1222

A REPORT

ON

OVERBURDEN DRILLING

on the

ROSE CLAIM GROUP

Munro Lake

OSOYOOS MINING DIVISION

NTS 82E/12, 13W

49°43' NORTH LATITUDE
119°55' WEST LONGITUDE

for the

owner/operator

ALMADEN RESOURCES CORPORATION

#807-475 HOWE STREET

VANCOUVER, BRITISH COLUMBIA

prepared by

D. DYLAN WATT, B.SC.

submitted

Dec 20, 1988

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I. INTRODUCTION:

Between June 17th and October 8th, 1988, Almaden Resources Corporation continued the till sampling exploration program on their ROSE claim group at Munro Lake. The objective of this phase of the program was to test for up - ice truncations to the anomalous silver dispersion trains discovered in 1987 drilling and to step out from the two previous grids to test the continuity of the high silver values. Thirty-four overburden holes (totalling 296 m.) were drilled along existing roads on the ROSE, ROSE 4, and ROSE 5 claims and 75 till samples were collected from these holes. Heavy mineral concentrates of the samples were analysed for Au, Ag, Zn, and As. This report will describe the program and results obtained and presents an interpretation of them.

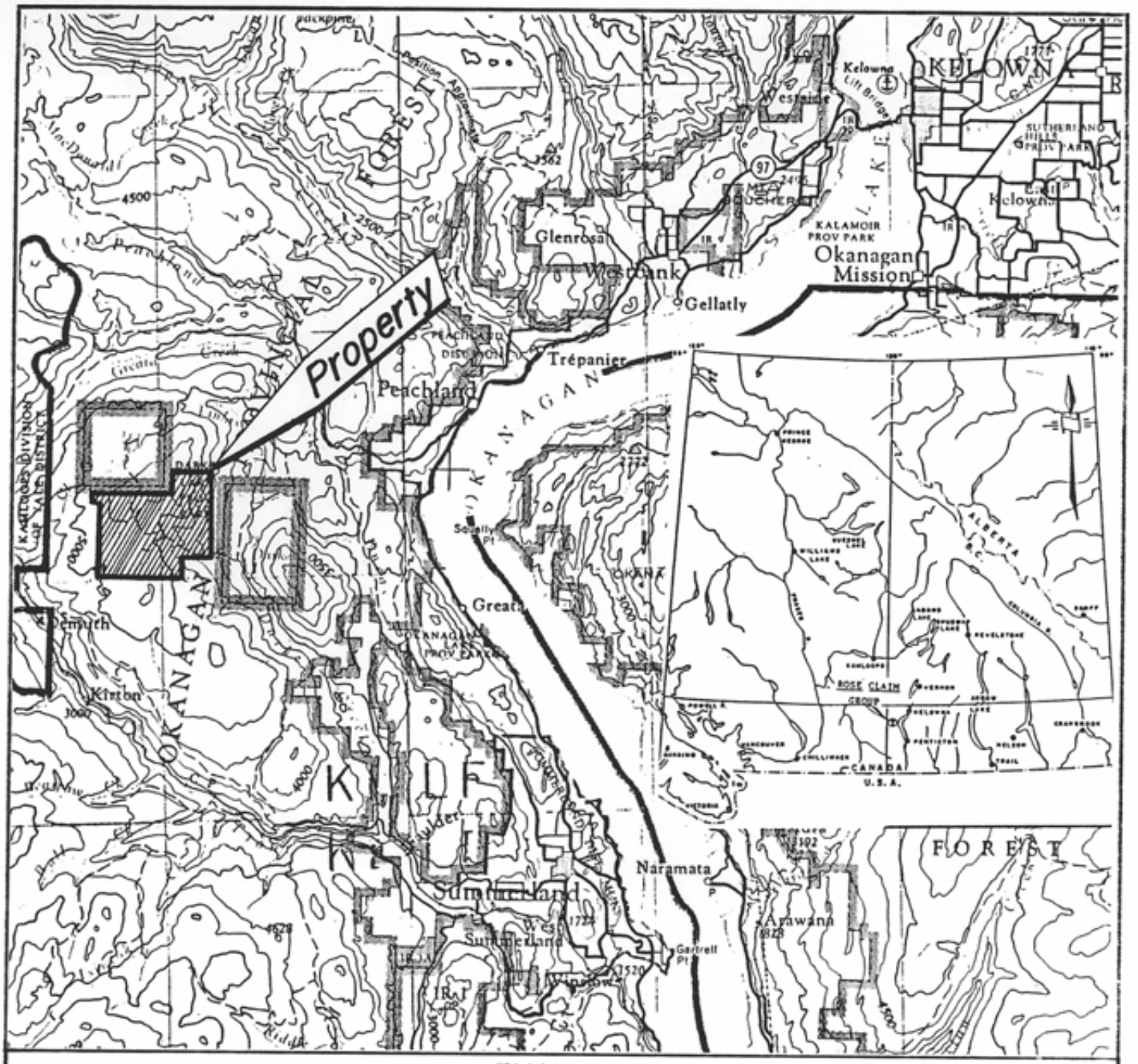


FIGURE 1

ALMADEN RESOURCES CORP.

ROSE CLAIM GP. PROJECT #

LOCATION MAP

SCALE 1 : 250000.

0 5. 10. 15. 20. KM.

D.D.W./G.H.G. December 6, 1988

A. Property:

The ROSE claim group consists of 10 contiguous claims totalling 85 units, as follows: (see fig. 2)

Claim Name	Record No.	Units	Expiry Date
ROSE	2325(9)	20	September 30, 1992
DALE	2346(11)	14	November 5, 1992
LAKE	2347(11)	15	November 5, 1992
ROSE 2	2357(11)	15	November 15, 1988
ROSE 3	2358(11)	15	November 15, 1988
ROSE 4 - 9	2745 - 2750(11)	6	October 5, 1988

The claims are located in the Osoyoos Mining Division of the Yale Land District.

B. Location and Access:

The property is situated in the Southern Okanagan region of B.C., approximately 40 kms NNW of Penticton and 18 km WSW of Peachland on the west side of Okanagan Lake (see fig. 1). The geographic centre of the property lies at 49°14'03"N and 119°54'38"W.

Access to the property is made by way of Peachland or Summerland on B.C. Hwy #97. A maintained gravel logging road leads north from the property 40 kms to Peachland while a good four wheel drive road connects the property with the Summerland-Princeton Highway at Kirton on the C.P.R.

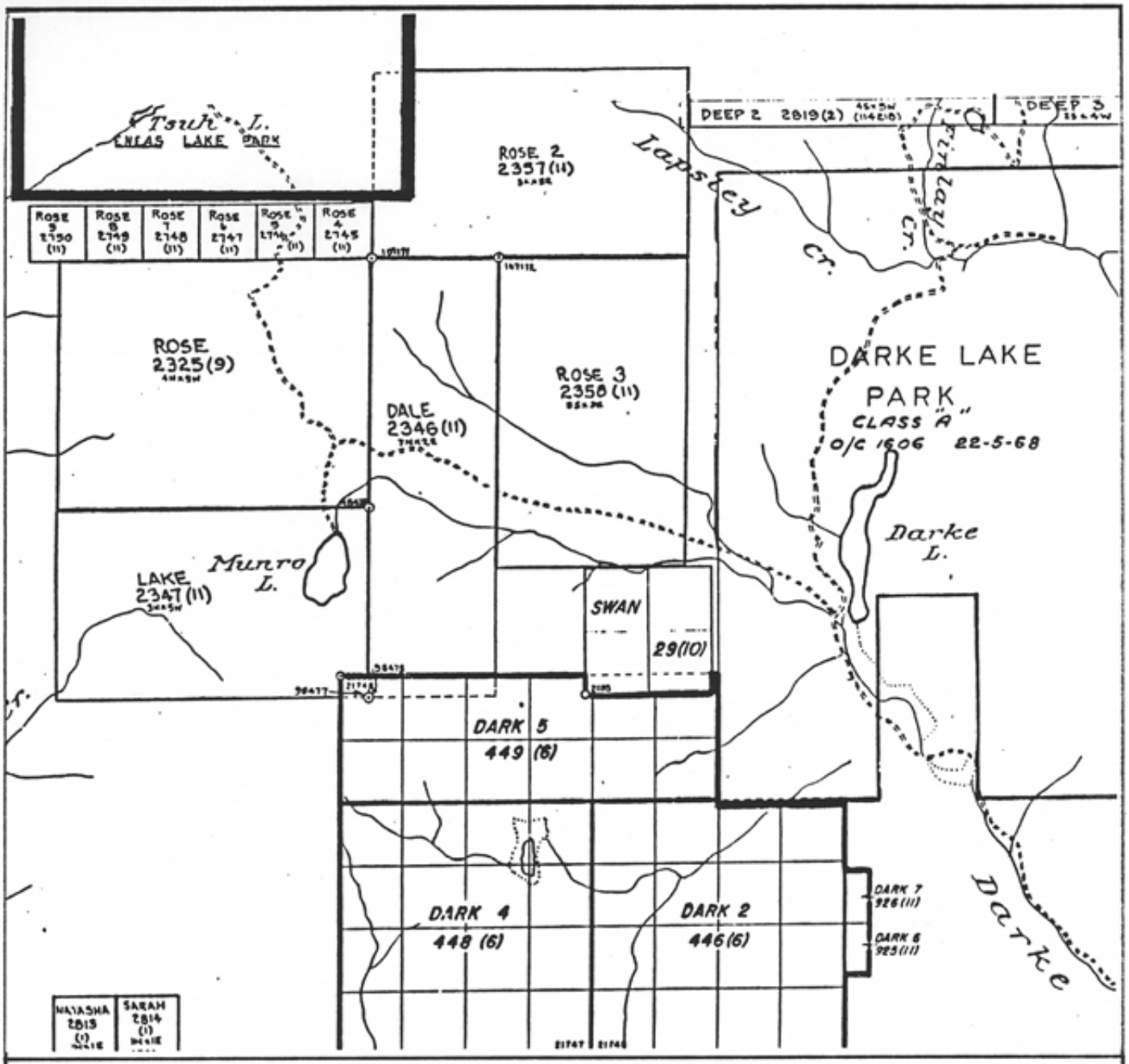


FIGURE 2

ALMADEN RESOURCES CORP.

ROSE CLAIM GP. PROJECT #

CLAIM MAP

SCALE 1 : 50000.

0 1000. 2000. 3000. 4000. M.

D.D.W./G.H.G. December 6, 1988

railway, approximately 30 kms west of Summerland. Poor four wheel drive trails also lead from the property down into Darke Lake Park, 5 km to the east, and north 10 km to Peachland via a small bridge over Peachland Creek.

C. Physiography and Vegetation:

The claims cover portions of a S to SE trending ridge known locally as the Bald Range. The western half of the property covers a gentle plateau with elevations of 5000 - 5500' a.s.l. while the east half of the property covers a steep east-facing slope cut by small creeks where elevations drop to 4500' a.s.l..

Vegetation on the claims consists primarily of thick stands of pine, spruce and balsam. Small creeks drain swamps which are scattered over the flat portions of the claims. Munro Lake is a small, till-dammed glacial pond which drains into Darke Lake, beyond the eastern claim boundary.

Most of the property is covered with a thick mantle of glacial till, with outcrop exposures confined mainly to steep bluffs at the eastern claim boundary, and in old trenches on the ROSE claim. The depth of till varies from 0 to 40 m. and has been shown to cover a very irregular bedrock surface (see fig. 5). Glacial striae indicate the direction of ice flow over the property to be approximately 110° to 130°.

II. GEOLOGY:

A. Regional:

The ROSE claim group is situated on the eastern margin of the Coast Batholith Intrusive Complex. The regional geology west of Okanagan Lake is dominated by granitic rocks of the Jurassic Nelson and Jurassic - Cretaceous Valhalla Intrusive complexes. The ROSE claim group covers a constriction zone between two diorite/granodiorite batholiths of the Nelson complex which has been intruded by a younger Valhalla stock of granodiorite to quartz monzonite composition. Quartz latite dykes and narrow aplite dykes (probably Tertiary in age) have in turn intruded this constriction zone.

B. Local:

Previous mapping indicates that most of the property is underlain by a porphyritic granodiorite probably belonging to the Valhalla complex. Exposures in trenches on the ROSE claim show porphyritic texture and are weakly foliated, while the bluffs on the ROSE 2 and 3 claims show locally strong NE - SW foliation and a more equigranular texture. Quartz latite dykes were observed cutting the granodiorite in trenches on the ROSE claim and in exposures near the Cache showing, on the ROSE 3 claim. Both occurrences showed similar NE strikes and near-vertical dips. Narrow aplite dykes occur over much of the claim area. These dykes show variable orientations but generally follow the overall NE structural trend.

Mineralization on the ROSE claim group occurs in two forms. Weak chalcopyrite-molybdenite mineralization is associated with pyrite in a small calcalkaline porphyry system exposed in trenches on the ROSE claim. Values taken from these trenches averaged 61 ppm Cu and 32 ppm Mo. Quartz veining in silicified shear zones is host to moderate silver values on both the Cache showings, and again south of the claim group on the Glad showing. Both occurrences show chalcopyrite-pyrite-specular hematite mineralization in altered and silicified granodiorite associated with E to NE trending shears. Samples taken in 1987 from the Cache show gave values up to 3.2 oz/t. in silver, over narrow widths (0.3 m.). The Minister of Mines Annual Report for 1967 reports mention of wire silver shipments from an adit in the vicinity of the Cache showing, however extensive prospecting by Almaden personnel failed to locate this adit. An 18 cm. quartz vein discovered on the ROSE 3 claim in 1986 gave values of up to 9 oz/t in silver and 0.1 oz/t. in gold. Subsequent sampling returned values of 22 oz/t silver and 0.132 oz/t in gold.

Examination of air photos over the property shows several strong lineaments trending E to NE. One lineament trending approximately 080° cuts across the entire claim group. The previously mentioned 9 oz/t silver value was collected from a quartz vein which lies on this lineament. Further west, on the ROSE claim, Au and Ag values up to 15,500 ppb and 1210 ppm respectfully have been collected from heavy mineral concentrates of basal till samples "down - ice" from this feature.

III. EXPLORATION HISTORY:

The following is a brief history of exploration on and around the ROSE claim group.

1966 - Brenda Mo-Cu orebody discovered 25 kms north of present ROSE claim. Low grade Cu-Mo mineralization (known as the Jass showing) discovered on ground now covered by the ROSE claim. Drilling by Lakeland Base Metals and Brenmac Mines Ltd. followed in 1967.

1966-67 - Koporok Mines Ltd. investigated silver occurrences on their Cache and Glad claims, east of the Jass showing. Soil sampling, trenching and a small I.P. survey failed to located economic grades of mineralization on the Cache claims.

1969 - airborne magnetometer survey over Cache and Glad claims.

1973 - Jass showing restaked by Canadian Occidental Petroleum; geological, geochemical, and ground magnetometer surveys. Three holes drilled in 1974 to test best Cu-Mo-Zn anomalies.

1976 - GSC released survey results from regional stream sediment sampling program which showed significantly anomalous silver values in streams draining the Munro Lake plateau.

1976-77 - Canadian Occidental resampled all soil and rock samples for silver; one diamond hole drilled to test the highest anomaly; a further Ag-Pb-Zn anomaly trenched in the NW corner of their grid.

1985 - ROSE claims staked for Almaden when Canadian Occidental's claims had lapsed. 25 line kms VLF-EM survey and minor prospecting completed over the claims in late 1985 and 1986

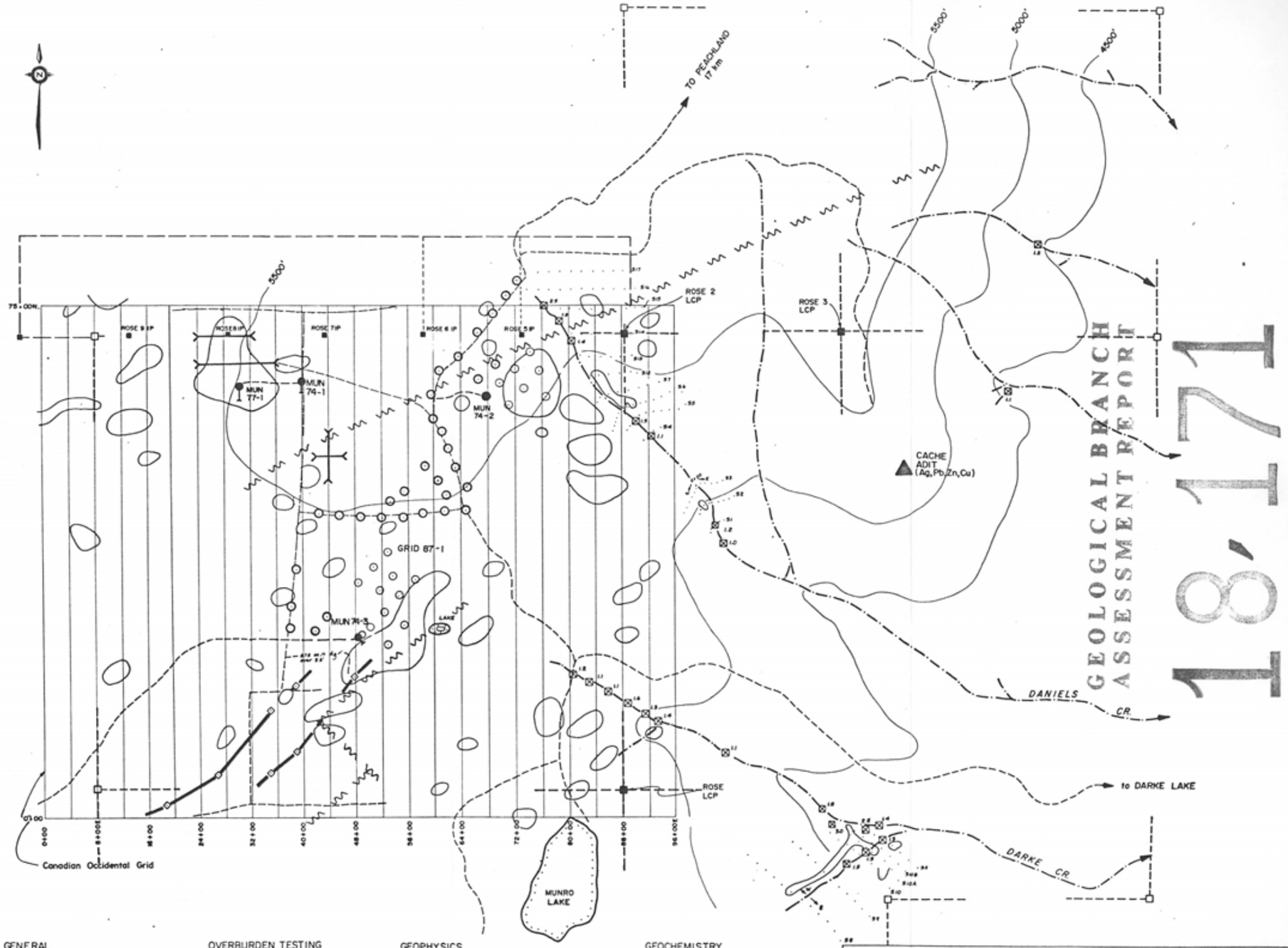
(Watt, 1986). VLF survey indicated 2 major conductors coincident with anomalous Ag values in Canadian Occidental's soil samples, while the prospecting program revealed anomalous silver and gold values (up to 7 oz/t./t Ag and 0.104 oz/t. Au) in a quartz vein outcrop on the ROSE 3 claim.

1987 - Almaden completed a 25 hole overburden drilling program to test for a source of anomalous silver in soils on ROSE claim (Watt, 1987). Results (up to 160 ppm Ag in heavy mineral concentrates) indicated a significant source of silver N.W. of two grids on the ROSE claim.

IV. CURRENT PROGRAM:

Almaden Resources' 1988 exploration program on the ROSE claim group was designed to test for a source for the highly anomalous silver values obtained from the 1987 drill program and to extend the lateral coverage across the property. Twenty-six vertical drill holes (OB 88-01 through 88-29) were spaced at 100 m. intervals along roads which cross the property in a NE - SW direction, subperpendicular to the observed direction of ice transport (see fig 4). Eight "fill-in" holes (88-30 through 37) were drilled at a later date to further delineate anomalies. Western Caissons Ltd. of Calgary was contracted to drill the holes using a Drill Systems HD 1000 wheel-mounted reverse circulation rig. Holes were drilled using either a 6¼" tri-cone or a 5¼" open face bit on 5½" dual-walled pipe. Holes 88-02 and 88-04 were drilled using a Becker Hammer mounted on the reverse circulation mast. As in the 1987 program, samples of cuttings from the basal till unit (0 - 3 m. above bedrock) were taken at 1.0 m. intervals, logged, packaged, and sent for analysis.

Due to their proximity, Eco-Tech Laboratories of Kamloops was chosen to prepare and analyze the samples. To ensure consistency of results, the flow sheet from Overburden Drilling Management's 1987 sample preparation procedure was reproduced at Eco-Tech's lab (see appendix II). The resulting heavy mineral concentrates were also analyzed at Eco-Tech for Au, Ag, Zn, and As by ICP techniques (see appendix III).


TO PEACHLAND 17 km
5500'
5000'
4500'
ROSE 2 LCP
ROSE 3 LCP
ROSE LCP
CACHE ADIT (Ag,Pb,Zn,Cu)
GEOLOGICAL BRANCH ASSESSMENT REPORT
17
18
DANIELS CR
to DARKE LAKE
DARKE CR
7S + 00N.
ROSE 9 IP
ROSE 8 IP
ROSE 7 IP
ROSE 6 IP
ROSE 5 IP
MUN 77-1
MUN 74-1
MUN 74-2
MUN 74-3
GRID 87-1
LAKE
0+00
8+00
16+00
24+00
32+00
40+00
48+00
56+00
64+00
72+00
80+00
88+00
96+00
Canadian Occidental Grid
MUNRO LAKE
GENERAL
dirt road
streams
topographic contours (500' interval)
lake
claim corner post
air photo lineors
trench
OVERBURDEN TESTING
overburden drill hole 1987
previous D.D.H.s (1974,77)
overburden drill holes 1988
GEOPHYSICS
VLF-EM crossover/conductor axis (1984-86)
GEOCHEMISTRY
soil sample location
2 ppm Ag contour in soil
stream sample location
anomalous value in stream sediments ppm Ag
FIGURE 4
ALMADEN RESOURCES CORPORATION
ROSE CLAIM GROUND
COMPILATION MAP
0 100 200 400 600 800 1000m
NTS-82E 12/13W
MONTGOMERY CONSULTANTS LTD.
DECEMBER / 1988

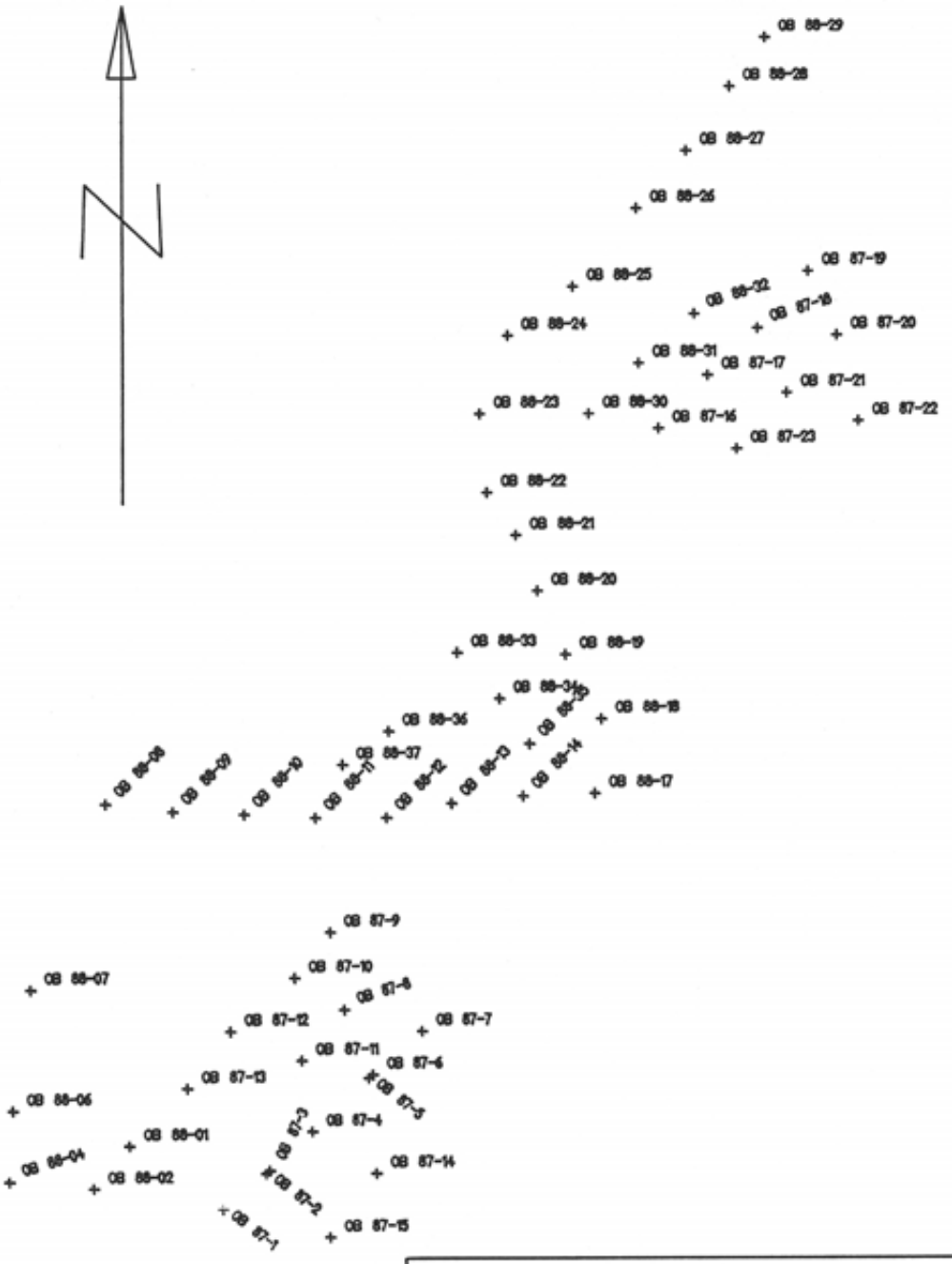


FIGURE 4

ALMADEN RESOURCES CORP.

ROSE CLAIM GP. PROJECT #

OVERBURDEN HOLE LOCATIONS

0 200. 400. M.

D.D.W./G.H.H. December 6, 1988

V. RESULTS:

Geology encountered in the reverse circulation holes of 1988 closely matched that of Burns, 1987. One, essentially homogenous till unit was found to cover the entire property. The till was generally light brown to grey, consisting of very silty sand with occasional boulders increasing in number at depth. Boulders were, again, primarily granodiorite in composition. Water was encountered at or near the bedrock interface in some of the holes, probably due to the much wetter summer than 1987. Depth of the overburden encountered varies from 1.3 m. at hole 87-8 to 22.5 m. in 87-13. Hole 88-2 reached bedrock at 20.5 m. 100 m. away from 87-13 which confirms the bedrock depth from 87-13.

A total of 75 basal till samples were processed by Eco-Tech using the techniques described in the appended flowsheet. Based on values obtained from prospecting on the property and results from several new discoveries in the southern Okanogan, gold was included in this year's analytical package. The encouraging results prompted reanalysis of pulps from the 84 concentrate samples from the 1987 program for Au. The following summarizes the results obtained:

A. Gold:

Gold values from the heavy mineral concentrates were generally quite high. Samples ranged from a low of 15 ppb to a high of 15,600 ppb in sample 87-17-05. Background is in the order of 400 ppb. The distribution of values is positively skewed and shows several overlapping populations. Due to gold's erratic nature, only the highest value from each hole was

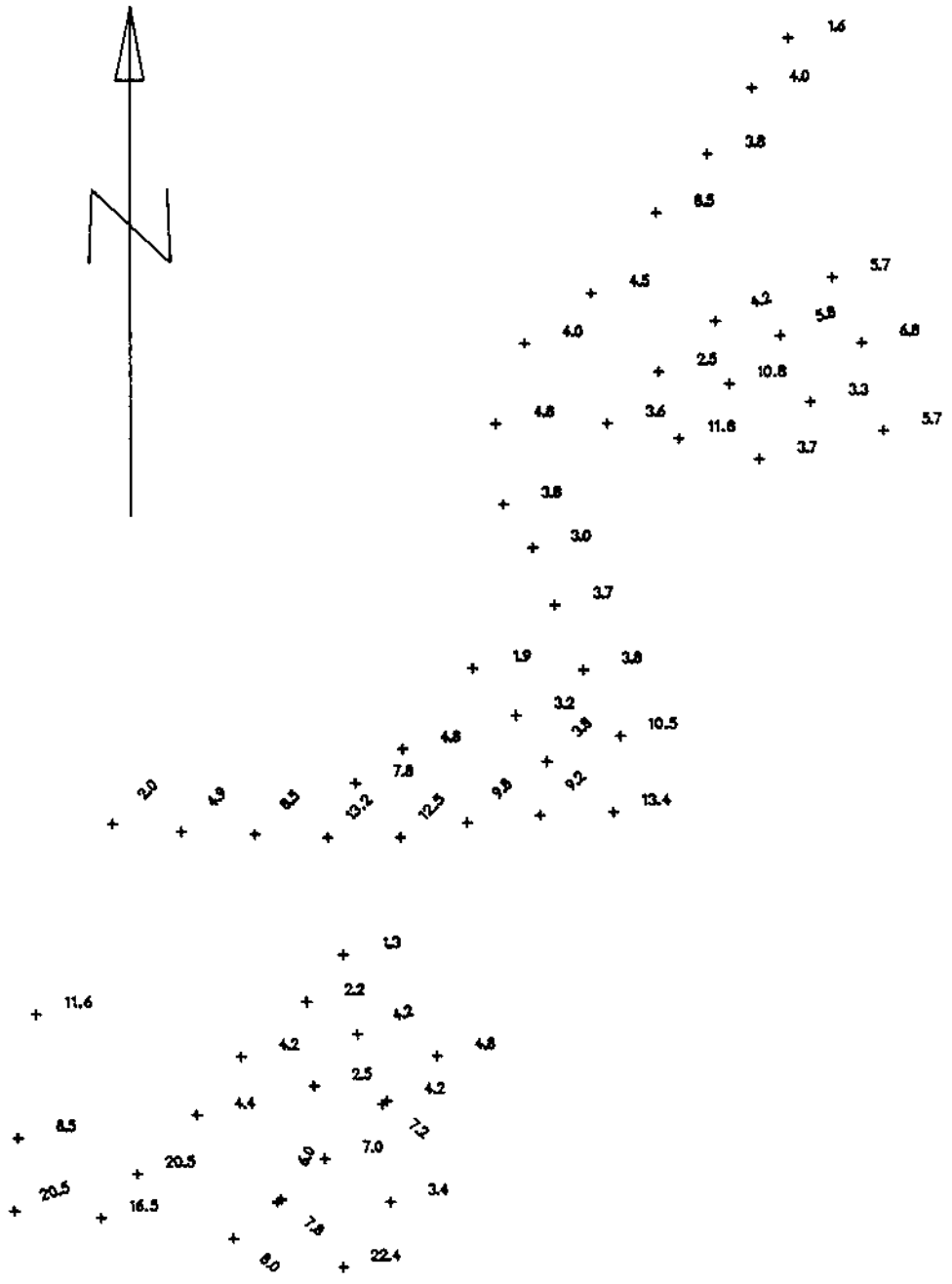


FIGURE 5

ALMADEN RESOURCE CORP.

ROSE CLAIM GP. PROJECT #

OVERBURDEN DEPTH (m.)

0 200. 400. M.

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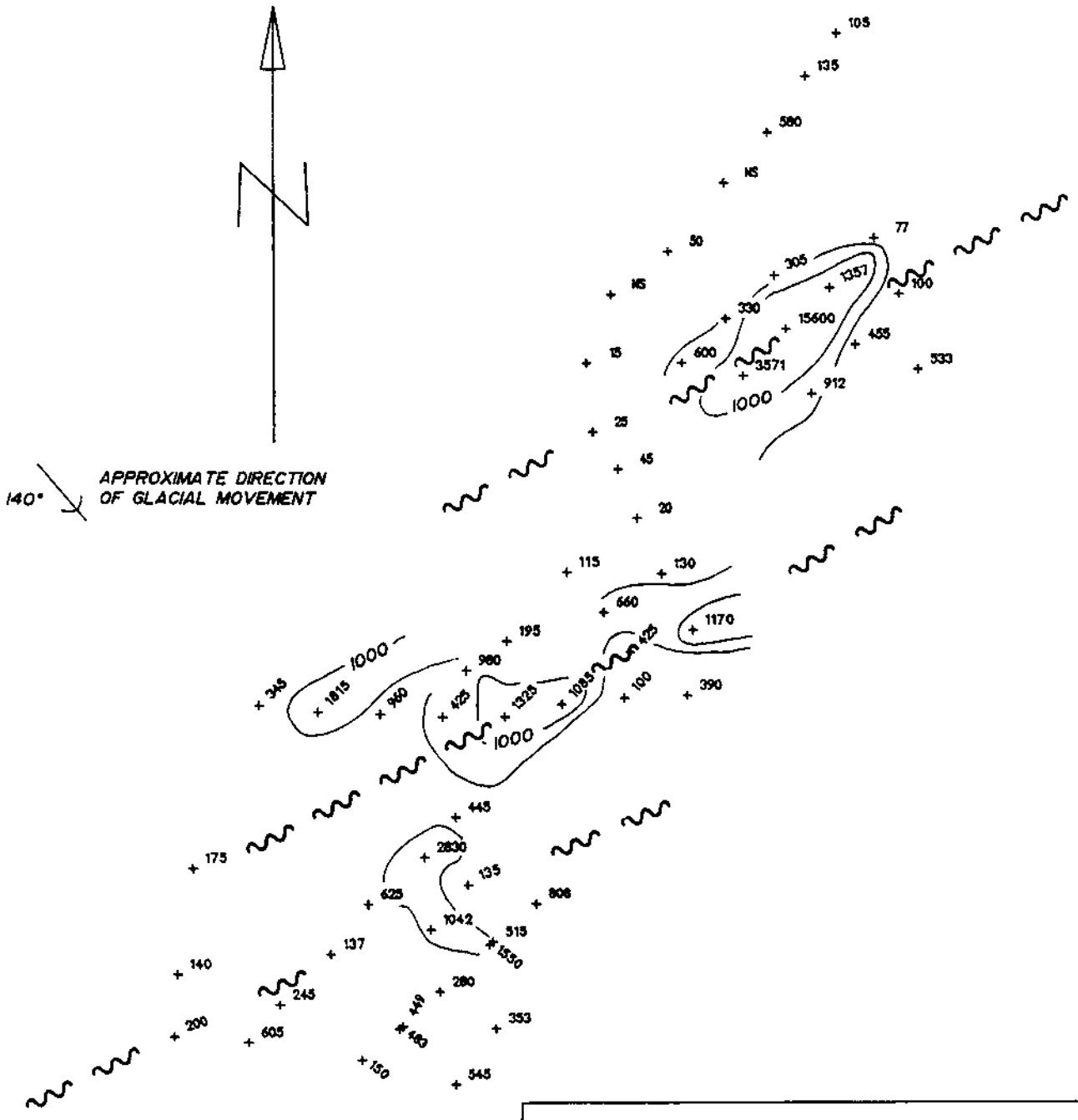


APPROXIMATE DIRECTION OF GLACIAL MOVEMENT

140°

NS = NO SAMPLE (INSUFFICIENT SAMPLE)

FIGURE 6

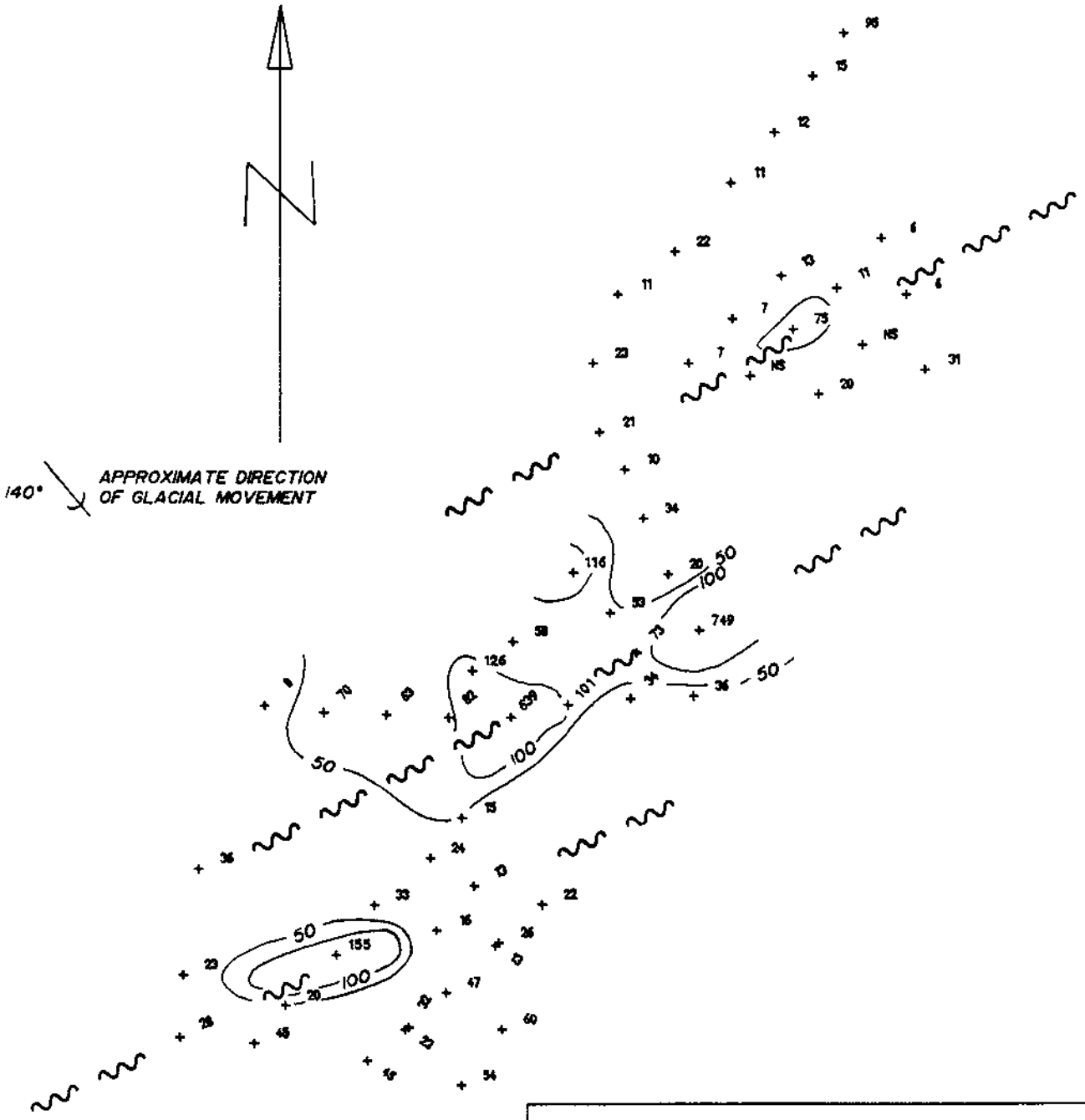
ALMADEN RESOURCES CORP.

ROSE CLAIM GP. PROJECT #

Au (ppb) in Basal Till

0 200. 400. M.

D.D.W./G.H.G. December 6, 1988



NS = NO SAMPLE (INSUFFICIENT SAMPLE)

FIGURE 7

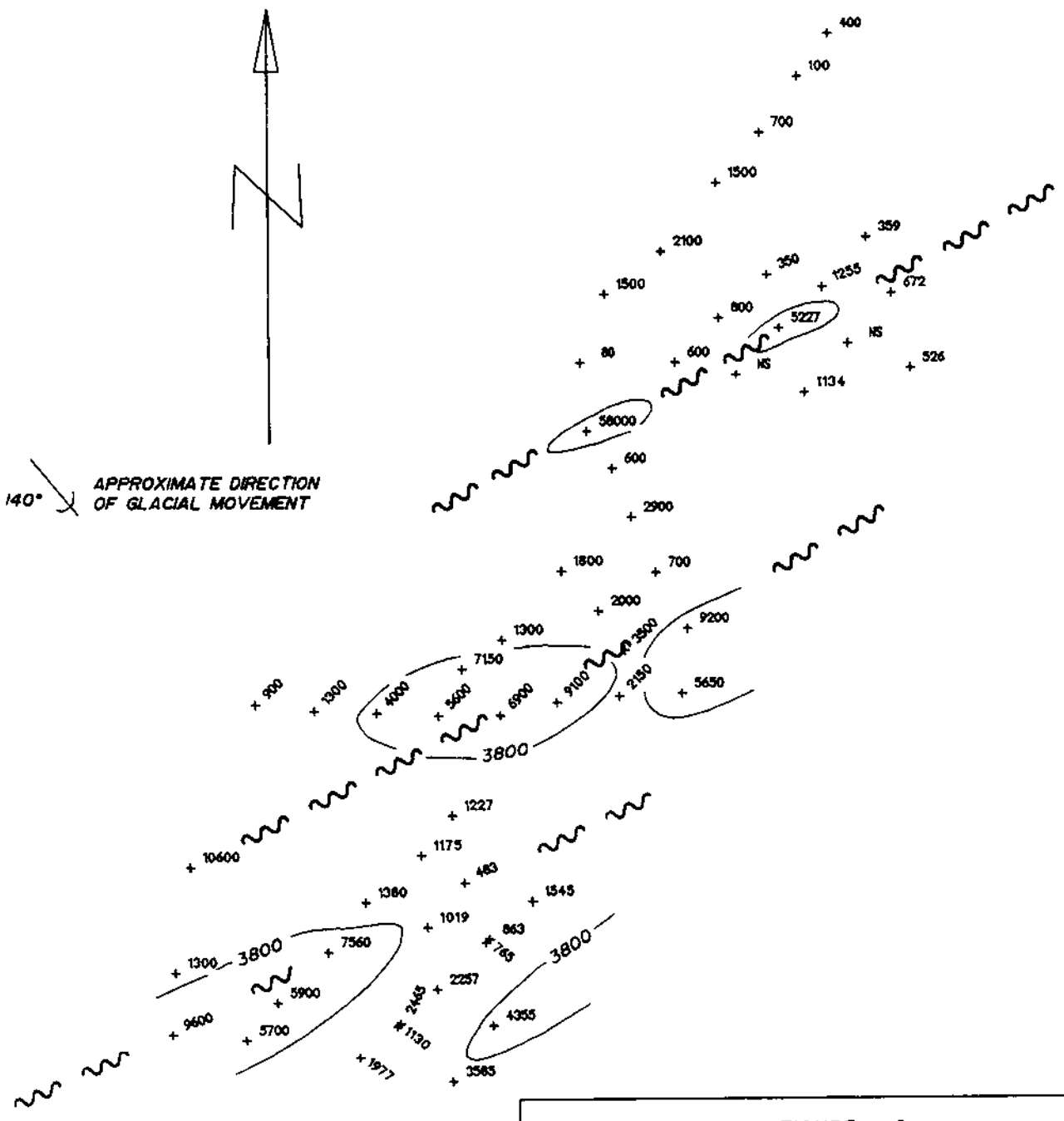
ALMADEN RESOURCES CORP.

ROSE CLAIM GP. PROJECT #

Ag (ppm) in Basal Till

0 200. 400. M.

D.D.W./G.H.G. December 6, 1988



NS = NO SAMPLE (INSUFFICIENT SAMPLE)

FIGURE 8

ALMADEN RESOURCES CORP.

ROSE CLAIM GP. PROJECT #

Zn (ppm) in Basal Till

0 200. 400. M.

D.D.W./G.H.G. December 6, 1988

plotted. A threshold value of 1000 ppb was used to contour anomalous values (see fig 6).

B. Silver:

Five samples from the 1988 program exceeded the 160 ppm high from 1987 drilling. The highest sample to date, 88-12-1, contained 1210 ppm Ag. This sample was collected 2.0 to 3.0 m. above bedrock in hole 88-12. Background for silver content in till on the ROSE claim is approximately 25 ppm. Statistically, no difference was noted between the bottom sample and the 1.0 m. above it, so silver values in till for each hole were averaged where more than one was present. Two populations, positively skewed, were indicated by the results. Contours of 50 and 100 ppm were used to outline anomalous data (see fig 7).

C. Zinc:

As with the silver values, zinc values in each hole were averaged when more than one sample was present. One sample, 88-22-1, contained 58,000 ppm (5.8%) zinc in heavy mineral concentrate. All other elements were at less than background levels for this sample. Zinc levels showed two anomalous populations and one lower one. A 3800 ppm contour separates these anomalous values from background (see figure 8).

D. Arsenic:

The 1988 samples were also analysed for arsenic to determine any association, but due to the limited number of samples and their location, no precise trends could be determined. Results fell between 9 ppm and 233 ppm with background at approximately 40 ppm.

The results of limited contouring of the Au, Ag, and Zn results from the 1987 and 1988 programs indicates three subparallel E - ENE trending anomalous zones in the basal till (shown on each figure as a dashed line). The linear relationship between silver and zinc values noted in the 1987 heavy mineral concentrates (Burns, 1987) was not evident when results of the two years were combined and studied.

VI. CONCLUSIONS AND RECOMMENDATIONS:

The 1988 overburden drilling program on the ROSE claim group has better defined the anomalous trends in the silver and zinc geochemistry of the basal till discovered in 1987 and has discovered a new potential for economic gold mineralization on the property. The extremely high values (up to 15,600 ppb gold, 1210 ppm silver, and 58,000 ppm zinc) obtained from heavy mineral concentrates of the basal till indicate a strong polymetallic source with origins on the claim group. Elevated gold, silver and zinc values appear to occur along three subparallel lineaments which coincide with larger scale features noted on airphotos. Previous sampling 1.5 km east along the strike of the most northerly of these linears discovered a narrow quartz vein that gave values up to 9.0 oz/t in silver, and 0.104 oz/t in gold. Subsequent sampling of the vein by Montgomery Consultants gave values of 22 oz/t in silver and 0.132 oz/t in gold. The resulting strike length potential of this structure is over 2.5 km, while parallel structures have yet to be fully delineated.

It is expected that economic mineralization will occur in discrete "shoots" within the structure, so, further till and rock sampling with coinciding geophysical surveys on closely-spaced lines are recommended to outline further anomalous zones along the trend of the airphoto linear. Combined VLF-EM and gradient magnetometer profiles should be taken over the entire strike length to determine the character of the structure, and resulting anomalies with good geochemical signatures should be drill-tested with shallow reverse circulation bedrock holes.

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, 1987 — Overburden Drilling and Stream Geochemistry on the ROSE Claim Group; B.C.M.E.M.P.R. Assessment Report

Giroux, G.H., 1988 — Private Report on the ROSE Claim Group for River City Resources Ltd.

VIII. AUTHOR'S QUALIFICATIONS:

I, DAVID DYLAN WATT, of Vancouver, British Columbia, do hereby certify that:

1. I am a geologist residing at #309-1996 Trutch Street Vancouver, British Columbia.

2. I am a graduate of the University of British Columbia, holding a Bachelor's Degree in Science (1984) in the field of Geology and I have been employed as an exploration geologist in Canada since my graduation.

3. I have collected, or aided in the collection of, all data and observations in this report.

4. I have no interest in the property described herein.

D. Dylan Watt, B. Sc.

20 December, 1988

APPENDIX I

OVERBURDEN HOLE LOGS

1988 PROGRAM

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/29 19 88 — HOLE NO 88-1 — LOCATION 9+20N 13+60E

GEOLOGIST DWJ — DRILLER WC — BIT NO. ____ — BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE ____

DRILL HAMMER RIG

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER TOTAL REFUSAL AT 20.5 m

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC AU ppb	AG ppm	ZN ppm	AS ppm
1–2				0 mixed wet silt and gravel. very muddy				
3–4			1	8.5m sand and gravel with minor silt	315	28	1600	11
5–6			2	14.0m silty gravel with occasional boulders	180	115	4900	51
7–8			3		985	31	2100	35
8–9			4	15.6m clay layer dark grey green	85	9	500	13
10–11			5	17.0m silty clay damp to wet grey green with minor pebble	270	28	700	14
12–13			6	20.5m T.D. on GRANODIORITE	95	19	9900	15
14–15			7		205	26	9700	13
16–17			8		115	46	19500	12
18			9		245	18	1300	15
19–20			10		170	23	1000	19

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/30 19 88 — HOLE NO 88-2 — LOCATION 8460N 1246E
GEOLOGIST DW — DRILLER WC — BIT NO. ____ — BIT FOOTAGE ____
SHIFT HOURS ____ TO ____ — MOVE TO HOLE ____
DRILL HAMMER RIG
TOTAL HOURS ____ — MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
CONTRACT HOURS ____ — OTHER TOTAL REFUSAL AT 16.5 M
MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1–12				0 dry brown silty sand variable to sandy silt occasional boulders. 10.5m. damp silty brown gravel layer with grey clay horizons. 16.0 bedrock 16.5 T.D. in DIORITE				
13			01		160	46	10500	21
15			02		605	44	900	16
16								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/22 19 88 — HOLE NO 88-4 — LOCATION 8+70N 11+40E
GEOLOGIST DW — DRILLER WC — BIT NO. — BIT FOOTAGE
SHIFT HOURS — TO — MOVE TO HOLE
DRILL CSR. rig
TOTAL HOURS — MECHANICAL DOWN TIME
DRILLING PROBLEMS continually plugged i. rods
CONTRACT HOURS — OTHER sample return poor
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm
0–15				0 variable light–dark brown silty sand depending on dampness 12.2m boulder layer with sand and gravel 14.5m sand and gravel with clay layers 16.0m silty clay gray green with sandy layers 18.8 m. bedrock ?? calcite rich, white horizon 20.5 m T.D. in white clay and calcite				
15–16			01		125	30	10500	17
16–18			02		200	26	9200	19
18–20			03		150	30	10000	18

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/29 19__

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO 88-6 LOCATION 9+70N 11+45E

GEOLOGIST DW DRILLER WC BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL HAMMER

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm			
0				0 brown silty sand							
2.5				2.5 m clay layer grey green							
3.2				3.2 m back to silty sand with abundant clay							
4.3				4.3 m occasional gravel layers							
5–7			01		140	23	1500	14			
8.5				8.5 m bedrock							
7–8.5			02		1.5	23	1100	26			
12.2	+ + +			12.2 T.D. in QUARTZ MONZONITE							

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/29 19 83 — HOLE NO 88-7 — LOCATION 11+40N 11+70E

GEOLOGIST DW — DRILLER WC — BIT NO. ____ — BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE ____

DRILL CSR.

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm
1–6				0 light brown silty sand 6.5m. boulders increase in silty sand some Fe oxide stain 11.6 bedrock 14.0 T.D. in granodiorite				
7–8			01		150	8	200	14
9–10			02		175	29	1700	11
11			03		15	44	4200	28
12–20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/27 19 88 HOLE NO 88-8 LOCATION 1400N 1275E
GEOLOGIST DW DRILLER WC BIT NO. _____ BIT FOOTAGE _____
SHIFT HOURS _____ TO _____ MOVE TO HOLE _____
TOTAL HOURS _____ DRILL _____
CONTRACT HOURS _____ MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm
1				0 dark brown sandy soil				
2				1.8m bedrock	345	8	900	11
3				3.0m T.D in propylitized GRDR				
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/27 19 88 | HOLE NO 88-9 | LOCATION 13+90N 15+70E

GEOLOGIST DW | DRILLER WC | BIT NO. ____ | BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER new button tricone bit

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppm	Ag ppm	Zn ppm	As ppm
1				0 brown sandy silt dry.				
2				3-2m brown clayey silt with pebbles				
3								
4				4·9m bedrock				
5			01		1815	70	1300	23
6				6·0m T·D· in wkly altered granodiorite				
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/27 1988 — HOLE NO 88-10 — LOCATION 13+80N 14+70E
GEOLOGIST DW — DRILLER WC — BIT NO. — BIT FOOTAGE
SHIFT HOURS — TO — MOVE TO HOLE
TOTAL HOURS — DRILL
MECHANICAL DOWN TIME
DRILLING PROBLEMS bit wearing down
CONTRACT HOURS — OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC. Au ppb	Ag ppm	Zn ppm	As ppm
1–5				0 brown dry sandy silt with clay layers 5.6 clay content increases > dump 9.5m bedrock				
6–7			01	10.0 T.D in rel. fresh GRDR.	330	45	3300	29
8			02		760	87	4100	43
9–20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/26 19 88 HOLE NO 88-11 LOCATION 13+90N 15+70E
GEOLOGIST DWJ DRILLER U/C BIT NO. _____ BIT FOOTAGE _____
SHIFT HOURS _____ TO _____
TOTAL HOURS _____
CONTRACT HOURS _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC. Au ppb	Ag ppm	Zn ppm	As ppm
0				0 brown sandy soil.				
				0.5 brown sandy silt with minor clay layers				
				5.2 boulders.				
				5.7				
				10.0 damp clayey gravel				
				12.0 light brown silty till dry.				
			01		425	64	4500	45
				13.2 bedrock.				
			02		200	100	6200	61
				15.0m T.D. in GRDR.				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/26 19 88 — HOLE NO 88-12 — LOCATION 13+90N 16+72E

GEOLOGIST Dill — DRILLER Mac — BIT NO. ____ — BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC.						
1				0 brown dry sandy silt with some damp patches and occasional boulders							
2											
3											
4				6.8 m. mixed clay, sand and gravel grey green damp							
5											
6											
7				8.5 mixed brown silty sand and grey clay layers							
8											
9				12.5 bedrock							
10			01	GRANODIORITE	1325	1210	650	54			
11				14.0 T.D							
12			02		25	68	700	53			
13	+ +										
14	+ + +										
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/26 1988 HOLE NO 88-13 LOCATION 14+00N 17+60E

GEOLOGIST DCL DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm
1–6				0 light brown sandy silt with variable silt and sand content. dry. 7.2 grey brown clay layers with pebbles				
6–8			01	9.8 bedrock	1085	104	6700	58
8–9			02	12.0m TD in rel fresh GRDR	200	99	11,500	30

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/26 1983 HOLE NO 83-14 LOCATION 14+10N 15+60E

GEOLOGIST DW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au mm	Ag mm	Zn mm	As mm
1				0 light brown dry silty sand				
2								
3								
4				4.3 dark brown sandy silt with clay layers				
5								
6				6.0 wet sandy clay				
7			01	7.2 damp brown sandy silt	1.5	35	1200	26
8								
9			02	9.8 bedrock granodiorite	100.	33	3100	26
10	++							
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/23 19 88 | HOLE NO 88-17 | LOCATION 14+15N 19+60E

GEOLOGIST DW | DRILLER IDC | BIT NO. | BIT FOOTAGE

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE

DRILL

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC. Au ppb	Ag ppm	Zn ppm	As ppm
1				0 m sandy brown till dry w/ cobbles (≤0.1m)				
2								
3				6.2m getting damp				
4								
5			03	8.5m wet gravel and sand.	280	52	700	12
6				10.2m				
7			04	back to damp sandy till w/ clay	810	77	5900	42
8				12.5 > clay				
9			05	13.4 bedrock.	390	53	10500	55
10								
11			01		160	20	900	29
12								
13			02		220	20	800	26
14	+ + + +							
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/25 19 88 HOLE NO 88-19 LOCATION 15+20N 19+70E

GEOLOGIST DW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm
1–20				0 dry brown silty sand with gravel layers 6.5 boulders ≤ 0.5m in grey clay 7.0 clayey silt grey-dark brown 10.5 bedrock GRDR.				
9–10			01		1170	749	9200	18

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/24 1988 HOLE NO 88-19 LOCATION 16+10N 19+20E

GEOLOGIST DWJ DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm			
1				Pdamp brown sandy silt							
2				2.0m dry silty gravel							
3			01	with some clay layers	130	20	700	30			
4	+ +			3.8m bedrock							
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/25 1988 HOLE NO 88-20 LOCATION 17+00N 18+80E
GEOLOGIST DDH DRILLER WC BIT NO. _____ BIT FOOTAGE _____
SHIFT HOURS _____ TO _____
TOTAL HOURS _____
CONTRACT HOURS _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Hg ppm	Zn ppm	As ppm
1				0 clamp brown silty till with grey clay layers				
2								
3			01	3.7m. bedrock highly altered intrusive with high conc of Py	20	34	2900	23
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/25 19 88 — HOLE NO 88-21 — LOCATION 17+80N 15+50E

GEOLOGIST DOUL — DRILLER A/C — BIT NO. ____ — BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	Pb ppm
1				0 brown - dark brown damp sandy silt boulders with minor silt + clay. Poor sample. grades into bedrock at 3.5 m.				
2				3mm				
3			01		45	10	600	29
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/29 19 88 HOLE NO 88-22 LOCATION 18+40N 13+62E

GEOLOGIST DDW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1				0 dry brown silty sand.				
2				0.5m brown damp sand and gravel				
3			01	2.0m brown clayey sand damp w/ occasional rounded pebbles.	25	21	58ppm	19
4	FT			3.8m Bedrock				
5				4.0 T.D in GRDR				
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/24 19 88 | HOLE NO 88-23 | LOCATION 19+50N 18+00E

GEOLOGIST DDJ | DRILLER W.S. | BIT NO. _____ | BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1				0 silty brown sand with gravel layers				
2								
3				3.4m sandy silt damp brown				
4			01	4.8m bedrock rel. fresh GRDR	15	23	80	50
5	++							
6	++							
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/24 1988 HOLE NO 88-24 LOCATION 20+60N 15+40E

GEOLOGIST DDW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1				0 grey brown dry sandy silt with many boulders ≤0.2m.				
2			01	3.4 damp brown sandy silt with occasional boulders ≤0.4m.	I.S	11	1500	12
3			02		sample missing			
4	+ +			4.0 bedrock				
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/24 1988 HOLE NO 88-25 LOCATION 21+30N 19+30E

GEOLOGIST DWI DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1				0 light grey sandy silt with many boulders				
2				3.2m brown damp sandy silt				
3								
			01	4.2 bedrock	50	22	200	9
4	+			6.0 T.D. in red fresh grey GRDR				
5	+ +							
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/24 1988 HOLE NO 88-26 LOCATION 22+40N 20+20E

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1				0 light brown silty sand boulder 2-3m.				
2				4.2 damp brown silty sand sandy gravel				
3				5.1 coarse wet gravel with minor silt angular				
4								
5								
6				7.0 silty sand damp brown with occasional boulders ≤ 0.5 m.				
7				8.9 bedrock				
8			01	10.0 T.D. in fresh GRDR	I·S	11	1500	12
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/25 19 89 HOLE NO 89-27 LOCATION 23+30N 20+90E

GEOLOGIST DDW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	Pb ppm
1				0-2.5m. light brown sandy silt with occasional boulders (GRDR)				
2								
3				2.5m-3.8m. damp sandy silt brown with boulders				
			01		580	12	700	61
4								
5				3.8m. bedrock rel fresh GRDR.				
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/25 19 85 HOLE NO 85-23 LOCATION 24+10N 2+50E

GEOLOGIST DDW. DRILLER LWC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE Au ppb	Ag ppm	Zn ppm	As ppm
1				0 - 1.6m. dry light grey - brown sandy silt with minor subround pebbles				
2	+ + + +		01		135	15	100	9
3				1.6 bedrock relatively fresh granodiorite				
4				3.0 T.D				
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 6/25 19 88 — HOLE NO 88-29 — LOCATION 24+80N 22+00E

GEOLOGIST DDW — DRILLER WC — BIT NO. ____ — BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTR						
					Au ppb	Ag ppm	Zn ppm	As ppm			
0				0-0.2m. Mixed silt+soil							
1			01	0.2-4.0m damp silty sand with minor subrounded pebbles. Generally light brown getting dry at 2.5m → light brown silty sand	65	70	400	26			
2											
3			02		105	121	400	29			
4	+ + +										
5											
6											
7				4.0 rel. fresh granodiorite bedrock							
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/29 19 88 HOLE NO 88-30 LOCATION _____

GEOLOGIST DW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

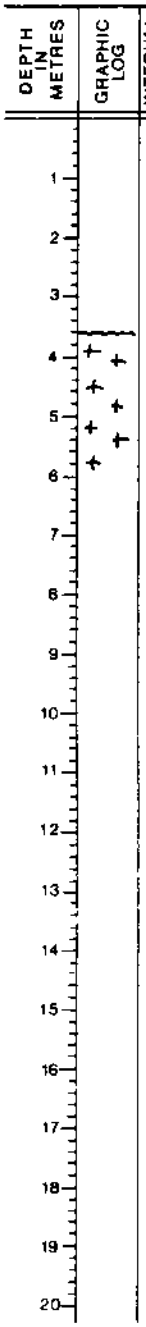
DRILL C·S·R· ROTARY

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____



DEPTH IN METRES	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE AU ppb	AG ppm	ZN ppm	AS ppm
0			brown - greenish brown damp silty coarse sand.	870	13	800	26
1		01		400	7	500	48
2		02	2.0-2.2 wet brown silty clay	600	7	600	21
3		03	2.2 back to brown silty sand variable to silty clay			~~1400~~	~~32~~
4			2.9 wet sand and gravel pebbles ≤ 10 mm.				
5			3.6 bedrock - fresh DIOR.				
6			6.0 T.D. in fresh DIOR				
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/29 19 88 — HOLE NO 88-31, 31A — LOCATION _____

GEOLOGIST DW — DRILLER WC. — BIT NO. _____ — BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS bedrock not positive so move + redrill

OTHER cat reqd to move drill in + out

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC. AU ppb	AG ppm	ZN ppm	AS ppm
1				0 light brown sandy silt				
2			01	w/occasional pebbles	330	12	1400	32
			02	≤ 10 mm	1.5	2	200	78
3	+ + + + + +			1.2 more boulders in brown damp silty sand				
4				1.9 DIOR boulder				
5								
6				2.6 water seam				
7								
8				4.0 T.D in DIOR				
9				move 4 m. N + retry.				
10				88-31A				
11				2.5 m. DIOR bedrock.				
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/29 1988 HOLE NO 88-32 LOCATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC Au ppb	Ag ppm	Zn ppm	As ppm
1				0 greenish grey sandy silt w/ pebbles				
2			01	definite GRDR deriv. sand	I.S.	7	400	104
3			02	2.5-2.8 m. bldrs.	305	15	400	46
4			03	3.2 highly weathered GRDR bedrock(?)	95	10	300	16
5	+ + + + + + +			3.8m. brown sandy silt				
6				4.2m ↓ some water at bedrock interface				
7				6.0 T.D in rel fresh GRDR.				
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/29 1988 HOLE NO 88-33 LOCATION _____

GEOLOGIST DW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONCENTRATE AU ppb	AG ppm	ZN ppm	AS ppm
0			01	0 brown - lt brown dry silty sand	T.S.	129	1200	63
1			02		115	103	2400	9
2	+ + +			1.9m. v. soft boulder(?) 0.5% PY in propylitic altern				
3	+ + + +							
4	+ +			4.0m. T.D in propylitic altern				
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/30 19 88 HOLE NO 88-34 LOCATION _____
GEOLOGIST D.W DRILLER WC BIT NO. _____ BIT FOOTAGE _____
SHIFT HOURS _____ TO _____ MOVE TO HOLE _____
DRILL _____
TOTAL HOURS _____ MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
CONTRACT HOURS _____ OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC AU ppb	AG ppm	ZN ppm	AS ppm
1				0 dry light brown sandy silt	68			
2			01	1 w/ occas. pebbles.	660	34	2500	15
3			02	0.9 getting damp	260	72	1500	21
4	+ + + + +			↓ 1.8 GRDR boulder				
5				↓ 2.8 brown silty clay				
6				↓ 3.0 bedrock. GRDR.				
7				5.0 T.D in fresh GRDR				
8				move hole 2 m N and retry for 2-3m. interval				
9				2.0 light brown sandy silt.				
10				↓ 3.2 fresh GRDR bedrock.				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/30 1988 HOLE NO 88-35 LOCATION _____
GEOLOGIST D.W DRILLER WC BIT NO. _____ BIT FOOTAGE _____
SHIFT HOURS _____ TO _____ MOVE TO HOLE _____
TOTAL HOURS _____ DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
CONTRACT HOURS _____ OTHER _____
MOVE TO NEXT HOLE _____

IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC AU ppb	AG ppm	ZN ppm	AS ppm
0				0				
1				brown - dk brown damp. sandy silty variable to silt.				
2			01		280	24	1000	35
3			02		425	120	3300	46
4	+ +		03	1.5 variable to silty sand w/ occas. bldrs	375	26	3700	117
5				bldrs increase in number				
6								
7				3.8 bedrock rel. fresh GRDR.				
8								
9				5.0 T.D.				
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/30 1988 HOLE NO 88-36 LOCATION _____

GEOLOGIST DW DRILLER WC BIT NO. _____ BIT FOOTAGE _____

SHIFT HOURS _____ TO _____

TOTAL HOURS _____

CONTRACT HOURS _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC. AU ppb	AG ppm	ZN ppm	AS ppm
1				0 greenish brown dry v. silty sand w/ occas clay layers.				
2			01		615	55	2200	35
3			02	3.2 multiple bldrs	195	58	1000	44
4			03	4.4 ↓ in brown damp clay	175	58	1600	46
5	+ + + +			brown-grey damp clayey silt w/ pebbles				
6				4.8 bedrock. GRDR.				
7				6.0 T.D. in rel fresh GRDR.				
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE 9/30 19 88 HOLE NO 88-37 LOCATION _____
GEOLOGIST DW DRILLER WC. BIT NO. _____ BIT FOOTAGE _____
SHIFT HOURS _____ TO _____ MOVE TO HOLE _____
TOTAL HOURS _____ DRILL _____
MECHANICAL DOWN TIME 1.5 hrs. - fix hydraulic leak
CONTRACT HOURS _____ DRILLING PROBLEMS bit failing
OTHER _____
MOVE TO NEXT HOLE _____

IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	HEAVY MINERAL CONC AU ppb	AG ppm	ZN ppm	AS ppm
1				0 dry light brown silty sand				
2				4.6 damp brown silty sand				
			01		240	44	1600	29
3			02	w/ occas. pebbles.	145	425	1900	233
4			03	6.4	45	62	1300	48
5			04	bldrs w/ occasional clay and sandy silt	145	87	1600	109
6			05	8.0 bedrock GRDR	145	97	1300	110
7			06	9.0 T.D. bit failed.	980	52	6900	165
8			07		305	199	7400	210.
9	+ + +							
10								
11								
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15								
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20								

APPENDIX II

SAMPLE

PREPARATION / ANALYTICAL TECHNIQUES

Bondar-Clegg & Company Ltd.
5420 Canotek Road
Ottawa, Ontario
K1J 8X5
(613) 749-2220 Telex 053-3233

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 088-52140.0 (COMPLETE)

REFERENCE INFO:

CLIENT: ALMADEN RESOURCES CORP.
PROJECT: ROSE

SUBMITTED BY: D. WATT
DATE PRINTED: 14-DEC-88

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	36	5 PPB	AQUA REGIA	FA-AA @ 10 gm weight
2	Testwt Fire Assay Test Wt.	37	0.01 gms		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	37	AS RECEIVED	37	As Received, No SP	37

REPORT COPIES TO: D. WATT
FAX TO: ATTN. MR. D. WATT

INVOICE TO: D. WATT

OVERBURDEN DRILLING MANAGEMENT LIMITED

107-15 CAPELLA COURT, NEPEAN, ONTARIO K2E 7X1 (613) 225-1771

SAMPLE PROCESSING FLOW SHEET

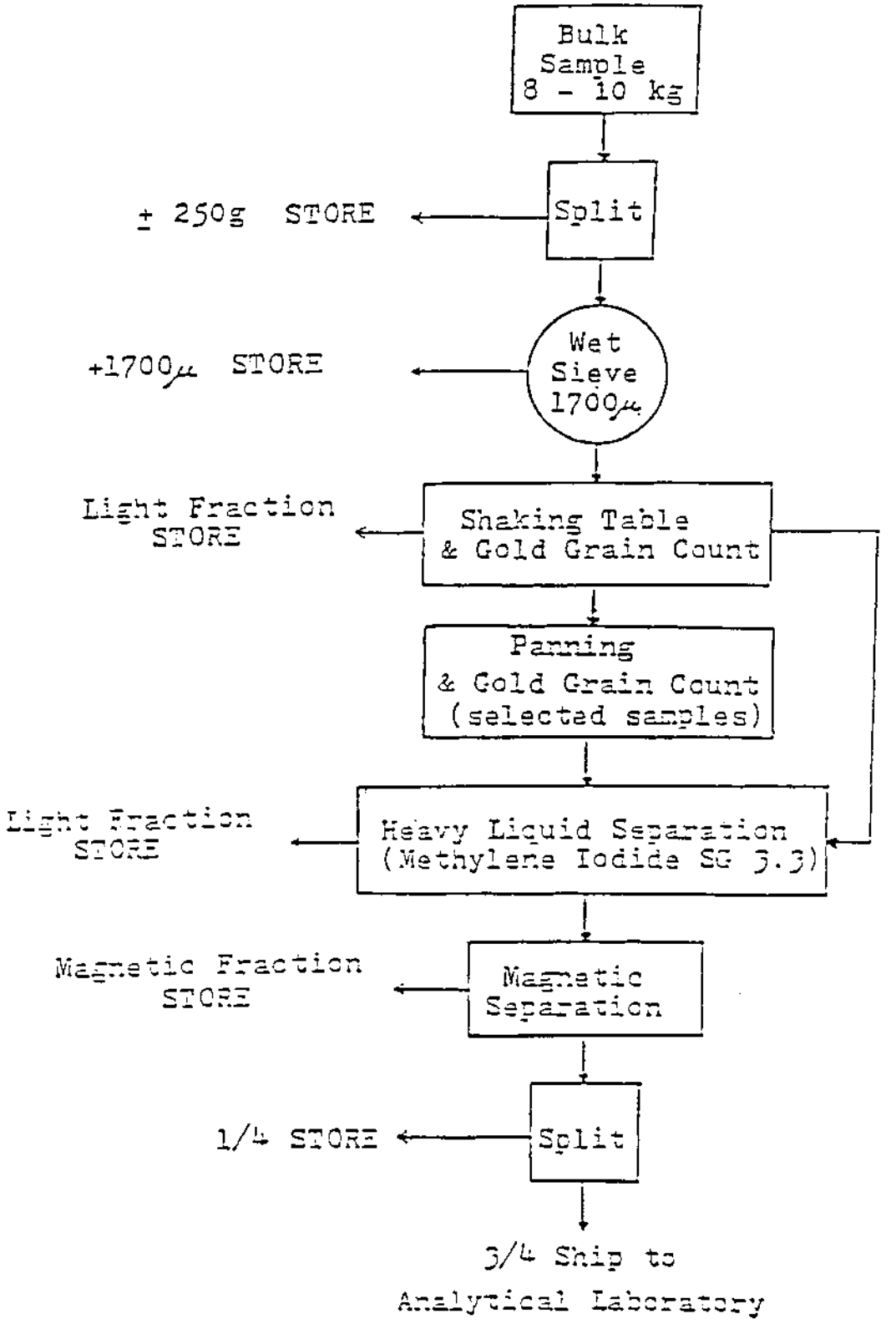

Figure 4 - Sample Processing Flow Sheet

SAMPLE FRACTION DESCRIPTIONS

1. Overburden Geochem - Standard soil envelope. Representative whole sample split of original overburden sample received by our laboratory. We recommend you store the geochems indefinitely.

2. Overburden +10 - 10" x 14" plastic bag containing all +10 mesh pebbles and cuttings; suitable for binocular pebble counts. The overburden +10 is retained by some clients and discarded by others.

3. Overburden -10 - 10" x 14" plastic bag of shaking table reject. Normally discarded.

4. Overburden Lights - Kraft paper bag. Methylene iodide (S.G. 3.3) float reject or shaking table preconcentrate; contains mid-density minerals that may be useful indicators for diamonds, industrial minerals, etc. We recommend you store the Lights indefinitely.

5. Overburden Mag - Plastic vial in compartment in cardboard vial box, adjacent to corresponding 1/4 H split. Heavy magnetic split (magnetite and drill steel of methylene iodide sink concentrates.) We recommend you store the mag indefinitely.

6. Overburden 1/4 H - Plastic vial in compartment in cardboard vial box. 1/4 split of heavy non-magnetic poration of methylene iodide sink concentrate. (Note: Where check analysis of part of the 1/4 split has been required, the retained split is marked 1/8 or 1/16 H.) We recommend you store the 1/4 split indefinitely.

7. Overburden 3/4 H - plastic vial with 3/4 split of non-magnetic portion of heavy mineral concentrate. Submitted to independent analytical laboratory, pulped and analyzed. Surplus pulp, if any, is stored by analytical laboratory.

8. Bedrock +10 - Kraft paper bag. Plus 10-mesh (Tyler) chip sample split of bedrock sample, for binocular examination. We recommend the Bedrock +10 be stored indefinitely.

9. Bedrock Oversize - 10" x 14" plastic bag of surplus bedrock whole sample remaining after separation of Bedrock Geochem and Bedrock +10 splits, normally discarded.

APPENDIX III

TILL GEOCHEMICAL

RESULTS

ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

July 21, 1988

CERTIFICATE OF ANALYSIS ETK 88-264

ALMADEN RESOURCES CORPORATION
807, 475 HOWE STREET
VANCOUVER, B.C.
V6C 2B3

ATTENTION: D. DYLAN WATT, B.SC.

SAMPLE IDENTIFICATION: 43 OVERBURDEN samples received July 6, 1988
PROJECT: ROSE

ET #	Description	TOTAL WT.(Kg)	+ 1.7 mm WT.(Kg)	TABLE CONC. WT. (g.)	H.L. CONC. WT. (g.)	FINAL CONC. WT. (g.)	Au (ppb)	Ag (ppm)	Zn (%)	As (ppm)
264 - 1	88-1 1	10.9	4.77	347.41	14.98	5.78	315	28	.16	11
264 - 2	2	6.8	1.82	199.43	14.21	7.06	180	115	.49	51
264 - 3	3	45.0	1.59	226.20	7.44	2.85	885	31	.21	35
264 - 4	4	5.2	2.04	261.15	11.53	3.86	85	9	.05	13
264 - 5	5	10.4	2.72	95.13	26.66	8.88	270	28	.07	14
264 - 6	6	5.2	1.93	77.19	20.77	14.23	95	19	.99	15
264 - 7	7	12.7	3.86	177.56	43.13	29.48	205	26	.97	13
264 - 8	8	4.3	.57	88.38	9.54	6.40	115	46	1.05	18
264 - 9	9	4.8	.68	90.85	10.03	4.39	245	18	.13	15
264 - 10	10	5.7	.45	107.51	14.40	9.68	170	23	1.05	19
264 - 11	88-2 1	5.4	2.95	175.68	14.39	9.82	160	46	1.05	21
264 - 12	2	5.0	1.76	96.22	8.83	3.61	605	44	.09	16
264 - 13	88-4 1	5.0	1.14	480.83	11.21	7.17	125	30	1.05	17
264 - 14	2	6.8	1.82	100.03	18.32	10.86	200	26	.92	19
264 - 15	3	10.4	4.31	117.44	19.00	14.20	150	30	1	18
264 - 16	88-6 1	1.3	.68	83.81	7.74	3.32	140	23	.15	14
264 - 17	2	4.5	.91	36.51	6.21	2.23	***	23	.11	26
264 - 18	88-7 1	5.4	1.14	59.26	4.39	3.54	150	8	.2	14
264 - 19	2	10.4	3.52	143.75	4.79	4.12	175	29	1.7	11
264 - 20	3	5.0	1.14	172.28	2.22	1.97	***	44	.42	28
264 - 21	88-8 1	4.1	1.48	111.93	8.43	2.73	345	8	.09	11
264 - 22	88-9 1	4.8	1.14	53.96	7.36	3.08	1815	70	.13	23
264 - 23	88-10 1	5.4	1.59	95.24	10.12	5.08	380	45	.39	53
264 - 24	2	5.0	1.82	63.74	7.02	3.10	960	81	.41	29
264 - 25	88-11 1	8.4	1.88	147.85	29.11	11.36	425	64	.45	48
264 - 26	2	10.9	2.95	85.99	31.22	11.74	270	100	.67	61
264 - 27	88-12 1	4.8	.91	51.02	12.81	3.90	1325	1210	.68	54
264 - 28	2	3.9	.85	31.82	8.30	3.41	***	68	.7	53
264 - 29	88-13 1	4.8	.68	33.83	12.64	4.84	1085	104	.67	51
264 - 30	2	4.8	.79	48.75	11.33	5.29	200	99	1.15	58

Frank J. Pezzotti, Certified Assayer

ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

ALMACEN RESOURCES CORPORATION

JULY 22, 1988

ET #	Description	TOTAL WT.(Kg)	+ 1.7 mm WT.(Kg)	TABLE CONC. WT. (g.)	H.L. CONC. WT. (g.)	FINAL CONC. WT. (g.)	Au (ppb)	Ag (ppm)	Zn (%)	As (ppm)
264 - 31	88-14 1	4.8	.91	68.40	7.42	2.04	***	35	.12	30
264 - 32	2	4.3	.68	39.11	12.34	4.48	100	33	.31	25
264 - 33	88-17 1	7.7	2.27	101.35	17.61	6.25	160	20	.09	29
264 - 34	2	4.8	1.36	70.08	10.74	3.36	220	20	.08	26
264 - 35	3	9.1	2.27	165.60	26.23	7.62	280	52	.07	12
264 - 36	4	9.8	1.7	90.95	26.20	10.24	810	77	.59	42
264 - 37	5	10.2	2.95	125.60	24.62	11.27	390	53	1.05	58
264 - 38	88-18 1	4.3	1.36	105.25	7.02	4.62	1170	749	.92	18
264 - 39	88-19 1	8.2	2.95	113.70	14.17	5.14	130	20	.07	30
264 - 40	88-20 1	8.9	1.93	249.80	17.58	11.82	20	34	.29	23
264 - 41	88-21 1	4.8	1.59	205.14	6.58	2.59	45	10	.06	29
264 - 42	88-22 1	8.2	3.86	175.19	15.14	5.76	25	21	5.8	19
264 - 43	88-23 1	10.2	3.63	112.20	32.19	7.32	15	23	.08	50
264 - 44	88-24 1	5.4	2.04	201.96	5.84	1.36	***	11	.15	12
264 - 45	88-25 1	10.0	3.18	147.24	15.15	3.52	50	22	.21	9
264 - 46	88-26 1	6.4	2.61	205.61	7.13	2.14	***	13	.05	26
264 - 47	88-27 1	6.8	2.5	78.94	13.60	4.15	580	12	.07	61
264 - 48	88-28 1	10.9	3.52	88.82	19.05	12.01	135	15	.01	9
264 - 49	88-29 1	11.4	5.11	54.16	22.03	6.70	65	70	.04	26
264 - 50	2	9.8	3.52	87.18	15.04	5.25	105	121	.04	29

NOTE: < = LESS THAN
*** INSUFFICIENT SAMPLE

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

SC988/MIS3

ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

OCTOBER 19, 1988

CERTIFICATE OF ANALYSIS ETK 88-541

ALMADEN RESOURCES CORPORATION
807, 475 HOWE STREET
VANCOUVER, B.C.
V6C 2B3

ATTENTION: D. DYLAN WATT, B.SC.

SAMPLE IDENTIFICATION: 25 OVERBURDEN samples received October 4, 1988

PROJECT: _____

ET #	Description	TOTAL WT.(Kg)	+ 1.7 mm WT.(Kg)	TABLE CONC. WT. (g.)	H.L. CONC. WT. (g.)	FINAL CONC. WT. (g.)	Au (ppb)	Ag (ppm)	Zn (%)	As (ppm)
541 - 1	88 30 - 1	17.3	7.38	330.69	28.39	12.37	870	13	.08	26
541 - 2	- 2	11.9	4.09	115.69	54.58	20.54	400	7	.05	48
541 - 3	- 3	18.2	10.22	337.57	21.66	6.26	600	7	.06	21
541 - 4	31 - 1	12.5	6.47	196.64	26.38	10.44	330	12	.14	32
541 - 5	- 2	9.1	3.97	220.31	11.83	3.13	**	2	.02	78
541 - 6	32 - 1	7.7	3.86	150.73	6.04	1.45	**	7	.04	104
541 - 7	- 2	11.4	7.26	213.19	34.95	9.23	305	15	.04	46
541 - 8	- 3	11.8	4.77	215.19	45.32	10.86	95	10	.03	16
541 - 9	33 - 1	7.5	2.38	33.51	1.85	.85	**	129	.12	63
541 - 10	- 2	12.7	4.31	396.43	16.51	14.38	115	103	.24	9
541 - 11	34 - 1	20.0	5.68	217.52	57.09	24.60	660	34	.25	15
541 - 12	- 2	19.5	6.02	429.37	26.35	6.19	260	72	.15	21
541 - 13	35 - 1	17.7	5.79	310.45	31.51	9.25	280	24	.1	35
541 - 14	- 2	16.3	4.43	342.56	27.78	12.50	425	120	.33	46
541 - 15	- 3	19.1	6.70	284.92	41.62	13.53	375	26	.37	117
541 - 16	36 - 1	17.7	3.75	289.10	56.30	22.14	615	55	.22	35
541 - 17	- 2	11.8	3.41	143.41	38.73	11.65	195	58	.1	44
541 - 18	- 3	10.4	3.63	152.86	27.62	10.73	175	58	.16	46
541 - 19	37 - 1	12.3	2.04	108.58	42.73	14.89	240	44	.16	29
541 - 20	- 2	16.3	2.84	154.66	62.53	25.16	145	425	.19	233
541 - 21	- 3	12.7	3.29	104.59	49.41	18.53	45	62	.13	48
541 - 22	- 4	17.7	4.09	168.74	54.34	21.66	145	87	.16	109
541 - 23	- 5	13.2	3.86	173.16	62.21	22.91	145	97	.13	110
541 - 24	- 6	18.6	4.20	179.12	69.90	28.34	980	52	.69	165
541 - 25	- 7	20.3	4.31	173.21	75.23	30.60	305	199	.74	215

NOTE: (= LESS THAN
*** INSUFFICIENT SAMPLE

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

SC888/MIS3

Bondar-Clegg & Company Ltd.
5420 Canotek Road
Ottawa, Ontario
K1J 8X5
(613) 749-2220 Telex 053-3233

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 088-52140.0 PROJECT: ROSE PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Testwt gms
AR87-01-05-H		179	0.39
AR87-01-06-H		150	2.00
AR87-01-07-3/4		43	3.00
AR87-02-02-3/4		75	2.00
AR87-02-03-H		IS	0.07
AR87-02-04-H		483	1.45
AR87-03-03-3/4		45	2.00
AR87-03-04-H		455	0.11
AR87-03-05-H		449	1.27
AR87-03-06-H		<417	0.12
AR87-04-03-3/4		<143	0.35
AR87-04-04-3/4		38	1.31
AR87-04-05-3/4		280	2.00
AR87-05-01-H		490	2.00
AR87-05-02-H		1550	2.00
AR87-06-01-3/4		490	2.00
AR87-06-02-H		515	0.33
AR87-06-03-H		<238	0.21
AR87-07-01-H		<217	0.23
AR87-07-02-H		808	0.26
AR87-07-03-H		680	2.00
AR87-08-01-3/4		135	2.00
AR87-09-01-H		291	0.55
AR87-09-02-H		445	4.00
AR87-10-01-H		413	0.46
AR87-10-02-H		80	2.00
AR87-10-03-H		2830	1.00
AR87-11-01-H		1042	1.65
AR87-11A-01-H		80	2.00
AR87-11A-02-H		40	2.00
AR87-11A-03-H		23	4.00
AR87-12-01-H		685	1.24
AR87-12-02-H		<625	0.08
AR87-12-03-H		<556	0.09
AR87-13-21-3/4		130	5.09
AR87-13-22-3/4		110	2.00
AR87-13-23-3/4		137	1.68

Bondar-Clegg & Company Ltd.
5420 Canotek Road
Ottawa, Ontario
K1J 8X5
(613) 749-2220 Telex 053-3233

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 088-52141.0 (COMPLETE)

REFERENCE INFO:

CLIENT: ALMADEN RESOURCES CORP.
PROJECT: ROSE

SUBMITTED BY: D. WATT
DATE PRINTED: 14-DEC-88

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	46	5 PPB	AQUA REGIA	FA-AA @ 10 gm weight

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	47	AS RECEIVED	47	As Received, No SP	46

REPORT COPIES TO: D. WATT
FAX TO: ATTN. MR. D. WATT

INVOICE TO: D. WATT

Bondar-Clegg & Company Ltd.
5420 Canotek Road
Ottawa, Ontario
K1J 8X5
(613) 749-2220 Telex 053-3233

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 088-52141.0 PROJECT: ROSE PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB
AR87-14-01-3/4		2833
AR87-14-02-3/4		770
AR87-14-03-3/4		1224
AR87-14-04-3/4		1865
AR87-14-05-3/4		116
AR87-14-06-3/4		353
AR87-14-07-3/4		350
AR87-15-01-3/4		543
AR87-15-02-3/4		213
AR87-15-03-3/4		1333
AR87-15-04-3/4		184
AR87-15-05-3/4		125
AR87-15-06-3/4		140
AR87-15-07-3/4		545
AR87-16-04-3/4		3571
AR87-16-06-3/4		1250
AR87-17-04-3/4		1895
AR87-17-05-3/4		15500
AR87-17-06-3/4		1083
AR87-18-05-3/4		1100
AR87-18-06-3/4		1357
AR87-18-07-3/4		1154
AR87-19-01-3/4		259
AR87-19-02-3/4		35
AR87-19-03-3/4		77
AR87-20-03-3/4		95
AR87-20-04-3/4		65
AR87-20-05-3/4		100
AR87-21-04-3/4		<64
AR87-21-05-3/4		203
AR87-21-06-3/4		<238
AR87-21-07-3/4		<455
AR87-22A-01-3/4		14235
AR87-22A-02-3/4		174
AR87-22A-03-3/4		141
AR87-22A-04-3/4		93
AR87-22A-05-3/4		110
AR87-22A-06-3/4		130
AR87-22A-07-3/4		1023
AR87-22A-08-3/4		401
AR87-22A-09-3/4		195
AR87-22A-10-3/4		533
AR87-22A-11-3/4		
AR87-23-01-3/4		<263
AR87-23A-01-3/4		122
AR87-23A-02-3/4		912
AR87-23A-03-3/4		<833

APPENDIX IV

STATEMENT OF COSTS

STATEMENT OF COSTS

1. FIELD COSTS:	
Drilling	
Western Caissons' Invoices	
34 holes, 296 m.	$27,237.23
Road & Site Preparation	
Serwa Bulldozing Invoice	4016.00
Geologist	
18 days @ $200/day	3,600.00
Assistant	
10 days @ $90/day	900.00
Room and Board	
28 mandays @$70	1960.00
Vehicle	
18 days @ $75	1350.00
Fuel,lubricants, and repairs	775.62
Materials	
various - sample bags, flagging tape, chainsaw fuel, etc.	300.00
2. SAMPLE PREPARATION AND ANALYSIS:	
68 samples for Au, Ag, Zn, & As by heavy mineral separation / I.C.P. @$77.52/sample	5271.38
84 pulps reanalysed for Au @ $7.50/sample	630.00
shipping	442.05
3. REPORT PREPARATION:	
Geologist	
4 days @$200/day	800.00
Drafting	265.75
Materials various	6.38
Copying	54.59
TOTAL COSTS	$47,609.00