FINAL REPORT
ATLIN PROJECT (1971)
EXAMINATION OF GEOCHEMICAL TARGETS AND DIAMOND DRILLING
MT. LESTER JONES PROPERTY

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Alan R. Archer ARCHER, CATHRO & ASSOC. LTD.

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INTRODUCTION

During the period July 25 to August 19, 1971, Archer, Cathro & Associates continued exploration in the Atlin area, British Columbia for a syndicate managed by Cordero Mining Company. Mr. W.H. Tisdall, representing Cordero, assisted the exploration crew during the entire period and Mr. E. Hager of Cordero visited the project from August 17 to August 19.

The purpose of the 1971 program was to expedite the $40,000 program outlined in the Archer, Cathro 1970 report. This consisted of further prospecting of select areas of geological interest containing geochemical response for copper and/or molybydenum found in 1970 plus further evaluation of the Mt. Lester Jones property by a series of short diamond drill holes and additional geological mapping.

LOGISTICS

The field crew was led by G. Abbott (geologist) and consisted of prospectors T. MacLeod and K. Carswell, pilot G. Stringer and a helicopter mechanic. A total of 22 1/2 days were spent in the field by consultants R.J. Cathro, A.R. Archer and M.P. Phillips. In addition, a diamond driller supplied by Arctic Diamond Drilling Ltd. was in the field from August 5 to August 15 and a cook was in camp from August 5 to August 17.

The crew and camp were mobilized to Warm Bay on Atlin Lake on July 25 and two areas of interest (Figures 4A to 4C and 5A to 5C in 1970 report) were examined from July 26 to July 29. On July 29 the camp and crew were mobilized to Tulsequah and drilling on the Lester Jones property began on August 6. The field crew started evaluation of the Shazah Creek area (Figures 12A to 12C in 1970 report) and examined a molybdenum anomaly on Sutlahine River (Figures 11A-11C in 1970 report). On August 12 the camp and crew were mobilized to King Salmon Lake and drilling on Lester Jones continued from there until August 17. As well, Shazah Creek area exploration continued and an area of interest south of King Salmon Lake (Figures 8A-8C, 1970 report) was prospected. The crew and camp were demobilized to Atlin on August 19 and from there to Whitehorse by truck the same day.

The helicopter, a Bell G3-B1 was supplied by Trans North Turbo Air Ltd., of Whitehorse. Crew, camp and fuel were mobilized by a Yukon Air Otter aircraft from Atlin. Supply trips were by Beaver aircraft from Whitehorse. The 1971 field season was unusually dry in this area and no significant field time was lost due to weather. The alternative camp at Tulsequah had to be used for 14 days because the King Salmon camp was occupied by a forestry crew fighting a fire immediately east of King Salmon Lake.

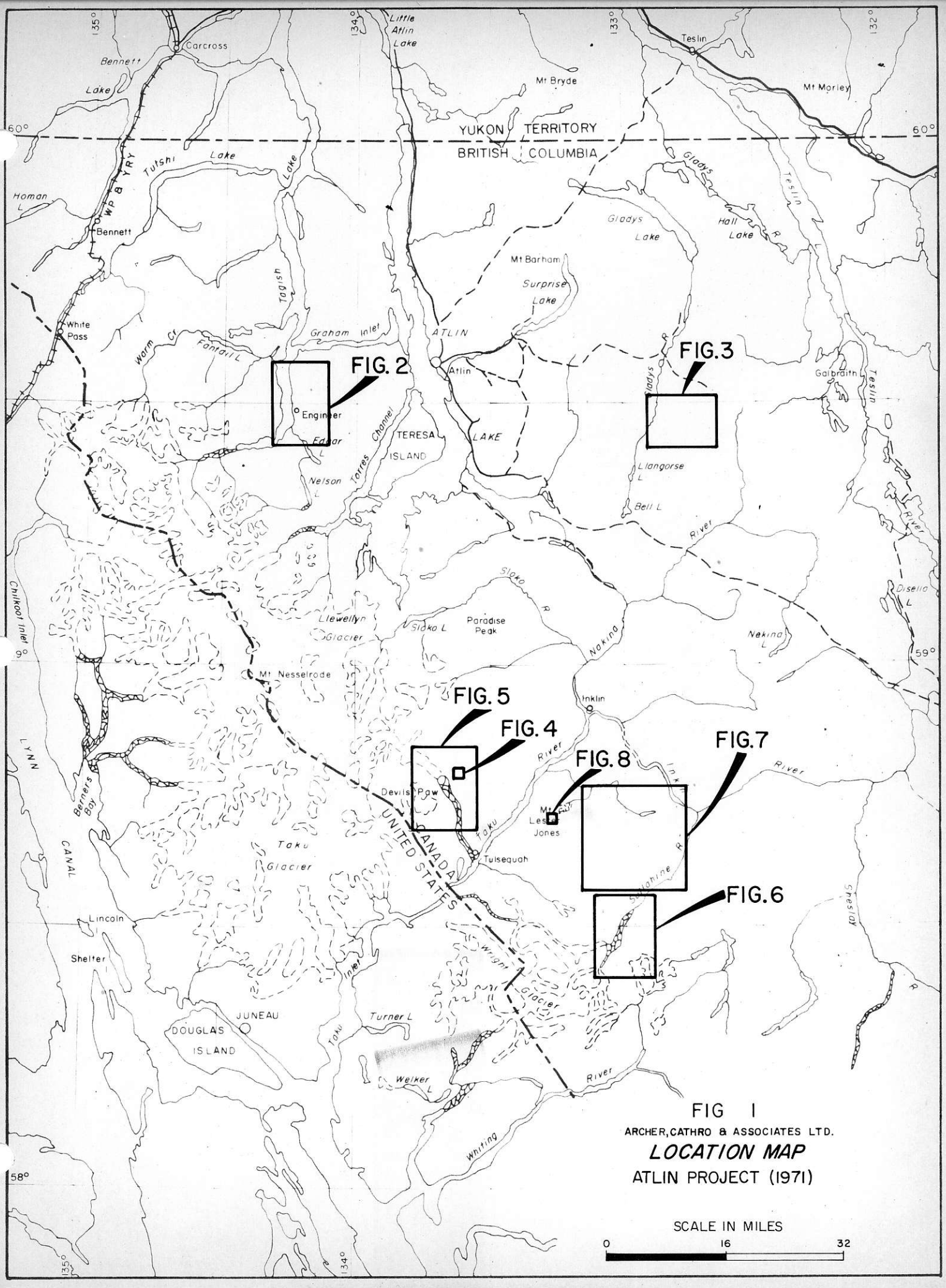

FIG 1

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LOCATION MAP

ATLIN PROJECT (1971)

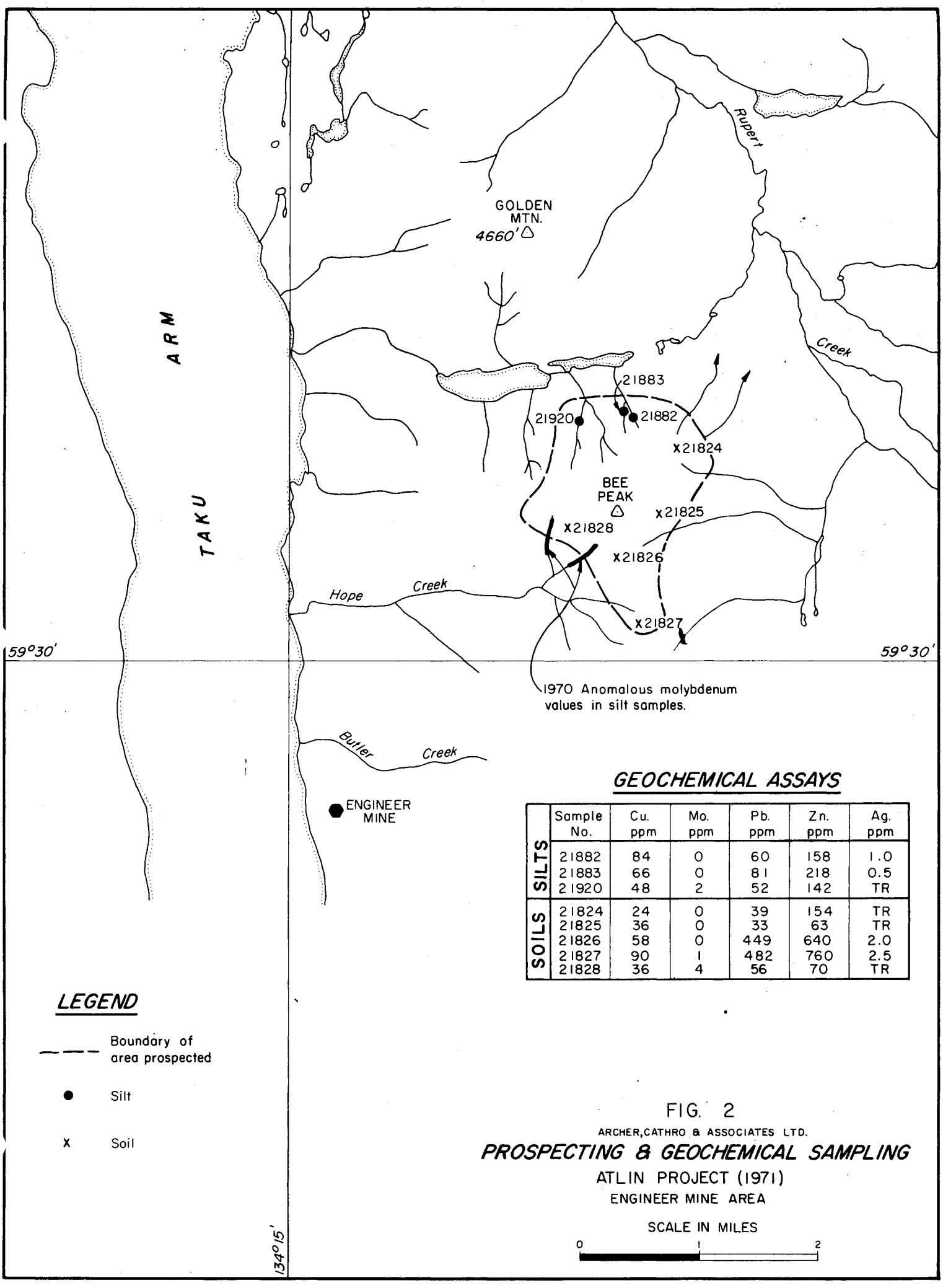
Stream sediment, soil, core samples from the Lester Jones drilling and most of the rock samples were assayed geochemically for copper, molybdenum, lead, zinc and silver by Chemex Labs., North Vancouver, B.C. using atomic absorption spectrometry analysis of a nitric-perchloric extraction of a minus 80 mesh fraction. Soil and stream sediment samples were collected in prenumbered Kraft envelopes using standard sampling procedure. Soil samples were all taken from a B plus C or C horizon.

EXAMINATION OF GEOCHEMICAL TARGETS

Engineer Mine Area

An area northeast of the old mine was stream sediment sampled in 1970 and found to be moderately anomalous for molybdenum (Figures 4A to 4C, 1970 Report). Further prospecting was carried out on July 27. Figure 2 on the following page shows the area covered and assays of some additional soil and stream sediment samples taken while prospecting.

The rocks are predominantly volcanics with some interbedded shales. A number of medium grey feldspar porphyry dykes intrude the sequence. Weak to moderate pyritization is present and probably account for the 1970 anomalies. No other evidence of mineralization was found and no further work is recommended.



GEOCHEMICAL ASSAYS

	Sample No.	Cu. ppm	Mo. ppm	Pb. ppm	Zn. ppm	Ag. ppm
SILTS	21882	84	0	60	158	1.0
	21883	66	0	81	218	0.5
	21920	48	2	52	142	TR
SOILS	21824	24	0	39	154	TR
	21825	36	0	33	63	TR
	21826	58	0	449	640	2.0
	21827	90	1	482	760	2.5
	21828	36	4	56	70	TR

FIG. 2

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PROSPECTING & GEOCHEMICAL SAMPLING

ATLIN PROJECT (1971)

ENGINEER MINE AREA

SCALE IN MILES

Radnor Creek Area

The Radnor Creek area was prospected in detail in an attempt to locate the source of very anomalous copper and moderately anomalous molybdenum values obtained in 1970 (see Figures 5A-5C). Figure 3 (in pocket) illustrates the results of prospecting and the assays of additional soil and stream sediment samples taken in 1971.

The geological setting consists of Cache Creek sediments and volcanics, with the former predominating, in contact to the south with a large quartz diorite pluton. The Cache Creek group is highly metamorphosed and pyritic. It occasionally contains swarms of quartz porphyry dykes suggesting an underlying intrusive. In certain areas the pyritization is sufficiently intense to produce extensive chocolate brown gossan on weathering. Small lenses of massive pyrrhotite with traces of chalcopyrite occasionally accompany the pyritization.

Other than the above mentioned occurrences, no evidence was found of copper mineralization. In one gossaned area, a few flecks of molybdenite were found on joint planes in the Cache Creek rocks. It would appear that the high copper values are due to metal mobilization caused by acid conditions from weathering pyrite.

Most of the area explored is staked. The large gossans south of Mt. Sanford are covered by the NT claims owned by Whitehorse prospectors. Canadian Johns-Manville Ltd. staked a group of 10 claims (Fire 1-10) on July 24, 1971,

that covered the gossan containing the traces of molybdenite. The lenses of pyrrhotite do not have sufficient assessory metals to be of interest. The weakly disseminated molybdenite and pyritization could indicate the presence of an unroofed porphyry deposit but the expense of testing such a remote possibility is not warranted. No further work is recommended for the area.

SHAZAH CREEK AREA

An area on the north side of Shazah Creek was prospected to locate the source of a stream sediment sample anomalous in copper and molybdenum (see Figures 12A-12C in 1970 Report). A small, leucocratic stock was discovered which does not appear on published maps of this area. The stock contains weak copper and molybdenum mineralization. The geological setting and results of geochemical and rock sampling of the intrusive are illustrated on Figure 4 (in pocket).

The stock outcrops on the steep, heavily timbered north side of Shazah Creek. It is weakly quartz veined and fractured. Disseminated molybdenite and chalcopyrite (or copper oxide) are found in small patches where the fracturing is most intense. This mineralization is not extensive and is low grade - the rock assays shown on the figure represent samples of the best grade areas found. The soil samples are very anomalous but are probably only reflecting a bedrock grade similar

to the rock samples. The intrusion cuts through altered metasediments and volcanics that are pyritic near the contact. Soil sampling indicates that the pyrite halo also has a low copper-molybdenum content although none was noted in the field. The very high values obtained for copper and molybdenum in soils and stream sediments from the stock are partially due to chemical conditions (high pyrite) and partially to weathering conditions. Thus, very high geochemical assays are obtained in an area of low metal content in the rocks, just as they were at Mt. Lester Jones.

Similar mineralization occurs near the upper end of the stock but is poorly exposed. Due to bad weather which prevented a return visit on August 18, this showing has only been seen by W. Tisdall and T. Macleod. Since the overburden covered area near this showing measures only 600 feet by 400 feet, the potential for a mineable deposit is very limited. Although it is almost certain that this area would grade less than 0.2% copper equivalent, further work would be required to prove it. Additional work would only be justified if a crew was in the area on another project and could be diverted, at a low cost, for 1 or 2 days.

GEOCHEMICAL ASSAYS

	Sample No.	Cu. ppm.	Mo. ppm.	Pb. ppm.	Zn. ppm	Ag. ppm
STREAM	21917	18	18	70	95	TR
	24164	13	2	48	74	TR
	24165	4	16	28	25	TR
SOILS	21918	6	27	24	13	TR
	24162	12	16	42	58	TR
	24163	26	41	50	53	TR
	24166	33	46	44	98	TR

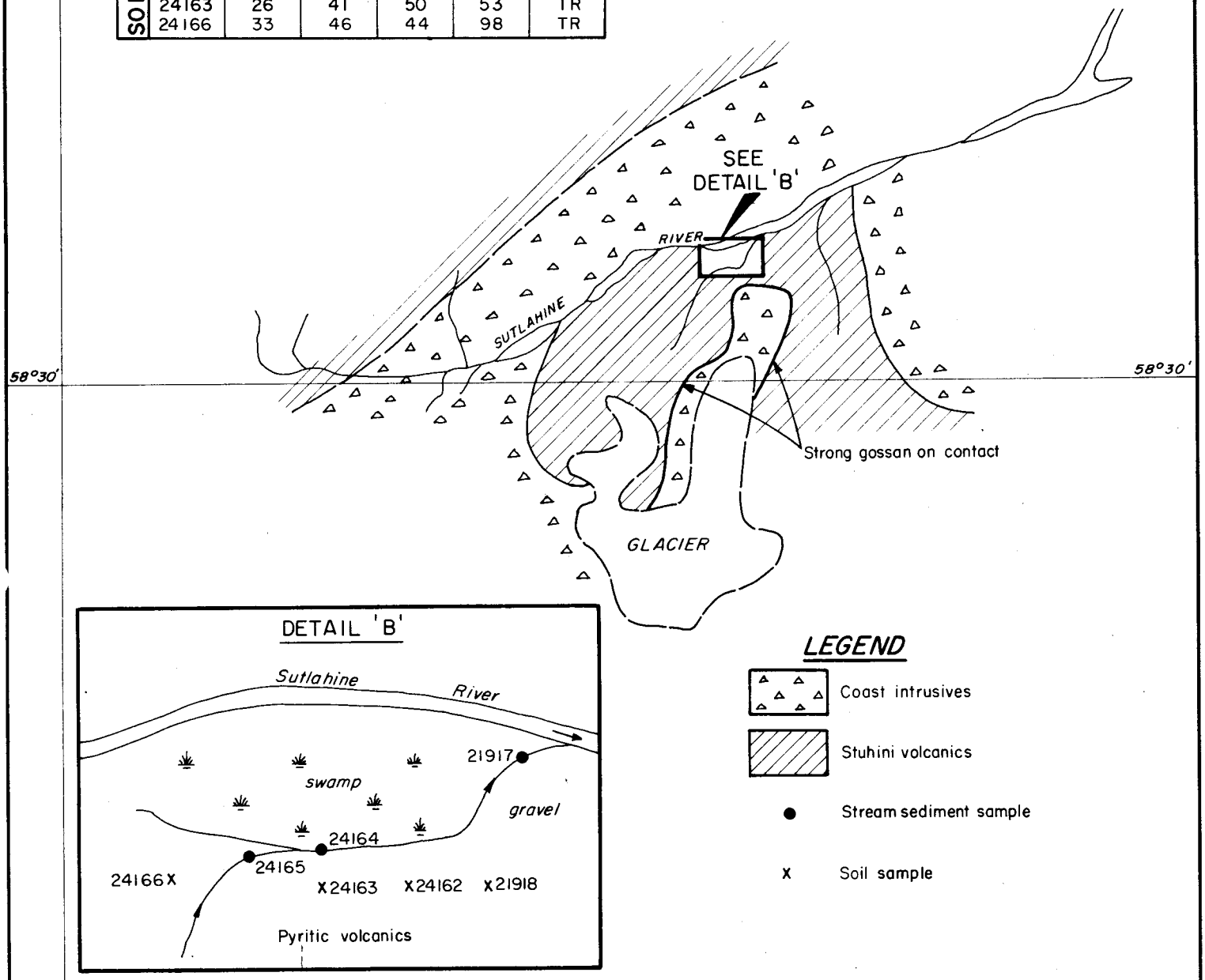

FIG. 6

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GEOLOGY & GEOCHEMISTRY

ATLIN PROJECT (1971)

SUTLAHINE RIVER AREA

SCALE IN MILES

0 1 2

Tulsequah River Area

The discovery of the unmapped, weakly mineralized, intrusive stock in a timbered area of Shazah Creek valley led to the field decision to explore the lower slopes of the Tulsequah River valley in more detail for porphyry type deposits. Traverses were made on both sides of the river well back from the valley floor. The valley walls are steep and densely vegetated, almost to the point of impassability.

Figure 5 (in pocket) illustrates the results of prospecting and stream sediment sampling. The area is largely underlain by Stuhini Group volcanics or its altered equivalents. A few small unmapped intrusive stock and dykes were found but none showed evidence of mineralization or porphyry type alteration. The stream sediment sampling did not point to any targets missed by the prospecting and no further work is recommended for the area.

Sutlahine River Area

A stream sediment sample taken in 1970 from a tributary of the Sutlahine River (See Figures 11A-11C, 1970 Report) returned moderately anomalous values in molybdenum and silver. The area was traversed in 1971 and Figure 6 on the following page illustrates results of prospecting and additional geochemical sampling.

The geological setting consists of Stuhini volcanics in contact with coast range intrusives. The contact is pyrite-rich and exhibits a weak, rusty gossan on weathering. The additional sampling confirms a moderately anomalous molybdenum response in the creek. Soil sampling over the pyritic volcanics indicates a weak to moderately anomalous background in molybdenum which explains the stream sediment values. No evidence of significant mineralization was found while prospecting and no further work is recommended.

King Salmon Lake Area

The specific target in this area was anomalous values in copper, molybdenum and silver obtained from a gossan immediately south of King Salmon Lake in 1970 (see Figures 8A-8C, 1970 Report). The overall area was explored because of the favourable geological setting. Figure 7 (in pocket) illustrates the regional geology of the overall area with geochemical analysis of samples taken while prospecting.

The specific target (detail 'A' on Figure 7) is a well defined gossan occuring near timberline. The published GSC map (Map 1262A) shows that this area is underlain by Jurassic Laberge Group sediments. However, detailed prospecting showed that outcrops consist mainly of pyritic and altered volcanics with occasional quartz

feldspar porphyry dykes. These altered volcanics probably belong to the Triassic Stuhini Group. Two types of mineralization were discovered. A small weakly fractured stock of felsite was found to contain disseminated chalcopyrite and molybdenite. Three samples of the better mineralized material were geochemically analysed and averaged 337 ppm copper (.034%) and 55 ppm molybdenum (.005% Mo). At least seven vein zones were found in the volcanics south of the felsite stock. These vary from a few feet to about 10 feet in width and each can be traced for several hundred feet. The vein material consists of brecciated quartz-carbonate with traces of galena, sphalerite and sulfosalts. One vein contained three feet of massive pyrrhotite and sphalerite. A sample from each vein was assayed but none returned significant values (see Figure 7 and assay certificate 6916-4 in appendix). The porphyry and vein mineralization is the likely source of the anomalous stream sediment and soil values. No further work is recommended.

The area south and west of King Salmon Lake, illustrated in Figure 7, was prospected for porphyry mineralization. The geological survey mapping shows this area to be underlain by Laberge Group sediments but prospecting showed that there is considerable volcanic rock, probably Stuhini Group, present. The entire area, particularly the southern part, contains numerous dykes and small

stocks of quartz feldspar porphyry. Gossans are abundant and generally occur near the dykes and stocks where the intruded rocks have a higher than average pyrite content. No mineralization of interest was found and the geochemical sampling does not indicate any unexplored targets. No further work is recommended.

A mineralized breccia pipe occurs 1.5 miles north of King salmon Lake. Arrangements were made with the owner, Moresby Mines Ltd., for Mr. Tisdall to visit the showing, called the BWM in the literature, in anticipation that the claims might be available for option in the future. Mineralization consists of coarse, angular fragments of chalcopyrite and pyrite, occurring with fragments of felsite in a body which is elliptical in plan, with a long axis of about 1000 feet. Average grade at surface, based on some trench sampling and drilling done in 1950 by Hudson's Bay Mining & Smelting, is less that 1.0% copper. The minerization is unusual because of a high zinc content in the chalcopyrite and a complete absence of molybdenum. The showing is mainly of interest because it could be an indicator of a nearby porphyry or massive sulfide deposit.

MT. LESTER JONES PROPERTY

General

The Mt. Lester Jones property was witness post staked in February 1971 as the Taku 1-37 claims. These claims were officially abandoned August 3, 1971 and restaked,

without the use of witness posts, as the Mike 1-32 claims, which were recorded at Atlin on August 6, 1971.

The main purpose of the 1971 program was to determine, by drilling, the extent of surface leaching of the altered volcanics. Geochemical sampling in 1970 had shown a large variance in copper, molybdenum and silver content in soils against rock samples from the same location. (See Figures 17B and 17C, 1970 Report). The following assays in parts per million show the comparison:

	Cu	Mo	Ag
Average of 8 soil samples	1120	238	7.8
Average of 8 rock samples	187	79	3.1

An X-ray drill supplied by Arctic Diamond Drilling Ltd. was mobilized by float plane from Whitehorse to the basecamp at Tulsequah, and from there to the property by helicopter. A two man drill crew was moved to and from the drill site each day by helicopter.

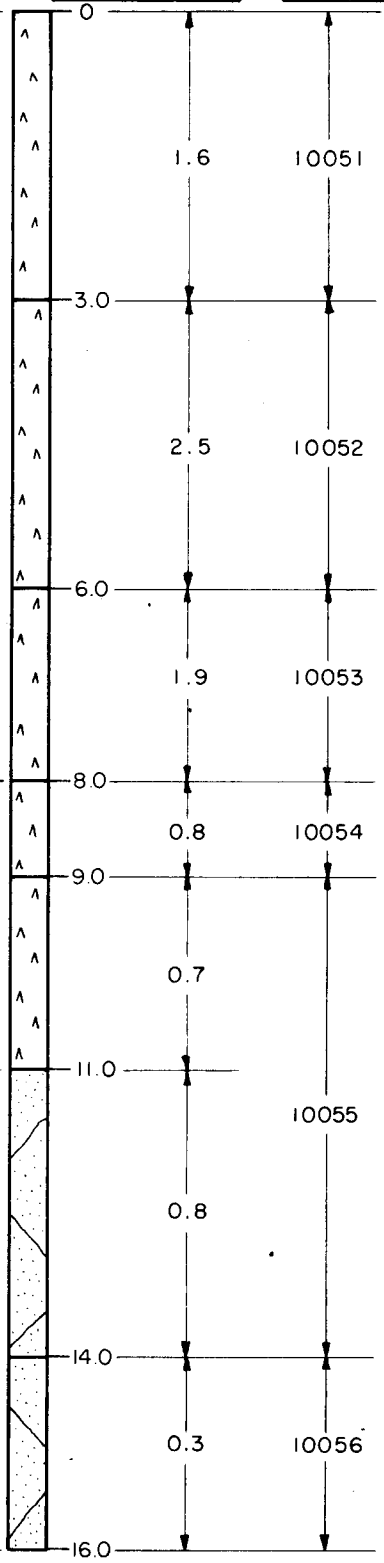
Drill Results

Figure 8 (in the pocket) shows the location of drilling with respect to the Mike claims and the 1970 rock sampling. Six vertical holes were drilled near 1970 rock sample B1. for a total of 88 feet. This location was chosen because the 1970 soil and rock sample at B1 gave the best combined response for copper, molybdenum and silver and because it was one of the few areas on the higher slope where drill water was available. Drilling was much more difficult

than expected due to hardness of the rocks and intense fracturing. Figures 9 to 13 on the following pages illustrate the geology and assays of split core of Holes 2 to 6 respectively. No core was recovered in Hole 1. The deepest hole, No.2, showed strong to moderate surface leaching to 18.0 feet with virtually no leaching from 18.0 feet to its final depth of 24 feet. The remaining holes all returned moderately leached material.

The only primary minerals seen in the core are pyrite and molybdenite. The pyrite content averages about 3 per cent and occurs as disseminations and fracture filling. Near surface, the pyrite has been altered to jarosite and altered and leached fractures are manganese stained. Leaching is restricted to the pyrite veinlets just a few feet below surface and even these veinlets are relatively unleached below 12 to 18 feet. Molybdenite occurs as very fine grained disseminations and is most abundant in or near quartz veining. The only copper mineralization visible in the core is minor covellite, which coats partially leached pyrite. It is almost certain that the source of the copper is fine disseminations of chalcopyrite in the pyrite. Weathering of the pyrite releases the copper which enriches the surface soils and redeposits to a lesser degree on unleached pyrite. Thus, it appears that true bedrock grade for copper of the altered volcanics is about double that obtained

Mineralization	Rock Type	Alteration
Fracturing poorly developed. Jarosite & pyrite occasionally present replacing chlorite. Manganese along weathered fractures common.	Stuhini Group Andesite(?) Dyke-dark grey green aphanitic with fine black chlorite (?) hornblende speckling. Minor-to 1 mm qz phenocrysts.	Strong pervasive & minor fracture filling carbonate biotite-hornblende (?) to chlorite
Jarosite after pyrite & minor pyrite along leached fractures rare disseminated yellow to steel grey pyrite to 3%. Molybdenite-associated qz filled fractures & minor disseminated.	Welded Tuff Light grey aphanitic.	Strong pervasive silicification minor hairlike qz filled fractures. Strong pervasive carbonate



Footage Markers	Recovery	Sample No.	Cu. ppm	Mo. ppm	Zn. ppm	Pb. ppm	Ag. ppm	Au. ppb
	1.6	10051	13	1	78	39	1.0	<30
	2.5	10052	12	1	95	39	1.0	<30
	1.9	10053	80	1	158	44	1.5	<30
	0.8	10054	100	5	304	44	1.5	<30
	0.7							
		10055	437	22	172	28	1.5	<30
	0.8							
	0.3	10056	NS	NS	NS	NS	3.0	<30

NOTE

NS = Not sufficient sample

FIG. 9

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GEOLOGY & ASSAYS DDH 2

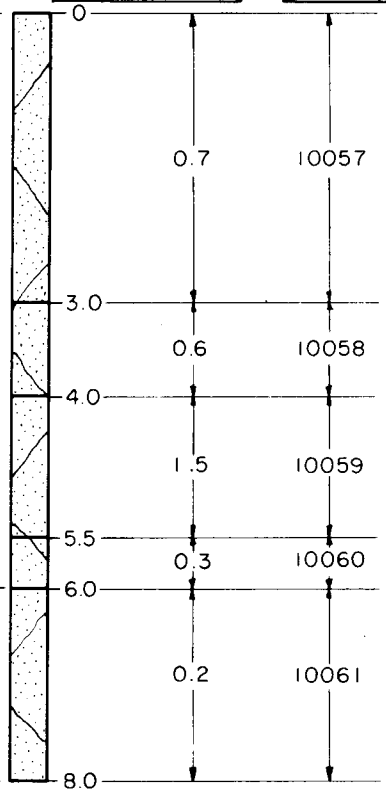
ATLIN PROJECT (1971)

MIKE CLAIMS-MT. LESTER JONES PROPERTY

SCALE IN FEET

0 1 2

Mineralization	Rock Type	Alteration
Exotic jarosite and manganese(?) staining common on fractures; indigeneous jarosite & pyrite in fractures usually assoc. with qz.-disseminated pyrite 1-4%	Stuhini Group Welded Tuffs Light grey aphanitic phenocrysts. Rare quartz crystals and potassium feldspar(?)	Strong pervasive silicification weak- to moderate fracture quartz & carbonate veining. Pervasive silicification weakens away from quartz fracture. 6.0 Transition — carbonate present on fractures
Molybdenite-minor assoc. with quartz veining & rare disseminated ferrimolybdenite (?) sometimes present.		



Footage Markers	Recovery	Sample No.	Cu. ppm	Mo. ppm	Zn. ppm	Pb. ppm	Ag. ppm	Au. ppb
0–3.0	0.7	10057	452	60	100	44	4.0	<30
3.0–4.0	0.6	10058	424	18	89	52	4.0	<30
4.0–5.5	1.5	10059	562	38	187	58	5.0	<30
5.5–6.0	0.3	10060	800	23	162	33	6.5	<30
6.0–8.0	0.2	10061	700	47	282	28	3.0	<30

FIG. 10

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GEOLOGY & ASSAYS DDH 3

ATLIN PROJECT (1971)

MIKE CLAIMS-MT. LESTER JONES PROPERTY

SCALE IN FEET

0 1 2

Mineralization	Rock Type	Alteration	Footage Markers	Recovery	Sample No.	Cu. ppm	Mo. ppm	Zn. ppm	Pb. ppm	Ag. ppm	Au ppb
			0								
		Silicification-strong pervasive & weak to moderate fracture filling. Carbonite-weak to strong pervasive & weak fracture. Tourmaline-0-6ft.-common disseminated & fractures, black rosettes, else-where weak.		1.6	10062	168	65	32	28	1.5	< 30
6.0' Covellite on fracture pyrite.		Silicification-carbonate content vary inversely.	6.0								
	Stuhini Group Welded Tuff Light grey bleached due to weathering along fractures aphanitic texture			1.3	10063	341	24	28	26	0.5	< 30
			9.0	1.0	10064	270	47	26	28	<0.5	< 30
	10.0' Fracturing weakens & rock green grey color.		10.0								
11.5' Covellite on fracture pyrite.				1.9	10065	540	110	44	39	1.5	< 30
			12.0								
Jarosite & manganese in fractures to 10.0ft. Pyrite-fracture & disseminated coated with jarosite in cap ±3-5%				1.5	10066	540	60	53	30	0.5	<30
			14.0								
Molybdenite-assoc. with quartz filled fractures & intense silicification Covellite(?)-coating pyrite along fractures				1.9	10067	341	60	36	20	0.5	<30
			16.0								
±18.0' Hypogene-some weak leaching in fractures 18.5 Covellite on fracture pyrite	±18.0' Fractures parallel to core axis			2.9	10068	285	33	65	39	1.5	<30
			19.0								
				0.7	10069	352	75	53	37	2.0	<30
			20.0								
				1.0	10070	1300	60	130	79	6.5	<30
			21.0								
		23.0 Quartz crystal in open fracture.		2.0	10071	410	70	92	74	6.5	<30
			24.0								

FIG. 11

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GEOLOGY & ASSAYS DDH 4

ATLIN PROJECT (1971)

MIKE CLAIMS-MT. LESTER JONES PROPERTY

SCALE IN FEET

0 1 2

Mineralization	Rock Type	Alteration
Jarosite - moderate fractures. Pyrite - fracture & disseminated. Covellite - minor coating pyrite Molybdenite - mainly associated quartz filled fractures & rare disseminated Ferrimolybdenite - along leached fractures.	Stuhini Group Welded tuff - light grey with supergene bleaching around leached fractures. Aphanitic texture with occas. doubly terminated quartz crystal, quartz and feldspar phenocrysts towards bottom texture phaneritic and rare book of chloritized biotite - gradational contact. Porphyry.	Silicification pervasive - moderate to intense Fracture - weak Carbonate - weak pervasive & fracture Tourmaline - weak disseminated. Potassium feldspar (?) weak to moderate pervasive Chlorite - strong

Footage Markers	Recovery	Sample No.	Cu. ppm	Mo. ppm	Zn. ppm	Pb. ppm	Ag. ppm	Au. ppb
0								
	2.5	10072	386	30	154	56	3.5	<30
7.0								
	2.5	10073	277	70	38	48	2.5	<30
10.0								
	0.7	10074	362	120	40	50	3.0	<30
12.0								
	0.9	10075	400	105	60	76	4.0	<30
14.0								
	0.7	10076	122	41	32	52	2.0	<30
15.0								
	1.1	10077	386	41	51	42	3.0	<30
17.0								

FIG. 12

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GEOLOGY & ASSAYS DDH 5

ATLIN PROJECT (1971)

MIKE CLAIMS - MT. LESTER JONES PROPERTY

SCALE IN FEET

0 1 2

Mineralization	Rock Type	Alteration
Jarosite-coating pyrite in & around fractures. Pyrite-fractures & disseminated. Covellite-occ. coating pyrite. Molybdenite-minor disseminated & in quartz filled fractures	Stuhini Group Welded Tuff (?) Porphyry (?) light grey quartz & abundant feldspar phenocrysts in a hard aphanitic matrix. Occasional subhedral thin books of biotite	Silicification-strong pervasive, minor fractures Chloritization of biotite Tourmaline-rare Supergene-feldspar to clay around pyrite filled fractures

Footage Markers	Recovery	Sample No.	Cu. ppm	Mo. ppm	Zn. ppm	Pb. ppm	Ag. ppm	Au. ppb
0								
	0.4	10078	178	9	78	290	0.5	<30
6.0								
	1.3	10079	277	49	53	39	2.5	<30
11.0								

FIG. 13

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GEOLOGY & ASSAYS DDH 6

ATLIN PROJECT (1971)

MIKE CLAIMS-MT. LESTER JONES PROPERTY

SCALE IN FEET

0 1 2

from surface rock sampling and about half that indicated by soil sampling. The major variance between surface rock and soil sample assays for molybdenum and silver is less easily explained. The drilling indicates that the molybdenite is not leached and suggests only a slightly better silver grade with depth.

Geology

The surface in the vicinity of the drill holes was better exposed in 1971 (less snow and good visibility). Figure 8 (in pocket) shows distribution of rock type and percentage outcrop. There are more dykes, or small plugs, of relatively unaltered and unmineralized feldspar-quartz-biotite porphyry than were noted in 1970. Copper and molybdenum mineralization in the volcanics appears, on surface, to be most intense near the dykes. Hole 2, which was collared in a dyke and passed into altered volcanics at 11 feet, illustrates the low metal content of the porphyry dykes but did not confirm the surface observation of better grades in the volcanics near the contact. The scree around the outcrop contains considerable quartz-carbonate vein float that is weakly mineralized with sulfosalts, chalcopyrite, pyrrhotite and occasionally magnetite. The distribution and abundance of float suggest that the veins trend north to northeast, are about 12 inches wide, are fairly persistant along strike,

and probably occur at 100 to 150 foot intervals. A small outcrop about 800 feet southeast of Hole 1 is cut by the only vein exposed on the slope. The vein is in altered volcanics and has a northerly strike and vertical dip. It is about 18 inches wide with a quartz-carbonate gangue containing 5% sulfosalts and traces of chalcopyrite. The altered volcanics are intensely bleached for two feet on either side of the vein. These veins, although of no direct economic interest, contribute a fair quantity of metal to the soil and help explain the discrepancy in copper and silver values in soil versus rock outcrop.

CONCLUSIONS AND RECOMMENDATIONS

None of the geochemical targets explored in 1971 merit further work with the exception of the mineralized intrusive at Shazah Creek (Figure 4), which requires one or two days additional exploration. This additional work would only be justified if a crew was in the area on some other project and could be diverted for several days without incurring the high mobilization cost for crew and helicopter.

The drilling at Mt. Lester Jones (Mike claims) proves that true bedrock grade is lower than was indicated by soil sampling and is well below economic range. The only untested possibility is an improvement in grade

with depth due a change in geological conditions- i.e. that the surface mineralization represents a low grade halo around a better grade unexposed porphyry deposit. The cost of a series of widely spaced, deep diamond drill holes, does not appear warranted considering the remote location and present economic conditions. The claims should be kept in good standing, by filing the 1971 work credit and paying $100 work credit to the mining recorder in lieu of work after the 1971 work credit expires, in the event that changing conditions make this prospect more attractive.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES

A.R. Archer

ARA:st

ATLIN PROJECT (1971)

DRILLING, MT. LESTER JONES MIKE

DATE Aug. 27/71

ASSAY CERTIFICATE

FILE NO. 6945-4

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM ARCHER & CATHRO

SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ PER TON	Copper	molybdenum				
24020	TR	TR	.08	.038				
24021	.005	.02	.02	.003				
24022	TR	TR	.15	.002				
24023	TR	TR	.07	.003				

DATE August 4,1971.

ASSAY CERTIFICATE

FILE NO. 6853-1

Sun-Oil Account

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Archer & Cathro

SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ PER TON	Zinc	Copper	Molybdenum As MoS_2	Spectro	
21906	TR	.16	TR	.20	.002	Sent Aug. 3/71	

DATE Aug.23/71

ASSAY CERTIFICATE

FILE NO. 6916-4

Sun-Oil Account

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Archer and Cathro

SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ PER TON	Copper	Lead	Zinc	Spectro	
24129	TR	TR	-	.02	14.37	71-17	
24130	.02	.30	-	.68	.40	71-18	
24133	TR	TR	.13	-	.08	71-19	
24194	TR	.46	.29	-	-	71-20	
						All sent Aug.16/71	

ASSAYER Geo. Spalding

COMPLETE ANALYSIS AND ASSAYING
FLUORIMETRIC URANIUM

CHEMICAL - SPECTROGRAPHIC - MICROSCOPIC

WM. GERRIE, M.A.
D. KERR-LAWSON, B.A., PH.D.

M. E. WELLER, B.A.
H. E. WELLER

CORRELATION LABORATORIES LTD.

R.R. 6 COBDEN, ONTARIO PHONE 646-7448 (AREA 613)

CERTIFICATE OF ANALYSIS No. 10599 Aug. 16, 1971.

We have analysed spectrographicly 1 samples of pulp
Received Aug. 9 and submitted by Whitehorse Assay Office
with the following results:

CODE:				
	1. Tr. Less than .01%	4. .02 to .1%	7. .2 to 1%	10. 2 to 10%
	2. .005 to .03%	5. .05 to .3%	8. .5 to 3%	11. 5 to 30%
	3. .01 to .05%	6. .1 to .5%	9. 1 to 5%	12. Over 10%

All listed elements were sought, blank spaces designate "not detected."

71-11 6853-1 #21906
A+B (Sun-Oil)

Antimony	
Arsenic	
Barium	2
Beryllium	1
Bismuth	
Boron	
Cadmium	
Chromium	
Cobalt	1
Copper	6
Gallium	1
Germanium	
Indium	
Lead	1
Iron	11
Lithium	
Manganese	3
Mercury	
Molybdenum	1
Nickel	
Niobium	
Rare Earths	
Yttrium	
Lanthanum	
Silver	
Thorium	
Tin	
Titanium	7
Tungsten	
Uranium	
Vanadium	
Zinc	
Zirconium	1

H. E. Weller

COMPLETE ANALYSIS AND ASSAYING
FLUORIMETRIC URANIUM

CHEMICAL - SPECTROGRAPHIC - MICROSCOPIC

WM. GERRIE, M.A.
D. KERR-LAWSON, B.A., PH.D.

CORRELATION LABORATORIES LTD.

M. E. WELLER, B.A.
H. E. WELLER

R.R. 6 COBDEN, ONTARIO PHONE 646-7448 (AREA 613)

CERTIFICATE OF ANALYSIS No. 10606 Aug. 23, 1971.

We have analysed spectrographicly 6 samples of pulp
Received Aug. 21 and submitted by Whitehorse Assay Office
with the following results:

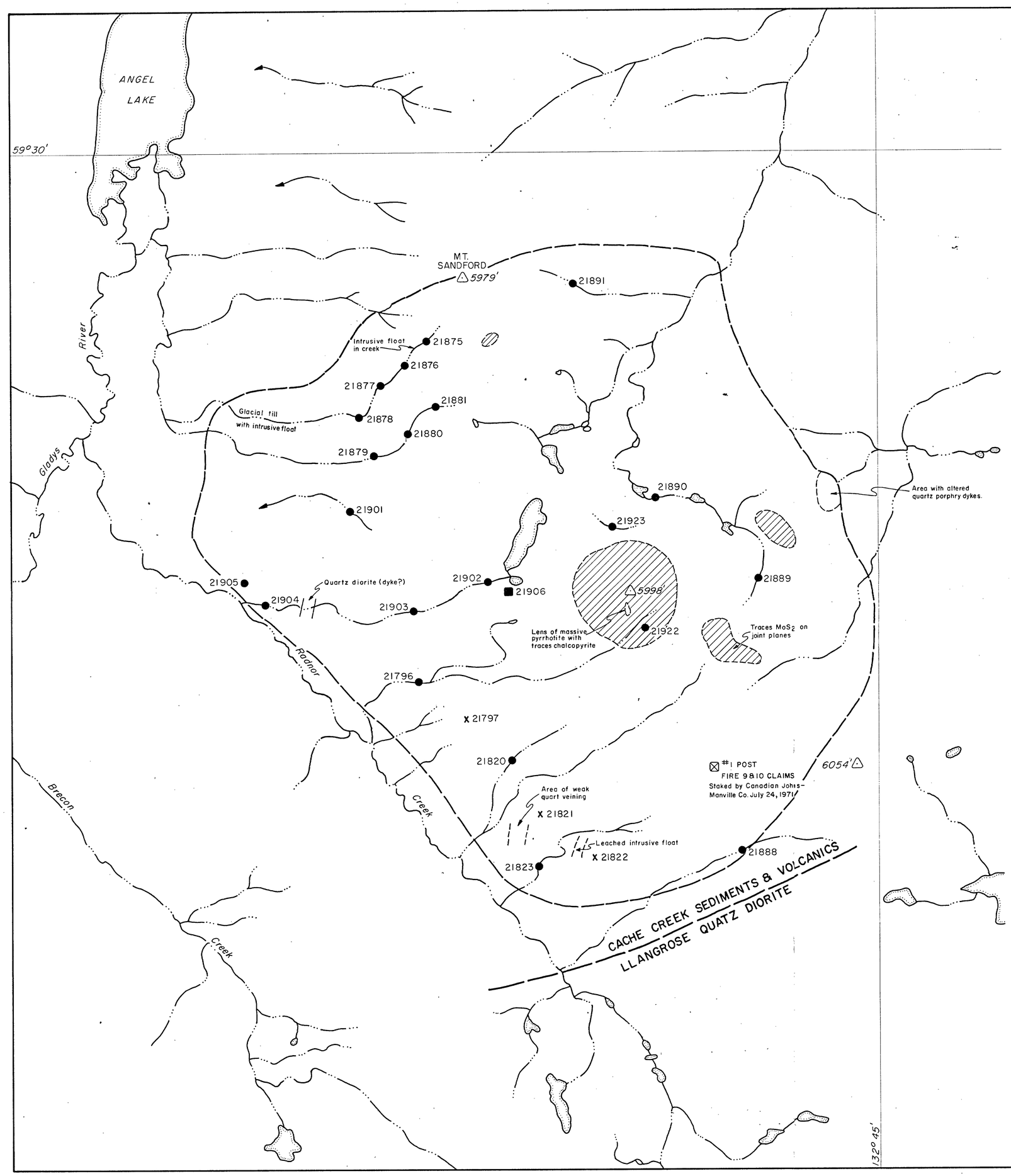
CODE:

1. Tr. Less than .01%	4. .02 to .1%	7. .2 to 1%	10. 2 to 10%
2. .005 to .03%	5. .05 to .3%	8. .5 to 3%	11. 5 to 30%
3. .01 to .05%	6. .1 to .5%	9. 1 to 5%	12. Over 10%

All listed elements were sought, blank spaces designate "not detected."

	~~#1588~~	~~#1589~~	#24129	#24130	#24133	#24134
	~~71-15~~	~~71-16~~	71-17	71-18	71-19	71-20
Antimony						
Arsenic						
Barium						
Beryllium						
Bismuth					1	
Boron	1					1
Cadmium	3		4			
Chromium						
Cobalt			1		1	
Copper	5	2	5	4	5	6
Gallium					1	
Germanium						
Indium						
Lead	1	2	2	7	2	8
Iron	10	9	11	10	11	8
Lithium						
Manganese	9	6	5	4	5	5
Mercury						
Molybdenum						
Nickel						
Niobium						
Rare Earths						
Yttrium						
Lanthanum						
Silver	2		1	1		1
Thorium						
Tin	2					
Titanium	2	6	5	5	5	5
Tungsten		5				
Uranium						
Vanadium		1		1		
Zinc	10		10	7	5	4
Zirconium		1	1			1

H. Weller



GEOCHEMICAL ASSAYS

	Sample No.	Cu. ppm	Mo. ppm	Pb. ppm	Zn. ppm	Ag. ppm
SILTS	21796	131	52	123	80	1.0
	21820	68	12	63	134	0.5
	21823	128	42	300	197	3.5
	21875	66	22	37	116	TR
	21876	118	21	40	158	TR
	21877	102	18	37	138	TR
	21878	82	6	20	95	TR
	21879	80	7	39	120	TR
	21880	146	5	42	292	1.0
	21881	112	5	48	154	1.5
	21888	86	3	22	172	TR
	21889	84	55	74	63	TR
	21890	168	35	100	63	3.5
	21891	68	3	26	123	TR
	21901	74	12	35	80	TR
	21902	880	10	77	353	0.5
	21903	236	7	54	273	TR
	21904	183	5	44	282	TR
	21905	84	9	46	72	TR
	21922	62	22	28	34	TR
	21923	310	23	200	98	3.0
SOILS	21797	66	7	54	138	TR
	21821	80	10	200	116	1.5
	21822	74	8	172	182	TR
ROCK	21906	Lens of massive pyrrhotite (see Whitehorse assay office cert. No. 6853-1 and Correlation Lab. Ltd. spectrographic analysis file 71-11 in appendix.)				

LEGEND

- ● Silt
- X Soil
- ■ Rock
- Strong gossan
- Boundary of area prospected in detail

inches 0 1
0 1 2 centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

FIG. 3

ARCHER, CATHRO & ASSOCIATES LTD.

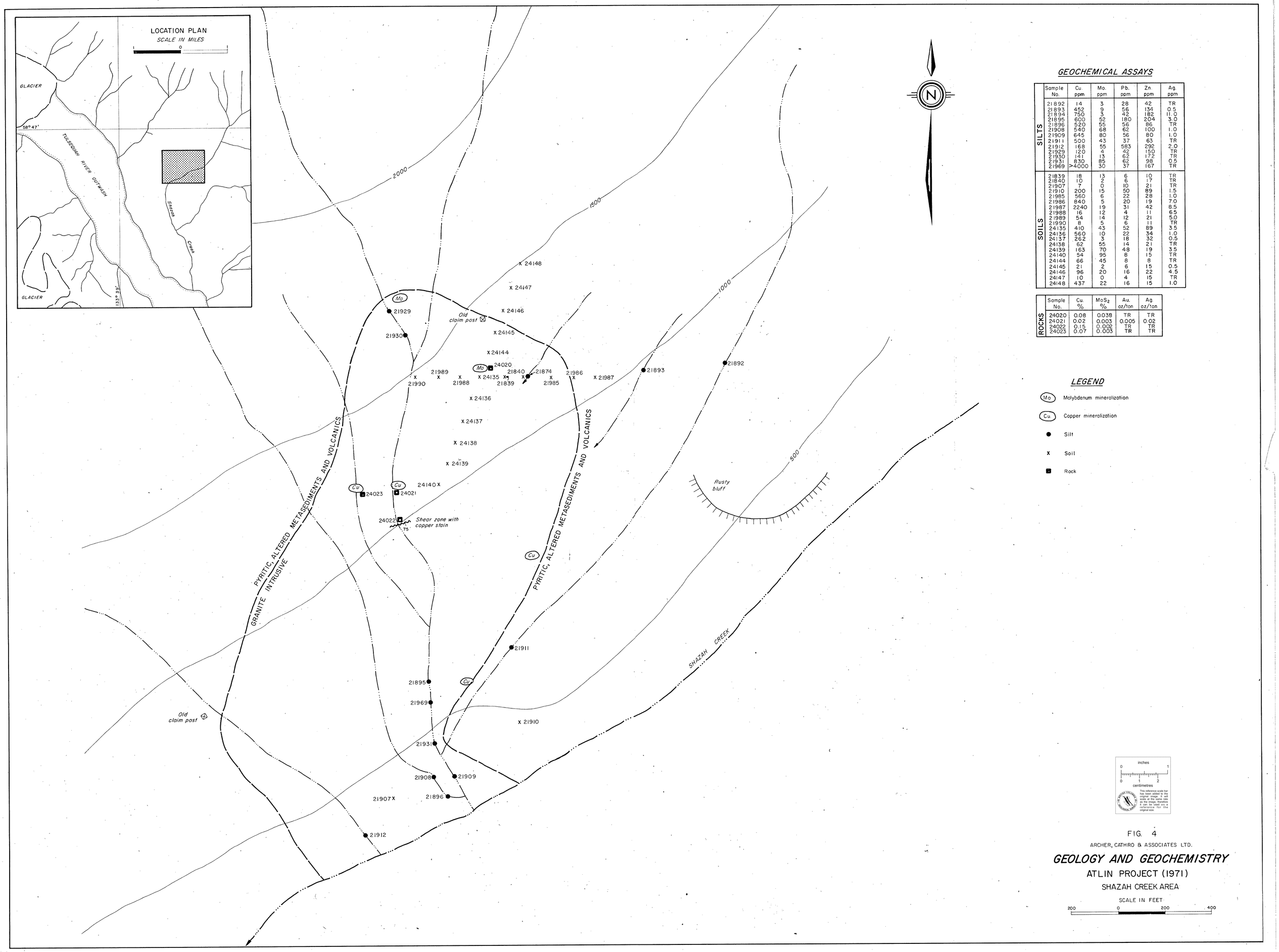
GEOLOGY AND GEOCHEMISTRY

ATLIN PROJECT (1971)

RADNOR CREEK AREA

SCALE IN MILES

1/2 0 1/2 1



GEOCHEMICAL ASSAYS

	Sample No.	Cu. ppm	Mo. ppm	Pb. ppm	Zn. ppm	Ag. ppm
SILTS	21892	14	3	28	42	TR
	21893	452	9	56	134	0.5
	21894	750	3	42	182	11.0
	21895	600	52	180	204	3.0
	21896	520	55	56	86	TR
	21908	540	68	62	100	1.0
	21909	645	80	56	80	1.0
	21911	500	43	37	63	TR
	21912	168	55	583	292	2.0
	21929	120	4	42	150	TR
	21930	141	13	62	172	TR
	21931	830	85	62	98	0.5
	21969	>4000	30	37	167	TR
SOILS	21839	18	13	6	10	TR
	21840	10	2	6	17	TR
	21907	7	0	10	21	TR
	21910	200	15	50	89	1.5
	21985	560	6	22	28	1.0
	21986	840	5	20	19	7.0
	21987	2240	19	31	42	8.5
	21988	16	12	4	11	6.5
	21989	54	14	12	21	5.0
	21990	8	5	6	11	TR
	24135	410	43	52	89	3.5
	24136	560	10	22	34	1.0
	24137	262	3	18	32	0.5
	24138	62	55	14	21	TR
	24139	163	70	48	19	3.5
	24140	54	95	8	15	TR
	24144	66	45	8	8	TR
	24145	21	2	6	15	0.5
	24146	96	20	16	22	4.5
	24147	10	0	4	15	TR
	24148	437	22	16	15	1.0

	Sample No.	Cu. %	MoS_2 %	Au. oz/ton	Ag. oz/ton
ROCKS	24020	0.08	0.038	TR	TR
	24021	0.02	0.003	0.005	0.02
	24022	0.15	0.002	TR	TR
	24023	0.07	0.003	TR	TR

LEGEND

- (Mo) Molybdenum mineralization
- (Cu) Copper mineralization
- ● Silt
- x Soil
- ■ Rock

inches 0 1
0 1 2 centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the original image, so it can be used as a reference for the original size.

BRITISH COLUMBIA GEOLOGICAL SURVEY

FIG. 4

ARCHER, CATHRO & ASSOCIATES LTD.

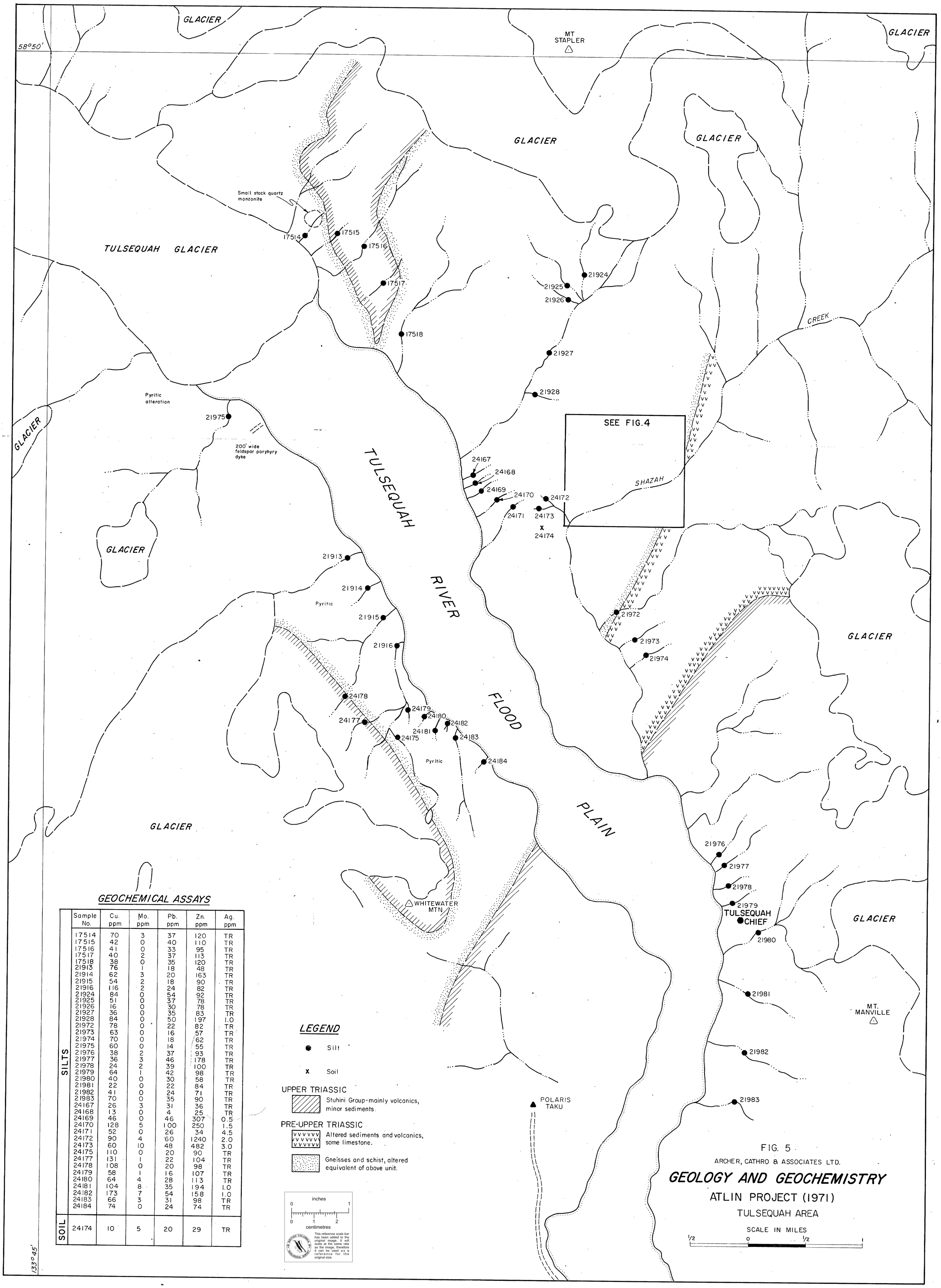
GEOLOGY AND GEOCHEMISTRY

ATLIN PROJECT (1971)

SHAZAH CREEK AREA

SCALE IN FEET

200 0 200 400



GEOCHEMICAL ASSAYS

	Sample No.	Cu. ppm	Mo. ppm	Pb. ppm	Zn. ppm	Ag. ppm
SILTS	17514	70	3	37	120	TR
	17515	42	0	40	110	TR
	17516	41	0	33	95	TR
	17517	40	2	37	113	TR
	17518	38	0	35	120	TR
	21913	76	1	18	48	TR
	21914	62	3	20	163	TR
	21915	54	2	18	90	TR
	21916	116	2	24	82	TR
	21924	84	0	54	92	TR
	21925	51	0	37	78	TR
	21926	16	0	30	78	TR
	21927	36	0	35	83	TR
	21928	84	0	50	197	1.0
	21972	78	0	22	82	TR
	21973	63	0	16	57	TR
	21974	70	0	18	62	TR
	21975	60	0	14	55	TR
	21976	38	2	37	93	TR
	21977	36	3	46	178	TR
	21978	24	2	39	100	TR
	21979	64	1	42	98	TR
	21980	40	0	30	58	TR
	21981	22	0	22	84	TR
	21982	41	0	24	71	TR
	21983	70	0	35	90	TR
	24167	26	3	31	36	TR
	24168	13	0	4	25	TR
	24169	46	0	46	307	0.5
	24170	128	5	100	250	1.5
	24171	52	0	26	34	4.5
	24172	90	4	60	1240	2.0
	24173	60	10	48	482	3.0
	24175	110	0	20	90	TR
	24177	131	1	22	104	TR
	24178	108	0	20	98	TR
	24179	58	1	16	107	TR
	24180	64	4	28	113	TR
	24181	104	8	35	194	1.0
	24182	173	7	54	158	1.0
	24183	66	3	31	98	TR
	24184	74	0	24	74	TR
SOIL	24174	10	5	20	29	TR

LEGEND

● Silt

x Soil

UPPER TRIASSIC

Stuhini Group-mainly volcanics, minor sediments.

PRE-UPPER TRIASSIC

Altered sediments and volcanics, some limestone.

Gneisses and schist, altered equivalent of above unit.

inches 0 1

0 1 2 centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

FIG. 5

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY AND GEOCHEMISTRY

ATLIN PROJECT (1971)

TULSEQUAH AREA

SCALE IN MILES

½ 0 ½ 1