

MAR 19760007: OLD FORT BAY

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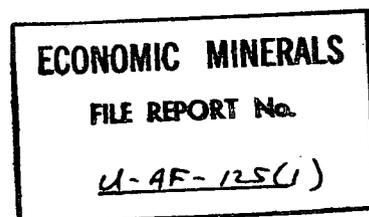
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REPORT ON
QUARTZ MINERAL EXPLORATION PERMIT 199

AT

OLD FORT BAY
LAKE ATHABASKA, ALBERTA



WORK PERFORMED APRIL 25, 1975 - APRIL 25, 1976

J.W. MacLeod, P.Eng.

May 12, 1976

RECEIVED

#333-885 Dunsmuir St.

Vancouver, B.C.

V6C 1N5

MAY 25 15 32 '76

ENERGY

May 20, 1976

NATURAL RESOURCES

George Fulford
Director of Minerals
Alberta Energy & Natural Resources
Petroleum Plaza, South Tower
#9915 - 108 Street
Edmonton, Alberta
T5K 2C9

Dear Mr. Fulford:

RE: QUARTZ MINERAL EXPLORATION PERMIT #199

Enclosed please find a report covering the exploration carried out during the past year on this permit.

Yours very truly,

J. W. MacLeod

JWM/fs

encl:

cc: P. Batke - Supervisor
Exploratory Agreements

P.M. Gibson - Geophysical Coordinator

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EXPENDITURE

SUMMARY

During the past year, geochemical, scintillation, electromagnetic and magnetic surveys were carried out on Permit 199 to determine the cause of aerial indications obtained by flying in 1969.

These surveys all obtained co-incident anomalies suggesting shallow depth to the sandstone cover and therefore good drill targets for uranium mineralization.

Diamond drilling failed to confirm the anomalous indications and established the depth of sandstone considerably greater than anticipated.

The original concept of favourable structure in the basement remains untested. With the data available it may be possible to establish drill targets with a seismic survey and this approach is recommended.

An initial expenditure of \$30,000.00 will be required.

PROPERTY

Quartz Mineral Exploration Permit No. 199 covers the following land:

Sec. 29 - 32	TP 110	R3W4M
Sec. 25 - 27, 34 - 36	TP 110	R4W4M
Sec. 5 - 6, 5 1/2 - 8	TP 111	R3W4M
Sec. 1 - 3	TP 111	R4W4M

The Permit was issued on April 25, 1975 and covers approximately 9,920 acres.

GENERAL

The property is located on the south shore of Lake Athabasca at Old Fort Bay 25 miles east southeast of Fort Chipewyan. This is a sand and muskeg covered area with relief less than 50 feet above lake level.

There is no outcrop on the property, but being approximately 12 miles from the Athabasca Sandstone-basement contact, it is probably completely underlain by sandstone, therefore the target for exploration is the regolith and underlying basement.

The location of the permit is considered favourable because it is at the projected confluence of three basement faults; the Black Bay, Grease River and Charles Lake Fault. Also, the available aerial megnetics, show a large north-south feature which suggests basic rocks in the basement at this location.

The general area was flown in 1969 and the results are available at the Alberta Research Council offices. A low order anomaly was obtained by the aerial work, centrally located on Permit 199.

The object of the past years work was to locate the cause of the aerial anomaly and to this end, ground geo-chemical, scintillation, magnetic, electromagnetic surveys and diamond drilling were carried out.

SCINTILLATION SURVEY

Reconnaissance work with a SRAAT SPP-2 scintillometer located above normal radioactivity within the aerial indications and formed the basis for the initial grid on lines 1000 feet apart laid out in the fall of 1975.

Background was established between 10-20 counts per second (c.p.s.) with a high of 80, with readings above 35 statistically anomalous, an area about 4000 by 4000 and open to the north was established on the ground. This was confirmed by further surveying during February 1976 when readings were about 60% of those taken in the fall, due to snow cover. The winter work expanded the anomaly to the north.

GEOCHEMICAL SURVEY

During the fall of 1975, 235 soil samples were collected on the scintillometer grid and analysed for uranium by the fluorimetric method.

Background in the soil-sand environment is under 1 part per million (p.p.m.) with anomalous readings up to 12 p.p.m. obtained in correlation with the scintillation anomaly. Along Crown Creek "B" horizon soil was difficult to obtain even at augered depths of 4 feet and here carbonaceous material in the samples gave erratically high values, which should not be compared to the sand-clay samples.

ELECTROMAGNETIC SURVEY

This survey was carried out with a Rhonka EM-16 unit, on electromagnetic system employing radiation from powerful radio transmitters as the primary signal. The presence of a conductor creates a local secondary field which gives rise to a vertical component and changes in amplitude. Measurement of these changes can locate structures such as faults, the object of the exercise. The stations used for this survey were Seattle, Washington at 18.6 kHz and Bangor, Main at 24.1 kHz.

An orientation line was run along the line between twp. 110 and 111 for a length of 16 km. Only in the vicinity of the scintillation anomaly were E.M. crossovers obtained so a north south control on the line between Range 3 and 4 was established for control of east-west lines at 200 meter intervals. Numerous conductors were encountered as shown on the accompanying plans with depths estimated around 30 to 60 meters.

MAGNETIC SURVEY

A Sharpe MF-1 magnetometer, a vertical force fluxgate instrument measuring the vertical component of the earth's total magnetic field, was used over the survey area.

Severe electrical storms prevented the surveying of sufficient area to prepare a contoured map, but short profiles over EM conductors tended to confirm the shallow (30-60m) depth to the causative bodies.

DIAMOND DRILLING

To test the anomalous conditions indicated by the surveys, two diamond drill holes were completed with locations shown on the accompanying plans.

Both holes encountered about 30 m of overburden and failed to penetrate the Athabasca Sandstone. Some vertical fractures with bleached walls, suggesting hydrothermal alteration, and minor pyrrhotite were encountered which could explain the E.M. and mag. anomalies at shallow depth.

CONCLUSIONS

All of the initial work; geochemical, radiometric, electromagnetic, magnetic, and the seismic depth of 52m on Moose Point obtained by the G.S.C. suggested favourable targets for drill test at shallow depth and interpreted as the regolith.

Drilling indicates the calculated depths were for the overburden-sandstone interface and not the regolith as anticipated.

On the basis of the original concept the area remains a good exploration bet, but a test at greater depths will be required. Targets for this could be provided by seismic surveys using the drill hole data for control.

RECOMMENDATIONS

A seismic test should be carried out in the vicinity of the drill holes to establish the feasibility of this method to determine the location of the regolith. Should this be indicated at a reasonable depth lines should be run to profile the contact to define fault scarps for drill targets.

A minimum of 15 miles of seismic line at \$2,000.00 per mile would be required for an estimated cost of \$30,000.00

Respectfully submitted,

J.W. MacLeod, P. Eng.

APPENDIX I

PROPERTY LAKE ATHABASCA

CLAIM # PERMIT #199 DEPARTURE 50W STARTED March 29, 1976

N.T.S. LATITUDE 400 N COMPLETED April 5, 1976

DEPTH 152.4 m ELEVATION + 230m LOGGED BY D. PEEL

	BRG.	DIP
0		90°

INTERVAL	DESCRIPTION
in meters	
0-33.8	<p>Overburden - mostly sand-sandy clay with some boulders at base.</p> <p>Athabasca Sandstone - Bedded Quartzose with occasional interbedding of argillaceous siltstone. Hard drilling.</p> <p>Quartzose - Well sorted bedding, overall bedding orientation 85° to core axis. Cross bedding in sections.</p> <p>Fine to medium grained - majority of grains subrounded to well rounded - some angular - sub angular grains. Occasional thin layer of coarse grains and rock fragments.</p> <p>Color varies from dark purple to light tan with some light green sections. Liesegang banding caused by hematitic staining.</p> <p>Minor fracturing throughout - the majority being sub parallel and sub perpendicular to core axis. Some fractures exhibit adjacent bleaching of walls and some pyrite, chlorite, talc and gypsum is associated with the vertical fracturing.</p> <p>Argillaceous Siltstone - Sections varying from a few inches to a few feet within the Quartzose. Characteristically dark purple with light green laminations or bands. The light green sections seem to be a leaching of the hematite as it is characteristically associated with the contacts with the Quartzose and along the walls of the occasional hairline fracture. The light green color also shows as rounded blebs or spots within the purple siltstone. The top contact is visually irregular (possibly due to load casting). Bottom contact is usually concordant with bedding. Bedding and banding within the siltstone is usually 85° to core axis.</p>

INTERVAL	DESCRIPTION
33.8 - 35.8	<p>Mixed section - various colored quartzose.</p> <p>Purple red quartzose with spotted appearance (lighter colored spots = 5mm in Dia.) fine - med grained.</p> <p>Light greenish tan quartzose, f.g. occasional iron oxide (hematitic) blebs disseminated throughout - 1% - minor accessory minerals - epidite & a pink transparent mineral grain.</p> <p>Purple quartzose with faint spotted appearance.</p> <p>Broken between sections - most likely boulders.</p>
35.8-40.4	<p>Medium grained quartzose. Light green with thin purple laminations. Laminations 80° to core axis. Occasional elongated (to bedding) blebs of soft green mineral - kaolin or chlorite. Some cross bedding. Evidence of sorting - fine - medium grains.</p>
40.4-40.55	<p>Argillaceous siltstone very fine - fine grained - light green with purple banding. Banding 85° to core axis. Occasional light green rounded blebs in purple bands.</p>
40.55 - 40.6	<p>Coarse grained quartzose angular to rounded grains.</p>
40.6 - 47.55	<p>Quartzose - similar to 35.8 - 40.4 m</p> <p>41.5 m (136') Vug filled with hematitic mud.</p> <p>42.84 m (140.6') purple band.</p> <p>43 m - 44.8 m (141-147') blocky - 30% recovery.</p> <p>46.6m (152.9') 2.5 cm mud seam.</p> <p>46.65 m (153') end of N core. Beginning of B core.</p> <p>46.65 -47.55 (153-156') laminated fine grained quartzose.</p> <p>47.55 - 49.9 (156 - 163.5') dark purple quartzose with light green laminations throughout some laminations wavy - 90° - 85° to core axis - some light green well rounded blebs throughout the hematitic sandstone.</p>

INTERVAL	DESCRIPTION
	<p>49.8-50.9 (163.5-167') tan quartzose with green bands and blotches. 50.3 - Perpendicular (to core axis) fracture with well developed platy elongated crystals of gypsum? 2.5 hardness - light tan color. no HCL. reaction.</p>
50.9-51.8	<p>Argillaceous siltstone purple and light green horizon. Contacts gradational. Occasional hematitic stained Vug.</p>
51.8-52.4	<p>Cross bedding - occasional flat round blebs of oxidized pyrite or pyrrhotite along small fracture.</p>
52.4-66.15	<p>Sorted bedding - fine to coarse grained. Alternating fine and medium grained with occasional coarse grained layer.</p> <p>Bedding - medium grained beds = 0.3 cm. fine grained beds = 1.0 cm coarse grained beds - grains up to 0.65 cm in diameter - some feldspar grains - one bed 5 cm thick.</p> <p>Light sandy pink with some dark purple and light green laminations and bands 85° to core axis.</p> <p>Trace of flat round blebs of pyrite along fractures.</p> <p>Sections with fine iron oxide disseminated throughout</p> <p>Occasional cloudy qtz. grain - transparent milky white.</p> <p>55.0m-13cm - clay seam - Light green - irregular contacts approximately perpendicular to core axis.</p> <p>62.3m Gradational laminations fine to medium grains - bedding in proper sequence.</p>
66.15-66.75	<p>Cross bedding? In purple quartzose - near vertical dark purple laminations (=15° to core axis.)</p>

INTERVAL	DESCRIPTION
66.75-73.1	<p>- abruptly cut off on either side. On top by horizontal laminations exhibiting some wavyness - on the bottom by an argillaceous siltstone - abrupt contact - contact 90° to core axis - light green to light pink siltstone - grading back to quartzose.</p> <p>Quartzose - tan color increase in white feldspar grains - 10% banding less prominent. 71.9m - light green bleb of shale irregular contact. 71.98m- Hematite stain stain in section of porous medium grained section. 72.12m- Irregular light green shell patches.</p>
73.1-77.1	<p>Banded - laminated quartzose - red and green bands and laminations.</p> <p>First 0.3m vertical wavy hematitic parallel laminations - liesgang banding - cross cuts bedding - resembles mini roll fronts laminations change abruptly to horizontal orientation.</p> <p>Cross bedding evident in fine - very fine grained beds.</p> <p>Some talc along vertical fractures.</p>
77.1-77.25	<p>Light green argillaceous siltstone - laminated.</p>
77.25-95.4	<p>Sorted quartzose. Vertical mineralized fractures - pyrite heavily oxidized - depart from fracture in rounded blebs.</p>
77.25 - 77.55	<p>3% pyrite along fracture</p> <p>82m - circular bedding or folded structure - parallel bedding.</p> <p>83.5m - Similar structure as 82m.</p> <p>84.4m - Rounded pyrite blebs along fracture.</p>

INTERVAL	DESCRIPTION
95.4 - 96.0	<p>8.85 m - Thin seam (8cm) light green siltstone with purple elongated patches. Top contact irregular with some slickenslides parallel to contact - contact 30° to core axis. Bottom contact 80° to core contact - slickenslides. Similar bedding above and below siltstone horizon. Two talc veinlets 5 cm above siltstone horizon approx. in same orientation as top contact.</p> <p>91.15m - blebs of pyrite along fracture.</p> <p>94.2-94.5 - Round patch and bands of medium grained porous quartzose with associated hematitic staining.</p> <p>95.1-95.4 - Purple bedded quartzose wavy cross bedding.</p> <p>Argillaceous siltstone - dark brownish red with patches and bands of light green.</p> <p>The light green color appears as a bleaching of the red siltstone as it appears in the walls of a hair line fracture at 95.55m, at the irregular top contact (80° to core axis) and bottom contact (95° to core axis).</p> <p>95.8-96.0 - Dark grey with light green bands of medium grained quartzose a 15 cm round vug stained with hematite.</p> <p>96.0 - Thin siltstone seam - 3mm 85° to core axis - minor slickenslides parallel to bedding.</p>
96.0-143.7	<p>Fine grain - medium grained sorted quartzose - banded - laminated - pinkish tan - light green with a few purple bands.</p> <p>101.35m- angular blebs of light green siltstone 0.5cm in diameter. Sub angular to well rounded grains.</p> <p>Up to 10% feldspar grains in sections 105.75-109.25m - bedding irregular spherical.</p> <p>109.25-2.5cm - bed of coarse quartz grains up to 0.9 cm in dia. angular patch of siltstone (light green) - grains well rounded - angular.</p>

INTERVAL	DESCRIPTION
143.7-147.6	<p>109.55m - 110.05m - hematitic staining medium grained sandstone which grades into siltstone (last 0.15m of section fine wavy light brown laminations and dark purple laminations adjacent to top contact - purple laminations in lower section. Bottom contact gradational into sandstone.</p> <p>110.95m - pyrite blebs in fracture - minor.</p> <p>111.1m - Coarse grains - orange quartz. Clear quartz, white feldspar, grains & light green clay particles.</p> <p>111.35 - 111.5 - interbedding of hematitic quartzose and light green siltstone.</p> <p>111.5 - coarse grains - sub rounded to well rounded.</p> <p>Occassional medium sized grains intermixed with fine grains. Coarser grained beds - thin - increasing in number to 126.6 m.</p> <p>134.7 - rounded pyritic blebs in fracture.</p> <p>139.6 - " " " " "</p> <p>142.35m - 0.75cm of light grain low grade quartzite - re vitreous mineral - in anhedral crystal aggregate - on a horizontal fracture Garnet? Flourite?</p> <p>142.8 - spherical bedding.</p> <p>Light green siltstone with interbedded quartzose.</p> <p>Top contact irregular approximately perpendicular to core axis. Tongue or quartzose comes down into siltstone - ripple marks in siltstone? Adjacent overlying quartzose bedding follows contact contours. Contact of siltstone - light green.</p> <p>143.7-143.9 - Purple siltstone with light green laminations and rounded blebs. Top contact 87° to core axis rest of section - mixed bedding.</p>

INTERVAL	DESCRIPTION
	<p>143.9-144.0 - mixed appearance - very fine grained sandstone perpherated by hematitic staining giving mixed pattern. Light green with elongated patches and laminations of dark green dark brown.</p> <p>144.0-144.5 - siltstone with mixed bedding very fine grained sandstone.</p> <p>144.5-144.6 - siltstone with fragments of white cherty material - angular to rounded - aligned to bedding - bottom contact 87° to core axis. Light brown shaly silt.</p> <p>144.6-144.7 - Quartzose - fine to medium grained - hematitic stained.</p> <p>144.7 - 144.8 - Laminated siltstone light green - pinkish white.</p> <p>144.8 - 145.25 - Quartzose with fine purple hematitic spots disseminated throughout.</p> <p>145.25 - 147.3 - Quartzose - well sorted bedding - tan color coarse - fine grain bedding.</p> <p>147.3 - 147.6 - Banded siltstone top contact - somewhat irregular. 85° to core axis. Light green first 0.5cm - dark purple with light green rounded blebs and lam. Some sorted bedding - fine to very fine grained.</p> <p>Bottom contact 85° to core axis.</p>
147.6-152.4	<p>Fine to medium grained quartzose faint laminations due to sorting. Soem hematitic staining in thin bands. Occassional fracture perpendicular and sub parallel to core axis.</p> <p>Near vertical fractures have associated pyrite and chlorite minerals.</p> <p>Occassional light green thin seam - usually of soft chloritic shale - siltstone. Increase in feldspar content near end of hole. Feldspar content - 15-20% - somewhat easier to drill but still hard.</p> <p>150.9 - medium grained sandstone yellow - dark purple in contact with siltstone - v.f.g. pale light brown and light green faint lamination irregular contact -</p>

INTERVAL	DESCRIPTION
	<p>70° to core axis fragments of light green siltstone - up to 6 cm x 4.6 cm fragments elongated to contact.</p> <p>150.0 - 151.1 - siltstone - light green with purple laminations. Bottom contact 85° to core axis.</p>

APPENDIX II

APPENDIX II

EXPENDITURE

Acquisition & Rental Cost	\$ 3,372.00
Geochemical & Geophysical	30,321.83
Diamond Drilling	43,770.30
Trailers	<u>7,237.75</u>
	\$ 84,701.88

PROPERTY LAKE ATHABASCA

CLAIM # Permit #199

DEPARTURE 350 W

STARTED APR. 6, 1976
APR. 12, 1976

N.T.S. _____

LATITUDE 180 S

COMPLETED _____

DEPTH 152.4 m

ELEVATION ± 230 m

LOGGED BY D. PEEL

	BRG.	DIP
		90°

INTERVAL IN METERS	DESCRIPTION
0.32	OVERBURDEN
32.0-152.4	Athabasca sandstone - similar to D.D.H.#1 Sections of low grade metamorphism exhibited by areas of somewhat welded quartz grains more evident in D.D.H.#2 than in D.D.H.#1.
32.0-33.7	Purple with faint green laminations - laminations 75° to core axis. Fine - medium grained. Trace of pyrite in sub vertical fractures. Very fine grained dark mineral disseminated throughout - 0.5% hematite? Purple color - hematitic staining. Green color - epidote. Grains appear somewhat welded.
33.7-35.65	Sorted quartzose purple - pink - to reddish purple. Fine grained with laminations of medium grained material - prominent laminations pronounced by red - purple color. Leisegang banding = subvertical - thin red laminations. 35 - 1.5 cm - sandstone dyke - cuts bedding - perpendicular to core axis.
35.65-36.4	Quartzose becomes increasingly porous. Fine - medium grained. Hematitic stain increasing with porosity cross bedding evident. Hematitic limonitic (orange pink clay) along vertical fracture.
36.4-36.55	Argillaceous siltstone light green and purple.
36.55 - 38.7	Quartzose. Speckled appearance - hematitic speckles laminated. Pyritic blebs - round flattened along sub vertical fractures.
38.7-41.3	Hematitic stained quartzose with interbedding of argillaceous siltstone. Quartzose - hematitic laminations and bands concordant to bedding 62-65° to core axis.

INTERVAL	DESCRIPTION
41.3-44.5	<p>Occasional vug with hematitic clay filling.</p> <p>Mottled appearance in places - spots of light purple in background of dark purple.</p> <p>Argillaceous siltstone - beds 3-15cm usually irregular top contact and smoother flatter bottom contact. Contacts vary from 75-85° to core axis. Some contacts have a thin layer of clay hematitic and limonitic, some possess a phylitic or micaceous mineral (yellow-brown color in one bed) - also occurs along sub vertical fractures - micaceous mineral very fine grained.</p> <p>40.55m - siltstone - sandstone contact separated by 1m.m. of clay = bedding in lower sandstone 85° to core axis - adjacent and concordant to contact changing abruptly to 65° to core axis.</p> <p>Siltstone grains aligned or elongated to bedding.</p> <p>41.25m - Thin band of siltstone - 85° to core axis top contact exhibits slickenslides.</p> <p>41.3m - End of major hematitic staining banding 85° to core axis. Some green fragments - angular - sub rounded siltstone - up to 9mm. One 6mm fragment - light pink - quartzite or feldspar.</p> <p>Tan - light green laminated quartzose.</p> <p>Cross bedding evident. Laminations 65-85° to core axis. Very fine grained disseminated black mineral = 1% hematite. Minor pyrite along sub perpendicular fracture more abundant in vertical fractures - some well developed fine pyrite crystals observed as well as the flattened blebs.</p> <p>42.45m - Quartzose becomes hematitic stained.</p> <p>42.55-42.95m - siltstone - bedding & contacts perpendicular to core axis. Light green and purple.</p> <p>42.95-43 m - Hematitic stained quartzose.</p>

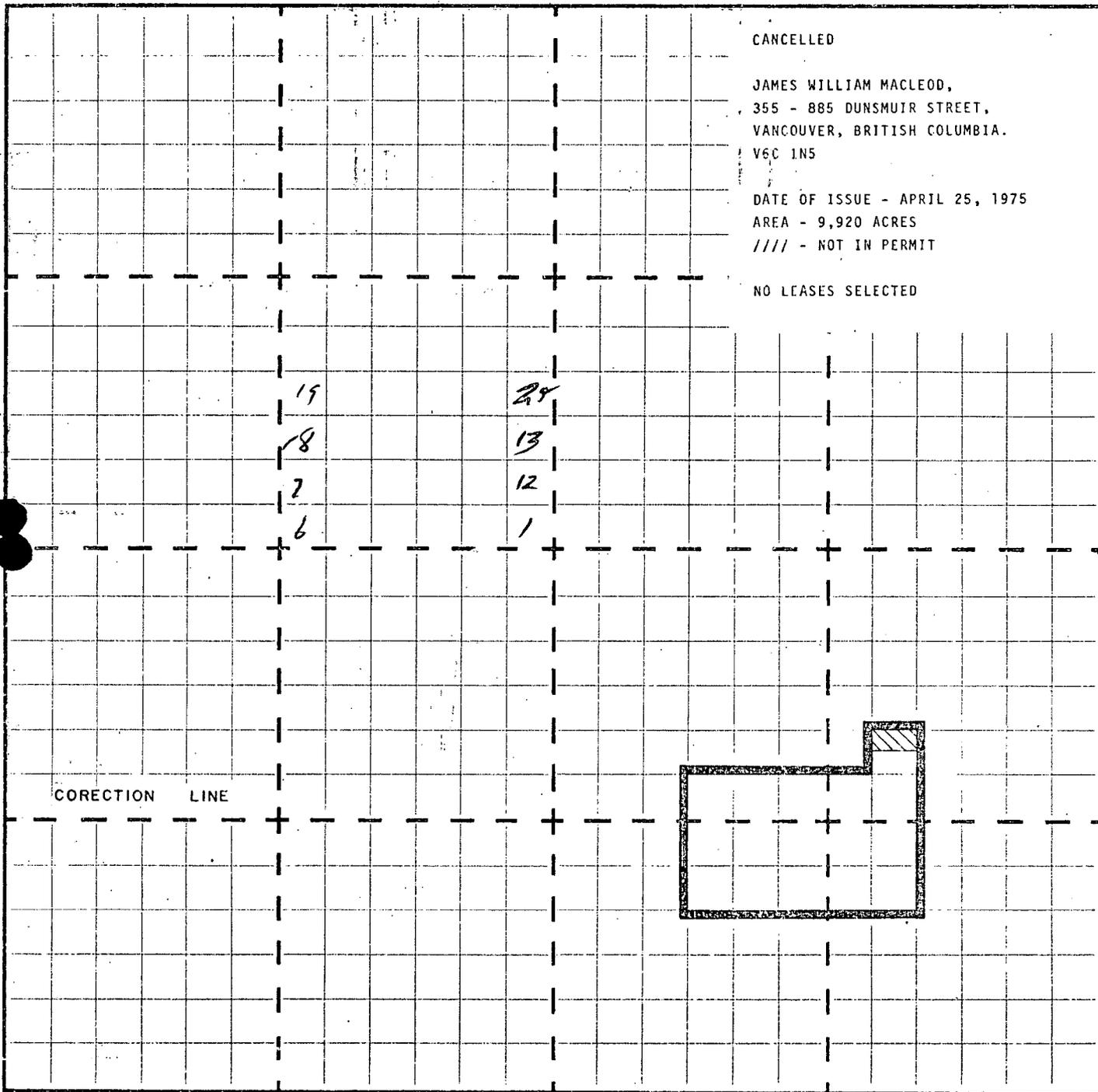
INTERVAL	DESCRIPTION
	43 m - Laminated
	43.3-44.25m - Faintly laminated quartzose - light tan with light green spots throughout spots - 3 mm in diameter.
	44.25m - laminations become more prominent. Fien - medium grained.
44.5-48.15m	Slightly welded quartzose mottled throughoug - hematitic speckled bands and laminations - light green and tan bands - impermiable bleaching along vertical and horizontal fractures sorted bedding.
	46.2-46.3 - light green slitstone - top contaet irregular - wavy 95° to core axis - exhibits load casting - upper 0.8cm argillaceous. Bottom contact 88° to core axis.
48.14-63.55	Light tan quartzose - bleached appearance. Mixed grain sizes within the sorted bedding. Spherical bedding - old boulder? Some hematitic laminations. Some argillaceous siltstone bed-. Minor flatteded round pyrite blebs in fractures. Faint laminations 85° to core axis. Some cross bedding - up to 70° to core axis.
	54.55 - Argillaceous siltstone - 3 mm wavy bottom and top contact.
	61.25-51.6 - Argillaceous siltstone - light greenwith hematitic quartzose bed. Graded - top - very fine grained. Bottom - coarse grained. Some elongated particles of green siltstone. Hematitic sandstone adjacent to either contact.
	63.55-67.35 - Quartzose - laminated - pinkish purple - dark purple - tan and light green - apple green. Liesegang banding - reddish purple. Laminations 75 - 85° to core axis.
	65.85 - slumping? wavy and broken bedding trace of very fine grained hematite?
67.35-98.75	Quartzose - bleached appearance - light tan with faint reddish purple laminations and faint light green bands.

INTERVAL	DESCRIPTION
	<p>70.4 - end N core start B core.</p> <p>74.65 - 3cm - green arcillaceous siltstone 75° to core axis - irregular contact. Sorted quartzose - somewhat coarser medium grained. Laminations caused by sorting. Pyrite - minor - vertical fracture very fine grained disseminated hematite 1%.</p> <p>81.05 - spherical bedding. Occasional very faint lieegang lamination [^] discordant to bedding. Bedding 85° to core axis. Coarse bedding more numerous occasional fragment of light green argillaceous siltstone.</p> <p>97.25 - spherical bedding.</p> <p>98.75 - 3 cm - light green argillaceous siltstone top contact 80° to core axis. Somewhat irregular.</p> <p>98.8-103.0 - Quartzose - purple banding and light green with tan coloring - some vertical lieegang laminations. Sub vertical hydrothermal bleaching along fractures.</p> <p>103.0-139.6 - pinkish tan quartzose - faintly laminated - 95° to core axis. Cross bedding. Minor Pyrite. Thin coarse grained bedding - polymictic conglomerate - angular grain size 3 mm increase of mixed grain sized within sorted bedding.</p> <p>Occasional milky quartz grains and orange brown transparent quartz grains - rounded - occasional black sub metallic grain - scratch brown - hematite?</p> <p>111.25-111.55 - Possible evidence of current flow. Rounded stone on preexisting surface - marked by darker medium grained horizon on which the medium grained circular structure (stone) rests and eddy current caused by the rock produced the ripple mark in preexisting surface.</p> <p>111.85 - cross bedding.</p> <p>113.4 - oo6.45- Hematitic banding.</p>

INTERVAL	DESCRIPTION
	<p>116.15 - 116.3 - Siltstone - pink - light green.</p> <p>115.67 - red - well cleaved fragment 90° cleavage -sub angular 3 mm.</p> <p>115.8 - 124.95 - increase of coarse grains and conglomerate beds.</p> <p>125.65 - 125.8 - Siltstone - light greenish grey.</p> <p>125.8 - pyrite & hematite (metallic crystals along vertical fracture.</p> <p>135.95- 1.5 cm - shale seam - purple with thin light green contacts - top contact 90° to core axis - bottom contact 88° to core axis fissile.</p> <p>138m - sub vertical and sub horizontal fractures with associated hematite (metallic crystals surrounded by red earthy oxide) and talc. Top contact = 90° to core axis. Thin shale layer adjacent to top contact.</p> <p>145.85 - 145.5 - Light green argillite with siltstone (light green with irregular patches of reddish brown talc along fractures. Top contact - irregular - 65° to core axis. Bottom contact - irregular - 65° to core axis.</p>

19760007

QUARTZ MINERAL EXPLORATION PERMIT NO. 199 U-AF-125



CANCELLED

JAMES WILLIAM MACLEOD,
355 - 885 DUNSMUIR STREET,
VANCOUVER, BRITISH COLUMBIA.
V6C 1N5

DATE OF ISSUE - APRIL 25, 1975
AREA - 9,920 ACRES
//// - NOT IN PERMIT

NO LEASES SELECTED

TP.

TP.

TP. III

TP. II O

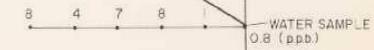
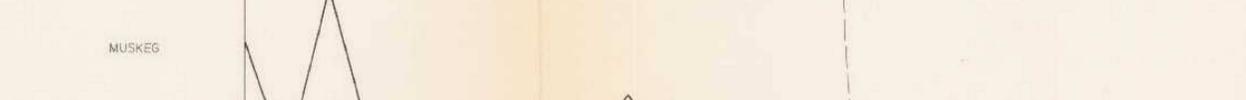
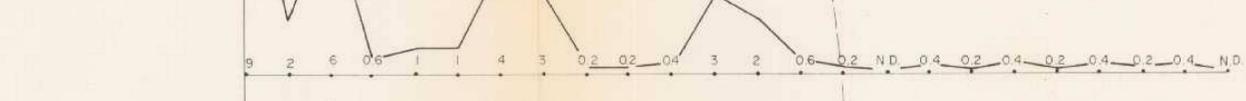
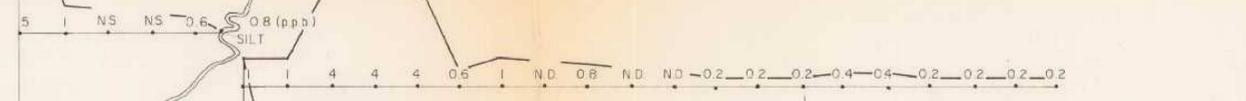
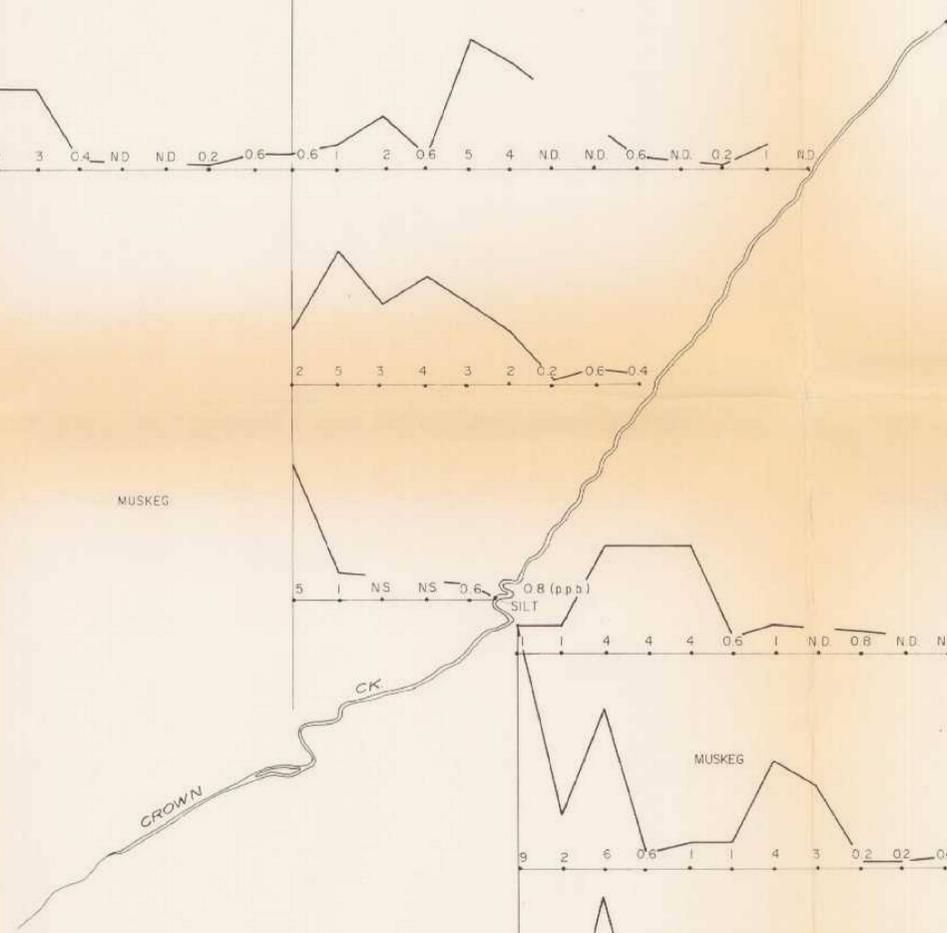
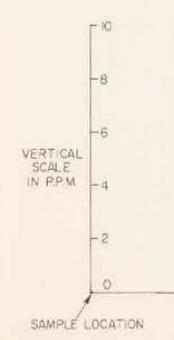
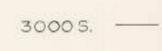
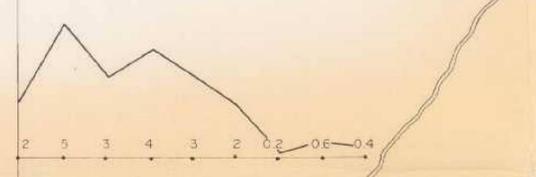
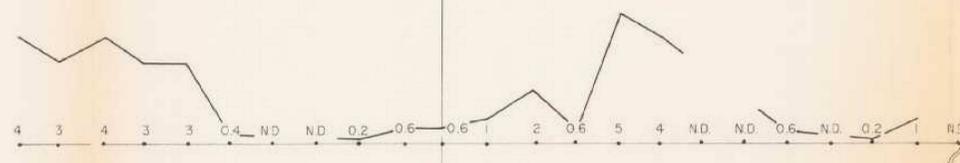
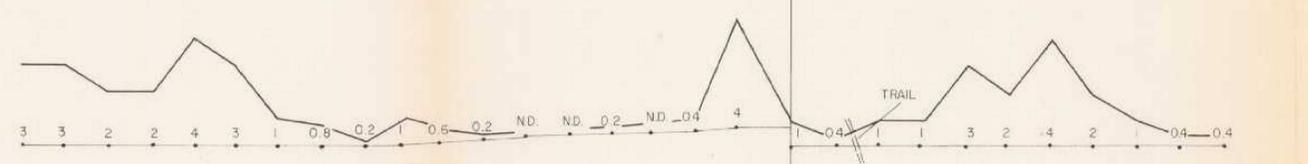
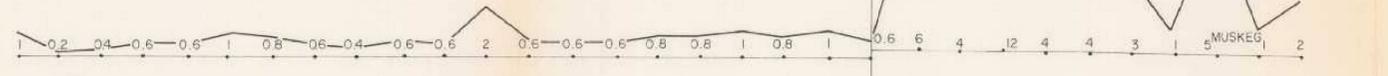
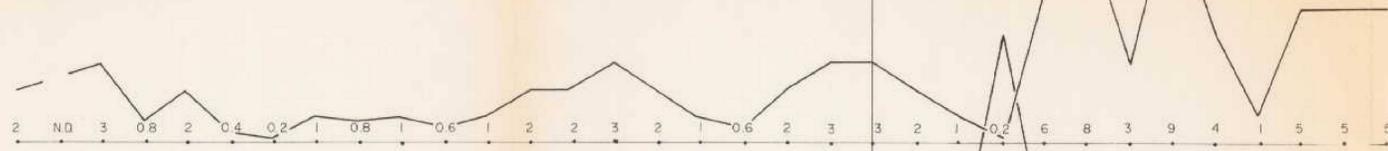
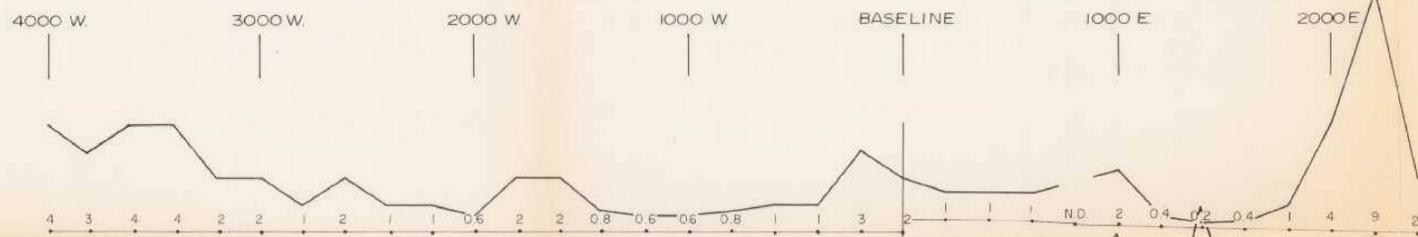
CORRECTION LINE

R.

R.

R. 4

R. 3 W. 4 M.

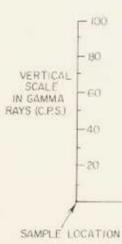
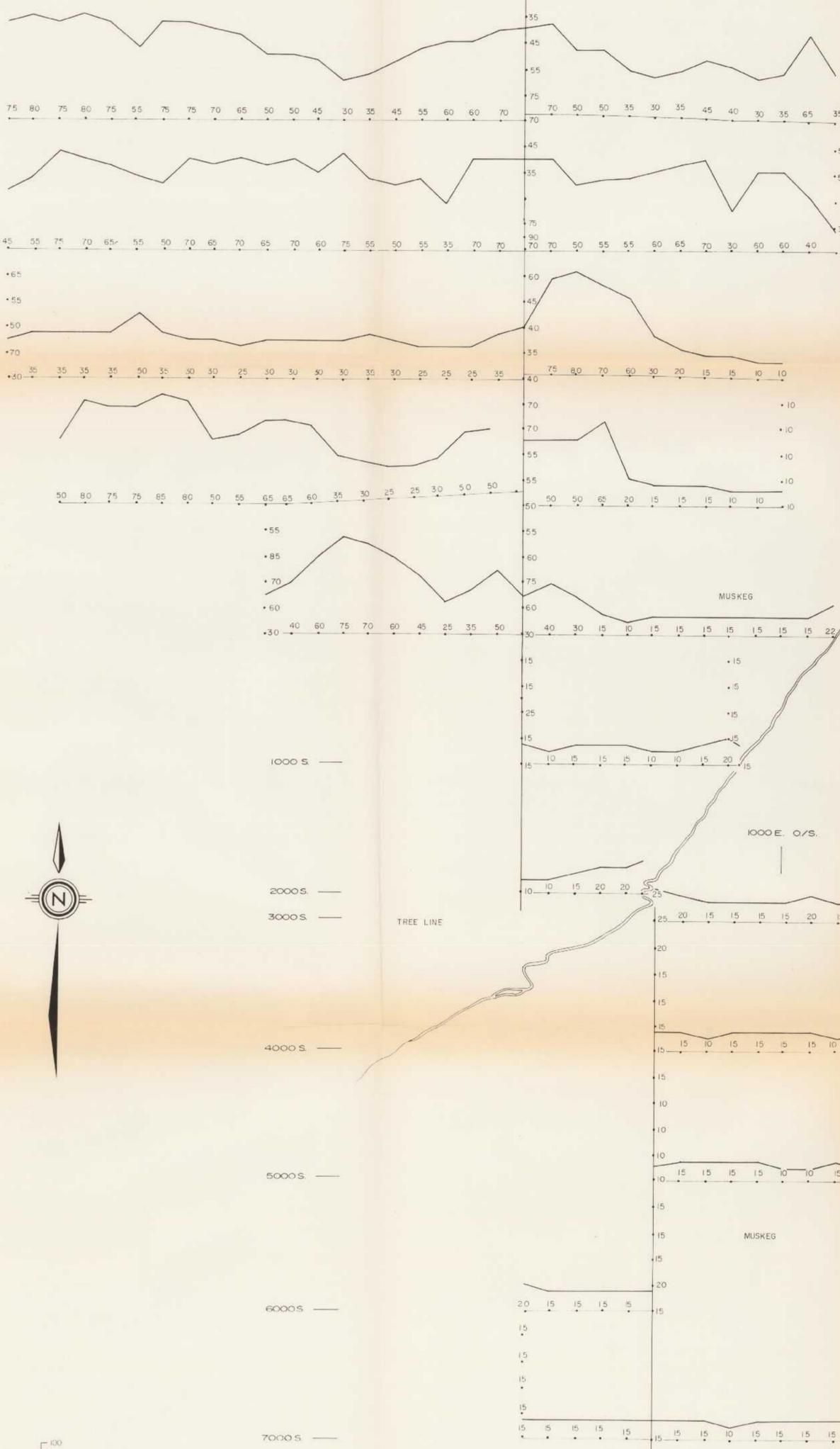


OL S. BASELINE

ENVOY RESOURCES LTD.	
GEOCHEMICAL SURVEY	
URANIUM IN PPM.	
LAKE ATHABASCA, ALBERTA	
SCALE IN FEET	
0 250 500 1000 1500 2000	
DATE: OCTOBER, 1975	N.T.S. 74 L.

4000 W 3000 W 2000 W 1000 W BASELINE 1000 E 2000 E

8000 N
7000 N
6000 N
5000 N
4000 N
3000 N
2000 N
1000 N
0



1000 E. O/S. 2000 E. O/S. 3000 E. O/S. 4000 E. O/S.

ENVOY RESOURCES LTD.

SCINTILLOMETER SURVEY
GAMMA RAYS (C.P.S.)

LAKE ATHABASCA, ALBERTA

SCALE IN FEET
0 250 500 1000 1500 2000

DATE: OCTOBER, 1975 N.T.S. 74 L



BOW RIVER RESOURCES

LAKE

ATHABASCA

RANGE 4

RANGE 3

GRASS

GRASS

GRASS



L 14 N

L 12 N

L 10 N

L 8 N

L 6 N

L 4 N

L 2 N

BL -1

L 2 S

L 4 S

L 6 S

L 8 S

L 10 S

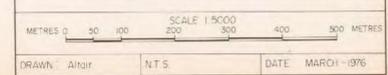
L 12 S

PRINCIPLE CONDUCTOR

ENVOY RESOURCES LTD.

E.M. 16 SURVEY
STATION 214

LAKE ATHABASCA, ALBERTA





BOW RIVER RESOURCES

LAKE

ATHABASCA

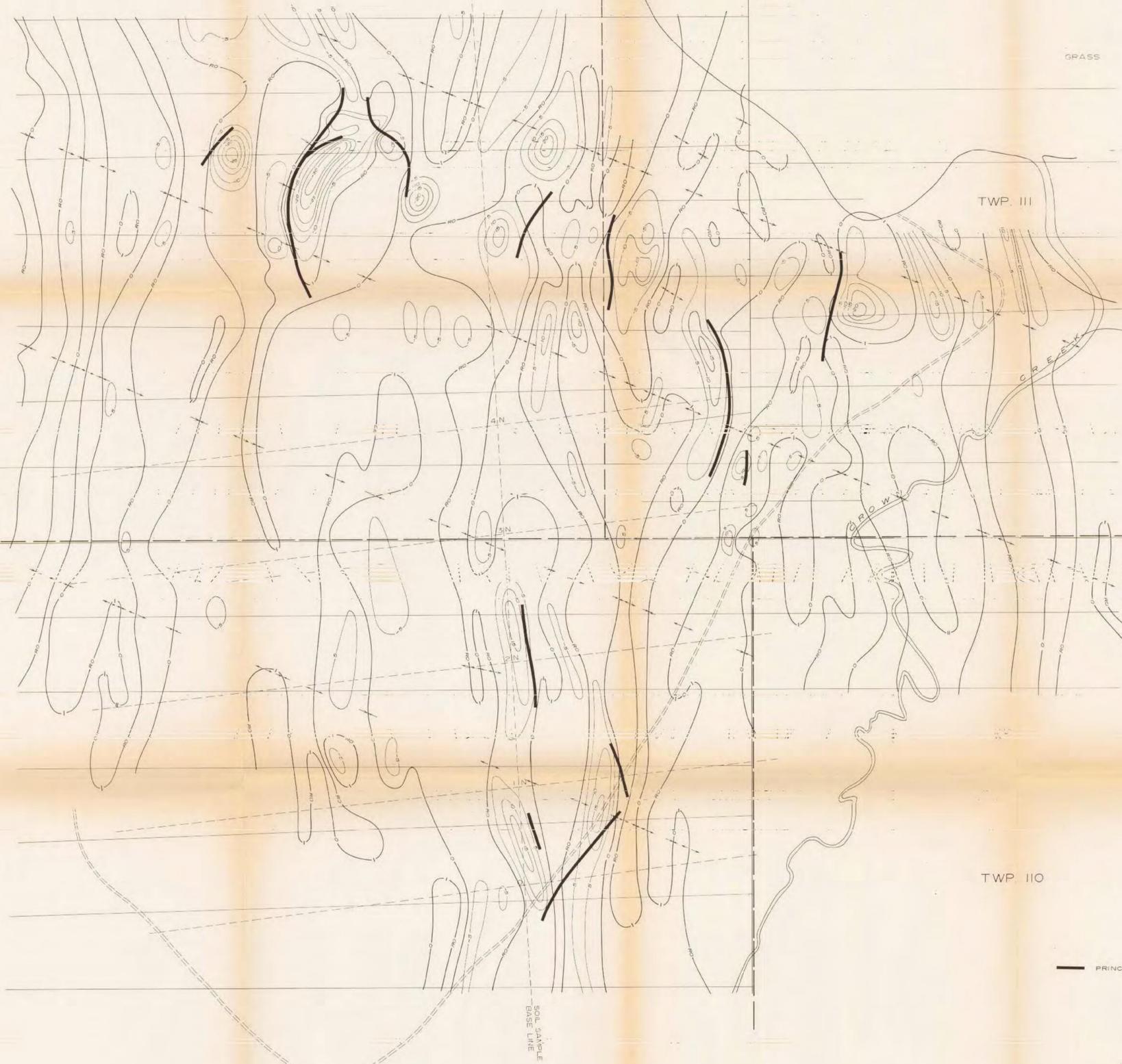
RANGE 4

RANGE 3

GRASS

GRASS

GRASS



L 14 N
L 12 N
L 10 N
L 8 N
L 6 N
L 4 N
L 2 N
BL - 1
L 2 S
L 4 S
L 6 S
L 8 S
L 10 S
L 12 S

TWP. 111

TWP. 110

PRINCIPLE CONDUCTOR

SOIL SAMPLE
BASE LINE

ENVOY RESOURCES LTD.

E.M. 16 SURVEY
STATION 186

LAKE ATHABASCA, ALBERTA

SCALE 1:5000
METRES 0 50 100 200 300 400 500 METRES
DRAWN: Altair N.T.S. DATE: MARCH-1976



BOW RIVER RESOURCES

LAKE

ATHABASCA

RANGE 4

RANGE 3

GRASS

E.M. BASELINE

GRASS

GRASS

TWP. III

CREEK

CROWN

D.D.H. 2

TWP. IIO

L 14 N
L 12 N
L 10 N
L 8 N
L 6 N
L 4 N
L 2 N
BL - I
L 2 S
L 4 S
L 6 S
L 8 S
L 10 S
L 12 S



LEGEND

- E.M. IG-STATION 18.6
- E.M. IG-STATION 21.4
- U300 SOL ANOMALY
- SURFACE RADIOMETRIC ANOMALY

ENVOY RESOURCES LTD.

COMPOSITE PLAN

LAKE ATHABASCA, ALBERTA

SCALE 1:5000

METRES 0 50 100 200 300 400 500

DRAWN: Altair N.T.S. DATE: MARCH-1976