



APPENDIX I to the  
Ladner Creek Project Report by  
M.P. Dickson September 10, 1996

## **GEOLOGICAL AND DIAMOND DRILLING ASSESSMENT REPORT**

### **LADNER CREEK PROJECT**

**McMASTER GROUPS 1 and 2  
SIWASH CREEK - LADNER CREEK AREA  
NEW WESTMINSTER MINING DIVISION  
LATITUDE 49 ° 32' / LONGITUDE 121 ° 17'  
NTS 92H / 11W+6W**

**Prepared for:**  
**Athabaska Gold Resources Ltd.**  
**#1200-1185 W. Georgia St.**  
**Vancouver, B. C., V6E 4E6**  
**Phone [604]688-3144 Fax [604]684-4601**

**FILMED**

**Prepared by:**  
**J. T. Shearer, M.Sc., P. Geo.**  
**Homegold Resources Ltd.**  
**Unit 5-2330 Tyner St.**  
**Port Coquitlam, B. C., V3C 2Z1**  
**Phone/Fax (604) 944-6102**

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## **SUMMARY**

This report summarizes the major exploration program completed by Athabaska Gold Resources Ltd. between August 1995 and February 1996 at the Ladner Creek Minesite.

The Idaho surface exposure was discovered in the summer of 1915 by the Late T. DeAngelis, a long time resident of Hope. A commercially viable orebody was defined by Carolin Mines Ltd., after a large scale, carefully staged exploration program between 1973 and 1978. Cost of the exploration phase was about \$4 million. An independent Feasibility Study by Kilborn Engineering recommended production at 1,500 tons per day.

The Idaho orebodies were placed into production by Carolin Mines Ltd. as operator and 50% owner in late 1981 [first dore bar poured in February 1982]. Published ore reserves at the time of the production decision were 1.5 million tons averaging 0.141 oz/ton gold [using a 0.08 oz/ton cut-off and 20% dilution]. The general exploration potential, to the immediate north and elsewhere on the claims, was considered to be one of the great attractions of the property and would result in the long-term success of the operation. This exploration potential was left largely untested.

Based on detailed underground mapping, core logging and relogging of selected old exploration core by J. T. Shearer, in conjunction with surface studies by G. Ray [government geologist], a clearer geological model of the Idaho orebodies was formulated in 1983. Essentially, this model recognizes that the mineralized zones amenable to long-hole stoping occur in the tectonically disrupted hinge areas of northward plunging antiforms and are associated with a distinct stratigraphic package, cut by gently northward dipping, east-west striking normal faults.

Building on the voluminous data base that has been assembled in the past on the Idaho orebodies, an aggressive program of underground drifting, diamond drilling underground in conjunction with related geological mapping, sampling, prospecting and metallurgical testing was completed by Athabaska. Underground diamond drilling totaled 7007.84 metres in 51 holes. Currently all old and new geological and assay

data have been compiled in a computer data base. Cross sections and plans of various orientations have been produced. For the first time, all data will be considered and interpreted together. New ore reserves have been calculated.

The 1995 - February 1996 program was successful in discovering new mineralized zones continuing north of the previously known ore zones and also, discovered a new type of mineralization hosted by volcanic rocks to the west of the old workings.

## **INTRODUCTION**

The Idaho surface exposure was discovered in the summer of 1915 by the late T. DeAngelis, a long time resident of Hope. A commercially viable orebody was defined by Carolin Mines Ltd. After a large scale, carefully staged exploration program between 1973 and 1978 at a cost of about \$4 million. An independent Feasibility Study by Kilborn Engineering recommended production at 1,500 tons per day.

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Unfortunately, a series of critical technical and interrelated management errors resulted in the premature closure of the operation in September 1984 after milling about 800,000 tonnes and producing 1,354 kg of gold. Mining and milling has not resumed to date.

Athabaska Gold Resources Ltd. has embarked on an aggressive staged exploration program with the objective of returning to production in the near term. Efforts in 1995 to February 1996 include:

- drifting on 875 level to 11,100 N [290 meters of drifting]
- underground diamond drilling, 23,000 feet of core [7007.84m]
- mapping and sampling
- prospecting and mapping on surface
- diamond drilling McMaster Zone and Lorraine Zone; a new high grade part of McMaster was found under the ultramafic rocks
- geotechnical assessment and systematic drilling of the tailings
- major metallurgical testing of a carefully blended fresh sample.

Therefore, as documented in this report, past mining experience points to the likelihood, if sufficient new ore reserves are found by on-going exploration [and given proper mine planning development, reasonable mill recoveries and strong financial management], that grade and tonnage estimates can be accurately defined.

Based on detailed underground mapping, core logging and relogging selected old exploration core by J. T. Shearer, in conjunction with surface studies by G. Ray [government geologist], a clearer geological model of the Idaho orebodies was formulated in 1983. Essentially, this model recognizes that the mineralized zones amenable to long-hole stoping occur in the tectonically disrupted hinge areas of northward plunging antiforms and are associated with a distinct stratigraphic package, cut by gently northward dipping, east-west striking normal faults.

This report documents the results of the Athabaska program for the purposes of the B. C. Mineral Act assessment credit.



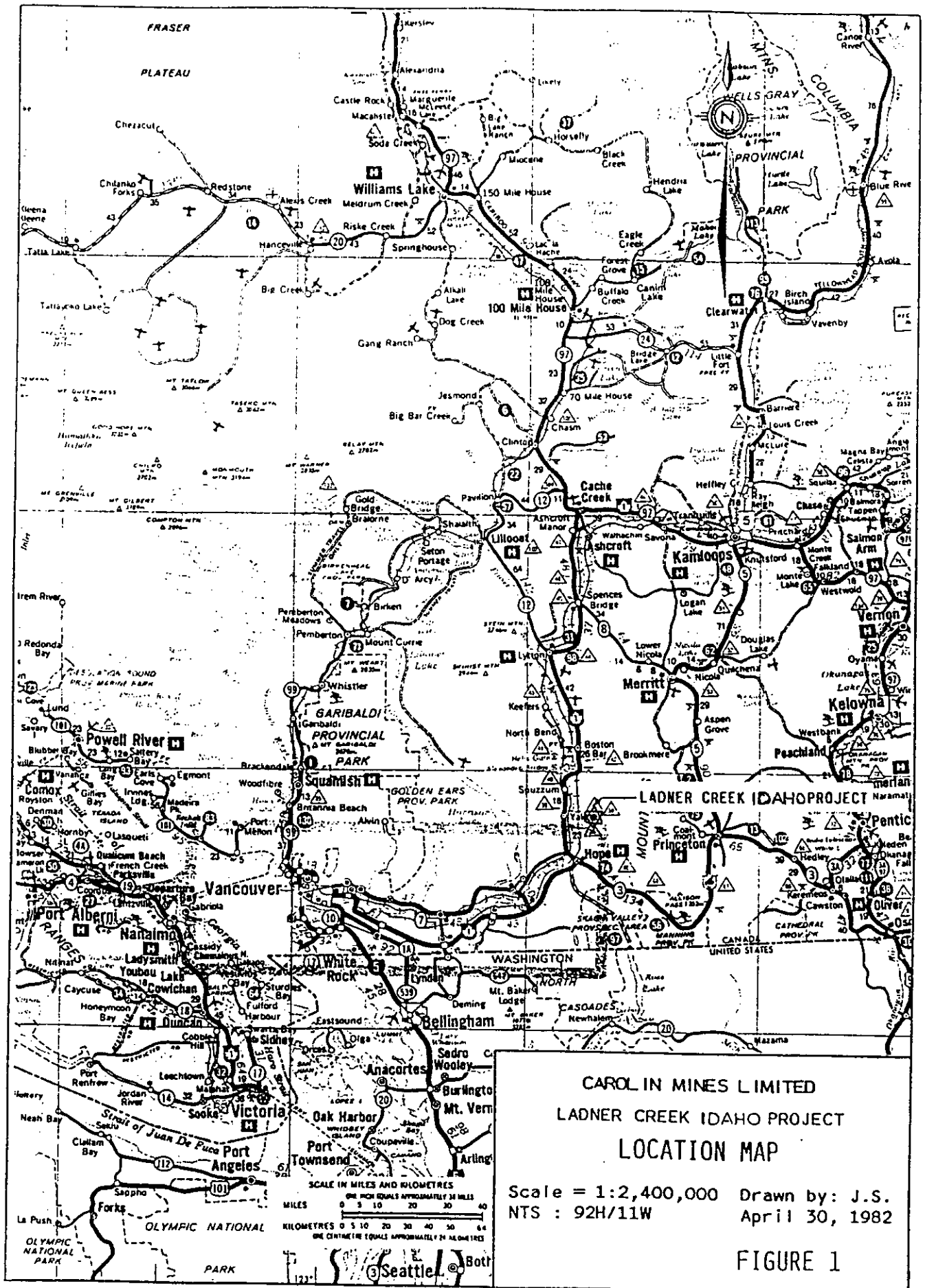
### **LOCATION AND ACCESS**

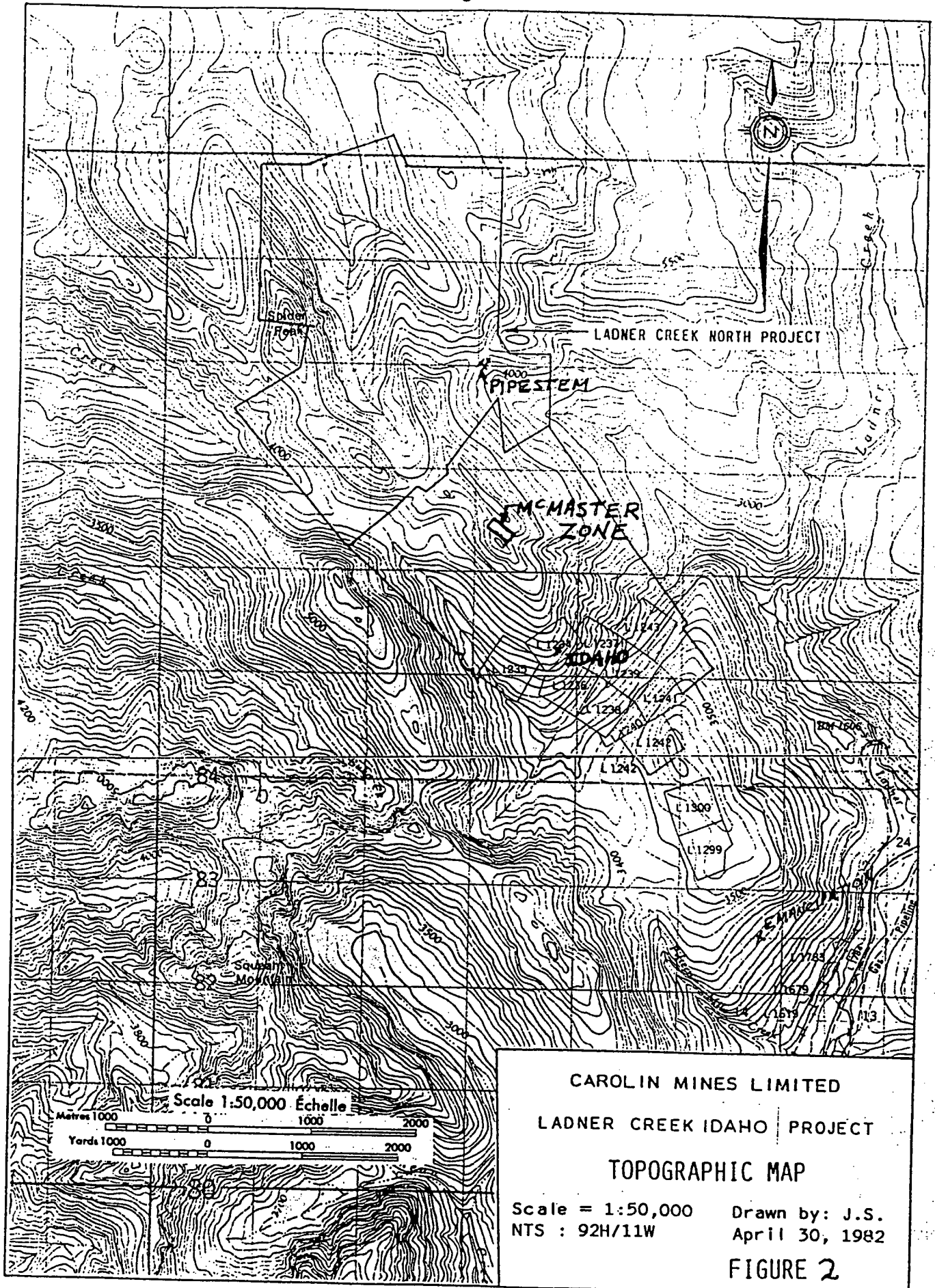
The Idaho Mine and surrounding claims are situated between the headwaters of Ladner Creek to the south and upper reaches of the south fork of Siwash Creek to the north. The Idaho Claim at latitude 49 ° 31' 34", longitude 121° 17' 30" is in the north-central portion of the claim group. The property is 19 km northeast of Hope, B.C., and lies adjacent on the north of the Ladner Creek Mine as shown on Figures 1 and 2. Elevations in the immediate area range from 700 to 1,510 m.

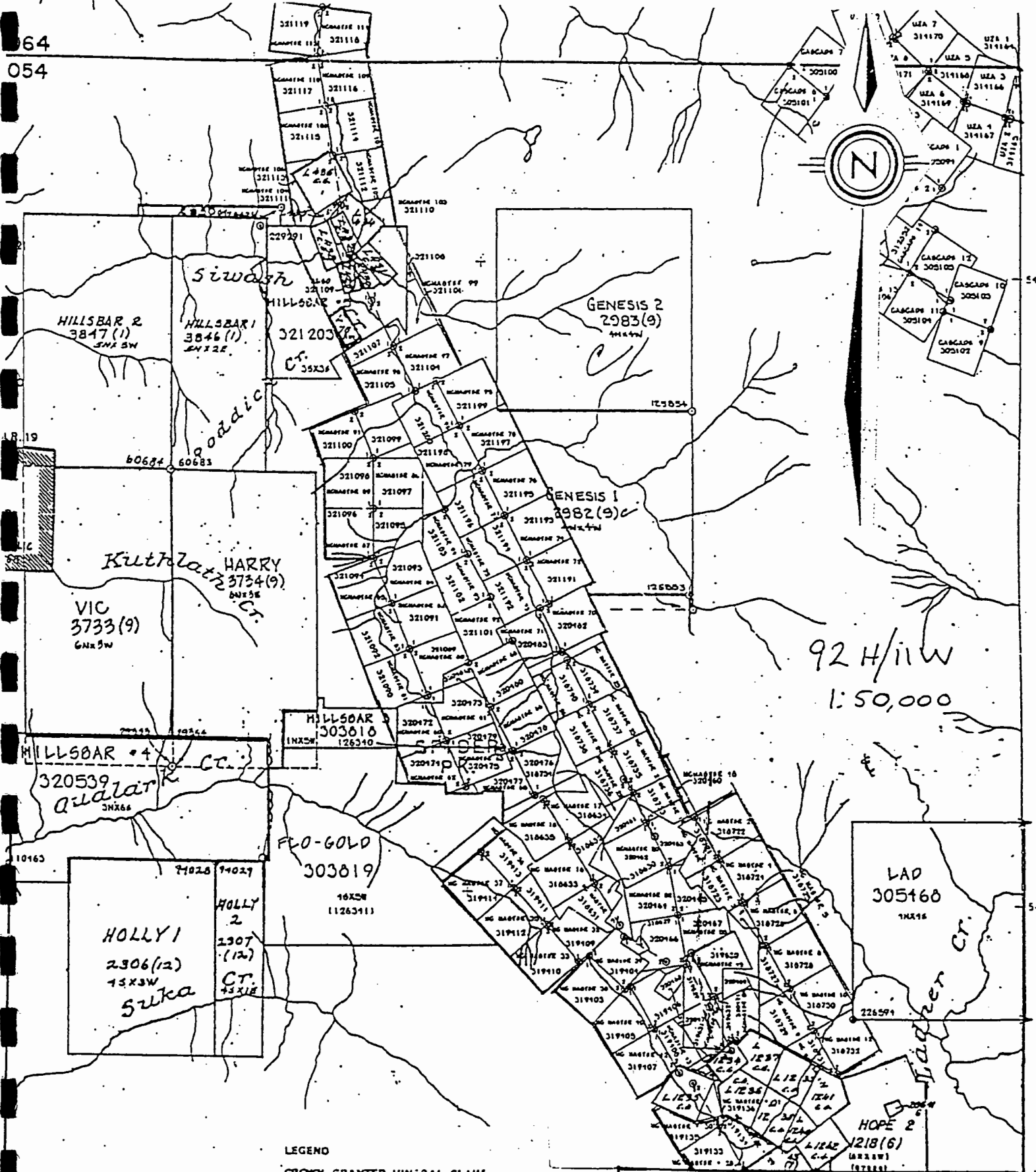
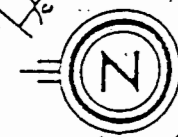
Access from Hope is by the Coquihalla Highway which was built along the old Kettle Valley Railway grade to km 25 at Exit 195, and then up the mine road 6 km to the mine site. From the mine, a 4-wheel drive gravel and dirt road 8 km long leads north to the McMaster Zone. The west and north sides of the property are accessible by logging roads up Qualark and Siwash Creeks (Figure 2).

### **CLAIM STATUS**

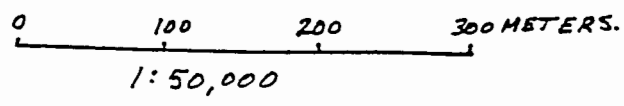
The Ladner Creek Property consists of McMaster 1 - 123 two post claims, Elman Creek 8 unit modified grid claim, McMaster 1 and 2 fractions, and 9 crown grants as listed in Table 1. These claims have been divided into the McMaster 1 and 2 Groups for assessment purposes.







**LEGEND**  
 CROWN-GRANTED MINERAL CLAIM  
 REVERTED C.G. MINERAL CLAIM  
 FORFEITED MINERAL CLAIM  
 VERIFIED LEGAL CORNER POST  
 LEGAL SURVEY  
 LEGAL CORNER POST & TAG NUMBER



LADNER CREEK NORTH PROJECT  
 CLAIM MAP

Scale = 1:50,000  
 NTS : 92H/11W  
 Drawn by: J.S  
 April 30, 19

TABLE 1  
McMaster Claim Group No. 1

ATHABASKA GOLD RESOURCES LTD - MASTER CLAIMS LIST - LADNER CREEK											
CLAIM NUMBER	CLAIM NAME	N.T.S.	LOCATION	AREA ACRES	UNITS	OWNER	RECORD DATE	GOOD TO	RC FM	TR FM	EXCESS WORK \$
318630	McMaster 13	92 H/11W			1	J.T.SHEARER	Jun 30/93	Jun. 30/96			
318631	McMaster 14	92 H/11W			1	J.T.SHEARER	Jun 30/93	Jun. 30/96			
318632	McMaster 15	92 H/11W			1	J.T.SHEARER	Jun 30/93	Jun. 30/96			
318633	McMaster 16	92 H/11W			1	J.T.SHEARER	Jun 30/93	Jun. 30/96			
318634	McMaster 17	92 H/11W			1	J.T.SHEARER	Jun 30/93	Jun. 30/96			
318635	McMaster 18	92 H/11W			1	J.T.SHEARER	Jun 30/93	Jun. 30/96			
318734	McMaster 20	92 H/11W			1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
318736	McMaster 22	92 H/11W			1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
318738	McMaster 24	92 H/11W			1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
318629	McMaster 27	92 H/11W			1	A.E.ANGUS	Jun. 30/93	Jun. 30/96			
319409	McMaster 32	92 H/11W			1	S.E.ANGUS	Jul. 22/93	Jul. 22/96			
319410	McMaster 33	92 H/11W			1	S.E.ANGUS	Jul. 22/93	Jul. 22/96			
319411	McMaster 34	92 H/11W			1	S.E.ANGUS	Jul. 22/93	Jul. 22/96			
319412	McMaster 35	92 H/11W			1	S.E.ANGUS	Jul. 22/93	Jul. 22/96			
319413	McMaster 36	92 H/11W			1	S.E.ANGUS	Jul. 22/93	Jul. 22/96			
319414	McMaster 37	92 H/11W			1	S.E.ANGUS	Jul. 22/93	Jul. 22/96			
319403	McMaster 38	92 H/11W			1	J.T.SHEARER	Jul. 22/93	Jul. 22/96			
319404	McMaster 39	92 H/11W			1	J.T.SHEARER	Jul. 22/93	Jul. 22/96			
319405	McMaster 40	92 H/11W			1	J.T.SHEARER	Jul. 22/93	Jul. 22/96			
319406	McMaster 41	92 H/11W			1	J.T.SHEARER	Jul. 22/93	Jul. 22/96			
319407	McMaster 42	92 H/11W			1	J.T.SHEARER	Jul. 22/93	Jul. 22/96			
319408	McMaster 43	92 H/11W			1	J.T.SHEARER	Jul. 22/93	Jul. 22/96			
319631	McMaster 46	92 H/11W			1	S.E.ANGUS	Jul. 29/93	Jul. 29/96			
320468	McMaster 56	92 H/11W			1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320470	McMaster 58	92 H/11W			1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320472	McMaster 60	92 H/11W			1	S.E.ANGUS	Aug. 23/93	Aug. 23/96			
320473	McMaster 61	92 H/11W			1	S.E.ANGUS	Aug. 23/93	Aug. 23/96			
320474	McMaster 62	92 H/11W			1	S.E.ANGUS	Aug. 23/93	Aug. 23/96			
320475	McMaster 63	92 H/11W			1	S.E.ANGUS	Aug. 23/93	Aug. 23/96			
320476	McMaster 64	92 H/11W			1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
320478	McMaster 66	92 H/11W			1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
320479	McMaster 67	92 H/11W			1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
320481	McMaster 69	92 H/11W			1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
321192	McMaster 73	92 H/11W			1	J.T.SHEARER	Sep. 24/93	Sep. 24/96			
321194	McMaster 75	92 H/11W			1	J.T.SHEARER	Sep. 24/93	Sep. 24/96			
321196	McMaster 77	92 H/11W			1	J.T.SHEARER	Sep. 24/93	Sep. 24/96			
321198	McMaster 79	92 H/11W			1	J.T.SHEARER	Sep. 24/93	Sep. 24/96			
321089	McMaster 80	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321090	McMaster 81	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321091	McMaster 82	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321092	McMaster 83	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321093	McMaster 84	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321094	McMaster 85	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321095	McMaster 86	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321096	McMaster 87	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321097	McMaster 88	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321098	McMaster 89	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321099	McMaster 90	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321100	McMaster 91	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321101	McMaster 92	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321102	McMaster 93	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321103	McMaster 94	92 H/11W			1	S.E.ANGUS	Sep. 24/93	Sep. 24/96			
321105	McMaster 98	92 H/11W			1	S.E.ANGUS	Sep. 25/93	Sep. 25/96			

**McMaster Claim Group No. II**  
**ATHABASKA GOLD RESOURCES LTD - MASTER CLAIMS LIST - LADNER CREEK**

CLAIM NUMBER	CLAIM NAME	N.T.S.	LOCATION	LAKE	AREA ACRES	UNITS	OWNER	RECORD DATE	GOOD TO	RC FM	TR FM	EXCESS WORK \$
318721	McMaster 1	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318722	McMaster 2	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318723	McMaster 3	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318724	McMaster 4	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318725	McMaster 5	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318726	McMaster 6	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318727	McMaster 7	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318728	McMaster 8	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318729	McMaster 9	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318730	McMaster 10	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318731	McMaster 11	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318732	McMaster 12	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318733	McMaster 19	92 H/11W				1	S.E.ANGUS	Jun 30/93	Jun 30/96			
318735	McMaster 21	92 H/11W				1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
318737	McMaster 23	92 H/11W				1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
318739	McMaster 25	92 H/11W				1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
318740	McMaster 26	92 H/11W				1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
319133	McMaster 28	92 H/11W				1	S.E.ANGUS	Jul. 3/93	Jul. 3/96			
319134	McMaster 29	92 H/11W				1	J.T.SHEARER	Jul. 12/93	Jul. 12/96			
319135	McMaster 30	92 H/11W				1	J.T.SHEARER	Jul. 12/93	Jul. 12/96			
319136	McMaster 31	92 H/11W				1	J.T.SHEARER	Jul. 12/93	Jul. 12/96			
319629	McMaster 44	92 H/11W				1	S.E.ANGUS	Jul. 29/93	Jul. 29/96			
319630	McMaster 45	92 H/11W				1	S.E.ANGUS	Jul. 29/93	Jul. 29/96			
319632	McMaster 47	92 H/11W				1	S.E.ANGUS	Jul. 29/93	Jul. 29/96			
320460	McMaster 48	92 H/11W				1	A.E.ANGUS	Aug. 22/93	Aug. 22/96			
320461	McMaster 49	92 H/11W				1	A.E.ANGUS	Aug. 22/93	Aug. 22/96			
320462	McMaster 50	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320463	McMaster 51	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320464	McMaster 52	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320465	McMaster 53	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320466	McMaster 54	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320467	McMaster 55	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320469	McMaster 57	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320471	McMaster 59	92 H/11W				1	S.E.ANGUS	Aug. 22/93	Aug. 22/96			
320480	McMaster 68	92 H/11W				1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
320482	McMaster 70	92 H/11W				1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
320483	McMaster 71	92 H/11W				1	S.E.ANGUS	Aug. 25/93	Aug. 25/96			
321191	McMaster 72	92 H/11W				1	J.T.SHEARER	Sep. 24/93	Sep. 24/96			





### ***FIELD PROCEDURES (IDAHO ZONE)***

All geological work and prospecting was done under the author's direct supervision by experienced personnel employed by Athabaska Gold Resources Ltd.

The Idaho logs reflect the rock nomenclature system built-up during mining of the Idaho ore zones 1981-1984, as established by Shearer [1982-1984].

Diamond drill logs are in Appendix III. Drilling was done in feet and the core was carefully converted into metric lengths at the Idaho core shack. Core recovery was measured on each piece of core and closely estimated through the uncommon, short rubbly sections.

A drill log form was designed for the project featuring from the left side: drilling blocks, boxes, core recover, graphic columns for alteration, fracturing, sulfides and geology. The centre is reserved for normal written descriptions and assay results are listed on the right. Each drill hole was logged on a scale of 1:250.

Each drill core sample was carefully split by an experienced splitter. Athabaska personnel checked each sample number with the assay ticket number and each bag was numbered. Samples were brought to Acme Lab by truck. The core shack was locked at all times when Athabaska personnel were not actually working on the core. Analytical procedures [fire assay] at Acme Labs are outlined in Appendix III. A suite of samples from the Idaho drilling project will be sent to a second independent lab for check assay. The results of the check assays are expected shortly.



### METALLURGICAL TESTING

A total of nine drums of typical zone material were collected from various locations throughout the Idaho mine including both #1 zone and #2 zone. These large samples were carefully taken from freshly blasted faces to avoid any oxidation.

Metallurgical testing has been carried out by Mellis Engineering Ltd., 519 45<sup>th</sup> Street West, Saskatoon, Saskatchewan in conjunction with Lakefield Research. The metallurgical samples listed below were mixed to provide a representative sample for testing.

### METALLURGICAL SAMPLES 1-10

DRUM NO.	LOCATION	DESCRIPTION
1	900 LEVEL-804 N.PILLAR, SOUTH WALL FULL DRUM, CLEAN CHL GW	LOW GRADE CHLORITIC GREYWAEKE, EST.GRADE 0.06 OZ/TON TYPICAL #1 ZONE
2	900 LEVEL-804 N.PILLAR, SOUTH WALL NICE CLEAN HIGH GRADE ZONE FULL DRUM	HIGHGRADE EST. GRADE 0.200 OZ/TON TYPICAL #1 ZONE MATERIAL
3	900 LEVEL-804 N.PILLAR, EAST WALL WEAK GRAPHITIC SCHLIST W/SLIGHT OXIDATION	WASTE, GRAPHITIC MATERIAL HANGING WELL #1 ZONE
4	NO SAMPLE - DISCARDED	
5	950 LEVEL-664N SOUTH END 675 STOPE NEAR IU-11 FULL DRUM, GOOD ZONE LARGE CHUNKS ON DRUM BOTTOM	ZONE MATERIAL EST. GRADE 0.150 OZ/TON #1 ZONE
6	950 LEVEL-620N, EAST WALL 95-000 X-CUT FULL DRUM, MODERATELY GOOD ZONE SLIGHTLY OXIDIZED??	ZONE MATERIAL UPPER EST. GRADE > 0.150 G/TON #1 ZONE
7	960 LEVEL-715N WEST WALL 71 R+P PILLAR GOOD CLEAN MUCK	ZONE MATERIAL #2 ZONE
8	970 LEVEL-651N, SOUTH WALL 63A CASCADE PILLAR ½ DRUM. WEAK ZONE	ZONE MATERIAL #2 ZONE
9	980 LEVEL-595N WEST WALL 58 PILLAR AREA 7/8 DRUM GOOD ZONE CLEAR	TYPICAL #2 ZONE ORE
10	875 LEVEL-804 PILLAR, NORTH WALL	MAINLY CHLORITIC GREYWAEKE, SOME 2M LAYERS OF ZONE EST. GRADE 0.08-0.10 OZ/TON #1 ZONE

Metallurgical testwork conducted on these samples has been reported by Mellis Engineering Ltd. in a series of Status Reports, Miscellaneous Reports, etc. and is covered separately as part of the overall assessment report by M.P. Dickson.

### **HISTORY OF EXPLORATION**

An account of the initial prospecting, Aurum discovery and then subsequent development of the Idaho Zone is discussed in detail by Shearer [1982A]. The Idaho claim was located August 9, 1915 by T. DeAngelis adjacent to the existing Pittsburg claim.

In 1926, a silicified zone was found by trenching along the ultramafic contact. As this trenching was extended in 1928, astonishing values in free gold in a talcose shear zone were revealed. Aurum Mines Limited was formed to handle operations [Cairnes, 1930].

The Idaho group was under option from December 1945 to October 1946, during which time the first diamond drilling and geophysical surveys were conducted. No. 2 Zone was encountered in nine drill holes which gave an overall average of mineralized intersections of 0.171 oz/ton gold.

Local residents of Hope became interested in the area during the early 1960s. An important feature was the consolidation of claims to the north, including the Pipestem Mine under one ownership. A road was excavated along the hillside to expose rock and provide access to the Idaho zone. Sharp [1966] was retained as geological consultant.

Exploration work by Carolin Mines Limited started on July 3, 1973 with a preliminary program of soil sampling, ground magnetometer, geological mapping and diamond drilling as recommended by independent geological consultant, D. R. Cochrane.

Mason [1947] viewed the Idaho mineralization as massing with continuity along the flank of a drag fold southeast from the nose. Sharp [1966] suggested that the folded and fractured silicified tuff hosting the gold values was largely structurally controlled:

"Particularly by a local flat warp of the slaty roof rocks and perhaps by a transversely-striking N. W. dipping roof fault."

Both workers recognized the more significant gold assays were associated with pyritic "arkosic sediments".

Initial surface diamond drilling by Carolin was interpreted as indicating a recumbent fold structure with mineralization located in both limbs. Later, when the "Mine Fault" was observed from the Idaho decline in 1977, the fold structure concept was completely discarded. Ideas concerning ore controls were then dominated by northwest trending major faults cutting comfortable "mineralized bands or beds". It was not until 1983 that these concepts were modified by the results of detail geological mapping to include a substantial "fold" component.

## **REGIONAL GEOLOGY**

The Idaho claim north to the McMaster Zone cover part of the Coquihalla Serpentine Belt, Spider Peak Formation volcanics, and the early to Middle Jurassic Ladner Group sedimentary rocks which are adjacent on the east (Cairnes, 1924; Monger, 1970). The two groups of rocks are separated by the Hozameen Fault (Figure 4). This assemblage makes up the main elements of the Coquihalla Gold Belt.

General characteristics of the Ladner Creek area have been discussed by Cochrane and Griffith in numerous Carolin Mines Limited private reports since 1973. Some of these are listed in the bibliography. Surface mapping by Ray (1982, 1983) shows that much of the stratigraphy in the immediate vicinity of the Idaho Orebody is inverted. Major folding and tilting of fault panels appear to be of fundamental importance in ore genesis. A summary of the importance of detail stratigraphic measurements is contained in Shearer and Niels (1983). The lower Ladner Group rocks represent a transition from a proximal turbidite depositional environment to a progressively distal turbidite and deeper water regime. A regular stratigraphic sequence is recognized within the Ladner Group at the Mine (Figure 5).

The basic structure in the Idaho Mine is a complex, asymmetric antiform which plunges about 20° to the northwest. The ore zones amenable to open longhole stoping are located in the thickened hinge portions of the fold while mineralization generally disappears or thins along the fold limbs. The main fold structure is cut by major late fault structures that run subparallel to the fold axial plane. Cross-cutting faults, trending northeast, appear to be an early element that has moved large blocks of volcanic rocks toward the east.

## **LOCAL GEOLOGY AND MINERALIZATION**

Geological mapping of surface exposures has not been satisfactorily completed. There are several areas of particular importance that have not been examined in detail and should be mapped during 1996 [Shearer, 1990A].

The first systematic geological mapping of the entire Idaho, Aurum 1 and 2 Crown Grants, after the reconnaissance by Cairnes from 1924 - 1930, was conducted by D. J. Griffith starting in September 1973. Griffith, in Cochrane, Griffith and Montgomery, 1974, recognized four principal units:

- serpentine
- chloritic, porphyritic greenstone
- interbedded welded tuffs and calcareous argillites and shales
- black slates [Ladner Slate Group]

Essentially, Griffith found the greenstone in isolated blocks near the Hozameen Fault and the welded tuff unit was in an area mainly to the east of the greenstone but west of the Idaho Zone. A detail geological plan by Griffith [1974 at 1:1,200] shows outcrops but no geological legend or individual outcrop descriptions are included. Apparently, Griffith at first thought the lithicwacke beds [now included in the Turbidite Unit] represented a welded tuff sequence, although this pyroclastic terminology was dropped from all later reports without explanation.

Unfortunately, this early Carolin mapping by Griffith did not recognize that the greenstone [Andesitic volcanics] are not restricted to discontinuous pods along the Hozameen Fault but are present also as a result of fold and thrust structures within the Ladner Group sedimentary rocks. No comprehensive attempt was made to correlate this early surface mapping with the subsequent drilling or underground programs.

Detail remapping of the 800 Track Level was done during December 1982 and January 1983 by J. Shearer [1983A] [Figure 8]. Emphasis was placed on documenting an accurate lithological succession. Care was taken to establish all significant mappable rock units that could be plotted at the 1:250 scale. An integral part of the mapping program was sawing representative rock specimens with a 20" diamond saw and examining the textures enhanced on the flat surface. A permanent display case of representative rock types has been set up in the core shack office as a reference suite for future comparison and study.

Structurally, the fundamental element is a plunging, asymmetric, isoclinal antiform as indicated by the northwest strike and easterly dips south of 850N. Diamond drill hole U-240 at 766N shows part of the steeply dipping [-80°] east limb. North of 830N bedding starts to trend northeasterly with northward dips of 25° around 900N. This change in strike and dip is probably due to the drift passing through the hinge area of the plunging antiform.

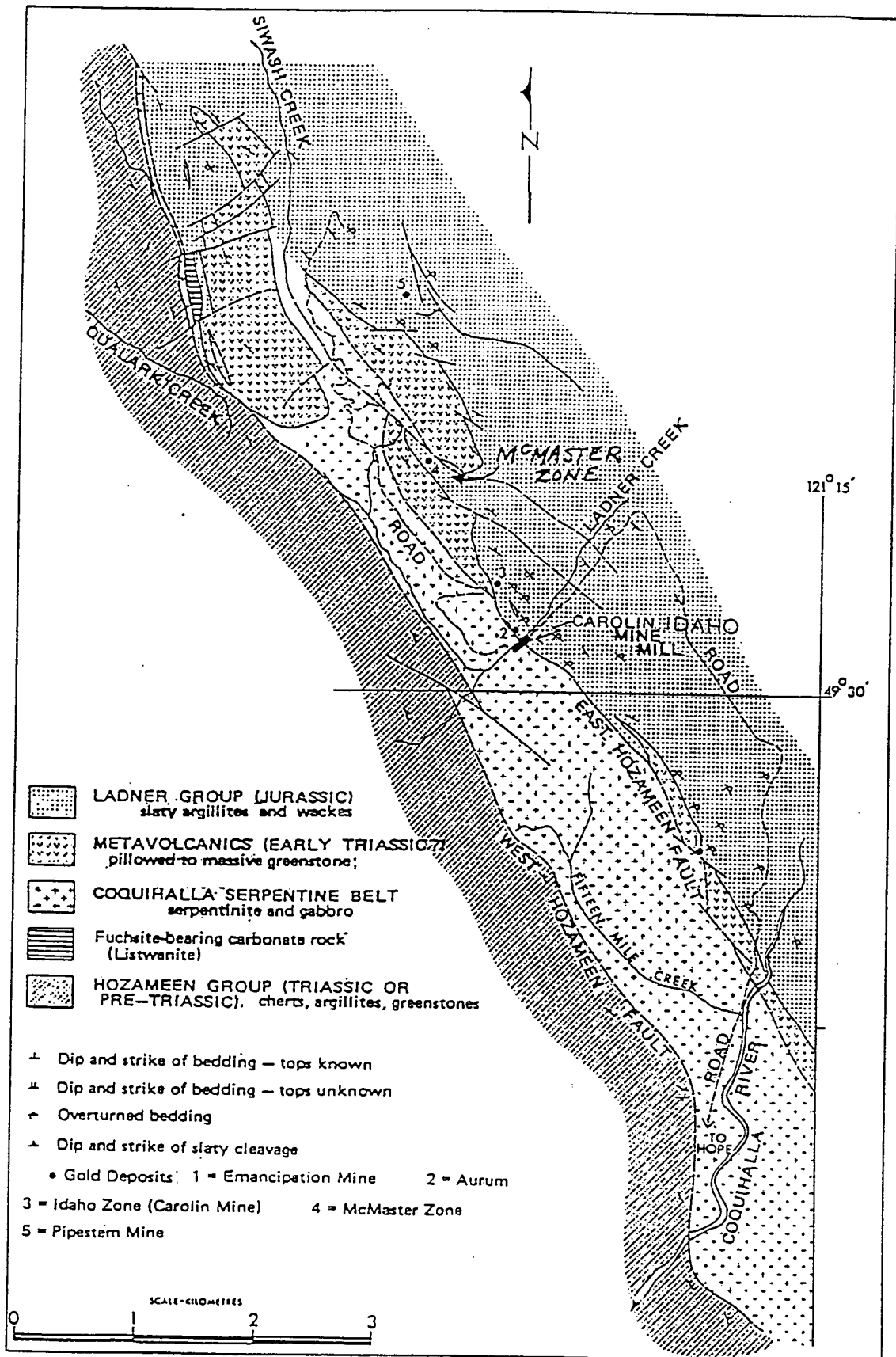


Figure 4 The regional geology of the Carolin-Pipestem-Emancipation

SCHEMATIC  
STRATIGRAPHIC COLUMN

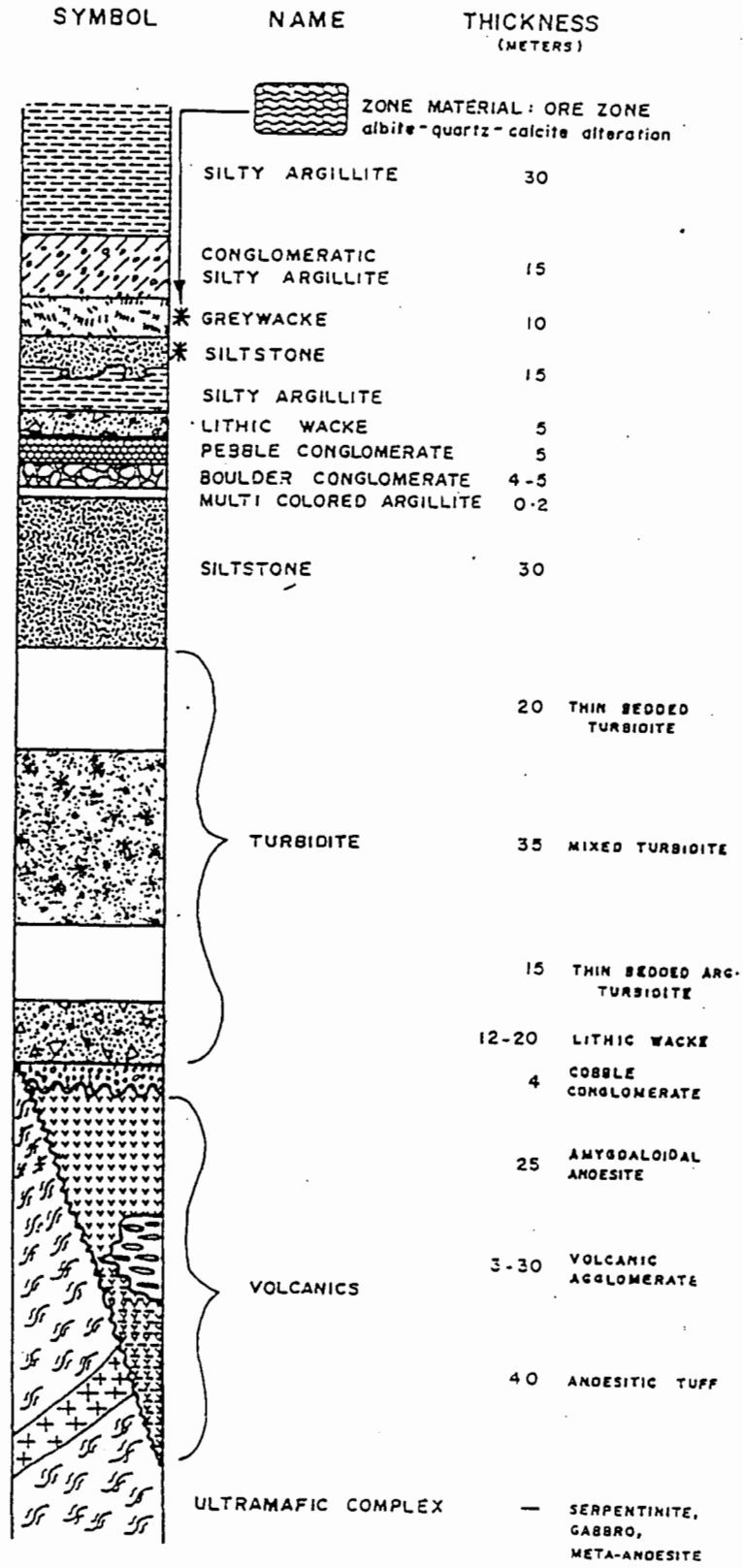


FIGURE 5 STRATIGRAPHY in the vicinity of the CAROLIN MINE.

Starting at the north end of the drift, three partial repetitions of the siltstone unit are apparent between 780N and 835N. These are relatively narrow, tight isoclinal folds subsidiary to the west limb of the main antiform.

A massive node of boulder and pebble conglomerate is exposed between 840N and 890N. Considerable fore-shortening of the coarse clastic units has occurred at this locality. The idea of multiple repetitions by local faulting and isoclinal folding correlates very well with the conglomerate intersections noted in DDH-U-240 at 766N. It is noteworthy that these extremely important conglomerate units are not mentioned in previous diamond drill logs. Correlation of this stratigraphy throughout the Mine as illustrated by the diamond drill log of DDH-587-4 shows that from the north-end of the orebody on 800 level at 900N to the south-end at 587N on 950 Level the footwall rocks are very similar. Drill hole DDH-587-4 is 330 metres south along plunge from the north end of 800 Level. The difference in elevation is 124 metres. Of particular interest is the section of drillhole 587-4 starting from the major fault at 15.55 metres, where the upper part of the stratigraphic sequence seen on 800 Level is found including [a] multicolour argillite unit, [b] boulder conglomerate, [c] mixed sequence and then mineralized greywacke. The slightly mineralized interval from 31.62 to 33.12 represents the weak southerly extension of the Main "No. 1 ZONE" orebody. Therefore, the rocks from 33.12 to 52.82 compose what was loosely termed in the past "DEAD STUFF IN THE MIDDLE" [Griffiths, 1975]. No. 2 Zone mineralization was intersected in 587-4 between 52.82 and 82.80. From 59.74 to 80.60, the zone averaged 0.122 oz/ton gold over 20.86 metres.

On 900 Level at 720N, graded bedding indicates that the stratigraphic sequence has been inverted. Local inversions may give slightly larger estimates of true thickness in the siltstone and turbidite units than actually occur.

A large area of volcanic rocks have been recognized in the 800 drift starting from 540N and south. Distinct amygdaloidal textures are evident at 508N and fragments up to 10 cm. In diameter with chilled margins make up the bulk of the rock. Granulated fragment boundaries are common.

Major faulting and widespread shattering are apparent in the 800 Exploration Drift between 896N and 925N. This zone of weakness appears to have affected the continuity of the northward extension of mineable One Zone mineralization and may be related to the occurrence of higher grade mineralization noted in holes NEX-1, 2 and 3. This is a complex faulted region with some vertical displacement associated with apparent substantial horizontal movement. Preliminary analysis suggest possibly a south block down-north block up vertical displacement. Horizontal movement suggests that the south block has moved west in relation to the north block in which the drift has come into close proximity with the volcanic package. A pair of cross sections should be constructed along the plane of the shatter zone with one section showing the south side and the other the north side. In this manner, a more accurate estimate of relative movement may be possible.

Table 2 is a stratigraphic column for the footwall sequence below the Idaho Orebody.



TABLE 2

<u>Unit No.</u>	<u>Colour On Map</u>	<u>Name</u>	<u>True Thickness</u>	<u>Description</u>
<b>LOWER LADNER GROUP</b>				
9	944	Greywacke (Favourable host for zone material)	15m.	Relatively coarse grained abundant albite-quartz-calcite alteration.
8	936	<u>Mixed sequences:</u> - silty argillite ) - argillaceous greywacke ) - siltstone )	22m.	Alteration beds of greywacke, laminated silty argillite and thin bedded siltstone.
3	905	Multi-coloured argillite	.2 m.	Thin, distinctive Laminations of black, green and brown argillite.
2	746	Boulder conglomerate	5m. to 13.2m.	Coarse clastic boulders to cobbles, heterolithic, well-rounded.
1	934	Pebble conglomerate	3m. +	Uniform close packed, pebble size dominate, well-rounded.
4	756	Lithicwacke	3m.	Very angular, pebble size, clasts have preferred orientation.
5	916	Siltstone (favourable host for Zone Material)	50m.	Thinbedded, 1 to 2cm beds, commonly graded, grades to turbidite.
6a	942	Turbidite (brown)	10-20m.	Thick bedded 5-10cm beds, well graded cross bedding, slump structures.
6	942	Turbidite (green)	55m.	
<u>FAULT CONTACT-unconformity elsewhere</u>				
<b>SPIDER PEAK FORMATION</b>				
Volcanic sequence				
	910	Dark Tuff	40m.	Dark green, non-bedded.
	738	Coarse volcanic agglomerate	3m.	Coarse well-rounded fragments, chilled margins.
	738	- lapilli tuff		
	738	Amygdaloidal andesite	25m. +	Dark green, finely amygdaloidal. exposed
		pillowed andesite	no base	
<b>FAULTED CONTACT</b>				
931		Serpentinite	Very thick	

### ***SURFACE PROSPECTING***

Minor prospecting was carried out on McMaster 108, 109 and 110 north of the Forks of Siwash Creek, Figure 2, to check out previously defined gold-in-soil anomalies. A total of 100 samples from this prospecting were submitted for analysis. Limited geological mapping, sampling and prospecting was completed on the Lorraine Showing situated between the McMaster Zone and the Pipestem Mine. A total of 2km of line cutting and 50 metres of excavator trenching was completed around the Lorraine showing. The Lorraine showing occurs in altered greywacke which is structurally underneath Spider Peak Formation volcanics, on the McMaster 54 claim. The results of this surface drilling are fully documented by a separate report (see Cardinal, 1996).

## DIAMOND DRILLING

### *Introduction*

After the Idaho deposit was delineated by surface diamond drilling starting in 1945-46 with work by Mason (1946) and later continued by Carolin Mines Limited in 1973, 1974 and 1975, confirmation of the surface drill-indicated tonnage was required for senior financing. This was done in 1977 and 1978 by a close spaced, well surveyed, underground diamond drill and bulk sampling program from the Idaho Decline which was driven at roughly -20 degrees. Diamond drill cross sections were constructed at about 33 meter intervals along 600N, 625N, 650N, 700N, 733N, 766N, 804N and 867N.

Drilling by Carolin Mines Limited (and Precambrian Shield in 1975) totaled 39 initial surface holes (22,665 feet). The longest and most northerly, hole #37, was 1,617 feet deep. The underground program consisted of 107 relatively short holes totaling 22,284 feet. Further definition drilling [U series] and holes on individual IU series sections continued during underground development and mining between 1980 and 1984. Table IV lists all the holes completed up to February 1996.

During the surface investigations, D.J. Griffith produced the most detailed logs and devised a workable lithological system. Drill core records of more reconnaissance nature were produced by W.E. Clarke and apparently by D.R. Cochrane who did not supply a copy to the mine.

Unfortunately, Griffith logged in a pseudo "computer compatible" style using four letter abbreviations which are difficult to decipher and understand. The apparently anticipated computerization of the logs was never completed. However, what is more important, Griffith did not record individual lithological types and their exact position, but rather lumped many diverse rock units together over broad intervals. An example of the comparative inadequacies of Griffith's logging for detail lithological correlation is surface hole #37 which was relogged in 1983. Even major faults in #37 are not mentioned by Griffith.

Logs produced by W.E. Clark, because of their nature of being a rapid overview, do not delve into lithological intricacies.

Clark's stratigraphic subdivisions consist essentially of three units greywacke, argillite, and interbedded greywacke-argillite. Minor subdivisions are greenwacke, lithicwacke and greenstone. The terms greenwacke and greenstone have been used by Clarke and Niels to describe andesite-agglomerate and bedded turbidite. Greenwacke should be discarded as a useful rock name, since it can only lead to confusion on new maps.

An aggressive exploration program north from the existing underground workings has been considered by a number of individuals. Cochrane 1979 C. Clarke 1981, Niels

1982 and Shearer 1983 D.E. and I.

Essentially, the north exploration program entailed advancing a drift on 862 Level, to the vicinity of 11,100 N and then conducted wide ranging diamond drilling. The likelihood of a general eastward and up movement along the northeast cross faults has been discussed (Shearer 1983 D) and 3 long diamond drill holes N. Ex-1, 2, and 3 were collared in October 1983 to test this projection. The rock types encountered were fully expected by extrapolation from OG-37 surface hole and the 966 N cross-section.

It is therefore apparent that the present knowledge of the stratigraphic column can be used as a powerful tool in projecting the geology beyond the limits of drilling.

Briefly, the results of N.Ex. 1, 2, and 3 can be summarized as follows:

- 1) All cut a high grade part of No. 1 Zone near the collars of the holes. This portion of No. 1 zone is now included in present ore reserves. The mineralized intersections are as follows.

Drill Hole No.	Intersection (m)		Length		Grade oz/ton Gold
	From	To	m	feet	
NEX 1	4.20	22.85	18.65	(61.19)	0.194 *
*includes	4.20	15.90	11.70	(38.40)	0.261
NEX 2	0.00	16.00	16.00	(52.49)	0.273
NEX 3	4.63	11.50	6.87	(22.54)	0.188

The higher grade gold mineralization found in these holes may be related to the cross-shattering observed between 896N and 925N on 800 Level. Other areas of cross-shattering should be examined for similar higher grade zones.

- 2) The easterly splay of the SUMP Fault was clearly identified in each hole.
- 3) A weakly mineralized siltstone unit was encountered in N.Ex. #1 that between 89.00 to 96.50 averaged 0.056 oz/ton gold. This zone does not appear in N.Ex. #2 although the adjacent conglomeratic silty argillite is present in both holes.
- 4) The boulder conglomerate marker unit is present in both holes at around 120m. This likely represents one limb of a major antiformal structure-mine fault system along the footwall of the east-west striking, north dipping normal fault.

- 5) This major antiformal structure is complicated in N.E. #2 by the presence of andesitic agglomerate in the probable core of the fold. The andesite is weakly mineralized with assays running as high as 0.164 oz/ton Au. Substantial ore reserves from altered, sulfide-rich volcanics is a real possibility that should not be ignored.
- 6) The east limb of the major antiform contains weakly mineralized greywacke and siltstone. This is where a major orebody could be found.
- 7) N.Ex. #2 terminates in a thick sequence of conglomeratic silty argillite which is usually associated with the eastern margins of the known orebodies.

It is evident that favourable rock units have been identified an additional 100 meters east of the previously known area and that parts of this favourable stratigraphy are mineralized. The fold structures and faults found to the east have many of the characteristics of the ore-bearing zones known in the mine.

Various options (Shearer, 1983) of drifting to the north have advantages and disadvantages inherently associated with trackless or tracked mining. From an exploration standpoint, any opening driven past 1150N will adequately explore the favourable ground.

During 1989, one hole was drilled at the bottom of the 766N section and two holes of the 776N section. This is the thickest and highest grade part presently known of the No. 3 Zone.

A great deal of geological information is contained in the regular diamond drill cross-sections throughout the mine. Unfortunately, much of this information is not presently available due to inadequate drill logs. The following discussion is based on one section that has been relogged by J. Shearer and reasonable extrapolations to other sections taking into consideration nearby underground workings that have been remapped.

A re-examination of cross section 766N which is presently the southern edge of 79 Stope has demonstrated that all geological data should be compiled as soon as possible throughout the Mine. This re-logging is based on the fact that a regular, easily defined stratigraphy with prominent marker units occurs around the orebody. The most important cross sections from the 1978 Idaho decline drilling campaign to be re-logged are 733N, 750N and 785N for No. 3 Zone details plus 900N, 934N and 966N for future drilling from the 800 North Exploration Drive.

Essentially, the re-examination of cross section 766N demonstrates that:

- (A) The orebody can be easily divided between (1) light coloured

"Zone Material" (quartz-albite-calcite rock) grading much greater than 0.15 around 0.05 oz/ton Au or lower. These two ore units have not been adequately differentiated in the past.

As a consequence, even at 0.05 oz/ton cut-off the ore outlined for stoping in the upper part of No. 1 Zone on 766N cross-section could have been moved west to the center drift on 900 Level and much of the low grade material could have been avoided during mining.

- (B) The overall structure of the ore zones conforms to an apparent complex asymmetric antiform with the main concentration of ore in the hinge region. Ore zone repetitions are related to general "saddle-reefs" along the main axial plane of the antiform. The mineralized intersections on 766N section are not connected in a straight-line vertical sense as previously thought, but rather are separated by the enclosing sediments over the hinge area. The lowest ore intersections are distinctly separate from No. 1 Zone.
- (C) The uppermost ore intersections are likewise connected over the hinge area instead of two lenses on both sides. Ore outlines in this region will be much different than previously thought. The top drill holes end in altered sediments rather than volcanics.

Drill hole 89-776-1 (-50 degrees) intersected 4.5m (14.76 feet) averaging 0.104 oz/ton of zone material flanked by chloritic greywacke. This demonstrates the zone found in U-240 (+50) (14.88 m averaging 0.123 oz/ton Au) extends to depth. The same zone was seen in both holes on 776N section. This part of No. 3 Zone has been investigated to the north (Sections 785N, 820N, 852N, 804N, 867N, 883N lower part of 900N and 912Nt) or immediately to the south (750N, 733N and 700N). All holes drilled in the current underground program are listed in Table 4.

The zone of potential ore on 766N (No. 3 Zone) extends from about 850 elevation to at least 805 elevation (open at depth) and has an approximate presently defined cross-sectional area of 400 square meters.

Significant gold-bearing intervals in the recent 1995-February 1996 drilling are listed in Table 3.

Several holes directed west from 875 level on sections 934N, 11,000N, 11,050N and 11,100N, intersected a higher grade type of mineralization hosted by altered volcanic rocks and quartz breccia of the Spider Peak Formation. This new zone should be investigated to the south from drilling in the 800 haulage level drift since the style of mineralization appears to correlate with a higher grade intersection found in the most southerly diamond drill hole on the property at 512N on 800 level.

TABLE 3

Athabaska Gold Resources Ltd. - Ladner Creek Project  
Underground Diamond Drill Hole Program 1995/96

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length
587-42	90	30	891.50	10587.50	10535.00	70.10
587-43	90	6	890.00	10587.50	10535.50	85.34
587-44	90	-12	888.80	10587.50	10535.00	106.68
587-45	90	-45	888.00	10587.50	10535.50	99.06
688-47	90	-56	893.80	10687.50	10538.20	36.58
688-48	90	-76	893.80	10687.50	10538.20	36.53
688-49	270	-54	893.80	10687.50	10538.20	39.62
LD750-1	90	90	899.00	10750.00	10477.00	91.44
750-20	89.68	8	820.01	10750.04	10456.53	99.06
750-21	90.53	-2	820.30	10750.04	10456.80	111.25
LD766-1	90	11	875.00	10766.00	10512.00	24.38
LD766-2	90	-11	873.00	10766.00	10512.00	30.48
LD766-3	270	40	873.00	10766.00	10512.00	98.32
LD766-4	270	-10	900.00	10766.00	10473.00	60.96
LD766-5	270	-41	897.00	10766.00	10473.00	91.44
LD766-6	90	50	900.00	10766.00	10436.00	15.24
785-46	90	80	902.50	10785.00	10474.00	60.96
785-24	89.95	-45	819.00	10785.66	10457.15	166.12
785-22	89.7	0	820.70	10785.67	10457.08	91.44
785-23	89.95	-20	820.54	10785.69	10457.15	102.80
820-27	92	-24	819.86	10819.45	10459.96	96.01
820-25	91.78	-9.5	820.31	10819.45	10459.98	91.44
820-26	91.73	5	820.71	10819.47	10459.99	91.44
820-50	90	77	903.00	10820.00	10466.00	39.62
852-41	90	-55	818.60	10852.00	10473.00	70.02
852-51	90	31	905.00	10852.00	10460.00	64.01
852-29	91.24	-37	820.07	10852.11	10472.93	91.14
852-28	90.1	-21	820.46	10852.13	10472.99	80.77
852-30	89.77	-4.5	820.81	10852.16	10473.01	67.06
LD867-1	270	-30	873.00	10867.00	10480.00	36.58
LD867-2	270	0	874.00	10867.00	10480.20	21.34
LD867-3	270	60	875.00	10867.00	10481.00	21.30
LD867-4	270	-90	873.00	10867.00	10481.50	15.24
LD867-5	90	70	875.00	10867.00	10480.00	18.29
LD867-6	90	-41	875.00	10867.00	10482.00	20.73
LD867-7	90	0	874.80	10867.00	10482.80	5.49
LD883-1	270	-20	875.00	10883.00	10480.00	18.29
LD883-2	270	-45	874.00	10883.00	10480.00	28.96
LD883-3	270	20	875.00	10883.00	10480.00	22.86
LD883-4	270	-90	874.00	10883.00	10482.00	30.48
883-33	96.12	-45	819.87	10883.57	10491.05	91.44
883-34	95.1	-60	819.60	10883.59	10490.73	91.44
883-31	95.73	-4.5	820.98	10883.60	10491.10	32.00
883-32	95.5	-25	820.53	10883.61	10491.04	45.72
LD895-1	270	-60	874.00	10895.00	10481.00	30.48
LD895-2	270	-30	874.00	10895.00	10481.00	18.29
LD895-3	270	0	875.00	10895.00	10481.00	18.29
LD895-4	270	20	875.00	10895.00	10481.00	18.29

**Athabaska Gold Resources Ltd. - Ladner Creek Project**  
**Underground Diamond Drill Hole Program 1995/96**

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length
LD912-1	90	25	876.00	10907.50	10496.00	23.16
LD912-2	90	-15	875.00	10907.50	10496.00	24.38
LD912-3	90	-45	875.00	10907.50	10496.00	9.45
LD912-5	90	-90	875.00	10908.00	10494.00	30.48
LD912-4	90	50	875.00	10912.50	10494.00	22.86
920-39	90	12	821.00	10920.00	10467.80	54.86
920-40	90	-31	820.60	10920.00	10467.80	60.05
920-38	85.5	-90	819.90	10920.30	10466.90	54.86
920-37	85.5	-75	819.87	10920.33	10467.40	91.44
920-36	85.5	-60	819.95	10920.36	10467.80	85.34
920-35	85.55	-9.5	821.01	10920.38	10467.89	50.29
LD934-1	270	20	877.00	10934.00	10505.00	30.48
LD934-2	270	-10	875.00	10934.00	10505.00	30.48
LD934-3	270	-50	875.00	10934.00	10505.00	35.05
LD934-4	270	-30	875.00	10934.00	10505.00	138.99
LD966-1	270	-20	878.50	10966.00	10511.00	30.48
LD966-2	270	0	878.00	10966.00	10511.00	30.48
LD966-3	270	20	878.50	10966.00	10511.00	24.38
11000-1	90	-38	877.00	11000.00	10515.00	30.18
11000-2	90	-68	877.00	11000.00	10513.50	74.68
11000-52	90	-10	879.20	11000.00	10515.00	89.92
11000-53	90	18	879.50	11000.00	10515.00	80.77
11000-54	90	-31	879.00	11000.00	10515.00	89.92
11000-55	90	-90	878.00	11000.00	10512.00	104.85
11000-56	270	-38	878.00	11000.00	10509.50	156.97
11000-57	270	16	879.00	11000.00	10509.50	120.40
11000-71	270	-28	879.00	11000.00	10509.50	278.09
11050-1	90	30	880.00	11050.00	10518.00	97.50
11050-2	90	-8	879.00	11050.00	10518.00	94.49
11050-3	90	-41	878.00	11050.00	10518.00	91.44
11050-4	90	-90	878.00	11050.00	10516.00	121.92
11050-58	90	12	880.50	11050.00	10518.00	96.01
11050-59	270	-47	878.00	11050.00	10514.00	198.12
11050-60	270	-34	878.00	11050.00	10514.00	216.41
11050-63	270	-43	878.00	11050.00	10514.00	196.60
11100-61	270	-43	878.50	11096.00	10516.00	222.50
11100-62	270	-52	878.50	11096.00	10516.00	217.93
11100-64	90	-90	878.50	11096.00	10518.00	103.63
11100-65	90	-53	878.50	11096.00	10520.00	103.63
11100-66	90	-23	878.50	11096.00	10520.00	109.73
11100-67	90	0	880.00	11096.00	10520.00	106.68
11100-68	90	68	881.00	11096.00	10516.00	120.40
11100-69	270	60	880.00	11096.00	10516.00	137.16
11100-70	90	90	884.00	11100.00	10516.00	125.58

7007.84



Four diamond drill holes were drilled on cross section 10,588N from 900 level to investigate the southern continuation of #3 Zone. Hole 587-44 intersected zone material over 6 metres which averaged 3.27 g/tonne. This general area is also traversed by OG24, a vertical surface hole which intersected three ore grade sections below 930 elevation.

Around the 1015 level, #2 Zone orebody is about 32 metres wide in true thickness. No. 1 Zone is starting to form a continuous body at 500E at 1000 elevation.

The broad geological elements occurring on all cross sections can be seen on 10,588N and are summarized as follows:

1. Steeply east dipping ( $60^{\circ}$  to  $80^{\circ}$ ) through-going faults referred to as the 'Mine Fault', SUMP Fault, and others. These faults are commonly graphitic and trend mainly mine north.
2. A thick sequence of black argillite and conglomerate argillite to the east of the Mine Fault.
3. A thick section of greywacke and siltstone immediately west of the Mine Fault.
4. The #1, 2 and 3 Zones often butt up against the Mine Fault.
5. Thick graded turbidite units, variable conglomerate, lithicwacke to argillite cycles.
6. Spider Peak Formation volcanics to the west and at depth (Hole 587-45).
7. A series of generally east-west striking, gently northwest dipping faults which off-set the Mine Fault with right lateral separation. One in particular, at the top of #2 Zone orebody, contains sheared talc infilling and is called the Richardson Fault.
8. East dipping Hozameen Fault separating Spider Peak Formation volcanics from talc schist and serpentinite.

Three short holes were drilled from 900 level on section 10,692 to investigate the southern continuity of #3 Zone. These holes encountered a turbidite sequence that included abundant lithicwacke. The #2 Zone orebody in the 970 elevation range is becoming much smaller and discontinuous from 10,692N northward. In contrast the #1 Zone is thicker and more continuous below 960 elevation. The eastern (upper) argillite package now completely underlies #2 Zone and forms the eastern boundary of #1 Zone. A short distance to the north, by 10,716N, #1 Zone doubles in width to over 30m in true thickness.

By 10,750N #3 Zone orebody becomes wide and relatively high grade. Holes 750-20

and 21 drilled from the 820 elevation tracked haulage level investigated the lower part of #3 Zone below the widest section at 850 elevation. Here #1 Zone is about 38 metres in true thickness from 950 elevation tapering down to 880 elevation.

On 10,766N two short holes were drilled from 875 level into the upper part of #3 Zone which appears in close proximity to the lower, thinner part of #1 Zone. Hole LD766-1 intersected 3 metres of mineralization which averaged 7.56 g/tonne. A fault controlled block of mineralization occurs above #1 Zone at 10,766N. This upper zone appears to be the northern continuation of #2 Zone cut and brecciated by the Richardson Fault. The western turbidite sequence was encountered in Holes LD766-4 and 5 but limitations of the drill rig did not allow continuing these holes to the Hozameen Fault.

Three holes were drilled on 10,785N from the 820 track level which encountered a thick section of Spider Peak Formation volcanics immediately below #3 Zone. The fault structures which emplaced the volcanics have displaced the downward continuation of #3 Zone mineralization.

Drilling on 10,820N shows the mineralized zones occurring between two slabs of volcanics 120 metres apart. No. 3 Zone was intersected in both 820-25 and 26. On 10,852N #3 Zone is relatively wide and up to 22 metres thick. Hole 852-30 averaged 5 metres of 12.33g/tonne separated by 3 metres of low grade and then 15 metres of 4.90g/tonne.

Several short holes from 875 level were drilled to the west on 10,867N and illustrate that the #1 Zone has split into several narrow lenses. There is a considerable tonnage to the west of the new exploration drift driven on 875 level in October and November, 1995. Several sections of argillite and barren greywacke were mined previously in 88 stope.

The volcanic section immediately above the western #1 Zone mineralization is shown on 10,883N. No. 3 Zone appears narrow and discontinuous on 10,883N.

North of 10,900N the mineralized zones appear narrow and disrupted by close space faulting. Some of these zones may be minable by drifting along them, paying close attention to grade control.

A new zone hosted by arsenopyrite-rich quartz breccia was found to the west of the old workings along the volcanic contact. This zone will require additional drilling but was encountered from 10,934N to the northern limit of access at 11,100N. Hole 11,000-71 intersected 6 ore grade intersections over a 110 metre core interval as follows (all west of 380E): 6.37 g/tonne over 7m, 3.40 g/tonne over 4m, 3.77 g/tonne over 5m, 3.84 g/tonne over 3m, 4.17 g/tonne over 4m, and 5.15 g/tonne over 7m. Hole 11,050-63 intersected the most easterly of these zones and averaged 11.40 g/tonne over 9m.

TABLE 4



ATHABASKA GOLD RESOURCES LTD. - LADNER CREEK PROJECT.  
Important Drill Intersections 1995/96  
0.08 oz/t Au cutoff

DDH	Interval (m)		Width (m)	Assay			
	from	to		(oz/t)	(g/t)		
11000-52	3.00	8.00	5.00	0.112	3.85		
11000-52	31.00	34.00	3.00	0.101	3.45		
11000-55	61.00	66.00	5.00	0.106	3.64		
11000-55	INC	64.00	66.00	2.00	0.198	6.79	
11000-55							
11000-71	113.58	118.16	3.30	0.084	2.87		
11000-71	154.89	162.00	7.11	0.188	6.43		
11000-71	178.30	182.30	4.00	0.099	3.39		
11000-71	INC	192.00	204.30	12.30	0.079	2.71	
11000-71							
11000-71			192.00	201.00	9.00	0.086	2.95
11000-71			192.00	195.00	3.00	0.126	4.33
11000-71			200.00	201.00	1.00	0.120	4.11
11000-71	215.36	216.41	1.05	0.105	3.60		
11000-71	INC	226.50	234.50	8.00	0.075	2.57	
11000-71							
11000-71			226.50	229.50	3.00	0.112	3.84
11000-71			233.50	234.50	1.00	0.160	5.49
11000-71	INC	247.32	262.50	15.18	0.117	4.00	
11000-71							
11000-71			247.32	251.32	4.00	0.122	4.17
11000-71			255.50	262.50	7.00	0.150	5.15
11050-1	90.40	91.44	1.04	0.264	9.05		
11050-2	40.10	41.15	1.05	0.109	3.74		
11050-3	26.00	26.85	0.85	0.122	4.18		
11050-3	INC	38.00	47.27	9.27	0.146	5.01	
11050-3							
11050-3			38.00	42.00	4.00	0.205	7.01
11050-59	INC	25.00	32.00	7.00	0.094	3.24	
11050-59							
11050-59			25.00	27.00	2.00	0.164	5.62
11050-59	43.50	47.50	4.00	0.122	4.19		
11050-63	25.31	30.48	5.17	0.091	3.12		



## ATHABASKA GOLD RESOURCES LTD. - LADNER CREEK PROJECT.

Important Drill Intersections 1995/96

0.08 oz/t Au cutoff

DDH	Interval (m)	Width (m)	Assay			
			from	to	(oz/t)	(g/t)
11050-63	INC					
11050-63	25.31	27.43	2.12	0.183	6.27	
11050-63	99.26	117.00	17.74	0.114	3.89	
11050-63	101.26	105.00	3.74	0.164	5.62	
11050-63	114.00	118.00	4.00	0.177	6.07	
11050-63	165.50	174.50	9.00	0.333	11.40	
11100-61	60.50	61.00	0.50	0.106	3.63	
11100-61	176.68	177.83	1.15	0.142	4.87	
11100-61	186.93	190.00	3.07	0.299	10.26	
11100-62	62.50	63.60	1.10	0.121	4.15	
11100-66	91.00	92.00	1.00	0.129	4.42	
587-44	46.50	51.50	5.00	0.095	3.27	
688-47	21.50	22.50	1.00	0.100	3.43	
750-20	64.00	66.50	2.50	0.105	3.60	
750-21	80.00	81.00	1.00	0.111	3.81	
750-24	55.20	56.23	1.03	0.092	3.15	
785-22	INC					
785-22	61.00	72.00	11.00	0.139	4.78	
785-22	66.00	72.00	6.00	0.186	6.38	
785-46	37.00	40.00	3.00	0.173	5.92	
820-25	4.57	7.52	2.95	0.113	3.87	
820-25	INC					
820-25	50.50	62.50	12.00	0.091	3.12	
820-25	54.50	62.50	8.00	0.108	3.69	
820-25	54.50	58.50	4.00	0.153	5.23	
820-26	48.50	52.58	4.08	0.117	4.01	
820-27	60.00	61.00	1.00	0.082	2.81	
852-28	35.00	36.00	1.00	0.099	3.39	



ATHABASKA GOLD RESOURCES LTD. - LADNER CREEK PROJECT.  
 Important Drill Intersections 1995/96  
 0.08 oz/t Au cutoff

DDH		Interval (m)		Width (m)	Assay	
		from	to		(oz/t)	(g/t)
852-29		40.00	58.50	18.50	0.116	3.98
852-29	INC					
852-29		53.50	58.50	5.00	0.268	9.19
852-30		30.00	53.00	23.00	0.181	6.21
852-30	INC					
852-30		30.00	35.00	5.00	0.360	12.34
852-30		38.00	53.00	15.00	0.148	5.07
852-41		45.00	47.00	2.00	0.109	3.72
852-51		62.00	64.00	2.00	0.116	3.96
883-32		15.29	19.29	4.00	0.102	3.50
920-39		43.00	48.68	5.68	0.099	3.38
LD766-1		14.14	17.24	3.10	0.219	7.49
LD766-2		22.26	24.26	2.00	0.123	4.22
LD766-3		46.00	47.15	1.15	0.398	13.65
LD867-1		0.00	6.57	6.57	0.114	3.91
LD867-1	INC					
LD867-1		0.00	3.00	3.00	0.175	6.00
LD867-2		0.00	10.00	10.00	0.100	3.44
LD867-2	INC					
LD867-2		3.00	5.00	2.00	0.137	4.70
LD867-2		8.00	10.00	2.00	0.204	6.99
LD867-4		0.00	6.05	6.05	0.096	3.28
LD867-4	INC					
LD867-4		0.00	3.05	3.05	0.143	4.90
LD883-1		12.67	23.72	11.05	0.114	3.90
LD883-1	INC					
LD883-1		12.67	18.72	6.05	0.145	4.96
LD883-2		19.20	23.20	4.00	0.097	3.31
LD883-2	INC					
LD883-2		20.20	23.20	3.00	0.101	3.47
LD883-4		12.27	13.27	1.00	0.127	4.35
LD895-1		2.60	15.24	12.64	0.139	4.75
LD895-1	INC					
LD895-1		2.60	9.14	6.54	0.200	6.84



ATHABASKA GOLD RESOURCES LTD. - LADNER CREEK PROJECT.  
 Important Drill Intersections 1995/96  
 0.08 oz/t Au cutoff

DDH	Interval (m)		Width (m)	Assay		
	from	to		(oz/t)	(g/t)	
LD895-1	22.34	23.34	1.00	0.106	3.63	
LD895-2	3.00	5.00	2.00	0.107	3.65	
LD895-2	9.00	11.00	2.00	0.088	3.00	
LD895-3	4.25	9.00	4.75	0.080	2.74	
LD895-3	INC	4.25	5.50	1.25	0.105	3.60
LD895-3						
LD912-2	7.50	9.00	1.50	0.151	5.18	
LD912-3	5.57	6.10	0.53	0.142	4.87	
LD912-5	15.00	16.00	1.00	0.193	6.62	
LD912-5	26.08	29.18	3.10	0.240	8.23	
LD934-1	1.90	4.00	2.10	0.087	2.98	
LD934-3	31.00	34.00	3.00	0.115	3.94	
LD934-4	13.88	15.88	2.00	0.083	2.85	
LD934-4	121.70	123.70	2.00	0.148	5.06	

TABLE 5  
Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
OG-20	90	-90	1078.35	9993.00	10309.00	137.50
A-1	280	27	819.20	10261.00	10488.00	71.65
A-2	280	14	819.20	10261.00	10488.00	99.70
A-3	280	0	819.20	10261.00	10488.00	103.05
A-4	287	2.5	819.20	10261.00	10488.00	83.21
B-1	240	0	819.50	10261.00	10488.00	134.45
B-2	240	-8	819.50	10261.00	10488.00	132.93
OG-48	281.1	-40	962.68	10345.77	10410.71	39.01
OG-49	281.1	-58	962.88	10345.77	10410.71	37.19
C-1	270	15	880.50	10350.00	10509.60	125.61
C-2	270	0	880.50	10350.00	10509.60	119.51
C-3	270	-12	880.50	10350.00	10509.60	113.41
D-1	270	18	819.10	10350.00	10480.60	86.28
D-2	270	-10	819.00	10350.00	10480.60	99.70
D-3	270	-24	818.90	10350.00	10480.60	114.33
OG-54	273.3	-60	971.30	10379.30	10439.30	65.39
OG-55	273.3	-72	971.41	10379.40	10493.70	85.39
OG-53	273.6	-40	971.60	10379.50	10438.90	82.96
OG-56	305.2	-40	971.00	10380.40	10437.80	97.50
OG-57	326.5	-90	971.00	10380.40	10437.80	74.07
G-1	270	25	819.80	10399.00	10468.60	101.52
G-2	270	0	819.50	10399.00	10468.60	100.91
F-1	270	14	882.20	10400.00	10507.80	128.35
F-2	270	0	882.00	10400.00	10507.80	125.91
OG-47	236.5	-90	931.87	10410.22	10575.15	54.25
OG-45	271	-35	931.51	10421.55	10591.47	47.55
OG-46	314.5	-40	931.39	10422.42	10589.99	55.17
K-1	270	25	819.80	10448.50	10471.00	119.21
H-2	270	15	884.20	10449.50	10510.40	167.69
M-1	270	15	819.80	10498.00	10465.30	149.70
L-1	270	30	885.40	10500.00	10511.00	148.78
L-2	270	17	885.20	10500.00	10511.00	171.65
L-3	270	0	885.00	10500.00	10511.00	189.94
512-1	115	45	821.00	10512.00	10462.00	57.00
OG-5	202.5	-40	986.50	10548.25	10600.50	90.55
OG-25	236	-90	1023.71	10552.85	10524.70	103.05
562-1	90	90	1001.40	10562.00	10554.20	10.06
562-2	270	55	1001.20	10562.00	10551.80	18.29
562-3	270	35	1000.40	10562.00	10551.00	24.99
562-4	270	15	1000.20	10562.00	10551.00	42.98
562-5	270	-8	999.60	10562.00	10551.00	28.35
562-6	270	-35	998.80	10562.00	10551.00	18.90
562-9	90	5	999.60	10562.00	10555.20	20.42
OG-39	217.5	-65	1072.78	10565.00	10530.00	108.54
OG-3	202.5	-40	1003.80	10567.70	10587.90	91.77
OG-4	202.5	-65	1003.80	10567.70	10587.90	305.00
OG-1	201.5	-35	1026.45	10571.70	10545.90	69.60
OG-2	201.5	-60	1026.45	10571.70	10545.90	81.40
OG-26	236	-90	1006.33	10571.80	10594.00	125.91
575-1	90	15	988.60	10575.00	10559.60	34.75
575-2	90	38	989.10	10575.00	10559.60	30.48
IS-43	270	-38	994.80	10577.07	10572.12	49.40
575-4	90	53	989.60	10579.20	10535.20	33.53
IU-120	90	76	949.50	10580.26	10506.70	44.80
575-5	90	90	999.00	10581.00	10499.20	39.93

Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
575-6	270	71	999.00	10581.00	10498.80	50.29
575-7	270	51	998.90	10581.00	10498.10	46.02
IS-41	270	-30	1045.30	10583.66	10497.40	65.85
IS-42	270	-60	1045.30	10583.66	10498.50	65.58
OG-10	270	-90	1052.66	10586.00	10590.00	67.99
587-1	90	54	943.71	10587.16	10516.11	66.14
587-2	90	66	943.90	10587.16	10516.00	79.86
587-4	90	78	943.90	10587.16	10515.00	94.79
587-5	90	88	943.90	10587.16	10515.40	89.00
587-10	270	-35	1012.80	10587.20	10498.20	19.51
587-11	270	-64	1013.10	10587.20	10497.80	21.30
587-12	90	52	1016.60	10587.20	10503.60	25.30
587-16	90	73	1016.60	10587.20	10502.80	22.25
587-6	270	49	1016.00	10587.20	10497.80	34.44
587-7	270	24	1014.40	10587.20	10497.80	37.80
587-8	270	74	1016.60	10587.20	10498.80	21.34
587-9	270	0	1013.80	10587.20	10497.80	11.58
587-42	90	30	891.50	10587.50	10535.00	70.10
587-43	90	6	890.00	10587.50	10535.50	85.34
587-44	90	-12	888.80	10587.50	10535.00	106.68
587-45	90	-45	888.00	10587.50	10535.50	99.06
OG-24	236.5	-90	1022.18	10587.50	10572.60	201.07
OG-28	236	-90	1045.96	10587.50	10501.20	99.70
OG-38	236.5	-90	1066.68	10587.50	10465.40	85.37
OG-9	286.5	-70	1049.92	10587.60	10562.10	47.44
U-204	47.5	4.7	891.82	10592.82	10507.78	137.25
IU-28	90	0	986.81	10598.91	10509.74	57.60
600-1	270	42	1016.40	10600.00	10498.10	35.66
600-2	270	17	1014.70	10600.00	10497.90	47.55
600-3	270	67	1017.00	10600.00	10499.15	38.40
600-4	90	90	1017.00	10600.00	10500.85	24.38
600-5	90	41	1017.00	10600.00	10502.50	26.40
600-6	90	20	1015.00	10600.00	10502.70	12.50
600-7	90	-15	1013.60	10600.00	10502.75	10.97
600-8	90	-40	1013.25	10600.00	10502.45	9.14
OG-11	236.5	-80	1064.55	10600.00	10540.00	133.54
OG-23	236.5	-85	1064.55	10600.00	10482.60	168.29
OG-6	316.5	-55	1050.53	10600.00	10540.50	102.44
TH-1	270	30	1002.30	10600.00	10520.80	7.32
TH-2	270	-30	1000.60	10600.00	10520.80	3.66
TH-3	270	3	1001.40	10600.00	10520.80	7.32
IU-10	270	-37	984.35	10600.14	10568.10	57.00
IU-6	270	-36	986.55	10600.36	10544.76	40.20
IU-7	90	-35	987.36	10600.44	10558.59	24.60
IU-111	90	0.5	984.79	10600.46	10577.01	69.50
IU-8	270	-35	984.88	10600.49	10555.50	33.30
IU-9	90	-35	986.10	10600.53	10570.61	12.90
IU-112	270	-55	983.87	10600.61	10572.18	67.95
IU-4	90	34.5	989.20	10600.61	10533.76	44.30
IU-113	270	-75	983.87	10600.64	10572.57	72.55
IU-5	90	35	988.87	10600.71	10547.35	29.10
IU-1	90	36	985.00	10600.87	10515.18	51.00
IU-2	90	47	986.44	10600.87	10515.18	51.00
IU-3	90	58	986.44	10600.87	10515.18	50.00
IS-40	270	-30	1048.60	10602.43	10536.40	63.90



Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
IU-114	69	7	945.03	10602.55	10516.40	79.90
612-3	90	58	947.80	10608.20	10545.80	70.10
612-4	90	75	947.80	10608.20	10546.00	70.10
612-5	90	90	947.80	10608.20	10546.40	76.20
612-11	240	0	1001.60	10611.50	10523.40	52.43
612-6	240	28	1002.40	10611.50	10523.40	64.62
612-7	240	15	1002.30	10611.50	10523.40	59.13
612-1	90	80	943.80	10612.00	10502.60	100.58
612-12	270	0	1001.60	10612.00	10523.40	62.44
612-14	270	-21	1001.40	10612.00	10523.40	37.80
612-15	270	16	1014.80	10612.00	10497.40	41.15
612-16	270	-10	1014.40	10612.00	10497.40	37.97
612-17	270	70	1015.80	10612.00	10498.20	17.07
612-18	90	80	1015.80	10612.00	10500.80	15.85
612-19	90	48	1015.80	10612.00	10501.80	15.85
612-2	90	90	948.00	10612.00	10536.60	67.06
612-8	270	28	102.40	10612.00	10523.40	74.07
612-9	270	15	1002.00	10612.00	10523.40	82.27
B612-1	270	-11	981.20	10612.00	10591.20	24.69
B612-2	270	-34	980.50	10612.00	10591.20	22.56
B612-3	270	-76	980.50	10612.00	10592.00	21.64
B612-9	270	14	1002.00	10612.50	10523.50	82.30
OG-12	56.5	-90	1064.55	10618.10	10529.50	81.10
OG-8	56.5	-75	1022.79	10619.00	10559.20	81.49
OG-14	236.5	-90	1053.27	10624.00	10575.50	135.67
OG-15	56.5	-77	1053.27	10624.00	10575.50	189.02
OG-16	236.5	-77	1053.27	10624.00	10575.50	194.51
OG-27	236	-90	1020.66	10624.00	10510.00	139.33
625-1	90	35	943.40	10625.00	10497.75	46.33
625-11	90	40	977.90	10625.00	10538.20	30.48
625-17	330	60	978.40	10625.00	10535.00	20.72
625-2	90	67	943.70	10625.00	10497.50	34.44
625-20	360	60	978.40	10625.00	10535.00	21.64
625-21	360	77	978.40	10625.00	10535.00	18.29
625-23	30	60	978.40	10625.00	10535.00	19.48
625-24	180	75	977.00	10625.00	10535.00	13.41
625-25	270	28	1002.10	10625.00	10516.15	61.87
625-26	270	15	1001.85	10625.00	10516.10	40.54
625-27	270	33	977.00	10625.00	10516.20	92.96
625-28	270	25	976.60	10625.00	10516.15	67.06
625-29	270	77	977.50	10625.00	10516.82	17.68
625-3	90	35	951.90	10625.00	10572.40	80.16
625-30	270	58	977.40	10625.00	10516.50	16.15
625-31	270	-75	974.00	10625.00	10517.00	8.53
625-32	270	46	1005.60	10625.00	10480.60	36.58
625-33	270	8	1004.20	10625.00	10480.40	39.62
625-34	270	-17	1003.30	10625.00	10480.40	17.07
625-35	90	79	1005.50	10625.00	10482.10	24.57
625-4	90	52	951.80	10625.00	10571.00	71.02
625-5	270	90	951.60	10625.00	10570.00	54.86
625-6	90	50	977.80	10625.00	10523.15	34.44
625-7	90	80	977.80	10625.00	10522.80	28.35
625-8	270	83	977.80	10625.00	10522.50	34.74
B625-1	90	3	975.50	10625.00	10566.80	19.81
B625-2	90	-40	974.70	10625.00	10566.60	13.10

Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
B625-3	270	-80	974.70	10625.00	10564.80	13.72
B625-4	270	-45	974.70	10625.00	10564.20	10.67
IU-21	90	20	978.62	10626.49	10501.44	42.60
IU-67	90	52	979.62	10626.49	10499.54	48.15
OG-13	236.5	-75	1053.27	10630.00	10530.00	103.05
637-1	90	50	944.40	10637.50	10496.75	73.15
637-10	270	60	948.00	10637.50	10580.00	91.44
637-11	90	72	946.60	10637.50	10535.75	54.86
637-12	270	83	952.10	10637.50	10561.86	43.59
637-13	270	-85	948.00	10637.50	10580.65	105.46
637-2	90	65	944.75	10637.50	10496.40	73.76
637-3	90	80	944.80	10637.50	10495.90	69.80
637-4	270	88	944.80	10637.50	10489.00	72.64
637-5	90	20	943.40	10637.50	10496.85	49.38
637-6	90	45	951.80	10637.50	10583.50	60.96
637-7	90	65	951.85	10637.50	10583.00	60.90
637-8	90	86	951.90	10637.50	10582.65	54.86
637-9	270	68	951.90	10637.50	10580.00	54.86
B637-1	270	-20	975.60	10637.50	10555.60	12.19
B637-2	270	-45	975.30	10637.50	10556.15	10.67
B637-3	270	-87	975.25	10637.50	10557.20	13.72
B637-4	90	-50	975.50	10637.50	10559.50	23.16
B637-6	90	50	975.80	10637.50	10531.50	16.15
B637-7	270	90	977.60	10637.50	10524.00	14.33
B637-8	270	45	977.00	10637.50	10523.50	5.18
B637-9	270	-75	974.20	10637.50	10524.00	18.29
OG-21	236.5	-78	1101.13	10640.00	10470.00	191.46
OG-32	90	-90	1149.39	10642.00	9725.00	316.46
IU-82	90	1	976.43	10644.74	10560.43	59.80
IU-83	90	35	977.19	10644.82	10560.20	29.55
IU-84	270	-90	975.00	10645.02	10557.09	108.58
IU-109	90	-44	975.30	10645.19	10560.63	25.60
IU-89	270	-35	974.34	10645.24	10511.99	21.65
IU-90	90	35	976.36	10645.51	10516.11	20.10
OG-50	319.6	-40	963.03	10645.99	10411.52	41.05
OG-51	319.6	-60	963.03	10645.99	10411.52	45.05
OG-52	319.6	-80	963.03	10645.99	10411.52	71.93
IU-85	270	-57	975.00	10646.00	10555.30	77.17
IU-91	270	90	976.14	10646.12	10513.85	16.00
IU-86	270	-36	975.03	10646.15	10553.56	63.10
IU-88	270	-36	974.49	10646.79	10531.89	37.50
IU-110	68	-6	955.50	10647.01	10517.68	60.70
IU-87	90	35	977.66	10647.12	10535.52	26.35
650-1	270	47	975.90	10650.00	10505.80	58.52
650-2	270	31	975.40	10650.00	10508.60	69.19
650-3	270	18	975.20	10650.00	10505.50	65.23
650-4	270	2	974.20	10650.00	10505.50	64.20
B650-1	90	52	962.80	10650.00	10559.00	12.19
B650-2	90	0	962.80	10650.00	10559.00	9.45
OG-17	236.5	-90	1083.45	10650.00	10538.50	169.82
OG-18	236.5	-81	1083.45	10650.00	10538.50	160.98
OG-22	56.5	-84	1100.52	10650.00	10419.00	182.62
650-5	90	36	967.00	10651.20	10547.20	33.52
B656-1	90	10	964.20	10656.00	10554.40	24.69
B656-2	90	40	964.80	10656.00	10554.40	21.95

Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
662-1	90	36	944.35	10662.00	10499.25	20.12
662-5	90	77	944.80	10662.00	10498.50	52.12
662-6	90	-30	892.30	10662.00	10525.20	49.99
662-7	90	-60	891.60	10662.00	10524.80	58.83
662-8	90	-90	891.35	10662.00	10524.00	50.29
B662-1	90	45	973.00	10662.00	10508.90	16.76
B662-2	90	51	971.15	10662.00	10508.50	19.51
B662-3	90	21	966.35	10662.00	10556.80	16.76
B662-4	90	45	967.00	10662.00	10556.76	24.38
B662-5	270	-70	965.40	10662.00	10554.30	10.67
B662-6	270	-60	965.50	10662.00	10550.65	7.63
OG-19	236.5	-90	1080.09	10662.50	10571.50	288.11
662-2	90	59	925.85	10663.21	10522.31	81.38
662-3	90	41	926.17	10663.26	10522.01	99.36
662-4	90	28	926.22	10663.27	10521.34	102.41
U-200	90.5	24.7	895.04	10664.20	10527.08	46.67
U-201	89.7	55.5	895.25	10664.21	10526.81	41.18
U-202	88.8	81.5	895.64	10664.21	10526.34	50.33
IU-15	270	-45	969.45	10664.27	10515.86	30.18
IU-12	270	90	972.73	10664.85	10519.13	20.40
IU-14	90	0	970.50	10664.86	10520.79	37.80
IU-11	270	-90	969.31	10664.87	10519.05	70.15
IU-13	90	40	972.09	10664.87	10520.23	28.80
U-203	88.7	1	892.93	10664.88	10527.98	65.88
IU-118	63	-1	930.40	10666.31	10521.24	50.30
675-4	90	67	947.10	10672.00	10502.00	52.12
675-3	65.1	70.1	925.44	10673.08	10512.18	61.57
675-1	90	60	925.40	10675.00	10523.80	61.57
675-10	90	40	895.30	10675.00	10530.00	67.05
675-10A	90	-45	841.20	10675.00	10529.60	88.39
675-11	270	28	944.40	10675.00	10515.70	12.19
675-12	270	0	943.40	10675.00	10515.70	12.34
675-14	270	-82	942.40	10675.00	10522.00	12.80
675-15	270	-33	942.30	10675.00	10515.70	7.62
675-16	90	0	943.70	10675.00	10523.20	6.10
675-17	90	-85	892.30	10675.00	10537.80	25.91
675-18	270	-75	892.30	10675.00	10537.00	26.21
675-19	270	70	969.30	10675.00	10553.70	17.68
675-2	90	30	924.30	10675.00	10524.00	61.87
675-20	90	80	969.30	10675.00	10554.50	15.85
675-21	90	62	969.30	10675.00	10554.80	15.85
B675-1	90	25	966.00	10675.00	10537.80	18.29
B675-2	90	50	967.00	10675.00	10537.80	18.29
B675-5	90	47	970.20	10675.00	10517.70	10.67
B675-6	270	66	970.10	10675.00	10516.80	12.50
B675-7	270	36	970.00	10675.00	10516.40	11.28
B675-8	270	-48	966.75	10675.00	10518.80	17.37
B675-9	270	-65	966.75	10675.00	10518.78	18.59
683-1	90	46	844.20	10683.00	10525.40	69.20
687-4	84.7	68.1	926.11	10685.00	10489.45	75.54
687-6	90	78	926.65	10685.00	10475.60	66.45
687-9	82.2	21	842.80	10687.30	10524.80	63.40
687-1	90	77	926.00	10687.50	10530.40	68.58
687-2	90	55	925.85	10687.50	10531.20	64.31
687-3	90	37	925.25	10687.50	10531.35	61.87

**Athabaska Gold Resources Ltd. - Ladner Creek Project**  
**Drill hole Database by Section**

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
687-5	90	74	925.30	10687.50	10512.25	72.24
687-7	270	28	944.80	10687.50	10516.60	14.02
687-8	270	7	944.45	10687.50	10516.60	14.33
688-47	90	-56	893.80	10687.50	10538.20	36.58
688-48	90	-76	893.80	10687.50	10538.20	36.53
688-49	270	-54	893.80	10687.50	10538.20	39.62
B687-17	90	20	965.45	10687.50	10544.15	13.41
B687-18	90	70	966.80	10687.50	10543.80	14.94
B687-19	270	-60	965.10	10687.50	10537.80	9.14
B687-20	270	-60	965.30	10687.50	10536.70	10.67
B687-3	270	-42	964.30	10687.50	10515.00	14.02
B687-4	270	-80	964.50	10687.50	10514.85	12.80
B687-7	90	42	966.20	10687.50	10516.00	8.23
B687-8	90	45	965.70	10687.50	10544.25	20.12
B687-9	270	-30	944.00	10687.50	10516.85	13.77
IU-24	270	-25.5	952.66	10696.75	10562.69	23.90
IU-71	270	-45	953.20	10696.80	10559.00	93.56
IU-72	270	-71	952.80	10696.80	10562.20	57.00
IU-25	90	45	956.20	10696.83	10566.61	28.20
IU-22	270	90	955.63	10696.97	10564.67	11.90
IU-23	270	-90	952.54	10696.97	10564.67	73.50
IU-19	270	-90	959.73	10699.66	10534.84	50.30
IU-20	270	90	962.87	10699.66	10534.85	33.85
700-1	90	79	844.50	10700.00	10520.90	66.44
700-2	90	62	844.30	10700.00	10521.20	61.87
700-3	90	41	843.50	10700.00	10521.50	12.40
700-5	90	15	842.40	10700.00	10521.30	42.67
IU-16	270	-30	960.09	10700.48	10533.64	43.20
IU-17	270	-64	959.77	10700.61	10536.14	45.12
IU-18	90	36	962.73	10700.68	10538.69	15.24
IU-27	270	-0.5	961.62	10700.72	10534.02	107.00
IU-69	270	-45	960.42	10700.72	10535.02	63.10
IU-70	270	20	962.72	10700.72	10534.02	44.20
IU-26	90	0	955.06	10702.38	10563.30	49.30
716-14	90.1	-5	841.50	10711.40	10518.90	46.63
716-3	90.2	0.3	924.64	10715.94	10537.57	35.66
716-10	90	26	842.25	10716.00	10517.00	64.00
716-11	90	48	843.10	10716.00	10517.15	61.57
716-12	90	72	843.30	10716.00	10517.30	46.33
716-4	90	62	926.65	10716.00	10501.75	46.63
716-5	90	41	926.50	10716.00	10502.00	60.96
716-6	90	19	925.50	10716.00	10502.00	60.05
716-7	90	90	926.85	10716.00	10500.85	40.23
716-8	270	45	945.60	10716.00	10516.15	16.15
716-9	90	52	946.35	10716.00	10522.30	36.57
U-242	90	0	895.20	10716.00	10517.00	31.72
716-2	270	-77	923.45	10716.04	10534.12	35.66
716-1	269.5	-28.6	923.90	10716.08	10533.00	35.05
725-1	270	-29	924.50	10725.00	10534.00	35.36
725-2	270	-77	923.80	10725.00	10536.00	35.36
OG-29	56.5	-81	1121.55	10725.00	10530.00	238.11
IU-29	270	0	948.32	10732.97	10536.82	69.50
IU-76	270	20	949.02	10732.97	10536.67	77.70
IU-77	270	-23	947.82	10732.97	10536.82	58.50
IU-78	270	-67.5	947.45	10732.97	10538.67	69.50

Athabaska Gold Resources Ltd. - Ladner Creek Project  
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DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
733-1	90	81	844.20	10733.00	10523.60	43.59
733-2	90	19	843.35	10733.00	10524.50	49.68
733-3	90	-35	841.00	10733.00	10524.70	78.64
733-4	90	-35	840.80	10733.00	10524.90	78.64
OG-31	236.5	-90	1127.03	10733.00	10530.60	253.35
IU-31	90	10	949.42	10733.13	10540.27	65.30
IU-30	90	56	949.87	10733.17	10539.68	45.40
U-252	90.8	23.6	846.34	10734.27	10497.34	56.12
IU-119	90	-86	947.45	10734.82	10537.32	124.05
IU-33	0	-90	947.28	10736.01	10535.85	57.35
IU-32	270	-45	947.27	10739.79	10537.29	50.90
U-218	89.5	41.3	899.41	10749.89	10481.17	61.61
U-217	89.7	67	899.70	10749.90	10480.67	85.71
U-219	89.6	19.6	898.34	10749.90	10481.72	65.58
LD750-1	90	90	899.00	10750.00	10477.00	91.44
U-241	90	0	896.50	10750.00	10511.30	30.50
750-20	89.68	8	820.01	10750.04	10456.53	99.06
750-21	90.53	-2	820.30	10750.04	10456.80	111.25
U-251	83.8	26.4	845.21	10750.27	10474.80	100.35
U-250	89.8	14.6	873.40	10750.39	10493.40	61.92
U-253	90.8	0.4	846.88	10751.84	10525.39	50.63
OG-30	236.5	-90	1106.61	10755.00	10570.00	272.26
U-255	154.7	-70.2	872.67	10758.70	10538.32	78.94
U-240	90.2	4.1	820.16	10765.89	10457.14	109.19
766-1	90	-5	818.80	10766.00	10457.20	86.56
LD766-1	90	11	875.00	10766.00	10512.00	24.38
LD766-2	90	-11	873.00	10766.00	10512.00	30.48
LD766-3	270	40	873.00	10766.00	10512.00	98.32
LD766-4	270	-10	900.00	10766.00	10473.00	60.96
LD766-5	270	-41	897.00	10766.00	10473.00	91.44
LD766-6	90	50	900.00	10766.00	10436.00	15.24
U-254	90.6	-2.6	840.81	10766.06	10468.08	91.50
IU-42	270	-39	936.57	10766.12	10504.56	49.10
IU-47	270	-45	936.57	10766.12	10504.60	34.15
IU-43	270	0	937.73	10766.33	10504.06	63.70
IU-73	270	-67.5	936.58	10766.33	10505.65	67.65
IU-74	270	31	939.08	10766.33	10504.06	38.10
IU-75	270	80	939.88	10766.33	10506.06	29.90
IU-108	270	-32	943.65	10766.53	10557.23	61.30
IU-94	270	-45	943.76	10766.53	10559.23	84.45
IU-41	270	-90	896.60	10766.57	10506.00	61.50
IU-44	90	56	939.94	10766.67	10507.84	25.90
IU-46	90	-20	937.17	10766.70	10508.55	31.10
IU-45	90	20	938.97	10766.93	10508.92	25.00
IU-92	270	-48	944.17	10766.97	10567.27	116.45
IU-115	270	-68.5	944.29	10766.99	10578.92	114.85
IU-93	270	-60	944.29	10766.99	10577.82	109.10
OG-35	90	-90	1140.30	10768.00	9848.30	304.27
776-1	90	5	820.20	10776.00	10457.10	86.56
776-2	90	0	819.60	10776.00	10457.10	85.34
U-249	90	5.5	851.94	10784.46	10490.99	50.94
U-256	270	-27	873.92	10784.72	10533.08	36.88
U-248	90.3	8.3	867.75	10784.84	10476.86	50.33
785-46	90	80	902.50	10785.00	10474.00	60.96
U-257	270	-68	874.00	10785.00	10534.00	64.31

Athabaska Gold Resources Ltd. - Ladner Creek Project  
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DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
785-24	89.95	-45	819.00	10785.66	10457.15	166.12
785-22	89.7	0	820.70	10785.67	10457.08	91.44
785-23	89.95	-20	820.54	10785.69	10457.15	102.80
U-213	100.6	27.9	900.47	10786.95	10474.26	80.83
U-212	89.4	51.2	902.27	10787.16	10474.09	69.54
U-214	88.7	18.2	900.24	10787.17	10474.31	76.86
U-216	88.5	-17.3	899.21	10787.18	10474.54	76.86
U-215	87.7	0.9	899.67	10787.20	10474.67	76.86
OG-33	60	-85	1176.83	10789.40	9617.40	364.94
IU-97	270	-74	927.52	10804.15	10545.80	100.30
IU-96	270	-63.5	927.52	10804.16	10545.51	95.40
IU-95	270	-48	927.52	10804.20	10544.74	94.20
IU-99	90	-30	927.83	10804.20	10547.92	40.60
IU-34	90	27	929.57	10804.24	10520.15	41.50
IU-35	90	0	928.11	10804.24	10520.19	54.90
IU-36	270	90	930.46	10804.37	10518.04	36.30
IU-98	270	-90	927.54	10804.43	10545.96	103.10
IU-39	270	-32	926.89	10804.54	10514.98	62.50
IU-38	270	-58	926.80	10804.55	10515.97	89.70
IU-40	270	6	928.63	10804.60	10514.90	69.20
IU-100	270	44	929.57	10804.63	10516.19	25.90
IU-37	270	-90	926.88	10804.76	10518.48	78.95
U-208	90.5	34.4	902.86	10818.00	10466.93	75.64
820-25	91.78	-9.5	820.31	10819.45	10459.98	91.44
820-27	92	-24	819.86	10819.45	10459.96	96.01
820-26	91.73	5	820.71	10819.47	10459.99	91.44
U-258	89.4	38.2	841.41	10819.80	10503.95	39.62
820-50	90	77	903.00	10820.00	10466.00	39.62
U-210	89.9	17.9	902.30	10820.01	10466.86	64.36
U-209	89.8	1	901.70	10820.03	10466.90	76.25
U-211	89.3	-14.4	901.28	10820.04	10466.88	76.86
U-247	91.6	10.6	857.17	10821.88	10480.51	51.24
U-246	90.8	29.3	857.88	10821.89	10480.72	54.90
IU-81	90	-32	920.07	10835.70	10512.87	93.55
IU-66	180	-28	920.00	10835.88	10510.18	99.70
IU-48	90	5	922.07	10836.70	10513.97	68.00
IU-51	90	-62	919.65	10836.80	10512.70	54.30
IU-49	90	45	922.74	10836.81	10513.63	36.60
IU-50	90	85	922.90	10836.92	10512.70	33.50
OG-36	236.5	-90	1204.15	10837.00	10460.00	359.15
U-231	93.8	0.2	820.52	10837.03	10466.79	87.84
U-230	93.4	12.7	821.48	10837.06	10466.65	78.08
U-229	93	23.4	821.52	10837.10	10466.50	101.26
U-228	89.2	42.6	821.93	10837.18	10466.33	105.23
IU-52	270	-90	919.66	10837.44	10511.38	60.35
IU-56	270	62	922.69	10837.59	10510.07	54.30
IU-53	270	-47	919.65	10837.65	10509.50	100.60
IU-54	270	-5	921.05	10837.73	10508.56	55.50
IU-55	270	35	922.56	10837.81	10508.70	77.15
IU-80	270	-67	920.20	10838.05	10510.65	64.90
IU-79	270	-90	920.66	10838.06	10508.70	50.60
U-245	89.8	15.8	860.21	10842.75	10460.19	61.00
U-243	89.1	44.2	860.98	10842.77	10459.68	45.75
U-244	88.8	25.9	860.59	10842.80	10460.22	65.88
852-41	90	-55	818.60	10852.00	10473.00	70.02

Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
852-51	90	31	905.00	10852.00	10460.00	64.01
852-29	91.24	-37	820.07	10852.11	10472.93	91.44
852-28	90.1	-21	820.46	10852.13	10472.99	80.77
U-205	91.2	0.5	902.71	10852.14	10460.01	81.44
U-207	90.5	-12.3	903.66	10852.15	10460.01	96.08
852-30	89.77	-4.5	820.81	10852.16	10473.01	67.06
U-206	90.4	18.4	901.38	10852.16	10460.02	59.17
U-239	90.1	16.9	821.30	10852.20	10473.14	54.60
U-237	90	48.2	822.20	10852.21	10473.07	89.98
U-238	89.4	35.6	821.85	10852.21	10473.21	95.47
IU-62	270	-35	913.87	10866.53	10515.70	54.00
IU-61	270	-70	913.02	10866.55	10516.30	54.00
IU-64	270	35	915.96	10866.61	10515.56	60.40
IU-63	270	0	964.58	10866.62	10515.53	57.40
IU-65	270	65	916.36	10866.66	10515.98	46.65
U-225	92.1	24.3	821.50	10866.79	10482.30	96.08
IU-101	270	-40	917.34	10866.87	10543.43	39.95
LD867-1	270	-30	873.00	10867.00	10480.00	36.58
LD867-2	270	0	874.00	10867.00	10480.20	21.34
LD867-3	270	60	875.00	10867.00	10481.00	21.30
LD867-4	270	-90	873.00	10867.00	10481.50	15.24
LD867-5	90	70	875.00	10867.00	10480.00	18.29
LD867-6	90	-41	875.00	10867.00	10482.00	20.73
LD867-7	90	0	874.80	10867.00	10482.80	5.49
IU-103	270	-58	917.61	10867.04	10558.39	124.35
IU-102	270	-59	917.30	10867.05	10544.18	98.75
IU-116	238	-46.5	918.05	10867.20	10573.90	110.40
IU-57	90	-70	913.02	10867.24	10518.01	71.40
U-226	99.5	80.2	823.00	10867.26	10480.72	86.01
U-227	92.4	2.3	821.21	10867.28	10482.54	51.24
IU-59	90	43	915.69	10867.44	10519.11	30.20
IU-58	90	6	914.59	10867.47	10519.77	60.75
IU-68	90	5	914.39	10867.47	10519.77	38.40
IU-60	90	85	916.39	10867.50	10518.25	23.80
IU-104	270	-59	917.94	10867.96	10573.99	71.00
IU-117	270	-90	918.05	10868.20	10575.15	76.60
IU-107	297	-43	918.07	10869.20	10573.40	116.45
IU-106	297	-35	918.07	10869.25	10572.91	110.95
IU-105	302	-22	918.14	10870.05	10572.95	105.15
U-235	96.7	26.2	822.19	10882.97	10490.89	90.98
LD883-1	270	-20	875.00	10883.00	10480.00	36.58
LD883-2	270	-45	874.00	10883.00	10480.00	28.96
LD883-3	270	20	875.00	10883.00	10480.00	22.86
LD883-4	270	-90	874.00	10883.00	10482.00	30.48
U-234	95.8	46.1	822.53	10883.02	10490.57	89.98
U-233	94.6	67.1	822.89	10883.07	10490.28	100.65
U-236	84	-86.1	823.12	10883.11	10489.82	78.39
U-232	89.6	82.1	823.10	10883.12	10489.92	104.35
883-33	96.12	-45	819.87	10883.57	10491.05	91.44
883-34	95.1	-60	819.60	10883.59	10490.73	91.44
883-31	95.73	-4.5	820.98	10883.60	10491.10	32.00
883-32	95.5	-25	820.53	10883.61	10491.04	45.72
OG-34	90	-90	1165.12	10890.90	9781.50	343.90
893-1	90	30	876.20	10893.00	10491.80	30.48
893-2	90	10	875.70	10893.00	10491.75	6.10

Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
LD895-1	270	-60	874.00	10895.00	10481.00	30.48
LD895-2	270	-30	874.00	10895.00	10481.00	18.29
LD895-3	270	0	875.00	10895.00	10481.00	18.29
LD895-4	270	20	875.00	10895.00	10481.00	18.29
900-1	90	62	842.00	10900.00	10511.90	75.59
900-2	90	42	877.60	10900.00	10515.50	24.99
900-3	90	45	878.00	10900.00	10498.70	25.90
U-223	92.1	16.5	820.78	10900.17	10494.67	46.67
U-222	90.7	21.3	821.29	10900.19	10494.76	76.86
U-220	89.8	72	824.01	10900.21	10493.99	94.86
U-221	89.7	45.1	822.04	10900.22	10494.44	96.99
U-224	2.5	87.4	823.87	10900.63	10493.25	85.71
LD912-1	90	25	876.00	10907.50	10496.00	23.16
LD912-2	90	-15	875.00	10907.50	10496.00	24.38
LD912-3	90	-45	875.00	10907.50	10496.00	9.45
LD912-5	90	-90	875.00	10908.00	10494.00	30.48
912-4	270	50	839.40	10912.00	10490.50	44.20
912-5	90	-20	875.60	10912.00	10494.00	24.99
LD912-4	90	50	875.00	10912.50	10494.00	22.86
912-3	30	50	842.20	10915.00	10510.00	44.20
915-1	270	80	841.80	10915.00	10509.00	18.29
915-2	270	45	841.60	10915.00	10507.90	64.31
915-3	347	64	841.90	10915.00	10509.40	35.97
920-39	90	12	821.00	10920.00	10467.80	54.86
920-40	90	-31	820.60	10920.00	10467.80	60.05
920-38	85.5	-90	819.90	10920.30	10466.90	54.86
920-37	85.5	-75	819.87	10920.33	10467.40	91.44
920-36	85.5	-60	819.95	10920.36	10467.80	85.34
920-35	85.55	-9.5	821.01	10920.38	10467.89	50.29
925-1	90	68	838.90	10925.00	10492.30	36.27
925-2	90	-35	835.60	10925.00	10491.80	50.20
925-3	270	42	839.00	10925.00	10490.10	59.44
925-4	270	76	839.00	10925.00	10491.40	44.20
925-5	322	64	842.40	10925.00	10508.50	33.83
NEX-10	30.5	-6	835.80	10932.00	10491.50	23.47
NEX-11	53	20	838.80	10932.00	10491.50	35.05
NEX-12	53	10	838.60	10932.00	10491.50	37.49
NEX-13	53	0	838.00	10932.00	10491.50	27.43
NEX-14	10	15	837.00	10932.00	10491.50	32.92
NEX-15	330	15	837.00	10932.00	10491.50	24.38
NEX-6	350	-5	836.40	10932.00	10491.50	81.50
NEX-7	30.5	17	837.40	10932.00	10491.50	32.31
NEX-8	30.5	8	837.00	10932.00	10491.50	24.38
NEX-9	30.5	0	836.20	10932.00	10491.50	45.72
NEX-2	31.5	13.5	837.00	10932.79	10491.33	241.10
NEX-1	43	20	838.00	10932.80	10491.50	156.67
NEX-3	32	29	838.00	10932.80	10491.50	178.92
934-1	90	45	823.10	10933.00	10464.80	70.71
934-2	90	65	823.50	10933.00	10464.50	116.43
934-3	107.6	30	822.70	10933.00	10465.40	107.59
934-4	90	73	843.00	10933.00	10508.40	57.91
934-5	90	-90	839.00	10933.00	10508.30	97.54
934-6	90	-90	820.00	10933.00	10461.60	60.96
934-10	270	59	825.30	10934.00	10461.00	61.57
934-11	90	58	825.30	10934.00	10462.00	13.00



Athabaska Gold Resources Ltd. - Ladner Creek Project  
Drill hole Database by Section

DDH	Azimuth	Dip	Elev (m)	Lat.	Dep.	length (m)
934-7	270	-72	834.00	10934.00	10508.30	86.87
934-8	90	-72	834.00	10934.00	10508.50	48.77
934-9	270	0	822.40	10934.00	10459.70	62.48
LD934-1	270	20	877.00	10934.00	10505.00	30.48
LD934-2	270	-10	875.00	10934.00	10505.00	30.48
LD934-3	270	-50	875.00	10934.00	10505.00	35.05
LD934-4	270	-30	875.00	10934.00	10505.00	138.99
966-5	90	-68	820.00	10965.65	10456.07	68.00
966-3	87.1	0	821.12	10965.69	10456.57	76.81
966-4	86.8	-30.4	821.50	10965.69	10456.39	92.66
966-1	90	45	822.50	10966.00	10456.40	71.02
966-2	270	90	828.00	10966.00	10453.70	68.27
966-6	270	59	827.50	10966.00	10452.80	69.49
966-7	270	0	826.00	10966.00	10452.80	91.44
966-8	270	-45	825.50	10966.00	10452.80	61.87
LD966-1	270	-20	878.50	10966.00	10511.00	30.48
LD966-2	270	0	878.00	10966.00	10511.00	30.48
LD966-3	270	20	878.50	10966.00	10511.00	24.38
NEX-4	10	21	820.00	10967.00	10454.90	206.04
OG-37	21.5	-85	1228.53	10967.00	10583.00	493.29
11000-1	90	-38	877.00	11000.00	10515.00	30.18
11000-2	90	-68	877.00	11000.00	10513.50	74.68
11000-52	90	-10	879.20	11000.00	10515.00	89.92
11000-53	90	18	879.50	11000.00	10515.00	80.85
11000-54	90	-31	879.00	11000.00	10515.00	89.92
11000-55	90	-90	878.00	11000.00	10512.00	104.85
11000-56	270	-38	878.00	11000.00	10509.50	156.97
11000-57	270	16	879.00	11000.00	10509.50	120.40
11000-71	270	-28	879.00	11000.00	10509.50	278.89
11050-1	90	30	880.00	11050.00	10518.00	97.54
11050-2	90	-8	879.00	11050.00	10518.00	94.49
11050-3	90	-41	878.00	11050.00	10518.00	91.44
11050-4	90	-90	878.00	11050.00	10516.00	121.92
11050-58	90	12	880.50	11050.00	10518.00	96.01
11050-59	270	-47	878.00	11050.00	10514.00	198.12
11050-60	270	-34	878.00	11050.00	10514.00	216.41
11050-63	270	-43	878.00	11050.00	10514.00	196.60
11100-61	270	-43	878.50	11096.00	10516.00	222.50
11100-62	270	-52	878.50	11096.00	10516.00	217.93
11100-64	90	-90	878.50	11096.00	10518.00	103.63
11100-65	90	-53	878.50	11096.00	10520.00	103.63
11100-66	90	-23	878.50	11096.00	10520.00	109.73
11100-67	90	0	880.00	11096.00	10520.00	106.68
11100-68	90	68	881.00	11096.00	10516.00	120.40
11100-69	270	60	880.00	11096.00	10516.00	137.16
11100-70	90	90	884.00	11100.00	10516.00	125.58



### CONCLUSIONS AND RECOMMENDATIONS

Since August 1984 there has been no routine mining at the Idaho Mine. Between December 1981 and August 1984 production came from two orebodies at a rate of approximately 1,500 tons per day, but delays and interruptions of up to several months at a time were experienced.

Difficulties in metallurgy precluded adequate gold recoveries in the milling circuit which ultimately contributed to mining and grade control problems underground as stopes remained open and active long after their designed lifetime. Hangingwall sloughage resulted in unexpected dilution.

Geological work during routine mining and preparation for northward exploration has demonstrated a regular, but somewhat complex stratigraphy which appears to control the location of orebodies within the hinge area of major fold structures. This recognized stratigraphy has not been satisfactorily documented by relogging in detail through the close-spaced drill cross-sections in the mine.

The exploration potential of the property which formed one of the attractive facets of the operation when the production decision was announced has not been diminished by the passage of time simply because it has not been adequately tested and this potential was addressed by an aggressive exploration program by Athabaska Gold Resources Ltd. between September 1995 and February 1996.

Based on the comprehensive database that has been assembled in the past on the Idaho orebodies, a program of drifting and diamond drilling was completed in October 1995 to February 1996.

Drifting on 875 level to give access to the area north of 11,000 and diamond drilling to test the continuity of mineralization north of the old workings. The 1995-February 1996 was successful in demonstrating that mineralization in Greywacke and siltstones does continue north to the 11,100N cross section but also that a new style of higher grade mineralization exists west of the old workings toward the Hosameen Fault hosted by altered volcanics of the Spider Peak formation.

Future exploration should concentrate on defining mineable blocks of this newly discovered volcanic hosted mineralization.

Respectfully submitted,



J. T. Shearer, M.Sc., P. Geo

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***APPENDIX I***

***STATEMENT OF QUALIFICATIONS***

## STATEMENT OF QUALIFICATIONS

I, Johan T. Shearer of 1817 Greenmount Avenue, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

- 1) I graduated in Honours Geology (B.Sc., 1973) from the University of British Columbia and the University of London, Imperial College, (M.Sc. 1977).
- 2) I have practiced my profession as an Exploration Geologist continuously since graduation and have been employed by such mining companies as McIntyre Mines Ltd., J.C. Stephen Explorations Ltd., Carolin Mines Ltd. And TRM Engineering Ltd. I am presently employed by Homegold Resources Ltd.
- 3) I am a fellow of the Geological Association of Canada (Fellow No. F439). I am also a member of the Canadian Institute of Mining and Metallurgy, the Geological Society of London and the Mineralogical Association of Canada. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (P.Geo, member no. 19,279).
- 4) I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. at Unit #5-2330 Tyner Street, Port Coquitlam, British Columbia.
- 5) I am the author of the report entitled "Geological Report for B.C. Explore Program on the Idaho Deposition-Ladner Creek Area", dated February 27, 1996.
- 6) I have visited the property numerous times since 1981 and carried out geological mapping, drill core logging and sample collection. I am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Ladner Creek Mine by examining in detail the available reports, plans and sections, logging core and have discussed previous work with persons knowledgeable of the area. I have worked along the entire Coquihalla Gold Belt as an employee of Carolin Mines Ltd. From February 1981 to March 1984 and supervised exploration programs in 1987, 1989 and 1990, as well as mapping and prospecting in October 1994 and June 1995. I personally supervised, mapped and logged core for the program conducted by Athabaska Gold from September 1995 to February 1996.
- 7) I own or expect to receive an interest (direct, indirect or contingent) of approximately 13% in the property described herein or in equivalent securities of Athabaska Gold Resources Ltd, but not in respect to services rendered in preparation of this report.

Dated at Port Coquitlam, British Columbia, this 27th day of February.



J.T. Shearer, M.Sc., P.Geo.

***APPENDICES II, III, IV AND V  
FOLLOW THIS REPORT  
IN POCKETS***