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GEOCHEMICAL (ROCK), PROSPECTING AND
PHYSICAL REPORT
ON THE BLUNT MOUNTAIN MINERAL PROPERTY

OMINECA MINING DIVISION

NTS 93 M/03,06

FOR

ATNA RESOURCES LTD. GEOLOGICAL BRANCH
ASSESSMENT REPORT

BY

21,748

PETER R. DELANCEY, P. ENG.

OCTOBER, 1991

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1.0 SUMMARY

Exploration during 1985-1987 led to the discovery of a precious metal quartz-sulphide vein system in the Blunt Mountain area near New Hazelton, B.C. A limited rock sampling program and evaluation was carried out in Sept. 1990 to better appraise the nature of the mineralized showings and make recommendations for future work. Limited follow-up sampling and prospecting, together with trail construction and marking, were carried out from July 19 to 21, 1991.

The structurally controlled mineralization can be traced over 2.6 km. Host rocks include an intrusive complex which cuts hornfels clastic rocks of the Bowser Group. The six main showings are characterized by concentrations of galena, sphalerite, arsenopyrite, pyrite, stibnite and possibly tetrahedrite with quartz, quartz breccias and associated silicification. Hand-trenching and chip sampling of the showings gives values in the order of 300 gmt silver and 1 gmt gold over half a meter.

Prospecting, soil sampling and hand trenching have been useful in exploring the exposed mineralization and indicating the potential extent of the mineralization. Large strike lengths of the vein system remain untested. Because of core recovery problems encountered while attempting to drill the showings, they have yet to be tested at depth. Recommendations of future work include the construction of a 2 km cat road from a logging area in Suskwa valley to the claims and back-hoe trenching and sampling of vein extensions, projections and soil anomalies.

2.0 INTRODUCTION

Limited rock sampling, prospecting and trail construction on the Blunt Mountain property was carried out by Peter DeLancey and assistant from July 19-21, 1991. The purpose of the work was to evaluate showings and areas not examined the previous year and to determine and mark a route to the showing areas, from near-by logging roads.

3.0 LOCATION, ACCESS AND TOPOGRAPHY

The Blunt Mountain property is located 25 km east of New Hazelton, B.C. and 49 km north of Smithers, B.C. (Fig.1). The property is centered on the northwestern slopes of Blunt Mountain (2301 m), 10 km east of the confluence of the Suskwa and Bulkley Rivers. The claims are situated along a southwesterly draining tributary of Skilokis Creek and the headwaters of the next creek to the east, called Ferri Creek. Both these creeks drain northerly into the Suskwa River (Fig.2). Much of the property is above tree-line.

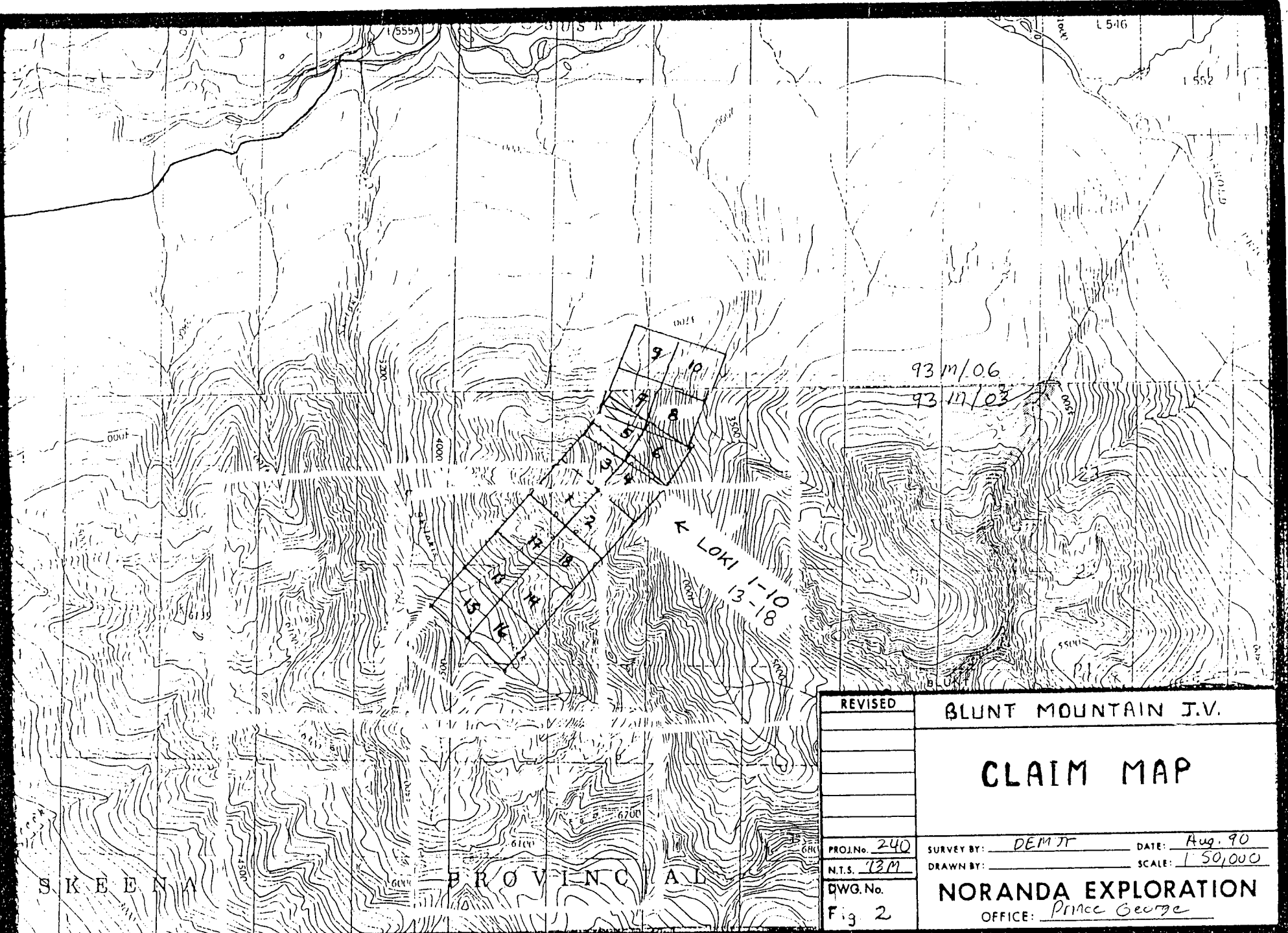
Vehicle access is by logging road leading from the Highway to logging clear-cuts in Suskwa valley, immediately north of the property. Good staging areas are present on the clear-cuts, to ferry equipment and personnel by helicopter to sites on the property. A road route to the northeastern portion of the claims would be approximately 2 km. Access to the northeastern portion of the claims is readily accomplished on foot from the logging roads. Because of the steepness and distances between the showings access to all portions of the property is best accomplished by chartered helicopter from Smithers.

4.0 CLAIM STATUS

The claim area has been reduced from 160 units to 16 "2-post" claims centered along the mineralized structure (Fig.3). The claims were previously held by Noranda for the 50/50 Joint Venture between Atna and Noranda. Noranda has transferred its interest in the claims, through a Bill of Sale to P. DeLancey, who holds the 100% interest "in trust" for Atna. The claim status is as follows:

<u>CLAIM NAME</u>	<u>UNITS</u>	<u>RECORD #</u>	<u>RECORD DATE</u>	<u>* EXPIRY DATE</u>
Loki 1 - 8	8	010740-47	Oct.16,1989	Oct.16,1994
Loki 9	1	010748	" "	Oct.16,1993
Loki 10	1	010749	" "	Oct.16,1994
Loki 13-16	4	012277-80	Jul.21,1990	Jul.21,1992
Loki 17-18	2	012281-82	Jul.23,1990	Jul.22,1992

* pending acceptance of assessment report



REVISED	BLUNT MOUNTAIN J.V.	
	CLAIM MAP	
PROJ. No. <u>240</u>	SURVEY BY: <u>DEM JT</u>	DATE: <u>Aug. 90</u>
N.T.S. <u>13M</u>	DRAWN BY:	SCALE: <u>1" = 50,000'</u>
DWG. No.	NORANDA EXPLORATION	
Fig. 2	OFFICE: <u>Prince George</u>	

5.0 HISTORY

The release of a government geochemical survey in June 1984 indicated a stream sediment sample from Skilokis Creek had anomalous silver, lead, arsenic, antimony values. The general source area was staked by Atna and Noranda.

Subsequent work in 1985 by both companies located mineralization in a tributary (Clay Creek) of Skilokis Creek and a cirque to the northwest (North Cirque) which is at the headwaters of Ferri Creek.

A 50-50 Joint Venture Agreement between Atna and Noranda was signed in late 1985 and limited exploration carried out.

In 1986 a large program including prospecting, soil, silt and rock geochemistry, geological mapping, magnetic and VLF-EM surveys, hand trenching and diamond drilling (3 holes totalling 192 m) was completed.

In 1987 work included grid extensions and additional geochemical sampling, 31 hand-dug trenches and 3 drill holes totalling 186 m.

The exploration programs were successful in discovering six significant showings along a 3 km structural trend. Because of core recovery problems, results from drilling were largely inconclusive.

6.0 GEOLOGY

The property lies within the Intermontaine Belt of British Columbia. The Skeena Arch, a broad structural high trending northeasterly, underlies the area.

Sedimentary rocks of the Bowser Lake Group of Jurassic age underlie the property. These rocks have been intruded by a small, late Cretaceous pluton of quartz monzonite to granodiorite composition. The intrusive is one of several Cretaceous intrusives in the area, referred to as the Bulkley intrusives.

Mineralization in the region is most commonly copper-molybdenum porphyries or silver-gold-lead-zinc veins related to the Bulkley intrusives or Tertiary Babine intrusives.

7.0 ECONOMIC GEOLOGY

The six showings form a linear trend some 3 km long extending northeasterly from Clay Creek to Ferri Creek. The steeply dipping structural zone which hosts the mineralized vein system is at Az 039. It appears that several of the showings are along a continuous vein while others form parallel or en echelon veins. The precious metal mineralization is associated with concentrations of galena, sphalerite, pyrite, arsenopyrite and stibnite in quartz veins/breccias and associated silicification. The adjacent rocks are altered intrusive or hornfels.

Starting at the southwest end of the vein system are the Clay Creek showings. This is a broad area of intense clay alteration. Most of the exploration has been concentrated in an area where in 1985 a sample taken over 30 cm ran 1.3 ppm Au and 1400 ppm Ag.

The Old Post and PS Veins are situated on the steep western slope of North Cirque. These veins, located 150 m west of the main vein system, were examined and sampled in 1991. Previous chip sampling from trenches across the PS Vein gave values up to 9.05 ppm Au and 651 ppm Ag over 30 cm. The Old Post Vein is 1 to 2 metres wide and appears continuous for 80 metres. Previous chip sampling gave values up to 4.66 ppm Au and 1260 ppm Ag over 40 cm. A Pb-Ag-Zn soil anomaly, probably reflecting the vein, is 400 m long.

The New Mound and Mound Veins are located just north of a small pond in North Cirque. Sampling of the vein gave 3.33 ppm Au and 268 ppm Ag over 1.2 m. Results of 2 holes drilled in 1987 were inconclusive because of technical drilling problems. The precious metal mineralization is associated with massive galena and concentrations of pyrite, sphalerite and arsenopyrite in quartz veins and associated silicification.

The Ferri Creek showing is located along the banks of the creek near tree-line. The vein is exposed in two locations separated by approximately 50 m. Sampling gave results of 0.79 ppm Au and 342 ppm Ag over 70 cm. Variable concentrations of galena, sphalerite, arsenopyrite and stibnite are associated with the precious metal mineralization. The vein was tested by drill hole 87-3. Although the vein was intersected, recovery was only 2%; a sample of the ground core graded 0.20 ppm Au and 111 ppm Ag.

The Ridge Vein, located 350 m NE on a wooded ridge (Lokis Ridge) leading down to the Suskwa valley, was examined and sampled during the 1991 program. Previous sampling gave an average grade of 1.44 ppm Au and 558 ppm Ag over a 78 cm width. The vein has been trenched over a length of 87 m. The host rocks are hornfels. Variable amounts of galena, sphalerite and arsenopyrite occur with the quartz vein.

The Lost Vein lies 260 m further NE, part way down the steep, east side of Lokis Ridge. An old 12 m long adit indicates previous interest in this area. The vein is exposed over 25 m and bifurcates at the NE end. A chip sample across the vein ran 0.2 ppm Au and 574 ppm Ag over 40 cm. Sulphides include arsenopyrite, sphalerite, pyrite and possibly tetrahedrite. The Lost Vein area was investigated during the 1991 program.

8.0 ROCK GEOCHEMISTRY

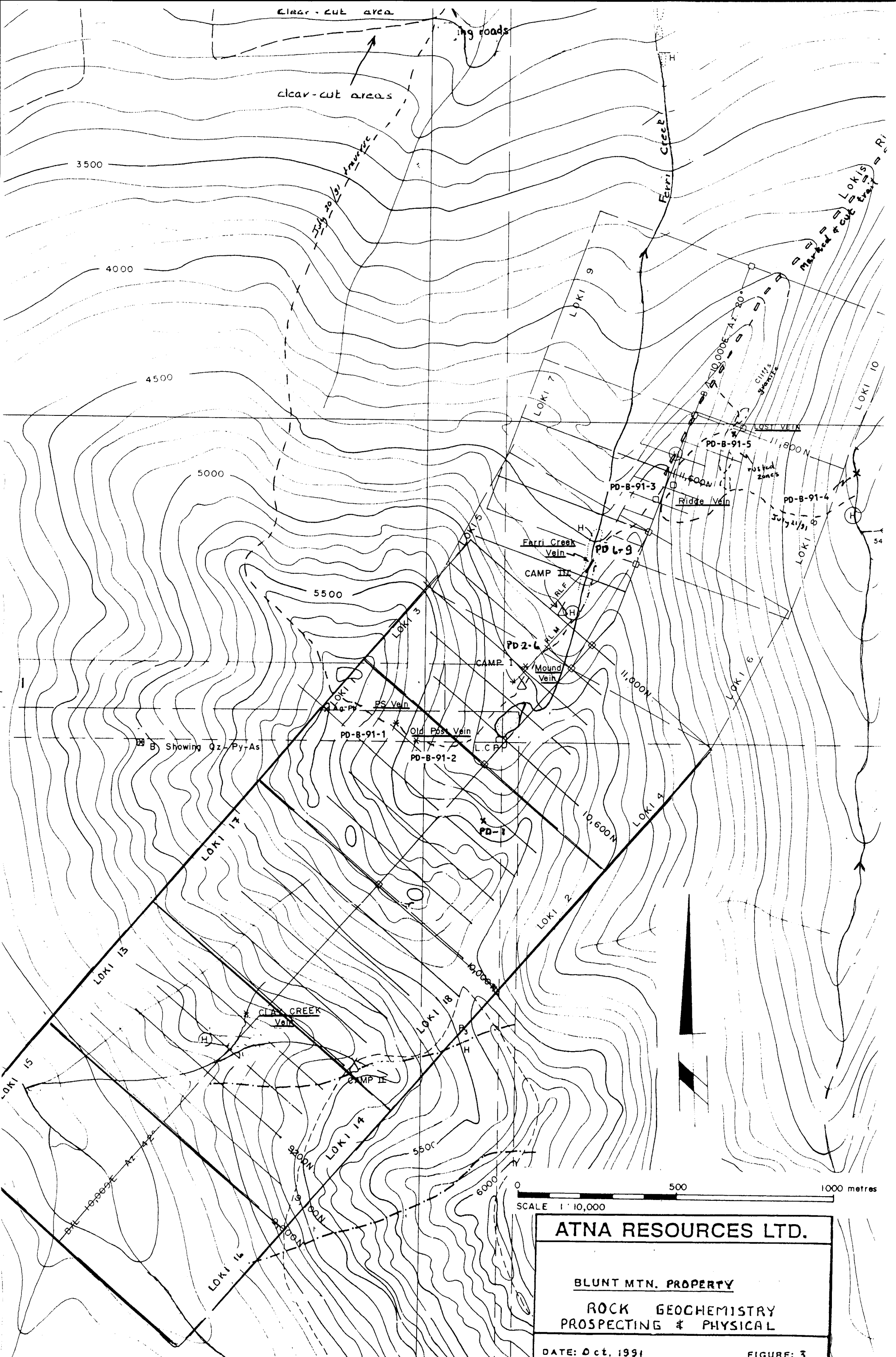
Nine rock samples were collected from mineralized showings or gossanous rock on the property. The samples were analyzed for 30 element ICP and gold by AA at Acme Laboratories in Vancouver, B.C. Location of samples is shown on Figure 3. Sample descriptions and analytical results are presented in Appendix 1 and Appendix 2 respectively.

9.0 PROSPECTING

One day was spent prospecting and exploring in the area of the Lost Vein. This showing, located on the steep northeast slope of Lokis Ridge and 260 m northeast from the Ridge Vein, was re-discovered in 1987. Little exploration has been carried out in the area. Much of the rock exposed on cliff faces in the area is gossanous. Access to this area in 1991 was by foot from a logging road to the northeast. The vein itself was not located, however much of the gossanous rock in the general area was explored and a few samples taken. Most of the gossanous rock is pyritic, iron-carbonate altered hornfels; granitic rocks of the Blunt Mountain Intrusive occur nearby.

10.0 PHYSICAL

Part of the 1991 program was to determine a route, accessible by foot, from logging roads on the south side of Suskwa valley; to appraise this route as a possible cat route to the showings and to mark the trail for future usage. Three routes to the property were explored (see Fig. 3). The best route is up Lokis Ridge from the nearest logging clearing. The trail is marked.



ATNA RESOURCES LTD.	
<u>BLUNT MTN. PROPERTY</u>	
ROCK GEOCHEMISTRY PROSPECTING & PHYSICAL	
DATE: Oct. 1991	FIGURE: 3

11.0 CONCLUSIONS

Quartz/sulphide vein showings with significant precious and base metal values have been discovered or re-discovered in the Blunt Mountain area. The sulphides are chiefly galena, sphalerite, arsenopyrite, pyrite, stibnite and possibly tetrahedrite.

The showings occur over a 3 km long, northeasterly linear trend. The mineralizing control appears to be a steeply dipping structural zone which transects the intrusive complex and adjacent hornfelsed sedimentary rocks. While some of the showings appear to be along the same structure, other showings are along parallel structures.

Hand trenching has been useful in evaluating the exposed mineralization, but is of limited use in exploring extensions covered by overburden or exploring for the source of soil anomalies. Because of recovery problems, drilling has failed to test the showings at depth. Exploration of these extensive, structurally controlled Au-Ag-Pb-Zn showings is at an early stage.

12.0 RECOMMENDATIONS

- 1) Construction of a +/- 2 km cat-road from the clear-cut area immediately north of the claims, up Ferri Creek to the lower camp.
- 2) Using a track-mounted back-hoe, dig trenches across extensions to the showings and across soil anomalies in accessible areas.
- 3) Additional hand-trenching in the steeper areas such as Lost and Old Post veins.
- 4) Further prospecting and sampling northeast from the Lost Vein and southwest from the Clay Creek area.


Peter R. DeLancey P.Eng

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APPENDIX 1

ROCK SAMPLE DESCRIPTIONS

- PD-B-91-1 PS Vein - relatively inconspicuous; mostly covered by talus. Appears to be relatively narrow +/- 30cm. Sample is of partially oxidized sulphides (20%), quartz and adjacent hornfels. Galena and arsenopyrite are disseminated throughout.
- PD-B-91-2 Old Post Vein - is located about 50 m immediately below the PS Vein and appears to be wider and more continuous. The vein is very gossanous. It is 1-2 m wide and dips shallowly into the hill. Sample is of partially oxidized sulphides and quartz.
- PD-B-91-3 Ridge Vein - Yellowish to rusty weathered quartz/sulphide rock. Disseminated to locally massive galena, arsenopyrite and stibnite are visible.
- PD-B-91-4 Gossanous float, previously sampled (18495). siliceous and baked shale (hornfels) with disseminated to local concentrations of pyrite and arsenopyrite associated with quartz veining.
- Pd-B-91-5 Rusted hornfels in area of Lost Vein; Around 3% disseminated pyrite/galena/arsenopyrite

APPENDIX 2 ROCK GEOCHEMICAL RESULTS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1716



GEOCHEMICAL ANALYSIS CERTIFICATE



Atna Resources Ltd. File # 91-3066 Page 1
 10th Floor - 900 W. Hastings, Vancouver BC V6C 1E5 Submitted by: PETER DeLANCEY

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
PD-B-91-1	99	1178	25287	172	548.4	8	93	116	9.79	51105	155	3	1	19	43.8	10350	30	26	.25	.033	30	16	.24	19	.01	6	.96	.06	.11	27	1590
PD-B-91-2	1	4476	36785	1652	467.7	10	1	27	7.65	16202	5	2	1	109	924.4	25070	28	1	.01	.004	2	21	.01	4	.01	2	.06	.01	.01	1	530
PD-B-91-3	3	567	43133	509	574.7	12	1	79	12.17	52224	5	ND	1	9	49.1	38571	2	1	.02	.004	2	19	.01	13	.01	5	.03	.01	.02	39	1370
PD-B-91-4	2	179	3551	49	37.2	23	78	1160	7.96	47808	5	ND	1	38	4.2	1388	6	22	1.83	.039	3	11	.25	24	.01	9	.86	.02	.35	5	310
PD-B-91-5	1	1380	34519	523	411.9	28	23	553	7.80	7364	5	ND	1	107	243.5	13337	5	135	.57	.059	2	50	1.29	69	.08	2	3.08	.18	.70	1	171

APPENDIX 3

COST STATEMENT

ROCK GEOCHEMISTRY, PROSPECTING and PHYSICAL

BLUNT MOUNTAIN PROPERTY

DATES OF WORK - JULY 19-21, 1991

WAGES	- P.DELANCEY	3days@400/day	\$1200	
	- J.RICHMOND	3days@200/day	600	
				\$1800
AIRFARE				500
BOARD & ROOM				500
EQUIPMENT				100
GEOCHEMISTRY	5 ROCK SAMPLES			100
REPORT, DRAFTING & COMPUTER				<u>1000</u>
<u>TOTAL EXPENDITURES</u>				<u>\$4000</u>


Peter R. DeLancey P. Eng.