Report on the Itsi, Vost, River
and Pre Mineral Claims,
Watson Lake M.D., Yukon Terr.,
for
Abacorn Syndicate

January 12, 1976 F. Holcapek, P. Eng.

AGILIS ENGINEERING LTD.
CONSULTING ENGINEERS & GEOLOGISTS
107-325 HOWE STREET, VANCOUVER, B.C. V6C 1Z7

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

$ 24,000.00

[signature]
Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 of the Yukon Quartz Mining Act.

B.R. BAXTER
Supervising Mining Recorder

[signature]
Commissioner of Yukon Territory

TABLE OF CONTENTS

ILLUSTRATIONS

Geochem Map: Scale 1" = 400'

Geology Map: Scale 1" = 400'

Property Map

APPENDIX

Statistical table for lead and zinc.

Probability Plot: Zinc

Probability Plot: Lead

Total Heavy Metal Test Procedure.

Zinc Spray and Spot Test Procedure.

Chemex Laboratory Procedure.

REPORT ON THE ITSI, VOST, RIVER, & PRE - MINERAL CLAIMS

WATSON LAKE MINING DIVISION, YUKON TERRITORY

FOR

ABACORN SYNDICATE

1-00 INTRODUCTION:

The Abacorn Syndicate was formed during spring of 1975 to continue a regional program started in 1973 to search for sedimentary zinc mineralization associated with Ordovician Shales in the Selwyn Basin, Howard Pass Area.

A crew consisting of Mr. D. Reinke, prospector, and Mr. M. Morgan, helper, under the supervision of the writer, prospected the area south of Itsi Lake, approximately 20 miles east of Canol Road in the Yukon Territory. This report is based on several visits to the area and on evaluation of zinc mineralization found.

During the course of the prospecting program numerous soil, rock and water samples were taken for geochemical analysis, regional mapping conducted, and 120 mineral claims were located.

2-00 LOCATION AND ACCESS:

The Itsi Lake zinc property of Abacorn Prospecting Syndicate consists of a total of 120 mineral claims, located approximately 120 miles north of Ross River, 5 miles south of Itsi Lake and 20 miles east of the Canol Road.

Access to the property is from Ross River either by truck along the Canol Road to Jeff Lake and from there by helicopter to the property, or by helicopter directly to the property from Ross River, a distance of 120 miles.

3-00 PHYSIOGRAPHY:

The claim group straddles a westerly trending mountain chain, south of Itsi Lake. Numerous creeks and gullies disect the property, forming steep slopes and slide areas.

Maximum relief on the property is approximately 1,500 feet. The highest point rises 6,500 feet above sea level.

Talus slopes, bluffs and good rock exposures prevail above the 5,500-foot elevation. The lower areas consist of steep grassy slopes or are covered by scrub spruce, arctic birch or willows along creek beds. The main valley of the Prevost River to the south of the property, is a wide, in places swampy glacial valley, covered by stands of spruce, patches of willows, separated by grass areas creating a park like setting. Soil creep along the slopes, frost heaves in the valley and extensive mud slides along the course of secondary streams suggest the presence of permafrost.

Glacial erratics are common along the lower reaches of the property, but absent from the high ridges and peaks, indicating that the high portions of the property have not been glaciated.

The predominance of steep V-shaped valleys, hanging valleys or sudden changes of the gradient along creeks, e.g. from low in the upper part to extremely steep in the lower part of the creeks, suggest extremely rapid erosion since waning of the glacial period.

4-00 PROPERTY:

The property consists of the following contiguous mineral claims located in the Watson Lake Mining Division, Yukon Territory.

Claim Name:		Record No.:
Itsi	1 - 48	Not available
Pre	1 - 24	" "
Vost	1 - 24	" "
River	1 - 24	" "

5-00 HISTORY:

The first detailed prospecting program in the area of the claim was contacted by Spartan Explorations Ltd. during the late 1960's. The discovery of a skarn float assaying 3% WO_3 led to the staking of the Joy Claim Group. During the following years numerous companies contacted regional soil and stream geochemical programs. Several silt anomalies were discovered during the period. No zinc mineralization was found in place and hence the regional programs were discontinued.

During 1972 and 1973, following discovery of zinc mineralization in the Howard Pass Area by Placer Development Ltd., associated with

Ordovician Shales, the area became active again. Placer Development, in 1973, Amax Explorations in 1974-75, and Cyprus-Anvil in 1975 were active in the area. The objective of this work was to locate and check zinc anomalies found by previous exploration and re-evaluate these under the light of new knowledge gained from the Howard Pass deposits.

During 1973 the Selwyn Syndicate prospected the north-western extent of the Selwyn Basin. Work was concentrated south of McMillan Pass.

6-00 GEOLOGY:

Geological mapping by D. Reinke completed on the property was of reconnaissance nature only. Several traverses were carried across the south-eastern portion of the property by the writer to clarify the stratigraphy and structural setting of the area. Spot checks of areas of interest on the rest of the property were made.

6-10 Stratigraphy:

Ordovician: Road River Formation:

Upper Siliceous Shales:
This unit has not been definitely identified but float of light greyish shales have been observed along steep banks in creeks.

Clay Flake Mudstone:
The unit sonsists of a limey to dolomitic clay-mudstone having small black flakes and mud balls. Pyrite has been found associated with the rock.

Chert Unit: Limey and Shaley Horizons:
Chert bands consist of black, hard chert weathering, forming talus slopes containing square fragments, secondary zinc carbonates, minor galena and boxwork after sphalerite.

Lower Shale Unit:
Siliceous dark grey to greenish shales showing rust on weathered surfaces.

Transitional Limestone:
Dark grey limestone.

Cambrian: Wavy Banded Limestone:
Dolomitic in places containing lenses or discontinuous bands of dark limestone and pyrite nodules.

6-20 Structural Geology:

During the course of the mapping it became apparent that the attitude of the rock units on a local scale is highly variable.

In general the units trend westerly having steep dips to the south. The distribution of rock types suggest the presence of a slightly northerly overturned anticlinal fold with the axis plunging flatly to the west.

Repetition of the Clay Flake Mudstone unit suggests secondary folding. On a local scale F_2 and F_3 folding is prominent, but the setting is not clearly understood at this time.

Faulting is indicated in several places but detailed mapping is necessary to clarify the setting.

6-30 Mineralization:

During the course of preliminary mapping the following types of mineralization have been observed on the property:

1) Fine grained pyrite as dissemination and discontinuous bands within the lower and upper siliceous shales.

2) Pyrite as coarse nodules or balls within the Wavy Banded Limestone and thin bedded black shales.

3) Pyritic bands in black cherts with a reddish fine grained mineral, sphalerite? and very minor specks of galena found as float in Canyon Creek below the Pre # 1 showing.

4) Smithsonite and hydrozincite as cleavage fracture filling, bands up to 1/2 inch parallel to the bedding at the Itsi # 2 and Vost # 1 showings.

5) Travertine as surface deposit, horizontally layered carrying zinc. These deposits are located within V-shaped valleys or along steep slopes and appear to be past glacial in age, at the Pre # 1, Pre # 2 and Vost # 1 showings.

7-00 MINERAL SHOWINGS:

7-10 Itsi #1:

This showing is located within the mountain pass at an elevation of 5,000 feet. It consists of a series of talus slopes consisting essentially of banded black chert, a white mineral has been observed as fracture filling and coating. A test of the mineral with "zinc spray solution" was positive.

Assays of material from talus vary from 0.6% to 1.64% zinc. One sample was checked for silver and assayed 0.06 oz.

These assays are not considered to be representative since down slope creep material from the side hill and deep weathering will contaminate and leach the original metal content.

7-20 Itsi # 2:

The Itsi # 2 showing is located within the depression on a southerly sloping mountain nose. Local soil creep is pronounced and foreign talus originating from uphill is plentiful.

The mineralization exposed is of two types:

a) Secondary zinc minerals as fracture fillings or bands in cherts.

b) Sphalerite boxwork with minor galena associated with cross cutting quartz veins or veinlets. This type appears to be remobilization of sphalerite, caused by a quartz porphyry dyke outcropping above and to the west of the showing.

The mineralization has been traced for a minimum distance of 300 feet across the mountain nose.

Assays of float material and black chert with no visible sulfides range from 0.28% to 39.7% zinc.

7-30 Vost # 1:

The Vost # 1 showing was found by water sampling using the total heavy metal kit. It is located approximately 3,000 feet south-west of the Itsi # 1 showing.

The showing consists of secondary zinc mineralization within a highly fractured and cleaved black chert unit. The chert forms a talus slope which consists of square rock fragments up to 2 inches thick. The chert is overlain by a strongly oxidized unit.

Outcrops are poor since this is essentially a slide area. Travertine carrying variable amounts of secondary zinc occures as layers, boulders or as cement along the margin of the slide.

Zinc assays are in general less than 0.5% but can be as high as 1.5% in the travertine. The observed rock outcrops are strongly weathered and hence deep weathering explains the low assays.

7-40 Pre # 1:

Travertine deposits assaying up to 1.5% zinc from the main part of the deposit. The showing is located along the 50 foot high waterfall and consists of transported material.

The geological setting of this area is not clear and little or no mapping has been completed in this area.

7-50 Pre # 2:

The Pre # 2 showing is located approximately 3,000 feet south-west of Itsi # 2. It consists of a well banded travertine deposit with dimensions of about 300 feet along the creek, 40 feet wide and in excess of 10 feet thick. Assays up to 2% zinc have been obtained from the travertine. This is a transported deposit.

The Clay Flake Mudstone has been found to outcrop approximately 500 feet upstream and float consisting of banded chert, containing bands of sulfides, sphalerite, pyrite, galena has been found in the creek. The Clay Flake Mudstone is considered to be a marker horizon overlaying the zinc bearing chert unit and usually outcropping within about 100 feet of mineralization.

8-00 GEOCHEMICAL SURVEY:

Three types of chemical aides have been employed to help locate areas of potential zinc mineralization:

1) Total Heavy Metal Kit for testing soils, water and rock fragments.

2) Zinc spray solution to test outcrops or floats for secondary zinc minerals.

3) Soil sampling on a grid basis to locate areas of interest.

This method was used as follow up mainly if No. 1 was positive.

All samples were shipped to Chemex Laboratories in North Vancouver for analysis.

8-10 Total Heavy Metal Test:

8-11 Creek Water:

Procedure:

The procedure for soil sampling was changed for water testing. A total of approximately 5 ml water was put into the graduated test tube and no buffer was added. The dithizone was added in 5 ml steps and if after the maximum of 10 ml the solution was anomalous in zinc, (red in colour) half of the liquid was emtied and the test tube was filled again. This was carried on until the blue colour was obtained.

Results:

The water sampling program outlined four creeks containing anomalous concentrations of zinc. These creeks are as follows:

Canyon Creek:

Approximately 800 feet upstream from junction with Zinc Creek. Rocks outcropping are steeply dipping, (black shales containing pyrite balls and nodules). Travertine float found in the creek and at the upstream limits of the anomaly, assays up to 1.5% zinc. The source of the zinc anomaly has been located, but the Clay Flake Mudstone Unit will cross the creek and hence the mineralized cherts. The travertine appears to have been derived from the limey component of the Clay Flake Mudstone, thereby changing the acidity of the creek water and hence causing precipitation of zinc ions with the carbonates.

Zinc Creek:

A 300 foot section of the creek is in the lower range of the anomalous value. The same chemical conditions exist here as on Canyon Creek. Zinc mineralization has been found in place approximately 2,000 feet north-east along the ridge. The mineralized chert unit and the overlaying Clay Flake

Mudstone cross the creek approximately 500 feet upstream from the anomaly.

North-west fork of Zinc Creek:

Several anomalous readings were obtained but will have to be checked.

Show Creek:

A strong total heavy metal anomaly has been located at the head of the north-west fork. Secondary zinc mineralization has been located along the bank of the creek. Talus and slide material mixed with travertine assaying zinc have been found along the east bank. This area is thought to be the source area, with the travertine originating from the limey chert horizon outcropping, although strongly weathered and oxidized in several places. The Clay Flake Mudstone has been found as talus uphill from the chert unit.

Reinke Creek:

This creek has not been checked by the prospector, but a geochemical silt sampling program completed by Spartan Explorations Ltd. located a coinciding zinc and lead anomaly. The possible source for this anomaly is the Itsi # 1 showing. The Clay Flake Mudstone outcrops along the southern ridge and hence the mineralized chert unit is possibly outcropping or forming sub outcrops along thes southern creek bank.

8-12 Soils:

Procedure:

The procedure as shown on the attached sheet was followed, except, if the sample solution turned blue before a total of 10 ml, 0.002% dithizone solution was added, it was taken as background reading and was not followed up.

Results:

Since the soil samples were taken at random, no attempt was made to plot the results. If strongly anomalous soils were encountered, a line was chained and flagged across the area and soil samples were taken at 200 foot intervals to be shipped to Vancouver for analysis.

8-20 Zinc Spray Test:

Procedure:

As outlined on attached sheet.

Results:

Several areas of rock outcrops and talus slopes give positive reaction. The areas have been assayed.

Assay values have been plotted on the geological map.

8-30 Soil Sampling on Grid Basis:

Field Procedure:

Grid lines following the claim location lines have been established by chain and compass. The lines have been flagged and sample stations have been marked at 200 foot intervals.

Samples were taken from a depth of 3 to 6 inches, depending on the development of the soil horizon. If possible the B horizon was sampled. In general the soil development is poor in the area. Talus slopes, slide areas and down hill creep of soil are common on the claim group.

Lab Procedure:

All samples have been submitted to Chemex Laboratories for analysis. Lab procedures used are attached. All samples were analysed for zinc and a portion of the samples for lead.

8-31 Results:

Lead:

A total of 144 samples were analysed for lead. The arithmetic probability plot shows that not enough samples were present to allow a definite interpretation. Background value for lead appears to be 27 ppm.

Zinc:

A total of 354 samples were analysed for zinc. The probability plot shows a definite erratic distribution.

If the stratigraphic column underlaying the property is taken into consideration it becomes apparent that each unit has a definite geochemical expression with the anomalous or high zinc values being associated with the chert or limey chert unit, The anomalous value is taken as 950-plus ppm, accounting for 9.13% of the sample population.

8-32 Interpretation:

Lead:

More detailed sampling will be necessary to definitely delineate the lead distribution.

Zinc:

From the limited soil sampling completed on the property it becomes apparent that the anomalous zinc values show a close relationship to the distribution of the cherty unit. Peak values in the order of 4,000-plus ppm have been encountered in vicinity of the known zinc mineralization.

9-00 CONCLUSIONS:

1) Regional geological mapping confirmed that the area is underlain by the favourable Ordovician Sediments known to be the host for syngenetic zinc mineralization in the Howard Pass Area.

2) Prospecting located 5 showings, 3 of them are in place or near to bedrock and 2 are definitely transported travertine carrying anomalous amounts of zinc.

3) Geochemical stream water sampling using the total heavy metal kit located several streams anomalous in zinc.

4) Soil sampling on a grid basis outlined several anomalous areas in vicinity of the known showings and in overburden covered areas.

5) The soil anomalies appear to be associated with the Ordovician Chert Units.

6) It was found that the Clay Flake Mudstone can be used as a marker horizon to locate the most favourable areas for further exploration.

7) Rock samples collected from in place, talus slopes or slide areas assayed from 0.28% to 39% zinc.

8) The property warrants further follow up work.

10-00 RECOMMENDATIONS:

The following program is recommended:

1) Geological mapping at 1 inch = 400 feet, using ortho airphotos as a base to locate the surface trace of the favourable sedimentary unit.

2) Geochemical sampling on a grid basis where the favourable sedimentary unit is covered by overburden.

3) Trenching of known showings.

4) Diamond drilling using at least AQ wireline where trenching does not reach fresh bedrock or where rock exposures are deeply weathered.

11-00 COST ESTIMATE:

A total of at least $ 70,000.00 should be made available for the above outlined program allowing for two drill holes, 400 feet each.

Respectfully submitted

Vancouver, B.C.
November 1975

F. Holcapek, P. Eng.
Geologist

APPENDIX

ITSI AND VOST - CLAIMS

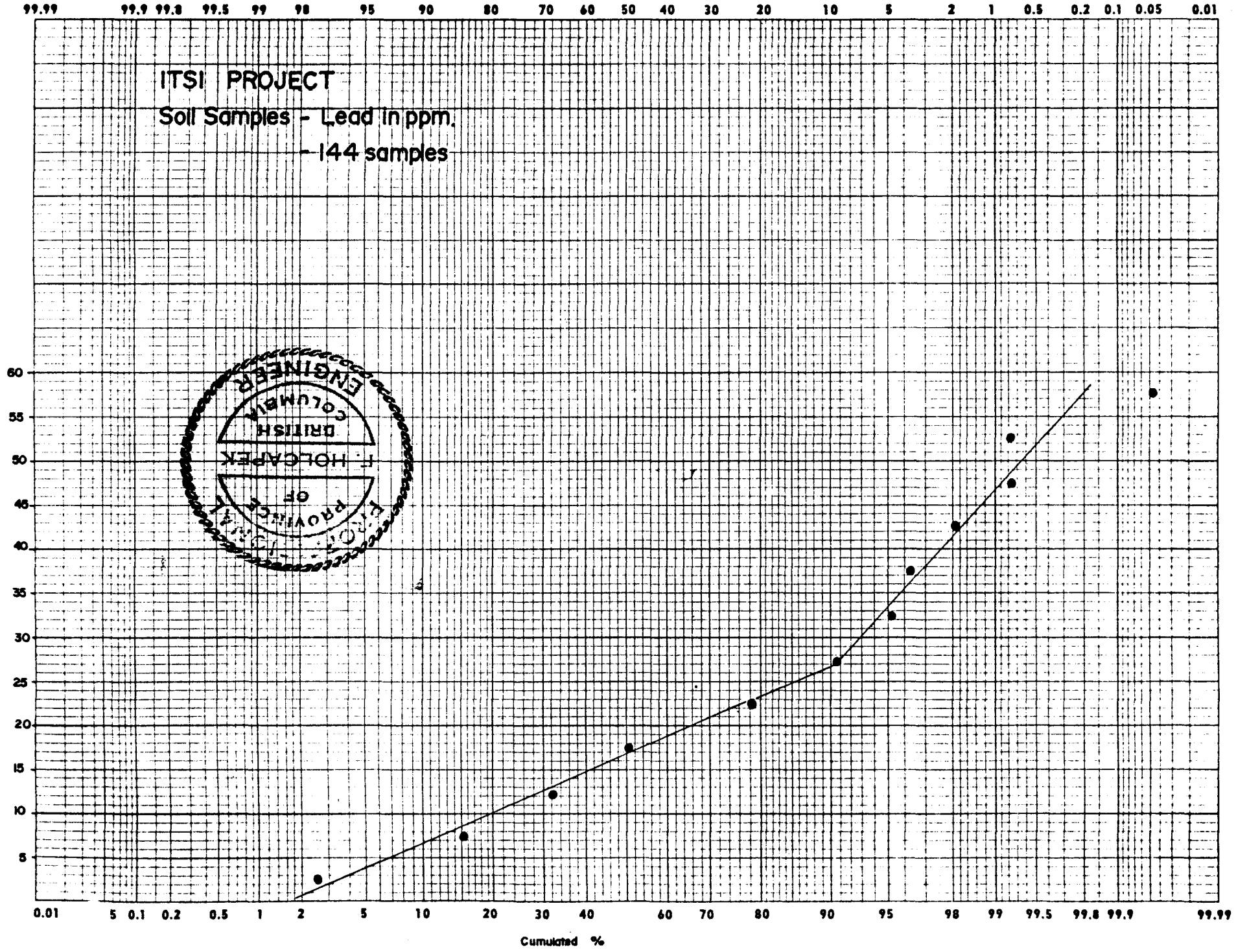
ZINC

Interval:	No. of samples:	%:	Accumulated %:
0 - 50	31	8.78	8.78
50 - 100	48	13.59	22,37
100 - 150	51	14.44	36.81
150 - 200	57	16.14	52.95
200 - 250	30	8.49	61.44
250 - 300	21	5.94	67.38
300 - 350	21	5.94	73.32
350 - 400	18	5.10	78.42
400 - 450	3	0.84	79.26
450 - 500	15	4.24	83.50
500 - 550	5	1.41	84.91
550 - 600	4	1.13	86.04
600 - 650	1	0.28	86.32
650 - 700	5	1.41	87.73
700 - 750	6	1.69	89.42
750 - 800	3	0.84	90.26
800 - 850	1	0.28	90.54
850 - 900			
950 -1000	7	1.98	92.52
1,000	26	7.36	99.88
	353 samples		

VOST CLAIMS

LEAD:

0 - 5	4	2.77	2.77
5 - 10	19	13.19	15.96
10 - 15	25	17.36	33.32
15 - 20	26	18.05	51.37
20 - 25	39	27.08	78.45
25 - 30	18	12.50	90.95
30 - 35	6	4.16	95.11
35 - 40	2	1.38	96.49
40 - 45	3	2.08	98.57
45 - 50	1	0.69	99.26
50 - 55			
55 - 60	1	0.69	99.95
	144 samples		



CLEARPRINT PAPER CO. NO. C327 ARITHMETIC PROBABILITY. PRINTED IN U.S.A. ON CLEARPRINT TECHNICAL PAPER NO. 1015
CLEARPRINT CHARTS

ITSI PROJECT

Soil Samples - Zinc in ppm.
- 354 samples

anomalous

mixed zone

background

Zinc in ppm

1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 150 100 50 0

99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01

0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99

Cumulated %

YUKON TERRITORY

ABACORN SYNDICATE

ITSI, RIVER, PRE & VOST CLAIMS

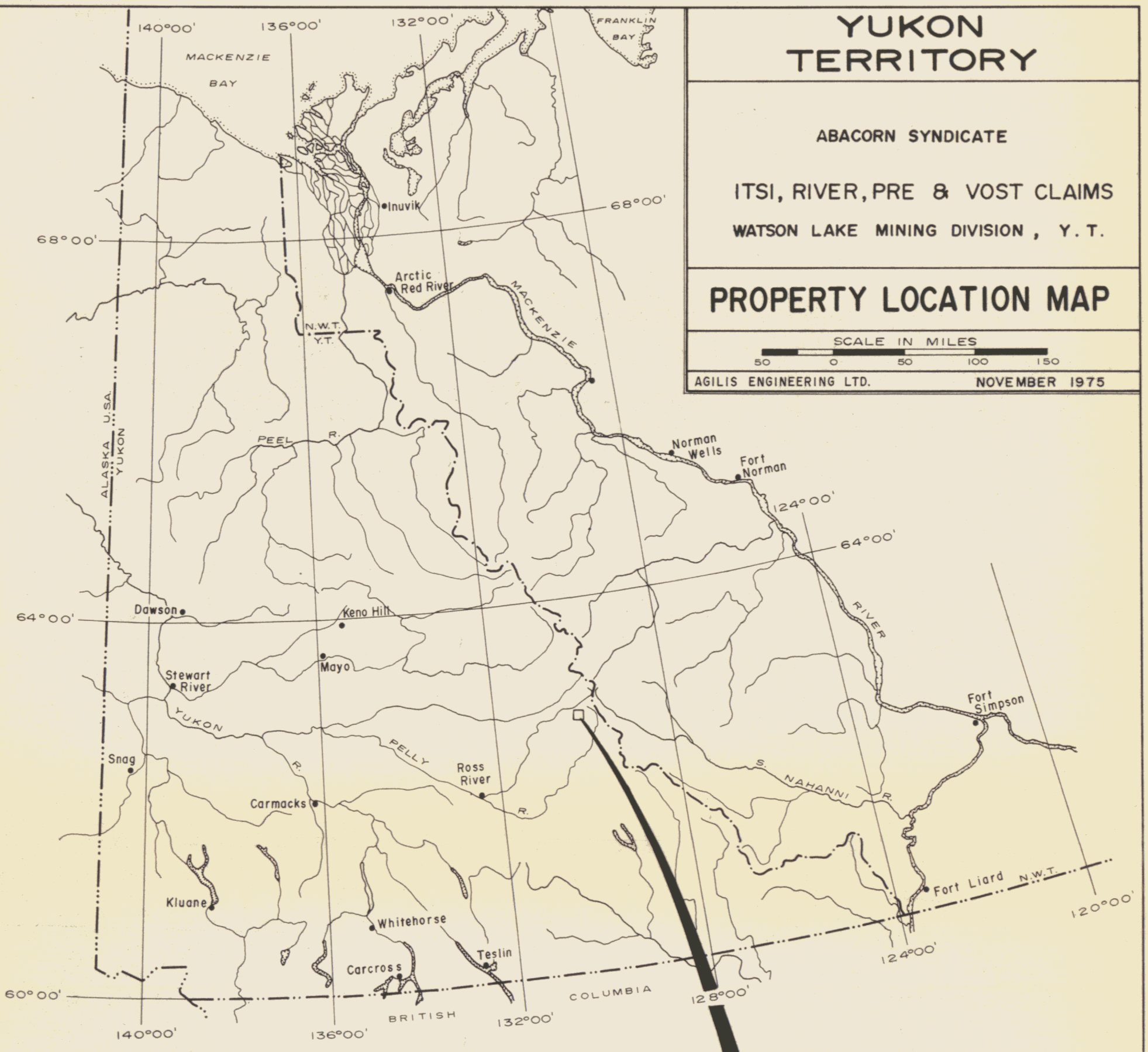
WATSON LAKE MINING DIVISION, Y.T.

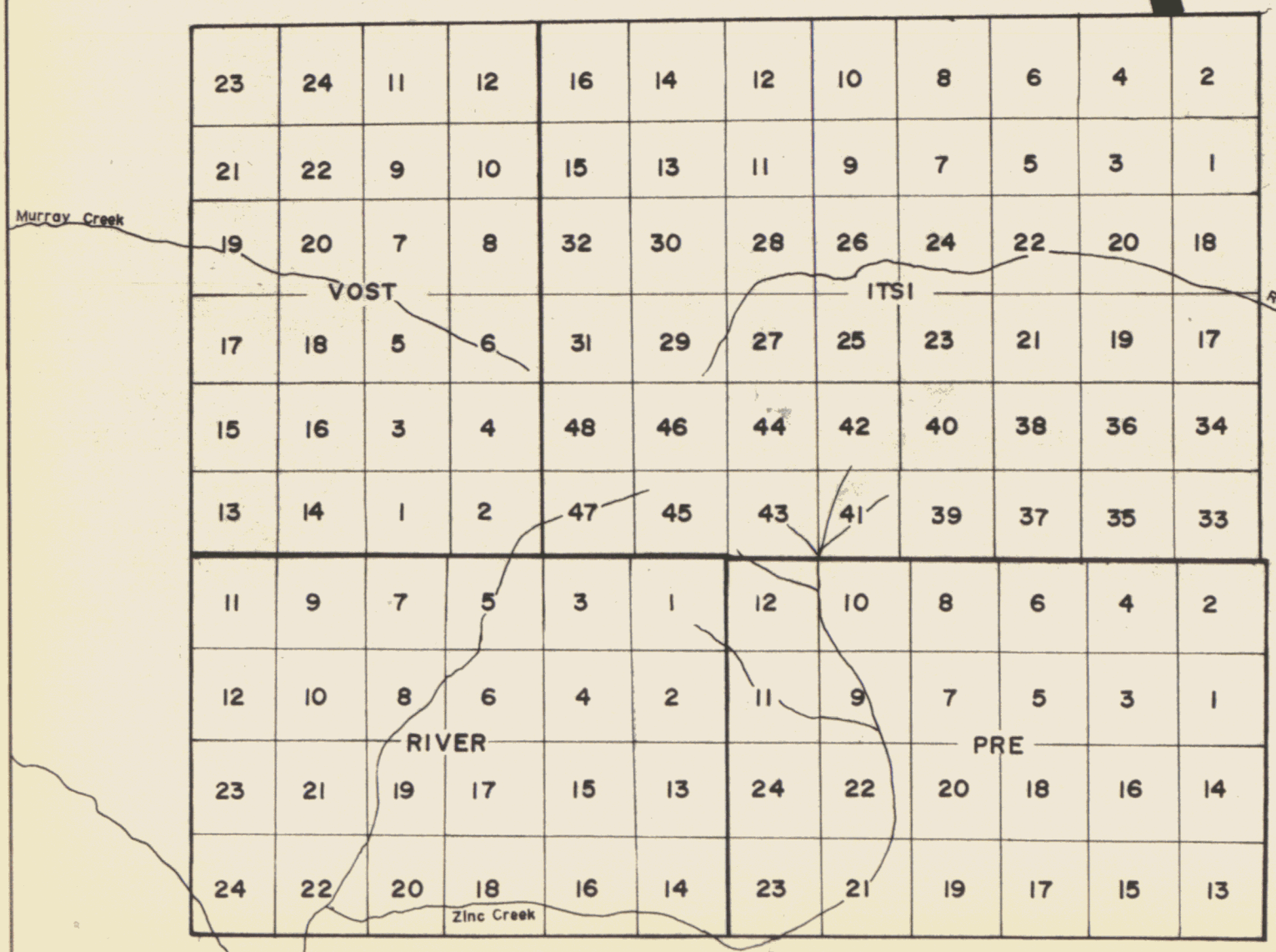
PROPERTY LOCATION MAP

SCALE IN MILES

50 0 50 100 150

AGILIS ENGINEERING LTD. NOVEMBER 1975





SCALE 1 inch = 1/2 mile

VOST 23 VOST 24 VOST 11 VOST 12 ITSI 16 ITSI 14 ITSI 12 ITSI 10 ITSI 8 ITSI 6 ITSI 4 ITSI 2

VOST 21 VOST 22 VOST 9 VOST 10 ITSI 15 ITSI 13 ITSI 11 ITSI 9 ITSI 7 ITSI 5 ITSI 3 ITSI 1

VOST 19 VOST 20 VOST 7 VOST 8 ITSI 32 ITSI 30 ITSI 28 ITSI 26 ITSI 24 ITSI 22 ITSI 20 ITSI 18

VOST 17 VOST 18 VOST 5 VOST 6 ITSI 31 ITSI 29 ITSI 27 ITSI 25 ITSI 23 ITSI 21 ITSI 19 ITSI 18

VOST 15 VOST 16 VOST 3 VOST 4 ITSI 48 ITSI 46 ITSI 44 ITSI 42 ITSI 40 ITSI 38 ITSI 36 ITSI 34

VOST 13 VOST 14 VOST 1 VOST 2 ITSI 47 ITSI 45 ITSI 43 ITSI 41 ITSI 39 ITSI 37 ITSI 35 ITSI 33

RIVER 11 RIVER 9 RIVER 7 RIVER 5 RIVER 3 RIVER 1 PRE 12 PRE 10 PRE 8 PRE 6 PRE 4 PRE 2

RIVER 12 RIVER 10 RIVER 8 RIVER 6 RIVER 4 RIVER 2 PRE 11 PRE 9 PRE 7 PRE 5 PRE 3 PRE 1

RIVER 23 RIVER 21 RIVER 19 RIVER 17 RIVER 15 RIVER 13 PRE 24 PRE 22 PRE 20 PRE 18 PRE 16 PRE 14

L 4N
L 0 00S
L 4S
L 8S
L 12S
L 16S
L 20S
L 24S
L 28S
L 32S
L 36S
L 40S
L 44S
L 48S
L 52S
L 56S
L 60S
L 64S
L 68S

Murray Creek
Reinke Creek
Snow Creek
Canyon Creek
Zinc Creek
Camp Creek
falls
x camp
camp x
Xcamp
x camp

ABACORN SYNDICATE

RIVER, PRE, VOST and ITSI CLAIMS

GEOCHEMICAL MAP

scale in feet

400 200 0 400 800

AGILIS ENGINEERING LTD. OCTOBER 1975

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA F. HOLCAPEK

VOST 23 VOST 24 VOST 11 VOST 12 ITSI 16 ITSI 14 ITSI 12 ITSI 10 ITSI 8 ITSI 6 ITSI 4 ITSI 2

VOST 21 VOST 22 VOST 9 VOST 10 ITSI 15 ITSI 13 ITSI 11 ITSI 9 ITSI 7 ITSI 5 ITSI 3 ITSI 1

Murray Creek

x camp

Reinke Creek

VOST 19 VOST 20 VOST 7 VOST 8 ITSI 32 ITSI 30 ITSI 28 ITSI 26 ITSI 24 ITSI 22 ITSI 20 ITSI 18

VOST 17 VOST 18 VOST 5 VOST 6 ITSI 31 ITSI 29 ITSI 27 ITSI 25 ITSI 23 ITSI 21 ITSI 19 ITSI 18

camp x

VOST 15 VOST 16 VOST 3 VOST 4 ITSI 48 ITSI 46 ITSI 44 ITSI 42 ITSI 40 ITSI 38 ITSI 36 ITSI 34

x camp

VOST 13 VOST 14 VOST 1 VOST 2 ITSI 47 ITSI 45 ITSI 43 ITSI 41 ITSI 39 ITSI 37 ITSI 35 ITSI 33

RIVER 11 RIVER 9 RIVER 7 RIVER 5 RIVER 3 RIVER 1 PRE 12 PRE 10 PRE 8 PRE 6 PRE 4 PRE 2

Snow Creek

x camp

falls

Canyon Creek

Zinc Creek

Camp Creek

RIVER 12 RIVER 10 RIVER 8 RIVER 6 RIVER 4 RIVER 2 PRE 11 PRE 9 PRE 7 PRE 5 PRE 3 PRE 1

RIVER 23 RIVER 21 RIVER 19 RIVER 17 RIVER 15 RIVER 13 PRE 24 PRE 22 PRE 20 PRE 18 PRE 16 PRE 14

L 4N
L 0 00S
L 4S
L 8S
L 12S
L 16S
L 20S
L 24S
L 28S
L 32S
L 36S
L 40S
L 44S
L 48S
L 52S
L 56S
L 60S
L 64S
L 68S

LEGEND

- SILURIAN SHALES (undifferentiated Road River Formation)
- MUDFLAKE STONE
- BLACK SHALEY CHERT
- WAVY BANDED LIMESTONE
- QUARTZ PORPHYRY DYKE
- TRAVERTINE & ZINC or LIMONITE GOSSAN

ABACORN SYNDICATE

RIVER, PRE, VOST and ITSI CLAIMS

DETAILED GEOLOGICAL MAP

scale in feet
400 200 0 400 800

AGILIS ENGINEERING LTD. OCTOBER 1975

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA F. HOLCAPEK