

787

GEOLOGICAL, GEOCHEMICAL and GEOPHYSICAL
REPORT ON THE
SAM ROSS CREEK PROPERTY

June 1966

Norman Shepherd
and
R.A. Barker, P.Eng. (B.C.)

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INTRODUCTION

GENERAL STATEMENT

Initial attention was focussed on the Sam Ross Creek area in 1963 when anomalous water and silt samples were obtained from streams draining an area mapped as Topley Intrusions, approximately 10 miles west of Endako.

Follow-up work in 1964 confirmed the anomalous nature of the streams and a preliminary soil sampling program was conducted in the Watkin's Creek area, located two miles east of Sam Ross Creek.

Detailed geological mapping and geochemical and biogeochemical sampling were carried out over the group of 36 claims immediately after staking was completed in June 1965. In April 1966, the soil samples collected were analyzed for their mercury vapor content.

A magnetometer survey was conducted over the claim group between May 20th to May 29th, 1966.

LOCATION AND ACCESS (Figure 1)

The Sam Ross Creek claims are located immediately south of Highway #16, 10 miles west of Endako. Access to the north boundary of the claim group is by a short gravel road leading from Highway #16, approximately 1000 feet west of Sam Ross Creek.

PROPERTY (Figure 2)

The property consists of 36 claims (Lorne 1 - 36) staked by the Company and recorded June 17th, 1965. Sam Ross Creek flows

northeast diagonally across the claim group.

GEOLOGY (Figure 3)

The claim group is located near the west contact of a large batholith of Topley "Granite". Younger, flat lying intermediate volcanics of Tertiary age outcrop a short distance south and west of the claim group.

Outcrop is sparse and limited to creek valleys. Glacial overburden obscures the geology in the northern part of the claim group which is situated along strike of a N70W trending coarse grained quartz monzonite in which several molybdenite occurrences, including the Endako Mine are located.

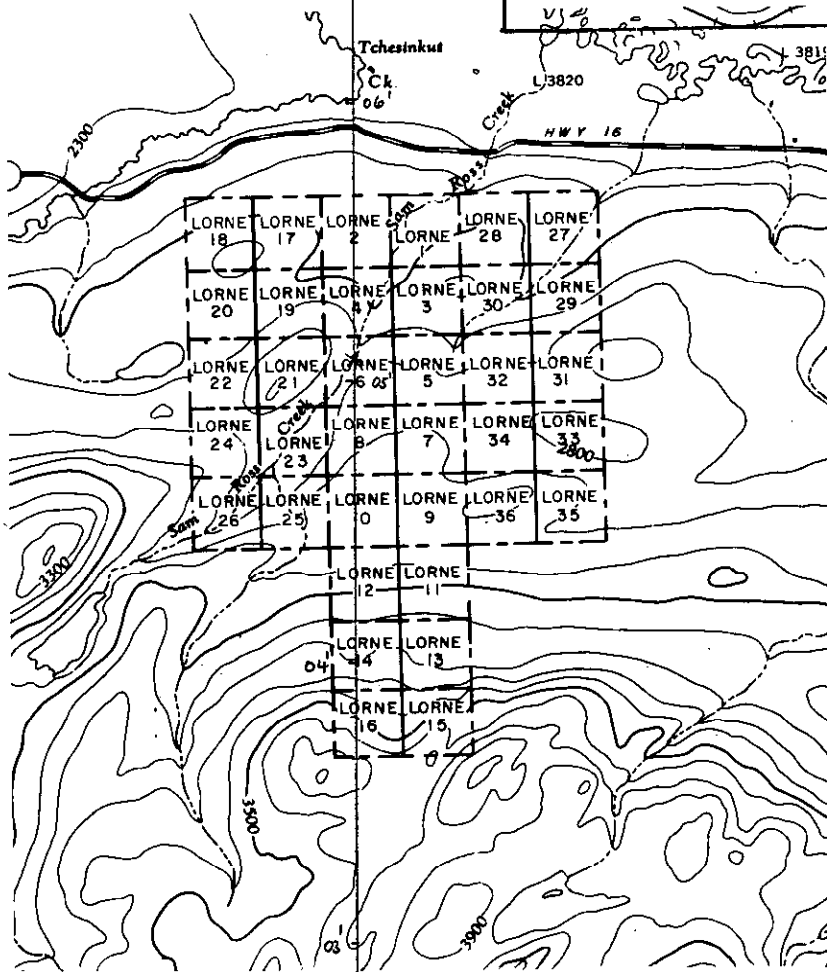
Massive, medium grained [?] (diorite) outcrops along Sam Ross Creek and the west branch. It is slightly sheared and chloritized near a fault that trends parallel to the main creek. This diorite is considered to be a younger differentiate of the Topley Intrusions.

South of the diorite, massive feldspar porphyry is exposed. It is a fine grained, grey rock and relatively unaltered. The largest outcrops of feldspar porphyry occur at the southwest corner of the claim group and extend 4000 feet south to the contact with Tertiary volcanics.

Aplite, found only as sub-angular boulders may indicate the presence of acid dykes in the area. In the molybdenite occurrences southeast of the claim group, aplite and porphyry dykes are

ASSESSMENT REPORT

NO. **787** MAP **#2**



SOUTHWEST POTASH CORPORATION

SAM ROSS CREEK PROPERTY
OMINECA MINING DIVISION. — BRITISH COLUMBIA

CLAIM MAP

54° 01'
SCALE 1 : 50,000

JUN 1966

Vancouver —

3W 3E

125° 15'

FIG. 2

characteristic.

Andesite and rhyolite with some porphyritic phases occur as angular float in the southern claims (Lorne 11 - 16) indicating proximity to the northern fringe of the extensive flat lying Tertiary lavas that encircle the Topley Intrusions.

The direction of glacial movement as indicated by drumlins and moraines in the Sam Ross Creek area is N80°E.

ALTERATION AND MINERALIZATION

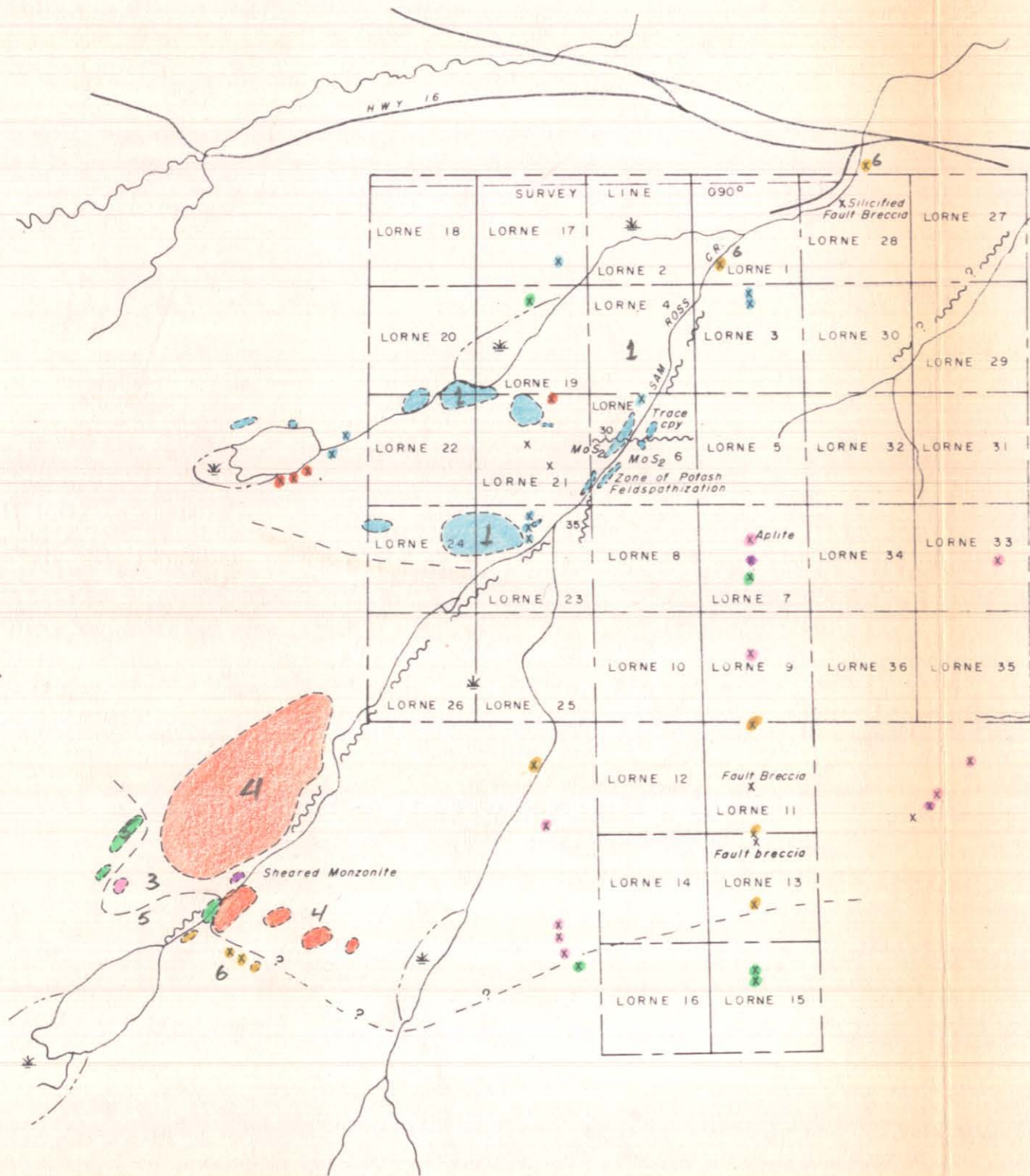
Apart from minor chloritization of the amphibole in shear zones cutting the diorite, all rocks outcropping in the claim group are relatively fresh and unaltered.

Potash feldspathization with associated pyrite mineralization occurs along a narrow fracture zone in the diorite outcropping in claim Lorne 6 along the walls of Sam Ross Creek. Minor specular hematite and fine scales of molybdenite were identified in this area. Chalcopyrite occurs in trace amounts throughout the diorite.

GEOCHEMISTRY (Figures 4, and 4 a)

Previous geochemical reconnaissance sampling in the Endako area indicated the water and silt of Sam Ross Creek to contain anomalous amounts of molybdenum.

Between June 20th and July 25th, 1965 water and silt samples were collected along the main channel and west branch of Sam Ross Creek. Two positive silt samples were obtained in claim Lorne 4.



L E G E N D

- 6 Rhyolite, Rhyolite Porphyry
- 5 Andesite, Andesite Porphyry
- 4 Feldspar Porphyry
- 3 Fine Grained Granite
- 2 Monzonite, Quartz Monzonite
- 7 Diorite

S Y M B O L S

- - - Geological Contact (defined, assumed)
- ~ Fault (defined, assumed)
- Outcrop
- x Angular Float
- Claim Location Line
- - - Claim Boundary Line
- * Swamp

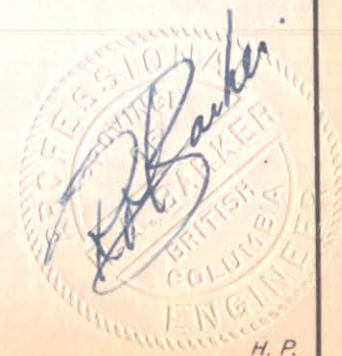
Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 787 MAP #3

SOUTHWEST POTASH CORPORATION

SAM ROSS CREEK PROPERTY
 OMINECA MINING DIVISION — BRITISH COLUMBIA

G E O L O G I C A L M A P

SCALE 1" = 2,000'



Vancouver — JUN 1966

A detailed soil sampling grid was conducted to cover this weakly anomalous area. Soil samples were collected at 200 foot intervals along lines 500 feet apart. In most areas samples were taken from the B-1 horizon of podzolic and, less commonly, brown earth soil profiles derived from transported parent material.

Soil samples were also collected on two north-south traverses across the claim group. Sample interval along these traverses varied from 200 to 500 feet.

The failure of the soil survey to outline an anomalous zone may be attributed to the nature and depth of glacial overburden. The glacial drift is estimated to exceed 30 feet over much of the property.

The pH of the soils ranged from 5.3 to 7.5 and averaged 6.4. (A total of 6 rock chip samples collected from the diorite outcrops in claims Lorne 6 and Lorne 23 along Sam Ross Creek averaged 192 ppm Mo and 80 ppm Cu).

The geochemical analytical procedure is described in Appendix I.

All soil samples collected within the claim group were sent to the Company Geochemistry Laboratory in Denver Colorado for Hg Vapor analyses. Recent surveys conducted by the British Columbia Department of Mines over significant molybdenite deposits in the Omineca Mining District, including the Endako ore body revealed the coincidence of a Hg vapor anomaly over the molybdenite mineralization.

Analytical procedures in the determination of Hg content in the soils is still a major problem in the application of Hg vapor technique to Mo prospecting. Results obtained by a modified version of the Lemaire detector were consistently lower than those obtained using the more sophisticated and more sensitive commercial detector in Denver.

While results are considered inconclusive, higher Hg vapor readings were obtained in claims Lorne 1 and Lorne 6. Further studies are required to determine the significance of results obtained to date. Results are plotted on Figure 4C.

A description of the principles and procedures applied for Hg vapor analyses is given in Appendix II.

A biogeochemical survey was conducted over the grid area (Figure 4B) to determine whether the vegetation contained an anomalous molybdenum content which would indicate a molybdenite occurrence beneath the blanket of glacial overburden. Second year spruce twigs and aspen bark were collected at all soil sample stations in the grid area.

A total of 137 vegetable samples was analysed at the University of British Columbia for Mo, Cu, Pb, Zn content. Most samples contained undetectable to trace amounts of molybdenum. No anomalous zone was outlined.

Analytical results are presented in Table I.

GEOPHYSICS

A magnetic survey was conducted over the entire claim group using a McPhar M500 fluxgate magnetometer. Readings were taken at 100 foot intervals along lines 1000 feet apart.

All readings were corrected for diurnal drift and tied in to the east-west survey line control.

A magnetic high trending N75W was obtained in claims Lorne 21 and Lorne 22. This anomaly is considered to reflect a minor concentration of magnetite in the underlying diorite intrusive.

A broad magnetic low extends one mile S70E from claim Lorne 2. This low is interpreted as being due to an underlying leucocratic, aplitic quartz monzonite. This rock type outcrops 1 - $\frac{1}{2}$ miles east along strike from the magnetic low.

The magnetic pattern over the remainder of the claim group is characterized by a series of weak N80W trending anomalies reflecting varying composition in the underlying bedrock.

Efforts were made to use an afmag unit to delineate shear zones and sulphide concentrations. However, during the period, field conditions were unsuitable for the satisfactory operation of the instrument.

CONCLUSIONS

Minor molybdenite occurs in diorite outcropping along Sam Ross Creek.

Efforts to outline the extent of mineralization by geochemical and geological methods were hampered by the depth of glacial overburden that blankets the claim group.

Further research is necessary before results of the mercury vapor analyses can be interpreted with any degree of reliability.

The magnetometer survey outlined the approximate limits of the diorite intrusion that underlies the central part of the claim group.

It is suggested that the claim group be maintained and further geophysical and geochemical techniques be applied in an effort to penetrate the veneer of glacial overburden that obscures the geology of the property.

SUMMARY OF WORK AND PERSONNEL INVOLVED

Line cutting and chaining	16,000'
Geological work	9 square miles
Geochemical survey	9 square miles
Magnetometer survey	12.6 line miles
Geochemical samples analysed	440

PERSONNEL EMPLOYED

F.C. Charlton, BSc. MA.	75A Melbourne St. W, Lindsay, Ontario; Senior Assistant.
D. Varley	4301 St. Mary's Ave., North Vancouver, B.C.; Junior Assistant.
A. Meek, BSc.	431 Gordon Ave., Peterborough, Ontario; Geochemist.
J. Buttazzoni	218 Regent St., Sudbury, Ontario; Magnetometer Operator.

ASSESSMENT WORK CHARGES

Salaries			\$1411.59
Board	93 man days @	\$2.50/day	232.50
Magnetometer rental	10 days @	\$9.00/day	90.00
Afmag rental	10 days @	\$17.00/day	170.00
Analyses of Geochemical Samples			
139 soils	@	\$1.50/sample	\$208.50
7 silts	@	\$1.50/sample	10.50
7 rock chips	@	\$2.00/sample	14.00
7 waters	@	\$1.00/sample	7.00
137 biogeochemical	@	\$2.30/sample	315.00
143 mercury vapor	@	\$2.50/sample	<u>357.50</u>
			\$912.50
			912.50
Preparation of report (typing and drafting)			<u>95.00</u>
		Total	<u>\$2911.59</u>

Norman Shepherd

 Norman Shepherd

R.A. Barker

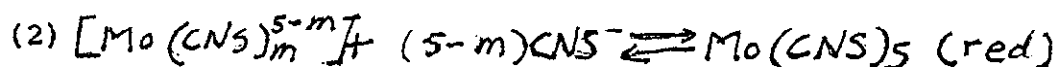
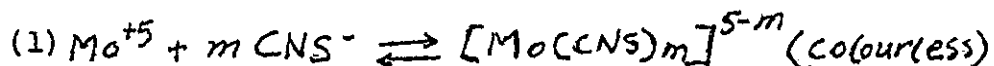
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INTRODUCTION

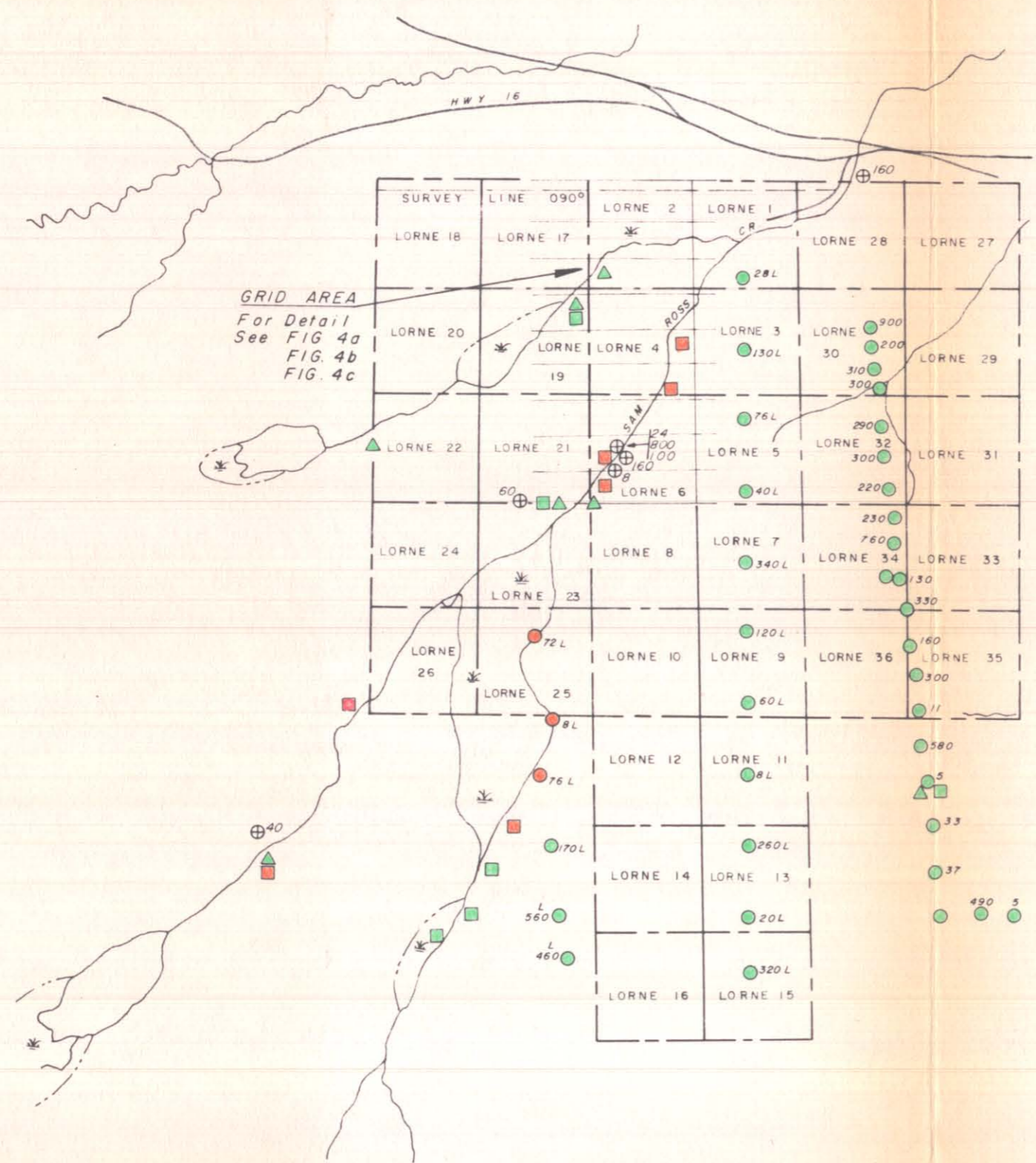
This report is a detailed description of the geochemical analytical method used by the Southwest Potash Corporation field laboratory in the determination of trace molybdenum in soil, stream sediment, rock chips, and water samples.

The method used is a modification of the classical thiocyanate-stannous chloride colorimetric technique. In acid solution in the presence of a suitable reducing agent, such as stannous chloride, thiocyanate reacts with molybdenum to form an amber colour. Such a thiocyanate complex of quinquevalent molybdenum ions is extracted in immiscible organic solvents such as ether or alcohol. The intensity of the coloured complex obeys Lambert-Beer's law and is proportional to the quantity or concentration of molybdenum present.

The reactions are given by the equations:



Only the quinquevalent molybdenum ion gives a coloured thiocyanate complex. According to Sandell, not all molybdenum is reduced to the quinquevalent form. It is estimated only about two-thirds of the total molybdenum present gives a colour reaction. However, because the standards are



GEOCHEMICAL RESULTS

SOIL SAMPLES p.p.m. Mo

- > 10 Anomalous.
- 4 - 10 Positive.
- < 4 Background.

SILT SAMPLES p.p.m. Mo

- > 10 Anomalous.
- 4 - 10 Positive.
- < 4 Background.

WATER SAMPLES p.p.b. Mo

- ▲ > 4 Anomalous.
- ▲ < 4 Background.

ROCK CHIP SAMPLES p.p.m. Mo

⊕ 160

SOIL SAMPLES p.p.b. Hg

- 76L Lemaire detector.
- 37 Denver.

SOUTHWEST POTASH CORPORATION

SAM ROSS CREEK PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

GEOCHEMICAL MAP

SCALE 1" = 2,000'



Vancouver — JUN 1966

treated in the same manner as the unknowns, any error cancels itself out and has no effect on the reported result.

Following a description of the analytical methods, a summary of the 1963 field laboratory is given in the appendix plus some recommendations for improving future laboratory operations.

SAMPLE PREPARATIONS

(a) Soil and Silt

Soil and silt samples when received are commonly wet or moist and must be dried before sieving. Treat the samples in the following steps:

1) Put the sample bags on an aluminum foil tray and place on top of an oil stove. Time required is usually eight hours.

2) Sieve the dried samples with a minus 35-mesh screen onto a one foot square piece of heavy brown paper. Use a new piece of paper every day and clean the sieve with a paint brush between samples.

3) Using a volumetric scoop (calibrated to deliver a given weight of sample) 'weigh' out a known amount (usually 1 gram) of screened sample and transfer it into a marked test tube.

4) Return the remaining fines (pulps) of the sieved sample into its original sample bag.

5) Put the samples in storage boxes if available or string with a piece of twine in batches of about 30 for bulk storage in gunny sacks.

(b) Rock Chips

1) With the sample still in its bag, crush with a hammer into small pieces.

2) Transfer several pieces of crushed rock into a porcelain mortar and grind.

3) Sieve the ground sample through a minus 35-mesh screen and proceed through steps 2 to 5 as followed for soil and silt samples. If the original bag is badly damaged during crushing transfer the pulps to a new bag.

DIGESTION

Samples of soil, silt and rock chips are digested in a hot water bath. The heat is supplied by a three-burner Coleman stove. Digestion is best done outside the laboratory where the toxic nitric fumes can dissipate into the atmosphere away from both laboratory equipment and personnel.

Digestion is carried out as follows:

1) Measure out volumetrically with leucite scoop 1 gm of the sieved sample and place in a 15 x 125 rimmed test tube.

2) Using an automatic pipette, add 4 ml of diluted (3:1) nitric acid.

- 3) Digest the samples, a rack at a time for 2 hours.
- 4) Shake the tubes occasionally to aid digestion.
- 5) Remove the rack and allow to cool.
- 6) Using poly wash bottle, fill all tubes up to the 4 ml mark with water.

DETERMINATION

(a) Soil, Silt and Rock Chip

Samples are usually treated in batches of ten and in racks of forty.

- 1) Using an auto-pipette, transfer a 1 ml aliquot from each digested solution to a marked rimless test tube. Use a smaller aliquot if high molybdenum content is suspected.

NOTE: Clean the auto-pipette thoroughly between each sample by rinsing at least three times with de-mineralized water. Shake the pipette in the air to dry. Contamination could easily occur at this step without suitable rinsing.

- 2) To each test tube using an automatic pipette, add 2 ml of 10% HCl.
- 3) Using a spatula, add 0.2 gm of sodium tartrate.
- 4) Using a burette, add 1.5 ml of KSCN. Shake to mix.
- 5) Using a burette, add 0.5 ml of SnCl₂ solution. Shake to mix.

NOTE: If the iron content of the testing solution is high, a larger amount of SnCl₂ solution may be required, (SnCl₂ should be added to completely eliminate the blood red colour of the ferric thiocyanate).

- 6) Using a wash bottle, add water to bring the total volume of the solution up to the 10 ml mark.
- 7) Using a burette, add exactly 1 ml of ether.
- 8) Stopper the test tubes with corks and shake vigorously for 45 seconds. It is advisable to number the corks to avoid mixing up tubes.
- 9) Allow the phases to separate.
- 10) Compare the colour of the ether layer to that of the molybdenum standards. Colour intensities should be compared and matched against a white background.

CALCULATIONS

(a) Soil, Silt and Rock Chip

The concentration of molybdenum in parts per million (ppm) is calculated from the following factors:

- 1) The weight of sample used for digestion.
- 2) Volume of solution for digestion.
- 3) Volume of aliquot taken for determination.
- 4) Gamma content of the matched standard.

The concentration in ppm is given by the formula

$$\text{ppm} = \frac{\text{volume digested sample solution (ml)}}{\text{weight of sample (gm)}} \times \frac{\text{value of matched standard (gammas)}}{\text{aliquot of sample (ml)}}$$

= gammas per gram (which equals parts per million)

STANDARDS(a) Molybdenum Standard Solutions

1) Stock standard concentrated: (100 gammas/ml). Dissolve 0.075 gm of MoO_3 in 20 ml of 10% NaOH. (10 gm of NaOH crystals in 100 ml of water). Dilute to 100 ml. Add diluted HCl until the solution is acid (use pH hydrion paper). Fill to 500 ml mark of the flask. Prepare this solution once a season.

2) Stock standard diluted: (1gamma/ml). Dilute 1 ml of stock standard to 100 ml mark of the volumetric flask. Prepare this diluted solution each time a new standard is made.

(b) Working Molybdenum Standard for Soil, Silt & Rock Chip

Two sets of working standards representing a low and a high range are prepared by diluting the working standard. The amount of standard solution diluted is outlined in the following tables.

Pipette from stock standard solutions the required volumes into a series of 7 test tubes. The amount and concentration of stock standard solution used is outlined in the following tables.

LOW RANGE

STANDARDS	A	B	C	D	E	F	G	H
ml of 1 ¹ / ₈ ml standard	0	0.5	1.0	1.5	2.5	3.0	4.0	5.0
Gammas	0	0.5	1.0	1.5	2.5	3.0	4.0	5.0
ppm*	0	2.0	4.0	6.0	10.0	12.0	16.0	20.0

* Concentration based on aliquot representing one quarter of a gram as used in procedure given above.

HIGH RANGE

STANDARDS	I	J	K	L	M	N	O
ml of 100 ¹ / ₈ ml standard	0.1	0.2	0.25	0.5	0.8	1.00	1.5
Gammas	10	20	25	50	80	100	150
ppm*	40	80	100	200	320	400	600

Treat the standards as outlined in the procedure given for the unknowns. It is important that the standards and unknowns undergo identical treatment. Cover the standards with a sheet of aluminum foil to shield them against any heat or light when not in use. Prepare new standards at least once every three weeks or sooner if fading is suspected.

PREPARATION OF REAGENTS

The following reagents are used in the test on soil, silt and rock chip samples.

1) 10% HCl: Add 100 ml of concentrated HCl into a 2 litre beaker and dilute to one litre. Store in a poly bottle.

2) Diluted HNO₃: Dilute 750 ml of concentrated HNO₃ to one litre. Store in a poly bottle.

3) Thiocyanate solution: Dissolve 5 gm of KSCN in 100 ml of water. Prepare fresh solution daily.

4) SnCl₂ solution: Dissolve 13 gm of SnCl₂ in 17 ml of concentrated HCl. Heat the mixture in a hot water bath. Make up to 100 ml with water when crystals have been completely dissolved. Add a piece of metallic tin to ensure stability of SnCl₂. Prepare a fresh solution daily.

5) Sodium tartrate - use directly as a solid.

6) Isopropyl ether - use directly but with caution as it is highly inflammable and explosive peroxides may form.

Use de-mineralized water for all reagents, preparations and analytical determinations.

pH DETERMINATION

A line-operated Beckman Model H-2 meter is used in making pH measurements. Following a warm-up period, the meter is calibrated with standard buffer solutions before using and rechecked between every 20 determinations, or every hour whichever comes first.

(a) Soil and Silt

Measurements are made as follows:

- 1) Pour approximately 15 gm of the sieved sample into a 30 ml poly beaker. Wet the sample with distilled water (use neutral stream water). Do not use de-mineralized water (water passed through a resin de-mineralizer is acidic). Swirl the beaker occasionally during the determination to ensure the sample is in a homogeneous state.
- 2) Gently insert the electrodes into the dampened sample.
- 3) Observe the pH reading when the needle reaches a steady state.
- 4) Discard the tested sample, clean the beaker and electrodes with water. Wipe the electrodes with a cleaning tissue. It is important that the electrodes be thoroughly cleaned after every determination.

(b) Rock Chips

pH determination is not required for rock chip.

WATER DETERMINATION

Water samples require no special preparation preceding the actual analysis . Samples are usually treated in sets of six.

(a) Determination

- 1) Pour water sample into a separatory funnel up to the 50 ml mark.
- 2) Using an automatic pipette, add 5 ml of diluted HCl.
- 3) Using an automatic pipette, add 1 ml of ferric ammonium sulphate solution. Tilt funnel to mix.
- 4) Using an automatic pipette, add 3 ml of KSCN solution. Tilt funnel to mix.
- 5) Using an automatic pipette, add 3 ml of SnCl₂ solution. Tilt funnel to mix.
- 6) Using a burette, add 2 ml of ether. Shake for 45 seconds. Release pressure every 10 seconds during shaking.
- 7) Allow phases to separate.
- 8) Discard the aqueous (water) layer into a beaker. Stop at 10 ml mark.
- 9) Drain off the remaining aqueous and the organic phases into a 16 x 150 rimless test tube.
- 10) Compare the colour of the organic layer to that of the molybdenum standards.

(b) Calculation

The concentration of molybdenum in water is expressed in parts per billion (ppb), i.e., 1/1000 gammas per gram or gammas per 1000 grams. The concentration is calculated using two factors.

- 1) The initial volume of sample used for determination.
- 2) The value of the matched standard x 1,000.

The concentration of molybdenum in water is given by the formula:

$$\text{ppb} = \frac{\text{value of the matched standard (gammas)}}{\text{volume of water used for determination (ml)}} \times 1,000$$

= gammas per 1000 millilitres (since density of water is equal to 1)

= gammas per 1000 grams, or ppb

(c) Standards

- 1) Pipette 0, 0.25, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 5.0, 8.0 ml of the dilute (1 gamma/ml) stock standard solution into the separatory funnels.
- 2) Add water to 50 ml mark and proceed with step (2) to step (9) given above for water determinations.

(d) pH Determination

Measurements are taken as follows:

- 1) Approximately 25 ml of sample is transferred into a 30 ml poly beaker for measurement.
- 2) Insert the electrode and take a reading.
- 3) Discard the sample; wash down and dry the electrodes.

(e) Preparation of Reagents

In addition to some reagents already mentioned on the previous pages the following are needed in the water test.

1) Ammonium sulfate solution: Dissolve 1 gm of ferric ammonium sulfate crystals in 100 ml of water. Warm the mixture in a water bath. Prepare fresh solution once every five days.

2) KSCN solution: Dissolve 10 gm of KSCN crystals in 100 ml of water. KSCN dissolves in cold water. Prepare fresh solution daily.

3) SnCl_2 solution: Heat 30 gm of SnCl_2 in 50 ml of concentrated HCl in a water bath till a clear solution appears. Dilute the solution to 300 ml. Insert a piece of metallic tin to stabilize the solution. Prepare fresh solution daily.

4) Diluted HCl: Dilute 800 ml of concentrated to one litre.

GENERAL REMARKSHazardous Reagents

Many of the reagents used in geochemical analyses are either poisonous or toxic. Some are hazardous because they are inflammable. Careless handling of concentrated acids may result in severe skin burns or eye damage. Some volatile organic compounds may produce permanent liver, lung or kidney damage after prolonged exposure. To avoid or minimize these dangers, a laboratory should be well ventilated at all times. No single rule can serve as an absolute safeguard against injury as it is basically a matter of common sense in taking precautions.

Where hazardous chemicals are involved, stock bottles should be kept away from possible dangers, i.e., fire and heating area, and if possible, be stored in a separate place.

Fire extinguishers should be within easy reach at all times. Plenty of water should always be readily available in case of acid burns on the skin. Lastly, smoking, eating, drinking and horseplay should be prohibited in the laboratory.

Contamination

Contamination is an ever present danger. Cleanliness of all apparatus and working stations minimizes the possibility of contamination. Common reagents like dithizone and some

organic compounds are extremely sensitive to metals and to commercial products which employ metals as catalysts. A trace of these foreign metals blended in with the testing solutions seriously affect analytical results. Tap water, commercial soaps or detergents for cleaning glassware are commonly loaded with heavy metals. Glassware should be allowed to dry in air rather than wiped with paper towels. To constantly check on contamination a blank sample and a known sample should be run daily or whenever new equipment or solutions are introduced.

Interferences

The thiocyanate-stannous chloride method of separation for molybdenum makes no allowance for certain metal interferences. Possible interfering metals include rhenium, titanium, rhodium, vanadium, uranyl complex, cobalt, and tungsten. Of these, only tungsten is provided for in the procedure. Fortunately most of the other metals do not generally occur in sufficient concentration to cause serious interference. The colours produced by some of these metals are from unstable complexes and quickly fade away. Other interference products are recognized easily because of their distinctive yellow, green, or blue colours.

Organization

The laboratory is systematically divided into a series of working stations along the benches. Each working station is equipped with the necessary reagents and apparatus to carry out a given part of the analytical procedure with the minimum of physical movement by the operator. If more than one operator participates in the procedure, the sequence is planned so that they will not interfere with each other. Streamlining the procedural layout increases the efficiency and productivity of the laboratory many fold.

Conway Chun

Conway Chun

APPENDIX IIMERCURY VAPOR ANALYSESPURPOSE

Published case histories of mineral exploration indicate that high concentrations of mercury are found in soils and rocks over mineralized areas. As a prospecting aid, atomic absorption and spectrographic techniques have been developed to analyse soils and pulverized rock chip samples for their mercury content.

Analyses for the mercury content of soils were made to supplement previous geochemical investigations over the Sam Ross Creek Property where other geochemical dispersion patterns appear to be masked by glacial overburden. Specifically, the mercury data were obtained to delineate structural trends and zones of mineralization in the claim group.

METHOD

Soil samples were air dried and sieved (-35 mesh), then heated to volatilize the contained mercury. The resulting vapor is passed through an atomic absorption analyzer to determine the amount of mercury driven off during the heating.

INSTRUMENTATION

Both commercial and company operated detectors generate radiation at one of the wave lengths absorbed by mercury vapor (i.e. 2537A°). The vapor from the heated sample is passed between the radiation source and a photocell, and the percentage light

absorption, as measured by the voltage charge across the photocell, is indicative of the mercury content of the vapor. The more sensitive commercial detector is less affected by contaminants but is considerably more intricate and not portable.

APPENDIX IIISTATEMENT OF QUALIFICATIONS

- F.C. Charlton
- Bachelor of Science in Honours Geology, University of Toronto, 1962.
 - Master of Applied Science in Mineral Exploration, McGill University, 1965.
- A.C. Meek
- Bachelor of Science in Chemistry, Dalhousie University, 1965.
 - Practical Experience - Summers of 1960, 1961, and 1962 as Assistant Geochemist for British Newfoundland Exploration.
 - Practical Experience - Summers of 1964, and 1965 as Geochemist for Southwest Potash Corporation.
- J.C. Buttazzoni
- Completed first year, University of Ottawa.
 - Practical Experience - Three weeks of training on the magnetometer under the direction of W.W. Shaw, Geophysicist for Southwest Potash Corporation.
 - Practical Experience - Summer 1965 as a magnetometer operator for Southwest Potash Corporation.

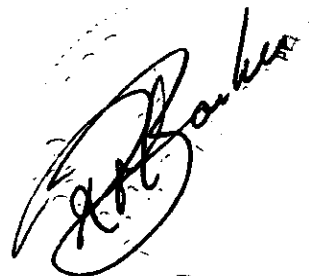


TABLE I

1.

BIOGEOCHEMICAL ANALYSES

Sample Description	ppm Cu	ppm Zn	Ratio Cu:Zn	ppm Pb	ppm Mo	% in Ash Cu	% in Ash Zn	% in Ash Pb	% in Ash Mo	% Ash
X-1 Needles	1.	87.	.012	0.3	0.5	.0022	.19	.00056	.004	4.5
X-1 Mixed Twigs	3.5	73.	.048	0.3	Tr	.012	.25	.00085	.0017	3.0
X-2 Needles	2.5	80.	.031	0.5	Tr	.012	.37	.0023	.0023	2.2
X-2 Mixed Twigs	4.	38.	.098	0.5	N.D.	.030	.30	.0040	--	1.3
X-3 Needles	1.	42.	.024	0.5	N.D.	.0020	.083	.0010	--	5.
X-3 Mixed Twigs	5.	100.	.046	0.3	N.D.	.016	.36	.00086	--	2.9
X-4 Needles	1.	74.	.014	0.3	N.D.	.0013	.098	.00033	--	7.6
X-4 Mixed Twigs	5.	78.	.065	0.5	N.D.	.016	.25	.0016	--	3.1
X-5 Needles	2.	250.	.0074	0.5	Tr	.0046	.58	.0011	.0011	4.4
X-5 Mixed Twigs	4.	66.	.057	1.	N.D.	.012	.21	.0032	--	3.1
X-6 Needles	2.	190.	.0043	0.3	Tr	.0042	.45	.00059	.0012	4.2
X-6 Mixed Twigs	5.	95.	.053	0.3	Tr	.019	.36	.00094	.0019	2.7
X-7 Needles	2.	42.	.042	0.8	N.D.	.0038	.089	.0016	--	4.7
X-7 Mixed Twigs	5.	42.	.055	0.3	N.D.	.016	.30	.0081	--	3.1
X-20 Needles	1.	110.	.0043	0.3	N.D.	.0011	.11	.00079	--	9.4
X-22 Mixed Twigs	4.	80.	.050	0.8	N.D.	.012	.24	.0073	--	3.3
X-9 Needles	2.	61.	.024	0.5	Tr	.0037	.13	.0011	.0011	4.7
X-9 Mixed Twigs	5.	49.	.10	0.3	N.D.	.018	.17	.00088	--	2.9
X-10 Needles	2.	220.	.0090	0.8	Tr	.0011	.79	.0077	.0018	2.8
X-10 Mixed Twigs	5.	95.	.055	0.5	N.D.	.019	.34	.0018	--	2.8
X-12	2.	110.	.016	0.3	0.5	.0071	.44	.0010	.0020	2.5
X-14 Needles	1.	99.	.010	0.5	0.5	.0018	.17	.00088	.00088	5.7
X-14 Mixed Twigs	5.	13.	.068	0.3	Tr	.017	.75	.00085	.007	3.
X-16 Needles	4.	49.	.077	0.8	Tr	.017	.33	.0035	.0023	2.2
X-16 Mixed Twigs	3.	110.	.028	0.3	1.	.024	.85	.0019	.0037	1.4
X-18 Needles	3.	48.	.066	0.5	Tr	.0081	.14	.004	.0056	3.5
X-18 Mixed Twigs	4.	200.	.037	3.	6.	.081	.74	.012	.0018	2.8
X-20 Bark	2.5	180.	.014	0.5	1.	.0070	.51	.0014	.0085	3.6
X-22 Bark	2.5	230.	.011	0.3	0.3	.0004	.49	--	.0011	4.1

TABLE I

2.

BIOGEOCHEMICAL ANALYSES

Sample Description	ppm Cu	ppm Zn	Ratio Cu:Zn	ppm Pb	ppm Mo	% in Ash Cu	% in Ash Zn	% in Ash Pb	% in Ash Mo	% Ash
X-24 Bark	4.	250.	.015	0.5	0.5	.0077	.51	.0010	.0010	4.9
X-24 Bark	0.5	140.	.0036	0.3	0.5	.0012	.34	.0006	.0015	4.1
X-25 Needles	1.	72.	.017	0.5	Tr	.0016	.093	.00005	.00006	1.7
X-25 Mixed Twigs	2.5	54.	.046	0.5	N.D.	.0072	.16	.0019	--	3.5
X-26 Needles	Tr	65.	.0018	0.3	0.5	.00066	.085	.00033	.00067	7.6
X-26 Mixed Twigs	5.	34.	.15	0.5	Tr	.016	.10	.0016	.0016	5.2
X-27 Needles	N.D.	48.	--	0.3	Tr	--	.10	.00015	.0011	4.6
X-27 Mixed Twigs	2.	56.	.031	0.5	N.D.	.0061	.25	.0018	--	2.9
X-28 Needles	1.5	72.	.021	0.5	N.D.	.0032	.10	.0011	--	4.7
X-28 Mixed Twigs	3.5	60.	.059	0.5	N.D.	.014	.23	.0020	--	2.6
X-29 Needles	0.5	68.	.0074	0.8	N.D.	.00014	.13	.005	--	0.1
X-29 Twigs	3.	99.	.061	0.3	N.D.	.0098	.16	.0008	--	3.1
X-30 Needles	0.5	32.	.016	0.5	N.D.	.002	.016	.0012	--	4.2
X-30 Mixed Twigs	4.5	52.	.087	0.3	N.D.	.018	.21	.0010	--	2.5
X-31 Twigs (1-4 yrs)	5.	58.	.086	0.5	N.D.	.073	.25	.0072	--	2.3
X-32 Twigs (1-4 yrs)	1.	51.	.020	1.5	N.D.	.0027	.14	.0041	--	3.7
X-33 Twigs (1-3 yrs)	5.	44.	.11	1.5	N.D.	.016	.14	.0049	--	3.1
X-34 Twigs (1-2 yrs)	5.5	55.	.10	1.5	N.D.	--	.74	.0065	--	2.3
X-35 Twigs (1-2 yrs)	3.5	37.	.095	1.5	N.D.	.019	.71	.0083	--	1.8
X-36 Twigs (1-3 yrs)	5.	16.	.24	0.8	Tr	.024	.081	.0016	--	0.1
X-37 Twigs (1-3 yrs)	1.5	61.	.12	1.	N.D.	.029	.23	.0038	--	2.8
X-38 Twigs (1-3 yrs)	5.	43.	.12	0.5	Tr	.021	.17	.0020	.0026	2.5
X-39 Bark	3.5	22.	.16	0.8	9.	.0061	.038	.0013	.015	3.8
X-40 Bark	4.	130.	.031	0.8	0.5	.0095	.30	.0017	.0012	4.2
X-42 Bark	4.	105.	.038	1.	0.5	.0087	.23	.027	.0011	4.6
X-44 Twigs (1-3 yrs)	5.	66.	.077	1.5	N.D.	.017	.22	.0062	--	2.4
X-46 Twigs (1-3 yrs)	4.	44.	.0011	2.5	N.D.	.019	.21	.012	--	2.1
X-48 Bark	5.	160.	.032	0.5	5.	.019	.61	.0019	.019	2.6
X-50 Bark	5.	91.	.055	2.	0.5	.012	.22	.0042	.012	4.4

TABLE I

3.

BIOGEOCHEMICAL ANALYSES

Sample Description	ppm Cu	ppm Zn	Ratio Cu:Zn	ppm Pb	ppm Mo	% in Ash Cu	% in Ash Zn	% in Ash Pb	% in Ash Mo	% Ash
X-51 Twigs (1-3 yrs)	10.	48.	.21	0.5	11.	.031	.15	.0016	.0031	3.2
X-53 Twigs (1-4 yrs)	8.	51.	.15	1.5	N.D.	.022	.15	.0044	--	3.4
X-54 Twigs (1-4 yrs)	4.	54.	.074	1.	N.D.	.011	.15	.0021	--	3.7
X-55 Twigs (1-3 yrs)	2.5	89.	.028	N.D.	Tr	.0078	.28	--	<.0231	3.2
X-56 Bark	0.5	110.	.0046	N.D.	Tr	.00086	.19	--	<.00088	5.7
X-57 Twigs (1-3 yrs)	2.5	65.	.038	N.D.	N.D.	.0086	.22	--	--	2.9
X-58 Bark	Tr	160.	<.003	N.D.	Tr	<.00081	.26	--	<.00081	6.2
X-59 Twigs (1-3 yrs)	Tr	54.	.019	N.D.	N.D.	.0032	.17	--	--	3.1
X-60 Twigs (1-4 yrs)	5.	65.	.077	N.D.	N.D.	.014	.19	--	--	2.5
X-61 Twigs (1-3 yrs)	2.5	46.	.054	N.D.	Tr	.0016	.14	--	.0030	3.3
X-62 Twigs (1-4 yrs)	2.	77.	.026	N.D.	N.D.	.0071	.28	--	--	2.8
X-63 Twigs	2.5	54.	.046	N.D.	Tr	.0095	.20	--	.0019	2.7
X-64 Bark	2.	97.	.018	N.D.	N.D.	.0055	.30	--	--	3.2
X-65 Bark	1.	170.	.0011	N.D.	Tr	.0030	.43	--	<.0012	4.1
X-66 Twigs (1-4 yrs)	2.	54.	.037	N.D.	N.D.	.0063	.11	--	--	3.2
X-67 Twigs (1-3 yrs)	3.5	65.	.054	N.D.	Tr	.011	.21	--	<.0032	3.1
X-68 Bark	2.	130.	.96	N.D.	Tr	.0067	.42	--	<.0017	3.
X-69 Twigs (1-4 yrs)	2.5	56.	.045	N.D.	Tr	.0015	.17	--	<.0015	3.4
X-70 Bark	2.5	100.	.025	N.D.	0.5	.0086	.34	--	.0017	2.9
X-72 Twigs (1-4 yrs)	2.5	50.	.050	N.D.	Tr	.0069	.14	--	<.0028	3.6
X-74 Twigs (1-4 yrs)	2.	69.	.029	N.D.	N.D.	.0071	.25	--	--	2.8
X-76 Bark	Tr	160.	.0033	N.D.	1.	<.0016	.50	--	.0041	3.1
X-78 Twigs (1-4 yrs)	Tr	65.	<.015	N.D.	N.D.	<.0034	.72	--	--	2.9
X-80 Twigs (1-3 yrs)	1.	170.	.0060	N.D.	Tr	.0040	.66	--	.0040	2.5
X-82 Twigs (1-3 yrs)	2.5	100.	.024	N.D.	N.D.	.0075	.33	--	--	3.2
X-84 Bark	0.5	140.	.0036	N.D.	Tr	.0011	.31	--	.0011	4.5
X-85 Bark	N.D.	160.	--	1.5	Tr	--	.38	.0036	.0012	4.2
X-86 Bark	Tr	390.	.0026	N.D.	Tr	.00040	.35	--	.00090	5.6
X-87 Twigs (1-4 yrs)	2.	35.	.057	N.D.	Tr	.012	.21	--	<.0059	1.7

TABLE I

4.

BIOGEOCHEMICAL ANALYSES

Sample Description	ppm Cu	ppm Zn	Ratio Cu:Zn	ppm Pb	ppm Mo	% in Ash Cu	% in Ash Zn	% in Ash Pb	% in Ash Mo	% Ash
X-88 Bark(1-3 yrs)	2.	160.	.04	N.D.	N.D.	.0042	.38	--	--	4.2
X-89 Twigs(1-3 yrs)	4.	140.	.029	1.5	Tr	.013	.45	.0048	<.0032	3.1
X-90 Twigs(1-3 yrs)	3.5	65.	.004	N.D.	N.D.	.011	.20	--	--	3.3
X-91 Twigs(1-3 yrs)	1.5	42.	.036	N.D.	Tr	.0047	.13	--	<.0031	3.2
X-92 Bark	N.D.	115.	--	N.D.	Tr	--	.27	--	.0019	6.5
X-93 Twigs(1-3 yrs)	2.	31.	.065	N.D.	Tr	.011	.16	--	<.005	1.4
X-94 Twigs(1-3 yrs)	2.	21.	.095	N.D.	Tr	.016	.17	--	<.0040	1.3
X-95 Bark	2.	170.	.010	N.D.	Tr	.0036	.36	--	.0021	4.9
X-96 Twigs(1-3 yrs)	N.D.	39.	--	N.D.	N.D.	--	.22	--	--	1.8
X-97 Twigs(1-3 yrs)	5.	35.	.14	N.D.	Tr	.028	.19	--	<.0056	1.8
X-98 Bark	N.D.	120.	--	0.5	1.	--	.25	<.0011	.0021	4.6
X-99 Bark	Tr	180.	<.0028	N.D.	0.5	.0010	.36	--	.0010	4.4
X-100 Twigs(1-3 yrs)	4.	62.	.065	N.D.	N.D.	.011	.16	--	--	3.8
X-101 Twigs(1-3 yrs)	50.	81.	.062	N.D.	Tr	.016	.26	--	<.0002	.1
X-102 Twigs(1-3 yrs)	2.5	46.	.054	N.D.	N.D.	.0086	.16	--	--	2.9
X-104 Twigs(1-3 yrs)	4.	25.	.15	N.D.	N.D.	.025	.77	--	--	1.5
X-106 Bark	Tr	98.	.0051	N.D.	1.	.0014	.28	--	.0036	3.5
X-108 Twigs(1-2 yrs)	4.	34.	.097	N.D.	Tr	.024	.25	--	.0032	1.6
X-110 Bark	1.	120.	.010	N.D.	1.	.0035	.35	--	.0035	3.6
X-112 Twigs(1-3 yrs)	6.	25.	.25	N.D.	Tr	.031	.13	--	.0025	2.0
X-114 Twigs(1-3 yrs)	5.	39.	.13	.13	Tr	.016	.12	.041	<.0036	3.2
X-116 Bark	0.8	140.	.0053	N.D.	Tr	.0012	.22	--	<.00079	6.4
X-118 Twigs(1-4 yrs)	5.	52.	.096	N.D.	Tr	.016	.16	--	<.0016	3.2
X-119 Bark	2.	150.	.014	N.D.	0.5	.0041	.35	--	.0012	4.3
X-120 Twigs(1-3 yrs)	2.	21.	.083	0.5	Tr	.010	.12	.0029	<.0029	1.8
X-121 Bark	2.	140.	.015	N.D.	0.5	.0051	.34	--	.0015	4.
X-122 Twigs(1-3 yrs)	5.	50.	.10	N.D.	Tr	.017	.17	--	.0033	3.
X-123 Bark	1.	110.	.0088	N.D.	0.8	.0023	.26	--	.0017	1.3
X-124 Twigs(1-4 yrs)	6.	48.	.13	N.D.	Tr	.020	.16	--	.0016	3.1

TABLE I

5.

BIOGEOCHEMICAL ANALYSES

Sample Description	ppm Cu	ppm Zn	Ratio Cu:Zn	ppm Pb	ppm Mo	% in Ash Cu	% in Ash Zn	% in Ash Pb	% in Ash Mo	% Ash
X-125 Bark	0.8	100.	.0050	N.D.	Tr	.0011	.22	--	.0011	4.5
X-126 Bark	1.	100.	.0065	N.D.	Tr	.0024	.37	--	< .0012	4.4
X-127 Twigs (1-3 yrs)	5.	46.	.11	N.D.	Tr	.016	.15	--	.0032	3.1
X-128 Twigs (1-3 yrs)	4.	71.	.053	N.D.	N.D.	.011	.20	--	--	3.5
X-129 Twigs (1-3 yrs)	3.	52.	.058	0.5	Tr	.011	.14	.0014	.0037	2.7
X-130 Twigs (1-3 yrs)	3.5	74.	.047	N.D.	N.D.	.011	.22	--	--	3.3
X-132 Twigs (1-3 yrs)	3.	120.	.025	N.D.	N.D.	.010	.41	--	--	2.4
X-134 Twigs (1-3 yrs)	5.	54.	.085	N.D.	N.D.	.015	.18	--	--	3.3
X-136 Twigs (1-3 yrs)	1.5	100.	.015	N.D.	N.D.	.0047	.31	--	--	3.2
X-138 Bark	2.5	54.	.047	N.D.	Tr	.013	.27	--	< .0025	2.
X-140 Twigs (1-3 yrs)	5.	37.	.14	N.D.	N.D.	.028	.21	--	--	1.8
X-142 Twigs (1-2 yrs)	5.	18.	.064	N.D.	N.D.	.019	.30	--	--	2.6
X-144 Twigs (1-3 yrs)	4.	63.	.063	1.	N.D.	.013	.21	.0033	--	3.
X-146 Twigs (1-3 yrs)	3.	37.	.081	N.D.	N.D.	.025	.31	--	--	1.2
X-148 Twigs (1-4 yrs)	5.	100.	.05	N.D.	N.D.	.019	.38	--	--	2.6
X-150 Twigs (1-3 yrs)	4.	70.	.051	N.D.	Tr	.015	.26	--	.0037	2.7
X-152 Twigs (1-3 yrs)	5.	48.	.10	N.D.	N.D.	.018	.18	--	--	2.7
X-154 Twigs (tips cut)	4.	81.	.049	N.D.	N.D.	.014	.28	--	--	2.9
X-156 Twigs (1-3 yrs)	4.	67.	.060	--	N.D.	.014	.23	.0034	--	2.9
X-158 Twigs (1-3 yrs)	4.	150.	.026	N.D.	N.D.	.015	.58	--	--	2.6
X-160 Twigs (1-3 yrs)	5.	52.	.096	N.D.	N.D.	.071	.27	--	--	2.4
CC-5 Bark	4.5	135.	.019	2.5	N.D.	.014	.71	.0076	--	3.3
CC-9 Bark	4.	280.	.04	3.	N.D.	.011	.83	.0097	--	3.3
CHH-4 Bark	5.	190.	.026	1.5	N.D.	.014	.54	.0043	--	3.6
CUH-8 Bark	4.	190.	.020	N.D.	N.D.	.0065	.43	--	--	4.4
CLL-11	2.	180.	.024	1.5	N.D.	.015	.61	.0050	--	2.9
D-2 1/3" Stems	4.	66.	.064	1.	N.D.	.026	.40	.0016	--	1.7
D-5 1/4" Stems	5.	54.	.043	1.5	N.D.	.029	.31	.0086	--	1.8
D-8 1/4" Stems	6.	46.	.065	6.	Tr	.020	.31	.020	.0016	3.1

TABLE I

6.

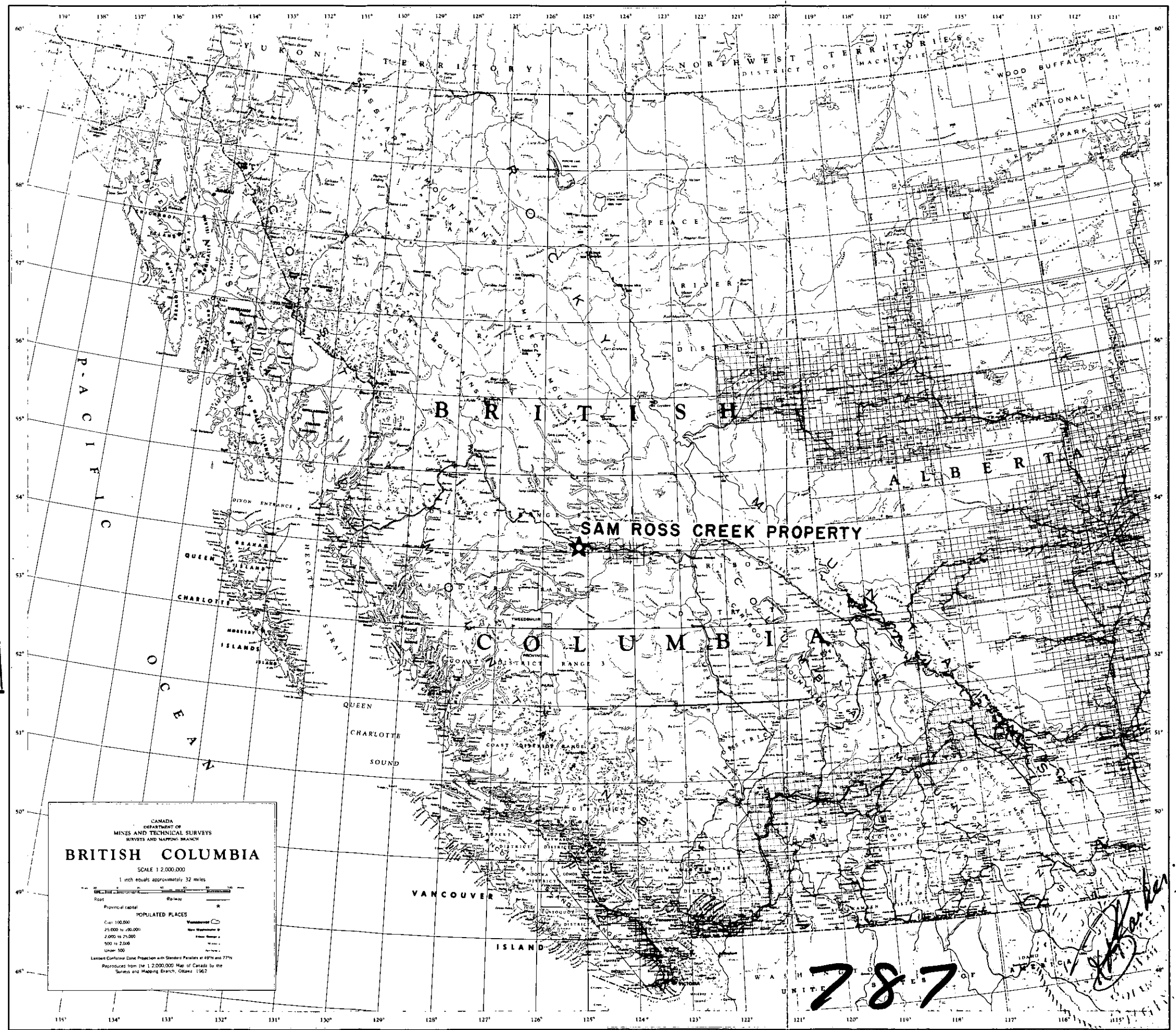
BIOGEOCHEMICAL ANALYSES

Sample Description	ppm Cu	ppm Zn	Ratio Cu:Zn	ppm Pb	ppm Mo	% in Ash Cu	% in Ash Zn	% in Ash Pb	% in Ash Mo	% Ash
D-11 1/4" Stems	5.	72.	.061	2.5	N.D.	.029	.42	.015	--	1.7
D-14 1/4" Stems	4.6	47.	.097	2.5	Tr	.019	.19	.023	.0021	2.4
DP-6 Bark	2.	160.	.012	0.3	N.D.	.0038	.31	.00048	--	5.2
DP-8 Bark	2.	220.	.0089	0.5	Tr	.0033	.37	.00083	<.00083	6.1
N-3 Bark	6.	200.	.032	4.	N.D.	.014	.23	.0088	--	4.6
N-6 Bark	0.8	200.	.0037	2.	N.D.	.0073	.64	.0063	--	3.2
N-8 Bark	0.5	230.	.0022	0.3	N.D.	.0011	.53	.00057	--	4.4
N-10 Bark	0.8	290.	.0026	2.5	N.D.	.0016	.61	.0052	--	4.8
N-15 Bark	1.	140.	.0004	4.	N.D.	.0034	.15	.016	--	2.6
T-1 3 Twigs (1-3 yrs)	1.	56.	.018	3.5	Tr	<.0056	.31	.014	.0056	1.8
H-6 Twigs (1-3 yrs)	0.5	59.	.0085	10.	Tr	.0022	.26	.044	<.0022	3.3
TL-4 Twigs (1-3 yrs)	1.	56.	.018	13.	N.D.	.0054	.33	.074	--	1.7
TL-12 Twigs (1-4 yrs)	1.5	78.	.019	30.	Tr	.0045	.79	.091	<.0030	3.3
TL-15 Twigs (1-4 yrs)	Tr	74.	<.014	Tr	N.D.	.0042	.31	.042	--	2.4
TL-18 Twigs (1-4 yrs)	Tr	59.	<.017	8.	N.D.	<.0039	.73	.031	--	2.6
TL-20 Twigs (1-4 yrs)	Tr	52.	<.019	50.	Tr	<.0036	.14	.018	.0036	2.8
TL-21 Twigs (1-4 yrs)	2.	85.	.029	45.	Tr	.002	.15	.082	.0018	2.5
TL-22 Twigs (1-4 yrs)	Tr	52.	.019	13.	N.D.	.0042	.22	.052	--	2.4
TL-24 Twigs (mixed)	1.	61.	.015	45.	Tr	.0038	.26	.17	.0038	2.6
TL-27 Twigs (1-4 yrs)	Tr	78.	.013	2.	N.D.	.0059	.46	.012	--	1.7
TL-29 Twigs (mixed)	1.	63.	.016	21.	Tr	.0043	.27	.089	.0043	2.3
TL-30 Twigs (mixed)	1.	63.	.016	11.	Tr	.0043	.27	.0482	.0045	2.3

Tr = 1.0

N.D. = Not Detected

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. # 1 MAP 787



CANADA
 DEPARTMENT OF
 MINES AND TECHNICAL SURVEYS
 SURVEYS AND MAPPING BRANCH

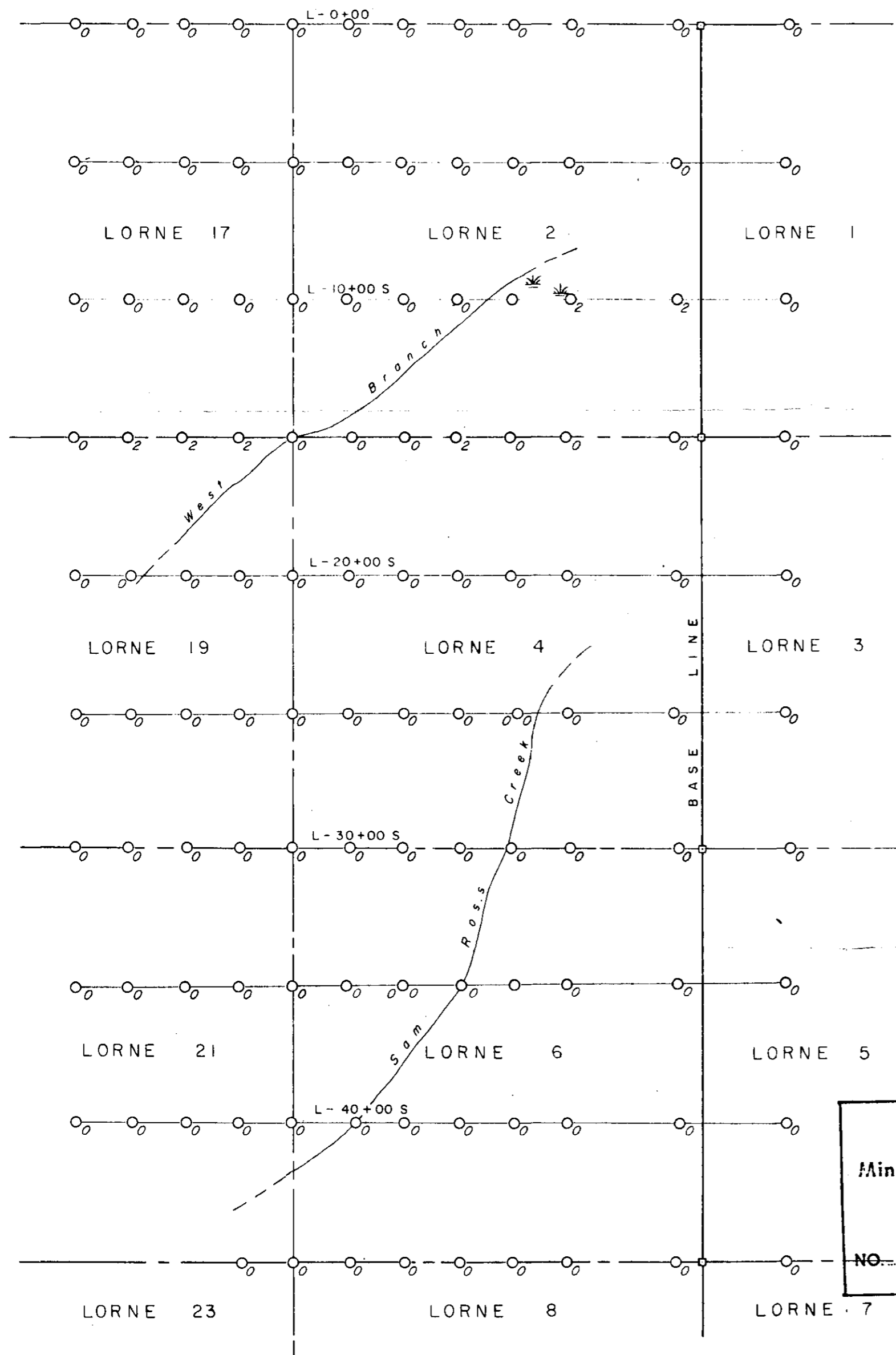
BRITISH COLUMBIA

SCALE 1:2,000,000
 1 inch equals approximately 32 miles

Provincial capital
 POPULATED PLACES
 Over 100,000
 25,000 to 100,000
 2,000 to 25,000
 500 to 2,000
 Under 500

Reproduced from the 1:2,000,000 Map of Canada by the
 Surveys and Mapping Branch, Ottawa, 1962

787



L E G E N D

- Picket Line
- Base Line and/or Claim Location Line.
- Picket Line and/or Claim Boundary Line.
- Claim Post
- Swamp.
- Soil Sample Site (p.p.m. Mo).

pH RESULTS

Average 6.4
Range 5.3 - 7.5

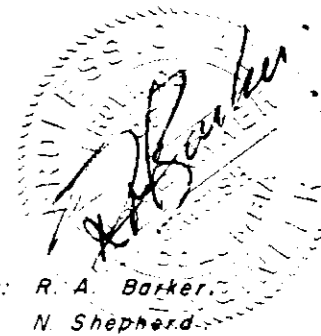
SOUTHWEST POTASH CORPORATION

Department of MINES AND PETROLEUM RESOURCES
ASSESSMENT REPORT
NO. 787 MAP # 5

SAM ROSS CREEK PROPERTY
MINING DIVISION — BRITISH COLUMBIA

SOIL SAMPLING
(GRID AREA)

SCALE 1" = 400'



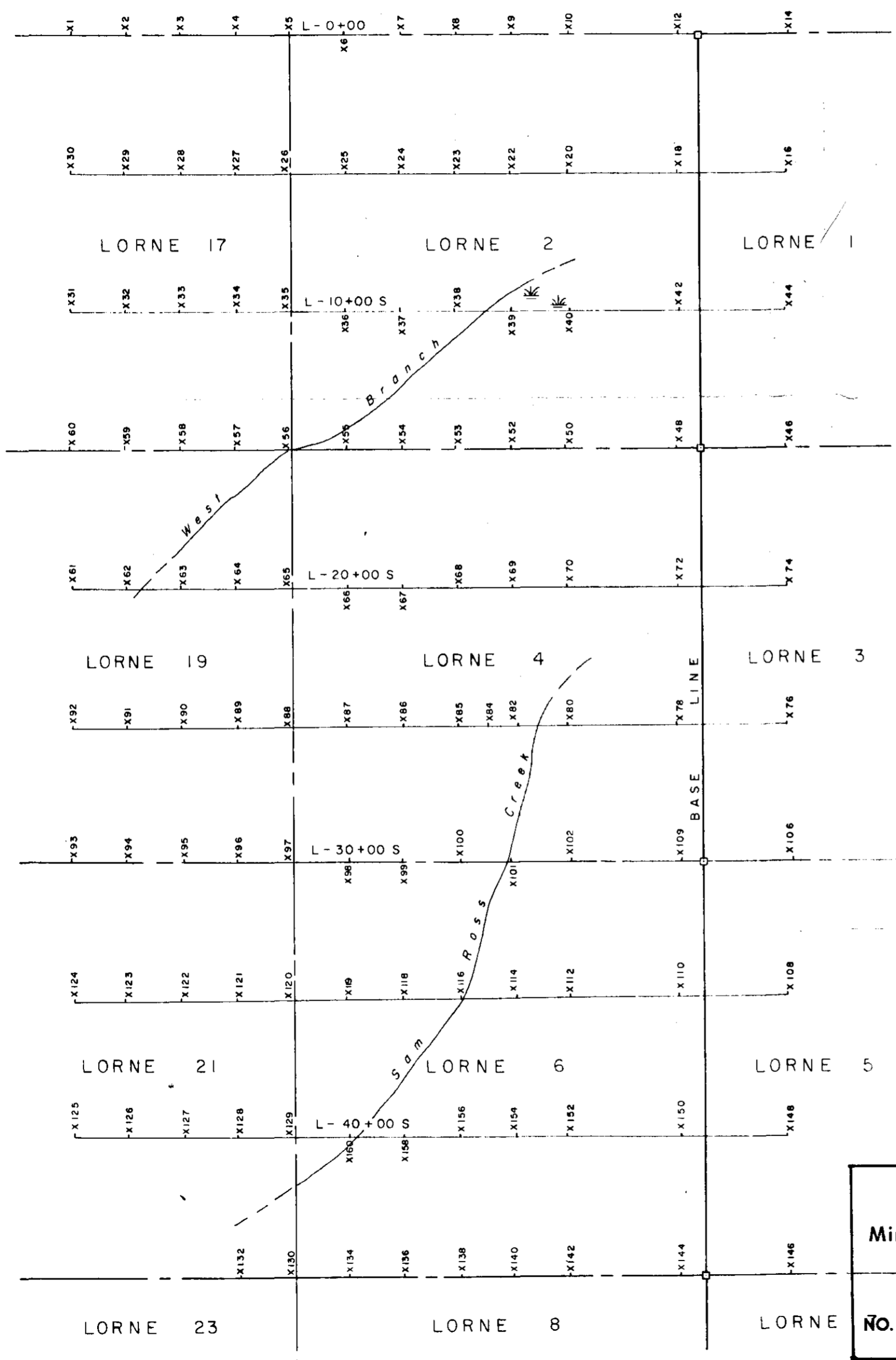
To accompany "REPORT ON THE SAM ROSS CREEK PROPERTY" by: R. A. Barker, N. Shepherd.

MI

787

Vancouver — JUN 1966

H.P.



L E G E N D

- Picket Line.
- Base Line and/or Claim Location Line.
- Picket Line and/or Claim Boundary Line.
- Claim Post.
- Swamp.
- Biogeochemical Sample Site (sample number).

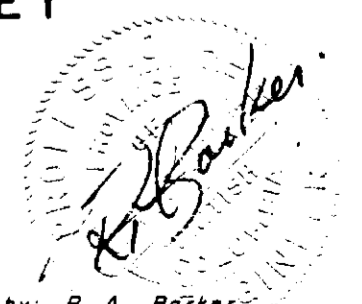
NOTE: -
For Biogeochemical Results See TABLE I

SOUTHWEST POTASH CORPORATION

SAM ROSS CREEK PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

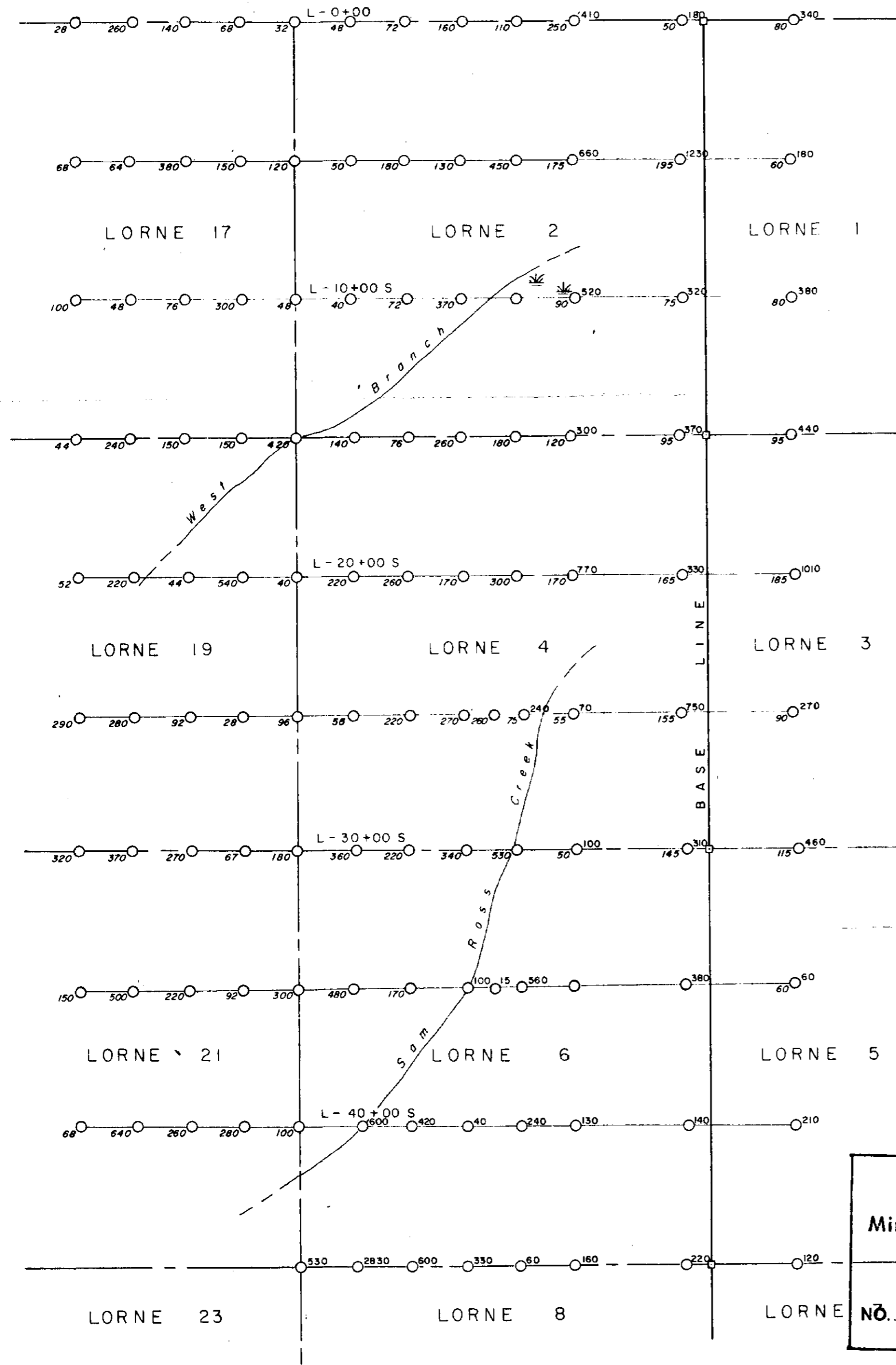
Department of **BIOGEOCHEMICAL SURVEY**
Mines and Petroleum Resources
(GRID AREA)
ASSESSMENT REPORT
No. **787** MAP # **6**

SCALE 1" = 400'



To accompany "REPORT ON THE SAM ROSS CREEK PROPERTY" by: R. A. Barker, N. Shepherd.

M2 787



L E G E N D

- Picket Line.
- Base Line and/or Claim Location Line.
- Picket Line and/or Claim Boundary Line.
- Claim Post.
- Swamp.

SOIL SAMPLES p. p. b. Hg

340 Lemaire Detector.

310 Denver.

SOUTHWEST POTASH CORPORATION

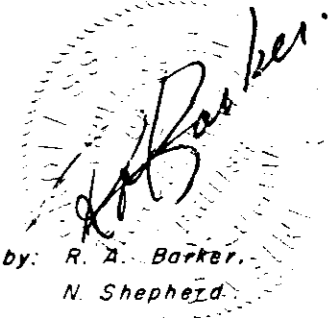
SAM ROSS CREEK PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 787 MAP # ?

MERCURY VAPOR IN SOIL
(GRID AREA)

SCALE 1" = 400'

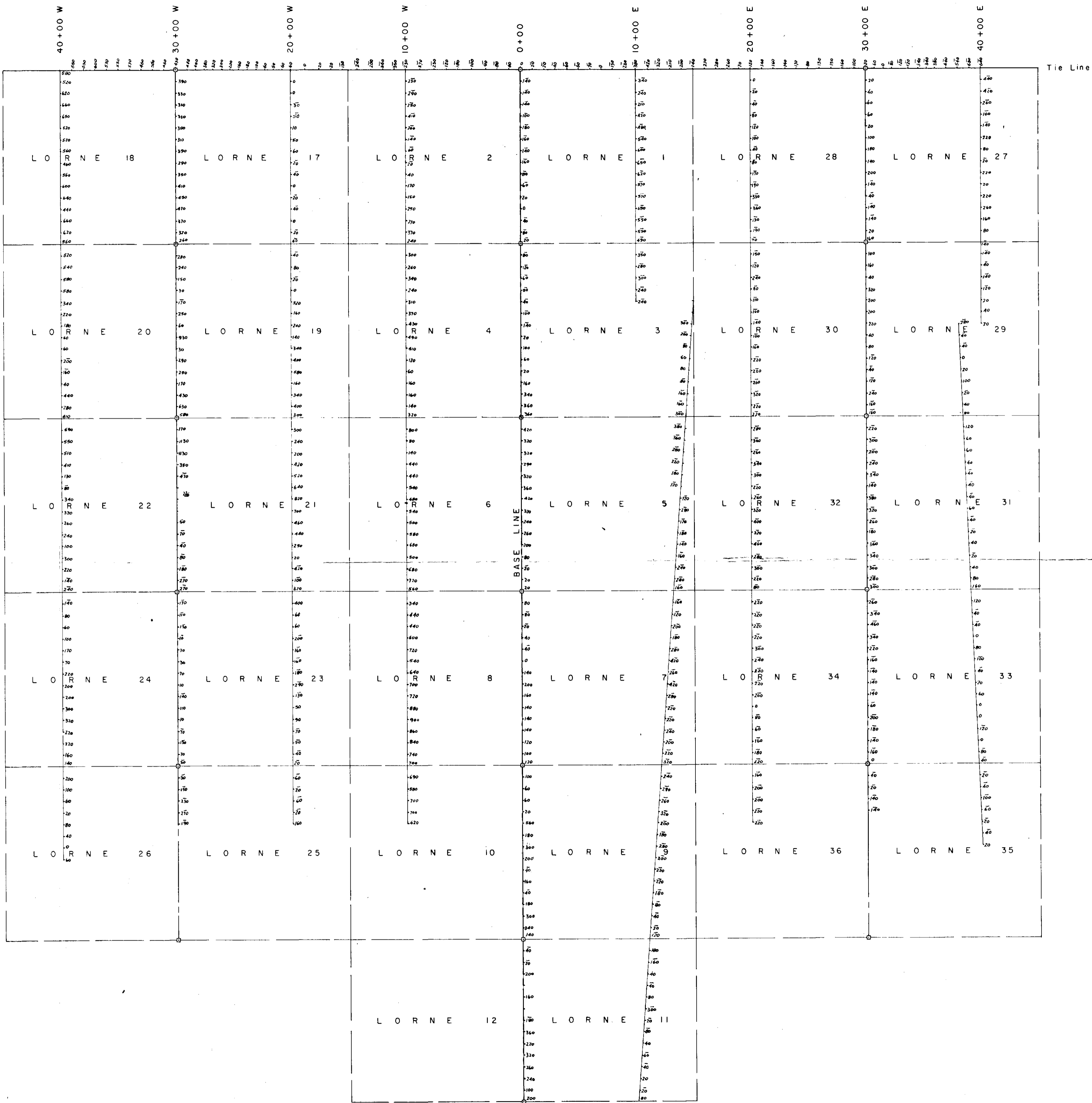
To accompany "REPORT ON THE SAM ROSS CREEK PROPERTY" by: R. A. Barker, N. Shepherd.



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Vancouver — JUN 1966

H.P.



LEGEND

- Claim Location Line and/or Base Line.
- Claim Boundary Line and/or Tie Line.
- Claim Location Line and/or Picket Line.
- Claim Boundary Line.
- Claim Post.
- Picket Line.
- Swamp.
- Magnetometer Reading Stations (readings in gammas).
- Station Interval Generally 100'.
- Magnetometer Readings (positive, negative).

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 787 MAP # 8

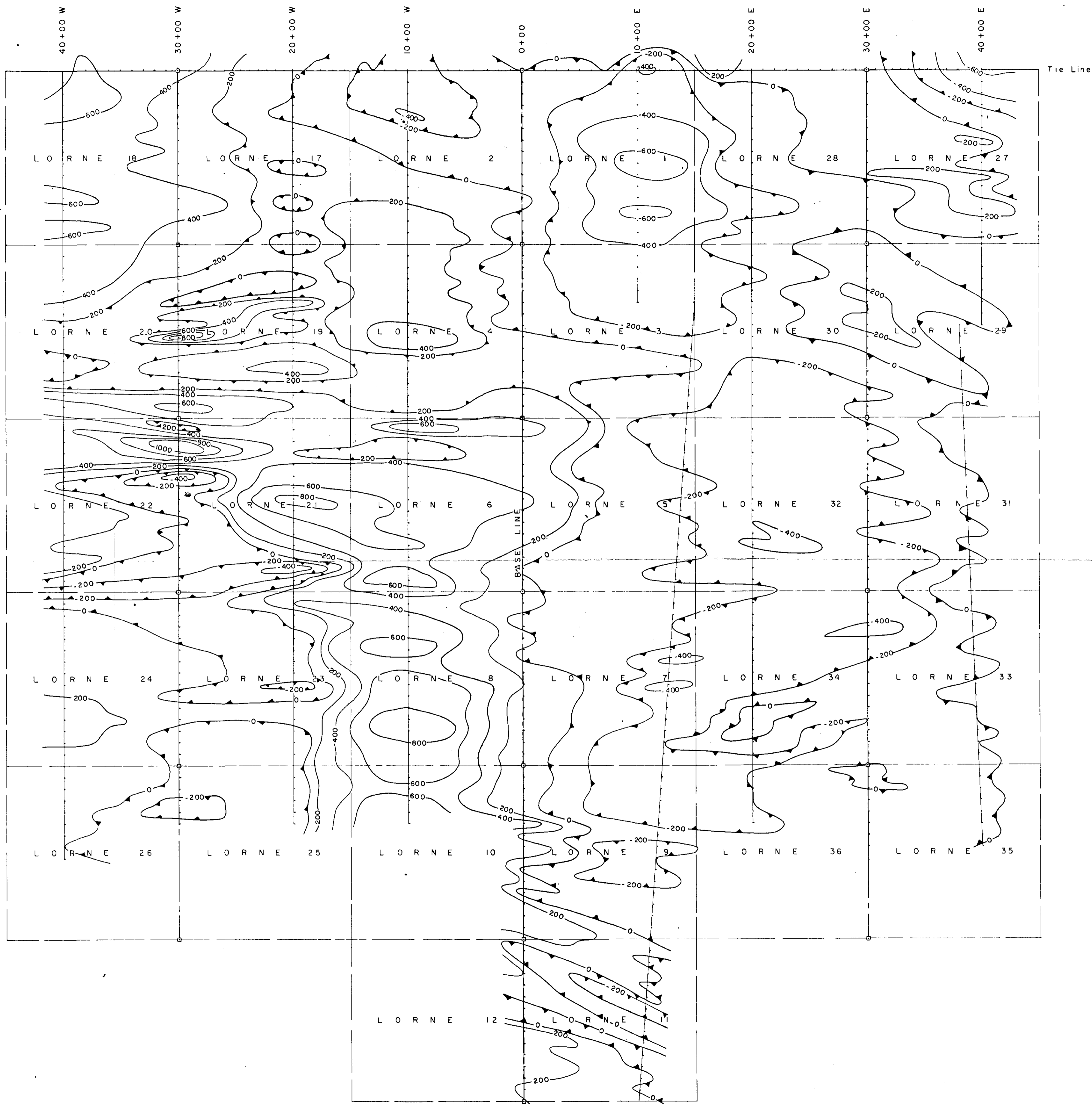
M4

SOUTHWEST POTASH CORPORATION
SAM ROSS CREEK PROPERTY
 OMINECA MINING DIVISION — BRITISH COLUMBIA
MAGNETOMETER READINGS MAP

SCALE 1" = 500'

To accompany "REPORT ON THE SAM ROSS CREEK PROPERTY" by: R. A. Barker.
 N. Shepherd.
 Vancouver — JUN 1966

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L E G E N D

- Claim Location Line and/or Base Line.
- Claim Boundary Line and/or Tie Line.
- Claim Location Line and/or Picket Line.
- Claim Boundary Line.
- Claim Post.
- Picket Line.
- Swamp.
- Magnetic Contour (contour interval 200 gammas).
- Magnetic Low.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 787 MAP # 9

SOUTHWEST POTASH CORPORATION

SAM ROSS CREEK PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

MAGNETOMETER SURVEY CONTOUR MAP

SCALE 1" = 500'

To accompany "REPORT ON THE SAM ROSS CREEK PROPERTY" by: R. A. Barker,
N. Shepherd.
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(M5)