

SUB-RECORDER
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VANCOUVER, B.C.

LOG NO: 0213	RD.
ACTION:	
FILE NO:	

DIAMOND DRILLING REPORT
GOLD HILL PROPERTY
KAMLOOPS MINING DIVISION, 92P/8E
Lat: 51°24'N Long: 120°06'W

FILMED

Owner/ Operator
Minnova Inc
4th Floor 311 Water St.
Vancouver, B.C.

Shelley Lear, Don Blackadar
January 29, 1989

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,372

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INTRODUCTION

General

Minnova Inc is the owner of 24 claim units in the Barriere area of the Kamloops Mining Division known as the Gold Hill property. This report summarizes the results of a diamond drill programme carried out during May and June, 1988.

Location and Access (Figure 1)

The claims are located 25 km north of Barriere, which lies 65 km north of Kamloops, B.C.

Access is via the Dunn Lake road from Barriere to the south end of Dunn Lake. From there, a 4-wheel drive road provides access onto the property.

Physiography

The Gold Hill property lies in the Dunn Creek valley and on the steep slopes north and south of the creek. Elevations range from 450 to 900 m. Slopes are heavily forested but have not been logged due to the steep terrain.

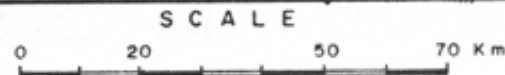
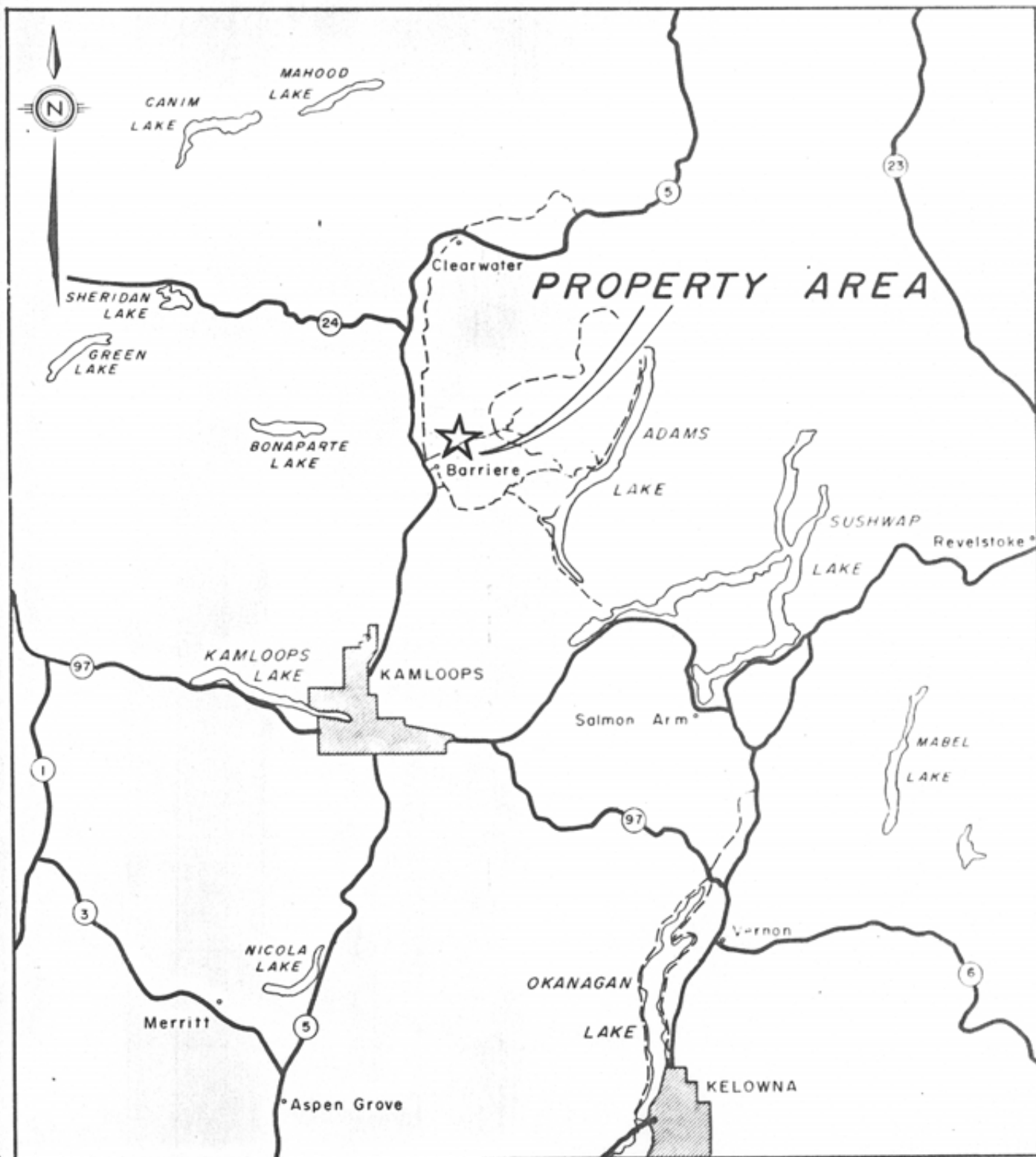
Property and Ownership

The claims are 100% owned and operated by Minnova Inc. The property consists of 4 claim blocks totalling 24 units. Pertinent data are summarized in Table 1. Claim configuration is shown in Figure 2.

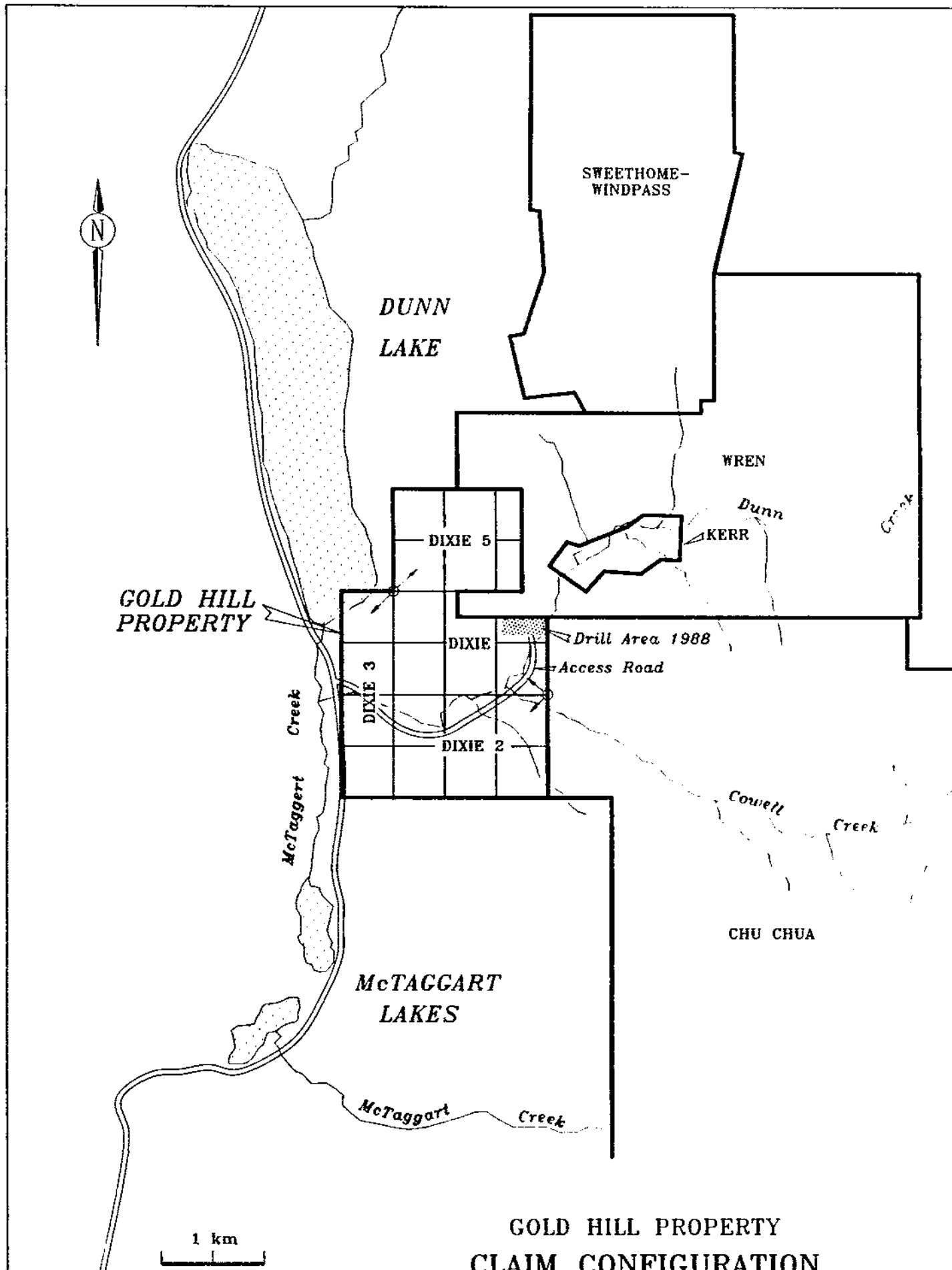
Table 1

CLAIM STATUS

<u>Claim</u>	<u>Record No.</u>	<u>Units</u>	<u>Expiry Date</u>
Dixie	4238	6	Nov 12, 1993
Dixie #2	6856	6	Nov 21, 1993
Dixie #3	6857	4	Nov 21, 1993
Dixie 5	7465	8	Jan 15, 1989



GOLD HILL PROPERTY
- LOCATION MAP -
JANUARY 1989



GOLD HILL PROPERTY
 CLAIM CONFIGURATION
 (SHOWING 1988 WORK AREA)

History

During the later 1920's H. Skoning and M. Fennell developed a series of drifts. The quartz vein and wallrock was transported to the creek where they crushed it and panned the free gold out. Over two dozen trenches and eight adits with over 300m of drifting exist on the property.

In 1935, 11 short holes were drilled on the vein systems. No results are available. Since then very little work is reported.

Late in 1986, Minnova made an agreement with M. Fennell to acquire the Dixie claim. The Dixie 2,3 and 5 claims were subsequently staked by Minnova around the main Dixie claim.

During 1987 Minnova conducted an exploration programme of surface geological mapping combined with underground mapping and sampling of the old adits. A 1 km long road was constructed to provide better access.

Work Done

A diamond drill programme consisting of 839.4 m in six holes was completed during May and June, 1988. Drill holes were designed to test down-dip extensions of gold-bearing quartz veins exposed at surface. A Longyear 38 surface rig modified for shallow angle holes was used. The contractor was Tonto Drilling. All core is NQ size and is currently stored at Minnova's warehouse in Barriere.

DRILL RESULTS

Six holes were drilled from 3 locations. Table 2 summarizes the program. Hole locations are shown on Figure 3.

Table 2

DRILLING RESULT SUMMARY

Hole No.	Line	Station	Azimuth	Dip	Length(m)
GH-1	3+50W	0+00N	340°	-40°	141.1
GH-2	3+50W	0+00N	340°	-20°	43.3
GH-3	2+75W	0+70S	360°	-40°	266.7
GH-4	2+75W	0+70S	360°	-15°	42.67
GH-5	2+75W	0+70S	360°	-20°	157.58
GH-6	2+00W	0+80S	360°	-15°	188.06
				Total	839.4m

Hole GH-1 intersected a 12m wide (drilled length) fault zone with quartz veining and minor sulphides (pyrite, galena, chalcopyrite). This zone occurs at the contact between Mafic Diorite and Fennell Basalt. GH-2 also encountered strong alteration and veining at the contact. This hole was abandoned at 43.3 m due to excessive caving.

GH-3 and 5 have an altered zone at the Diorite-Basalt contact, although the intensity and width of the zone decreases at depth. Hole GH-4 intersected old workings at 42.67 m and was abandoned. A second (lower) shear zone in GH-5 is 30 m wide (drilled width) and contains strongly altered basalt with minor quartz veining and sulphides. The down-dip extension of this zone in GH-3 consists of moderately broken basalt with minor silicification and occasional thin quartz veinlets. The upper shear/quartz zone intersected by these holes is equivalent to Vein #2 which is exposed in Adit 7. The best gold values to date on the property were obtained from samples in this adit. One value of 40 gm/T over 30-50 cm and several 2000 to 7000 ppb Au were returned during the 1987 programme. Results from drill holes (maximum 650 ppb Au) did not duplicate these values.

GH-6 was located further south than proposed due to steep and unstable surface conditions. A 4 m wide shear zone with altered basalt, quartz veins and minor galena, sphalerite and pyrite was encountered. This correlates with shear zones on surface, although it is much narrower than anticipated. A gold value of 2900 ppb was obtained from a 0.45 m long sample of a galena-bearing quartz vein.

Lithogeochemistry

A total of 102 drill core samples were collected. Samples of diorite, unaltered and altered basalt were analyzed for Al_2O_3 , Ba, CaO, Fe_2O_3 , K_2O , MgO, MnO_2 , Na_2O , SiO_2 , Sr, TiO_2 , Ag, As, Cu, Pb, Sb, Zn, Au. Samples of quartz veins or highly silicified rock were analyzed for Ag, As, Cu, Pb, Sb, Zn, Au only. Analysis was done by Min-En Labs of North Vancouver. A standard fusion process with ICP finish was used for the majors. Au was determined by wet geochemical method and other traces by aqua-regia digestion with and ICP finish.

Gold values are highest in the quartz veins, ranging from 5 to 2900 ppb with a mean of 310 ppb.

As expected, gold values from unaltered basalt are low ranging from 5 to 70 ppb. Only one sample occurs above 15 ppb.

In the altered basalts gold ranges from 5 to 650 ppb with 23% of samples above 75 ppb. Anomalous values are summarized below:

Hole No.	From(m)	To(m)	Au ppb	Ag ppm	Rock type
GH-2	37.2	38.7	545	0.4	Alt.Basalt
GH-4	32.75	33.15	685	7.9	Qtz vein, ga,cpy
GH-6	63.4	63.65	450	17.8	Qtz vein, ga,sph Sb = 56 ppm
GH-6	63.65	66.1	650	1.5	Silic. basalt w/ qtz veins
GH-6	152.55	153.0	2900	3.2	Qtz vein, py,ga

A comparison of oxides for altered and unaltered basalts (Appendix 2) indicates no pronounced differences. Al_2O_3 is slightly lower in the altered basalts with a range of 7-15% compared to 12-16% in unaltered sections. K_2O and CaO are slightly enriched in the altered basalts. SiO_2 values are unchanged indicating no widespread silicification, although the altered basalts have stronger quartz veining.

CONCLUSIONS and RECOMMENDATIONS

The drill programme showed that alteration zones continue at depth, although they are narrower than on surface.

Gold values are slightly elevated, but lower than values from the adits.

Future exploration work should include mapping and sampling on the Dixie 5 claim north of the present grid. No further drilling on the grid area is recommended at this time.

APPENDIX I

ITEMIZED COST STATEMENT

ITEMIZED COST STATEMENT

Diamond Drilling		
Tonto Drilling Ltd.		\$66,005.99
Road and Drill Pad Construction		
Copper Valley Construction		3,130.00
Ultra Diversified		7,023.25
Analysis		
Min-En Labs		
81 Lithos @ \$23.50		1,903.50
15 Geochem @ \$10.25		153.75
3 Assays @ \$46.25		92.50
Salaries - Minnova Personnel		
G. Evans 18 days @ \$300/day		5,400.00
S. Lear 17 days @ \$300/day		5,100.00
C. Evans 18 days @ \$150/day		2,700.00
G. Johnson 2 days @ 150/day		300.00
Room & Board		
55 man-days @ \$50/day		2,750.00
Truck Rental		
35 days @ \$50/day		1,750.00
		=====
Total		\$96,308.99

APPENDIX II

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Shelley R. Lear certify that:

1. I am an Exploration Geologist residing at 2393 W. 6th Ave., Vancouver, B.C.
2. I have a BSc in Geology from the University of British Columbia (1981).
3. I have practised my profession since 1981.
4. I personally carried out or supervised the work reported herein.

Dated this 3rd day of January, 1989.

Shelley Lear
Shelley R. Lear
Geologist

STATEMENT OF QUALIFICATIONS

I, Donald William Blackadar of 3838 Regent Avenue, North Vancouver, B. C. do hereby certify that:

1. I graduated from the University of Calgary with a B.Sc. in Geology in 1975.
2. I graduated from the University of Alberta with a M.Sc. in Geology in 1981.
3. I have been a professional geologist registered in the Province of Alberta since 1978.
4. I have been employed on a full time basis in my profession since April 1975, except for two years spent at the University of Alberta.
5. I am currently employed as a Project Geologist by Minnova Inc. of 4th floor - 311 Water St., Vancouver, B.C.
6. Work reported in this volume was carried out under my direct supervision.

Date: February 8, 1989

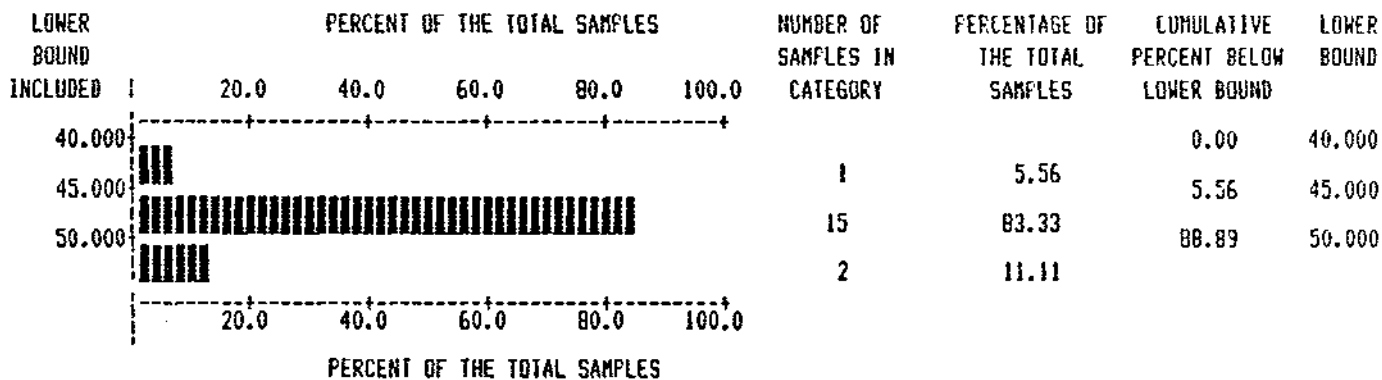
Signature: Donald Blackadar

APPENDIX III

LITHOGEOCHEM LISTINGS AND STATISTICS

DATA TITLE : GOLD HILL DDH- LITHOS unaltered basalt

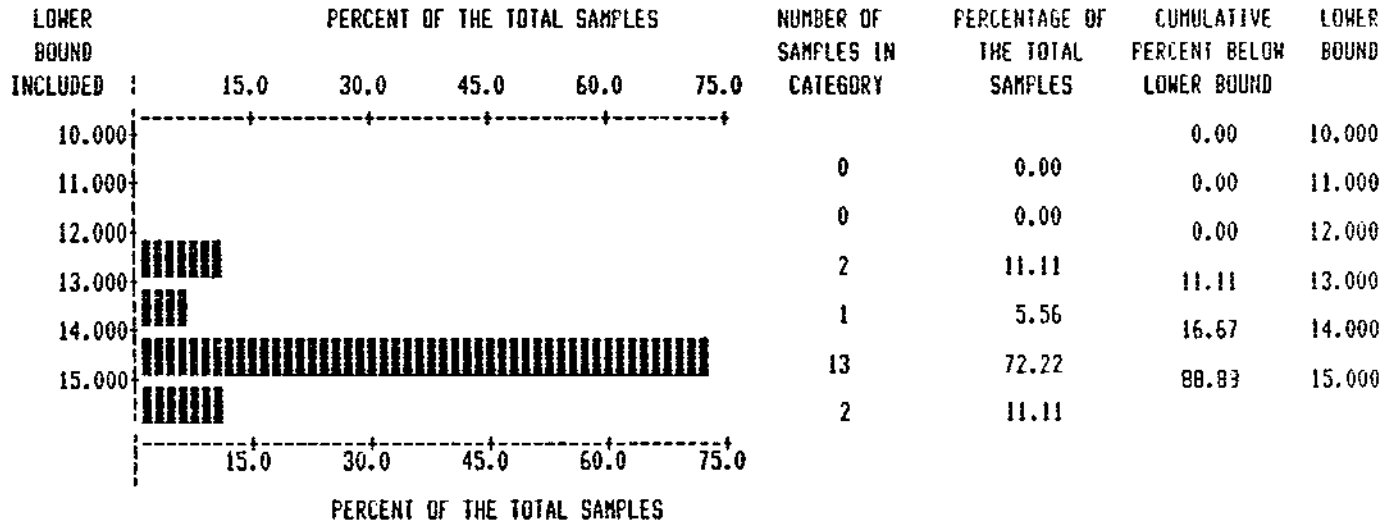
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VARIABLE: SiO2
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 MAXIMUM: 50.650
 MEAN: 47.413
 STANDARD ERROR OF MEAN: 0.385
 STANDARD DEVIATION: 1.632
 COEFFICIENT OF VARIATION: 3.441
 SKEWNESS: -0.234
 KURTOSIS: 0.369

DATA TITLE : GOLD HILL DDH- LITHOS unaltered basalt

VARIABLE : AL2O3

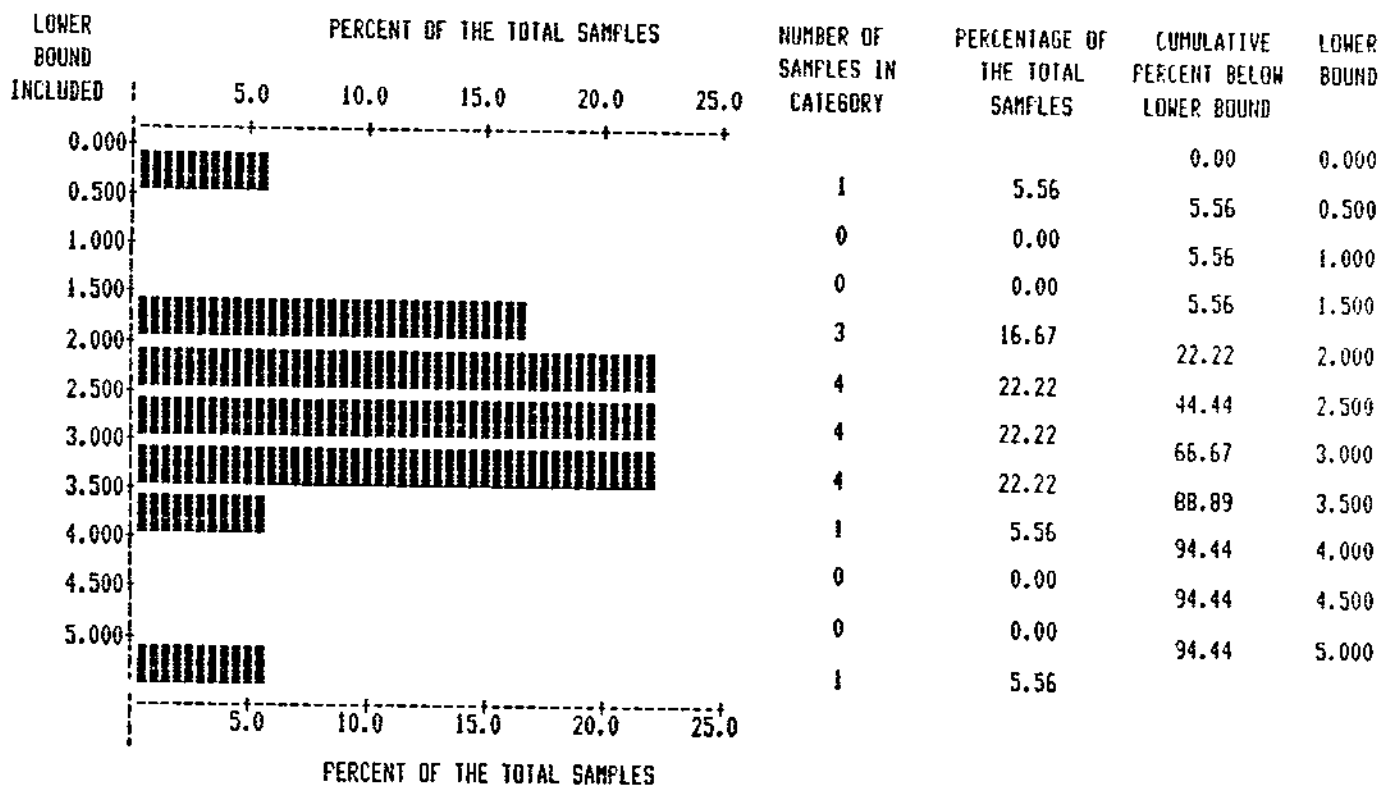


VARIABLE: AL2O3
 NUMBER OF OBSERVATIONS: 18
 MINIMUM: 12.050
 MAXIMUM: 15.960
 MEAN: 14.356
 STANDARD ERROR OF MEAN: 0.215
 STANDARD DEVIATION: 0.912
 COEFFICIENT OF VARIATION: 6.354
 SKEWNESS: -0.834
 KURTOSIS: 0.749

.....

DATA TITLE : GOLD HILL DDH- LITHOS unaltered basalt

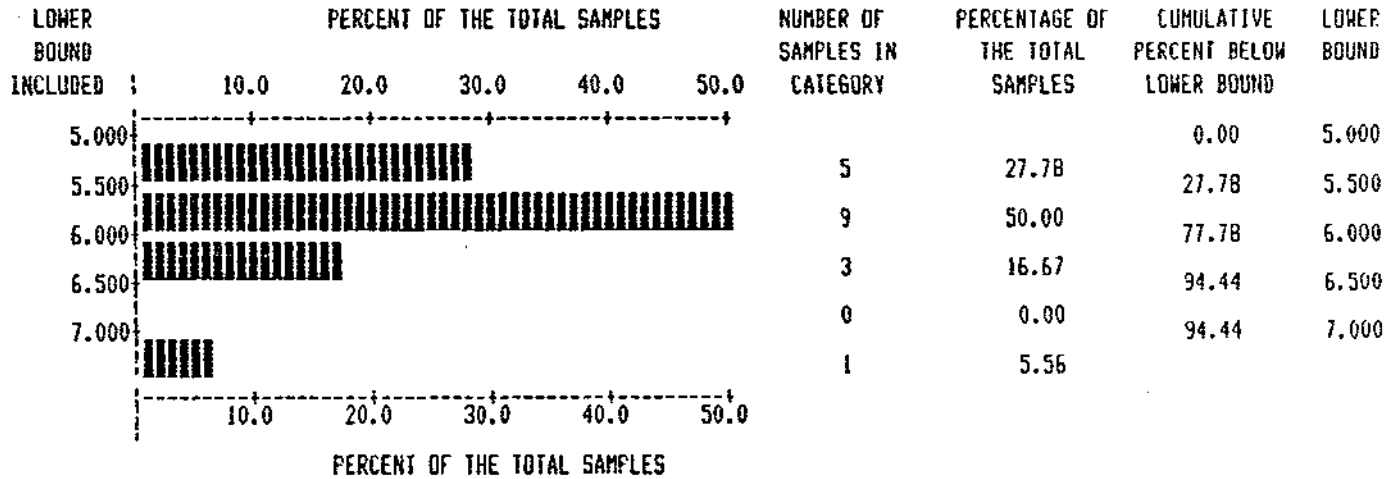
VARIABLE : NA2O



VARIABLE: NA2O
 NUMBER OF OBSERVATIONS: 18
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 MAXIMUM: 5.010
 MEAN: 2.617
 STANDARD ERROR OF MEAN: 0.238
 STANDARD DEVIATION: 1.008
 COEFFICIENT OF VARIATION: 38.504
 SKEWNESS: 0.068
 KURTOSIS: 0.616

DATA TITLE : GOLD HILL D9H- LITHOS unaltered basalt

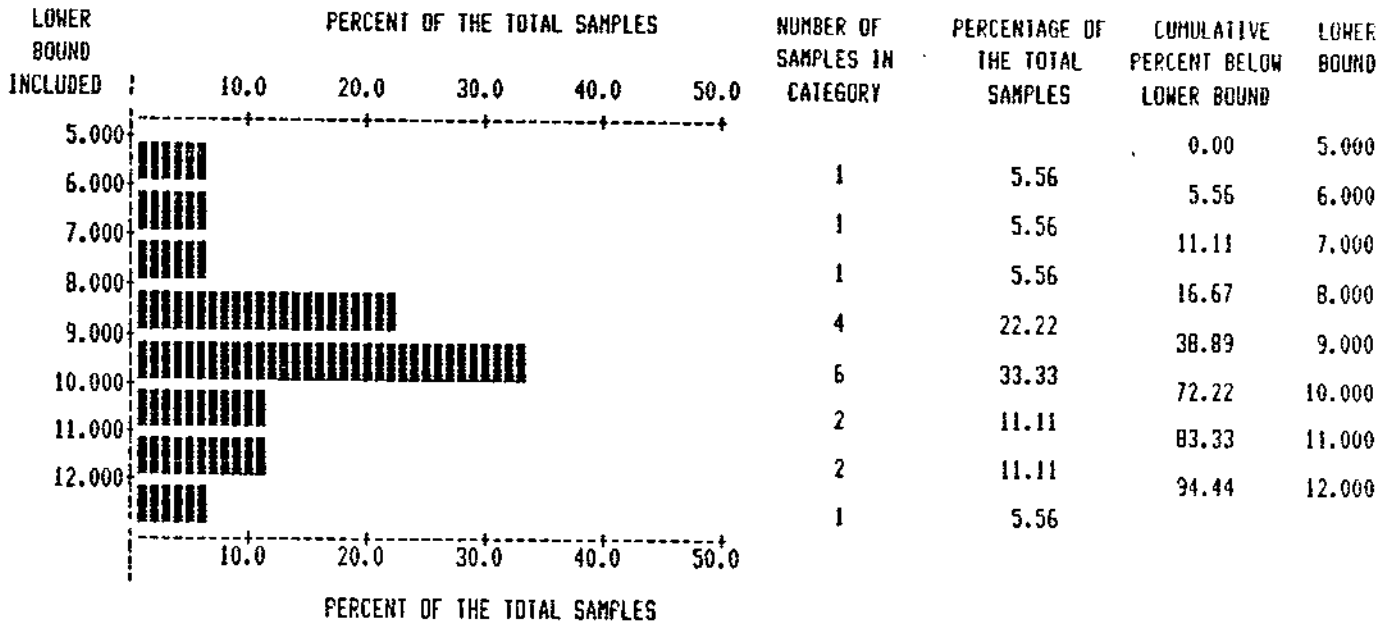
VARIABLE : MGO



VARIABLE: MGO
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 MAXIMUM: 7.300
 MEAN: 5.768
 STANDARD ERROR OF MEAN: 0.117
 STANDARD DEVIATION: 0.498
 COEFFICIENT OF VARIATION: 8.632
 SKEWNESS: 1.349
 KURTOSIS: 2.507

DATA TITLE : GOLD HILL DDH- LITHOS unaltered basalt

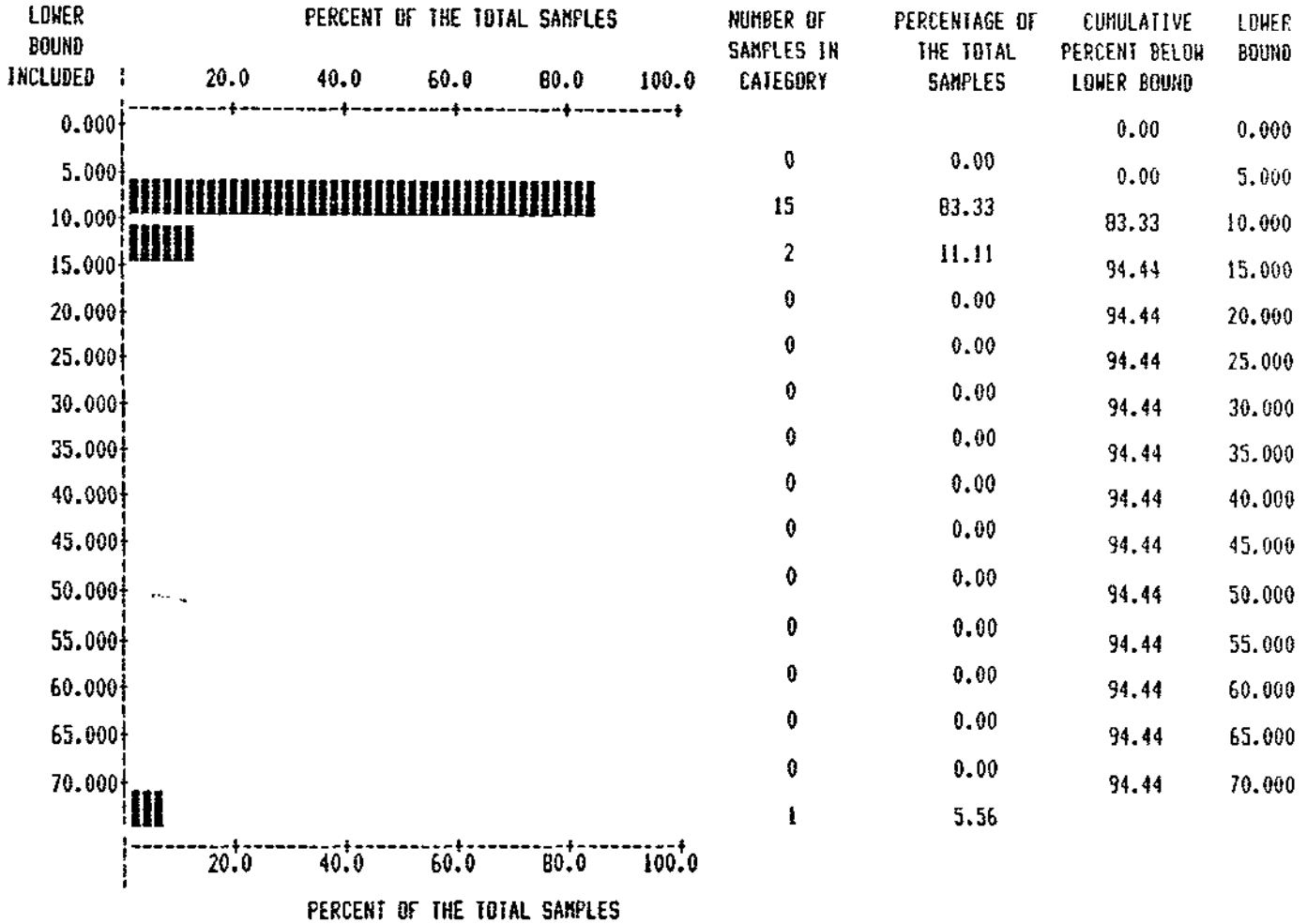
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VARIABLE: CAQ
 NUMBER OF OBSERVATIONS: 18
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 MAXIMUM: 12.550
 MEAN: 9.256
 STANDARD ERROR OF MEAN: 0.408
 STANDARD DEVIATION: 1.730
 COEFFICIENT OF VARIATION: 18.693
 SKEWNESS: -0.302
 KURTOSIS: 0.011

DATA TITLE : GOLD HILL DDH- LITHOS unaltered basalt

VARIABLE : AU



VARIABLE: AU
 NUMBER OF OBSERVATIONS: 18
 MINIMUM: 5.000
 MAXIMUM: 70.000
 MEAN: 9.167
 STANDARD ERROR OF MEAN: 3.599
 STANDARD DEVIATION: 15.267
 COEFFICIENT OF VARIATION: 166.552
 SKEWNESS: 3.498
 KURTOSIS: 11.009

Altered Basalt

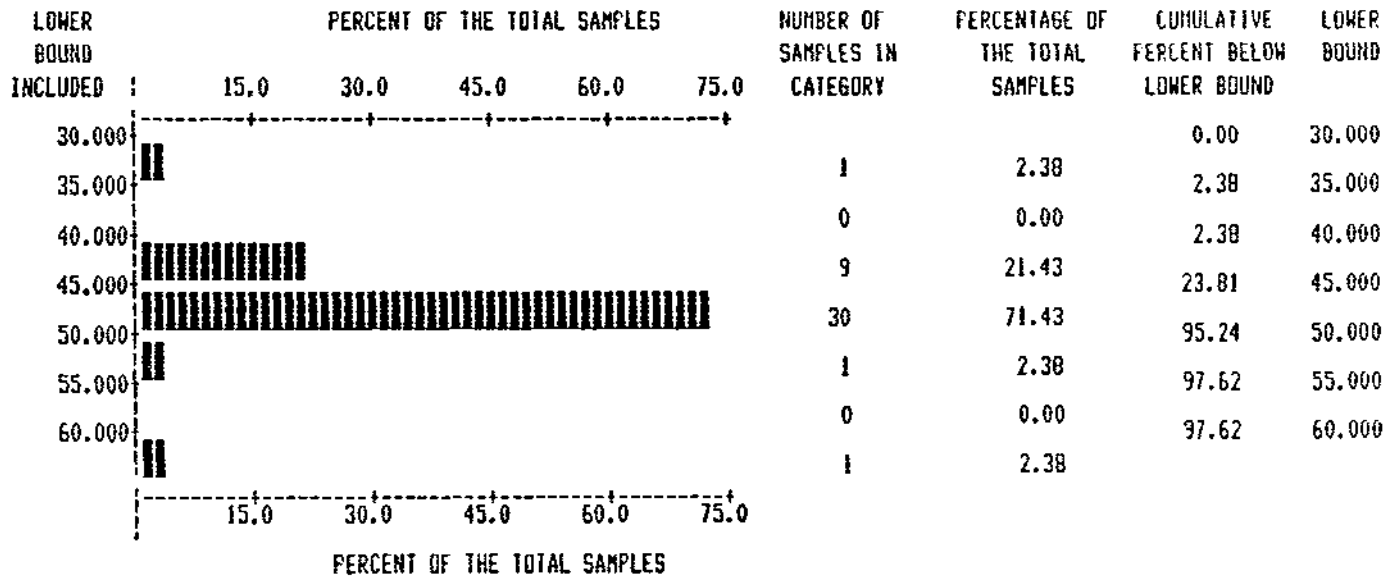
SAMPLE NO.	ROCK	AL2O3	CAO	K2O	MGO	MNO2	NA2O	SiO2	AU	FB	CU
7712	1.6	10.59	14.52	1.01	7.92	0.24	0.15	43.49	130.	34.	100.
7713	1.6	12.64	9.3	1.43	5.7	0.23	0.32	49.4	70.	52.	18.
7715	1.6	13.89	9.82	0.65	6.39	0.3	1.72	44.83	15.	13.	7.
7716	1.6	7.12	24.12	0.71	8.2	0.44	0.35	32.77	10.	17.	2.
7717	1.6	12.93	11.14	1.58	5.26	0.29	1.04	46.24	380.	59.	38.
7718	1.6	13.73	11.73	0.43	6.07	0.27	0.41	45.59	10.	26.	20.
12507	1.6	13.62	7.95	0.71	6.42	0.27	3.22	45.98	45.	28.	15.
BCD12529	1.6	12.98	10.27	1.09	4.56	0.25	3.18	42.17	330.	14.	17.
BCD12530	1.6	15.07	6.8	0.1	6.31	0.24	3.81	47.2	5.	17.	21.
BCD12531	1.6	8.63	11.53	0.01	2.85	0.15	0.05	62.68	5.	35.	56.
BCD12532	1.6	13.76	12.88	1.83	4.37	0.27	0.17	45.57	120.	20.	9.
BCD12533	1.6	14.68	9.06	0.78	5.28	0.24	3.18	45.13	5.	13.	16.
BCD12535	1.6	14.55	10.2	1.86	5.12	0.24	2.36	44.23	10.	12.	19.
BCD12537	1.6	14.85	9.31	0.61	4.55	0.22	2.44	47.53	5.	21.	11.
BCD12540	1.6	15.27	8.46	0.72	6.69	0.24	2.28	46.9	5.	27.	26.
BCD12548	1.6	10.95	9.7	0.62	4.46	0.17	4.77	51.68	125.	320.	43.
BCD12549	1.6	13.3	8.46	2.18	5.87	0.29	2.02	45.93	35.	12.	16.
BCD12550	1.6	13.7	8.55	2.44	6.05	0.26	1.47	45.4	25.	19.	11.
BCD12516	1.6	13.12	8.87	2.49	5.75	0.23	1.27	45.01	10.	13.	7.
BCD12518	1.6	12.95	10.28	1.69	5.6	0.25	2.02	46.01	40.	11.	5.
BCD12519	1.6	14.06	8.18	0.71	5.64	0.24	3.9	45.31	5.	43.	6.
BCD12521	1.6	12.02	11.43	1.94	5.52	0.21	2.6	45.43	60.	6.	4.
BCD12522	1.6	12.61	11.28	1.05	5.34	0.22	4.27	44.33	15.	6.	22.
BCD12524	1.6	10.7	13.38	0.32	5.06	0.22	4.5	42.37	50.	6.	4.
BCD12525	1.6	10.84	11.88	0.22	4.62	0.2	5.29	47.44	150.	7.	2.
BCD11701	1.6	9.38	13.17	0.08	5.22	0.22	4.47	46.02	140.	4.	3.
BCD11704	1.6	13.32	10.11	1.75	5.01	0.23	0.76	43.96	5.	25.	16.
BCD11705	1.6	14.36	8.69	0.4	5.84	0.24	2.02	47.25	5.	14.	10.
BCD11706	1.6	14.9	8.14	0.52	5.05	0.23	1.21	47.43	5.	16.	9.
BCD11708	1.6	13.76	11.21	0.88	5.5	0.25	0.97	45.74	5.	12.	8.
BCD11712	1.6	13.25	8.67	1.6	5.26	0.23	2.86	46.55	55.	3.	26.
BCD11713	1.6	12.97	8.59	1.32	5.4	0.23	3.11	48.13	205.	9.	28.
BCD11715	1.6	13.31	11.71	1.3	5.74	0.25	3.42	43.48	188.	10.	32.
BCD11717	1.6	11.56	11.27	1.35	4.9	0.23	2.92	47.68	650.	52.	49.
BCD11720	1.6	12.	16.7	1.53	2.4	0.24	0.44	46.42	5.	6.	17.
BCD11723	1.6	14.16	9.23	1.36	5.03	0.2	2.03	46.89	5.	29.	50.
BCD11724	1.6	11.83	11.54	0.98	5.32	0.21	1.32	49.09	50.	220.	19.
BCD11726	1.6	12.93	11.81	0.27	6.57	0.23	2.12	44.31	5.	48.	24.
BCD11730	1.6	15.16	6.98	0.4	6.38	0.24	3.35	47.67	10.	9.	45.
BCD11731	1.6	14.49	8.48	0.27	5.99	0.24	2.66	46.83	5.	15.	28.
BCD11732	1.6	14.61	10.78	0.08	5.4	0.23	2.51	46.67	5.	13.	38.
BCD11733	1.6	14.85	10.11	0.07	6.08	0.22	1.95	47.54	5.	6.	37.
BCD11707	1.6								10.	10.	10.

Unaltered basalt

SAMPLE NO.	ROCK	AL2O3	CAO	K2O	MGO	MNO2	NA2O	SI02	AU	PB	CU
7714	1.	15.96	5.24	0.02	5.49	0.22	2.99	50.65	5.	22.	36.
BCD12536	1.	14.46	9.68	0.51	5.35	0.23	2.32	47.42	10.	176.	41.
BCD12538	1.	14.77	8.18	0.06	6.16	0.24	3.17	48.28	5.	18.	27.
BCD12517	1.	13.55	9.37	1.96	5.86	0.24	0.29	46.76	70.	22.	4.
BCD12523	1.	12.64	11.82	0.93	5.14	0.23	5.01	43.47	5.	4.	12.
BCD11703	1.	14.	9.16	1.37	5.77	0.24	1.78	45.29	10.	14.	4.
BCD11709	1.	14.9	8.99	0.09	5.61	0.25	2.58	47.1	5.	23.	17.
BCD11710	1.	14.12	12.55	0.04	5.67	0.24	1.52	46.62	5.	10.	36.
BCD11711	1.	14.5	9.38	0.06	6.1	0.25	3.8	47.1	5.	10.	39.
BCD11718	1.	15.62	8.54	0.08	6.22	0.24	2.65	46.28	5.	15.	39.
BCD11719	1.	14.81	11.02	0.07	5.86	0.24	2.02	47.86	5.	16.	40.
BCD11721	1.	14.55	10.34	0.03	5.85	0.23	2.2	48.18	5.	13.	42.
BCD11727	1.	14.33	6.71	0.07	7.3	0.2	3.16	48.07	5.	11.	37.
BCD11728	1.	14.48	8.61	0.03	5.67	0.22	2.64	47.68	5.	11.	33.
BCD11729	1.	14.52	9.49	0.07	5.43	0.23	3.17	48.72	5.	13.	42.
BCD11734	1.	12.05	9.96	0.47	5.03	0.21	2.47	47.63	5.	48.	41.
BCD11735	1.	14.57	7.52	0.15	5.67	0.23	3.42	50.07	5.	16.	38.
BCD11736	1.	14.58	10.05	0.23	5.64	0.22	1.92	46.26	5.	12.	42.

DATA TITLE : GOLD HILL DDH- LITHOS altered basalt

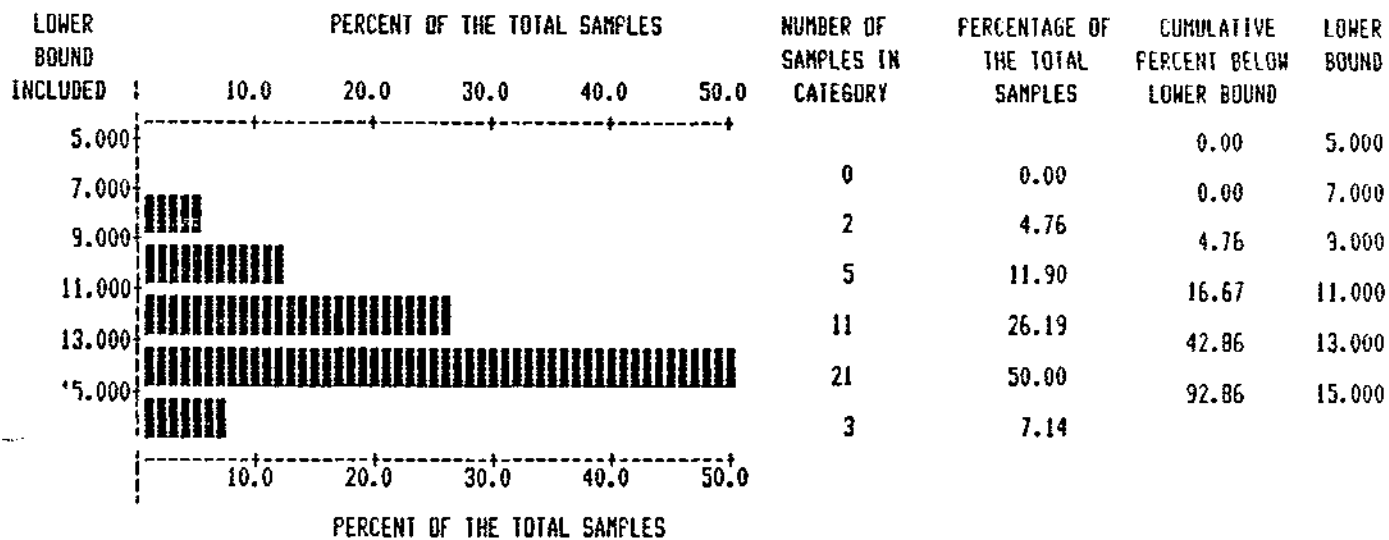
VARIABLE : SiO2



VARIABLE: SiO2
 NUMBER OF OBSERVATIONS: 42
 MINIMUM: 32.770
 MAXIMUM: 62.680
 MEAN: 46.197
 STANDARD ERROR OF MEAN: 0.585
 STANDARD DEVIATION: 3.788
 COEFFICIENT OF VARIATION: 8.200
 SKEWNESS: 0.921
 KURTOSIS: 9.497

DATA TITLE : GOLD HILL DDH- LITHOS altered basalt

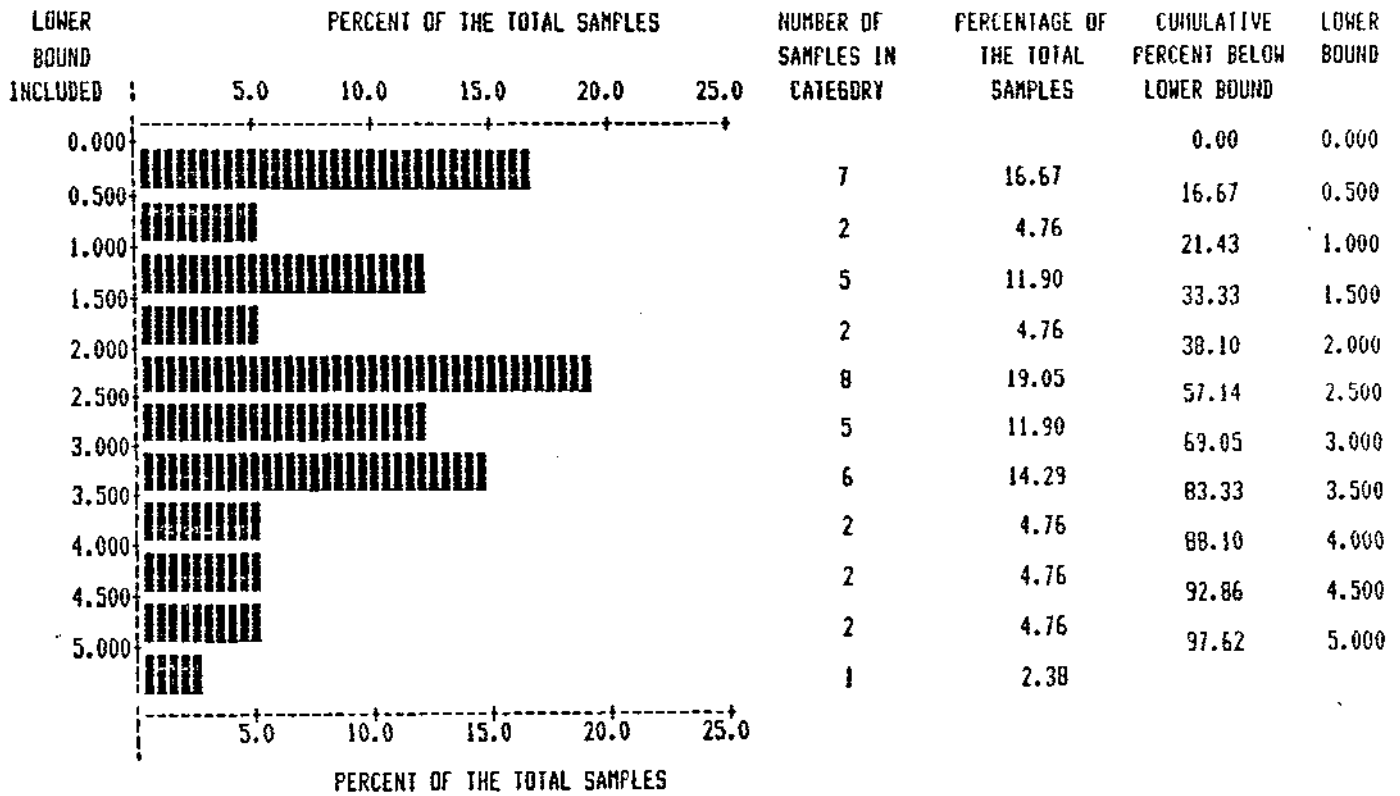
VARIABLE : AL203



VARIABLE: AL203
 NUMBER OF OBSERVATIONS: 42
 MINIMUM: 7.120
 MAXIMUM: 15.270
 MEAN: 12.986
 STANDARD ERROR OF MEAN: 0.280
 STANDARD DEVIATION: 1.815
 COEFFICIENT OF VARIATION: 13.975
 SKEWNESS: -1.218
 KURTOSIS: 1.304

DATA TITLE : GOLD HILL DDH- LITHOS altered basalt

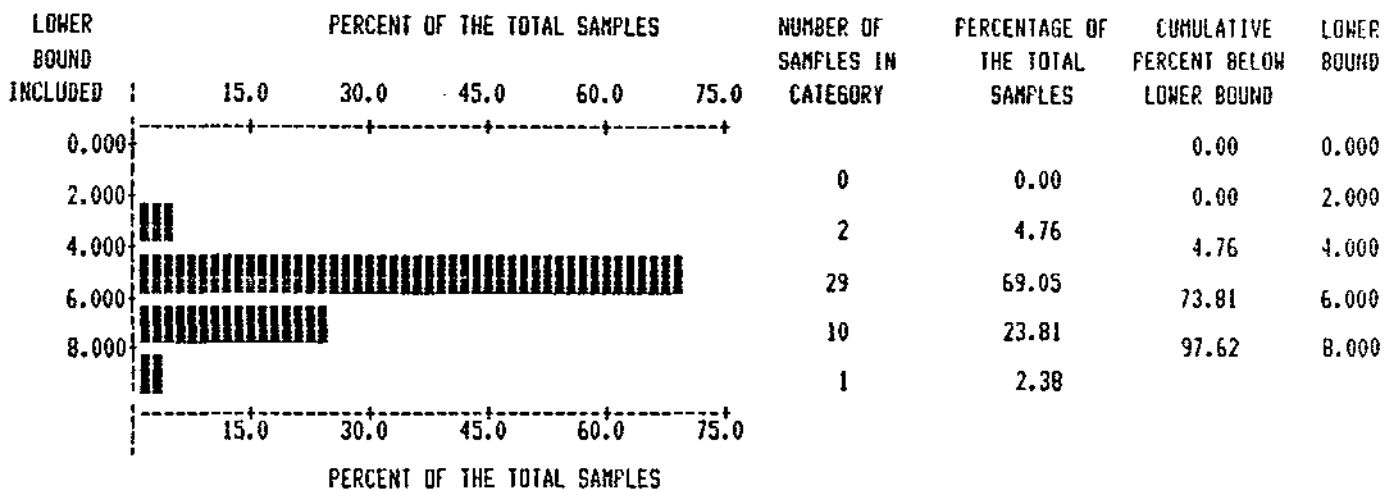
VARIABLE : NA2O



VARIABLE: NA2O
 NUMBER OF OBSERVATIONS: 42
 MINIMUM: 0.050
 MAXIMUM: 5.290
 MEAN: 2.260
 STANDARD ERROR OF MEAN: 0.214
 STANDARD DEVIATION: 1.388
 COEFFICIENT OF VARIATION: 61.442
 SKEWNESS: 0.192
 KURTOSIS: -0.853

TITLE : GOLD HILL DDH- LITHOS altered basalts

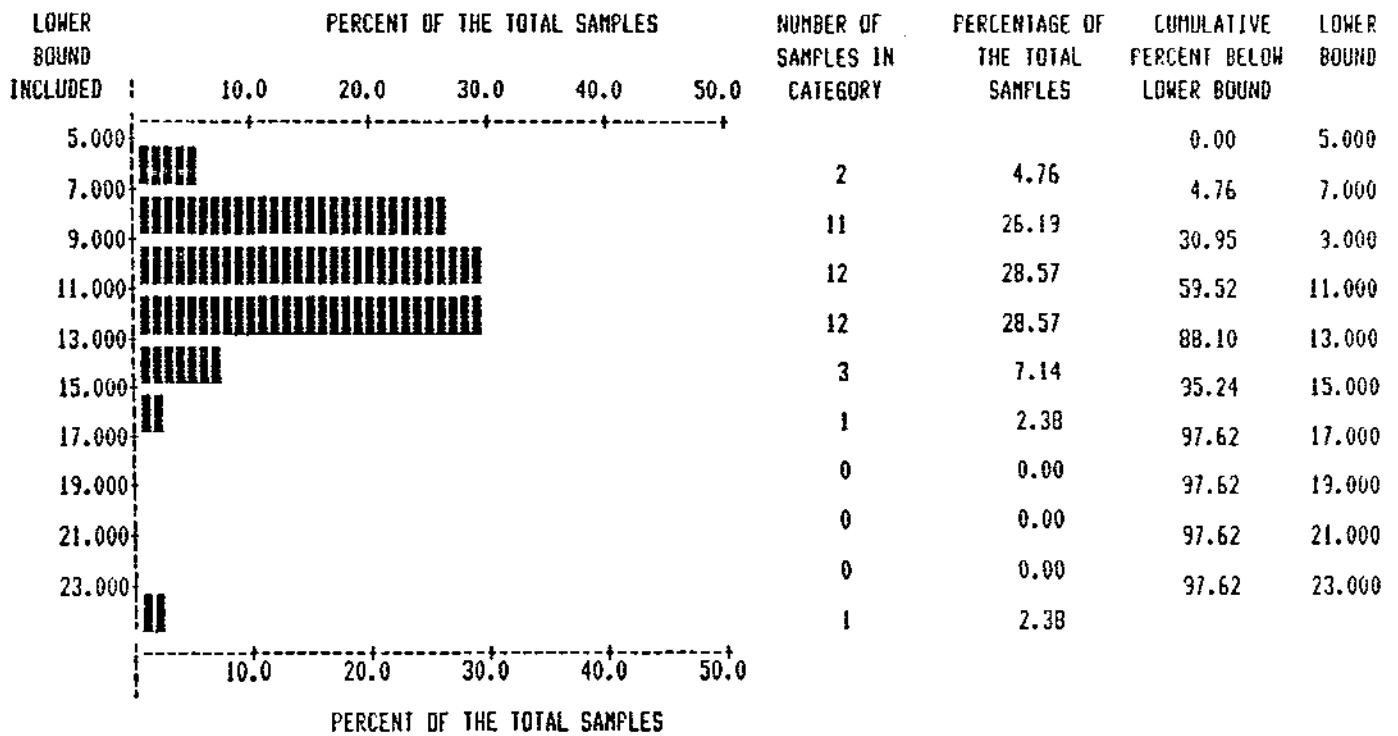
VARIABLE : MGO



VARIABLE: MGO
 NUMBER OF OBSERVATIONS: 42
 MINIMUM: 2.400
 MAXIMUM: 8.200
 MEAN: 5.493
 STANDARD ERROR OF MEAN: 0.159
 STANDARD DEVIATION: 1.032
 COEFFICIENT OF VARIATION: 18.786
 SKEWNESS: -0.279
 KURTOSIS: 2.044

DATA TITLE : GOLD HILL DDH- LITHOS altered basalt

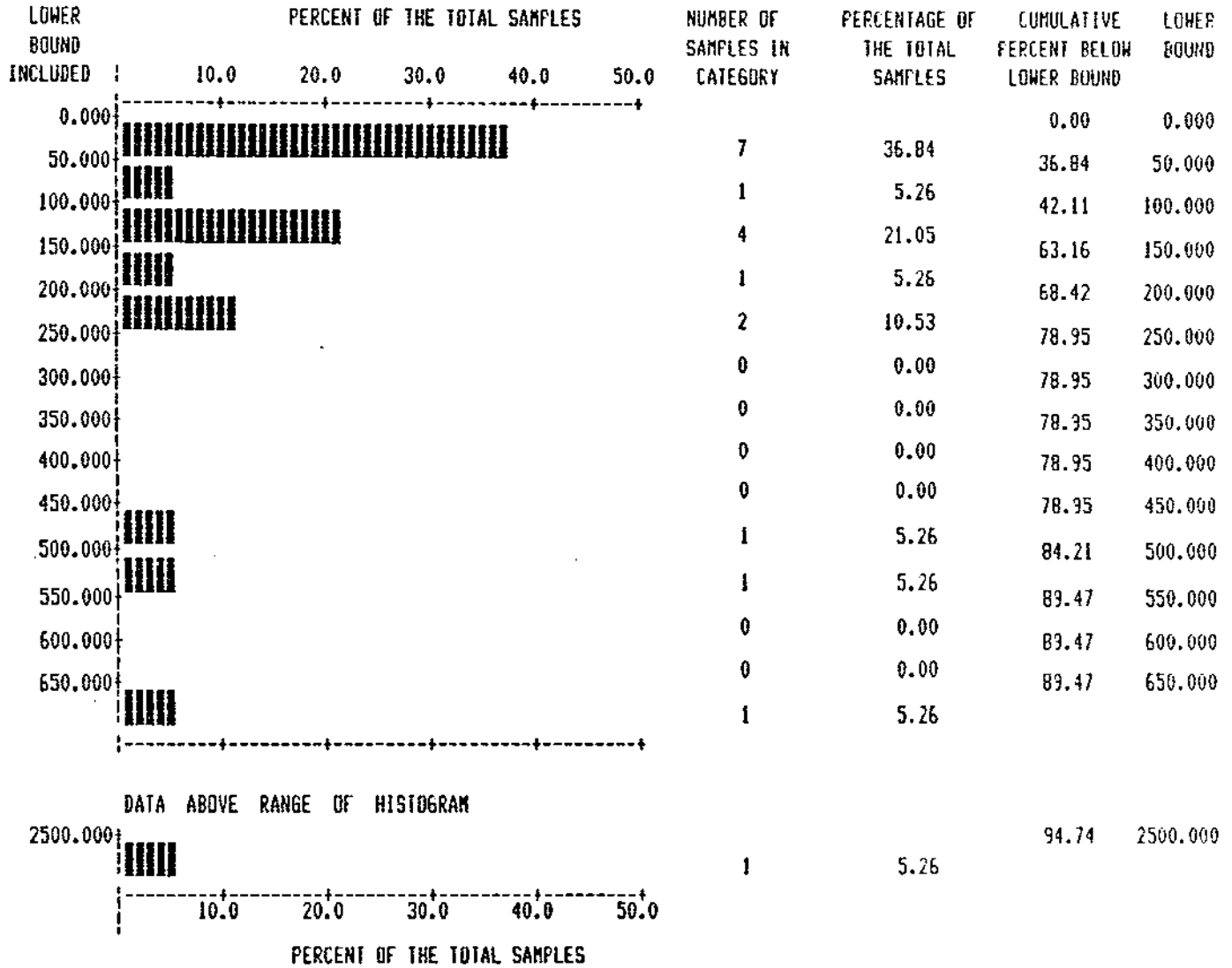
VARIABLE : CAO



VARIABLE: CAO
 NUMBER OF OBSERVATIONS: 42
 MINIMUM: 6.800
 MAXIMUM: 24.120
 MEAN: 10.626
 STANDARD ERROR OF MEAN: 0.453
 STANDARD DEVIATION: 2.935
 COEFFICIENT OF VARIATION: 27.619
 SKEWNESS: 2.415
 KURTOSIS: 4.11

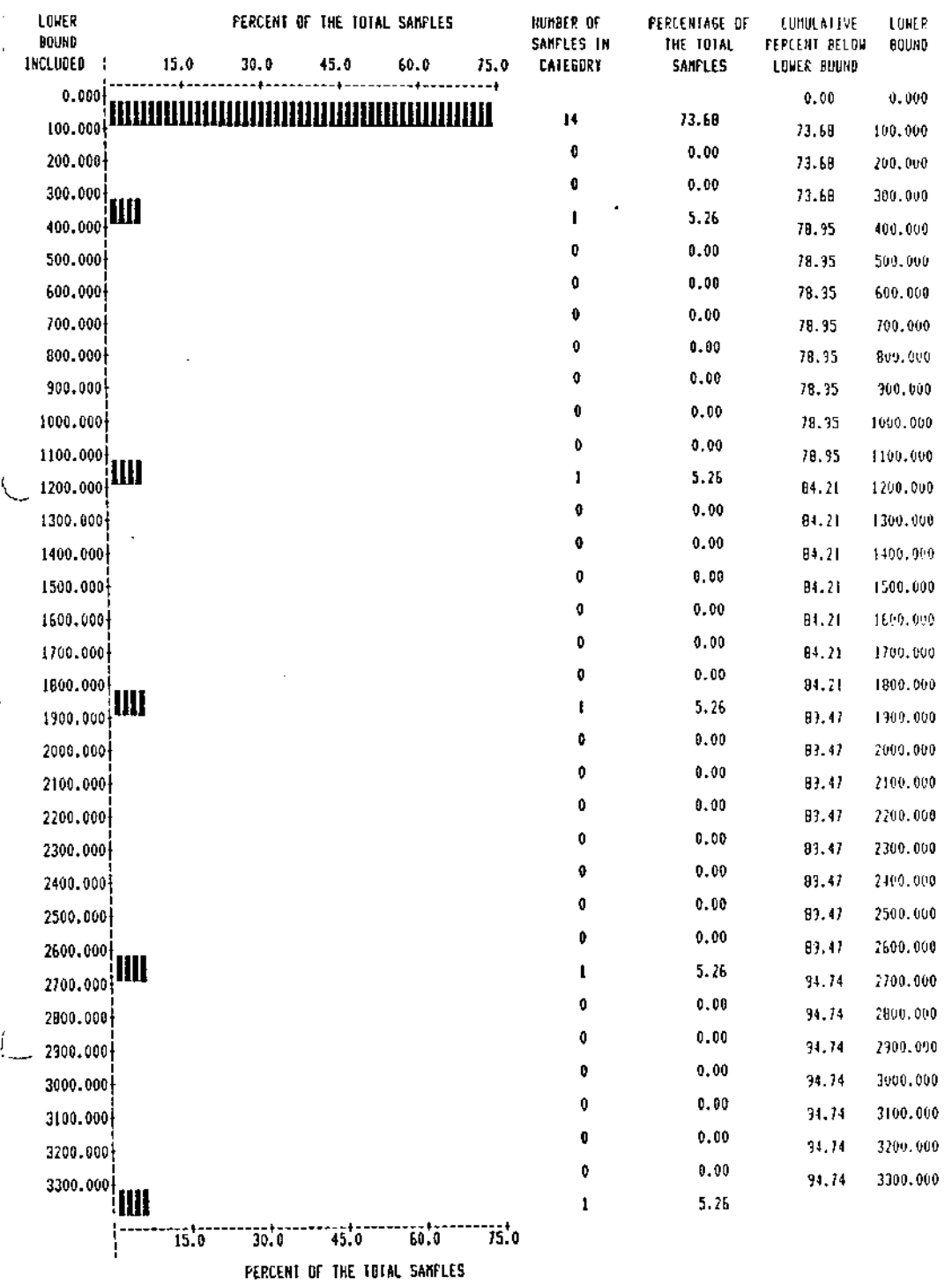
DATA TITLE : GOLD HILL DDH- LITHOS Quartz veins

VARIABLE : AU



VARIABLE: AU
 NUMBER OF OBSERVATIONS: 19
 MINIMUM: 5.000
 MAXIMUM: 2900.000
 MEAN: 310.526
 STANDARD ERROR OF MEAN: 150.364
 STANDARD DEVIATION: 655.419
 COEFFICIENT OF VARIATION: 211.067
 SKEWNESS: 3.219
 KURTOSIS: 9.846

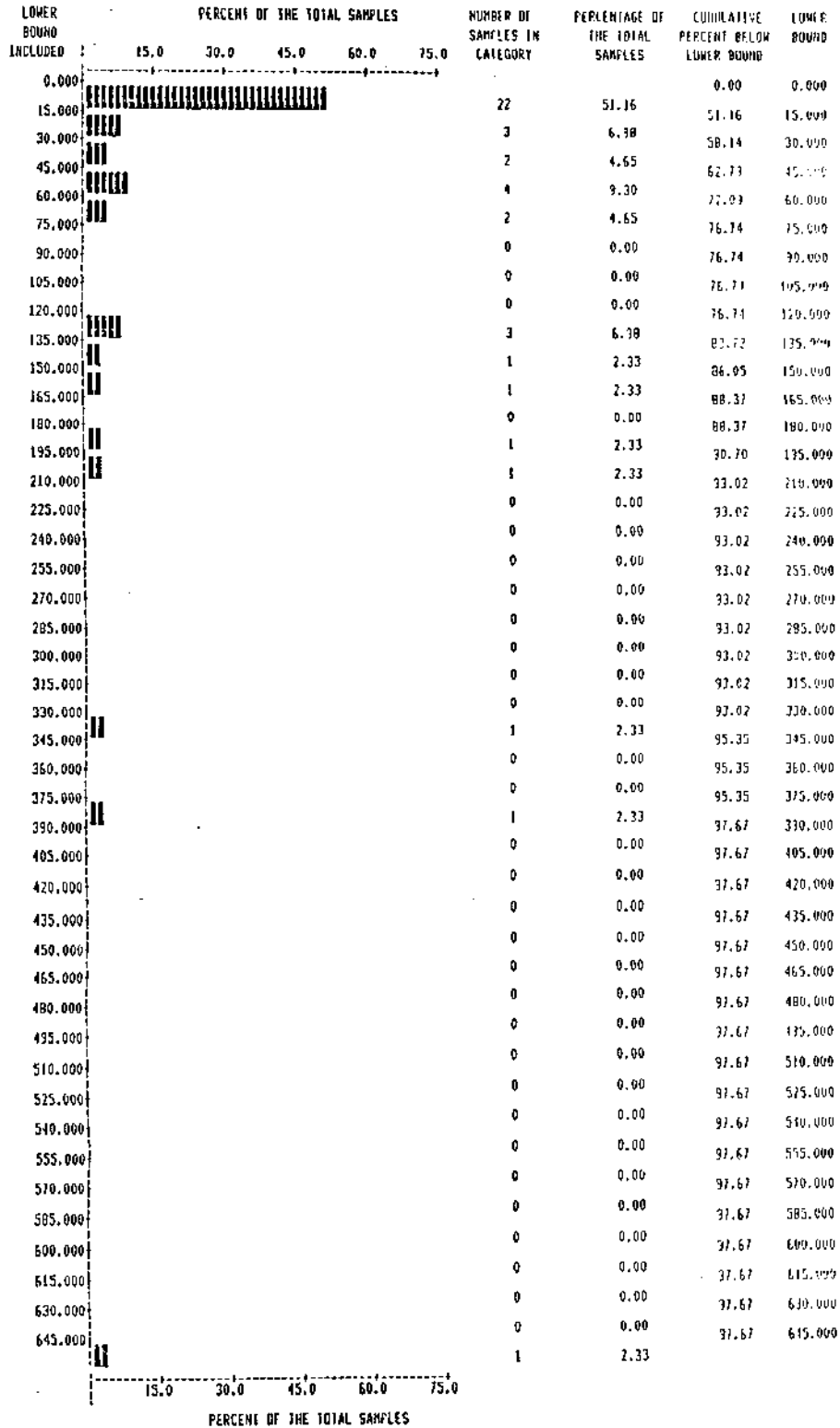
DATA TITLE : GOLD HILL DON- LITHOS Quartz veins
 VARIABLE : PB



VARIABLE: PB
 NUMBER OF OBSERVATIONS: 19
 MINIMUM: 5.000
 MAXIMUM: 3308.000
 MEAN: 504.368
 STANDARD ERROR OF MEAN: 229.224
 STANDARD DEVIATION: 939.163
 COEFFICIENT OF VARIATION: 198.102
 SKEWNESS: 1.757

DATA TITLE : GOLD HILL DDH- LITHOS altered basalt

VARIABLE : AU



VARIABLE: AU
 NUMBER OF OBSERVATIONS: 43
 MINIMUM: 5.000
 MAXIMUM: 650.000
 MEAN: 70.186
 STANDARD ERROR OF MEAN: 19.027
 STANDARD DEVIATION: 124.769
 COEFFICIENT OF VARIATION: 177.768
 SKEWNESS: 2.830
 KURTOSIS: 9.264

APPENDIX IV

DRILL LOGS

HOLE NUMBER: GH-01

MINNOVA INC.
DRILL HOLE RECORD

DATE: 20-July-1988

FROM : TO :	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
0.00 : TO : 3.40 :	CASING <CB>					Casing
3.40 : TO : 85.40 :	MAFIC DIORITE - PYROXENITE GABBRO <M DIOR>	Colour - dark green. Grain Size - medium grained. - Massive medium grained porphyry - Mafic groundmass +/- plagioclase grains - Generally moderately magnetic - Occasional grains drawn out along fabric - Grain size from coarse fine grained - coarse medium grained. - Normally a mafic Diorite - Gabbro with mafic hornblende-pyroxene? groundmass with serpentine.		<Chl, serp> 3.4 - 54.0 - Serp + Chl on fracture with avg. 1-2% Qtz-Carb veinlets with interst. carb - 1-2% 3-5um Qtz veinlets (white - light blue) - zones with 5% light wispy green silicification with chl bands	<Tr py, po> 3.4 - 47.4 Occasional py blebs in quartz veinlets 20-40 degrees to CA, 1% disse. pyr.	3.4 - 6.2 Weak fault with broken rock 30-40 degrees to CA 19.7 - 13.4 <FLT> Moderate fault with clay gouge. 27.6 - 29.6 Weak fault with broken rock 30 degrees to CA. 47.4 - 49.9 Avg. 1% disseminated pyrite. 49.9 - 69.9 Zones with 2-5% very fine grained disse. pyr. with 1% fine grained disseminated py, occasional cpy bleb in quartz veinlets. 69.9 - 85.4 Chl altered with minor serp 2-4% Quartz veinlets with minor Qtz-Carb veinlets.
85.40 : TO : 97.00 :	FAULT ZONE WITH QTZ VEINS <FLT +> <QTZ VNS>	Colour - light green. Grain Size - medium grained - aphanitic. Badly broken ground. 85.4 - 87.9 Strong fault with clay gouge and occasional BV frag. ang. (Maf. Dio.). 87.9 - 90.0 Strong fault with silicified rock (Maf. Dio.).		85.4 - 87.9 10% BV chips. 87.9 - 90.0 Silicified with Qtz veinlets + green mica 1-2%.	<Tr py, ga, cpy> 71.3 - 85.4 1% fine grained disseminated py or pyr?	169.9 - 71.3 <FLT> Strong fault with clay gouge and BV chips 30-40% 78.4 - 79.3 Fault zone with clay gouge.

HOLE NUMBER: SH-01

DRILL HOLE RECORD

LOGGED BY: B. EVANS

PAGE: 2

FROM TO	RDCX TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
		90.0 - 91.0 QV with wallrock silicification, badly broken. QV white.	90.0 - 91.0	QV with silicification + minor green mica.	90.0 - 91.0 1-2% coarse Ga blebs, tr cpy blebs, 2-3% py blebs.	
		91.0 - 92.3 Altered + badly faulted Mafic Dio.				
		92.3 - 94.5 Fennell Basalt Contact, strongly broken. Light green Fennell Basalt.	92.3 - 94.5	Strongly silicified.	92.3 - 94.5 1% disseminated pyrite.	92.3 } Fennell Contact
		94.5 - 97.0 Intense fault zone with 90% clay gouge.	94.5 - 97.0	Strong clay alteration, some black gouge, shear @ 40 degrees to CA, some QV chips.	94.5 - 97.0 Trace disseminated pyrite.	
97.00 TO 141.10	VARIOLITIC BASALT <BSL>	Colour - light green. Grain Size - fine grained. - Fennell Variolitic Basalt. Generally fine grained massive matrix with zones of light coloured variolites.			<tr py>	
			97.0 - 97.7	Weak bleaching.	97.0 - 111.5 Trace disseminated pyrite with occas. disseminations in qtz veinlets.	97.0 - 99.4 Weak fault with broken rock.
			97.7 - 107.9	Avg. 2-3% qtz-carb veinlets.		
			107.9 - 111.5	Very weak bleaching turns rock a light brown colour.		
			111.5 - 116.4	Silicified zone with bleaching around 20-30% qtz veinlets with some vein bx @ 20-40 degrees to CA. (Possibly a healed fault?)	111.5 - 116.4 Avg. 3-5% pyrite as veinlets with QV and in fractures.	
			116.4 - 141.1	1% qtz veinlets except	116.4 - 141.1 Trace disseminated pyrite.	117.0 - 121.0 Weak fault with broken rock.
			129.5 - 131.6	Small quartz vein with bleaching 10 degrees to CA.		

HOLE NUMBER: GH-01

ASSAY SHEET

DATE: 19-July-1988

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL						COMMENTS	
				CU %	ZN %	PB %	AG gm/T	AU gm/T	CU PPM	ZN PPM	PB PPM	AG PPM	AU PPM	AS PPM		SB PPM
7703	87.90	90.00	2.10	.014	.02	.01	3.2	.20								
7710	90.00	91.00	1.00	.028	.02	.23	5.7	.67								

Sample	From (m)	To (m)	Length (m)	AL2O3 %	BA %	CAO %	FE2O3 %	K2O %	MGO %	MNO2 %	NA2O %	SiO2 %	SR %	TiO2 %	ZR %	S %	TOT %	A6 PPM	A5 PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU PPB
7701	6.50	9.50	3.00	6.04	.005	4.56	15.00	.01	20.43	.20	.01	44.45	.02	.70	.005	91.41	1.4	32	3	117	52	1	59	5	
7702	31.70	34.80	3.10	6.31	.005	6.88	14.17	.01	19.04	.28	.01	41.71	.02	.75	.005	89.18	1.2	44	4	017	9	1	56	10	
7703	47.40	48.50	1.10	6.20	.005	3.86	14.34	.01	22.81	.28	.01	41.72	.02	.69	.005	89.93	1.5	41	4	104	4	1	45	5	
7704	48.50	49.90	1.40	6.31	.008	3.67	15.57	.01	22.72	.29	.01	40.91	.01	.74	.005	90.24	1.1	50	7	50	5	4	43	5	
7705	59.10	62.20	3.10	6.00	.005	4.22	15.23	.01	22.86	.35	.01	40.58	.02	.71	.005	89.98	.8	36	2	86	6	1	48	5	
7707	65.50	67.50	2.00	6.16	.005	3.47	16.33	.01	22.13	.26	.01	41.90	.02	.69	.005	90.97	.7	57	2	135	10	1	41	5	
7706	69.90	71.30	1.40	5.83	.005	9.28	13.50	.01	17.92	.32	.01	40.69	.03	.66	.005	88.21	1.4	45	2	75	7	6	45	5	
7711	91.00	92.30	1.30	6.82	.006	15.84	12.19	.27	13.88	.30	.01	36.49	.08	377	.006	86.64	2.6	102	9	68	69	36	130	110	
7712	92.30	94.50	2.20	10.59	.031	14.52	9.11	1.01	7.92	.24	.15	43.49	.06	1.33	.009	88.44	2.1	39	19	100	34	13	105	130	
7713	94.50	97.00	2.50	12.64	.046	9.30	10.60	1.43	5.70	.23	.32	49.40	.03	1.49	.010	91.19	1.7	43	42	18	52	6	71	70	
7714	101.80	104.80	3.00	15.96	.012	5.14	10.80	.02	5.49	.22	2.99	50.65	.03	1.76	.011	93.21	.7	1	35	36	22	2	74	5	
7715	111.50	113.00	1.50	13.89	.032	9.82	11.52	.65	6.39	.30	1.72	44.83	.03	1.50	.010	90.69	1.2	1	57	7	19	1	71	15	
7716	113.00	114.50	1.50	7.12	.033	24.12	10.92	.71	8.20	.44	.35	32.77	.03	.71	.006	85.40	1.1	4	50	2	17	1	36	10	
7717	114.50	116.40	1.90	12.93	.047	11.14	9.92	1.58	5.26	.29	1.04	46.24	.03	1.47	.010	89.97	1.7	34	91	38	59	5	83	380	
7718	132.30	135.30	3.00	13.73	.012	11.73	11.61	.43	6.07	.27	.41	45.59	.02	1.51	.011	91.40	1.0	10	21	20	26	3	61	10	

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL							COMMENTS
				CU %	ZN %	PB %	AG g/t	AU g/t	CU PPM	ZN PPM	PB PPM	AG PPM	AU PPB	AS PPM	SB PPM	
12512	6.70	9.70	3.00						125	54	14	1.4	5	43	2	
12513	25.00	28.00	3.00						87	56	7	.8	5	21	2	
12503	28.60	30.10	1.50						23	93	21	.3	125	236	6	
12504	30.10	31.10	1.00						301	88	16	.5	5	1	3	
12505	31.10	32.60	1.50						12	72	18	.4	125	17	3	
12506	32.60	34.10	1.50						20	86	23	.4	40	44	4	
12514	35.70	37.20	1.50						39	76	18	.3	35	52	7	
12509	37.20	38.70	1.50						18	94	19	.4	545	97	11	
12510	38.70	40.20	1.50						23	95	19	.4	160	27	13	
12511	40.20	43.20	3.10						59	96	22	1.3	210	49	21	

Sample	From (m)	To (m)	Length (m)	AL2O3	BA	CAO	FE2O3	K2O	MGO	MNO2	NA2O	SiO2	SR	TiO2	TR	S	TOT	AG	AS	BA	CU	PB	SB	ZN	AU
				%	%	%	%	%	%	%	%	%	%	%	%	%	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPB
12512	6.70	9.70	3.00	7.24	.005	3.54	14.70	.01	19.80	.24	.01	41.74	.02	.87	.006		90.17	1.4	43	2	125	14	2	54	5
12501	17.30	18.70	1.40	6.31	.005	9.77	11.84	.01	15.55	.37	.01	44.57	.02	.74	.005		89.20	.9	24	3	109	21	2	52	5
12502	19.10	20.60	1.50	7.48	.005	7.93	13.83	.01	16.83	.39	.01	42.05	.02	.82	.005		89.35	1.3	33	6	150	16	3	63	10
12513	25.00	28.00	3.00	7.23	.005	8.02	13.64	.01	16.89	.28	.01	41.98	.02	.81	.005		88.89	.8	21	5	87	7	2	56	5
12507	34.10	35.70	1.60	13.62	.027	7.95	10.87	.71	6.42	.27	3.22	45.98	.04	1.66	.011		90.78	1.2	29	36	15	28	3	75	45

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE (TO C.A.)	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.05	CASING <CB>					
3.05 TO 72.90	MAFIC DIORITE- PYROXENITE <C Dior>	Colour - dark grey-green. Grain Size - medium grained. Mafic Diorite - pyroxenite. - anhedral-subhedral white f.s. porph. - groundmass of dark grey to green pr-hbl. - relatively homogeneous. Local minor variations in grain size - serp/chlorite on fractures/groundmass throughout	<carb. serp> 3.05 - 25.75 Thin calcite-qtz veinlets at 30 degrees Serp/chlorite on fractures. 21.25 - 21.40 White qtz vein in fault zone. 22.6 - 22.8 5cm wide, light green clay? bands. At 50 degrees to C.A. Offset by later fractures. 25.75 - 45.95 2-5% calc/qtz/chl veins. Concentrated in broken/gouge zones. Veins at 60-90 degrees to C. A. Thin, light green clay filled fractures at 0-30 degrees to C.A.		<Tr-Si po,py> 3.05 - 7.0 2-5% pyrrhotite. Possibly with magnetite.	3.05 - 16.5 Moderate to very broken core. 6.1 - 7.32 Poor, 40% recovery. 21.3 - 21.45 Minor fault. Clay gouge with qtz vein. 21.65 - 21.75 Minor fault. Broken core, clay. 21.95 - 22.02 <FLT> Minor fault, clay gouge. Broken zones with calc/qtz veins, minor gouge: 27.6 - 28.0 33.4 - 33.7 36.2 - 36.53 36.78 - 36.88 42.5 - 43.4 43.2 - 43.86 44.95 - 45.1
45.95 - 52.8	Light grey altered diorite. - 10-20% interstitial calcite. Py partially altered to light brown mineral. Bleached appearance. - 10-20% chl/serp alteration of groundmass.	45.95 - 52.8 Moderately, pervasive carb. alteration. Thin calcite veinlets.	51.5 1-2mm wide fine grained pyrite infilling fracture with calcite.	52.1 - 52.5 Trace pyrite on fractures.	52.1 - 52.5 Weak fault - broken core.	
52.8 - 64.8	Light brown pyroxene? 1-2mm.	52.8 - 72.9 Thin calc/qtz veinlets.	52.8 - 64.8 Trace py/po, very fine.			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CAI	ALTERATION	MINERALIZATION	REMARKS
		- dark green chl/serp matrix. 64.8 - 72.9 F.S. increases up to 30%. Altered to light green in places. Up to 4mm; gives spotted appearance. FAULT CONTACT		Occasional grey clay-filled fractures. 58.7 20cm long calcite zone. 68.4 16cm long white quartz vein. Tr py.		{72.8 - 72.9} <FLT>
72.90 TO 76.29	HORNFELS BASALT <ALT BSLT>	Colour - light brown to dark grey. Grain Size - fine - aphanitic. Intensely altered basalts. Occasional remnant varioliths visible. Upper contact broken over 10cm.		<qtz-carb> Strong qtz-carb veining. 73.1 - 73.45 White qtz vein, tr calc. Occasional frags of wall rock.	<Tr py, po, cpy> Trace py, po, very trace cpy. - concentrated in qtz veins.	
76.29 TO 88.85	CHLORITE ALT. FENNEL BASALT <CHL BSLT>	Colour - medium grey-green. Grain Size - fine. - Occasional relict varioliths. - 10% dark green - black chlorite? seams. Irregular & discont. Possibly formed by cooling and cracking at top of flow.		- Occasional qtz-carb veining assoc. with sulphides. - Chl-serp on fractures.	<Tr - 2% py/po> Trace - 2% py, po often at selvages of qtz veins and on fractures.	79.2 - 79.6 Broken core.
88.85 TO 206.70	VARIOLITIC BASALT <BSLT>	Colour - medium green to brown. Grain Size - fine. Variolitic green basalt. Varioles - light brown, 2-5mm - zones of fine grained brown basalt with chlorite seams - Intra pillow breccia in places.		<chl, qtz vns> Chlorite on fractures. - occasional thin qtz veins 102.05 - 102.6 Moderately bleached zone. {113.0 - 120.2} <Alt. Bslt.> Strong alteration. Light brown colour. 2-5% qtz-carb veins. 117.3 - 119.5 Intense qtz veining. 121.8 - 122.0 Qtz veining in bleached basalt.	<Tr py/po> Trace py/po. Sulphides in qtz veins + fractures.	Broken zones: 89.6 - 90.2 96.2 - 96.7 117.3 - 118.3 121.4 - 121.3 125.0 - 125.2

FROM TG	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA:	ALTERATION	MINERALIZATION	REMARKS
				125.5 - 126 Bleached basalt. Calc/qtz veinlets.	125.5 - 126 2-Si py.	
		128.94 - 130.2 Medium grained porphyritic basalt. F.S.? porphs- light green to white. Contacts sharp at 50 degrees to C.A.				
						{146.98 - 148.4} <FLT> Fault zone. Broken core with chl fractures.
						149.7 - 150.2 Broken core.
						{150.8 - 151.72} <FLT> Broken core. Minor fault.
						154.2 - 155 Moderately broken core.
				{155.6 - 157.65} <Alt. Bslt.> Moderately bleached zone. Light brown. 1 10cm wide qtz vein.		
		158.92 - 165.2 Medium grained porphyritic basalt. White FS porph and 1-2mm long needles of dark green ps?				
		166.3 - 168.4 10% black chl? seams in fine grained light grey matrix.				
				175.03 Green mica in qtz vein.		
				179.12 Green mica with pyrrh. in qtz vein.		
				190.15 - 190.65 5% qtz-calc veins. Tr. py.		Broken zones: 180.1 - 180.25 185.9 - 186.3 187.5 - 187.9 199.6 - 200.0
				202.18 - 202.8 Qtz flooding, minor calcite. Some gouge. Tr py.		

HOLE NUMBER: 6H-03

ASSAY SHEET

DATE: 20-July-1988

Sample	From (m)	To (m)	Length (m)	ASSAYS				GEOCHEMICAL						COMMENTS		
				CU %	ZN %	PB %	AG gm/T	AU gm/T	CU PPM	ZN PPM	PB PPM	AG PPM	AU PPM		AS PPM	SB PPM
12539	202.20	202.80	0.60						4	54	12	1.2	90	37	4	

HOLE NUMBER: 6H-03

ASSAY SHEET

PAGE: 1

Sample	From (m)	To (m)	Length (m)	AL2O3 %	BA %	CAO %	FE2O3 %	K2O %	MGO %	MNO2 %	NA2O %	SiO2 %	SR %	TiO2 %	ZR %	S %	TOT %	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU PPM
12526	19.00	22.00	3.00	7.76	.010	5.32	16.02	.08	16.98	.30	.19	41.96	.04	.87	.013	.15	89.7	2.2	15	6	11	15	4	59	5
12527	47.00	50.00	3.00	12.20	.010	7.63	14.12	.08	12.20	.29	.05	39.76	.01	1.29	.017	.01	89.70	2.2	15	6	11	15	4	59	5
12528	68.00	71.00	3.00	12.39	.025	10.91	11.52	.69	8.24	.29	.78	42.54	.02	1.46	.007	.61	89.48	.8	9	38	12	24	5	138	5
12529	73.50	76.20	2.80	12.98	.040	10.27	11.33	1.09	4.56	.24	3.18	42.17	.04	1.21	.016	.83	87.97	1.7	25	63	17	14	3	87	330
12530	82.00	85.00	3.00	15.07	.017	6.80	11.74	.10	6.31	.24	3.81	47.20	.02	1.49	.010	.13	92.94	3.6	33	30	21	17	5	104	5
12531	102.00	102.60	0.60	8.63	.005	11.53	5.12	.01	2.85	.15	.05	62.68	.01	.64	.005	.08	91.74	2.6	51	13	56	36	5	39	5
12532	113.00	116.00	3.00	13.76	.048	12.88	9.23	1.83	4.37	.27	.17	45.57	.02	1.43	.007	.75	90.33	.7	37	48	2	20	5	64	120
12533	116.00	117.30	1.30	14.68	.026	9.06	10.24	.78	5.28	.24	3.18	45.13	.03	1.43	.007	.29	90.39	1.0	21	28	16	13	4	78	5
12534	117.30	119.50	2.20																						
12535	125.50	126.00	0.50	14.55	.035	10.20	9.91	1.86	5.12	.24	2.36	44.23	.03	1.25	.007	.92	90.83	1.2	18	37	19	12	3	67	10
12536	135.00	138.00	3.00	14.46	.017	9.68	9.91	.51	5.35	.23	2.32	47.42	.02	1.36	.006	.44	91.73	2.7	27	60	41	176	5	105	10
12537	155.60	157.60	2.00	14.85	.020	9.31	9.75	.61	4.55	.22	2.44	47.53	.02	1.45	.007	.31	91.06	.5	34	17	11	21	6	67	5
12538	176.00	179.00	3.00	14.77	.012	8.18	10.15	.06	6.16	.24	3.17	48.28	.02	1.41	.007	.17	92.63	2.9	32	20	27	18	5	65	5
12540	206.00	209.00	3.00	15.27	.024	8.46	10.52	.72	6.69	.24	2.28	46.90	.02	1.40	.007	.15	92.69	3.4	31	31	26	27	6	74	5
11729	212.00	215.00	3.00	14.52	.005	9.49	9.57	.07	5.43	.23	3.17	48.72	.01	1.31	.009	.17	92.72	1.8	1	13	42	13	1	64	5
11730	220.00	223.00	3.00	15.16	.027	6.98	10.52	.40	6.38	.24	3.35	47.67	.02	1.43	.010	.13	92.33	1.2	29	45	45	9	3	81	10
11731	223.00	226.00	3.00	14.49	.031	8.48	11.20	.27	5.99	.24	2.66	46.83	.01	1.39	.010	.19	91.80	1.4	38	29	28	15	5	68	5
11732	230.00	233.00	3.00	14.61	.006	10.78	10.17	.08	5.40	.23	2.51	46.67	.01	1.26	.010	.14	91.90	1.7	2	11	38	13	4	68	5
11733	239.00	242.00	3.00	14.85	.006	10.11	9.72	.07	6.08	.22	1.95	47.54	.01	1.31	.009	.12	92.00	1.3	30	22	37	6	4	68	5
11734	244.60	245.97	1.37	12.05	.025	9.96	8.04	.47	5.03	.21	2.47	47.63	.01	1.1	.007	.05	87.06	.7	6	22	41	48	3	95	5
11735	249.00	252.00	3.00	14.57	.011	7.52	9.40	.15	5.67	.23	3.42	50.07	.02	1.26	.009	.18	92.50	1.3	1	19	38	16	4	74	5
11736	260.00	263.00	3.00	14.58	.010	10.05	10.69	.23	5.34	.22	1.92	46.26	.02	1.24	.010	.10	90.98	1.3	6	17	42	12	4	63	5

FROM : TO :	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.04	CASING <OB>					
3.04 TO 42.67	DIORITE GABBRO <M DICR>	Colour - dark grey. Grain Size - medium grained. - white to light green F.S. phenos up to 2mm - matrix is fine grained pyroxene? chl/serp on fractures - broken sections common - finer grained, darker sections are magnetic due to disse. pyrrh.		<caro, chl/serp>	<Tr - 21 po/py> Tr - 17 po/py as fine grained disse. - also on fractures + qtz veins. 3.04 - 10.5 Tr - 22 pyrrh. Moderately magnetic.	{7.4 - 8.2} <FLT> Broken core. Py/Qtz on fractures. Minor clay gouge. {10.45 - 16.3} <FLT> Fault zone. Broken core, minor gouge.
		16.3 - 28.3 5-20% calcite-rimmed FS? phenos. 0.5-3mm wide.		16.3 - 28.3 2-SI calc-qtz veins occasionally up to 5cm wide.		22.8 - 24.4 Minor fault. Moderate broken core.
		28.3 - 42.67 20-60% white to light brown FS? phenos. Sub-rounded, 1-3mm wide.		28.3 - 39.25 Thin QV mostly at 60-80 degrees to CA.		
				32.75 - 33.15 White qtz vein.	{32.75 - 33.15} <Tr ga, cpy> 21 py, tr ga, cpy.	
				39.25 - 42.67 Qtz-calc veining up to 20%. Increases towards end of hole.	39.25 - 39.40 SI py as fine grained blebs in qtz-calc veins.	
					39.40 - 42.67 Tr - 21 py, concentrated on fractures.	{39.80 - 42.67} <FLT> Moderate to well broken core with Qtz veining. Poor recovery, approx. 50%.
		Hole intersected old workings at 42.67m. Abandoned at 44.5m and re-started at -20 degrees.				

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL					COMMENTS		
				CU I	ZN I	PB I	AG g/t	AU g/t	CU PPM	ZN PPM	PB PPM	AG PPB	AS PPM		SB PPM	
12543	32.75	33.15	0.40						67	25	303	7.9	685	59	5	
12545	39.25	42.67	3.42						9	101	65	2.4	25	55	3	

HOLE NUMBER: GH-04

GEOCHEM. SHEET

DATE: 20-July-1988

Sample	From (m)	To (m)	Length (m)	AL2O3	BA	CAO	FE2O3	K2O	MGO	MNO2	NA2O	SiO2	SR	TiO2	ZR	S	TOT	AG	AS	BA	CU	PB	SB	ZN	AU
				I	I	I	I	I	I	I	I	I	I	I	I	I	I	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPB
12541	5.00	8.00	3.00	7.08	.005	4.30	15.75	.01	20.28	.28	.06	40.72	.02	.81	.005	.19	89.5	2.1	16	5	48	8	4	54	5
12542	17.00	20.00	3.00	7.58	.005	5.93	14.60	.01	18.68	.31	.01	41.92	.02	.88	.006	.01	89.95	2.3	56	4	43	13	5	48	5
12544	32.50	36.50	3.00	7.55	.005	7.53	13.42	.01	16.80	.31	.01	41.35	.03	.93	.005	.23	88.15	1.0	23	4	6	8	4	57	10

HOLE NUMBER: GH-04

GEOCHEM. SHEET

PAGE: 1

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: (TO CA)	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 1.50	CASING <OB>					
1.50 TO 47.00	DICRITE GABBRD <M DIOR>	Colour - dark to light grey. Grain Size - medium grained. - white 0.5-2mm F.S. phenos - fine grained pyroxene?-rich matrix - darker, finer grained varieties often magnetic due to very fine pyrrh. - F.S. often partially calc. altered		<carb, serp/chl> - chl/serp on fractures - thin calcite veins, calc-altered F.S. phenos	<Tr py/po> Tr py/po 2.5 - 8.2 Moderately magnetic. Tr - 22 pyrrh.	{2.5 - 4.0} <FLT> Fault. Broken core. {5.05 - 7.5} <FLT> Fault. Broken core, calc. frags. {12.8 - 18.5} <FLT> Fault. Zones of very broken core, minor gouge, slickensides.
		18.5 - 34.8 Lighter grey diorite. F.S. larger & up to 40I. Calcite rims on F.S. phenos.		18.5 - 34.08 Minor chl on fractures and with calc. veins.		24.5 - 26.05 Minor fault. Moderately broken, some gouge.
		34.8 - 47.0 F.S. phenos increase to 40-60Z. FAULT CONTACT.		34.8 - 47.0 2-5I thin qtz veins, often with black chl.	34.8 - 47.0 Very trace py with QV.	32.8 - 33.3 Moderately broken core. {46.5 - 47.0} <FLT> Broken core, fault.
47.00 TO 58.00	ALTERED BASALT WITH QV <ALT BSL> <QV>	Colour - light green to brown. Grain Size - fine. - upper contact faulted.		<Qtz vns> 47.0 - 47.65 Qtz vein fragments.	<Tr py, ga, cpy> Trace py, ga, cpy	<FLT> Fault zone, core very broken throughout. Poor recovery in places - 60I.
		47.65 - 50.2 Light brown, silicified basalt.		47.65 - 50.2 10-20Z cross-cutting qtz veins.	47.65 - 50.2 Tr - 12 py, especially on fractures. Tr ga/cpy in qtz vein.	
		50.2 - 56.1 Light green, altered basalt. Light brown variegates up to 7mm wide. - chl on fractures		50.2 - 56.1 22 thin qtz veins.	50.2 - 56.1 Very trace py.	
		56.6 - 57.0		56.6 - 57.0	56.6 - 57.0	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
		Silicified basalt. 57.3 - 58.8 Light green altered basalt. Chl seams and fracture fillings. - moderately broken core		Intense qtz veining, tr calc.	SZ py	57.3 - 57.5 Very broken core with qtz frags.
58.80 TO 124.51	VARIOLITIC BASALT (BSLT)	Colour - medium green. Grain Size - fine. - Light brown varioles 2-5mm wide occur in places.		<Chl, qtz-calc> - Chl on fractures and occasionally in groundmass. 58.8 - 70.4 Network of thin (fine) qtz-calc veinlets; 5-10%. 66.5 - 67.0 20% qtz-calc veining in fault. 70.4 - 77.5 Chl as thin seams and fracture coating. 77.5 - 80.6 Light brown, moderately silicified bleached basalt. 10% qtz veins up to 2cm wide. 80.6 - 82.9 Chl + calc on fractures in fault zone. 85.1 - 86.25 Light brown to grey, highly silicified basalt. 20% qtz veins. 89.6 - 90.2 Light brown altered basalt with 20% qtz veins. 93.2 - 97.4 Dark green, fine grained basalt. Occasional medium green varioles. 99.25 - 99.33 Silicified basalt. Light green.	<Tr py> Trace pyrite. - Conc. near qtz veins. 66.5 - 67.0 2% py 77.5 - 80.6 2% py, especially in wallrock near quartz veins. 82.1 Trace galena in qtz vein. 85.1 - 86.25 2% py 99.25 - 99.33 Trace pyrite.	66.5 - 67.0 Fault zone, broken core. 72.95 - 73.15 Minor fault. Chl fractures. {79.4 - 82.9} <FLT> Broken core. FAULT. 88.0 - 89.6 Fault zone. Broken core. 96.5 - 97.5 Minor fault. Broken core.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CAI	ALTERATION	MINERALIZATION	REMARKS
				5% Qtz-calc veining.		
				102.8 - 105.1		
				Occasional epidote with calcite veins.		
				105.4 - 107.4		
				10% thin calcite veinlets.		
				107.4 - 108.65		
				Silicified light grey basalt. 10-30% Qtz veining. Trace pyrite.		
				110.0 - 113.15	110.0 - 113.15	{109.5 - 112.17} <FLT> Fault zone. Broken core.
				Bleached and silicified basalt. 20% Qtz veining.	Trace - 1% pyrite. Euhedral pyrite on fractures.	
				117.10 - 124.51		
				Moderately altered basalt. Light green to brown, 5% Qtz veins. Alt. increases near lower contact.		
124.51 TO 133.44	SHEAR ZONE ALT. BASALT + QTZ VEINS <FLT > <BSLT, DV>	Colour - light brown to green. Grain Size - fine grained. Moderate to highly silicified basalt. Intense Qtz veining. - very broken throughout, some fault gouge.		<Qtz vns>	<Tr - 5% py>	
		124.51 - 133.8	124.51 - 133.8	Intense Qtz veining and flooding - up to 70%.	Trace pyrite. Euhedral pyrite on fractures up to 5% fine pyrite in gouge zones.	133.19 - 138.5 Highly broken core.
		Light brown, highly silicified basalt. Pseudo-breccia texture - frags of light brown basalt in grey silicic matrix. Possibly formed by healing of fractured rock.		133.8 - 134.4		
				White, broken Qtz vein. Length uncertain as much core lost. Tr py.		
		134.4 - 139.5	134.4 - 139.5	5% thin Qtz veinlets.		
		Medium green, fine grained basalt.		139.5 - 141.7		
		Grey basalt; shattered, cemented by fault gouge.		2-5% Qtz veins.		
		139.7 - 141.7				
		Fine grained, light grey basalt.				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
		141.7 - 153.44 Light green-grey, fine grained, altered basalt. Some broken sections. Most pieces 10-15cm.		{141.7 - 153.44} «grn mica» Minor bright green mica; occasionally calcite on fractures.		148.94 - 152.2 Very broken core.
		152.2 - 153.4 More competent zone. Occasional sections of unaltered basalt. Transition zone to next unit.				150.5 - 151.6 Fault gouge. Black (Mn?) staining.
153.44 TO 157.58	BASALT «BSLT»	Colour - medium green. Grain Size - fine grained. - 2-5% dark green phenos in fine grained medium green groundmass - 2cm wide chill zones represent pillow margins		Occasional qtz veins, up to 5% near upper contact.	«fr py/po»	

HOLE NUMBER: GH-05

ASSAY SHEET

DATE: 22-July-1988

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL							COMMENTS
				CU %	ZN %	PB %	AG g/T	AU g/T	CU PPM	ZN PPM	PB PPM	AG PPM	AU PPB	AS PPM	SB PPM	
12515	56.60	57.30	0.70						1	90	5	1.4	10	29	2	
12520	85.10	86.25	1.15						1	84	94	1.6	200	36	2	
11702	133.80	134.40	0.60						14	26	12	3.9	145	116	3	

HOLE NUMBER: GH-05

ASSAY SHEET

PAGE: 1

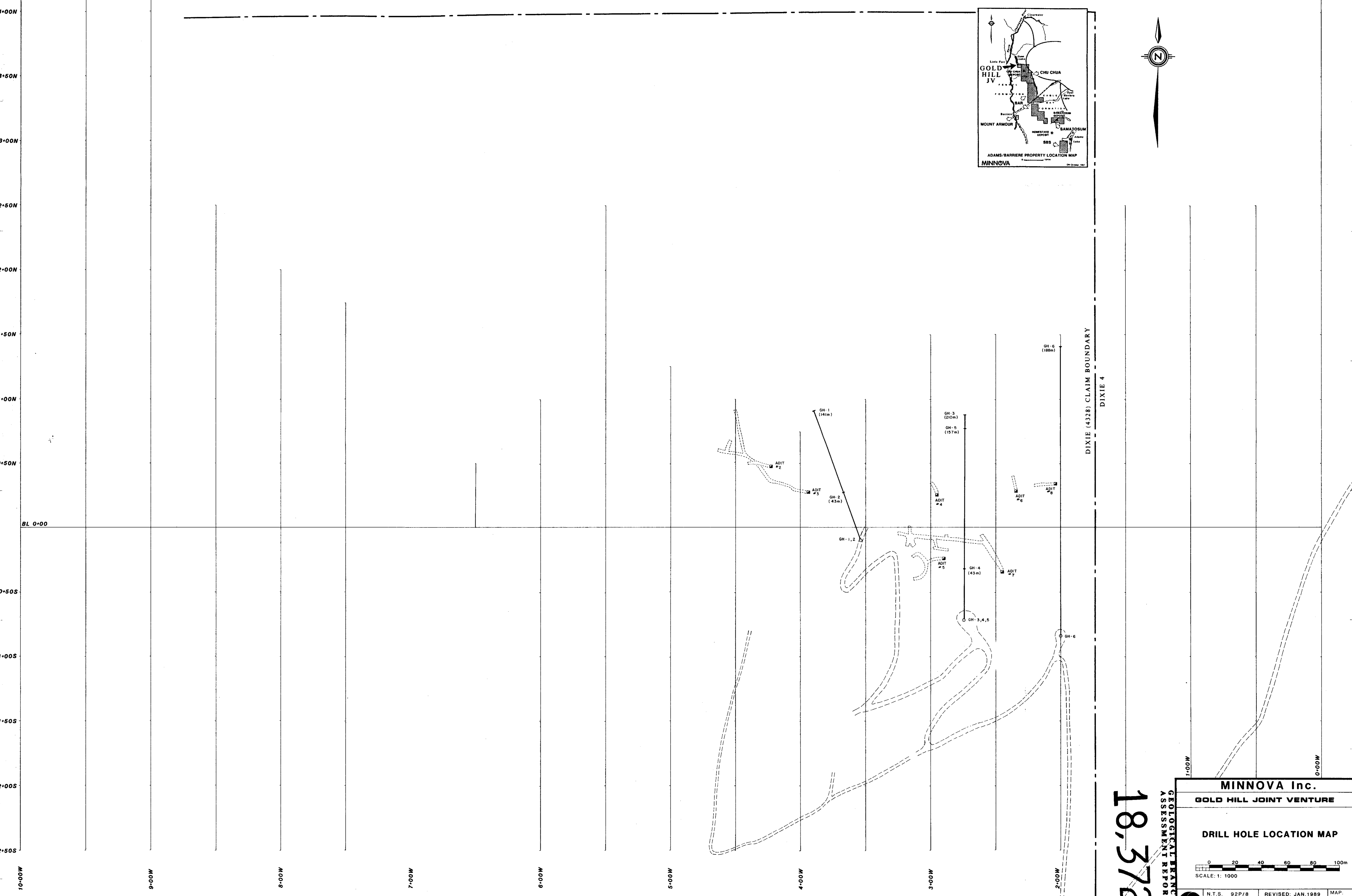
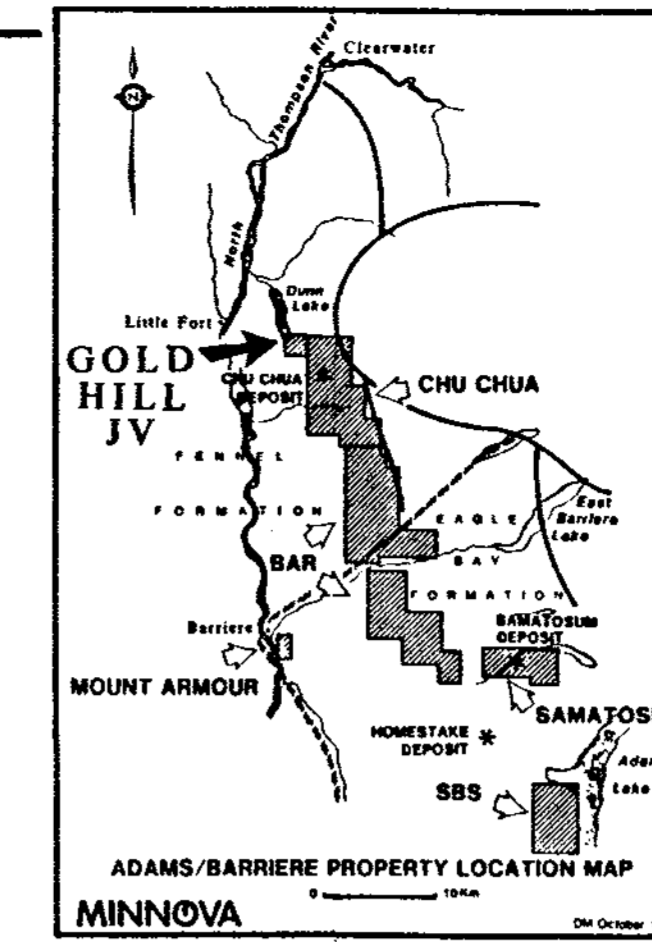
Sample	From (m)	To (m)	Length (m)	AL2O3	BA	CAO	FE2O3	K2O	MGO	MNO2	NA2O	SiO2	SR	TiO2	ZR	S	TOT	AG	AS	BA	CU	PB	SB	ZN	AU
				%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	PPM	PPM	PPM	PPM	PPM	PPM
12546	7.50	10.50	3.00	7.17	.005	4.20	15.38	.01	20.12	.28	.04	41.73	.02	.87	.005	.21	90.02	1.9	9	4	17	12	4	58	5
12547	41.00	44.00	3.00	7.56	.005	8.24	13.33	.01	15.62	.30	.01	41.72	.03	.95	.005	.10	87.86	.4	18	5	10	15	4	61	5
12548	47.00	50.20	3.20	10.96	.030	9.70	7.37	.62	4.46	.17	4.77	51.68	.04	1.13	.005	.55	91.51	1.6	19	53	45	320	2	92	125
12549	50.20	53.00	2.80	13.20	.065	8.46	10.43	2.18	5.87	.29	2.02	45.93	.03	1.51	.008	.36	90.45	.7	1	80	16	12	3	77	35
12550	53.00	56.60	3.60	13.70	.074	8.525	10.48	2.44	6.05	.26	1.47	45.340	.03	1.50	.007	.14	90.10	.7	11	72	11	19	3	91	25
12516	57.30	58.80	1.50	13.12	.057	8.87	10.14	2.49	5.75	.23	1.27	45.01	.03	1.42	.006	.30	88.70	1.0	23	62	7	13	3	86	10
12517	64.00	67.00	3.00	13.55	.067	9.37	10.29	1.96	5.86	.24	.29	46.76	.03	1.41	.007	.48	90.32	1.0	25	86	4	22	5	71	70
12518	77.50	80.60	3.10	12.95	.051	10.28	9.34	1.69	5.60	.25	2.02	46.01	.01	1.35	.005	.72	90.30	1.4	22	48	5	11	3	70	40
12519	80.60	82.90	2.30	14.06	.043	8.18	10.38	.71	5.64	.24	3.90	45.31	.03	1.35	.008	.26	90.12	.9	10	91	6	43	4	81	5
12521	107.40	108.65	1.25	12.02	.044	11.43	8.87	1.94	5.52	.21	2.60	45.43	.04	1.18	.005	.59	89.87	1.3	13	49	4	6	2	82	60
12522	110.00	113.15	3.15	12.61	.021	11.28	8.72	1.05	5.34	.22	4.27	44.33	.05	1.25	.006	.84	89.97	1.2	8	27	22	6	2	89	15
12523	119.00	122.00	3.00	12.64	.022	11.82	8.33	.93	5.14	.23	5.01	43.47	.05	1.24	.006	.35	89.22	.9	9	24	12	4	2	107	5
12524	124.50	127.50	3.00	10.70	.018	13.28	9.28	.32	5.06	.22	4.50	42.37	.05	1.04	.007	.86	87.83	.8	19	21	4	6	2	103	50
12525	127.50	130.50	3.00	10.84	.013	11.88	7.63	.22	4.62	.20	5.39	47.44	.01	.97	.005	.69	89.84	1.2	31	11	2	7	1	65	150
11701	130.50	133.80	3.30	9.28	.069	13.17	8.79	.08	5.22	.22	4.47	46.02	.06	.75	.005	.90	89.06	1.1	29	9	3	4	1	95	140
11703	134.40	138.50	4.10	14.00	.045	9.16	10.29	1.37	5.77	.24	1.78	45.29	.04	1.35	.009	.45	89.80	.9	42	52	4	14	5	70	10
11704	138.50	141.50	3.00	13.32	.047	10.11	13.79	1.75	5.01	.23	.76	43.96	.05	1.22	.014	.19	90.46	1.5	40	52	16	25	4	58	5
11705	141.50	144.50	3.00	14.26	.025	8.69	10.08	.40	5.84	.24	2.02	47.25	.05	1.33	.014	.31	90.50	1.1	33	23	10	14	5	71	5
11706	144.50	147.50	3.00	14.90	.029	8.14	11.72	.52	5.05	.23	1.21	47.43	.05	1.35	.014	.48	91.13	1.1	41	34	9	16	6	71	5
11707	147.50	150.50	3.00	13.69	.031	10.18	10.00	.84	5.51	.24	1.21	46.77	.05	1.23	.014	.37	90.14	.8	46	37	10	10	7	64	10
11708	150.50	153.44	2.94	13.76	.038	11.21	9.49	.88	5.50	.25	.97	45.74	.05	1.26	.014	.28	89.44	.9	10	42	8	12	5	61	5
11709	154.00	157.00	3.00	14.90	.012	8.99	10.40	.09	5.61	.25	2.58	47.10	.04	1.35	.013	.09	91.45	2.6	27	15	17	23	7	69	5

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 11.58	CASING <OB>					
11.58 TO 14.94	BOULDERS <OB>	Chips and altered fragments of diorite, limonitic granite and basalt.				
14.94 TO 166.40	VARIOLITIC BASALT <BSLT>	Colour - medium green to grey. Grain Size - fine grained. - zones of light green varioles; 0.5-2mm wide. - fine grained groundmass with occasional 0.5mm wide black phenos 14.94 - 22.45 2X 1-2mm wide chl seams. Varioles concentrated at dark green chl chill margins marking pillow boundaries.		Occasional 2-3mm wide qtz veins.	<Tr py/po> - pyrite often as fracture coatings	
			24.4 - 24.5 Intense qtz veining.			26.1 - 26.5 Broken core.
			27.1 - 27.4 Qtz healed fractures.		27.2 Tr pyrrh. in qtz vein.	
			30.1 3cm wide qtz vein.			29.6 - 29.95 Minor fault. Broken core & gouge.
			34.9 6cm qtz vein with py & green mica.		30.45 Tr pyrrh. in qtz vein.	30.8 - 32.1 <FLT> Fault. Broken core.
					34.75 - 35.1 2X py as fine grained blebs.	
						37.6 - 39.0 Moderately broken core. Chl on fractures.
			42.5 - 54.5 Occasional epidote on selvages of qtz veins.			45.3 - 45.9 Minor fault; broken core.
						48.2 - 49.0 Minor fault; broken core.
			55.8 - 61.0 Light brown altered basalt. Dark green chloritic sections. Qtz veins; 5X up to 4cm wide. Vuggy in places.			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA	ALTERATION	MINERALIZATION	REMARKS
			61.0 - 61.7	<QV> White qtz vein.	61.0 - 61.7 <Z> galena, trace sphalerite, very trace cpy.	
			61.7 - 63.4	30-50% diss. epidote alteration.		62.3 - 65.8 <FLT> Broken core, fault zone.
			63.4 - 63.65	Qtz vein.	63.4 - 63.65 <Z> py, trace galena, sphalerite.	
			63.65 - 66.1	Fine grained, light brown, moderately silicified basalt. Qtz veining up to 20%.		
			66.1 - 67.5	Moderately altered basalt, <Z> thin qtz veins.		
69.5 - 74.5		Porphyritic basalt. Fine, 0.5mm dark green pyroxene? phenos.				
			76.85 - 78.6	Light brown altered basalt. Moderately silicified in places. Minor clay gouge associated with qtz veins.		
			79.4 - 80.2	30% qtz veining at 30-40 degrees to CA.		
					82.25 - 87.5 Tr - <Z> pyrhh. as fine grained blebs up to 5mm wide.	
			87.5 - 90.5	10% epidote alteration, <Z> qtz-calc veins/interstitial alteration. Minor chl alteration.	87.5 - 90.5 2-5% fine grained pyrite.	89.1 - 89.6 Minor fault. Broken core.
					90.5 - 129 Tr - <Z> porpy. Pyrhh. confined to fine grained, medium grey sections. Mostly po below 100m. as fine grained blebs up to 10mm long.	
			94.5 - 95.0	Strong chl/calc/qtz/epidote alteration. <Z> pyrite.		
			96.1 - 96.45	Chl/calc/qtz/ep alteration as above.		97.4 - 97.8 Minor fault. Broken core, chl on

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	SAMPLES TO CAS	ALTERATION	MINERALIZATION	REMARKS
		105.3 - 110.0 Occasional faint, 1-3mm long white phenos. F.S.?				fracture.
			131.3 - 132.05	Light brown bleached basalt. SI qtz veins. Minor chl.		
			140.5 - 141.7	SI thin calcite veinlets.		
			141.7 - 143.1	10-20% epidote; 1-2mm long patches. Possibly replacing phenos.		
			144.2 - 145.7	Light brown altered basalt. 10% qtz veining.		144.4 - 145.7: <FLT> Fault Zone. Broken core, poor recovery approximately 40%.
					148.5 - 151.0 Tr po as fine grained blebs.	
			152.55 - 153.04 <QV>	Intense qtz veining, with altered basalt. Banded white/light green appearance.	152.85 - 153.04 <qn, py> SI galena; SI pyrite in qtz vein.	
			154.5 - 163.8	Up to SI epidote altered at qtz vein selvages.		
			164.1 - 166.4	Light grey-brown alteration. 10-20% thin qtz veins.		
166.40 TO 171.50	SHEAR ZONE ALTERED BASALT & QTZ VEINS <SHEAR> <ALT. SOLT> <QTZ VEINS>	Colour - light green to brown. Grain Size - fine. Broken core, fault gouge. Intense qtz flooding of basalt in places.				
			166.4 - 167.9	Very broken, moderately bleached basalt. Occasional calcite on fractures.		
			167.9 - 168.95	Light brown basalt, intense qtz/carb	167.8 - 168.95 Tr sph, galena in qtz veins.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
				flooding. 168.95 - 169.35} <QV> White, broken quartz vein.	168.95 - 169.35} <S2 gn, 2% sph> S% galena, 2% red-brown sphalerite, trace pyrite.	169.35 - 170.0 Grey clay fault gouge, 50% recovery.
171.50 TO 188.05	BASALT <BSLT>	Colour - dark green. Grain Size - fine. - faint 0.5-1mm long white phenocrysts. - fine grained dark green matrix - minor chl on fractures - fractured appearance common with qtz filling spaces		170.0 - 171.5 Light grey basalt with dark green 1-2mm long porphyries. S% qtz veins.	<tr py> Trace pyrite with qtz.	175.45 - 175.9 Highly broken core. Minor fault?
				177.2 - 177.8 Light brown highly altered zone. Tectonic breccia with grey fault gouge over upper 15cm. 10% qtz veining.	177.2 - 177.8 Trace pyrite with qtz veins.	
		177.8 - 188.05 1-2mm long light green varivoles, concentrated at chilled, epidote altered pillow margins.		178.2 - 178.5} <Hem alt.> Strong hematization.		
				182.8 - 182.95 Qtz vein.	182.8 - 182.95 Trace galena.	185.1 - 185.5 Broken zone. Moderately bleached.



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MINNOVA Inc.		
GOLD HILL JOINT VENTURE		
DRILL HOLE LOCATION MAP		
N.T.S. 92P/8	REVISED: JAN. 1989	MAP:
DRAWN BY: GE/sg		3
DATE: NOV 1987		