

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.12.14

ASSESSMENT REPORT 18421

MINING DIVISION: Atlin

PROPERTY: Shell  
LOCATION: LAT 58 14 00 LONG 131 53 00  
UTM 09 6458101 330703  
NTS 104J04W  
CLAIM(S): Shell 1-4  
OPERATOR(S): Lacana Min.  
AUTHOR(S): Jones, P.W.  
REPORT YEAR: 1989, 21 Pages  
COMMODITIES  
SEARCHED FOR: Copper, Gold  
KEYWORDS: Triassic, Andesite, Basalt, Tuff, Monzonite, Syenite, Chalcopyrite  
WORK  
DONE: Prospecting, Geochemical  
PROS 750.0 ha  
Map(s) - 2; Scale(s) - 1:2500, 1:10 000  
ROCK 47 sample(s) ;ME  
SAMP 49 sample(s) ;ME  
SILT 3 sample(s) ;ME  
MINFILE: 104J 004, 104J 016

LOG NO: 0222	RD.
ACTION:	
FILE NO:	
LOG NO: 0704	RD. 1
ACTION: Date received report back from amendments.	
FILE NO:	

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VANCOUVER, B.C.

SHELL 1 - 4 CLAIM GROUP  
(3101, 3102, 3103, 3104)  
ATLIN MINING DIVISION

PROSPECTING REPORT  
JANUARY 1989

Latitude 58° 14.5'

Longitude 131° 54'

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**18,421**

PAUL W. JONES  
CORONA CORPORATION

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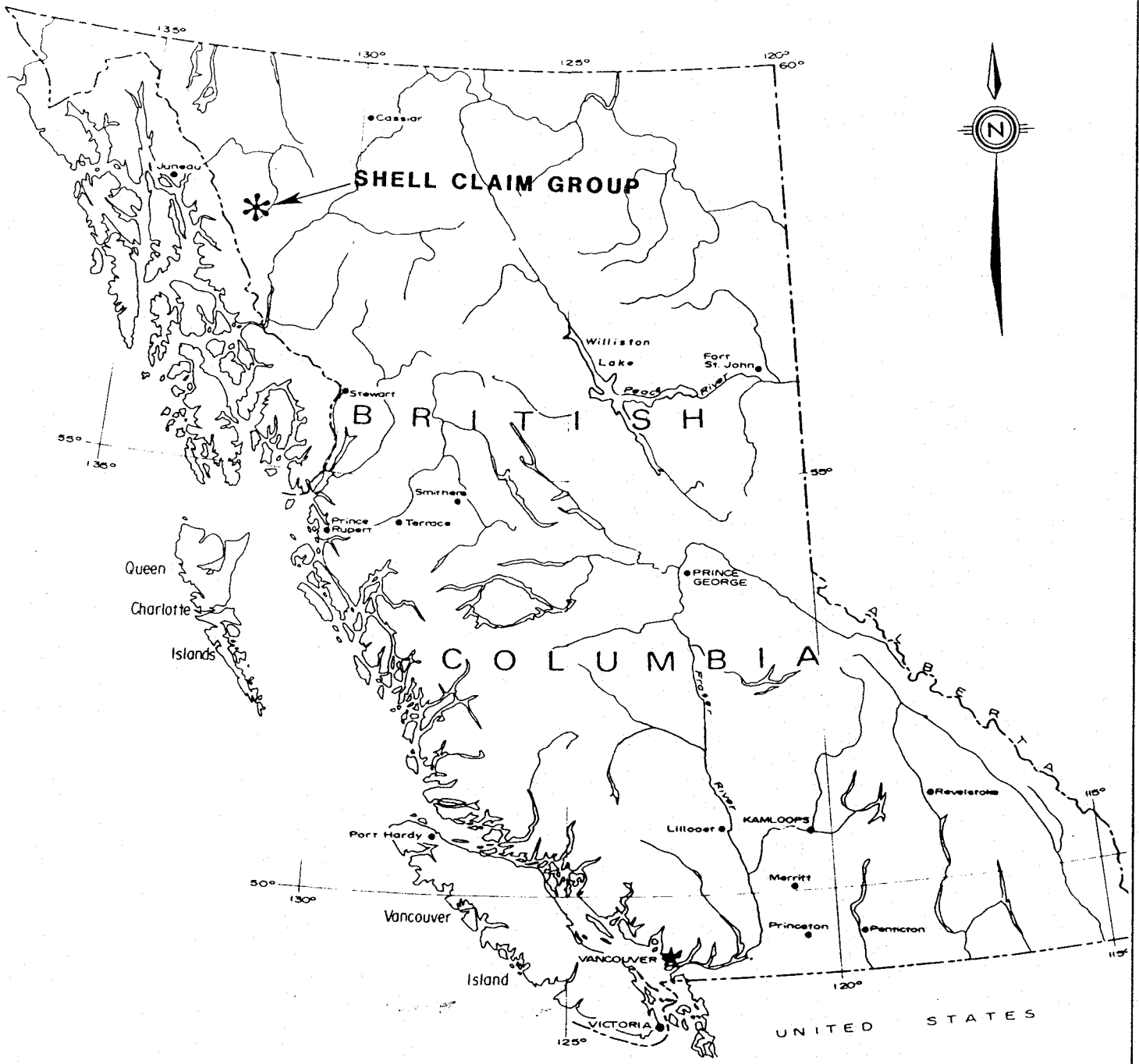
## INTRODUCTION

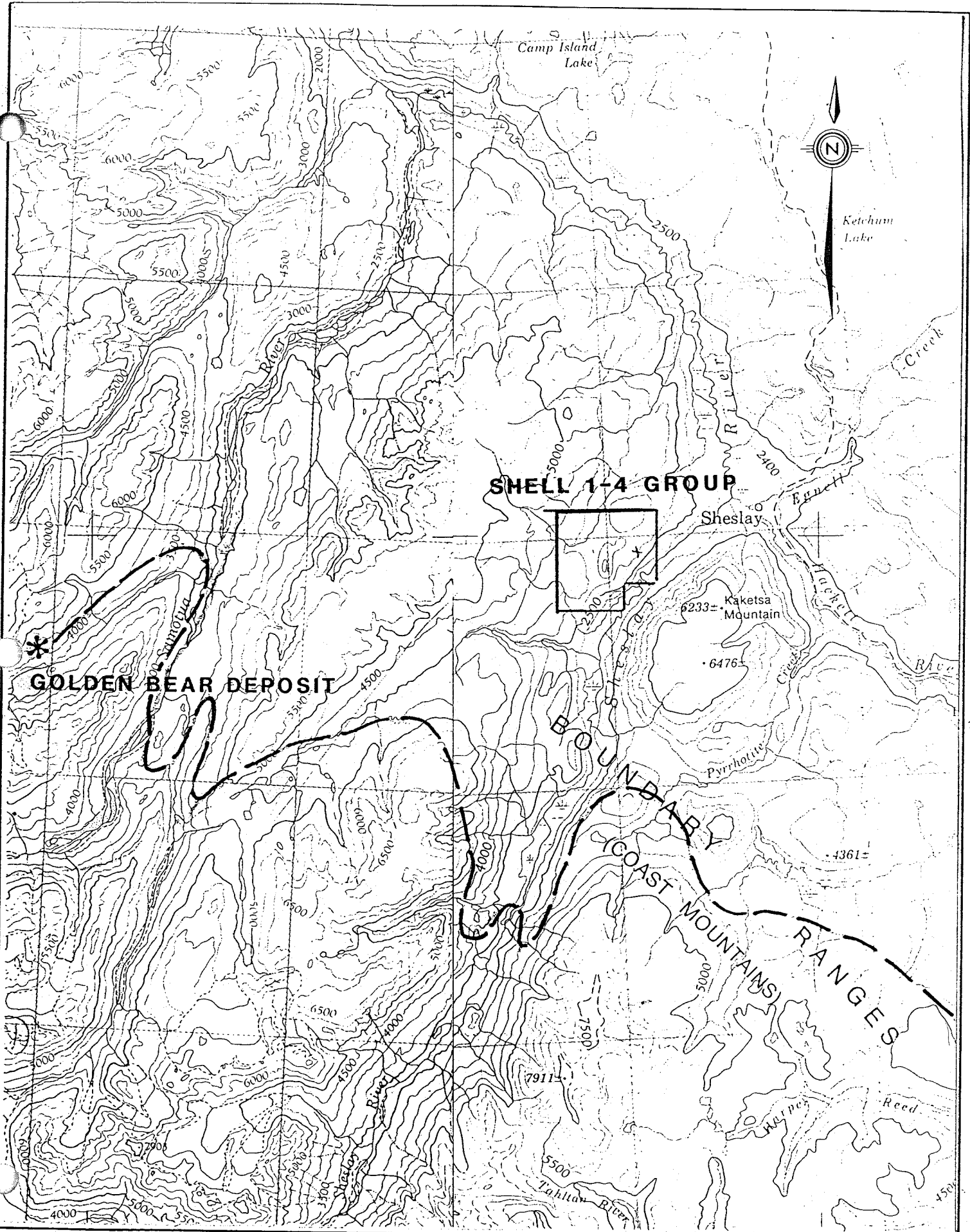
The SHELL 1-4 claim group is located in the Atlin Mining Division 60 km north west of Telegraph Creek on N.T.S. map sheets 104-J/4 and 5 west. Access has been greatly enhanced by the building of a new mining road to within 8 km of the property. Topography for building a spur access road is excellent, no bridging would be involved.

The area is underlain with Upper Triassic andesite, basalt, tuff and breccia with many small stocks, dykes and sills of porphyritic andesite and basalt. This unit is intruded by a large batholith which forms Kaketsa Mountain. Its composition varies from diorite, granodioritic to syenite. Late Tertiary to Pleistocene basalt, olivine basalt flows are also present. The valleys have thick fluvial gravel and sand accumulations. Local mineral occurrences are all of a porphyry nature with Cu as the economic mineral. To the west in an older sediment unit with minor volcanics, structurally hosted precious mineral occurrences are found. Included in this list is North American Metals' Golden Bear Deposit.

This report summarizes the two initial prospecting outings to the SHELL Claim Group. The first trip was undertaken from August 6th to 10th by geologist Ludek Uher and assistant Jonathon Cowan. During these 5 days, (10 mandays) 27 rock and 3 silt samples were collected of which 7 of these rocks were anomalous in precious metals. Prospecting traverses were performed on August 6th, 9th and 10th and surveying and sampling of drill core on the 7th and 8th.

The second expedition was on September 27th, 28th and 29th. The participants in this venture were prospector Paul Jones and geologist Ian Mitchell. This follow-up trip was to acquire more information to enhance the initial prospecting finds before winter conditions ended the field season. This trip produced 22 rock samples of which 11 were anomalous in precious metals. High Cu values were obtained from 18 of these samples, two with values of 1.5% and 1.1% respectively. The sampling was during 2 days (4 mandays) of work, September 28th and 29th.





**SHELL 1-4 GROUP**

**GOLDEN BEAR DEPOSIT**

**BOUNDARY COAST MOUNTAINS RANGES**

**CORONA CORPORATION**

**SHELL GROUP LOCATION MAP**

DATE: January 1989 SCALE: 1:250000 DRAWING No. 2

## GEOLOGY

### REGIONAL

The claim group area has 3 prominent geologic units. Underlying the claim are Upper Triassic andesite, basalt, tuff, breccia with many small stocks, dykes and sills of porphyritic andesite and basalt. Intruding the southeast section of the claim is a tongue off of a stock, Kaketsa Mountain, of a large batholith of granitic rock. This intrusive ranges from monzonite to quartz diorite with later syenite intrusions. These undifferentiated granitic rocks are of Triassic and later age. Overlying all of the previous rock types is a Late Tertiary to Pleistocene basalt, olivine basalt with minor trachyte and rhyolite flows. The valleys are filled with fluvial gravel and sand accumulations and in some parts the basalt flows are younger than the alluvial deposits.

Further to the west are two older units. These are an upper Pre Upper Triassic undivided, fine grained clastic sediments with intercalated volcanics, unit. In places the rocks are greenstone altered with some phyllic sections. The older Permian limestone and dolomitic limestone that underlies the mixed unit has chert, argillite and sandy limestone segments.

### PROPERTY

Due to the short amount of time spent on the property the resulting geologic interpretation is very limited.

The majority of the claim is underlain with augite porphyry andesite volcanic. Variations on this volcanic range from agglomeratic to lapilli, with siliceous and brecciated segments. It is not uncommon to find up to 5% disseminated pyrite. Nearer the contact with the diorite-quartz monzonite-syenite plug the volcanic has been heated. It becomes very dark in colour, aphanitic with higher amounts of disseminated pyrite. Small quartz veinlets are abundant.

Within the andesite unit both siliceous felsic and lamprophyre dykes were observed. A felsic dyke sampled had chalcopyrite and pyrite but did not run in precious metals.

The granite intrusion has been described as medium grained monzonite to quartz diorite. Only the contact area was observed and it had a syenitized monzonite-quartz diorite composition. The greater the mineralization the more potassic rich the intrusive.

The mineralization noted was pink potassic feldspar flooded disseminated chalcopyrite zones with lesser pyrite. The mineralization is disseminated, within fractures and as veinlets. It occurs in both the intrusive and the andesite. Commonly secondary copper in the form of malachite and azurite is present. The possibility exists that a magnetic, magnetite halo may be present within the andesite peripheral to the intrusive stock.

#### PROSPECTING TRAVERSES

The first set of prospecting traverses were performed by geologist Ludek Uher and assistant Jonathon Cowan on August 6th, 9th and 10th. They worked together collecting 15 rock and 3 silt samples.

On the first day, after setting up camp, the basin area below the prominent ridge that semi circles the east central portion of the claims was scouted. Three silt samples were obtained. All the samples were taken below old drill sites that were also located during this initial traverse, SS-1-88 below DDH-2, SS-2-88 below DDH-3 and SS-3-88 below DDH-1. The priority of this day was orientation.

On the second day the traverse took the crew up and north along the ridge above camp. Two separate areas were concentrated on. Both areas were contact zones between the intrusive rocks and the cooked altered volcanics. The granitic rocks showed propylitic and potassic alteration with malachite



and pyrite mineralization. The volcanic rocks were silicified, brecciated and aphanitic, all primary textures being destroyed. Pyrite sulphides were present in all of the volcanic rocks. A total of 7 rock samples were collected.

The final day was spent traversing the steep hillside NW above the Sheslay River. The same contact type mineralization was encountered. The sulphides were more intense and varied. Both chalcopyrite and pyrite were found in disseminated and fracture filled states. The last rock sampled returned a Au value of 1395 ppb with highly anomalous Cu. A total of 8 rock samples were collected.

The second prospecting trip into the SHELL Claim Group was to follow up the last sample taken and further evaluate the property potential. After setting up camp on the 27th of September prospecting began on the 28th. Paul Jones and Ian Mitchell were the samplers.

On the first day, both prospectors commenced prospecting down below camp together. Once target rock types were established individual routes were taken. Mr. Jones proceeded on a low path to the west, whereas Mr. Mitchell the higher one. The traverses converged back up in the basin. The rock types discovered were typical of previous outings with more detailed sampling occurring. A mineralized zone at the contact thought to be the "South Zone" discovered back in the 60's and 70's was encountered. This area returned 7 anomalous Au results of 10 samples. During this day 19 rock samples were taken.

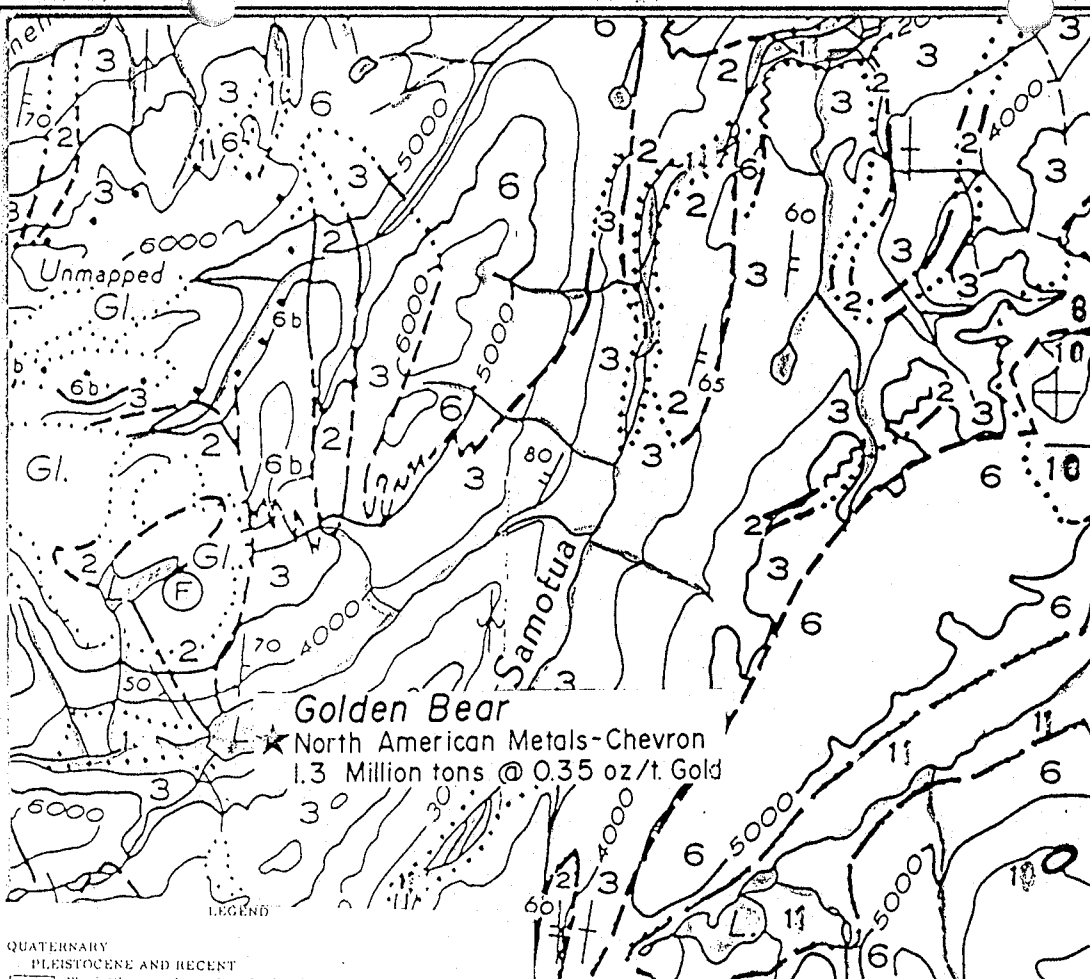
The second day was hampered by a heavy snowfall the night before. A helicopter drop off was arranged to explore the west central portion of the claim. The traverse was initiated in a linear (structure?) lake valley. The host rock type was the augite porphyry andesite. The rock type remained constant with a variation in the clast sizes until the contact with the intrusive was approached. At this time the volcanic rock became aphanitic and dark green black. Mineralization increased even into the granite rock.

The syenite composition granite had more chalcopyrite than the host andesite. The last three rock samples were collected on this day.

In total 49 samples were collected, 46 rock and 3 silt. A total of 16 mandays were spent prospecting the SHELL Claim Group.

#### CONCLUSIONS

The SHELL Claim Group has the potential to host both porphyritic Cu, Au and contact and structural Au mineral occurrences. The limited sampling that has returned anomalous gold values deserves further attention. The previous Cu porphyry work has indicated additional targets for potential precious metals. A cost effective program to evaluate these claims could be completed within a month for a relatively inexpensive cost in light of the remoteness of the claim. A geochemical soil grid analyzed for gold would greatly enhance the property.



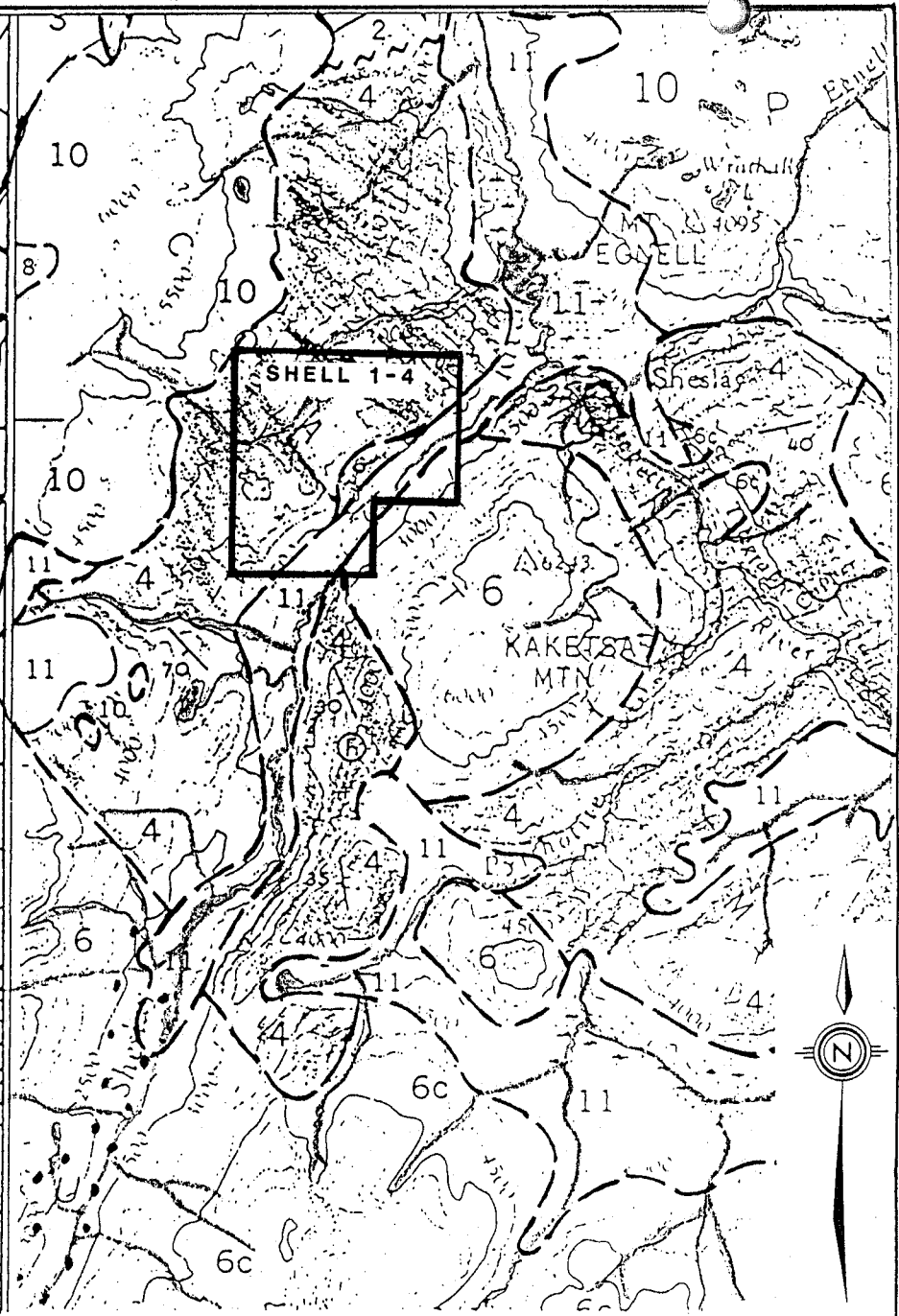
**Golden Bear**  
 ★ North American Metals-Chevron  
 1.3 Million tons @ 0.35 oz./t. Gold

LEGEND

- QUATERNARY  
 PLEISTOCENE AND RECENT  
 11 Fluvialite gravel, sand, and silt; glacial outwash; till and alpine moraine
- VERTICALY AND QUATERNARY  
 LATE TERTIARY AND PLEISTOCENE  
 10 Basalt, olivine basalt; minor trachyte and rhyolite; in part younger than 11
- JURASSIC  
 LOWER JURASSIC  
 8 Granite-boulder conglomerate, chert-pebble conglomerate, greywacke, quartzose sandstone, siltstone and shale; 8a, metamorphosed equivalents of 8 and including abundant sills and dykes of quartz-feldspar porphyry
- TRIASSIC AND LATER  
 6 Undifferentiated granitic rocks, mainly granodiorite; 6a, granite and granodiorite; 6b, quartz monzonite; 6c, diorite and monzonite; 6d, syenite; 6e, diorite and gabbro
- TRIASSIC  
 UPPER TRIASSIC  
 4 Andesite, basalt, tuff, breccia, volcanic sandstone and conglomerate; minor greywacke, argillite, and shale; many small stocks, dykes, and sills of porphyritic andesite and basalt; 4a, andesite and basalt porphyry
- TRIASSIC AND EARLIER  
 PRE UPPER TRIASSIC  
 3 Undivided, fine-grained clastic sediments and intercalated volcanic rocks, largely altered to greenstone and phyllite; chert, jasper, greywacke, and limestone; 3a, chert, slate, argillite, greywacke, greenstone, and limestone; mainly pre-Permian but probably includes younger rocks; 3b, mainly greenstone; age uncertain; 3c, greenstone, jasper, slate, chert, greywacke, fine-grained clastic rocks, conglomerate; mainly post-Permian, in part older than 2
- PERMIAN  
 2 Chiefly limestone and dolomitic limestone; minor chert, argillite, and sandy limestone; may locally include limestone older than 2

- Geological boundary (defined, approximate and assumed), . . . . .
- Limit of geological mapping, . . . . .
- Bedding (inclined, vertical), . . . . .
- Bedding (direction of dip known, upper side of bed unknown), . . . . .
- Schistosity, gneissosity, (inclined, vertical), . . . . .
- Anticline, . . . . .
- Syncline, . . . . .
- Syncline (inverted), . . . . .
- Fault (defined, approximate, assumed), . . . . .
- Fossil locality, . . . . .
- Glacial striae, . . . . .

Geology by H. Gabrielse and J. G. Souther, 1956 and 1961, E. F. Roots, 1956, and Officers of Geological Survey of Canada: "Operation Stikine", 1956



**CORONA CORPORATION**

**SHELL CLAIM GROUP REGIONAL GEOLOGY**

DATE: January 1989 SCALE: 1:132800 DRAWING No. 3

APPENDIX A  
GEOCHEMICAL DATA

SAMPLE DESCRIPTIONS - SHELL CLAIMS

Sample No.	Sample Type	Description
21751	Drill Core	619' - 621' DDH #1 K-spar enriched zone.
21752	Drill Core	616' - 619' DDH #1 more andesitic with syenite dyke, no sulphides.
21753	Drill Core	537' - 540' DDH #1 contact zone between syenite and andesite.
21754	Drill Core	489' - 493' DDH #1 breccia zone.
21755	Drill Core	404' - 408' DDH #1 highly altered fault shear zone.
21756	Drill Core	396' - 404' DDH #1 fractured pink syenite with chlorite and epidote on shears with fine grained disseminated sulphides, cut by narrow clay altered andesite dykes.
21757	Drill Core	383' - 396' DDH #1 fractured pink syenite with chlorite and epidote on shears with fine grained disseminated sulphides, cut by narrow clay altered andesite dykes.
21758	Drill Core	350' - 360' DDH #1 syenite with medium grained chalcopyrite, pyrite and K-spar.
21759	Drill Core	369' - 382' DDH #1 monzonite with K-spar and clay mineral alteration.
21760	Grab	Propollitic altered monzonite with 5% disseminated pyrite.
21761	Grab	Potassic altered intrusive with quartz veinlets and malachite stain.
21762	Grab	Fine grained dark grey volcanic rock with trace pyrite.
21763	Grab	Rusty siliceous fractured intrusive with trace pyrite.
21764	Grab	Rusty siliceous fractured intrusive with trace pyrite.
21765	Grab	Very fine grained aphanitic volcanic, siliceous grey green with trace pyrite.
21766	Grab	Very fine grained aphanitic volcanic siliceous grey green with trace pyrite.

Sample No	Sample Type	Description
21767	Grab	Monzonite with calcite epidote and K-spar veining.
21768	Grab	Feldspar altered monzonite with epidote envelopes, minor malachite.
21769	Grab	Feldspar altered monzonite with epidote envelopes, minor malachite.
21770	Grab	Black medium grained volcanic with malachite bloom, trace chalcopryrite both disseminated and in veinlets.
21771	Grab	High grade semi-massive pyrite and chalco-pyrite mainly on exposed fractures.
21772	Grab	High grade semi-massive pyrite and chalco-pyrite (more than 21771) mainly on fractures.
21773	Grab	Malachite stained K-spar rich intrusive with 1% pyrite and chalcopryrite.
21774	Grab	Malachite stained syenite with trace disseminated pyrite and chalcopryrite.
SS-1-88	Silt	Below DDH #2.
SS-2-88	Silt	Below DDH #3.
SS-3-88	Silt	Below DDH #1.
14101	Grab	Altered syenite with epidote, 2 - 3% chalcopryrite, 2 - 5% magentite.
14102	Grab	Altered syenite with 30- 50% epidote.
14103	Grab	Syenite with 3 - 5% chalcopryrite heavily stained with malachite and auzurite.
14104	Grab	Altered syenite, oxidized with 3 - 5% pyrite.
14105	Grab	Altered syenite, epidote, potassic altered with trace chalcopryrite.
14106	Grab	Altered syenite, epidote, potassic altered with 3% chalcopryrite and 2% malachite stain.

Sample No.	Sample Type	Description
14107	Grab	10 m sheared altered brecciated contact between syenite and altered andesite, 5% chalcopryrite and abundant epidote.
14108	Grab	Altered siliceous andesite with trace to 1% pyrite.
14109	Grab	Altered siliceous andesite, slightly brecciated with up to 4% pyrite.
14201	Grab	Siliceous volcanic, possible breccia with malachite and chalcopryrite.
14202	Float	Black volcanic with injected K-spar mineralized with malachite, and chalcopryrite.
14203	Float	Siliceous volcanic with K-spar flooding mineralized with malachite, chalcopryrite and pyrite.
14204	Grab	Siliceous brecciated volcanic with malachite, chalcopryrite and pyrite.
14205	Grab	Black volcanic, minor silicification and brecciation with disseminated chalcopryrite, pyrite and malachite.
14206	1 m Chip	Black volcanic with semi-massive chalcopryrite, pyrite and malachite.
14207	Float	Mafic hornblende syenite, magnetic, with disseminated chalcopryrite and malachite.
14208	Grab	Contact of syenite and black volcanic rocks with blebs of chalcopryrite and magnetite.
14209	Grab	Mafic syenite with chalcopryrite, magnetite, pyrite and malachite.
14210	Grab	Siliceous felsic dyke with disseminated chalcopryrite, pyrite and malachite.
14211	Grab	Contact between black volcanic and syenite, siliceous with chalcopryrite, malachite and pyrite.
14212	Grab	Siliceous black volcanic with disseminated chalcopryrite, pyrite and magnetite.

Sample No.

Sample Type

Description

14213

Grab

Syenite with disseminations and blebs of  
chalcopyrite and malachite.



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

DATE RECEIVED: AUG 15 1988

DATE REPORT MAILED: *Aug. 22/88*

### GEOCHEMICAL ANALYSIS CERTIFICATE

- SAMPLE TYPE: P1 CORE/ROCK P2 SILT  
AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

ASSAYER: *C. Leung* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

LACANA MINING CORP. PROJECT SHELL FILE # 88-3595 Page 1

SAMPLE#	AU* ppb
E 21751	1
E 21752	2
E 21753	1
E 21754	1
E 21755	1
E 21756	1
E 21757	2
E 21758	9
E 21759	1
E 21760	235
E 21761	55
E 21762	1
E 21763	5
E 21764	1
E 21765	1
E 21766	3
E 21767	1
E 21768	1
E 21769	1
E 21770	169
E 21771	765
E 21772	340
E 21773	198
E 21774	1395

SAMPLE#	AU* ppb
---------	------------

S-S-1-88	1
S-S-2-88	1
S-S-3-88	3

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR NG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: Pulp

DATE RECEIVED: JAN 3 1989

DATE REPORT MAILED: *Jan 9/89*SIGNED BY: *C. Long* D. TOYE, C. LEONG, B. CHAN, J. WANG; CERTIFIED B.C. ASSAYERS

LACANA MINING CORP. PROJECT-SHELL File # 88-3595R

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
E 21751	2	188	2	55	.1	2	6	621	2.29	3	5	ND	1	53	1	2	2	51	3.48	.079	8	5	.83	13	.02	2	1.06	.03	.03	1
E 21752	1	875	4	53	.2	11	17	830	3.06	4	5	ND	1	84	1	2	2	85	6.53	.066	3	74	1.31	9	.10	2	1.09	.05	.01	1
E 21753	20	86	2	16	.1	1	6	301	2.89	2	5	ND	2	68	1	2	4	63	1.46	.080	7	4	.38	44	.03	4	.67	.05	.05	1
E 21754	1	321	2	12	.1	1	4	165	2.72	3	5	ND	2	36	1	2	3	64	.96	.076	6	1	.27	53	.04	7	.62	.03	.06	1
E 21755	2	355	3	17	.1	1	5	532	2.58	5	5	ND	2	47	1	2	2	57	2.22	.071	7	2	.33	21	.02	2	.62	.04	.06	1
E 21756	2	202	4	16	.1	1	4	988	2.59	3	5	ND	2	54	1	2	2	62	3.77	.077	9	2	.28	68	.02	2	.50	.03	.05	1
E 21757	4	299	2	14	.1	1	5	861	2.67	2	5	ND	1	52	1	2	2	58	3.34	.079	9	2	.25	24	.03	2	.52	.03	.05	1
E 21758	6	497	2	14	.1	1	6	275	2.58	2	5	ND	1	32	1	2	2	58	1.51	.078	6	2	.19	19	.03	2	.56	.03	.06	33
E 21759	1	285	4	18	.1	1	7	275	2.60	2	5	ND	2	38	1	2	2	61	1.48	.078	6	2	.21	14	.03	3	.52	.04	.06	1
E 21760	1	917	3	37	.8	4	30	320	3.65	2	5	ND	1	37	1	2	2	54	.55	.120	3	6	1.26	27	.04	2	1.44	.03	.04	1
E 21761	1	3638	10	34	6.3	5	5	197	2.24	7	5	ND	2	64	1	3	2	35	.94	.070	2	8	.34	8	.05	8	.90	.01	.01	1
E 21762	1	456	9	40	.2	24	16	587	2.91	6	5	ND	1	70	1	2	2	73	1.29	.071	2	54	1.61	15	.12	3	1.88	.01	.02	1
E 21763	3	190	12	55	.3	31	17	370	4.30	45	5	ND	1	37	1	2	2	91	.70	.090	4	43	.81	21	.08	2	1.63	.10	.10	1
E 21764	2	192	12	19	.1	33	16	236	3.53	16	5	ND	2	17	1	2	3	73	.60	.143	7	57	.48	12	.07	2	1.01	.04	.07	2
E 21765	2	73	5	89	.1	28	12	700	3.40	9	5	ND	2	20	1	2	2	65	.66	.116	8	16	.27	20	.06	2	.77	.07	.11	1
E 21766	7	203	32	5987	.4	30	16	952	4.64	156	5	ND	3	9	34	2	2	93	.57	.149	15	50	.29	11	.03	3	.58	.03	.04	1
E 21767	1	77	4	89	.1	6	6	243	2.20	6	5	ND	4	28	1	3	2	72	.76	.038	3	15	.24	241	.07	4	.32	.04	.06	2
E 21768	2	2074	10	57	.7	1	6	255	1.34	9	5	ND	2	40	1	2	2	30	1.07	.139	4	3	.50	17	.05	11	.86	.03	.03	1
E 21769	3	1438	5	30	.5	2	4	221	1.25	8	5	ND	1	40	1	2	2	31	1.14	.135	4	3	.44	13	.05	7	.88	.03	.03	1
E 21770	1	5281	3	77	1.8	35	31	502	3.75	8	5	ND	1	17	1	2	2	119	.87	.087	2	124	1.26	13	.14	2	.93	.02	.02	1
E 21771	1	20165	18	82	8.4	102	77	299	6.79	15	5	ND	2	44	1	2	4	122	.58	.037	5	95	.72	28	.13	2	.84	.02	.08	1
E 21772	1	4331	5	43	1.0	63	60	197	7.15	5	5	ND	1	20	1	2	2	185	.57	.064	4	111	.75	95	.15	6	.78	.04	.12	1
E 21773	1	2540	6	38	1.8	3	6	254	1.88	7	5	ND	1	26	1	2	2	38	.68	.137	3	5	.64	14	.07	7	.76	.03	.05	1
E 21774	1	6948	2	28	1.5	59	18	146	5.02	3	5	2	2	39	1	2	2	129	.61	.126	5	3	.31	70	.06	4	.71	.11	.05	1
S-S-1-88	1	1845	5	54	.1	20	7	248	1.06	13	5	ND	1	242	1	2	2	19	18.94	.064	6	24	.71	104	.02	36	.43	.02	.03	2
S-S-2-88	1	209	7	43	.1	32	10	340	2.30	12	5	ND	1	119	1	2	2	51	13.94	.068	5	52	1.04	74	.03	6	.88	.02	.04	5
S-S-3-88	1	1484	11	24	.1	9	3	87	.54	6	5	ND	1	174	1	2	4	20	5.04	.088	10	16	.27	192	.01	45	.39	.01	.01	1
STD C	18	62	43	134	6.9	72	31	1044	4.19	42	23	8	40	51	19	17	21	63	.50	.094	39	61	.95	182	.07	33	1.95	.06	.14	12

\* ASSAY REQUIRED FOR CORRECT RESULT \*

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR NG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK AU ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: OCT 6 1988

DATE REPORT MAILED: *Cd 12/88* ASSAYER: *C. Leong* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

LACANA MINING CORP. PROJECT 1036 File # 88-5043

*Sheet*  
*1036*

SAMPLE#	Mc	Cd	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Ce	Mg	Ba	Ti	B	Al	Si	W	Au*	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	%	PPM	PPM		
C 14101	1	468	5	60	.1	22	12	476	6.41	5	5	ND	1	86	1	2	2	170	2.06	.055	2	97	1.34	38	.11	6	1.79	.03	.02	1	1
C 14102	1	5	4	10	.1	6	3	173	1.42	3	5	ND	1	84	1	2	2	66	2.22	.031	2	43	.41	4	.15	3	1.05	.02	.02	1	1
C 14103	1	5344	5	38	.9	7	5	585	1.77	4	5	ND	1	23	1	2	2	44	1.36	.090	2	46	.89	9	.13	2	.85	.04	.02	1	7
C 14104	1	124	7	13	.2	2	4	100	1.33	7	5	ND	1	35	1	2	3	20	.78	.100	6	6	.26	41	.06	5	.64	.06	.06	1	1
C 14105	1	155	5	38	.1	2	11	366	1.44	4	5	ND	1	90	1	2	2	42	2.13	.132	3	3	.60	32	.09	4	1.28	.07	.03	2	14
C 14106	1	1447	5	34	.3	5	7	333	1.24	4	5	ND	1	25	1	2	2	46	1.43	.155	4	4	.79	40	.09	5	.91	.03	.09	1	1
C 14107	5	7761	10	216	1.7	43	30	945	3.51	6	5	ND	1	67	1	2	2	87	3.99	.054	2	100	2.39	18	.08	2	2.18	.02	.01	2	9
C 14108	1	107	13	41	.1	17	14	550	2.84	7	5	ND	1	37	1	2	2	80	1.32	.071	2	38	1.49	86	.17	3	1.57	.05	.17	3	1
C 14109	2	540	2	47	.1	10	9	796	3.44	2	5	ND	2	37	1	2	2	67	1.46	.229	12	6	.79	12	.16	2	1.37	.05	.06	1	1
C 14201	4	845	136	455	1.5	5	10	351	.92	10	5	ND	1	112	3	2	2	36	2.36	.027	2	13	.11	12	.10	7	.86	.01	.02	1	2
C 14202	1	2157	3	27	.1	19	14	415	5.17	9	5	ND	1	389	1	3	3	211	2.44	.063	5	167	.90	65	.09	7	1.09	.07	.09	3	6
C 14203	8	7940	3	35	.6	37	19	328	3.88	4	5	ND	1	49	1	2	2	111	.86	.081	6	91	1.60	62	.09	2	1.44	.03	.04	1	142
C 14204	50	15066	2	25	.8	58	31	355	3.91	5	5	ND	1	22	1	2	2	83	.62	.109	8	77	1.92	249	.09	2	1.43	.02	.03	1	580
C 14205	17	11195	7	31	2.3	64	43	435	4.35	13	5	ND	1	480	1	2	4	93	.78	.141	11	98	2.34	212	.09	2	2.19	.02	.06	3	510
C 14206	130	6917	4	22	1.2	35	29	318	4.03	7	5	ND	1	253	1	2	2	116	.50	.055	3	82	1.09	62	.11	2	1.21	.04	.05	1	1060
C 14207	1	1591	2	18	.8	3	5	166	1.02	2	5	ND	1	40	1	2	2	25	.76	.127	3	2	.31	11	.06	2	.59	.04	.05	1	230
C 14208	2	1144	20	16	2.6	6	4	151	1.92	6	5	ND	1	45	1	2	2	35	.74	.144	3	8	.32	25	.10	5	.66	.04	.06	1	36
C 14209	1	4663	6	26	1.4	5	7	272	1.63	5	5	ND	1	29	1	2	4	37	1.01	.148	3	1	.63	21	.09	4	.86	.04	.07	2	2
C 14210	3	2993	2	12	.1	11	6	248	1.36	8	5	ND	2	169	1	2	2	34	1.10	.037	4	11	.73	55	.05	8	.92	.05	.03	1	8
C 14211	253	9560	2	25	1.5	36	37	235	7.43	2	5	ND	1	266	1	2	2	156	.77	.079	5	69	1.17	82	.10	2	1.25	.05	.05	1	1060
C 14212	2	4572	13	71	1.3	61	48	424	5.34	8	5	ND	1	25	1	2	2	192	.90	.081	2	114	1.28	115	.24	4	1.46	.05	.06	1	310
C 14213	2	1433	5	47	.2	5	13	446	3.05	3	5	ND	1	25	1	2	2	68	.47	.073	6	8	.73	63	.07	4	.97	.04	.06	1	37
STD C/AU-R	18	62	36	131	7.1	67	30	1049	4.03	36	17	6	37	47	17	19	15	59	.47	.088	39	53	.93	177	.07	32	1.89	.06	.14	12	495

Assay required for correct result *for Cu > 10,000 ppm*

STATEMENT OF COSTS

First Trip

10 man days @ \$150/man day	\$1,500.00	
27 samples @ \$20/each	540.00	
Truck Rental - 7 days @ \$40/day	280.00	
Food and Accomodation - 10 man days @ \$30/man day	300.00	
Supplies and Equipment	125.00	
Helicopter Support	<u>1,740.00</u>	\$ 4,485.00

Second Trip

6 man days @ \$150/man day	900.00	
22 Samples @ \$20/each	440.00	
Truck Rental - 5 days @ \$40/day	200.00	
Food and Accomodation - 6 man days @ \$30/man day	180.00	
Supplies and Equipment	125.00	
Helicopter Support	<u>1,620.00</u>	<u>3,465.00</u>
		7,950.00
Report Preparation		<u>250.00</u>

TOTAL COSTS

\$ 8,200.00

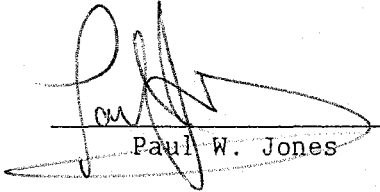
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Dates: August 6th, 7th, 8th, 9th, 10th, 1988  
September 27th, 28th, 29th, 1988.

STATEMENT OF QUALIFICATIONS

I, PAUL JONES, the City of Vancouver, B.C. declare that:

1. I have been involved actively in the mining industry in Canada and the United States for 11 years.
2. I have personally performed the work enclosed in this report under the supervision of Corona Corporation's Senior Geologist, Darrel Johnson.

  
Paul W. Jones

DATED this 1<sup>st</sup> day of FEBRUARY 19 89  
at VANCOUVER, British Columbia.



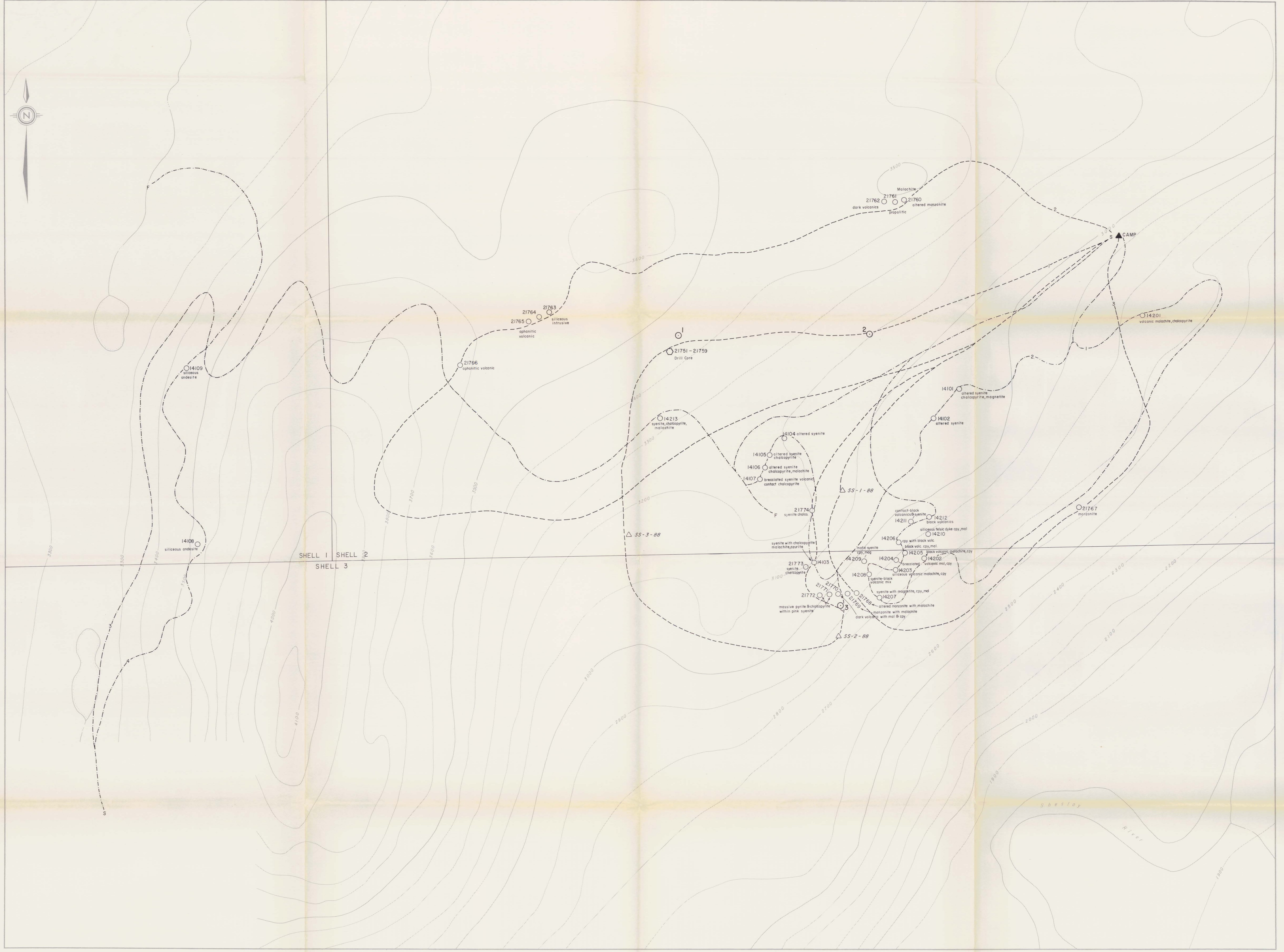


LACANA MINING CORP. PROJECT 1036 File # 88-5043

DATE	NO.	BY	DESCRIPTION
1988-08-10	1	J.V.V.	Initial Survey
1988-09-15	2	J.V.V.	Drill Hole Locations
1988-10-20	3	J.V.V.	Topographic Contours
1988-11-05	4	J.V.V.	Shell Area Delineations
1989-01-10	5	J.V.V.	Final Map Compilation

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li>○ DRILL CORE SAMPLED</li> <li>△ ROCK</li> <li>----- TRAVERSES 1st VISIT (1,2,3)</li> <li>----- TRAVERSES 2nd VISIT (1,2,3,4)</li> <li>----- CLAIM LINES</li> <li>▲ CAMP</li> <li>○ DRILL HOLES</li> </ul>	<p><b>MAP SCALE</b></p> <p>200 0 200 400 600 m</p> <p>NTS_I04/J/4.5W</p>	<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>MADE BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1988/08/10</td> <td>J.V.V.</td> <td>Initial Survey</td> </tr> <tr> <td>2</td> <td>1988/09/15</td> <td>J.V.V.</td> <td>Drill Hole Locations</td> </tr> <tr> <td>3</td> <td>1988/10/20</td> <td>J.V.V.</td> <td>Topographic Contours</td> </tr> <tr> <td>4</td> <td>1988/11/05</td> <td>J.V.V.</td> <td>Shell Area Delineations</td> </tr> <tr> <td>5</td> <td>1989/01/10</td> <td>J.V.V.</td> <td>Final Map Compilation</td> </tr> </tbody> </table>	NO.	DATE	MADE BY	DESCRIPTION	1	1988/08/10	J.V.V.	Initial Survey	2	1988/09/15	J.V.V.	Drill Hole Locations	3	1988/10/20	J.V.V.	Topographic Contours	4	1988/11/05	J.V.V.	Shell Area Delineations	5	1989/01/10	J.V.V.	Final Map Compilation	<p style="text-align: center;"><b>CORONA CORPORATION</b></p>	<p style="text-align: center;"><b>SHELL PROJECT</b></p> <p style="text-align: center;"><b>COMPILATION MAP</b></p> <p style="text-align: center; font-size: 1.2em;"><b>18,421</b></p> <table border="1" style="width: 100%;"> <tr> <th>DATE</th> <th>DRAWN BY</th> <th>CHECKED</th> <th>APPROVED</th> <th>OFFICE</th> <th>DEPARTMENT</th> <th>MAP INDEX NUMBER</th> <th>SCALE</th> <th>DRAWING NUMBER</th> </tr> <tr> <td>Feb. 89</td> <td>J.v.V.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1 : 10,000</td> <td>1</td> </tr> </table>	DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT	MAP INDEX NUMBER	SCALE	DRAWING NUMBER	Feb. 89	J.v.V.						1 : 10,000	1
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