1978 EXPLORATION WORK

ARGO CLAIMS

YUMACK SYNDICATE

NTS 105 - O - 1

MacMillan Pass Area, Y.T.

by

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HIGHWOOD RESOURCES LIMITED

Calgary, Alberta

November, 1978

090427

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 $5499.99.

J R Craig 26/2/79.

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

B. R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

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SUMMARY

Further prospecting and geochemical sampling was carried out as follow-up to geological mapping and geochemical surveying completed in 1977. This work resulted in further delineating a geochemically anomalous area along Creek "A". However, no in-place mineralization was located and it is presumed the anomalies are due to a mineralized sources buried beneath scree south of Creek "A" but north of favourable geology on claims ARGO 20, 22, 43 & 45. Further exploration in 1979 will be concentrated in this area and will consist initially of geophysics.

LOCATION & ACCESS

The sixty-six ARGO claims are located at latitude 63°11' north and longitude 130°13' west, on NTS map sheet 105-O-1. The Canol Road passes close to the southeast boundary of the property. We camped at mile 275. A gravel air strip parallels the road at this point. Access may be by the road in summer or by air in all seasons.

HISTORY

The ARGO claims were staked in the summer of 1976 by the Yumack Syndicate. The Syndicate, whose members are Giant, Highwood, Nemco, Canada Southern and J.D. Murphy and was formed to conduct regional geological prospecting based upon an earlier geochemical survey. The results of the program were essentially negative and the culmination was the staking of the ARGO group for location only. Geological mapping and geochemical surveying was carried out during 1977 when a geochemical anomaly coincident with favourable geology was located. The 1978 exploration was intended to check this single anomalous reading and determine it's cause.

1978 EXPLORATION

Work during August of 1978 was confined to prospecting and the collection of samples for geochemical analysis. Prospecting and sample collection

were carried out by Mark Senkiw, B.Sc., geologist of Yellowknife and Charlie Ollie, prospector of Ross River. The work was supervised by the writer who collected the check samples from the anomalous area outlined in 1977.

PROSPECTING

Detailed prospecting of the southwest portion of the ARGO claim block was completed with negative results. Prospectors notes are attached. A number of traverse were made with soil and rock samples being collected at the same time. The work was concentrated in the southwest corner of the block and also outside the claims on the west boundary (Creek E).

GEOCHEMICAL SAMPLING

A total of 192 samples was collected in the form of rocks and soils, stream silts and waters. The net result was that the vicenity of Creek F has been shown to be definitely anomalous in both water and stream sediments:

(a) Stream Sediment Geochemistry

The sampling procedure in the field is described in the 1977 Geochemical Report by the writer. Trace analysis for copper lead, zinc and barium* were carried out at Bondar Clegg's, Whitehorse, Y.T. Estimation was by Atomic Absorption after acid digestion of the -80 mesh fraction.

* Not available at time of writing.

In the 1978 program thirty samples were collected from seeps and streams in the southwest of the ARGO block. Classification of anomalous values was done by precluding erratic highs and considering 2½% of the remaining values as being anomalous. This given background and Threshold values for the basemetals as follows:

Metal	Mean Background	Threshold
Lead	30 ppm	45 ppm
Zinc	900 ppm	1600 ppm
Copper	100 ppm	160 ppm

It may be seen that the only anomalous values obtained in stream silts were in the immediate vicinity of what is known as Creek F. These are samples A51, 52, 55-S for lead, A52, 54, 55-S for zinc and A52 & 55-S for copper. The cause of these anomalies lies to the south of Creek A. Since the silt values downstream from Creek 7 are higher than those above the cause must also be fairly localised. A considerably amount of limonite has been deposited at a break in slope near the junction of Creeks F & A. This may have also resulted in an abnormal concentration of lead and zinc in this vicinity. However anomalous waters exist up-stream form the iron-stain (AOIF) and also further up-stream along Creek A (A-20 & 21-W). In addition, A-51 & 52-S and A-02-W are also anomalous although no limonitic or break-in-slope conditions exist on Creek "G".

It is possible that the anomalies are due to high background shales but if this is so they must again be localised. The anomalies A-54 & 55-S are the highest collected in 1977 & 1978 and the highest collwcted in Yumack's 1976 regional work within the MacMillan Pass area.

Further exploration of the area would have to involve geophysics and/or drilling. No soils have been developed up-stream on Creek F as scree slopes cover a large part of the area. Further water geochemistry of seeps might be useful in narrowing down the anomaly.

(b) Water Geochemistry

Some twenty water samples were collected from creeks and seeps in the southwest block. These are marked A-01-W and so on. It may be seen that the waters draining the area east and west of Creek F are very anomalous in zinc and possibly higher in lead though the limited number of samples precludes proper statistical analysis. These vary between 105 ppb & 2350 ppb over a 40 ppb background.

(c) Rock & Soil Geochemistry

Soils are generally poorly developed in the area so that most samples taken from surface include pieces of bedrock. The object of this sampling was attempt to locate less obvious mineralization. Only two samples were found to be anomalous and will require follow-up. These were sample ME-28-61 which is located near the Argo/Jason boundary and A-02-F located on Creek F. A reading of 285 ppm Pb was obtained on ME-28-61 and follow up prospecting should be carried out in this vicinity.

A-02-F is located within the limonite area of Creek F and gave a reading of 3 ppm Pb and 1300 ppm Zn.

The average of the rock and soil samples was 19 ppm Pb & 88 ppm Zn. There appeared to be a higher zinc background along the ME-28 line.

CONCLUSIONS

Prospecting and geochemical surveying during 1978 gave the following results:

(a) The area of Creek F has been shown to be definitely anomalous in both lead and copper. Zn - see water-geochem

(b) No in-place showings were located but a single rock-geochem. high requires follow-up.

(c) Soil geochemistry follow-up will be impossible due to presence of scree.

(d) Further exploration will have to consist of geophysics and/or drilling.

Recommendations

It is recommended that a gravity survey of the area south of Creek "A" be attempted during the summer of 1979. Any anomalies outlined should then be diamond drilled. Magnetic & electromagnetic surveys should also be considered particularly if they have been found of value on other properties in the area.

PROFESSIONAL ENGINEER ALBERTA
D. G. Thomas

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BONDAR-CLEGG & COMPANY LTD.

764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110
Branch: 136B Industrial Rd., Whitehorse, Y.T.

Geochemical Lab Report

Extraction Pb, Zn Report No. 48-90

Method A.A. From Yumack

Fraction Used -80 Soils -100 Rocks Date September 19, 19 78

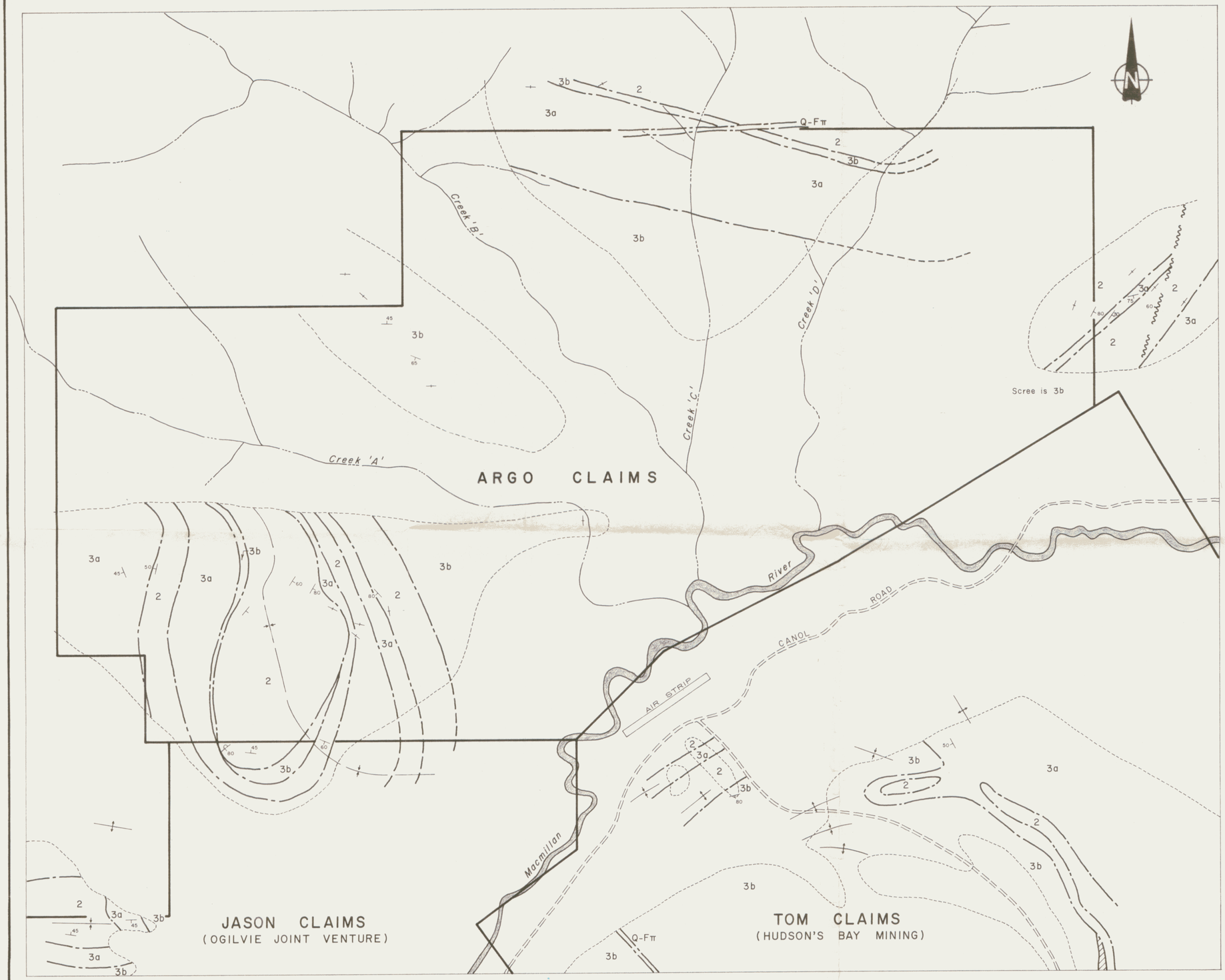
SAMPLE NO.	Pb* ppm	Zn ppm			SAMPLE NO.	Pb* ppm	Zn ppm		
Me 27-1	24	105			Me 28-16	15	410		
2	28	90			17	5	120		
3	38	44			18	18	710		
4	16	100			19	17	440		
5	10	52			20	65	130		
6	4	17			21	72	140		
7	15	88			22	46	180		
8	9	33			23	37	230		
9	9	20			24	25	180		
10	6	19			25	30	280		
11	15	48			26	3	42		
12	22	80			27	20	210		
13	24	62			28	23	145		
Me27-14	5	10			29	13	40		
A01F	71	130			30	37	115		
A02F	3	1300			31	25	150		
Me 28-1	21	128			32	13	50		
-2	17	270			33	25	70		
3	10	66			34	26	26		
4	17	270			35	10	17		
5	21	185			36	3	11		
6	5	100			37	11	50		
7	6	30			38	10	38		
8	5	34			39	15	74		
9	18	250			40	36	66		
10	17	420			41	26	40		
11	30	250			42	29	32		
12	16	280			43	30	50		
13	23	310			44	60	24		
14	16	780			45	80	11		
Me28- 15	15	410			Me 28-46	20	18		

GEOCHEMICAL LAB REPORT

SAMPLE NO.	Pb* ppm	Zn ppm	Cu	SAMPLE NO.	Pb* ppm	Zn ppm	Cu	REMARKS
Me 28-47	8	6		A 69 S	13	110	86	
48	18	28		70 S	16	630	95	
49	15	22		71 S	15	800		
50	17	26		72 S	25	420		
51	10	18		73 S	19	500		
52	10	28		74 S	18	505		
53	8	19		75 S	20	510		
54	2	1		76 S	20	810		
55	2	2		77 S	20	800		
56	3	2		78 S	19	1240		
57	16	13		79 S	19	825		
58	38	2		80 S	26	1040		SILTS
59	33	2		A 81 S	24	1400		↕
60	37	18		A 90 S	33	73		SOILS
61	285	2		91 S	18	140		
62	53	21		92 S	1	7		
63	37	34		93 S	32	28		
Me 28-64	37	10		94 S	32	65		
A 51s	90	1160	130	95 S	9	30		
SILTS 52S	62	2260	280	96 S	1	1		
53 S	17	390	100	97 S	12	58		
54 S	30	5000	165	98 S	9	75		
55 S	50	4800	160	99 S	10	30		
56 S	11	520	78	100 S	14	37		
57 S	9	1240	69	101 S	16	60		
58 S	17	610	68	102 S	13	80		
59 S	19	690	82	103 S	11	18		
60 S	15	610	78	104 S	12	80		
61 S	17	940	96	105 S	3	1		
62 S	17	620	70	106 S	20	80		
63 S	18	615	65	107 S	5	10		
64 S	17	625	77	108 S	1	1		
65 S	26	400	82	109 S	2	1		
66 S	20	270	80	110 S	9	79		
67 S	17	720	100	111 S	12	26		
A 68 S	18	590	92	A 112 S	8	17		

GEOCHEMICAL LAB REPORT

SAMPLE NO.	Pb* ppm	Zn ppm	SAMPLE NO.	Pb* ppb	Zn ppb	REMARKS
A 113 S	1	1	MW-27-01	5	35	Waters ↓
114 S	14	60	A-01-W	4	105	
115 S	11	40	A-02-W	3	170	
116 S	1	2	A-03-W	4	600	
117 S	3	5	A-04-W	5	380	
118 S	15	60	A-11-W	3	35	
119 S	6	32	A-12-W	ND	25	
120 S	8	24	A-13-W	4	35	
121 S	4	21	A-14-W	3	35	
122 S	10	34	A-15-W	4	30	
123 S	1	1	A-16W	2	50	
124 S	11	22	A-17-W	3	33	
125 S	21	46	A-18-W	4	47	
126 S	51	25	A-19-W	3	25	
127 S	69	28	A-20-W	2	2350	
128 S	75	26	A-21-W	2	2350	
129 S	32	50	A-22-W	2	25	
130 S	30	68	A-23-W	2	55	
A 131 S	80	30	A-24-W	1	89	
A 01 R	19	1	A-25-W	2	25	
A 02 R	12	60	A-26-W	3	45	WATERS ↑
A 03 R	18	30	A-27-W	3	55	
A 04 R	15	15				
A 05 R	11	9				
A 06 R	3	310				
A 07 R	26	32				
Mx 27-1	23	50				



LEGEND

- Q-Fπ — QUARTZ-FELDSPAR PORPHYRY
- 3b — BLACK SHALE
- BARITE-LEAD-ZINC HORIZON
- 3a — SILTY SHALE
- 2 — CHERT PEBBLE CONGLOMERATE

- AREA OF OUTCROP
- GEOLOGIC BOUNDARY
- CLAIM BOUNDARY

YUMACK SYNDICATE

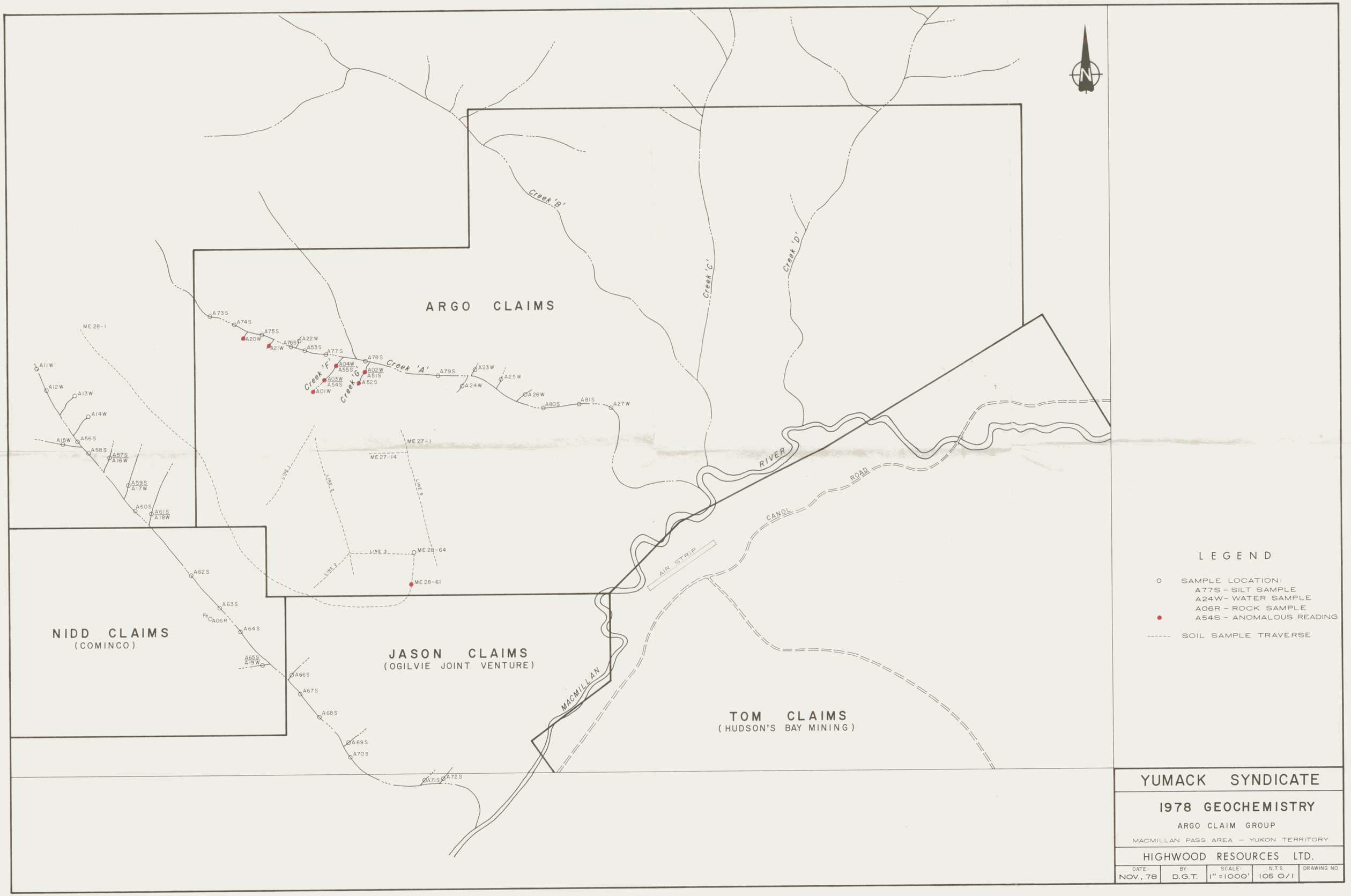
GEOLOGY

-ARGO CLAIM GROUP-

MACMILLAN PASS AREA — YUKON TERRITORY

HIGHWOOD RESOURCES LTD.

DATE:	BY:	SCALE:	N.T.S.	DRAWING NO.
OCT.,'77	R.W.S.	1" = 1000'	105 O/1	



LEGEND

- SAMPLE LOCATION:
  - A77S – SILT SAMPLE
  - A24W – WATER SAMPLE
  - A06R – ROCK SAMPLE
- A54S – ANOMALOUS READING

------ SOIL SAMPLE TRAVERSE

YUMACK SYNDICATE

1978 GEOCHEMISTRY

ARGO CLAIM GROUP

MACMILLAN PASS AREA – YUKON TERRITORY

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