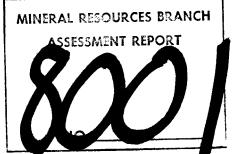
Title:	Geochemical Jana Proper	Report on the		
Claims:	Jana 1195	5(1) (12 units))	
	Reverted	Crown Grants		
	Royal B.Fr.	797(5)	Royal 5	805(6)
	Lion No. 7	789(5)	Royal 4	806(6)
	Royal 1	791(5)	Royal 7	807(6)
	Royal 2	792(5)	Royal 6	808(6)
	Royal 8	793(5)	Royal A.Fr.	809(6)
	Royal 9	794(5)	Royal C.Fr.	810(6)
	Royal 10	795(5)	Unicorn #6	802(6)
	Royal 11	796(5)	Lion 1	788(5)
	Trail 2	801(6)	Bulldog 7	790(5)
	Royal	803(6)	Unicorn #4	800(6)
	Royal 3	804(6)		
Mining Division:	Lillooet			
NTS Location:	50°42' 122°38'	92J/11/12 10E		
Owner:	W.A. Cook			
Operator:	Hillside En	ergy Corporation	i .	
Consultants:	Nevin Sadli	er-Brown Goodbra	and Ltd.	
Authors:	D.J. Brownl B.D. Fairba	ee, Geologist nk, P.Eng.		
Dates Work Done:	May 5 - May	12, 1980		
Submitted:				ANCH

Sec. Be allowed

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SUMMARY

Nevin Sadlier-Brown Goodbrand Ltd. conducted a geochemical survey of the Jana Property, Lillooet Mining Division, on behalf of Hillside Energy Corporation. This report is for submittal under Mineral Act Regulations to apply assessment work.

The Jana Property consists of Jana, Lion No. 7, Royal 1 to 11, Trail 2, Royal A.Fr. to C.Fr., Unicorn 6 and 4, Lion 1, Bulldog 7 claims. The property is located at latitude $50^{0}42'$ and longitude $122^{0}38'$.

A total of 105 soil, 9 silt, and 4 rock samples were collected on a grid over 1.5 by .6 kilometres, with a 50 metre sample interval. The samples were analyzed for gold and zinc, with one line (4E) being analyzed for arsenic and tungsten as well.

A 1:200 scale drawing was compiled showing the results of the survey in a graphical form. Also a 1:200 scale plan was prepared showing the gold and zinc values contoured at 120, 200, and 500 ppm for the zinc and 10 ppb for the gold values.

The zinc values showed a good correspondence to the gold values attained and should be a useful exploration tool in the area.

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- 3.3 Discussion
- 3.4 Conclusions

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1.0 INTRODUCTION

1.1 Terms of Reference

Nevin Sadlier-Brown Goodbrand Ltd. was retained by Hillside Energy Corporation to carry out a geochemical sampling survey on the Jana property in the Lillooet Mining Division, B.C. The field work was performed during May, 1980 by D. Brownlee and D. Yurkiw. This report describes the results of this project as required for submission to the Ministry of Energy, Mines and Petroleum Resources under Mineral Act Regulations respecting assessment work.

1.2 Location and Access

The property is located at latitude 50⁰42' and longitude 122⁰38', 15 kilometres southeast of Bralorne, B.C. and at the junction of Standard and Cadwallader Creeks (Drawing 1). Access is by 4-wheel drive vehicle from Bralorne.

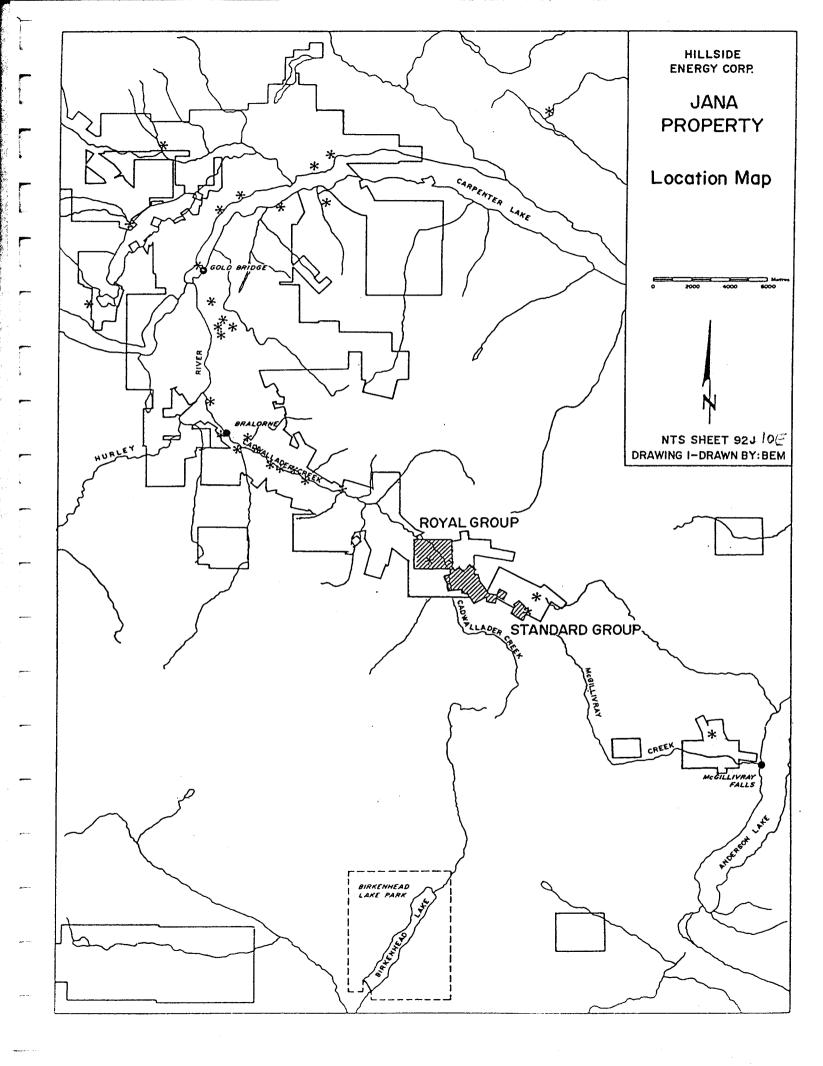
1.3 Terrain

The property is located in the Bendor Range of the Coast Mountains, of British Columbia. The local relief is up to 900 metres. The drainage is dendritic in pattern and semi-seasonal in nature. The vegetation consists mainly of mixed balsam, fir, pine and spruce with alder in the avalanche runs. Outcrop is abundant at higher elevations but lower slopes are largely overburden covered.

1.4 Property

The property consists of the Jana MGS claim and two groups of reverted Crown grants, the Royal and Standard groups. The Royal Group consists of eighteen contiguous claims, with the Standard Group consisting four contiguous claims (Drawing 2): The Jana claim is owned by Hillside Energy and the others are held by the company under the terms of an option agreement with W.A. Cook of Lillooet, B.C.

A list of claim names and record numbers is as follows:



Claim	Record No.	Unit
Royal Group:		
Jana	1195	12
Royal B.Fr.	797	1
Lion No. 7	789	1
Royal 1	791	1
Royal 2	792	1
Royal 8	793	1
Royal 9	794	1
Royal 10	795	1
Royal 11	796	1
Trail 2	801	1
Royal	803	1
Royal 3	804	1
Royal 5	805	1
Royal 4	806	1
Royal 7	807	1
Royal 6	808	1
Royal A.Fr.	809	1
Royal C.Fr.	810	1
Standard Group:		
Unicorn #6	802	1
Lion 1	788	1
Bulldog 7	790	1

1.5 Previous Work

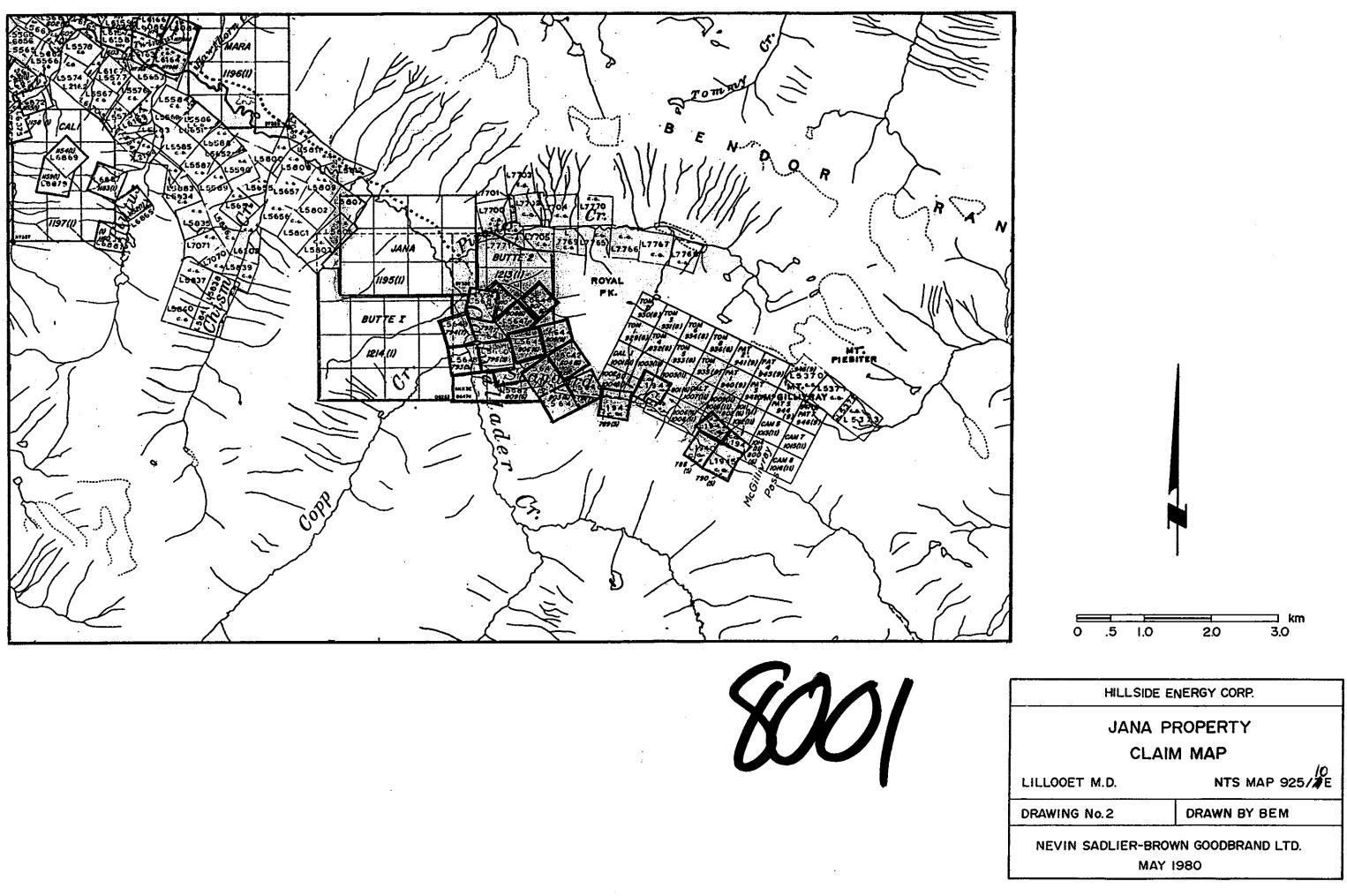
Unicorn #4

Gold was discovered on Cadwallader Creek in 1896 and by the mid 1930's the district had become one of the most productive in western Canada. The earliest record of work on the Jana property dates to 1932 when Cadwallader Gold Mines Ltd. obtained the Royal Group of claims situated at the junction of Standard and Cadwallader Creeks. Exploration work continued to about 1934 and included trenching and the driving of a short cross cut adit located 46 metres below the road (Drawing 3). Also at this time Standard Gold Mines Ltd. acquired property in McGillivray Pass and in 1932 extended the road from the

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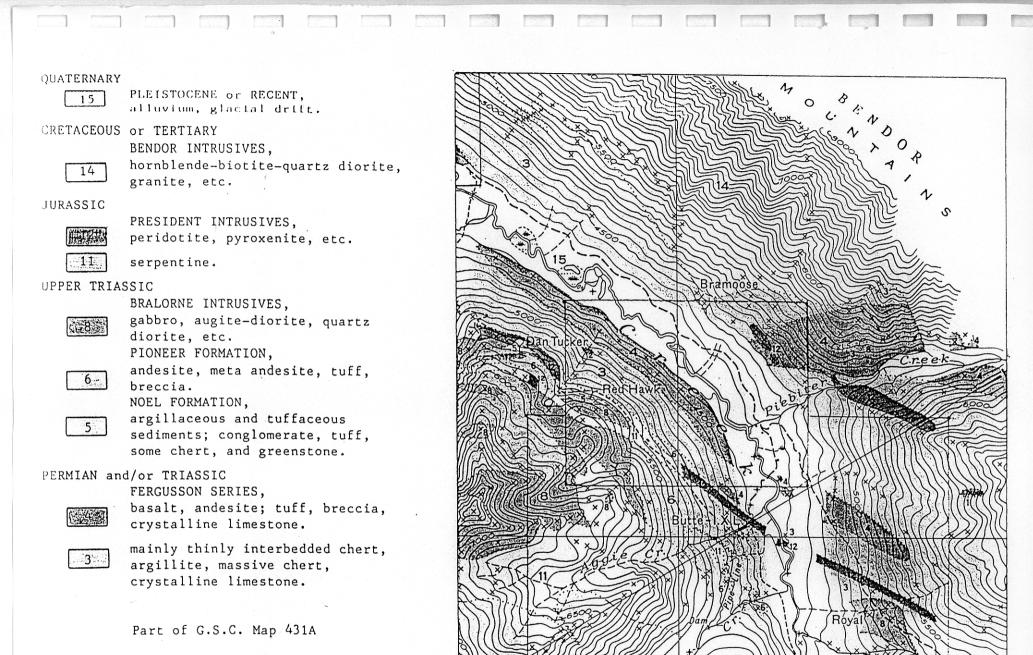
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CADWALLADER CREEK AREA

by C.E. Cairnes, 1934-35

GEOLOGY OF THE COOK OPTION AREA Scale - 1 inch = 1/2 mile

Drawing 3

14

Pioneer mine up to this property. During the period 1932-35 a number of open cuts and trenches were completed and a crosscut adit 200 metres long was driven on the property. A smaller 5 metre adit was driven 1150 metres farther down the creek.

The area has been mapped in detail by Cairnes in 1934 (GSC Map 431A) and later at a 1:250 000 scale by G. Woodsworth (GSC Open File 482).

1.6 Work Completed

A total of 105 soil, 9 silt, and 4 rock samples were collected on the Jana property during the week of May 5th 1980. At this time a 1.5 by 0.6 kilometre grid was laid out on the west slope of Royal Peak.

On May 6th 1980 a reconnaissance prospecting and geochemical survey was carried out on the Standard Group. The work, however, was impeded by snow conditions.

2.0 GEOLOGY

The Royal property is underlain mainly by rocks of the Bridge River Group, a triassic ophiolitic sequence and the oldest rocks in the general area (Drawing 3, Table 1). Bridge River sedimentary and volcanic rocks are locally cut by the Bralorne Intrusives, principally augite porphyry, and by the President Intrusives. The latter are represented here by a 60 metre wide dike of serpentinite which trends across the property in a northwest-southeast direction. Several dioritic and/or feldspar porphyry dikes were observed cutting the older rocks.

The Standard property is underlain primarily of peridotite and serpentinite which comprise the President Intrusives in that area.

3.0 GEOCHEMICAL SURVEY

3.1 Sampling Rationale

The geochemical soil survey was intended to test for gold and, in addition, to identify other metal which might be geochemical

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- 3 -

Quaternary	Pleistocene and Recent	Alluvium and glacial drift.
Cretaceous or Tertiary	Bendor Intrusives	b) Hornblende-biotite-quartz diorite, some granite, granodiorite and diorite.
		a) Porphyritic diorite, feld- spar porphyrite, hornblende porphyrite, felsite, aphanite.
	Bralorne Intrusives	Soda granite; gabbro, augite diorite, quartz diorite, meta diorite.
Jurassic	President Intrusives	Serpentine, peridotite, diorite.
Triassic and/or Jurassic	Hurley Formation	Argillaceous and tuffaceous sediments in part calcareous; limestone, conglomerate, tuff, lava flows.
	Pioneer Formation	Andesite, meta-andesite, tuff, breccia.
	Noel Formation	Argillaceous and tuffaceous sediments, conglomerate, tuff, breccia; some chert and green- stone.
Triassic and/or Jurassic or older (Permian?)	Fergusson Series/ Bridge River Group	Basalt, andesite; limestone, interbedded chert and argillite, massive chert.
Palaeozoic?		Metasedimentary rocks, etc.

indicators for gold in this region. Stevenson (1947) stated that gold was generally found when sulphides were present in the veins and only rarely if they were not. Pyrite, chalcopyrite, arsenopyrite, sphalerite and galena are the main sulphides present. Scheelite tends to occur in most gold bearing veins in addition to the sulphides.

All samples collected on the grid were tested for gold and zinc and on one line for arsenic and tungsten in addition.

3.2 Sampling Procedure

Survey lines were laid out along the slope at 200 metre spacings using a hipchain and compass. Sample interval was 50 metres.

Overburden in the region consists of a partially developed A horizon on a wooded slope cut by avalanche runs overgrown with alder. The B horizon consists of a medium brown, clayey soil well developed over the whole slope except in the avalanche runs.

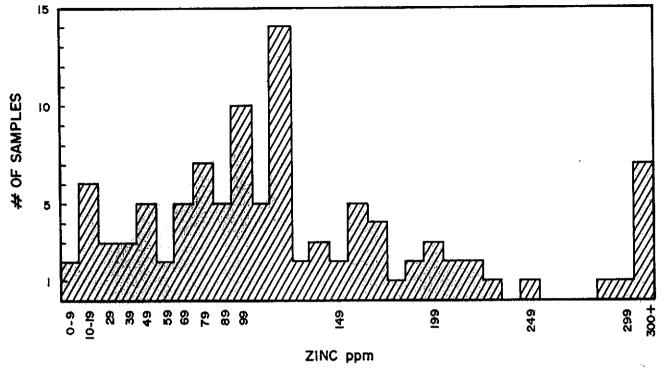
The samples were taken with grub hoes from the B horizon. They were placed in paper envelopes and shipped to Chemex Laboratories of North Vancouver for analysis.

3.3. Discussion

Drawing 4 shows the soil geochemical results in a graphical form for each line. Arsenic and tungsten was run on line 4 east only, and shows no correlation with the gold values obtained.

Zinc values on the south portion of the grid show a reasonable correlation with gold values. A histogram of the zinc content shows a marked change at 120 ppm; this value is used as the threshold value from background to anomalous zinc in soil (Figure 1). The zinc values are contoured at 120, 200 and 500 ppm zinc and shown along with the 10 ppb gold contour in Drawing 5. The contouring of these values was influenced by the northwest-southeast structural trend in the region, taking into consideration the downslope vector of groundwater and soil movement.

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HILLSIDE E	NERGY CORP.						
JANA PROPERTY							
# SAMPLES PER ZINC CONC.							
LILLOOET M.D.							
FIGURE No. 1 DRAWN BY BEM							
NEVIN SADLIER-BRO	•						

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The gold values attained are situated on, and upslope from the anomalous zinc values, confirming the applicability of using zinc as a pathfinder of gold in this area.

Drawing 6 shows the results of the silt and rock geochemical samples which were taken on the grid, as well as the arsenic and tungsten values obtained on line 4 east. A rock sample taken from an outcrop of metasedimentary rock at OE, 4+50N near a plug of (Bralorne?) diorite was geochemically analyzed and gave 40 ppb Au. Rock sample #55594A was taken from a northwest striking 1.5 metre wide quartz vein.

3.4 Conclusions

There are two main zinc anomalies, one centred on 4+00S Line 6E and the other situated at the south end of Lines 4E and 6E. The former is a broad weak anomaly extending northwest to approximately Line 3E and south to 4+50S. The anomaly situated at the south end of Lines 6E and 4E appears to be two small anomalous zones which trend to the northwest. This zone is about half the size as the northern anomaly but is two to three times stronger.

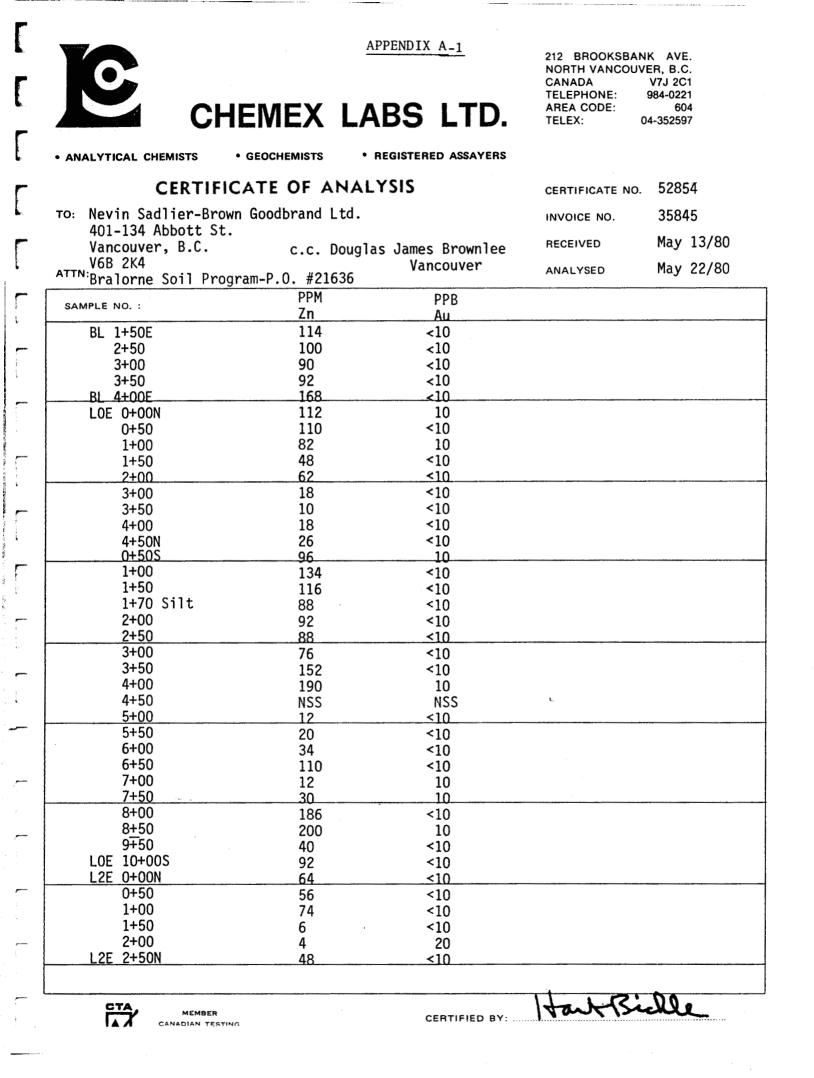
To the north of the baseline gold values, also trending northwest, have no associated anomalous zinc. These occur southeast and upslope from an outcrop of (Bralorne?) diorite.

Respectfully submitted

D.J. Brownlee, Geologist

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B.D. Fairbank, P.Eng.





APPENDIX A-2

CHEMEX LABS LTD.

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 984-0221 TELEPHONE: AREA CODE: 604 04-352597 TELEX:

ANALYTICAL CHEMISTS

GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Nevin Sadlier-Brown Goodbrand Ltd. то: 401-134 Abbott St. Vancouver, B.C. V6B 2K4

Vancouver c.c. Douglas James Brownlee RECEIVED

CERTIFICATE NO. 52855 INVOICE NO. 35845

ANALYSED

May 13/80

May 22/80

ATTN: Bralorne Soil Program-P.O. #21636

SAMPLE NO.	:	PPM	PPB	PPM	PPM
		<u>Zn</u>	<u>Au</u>	As	W
L2E	3+00N	64	10		
	0+255	86	< 10		
	0+50	110	10		
	1+00	114	< 10		
	1+50	72	< 10		
	2+00	110	10		
	2+50	108	< 10		
	3+00	126	< 10		
	3+50	102	< 10		
	4+00	128	< 10		
	4+50	114	< 10		
	5+00	96	< 10		
	5+50	154	< 10		
	6+00	142	10		
	6+50	32	< 10		
	7+00	28	≺ 10		
	7+50	78	< 10		
	8+00	114	< 10		
	8+45 Silt	680	< 10		
	8+50	70	< 10		
·····	9+00	48	< 10		
	9+25 Silt	200	< 10		
	9+50	184	10		
L2E	10+005	18	< 10		
	0+50N	92	10		1
	1+00	94	10	51	1
	1+50	76	< 10	20	2
	2+00	56	20	30	1
	2+50	88	< 10	26	9
	3+00	66	20	28	2
	3+50	64	< 10	27	3
	4+00	46	< 10	5	1
	4+50N Silt	30	< 10	90	1
	0+50S	92	10	11	2
		245	20	35	3
	1+00	166	10	<u> </u>	2
	1+50	134	10		3
	2+00			20	3
	2+50	225	< 10	15	4
- • -	3+00	196	< 10	24	2
L4E	3+505	156	< 10	57	<u> </u>



Hart Bielle CERTIFIED BY:



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APPENDIX A-3

CHEMEX LABS LTD.

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 984-0221 AREA CODE: 604 TELEX: 04-352597

· ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIF			o. 52856	
Nevin Sadlier-Brow 401-134 Abbott St			INVOICE NO.	35845
Vancouver, B.C.	c.c. Douglas Ja	RECEIVED	May 13/80	
V6B 2K4 ^{TN:} Bralorne Soil Pro		ancouver	ANALYSED	May 22/80
AMPLE NO. :	РРМ	PPB	PPM	PPM
	Zn	Au	As	W
L4E 4+00S	210	<10	51	1
4+50	74	<10	17	2
5+00	80	10	4	1
5+50	108	<10	23	3
6+00	152	<10		1
6+50	114	<10	10	2
7+00	144	<10	16	4
7+50	290	10	7	4
7+50 Silt	88	<10	32	3
8+00	100	10	16	1
9+ 00	885	<10	40	3
L4E 9+31S	205	<10	41	7
L6E 0+50S	110	<10		
0+77 Silt	116	<10		
1+50	98	<10		
2+00	108	10		
2+50	168	<10		
3+00	300	<10		
3+50	370	<10		
4+00	400	10		
4+40 Silt	455	10		
4+50	176	<10		
5+00	198	<10		
5+50	154	<10		
6+00	138	20	<u></u>	
6+50	112	<10		
7+00	168	<10		
7+50	210	<10		
8+00	280	<10		
9+12	1200	<10		
9+12 Silt	1600	<10		
9+ 50	365	<10		
L6E 10+00S	645	<10		
65801 Silt	144	<10		

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APPENDIX A-4

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 984-0221 AREA CODE: 604 TELEX: 04-352597

CERTIFICATE NO. 52857

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO:						INVOICE NO. 35755			55	
	401 - 134 Abbott St. Vancouver, B.C. ROCK			1 677 6		RECEIVED	May	13/80		
	V6B 2K4	, 2.0.	•		E.	UGKS				
ATTN		James	Brownlee		P.O.	#21901		ANALYSED	мау	15/80
SAM	PLE NO. :		PPB	PPM W						
555	90A		<u>Au</u> 40	W			i			
555		<	10	1			×.			
555			10	1						
555			10	1						1
555			10							
555	95	<	10							
555			10							
555			10							
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555			10							
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		мемве				CERTIF	IED BY:	Harts	in	0.
		ANADIAN TI	ESTING							~~

APPENDIX B

Soil Geochemistry Analytic Method

- PPM Arsenic: A 1.0 gram sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digested is acidified, reduced with Kl and mixed. A portion of the reduced solution is converted to arsine with NaBH₄ and the arsenic content determined using flameless atomic absorption. Detection limit - 1 PPM
- PPM Tungsten: 0.50 gram sample is fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten in complexed with toluene 3,4 dithiol and extracted into an organic phase. The resulting color is visually compared to similarly prepared standards. Detection limit - 2 PPM
- <u>PPM Zinc:</u> A 1.0 gram sample portion of sample is digested in conc. perchloric-nitric acid $(HC10_4-HNO_3)$ for approx. 2 hrs. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Zinc is determined by atomic absorption techniques.
- <u>PPB Gold:</u> 5 gram samples ashed @ 800^OC for one hour, digested with aqua regia - twice to dryness - taken up in 25% HCL⁻, the gold then extracted as the bromide complex into MIBK and analyzed via A.A. Detection limit - 10 PPB

Note: Samples are dried and run through 80 mesh prior to above.

APPENDIX C

ITEMIZED COST STATEMENT

Fees:

D.J. Brownlee, Geologist, 7 days, @ \$225/day, May 5-11,1980	\$ 1575
D. Yurkuw, Soil Sampler, 5 days, @ \$100/day, May 5-9,1980	500
	\$ 2075

Disbursements:

r

79 soil samples, analyzed for Au and Zn @ \$5.40/sample426.607 silt samples, analyzed for Au and Zn @ \$5.40/sample37.8026 soil samples, analyzed for Au,As,W, and Zn @ \$12.15/sample315.902 silt samples, analyzed for Au,As,W, and Zn @ \$12.15/sample24.308 rock samples, analyzed for Au @ \$3.75 and \$2.00 prep/sample46.003 rock samples, analyzed for Au and W @ \$7.50 and \$2.00 prep/sample28.50\$879.10

 Food for 7 days, May 5-11, 1980
 \$150

 Tent and Camp equip., 7 days, \$25/day, May 5-11, 1980
 \$175

 4x4, 7 days, \$25/day, May 5-11, 1980, plus 850 Km @ 12¢/Km
 \$277

 \$602
 \$175

Total \$ 1481.10

GRAND TOTAL \$ 3556.10

APPENDIX D

REFERENCES

Cairnes, C.E., 1934:

, 1943:

Joubin, F.R., 1948:

McCann, W.S. 1922:

Nichols, H.G., 1932:

O'Grady, B.T., 1937:

Woodsworth, G.J., 1977:

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Lode gold deposits, Minto City vicinity, Bridge River camp, in Part F, Western Mineral Survey District (No. 6); Annual Report of the Minister of Mines of the Province of British Columbia for the year ended 31st December, 1936.

Geology of Pemberton Map Area (92J); Geol. Surv. Can. Open File 482.

APPENDIX E-2

QUALIFICATION OF THE AUTHOR

I, Brian D. Fairbank, hereby certify that:

- 1. My residence address is 342 West 15th Street, North Vancouver, B.C., V7M 185
- 2. I am a geologist by occupation with the firm of Nevin Sadlier-Brown Goodbrand Ltd., 401-134 Abbott Street, Vancouver, B.C., V6B 2K4
- 3. I hold a B.A.Sc. in Geological Engineering from the University of British Columbia. I have been practicing my profession since 1973, and I am a member of the Association of Professional Engineers (Geological) of the Province of British Columbia
- 4. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy
- 5. I have reviewed the work and data described in this report personally
- 6. I am currently the owner of 1000 shares of Hillside Energy Corporation.

antale

B.D. Fairbank, P.Eng.

APPENDIX E-1

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QUALIFICATION OF THE AUTHOR

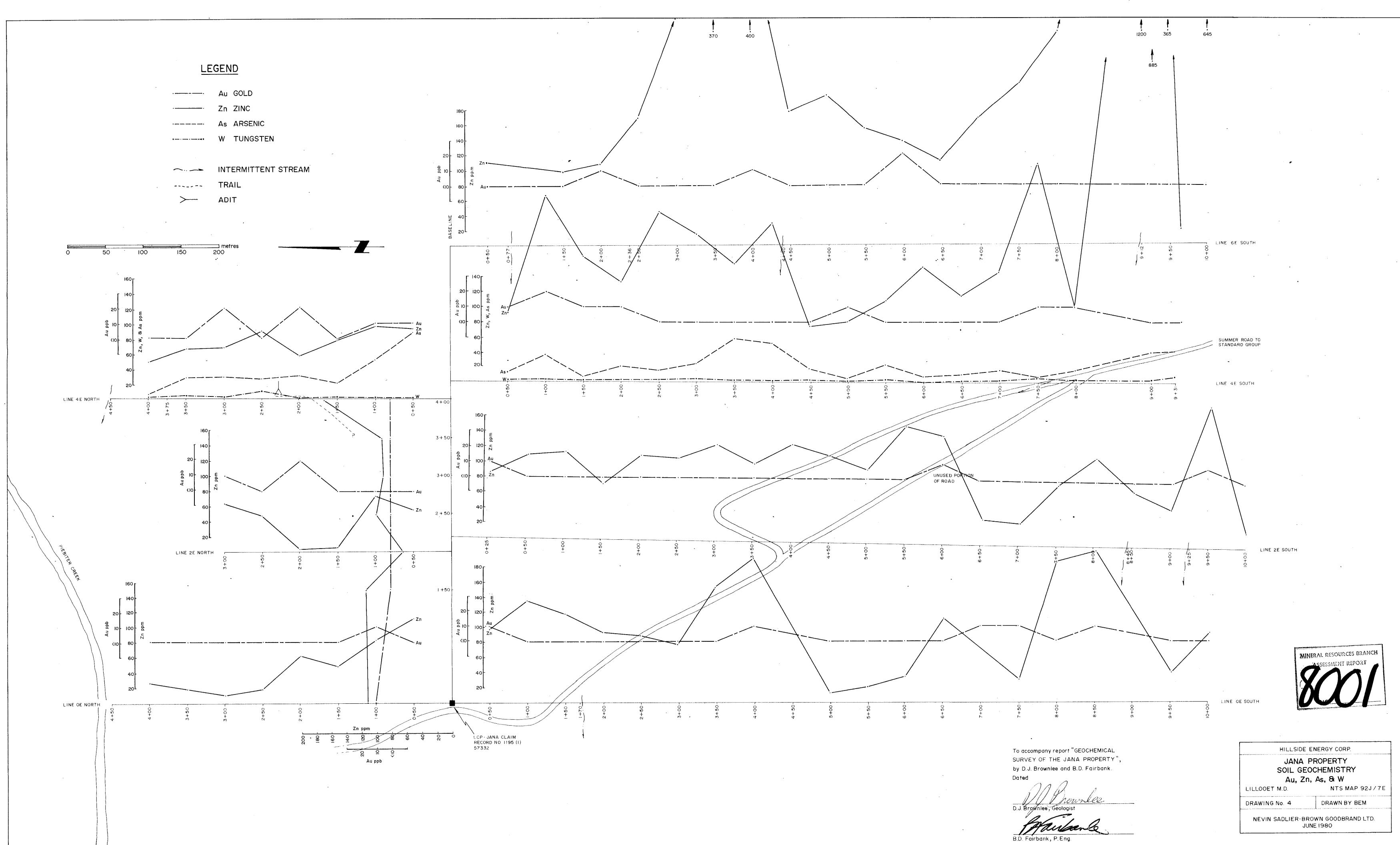
I, Douglas J. Brownlee, hereby certify that:

 My residence address is 206 - 1330 Bute Street, Vancouver, B.C., my office address is 4th Floor -134 Abbott Street, Vancouver, B.C., V6B 2K4; and that I am a Geologist by occupation

 I have completed all requirements for a B.Sc. (specialization) in Geology, and expect to receive my degree from the University of Alberta in June, 1980. I have been practicing my profession since January, 1980

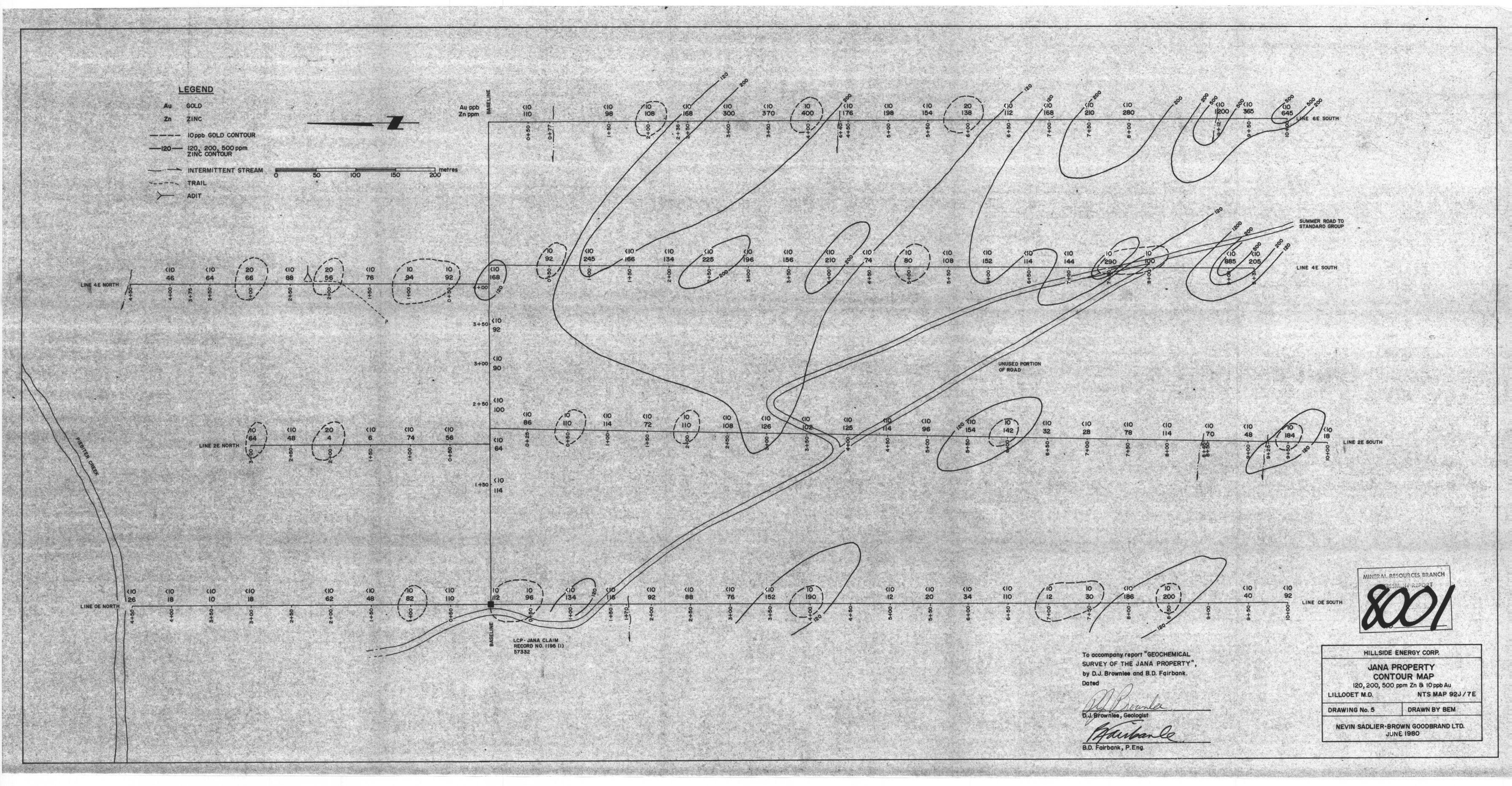
3. I conducted the geochemical work described in this report.

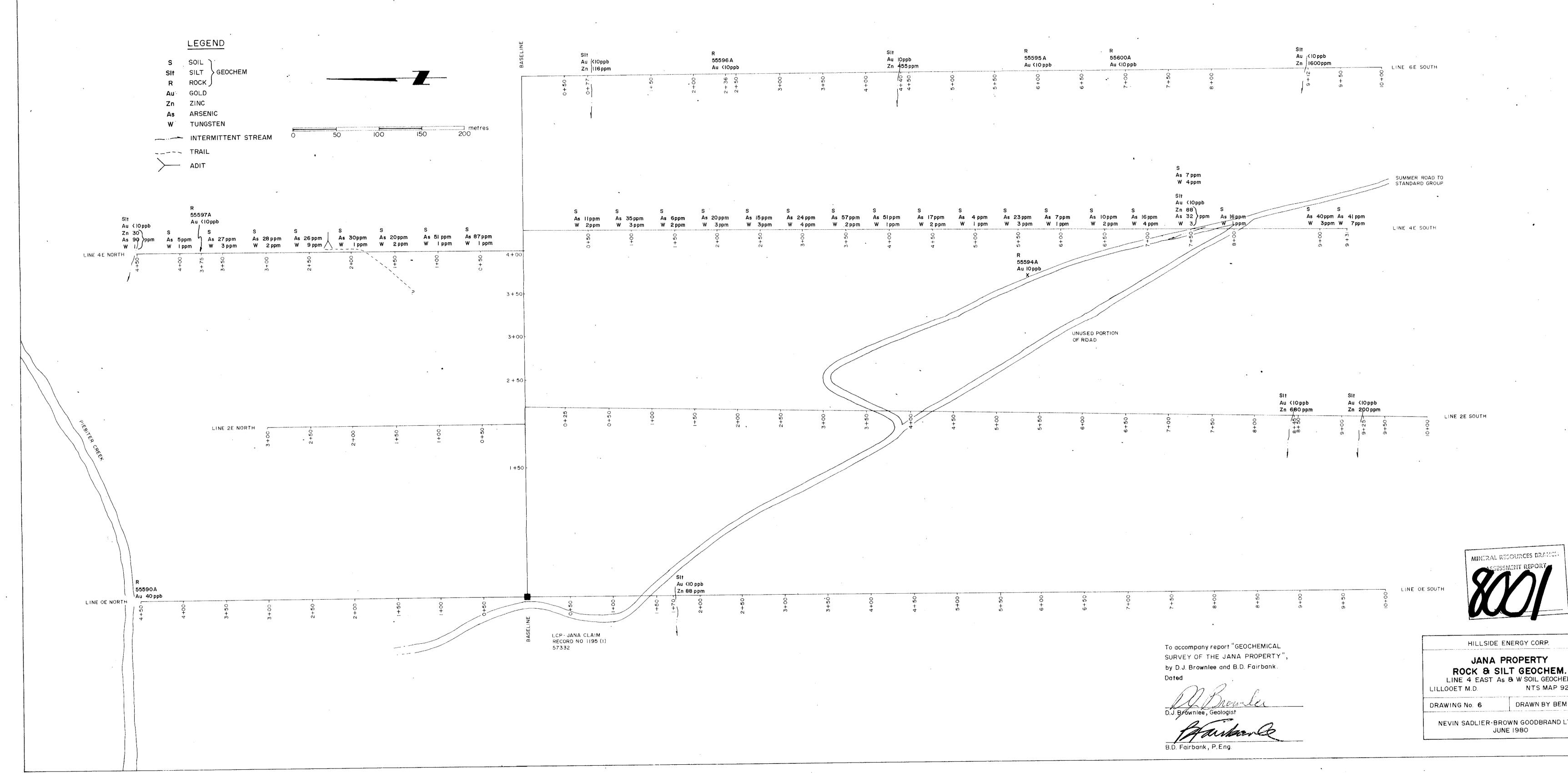
Douglas J, Brownlee, Geologist



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5 B

ROCK & SILT GEOCHEM. LINE 4 EAST As & W SOIL GEOCHEM. NTS MAP 92J/7E DRAWN BY BEM NEVIN SADLIER-BROWN GOODBRAND LTD. JUNE 1980