

83-#665-11611

ASSESSMENT REPORT
GEOLOGICAL AND GEOCHEMICAL SURVEY
ON THE
WB 1-4 MINERAL CLAIMS
NTS 82F/9
49°31'50"N Lat; 116°20'30"W Long.

FT. STEELE MINING DIVISION

BY

DOUGLAS BRYAN

NORANDA EXPLORATION COMPANY, LIMITED
(No Personal Liability)

JUNE 26 - JULY 31, 1983

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,611

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MAP 1 GEOLOGICAL MAP	WB 1-4 Claims Scale 1:10,000
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ABSTRACT

During June and July of 1983 geological and geochemical surveys were completed on the WB 1-4 mineral claims. The WB 1-4 claims are located in the Mt. McKay-Mallandaine Pass area some 34 km. southwest of Kimberley, B.C.

Reconnaissance geological mapping indicates the claim group is underlain by a deformed sequence of Purcell Supergroup metasedimentary rocks.

Thirty stream sediment and soil samples were collected. Several of these samples returned anomalous lead and zinc values.

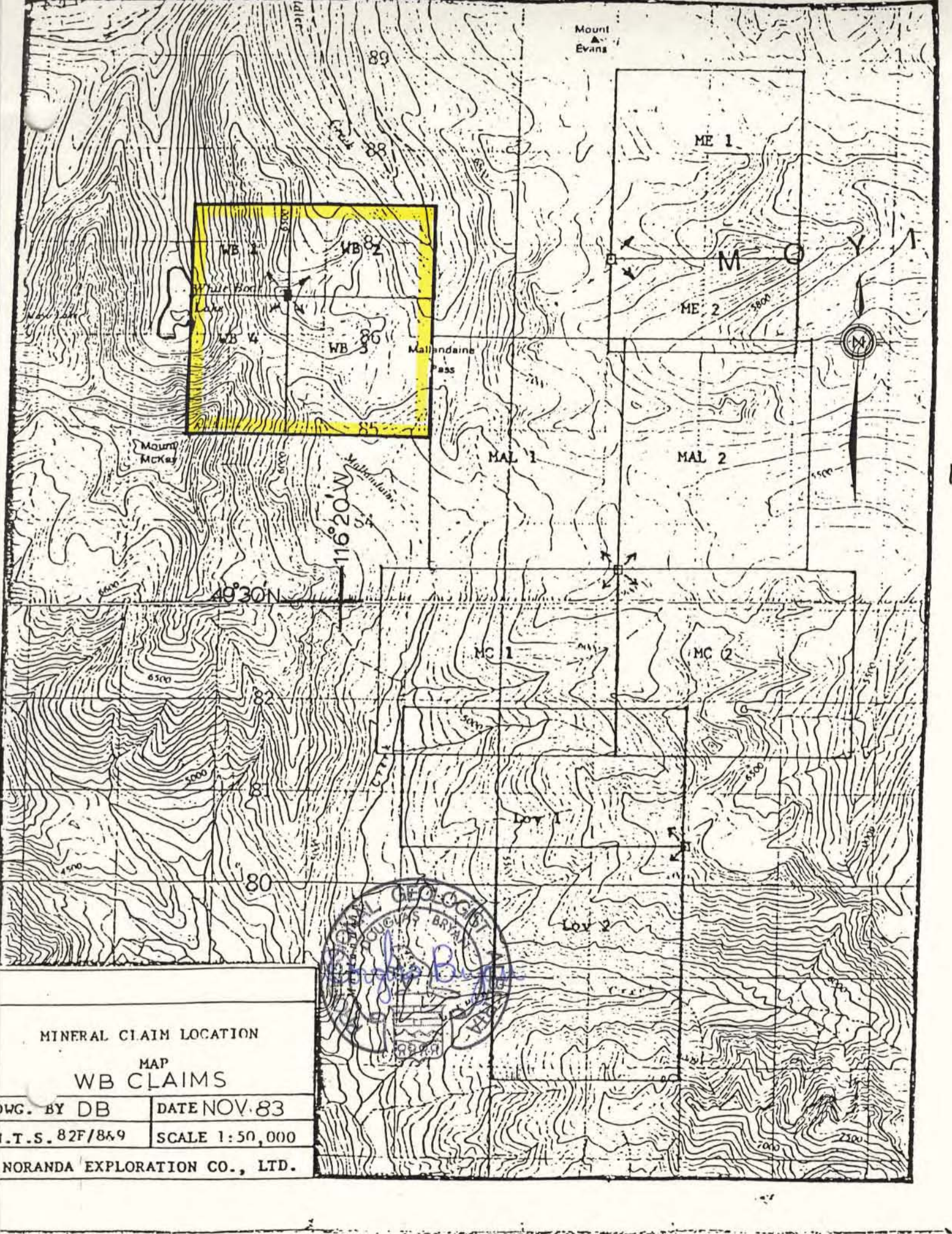
Detailed mapping, prospecting and soil sampling surveys are recommended for 1984.

1) INTRODUCTION

Between June 26 and July 31, 1983 Noranda Exploration Company, Limited (No Personal Liability) completed a reconnaissance geological mapping program, combined with a soil and stream sediment sampling program, on the WB 1-4 mineral claims. The WB claims are located approximately 34 km. southwest of Kimberley, B.C.

2) LOCATION AND ACCESS

The WB 1-4 claims (N.T.S. 82F/9) are located within the Ft. Steele Mining Division some 34 km. southwest of Kimberley, B.C. The claim group is centered on Long. $116^{\circ} 20'W$ and $49^{\circ} 31'N$. Road access to the claims may be gained from Kimberley by taking the St. Mary Lake road some 6 km. past the west end of St. Mary Lake. At this point the Meachem Creek road is followed some 11.7 km. to the Fiddler Creek valley through to the Mallandaine Pass. Mallandaine Pass cuts through the extreme eastern portion of the claim group. Access to the western end of the claims may be gained by following the Meachem Creek road approximately 3 km. past the Fiddler Creek turnoff to the White Boar Lake road. White Boar Lake lies along the western boundary of the WB 1-4 claims.



Mount
Evans

WB 1 WB 2
 White Boat Lake
 WB 4 WB 3

ME 1
 M O Y I
 ME 2

MALLINDAINE PASS
 MAL 1 MAL 2

MC 1 MC 2

LOY 1
 LOY 2



MINERAL CLAIM LOCATION

MAP
WB CLAIMS

DRWG. BY DB	DATE NOV. 83
I.T.S. 82F/8&9	SCALE 1:50,000
NORANDA EXPLORATION CO., LTD.	

3) TOPOGRAPHY

The WB 1-4 claims are bisected by Fiddler Creek, which cuts through the northeastern portion of the claims and Mallandaine Creek which cuts through the southwest corner of the claim. Mt. McKay (2622 m.) underlies the southwest corner of the claim group. The topography on the WB claims is rugged with a maximum relief in the order of 1030 m. Valley floors are characterized by extensive amounts of overburden with outcrop primarily restricted to those areas with elevations in excess of 1800 m.

Vegetation on the lower levels consists of stands of spruce and cedar with an undergrowth of alder. At higher elevations, alpine conditions prevail.

4) CLAIMS AND OWNERSHIP

<u>CLAIM NAME</u>	<u>OWNER</u>	<u>RECORD NO.</u>	<u>RECORD DATE</u>
WB 1	NORANDA EXPLORATION	1716	Nov. 02/82
WB 2	COMPANY LIMITED	1717	Nov. 02/82
WB 3	(No Personal	1718	Nov. 02/82
WB 4	Liability)	1719	Nov. 02/82

5) GEOLOGICAL SURVEY

5.1 Introduction:

Twenty-eight man days were spent mapping the WB 1-4 mineral claims at a scale of 1:10,000. Geological mapping was hampered by the rugged terrain and the extensive overburden cover at lower elevations.

5.2 General Geology

The WB 1-4 mineral claims are underlain by a generally north-south trending sequence of metasedimentary rocks, tentatively correlated with the Middle and Upper Divisions of the Proterozoic Aldridge Fm., as applied by Leech (1957). Middle Aldridge Fm. rocks on the WB 2 claims have been intruded by a small granodiorite stock, possibly a satellite body of the larger Hellroaring Creek stock of Mid Proterozoic age. (Ryan and Blenkinsop, 1971).

5.3 Description of Lithologies

The lowermost exposed unit (unit 2) on the WB 1-4 claims is a thick sequence of massive to thickly bedded quartzite, correlative with the Middle Aldridge Fm. of Leech (1957). This quartzite member is typically grey to white in colour and is often characterized by thin (1.0-2.0cm) interbeds of graphitic argillite. Individual quartzite members appear to vary in thickness from several centimeters to over 1.0 m. Graded bedding and cross bedding were the only primary structures observed.

5.3 Description of Lithologies Cont'

Conformably overlying unit 2 and gradational to it, is a medium grained, well bedded clean quartzite. This member (unit 2a) is distinguished from the lowermost quartzite unit primarily by the lack of graphitic or argillitic partings. Unit 2a typically weathers a white to cream colour and displays excellent graded bedding and cross bedding. Unit 2a is thought to represent the uppermost member of the Middle Aldridge Fm.

Unit 2a is overlain by a thick sequence of very fine grained black shale often with a high graphite component. Individual beds are in the order of 0.5 cm. in thickness. This black shale (unit 3), often recessive is thought to represent the basal member of the Upper Aldridge Fm. of Leech (1957).

A small granodiorite stock (unit 9) cuts the sedimentary sequence on the WB 2 claim. This fine to medium grained stock with approximate dimensions of 50m X 100m may be a satellite stock of the larger Hellroaring Creek stock. Contact metamorphic effects peripheral to this stock are minimal.

The only sulphide mineralization noted on the WB claims was several small zones of disseminated pyrite ($\pm 5\%$) within units 2 and 2a.

5.4 Structural Geology

The regional strike on the WB claims varies between Az 130° and Az 170° with dips ranging between 20° and 70° to either the northeast or southwest. The dominant structural feature is a broad syncline trending Az 170°. This open fold has a very gentle plunge to the south-southeast. This broad syncline is flanked by two open anticlines both of which trend approximately Az 155°. Plunges on these two folds appear to be 40° to the southeast.

6) GEOCHEMICAL SURVEY

Ten soil samples and 20 silt samples were collected from the WB 1-4 claims. All samples were analysed for ppm copper, lead, zinc, silver and molybdenum and ppb Au. in the Noranda Exploration Company, Limited laboratory located at 1050 Davie Street, Vancouver, B.C.

6.1 Silt Sampling Methods

Silt samples were obtained by hand selecting a portion of the finest transported material available, preferably free of organic impurities, from accessible stream beds, springs and freshets. The samples were placed in "Hi Wet Strength Kraft 3½ X 6 1/8" Open End" envelopes and the sample number was marked on the envelopes with indelible felt pen. The sample location was also recorded on 1:10,000 scale topographic field maps.

6.2 Soil Sampling Methods

Soil samples were obtained by digging holes with a maddock to a depth of 15 - 30cm. where the visible B horizon when ever possible was exposed. The samples were placed in "Hi Wet Strength Kraft 3½ X 6 1/8" Open End" envelopes and the sample number was marked on the envelopes with indelible felt pen.

The sample location was also recorded on 1:10,000 scale topographic field maps.

6.3 Laboratory Analytical Methods

The silt and soil samples are first placed in a drying cabinet for a period of 24 to 48 hours. The sample material is then screened and sifted to obtain a -80 mesh fraction.

The determination procedure for total copper, zinc, lead and molybdenum is as follows:

0.200 grams of the -90 mesh material is digested in 2ml. of HCl 04 and 0.5ml. of HNO₃ for approximately four hours. Following digestion, each sample is diluted to 5ml. with demineralized H₂O. A Varian Techtron Model AA-5 Atomic Absorption Spectrophotometer was used to determine the parts per million copper, zinc, lead and molybdenum content in each sample.

The theory of the Atomic Absorption Spectrophotometer is fully outlined in the literature and will not be discribed in this report.

6.4 Presentation of Results

Results of the silt and soil geochemical survey are presented on MAP 2 of this report. This is a topographic map, scale 1:10,000, showing copper, zinc, lead, silver and molybdenum in ppm. and gold in ppb. Anomalous values for copper, zinc and lead are indicated in the legend.

6.5 Discussion of Results

6.5.1 Stream Sediment Samples

The majority of copper, zinc, lead, silver, molybdenum and gold analyses fall within background values. Three silt samples (30336,37,38) contain anomalous concentrations of zinc and silver with samples 30336 and 30337 displaying coincident lead anomalies.

6.5.2 Soil Samples

Most samples display background, or slightly elevated levels of copper, zinc, lead, silver, molybdenum and gold. Two samples (10783,87) contain anomalous lead concentrations.

7) SUMMARY AND RECOMMENDATIONS

The WB 1-4 claims are underlain by a folded sequence of Lower Proterozoic sediments consisting of quartzites and black (graphitic) shales. Three silt samples from a reconnaissance program returned anomalous concentrations of zinc and silver with two of the samples containing anomalous lead values. Two soil samples contain anomalous lead values.

7) Summary and Recommendations Cont'

Detailed mapping, prospecting and soil sampling is recommended for those areas returning anomalous geochemical values.

BIBLIOGRAPHY

Leech, G.B. (1957): St. Mary Lake, Kootenay District,
British Columbia. Geol. Surv. Can.,
Map 15-1957.

Ryan, B.C., and Blenkinsop, J. (1971): Geology and geochronology
of the Hellroaring Creek Stock, British
Columbia, Can. J. Earth Sci., 8 p. 85-95.

APPENDIX 1
SOIL SAMPLE RESULTS
SILT SAMPLE RESULTS

SOIL SAMPLE RESULTS

<u>SAMPLE</u>	<u>Cu</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Ag</u> <u>ppm</u>	<u>Mo</u> <u>ppm</u>	<u>Au</u> <u>ppb</u>
10783	48	140	120	.2	<u>/2</u>	10
10784	46	130	82	.2	<u>/2</u>	10
10785	46	130	64	.2	<u>/2</u>	10
10786	22	120	82	.2	<u>/2</u>	10
10787	32	84	100	.2	<u>/2</u>	10
10788	6	16	14	.2	<u>/2</u>	10
10789	12	38	14	.2	<u>/2</u>	10
10792	12	24	14	.2	<u>/2</u>	10
10795	22	76	26	.2	<u>/2</u>	10
10796	34	66	30	.2	<u>/2</u>	10
10797	30	110	30	.2	<u>/2</u>	10

STREAM SEDIMENT SAMPLE RESULTS

SAMPLE	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Mo ppm	Au ppb
30336	50	310	110	0.4	<u>12</u>	10
37	32	220	92	2.2		
38	26	260	62	0.6		
39	26	180	90	0.4		
40	38	48	26	0.2		
41	24	140	84	0.4		
10967	32	76	32	0.2		
68	22	74	22	0.2		
69	20	98	34	0.2		
70	26	76	40	0.2		
71	24	82	52	0.2		
72	28	100	26	0.2		
73	18	42	26	0.2		
74	26	72	10	0.2		
75	20	52	20	0.2		
10790	20	74	60	0.2		
91	18	40	72	0.2		
93	74	38	22	1.0		
94	94	96	42	0.6		

APPENDIX 2
STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT - Mt. Evans J.V. - WB1-4 Claims
TYPE OF REPORT - Geology and Geochem

DATE: October 1983

a) Wages:

No. of Days - 32 mandays
Rate per Day - \$79.18
Dates From - June 26 - July 31, 1983
Total Wages - 32 X \$79.18 \$2,533.84

b) Food and Accommodation:

No. of Days - 32
Rate per Day - \$45.00
Dates From - June 26 - July 31, 1983
Total Cost - 32 X \$45.00 \$1,440.00

c) Transportation:

No. of Days - 32
Rate per Day - \$46.88
Dates From - June 26 - July 31, 1983
Total cost 32 X \$46.88 \$1,500.00

d) Analysis \$ 240.00

e) Cost of Preparation of Report:

Author 158.00
Drafting 79.00
Typing 79.00

e) Other:

Supervision 300.00

Total Cost \$6,329.84

NORANDA EXPLORATION COMPANY, LIMITED

DETAILS OF ANALYSES COSTS

Project: Mt. Evans JV - WB 1-4 Claims

<u>Element</u>	<u>No. of Determinations</u>	<u>Cost per Determination</u>	<u>Total</u>
Cu	30	1.60	48.00
Zn	30	.60	18.00
Pb	30	.60	18.00
Ag	30	.60	18.00
Mo	30	.60	18.00
Au	30	4.00	120.00
Total			<u>\$240.00</u>

LIST OF EMPLOYEES

<u>EMPLOYEE</u>	<u>POSITION</u>	<u>DATES WORKED ON PROPERTY</u>
R. ADAIR	GEOLOGIST	JUNE 26, JULY 19,21,22,24,27,28
M. CROSS	GEOLOGICAL ASSISTANT	JUNE 26, JULY 19,20,21,22,24,27,28
R. SCHAFER	GEOLOGICAL ASSISTANT	JULY 19,21
C. KARCHEWSKI	GEOLOGICAL ASSISTANT	JULY 19,20
J. KEATING	GEOLOGIST	JULY 19,20,21,22,24,28
J. McDONALD	GEOLOGIST	JULY 22,27
D. BRYAN	GEOLOGIST	JULY 28

APPENDIX 3
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

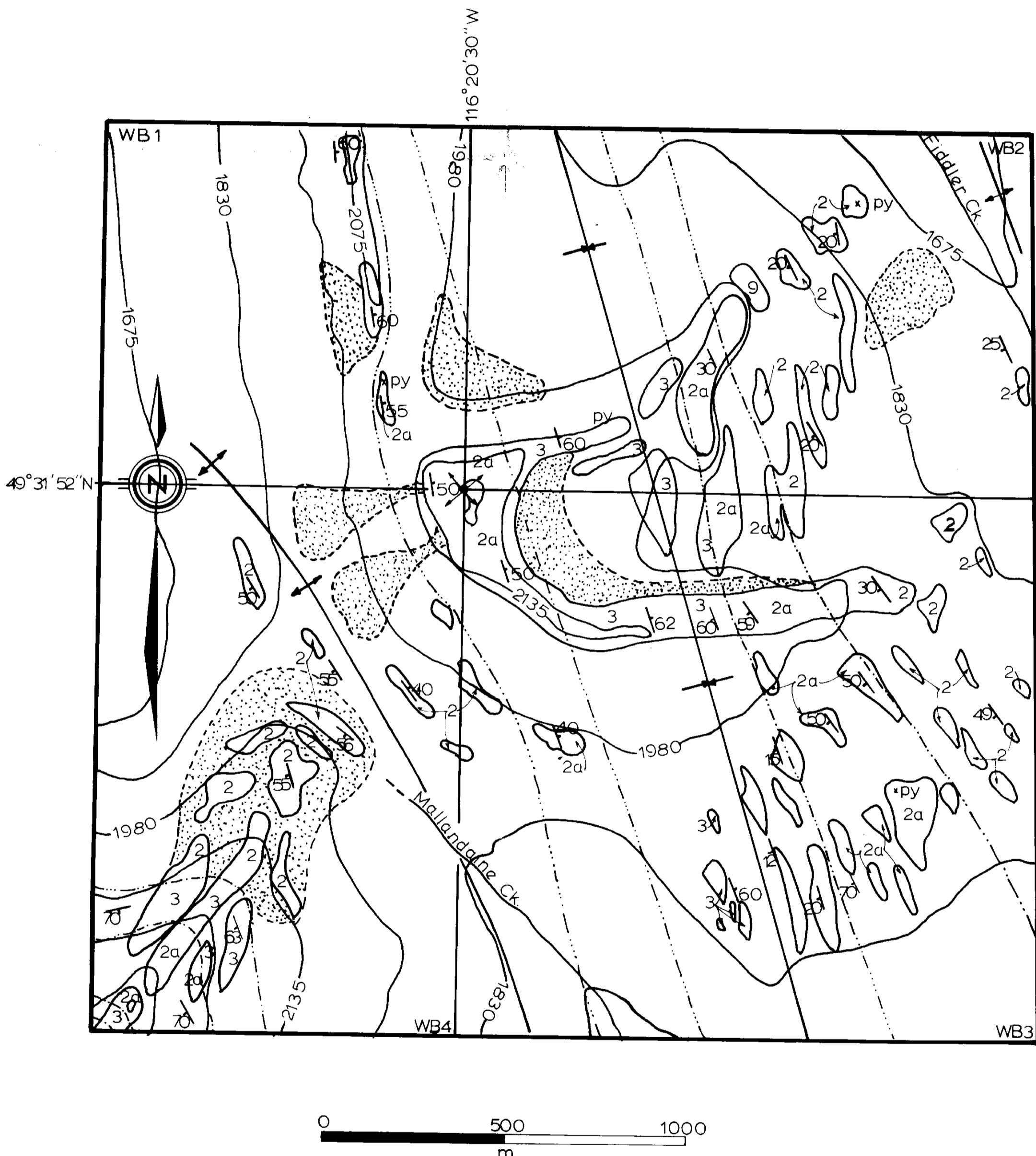
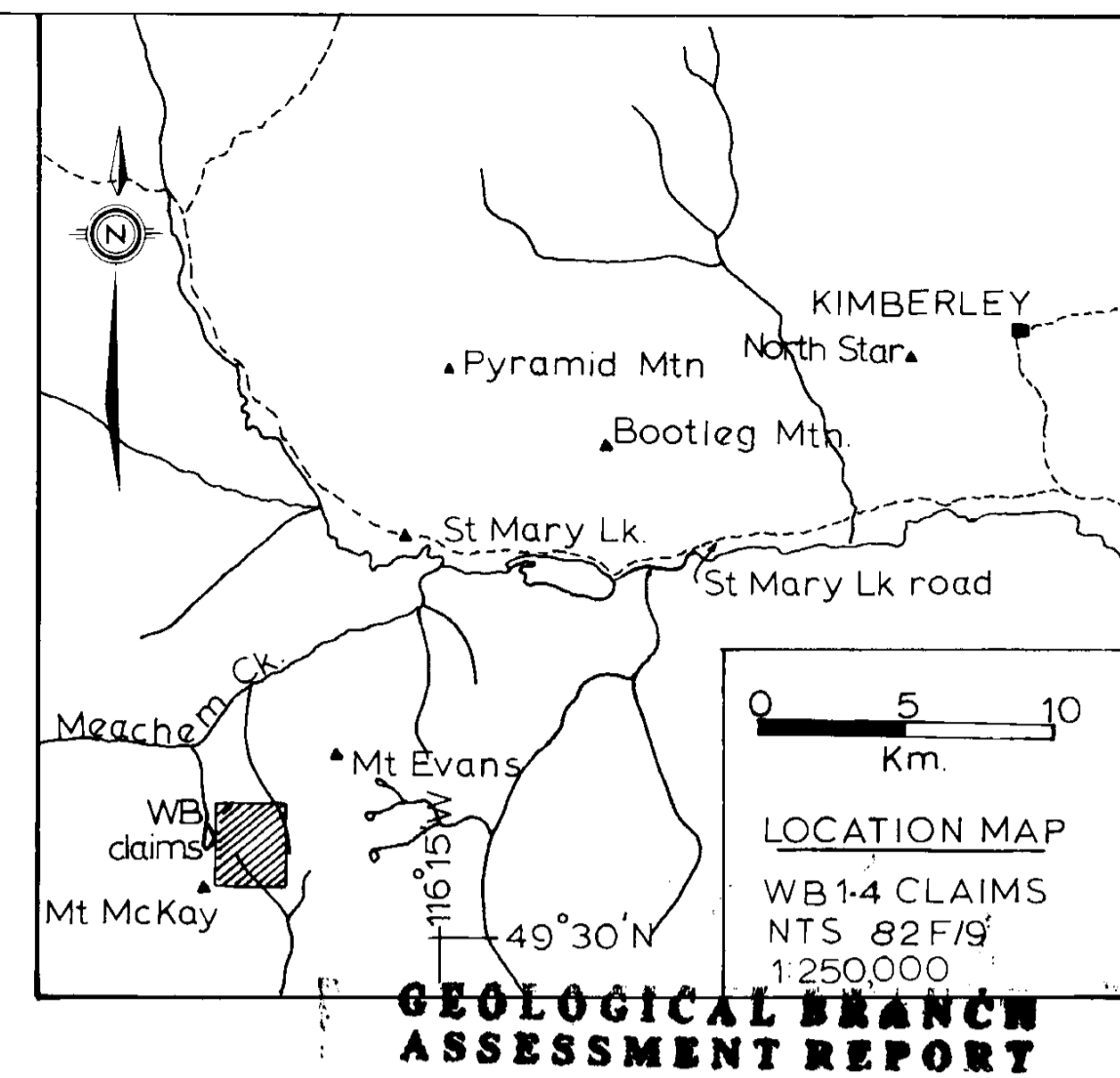
I, Douglas Bryan of the City of Kamloops, Province of British Columbia, do certify that:

1. I am a graduate of the University of Alberta with a Masters of Science in Geology.
2. I am a Professional Geologist registered with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
3. I have been a permanent employee of Noranda Exploration Company, Limited since March, 1977.

Douglas Bryan

Douglas Bryan
District Geologist
Noranda Exploration Company, Limited
(No Personal Liability)





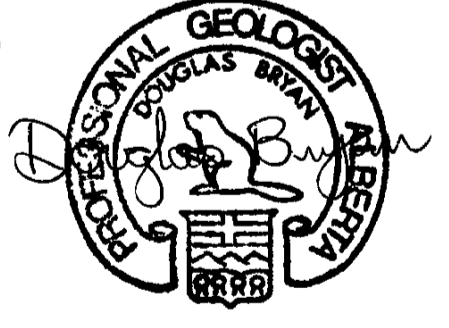
LEGEND

PROTEROZOIC **11,611**

- 9 Granodiorite FINE TO MEDIUM GRAINED
- 3 U. ALDRIDGE FM. - BLACK SHALE
FINE GRAINED, WELL BEDDED,
GRAPHITIC
- 2a L. ALDRIDGE FM. Quartzite WHITE TO
CREAM, MASSIVE TO WELL
BEDDED, SOME CROSS BEDDING
- 2 L. ALDRIDGE FM. QUARTZITE
WHITE TO GREY, MASSIVE TO
WELL BEDDED, BLACK SHALE
(GRAPHITIC) INTERBEDS

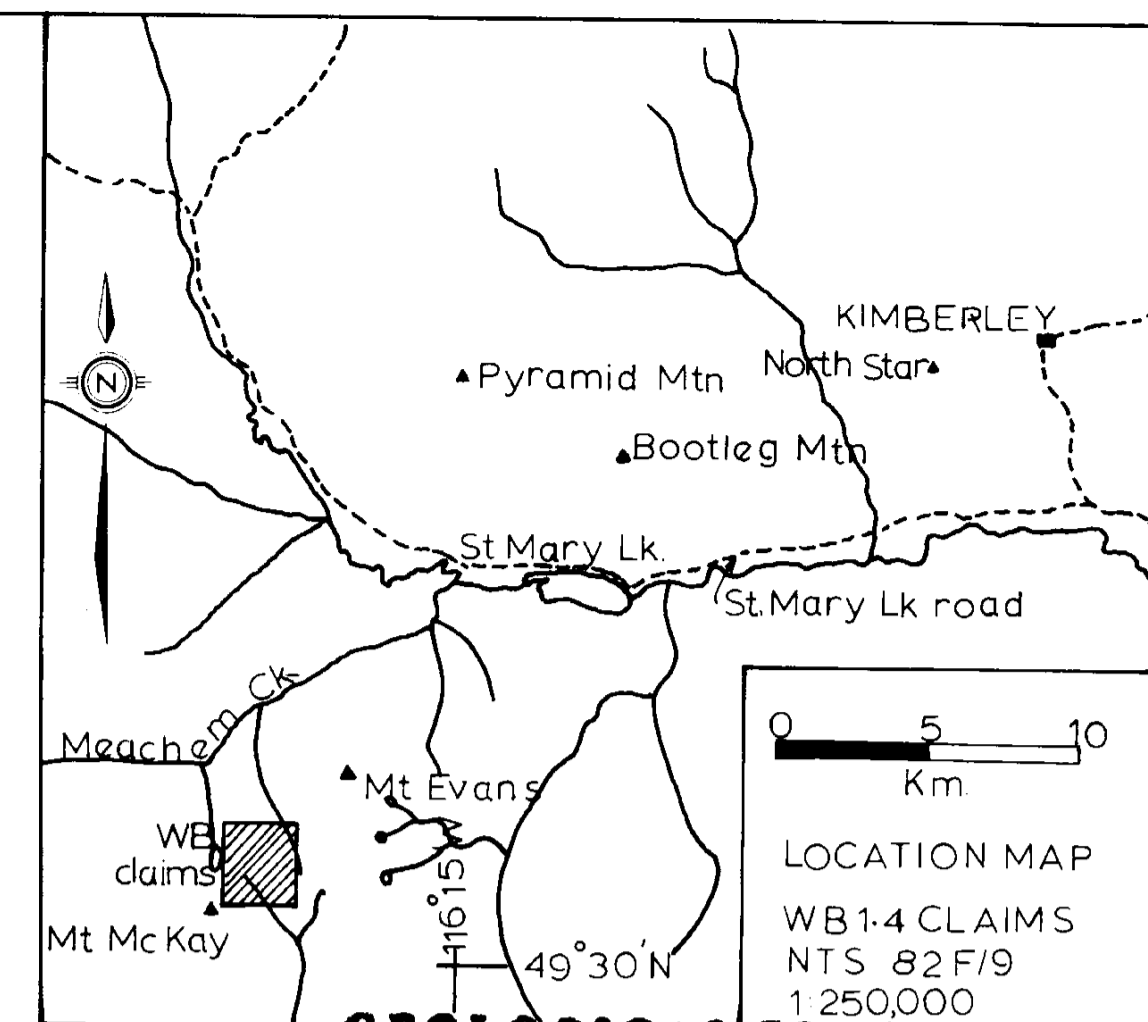
Symbols

- OUTCROP BOUNDARY
- TALUS
- STRIKE DIP
- ANTICLINE
- SYNCLINE
- GEOLOGICAL CONTACT, Defined, Approx., Assumed
- CONTOUR LINE (METERS)
- CLAIM LINES
- LEGAL CORNER POST
- *py PYRITE



To Accompany: Assessment Report Geological and Geochemical Survey on the WB 1-4 Mineral Claims, Ft. Steele M.D., B.C.
By: Douglas Bryan, Geologist, June 26 - July 31, 1983

REVISED		
	GEOLOGICAL MAP WB 1-4 CLAIMS	
PROJ. No. 1071	SURVEY BY: R.A. JK. JM.	DATE: NOV. 83
N.T.S. 82F/9	DRAWN BY: D.B.	SCALE: 1:10,000
DWG. No. 1	NORANDA EXPLORATION OFFICE: KAMLOOPS	



LOCATION MAP
WB1-4 CLAIMS
NTS 82 F/9
1:250,000

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,611

SYMBOLS

- Soil Sample Location
- ▲ Stream Sediment Sample Location

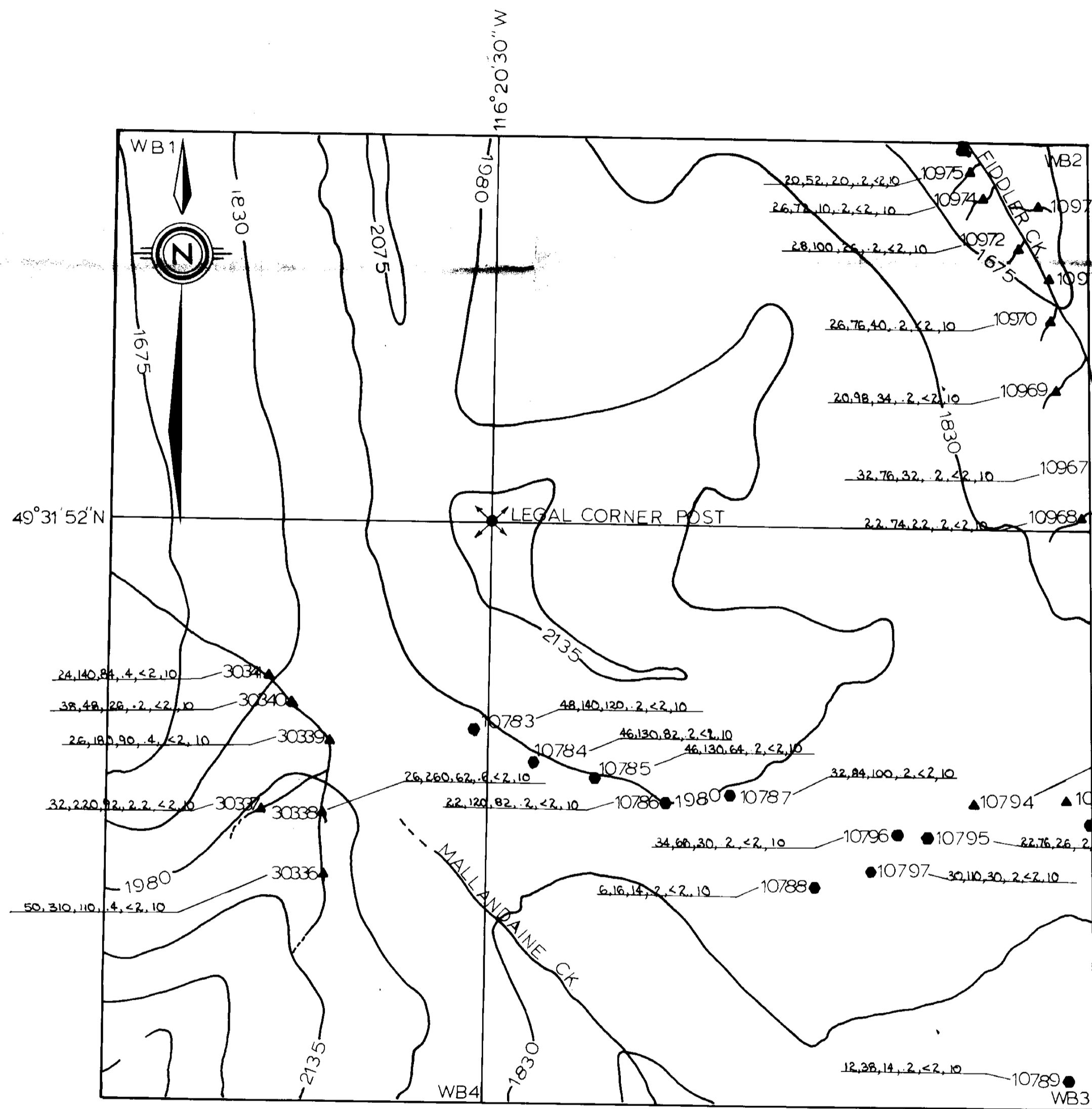
▲ 10936 Sample number
Cu(ppm), Zn(ppm), Pb(ppm), Ag(ppm), Mo(ppm), Au(ppb)

ANOMALOUS VALUES

COPPER: soils 56 ppm, silts 66 ppm
ZINC: soils 170 ppm, silts 210 ppm
LEAD: soils 104 ppm, silts 96 ppm



To Accompany: Assessment Report Geological and Geochemical Survey on the WB 1-4 Mineral Claims, Ft. Steele, M.D., B.C.
By: Douglas Bryan, Geologist, June 26 - July 31, 1983



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10797 30, 110, 30, 2, <2, 10
10788 6, 16, 14, 2, <2, 10
10789 12, 26, 14, 2, <2, 10

REVISED	
	Geochemical Sampling WB 1 4 Claims
PROJ. No. 1071	SURVEY BY: M.C. RS. C.K. DATE: NOV. 83
N.T.S. 82 F/9	DRAWN BY: D.B. SCALE: 1:10,000
DWG. No. 2	NORANDA EXPLORATION OFFICE: KAMLOOPS