GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL REPORT

SIAN CLAIM GROUP

Nadaleen Range, Yukon

NTS 106 C2

CO-ordinates: 132°47', 64°07'

July - August, 1977

A.O. Birkeland, P.Eng.

A.M.S. Clarke, Ph.D., F. G.A.C.

090309

Correct amount is $31,200.00

Koez 8/78

Resident Mining Eng.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $ 31,200.00

Resident Geologist or
Resident Mining Engineer

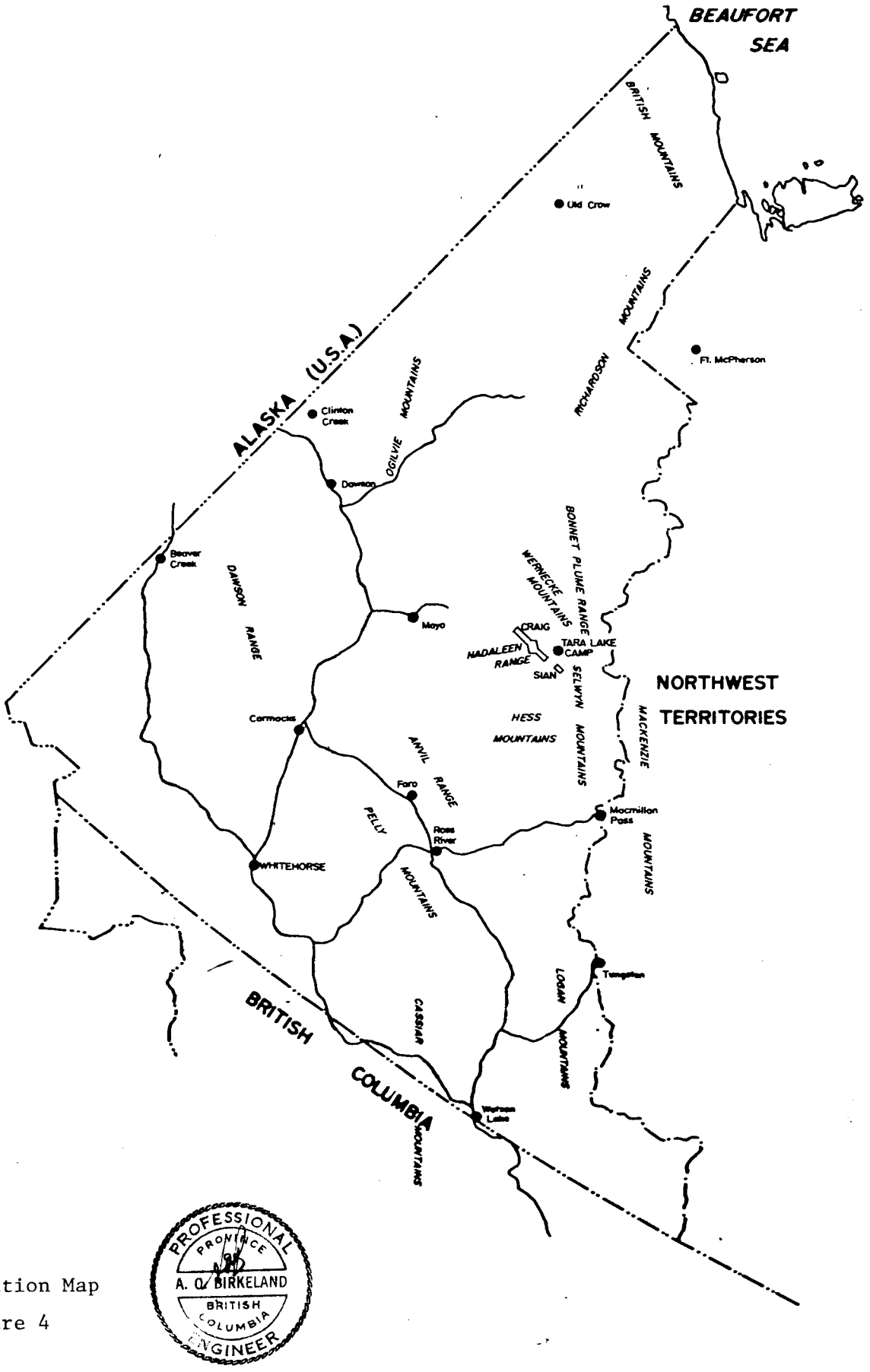
Considered as representation work under Section 53 (4) Yukon Quartz Mining Act

B. R. BAKER
Supervising Mining Recorder

for Commissioner of Yukon Territory

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS



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PROVINCE OF BRITISH COLUMBIA
A. O. BIRKELAND

Location Map

Figure 4

INTRODUCTION

The Sian property was discovered late in the 1976 field season. Follow up prospecting of geological targets is credited for the find. Between Sept. 1 and Sept. 9, 104 claims were located. Preliminary evaluation was carried out in 1976, and detailed geological studies were undertaken in 1977.

LOCATION AND ACCESS

Co-ordinates: $132^{0}47'$, $64^{o}07'$

The Sian claim group is located 5 miles N.N.E. of Ortell Lake and 95 miles N.E. of Mayo. Work on the property was carried out from a base camp established at Tara Lake ($132^{o}54'$, $64^{o}15'$) 102 miles N.E. of Mayo. The lake is 2,500' long and will accommodate float planes based in Mayo.

Elevations on the property range from 3,000' in the valleys to 6,000' on the peaks with 50% of the claim group located below tree line.

CLAIM TENURE

Claim Name	Grant Number	Date Recorded
Sian 1 - 104	YA 6771 - YA 6874	14th September,1976

GEOLOGY AND MINERALIZATION

For detailed geological descriptions of the Sian claim group lithologies and mineralization refer to:

1. Appendix 1. Report on the Geology of the Sian Claim Group, Nadaleen Range, Yukon Territory by A.M.S. Clark, Ph.D. November 8, 1977.

2. Appendix 2. Report on the Geology of the Sian Claim Group, Nadaleen Range, Yukon Territory by A.M.S. Clark, Ph.D. December 2, 1977.

GEOCHEMISTRY

A detailed soil geochem program based on a grid 12,400' X 1,600' was conducted. Line intervals were 400' apart, sample intervals were 100' apart. B-horizon material was collected when possible, and standard A.A. analysis was conducted on the -80 fraction. Results were plotted and contoured on a scale of 1" = 200' (see Figures 1 & 2). A contour interval of approximately 5 time background was used.

The most extensive anomalous area is centered at approximately 10,000 N and 20,000 E. The anomalous values in Pb and Zn relate directly to surface mineralization observed in the Clinker "Kill Zone" area. Two small (one station) anomalies 2000' to the east represent small isolated showings of Pb and Zn. More detail could be conducted in this area.

Four scattered anomalies are also present at about 8000 N 29,000 E. The anomalies represent the expression of Showing D (Clark, 1977) Isolated occurrances of weak sphalerite mineralization in siliceous dolomite do not adequately explain the geochem response. More detailed soil geochem in the covered sections and prospecting where possible may indicate a good target area for follow-up.

GEOPHYSICS

A limited amount of geophysical orientation was conducted over the Clinker Zone. Total intensity magnetics, H.E.M., and S.P. traverses were run on 2 traverses with azimuths of 040^{o} and 144^{0}. The profiles are plotted in Figure 3.

There was no obvious magnetic response. The only minor S.P. anomaly relating to the Clinker Zone is located at Station 0 on Azimuth 040^{o}.

A 200' cable H.E.M. in phase cross over was obtained on 4 frequencies at about 1N on Azimuth 040^{o}. This feature may relate to a conductive sulfide body but probably marks the geologic contact between dolostone and argillaceous wacke.

CONCLUSIONS

Numerous lead, zinc and barite occurrences have been located in carbonate and clastic hosts in the "Grit" unit rocks. Significant outcroping mineralization is suggested and the presence of substantial "Kill Zones" indicates target areas for follow up are suggested.

Geochem targets are suggested to the west of the Clinker Zone and around the D Showing area.

Results of the goephysical orientation were discouraging and no clear cut response relating to mineralization was indicated.

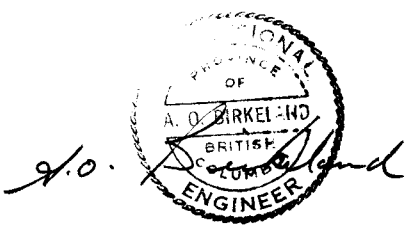

TABLE OF ANALYTICAL RESULTS

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41746

TO: McIntyre Mines Ltd.,
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ATTN: V6C 1T8

INVOICE NO. 21774

RECEIVED September 5, 1977

ANALYSED September 7, 1977

SION PROJECT

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT829-1	34	1800	0.1
2	30	840	0.1
3	6	230	0.2
4	4	190	0.2
5	6	185	0.1
6	10	180	0.4
7	6	100	0.1
8	4	120	0.2
9	18	150	0.1
10	20	170	0.1
11	82	110	0.2
12	54	110	0.1
13	70	100	0.2
14	200	125	0.4
15	16	110	0.1
16	22	80	0.1
17	34	100	0.1
18	20	110	0.1
19	32	140	0.1
20	22	95	0.1
21	26	105	0.1
22	24	100	0.1
23	18	90	0.1
24	30	105	0.1
25	14	95	0.1
26	22	80	0.1
AT829-27	26	155	0.2
SA828-1	30	180	0.2
2	24	90	0.1
3	32	125	0.1
4	18	170	0.1
5	8	90	0.1
6	10	170	0.1
7	8	155	0.1
8	20	140	0.1
9	44	210	0.1
10	20	125	0.1
11	12	90	0.1
12	34	165	0.1
SA828-13	72	385	0.1
STD.	86	200	7.4

CTA MEMBER CANADIAN TESTING ASSOCIATION

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3	6	230	0.2
4	4	190	0.2
5	6	185	0.1
6	10	180	0.4
7	6	100	0.1
8	4	120	0.2
9	18	150	0.1
10	20	170	0.1
11	82	110	0.2
12	54	110	0.1
13	70	100	0.2
14	200	125	0.4
15	16	110	0.1
16	22	80	0.1
17	34	100	0.1
18	20	110	0.1
19	32	140	0.1
20	22	95	0.1
21	26	105	0.1
22	24	100	0.1
23	18	90	0.1
24	30	105	0.1
25	14	95	0.1
26	22	80	0.1
AT829-27	26	155	0.2
SA828-1	30	180	0.2
2	24	90	0.1
3	32	125	0.1
4	18	170	0.1
5	8	90	0.1
6	10	170	0.1
7	8	155	0.1
8	20	140	0.1
9	44	210	0.1
10	20	125	0.1
11	12	90	0.1
12	34	165	0.1
SA828-13	72	385	0.1
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V6C 1T8

ATTN:

SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SA828-14	54	200	0.1
15	66	250	0.1
16	50	245	0.1
17	146	480	0.1
18	24	260	0.1
19	58	305	0.1
20	20	115	0.1
21	34	155	0.1
22	800	1520	0.1
23	235	485	0.1
24	142	330	0.1
25	180	290	0.1
26	100	235	0.1
27	134	650	0.1
28	100	590	0.1
29	194	815	0.1
30	116	750	0.1
SA828-31	84	690	0.1
AT828-01	20	110	0.1
02	90	120	0.1
03	18	330	0.1
04	20	140	0.1
05	12	110	0.1
06	18	130	0.1
07	16	100	0.1
08	22	150	0.1
09	12	150	0.1
10	20	120	0.1
11	12	130	0.1
12	14	175	0.1
13	18	145	0.4
14	14	140	0.1
15	1	380	0.1
16	14	175	0.1
17	10	115	0.1
18	14	120	0.1
19	12	95	0.1
20	12	125	0.1
21	8	155	0.2
AT828-22	12	160	0.1
STD.	86	200	7.4

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CERTIFIED BY: A. O. Birkeland

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SA828-14	54	200	0.1
15	66	250	0.1
16	50	245	0.1
17	146	480	0.1
18	24	260	0.1
19	58	305	0.1
20	20	115	0.1
21	34	155	0.1
22	800	1520	0.1
23	235	485	0.1
24	142	330	0.1
25	180	290	0.1
26	100	235	0.1
27	134	650	0.1
28	100	590	0.1
29	194	815	0.1
30	116	750	0.1
SA828-31	84	690	0.1
AT828-01	20	110	0.1
02	90	120	0.1
03	18	330	0.1
04	20	140	0.1
05	12	110	0.1
06	18	130	0.1
07	16	100	0.1
08	22	150	0.1
09	12	150	0.1
10	20	120	0.1
11	12	130	0.1
12	14	175	0.1
13	18	145	0.4
14	14	140	0.1
15	1	380	0.1
16	14	175	0.1
17	10	115	0.1
18	14	120	0.1
19	12	95	0.1
20	12	125	0.1
21	8	155	0.2
AT828-22	12	160	0.1
STD.	86	200	7.4

A. O. BIRKELAND
BRITISH COLUMBIA
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ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT828-23	12	125	0.1
24	10	95	0.1
25	12	170	0.1
26	10	135	0.1
27	18	95	0.1
28	12	115	0.1
29	14	105	0.1
30	8	90	0.1
31	12	115	0.1
32	14	130	0.1
33	22	255	0.2
34	42	365	0.1
35	22	335	0.1
36	22	290	0.1
37	116	810	0.1
38	34	415	0.1
39	16	335	0.1
AT828-40	44	455	0.2
SS828-8	4	40	0.1
SS828-29	22	115	0.2
SS828-30	24	105	0.1
STD.	84	195	7.4

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SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT828-23	12	125	0.1
24	10	95	0.1
25	12	170	0.1
26	10	135	0.1
27	18	95	0.1
28	12	115	0.1
29	14	105	0.1
30	8	90	0.1
31	12	115	0.1
32	14	130	0.1
33	22	255	0.2
34	42	365	0.1
35	22	335	0.1
36	22	290	0.1
37	116	810	0.1
38	34	415	0.1
39	16	335	0.1
AT828-40	44	455	0.2
SS828-8	4	40	0.1
SS828-29	22	115	0.2
SS828-30	24	105	0.1
STD.	84	195	7.4

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ATTN: SION PROJECT
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SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SS824-1	240	520	0.1
2	72	990	0.1
3	26	80	0.1
4	16	80	0.1
5	8	45	0.1
6	12	85	0.1
7	21	2200	0.1
8	10	50	0.1
9	18	75	0.1
10	16	70	0.1
11	13	105	0.1
12	19	170	0.1
13	68	405	0.1
14	42	430	0.1
15	180	795	0.1
16	122	1280	0.1
17	162	445	0.1
18	450	1480	0.1
19	121	1320	0.1
20	158	890	0.1
21	102	785	0.1
22	96	670	0.1
23	23	315	0.1
24	6	75	0.1
25	11	50	0.1
26	27	95	0.1
27	26	100	0.1
28	20	65	0.1
29	18	145	0.1
30	33	255	0.1
31	48	535	0.1
SS824-32	128	695	0.1
AT824-1	100	1240	0.2
2	28	160	0.1
3	72	355	0.1
4	49	355	0.1
5	12	80	0.1
6	10	55	0.1
7	30	125	0.1
AT824-8	10	85	0.1
STD.	85	205	7.4

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SS824-1	240	520	0.1
2	72	990	0.1
3	26	80	0.1
4	16	80	0.1
5	8	45	0.1
6	12	85	0.1
7	21	2200	0.1
8	10	50	0.1
9	18	75	0.1
10	16	70	0.1
11	13	105	0.1
12	19	170	0.1
13	68	405	0.1
14	42	430	0.1
15	180	795	0.1
16	122	1280	0.1
17	162	445	0.1
18	450	1480	0.1
19	121	1320	0.1
20	158	890	0.1
21	102	785	0.1
22	96	670	0.1
23	23	315	0.1
24	6	75	0.1
25	11	50	0.1
26	27	95	0.1
27	26	100	0.1
28	20	65	0.1
29	18	145	0.1
30	33	255	0.1
31	48	535	0.1
SS824-32	128	695	0.1
AT824-1	100	1240	0.2
2	28	160	0.1
3	72	355	0.1
4	49	355	0.1
5	12	80	0.1
6	10	55	0.1
7	30	125	0.1
AT824-8	10	85	0.1
STD.	85	205	7.4

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ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT824-9	17	855	0.1
10	570	1160	0.2
11	154	650	0.1
12	37	175	0.1
13	290	1680	0.1
14	530	1640	0.1
15	530	975	0.1
16	230	910	0.1
17	340	510	0.1
18	38	120	0.1
19	14	95	0.1
20	16	80	0.1
21	8	50	0.1
22	14	80	0.1
23	10	165	0.1
24	24	105	0.6
25	24	405	0.1
26	65	310	0.1
27	8	90	0.1
28	23	175	0.1
29	142	1720	0.1
30	186	920	0.1
31	420	2280	0.1
32	172	1480	0.1
33	27	125	0.1
34	10	60	0.1
35	10	50	0.1
36	15	75	0.1
37	62	490	0.1
38	24	130	0.1
39	16	65	0.1
AT824-40	14	90	0.1
AT825-1	11	80	0.1
2	8	65	0.1
3	12	85	0.1
4	14	70	0.1
5	16	105	0.1
6	16	70	0.1
7	22	95	0.1
AT825-8	20	90	0.1
STD.	87	200	7.5

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10	570	1160	0.2
11	154	650	0.1
12	37	175	0.1
13	290	1680	0.1
14	530	1640	0.1
15	530	975	0.1
16	230	910	0.1
17	340	510	0.1
18	38	120	0.1
19	14	95	0.1
20	16	80	0.1
21	8	50	0.1
22	14	80	0.1
23	10	165	0.1
24	24	105	0.6
25	24	405	0.1
26	65	310	0.1
27	8	90	0.1
28	23	175	0.1
29	142	1720	0.1
30	186	920	0.1
31	420	2280	0.1
32	172	1480	0.1
33	27	125	0.1
34	10	60	0.1
35	10	50	0.1
36	15	75	0.1
37	62	490	0.1
38	24	130	0.1
39	16	65	0.1
AT824-40	14	90	0.1
AT825-1	11	80	0.1
2	8	65	0.1
3	12	85	0.1
4	14	70	0.1
5	16	105	0.1
6	16	70	0.1
7	22	95	0.1
AT825-8	20	90	0.1
STD.	87	200	7.5

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. O. BIRKELAND

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41605

INVOICE NO. 21713

RECEIVED August 30, 1977

ANALYSED September 2, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.

ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT825-9	340	75	0.1
10	340	140	0.1
11	210	135	0.1
12	22	120	0.1
13	22	165	0.1
14	13	75	0.1
15	18	205	0.1
16	23	180	0.1
17	12	65	0.1
18	15	80	0.1
19	20	90	0.1
20	11	65	0.1
21	10	80	0.1
22	9	70	0.1
23	20	90	0.1
24	10	60	0.1
25	16	70	0.1
26	9	35	0.1
27	20	85	0.1
28	6	390	0.3
29	16	330	0.1
30	11	730	0.1
31	39	1640	0.1
32	35	1960	0.1
33	11	205	0.1
34	20	125	0.1
35	24	210	0.1
36	53	265	0.1
37	74	160	0.1
38	102	140	0.1
39	116	180	0.1
AT825-40	94	185	0.1
SS825-1	58	190	0.1
2	104	240	0.1
3	103	230	0.1
4	107	250	0.1
5	66	185	0.1
6	74	245	0.1
7	80	160	0.1
SS825-8	82	300	0.1
STD.	84	200	6.8

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. O. BIRKELAND

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41605

INVOICE NO. 21713

RECEIVED August 30, 1977

ANALYSED September 2, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.

ATTN:

SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT825-9	340	75	0.1
10	340	140	0.1
11	210	135	0.1
12	22	120	0.1
13	22	165	0.1
14	13	75	0.1
15	18	205	0.1
16	23	180	0.1
17	12	65	0.1
18	15	80	0.1
19	20	90	0.1
20	11	65	0.1
21	10	80	0.1
22	9	70	0.1
23	20	90	0.1
24	10	60	0.1
25	16	70	0.1
26	9	35	0.1
27	20	85	0.1
28	6	390	0.3
29	16	330	0.1
30	11	730	0.1
31	39	1640	0.1
32	35	1960	0.1
33	11	205	0.1
34	20	125	0.1
35	24	210	0.1
36	53	265	0.1
37	74	160	0.1
38	102	140	0.1
39	116	180	0.1
AT825-40	94	185	0.1
SS825-1	58	190	0.1
2	104	240	0.1
3	103	230	0.1
4	107	250	0.1
5	66	185	0.1
6	74	245	0.1
7	80	160	0.1
SS825-8	82	300	0.1
STD.	84	200	6.8

PROFESSIONAL ENGINEER OF BRITISH COLUMBIA A. O. BIRKELAND

CTA MEMBER CANADIAN TESTING ASSOCIATION

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41606

INVOICE NO. 21713

RECEIVED August 30, 1977

ANALYSED September 2, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.

ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SS825-9	186	490	0.1
10	270	335	0.1
11	144	315	0.1
12	100	185	0.1
SS825-13	74	260	0.1

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. O. BIRKELAND

CTA MEMBER CANADIAN TESTING ASSOCIATION

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41606

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.

INVOICE NO. 21713

RECEIVED August 30, 1977

ANALYSED September 2, 1977

ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SS825-9	186	490	0.1
10	270	335	0.1
11	144	315	0.1
12	100	185	0.1
SS825-13	74	260	0.1

A. O. BIRKELAND
ENGINEER

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY:

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TELEPHONE: 985-0648
AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41765

INVOICE NO. 21781

RECEIVED September 6, 1977

ANALYSED September 8, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT829-28	32	220	0.1
29	28	125	0.1
30	54	295	0.1
31	122	585	0.1
32	60	1400	0.1
33	95	910	0.1
34	90	1280	0.1
35	30	830	0.1
36	38	220	0.1
37	48	290	0.1
38	30	140	0.1
39	44	220	0.1
AT829-40	20	135	0.1
AT830-1	24	135	0.1
2	6	80	0.1
3	10	100	0.1
4	14	145	0.1
5	12	120	0.1
6	6	70	0.1
7	12	105	0.1
8	12	95	0.2
9	26	145	0.1
10	10	80	0.1
11	14	165	0.1
12	12	60	0.1
13	10	200	0.1
14	14	155	0.1
15	58	300	0.1
16	460	735	0.2
17	190	415	0.1
18	260	430	0.4
19	1100	2480	0.6
20	68	365	0.1
21	44	180	0.1
22	34	145	0.2
23	30	145	0.1
24	34	145	0.1
25	20	100	0.1
26	26	95	0.2
AT830-27	34	105	0.1
STD.	84	195	7.4

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. O. BIRKELAND

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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RECEIVED September 6, 1977

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TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
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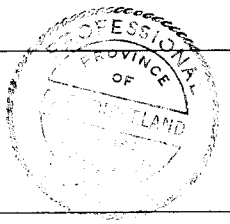
V6C 1T8

ATTN: SION PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT829-28	32	220	0.1
29	28	125	0.1
30	54	295	0.1
31	122	585	0.1
32	60	1400	0.1
33	95	910	0.1
34	90	1280	0.1
35	30	830	0.1
36	38	220	0.1
37	48	290	0.1
38	30	140	0.1
39	44	220	0.1
AT829-40	20	135	0.1
AT830-1	24	135	0.1
2	6	80	0.1
3	10	100	0.1
4	14	145	0.1
5	12	120	0.1
6	6	70	0.1
7	12	105	0.1
8	12	95	0.2
9	26	145	0.1
10	10	80	0.1
11	14	165	0.1
12	12	60	0.1
13	10	200	0.1
14	14	155	0.1
15	58	300	0.1
16	460	735	0.2
17	190	415	0.1
18	260	430	0.4
19	1100	2480	0.6
20	68	365	0.1
21	44	180	0.1
22	34	145	0.2
23	30	145	0.1
24	34	145	0.1
25	20	100	0.1
26	26	95	0.2
AT830-27	34	105	0.1
STD.	84	195	7.4



CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: H.F. Shaw

212 BROOKSBANK AVE.
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41766

INVOICE NO. 21781

RECEIVED September 6, 1977

ANALYSED September 8, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN: SIAN PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT830-28	16	90	0.1
29	10	65	0.1
30	12	60	0.2
31	18	80	0.1
32	20	185	0.1
33	82	760	0.2
34	26	370	0.1
35	92	1240	0.1
36	630	2600	0.8
37	30	145	0.1
38	24	160	0.1
39	40	190	0.1
AT830-40	12	110	0.1
MS829-1	30	140	0.1
2	12	55	0.2
3	10	70	0.1
4	12	60	0.1
5	14	80	0.1
6	10	60	0.1
7	22	65	0.1
8	20	100	0.1
9	12	60	0.1
10	10	45	0.1
11	8	50	0.1
12	24	70	0.1
13	16	80	0.1
14	22	70	0.1
15	24	80	0.1
16	16	65	0.1
17	12	90	0.1
18	20	100	0.1
19	14	140	0.1
20	12	110	0.1
21	10	80	0.1
22	14	125	0.1
23	12	100	0.1
24	16	95	0.1
25	76	>4000	0.1
26	36	315	0.2
MS829-27	20	125	0.1
STD.	84	205	7.4

PROVINCE OF BRITISH COLUMBIA
A. O. BIRKELAND
ENGINEER

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41766

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

INVOICE NO. 21781

RECEIVED September 6, 1977

ANALYSED September 8, 1977

ATTN: SIAN PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
AT830-28	16	90	0.1
29	10	65	0.1
30	12	60	0.2
31	18	80	0.1
32	20	185	0.1
33	82	760	0.2
34	26	370	0.1
35	92	1240	0.1
36	630	2600	0.8
37	30	145	0.1
38	24	160	0.1
39	40	190	0.1
AT830-40	12	110	0.1
MS829-1	30	140	0.1
2	12	55	0.2
3	10	70	0.1
4	12	60	0.1
5	14	80	0.1
6	10	60	0.1
7	22	65	0.1
8	20	100	0.1
9	12	60	0.1
10	10	45	0.1
11	8	50	0.1
12	24	70	0.1
13	16	80	0.1
14	22	70	0.1
15	24	80	0.1
16	16	65	0.1
17	12	90	0.1
18	20	100	0.1
19	14	140	0.1
20	12	110	0.1
21	10	80	0.1
22	14	125	0.1
23	12	100	0.1
24	16	95	0.1
25	76	>4000	0.1
26	36	315	0.2
MS829-27	20	125	0.1
STD.	84	205	7.4

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. O. BIRKELAND

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: A. O. Birkeland

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41767

INVOICE NO. 21781

RECEIVED September 6, 1977

ANALYSED September 8, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN: SIAN PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
MS829-28	12	85	0.1
29	50	130	0.1
30	24	65	0.2
31	22	170	0.2
MS829-32	26	150	0.1
MS830-1	18	135	0.1
3	14	130	0.1
6	50	200	0.4
9	>4000	>4000	17
10	150	660	0.2
12	330	475	0.2
13	210	1560	0.1
17	335	>4000	0.2
18	415	465	0.2
19	24	150	0.2
20	28	110	0.1
21	12	110	0.1
22	12	80	0.2
23	14	135	0.1
MS830-24	20	200	0.4
SA829-1	16	120	0.1
2	18	160	0.1
3	8	65	0.2
4	6	45	0.2
5	14	50	0.1
6	8	60	0.4
7	10	70	0.1
8	12	80	0.1
9	12	80	0.1
10	22	95	0.1
11	18	65	0.1
12	10	80	0.1
SA829-13	10	70	0.2
SA830-1	14	105	0.1
2	26	185	0.1
3	22	110	0.1
4	26	235	0.1
5	12	95	0.2
6	24	160	0.1
SA830-7	30	155	0.2
STD.	84	200	7.6

PROVINCE OF BRITISH COLUMBIA — A. O. BIRKELAND — ENGINEER

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

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AREA CODE: 604
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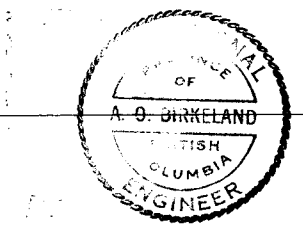
TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN:

SIAN PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
MS829-28	12	85	0.1
29	50	130	0.1
30	24	65	0.2
31	22	170	0.2
MS829-32	26	150	0.1
MS830-1	18	135	0.1
3	14	130	0.1
6	50	200	0.4
9	>4000	>4000	17
10	150	660	0.2
12	330	475	0.2
13	210	1560	0.1
17	335	>4000	0.2
18	415	465	0.2
19	24	150	0.2
20	28	110	0.1
21	12	110	0.1
22	12	80	0.2
23	14	135	0.1
MS830-24	20	200	0.4
SA829-1	16	120	0.1
2	18	160	0.1
3	8	65	0.2
4	6	45	0.2
5	14	50	0.1
6	8	60	0.4
7	10	70	0.1
8	12	80	0.1
9	12	80	0.1
10	22	95	0.1
11	18	65	0.1
12	10	80	0.1
SA829-13	10	70	0.2
SA830-1	14	105	0.1
2	26	185	0.1
3	22	110	0.1
4	26	235	0.1
5	12	95	0.2
6	24	160	0.1
SA830-7	30	155	0.2
STD.	84	200	7.6



CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41768

INVOICE NO. 21781

RECEIVED September 6, 1977

ANALYSED September 8, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN: SIAN PROJECT
c.c. R.G. Gifford

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. O. BIRKELAND

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SA830-8	16	155	0.1
9	42	225	0.1
10	36	625	0.1
11	36	280	0.1
12	20	135	0.1
13	62	445	0.1
14	780	2280	0.2
15	136	590	0.1
16	300	1200	0.1
17	180	270	0.1
18	70	300	0.1
19	620	660	0.1
20	520	750	0.1
21	690	1080	0.1
22	665	2040	0.1
23	730	1400	0.2
24	26	120	0.1
25	8	70	0.1
26	12	80	0.1
27	12	80	0.1
28	10	95	0.1
✓ SA830-29	10	80	0.1
✓ SS819-19	4	190	0.1
SS829-1	58	710	0.1
2	88	555	0.1
3	76	410	0.1
4	46	240	0.1
5	58	465	0.1
6	58	385	0.4
7	14	155	0.1
8	6	60	0.1
9	10	150	0.1
10	12	205	0.1
11	16	520	0.1
12	26	510	0.1
13	28	350	0.1
14	44	530	0.1
15	24	195	0.1
16	26	230	0.1
SS829-17	30	185	0.1
STD.	84	195	7.6

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: A. O. Birkeland

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN:

SIAN PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SA830-8	16	155	0.1
9	42	225	0.1
10	36	625	0.1
11	36	280	0.1
12	20	135	0.1
13	62	445	0.1
14	780	2280	0.2
15	136	590	0.1
16	300	1200	0.1
17	180	270	0.1
18	70	300	0.1
19	620	660	0.1
20	520	750	0.1
21	690	1080	0.1
22	665	2040	0.1
23	730	1400	0.2
24	26	120	0.1
25	8	70	0.1
26	12	80	0.1
27	12	80	0.1
28	10	95	0.1
SA830-29	10	80	0.1
SS819-19	4	190	0.1
SS829-1	58	710	0.1
2	88	555	0.1
3	76	410	0.1
4	46	240	0.1
5	58	465	0.1
6	58	385	0.4
7	14	155	0.1
8	6	60	0.1
9	10	150	0.1
10	12	205	0.1
11	16	520	0.1
12	26	510	0.1
13	28	350	0.1
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SS829-17	30	185	0.1
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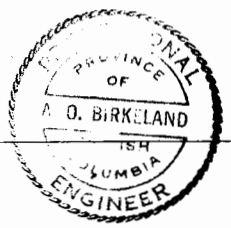

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 41769

INVOICE NO. 21781

RECEIVED September 6, 1977

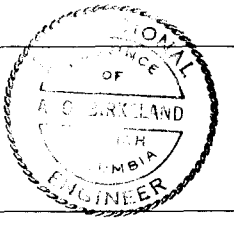
ANALYSED September 8, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN:

SIAN PROJECT
c.c. R.G. Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SS829-18	38	185	0.1
19	32	130	0.1
20	24	140	0.1
21	24	130	0.1
22	16	115	0.1
23	28	165	0.2
24	48	200	0.1
25	10	75	0.1
26	8	70	0.1
27	10	75	0.1
28	10	90	0.1
29	20	130	0.1
30	16	100	0.1
31	18	145	0.1
32	12	120	0.1
33	38	275	0.1
34	30	135	0.1
35	34	210	0.2
36	200	840	0.1
37	108	445	0.1
38	184	2680	0.8
39	20	705	0.2
SS829-40	18	535	0.1
SS830-1	24	115	0.1
2	12	275	0.2
3	10	150	0.4
4	10	90	0.1
5	14	95	0.1
6	10	110	0.1
7	14	85	0.1
8	14	60	0.1
9	14	115	0.1
10	20	110	0.1
11	14	150	0.1
12	10	85	0.1
13	8	80	0.1
14	12	90	0.1
15	12	105	0.1
16	22	180	0.1
SS830-17	32	115	0.1
STD.	84	195	7.4



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23	28	165	0.2
24	48	200	0.1
25	10	75	0.1
26	8	70	0.1
27	10	75	0.1
28	10	90	0.1
29	20	130	0.1
30	16	100	0.1
31	18	145	0.1
32	12	120	0.1
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35	34	210	0.2
36	200	840	0.1
37	108	445	0.1
38	184	2680	0.8
39	20	705	0.2
SS829-40	18	535	0.1
SS830-1	24	115	0.1
2	12	275	0.2
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10	20	110	0.1
11	14	150	0.1
12	10	85	0.1
13	8	80	0.1
14	12	90	0.1
15	12	105	0.1
16	22	180	0.1
SS830-17	32	115	0.1
STD.	84	195	7.4

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CERTIFICATE NO. 41770

INVOICE NO. 21781

RECEIVED September 6, 1977

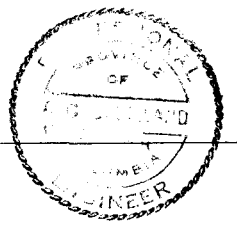
ANALYSED September 8, 1977

TO: McIntyre Mines Ltd.,
1003 - 409 Granville St.,
Vancouver, B.C.
V6C 1T8

ATTN:

SIAN PROJECT
c.c. R.G Gifford

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
SS830-18	24	100	0.1
19	14	70	0.1
20	10	50	0.1
21	22	95	0.1
22	32	50	0.1
23	12	80	0.1
24	28	55	0.1
25	66	120	0.2
SS830-26	112	245	0.1
STD.	84	195	7.4



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TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE NO. 41770

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SS830-18	24	100	0.1
19	14	70	0.1
20	10	50	0.1
21	22	95	0.1
22	32	50	0.1
23	12	80	0.1
24	28	55	0.1
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SS830-26	112	245	0.1
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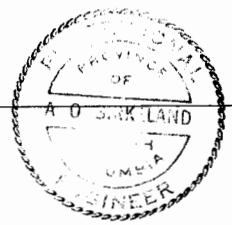

CTA MEMBER CANADIAN TESTING ASSOCIATION

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APPENDIX 1

REPORT ON THE GEOLOGY OF THE SIAN CLAIM GROUP NADALEEN RANGE, YUKON TERRITORY

by

A.M.S. Clark, Ph.D.

November 8,1977

REPORT ON THE

GEOLOGY

OF THE

SIAN CLAIM GROUP

Nadaleen Range, Yukon Territory

N.T.S. 106-C-2

Timmins, Ontario
November 8, 1977

A.M.S. Clark, Ph.D., F.G.A.C.
McIntyre Mines Limited

TABLE OF CONTENTS PAGE

SUMMARY

The Sian Claim Group is underlain by a sequence of black, buff, maroon and green argillites in which are quartz-clast wackes and small-pebble, argillaceous matrix conglomerates. These are underlain (?), partly interbedded with and overlain by limestones and dolomites, which in turn are overlain (?) by Devonian (?) coral reefs and associated limestone facies. The entire sequence has undergone one major period of large-scale tight folding , and appears to have undergone later large-scale, open cross-folding .

The dolomite sequences locally carry sphalerite and galena mineralisation, disseminated in the dolostone and in barite veins and silicified breccias associated with the dolostone. In two locations the wacke also carries mineralisation.

INTRODUCTION

This report describes the geology of the Sian Claim Group based on geological mapping carried out between 11th August and 3rd September 1977. A geological map at a scale of 1":1000' is included at the back of the report.

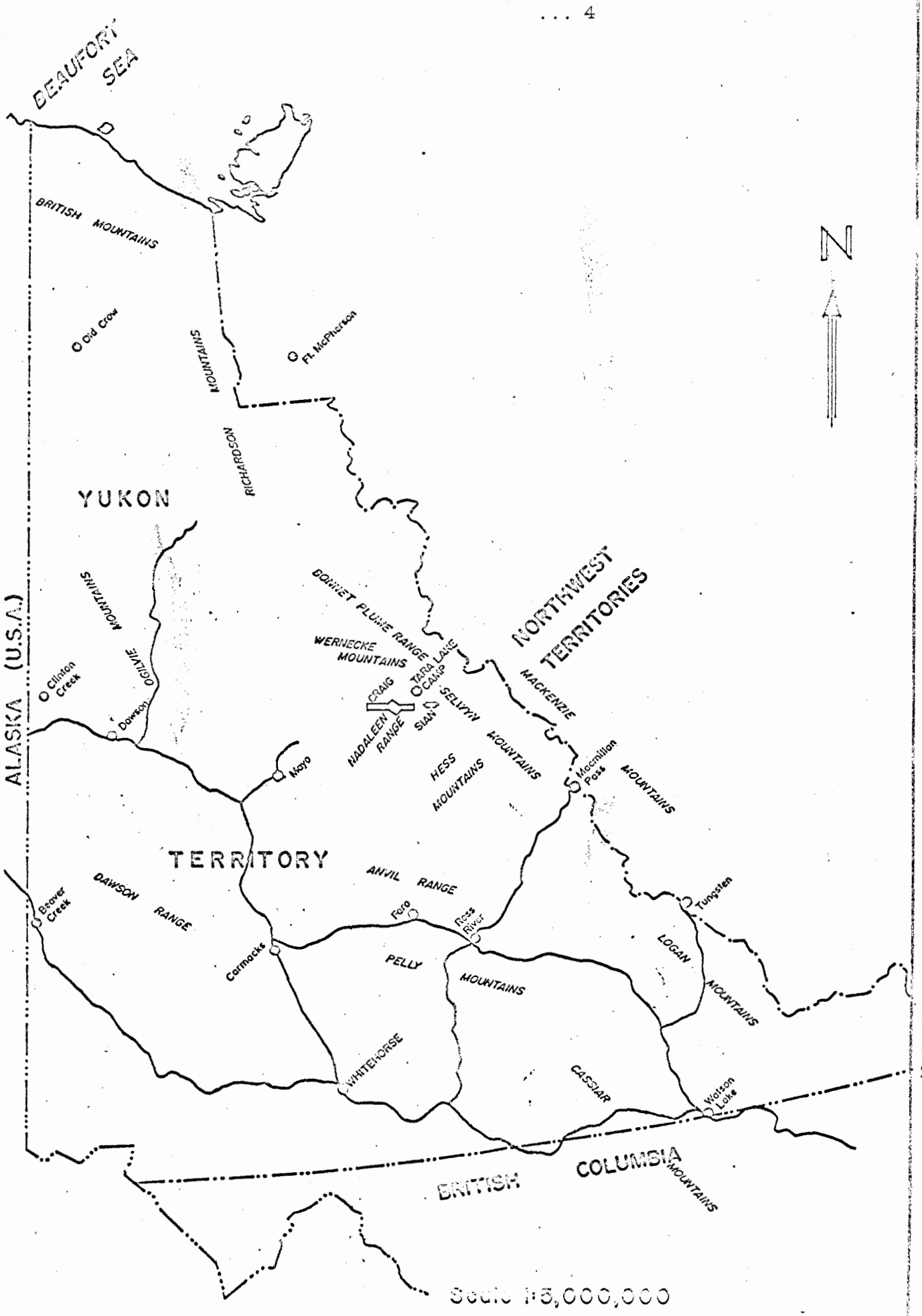
The Sian Claims are situated about one hundred miles east-northeast of Mayo, Yukon Territory, in the Nadaleen Mountain Range, between the Nadaleen and Stewart Rivers (Figs. 1&2). The following claims comprise the Sian Group: Sian 1 to 104/Grant No. YA6771 to YA6874/Recorded 14th September 1976.

NOTES ON THE 1":1000' MAP

The geology is based on specific outcrops and also on interpretation of near "in-situ" surface rubble. Because of the scale of the map it has not been possible to note individual outcrops. Where the rubble was not entirely of one rock-type or was considered transported (e.g. glacial debris in the broad valleys) the geology was not interpreted. The dips and strikes of bedding in the argillite units are all suspect as in this area they all show considerable slumping and rotation, which is not always easily recognisable. Topographic effects have considerably complicated the plotting and interpretation of the location of the various units.

GEOLOGY

The claim group is underlain by a bedded sequence of unfossiliferous argillites (shales and slates), grits, conglomerates, limestones and dolostones,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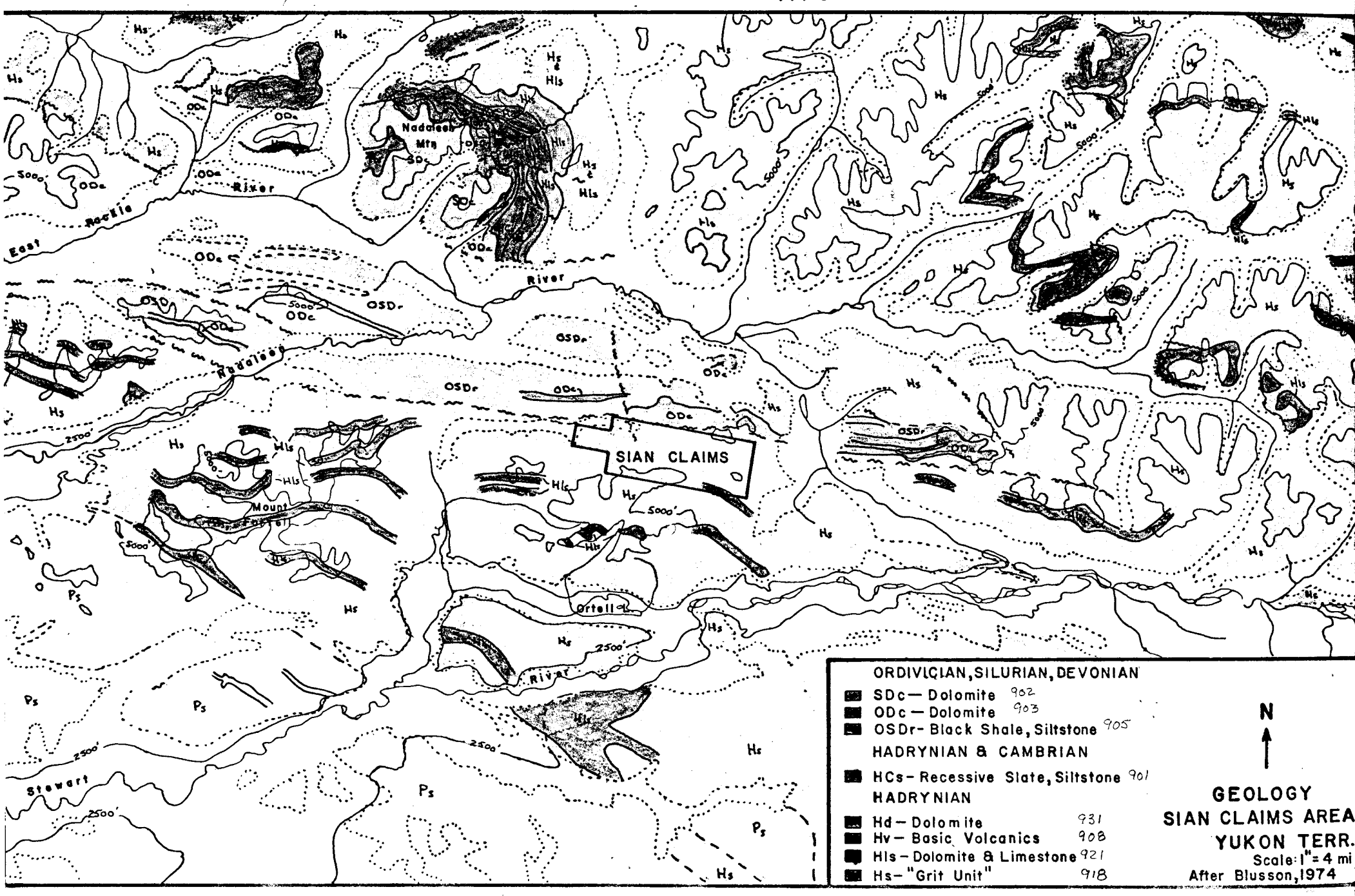
BRITISH MOUNTAINS
Old Crow
MOUNTAINS
Ft. McPherson
RICHARDSON
YUKON
ALASKA (U.S.A.)
OGILVIE MOUNTAINS
Clinton Creek
Dawson
BONNET PLUME RANGE
WERNECKE MOUNTAINS
CRAIG
TARA LAKE CAMP
SELWYN
SIAN
NADALEEN RANGE
NORTHWEST TERRITORIES
MACKENZIE
Mayo
HESS MOUNTAINS
MOUNTAINS
Macmillan Pass
MOUNTAINS
TERRITORY
ANVIL RANGE
DAWSON RANGE
Beaver Creek
Faro
Ross River
Tungsten
Carmacks
PELLY
MOUNTAINS
LOGAN
MOUNTAINS
WHITEHORSE
CASSIAR
Watson Lake
BRITISH COLUMBIA
MOUNTAINS
N
Scale 1:3,000,000
Miles 100 0 100 200 Miles


Nadaleen Mtns
Rixer
Rackla
East
River
Nadaleen
SIAN CLAIMS
Mount
Ortell
Stewart
River
ORDIVICIAN, SILURIAN, DEVONIAN
SDc — Dolomite 902
ODc — Dolomite 903
OSDr - Black Shale, Siltstone 905
HADRYNIAN & CAMBRIAN
HCs - Recessive Slate, Siltstone 901
HADRYNIAN
Hd — Dolomite 931
Hv — Basic Volcanics 908
Hls — Dolomite & Limestone 921
Hs — "Grit Unit" 918
N
GEOLOGY
SIAN CLAIMS AREA
YUKON TERR.
Scale: 1" = 4 mi
After Blusson, 1974

overlying (?) which is a coralline reefal limestone of Devonian (?) age.

The argillaceous units have developed a well-defined schistosity, and minor folding on approximately east/west axial planes is common. However, although major folding about the same axes does occur, the major-fold axial planes have not been fully located and confirmed in the field. Later large-scale, open cross-folding about approximately north-south axes is also thought to have occurred but has not been adequately recognised in the field. Because of the major and minor folding the stratigraphic sequence is not resolved, although it is presumed the fossiliferous limestones overlie the unfossiliferous sequences.

Following is a description of the lithologies recognised in the claim group with their map symbols:

Black Argillite - a(blk): A black, very fissile, carbonaceous argillite. No bedding recognised.

Interbedded Argillite & Carbonate - la & da: A thinly interbedded (2 to 10 cm scale) sequence of black carbonaceous argillite and white non-carbonaceous or black carbonaceous limestone. The limestone is locally dolomitised.

Buff Argillite& Siltstone - a: This sequence is very fissile and varies from argillite to argillite with a few siltstone interlamellae, to silty argillite, argillaceous siltstone and siltstone. Colour is predominantly buff on weathered surface with buff or grey on unweathered surface. However, where siltstone is lacking completely a thick sequence of maroon and green argillite facies sometimes occurs. It has not been possible to trace out the maroon and green facies to any extent on the ground. The colours are due to reduction (green) of oxidised argillite (red) in the vicinity of veinlets and other, unrecognised, features. The siltstones locally grade in appearance into the wackes, but are

Buff Argillite & Carbonate - Con't: generally lighter coloured and distinctly finer grained.

Wacke - w: The wacke is a dark brown, quartz-clast sandstone to conglomerate (0.5 to 2 cm) rock-type with a dark, argillaceous (?) matrix. Clasts are usually well rounded and sub-spherical. The unit is usually only about 1 to 2 m thick, but locally may be as much as about 80 m thick. It is always situated within the buff argillite, and individual wacke sequences are well separated from one another. Mineralisation appears to occur in this unit at the Clinker and Valley Zones.

Dolostone - d: A dark grey and white or light grey, thinly bedded to laminated, frequently zebra-banded dolostone, with thick-bedded to massive, sandy grey dolostone in places. Locally the units remain as undolomitised limestone (l). It is not yet certain whether there are several dolostone horizons, or only a single one repeated by folding. This is the rock-type in which the mineralisation occurs, though at the Clinker Zone and the Valley Zone mineralisation also appears to occur in the wacke.

Limestone - l: Some of the limestones are undolomitised parts of the dolomite units, but for the most part they are a distinctive orange or grey weathering, grey, micritic, laminated to thin bedded limestone sequence. Locally algal lamellae are preserved as are small (20 cm diameter) low-amplitude (10 cms) stromatolitic (?) mounds.

Devonian Reef Facies - Dr: The Devonian Reef Facies and its associated off-reef facies consist of coral reefs with reef-breccias and bivalve-bearing black carbonaceous micrites.

MINERALISATION

The following mineral showings have been recognised in the claim group. See Appendix for sample analyses.

Showing A: 40'x60' zone of frost-heaved boulders of orange and grey weathering, grey, slightly sandy, massive to thick bedded, locally mosaic-brecciated, medium-grained, crystalline dolostone. Minor quartz and barite veins and veinlets with a few specks of galena and smithsonite. Grab sample gave 0.45% Pb, 0.42% Zn and nil oz Ag/ton.

Sidehill Showing: 500'x1000' zone of frost-heaved boulders with local areas of outcrop up to 50'x100' in size. Buff-grey weathering, medium grey crackle-brecciated, thin to thick bedded, slightly sandy, medium-grained, crystalline dolostone, and dark and light grey, laminated, zebra-banded dolostone. Locally oolitic. Sparse yellow and green sphalerite associated with quartz veins. Up to 2% sphalerite recognised in a few frost-heaved boulders. Grab sample gave 0.28% Pb, 2.92% Zn and nil oz Ag/ton. Previously grab sampled (Floyd & Birkeland, 1976) and reported to contain 6 1/2% lead + zinc combined and 0.1 oz silver per ton.

Showing B: A 20'x30' area of abundant barite veins from hair-line veinlets up to 1' thick veins set in a ridge of crackle- and mosaic-brecciated grey, medium-grained, crystalline dolostone. A few specks of galena and minor green sphalerite (up to a maximum of 2% sphalerite over 1') have been recognised in the barite veins. This may be an extension of the Sidehill Zone. Grab sample gave 0.75% Pb, 0.53% Zn and nil oz Ag per ton.

Bluff Zone: A 5' to 15' high bluff extending for a distance of 90'. The rock-type is a laminated to thin-bedded, dark and light grey, locally zebra-banded, locally slightly sandy, medium-grained, crystalline dolostone. The dolostone is slightly brecciated (crackle to mosaic breccia) in which are veins and veinlets of quartz and barite up to 1' thick. Sparse sphalerite has been recognised in the barite veins, but nowhere forms more than 1% of the vein material. The host dolomite has locally also been partly replaced by barite. Two grab samples of vein material gave respectively trace and 0.02% Pb, 0.01 and 0.16% Zn and nil oz Ag/ton. One grab sample of unveined country rock gave 0.22% Pb, 0.25% Zn and nil oz Ag/ton.

Showing C: Loose rubble in soil on steep slope covering an area of approximately 50'x75'. Boulders of grey, medium-grained, crystalline, rubble-brecciated dolostone with minor barite veins in which is sparse (< 1%) sphalerite. Further downhill is an outcrop (30'x75' in size) of a similar rock-type, in which a few specks of sphalerite and smithsonite have been recognised. Grab sample gave 0.04% Pb, 0.76% Zn and nil oz Ag/ton.

Showing D: Small 6' high cliff-face extending 150' downhill parallel to small stream course. Grey, fine-grained, silicified dolostone, locally zebra-banded, with disseminated sphalerite (about 1%, up to a maximum of 3% in some loose boulders). Grab sample assayed at 0.06% Pb, 0.43% Zn and nil oz Ag per ton.

Showing E: A few specks of sphalerite in a 2'x3' area of mosaic breccia in laminated to very thin-bedded, (locally graded) grey, medium-grained, crystalline dolostone. Not sampled.

Clinker Zone: This was reported previously (Floyd & Birkeland, 1976) as a heavily leached "kill zone", 80'x80' in area, and averaging 3.0% combined lead and zinc with 0.1 oz silver per ton. Recent mapping by the present author indicates the mineralisation is associated with a wacke unit and dolostone or silicified dolostone are not important host-rocks.

Valley Zone: A few scattered frost-heaved (?) boulders on soil over an area of 20'x60'. Grey, medium-grained, crystalline dolostone with abundant quartz-carbonate veins and veinlets. Minor brown sphalerite with local massive concentrations over areas of 3 cms x 5 cms. Grab sample previously collected (Floyd & Birkeland, 1976) reported as 8.0% lead/zinc combined and 1.0 oz silver/ton.

LIST OF REFERENCES

Blusson, S. L., 1974. Five Geological Maps of northern Selwyn Basin (Operation Stewart), Yukon Territory and District of Mackenzie, N. W. T. Scale 1:250,000. Geol. Survey Canada, Open File 205.

Floyd, A., and Birkeland, A. O., November 1976. Summary Report on Sian Claim Group 106-C-2 for McIntyre Mines Limited.

APPENDIX 2

REPORT ON THE GEOLOGY OF THE SIAN CLAIM GROUP

NADALEEN RANGE, YUKON TERRITORY

by

A.M.S. Clark, Ph.D.

December 2, 1977

TABLE OF CONTENTS

APPENDICES

GEOLOGY

General:

The Sian Claims mineralization consists of several small occurrences of sphalerite and very minor galena associated with quartz and barite in dolostone units in the core of a major syncline. These dolostones are overlain by argillites and Devonian reefal limestones. They are underlain by argillites, dolostones and limestones.

The Sian area has undergone two phases of folding, the recognition of which was used in the interpretation of the Discovery Zone folding.

Lithology:

Argillites and siltstones- These argillites and siltstones are lithologically identical to the upper argillites at Discovery (q.v.) but with more silty units. It has not been possible to map the siltstone or colour variations (grey, buff, maroon and green) separately.

Mud-cracks and in one case trace-fossils (AC-77-131), have been recognised in the middle argillites.

Locally, in the north of the area, black graphitic argillites are interbedded with white limestone, and along-strike with black graphitic dolostone.

Quartz-Pebble Conglomerate and Wacke - These lithologies are clast size variations of the same rock-type (AC-77-89,90, 110 & 141). They occur interbedded with one another with sharp contact, and form sequences up to about 100 m thick, but usually 5 to 10 m thick in the buff-grey middle and upper argillites with which they have sharp contacts. Sedimentary structures

are rare but weakly defined cross-bedding, ripple-marks, and sole-markings due to scouring of the underlying argillite have been recognised in a few locations and grade bedding has been recognised in one location. The composition is the same as for the same rock-type in the Discovery Zone (q.v.) except that locally the matrix may be sparse enough for the rock to be a quartzite. The rounding of the clasts is obvious in the coarser clast-sizes but pressure-solution and quartz-clementation effects have generally obscured the roundness in the finer clast-size quartzites (AC-77-124 & 130). Zinc mineralization occurs in the wacke in the Clinker and Valley Zones.

Dolostones and Limestones - Several dolostone units occur in the area but may be divided into an overlying unit in which the Sidehill Showing occurs, a middle unit in which the A & E showings occur and its equivalent in the east in which the Valley Zone occurs. A lower dolostone unit occurs along the southern boundary of the area and its presumed equivalent along the northern boundary.

All the dolostones have undolomitised limestone sections. Most of the dolostones are markedly laminated, with minor zebra-banding, but indistinctly laminated, sandy dolostones have been recognised. The dolostones in the north of the area are dark grey graphitic and are interbedded with graphitic argillite. Towards the east of the same unit the dolostone beds give way to undolomitised white non-graphitic limestone which is still interbedded with graphitic argillite.

Cross-bedding and graded bedding has been recognised in some of the dolostone and limestone units.

Devonian(?) Reefal Limestones - A suite of coral reef limestones and associated off-reef facies has been recognised and dated from the fossils as Silurian or Devonian, probably mid-Devonian (Appendix 1).

It has not been possible to demonstrate that this unit overlies all the other units. In fact, despite considerable investigation in the field, it still appears the unit may unconformably overlie the argillites, or possibly even tectonially overlie them,though no evidence apart from their position confirms this. More field work in areas of rugged topography and good exposure away from the Sian Claims is needed to solve this problem.

Structure:

The Sian area has undergone one major period of deformation which resulted in a penetrative S-fabric (S_1,locally a schistosity, but more commonly a slaty or fracture cleavage) and major tight to isoclinal (F_1) folding about approximately east/west axes. A later period of open (F_2) cross-folding does not have an associated S-fabric.

A stereographic plot of all S_1-fabrics (Fig.15) indicates the F_2folding is about an axial plane striking approximately north and sipping approximately 80° to the west. The hinge plunges downwards approximately 60° in a south-southwesterly direction. This is slightly different to the northwesterly trending F_2 folds at Discovery Zone, but is considered to be the same generation of folds.

A stereographic plot of all S_1- fabrics (Fig. 15) indicates a F_2 folding is about an axial plane striking approximately north and dipping approximately 80° to the west. The hinge plunges downwards approximately 60° in a south-southwesterly direction. This is slightly different to the northwesterly trending F_2 folds at Discovery Zone, but is considered to be the same generation of folds.

A stereographic diagram of bedding planes was constructed (Fig.16). It was not possible to determine the F_1 axial-plane and hinge orientations from this diagram, but it may be seen that there is a distinct separation of upward and downward facing beds into two separate fields. S_1 (representing the F_1axial-plane orientation) approximately achieves this separation, but an S_1(F_1axial-plan) orientation more northwesterly would more accurately subdivide the two fields. This orientation is similar to that in the Discovery Zone.

Two sets of tension gashes have been recognised in a limestone in the vicinity of the F_2 fold hinge between the Clinker Zone and Showing E. One set cross-cuts a small F_1 fold indicating a post-F_1 age, and neither set is folded confirming this age. One set cross-cuts and is therefore slightly later than the other, but there is no good evidence for separate stress orientations and so they are considered to be a complementary set in which one orientation "locked" so that strain was taken up in the other orientation (Fig.17). No definite "in situ" orientation attitudes could be determined but it is assumed these tension gashes are a manifestation of F_2 folding and not due to a separate, later, stress field.

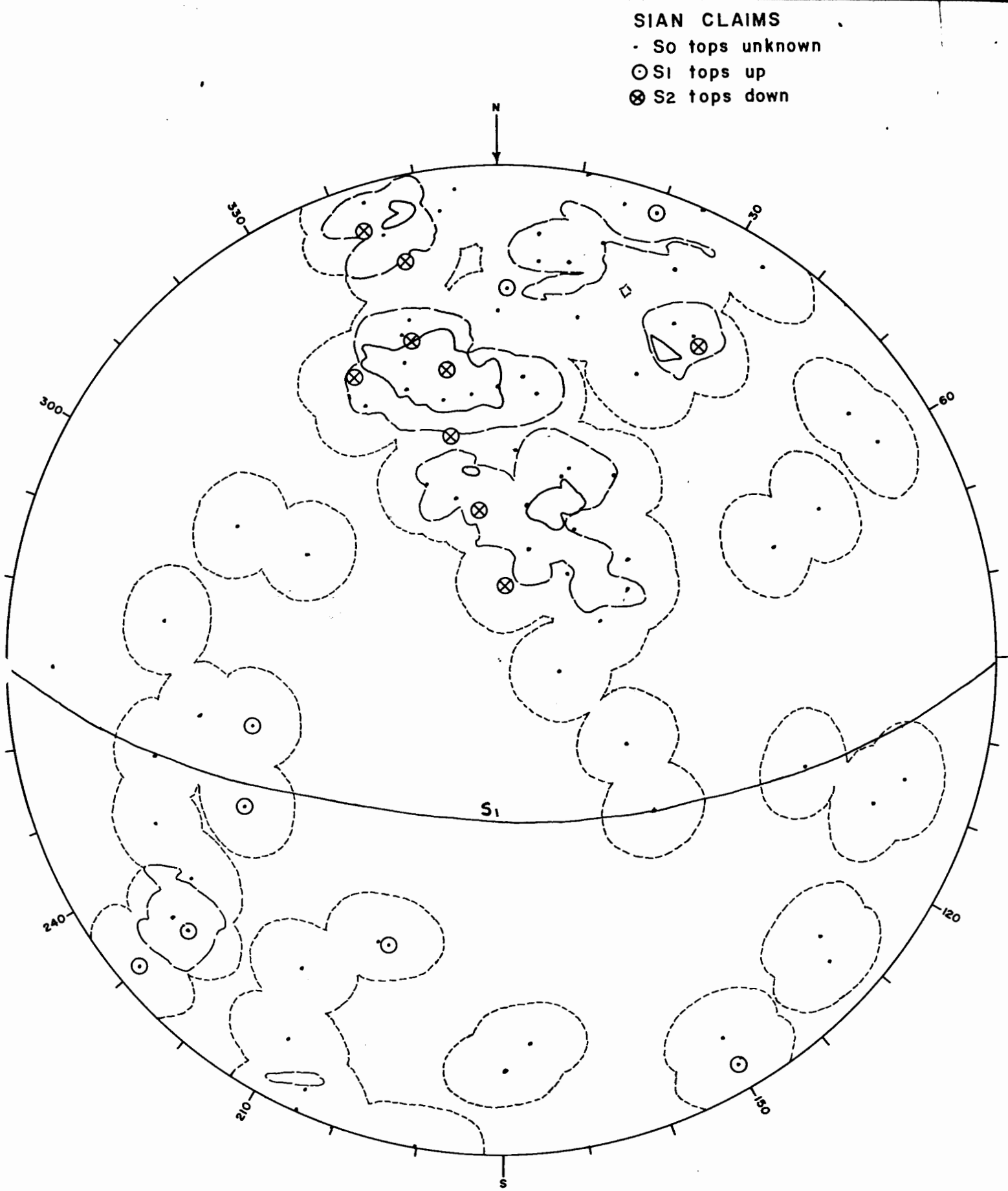


Fig. 16 Schmidt stereographic plot of all bedding (So) measurements – Sian claims

MINERAL SHOWINGS (This section is mainly taken from Clark, Nov. 1977).

The following mineral showings have been recognised in the claim group. See Appendix 3 for sample analyses and Maps A & C for locations.

Showing A: 40' X 60' zone of frost-heaved boulders of orange and grey weathering, grey, slightly sandy, massive to thick bedded, locally mosaic-brecciated, medium-grained, crystalline dolostone. Minor quartz and barite veins and veinlets with as few specks of galena and smithsonite. Grab sample (AC-77-132) gave 0.45% Pb, 0.42% Zn and nil oz Ag/ton.

Sidehill Showing: 500 X 1000' zone of frost-heaved boulders with local areas of outcrop up to 50' X 100' in size. Buff-grey weathering, medium grey crackle-brecciated, thin to thick bedded, slightly sandy, medium-grained, crystalline dolostone, and dark and light grey, laminated, zebra-banded dolostone. Locally oolitic. Sparse yellow and green sphalerite associated with quartz veins. Up to 2% sphalerite recognised in a few frost-heaved boulders. Grab sample (AC-77-135) gave 0.28% Pb, 2.92% Zn and nil oz Ag/ton. Previously grab sampled (Floyd & Birekland, Sian Claims, 1976) and reported to contain 6 1/2% lead + zinc combined and 0.1 oz silver per ton.

Showing B: A 20' X 30' area of abundant barite veins from hair-line veinlets up to 1' thick veins set in a ridge of crackle- and mosaic-brecciated grey, medium-grained, crystalline dolostone. A few specks of galena and minor green sphalerite (up to a maximum of 2% sphalerite over 1") have been recognised in the barite veins. This may be an extension of the Sidehill Zone. Grab sample (AC-77-136) gave 0.75% Pb, 0.53% Zn and nil oz Ag/ton.

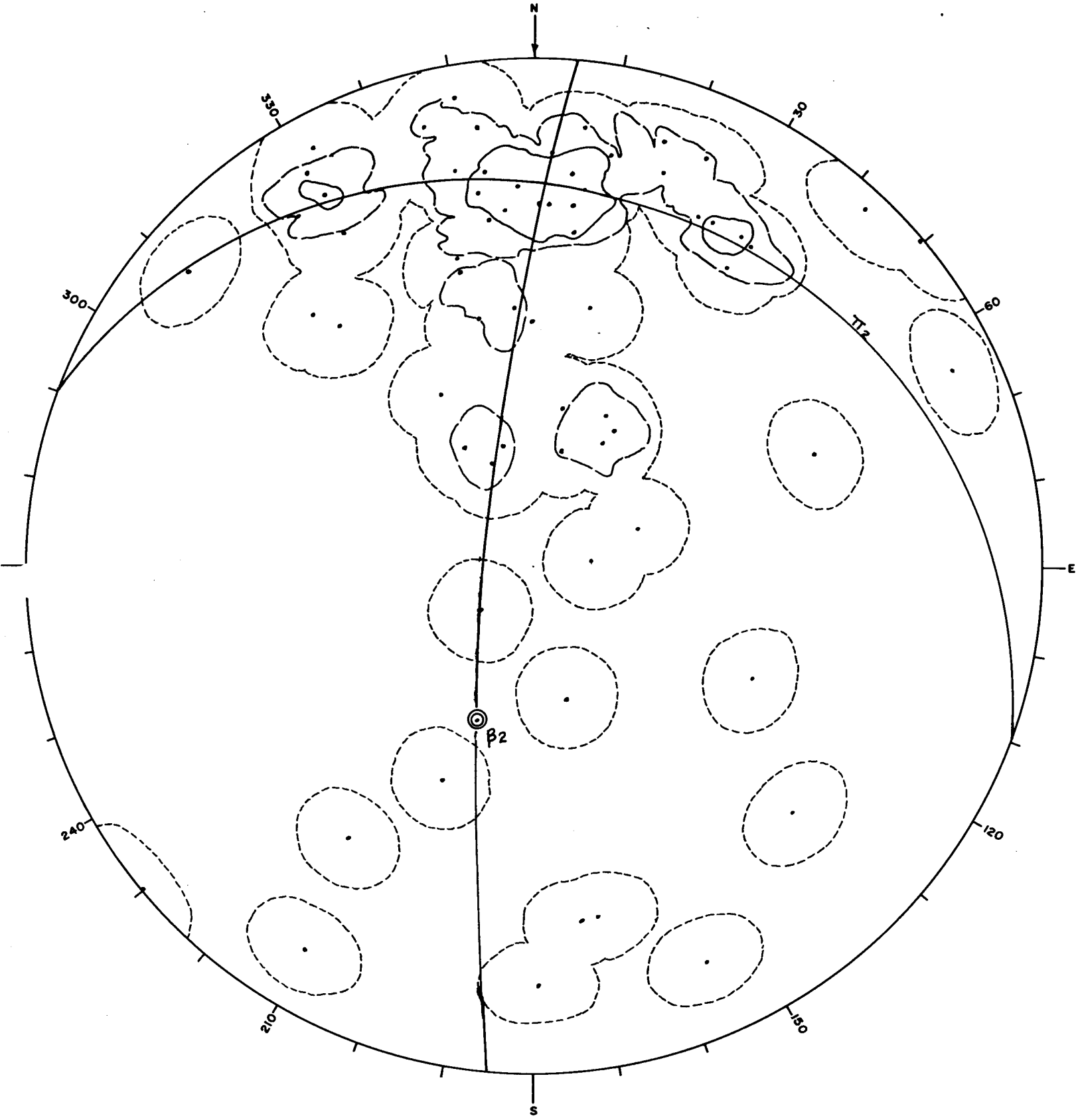


Fig. 15 Schmidt stereographic plot of S1-fabrics — Sian claims

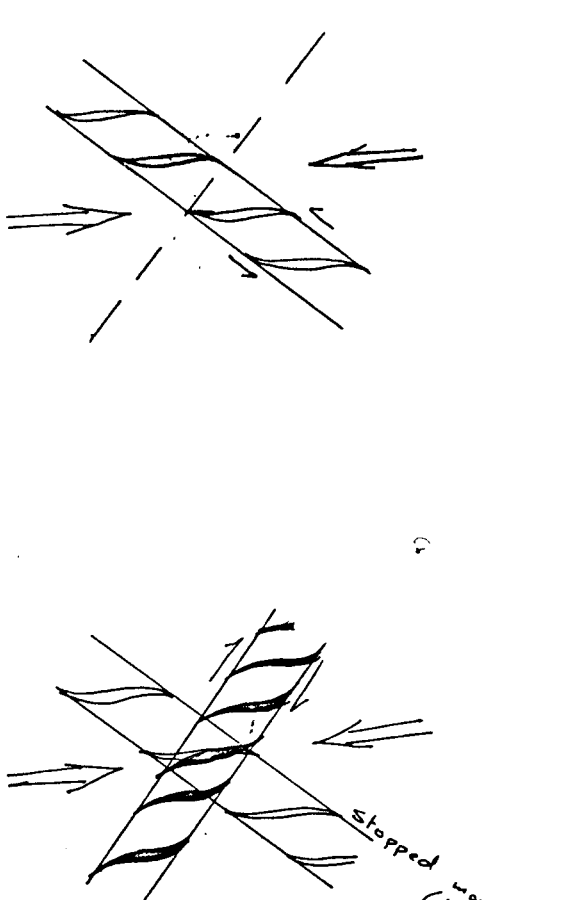


Figure 17: Development of a cross-cutting set of tension gashed during a single deformation.

Bluff Zone: A 5' to 15' high bluff extending for a distance of 90'. The rock-type is a laminated to thin-bedded, dark and light grey, locally zebra-banded, locally slightly sandy, medium-grained, crystalline dolostone. The dolostone is slightly brecciated (crackle to mosaic breccia) in which are veins and veinlets of quartz and barite up to 1' thick. Sparse sphalerite has been recognised in the barite veins, but nowhere forms more than 1% of the vein material. The host dolomite has locally also been partly replaced by barite. Two grab samples of vein material (AC-77-144 & 145) gave respectively trace and 0.02% Pb, 0.01 and 0.16% Zn and nil oz Ag/ton. One grab sample of unveined country rock (AC-77-138) gave 0.22% PB, 0.25% Zn and nil oz Ag/ton.

Showing C: Loose rubble in soil on steep slope covering an area of approximately 50' X 75'. Boulders of grey, medium-grained crystalline, rubble-brecciated dolostone with minor barite veins in which is sparse (less than 1%) sphalerite. Further downhill is an outcrop (30' X 75' in size) of a similar rock-type, in which a few specks of sphalerite and smithsonite have been recognised. Grab sample (AC-77-137) gave 0.04% Pb, 0.76% Zn and nil oz Ag/ton.

Showing D: Small 6' high cliff-face extending 150' downhill parallel to small stream course. Grey, fine-grained, silicified dolostone, locally zebra-banded, with disseminated sphalerite (about 1%, up to a maximum of 3% in some loose boulders). Grab sample (AC-77-149) assayed at 0.06% Pb, 0.43 % Zn and nil oz Ag per ton. A second grab sample (AC-77-150) was collected from apparently unmineralised, heavily silicified, rust-stained laminated siltstone about 150 feet downstream from the above sample, and gave 0.02% lead, 0.02% zinc and nil silver.

Showing E: A few specks of sphalerite in a 2' X 3' area of mosaic breccia in laminated to very thin-bedded, (locally graded) grey, medium-grained, crystalline dolostone. Not sampled.

Clinker Zone: This was reported previously (Floyd & Birkeland, Sian Claims, 1976) as a heavily leached "kill zone", 80' X 80' in area and averaging 3.0% combined lead and zinc with 0.1 oz silver per ton. Recent mapping by the present author indicates the mineralisation is associated with a wacke unit and dolostone or silicified dolostone are not important host-rocks.

Valley Zone: A few scattered frost-heaved (?) boulders on soil over an area of 20' X 60'. Grey, medium-grained, crystalline dolostone with abundant quartz-carbonate veins and veinlets. Minor brown sphalerite with local massive concentrations over areas of 2 cms X 5 cms. Grab sample previously collected (Floyd & Birkeland, Sian Claims, 1976) reported as 8.0% lead/zinc combined and 1.0 oz silver/ton.

Stream Below Showing E: The stream from which the samples were taken is downhill to the west of Showing E. The actual sample site on this stream is immediately south (upstream) of the confluence about 3,000', northwest of Showing E. The samples were taken from boulders of quartz-pebble conglomerate. One sample (AC-77-140) had clast sizes up to 3 cm diameter in thin beds interbedded with argillite beds and showed Trace gold, nil silver and less than 0.001% uranium. The other sample (AC-77-141) had a maximum clast size of about 5 mm diamter, was very much better sorted than the previous sample but also only showed trace gold, nil silver and less than 0.001% uranium.

Station 51-16: This sample location occurs in the vicinity of Station 51-16, but towards the south. The sample (AC-77-142) was taken from frost-heaved boulders and shows trace lead, 0.05% zinc and nil silver.

SUMMARY OF SIAN CLAIMS

The Sian claims are underlain by thick argillites in which are major dolostone, and limestone beds and lesser conglomerate and wacke beds. This entire sequence has been tightly folded into an east-west trending, northerly facing F_1 syncline, which has been later refolded about northerly trending open F_2 folds. Mineralisation appears to occur only where dolostone units are situated in the axial zone of the F_1 syncline.

Devonian (?) limestone reefs overlie the above sequence, but whether conformably or unconformably (possibly tectonically) is not known.

APPENDIX 1

Report on fossil samples from the Nadaleen Range submitted by A.M.S. Clark, Regional Geologist, McIntyre Mines Limited.

Rolf Ludvigsen,
Assistant Professor
Department of Geology
University of Toronto

Only eight of the twenty-seven samples submitted contained identifiable fossil material. The fossil-bearing samples were generally too small to provide firm age determinations or paleoecologic data.

Samples AC-77-111, 113, 114, 115

This group of samples contain common Coenites sp. (a branching tabulate coral) and Favosites sp. (in this case, an encrusting tabulate coral). These tabulate corals place the collections in the Silurian or Devonian interval. Also occurring are scraps of brachiopods.

One collection (AC-77-113) contains a poorly preserved fasciculate rugose coral tentatively identified as Dendrostella sp. If the identification is correct, it places the collection in the Middle Devonian.

In other parts of northern Canada (Mackenzie Mountains, Mackenzie Platform), this association of corals is common in a number of Middle Devonian formations (that is, Nahanni, Hume, Headless Formations). These formations have been dated as early Middle Devonian (late Eifelian) on brachiopod and conodont evidence.

Therefore, these collections appear to be of Devonian age and, probably, of early Middle Devonian age.

Samples AC-77-118, 119

These samples contain large pelmatozoan ("crinoid") ossicles. The age significance of these fossils is minor. They merely indicate a Phanerozoic age younger than Cambrian. In the northern Cordillera, such ossicles are common in the Ordovician to Permian interval.

Samples AC-77-74, 131

The well-preserved trace fossils of the ichnogenus Planolites indicate an age of Hadrynian or younger, probably Hadrynian (approx. 700-600 m.y.).

APPENDIX 2

List of Samples with Thin & Polished Section Descriptions

D= Discovery Zone
S= Sian Claims
W= West Zone
R= Ridge Zone

(T/S) - Thin-section
(P/S) - Polished Section

AC-77-63 D(T/S) Quartz-pebble conglomerate. A small pebble (0.5 mm to 5 mm diameter) conglomerate. The clasts are predominately well rounded, sub-spherical strained quartz grains, many with sutured sub-grains due to strain release by recrystallisation. The matrix is dark brown to black in colour and is a mixture of fine-grained quartz fracments, sericite/muscovite, haematite, and various indeterminate mineral species. A few clasts of an unusual, fine-grained haematite-talc (?) rock also occur.

AC-77-65 D(T/S) Altered basic hypabyssal rock containing secondary amphiboles, chlorite, haematite (?, very weakly translucent brown) and replacement by carbonate.
Basalt dyke?

AC-77-68 D T/S Dolomite-clast "sandstone"

AC-77-74 D Interlaminated shale and siltstone with worm-burrows (?). See also AC-77-131 Hadrynian (?)

AC-77-75 D Upper argillite & siltstone unit

AC-77-76 D Upper argillite & siltstone unit

AC-77-77 R(T/S) Serpentinised harzburgite. Serpentine after coarse-grained olivine and orthopyroxene (bastite). Minor opaque minerals with associated brown mineral (chromite & picotite?). Not recognisably cumulate-textured. Carbonate (probably magnesite) veining.

AC-77-78 R(T/S) Serpentinised harzburgite. As for AC-77-77, but carbonate is "ferrodolostone".

AC-77-79 R Cross-bedding in siltstone horizon from argillite.

AC-77-80 R T/S Orange-weathering dolostone ("ferrodolostone"). Felsic and brown micritic clasts in recrystallised brown-stained carbonate.

AC-77-81 R(T/S) A graded-bedded siltstone with excellent grading from 0.5 mm by 3 mm flakes to clay-size fraction. Clasts are moderately to well rounded and mainly sub-spherical except for the elongate argillaceous clasts. The clasts are composed of: Argillite (rip-up fragments?); felsitic (felsic volcanic?) fragments; quartz grains; opaque minerals; and various ultra-fine-grained rock-types that appear to be argillites and recrystallised volcanic glasses. Carbonate appears to replace many rock-types, but does not form clasts.

AC-77-84 W(T/S) Carbonate-fuchsite rock after ultramafic rock. Almost all carbonate with finely divided fuchsite, cut by quartz-carbonate veins.

AC-77-86 W Cross bedding in siltstone.

AC-77-88 D(T/S) Basalt dyke? See AC-77-65

AC-77-89 S(T/S) Wacke. Fine-grained, equigranular, silt-sized quartz and feldspar (K-feldspar & plagioclase) grains in a sparse matrix of clay minerals, white-micas and haematite/limonite. Grains are angular, but this may be partly due to intergranular pressure solution.

AC-77-90 S(T/S) Wacke. Similar to AC-77-89.

AC-77-96 S T/S Chert and dolostone (with coarse-grained sub-parallel vein)

AC-77-97 S T/S Limestone "grit"

AC-77-110 S Wacke.

AC-77-111 S Ordovician-Devonian corals, possibly Middle Devonian. See Appendix 1

AC-77-112 S "
AC-77-113 S "
AC-77-114 S "
AC-77-115 S "
AC-77-116 S "

AC-77-117 S T/S Cross-bedded limestone

AC-77-118 S Crinoidal chert float - see Appendix 1.

AC-77-119 S Crinoidal stem cast in wacke. Float over "in situ" wacke rubble stratigraphically below the Clinker Zone. See Appendix 1.

AC-77-120 S T/S Laminated limestone

AC-77-121 W(T/S) Plagioclase aggregate with interstitial glass (now chlorite). Chlorite also after amphiboles (?). Sphene (skeletaland vein) and minor perovskite after ilmenite. Minor interstitial quartz appears to form xenoliths. Quartz also associated with later carbonate veins.

Basalt lava-flow (?)

AC-77-122 S Coral limestone

AC-77-124 S(T/S) Quartzite. Similar to AC-77-89 but almost no matrix or feldspar.

AC-77-125 Rod Claims (T/S) Basic igneous breccia. Clasts of various rock-types set in a matrix of the same material finely comminuted and containing a very fine dusting of opaque-white mineral (leucoxene?) Phenocrysts of brown (and lesser green) hornblende and biotite are abundant and generally set in a felsitic (feldspar?) matrix. Abundant carbonate replacement (some may be original). A hornblende-biotite-lamprophyre igneous breccia (possibly carbonatitic).

AC-77-126 S T/S Chert

AC-77-128 S T/S Algal mat deposit (?) - locally shows coarse cross-bedding. Same location as AC-77-143

AC-77-129 S T/S Dolostone with graded bedding

AC-77-130 S(T/S) Quartzite. Similar to AC-77-124. Quartz overgrowth over rounded grains recognisable in some parts of the thin-section.

AC-77-131 S Hadrynian (?) "worm tracks" in argillite. See Appendix 1.

AC-77-133 S T/S Dolomitised intramicrite (?)

AC-77-134 S T/S Zebra-banded dolostone

AC-77-139 S Quartz pebble conglomerate

AC-77-140 D(T/S) Quartz-pebble conglomerate. Similar to AC-77-63 but more varied clast rock-type and more abundant, argillaceous matrix. Apart from the quartz clasts, other clast rock-types are: felsitic quartz and saussuritised feldspar, some of which appears to have crystallised from a glass (felsic volcanic?); silicified oolitic limestone (?); with small euhedral rhombs of porphyroblastic siderite; and ultra-fine-grained chloritic clasts that may be altered volcanic glass. The matrix contains siderite and considerably more sericite and chlorite than AC-77-63.

AC-77-143 S T/S Algal mat and stromatoporid structures (?) in limestone. Note ribbed structures on one side and mottled structures on the other. Same location as AC-77-128.

AC-77-148 D(T/S) Skeletal (quench-texture, swallow-tail) plagioclase set in a devitrified glass (now a chlorite matt). The glass is locally microlitic, and also contains carbonate-filled vesicles. Later carbonate veins and replacement. Vesicular basalt lava-flow.

AC-77-151 S Limestone

APPENDIX 3

Certificates of Analysis

BONDAR-CLEGG & COMPANY LTD.

764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110

Certificate of Analysis

TO McIntyre Mines Limited,
P.O. Box 970,
Timmins, Ontario. P4N 7H5

REPORT NO. ....A-C05-77.....
DATE .....September 21, 1977.....

I hereby certify that the following are the results of analyses made by us upon the herein described ...rock..... samples

MARKED		oz/ton Au	oz/ton Ag	% Pb	% Zn	
						SIAN CLAIMS.
AC-77-132			nil	0.45	0.42	Showing A - grab sample
AC-77-135			nil	0.28	2.92	Sidehill Showing - grab sample
AC-77-136			nil	0.75	0.53	showing B - grab sample
AC-77-137			nil	0.04	0.76	Showing C - grab sample
AC-77-138			nil	0.22	0.25	Bluff zone - grab sample of unreleved country-rock
AC-77-140		trace				Stream boulder - quartz-pebble cg. from stream below Showing E
AC-77-141		trace				Stream boulder - quartz-pebble cg. from stream below Showing E
AC-77-142			nil	trace	0.05	Grab sample, float-type boulders near station 51-16, east of Valley Zone
AC-77-144			nil	trace	0.01	Bluff zone - grab sample of baritic vein
AC-77-145			nil	0.02	0.16	Bluff Zone - grab sample of veined country rock.

Trace: less than 0.010 oz/ton Au
Trace: less than 0.01% Pb

BONDAR-CLEGG & COMPANY LTD.

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.

764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110

Certificate of Analysis

OCT 31 1977

TO McIntyre Mines Limited,
P.O. Box 970,
Timmins, Ontario. P4N 7H6

REPORT NO. A-665-77

DATE October 26, 1977

I hereby certify that the following are the results of analyses made by us upon the herein described pulp samples

MARKED		oz/ton Ag	% U							
AC-77-140		nil	L0.001	SIAN CLAIMS Stream boulder — quartz-pebble cg. from stream below Showing E						
AC-77-141		nil	L0.001	" "	" "	" "	"	" "	"	" " E.

L means less than.

BONDAR-CLEGG & COMPANY LTD.

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.

764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110

(Exploration Office)

Certificate of Analysis

SEP 19 1977

TIMMINS

TO McIntyre Mines Limited,
P.O. Box 970,
Timmins, Ontario. P4N 7M6

REPORT NO. A-598-77 M & D

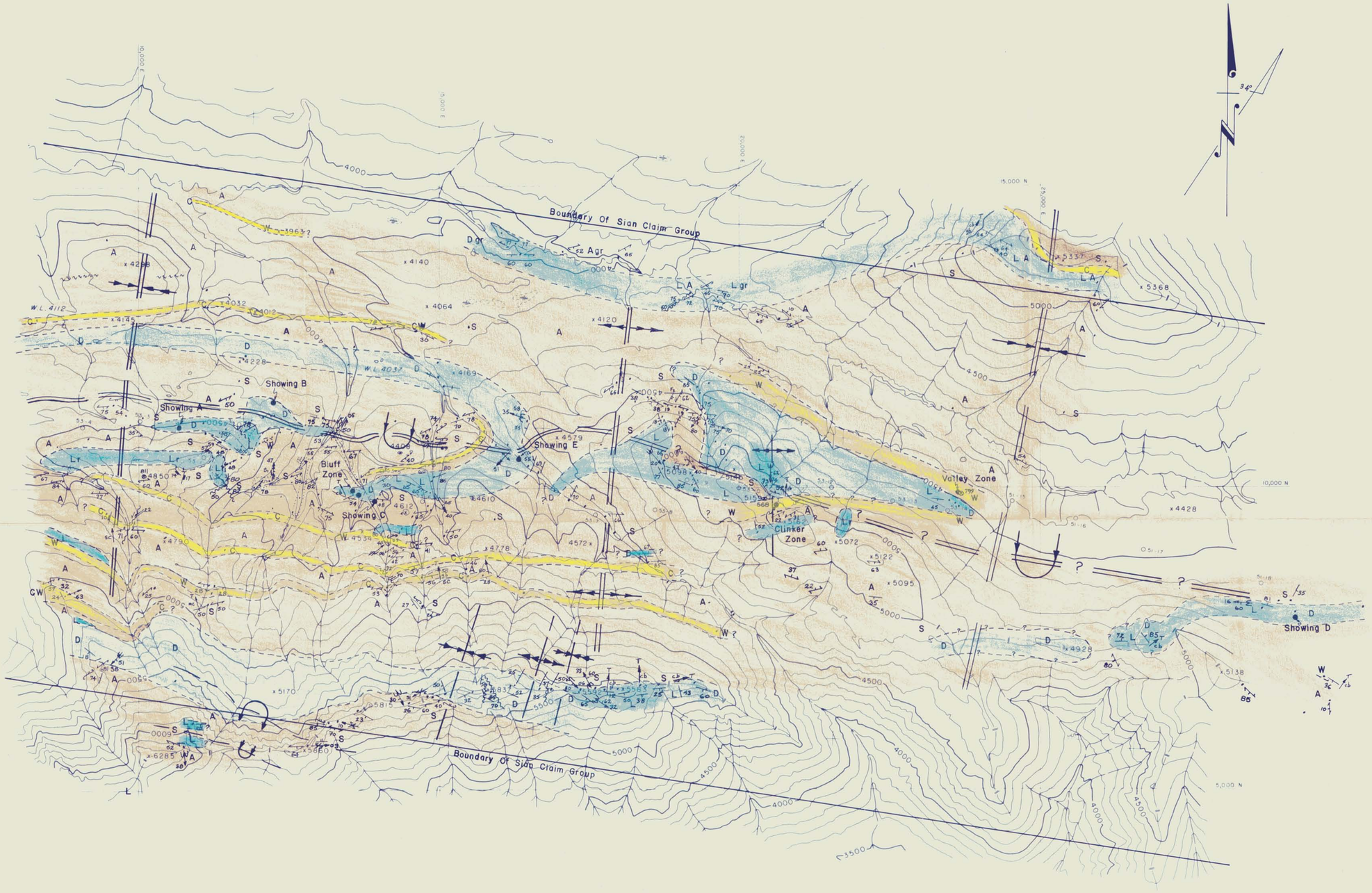
DATE September 16, 1977

I hereby certify that the following are the results of analyses made by us upon the herein described rock samples

MARKED		oz/ton Ag	% Pb	% Zn	
AC-77 - 149		nil	0.06	0.43	SIAH cutting Showing D – grab sample.
AC-77 - 150		nil	0.02	0.02	Showing D – grab sample.

BONDAR-CLEGG & COMPANY LTD.

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.



LEGEND

- Lr — Devonian(?) limestone, coral reef and associated facies
- L — Limestone
- D — Dolostone
- C — Quartz-pebble conglomerate
- W — Quartz-clast wacke
- A — Argillite
- S — Siltstone
- LA — Interbedded limestone & Argillite
- gr — Graphitic

SYMBOLS

- Bedding
- T — Top (younging) direction from:
  - cb — cross-bedding
  - gb — graded bedding
  - mc — mud-cracks
  - so — sole markings
  - sc — scour structures
- S_1-fabric
- Bedding/S_1 intersection lineation
- D_1-boudin attitude
- Joint set
- Minor symmetrical F_1 fold
- Minor asymmetrical F_1 fold (tics on synclinal side)
- Sense of F_1 fold closure on horizontal & vertical plane (tics on synclinal side)
- Minor symmetrical F2 fold
- Minor asymmetrical F2 fold
- Minor inclined F_1 syncline
- Minor inclined F_1 anticline
- Major inclined F_1 syncline
- Minor F2 synform
- Minor F2 antiform
- Major F2 synform
- Major F2 antiform
- Fault; strike, dip, relative movement & orientation of slickensides indicated

SCALE
0 50 100 200 300 400 600 800 1000
FEET

McINTYRE MINES LIMITED

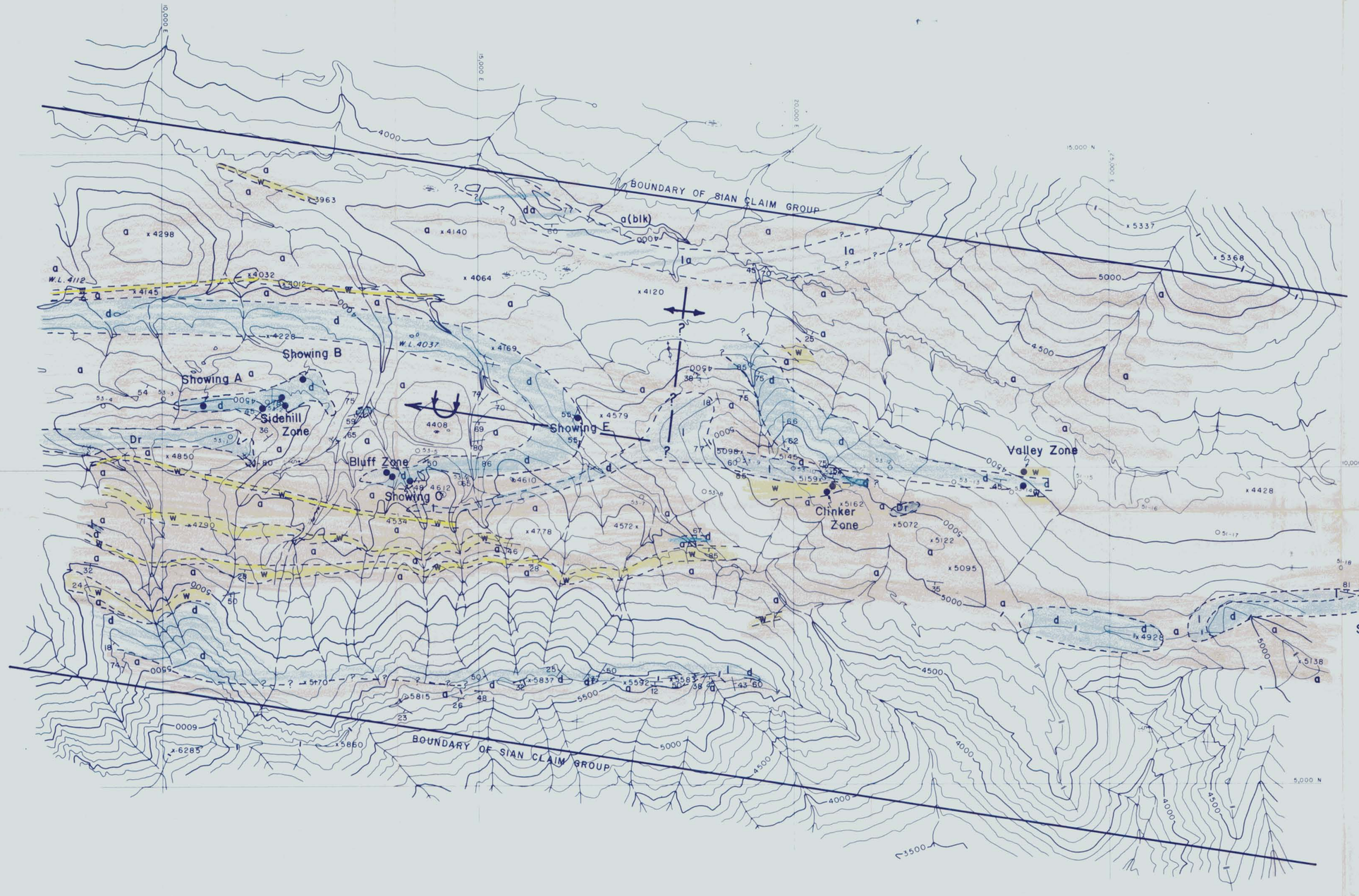
GEOLOGY

SIAN CLAIMS

Figure: A

WORK BY: A.M.S. CLARK	DATE: SUMMER 1977
DRAWN BY: A.M.S.C. & J.J.K.	NTS: 106-C-2

PACIFIC SURVEY CORPORATION



LEGEND

- Dr — Devonian(?) coral reef & off-reef facies
- w — Wacke. Quartz-clast wacke & small-pebble conglomerate
- da, la — Interbedded black carbonaceous argillite & white or black-carbonaceous dolostone or limestone
- l — Limestone
- d — Dolostone
- a — Argillite. Buff, locally green & maroon silty argillite & argillaceous siltstone
- a(blk) — Black carbonaceous argillite
- Geological contacts, approximate
- 75 — Bedding, dip & strike
- ● — Mineralization, showings in heavy print

N

Scale: 1"=1000'

1000 0 1000 2000 3000

305 0 305 610 915

Scale: 1"=305 metres

Pacific Survey Corporation

McINTYRE MINES LIMITED

GEOLOGY MAP OF SIAN CLAIMS

WORK BY: A.M.S. CLARK	DATE: SUMMER 1977
DRAWN BY: G.J.K.	NTS: 106-C-2

18 000E

20 000E

22 000E

12 000 N

10 000 N

8000N

RIDGE LINE

Kill Zone

LEAD > 500 PPM

ZINC > 1500 PPM

SILVER > 7.5 PPM

Pb / Ag Zn

200 100 0 200 400 600

FEET

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

McINTYRE MINES LIMITED

SIAN CLAIMS - CLINKER ZONE

SOIL GEOCHEMISTRY

Figure : 1

WORK BY B. GIFFORD	DATE Aug 1977
DRAWN BY A.R. Gunther/R.T.Falk	NTS 106 C 2

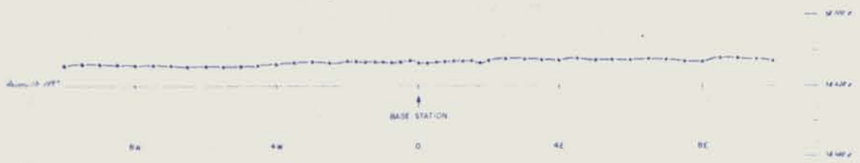
McINTYRE MINES LIMITED

SIAN CLAIMS - VALLEY ZONE

SOIL GEOCHEMISTRY

Figure : 2

WORK BY B GIFFORD	DATE Aug 1971
DRAWN BY A.R. Gunther/T Falck	NTS 106-C-2

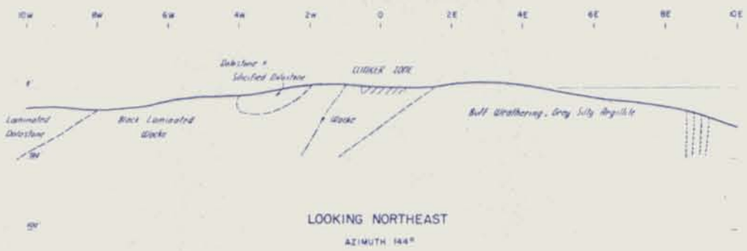


TOTAL INTENSITY MAGNETIC PROFILES

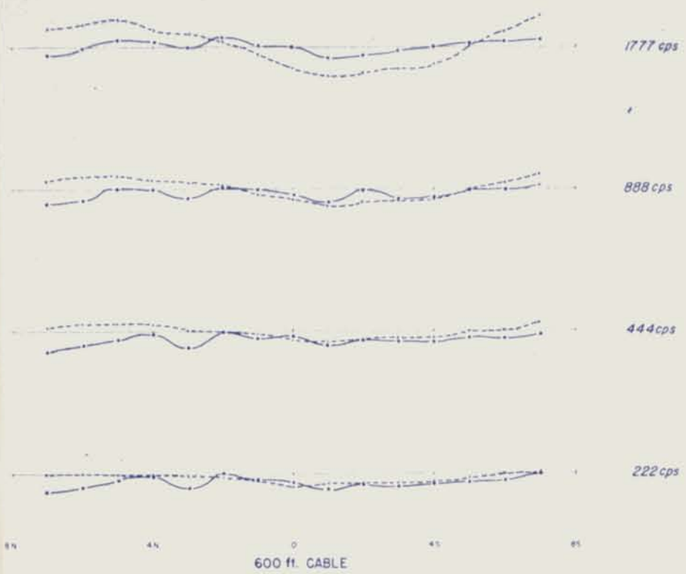
INSTRUMENT Scintrex IGP 2 Proton Magnetometer
SCALES 1" = 200'
1" = 100 gammas

S.P. (SELF POTENTIAL) PROFILES

INSTRUMENT Iff Phor SP Unit
SCALES 1" = 200'
1" = 100 milli volts

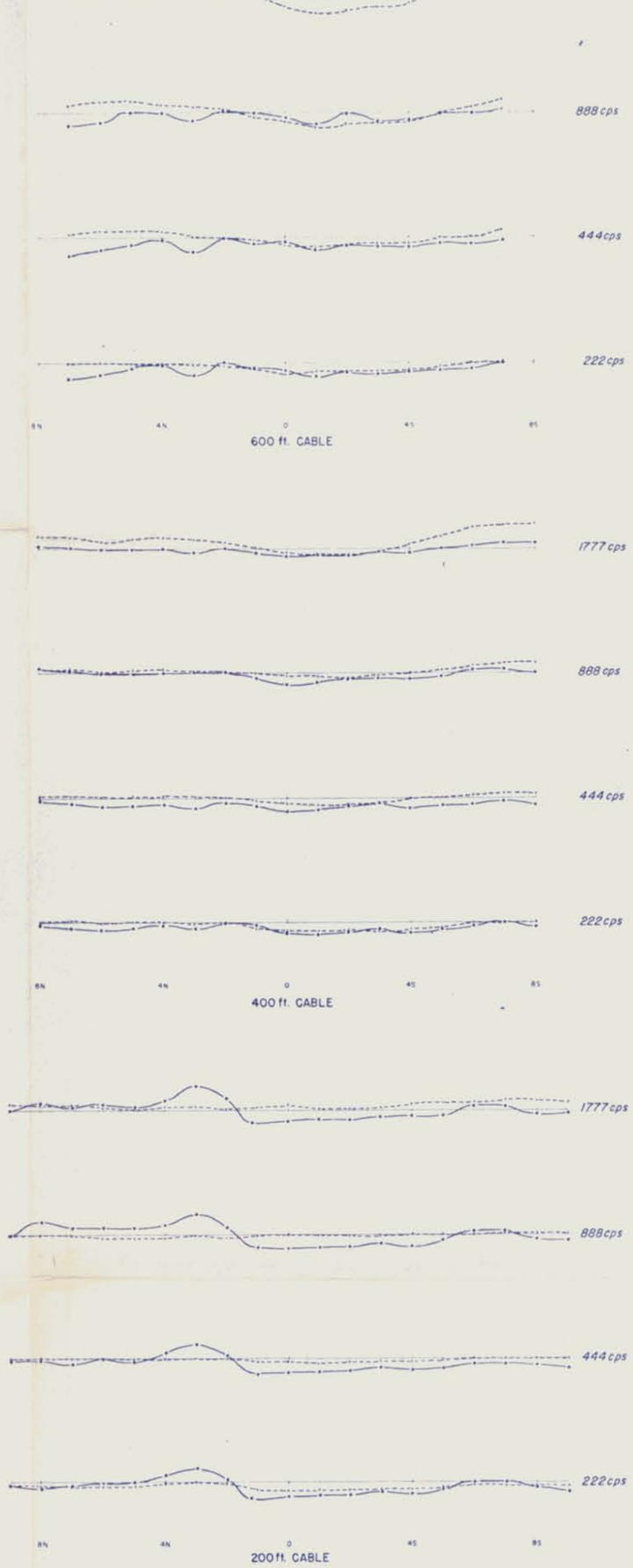


LOOKING NORTHEAST
AZIMUTH 144°

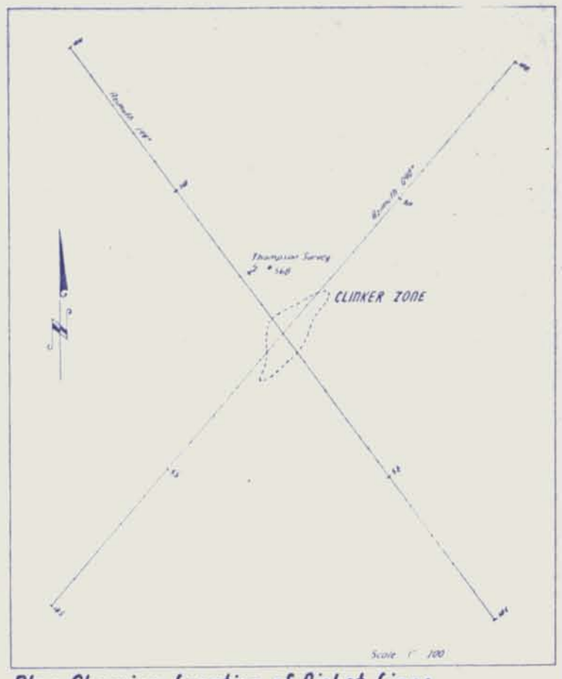


600 ft. CABLE

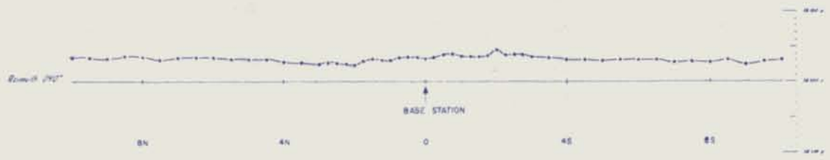
400 ft. CABLE



200 ft. CABLE



Plan Showing Location of Picket Lines

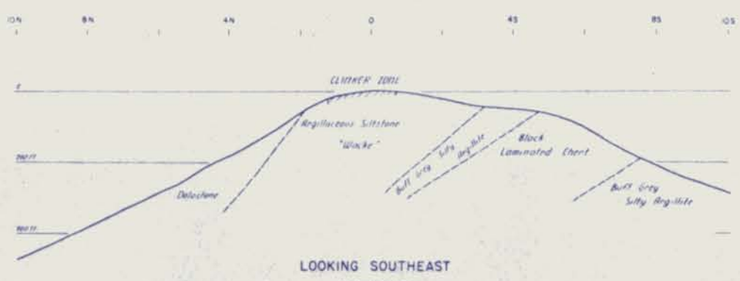


TOTAL INTENSITY MAGNETIC PROFILES

INSTRUMENT Scintrex IGP 2 Proton Magnetometer
SCALES 1" = 200'
1" = 100 Gammas

S.P. (SELF POTENTIAL) PROFILES

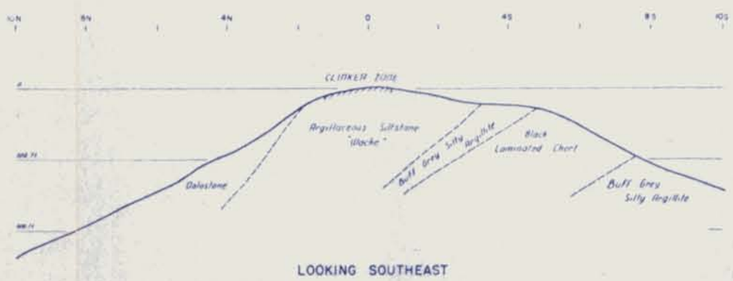
INSTRUMENT Iff Phor SP Unit
SCALES 1" = 200'
1" = 100 milli volts



LOOKING SOUTHEAST
AZIMUTH 040°

INSTRUMENT Apex Parametrics
FREQUENCY As Shown
CABLE LENGTH As Shown
In Phase Profile
Out of Phase Profile
SCALES 1" = 200'
1" = 20%

H.E.M. PROFILES



LOOKING SOUTHEAST
AZIMUTH 040°

McINTYRE MINES LIMITED
TIMMINS - CANADA

SIAN CLAIMS - CLINKER ZONE

GEOPHYSICAL PROFILES

Figure: 3

Drawn by	A.R. Gunther	Revisions	Map No.
Work by	I. Atkinson		
Date	August, 1977		
Scale	As Shown	Project No. 1000%	

FIGURE 5.

PROFESSIONAL ENGINEER
A. O. BIRKELAND
BRITISH COLUMBIA

McINTYRE MINES LIMITED

SIAN CLAIMS 1-104.

WORK BY: A.O.B.	DATE NOV 76
DRAWN BY: F	N.T.S.: 106 C 2