COMINCO LTD.

EXPLORATION
NTS: 82F/9W

WESTERN DISTRICT

GEOLOGICAL MAPPING AND SOIL GEOCHEMICAL SURVEY

ON THE AILSA MINERAL CLAIMS

MEACHEN CREEK AREA

FORT STEELE MINING DIVISION, B.C.

$49^{o}31.5'N$; $116^{o}24'W$

PERIOD OF WORK

July 14 to July 31, 1980

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8509

September 1980

R.L. WRIGHT

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ATTACHMENTS

COMINCO LTD.

EXPLORATION
NTS: 82F/9W

WESTERN DISTRICT
12 September 1980

ASSESSMENT REPORT

GEOLOGICAL MAPPING AND SOIL GEOCHEMICAL SURVEY

ON THE AILSA MINERAL CLAIMS

MEACHEN CREEK AREA

FORT STEELE MINING DIVISION, B.C.

SUMMARY

A geological mapping and soil sampling program was carried out on the Ailsa claims which are located 34 kilometres WSW of Kimberley, B.C. on the south side of Meachen Creek. The work consisted of detailed geological mapping and prospecting of the property and soil sampling along contour lines. A total of 263 soils were collected; all samples were analyzed for Mo (molybdenum) and W (tungsten).

Results show a broad anomalous zone (> 10 ppm Mo, > 20 ppm W) in soils which overlie the quartz monzonite intrusion. Several molybdenite and scheelite occurrences have been found within this area (Plate 3). More work is required to determine the significance of these anomalies and mineral occurrences.

LOCATION

Latitude	49° 31.5'N
Longitude	116° 24' W
NTS	82F/9W
Fort Steele Mining Division	

The AILSA claims are located at the headwaters of Ailsa Creek, which drains northward into Meachen Creek, about 34 kilometres WSW of Kimberley, B.C. (Plate 1) Access to the property is by helicopter from Cranbrook. Elevation ranges from 1550 to 2600 metres.

HISTORY

The general area of the Ailsa property has been explored for precious metals and lead/zinc for many years. Showings and old workings on White Grouse Mountain, about 2 km to the west, reportedly contain gold, silver and tin in veins. No record of previous exploration for molybdenum or tungsten in this area could be found.

OWNERSHIP

The Ailsa property is 100% Cominco-owned through staking, and consists of two (2) claims comprising 40 units, as follows:

Claim	No. of Units	Recorded	Record No.	Due Date
Ailsa 1	20	Aug. 16/79	761	Aug. 16/80
Ailsa 2	20	Aug. 16/79	762	Aug. 16/80

GEOLOGY AND MINERALIZATION

General Geology

The AILSA Property is underlain by siltstones, quartzites and phyllites of the Proterozoic Aldridge and Creston Formations, intruded by a small quartz monzonite stock of possible Cretaceous age. The sediments adjacent to the intrusion have been altered to produce concentric zones of biotite hornfels and siliceous siltstone.

The sediments generally strike around 160^{o} and dip steeply westward. The stratigraphic sequence appears to be younging westward, but the possibility of structural reversals and thickening by folding or faulting cannot be ruled out on the basis of the present mapping.

Detailed Geology

The grey siltstone of the Upper Aldridge Formation (Unit 1) underlies much of the eastern half of the claim block. The unit is relatively homogeneous, with the occasional thin interbed of light grey quartzite and laminated light and dark grey argillaceous quartzite. Sedimentary features such as crossbedding and dessication cracks are common.

Near the intrusive contact is a silicic alteration zone (unit 1a) consisting of light grey siliceous siltstone with 3-4% disseminated pyrite and minor chlorite. Bedding and jointing within this unit are similar to the surrounding unaltered rock.

Between the silicic zone and the intrusive contact, the rock has been altered to a biotite hornfels (unit 1b), containing abundant fine-grained biotite in small rosette shaped clusters and thin bands, and also containing small altered pyroxenes.

The light greenish-grey phyllite (unit 2) occurs in the western most portion of the claim block. It is fine-grained and relatively homogeneous, with chloritic coatings on fracture surfaces. White, unmineralized quartz veins are common throughout.

The green and purple siltstones (unit 3) underlie the ridge west of the intrusion, the colours alternating on a scale of 10-15 metres on occasionally on a small scale of 2-3 metres. These siltstones are commonly interbedded with green chloritic finer grained quartzites.

The quartz monzonite intrusion (unit 4) outcrops in the cirque in which Ailsa Lake is located. The rock is typically medium to coarse - grained, light yellow-grey, with approximately 30% glassy grey quartz eyes, 35% potassium feldspar and 30% plagioclase, with about 5% fresh biotite and about 1% disseminated pyrite. The quartz monzonite is relatively fresh near the core of the intrusion, whereas the margins show kaolinization, sericitic alteration and silicification along fractures.

Mineralization

Quartz veining occurs throughout the map area but is most abundant within 100 metres of the intrusive contact. Mineralization in the form of molybdenite, scheelite, stibnite and galena is also generally restricted to this narrow zone, while quartz veins remote from the intrusion are apparently barren. A number of small mineralized occurrences have been located in the course of geological mapping. These require further evaluation.

SOIL GEOCHEMISTRY AND ANALYTICAL PROCEDURE

mainly material from the C horizon @ 30cm depth

The field work was conducted by R.L. Wright M.Sc. 1974, assisted by R. Cadel, B.Sc. 1980, L. Goldberg, G. Dobek, and S. Ahrend.

Soil samples were collected from contour lines every 500 vertical feet (150 m) approximately, and spaced 100 m. apart along lines. Control of sample location was provided by altimeters and chaining from recognizable topographic features.

All soil samples were collected in numbered kraft sample bags, air dried, then shipped to Cominco's Vancouver Research Laboratory. Samples were then dried and sieved and the -80 mesh fraction was analyzed for molybdenum and tungsten. Mo was determined by nitric - perchloric acid digestion and HCl extraction followed by thiocyanate colorimetry. W was determined by pyrosulphate fusion and HCl extraction followed by Zn dithiol colorimetry. All values are reported in parts per million (ppm).

RESULTS AND INTERPRETATION

Molybdenum values, ranging from 2 to 300 ppm with a threshold value of 10 ppm show anomalous values over the quartz monzonite intrusion and downslope to the east, in the area underlain by grey siltstones. These anomalies correspond spatially with the known occurrences of molybdenite mineralization.

Tungsten values, ranging from 2 to 400 ppm, with a threshold value of 20 ppm, show a similar, but larger anomalous zone centred on the quartz monzonite intrusion. Most of this anomalous area cannot be explained by mineralization found to date.

CONCLUSIONS

A program of detailed geological mapping and soil geochemistry on the Ailsa property has indicated broad zones of anomalous molybdenum and tungsten values centred on a small quartz monzonite stock. Mineralization found to date cannot explain all of these anomalous values. More work is required to determine the source and economic significance of these anomalies.

Report by R.L. Wright
R.L. Wright
Geologist

Endorsed by
D.L. Cooke
Senior Geologist

Approved for Release by D.W. Kwok for G. Harden
G. Harden
Manager, Western District

RLW/skg

Distribution

Mining Recorder 2
Western District 1
RLW/DLC 2

COMINCO LTD.

EXPLORATION
NTS: 82F/9W

WESTERN DISTRICT
12 September 1980

APPENDIX I

STATEMENT OF EXPENDITURES

Cost of geological mapping and soil geochemistry surveys on the AILSA mineral claims, Meachen Creek area, Fort Steele Mining Division, B.C. from July 14 to July 31, 1980.

SALARIES

R.L. Wright	8 days @ 164.63	1317.04
R. Cadel	17 days @ 106.83	1816.11
L. Goldberg	17 days @ 87.12	1481.04
G. Dobek	16 days @ 77.88	1246.08
S. Ahrend	16 days @ 73.26	1172.16
		7032.43

TRANSPORTATION

Truck rental 2 vehicles, 2 weeks each including gas, oil, repairs, etc.	859.30
Helicopter rental 5.0 hours @ $400	2000.00

FIELD COSTS

Food and accommodation	1111.25
Geological Equipment	503.25
Camp Equipment	783.10
Communication, radio rental, etc.	340.48

GEOCHEMISTRY

263 soils @ 4.95 for Mo, W 10 soils @ 6.25 for Mo, W	1364.35

TOTAL 13,994.16

Signed R.L. Wright
R.L. Wright
Geologist

COMINCO LTD.

EXPLORATION
NTS: 82F/9W

WESTERN DISTRICT
12 September 1980

APPENDIX II

IN THE MATTER OF THE B.C. MINERAL ACT AND

IN THE MATTER OF A GEOLOGICAL AND GEOCHEMICAL

PROGRAM CARRIED OUT ON THE

AILSA MINERAL CLAIMS

LOCATED IN THE FORT STEELE MINING DIVISION

OF THE PROVINCE OF BRITISH COLUMBIA

MORE PARTIBULARLY NTS: 82F/9W

A F F I D A V I T

I, ROBERT L. WRIGHT, OF THE CITY OF VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY:-

1. THAT I am employed as a geologist by Cominco Ltd., and as such have a personal knowledge of the facts to which i hereinafter depose:

2. THAT annexed hereto and marked as Appendix I to this my affidavit is a true copy of expenditures on a geological and geochemical program carried out on the AILSA mineral claims.

3. THAT the said expenditures were incurred between the 11th day of June 1980 and the 15th day of July 1980 for the purpose of mineral exploration on the above noted claims.

R.L. Wright

R.L. Wright, Geologist

COMINCO LTD.

EXPLORATION
NTS: 82F/9W

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12 September 1980

STATEMENT OF QUALIFICATIONS

APPENDIX III

I, ROBERT L. WRIGHT, OF THE CITY OF VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY:

1. THAT I am a geologist residing at 1859 Napier Street, Vancouver, British Columbia, with a business address at 409 Granville Street, Vancouver, British Columbia.

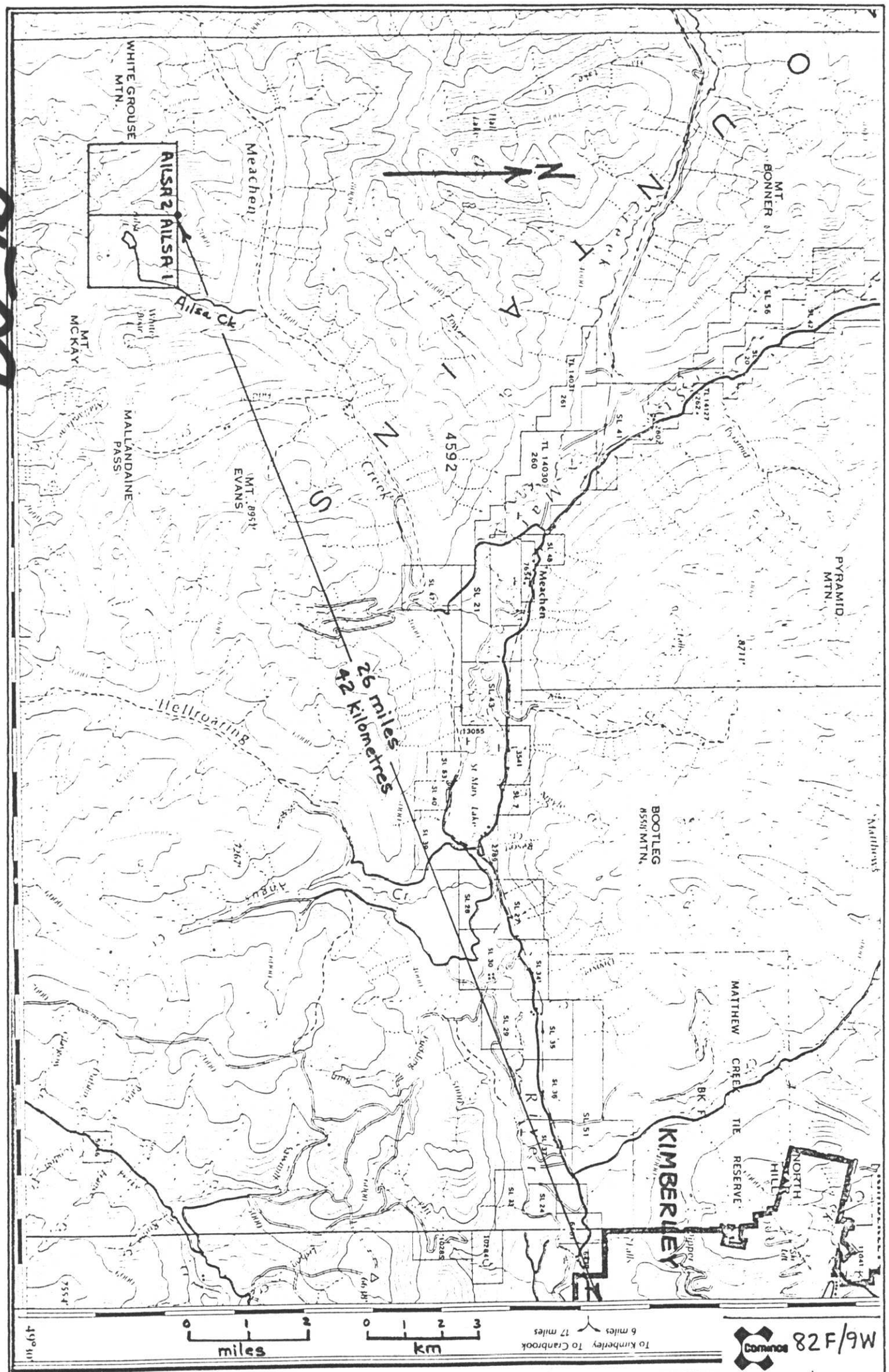
2. THAT I graduated with a B.Sc. in geology from McMaster University, Hamilton, Ontario in 1971 with a M.Sc. in geology from the University of British Columbia in 1974.

3. THAT I have practised geology with Cominco Ltd. from 1975 to 1980.

DATED THIS 12th DAY OF SEPTEMBER 1980 AT VANCOUVER, BRITISH COLUMBIA.

R.L. Wright.

R.L. Wright, M.Sc.



Drawn by: RLW		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP
Ailsa Property

Scale: 1: 250,000 | Date: Sept /80 | Plate 1

BCIL 2187 C

LCP (located)
AILSA 2
AILSA 1
AILSA LAKE
MAYO LAKE

N

SCALE
0 100 250 500
METRES

19 05/10 Soil Sample Location : Sample Number , Mo(ppm)/W (ppm)

◐ Anomalous Mo value >10 ppm.

◑ Anomalous W value >20 ppm.

● Anomalous Mo and W values.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
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R.L. Wright.

AILSA PROPERTY

NTS 82 F/9W

Drawn by: RLW | Traced by:

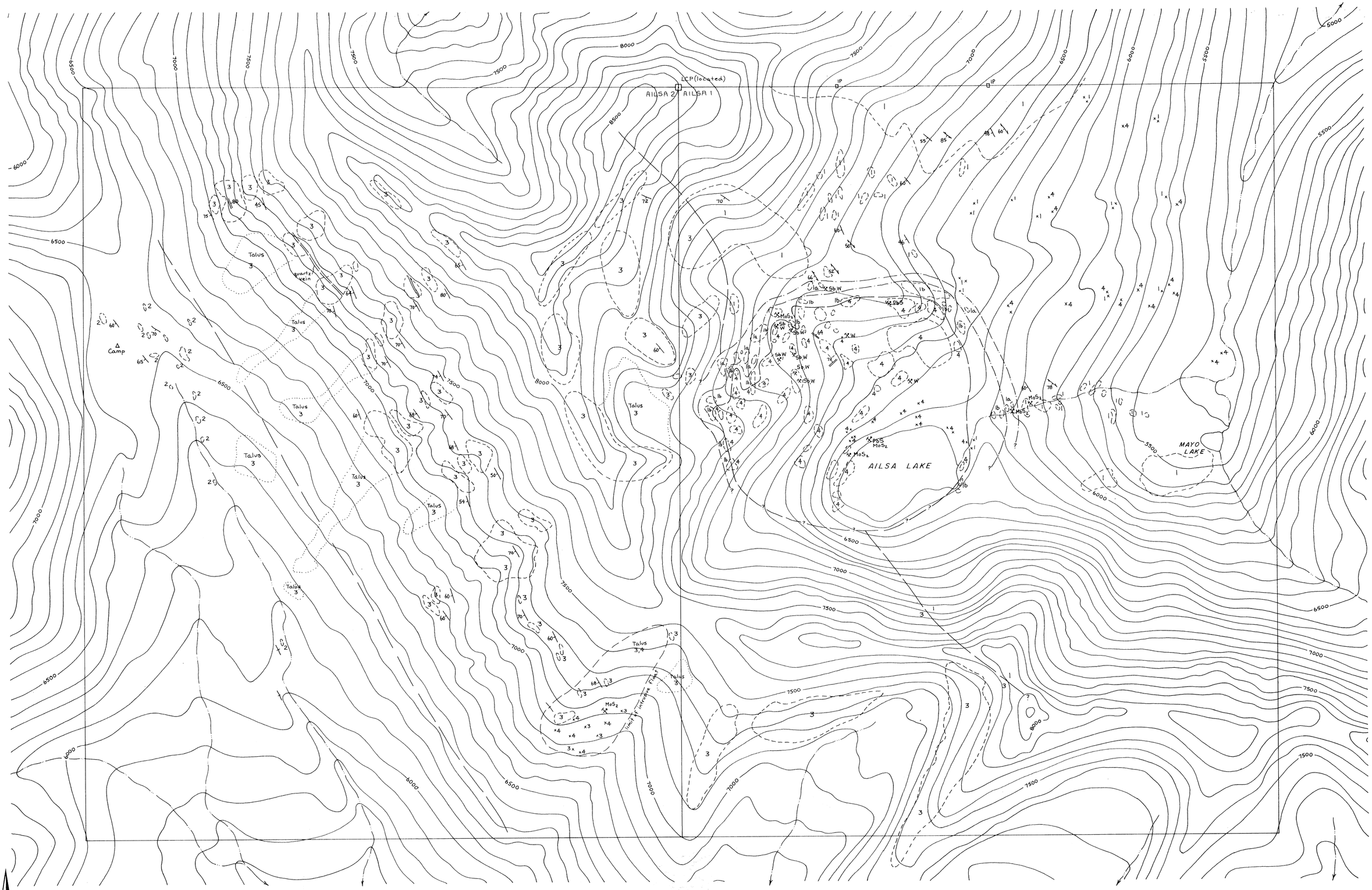
Revised by	Date	Revised by	Date

SOIL GEOCHEMISTRY
Mo, W ppm.

Scale: 1:5000 | Date: Sept/80 | Plate: 2

NCI-119-C.L.

FORM 210 0690



N

SCALE

0 100 250 500

METRES

LEGEND

CRETACEOUS?

4 QUARTZ MONZONITE: LIGHT YELLOW-GREY MEDIUM GRAINED INTRUSION WITH 30% QUARTZ

INTRUSIVE CONTACT

PROTEROZOIC

CRESTON FORMATION

3 PURPLE AND GREEN SILTSTONE AND FINE GRAINED GREEN QUARTZITE

2 LIGHT GREEN-GREY PHYLLITE

ALBRIDGE FORMATION

1 GREY SILTSTONE - GREY, RUSTY WEATHERING SILTSTONE AND FINE-GRAINED QUARTZITE

1A SILICIFIED SILTSTONE - LIGHT GREY SILICEOUS SILTSTONE WITH 2% DISSEM. PYRITE

1B BIOTITE HORNFELS

- OUTCROP
- TALUS
- × FLOAT BOULDER
- GEOLOGICAL CONTACT
- CONTACT ALTERATION ZONES
- MINERAL OCCURRENCE: MoS_2 - MOLYBDENITE
  W - SCHEELITE
  Sb - STIBNITE

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R.L. Wright

AILSA PROPERTY NTS 82 F/9W

Geotex

Drawn by: R.L.W.	Traced by:		
Revised by / Date	Revised by / Date		

GEOLOGY

Scale: 1:5000 Date: Sept/80 Plate: 3

FORM 210 0680

NCI - 119 - C.L.