

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 92.09.06

ASSESSMENT REPORT 21878

MINING DIVISION: Liard

PROPERTY: Hoodoo
LOCATION: LAT 56 48 00 LONG 131 18 00
UTM 09 6297269 359541
NTS 104B14W
CLAIM(S): Hoodoo 1-5
OPERATOR(S): Minnova
AUTHOR(S): Wells, G.S.
REPORT YEAR: 1991, 19 Pages
COMMODITIES
SEARCHED FOR: Copper, Zinc, Silver, Gold
KEYWORDS: Triassic, Stuhini Group, Andesites, Gossans, Argillites, Shear zones
WORK
DONE: Geochemical, Geological
GEOL 1500.0 ha
Map(s) - 1; Scale(s) - 1:5000
ROCK 62 sample(s) ;ME
RELATED
REPORTS: 11331, 12614, 20441
MINFILE: 104B 127, 104B 283, 104B 284

LOG NO: DEC 04 1991	RD.
ACTION:	
FILE NO:	

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NOV 28 1991
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VANCOUVER, B.C.

Report on
Lithogeochemical Sampling
Hoodoo Property

Liard Mining Division
NTS 104B/14W

Latitude 56° 48' N
Longitude 131° 18' W

Owner: Kerr Addison Mines Ltd.
Operator: Minnova Inc.

Claims

Hoodoo 1-5 incl.

Minnova Inc.
Vancouver, B.C.

GEOLOGICAL BRANCH Wells
ASSESSMENT REPORT November, 1991

21.878

Table of Contents

	<u>Page</u>
1. Introduction	1
a. Location and Access	1
b. Mineral Rights	3
c. History	3
2. Work Done	3
3. Geology	5
4. Results of Lithogeochemical Sampling Program	6
5. Conclusions	8
6. Itemized Cost Statement	9
7. References	10
8. Author's Qualifications	11

List of Appendices

Appendix I	Analytical Procedures
Appendix II	Analytical Certificates

List of Figures

Figure 1:	Location Map	2
Figure 2:	Claim Map	4
Figure 3:	Geology, Lithogeochemical Sample Locations and Results (1:5000)	in pocket

List of Tables

Table 1:	Lithogeochemical Sampling - Hoodoo Claims	7
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Report on Lithogeochemical Sampling
Hoodoo Property

1. Introduction

Kerr Addison acquired the Hoodoo claims in August 1982 and Minnova inherited the claims when the two companies amalgamated their exploration divisions in 1989. Since 1982, there has been an extensive amount of exploration activity in the Iskut River area which has resulted in a number of new discoveries. In 1990, Prime Resources discovered the Rock and Roll massive sulphide zone which is hosted in argillites and mafic volcanics of the Triassic-aged Stuhini Group. These units are also exposed on the Hoodoo claims and the present lithogeochemical sampling program was undertaken to assess the massive sulphide potential of the property. This report describes the results of this work.

a. Location, Access and Physiography

The Hoodoo claims are located 20 km northwest of the Bronson Creek airstrip and are readily accessible by helicopter (Figure 1). The property covers a north-south trending strip of land which is bounded to the east by the Twin glacier and to the west by the Hoodoo glacier. Topographic relief is moderate with elevations ranging between 600 and 1350 meters above sea level. All parts of the property are accessible by foot. Most of the claims are above treeline but some stands of stunted spruce occur at the lower elevations.

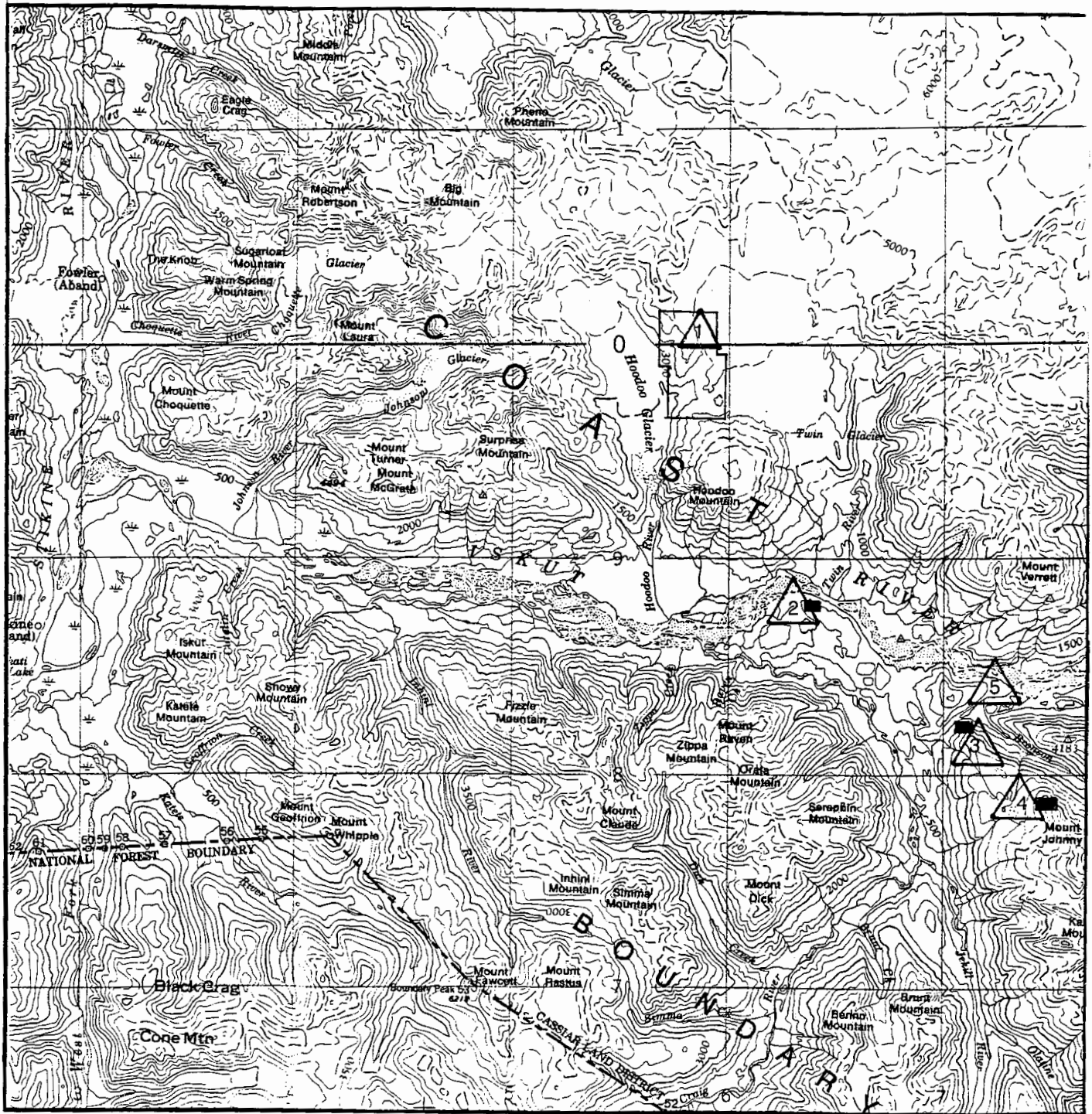
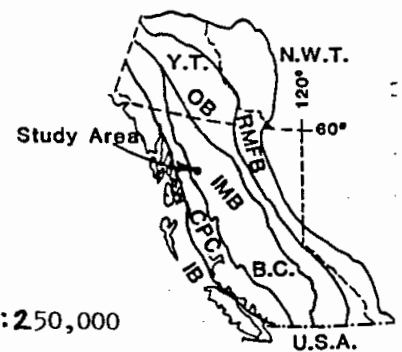


FIGURE 1 LOCATION MAP

- 1 Hoodoo 1-5 Claims, Kerr Addison
- 2 Rock & Roll Property, Eurus/Thios, Black Dog Zone
- 3 Snip, Cominco/Prime
- 4 Johnny Mountain, Skyline
- 5 BRONSON AIR STRIP



b. Mineral Rights

The sampling program was carried out on the Hoodoo 1, 3 and 4 claims which are included in the Hoodoo group (Figure 2). The claim status is as follows:

Hoodoo Group

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Month of Record</u>
Hoodoo 1	10	22189	September
Hoodoo 2	6	22190	September
Hoodoo 3	6	22191	September
Hoodoo 4	20	22192	September
Hoodoo 5	1	22193	September
Total	<u>43</u> units		

c. History

After staking the claims in 1982, Kerr Addison conducted a number of surface surveys which included geology, trenching, rock and soil sampling and geophysics (DEEPEM, IP, Mag). This work was directed at evaluating the precious metal content of several gossanous zones exposed on the property. This work is documented in assessment reports prepared by Holbek (1982, 1983) and Fraser (1984).

2. Work Done

Argillite units exposed on the Hoodoo claims were systematically panel and chip sampled to assess their potential for hosting a volcanogenic massive sulphide zone. The field work was carried out by Pamicon Development personnel under the

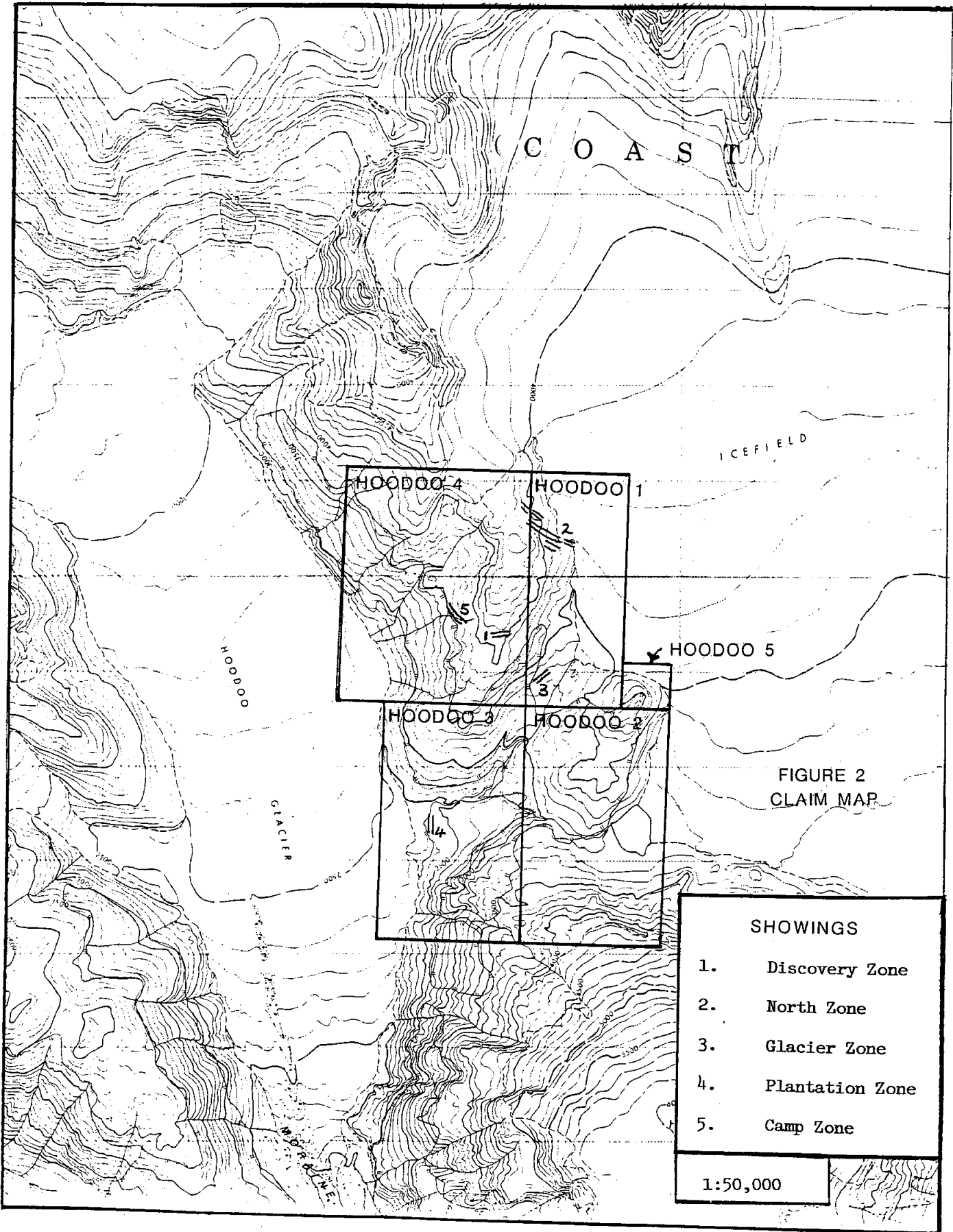


FIGURE 2
CLAIM MAP

SHOWINGS	
1.	Discovery Zone
2.	North Zone
3.	Glacier Zone
4.	Plantation Zone
5.	Camp Zone
1:50,000	

direction of a Minnova geologist during the period August 20th to 26th, 1991. Fifty-seven samples of argillite and five other mineralized samples were collected. These samples were shipped to Min-En Laboratories in Smithers and North Vancouver and analyzed for Ag, As, Ba, Cu, Pb, Sb and Zn using standard ICP techniques. Gold was analyzed using an atomic absorption finish on a fire assay bead. Details of the analytical procedures are give in Appendix I.

3. Geology

The Hoodoo claims are underlain by Upper Triassic volcanics and sediments of the Stuhini Group (Figure 3). The volcanic rocks are comprised primarily of unaltered, dark green mafic tuffs, lapilli-tuffs and block breccias. Felsic volcanics are exposed in the central and northern parts of the claim group. They are pyroclastic in character and consist of cherty tuffs, lapilli and block breccias. Several argillite horizons are interlayered with the volcanic stratigraphy. These units appear to have a limited strike extent which can be attributed to poor exposure, faulting (Figure 3) or rugged paleotopography.

Five gossanous areas have been identified on the Hoodoo claims and most of the previous work has focused on evaluating their precious metal content (Figure 3). The best silver grades have been obtained from the Discovery Zone (43.2 g/T Ag over 7.4 m) and the North Zone (164 g/T Ag - grab). The high Ag values appear to associated with a fine grained sooty pyrite that occurs in fractures and as disseminations.

There is extensive faulting on the Hoodoo claims which is evident from air photo lineaments and the truncation of many of the argillite horizons (Figure 3). Holbek (1982) attributed this brittle deformation to the collapse of the magma chamber which fed the recent Hoodoo volcanics exposed in the southern part of the claims.

4. Results of the Lithogeochemical Sampling Program

Sample descriptions and results are included in Table 1 and sample locations and results are plotted in Figure 3. Although the database is too small to be properly evaluated on a statistical basis, means, ranges and standard deviations for each element have been calculated and are presented below:

<u>Element</u>	<u>Range</u>	<u>Mean</u>	<u>Standard Deviation</u>
Cu	11-313 ppm	51.6 ppm	14.2 ppm
Pb	13-39 ppm	24.0 ppm	6.1 ppm
Zn	43-142 ppm	85.7 ppm	21.5 ppm
Ag	0.1-2.4 ppm	0.75 ppm	0.6 ppm
Au	1-31 ppb	2.6 ppb	1.6 ppb
Ba	30-1212 ppm	127.2 ppm	50.8 ppm
As	1-39 ppm	18.4 ppm	8.7 ppm
Sb	1-8 ppm	1.4 ppm	1.2 ppm

In general, the argillites have low metal values. Only 3 or 4 samples have anomalous Ba, Cu, Zn or Au values and there is no correlation between anomalous samples. The high copper samples are located in the northeastern part of the claim group and the high zinc samples are located in the vicinity of the North showing.

During the sampling of the argillites, five rusty or mineralized outcrops were also sampled (Table 1). No significant mineralization was discovered although one sample has high copper (47591 ppm).

TABLE 1 : Lithochemical Sampling - HOODOO Claims

SAMPLE	ROCK TYPE	WIDTH / AREA	MINERALIZATION	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm	Ba ppm	Sb ppm
461651	Argillite	20 sq. m	tr py	57	28	83	0.5	2	18	136	1
461652	Argillite	10 sq. m	tr py	26	22	43	1.0	4	16	107	1
461653	Argillite	10 sq. m	tr py	40	27	76	1.3	2	26	115	1
461654	Argillite	10 sq. m	tr py	35	23	66	1.2	1	21	133	1
461655	Argillite	2 sq. m	tr py	65	28	93	0.3	3	19	1212	1
461656	Argillite	20 sq. m	tr py	11	23	140	2.2	2	33	56	4
461657	Argillite	10 sq. m		196	35	67	2.4	2	31	114	5
461658	Argillite	15 m		142	25	83	0.8	1	12	118	1
461659	Argillite	5 sq. m	tr py	136	16	57	1.4	2	24	64	2
461660	Argillite	2 m		313	26	78	1.5	6	25	133	2
461661	Argillite	15 m		91	26	80	1.2	3	17	71	1
461662	Argillite	5 m		77	28	108	0.2	4	20	141	1
461663	Argillite	10 m		89	28	133	0.1	1	16	206	1
461664	Argillite	15 m		40	24	71	0.8	2	24	149	1
461665	Argillite	10 m		59	30	117	0.1	2	21	197	1
461666	Argillite	10 m		61	26	87	0.2	3	19	155	1
461667	Argillite	10 m		56	27	128	0.5	2	16	143	1
461668	Argillite	10 m		50	36	124	0.8	1	23	409	1
461669	Argillite	10 m		58	37	110	0.1	1	20	139	1
461670	Argillite	5 m		62	36	119	0.2	2	27	193	1
461671	Argillite	5 m		55	20	88	0.3	31	16	205	1
461672	Argillite	2 m		59	23	70	0.3	5	24	288	1
461673	Argillite	3 m		67	30	91	1.0	2	17	153	1
461674	Argillite	3 m		53	19	81	2.4	4	4	82	1
461675	Argillite	2 m		60	28	92	0.3	1	26	157	1
461676	Argillite	5 m		47	23	120	0.1	1	33	132	8
461677	Argillite	5 m x 20 m		64	29	95	0.2	2	26	177	1
461678	Argillite	5 m x 20 m		59	31	79	0.2	2	24	183	1
461679	Argillite	5 m		63	16	91	2.0	1	2	80	1
461702	Argillite	0.7 m	1% py	46	27	142	1.1	3	37	30	3
461703	Argillite	8 sq. m		50	25	78	0.1	7	19	106	1
461704	Argillite	8 sq. m		44	26	82	0.1	4	11	132	1
461705	Argillite	15 sq. m		67	27	95	0.1	12	18	133	1
461706	Argillite	2 sq. m		41	25	71	0.3	2	30	407	1
461707	Argillite	24 sq. m		51	24	86	0.1	1	17	94	1
461708	Argillite	7 sq. m		61	13	84	1.1	4	6	94	1
461709	Argillite	4 sq. m		39	39	50	1.3	9	21	46	1
461710	Argillite	5 sq. m		35	21	73	0.7	2	16	59	1
461711	Argillite	5 sq. m		55	22	91	0.4	2	9	86	1
461712	Argillite	8 m		41	20	77	0.5	6	22	76	1
461713	Argillite	10 m		58	21	69	0.6	3	17	108	1
461714	Argillite	10 m		45	13	71	1.6	2	1	92	1
461715	Argillite	10 m		44	17	74	0.1	2	6	147	1
461716	Argillite	20 m	1% py	48	21	81	0.1	1	15	173	1
461717	Argillite	5 sq. m	1% py	23	25	50	0.7	1	19	209	2
461718	Argillite	3 sq. m		49	18	84	1.2	2	3	167	1
461719	Argillite	2 m x 5 m		45	17	82	1.6	2	10	158	1
461720	Argillite	3 m		45	19	69	1.2	1	8	117	1
461721	Argillite	5 m		40	12	72	1.6	2	5	82	1
461722	Argillite	2 m		53	18	73	1.0	2	12	62	1
461723	Argillite	15 m		52	18	89	0.1	3	23	70	1
461724	Argillite	5 m		33	20	74	0.8	2	9	73	1
461725	Argillite	5 m		45	14	62	1.1	2	8	72	1
461727	Argillite	3 m		56	20	76	0.8	2	15	179	1
461729	Argillite	10 m x 5 m		66	29	85	0.2	19	25	175	3
461730	Argillite	10 m		59	22	97	0.1	5	39	156	3
461731	Argillite	10 m		49	24	79	0.4	3	26	149	1
461701	Py Shear	grab	5% py	39	84	12	10.4	167	392	90	17
461726	rusty mafic	15 m x 5 m	1 - 2% py	22	7	57	1.2	1	1	114	1
461728	rusty shear	grab		60	8	36	2.0	8	31	108	1
461732	qtz-cp vein	grab	15% py-cp	47591	115	89	23.7	158	17	30	38
461733	Discovery	grab	20% py	642	24	46	5.5	2	122	474	12

5. Conclusions

Lithogeochemical sampling of the argillites on the Hoodoo property was done to determine if these horizons are associated with volcanogenic massive sulphide mineralization similar to that exposed at Prime Resources' Rock and Roll prospect located 15 km to the southeast. Metal content of the argillites on the Hoodoo claims is low and Cu, Zn and Ba values are at least an order of magnitude lower than what would be expected in a prospective massive sulphide environment. The few slightly anomalous samples occur in the vicinity of shear related mineralization. In light of this survey, it appears that the potential for discovering a volcanogenic massive sulphide zone on the Hoodoo property is low.

Gary Wells

6. Itemized Cost Statement

filed for \$14,600

Hoodoo Group

-work on Hoodoo 1, 3, 4

-Salaries

G. S. Wells	3 days	@ \$375/day	1,125.00
M. Stammers	5.5 days	@ \$375/day	2,062.50
A. Montgomery	6.5 days	@ \$225/day	1,462.50
J. Anderson	1 day	@ \$225/day	225.00

-Helicopter 4,393.86

-Accommodation/food

14 man days @ \$100/day 1,400.00

-Air fares

(GSW, MS, AM: return Vancouver - Bronson Strip) 1,629.25

-Air freight (samples, equipment) 891.31

-Analyses

62 samples @ \$15.50/sample 961.00

Subtotal \$14,150.42

Pac withdrawal \$449.58

Total \$14,600

7. References

Fraser, R. J. (1984) Report on Geology, Geophysics, Rock Trenching and Sampling, Hoodoo Claim Group.

Holbek, P. (1982): Report on Geology and Geochemistry of the Hoodoo Claim Group.

Holbek, P. (1983): Report on Geology and Geochemistry of the Hoodoo Claim Group.

8. Statement of Qualifications

I, Gary S. Wells, hereby certify that:

1. I hold an Honours Bachelor of Science degree in combined geology and chemistry (1975) from Carleton University, Ottawa, Ontario and a Ph.D degree in geology (1980) from Queen's University, Kingston, Ontario.
2. I am an associate member of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
3. I have practised my profession in exploration continuously since graduation in 1980.



Gary S. Wells

Date: November 21, 1991

Appendix I

Analytical Procedures



**MINERAL
• ENVIRONMENTS
LABORATORIES**

Division of Assayers Corp. Ltd.

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR 31 ELEMENT TRACE ICP

Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu,
Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb,
Sr, Th, Ti, V, Zn, Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer or ring mill pulverizer.

0.5 gram of the sample is digested for 2 hours with an aqua regia mixture.

After cooling samples are diluted to standard volume. The solutions are analysed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers. Reports are formatted and printed using a dot-matrix printer.



**MINERAL
• ENVIRONMENTS
LABORATORIES**

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR FIRE GOLD GEOCHEM:

Geochemical samples for Fire Gold processed by Min-En Laboratories., at 705 West 15th Street, North Vancouver Laboratory employing the following procedures.

After drying the samples at 95^oC soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 15.00 or 30.00 grams are fire assayed preconcentrated.

After pretreatments the samples are digested with aqua regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 1 ppb.

Appendix II

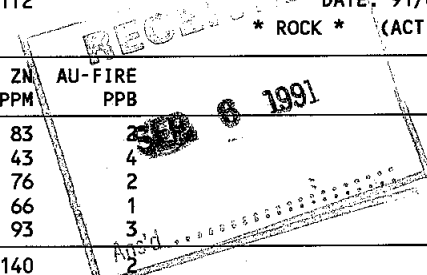
Analytical Certificates

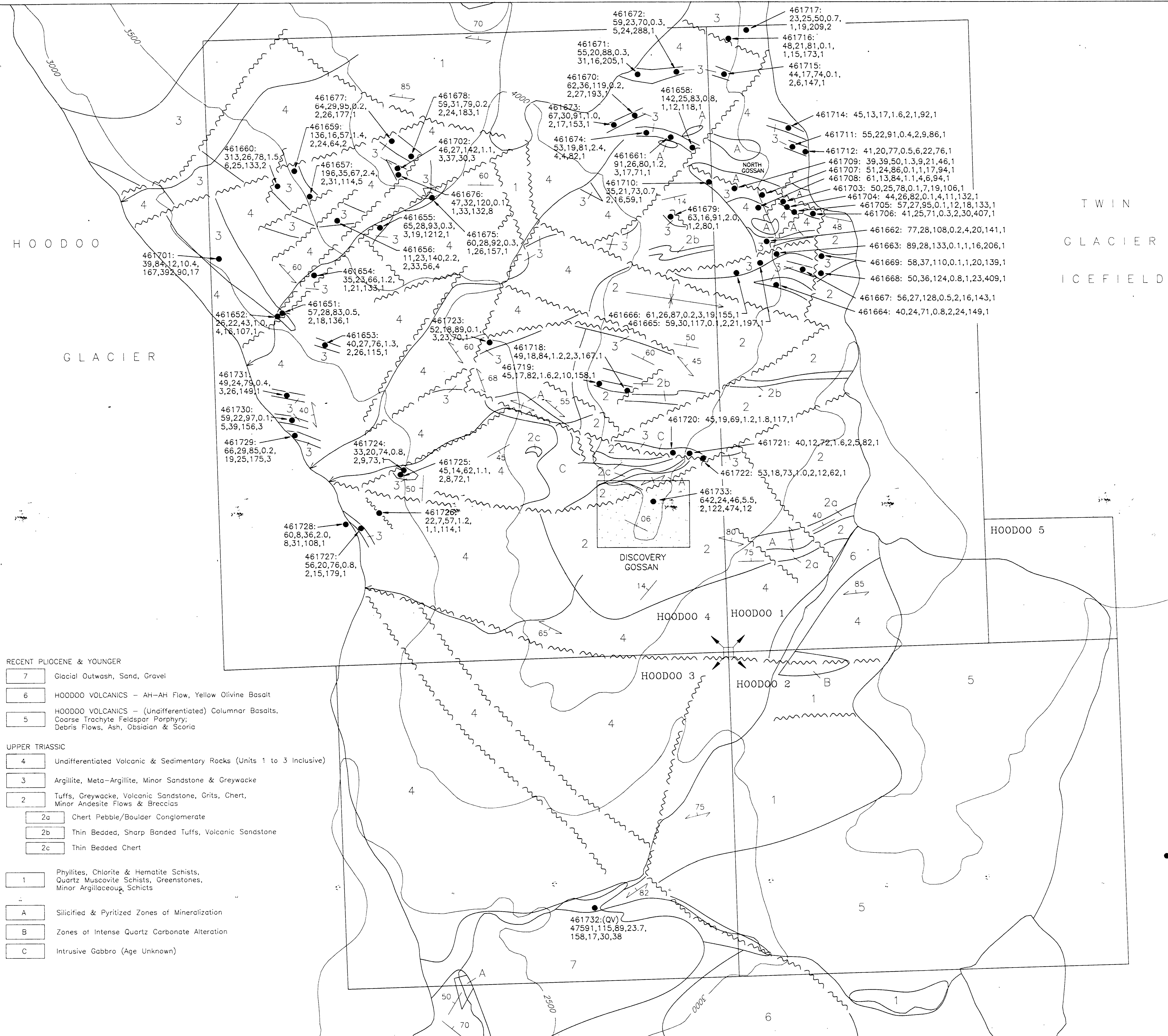
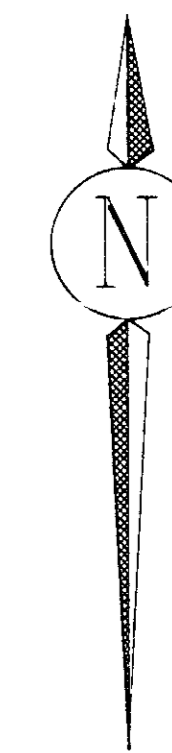
COMP: MINNOVA INC.
 PROJ: HOODOO PN 668
 ATTN: GARY WELLS

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0579-RJ1+2
 DATE: 91/09/02
 * ROCK * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU-FIRE PPB
461651	.5	18	136	57	28	1	83	2
461652	1.0	16	107	26	22	1	43	4
461653	1.3	26	115	40	27	1	76	2
461654	1.2	21	133	35	23	1	66	1
461655	.3	19	1212	65	28	1	93	3
461656	2.2	33	56	11	23	4	140	2
461657	2.4	31	114	196	35	5	67	2
461658	.8	12	118	142	25	1	83	1
461659	1.4	24	64	136	16	2	57	2
461660	1.5	25	133	313	26	2	78	6
461661	1.2	17	71	91	26	1	80	3
461662	.2	20	141	77	28	1	108	4
461663	.1	16	206	89	28	1	133	1
461664	.8	24	149	40	24	1	71	2
461665	.1	21	197	59	30	1	117	2
461666	.2	19	155	61	26	1	87	3
461667	.5	16	143	56	27	1	128	2
461668	.8	23	409	50	36	1	124	1
461669	.1	20	139	58	37	1	110	1
461670	.2	27	193	62	36	1	119	2
461671	.3	16	205	55	20	1	88	31
461672	.3	24	288	59	23	1	70	5
461673	1.0	17	153	67	30	1	91	2
461674	2.4	4	82	53	19	1	81	4
461675	.3	26	157	60	28	1	92	1
461676	.1	33	132	47	23	8	120	1
461677	.2	26	177	64	29	1	95	2
461678	.2	24	183	59	31	1	79	2
461679	2.0	2	80	63	16	1	91	1
461701	10.4	392	90	39	84	17	12	167
461702	1.1	37	30	46	27	3	142	3
461703	.1	19	106	50	25	1	78	7
461704	.1	11	132	44	26	1	82	4
461705	.1	18	133	57	27	1	95	12
461706	.3	30	407	41	25	1	71	2
461707	.1	17	94	51	24	1	86	1
461708	1.1	6	94	61	13	1	84	4
461709	1.3	21	46	39	39	1	50	9
461710	.7	16	59	35	21	1	73	2
461711	.4	9	86	55	22	1	91	2
461712	.5	22	76	41	20	1	77	6
461713	.6	17	108	58	21	1	69	3
461714	1.6	1	92	45	13	1	71	2
461715	.1	6	147	44	17	1	74	2
461716	.1	15	173	48	21	1	81	1
461717	.7	19	209	23	25	2	50	1
461718	1.2	3	167	49	18	1	84	2
461719	1.6	10	158	45	17	1	82	2
461720	1.2	8	117	45	19	1	69	1
461721	1.6	5	82	40	12	1	72	2
461722	1.0	12	62	53	18	1	73	2
461723	.1	23	70	52	18	1	89	3
461724	.8	9	73	33	20	1	74	2
461725	1.1	8	72	45	14	1	62	2
461726	1.2	1	114	22	7	1	57	1
461727	.8	15	179	56	20	1	76	2
461728	2.0	31	108	60	8	1	36	8
461729	.2	25	175	66	29	3	85	19
461730	.1	39	156	59	22	3	97	5
461731	.4	26	149	49	24	1	79	3





RECENT PLIOCENE & YOUNGER

- 7 Glacial Outwash, Sand, Gravel
- 6 HOODOO VOLCANICS - AH-AH Flow, Yellow Olivine Basalt
- 5 HOODOO VOLCANICS - (Undifferentiated) Columnar Basalts, Coarse Trachyte Feldspar Porphyry, Debris Flows, Ash, Obsidian & Scoria

UPPER TRIASSIC

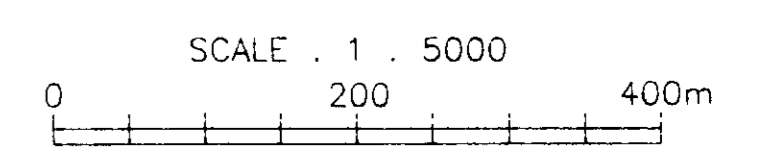
- 4 Undifferentiated Volcanic & Sedimentary Rocks (Units 1 to 3 Inclusive)
- 3 Argillite, Meta-Argillite, Minor Sandstone & Greywacke
- 2 Tuffs, Greywacke, Volcanic Sandstone, Grits, Chert, Minor Andesite Flows & Breccias
 - 2a Chert Pebble/Boulder Conglomerate
 - 2b Thin Bedded, Sharp Banded Tuffs, Volcanic Sandstone
 - 2c Thin Bedded Chert

- 1 Phyllites, Chlorite & Hematite Schists, Quartz Muscovite Schists, Greenstones, Minor Argillaceous Schists
- A Silicified & Pyritized Zones of Mineralization
- B Zones of Intense Quartz Carbonate Alteration
- C Intrusive Gabbro (Age Unknown)

GEOLOGICAL BRANCH ASSESSMENT REPORT

21,878
LEGEND

- 461666: SAMPLE NUMBER: 61,26,87,0.2 Cu ppm,Pb ppm,Zn ppm,Ag ppm, 3,19,155,1 Au ppb,As ppm,Ba ppm,Sb ppm



MINNOVA Inc.		MAP No. 3
HOODOO CLAIM GROUP		
GEOLOGY &		
1991 SAMPLES/LITHOGEOCHEMICAL RESULTS		
DATE	NOVEMBER 1991	FILE HODOOASS.DWG
DRAWN BY	AF/GSW/sg	
REVISED		