

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.06.16

ASSESSMENT REPORT 17493

MINING DIVISION: Atlin

PROPERTY: Reef
LOCATION: LAT 59 35 05 LONG 133 37 24
UTM 08 6605762 577746
NTS 104N12E

CLAIM(S): Reef
OPERATOR(S): Homestake Min. Dev.
AUTHOR(S): McIvor, D.F.
REPORT YEAR: 1988, 17 Pages

GEOLOGICAL

SUMMARY: Permo-Pennsylvanian Cache Creek Group volcanics and Permian ultramafic intrusive rocks have structural contacts with associated hydrothermal alteration (silicification, carbonatization) containing sporadic quartz veins weakly anomalous in gold.

WORK
DONE:

Geological
GEOL 350.0 ha
Map(s) - 1; Scale(s) - 1:2000
LINE 22.5 km
ROCK 5 sample(s) ;ME

LOG NO: 0627

RD.

ACTION:

FILE NO:

FILMED

SUMMARY REPORT; GEOLOGICAL MAPPING AND
LITHOGEOCHEMICAL SAMPLING PROGRAMS
ON THE REEF CLAIM, EZ VENTURES PROPERTY
(WEST GROUP OF CLAIMS)

ATLIN MINING DIVISION
BRITISH COLUMBIA

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

17,493

NTS: 104N.12E
LATITUDE: 59° 35' NORTH
LONGITUDE: 133°38' WEST
OWNER: HOMESTAKE MINERAL DEVELOPMENT COMPANY LTD.
OPERATOR: HOMESTAKE MINERAL DEVELOPMENT COMPANY LTD.
BY: DUNCAN MCIVOR
DATE: JANUARY 1988

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2. ICP GEOCHEMICAL DATA

1. SUMMARY

The Reef Claim is situated 4 kilometers east of the town of Atlin, in northwestern British Columbia. During the period June through October 1987, as part of a large exploration effort in the Atlin area, Homestake Mineral Development Company Ltd. established 22.5 line-kilometers of cut-line grid on the property, from which geological mapping and lithochemical sampling programs were conducted.

The mapping program discovered only two small areas of outcrop exposure, along the shores of Pine and Spruce Creeks. Encountered lithologies included serpentinized ultramafic and andesite, with minor occurrences of feldspar porphyry dyke rocks. There is insufficient outcrop exposure to allow interpretation of the property geology, although regional airborne magnetic data suggest that the majority of the ground is underlain by massive homogeneous andesites of the Cache Creek Group.

Five rock samples were collected from the property during mapping, and analyzed geochemically for Au and via ICP for a suite of 30 elements. Only one sample, from andesite containing 10% thin carbonate stringers, returned even weakly anomalous gold values, that being 69 ppb Au.

2. INTRODUCTION

2.1 Scope of Report

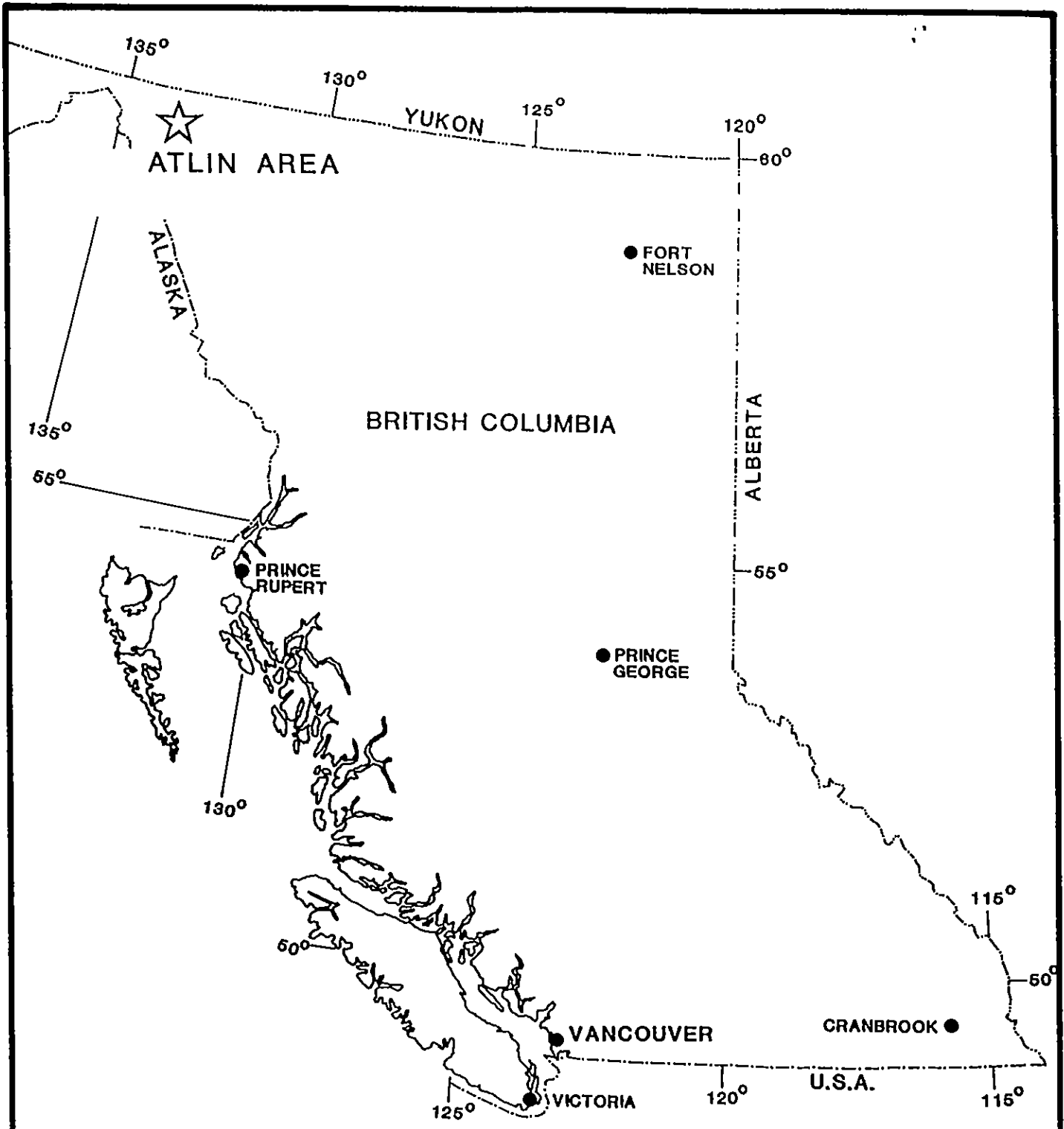
This report briefly summarizes the exploration work conducted by Homestake Mineral Development Company Ltd., on portions of the Reef Claim during the period June through October 1987.


2.2 Location, Access and Physiography

The Reef Claim is located 4 kilometers due east of the town of Atlin, in northwestern British Columbia (see Figures 1 and 2). Access to the property is excellent, with several 4WD bush roads extending west from the Spruce Creek Road and crossing the property. The portion of the Reef Claim on which work was performed this year is bounded on the north by Pine Creek, and to the south and west by Spruce Creek. The majority of the claim is overlain by a thick mantle of fluvial and glacial sediments, and outcrop exposure constitutes less than 1% of the property area. The majority of this exposure is along the two aforementioned creeks. The claim is densely wooded, with mature spruce and jackpine the most common vegetation. Relief on the property is by local standards low, with perhaps a maximum of 30 meters difference between the creek valleys and higher plain between the creeks.

2.3 Land Status

The 20 unit Reef claim is part of a larger group of claims (collectively known as the West Group), all of which are in good standing until late 1988.



HOMESTAKE MINERAL DEVELOPMENT COMPANY			
ATLIN PROJECTS BRITISH COLUMBIA			
LOCATION MAP			
DRAWN KMc	DATE 11/87	FILE CODE 104N/11;12	map 1
Revised _____			

2.4 General Geologic Setting

The Reef claim lies near the western edge of the northwest trending "Atlin Terrane", which is underlain by Upper Paleozoic oceanic crustal rocks (Monger, 1975). These rocks are correlated with the Cache Creek Group rocks of southern and central British Columbia.

Within the Atlin Terrane, andesitic to basaltic flows are overlain by cherts and thick shallow water carbonate rocks. Discordant granitic plutons, ranging in age from Late Jurassic to early Tertiary, locally intrude the stratigraphy. Some remnant Tertiary volcanics and sediments are found within the area.

Also within the Atlin Terrane, and co-eval or immediately post dating the Cache Creek group rocks, are large ultramafic bodies which define a discordant belt trending west across the tectonic fabric of the terrane. The ultramafic bodies are commonly intensely serpentinized, and in places extensively hydrothermally altered to a listwanite-like assemblage of silica-carbonate-mariposite/fuchsite.

The Reef claim is believed to be underlain predominantly by rocks of the Cache Creek Group (andesitic to basaltic flows, with minor intercalated meta-sediments), with some intrusive ultramafic rocks in the extreme north and south portions of the property. Figure 3, illustrates the general geology of the Atlin area, and the location of the Reef Claim within that geologic setting.

2.5 Preliminary Economic Assessment

The majority of known lode gold mineralization within the Atlin Camp is associated with intensely altered (silica-carbonate-mariposite/fuchsite) ultramafic rocks proximal to their fault bounded or intrusive contacts with rocks of the Cache Creek Group.

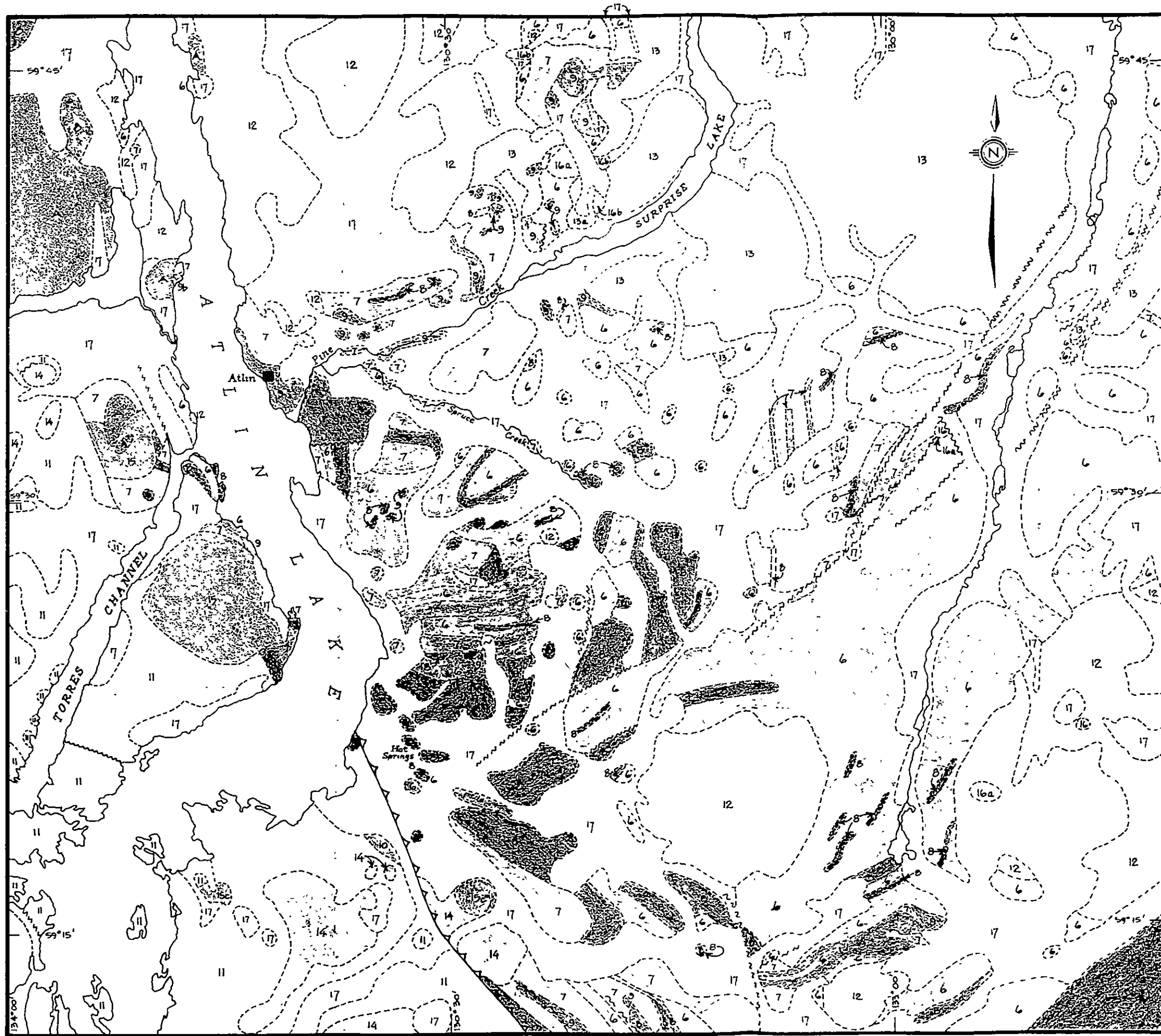
The mineralization is almost exclusively hosted in quartz quartz-carbonate veins and vein stockworks within these altered packages of rocks, occurring either as often spectacular free gold, or in intimate association with gangue sulphides such as pyrite, chalcopyrite, arsenopyrite, sphalerite, galena, and sulfosalts (pyrargyrite, tetrahedrite).

The Reef claim, in as much as it is believed to be underlain by contacts between ultramafic rock in the north, and Cache Creek rocks through the central portion of the property, may host areas of hydrothermally altered ultramafics along these contacts, which may in turn host potentially auriferous quartz/quartz-carbonate vein stockworks.

The Reef Claim lies 5 kilometers west and along strike from Homestake's Yellowjacket zone of gold mineralization, which is hosted in a geological environment similar to that discussed above.

2.6 Exploration History

Prior to acquisition by Homestake Mineral Development Company Ltd., no recorded work has been filed on the claim.



LEGEND

- CENOZOIC**
- QUATERNARY**
- PLEISTOCENE AND RECENT
- 17 GLACIAL DRIFT ; ALLUVIUM
- TERTIARY AND QUATERNARY**
- 16 OLIVINE BASALT AND SCORIA ;
16a TERTIARY 16b PLEISTOCENE
- TERTIARY (?)**
- 15a QUARTZ MONZONITE 15b GRANOPHYRE
15c GABBRO AND DIORITE
- CRETACEOUS OR TERTIARY**
- 14 SLOKO GROUP
ANDESITE BASALT, ALBITE TRACHITE,
ALBITE RHYOLITE, DACITE AND RELATED
PYROCLASTIC ROCKS ; CONGLOMERATE,
SANDSTONE
- CRETACEOUS**
- 13 ALASKITE
- JURASSIC (MAY BE IN PART OLDER OR YOUNGER)**
- 12 COAST INTRUSIONS
UNDIFFERENTIATED GRANITIC ROCKS
- JURASSIC**
- 11 LABERGE GROUP
VOLCANIC GREYWACKE, SILTSTONE,
MUDSTONE, SHALE, CONGLOMERATE
- TRIASSIC**
- 10 GREYWACKE, CHERT, ARGILLITE, CONGLOMERATE,
TUFF, SLATE, GREENSTONE,
IMPURE LIMESTONE, JASPER
- PALEOZOIC**
- PENNSYLVANIAN AND PERMIAN**
- ATLIN INTRUSIONS ; META-DIORITE AND META-GABBRO ;
SERPENTINITE ; CARBONITIZED SERPENTINITE ; TALC-BEARING (STEATITIZED) ULTRAMAFIC ROCKS
- CACHE CREEK GROUP
8. LIMESTONE AND LIMESTONE BRECCIA
7. GREENSTONE AND VOLCANIC GREYWACKE ;
DERIVED AMPHIBOLITE ;
MINOR 6 AND 8
6. CHERT, ARGILLITE, CHERT-PEBBLE CONGLOMERATE AND CHERT BRECCIA ;
QUARTZITE AND SCHIST ; MINOR 7 AND 8
- UNDIFFERENTIATED, MAINLY VOLCANIC ROCKS OF UNCERTAIN, POSSIBLY SEVERAL, AGES.
- N, W FAULT (ASSUMED, APPROXIMATE)
- W W W FAULT (DEFINED)
- ▲▲▲ FAULT (THRUST)
- GEOLOGICAL CONTACT

HOMESTAKE MINERAL DEVELOPMENT COMPANY

ATLIN PROPERTIES
BRITISH COLUMBIA
REGIONAL GEOLOGY

0 20 40 60 80 100km
1:253,440

DRAWN KMC	DATE	FILE CODE
Revised		104N/12

2.7 Work Completed to Date

During the period June through October 1987, the following work was completed by Homestake (HMDC) on the property;

- 22.5 kilometers of grid were cut on the property, to facilitate geological mapping.
- geological mapping, at a scale of 1:2000 was completed on the property.
- 5 samples were collected from the property and analyzed for 30 elements via ICP, and for Au via standard fire assay and A.A. methods.

The details of this work are outlined in the next section of this report.

3. DETAILED TECHNICAL DATA

3.1 Geological Mapping

3.1.1. Methods Employed

As mentioned, 22.5 line-kilometers were cut on the property, to provide control for geological mapping and any potential future work. The grid was an extension of the Yellowjacket grid bordering the property to the east, and involving extending a baseline 2 kilometers across the southern portion of the claim. Baseline orientation was 070°/250°, from which crosslines at 340°/160° were established at 100 meter intervals. Stations were established at 20 meter intervals along each cross-line.

In the course of mapping, all encountered outcrops were physically tied into the grid, and their perimeters followed via hip-chain and compass. This provided very accurate establishment of outcrop locations.

Detailed notations as to outcrop lithology, structural orientation, and the presence or absence of any significant alteration, veining, and mineralization were made in the field.

All pertinent topographic and geomorphic features were also accurately tied into the grid.

The geology map of the property, at a scale of 1:2000, appears in Appendix 1 of this report.

3.1.2. Results

Lithologies

Outcrop exposure on the property constituted less than 1%, occurring only sporadically along Pine Creek in the north and Spruce Creek in the South. Four lithologies were encountered during mapping, and below are brief descriptions, their numbers corresponding with those of the map legend in Appendix 1.

Unit 2 - Serpentinized Ultramafic

This unit occurs as a very fine grained to aphanitic, predominantly massive bright green to black, strongly serpentinized rock, the serpentine content varying from approximately 30% to 100%. The rock weathers a characteristic tan to buff colour, and is generally very strongly magnetic. The unit is in places porphyritic, with small 2-3mm weakly steatized pyroxene crystals which stand out in relief on weathered surfaces.

Where weakly sheared (see map), talc alteration increases at the expense of serpentine.

Unit 5 - Feldspar Porphyry

This lithology outcrops as thin dykes cutting andesites in the northeast corner of the property. The rock is comprised of an intermediate, massive, very fine grained to aphanitic groundmass with a highly variable phenocryst content, from nil to 20%. Phenocrysts are predominantly euhedral to subhedral white plagioclase.

Unit 9 - Andesite

This unit, which outcrops along both Spruce and Pine Creeks, is believed to underlie the majority of the property. It is characteristically massive, dark green, aphanitic, and uniformly unspectacular.

Unit 12 - Argillite/Graywacke/Quartzite

In the northeast corner of the property, a thin wedge of fine grained pink granular quartzitic appearing rock cuts a serpentinized ultramafic outcrop. This may either be a broken and rafted "xenolith" of quartzite, or a recrystallized felsic dyke.

Structural/Stratigraphic Setting

The poor exposure on the property makes interpretation of the structural and stratigraphic relationship of the property geology difficult, but based on what outcrop is present, and the regional magnetic data, it would appear that;

- the majority of the property is underlain by a thick pile of intermediate (andesitic) volcanics of the Cache Creek Group. Regional orientation of these volcanics, based on aeromagnetic data and observed orientations elsewhere in the Atlin area, is predominantly east-west, with vertical to sub-vertical dips.

This volcanic package has been locally intruded by ultramafic rocks to an unknown extent, as there is insufficient ground exposure or detailed magnetometer coverage to allow delineation of these units.

3.2 Lithochemical Sampling

3.2.1. Methods Employed

In the course of mapping, 5 bedrock samples were collected from the property, and forwarded to Acme Analytical Laboratories in Vancouver for 30 element geochemical ICP analysis. All samples were also geochemically analyzed for gold by standard fire assay and atomic absorption methods.

Obviously, the purpose of the sampling program was to evaluate the economic potential of the property, and all exposures containing any form of alteration, mineralization or veining were sampled. In addition to the gold analyses, the wide spectrum of elements analyzed for by the ICP method provides some very useful trace element geochemical data. Gold mineralization in the Atlin camp is often associated with highly elevated contents of Cu, Zn, Pb, Sb, As, Cd and Ag, all of which are part of the ICP package. Elevated contents of these elements, even in the absence of gold anomalies, may serve as pathfinders to gold mineralization.

The ICP geochemical analytical results appear in Appendix 2 of this report. All sample locations are plotted on the enclosed geology map (Appendix 1), followed by the sample gold content in ppb.

3.2.2. Results

Of the five samples collected during mapping, only one returned even weakly anomalous gold values, that being;

Sample EZ-33226

A grab sample of andesite in the northeast corner of the property, which locally contained 5-10% thin carbonate stringers with 1% disseminated pyrite, returned an assay of 69 ppb Au and 0.5 ppm Ag. This area of exposure warrants a more vigorous sampling program to assess the significance of the weakly anomalous gold value.

All other samples returned insignificant Au and associated trace element values.

4.0 ITEMIZED COST STATEMENT AND ALLOCATION OF EXPENDITURES

4.1 Itemized Cost Statement

The following expenses were incurred as a direct result of the exploration work described in this report.

1) <u>Linecutting Costs</u>		
22.0 kilometers @\$375.00 per kilometer, (as invoiced by Eaglehead Exploration)	\$8,250.00	
2) <u>Salaries and Wages</u>		
<u>Duncan McIvor:</u> (Report Preparation)		
1 day (December 6, 1987)		
@\$115.00/day	\$ 115.00	
<u>Joanne Bozek:</u>		
5 days (August 3-6, 11, 1987)		
@\$85.00/day	\$ 425.00	
<u>Phil Southam:</u>		
4 days (August 3-6, 1987)		
@\$85.00/day	\$ 340.00	
	<u>SUB TOTAL</u>	\$ 880.00
	+20% BENEFITS, ETC.	<u>176.00</u>
	<u>TOTAL</u>	<u>\$1,056.00</u>
3) <u>Analytical Costs</u>		
5 samples, analyzed for Au & 30 additional elements, @\$14.25/sample	\$ <u>71.25</u>	
4) <u>Food and Accommodation Costs</u>		
@\$35/day per man x 9 man days	\$ <u>315.00</u>	
5) <u>Transportation Costs</u>		
Fuel and Maintenance on Vehicles		
@\$25/day x 5 days	\$ <u>125.00</u>	
6) <u>Miscellaneous Field Equipment Costs</u>		
- flagging tape, toposil, sample bags, etc.	\$ <u>50.00</u>	
	<u>TOTAL EXPENDITURES</u>	<u>\$9,867.25</u>

4.2 Allocation of Expenditures

These costs were all incurred and are all allocated to the Reef Claim (2334), part of the "West Group" of claims. Application of these expenditures to claims of the West Group is as outlined on the Statement of Exploration and Development.

<u>CLAIM</u>	<u>REC. NO.</u>	<u>UNITS</u>	<u>REC. DATE</u>	<u>ALLOCATION</u>
REEF	2334	20	11/07/84	\$9,867.25

DMc/mm

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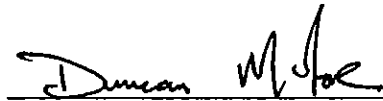
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AUTHOR'S QUALIFICATIONS

I, Duncan Forbes McIvor, do hereby state that;

- I am a graduate of the University of Waterloo, and hold an Honours Bachelor of Applied Science degree.
- I have been practising my profession as an exploration geologist on a full time basis since 1982.
- I have personal knowledge that all information presented in this report is true and accurate.


Duncan McIvor

RTB

GEOCHEMICAL ICP ANALYSIS

MASTER
VINTS - LEAN OIL & GAS OPTION
11. BC. 104N. 12
PAR

500 GRAM SAMPLE IS DIGESTED WITH 100% HNO₃-H₂O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 100 ML WITH WATER.
THIS LEACH IS PARTIAL FOR AM, BR, CA, CR, CU, NI, Pb, S, W AND LIMITED FOR Na, K, Rb, Sr AND DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Rock Chips ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: AUG 25 1987 DATE REPORT MADE: Sept 2/87 ASSAYER: D. J. Deane DEAN TOYE, CERTIFIED B.C. ASSAYER

HOMESTAKE MINERAL PROJECT-PL-5710 FILE # 87-359A Page 1

REEF
GEOCHEM.

SAMPLE NO.	NO.	CU	PB	ZN	AS	NI	CO	NI	FE	AS	W	AU	TH	SR	CD	SB	Bi	V	CA	P	LA	CR	MO	BA	TI	B	AL	MA	K	W	AU
PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
PL-01-1-33001	21	155	9	14	31	812	430	124	4.64	24	5	ND	1	532	1	26	23	14.94	.001	21	602	9.23	15	.01	2	.51	.01	.03	2	2	
PL-01-1-33002	21	63	3	53	18	218	33	916	5.06	8	5	ND	16	380	1	2	2	114	6.49	.330	66	478	7.52	5185	.19	8	3.11	.09	.09	1	
PL-01-1-33019	21	46	3	30	18	45	15	393	2.84	2	5	ND	2	21	1	2	2	85	1.48	.029	2	46	.94	48	.24	4	1.38	.20	.11	1	
PL-01-1-33021	21	28	8	18	18	57	25	424	2.52	8	5	ND	3	333	1	9	2	8	3.58	.026	8	56	7.50	39	.01	5	.13	.01	.06	3	
PL-01-1-33023	21	54	3	34	10	14	14	459	4.42	5	5	ND	1	46	1	2	2	138	7.93	.043	2	12	1.53	16	.27	5	1.96	.09	.05	1	
PL-01-1-33024	21	46	13	40	4	620	134	816	4.38	149	55	ND	9	481	1	2	2	26	6.93	1.159	24	120	4.90	60	.01	6	.51	.02	.16	91	
PL-01-1-33026	21	8	6	25	1	8	3	344	1.12	11	5	ND	2	14	1	2	2	4	2.03	.008	2	3	.13	10	.01	2	.07	.01	.06	37	
PL-01-1-33027	21	45	15	98	5	30	15	179	4.60	4	5	ND	1	86	2	2	2	48	15.37	.067	8	34	.82	85	.01	4	.65	.01	.12	120	
PL-01-1-33028	21	35	10	30	1	30	12	976	3.66	28	5	ND	1	135	1	2	2	38	9.70	.008	2	42	2.67	14	.01	4	.73	.02	.09	8	
PL-01-1-33029	21	60	12252	535	28	14	9	509	2.81	9	5	ND	2	58	9	25	2	11	3.23	.035	4	5	.48	48	.01	3	.16	.01	.08	420	
PL-01-1-33030	21	36	41	36	1	25	13	934	4.55	2	15	ND	1	353	1	2	2	39	11.98	.060	8	74	4.52	117	.02	5	.44	.02	.13	1	
PL-01-1-33031	21	12	65	42	1	30	16	450	4.15	6	5	ND	1	135	1	2	2	70	5.86	.023	2	55	2.45	82	.02	6	1.54	.18	.26	12	
PL-01-1-33032	21	50	7	27	1	24	9	458	2.28	4	5	ND	1	110	1	15	2	23	3.78	.006	2	27	1.43	76	.01	3	.25	.01	.09	27	
PL-01-1-33033	21	17	15	21	1	14	7	1049	3.84	4	5	ND	1	301	1	4	2	20	11.05	.037	3	15	3.83	21	.01	4	.14	.01	.08	20	
PL-01-1-33034	21	46	5	23	1	30	10	251	1.95	6	5	ND	3	75	1	2	2	72	2.98	.079	5	88	1.01	39	.27	4	2.24	.35	.04	2	
PL-01-1-33035	21	41	7	59	1	45	21	804	5.00	4	5	ND	1	172	1	2	2	72	7.23	.041	3	56	2.07	27	.01	6	1.16	.01	.14	26	
PL-01-1-33036	21	67	3	7	1	12	2	542	1.52	2	5	ND	1	129	1	2	7	12	6.37	.013	2	10	.87	21	.01	2	.13	.01	.03	8	
PL-01-1-33037	21	13	3	33	1	33	12	794	4.08	10	5	ND	1	323	1	2	2	39	10.35	.013	2	28	3.64	34	.01	2	.47	.01	.12	8	
PL-01-1-33038	21	17	9	29	1	30	11	1117	2.90	4	5	ND	1	267	1	2	2	38	15.16	.046	7	135	1.46	599	.02	3	.76	.03	.08	10	
PL-01-1-33039	21	96	68	119	4	7	11	782	289	1.41	16	5	ND	2	35	3	3	4	29	2.54	.027	5	34	.57	59	.01	2	.38	.01	.05	154
PL-01-1-33040	21	55	77	376	4	7	3	960	1.23	2	5	ND	1	86	8	3	2	7	10.99	.014	4	6	.14	29	.01	4	.13	.01	.04	210	
PL-01-1-33041	21	36	9	43	1	48	22	561	4.94	20	5	ND	2	58	1	2	2	123	4.61	.033	2	103	1.43	13	.10	5	1.92	.06	.09	22	
PL-01-1-33042	21	28	34	59	3	23	11	485	2.61	17	5	ND	2	41	1	2	2	47	3.27	.017	2	38	1.91	23	.07	18	.86	.08	.08	22	
PL-01-1-33043	21	13	1510	59	2	5	1	157	1.69	9	5	ND	1	8	27	2	8	5	1.07	.001	2	5	.08	3	.01	2	.41	.01	.01	46	
PL-01-1-33044	21	17	229	59	4	10	3	430	1.57	10	5	ND	2	40	1	4	8	5	3.40	.004	2	3	.40	104	.01	2	.07	.01	.03	184	
PL-01-1-33045	21	11	9	34	1	9	4	671	2.32	6	5	ND	1	215	1	2	6	9	5.88	.016	3	1.80	45	.01	7	.09	.01	.06	4		
PL-01-1-33046	21	6	25	1	1	20	2	791	2.40	8	5	ND	1	367	1	2	2	14	8.01	.025	4	12	2.30	38	.01	2	.05	.01	.06	8	
PL-01-1-33047	21	4	2	44	1	57	16	1014	4.54	8	5	ND	1	212	1	4	2	52	11.40	.030	4	210	2.41	44	.01	8	.49	.01	.13	1	
PL-01-1-33048	21	4	3	21	1	60	6	9735	2.98	109	15	ND	1	399	1	5	2	26	11.23	.009	2	179	3.80	24	.01	3	.26	.01	.08	1	
PL-01-1-33049	21	61	6	47	1	39	12	1152	5.09	48	15	ND	1	29	1	2	2	4	76	9.44	.022	2	41	.21	18	.01	31	.37	.01	.02	8
PL-01-1-33050	21	15	4	40	1	72	16	713	3.85	59	15	ND	2	249	1	3	2	48	6.64	.051	7	164	4.06	159	.03	10	.77	.03	.25	11	
PL-01-1-33051	21	75	7	44	1	43	20	4433	4.27	16	15	ND	2	90	1	2	2	79	4.21	.039	2	146	1.67	84	.07	7	1.41	.18	.08	8	
PL-01-1-33052	21	48	16	44	1	40	16	2891	4.53	1029	15	ND	1	135	1	2	2	6	74	9.99	.022	2	165	2.68	167	.01	2	1.53	.16	.07	2
PL-01-1-33053	21	42	2	34	2	26	13	2802	3.42	34	15	ND	5	139	1	2	2	31	11.44	.021	2	138	2.96	157	.01	8	.65	.05	.09	10	
PL-01-1-33054	21	20	2	22	3	29	7	263	3.47	17	15	ND	1	204	1	2	2	48	28	8.89	.004	2	11	2.54	95	.01	2	.16	.01	.01	1
PL-01-1-33055	21	41	10	38	1	39	14	1867	4.12	35	15	ND	1	182	1	2	2	64	27.95	.021	2	47	12.62	339	.02	9	.80	.07	.09	1	
STD GRA-RE	19	60	42	132	7	69	29	1049	4.09	43	17	ND	8	39	51	18	16	18	58	1.49	.088	39	61	.89	178	.08	33	1.82	.06	.14	500

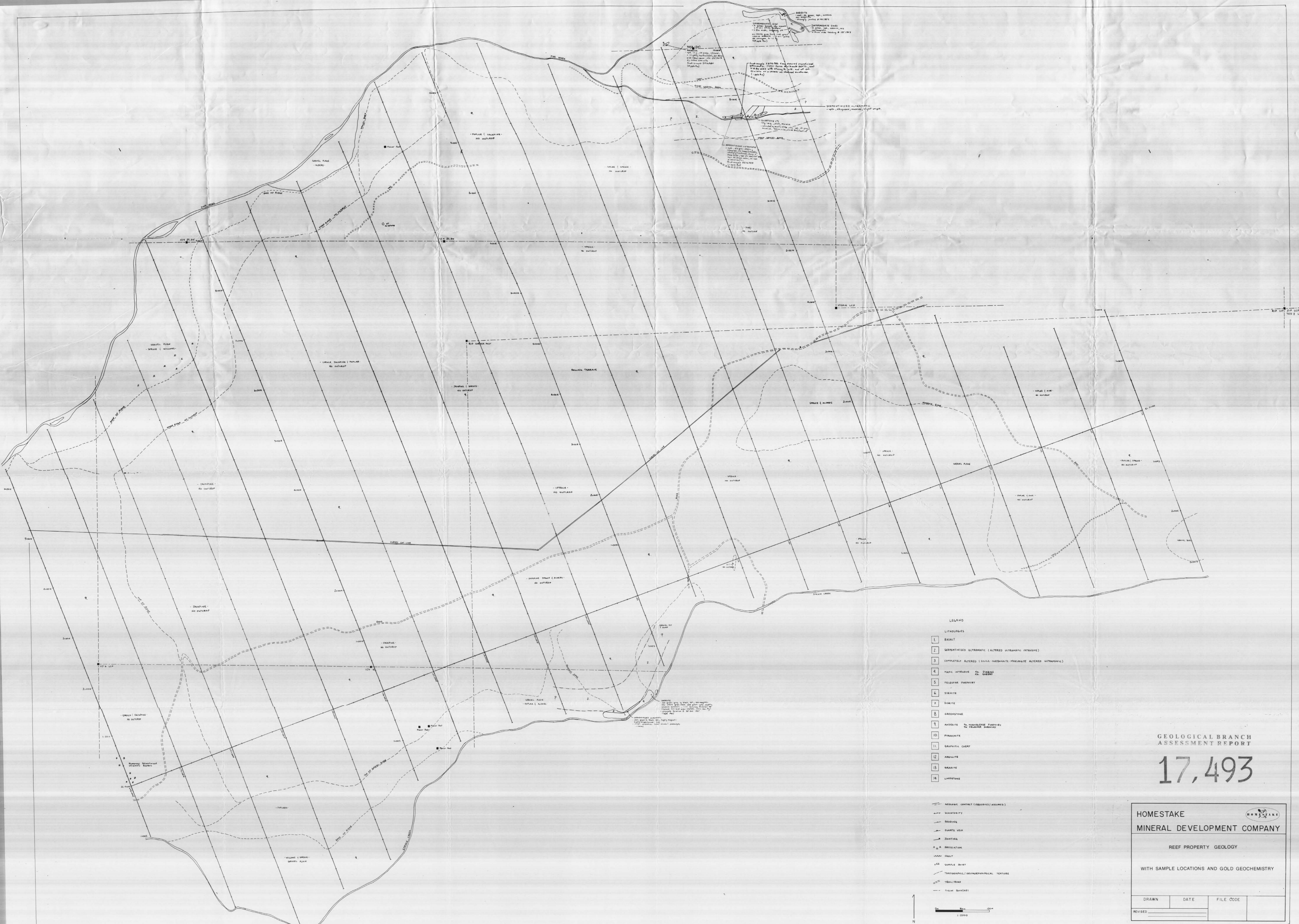
HOMESTAKE MINERAL PROJECT-PL-5710 FILE # 87-3594

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM	AU1 PPM
PL-01-1-33092	1	36	44	32	.4	3	2	409	1.49	18	5	ND	1	99	1	2	2	4	2.97	.007	3	3	1.18	67	.01	3	.08	.01	.05	1	131
PL-01-1-33093	2	15	7	22	.1	28	6	779	2.89	59	5	ND	1	259	1	5	2	12	10.23	.041	4	17	4.09	32	.01	5	.14	.01	.08	1	66
PL-01-1-33094	1	11	4	5	.1	5	1	120	.71	10	5	ND	1	26	1	3	2	2	.76	.001	2	2	.26	15	.01	12	.03	.01	.02	1	21
PL-01-1-33095	1	41	10	34	.1	23	8	937	4.21	106	5	ND	1	206	1	7	2	41	10.25	.009	2	28	2.97	31	.01	3	.52	.04	.06	1	23
PL-01-1-33096	1	17	5	20	.1	24	6	488	2.16	45	5	ND	1	157	1	7	3	9	4.91	.030	4	11	1.79	27	.01	9	.15	.01	.09	2	66
PL-01-1-33097	1	34	6	73	.1	8	7	1134	5.40	36	5	ND	1	319	1	14	2	39	12.10	.008	2	7	3.97	117	.01	6	.15	.01	.06	1	31
PL-01-1-33098	2	13	7	32	.1	43	12	878	3.71	40	5	ND	1	533	1	2	2	35	9.89	.023	4	48	4.32	225	.01	12	.33	.01	.10	1	7
PL-01-1-33099	1	265	3	83	1.5	16	4	657	2.92	44	5	ND	1	308	1	101	5	14	8.77	.006	2	20	3.45	63	.01	6	.12	.01	.07	1	43
PL-01-1-33100	1	5	5	17	.1	9	3	938	3.87	21	5	ND	1	241	1	2	2	27	10.88	.007	2	12	3.02	42	.01	2	.15	.01	.05	1	3
PL-01-1-33200	1	33	2	30	.1	12	10	630	3.65	367	5	ND	1	106	1	12	2	34	4.59	.012	2	7	1.36	44	.01	14	.19	.01	.08	1	215
PL-01-1-33201	1	4	14	51	.1	73	21	727	4.03	33	5	ND	5	171	1	3	2	67	5.49	.047	16	265	3.92	261	.05	2	1.19	.03	.27	1	1
PL-01-1-33202	1	28	5	61	.4	7	5	272	1.67	1201	5	ND	1	40	1	22	2	12	2.54	.001	2	3	.63	30	.01	2	.12	.01	.05	1	320
PL-01-1-33203	1	8	3	24	.1	19	7	469	2.12	65	5	ND	1	184	1	3	2	20	6.50	.012	2	89	3.05	42	.01	3	.28	.01	.07	1	4
PL-01-1-33204	1	188	8	260	1.2	25	10	1005	3.19	42	5	ND	1	344	1	33	2	23	11.18	.018	6	68	3.85	25	.01	11	.56	.01	.09	1	3
PL-01-1-33205	1	20	2	17	.1	13	7	723	2.70	27	5	ND	1	168	1	3	2	19	9.61	.010	2	32	2.81	23	.01	4	.28	.01	.06	6	1
PL-01-1-33206	1	5	10	18	.1	3	3	239	1.02	2	5	ND	1	79	1	2	4	8	2.28	.033	7	1	.29	694	.01	2	.38	.03	.15	1	2
PL-01-1-33207	6	24	20	53	.1	253	28	967	4.85	5	5	ND	1	365	1	2	2	75	6.92	.049	7	457	3.66	885	.03	4	1.33	.10	.20	1	6
PL-01-1-33208	2	23	7	34	.2	59	18	1285	5.67	166	5	ND	1	244	1	2	2	24	11.90	.008	2	57	2.80	31	.01	3	.28	.01	.16	1	205
PL-01-1-33209	2	20	11	38	.3	53	20	1124	6.03	232	5	ND	1	195	1	2	2	23	10.89	.013	2	25	1.73	35	.01	2	.27	.01	.16	1	245
PL-01-1-33210	1	22	12	62	.1	13	16	1175	6.09	13	5	ND	1	87	1	2	2	60	5.17	.058	2	14	1.97	68	.02	2	.74	.04	.09	1	4
PL-01-1-33211	1	53	6	49	.1	71	20	933	5.30	66	5	ND	1	147	1	8	4	66	5.82	.038	2	67	2.40	56	.02	10	.76	.05	.17	1	3
PL-01-1-33212	1	21	3	35	.1	29	12	851	4.10	53	5	ND	1	186	1	2	2	41	9.26	.014	2	28	2.80	42	.01	4	.29	.01	.08	2	1
PL-01-1-33213	1	35	10	49	.1	44	17	1053	5.27	44	5	ND	1	199	1	2	2	62	8.36	.031	2	46	2.90	66	.01	7	.62	.03	.13	1	1
PL-01-1-33214	2	30	15	35	.6	27	7	486	2.26	45	5	ND	12	490	1	5	3	14	4.93	.031	9	11	2.22	136	.01	4	.26	.02	.08	1	1
PL-01-1-33215	2	1	6	19	.1	935	33	803	2.94	110	5	ND	1	506	1	2	2	9	16.04	.001	2	308	7.90	50	.01	7	.05	.02	.01	1	1
PL-01-1-33216	1	7	2	10	.1	14	1	188	.82	17	5	ND	8	142	1	2	2	1	2.03	.008	7	2	.99	18	.01	2	.14	.01	.06	1	1
PL-01-1-33217	3	14	3	10	.1	31	4	76	.91	3	5	ND	2	12	1	3	7	14	.24	.010	6	16	.31	14	.06	2	.31	.02	.04	1	2
PL-01-1-33218	1	37	10	49	.1	28	17	992	5.34	38	5	ND	1	162	1	2	2	77	7.76	.032	2	39	2.68	34	.03	8	1.07	.06	.09	1	4
PL-01-1-33219	1	37	6	35	.3	23	11	1203	4.20	30	5	ND	1	95	1	2	2	49	9.05	.021	2	34	1.81	25	.01	5	1.07	.01	.09	1	23
PL-01-1-33220	1	29	18	62	.4	33	19	1115	5.95	84	5	ND	1	173	1	2	2	79	11.28	.023	2	38	2.41	32	.01	16	1.16	.03	.14	1	28
PL-01-1-33221	1	53	17	75	.2	39	25	1080	6.98	53	5	ND	1	87	1	2	2	132	7.39	.036	2	67	1.85	47	.06	8	1.16	.07	.14	1	14
PL-01-1-33222	1	4	2	9	.1	4	2	819	2.66	6	5	ND	1	147	1	2	3	11	9.76	.003	2	2	2.04	30	.01	5	.11	.01	.02	1	6
PL-01-1-33223	1	74	10	35	.1	109	25	877	3.49	3	5	ND	1	420	1	2	5	16	17.14	.037	2	51	1.17	71	.01	2	.48	.02	.09	2	3
PL-01-1-33224	1	33	12	51	.5	36	17	1058	5.77	55	5	ND	1	123	1	7	2	82	7.75	.023	2	51	2.36	34	.01	6	1.30	.03	.11	1	1
PL-01-1-33225	1	40	4	31	.2	26	14	1308	4.33	109	5	ND	1	201	1	2	3	21	12.91	.013	2	14	2.34	30	.01	5	.35	.01	.13	1	123
PL-01-1-33226	1	49	16	27	.5	86	26	956	4.08	46	5	ND	11	436	1	2	2	35	16.99	.314	49	67	4.08	44	.01	10	.79	.01	.19	1	69
STD C/AU-R	20	62	43	132	7.5	70	28	1108	4.33	43	19	8	40	52	19	17	22	60	.52	.090	40	63	.94	180	.08	38	1.94	.07	.13	13	505

REF
GEOLOGEM

SAMPLE#	MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	MG	BA	TI	B	AL	KA	K	W	AU#
	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	%	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	%	%	PPH	PPH	%	PPH	%	%	%	%	%	PPH	PPH
PL-01-1-33227	1	11	3	5	.4	6	1	30	.31	9	5	ND	1	5	1	2	2	1	.11	.001	2	1	.05	1	.01	3	.01	.01	.01	1	156
PL-01-1-33228	1	33	55	50	3.9	22	1	44	.53	38	5	ND	1	6	1	7	8	1	.04	.002	2	4	.03	14	.01	2	.04	.01	.02	2	780
PL-01-1-33229	4	5	2	13	.1	1060	52	622	3.77	37	5	ND	1	36	1	2	2	2	.57	.001	2	151	17.96	6	.01	2	.03	.01	.01	1	11
PL-01-1-33230	1	30	20	70	.1	33	19	738	4.84	2	5	ND	4	33	1	2	2	111	2.03	.125	15	16	2.52	125	.46	9	2.40	.04	.08	1	1
PL-01-1-33231	1	1	2	1	.3	3	1	46	.12	2	9	ND	3	84	1	2	5	1	39.16	.001	2	1	.05	2	.01	3	.01	.01	.01	1	1
PL-01-1-33232	1	34	2	25	.1	136	11	380	1.65	103	5	ND	1	58	1	2	3	37	5.33	.018	5	114	1.88	13	.01	2	.20	.01	.01	1	3
PL-01-1-33233	2	68	3	21	.1	958	42	1097	1.88	18	5	ND	1	753	1	2	2	11	12.92	.005	2	488	6.74	110	.01	5	.24	.01	.03	1	4
PL-01-1-33234	2	31	2	14	.1	623	27	267	1.85	27	5	ND	2	117	1	2	2	7	1.82	.001	2	328	10.55	3	.01	2	.15	.01	.01	1	1
PL-01-1-33235	1	103	9	20	.3	24	17	285	2.52	6	5	ND	2	42	1	2	2	74	2.92	.037	2	17	1.02	52	.24	3	1.91	.04	.06	1	2
PL-01-1-33236	1	101	10	36	.2	42	22	641	4.79	5	5	ND	1	49	1	2	2	149	3.94	.032	2	91	2.32	77	.11	6	2.09	.08	.06	2	4
PL-01-1-33237	1	5	2	22	.2	52	12	703	2.87	105	5	ND	1	365	1	2	2	8	7.51	.029	6	26	3.66	137	.01	12	.24	.01	.12	2	87
PL-01-1-33238	2	9	2	10	.1	1038	53	697	3.16	13	5	ND	1	34	1	2	2	11	1.25	.001	2	562	10.28	5	.01	4	.28	.01	.01	1	3
PL-01-1-33239	1	4	2	15	.1	296	12	1179	1.81	55	5	ND	1	396	1	2	2	10	10.76	.001	2	282	5.48	34	.01	8	.22	.01	.01	1	2
PL-01-1-33240	1	55	2	12	.1	720	38	430	1.36	38	5	ND	1	104	1	2	3	12	3.70	.001	2	707	2.06	16	.01	2	.54	.01	.01	1	2
PL-01-1-33241	1	8	4	28	.1	15	5	587	2.27	4	5	ND	3	38	1	2	2	15	2.31	.040	8	9	.86	16	.01	2	.61	.05	.04	1	3
PL-01-1-33242	1	38	17	55	.3	34	18	573	5.32	5	5	ND	1	40	1	2	2	176	5.06	.041	2	34	1.84	35	.16	3	2.19	.05	.03	1	1
PL-01-1-33243	1	208	3	4	.1	389	17	39	2.14	3	5	ND	1	2	1	2	5	7	.06	.002	2	596	.97	1	.01	5	.29	.01	.01	1	2
PL-01-1-33249	3	1	3	13	.3	426	22	455	2.76	52	5	ND	1	146	1	5	2	7	1.78	.002	2	260	13.00	4	.01	5	.11	.01	.01	1	1
PL-01-1-33250	3	4	2	10	.1	868	43	470	3.28	64	5	ND	1	153	1	2	2	3	2.69	.001	2	112	13.70	6	.01	2	.04	.01	.02	1	2
PL-01-1-36391	2	53	3	51	.1	30	17	636	3.37	4	5	ND	2	53	1	2	2	66	4.29	.039	8	214	2.04	159	.03	2	.73	.05	.11	1	1
PL-01-1-36392	2	17	4	34	.5	27	11	754	2.69	42	5	ND	1	28	1	2	2	35	5.48	.021	4	91	.87	34	.01	3	.28	.01	.07	1	2
PL-01-1-36393	1	5	5	3	5.8	6	1	38	.35	2	5	ND	1	2	1	2	2	1	.16	.001	2	4	.04	3	.01	2	.02	.01	.01	2	225
PL-01-1-36446	3	46	2	10	2.8	334	18	182	2.05	87	5	ND	1	196	1	37	2	3	2.97	.001	2	103	10.62	9	.01	2	.04	.01	.02	1	5
PL-01-1-36448	2	51	12	63	.7	385	28	691	4.89	105	5	ND	4	335	1	2	2	21	5.97	.196	18	79	4.53	56	.01	10	1.40	.01	.14	1	26
PL-01-1-36449	2	17	5	20	.8	331	20	354	2.52	122	5	ND	1	379	1	4	2	7	4.25	.001	2	95	9.59	9	.01	2	.04	.01	.04	2	23
EZ-01-1-36385	1	31	13	33	.3	31	13	295	2.74	14	5	ND	7	28	1	2	2	60	1.23	.051	17	137	2.13	468	.22	2	1.63	.06	.61	1	4
EZ-01-1-36386	2	4	2	20	.1	1432	65	647	3.04	19	5	ND	1	143	1	2	2	10	4.73	.002	2	474	11.17	15	.01	29	.29	.01	.01	1	1
STD C/AU-R	20	61	42	134	7.6	48	30	1068	4.05	41	18	8	41	51	19	19	22	60	.45	.089	41	59	.86	183	.08	35	1.84	.06	.13	13	500
EZ-01-1-36387	4	2	2	30	.1	1588	71	433	3.72	4	5	ND	2	8	1	2	2	8	.35	.002	2	449	20.49	16	.01	15	.20	.01	.01	1	11

REF
LEUCHEMISTS



GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,493

HOMESTAKE
MINERAL DEVELOPMENT COMPANY

REEF PROPERTY GEOLOGY

WITH SAMPLE LOCATIONS AND GOLD GEOCHEMISTRY

DRAWN	DATE	FILE CODE
REVISED		