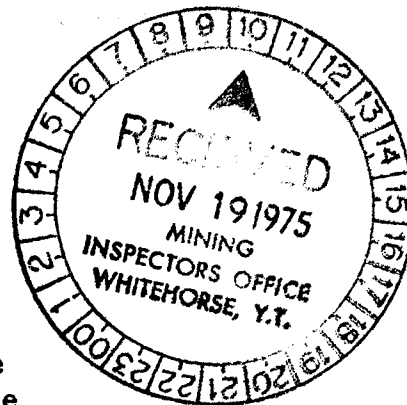


GREAT PLAINS DEVELOPMENT
COMPANY OF CANADA, LTD.,

GEOLOGICAL AND GEOCHEMICAL
REPORT ON THE JANE CLAIMS

N.T.S. 116-H-6

65 degrees 17 minutes North Latitude
137 degrees 14 minutes West Longitude
June 26th - August 6th, 1975.



This report has been examined by the
Geological Evaluation Unit and is recom-
mended to the Com. of Lands to be con-
sidered as representative work in the amount of
\$7200.00

J.B. Craig
District Geologist of
Resident Mining Inspector

Considered as representative work under
Section 83 (4) Yukon Quartz Mining Act.

A.B. Baxter
A.B. BAXTER
Supervising Mining Recorder
B.C. Commissioner
B.C. Commissioner of Yukon Territory

B.D. Farion
P. Geol.,

October, 1975.
Bill David Farion

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A. SUMMARY

1. Following the recognition of environments favorable to the formation of stratabound lead-zinc deposits, Great Plains conceived of and operated a geochemical reconnaissance program in the Bonnet Plume area of Yukon Territory. The Jane claims, one of several claim groups staked during the 1974 exploration program will be the subject of this report.

2. The field crew assembled to complete assessment work on the claim group moved to the base camp at Margaret Lake by May 23rd, 1975.

Personnel included:

Bill Farion	Party Chief
Barry Edmonson	Student Geologist
Colin Winter	Geologist
Janet Helton	Student Geologist
Romulo Santos	Student Geologist
John Van der Lee	Geological Assistant
Nigel Lumsden	Geological Assistant
Janet Etzkorn	Cook
Mike Hofuis	Helicopter pilot
Paul Koovisk	Apprentice engineer.

Transwest Helicopters (1965) Ltd., of Burnaby, B.C., supplied a Hughes 500 C helicopter while Trans North Turbo Air supplied fixed wing support from Mayo. Expediting services were provided by Stirling Expediting Services, Mayo and assaying was performed by Barringer Research, Whitehorse.



MACKENZIE PROJECT
YUKON TERRITORY
JANE CLAIMS
LOCATION MAP

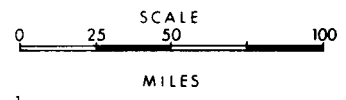
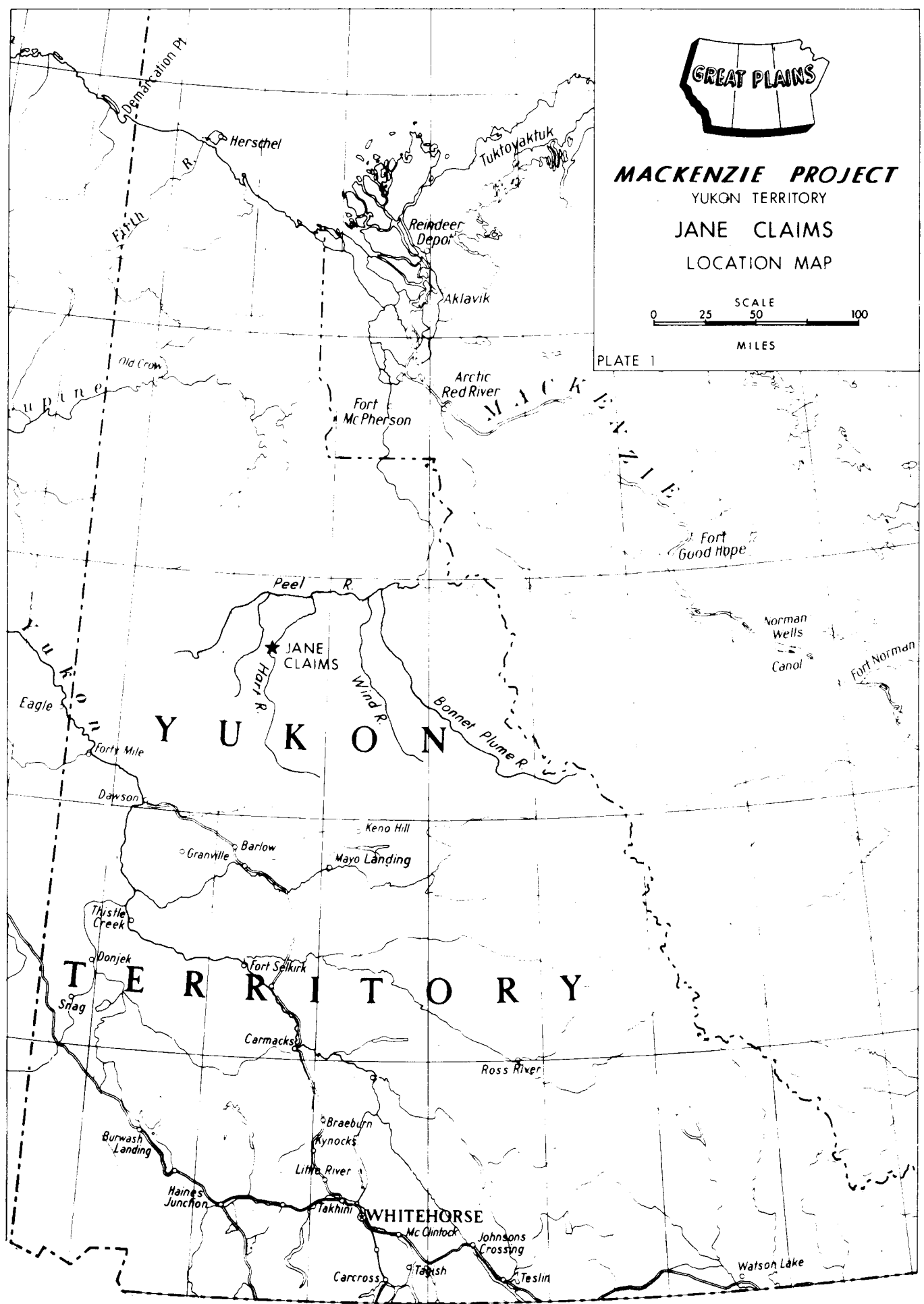


PLATE 1



B. INTRODUCTION

1. Location

The claims are located two miles southwest of the Hart River at 65 degrees 17 minutes north latitude, 137 degrees 14 minutes west longitude on an unnamed creek. The claims are on claim sheet 116-H-6 and about 130 miles north of Mayo, in the Mayo Mining Division.

2 Property

The property consists of 32 contiguous mineral claims.

<u>Claims</u>	<u>Grant Numbers</u>
Jane 1-8	Y95294-Y95300
Jane 9-10	Y96118-Y96119
Jane 11-12	Y96453-Y96454
Jane 13-14	Y96455-Y96456
Jane 15-18	Y95301-Y95304
Jane 19-22	Y96457-Y96460
Jane 23-24	Y96120-Y96121
Jane 25-32	Y96461-Y96468

3. Field Methods

The area was mapped on a scale of 1"=1060' using a 5x blowup of an airphoto taken for the National Air Photo Library as a basemap. The base map was subsequently expanded to a 1"=500 ft scale.

A chemical which turns red when in contact with the weathering products of zinc sulphides was used to aid in the recognition of zinc sulphides. Stream silts were tested in the field with a cold extractable heavy metals assay kit. All silt, soil and rock samples were submitted to Barringer Research for analysis.

4. Geography

The claims are located on one of the limbs of a very large anticline. A resistant limestone ridge runs through the property. The valleys are recessive units and covered with small trees and moss.

C. GEOLOGY

1. Lithology

Two major folds can be seen from the air in the area. On a regional scale, the exposed rocks form ridges tens of miles long as the limb of an anticline. The anticline is several miles across. The entire geological succession from Precambrian to Permian may be seen in the cores of the anticlines with little complication due to faulting.

The Jane claims are in the left limb of one of the anticlines. The section may be divided into six units as follows:

Unit A

The unit consists of recessive, aphanocrystalline, dark grey dolomite. The weathered surface is light grey. The dolomite contains white crystals of dolomite in veinlets 0.1" wide and 2" long. Since outcrop could not be found in the vicinity, observations were made on talus samples.

Unit B

The unit consists of interbedded limestone and black graptolitic shale. The shale is black, fissile, graptolitic and weathers dull medium grey. The shale contains carbonaceous material and pyrobitumen. The interbeds consist of aphanocrystalline medium grey, blocky, grey to yellow weathering limestones. It is occasionally laminated and iron stained. Calcite veining is common. The unit is resistant and cliff forming.

Unit C

The unit is a dark grey, weathering light grey, crystalline crinoidal limestone. Bedding is variable from ½" laminated units to massive beds greater than two feet thick. Large joint sets are common. The unit is resistant and cliff forming.

Unit D

The unit consists of fissile to laminated, greasy, black, hematitic shales. The extensive limonite in the creek may be derived from shale.

Unit E

The unit consists of resistant limestone ridges and mounds in the shale(?) running in an east-west trend just below unit F.

Unit F

The unit consists of resistant light medium grey micro-crystalline dolomite. Calcite fracture fillings up to .1" are abundant. Bedding varies from 2" to 1.5' in thickness.

Structure

The units form part of the south dipping limb of a regional fold.

Age

On the basis of fossil evidence, which includes the biserial graptolites, Monograptis sp and Encrinurus sp., trilobites, and Favosites sp., corals, Units B and C, which form the ridge through the property, can be dated as Upper Ordovician.

D. GEOCHEMISTRY

Soil sampling and silt sampling programs were carried out on the property.

The stream silt sampling included gathering of silts from all seepages and springs along the creeks in an effort to close off the anomaly, as recommended by Dr. P. Bradshaw (Barringer Research - Chief Geochemist).

Soil sampling was conducted in two lines along contours. The soil consists of a well developed organic "A" horizon and a poorly developed brown "B" horizon consisting of clay to sand sized particles and fragments of parent material. On scree slopes, sufficient fine material could be found to collect a sample.

The samples were shipped to Barringer Research for analysis. The samples were screened to 80 mesh, digested in a perchloric acid (HCl O4) solution and analyzed with an atomic absorption unit. Samples taken after July 6-7 were corrected for true lead and cadmium values. The values were plotted on a 1" = 500' overlay which could be fitted onto the geological map.

E. CONCLUSIONS

The presence of cold sulphurous springs with 620 and 490 ppm (parts per million) zinc in the sulphate material would indicate anomalous amounts of metal. The limestone contains 720, 335 and 385 ppm zinc (whole rock analysis). The anomalous zinc values in the stream are found near the limestone-shale contact or below the limestone ridge (downstream) with very rapid return to background values upstream and downstream. The pH values in the stream waters are normal and do not change significantly when crossing the shale-limestone contact. The results from the seepage samples also increase significantly as the limestone shale contact is approached (75 ppm to 760 ppm).

The results of the soil sampling program show sporadic results. The samples were taken approximately at 200 foot intervals on line 400 to 500 feet apart along contours. Several of the samples proved to contain above normal zinc (700-1900 ppm zinc). These were resampled by taking 4 samples 100 feet away from the anomalous samples. The results show that the metal content of the soil does decrease away from the sample.

The source of the limonite staining in the creek bed cannot be explained simply. If it was derived from the shales, then it should be just as prevalent in other streams in the area. However the limonite is not prevalent in other streams. Limonite may scavenge some metals but not to the extent of the anomalous values on Red Creek (pers. comm. Dr. P. Bradshaw).

F. RECOMMENDATIONS

A method of checking the source of the anomaly would be to drill 2 or 3 EX Winkle holes in the shales, the shale-limestone contact and the spring area. The cost would be minimal since good set-ups and water are readily available.

This would test the shale-limestone contact which cannot be seen and where the larger anomalies in silt and soils appear to be located. Also the possibility of a covered deposit does exist which may be intersected in a drill hole. A hole should also be drilled above the springs to attempt to intersect some of the carbonates that the spring water flows through.

APPENDIX 1

NAMES AND ADDRESSES OF PERSONNEL

Janet Elizabeth Etzkorn
7169 Maureen Crescent,
BURNABY, 2,
British Columbia.

Cook,

Barry William Edmonson,
2527 - 17th Street N.W.
CALGARY,
Alberta.

Student Geologist

John Donald Gregory Van der Lee
8212-10th Street S.W.
CALGARY,
Alberta.

Geological Assistant.

Romulo D. Santos
3903 - 14th Avenue N.E.
CALGARY,
Alberta.

Student Geologist

Janet Lenore Helton
947 Canfield Crescent S.W.
CALGARY,
Alberta.

Student Geologist.

Colin Quinton Winter
'Greenways',
37 Keniworth Road,
Ealing,
LONDON, W55PA,
England.

Geologist (B.A. Oxon)

Nigel Lumsden,
c/o Great Plains Development
Company of Canada; Ltd.,
736 - 8th Avenue S.W.
CALGARY,
Alberta.

Geological Assistant

Bill Dave Farion,
#84 210-86th Avenue S.E.
CALGARY,
Alberta.

Party Chief

Mike Hofuis
Paul Koovisk

Transwest Helicopters
Burnaby, B.C.

APPENDIX 2

STATEMENT OF QUALIFICATIONS

1. I graduated with a Bachelor of Science in Geology from the professional program at the University of Alberta in April, 1971.
2. I have been employed as a geologist with various companies since graduation in 1971.
3. I have been employed as a geologist in the mineral division of Great Plains since August 1972.
4. I applied and was accepted into the Association of Professional Engineers, Geologists and Geophysicists of Alberta in 1973.
5. I have supervised and carried out the work outlined in this report.



Bill Dave Farion

Bill Dave Farion
P. Geol.,

APPENDIX 3



BARRINGER RESEARCH Limited

Great Plains Development
736 - 8th Avenue S.W.
Calgary, Alberta

Attention: B. Farion

304 Carlingview Drive
Rexdale, Toronto, Canada
Phone: 677-2491
Cable: Baresearch

Geochemical
Laboratory
Report

DATE
July 21st, 1975

REPORT NUMBER 32-A

27

SAMPLE NUMBER	HClO ₄ Pb ppm	HClO ₄ Zn ppm	HClO ₄ Cd ppm						
BE-5-6-29-1	77	130	2.4						
2	58	140	2.3						
3	56	135	2.7						
4	76	130	4.0						
5	74	75	3.9						
6	86	81	3.6						
7	88	170	3.0						
8	71	150	3.7						
9	67	48	4.0						
10	56	51	3.8						
11	68	56	3.7						
NL-5-6-28-1	43	185	3.4						
2	43	230	6.0						
3	49	130	3.6						
4	34	84	2.8						
5	32	86	3.1						
6	38	81	2.9						
7	36	360	10.0						
8	44	275	4.8						
9	32	87	2.4						

Peron - Muelenzu - 5510



BARRINGER RESEARCH Limited

Great Plains Development
736 - 8th Avenue S.W.
Calgary, Alberta

304 Carlingview Drive
Rexdale, Toronto, Canada
Phone: 677-2491
Cable: Baresearch

Environmental
Laboratory
Report

DATE

July 23rd, 1975

Attention: Mr. B. Farion

REPORT NUMBER 36-A

UNCORR. CORR.

UNCORR. CORR.

SAMPLE NUMBER	HC10 ₄	HC10 ₄		HC10 ₄		HC10 ₄	HC10 ₄			
	Pb ppm	Pb ppm		Zn ppm		Cd ppm	Cd ppm			
JLH-5-6-30-1	31	9		205		2.6	1.6			
2	34	2		175		3.2	1.2			
3	31	5		190		5.0	3.6			
4	24	5		72		3.6	2.6			
5	34	8		880		12.2	10.8			
6	31	6		340		6.0	4.6			
7	41	13		140		2.2	.8			
RS-5-6-30-1	34	2		335		4.4	2.8			
2	34	2		1300		13.6	11.6			
3	29	2		135		3.0	1.6			
4	36	10		320		4.8	3.4			
5	37	8		205		5.0	3.2			
6	36	7		130		2.8	1.0			
7	28	2		22		2.2	.4			
8	32	2		105		3.0	1.2			
9	34	11		75		2.2	1.2			
10	28	4		310		3.0	1.6			
11	30	11		78		2.4	1.2			
12	29	6		32		1.6	.6			
13	25	2		45		1.8	1.0			

Sample No.	HClO ₄ Pb ppm	HClO ₄ Zn ppm	HClO ₄ Cd ppm						
RS-5-6-25-11	49	23	3.2						
12	45	21	3.3						
13	44	21	3.4						
14	51	22	3.0						
15	45	27	2.9						
16	42	23	3.2						
BE-5-6-25-1	73	130	3.0						
2	64	150	2.8						
3	72	165	2.7						
4	72	130	3.4						
5	56	110	3.0						
6	61	150	3.0						
7	80	125	3.7						
8	66	61	3.1						
BE-5-6-26-1	92	270	2.3						
2	45	84	2.0						
3	91	255	2.2						
4	66	150	1.9						
5	200	260	2.3						
6	80	175	2.0						
7	63	135	2.4						
RS-5-6-26-1	31	145	2.5						
2	43	65	1.8						
3	37	1900	10.8						
4	31	110	2.7						
5	54	58	4.0						
6	42	85	2.5						

CORR.

CORR.

Sample No.	HC10 ₄ Pb ppm	HC10 ₄ Zn ppm	HC10 ₄ Cd ppm						
RS-5-8-5-9g	10	610	8.4						
10 (R)	95	210	.4						
11 (R)	32	150	.2						
12	615	3600	3.6						
13	925	6450	6.4						
14 (R)	190	680	1.0						
15 (R)	80	250	.6						
16	38	210	.2						
17	17	130	.2						
18	26	120	.2						
19	180	700	1.0						
20	8	62	.2						
21	115	260	.2						
22	17	165	.2						
23	10	80	.2						
24	52	270	.2						
24a	6	450	3.2						
24b	5	560	3.6						
24c	4	250	1.2						
24c*	2	195	1.2						
24d	9	540	4.0						
25	19	80	.2						
26	40	145	.2						
27	24	72	.2						
28	7	76	.2						
29	13	75	.2						
30	23	78	.2						

APPENDIX 4

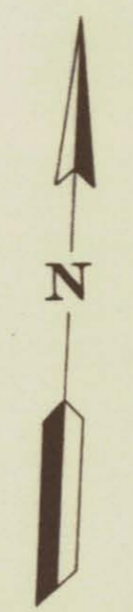
137° 15' WEST

LEGEND

- Covered Interval
- Ridges
- Outcrop and Unit Boundaries
- Strike and Dip
- 1,2,3...32 Claim Numbers

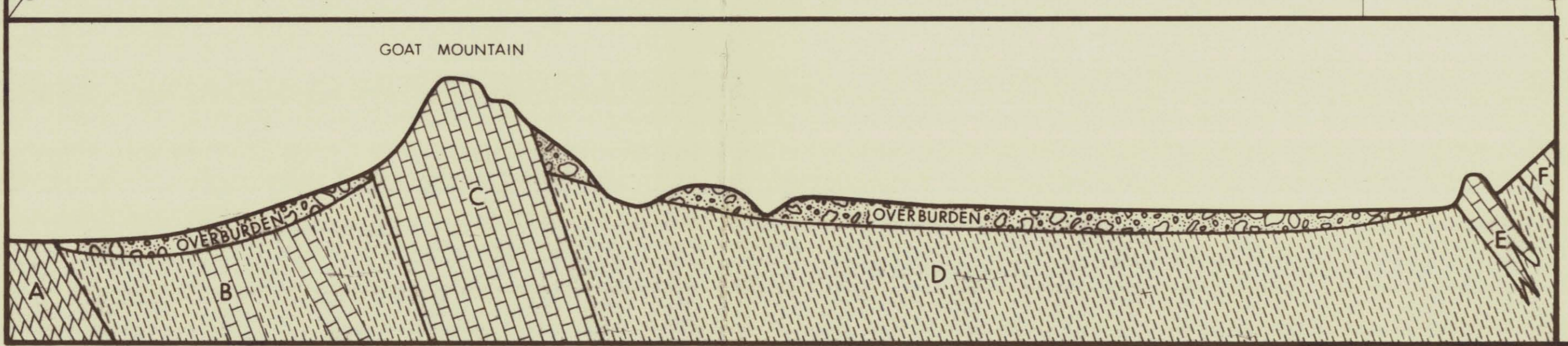
GEOLOGICAL UNITS

- A Dolomite - Dark grey rubble
- B Shale & Limestone, Interbedded Shale - Black graphitic limestone - grey, blocky
- C Limestone - Crinoidal, resistant
- D Shale - Black, pyritic
- E Limestone - Crinoidal, resistant
- F Dolomite - Microcrystalline, medium grey



65° 17' 30"

65° 17' 30" NORTH



GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
YUKON TERRITORY

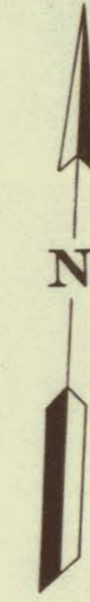
MACKENZIE PROJECT
JANE CLAIMS
GEOLOGY

500 250 0 500 1000
FEET

MANO M.D. JANET HELTON NTS: 116 H-6 AUGUST 1975

137° 15'

137° 15' WEST



LEGEND

730 / 34 / 5.6 } IN PARTS PER MILLION
LEAD
CADMIUM
ZINC

450 / 12 / 5.6 }
STRAIGHT VALUES - "UNCORRECTED" LEAD & CADMIUM
SLANT VALUES - "CORRECTED" LEAD & CADMIUM

65° 17' 30"

65° 17' 30" NORTH



137° 15'

090001

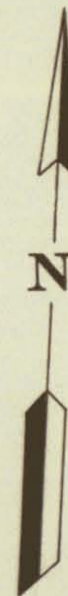
GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
YUKON TERRITORY
MACKENZIE PROJECT
JANE CLAIMS
SOIL SAMPLE - GEOCHEMISTRY RESULTS

500 250 0 500 1000
FEET

MAYO M.D.
JANET HELTON

NTS: 116 H-6
AUGUST 1975

137° 15' WEST



LEGEND

- SILT SAMPLES (UNDERLINED SEEPAGE)
 - ▲ ROCK SAMPLES
- LEAD
 730/ 45/ 5.6 CADMIUM } IN PARTS PER MILLION
 ZINC


65°17'30"

65°17'30" NORTH



137° 15'

090001


DEVELOPMENT COMPANY OF CANADA, LTD.
 YUKON TERRITORY
MACKENZIE PROJECT
 JANE CLAIMS
 ROCK & SILT SAMPLE GEOCHEMISTRY RESULTS

500 250 0 500 1000
 FEET

MAYO M.D.
 JANET HELTON

NTS: 116 H-6
 AUGUST 1975