ASSESSMENT REPORT
GEOLOGICAL MAPPING AND
GEOLOGICAL SAMPLING
BARB CLAIMS
WHITEHORSE MINING DISTRICT

BARB 1-48, YA 61921 TO YA 61968

NTS 105 F/6
LATITUDE : 61°22' NORTH
LONGITUDE: 133°20' WEST

AUGUST 20 - SEPTEMBER 1, 1981
AND
JUNE 10 - JUNE 18, 1982

By: P.D. Van Angeren

This report has been examined by the Geological Advisory Board under Section 53 (4) of the Quartz Mining Act and is allowed as representation work in the amount of $ 24,000 —.

P Watson

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

I (Name) Phil D. Van Angeren	Occupation Geologist
(Postal Address) 2700, 700 - 2nd Street S.W., Calgary, Alberta T2P 2W2	OFFICE DATE STAMP

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, wotk on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

ARB

1-YA61921	10-YA61930	18-YA61938	26-YA61946	34-YA61954	42-YA61962
2-YA61922	11-YA61931	19-YA61939	27-YA61947	35-YA61955	43-YA61963
3-YA61923	12-YA61932	20-YA61940	28-YA61948	36-YA61956	44-YA61964
4-YA61924	13-YA61933	21-YA61941	29-YA61949	37-YA61957	45-YA61965
5-YA61925	14-YA61934	22-YA61942	30-YA61950	38-YA61958	46-YA61966
6-YA61926	15-YA61935	23-YA61943	31-YA61951	39-YA61959	47-YA61967
7-YA61927	16-YA61936	24-YA61944	32-YA61952	40-YA61960	48-YA61968
8-YA61928	17-YA61937	25-YA61945	33-YA61953	41-YA61961	
9-YA61929					

situated at Caribou Creek Claim Sheet No. 105F/6

in the Whitehorse Mining District, to the value of at least $24,000.00

dollars, since the 20th day of August 19 81,

to represent the following mineral claims under the authority of Grouping Certificate No. _____

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

ARB

1-YA61921	14-YA61934	27-YA61947	40-YA61960
2-YA61922	15-YA61935	28-YA61948	41-YA61961
3-YA61923	16-YA61936	29-YA61949	42-YA61962
4-YA61924	17-YA61937	30-YA61950	43-YA61963
5-YA61925	18-YA61938	31-YA61951	44-YA61964
6-YA61926	19-YA61939	32-YA61952	45-YA61965
7-YA61927	20-YA61940	33-YA61953	46-YA61966
8-YA61928	21-YA61941	34-YA61954	47-YA61967
9-YA61929	22-YA61942	35-YA61955	48-YA61968
10-YA61930	23-YA61943	36-YA61956	
11-YA61931	24-YA61944	37-YA61957	
12-YA61932	25-YA61945	38-YA61958	
13-YA61933	26-YA61946	39-YA61959	

Renewal requested to August 4, 1987

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

August 20 to September 1, 1981 - soil and silt sampling, geological mapping

June 10 to June 18, 1982 - soil sampling and geological mapping

Sworn before me at Whitehorse

this 3rd day of August 19 82

Notary Public

Phil D. van Angeren

Applicant.

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1. INTRODUCTION

1.1 General

This report describes geological mapping and geochemical sampling carried out by AGIP Canada Ltd. on BARB claims 1-48 (YA 61921 to YA 61968 inclusive) between August 20th and September 1st, 1981, and between June 10th and June 18th, 1982.

1.2 Location and Access

The BARB claims are located 120 kilometers northeast of Whitehorse, on a ridge separating Caribou Creek from the Big Salmon River. The Claim distribution is shown in Figure 1.

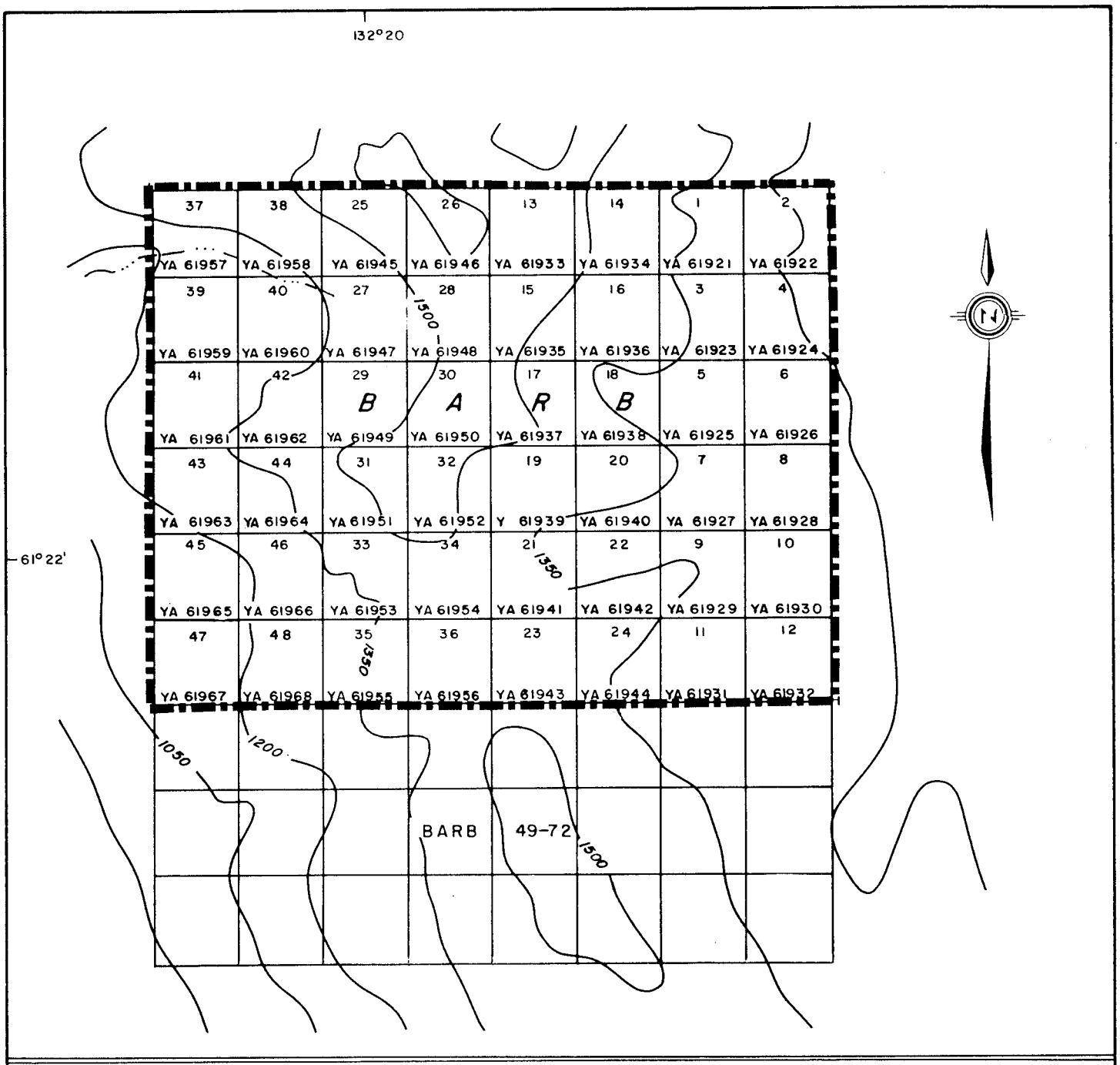
Access to the claims is by helicopter from Whitehorse or from the South Canol Road, 14 kilometers to the east. An old bulldozer trail leads to the BARB claims from the Canol Road.

1.3 Physiography and Vegetation

The BARB claims cover a north-trending ridge which is flanked by Caribou Creek to the east and the Big Salmon River to the west. Areas above 1400 meters A.S.L. have only sparse alpine vegetation; below this level there is thick spruce forest. Outcrops are uncommon except along ridges. Glacial and talus deposits have a thin cover of white ash, deposited approximately 1200 years ago (Gleeson, 1976).

1.4 Exploration By Other Companies

Iola Mines Ltd. carried out exploration in this area between 1964 and 1972 (Archer, Cathro and Associates, 1982). In 1965, bulldozer trenching was carried out and 5 holes were



LEGEND

Topographic Contours (in metres)

0 1 2

Kilometres

AGIP CANADA LTD.		
Barb Claims 1–48		
YUKON		
Scale: 1:31,680	NTS: 105 F/6	Date: JULY, 1982
Author: P. v.A.	Drawn by: GTSz	Figure: 1

drilled (total 570 ft.). A small gravity survey was carried out in 1966 (Galeski, 1967) and one more hole was drilled in 1967 (261 ft.). A final hole was drilled in 1969 (398 ft.). Minor amounts of pyrite were encountered in several holes, locally accompanied by traces of galena and chalcopyrite. The drill and remains of the drill camp are still on the property but there is little core left to examine.

2. GEOLOGY

2.1 Regional Geology

The area in the vicinity of the claim group has been mapped as being underlain by a narrow northwest trending belt of predominantly autochthonous mid-Paleozoic sedimentary rocks (Tempelmann-Kluit, 1979). In the central and south-eastern portion of the belt, there is a sequence of Upper Paleozoic volcanic rocks of the Anvil-Campbell allochthon which have been thrust over the mid-Paleozoic sedimentary rocks. Siltstones, quartzites, slates and greywacke are the principal types of sedimentary rock, whereas massive greenstones predominate in the volcanic suite.

2.2 Geology of the BARB Claims

The geologic map of the BARB claims (Figure 2), was compiled from data collected during the 1981 and 1982 programs. The map units are described first and then followed by a description of structure.

Two groups of rocks outcrop on the claim group; the autochthonous mid-Paleozoic (Devonian-Mississipian) sedimentary rocks and the overlying allochthonous Upper Paleozoic (Carboniferous-Permian) rocks. The sedimentary rocks are divided into two map units; a white micaceous quartzite (Unit 1) and a sequence of dark carbonaceous sedimentary rocks (Unit 2). The volcanic rocks consist of massive greenstones and tuffs (Unit 3).

The white micaceous quartzite of Unit 1 was observed to outcrop in only one location near the eastern edge of the claim block, but is also seen in core drilled by Iola Mines Ltd. The quartzites are buff to white weathering and massive in nature. The contact with the overlying dark clastic rocks of Unit 2 is apparently gradational.

Unit 2 outcrops in isolated localities along ridges and stream valley sides in most areas of the claim block. Almost all rocks of this unit include gritty (2a) and argillaceous (2b) varieties. As well, several outcrops of a massive white quartzite (2c) were noted.

The gritty rocks of subunit 2a include grey to black weathering chert pebble conglomerates and greywackes. The conglomerate contains distinctive pebbles of chert that are elongated parallel to foliation planes.

The argillaceous rocks of subunit 2b include black slate, silvery-grey weathering black shale, siliceous argillite, and black graphitic shale. The slates and shales are very fissile and thin bedded whereas the argillite is more competent and forms beds to 10 centimeters thick. The trace of a graphitic black shale horizon which locally gives anomalous scintillometer readings (Section 4.3) is indicated on the geology map.

The quartzite of subunit 2c is noted in only two localities. It is buff to white weathering, massive, and non-micaceous.

Volcanic rocks of unit 3 outcrop along the highest ridges in the west central portion of the claim block. The unit is composed of dark grey-green to black weathering, massive greenstone and tuff. The contact with the underlying sedimentary rocks is masked by imbricate fault slices of both units separated by zones of shearing.

The sedimentary rocks observed on the claim group generally strike northeast and dip moderately to the northwest with local variations. The plane of the major thrust fault

that crosses the claim block, strikes northwesterly and dips moderately to the southwest. Several normal faults that offset the black clastic-greenstone thrust fault contact are observed. Displacements are small. Preferred orientations are north-northwest to west-northwest. These faults are frequently manifested by airphoto linears. However, they are differentiated on the map from airphoto linears where no indications of faulting, such as offset slickensides and breccia zones, have been observed.

A pronounced cleavage or foliation of variable orientation is frequently noted in certain rock types that outcrop on the claim block. In particular, the greywacke and chert pebble conglomerate contain elongate grains and flattened pebbles oriented parallel to planes of foliation. Certain portions of the greenstone unit have a well developed foliation. Localized portions of the shales are phyllitic. The black slates also have a well developed cleavage. Where bedding and cleavage are observed together they crosscut each other at a very shallow angle.

3. 1981 WORK PROGRAM

3.1 General

The BARB 1-48 claims were staked in July 1981. After recording the claims, a program of geological mapping, stream sediment and soil sampling, was carried out. Additional mapping and soil sampling have also been carried out in the first part of the 1982 field season.

A further 24 claims, BARB 49-72 (YA 74455 to YA 74478 inclusive) were staked in November 1981. This report describes only work carried out on BARB 1-48.

3.2 Stream Sediment Samples

A total of thirty-five (35) silt samples were taken from five creeks draining the area (Figure 2). All samples were collected at 200 meter intervals and were analysed for uranium, copper, molybdenum, lead, zinc and silver. Sample locations are shown in Figure 2. Analytical methods are described and results tabulated in Appendix B.

Uranium, copper and molybdenum values all occur in background concentrations.

Lead occurs in anomalous concentrations in two creeks; in the creek which drains the northwestern corner of the claim block (values to 420 ppm Pb) and in the creek draining the southwestern side of the claim block (up to 172 ppm Pb).

This latter creek also contains the only anomalous zinc values (to 1800 ppm Zn).

A maximum value of 3.8 ppm silver was detected at the headwaters of the northernmost creek of the work area. It is the only silt sample anomalous in silver.

All anomalies are in areas underlain by graphitic and siliceous slates.

3.3 Soil Samples

A total of 382 soil samples were collected in the claim group. Of these, 343 samples (talus fines) were collected at 50 meter intervals along five lines which cover the drainage basins of two east-flowing creeks in the centre of the claim group. Each line represents a 50 meter contour interval (Figure 3).

The remaining 39 samples were collected at 50 meter centres on a small grid surveyed in at the headwaters of "Drill Creek" (Figure 4).

All the samples were analysed for uranium, copper, molybdenum, lead, zinc and silver. Forty-three of these samples were also analysed for cobalt, nickel, chromium, arsenic, and tungsten.

It should be noted that good samples were difficult to obtain since much of the sampled area is covered by coarse talus from which the fines have largely been washed out. This talus is overlain by 5 to 10 centimeters of volcanic ash and humus. This ash is considered to cause no contamination (Gleeson, C.F. and Brummer, J.J., 1976), but if inadvertently included in soil samples, the ash would perhaps cause dilution of otherwise anomalous material. Samples 28111 through 28301 (Figure 3) may have included material from this ash horizon.

Some samples along these contour lines are obviously highly anomalous in one or more of the analysed elements. The most significant feature of these anomalies is that they all occur within the drainage basin of "Drill Creek" (where much of Iola Mines' work was carried out) and that they are all underlain by graphitic and siliceous slate. This association suggests that most anomalies are the results of primary concentrations of many elements in the black shale sequence, with some values representing local enhancement by secondary concentration processes.

The small grid at the headwaters of "Drill Creek", was located in the areas of an iron oxide-rich seep, and extensive limonitic soils. Maximum values from this grid are: 870 ppm Cu, 610 ppm Mo, 350 ppm Pb, 1663 ppm Zn, 25.0 ppm Ag, 780 ppm As, 23 ppm W, 58 ppm Co and 233 ppm Ni.

All high copper, molybdenum, zinc, arsenic, cobalt, nickel and tungsten values occur in limonite-rich soil. However, high lead values occur only along the northern limits of the grid, in normal (ie. non-limonitic) soils. Silver anomalies occur in both types of soil. It would seem that most anomalous concentrations in this area may be caused by the scavenging effects of iron hydroxides.

4. 1982 WORK PROGRAM

4.1 General

In 1982, AGIP Canada Ltd. carried out follow-up soil sampling and pit sampling in areas underlain by the multi-element soil anomalies detected in 1981. The geological mapping was extended and a number of radiometric readings were taken in areas with anomalous uranium values in soil.

4.2 Soil Samples

A total of 248 soil samples were collected in the area. All samples were analysed for uranium, copper, molybdenum, lead, zinc and silver. Of these, 26 were from separate soil and talus horizons encountered in eight different pits dug at 6 anomalous (pits 3 through 8) and 2 barren (pits 1 and 2) soil sample sites (1981 results). The selected sites from 1981 are numbers 28126 (pit 2), 28139 (pit 1), 28535 (pit 7), 28544 (pit 8), 28578 (pit 3), 28824 (pit 4), 28832 (pit 6), and 28833 (pit 5), (see Figure 3 and Appendix B). The last 6 pits (3 to 8 inclusive) were dug to determine which horizons and rock types produce the strongest anomalies. The first two pits (#1 and #2) were dug in order to determine whether the deeper talus horizons (below the ash horizon) were anomalous. Each pit was dug to a depth of 1 meter. Three horizons were sampled in each; the organic-rich "top-soil", the weakly bleached, grey to green weathered talus immediately below this and the weakly oxidized to non-weathered, reddish-brown to black "fresh" talus below this. The talus at each site is derived from black slate of unit 2. Pit locations and the samples taken at each site are shown in Figure 5. Results from these pits (samples 0030000 to 0025 inclusive) are indicated in Appendix B.

The remaining 222 soil samples were taken at 50 meter intervals along contour lines 50 and 100 meters above the

highest line sampled in 1981 (Figure 5). These new lines were sampled in order to determine the possible presence of anomalous soils upslope from the ones discovered in 1981 thus establishing limits to anomalous zones.

Results are indicated in Appendix B.

All samples at pits 1 and 2 contain background concentrations of each element.

In pits 3, 7, and 8 results indicate that the deepest, less weathered horizon of the talus has the highest values for uranium, molybdenum and silver.

All samples in pits 4 and 6 contain anomalous concentrations of lead and molybdenum respectively.

The anomalous samples from these pits were taken from weakly oxidized to non-weathered talus.

The three samples taken in pit 5, consist of talus cemented by manganese hydroxides, which have had a scavenging effect on copper, molybdenum and silver.

The contour soil sampling has confirmed that the black graphitic slates at the headwaters of "Drill Creek" have a high background concentration of uranium, molybdenum and silver. Soil samples taken near the southeast-trending air-photo linear (fault) in the north-central part of the claim block have a high content of lead and silver (Figures 2 and 5).

The soil sampling carried out in 1982 has confirmed that most anomalies in the area are the result of both primary and locally enhanced, secondary concentrations of various metals in a black shale sequence.

4.3 Ground Radiometrics

A number of radiometric readings were taken throughout the area, with an URTEC UG 135 portable spectrometer, along zones underlain by uranium anomalies in soil (1981).

Values everywhere ranged between 100 and 150 cps. Maximum values of 225 to 250 cps were encountered in areas underlain by sooty, graphitic slates (Figure 2). These values are waist-level readings.

5. REFERENCES

Archer, Cathro and Associates (1982): Northern Cordillera Mineral Inventory.

Galeski, R.B. (1967): Assessment Report M.I. M-252, D.I.A.N.D., Whitehorse.

Gleeson, C.F., and Brummer, J.J. (1976): Reconnaissance Stream Sediment Geochemistry Applied to Exploration for Porphyry Cu-Mo Deposits in Southwestern Yukon Territory, C.I.M. Bulletin, May, 1976.

Tempelmann-Kluit, D.J. (1979): Quiet Lake and Finlayson Lake Map Sheets, G.S.C. Open File 486.

APPENDIX A

List of Claim Names and Grant Numbers

BARB 1	YA 61921	BARB 25	YA 61945
BARB 2	YA 61922	BARB 26	YA 61946
BARB 3	YA 61923	BARB 27	YA 61947
BARB 4	YA 61924	BARB 28	YA 61948
BARB 5	YA 61925	BARB 29	YA 61949
BARB 6	YA 61926	BARB 30	YA 61950
BARB 7	YA 61927	BARB 31	YA 61951
BARB 8	YA 61928	BARB 32	YA 61952
BARB 9	YA 61929	BARB 33	YA 61953
BARB 10	YA 61930	BARB 34	YA 61954
BARB 11	YA 61931	BARB 35	YA 61955
BARB 12	YA 61932	BARB 36	YA 61956
BARB 13	YA 61933	BARB 37	YA 61957
BARB 14	YA 61934	BARB 38	YA 61958
BARB 15	YA 61935	BARB 39	YA 61959
BARB 16	YA 61936	BARB 40	YA 61960
BARB 17	YA 61937	BARB 41	YA 61961
BARB 18	YA 61938	BARB 42	YA 61962
BARB 19	YA 61939	BARB 43	YA 61963
BARB 20	YA 61940	BARB 44	YA 61964
BARB 21	YA 61941	BARB 45	YA 61965
BARB 22	YA 61942	BARB 46	YA 61966
BARB 23	YA 61943	BARB 47	YA 61967
BARB 24	YA 61944	BARB 48	YA 61968

APPENDIX B
ANALYTICAL METHODS AND RESULTS

All geochemical samples were prepared and analysed by Bondar-Clegg in Whitehorse.

Soils and stream sediment (silt) samples were sieved to -80 mesh. A split of this fraction was analysed.

Copper, molybdenum, lead, zinc, silver, cobalt, nickel and chromium were analysed by atomic absorption techniques; for most elements, the sample was dissolved in hot aqua reqia. Silver values greater than 4.0 ppm were checked using a nitric acid digestion.

Tungsten analyses were by basic oxidizing fusion followed by a colorimetric determination.

Uranium analyses were by hot concentrated nitric acid digestion and fluorimetric determination.

Arsenic analyses were by an arsine solution extraction ($HClO_4$-HNO_3) followed by colorimetric determination.

GEOCHEMICAL RESULTS

1981 Stream Sediment Geochemistry

All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
14093	3.1	40	8	18	237	1.3					
14094	2.6	40	10	30	169	1.1					
14095	3.4	36	5	20	300	1.2					
14096	1.4	52	6	20	1051	0.4					
14097	1.1	22	3	20	801	0.1					
14230	2.4	60	4	20	466	0.3					
14231	1.7	90	5	44	201	3.6					
14232	1.4	52	9	40	192	0.4					
14233	1.4	34	6	22	163	0.2					
14234	1.3	24	4	16	155	0.2					
14235	0.9	18	5	14	63	0.2					
14236	0.8	32	4	12	130	0.1					
14237	0.7	12	6	16	494	0.3					
14478	1.6	60	4	420	191	1.8					
14479	1.0	30	3	108	138	1.0					
14480	0.8	26	3	72	91	1.2					
14481	1.1	28	2	80	162	1.3					
14482	0.7	30	2	84	251	1.3					
14483	0.6	28	3	68	179	0.4					
14484	1.0	28	3	76	209	0.6					
14485	0.9	32	5	80	270	0.5					
14486	1.7	28	3	72	338	0.2					
14487	3.8	36	4	80	435	0.5					
14640	0.1	16	2	4	32	0.2					
14641	2.5	48	3	48	168	1.9					
14642	0.6	16	3	40	110	0.5					
14643	1.6	52	6	172	553	1.0					
14644	1.4	40	6	148	531	0.3					
14645	0.5	24	2	8	796	0.4					
14646	0.6	24	1	12	1800	0.2					
14647	1.0	16	1	96	900	0.2					
14648	0.8	18	1	12	468	0.3					
14649	0.9	24	2	32	880	0.2					
14650	0.3	28	2	24	242	0.2					
14651	0.3	24	2	12	165	0.2					

1981 Soil Geochemistry

All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28031	0.2	24	1	16	152	1.0					
28032	0.1	16	1	10	118	0.5					
28034	<0.1	16	1	8	71	0.3					
28035	0.5	24	1	28	117	0.9					
28036	0.2	12	1	20	70	0.3					
28037	1.1	36	3	56	180	1.2					
28038	0.2	20	1	12	90	0.1					
28039	0.1	12	1	4	31	0.4					
28040	0.3	34	3	14	119	0.5					
28042	0.1	16	1	28	93	0.4					
28043	0.2	16	1	16	81	0.2					
28044	0.2	6	1	8	49	0.3					
28045	0.2	16	1	16	23	0.9					
28046	0.1	14	1	22	147	0.6					
28047	0.4	28	1	12	220	0.5					
28048	0.3	13	1	25	206	0.3					
28049	0.2	22	1	24	323	0.5					
28050	0.2	16	2	36	280	0.2					
28051	<0.1	16	2	20	81	0.6					
28052	0.3	20	2	32	116	0.6					
28054	0.1	10	1	4	62	0.2					
28055	<0.1	4	1	6	63	0.5					
28056	0.2	8	2	26	75	0.3					
28057	<0.1	8	2	10	80	0.3					
28058	<0.1	12	2	16	174	0.5					
28059	<0.1	4	2	4	14	0.2					
28061	0.3	12	2	14	62	0.2					
28062	1.0	20	3	48	81	0.7					
28063	<0.1	10	1	12	117	0.2					
28064	<0.1	4	1	4	17	0.2					
28066	<0.1	16	3	24	130	0.5					
28067	<0.1	4	3	28	162	0.2					
28068	0.1	12	2	64	268	0.6					
28069	0.5	20	2	72	127	0.7					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28070	0.2	2	1	3	13	0.2					
28071	0.7	6	1	10	35	0.5					
29072	0.4	8	1	16	34	0.2					
28073	1.4	32	<1	36	151	0.4					
28074	0.3	2	2	4	8	0.3					
28075	1.0	12	2	16	61	0.4					
28076	0.8	20	3	32	79	0.4					
28077	0.6	4	2	8	8	0.1					
28079	0.6	6	2	8	21	0.3					
28080	0.6	8	2	16	59	0.4					
28081	0.6	20	2	16	79	0.3					
28082	0.3	8	2	12	57	0.3					
28083	0.2	4	2	12	136	0.5					
28085	0.9	12	1	16	110	0.5					
28087	0.6	8	1	12	116	0.4					
28088	0.8	8	2	16	65	0.5					
28089	0.3	8	2	128	70	0.9					
28091	<0.1	6	1	4	134	0.4					
28092	0.4	16	3	16	202	0.5					
28093	0.3	8	2	8	80	0.1					
28094	0.1	2	1	2	3	0.2					
28095	0.3	4	1	4	15	0.3					
28097	0.2	6	1	8	27	0.5					
28098	0.2	<1	1	<2	<1	0.1					
28099	0.3	4	1	10	27	0.3					
28100	0.4	20	4	32	92	0.3					
28101	0.3	8	2	12	39	0.2					
28102	0.4	12	3	20	50	0.3					
28103	0.1	4	2	10	10	0.1					
28104	0.2	8	3	12	33	0.3					
28105	0.1	<1	2	8	7	0.3					
28107	0.1	6	2	12	28	0.4					
28108	0.2	6	2	8	40	0.2					
28109	0.2	8	2	14	119	0.5					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28110	<0.1	6	3	12	118	0.2					
28111	0.2	10	3	12	115	0.2					
28112	<0.1	8	2	12	26	0.3					
28113	0.3	12	2	32	69	0.2					
28114	0.2	8	3	12	42	0.2					
28115	0.1	6	2	16	30	0.3					
28116	0.6	14	2	24	77	0.5					
28117	0.2	4	2	12	8	0.3					
28118	0.4	16	2	30	111	0.5					
28119	<0.1	<1	2	8	3	0.2					
28120	<0.1	<1	1	8	4	0.3					
28121	0.2	8	2	16	37	0.2					
28122	0.2	8	5	16	58	0.6					
28123	0.1	2	2	8	8	0.2					
28124	0.2	4	2	12	12	0.5					
28125	0.2	16	2	28	43	0.7					
28126	0.2	20	2	36	47	1.0					
28127	0.1	12	2	28	12	0.8					
28128	0.1	4	2	16	10	1.0					
28129	0.6	12	1	26	50	0.4					
28130	0.2	4	1	16	15	0.5	12	3	3	6	20
28131	<0.1	<1	2	6	3	0.1	3	4	5	2	6
28132	0.3	12	1	18	64	0.3	18	3	2	12	43
28133	0.2	4	<1	8	12	0.5	4	4	12	4	10
28134	<0.1	2	<1	6	2	0.3	5	5	3	3	9
28135	0.2	6	1	8	20	0.4	5	2	6	5	12
28136	0.2	20	1	20	108	0.7	50	5	5	21	42
28137	0.1	12	1	12	90	0.4	16	4	8	13	17
28138	0.4	22	2	16	207	0.2	24	2	10	27	63
28139	0.1	4	2	4	11	0.2	3	3	4	3	7
28140	0.4	24	2	14	69	1.4	70	6	5	25	54
28141	0.4	12	1	16	66	0.3					
28142	0.5	24	1	20	109	0.6					
28143	0.8	14	1	92	28	0.8					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28144	<0.1	16	2	89	20	0.3					
28145	<0.1	10	4	12	60	1.3					
28146	0.1	20	6	10	30	0.7					
28147	0.1	12	7	4	4	0.7					
28148	1.1	22	46	12	28	0.8					
28149	0.3	12	6	8	12	2.7					
28150	<0.1	20	8	4	8	2.6					
28151	1.7	16	7	16	11	1.6					
28152	0.6	40	13	28	90	1.5					
28153	0.6	32	14	20	78	1.8					
28154	<0.1	24	11	16	47	1.4					
28155	<0.1	28	6	24	96	0.5					
28156	0.1	28	13	44	117	1.0					
28157	<0.1	4	12	2	2	1.8					
28158	0.8	44	15	20	72	2.2					
28159	<0.1	32	7	8	30	1.1					
28160	0.4	26	5	16	51	0.7					
28161	0.7	20	2	20	72	0.3					
28162	0.4	28	2	12	92	0.3					
28163	0.6	28	2	20	151	0.4					
28164	0.5	24	2	16	132	0.4					
28165	0.2	20	2	10	125	0.3					
28166	0.2	16	2	20	136	0.4					
28167	0.2	42	2	18	167	0.7					
28168	0.2	18	2	24	169	0.4					
28170	0.2	24	2	12	80	0.7					
28171	0.6	36	4	24	227	0.7					
28173	0.7	34	3	32	208	0.2					
28174	0.1	12	2	12	100	0.2					
28175	1.6	24	2	24	257	1.3					
28177	0.3	16	1	4	29	0.1					
28178	0.8	12	2	8	18	0.2					
28179	0.2	16	2	89	16	0.1					
28180	<.1	4	1	36	16	0.2					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28289	0.2	4	1	4	11	0.7					
28290	1.4	12	1	12	49	1.3					
28291	0.2	20	1	44	78	0.8					
28292	0.3	20	1	16	65	0.4					
28293	0.3	24	1	36	90	0.3					
28294	0.4	8	1	6	17	0.2					
28295	0.5	16	1	24	102	0.1					
28296	0.3	20	1	16	81	0.2					
28297	0.1	24	1	14	79	0.4					
28298	0.6	24	1	22	77	0.4					
28299	0.8	20	1	140	79	0.4					
28300	0.2	19	2	32	83	0.3					
28301	0.1	20	2	20	61	0.4					
28302	<0.1	20	1	32	63	0.1					
28303	<0.1	12	1	30	28	0.1					
28304	0.3	24	1	40	66	1.7					
28305	<0.1	10	2	210	46	1.6					
28306	0.4	6	1	12	11	0.4					
28307	0.2	8	1	26	97	0.4					
28308	0.1	20	3	26	178	0.4					
28309	0.3	16	2	18	169	1.4					
28310	0.2	16	2	20	117	0.4					
28311	0.1	18	2	20	169	0.7					
28312	0.3	22	2	24	102	1.6					
28313	0.7	28	2	32	172	1.0					
28314	0.4	24	2	32	191	0.6					
28315	0.3	22	24	24	240	0.2					
28316	0.5	24	2	34	252	0.2					
28317	0.3	20	2	16	199	<1					
28318	0.2	16	1	16	229	0.4					
28319	0.2	12	2	20	120	0.3					
28320	0.5	16	3	20	358	0.6					
28321	0.5	26	3	26	200	0.4					
28322	0.4	16	3	60	97	0.4					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28323	5.1	96	24	42	437	3.2					
28324	0.6	36	6	52	59	1.0					
28325	0.7	16	7	48	46	1.4					
28326	5.2	96	55	48	526	1.7					
28327	0.9	870	2	50	760	10.0					
28328	1.0	22	6	84	119	2.5					
28329	1.1	16	1	72	93	0.7					
28330	0.2	14	2	350	77	3.9					
28331	0.5	16	4	208	101	0.5					
28332	<0.1	230	3	22	1153	6.5					
28333	0.3	24	2	32	107	0.3					
28334	0.1	42	4	80	142	0.5					
28335	0.2	24	9	36	78	0.2					
28336	0.1	34	2	44	91	0.8					
28337	1.5	12	6	26	368	2.3					
28338	0.5	8	6	30	34	0.7					
28339	1.1	32	8	42	86	1.8					
28340	0.4	28	10	58	85	1.6					
28341	<0.1	24	11	40	106	1.0					
29342	0.7	38	3	48	147	0.4					
28343	0.1	250	6	8	160	25.0					
28500	1.6	20	4	20	96	0.4					
28501	0.8	18	5	24	100	1.1					
28502	0.4	24	1	44	103	0.5					
28503	0.2	16	2	72	100	0.8					
28504	0.8	92	8	80	158	1.3					
28505	<0.1	26	4	440	272	1.3					
28506	0.1	32	3	72	198	1.1					
28507	0.1	34	1	54	202	0.8					
28508	0.4	16	2	48	130	1.1					
28509	0.3	16	2	32	191	0.4					
28510	0.2	12	1	24	204	0.7	18	7	8	35	125
28511	0.4	20	1	32	128	0.9	30	4	7	50	178
28512	0.2	10	2	24	70	0.4	13	5	7	33	181

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28513	0.5	16	2	26	97	0.8	20	4	6	30	117
28514	0.8	24	4	40	97	0.7	30	5	5	35	143
28515	0.6	16	5	26	88	0.4	19	3	6	30	121
28516	0.5	20	5	42	81	0.4					
28517	0.8	24	6	60	108	0.6					
28518	1.5	24	12	32	70	1.8					
28519	1.0	20	8	32	93	0.4					
28520	0.6	26	9	32	89	0.8					
28521	1.0	20	6	24	81	1.0					
28522	1.6	28	12	28	83	2.6					
28523	0.5	24	6	28	87	1.0					
28524	0.6	8	6	40	28	1.5					
28525	1.4	32	14	64	86	1.4					
28526	0.3	16	7	30	58	1.1					
28527	0.6	24	9	34	56	2.1					
28528	0.3	24	6	38	58	1.2					
28529	0.6	24	5	40	50	1.0					
28530	1.9	24	9	40	60	1.9					
28531	3.1	34	13	72	49	3.0					
28532	0.4	12	3	16	18	1.1					
28533	2.2	50	18	48	45	4.0					
28534	1.1	36	21	84	139	1.6					
28535	5.9	56	32	400	100	3.1					
28536	2.7	16	16	100	43	2.0					
28537	0.7	12	11	16	48	0.6					
28538	1.8	16	16	20	101	1.2					
28539	0.9	16	10	18	108	0.6					
28540	0.9	24	20	28	136	0.8					
28541	0.7	16	14	22	107	0.8					
28542	6.3	48	16	30	232	2.3					
28543	5.4	44	38	40	37	3.6					
28544	60.0	40	67	36	40	8.0					
28545	0.5	26	5	18	5	1.4					
28546	0.3	16	3	16	29	0.5					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28547	0.6	28	3	20	58	1.7					
28548	0.8	42	7	24	97	1.1					
28549	2.6	40	13	26	98	1.6					
28550	1.7	26	4	24	82	1.6					
28551	1.2	44	5	22	145	1.5					
28552	1.7	56	6	26	188	1.1					
28553	0.6	28	16	28	63	1.4					
28554	0.6	26	6	12	45	0.6					
28555	3.4	32	11	28	121	5.5					
28556	1.3	24	9	182	476	1.0					
28557	7.3	180	17	34	522	9.2					
28558	0.3	28	3	14	99	0.6					
28559	0.5	28	3	16	163	1.0					
28560	0.4	32	4	20	178	0.5					
28561	1.1	34	20	28	149	2.2					
28562	1.0	34	2	22	129	1.4					
28563	0.5	20	3	16	92	0.5					
28564	0.6	26	6	24	69	1.2					
28565	0.8	20	7	24	78	1.2					
28566	1.0	28	8	24	65	1.5					
28567	0.4	12	6	20	38	0.8					
28568	9.0	14	66	34	62	1.0					
28569	1.0	28	8	24	110	0.5					
28570	3.6	12	18	22	13	2.5					
28571	1.0	22	11	28	78	1.2					
28572	7.2	18	26	22	43	15.0					
28573	3.7	14	19	16	38	9.0					
28574	6.3	12	31	24	37	2.4					
28575	49.0	44	31	34	58	9.5	38	6	1	16	126
28576	2.0	16	26	28	82	1.2	12	7	<1	14	95
28577	25.0	44	24	24	11	5.7	20	3	<1	9	166
28578	49.0	22	50	132	23	17.5	60	5	<1	19	146
28579	1.3	8	9	20	32	1.1	12	4	<1	18	102
28580	0.7	16	14	30	37	2.4	22	3	<1	14	99

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28581	13.3	18	16	28	41	7.9					
28582	16.6	64	24	36	20	3.6					
28583	1.8	28	14	20	4	4.0					
28584	3.0	36	21	16	3	4.6					
28585	0.6	12	3	4	2	0.4					
28586	0.6	16	2	32	66	1.4					
28587	0.7	26	3	42	108	0.6					
28771	<0.1	4	1	8	92	0.4					
28772	0.1	10	1	12	163	0.6					
28773	0.2	10	1	12	205	0.6					
28774	0.1	4	1	8	100	0.1					
28775	0.1	20	1	12	128	0.2					
28776	0.4	20	1	16	167	0.6					
28777	0.1	40	2	16	181	0.3					
28778	0.7	28	2	20	150	0.3					
28779	0.2	16	3	20	100	0.2					
28780	0.4	20	6	38	107	0.3					
28781	0.2	8	3	40	78	0.3					
28782	0.2	14	7	42	107	0.4					
28783	0.4	20	6	188	129	1.0					
28784	0.3	12	5	60	80	0.1					
28785	0.4	22	3	116	151	0.9					
28786	0.4	20	3	30	62	1.0					
28787	0.6	30	7	72	104	1.2					
28788	0.2	16	3	42	60	0.4					
28789	0.2	12	2	26	43	0.2					
28790	10.2	60	36	900	31	4.2					
28791	2.5	44	39	56	48	2.2					
28792	0.5	40	6	48	50	1.6					
28793	6.8	72	18	40	68	3.8					
28794	2.2	64	4	20	132	0.6					
28795	0.8	64	4	44	189	0.6					
28796	0.6	60	2	28	182	1.0					
28797	1.3	115	3	20	378	0.9					

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28798	0.2	8	1	12	47	0.2					
28799	0.1	6	1	16	44	0.3					
28800	<0.1	20	2	16	101	0.1					
28801	<0.1	8	1	16	59	0.2					
28802	<0.1	4	1	8	32	0.5					
28803	0.1	16	2	22	174	0.4					
28804	0.3	14	2	20	220	0.6					
28805	0.2	20	2	16	141	0.7					
28806	0.2	32	1	32	236	2.9					
28807	0.2	16	2	36	88	<0.1					
28808	<0.1	20	2	16	153	0.2					
28809	0.1	8	2	16	213	0.2					
28810	0.4	16	1	24	157	0.4					
28811	0.2	20	2	20	118	0.7					
28812	0.8	24	2	22	102	0.8					
28813	0.3	32	2	16	160	0.3					
28814	0.6	20	2	30	119	0.6					
28815	0.2	8	1	44	213	0.3					
28816	0.2	16	1	16	115	0.3					
28817	1.1	28	2	72	182	1.1					
28818	0.8	28	2	124	120	0.8					
28819	0.7	28	2	68	102	1.4					
28820	1.2	24	6	96	98	1.0					
28821	0.3	6	3	36	100	0.6					
28822	0.8	14	2	184	91	3.0					
28823	0.5	16	5	285	73	2.7					
28824	0.5	18	11	814	180	2.0	63	6	4	28	88
28825	0.8	22	3	72	135	0.5					
28826	0.2	16	2	60	115	0.6					
28827	1.0	22	4	48	102	0.6					
28828	1.1	48	6	42	162	0.4					
28829	2.8	24	9	44	77	1.8					
28830	1.1	40	6	100	113	1.0	80	2	2	28	67
28831	0.7	8	13	40	33	0.8	15	2	1	11	56

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28832	3.5	44	148	52	946	0.9	30	5	32	200	92
28833	11.0	10,000	950	80	381	15.0					
28834	0.8	72	1	94	119	0.6	40	9	4	42	115
28835	1.3	64	10	136	158	1.4	70	4	4	90	33
28836	3.5	36	12	104	66	2.3					
28837	4.9	40	26	235	112	2.7					
28838	2.1	26	14	168	101	1.3					
28839	1.1	12	7	62	15	2.0					
28840	4.4	490	59	142	119	2.3					
28841	2.9	24	22	32	69	2.1					
28842	2.7	12	17	20	3	2.0					
28843	2.2	36	22	36	69	1.6					
28844	3.4	48	10	12	58	0.8					
28845	0.4	8	1	16	34	0.2					
28846	0.3	12	1	16	90	0.4					
28847	0.3	16	1	20	42	0.6					
28848	0.2	18	1	20	97	0.7					
28849	0.1	8	1	16	82	0.2					
28850	1.4	24	14	58	73	1.6					
28851	1.5	36	5	26	88	0.8					
28852	3.4	64	12	32	93	3.1					
28853	2.6	36	11	40	80	3.0					
28854	1.3	20	6	40	67	0.6					
28855	1.0	24	4	44	98	0.4					
28856	0.3	8	2	52	38	1.0					
28857	0.1	16	3	132	70	0.6					
28858	0.2	12	4	104	56	1.4					
28859	0.1	16	5	108	72	1.0					
28860	0.2	20	4	42	60	1.2	28	2	3	48	57
28861	1.6	32	4	24	90	1.2	20	6	4	38	45
28862	1.4	44	5	76	82	1.3	25	5	2	66	69
28863	2.0	104	610	12	322	0.2	780	5	<1	16	16
28864	1.3	12	6	22	20	1.1	20	23	3	55	68
28865	0.4	10	4	34	28	0.7	15	4	1	40	75

1981 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
28866	5.9	36	38	28	490	1.1	60	7	18	230	62
28867	1.8	180	136	36	746	3.3	400	7	58	233	43
28868	0.6	16	1	52	279	1.0	17	5	1	31	84
28869	<0.1	410	1	8	1663	4.0	7	4	1	8	9

1982 SOIL GEOCHEMISTRY

0830000	0.2	10	2	6	50	0.2
0830001	0.2	4	1	2	10	0.2
0830002	0.3	22	2	10	125	0.5
0830003	0.5	20	2	22	150	0.8
0830004	1.2	28	3	24	135	1.1
0830005	0.6	22	2	40	50	1.0
0830006	0.6	32	2	40	95	1.1
0830007	1.0	28	3	52	115	0.8
0830008	2.6	78	5	76	190	2.7
0830009	0.9	14	25	58	55	1.2
0830010	3.1	30	32	72	60	3.8
0830011	8.1	28	40	34	50	5.0
0830012	32.0	76	99	42	225	4.0
0820013	1.3	26	13	920	120	2.6
0830014	0.7	28	12	925	125	2.6
0830015	1.6	44	15	870	170	3.4
0830016	3.0	2500	245	52	90	>50.0
0830017	2.1	8800	710	62	340	38.0
0830018	2.8	2700	343	130	240	10.3
0830019	1.4	116	1185	44	440	0.7
0830020	0.9	88	362	56	1800	0.8
0830021	2.7	28	23	280	50	2.5
0830022	18.3	44	28	285	85	6.2
0830023	7.5	60	26	170	190	4.7
0830024	6.9	14	39	16	25	2.4
0830025	38.0	40	66	28	50	21.5
0931000	0.2	12	3	18	110	1.4
0831001	0	12	2	16	105	0.6
0831002	0	14	4	20	110	1.3

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0831003	0	10	1	4	5	0.1					
0831004	0	14	2	16	70	0.6					
0831005	0	8	2	16	20	0.3					
0831006	0.6	22	2	16	20	0.9					
0831007	0.2	20	1	6	80	0.5					
0831008	0.2	16	1	4	55	0.2					
0831009	1.0	24	3	32	40	0.3					
0831010	0.9	32	6	36	40	0.4					
0831011	0.3	12	2	28	40	0.3					
0831012	0.4	16	2	48	60	1.2					
0831013	0.2	14	2	20	50	0.2					
0831014	0.1	16	2	48	50	0.8					
0831015	0.3	12	14	16	20	1.2					
0831016	1.9	16	37	24	25	3.8					
0831017	4.8	26	29	16	40	4.5					
0831018	0.8	12	7	10	15	1.2					
0831019	0.1	10	9	22	25	0.8					
0831020	0.7	38	12	86	130	1.3					
0831021	1.6	34	16	52	105	1.4					
0831022	0.2	26	9	40	90	0.6					
0831023	0.7	26	8	34	95	1.0					
0831024	6.9	225	44	36	600	5.0					
0831025	0.3	22	7	48	65	1.1					
0831026	3.1	128	41	68	140	3.0					
0831027	1.1	22	25	136	40	1.4					
0831028	3.5	24	19	130	40	3.5					
0831029	0.5	18	19	22	100	0.5					
0831030	0.9	16	25	50	20	0.9					
0831031	0.7	54	8	24	25	0.7					
0831032	9.2	28	95	26	36	9.2					
0831033	0.3	14	10	12	25	0.3					
0831034	1.0	6	30	20	15	1.0					
0831035	7.4	16	81	30	10	7.4					
0831036	0.3	28	3	430	43	2.4					

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0831037	1.5	62	2	56	160	1.1					
0831038	0.2	28	3	74	56	0.4					
0831039	0.9	28	2	82	40	1.2					
0831040	4.9	36	5	56	81	1.4					
0831041	1.7	32	4	44	175	1.1					
0831042	1.2	28	3	165	32	3.8					
0831043	0.5	18	2	116	71	0.7					
0831044	0.9	26	3	235	130	1.5					
0831045	0.7	18	2	96	73	0.8					
0831046	<0.1	10	2	52	42	0.5					
0831047	0.3	14	2	120	43	0.8					
0831048	0.7	14	3	400	31	3.2					
0831049	0.9	20	3	92	79	1.4					
0831050	0.9	20	4	270	61	2.8					
0831051	0.7	32	3	0	135	0.8					
0831052	0.3	12	2	42	52	0.5					
0831053	0.3	18	3	96	82	1.2					
0831054	3.7	14	2	14	48	0.2					
0831055	0.7	18	2	110	72	0.4					
0831056	0.6	14	2	16	61	6.2					
0831057	3.2	18	2	12	68	0.4					
0831058	0.8	16	2	12	70	0.2					
0831059	1.1	12	2	6	60	0.4					
0831060	0.9	20	2	16	77	0.5					
0831061	0.5	22	2	4	20	0.4					
0831062	0.8	18	3	10	82	0.5					
0831063	1.3	28	3	10	93	1.0					
0832000	2.8	96	10	50	500	0.6					
0832001	2.6	24	2	20	135	0.1					
0832002	<0.1	24	3	12	59	0.6					
0832003	0.2	64	2	16	335	0.8					
0832004	0.1	28	2	12	65	2.1					
0832019	0.3	42	2	12	150	0.2					
0832020	<0.1	32	2	12	65	0.5					

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0832021	<0.1	10	2	6	190	0.2					
0832022	<0.1	12	2	6	80	0.2					
0832023	<0.1	12	2	12	80	0.2					
0832024	<0.1	6	2	8	100	0.2					
0832025	<0.1	10	3	6	80	0.1					
0832026	1.8	24	14	24	120	0.9					
0832027	1.8	42	9	14	205	3.6					
0832028	18.2	88	17	10	185	3.1					
0822029	19.0	60	12	14	60	5.5					
0832030	2.6	24	11	12	40	1.2					
0832031	13.4	26	10	28	65	5.0					
0832032	<0.1	16	10	18	55	.5					
0832033	18.8	38	22	28	66	5.5					
0832034	2.1	14	9	6	21	1.0					
0832035	2.7	20	15	10	31	2.9					
0832036	4.6	18	13	10	32	1.4					
0832037	4.4	32	18	16	88	1.2					
0832038	2.4	24	9	10	40	1.1					
0832039	1.1	88	5	68	67	0.8					
0832040	0.4	16	4	6	32	0.3					
0832041	1.1	14	2	4	29	0.2					
0832042	1.5	60	5	12	92	0.8					
0832043	1.2	22	6	10	70	0.6					
0832044	0.7	52	6	16	67	0.6					
0832045	2.3	92	5	10	59	0.6					
0832046	0.3	26	3	4	27	0.3					
0832047	0.4	40	3	12	55	0.2					
0832048	<0.1	80	2	16	120	0.7					
0832049	<0.1	52	3	10	100	0.2					
0832050	<0.1	60	2	8	71	0.2					
0832051	<0.1	20	3	4	41	0.3					
0932052	0.1	38	7	1	48	0.4					
0832053	<0.1	32	6	10	38	0.4					
0832054	0.6	56	7	16	60	0.8					

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0832055	0.3	44	9	12	53	0.8					
0832056	0.6	44	9	14	48	1.0					
0832057	0.2	16	2	8	42	0.3					
0832058	0.3	59	6	18	78	0.7					
0832059	<0.1	36	4	8	115	0.3					
0832060	0.1	64	2	8	78	0.2					
0832061	1.2	32	3	8	50	0.3					
0832062	3.4	62	4	12	40	0.1					
0832063	2.2	130	24	10	73	0.5					
0832064	2.0	56	13	78	180	0.3					
0832065	2.4	32	7	38	90	0.8					
0832066	1.7	24	4	16	54	0.4					
0832067	0.4	26	3	20	49	0.5					
0832068	1.9	44	4	20	75	1.1					
0832069	2.8	76	2	16	88	0.4					
0832070	2.6	14	12	44	22	1.1					
0832071	1.7	16	5	52	28	1.0					
0832072	2.0	18	8	96	20	1.0					
0832073	3.8	20	7	24	20	1.2					
0832074	1.9	58	5	92	51	1.2					
0832075	1.2	32	4	18	59	1.1					
0832076	0.9	76	3	24	115	0.4					
0832077	0.7	115	2	24	110	0.7					
0832078	<0.1	105	2	22	125	0.8					
0832079	<0.1	64	2	8	60	0.3					
0832080	0.2	52	2	18	67	0.4					
0832081	0.6	28	2	16	46	0.4					
0832082	0.7	40	2	18	54	0.3					
0832083	1.9	38	3	22	62	0.5					
0832084	<0.1	135	2	28	155	0.5					
0832085	0.7	44	4	16	50	0.2					
0832086	1.0	28	4	20	51	0.2					
0832087	0.4	88	2	32	190	0.2					
0832088	0.9	26	3	12	47	0.4					

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0833000	<0.1	16	2	10	40	0.5					
0833001	<0.1	34	3	16	90	0.4					
0833002	<0.1	16	2	18	60	0.6					
0833003	<0.1	20	2	14	85	0.7					
0833004	<0.1	14	2	16	70	0.2					
0833005	0.6	18	2	24	70	0.7					
0833006	0.7	16	2	80	60	0.6					
0833007	1.5	18	2	14	90	0.4					
0833008	1.3	14	2	12	70	1.0					
0833009	0.5	16	3	12	75	0.9					
0833010	0.7	24	2	20	125	0.6					
0833011	0.4	22	5	48	100	1.2					
0833012	1.1	18	2	46	90	0.4					
0833013	1.3	28	3	270	50	3.1					
0833014	0.5	20	3	150	80	4.0					
0833015	0.4	42	3	52	40	0.6					
0833016	0.1	12	2	22	30	0.3					
0833017	0.1	20	2	24	35	0.8					
0833018	0.2	14	3	16	35	0.7					
0833019	0.2	14	9	28	50	1.6					
0833020	0.3	26	3	10	55	0.3					
0833021	0.3	10	2	6	20	0.1					
0833022	1.3	20	3	24	65	0.3					
0833023	5.2	22	3	28	75	0.4					
0833024	3.6	20	3	24	65	0.2					
0833025	3.4	32	3	40	95	0.6					
0833026	1.1	28	2	26	80	0.3					
0833027	3.0	20	2	14	60	1.1					
0833028	0.8	26	3	22	70	0.5					
0833029	1.9	12	3	18	30	0.5					
0833030	0.6	10	4	24	20	1.2					
0833031	3.7	12	11	32	10	1.9					
0833032	0.2	3	3	2	5	0.5					
0833033	1.8	20	14	20	40	3.8					
0833034	2.0	16	8	18	30	4.3					

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0833035	2.2	28	6	14	15	1.1					
0833036	1.6	24	5	16	30	0.4					
0833037	2.1	16	6	150	10	3.6					
0833038	5.6	36	20	28	65	1.4					
0833039	2.2	40	6	28	60	0.9					
0833040	0.3	27	4	22	55	0.8					
0833041	0.6	16	5	40	80	1.8					
0833042	12.6	28	22	16	40	1.4					
0833043	0.7	12	15	20	25	0.6					
0833044	2.1	16	14	20	45	0.3					
0833045	2.6	20	22	16	30	1.4					
0833046	2.5	18	52	20	25	3.1					
0833047	5.2	16	12	16	40	2.3					
0833048	0.3	16	23	20	30	0.8					
0833049	0.7	24	15	22	75	1.0					
0833050	0.1	20	13	16	55	2.2					
0833051	2.4	34	11	28	85	1.8					
0833052	10.0	46	31	28	45	8.2					
0833053	<0.1	10	4	10	10	0.4					
0833054	<0.1	18	8	18	50	7.3					
0833055	<0.1	24	9	16	16	1.7					
0833056	0.1	24	7	10	65	2.6					
0833057	1.9	30	5	12	80	0.7					
0833058	0.4	16	2	12	80	0.2					
0833059	0.8	16	2	6	40	0.3					
0833060	0.7	18	2	12	165	0.4					
0833061	1.1	32	6	14	180	0.8					
0833062	<0.1	66	6	20	60	1.1					
0833063	<0.1	132	4	24	110	0.1					
0833064	<0.1	106	2	22	100	0.4					
0833065	<0.1	86	3	28	110	0.3					
0833101	1.4	52	4	40	60	0.6					
0833102	0.7	44	4	34	58	0.5					
0833103	0.3	24	2	22	47	0.7					

1982 Soil Geochemistry, con't
All values in parts per million

Sample No.	U	Cu	Mo	Pb	Zn	Ag	As	W	Co	Ni	Cr
0833104	1.0	14	5	92	27	0.7					
0833105	0.3	18	6	72	53	0.6					
0833106	0.5	84	3	40	70	0.3					
0833107	<0.1	10	7	135	22	0.8					
0833108	7.5	52	7	125	32	1.6					
0833109	3.4	28	6	115	11	2.4					
0833110	0.9	14	6	275	6	2.0					
0833111	1.8	18	7	20	12	1.6					
0833112	1.3	12	3	8	8	1.0					
0833113	1.4	22	6	16	27	1.5					
0833114	0.7	24	2	12	25	0.4					
0833115	0.1	16	6	16	19	1.9					
0833116	0.3	18	2	10	20	2.3					
0833117	5.6	36	24	12	20	2.4					

APPENDIX C

STATEMENT OF COSTS - 1981

Labour

R. Robertson, Area Geologist @ $140/day	
-2 field days plus 1 day report preparation	$ 420.00
P. Van Angeren, Project Geologist @ $110/day	
-13 field days plus 3 days report preparation	$ 1,760.00
R.S. Morrison, Senior Assistant @ $80/day	
-12 field days	$ 960.00
M. Fortier, Intermediate Assistant @ $75/day	
-11 field days	$ 825.00
A. Malnasi, Junior Assistant @ $55/day	
-12 field days	$ 660.00
Total Labour Costs	$ 4,625.00

Helicopter

Hughes 500-D helicopter on contract from Liftair International, Calgary	
-17.8 hours @ $379/hour	$ 6,746.20
-fuel estimated @ 25 gal/hour @ $1.87/gal	$ 832.15
Total Helicopter Costs	$ 7,578.35

Analytical Costs

35 silt samples @ $8.25/sample	$ 288.75
343 soil samples @ $8.25/sample	$ 2,829.75
39 soil samples @ $20.15/sample	$ 785.85
Total Analytical Costs	$ 3,904.35

Food, Camp Supplies and Field Equipment

Food costs estimated at $20/man-day (50 man-days)	$ 1,000.00
Camp Supplies and Field Equipment estimated at -$20/day, (12 days) -includes truck rentals, during mobilization and demobilization	$ 240.00
Total Food, Camp Supplies and Field Equipment Costs	$ 1,240.00
TOTAL EXPENDITURES, 1981	$17,347.70

STATEMENT OF COSTS - 1982

Labour

D.A. Sketchley, Supervisor @ $150/day -3 field days	$ 450.00
P. Van Angeren, Project Geologist @ $120/day -9 field days plus 1 report preparation	$ 1,200.00
J. Haase, Senior Assistant @ $90/day -9 field days plus 1 map preparation	$ 900.00
C. Evert, Intermediate Assistant @ $77/day -7 field days	$ 539.00
M. Laing, Junior Assistant @ $58/day -7 field days	$ 406.00
Total Labour Costs	$ 3,495.00

Helicopter Costs

Hughes 500-D on contract from Can West Helicopters, Calgary -6.2 hours @ $450/hour	$ 2,790.00
-Fuel estimated @ 25 gal/hour @ $2.00/gal	$ 310.00
Total Helicopter Costs	$ 3,100.00

Analytical Costs

248 soil samples @ $9.30/sample	$ 2,306.40
Total Analytical Costs	$ 2,306.40

Food, Camp Supplies and Field Equipment

Food estimated at $20/man-day (35 man-days)	$ 700.00
Equipment and Supplies @ $20/day (9 days)	$ 180.00
Total Food, Camp Supplies and Field Equipment Costs	$ 880.00

Drafting and Secretarial Costs

Map Preparation (est.)	$ 650.00
Typing (est.)	$ 100.00
Total Drafting and Secretarial Costs	$ 750.00

TOTAL 1982 COSTS	$10,531.40
TOTAL 1981 COSTS	$17,347.70
GRAND TOTAL	$27,879.10

APPENDIX D

STATEMENT OF QUALIFICATIONS

I, PHIL D. VAN ANGEREN, of the City of Calgary in the Province of Alberta hereby certify:

That I am a geologist employed by AGIP Canada Ltd. and I caused to be performed the work described in this report.

That I obtained a Bachelor of Science degree with Honours in Geology from McGill University in Montreal in 1977.

That I have been engaged in mineral exploration on a full-time and part-time basis for eight years, four of which have been in the Yukon Territories and British Columbia.

Signed at Whitehorse, Yukon Territory, this 30th day of July, 1982.

Phil D. Van Angeren

133° 20'

14237 14236 14235 14234 14233 14232 14231 14230

CARIBOU CREEK

14481 14482 14480 14483 14479 14478 14484 14485 14486 14487

DRILL CREEK

61° 22'

BIG SALMON RIVER

14097 14096 14095 14094 14093

14651 14650 14649 14648 14647 14646 14645 14644 14643 14642 14641 14640

BARB (1-48) CLAIM BOUNDARY

BARB 49-72

0 500 Metres

LEGEND

CARBONIFEROUS-PERMIAN (Anvil Allochthon)

- 3 Massive Greenstone and Tuff

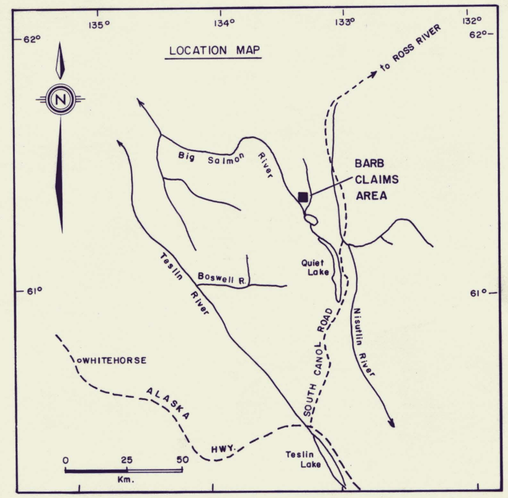
DEVONIAN-MISSISSIPPIAN

- 2c White Quartzite
- 2b Black Shale, Slate, Argillite
- 2a Chert Pebble Conglomerate and Greywacke
- 1 Micaceous Quartzite

SYMBOLS

- Limits of Outcrop
- Geological Contact (defined, approx., inferred)
- Fault (defined, inferred from Airphoto)
- Thrust Fault (defined, approx.)
- 25 Bedding, tops unknown (inclined)
- 25 Foliation, Cleavage
- Trace of Graphitic black Shale Horizon
- X Radiometric Anomaly (125-250 cps on URTEC UG 135)

LOCATION MAP



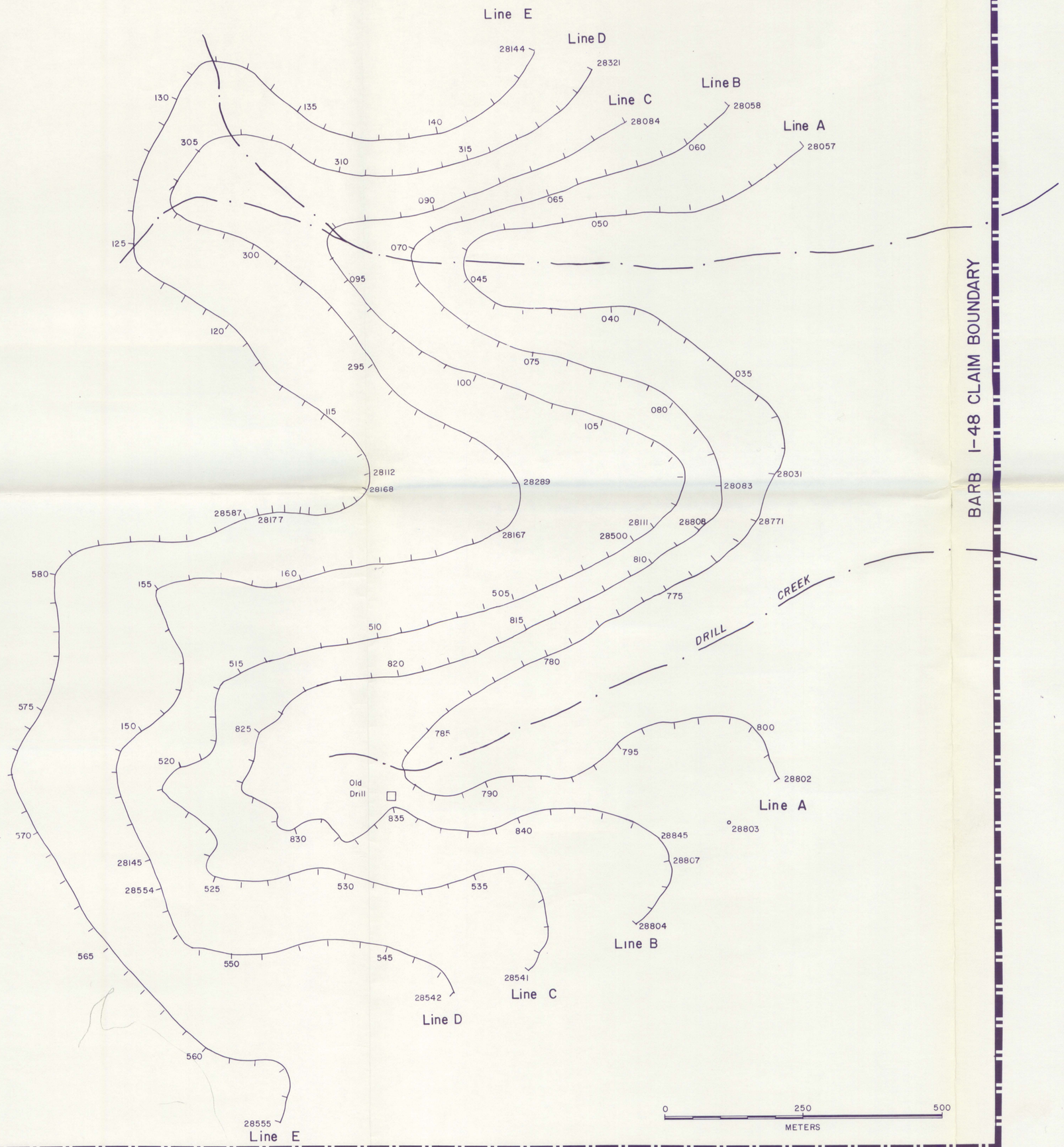
AGIP CANADA LTD.

091078

BARB CLAIMS 1-48
YUKON

GEOLOGY AND STREAM SEDIMENT SAMPLE LOCATIONS (1981)

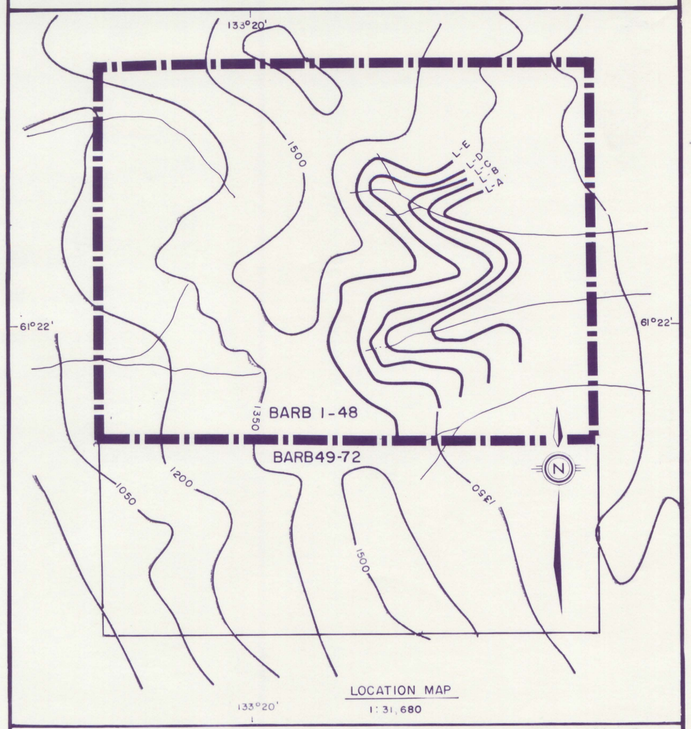
SCALE: 1:10,000	AUTHOR: PDvA	DATE: JUNE, 1982	
DRAWN BY: G.T.Sz.	N.T.S.: 105-F-6	FIGURE: 2	



BARB 1-48 CLAIM BOUNDARY

LEGEND

Sample location and number 28058 — Soil sample



LOCATION MAP
1:31,680

091078

1981 Soil Sample Locations

SCALE: 1 : 5,000

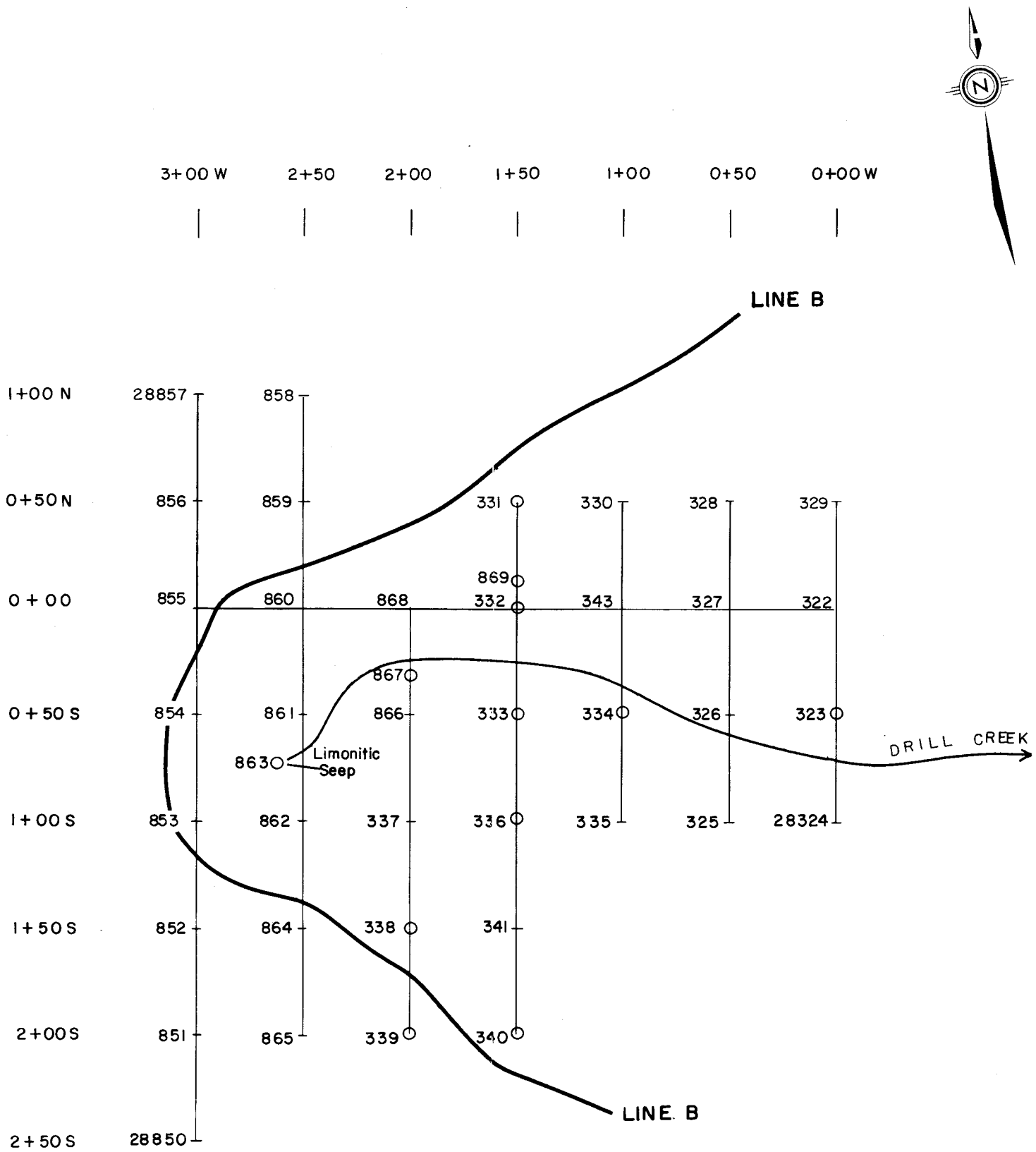
PROJECT:

BARB CLAIM 1-48

YUKON NTS 105 F/6

AGIP CANADA LTD.

PROJECT NO.	
SURVEYED BY	PDvA
DRAWN BY	J. B.
DATE	JULY, 1982
APPROVED	
FIGURE	3



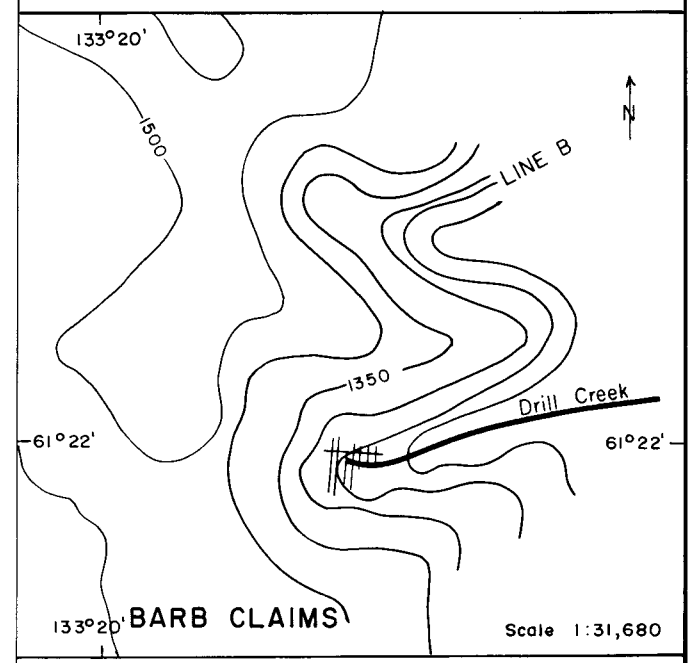
341 Soil sample

Soil sample containing hematite "cement"

091078

0 50 100

METRES



AGIP CANADA LTD.

BARB CLAIMS
1-48
1981 SOIL GRID

Scale: 1:2500	NTS: 105 F/6	Date: July, 1982
Author: P.D.v.A	Drawn by: G.T.SZ.	Figure: 4

LEGEND

31005 • Soil Sample Location and Number

P-1 □ Pit Location and Number

▲ Campsite Location

Stream

CARIBOU CREEK

DRILL CREEK

BARB 1-48 CLAIM BOUNDARY

30000
30001
30002
30003
30004

30005
30006
30007
30008

30009
30010
30011
30012

30013
30014
30015

30016
30017
30018

30019
30020

030021
030022
030023

030024
030025

0 100 200 m.

LOCATION MAP
1:31,680

AGIP CANADA LTD.

BARB CLAIMS 1-48
091078
YUKON

1982 SOIL SAMPLE LOCATIONS

SCALE: 1:5,000	AUTHOR: PDvA	DATE: JULY, 1982
DRAWN BY: GTSz	N.T.S.: 105 F-6	FIGURE: 5