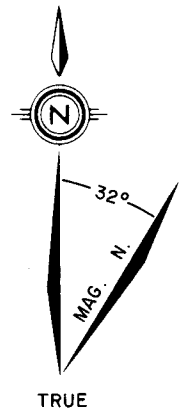
Control by chain and compass

The southeastern section of the barite zone appears to be of the greatest economic importance because of the combination of higher grade sections, open pit potential, (particularly for the Urn 9) and the shortest road haul to the concentrator. This section contains the zones designated Urn 1, 2, 7, 8 and 9.

The geological map in the 1978 report correlates these showings with the upper barite horizon Unit 6D, while the report states: "Correlation with Unit 6B or 6D, or the possibility of a third horizon, is uncertain." In part, this seems to be the difficulty in relating the barite formations to the Crystal Peak Formation, Unit 6C, composed of Chert granule/pebble conglomerate/quartzite. This will remain speculation until much more detailed geological mapping is completed.

Structurally, a southeast trend is shown over the 3 km. between showings Urn 7 to Urn 8 on Figure 2, and this is confirmed by recorded strikes and dips on Urn 2 and Urn 7 which ranged from N32W to N50W and dipped 50° to 68° southwest (figure 4) and observations on Urn 1. However, there is a considerable change from the northwest strike on the Urn 9 showing, where the strike ranged from N19E to N36E and the dip ranges from 45° to 61° northwest. Fortunately, this change in strike creates a dip slope on the hillside and a natural quarry site. See Fig.5 and Photos 3 and 4.

The cause of the change in strike is not known, nor is it known if this could cause an increase or decrease in thickness. The footwall appeared to have been reached near the end of the sample cut 36193, but the contact of the barite with the hangwall rock was not observed. It would appear that the true thickness of the bed is in excess of 25 metres and any additional thickness would add to the tonnage potential.



- LEGEND**
- 56° / Strike & dip remnant bedding
 - 84° Jointing
 - x Barite - outcrop
 - △ Barite - angular float
 - Claim Post

Control by tape, topolite and compass.

Start - Sample 36151

SAMPLE WIDTH(m)	AVERAGE S.G.	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
6.5	4.08	86.19	0.71	10.16
1.5	3.80	74.96	0.48	20.87
4.5	4.02	82.17	0.65	13.45
3.0	3.95	78.50	0.78	13.96
2.5	3.86	73.96	0.75	17.69
3.5	3.67	68.70	0.76	24.21
21.5	3.94	79.22	0.70	15.29

End - Sample 36193

DOME PETROLEUM LIMITED
(NORTHERN BARITE PROJECT)
URN 9 MINERAL SHOWING-FARO, Y.T.
NTS 105 K/5,6 62° 19.5 N. , 133° 30' W

PRELIMINARY SKETCH PLAN & SECTION

Feet 100 50 0 100 200
Metres 25 0 25 50

DRAWN BY: WAYLAND S. READ P. Eng., Consulting Geologist, Cobble Hill, B.C.
DATE: DECEMBER, 1981
REVISED:
SCALE: 1: 1000
No. 5

URN 7 BARITE PROSPECT - SAMPLE AVERAGES

Sample Numbers	Sample Width (m)	Accum. Width (m)	<u>Measured</u>		<u>Calculated</u>		BaSO ₄ %	Accum. BaSO ₄ %	BaCO ₃ %	Accum. BaCO ₃ %	SiO ₂ %	Accum. SiO ₂ %
			S.G.	Accum. S.G.	S.G.	Accum. S.G.						
36132-36147	8.0	8.0	4.07	4.07	4.09	4.09	85.18	85.18	0.63	0.63	10.38	10.38
36148-36150	1.5	9.5	3.37	3.96	3.45	3.99	53.53	80.18	0.77	0.65	26.61	12.94

URN 9 BARITE PROSPECT - SAMPLE AVERAGES

36151-36163	6.5	6.5	4.08	4.08	4.12	4.12	86.19	86.19	0.71	0.71	10.16	10.16
36164-36166	1.5	8.0	3.80	4.03	3.84	4.07	74.96	84.09	0.48	0.67	20.87	12.17
36167-36175	4.5	12.5	4.02	4.03	4.02	4.05	82.17	83.40	0.65	0.66	13.45	12.63
36176-36181	3.0	15.5	3.95	4.01	3.93	4.03	78.50	82.45	0.78	0.68	13.96	12.89
36182-36186	2.5	<u>18.0</u>	3.86	<u>3.99</u>	3.82	<u>4.00</u>	73.96	<u>81.27</u>	0.75	<u>0.69</u>	17.69	<u>13.55</u>
36187-36193	3.5	21.5	3.67	3.94	3.71	3.95	68.70	79.22	0.76	0.70	24.21	15.29

FIGURE 6

The barite beds are found in a siliceous environment and silica is the main dilutant and cause of the lower specific gravity. No effervescence was noted in the field when hand samples and barite outcrops were rested with dilute HCl, indicating little or no calcite, limestone or other carbonates.

The Urn 7 and Urn 2 showings are in close proximity as seen by figures 2, 4 and photos 1 and 2. They parallel one another with a separation of waste rock.

Our sample cut on the Urn 7 across 8 metres plus 1.5 metres on the footwall, averaged as follows:

Sample	Width (m)	Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36132-47	8.0	4.07	85.18	0.63	10.38
36148-50	1.5	3.37	53.53	0.77	26.61

A 1977 sample for Site 2, Zone A, which is believed to have been taken near the point marked Urn 2 on figure 4, averaged as follows:

3017-26	20.0	4.03	88.2	N.A.	9.96
---------	------	------	------	------	------

The Urn 9 showing is across the valley to the southeast, a distance of about 1.1 km from the Urn 2 and 7. Interest in the Urn 9 was elicited by a reported open pit potential and a single Cyprus Anvil assay, number 3052, across 3.0 metres, that ran 94.15% BaSO₄ and only 4.13 S.G. with 4.78% SiO₂.

There was an obvious discrepancy between the barite and specific gravity reading, and if the BaSO₄ reading was correct, the barite should have a higher specific gravity and be in a weight range for direct shipping.

Examination showed the deposit to be wider and of a different strike than expected. The section of figure 5 shows that although a 21.5 metre zone was trenched and sampled, because of the dip-slope nature of the exposures, this represents the lower part of the barite bed only. Heavy bulldozer trenching and diamond drilling are required to test the full width of the zone.

All BaSO_4 assays were somewhat lower than the former assay of 94.15%, the highest being 89.91, and the specific gravity measurements are less than the 4.2 minimum required for drill mud, thus necessitating beneficiating.

Sample	Width Metre	Specific Gravity	BaSO_4 %	BaCO_3 %	SiO_2 %
36151-86	18.0	3.99	81.27	0.69	13.55
36187-93	3.5	3.67	68.70	0.76	24.21

SAMPLING:

Sampling was laid out and supervised by the writer and samples were taken by an experienced 2 man crew.

The area to be sampled was cleared down to bedrock and a continuous channel chip sample was taken. Samples were cut with a heavy hammer and tungsten-carbide tippedmoil, and, where possible, with the aid of an Atlas Copco Cobra gasoline drill with chisel bit, used as a gas hammer.

Samples were cut at 0.5 metre intervals and each sample nearly filled a 12 inch X 20 inch plastic sample bag. They are estimated to weigh an average of about 8 kilograms each. The large samples would accumulate enough weight of sample for follow-up metallurgical testing.

The short sample interval would show any chemical variation across the barite bed.

The sample number was marked on each bag as well as the enclosed tag, packed in fibre shipping bags, also showing sample numbers, and taken by helicopter from the site to the concentrator area. A spike with sample numbered aluminum tag marked some sample cuts along the trench. The bags were put on pallets and shipped by White Pass and Yukon truck directly to the Metallurgical Lab of Bacon-Donaldson and Associates in Vancouver.

Sample preparation and analysis were done at the metallurgical laboratory. The results are included in the appendix to this report.

The samples were analysed for Specific Gravity, $\text{BaSO}_4\%$, $\text{BaCO}_3\%$ and SiO_2 . See Appendix 1.

MINERALIZATION:

Barite (BaSO_4) is a heavy mineral with a specific gravity of 4.5. Colour can vary from colourless, white and light shades of blue, yellow, red and grey. It can be transparent to translucent. Barite has many chemical uses but the largest consumption is in the drilling industry as an inert weighting agent for drill muds. It is a relatively low-value commodity, but freight costs can greatly increase the effective cost at the drill site. This is particularly true for drilling in the Canadian Arctic.

The ground barite has to meet rigorous standards of regulatory agencies, the petroleum companies, and specifications set out by the American Petroleum Institute (see Appendix 3).

The Urn barite showings are bedded and the barite is light to medium grey in colour. Some fine fracturing was observed that has been filled with white barite. No limestone or calcite was observed. The barite exhibits a possible remnant bedding but is often quite massive. It did not effervesce when treated with dilute HCl, indicating little or no calcite, limestone or other carbonate.

Samples 36157 and 36169 of 4.00 and 4.01 specific gravity, were selected to be tested by Scanning Electron Microscope at the metallurgical lab to find out what minerals lowered the specific gravity below acceptable levels. It was found that the samples are mainly a barite matrix with silica. The grain size for sample 36157 is reported as "large area of barite. Silica inclusions varying from micron size to coarse." Sample 36169 is described as "barite interspersed with various size silica inclusions (20 microns and up)."

The metallurgists felt that since the mineralization already had a high specific gravity and requires little upgrading, it may be possible to remove the coarser silica by tabling, and thus produce a product grade by gravity separation.

For further testing the 18.0 metre sample interval, samples 36151-36186, was chosen. This interval has an average measured specific gravity 3.99, and a calculated specific gravity of 4.00 BaSO_4 81.27%, BaCO_3 0.69% and SiO_2 13.55%. These assays account for 95.51% of the components, allowing 4.49% for other components and assay variation.

As a rough estimate of tonnage in sight, if a true width of 25 metres is assumed, and mapped outcrops scale to a length of about 60 metres, assuming half the length to depth and using a specific

gravity of 4.00, the tonnage contained by the block would be 180,000. The actual potential is much greater and is estimated from one million to several million tonnes.

CONCLUSIONS:

The Urn 9 deposit has a potential from 1 to several million tonnes of barite in a natural quarry site, with about 180,000 tonnes estimated from present mapping. It is very well located within 6 km. of the large Cyprus Anvil Mining Corp., concentrator and open pit, near Faro in the central Yukon Territory, with major infrastructure in place.

The estimated haulage distance from site to concentrator is about 8 kilometers. This is some advantage compared to properties that are closer to the Northern market but with no infrastructure, and a definite advantage over property in the MacMillan Pass area.

The barite sampled could not be recovered as a direct shipping product as it does not meet the 4.20 minimum specific gravity requirement. The main impurity is silica. From checking two samples with the Scanning Electron Microscope, some of the silica is coarse enough that it might be removed by gravity methods. The remaining silica would be an acceptable product impurity if the other specifications are met.

The barite from the Urn 2 and Urn 7 are visually similar to the Urn 9 and also have approximately the same assay results. If they exhibit the same silica grain size as the Urn 9, it is quite likely

they would respond to similar treatment.

Considerable potential exists for finding more barite and extending the known discoveries through exploration and development.

It is of prime importance at this time to find out if a composite of selected Urn 9 samples can be beneficiated to produce an acceptable product. With a microscopic study of the Urn 7 running concurrently with metallurgical testing of the Urn 9, a good idea of how the Urn 2 and 7 deposits might also respond to similar treatment could be established.

Further analysis of the composite head sample and the ensuing test product is advised to check for other impurities and to insure product acceptability for the drilling industry.

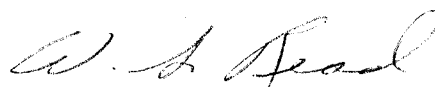
Development work in the form of bulldozer trenching, diamond drilling, sampling, geological mapping and surveying is required before proven reserves can be outlined on any of the prospects.

CERTIFICATE OF QUALIFICATIONS

I, Wayland Stuart Read, do hereby certify that:

1. I am a practising Mining Geologist and my address is Cherry Point Road, Cobble Hill, British Columbia.
2. I am a graduate in Geology from Acadia University, Wolfville, Nova Scotia, and have been granted the degree of Bachelor of Science in Geology, and have engaged in practising my profession for the past twenty-three years.
3. I am a member of the Association of Professional Engineers of British Columbia and the Yukon Territory, a Fellow of the Geological Association of Canada, and a Member of the Canadian Institute of Mining and Metallurgy.
4. This report is based on my personal examination and work on the property on the 14 - 16 September, 1981, as well as broad experience in mineral exploration, development and production in the Yukon and Northwest Territories over the past twenty years.

Respectfully submitted,



Wayland S. Read, B.Sc., P.Eng.

Consulting Geologist

Cherry Point Road,
Cobble Hill, B.C.

15 January 1982

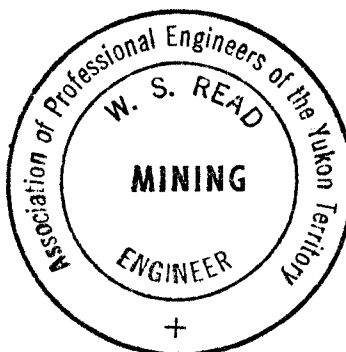


TABLE 15 FILE 3430

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 7

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36132	0.5	4.19	4.16	87.69	0.60	8.00
36133	0.5	4.10	4.10	85.62	0.55	9.16
36134	0.5	4.18	4.14	87.14	0.53	9.28
36135	0.5	4.01	4.10	85.41	0.68	11.40
36136	0.5	3.92	4.02	82.26	0.66	14.31
36137	0.5	3.99	4.03	82.58	0.69	14.18
36138	0.5	4.23	4.10	85.45	0.70	10.52
36139	0.5	4.07	4.14	87.04	0.73	8.75
36140	0.5	4.18	4.15	87.15	0.69	5.73
36141	0.5	4.15	4.14	87.08	0.59	9.60
36142	0.5	3.94	4.03	82.82	0.49	13.93
36143	0.5	4.13	4.18	88.22	0.76	7.06
36144	0.5	4.07	4.09	84.96	0.73	10.67
36145	0.5	4.13	4.17	88.29	0.52	8.32
36146	0.5	3.90	3.96	79.67	0.70	13.35
36147	0.5	4.00	4.00	81.47	0.49	11.78
36148	0.5	3.76	3.86	75.70	0.68	22.89
36149	0.5	2.94	2.97	25.45	0.92	16.47
36150	0.5	3.41	3.52	59.45	0.70	40.47

TABLE 16 FILE 3430

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 9

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36151	0.5	4.23	4.22	89.81	0.80	6.33
36152	0.5	4.06	4.22	89.67	0.72	7.76
36153	0.5	4.06	4.11	85.86	0.76	8.61
36154	0.5	4.12	4.12	86.06	0.76	11.36
36155	0.5	4.07	4.05	83.39	0.76	10.85
36156	0.5	4.20	4.20	89.17	0.68	6.37
36157	0.5	4.00	4.09	85.08	0.76	8.69
36158	0.5	4.11	4.16	87.75	0.78	9.26
36159	0.5	4.15	4.19	88.91	0.68	9.13
36160	0.5	4.06	4.15	87.25	0.76	10.93
36161	0.5	4.00	3.97	80.16	0.80	12.69
36162	0.5	3.94	4.05	83.53	0.59	15.68
36163	0.5	4.03	4.05	83.84	0.37	14.48
36164	0.5	3.87	3.87	75.96	0.55	20.54
36165	0.5	3.85	3.90	77.46	0.63	20.60
36166	0.5	3.68	3.76	71.46	0.27	21.48
36167	0.5	4.03	4.08	85.03	0.27	12.84
36168	0.5	4.27	4.21	89.54	0.66	7.55
36169	0.5	4.01	4.07	84.23	0.59	13.09
36170	0.5	3.65	3.63	65.15	0.73	32.56
36171	0.5	4.10	4.12	86.04	0.62	12.19

TABLE 17 FILE 3430

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 9 (Cont.)

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36172	0.5	4.07	4.07	84.01	0.72	13.73
36173	0.5	3.99	3.95	79.33	0.82	13.37
36174	0.5	4.03	4.01	81.73	0.76	8.64
36175	0.5	4.06	4.08	84.46	0.72	7.04
36176	0.5	3.97	3.92	78.20	0.79	12.32
36177	0.5	3.92	3.97	80.06	0.76	15.12
36178	0.5	3.80	3.80	72.89	0.72	21.26
36179	0.5	4.02	3.99	80.73	0.82	13.03

TABLE 18FILE 3430

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 9 (Cont.)

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36180	0.5	4.03	3.98	80.51	0.78	10.20
36181	0.5	3.98	3.93	78.63	0.78	11.81
36182	0.5	3.85	3.78	72.06	0.76	20.13
36183	0.5	3.86	3.82	73.53	0.83	18.05
36184	0.5	3.82	3.82	73.91	0.68	17.11
36185	0.5	3.84	3.83	74.26	0.68	16.60
36186	0.5	3.91	3.87	76.05	0.79	16.56
36187	0.5	3.60	3.64	65.34	0.91	26.93
36188	0.5	3.60	3.72	69.08	0.70	27.55
36189	0.5	3.88	3.88	76.54	0.75	19.38
36190	0.5	3.95	3.94	78.94	0.75	14.14
36191	0.5	3.63	3.66	66.16	0.83	23.62
35192	0.5	3.58	3.61	64.18	0.75	25.03
36193	0.5	3.48	3.54	60.64	0.66	32.82

URN ASSAY RESULTS (CYPRUS ANVIL)

APPENDIX 2

<u>Samp. No.</u>	<u>Interval Metres</u>	<u>BaSO₄</u>	<u>S.G.</u>	<u>SiO₂</u>	<u>FeO</u>	<u>CaO</u>	<u>S</u>
<u>SITE 1</u>							
<u>Zone A</u>							
3001	0.0 - 2.0	76.8	3.84				
3002	2.0 - 4.0	25.5	3.00				
3003	4.0 - 6.0	18.4	2.79				
3004	6.0 - 8.5	80.1	3.78	18.0	0.44	0.042	0.29
<u>Zone B</u>							
3005	0.0 - 3.5	47.2	3.19				
3006	3.5 - 5.5	44.8	3.17				
3007	5.5 - 7.5	70.1	3.56				
<u>Zone C</u>							
3008	0.0 - 4.0	76.4	3.80				
3009	4.0 - 8.0	74.7	3.62				
3010	8.0 - 12.0	78.6	3.83				
3011	12.0 - 14.5	42.4	3.11				
3012	14.5 - 16.5	36.0	2.96				
3013	16.5 - 19.5	40.7	2.99				
3014	19.5 - 22.5	17.3	2.77				
3015	22.5 - 25.5	38.6	2.94				
3016	25.5 - 28.0	67.1	3.48				
<u>SITE 2</u>							
<u>Zone A</u>							
3017	0.0 - 2.0	86.2	4.11	9.77	0.06	0.034	0.22
3018	2.0 - 4.0	86.7	4.00	10.72	0.14	0.038	0.26
3019	4.0 - 6.0	93.1	4.12	6.36	0.21	0.039	0.19
3020	6.0 - 8.0	90.6	4.10	7.20	0.14	0.036	0.21
3021	8.0 - 10.0	90.1	4.02	8.71	0.12	0.031	0.20
3022	10.0 - 12.0	89.4	4.02	9.09	0.06	0.038	0.26
3023	12.0 - 14.0	91.7	4.11	7.55	0.06	0.039	0.21
3024	14.0 - 16.0	86.6	3.96	12.62	0.12	0.043	0.23
3025	16.0 - 18.0	84.3	3.95	12.90	0.21	0.049	0.23
3026	18.0 - 20.0	83.5	3.94	14.66	0.17	0.046	0.23
		88.2	4.03	9.96			
<u>Zone B</u>							
3027	0.0 - 2.0	71.6	3.61				
3028	2.0 - 4.0	74.4	3.63				
3029	4.0 - 5.0	72.6	3.63				
<u>Zone C</u>							
3030	0.0 - 2.0	91.2	4.00	7.85	0.06	0.041	0.22
3031	2.0 - 4.0	79.9	3.77				

<u>Samp.</u> <u>No.</u>	<u>Interval</u> <u>Metres</u>	<u>BaSO₄</u>	<u>S.G.</u>	<u>SiO₂</u>	<u>FeO</u>	<u>CaO</u>	<u>S</u>
<u>SITE 3</u>							
3032	0.0 - 2.0	72.0	3.73				
3033	2.0 - 4.0	50.6	3.00				
3034	4.0 - 6.0	43.4	3.20				
3035	6.0 - 8.0	67.0	3.67				
3036	8.0 - 10.0	55.8	3.44				
3037	10.0 - 12.0	42.0	3.13				
		55.1	3.56				
<u>SITE 4</u>							
3038	0.0 - 2.0	47.7	3.24				
3039	2.0 - 4.0	73.0	3.87				
3040	4.0 - 6.0	56.8	3.44				
3041	6.0 - 8.0	68.6	3.66				
3042	8.0 - 10.0	69.0	3.68				
		63.0	3.55				
<u>SITE 9</u>							
3052	0.0 - 3.0	94.15	4.13	4.78	0.44	0.07	0.26
<u>SITE 10</u>							
3053	0.0 - 4.0	47.8					

Sites 5 - 8 inclusive samples lost in transit.

SCHEDULEQUALITY CONTROL INSPECTION OF BULK BARITESpecifications

1.1 Barite physical and chemical requirements as per A.P.I. specification 13 A, section 2. (API specifications attached)

- a) Specific gravity 4.20 Minimum
- b) Soluble alkaline earth metals
as calcium 250 P.P.M. Maximum
- c) Wet Screen Analysis:
 - Residue on U.S. sieve No. 200 3.0 % Maximum
 - Residue on U.S. sieve No. 325 5.0 % Maximum

*Cannot have
less than 5%*

NOTE: Sieve designation as per A.S.T.M. E 11
"Sieves for Testing Purposes"

- d) pH determination, API RP 13 B, section 6, (reported for reference only).

1.2 Analysis for trace metals by total acid digestion for the following elements:

Mercury	1 P.P.M. Maximum
Copper	50 P.P.M. Maximum
Lead	10 P.P.M. Maximum
Cadmium	1.5 P.P.M. Maximum
Chromium	5 P.P.M. Maximum
Nickel	10 P.P.M. Maximum
Zinc	5 P.P.M. Maximum
Cobalt	5 P.P.M. Maximum
Arsenic	1 P.P.M. Maximum
Iron	~~1000 P.P.M. Maximum~~

TIME AND COST STATEMENT - URN PROPERTY

Field Personnel:

W.S.Read, P.Eng., Cobble Hill, B.C. Sept.14-16,1981 plus 1 day travel	4 days @ \$400	\$1,600.00
Steven Read, Prince Rupert, B.C., Drill Operator and Sampleman. Sept.14-16,1981 plus 1 day travel	4 days @ \$133.73	534.92
Brad Riffal, Coquitlam, B.C., Sampleman Sept.14-16, 1981, plus 1 day travel.	4 days @ \$108.16	432.64
Transportation Ross River-Faro, Sept.13.	\$60.00	
Hotel - Faro, Sept.13,14, 1981	104.90	
Meals, etc., in Faro	<u>63.96</u>	228.86
Freight on drill return from Faro		<u>100.94</u>
		\$2,897.36

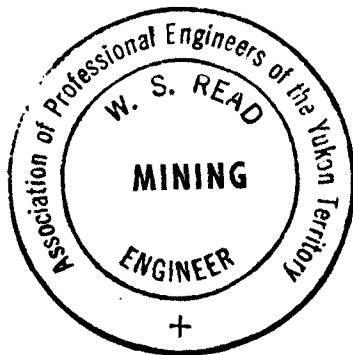
Plus - Accommodation & Meals, Cyprus Anvil Corp.
- Helicopter: Minesite to property
- Freight on samples, Faro to Vancouver
- Truck rental, Faro.

Analysis and Compilation after October 5, 1981:

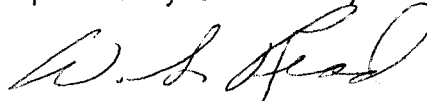
Assaying - Nov.Dec.1981, Bacon-Donaldson (from quote) 62 samples @ \$49.00	3,038.00
W.S.Read,P.Eng. - Compilation of survey and geological field data, sample locations, assay averages and preparation of the related plans,section and table of weighted agerages. 4 days, December 1981	1,600.00
For study of data and preparation of report 3 days in January 1982	<u>1,200.00</u>
<u>Total</u> - - - - -	\$5,838.00

NOTE:

Time and costs relating to the Urn Property that
were grouped with other properties in the project
study are not included in this cost statement.



Respectfully submitted,


Wayland S. Read, P.Eng.

DOME PETROLEUM NORTHERN
BARITE PROJECT
- ANALYSIS REPORT

PREPARED FOR:
Mr. M. J. Morison

of

Dome Petroleum Ltd.
Calgary, Alberta
T2P 2H8

INTRODUCTION

One hundred and ninety-three samples were delivered to our offices by Mr. Wayland S. Read, P. Eng., Consulting Geologist.

The samples were to be dried, evaluated for specific gravity and assayed for BaSO_4 , soluble barium and SiO_2 .

RESULTS

The results are reported here and have been checked by comparing the calculated and measured specific gravity. The soluble barium has been reported as barium carbonate (it is known that in some of the samples it is actually barytocalcite).

These results have been previously reported. There was, however, a serious error in the specific gravity analyses and all specific gravities have been re-evaluated.

The original specific gravity determinations were performed in 500 ml graduated cylinders and utilized approximately 200 gms. of -10 mesh ore. The determination involved weighing the ore and the requisite amount of water to make the ore plus water volume 500 cc. The calculations were made on the two weights and total volume. The specific gravities were all low and an error analysis has not found a consistent error.

The second series of specific gravity determinations employed 1000 cc. volumetric flasks and ore pulverized to -100 mesh. Once again the specific gravities are slightly lower than the assay calculated specific gravities, they are well within normal determination error ($\pm 2.5\%$).

The comparison of the correctly determined specific gravities and the calculated specific gravities led to a few reassays of BaSO_4 and one reassay of silica.

These results are believed to be complete and accurate.

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TABLE 1FILE 3430

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Ridge Main Zone Road "E"

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36001		3.59	3.55	15.64	49.5	4.41
36002		3.66	3.93	15.26	68.6	4.90
36003		3.87	3.89	8.73	73.6	4.92
36004		3.78	3.84	5.92	74.2	3.57
36005		3.92	3.96	2.07	84.1	6.33
36006		3.83	3.96	31.19	52.6	6.85
36007		3.59	3.59	4.99	62.9	2.20
36008		3.67	3.64	4.34	66.0	5.03
36009		3.66	3.61	3.53	65.7	3.79
36010		3.81	3.78	0.99	76.7	5.22
36011		3.89	3.94	3.94	80.9	8.56
36012		3.75	3.81	1.21	78.2	9.13
36013		3.93	4.05	8.38	80.9	5.45
36014		3.90	4.01	11.20	76.6	5.73
36015		3.99	4.09	4.90	86.5	3.68
36016		3.91	4.00	6.77	80.8	4.26
36017		3.95	4.03	4.46	84.4	2.95
36018		4.07	4.10	16.97	74.1	2.67
36019		3.93	4.10	8.83	82.6	3.06
36020		3.85	4.03	9.12	79.3	2.74

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Ridge Main Zone Road "E" (Cont.)

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36021		3.76	3.83	9.04	70.8	3.06
36022		3.78	3.81	0.50	78.7	4.54
36023		3.52	3.46	0.44	60.8	2.48
36024		3.62	3.66	7.62	63.7	6.72
36025		3.69	3.72	8.40	66.1	14.29

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Ridge North 2 Zone Road "E"

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36032		3.73	3.72	66.67	3.32	22.31
36033		4.00	4.06	83.25	1.37	9.03
36034		4.09	4.15	87.04	0.99	5.99
36035		4.08	4.14	77.10	11.2	2.74
36036		3.80	3.84	47.19	30.3	1.09
36037		4.17	4.30	92.13	1.19	2.08
36038		4.10	4.10	85.12	1.02	8.11
36039		4.30	4.30	90.83	2.74	1.80
36040		4.29	4.33	93.69	0.86	1.65
36041		4.29	4.35	94.18	1.09	1.54
36042		4.26	4.33	93.78	0.78	2.29
36043		4.20	4.32	91.70	2.44	2.27
36044		4.10	4.26	90.82	1.25	3.44
36045		4.19	4.29	92.06	0.83	3.40
36046		4.21	4.28	92.11	0.62	2.85
36047		4.18	4.29	91.74	1.15	2.95
36048		3.75	3.79	50.97	23.9	1.95
36049		4.23	4.24	90.46	0.91	3.02
36050		4.25	4.36	94.67	0.69	2.05
36051		4.11	4.17	84.94	3.88	3.12
36052		4.11	4.19	86.36	3.10	5.28

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Ridge North 2 Zone "F"

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36058		3.29	3.35	48.51	2.47	27.06
36059		3.70	3.81	70.65	3.71	7.25
36060		4.05	4.11	84.10	2.27	4.43
36061		4.11	4.22	90.06	0.65	3.74
36062		4.14	4.31	93.16	0.66	2.55
36063		4.16	4.30	92.57	0.99	2.65
36064		4.14	4.32	93.47	0.70	2.27
36065		4.17	4.32	93.52	0.69	2.08

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Ridge North 2 Zone - Extension

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36066		4.27	4.41	96.44	0.56	0.98
36067		4.23	4.33	93.74	0.62	1.37
36068		4.20	4.38	95.58	0.68	1.37
36069		4.21	4.38	95.60	0.66	1.54
36070		4.26	4.40	96.00	0.82	2.12
36071		4.19	4.27	90.75	1.57	3.32
36072		4.35	4.33	93.58	0.92	2.05
36073		4.24	4.30	92.47	0.95	2.44

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Cliff Zone

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36074		3.74	3.78	65.90	7.33	20.73
36075		3.86	3.89	76.47	0.93	16.81
36076		3.70	3.74	69.49	1.52	12.88
36077		3.47	3.40	51.52	2.13	14.42
36078		3.36	3.40	51.61	2.11	6.82
→ 36079		3.85	3.94	78.62	1.25	14.65 (x)
36080		3.86	3.99	80.87	0.70	15.44
36081		3.88	4.01	81.75	0.75	11.57
36082		3.82	3.95	79.40	0.59	13.31
36083		3.83	3.92	78.13	0.72	14.78
36084		4.10	4.15	87.43	0.70	7.46
36085		4.06	4.19	88.82	0.80	6.63
36086		4.22	4.34	94.01	0.76	3.21
36089		4.17	4.30	92.79	0.70	4.79
36088		3.87	3.92	78.13	0.85	19.08
36089		4.12	4.18	88.34	0.78	6.37
36090		4.10	4.15	86.65	1.24	4.98

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: Cliff Zone (Cont.)

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36091		3.97	4.05	83.72	0.52	12.84
36092		4.12	4.19	88.69	0.62	5.82
36093		4.16	4.15	87.03	0.86	5.82
36094		3.82	3.81	69.30	4.86	5.54
36095		3.77	3.84	71.72	4.07	7.78
36096		4.20	4.27	91.61	0.78	5.01
36097		4.16	4.27	91.36	0.83	3.59
36098		4.20	4.22	89.78	0.80	5.43
36099		3.69	3.73	60.34	11.0	19.81

SAMPLE DESCRIPTION: Rein Barite NTS 116 B/9

LOCATION: West Creek Zone

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36100		3.20	3.31	47.39	0.96	33.76
36101		3.29	3.39	52.26	0.82	32.34
36102		3.34	3.30	44.93	3.06	21.58
36103		3.62	3.73	50.71	21.0	14.59
36104		3.62	3.63	61.25	4.64	18.93
36105		3.31	3.52	51.49	8.98	25.07
36106		3.42	3.70	68.02	1.01	28.21
36107		3.38	3.14	36.75	1.49	13.01
36108		3.48	3.53	59.16	1.64	29.20
36109		3.83	3.80	72.72	0.79	15.81
36110		3.68	3.64	64.77	1.39	13.80
36111		3.62	3.55	60.66	0.93	14.82
36112		3.96	3.90	77.44	0.62	14.20
36113		3.88	3.83	60.98	15.1	15.96
36114		3.88	3.90	52.00	27.6	8.11
36115		3.64	3.60	45.85	19.7	9.93
36116		3.82	3.70	68.14	0.82	11.40
36117		3.84	3.90	76.87	1.37	14.03
36118		3.89	3.89	65.95	12.3	12.17

SAMPLE DESCRIPTION: Barite Mountain NTS 105 F/14,15

LOCATION: Vein 2 - Upper Cut North Creek

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36119		3.85	3.90	77.51	0.57	1.56
36120		4.20	4.32	93.64	0.55	0.90
36121		4.29	4.43	97.25	0.57	0.53
36122		4.19	4.34	94.30	0.53	1.37
36123		3.52	3.47	56.79	0.62	5.37

SAMPLE DESCRIPTION: Barite Mountain NTS 105 F/14,15

LOCATION: Vein 2 - Lower Cut North Creek

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36124		4.35	4.17	88.18	0.53	0.32
36125		4.31	4.38	95.63	0.55	0.32
36126		4.25	4.35	94.71	0.52	0.68

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 7

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36132		4.19	4.16	87.69	0.60	8.00
36133		4.10	4.10	85.62	0.55	9.16
36134		4.18	4.14	87.14	0.53	9.28
36135		4.01	4.10	85.41	0.68	11.40
36136		3.92	4.02	82.26	0.66	14.31
36137		3.99	4.03	82.58	0.69	14.18
36138		4.23	4.10	85.45	0.70	10.52
36139		4.07	4.14	87.04	0.73	8.75
36140		4.18	4.15	87.15	0.69	5.73
36141		4.15	4.14	87.08	0.59	9.60
36142		3.94	4.03	82.82	0.49	13.93
36143		4.13	4.18	88.22	0.76	7.06
36144		4.07	4.09	84.96	0.73	10.67
36145		4.13	4.17	88.29	0.52	8.32
36146		3.90	3.96	79.67	0.70	13.35
36147		4.00	4.00	81.47	0.49	11.78
36148		3.76	3.86	75.70	0.68	22.89
36149		2.94	2.97	25.45	0.92	16.47
36150		3.41	3.52	59.45	0.70	40.47

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 9

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36151		4.23	4.22	89.81	0.80	6.33
36152		4.06	4.22	89.67	0.72	7.76
36153		4.06	4.11	85.86	0.76	8.61
36154		4.12	4.12	86.06	0.76	11.36
36155		4.07	4.05	83.39	0.76	10.85
36156		4.20	4.20	89.17	0.68	6.37
36157		4.00	4.09	85.08	0.76	8.69
36158		4.11	4.16	87.75	0.78	9.26
36159		4.15	4.19	88.91	0.68	9.13
36160		4.06	4.15	87.25	0.76	10.93
36161		4.00	3.97	80.16	0.80	12.69
36162		3.94	4.05	83.53	0.59	15.68
36163		4.03	4.05	83.84	0.37	14.48
36164		3.87	3.87	75.96	0.55	20.54
36165		3.85	3.90	77.46	0.63	20.60
36166		3.68	3.76	71.46	0.27	21.48
36167		4.03	4.08	85.03	0.27	12.84
36168		4.27	4.21	89.54	0.66	7.55
36169		4.01	4.07	84.23	0.59	13.09
36170		3.65	3.63	65.15	0.73	32.56
36171		4.10	4.12	86.04	0.62	12.19

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 9 (Cont.)

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36172		4.07	4.07	84.01	0.72	13.73
36173		3.99	3.95	79.33	0.82	13.37
36174		4.03	4.01	81.73	0.76	8.64
36175		4.06	4.08	84.46	0.72	7.04
36176		3.97	3.92	78.20	0.79	12.32
36177		3.92	3.97	80.06	0.76	15.12
36178		3.80	3.80	72.89	0.72	21.26
36179		4.02	3.99	80.73	0.82	13.03

SAMPLE DESCRIPTION: URN Barite NTS 105 K/5,6

LOCATION: URN 9 (Cont.)

Sample Number	Sample Width (m)	Measured Specific Gravity	Calc. Specific Gravity	BaSO ₄ %	BaCO ₃ %	SiO ₂ %
36180		4.03	3.98	80.51	0.78	10.20
36181		3.98	3.93	78.63	0.78	11.81
36182		3.85	3.78	72.06	0.76	20.13
36183		3.86	3.82	73.53	0.83	18.05
36184		3.82	3.82	73.91	0.68	17.11
36185		3.84	3.83	74.26	0.68	16.60
36186		3.91	3.87	76.05	0.79	16.56
36187		3.60	3.64	65.34	0.91	26.93
36188		3.60	3.72	69.08	0.70	27.55
36189		3.88	3.88	76.54	0.75	19.38
36190		3.95	3.94	78.94	0.75	14.14
36191		3.63	3.66	66.16	0.83	23.62
35192		3.58	3.61	64.18	0.75	25.03
36193		3.48	3.54	60.64	0.66	32.82

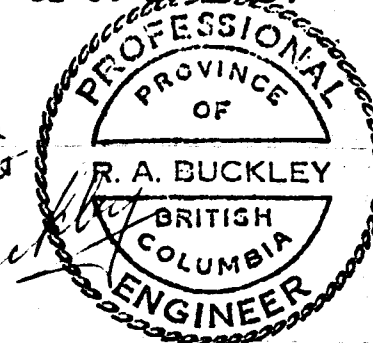
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AFE 0601170 NORTHERN BARITE PROJECT - YUKON

PROJECT STATUS
MANAGER ACTIVE
COST CENTRE MURRAY MORISON
CURRENCY 6802000
CDNGROSS
ESTIMATEGROSS
ACTUAL

DIFFERENCE

Certified
as rec'd from
Computer printout
as to date &
time
R. A. Buckley

139 SHORE BASE FACILITIES

049 PROFESSIONAL FEES

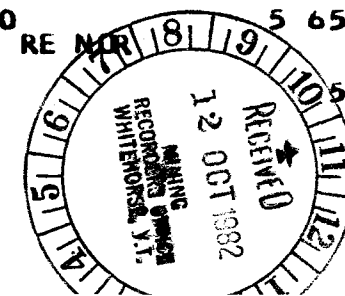
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115 206.98

1 793.02

CLEARED	VOUCHER	VENT CODE	DATE	DESCRIPTION	VOUCHER AMOUNT
	J81940	115	820908	IOTA MESSENGER 129575 82/06/08 P0590450 00 MORISON-MU 03/COURIER FROM R. BUCKLEY TO BACON DONALDSON	5.75
	H82556	115	820809	LUMMUS CANADA C06-82-256 82/06/21 P0590460 06 MORISON-MU 05-CHGS FOR NORTHERN BARITE PROJECT MAR 29-MAY 23	4 009.22
	H82557	115	820809	LUMMUS CANADA C07-82-379 82/07/23 P0590460 06 MORISON-MU 06-CHGS FOR NORTHERN BARITE PROJECT TO JUNE 27/82	127.83
	H99950	115	820826	BACON DONALDS 0254 82/05/03 P0059045 05/PROFESSIONAL FEES	14 962.49
	D85750	115	820426	READ WAYLAND 820301680287 82/04/22 P0590480 00 MORISON-MU 02-PROF FEES RENDERED RE NOR THERN BARITE PROJECT	6 802.87
	D85751	115	820426	READ WAYLAND 820401525131 82/04/22 P0590480 00 MORISON-MU 03-PROF FEES RENDERED RE NOR THERN BARITE PROJECT	5 251.31
	D85819	115	820428	LUMMUS CANADA C04-82-157 82/04/22 P0059046 03 MU RISON NORTHERN BARITE PROJ. COSTS 02/22 TO 03/28	4 003.66
	C80785	115	820303	READ WAYLAND D07755 82/03/03 P0123584 03(MORRISON) ERROR IN AMT PAID ON INV 820121102946 S/B 6262.83 NOT 10,294	4 031.85-
	C81900	115	820309	BACON DONALDS 4771 82/01/19 P0059045 10 MORISON...CHEMICAL MINERALOGIC ANALYSIS	10 132.00
	C81863	115	820311	WESTERN MINER 8112091300 81/12/16 P0124507 12(MORRISON) 1 YEAR SUBSCRIPTION FROM DEC 1981 TO NOV 1982	13.00
	C86558	115	820324	LUMMUS CANADA C03-82-067 82/03/17 P0590460 03/CONSULTING SERVICES FOR PERIOD NOV 22/81 TO FEB 21/82 MORISON	4 193.69
	C86755	115	820326	READ WAYLAND 820131565702 82/02/24 P0590480 00 MORISON-MU 01-PROF FEES RENDERED RE NOR THERN BARITE PROJECT	5 657.02
	CM0640	115	820322	TO CORRECT CODING ERROR ON VCHR A98160 WAS 139-981 S/B 139-049	50.00

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AFE 0601170 NORTHERN BARITE PROJECT - YUKON

PROJECT MANAGER STATUS ACTIVE
COST CENTRE MURRAY JMORISON
CURRENCY 6802000
CDN

			GROSS ESTIMATE	GROSS ACTUAL	DIFFERENCE
	B80213	115	820203	RENEWABLE RES 136 82/01/26 PO845830	126.36
	B84681	115	820221	11-MORRISON, PROFESSIONAL SERVICES TO NOV 30/81 READ WAYLAND 820121102946 82/02/11 PO123584	10 294.68
	AM0642	115	811117	12(MORISON)PROF SERVICE, COMPILING DATA FOR MAPS O URN AND REIN PROPERTY	
	A98135	115	820124	11 DRUM PUBLISHERS LTD INV #58780 11/17 FPO 124921 SUBSCRIPTION CHEQUE 800137	30.00-
	M83164	115	811209	1 YEAR SUBSCRIPTION M MORRISON	30.00
	M85234	115	811216	RENEWABLE 128 81/12/08 PO123576	202.32
	M86113	115	811222	11-MORRISON, PROFESSIONAL FEES & EXPENSES TO OCT 31 LUMMUS CANADA C11-81-679 81/12/02 PO123577	7 627.53
	MM0711	115	811028	MORRISON-COSTS INCURRED FOR NORTHERN BARITE PROJEC T PERIOD 09/21-10/25	
	MM0721	115	810916	ROBERTSON D S 4076 81/12/02 PO123582	4 460.24
	MM0770	115	811117	11-MORRISON, PROFESSIONAL FEES & EXPENSES 10 WHITEHORSE STAR LTD INV03575 10-28	100.00
	L80106	115	811102	PO124513 NEWSPAPER SUBSCRIPTION	
	L82177	115	811108	09 TAYLOR CHEVROLET OLDSMOBILE LTD INV 92-89756 09/16 PO590420	205.52
	L81979	115	811108	TRUCK RENTAL	
	LM0711	115	810911	11 DRUM PUBLISHERS LTD INV 58780 11/17 PO 124921 SUBSCRIPTION CHQ #800137	30.00
	K83756	115	811014	LUMMUS CANADA C10-81-622 81/10/28 PO123577	4 119.36
	K83757	115	811014	MORRISON-TO CONDUCT INITIAL SITE INVESTIGATIONS	
	K83761	115	811014	READ WAYLAND 811106205578 81/11/06 PO123581	20 557.81
				10-M.MORRISON- NORTHERN BARITE PROJ.-CONSULTING SER VICES	
				FRONTIER HELI 3364 81/10/14 PO590410	656.42
				10-MORRISON-RENTAL OF HELICOPTER	
				09 KLONDIKE AIR LTD INV 405 09/11	700.00
				PO 590430 CHARTERED HELICOPTER CHARGES	
				READ WAYLAND 810922 81/09/22 PO123575	6 703.71
				08-MORRISON, PROF SERV. AUG 1-31/81	
				READ WAYLAND 810821 81/08/21 PO123575	1 658.60
				08-MORRISON, PROF. SERV. TO JULY 31/81	
				RENEWABLE RES 118 81/09/28 PO123576	6 593.19
				08-MORRISON, PROF. SERV. UP TO AUG. 31/81	
				0.00 17 855.48 17 855.48-	

463 TRAVEL - EMPLOYEE

CLEARED	VOUCHER	VENT CODE	DATE	DESCRIPTION	VOUCHER AMOUNT
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CANMAR

AFE 0601170 NORTHERN BARITE PROJECT - YUKON

PROJECT STATUS
MANAGER MURRAY MORISON
COST CENTRE 6802000
CURRENCY CDN

			GROSS ESTIMATE	GROSS ACTUAL	DIFFERENCE
GM0615	115	820728	03/24 CREDIT FOR TKT 1454253337 MORISON		294.00-
DM0615	115	820426	TRANSFER COST FROM 6751004 TO SPECIFIED AFE'S		825.50
			AIR TICKETS PD ON PO 36C8890 AND 36C8880		
			FEB/MARCH/APRIL		
CM0650	115	820329	TRSF FROM 6751004 509 203 TO SPEC AFES JAN AND		359.50
			FEB AS PER SUMMARY COMMER AIRLINE TKTS		
B81782	115	820209	MORISON M J 82013124143 82/02/03 PO		407.23
			01-COTTERILL-EXP CLAIM FOR M.MORISON, DEC 15 TO		
			JAN 31/82 YELLOW, VAN		
MM0679	115	810810	AIR CANADA M MORRISON		701.50
			YYC-HALIFAX 81-08-10 VOUCHER LH0160		
LH0076	115	811118	BUCKLEY RONALD A EXP ACCT		705.39
			SPEC PROJ		
LH0158	115	811130	AIR CAN 81/09/09 MORRISON		453.50
K87320	115	811023	MORISON M J 81101664348 81/10/21 PO		643.48
			10 EXPENSE ACCT FOR MURRAY MORISON FROM 09/30 TO		
			10/16/81		
K89401	115	811029	TRANS NOR 54984 81/10/01 PO123579		812.99
			AIR CHARTER		
K89402	115	811029	TRANS NOR 54987 81/10/01 PO123579		558.93
			AIR CHARTER		
K89403	115	811029	TRANS NOR 49038 81/10/14 PO123580		865.67
			AIR CHARTER		
K89404	115	811029	TRANS NOR 55237 81/10/09 PO120638		563.85
			AIR CHARTER		
K89405	115	811029	TRANS NOR 55238 81/10/09 PO120638		1 307.05
			AIR CHARTER		
K89406	115	811029	TRANS NOR 55239 81/10/09 PO120638		1 142.68
			AIR CHARTER		
K89407	115	811029	TRANS NOR 53913 81/10/13 PO123578		1 323.97
			AIR CHARTER		
K89408	115	811029	TRANS NOR 53908 81/10/13 PO123578		1 222.13
			AIR CHARTER		
K89409	115	811029	TRANS NOR 53904 81/10/13 PO123578		1 425.82
			AIR CHARTER		
K89410	115	811029	TRANS NOR 53900 81/10/13 PO123578		1 323.97
			AIR CHARTER		
K89411	115	811029	TRANS NOR 53901 81/10/13 PO123578		1 425.82
			AIR CHARTER		
K89412	115	811029	TRANS NOR 3-43329 81/10/13 PO123578		73.00
			AIR CHARTER		
K89413	115	811029	TRANS NOR 3-43328 81/10/13 PO123578		73.00

DOME PETROLEUM LIMITED
AFE CUMULATIVE
DETAIL REPORT

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AFE 0601170 NORTHERN BARITE PROJECT - YUKON

PROJECT MANAGER STATUS
COST CENTRE MURRAY
CURRENCY 6802000 J MORISON
CDN

			GROSS ESTIMATE	GROSS ACTUAL	DIFFERENCE
	J87239	115	810924	AIR CHARTER MORISON M J 810820128645 81/09/04 PO 08 RELOCATION AND TRAVEL COSTS - M.MORISON, 08/17 TO 08/20/81	1 286.45
	J89402	115	810929	MORISON M J 81092162805 81/09/28 PO 09 EXPENSE ACCT FOR MURRAY MORISON FROM 09/15 TO 09/21/81 WHITEHORSE	628.05
469 TRAVEL - NON EMPLOYEE			13 000.00	3 611.93	9 388.07

	CLEARED	VOUCHER	VENT CODE	DATE	DESCRIPTION	VOUCHER AMOUNT
		CM0632	115	820312	TSF COSTS FROM 777-881-9992802 TO 139-469-0601170 EMPLOYEE I-MORISON MJ-INTERVIEW EXPS VCHR D84524	1 039.31
		A85519	115	820128	AIR CANADA 140000000000 82/01/04 PO125439 10/KING COMMERCIAL TICKETING FOR PERIOD ENDING OCT/81	529.50
		K83612	115	811014	FRONTIER HELI 2973 81/08/28 PO120652 07/PAYNE...CHARTER FLIGHT RE:BARITE PROJECT	1 336.77
		J80240	115	810902	CALG INN 455173 81/07/28 PO120089 81/06-M.MORRISON,HOTEL FOR MURRAY MORRISON.	403.95
		J80241	115	810902	CALG INN 457913 81/08/31 PO120089 81/06-MORRISON,HOTEL	302.40
472 FREIGHT				0.00	621.89	621.89-
		L86800	115	811125	WHITE PASS 511651 81/10/05 PO590440 MORRISON SHIPMENT DAWSON TO VANCOUVER	621.89
500 SALARIES AND WAGES				0.00	1 290.57	1 290.57-
		FM0662	115	820616	ADJ APPLIED BURDEN JAN 1 - MAY 31 TO REFLECT NEW 82 RATES	26.44
		BM0607	115	820228	PAYROLL FOR PERIOD ENDING 820228	375.80
		HMD607	115	810831	PAYROLL FOR PERIOD ENDING 810831	888.33-
		HMF607	115	810831	PAYROLL FOR PERIOD ENDING 810831	888.33
		HM0607	115	810831	PAYROLL FOR PERIOD ENDING 810831	888.33
711 CONTINGENCY-AFE BUDGET USE ONLY				20 000.00	0.00	20 000.00
981 1981 ACCRUAL				0.00	0.00	0.00
		CM0640	115	820322	TO CORRECT CODING ERROR ON VCHR A98166 WAS 139-981 S/B 139-049	50.00-
		BM0642	115	820223	TO REVERSE JV MM0768 FOR 1981 ACCRUAL	1 100.00-

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AFE 0601170 NORTHERN BARITE PROJECT - YUKON

STATUS
 PROJECT MANAGER
 COST CENTRE
 CURRENCY
 ACTIVE
 MURRAY
 6802000
 CDN
 J MORISON

			GROSS ESTIMATE	GROSS ACTUAL	DIFFERENCE	
A84463	115	820125	NORTHERN MINE	P0130 81/11/17	P0124506	35.00
A98166	115	820126	11-MORRISON- SUBSCRIPTION	1762 81/12/01	P0124508	15.00
MM0768	115	811231	NORTHERN NEW SUBSCRIPTION 1981 A/P GEN ACCRUAL CAPITAL PROJECT DETAIL WITH ACCT JOURNAL VOUCHER MM0768 PAGES 4 & 5 OF JV			1 100.00

AFR600-600

D O M E P E T R O L E U M L I M I T E D
AFE CUMULATIVE
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AFE 0601170 NORTHERN BARITE PROJECT - YUKON

STATUS
PROJECT MANAGER
COST CENTRE
CURRENCY

ACTIVE
MURRAY
6802000
CDN

JMORISON

Completion Report

AFE 0601170 RECAP

GROSS ESTIMATE	150 000.00	LESS GROSS ACTUAL	138 586.85	DIFFERENCE	11 413.15
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VENT
CODE

PARTICIPANT

NAME

PERCENTAGE

AMOUNT

115

01030

CANMAR DIVISION

100.000000

138 586.85

TIME AND COST STATEMENT - URN PROPERTY



Field Personnel:

W.S.Read, P.Eng., Cobble Hill, B.C. Sept.14-16,1981 plus 1 day travel	4 days @ \$400	\$1,600.00
Steven Read, Prince Rupert, B.C., Drill Operator and Sampleman. Sept.14-16,1981 plus 1 day travel	4 days @ \$133.73	534.92
Brad Riffal, Coquitlam, B.C., Sampleman Sept.14-16, 1981, plus 1 day travel.	4 days @ \$108.16	432.64
Transportation Ross River-Faro, Sept.13.	\$60.00	
Hotel - Faro, Sept.13,14, 1981	104.90	
Meals, etc., in Faro	<u>63.96</u>	228.86
Freight on drill return from Faro		<u>100.94</u>
		\$2,897.36

Plus - Accommodation & Meals, Cyprus Anvil Corp.
- Helicopter: Minesite to property
- Freight on samples, Faro to Vancouver
- Truck rental, Faro.

Analysis and Compilation after October 5, 1981:

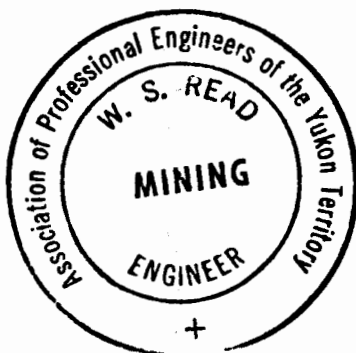
Assaying - Nov.Dec.1981, Bacon-Donaldson (from quote) 62 samples @ \$49.00	3,038.00
W.S.Read,P.Eng. - Compilation of survey and geological field data, sample locations, assay averages and preparation of the related plans,section and table of weighted agerages. 4 days, December 1981	1,600.00
For study of data and preparation of report 3 days in January 1982	<u>1,200.00</u>
<u>Total</u> - - - - -	\$5,838.00

NOTE:

Time and costs relating to the Urn Property that
were grouped with other properties in the project
study are not included in this cost statement.

Respectfully submitted,


Wayland S. Read, P.Eng.



091369