

REPORT ON TRENCHING  
STAR OF THE WEST (L.1311)  
ASSESSMENT REPORT

LACANA MINING CORP      R. J. JOHNSTON  
VANCOUVER, B.C.      DECEMBER 1986

12/15/87  
15606

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## **G E O L O G I C A L   B R A N C H A S S E S S M E N T   R E P O R T**

# **15,606**

**FILMED**



Province of  
British Columbia

Ministry of  
Energy, Mines and  
Petroleum Resources

ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
GEOLOGICAL, GEOCHEMICAL	\$4,176.00

AUTHOR(S) R. J. JOHNSTON ..... SIGNATURE(S) *R.J.J.* .....

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED DEC 11, 1986 ..... YEAR OF WORK 1986  
PROPERTY NAME(S) GREAT WESTERN GROUP .....

COMMODITIES PRESENT Pb, Zn, Ag .....

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN .....

MINING DIVISION NELSON ..... NTS 82-F/6W .....

LATITUDE 49° 26'N ..... LONGITUDE 117° 17'W .....

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

STAR OF THE WEST (L.1311), COT., COT. Fr., ROADSIDE Fr., MAS. Fr., TEE. Fr., FLAT. Fr.,  
Au 2, Au 4 .....

OWNER(S) .....

(1) R. J. BOURDON ..... (2) C. PITTMAN .....

MAILING ADDRESS .....

612 Mill St ..... 1424 Cedar St .....

Nelson, B.C. ..... Nelson, B.C. ....

OPERATOR(S) (that is, Company paying for the work) .....

(1) LACANA MINING CORPORATION ..... (2) .....

MAILING ADDRESS .....

312 - 409, GRANVILLE ST.....  
VANCOUVER, B.C. ....  
V6C 1T2 .....

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

The property is underlain by northwest trending, southwest dipping andesite flows and tuffs of the Lower Jurassic Elise Fm, which have been intruded by sills of Silver King Porphyry and altered diorite which contain spotty gold anomalies. Discontinuous silicified pods containing stringer galena and sphalerite occur in shears.

REFERENCES TO PREVIOUS WORK .....

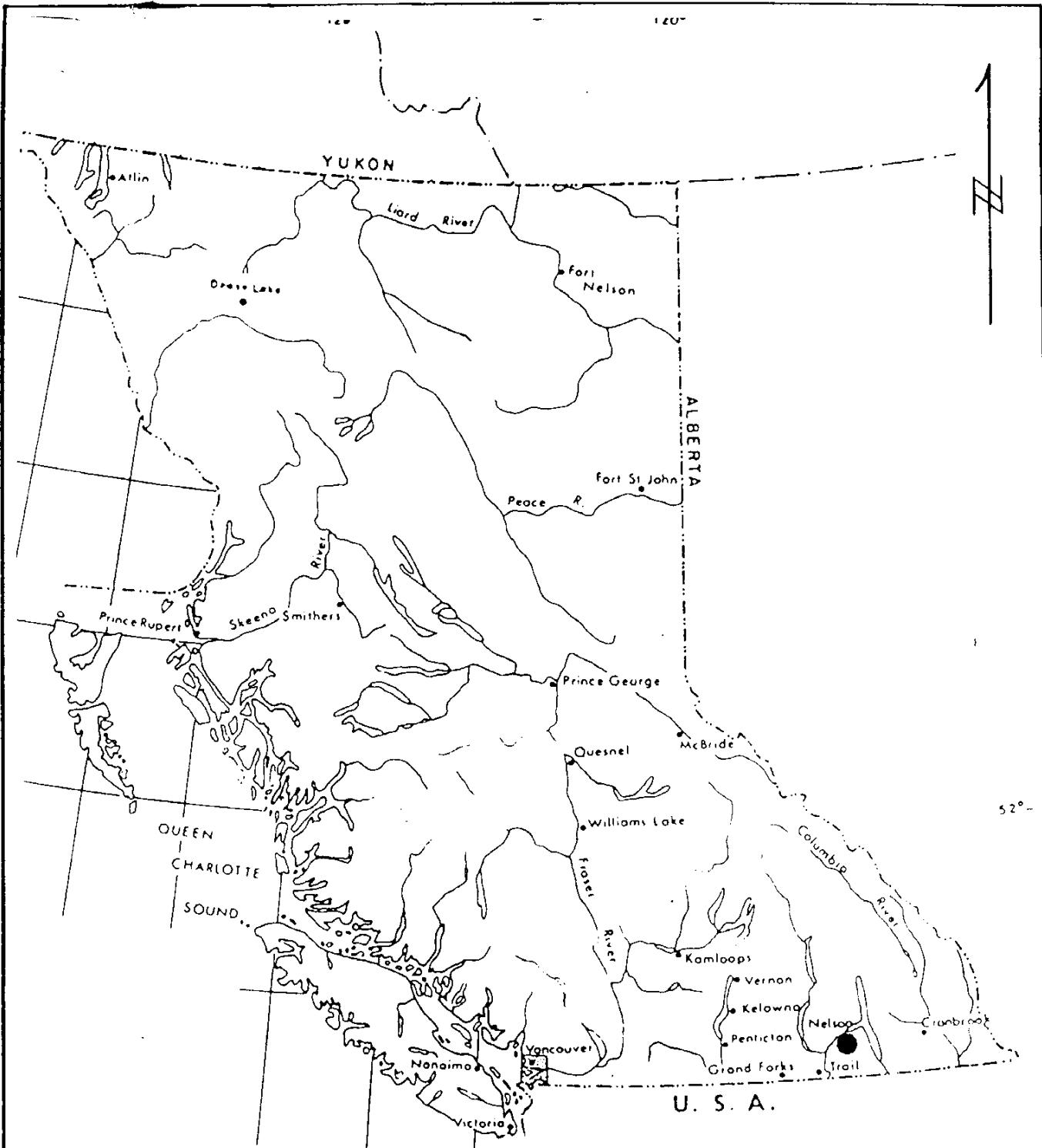
TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground			
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ....)			
Soil			
Silt			
Rock	82 samples for Au & multi-elements.		\$4,176.00
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)			
Road, local access (kilometres)			
Trench (metres)			
Underground (metres)			
		TOTAL COST	\$4,176.00

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted . . . . . Date . . . . .	Rept. No. . . . .			Information Class . . . . .

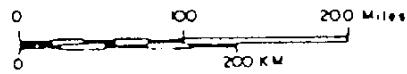
SUMMARY

In September of 1986 Lacana Mining Corporation carried out a backhoe trenching program on the Star of the West (L.1311) Reverted Crown Grant, located in S.E. British Columbia 4 km south of the City of Nelson. The property is part of the Great Western Group, owned jointly by R. J. Bourdon and C.G. Pittman of Nelson, B.C.

Four trenches totalling 209 meters were completed and subsequently mapped and sampled. Two of these were put in over an area where Elise Fm andesites are intruded by silicified, epidotized and pyritized diorite sills, which yielded spotty gold values up to 880 ppb. The other two trenches were put in on a zone containing structurally controlled galena-sphalerite bearing silicified pods which contained anomalous silver, but only minor gold.



SCALE

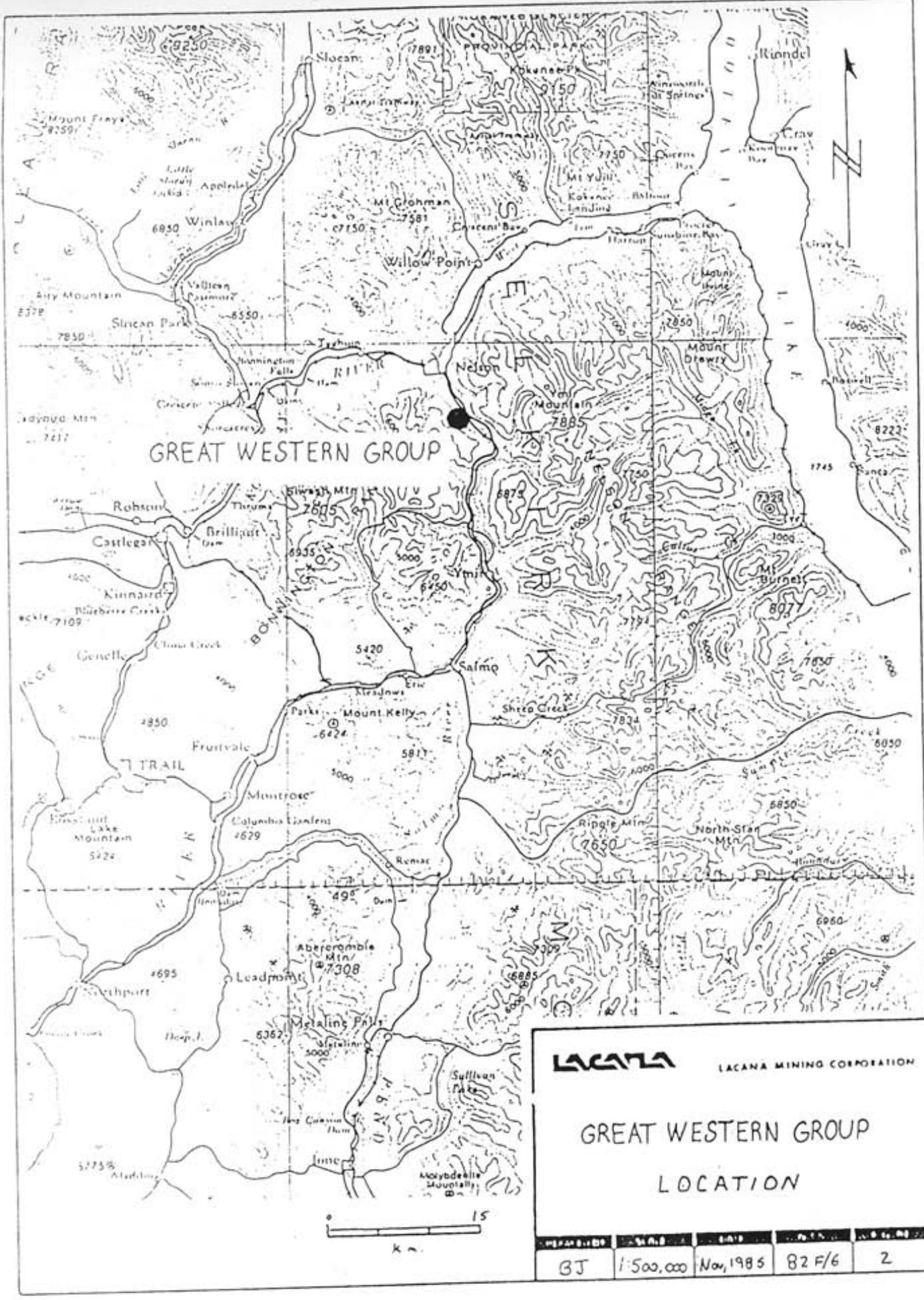


LACANA

LACANA EX (1981) INC.

GREAT WESTERN GROUP  
LOCATION MAP

PREPARED BY	SCALE	DATE	NTS	FIGURE
D J		.86		1



LOCATION AND ACCESS

The Great Western claim group, of which the property examined belongs, is located in the Selkirk Mountains of southeastern B.C., 4 km south of the City of Nelson. The properties are situated on the N.E. flank of Toad Mountain, between Giveout and Gold Creeks on N.T.S. 82-F/6W at  $49^{\circ}26'N$  Latitude,  $117^{\circ}17'W$  Latitude.

The terrain is generally rugged, and is thickly forested with hemlock and cedar.

Road access is good, consisting of seven km of logging roads which depart from Highway 6 south of Nelson.

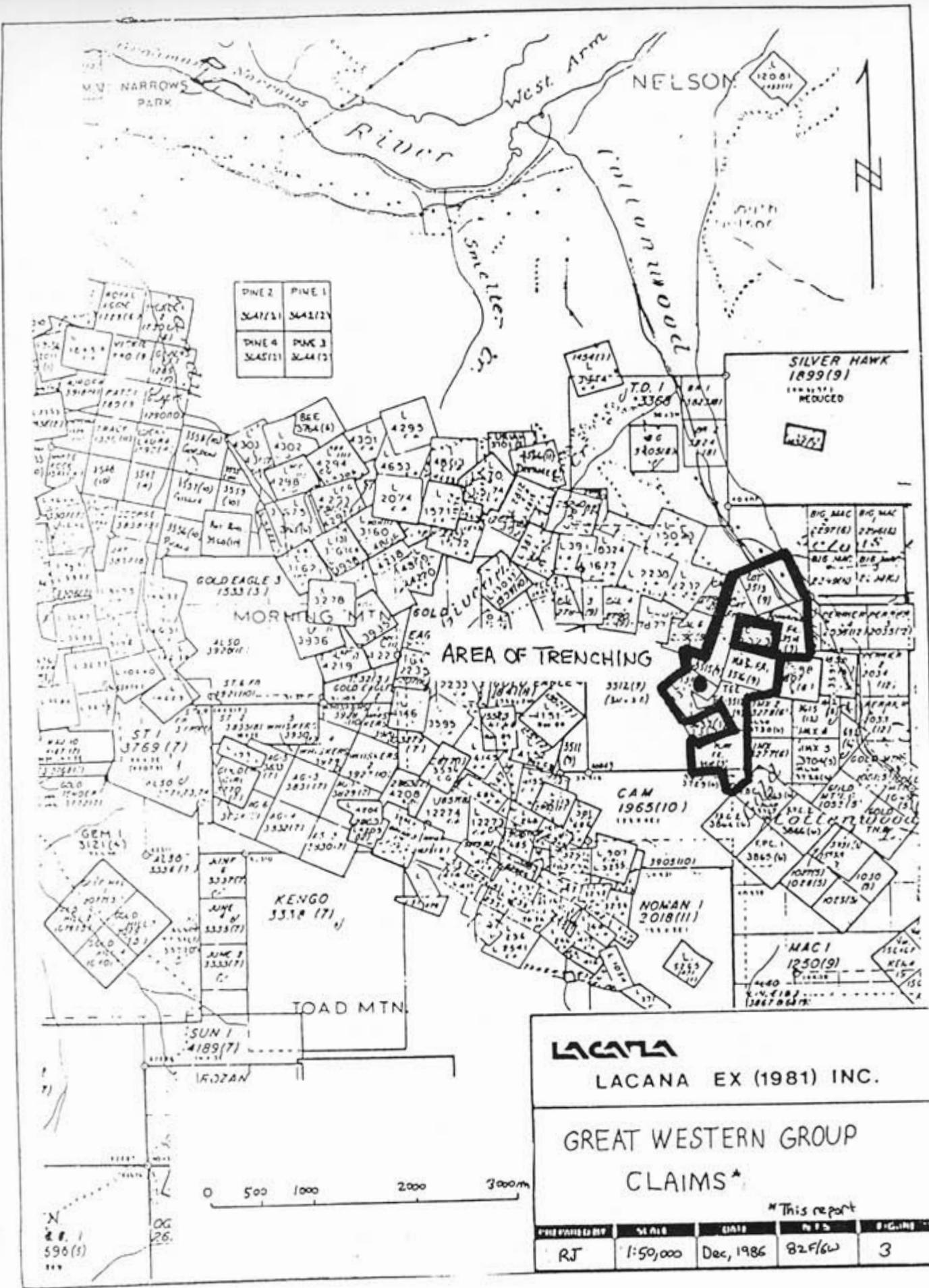
CLAIMS

The claims for which this work is being recorded are part of the Great West group which is owned by R. J. Bourdon and C. Pittman of Nelson, B.C. This group is a combination of reverted Crown Grants, 2 post, modified grid and fractional claims, which are located entirely within the Nelson Mining District. The following table lists only the claims for which assessment is applied in this report.

<u>Claim Name</u>	<u>Record No.</u>	<u>Record Date</u>
COT	3513	Sept 13
ROADSIDE Fr	3514	Sept 13
COT Fr	3515	Sept 13
MAS Fr	3516	Sept 13
TEE Fr	3517	Sept 13
FLAT Fr	3518	Sept 13
AU 2	3728	June 05
AU 4	3730	June 05
STAR OF THE WEST	4010	Jan 04

HISTORY

The claim group lies within the Nelson Mining Camp, which has produced significant gold and silver from a number of mines which date from the turn of the century. Though no record of work was found, a number of the hand trenches and adits were noted on the STAR OF THE WEST (L.1311).



LACATA

LACANA EX (1981) INC.

GREAT WESTERN GROUP  
CLAIMS\*

\*This report

PREPARED BY	SCALE	DATE	RTS	FIGURE NO.
RJ	1:50,000	Dec, 1986	82F/6W	3

### REGIONAL GEOLOGY

A fair representation of the regional geology is given by G.S.C. Map 1571A Bonnington Map area (Little, 1982). It shows the area to be made up of northwest trending Triassic-Jurassic intermediate volcanics and lesser sediments intruded by the Nelson Batholith, a diorite-granodiorite body of late Jurassic age.

Locally intense N.W. trending shearing and a pervasive chloritization resulting from a regional greenschist facies metamorphism have turned many of the volcanics in the area to chlorite schists.

### PROPERTY GEOLOGY

The Star of the West property is underlain by a series of northwest trending-southwest dipping chloritized andesite flows and tuffs of the Elise Fm. Augite porphyry is the most common flow type. The volcanics have been intruded by various sills related to the Nelson Intrusives, a large body of which outcrops just to the north of the area of trenching.

Two intrusive types were noted during the trenching, a diorite and hornblende quartz diorite, termed the Silver King Porphyry. The diorite is variably silicified, epidotized and pyritized.

A 2 m zone containing discontinuous pods of intense silicification occurs in trenches 3 and 4. The silicified pods of sheared volcanic(?) material contain stringers and veinlets of fine-grained galena and sphalerite and range up to 2 m in width. It is thought that the silicification and mineralization are structurally controlled.

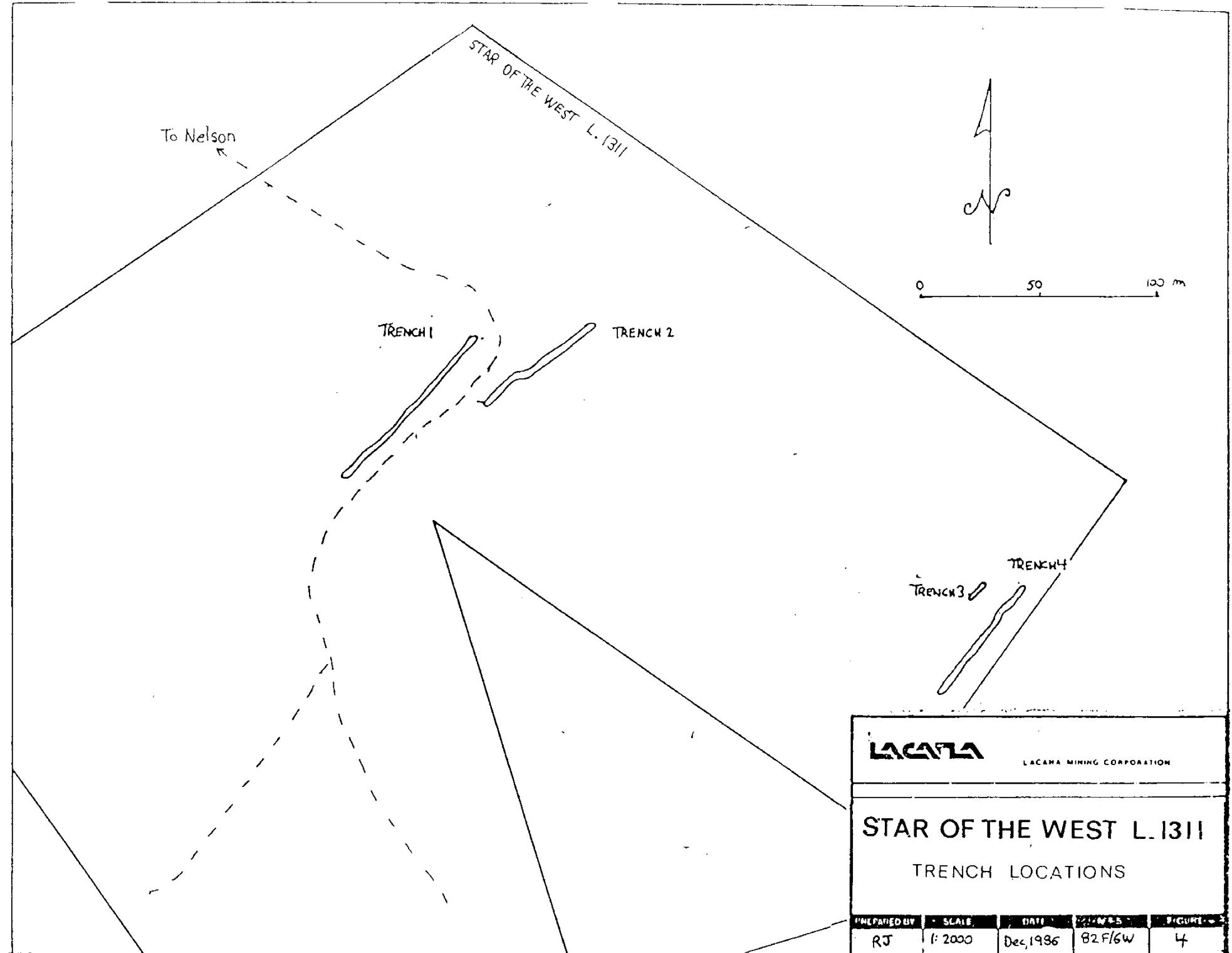
### 1986 WORK

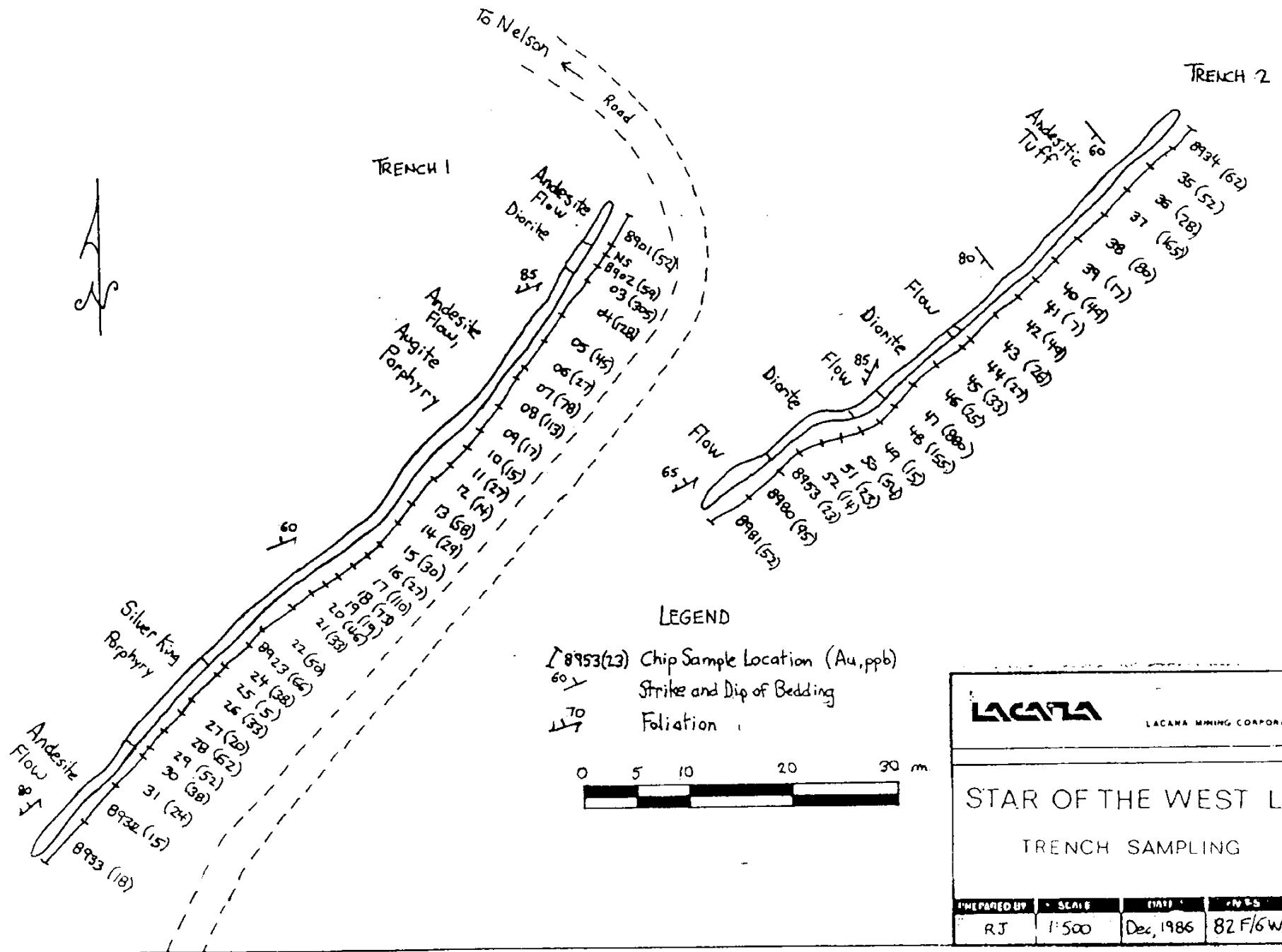
During late September 1986, four backhoe trenches totalling 209 m were completed on the Star of the West (L.1311) Reverted Crown Grant, and were subsequently mapped and chip sampled along their entire length. This program was carried out as a follow up to earlier soil and magnetometer surveys and silicified float found near Trench 1.

The mapping was performed by Nolan Shaheen, under the supervision of the author. Shaheen and Dave Cherry carried out the sampling survey. A total of 82 chip samples were taken and analyzed for Au and multi-element by Acme Analytical Laboratories of Vancouver, B.C. The sample analysis are given in Appendix III.

REFERENCES

- Johnston, R.J. - 1985 Assessment Report on Great Western Group  
for Lacana Mining Corp.
- Little, H.W. 1960 - Nelson Map Area West Half, British Columbia,  
G.S.C. Memoir 308.
- 1982 - Bonnington Map Area, British Columbia  
G.S.C. Map 1571A.
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Map Area, British Columbia G.S.C. O.F. 1195.
- Mulligan, R. 1952 - Bonnington Map Area, B.C., G.S.C. Paper 52-13.



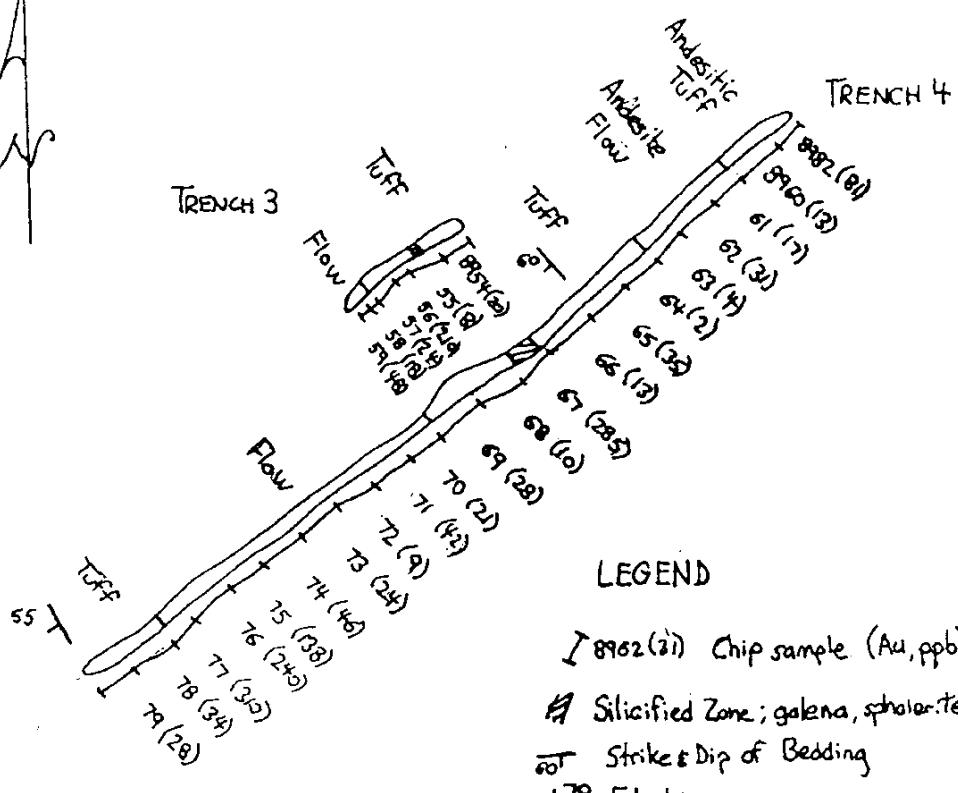


LACANA

LACANA MINING CORPORATION

STAR OF THE WEST L.1311

TRENCH SAMPLING



STAR OF THE WEST L.1311				
TRENCH SAMPLING				
PREPARED BY	SCALE	DATE	INTS	FIGURES
RJ	1:500	Dec, 1986	82 F/6W	6

APPENDIX I

BREAKDOWN OF COSTS

Trenching - 4 backhoe trenches

1 m deep x 0.5 m wide totalling 209 m  
26 hours @ \$50/hr \$1,300

Analyses - 82 rock chip samples @ \$13  
(Au+Multi-element) 1,066

R.J. Johnston Sept 29, 30, Oct 2, 1986

3 days @ \$150 - Supervision 450

N. Shaheen Sept 29, 30, Oct 1-6, 1986

8 days @ \$120 - Mapping & Sampling 960

D. Cherry Sept 30, Oct 1, 3, 6, 1986

4 days @ \$100 - Sampling 400

Total Cost \$4,176

## APPENDIX II

### METHODS OF GEOCHEMICAL ANALYSIS

The samples were boxed in the field and shipped via bus to Acme Analytical Laboratoris Ltd. of Vancouver, B.C. The rocks were pulverized to -100 mesh and the soils sieved to -80 mesh. From this, a 0.500 gram sample is digested with 3 ml of 3-1-2 HCl-HNO<sub>3</sub>-H<sub>2</sub>O at 95°C for one hour and is diluted to 10 ml with demineralized water. Multi-element analysis is done by Inductively Coupled Argon Plasma.

Elements obtained in the ICP analyses are: Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Au, Sb, Bi, V, Ca, P, Ca, Cr, Mg, Ba, Ti, B, Al, Na, K, and W.

For gold analysis, a 10.0 gram sample is ignited overnight at 600°C and is then digested in with 30 mls of hot dilute aqua regia, and 75 ml of clear solution obtained is extracted with 5 ml of Methyl Isobutyl Ketone (MIBK). Gold is determined in MIBK extract by Atomic Absorption (AA).

**APPENDIX III**

**CHIP SAMPLE ANALYSES**

ACME ANALYTICAL LABORATORIES LTD.

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

PHONE 253-3158

DATA LINE 251-1011

## GEOCHEMICAL ICP ANALYSIS

.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,Ca,P,CR,Mg,Ba,Ti,B,Al,Ma,K,M,SI,Zr,CE,Sn,Y,Nb AND Ta. Au DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK CHIPS Au8 ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: OCT 7 1986 DATE REPORT MAILED: Oct 17/86 ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER.

LACANA MINING PROJECT - 6101BICYCLE FILE # 86-3105

PAGE 1

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 PPM	La PPM	Cr PPM	Mg PPM	Ba PPM	Ti PPM	B PPM	Al PPM	Na PPM	K PPM	M PPM	Au8 PPB
8901	9	79	5	36	.1	20	16	539	3.96	7	5	ND	1	99	1	2	2	123	.97	.135	3	32	1.71	59	.27	2	1.94	.04	1.35	1	52
8902	35	76	5	4	.3	8	10	156	4.01	14	5	ND	1	112	1	2	2	73	1.09	.186	2	6	.13	31	.20	3	.64	.04	.15	17	59
8903	24	58	6	13	.2	6	10	222	5.09	15	5	ND	1	85	1	2	2	103	.87	.186	4	7	.57	45	.27	2	.90	.03	.40	46	305
8904	15	160	3	21	.2	12	19	303	4.47	16	5	ND	1	81	1	2	2	122	.84	.156	3	10	.78	27	.27	2	1.08	.03	.59	12	128
8905	15	149	5	6	.1	9	16	264	3.54	14	5	ND	1	75	1	2	2	88	1.33	.180	2	5	.25	22	.22	4	.75	.03	.16	19	45
8906	2	116	2	28	.1	12	24	491	3.83	12	5	ND	1	81	1	2	2	99	1.00	.141	4	8	1.38	73	.26	2	1.88	.04	1.00	2	27
8907	2	205	4	21	.2	12	28	408	3.31	13	5	ND	1	89	1	2	2	92	1.13	.154	3	8	.90	76	.24	9	1.34	.05	.61	4	78
8908	5	105	6	17	.2	12	22	329	3.45	12	5	ND	1	90	1	2	3	89	.97	.151	3	9	.73	52	.25	2	1.09	.04	.36	11	113
8909	4	144	5	46	.1	12	24	628	4.10	9	5	ND	1	90	1	2	2	119	.93	.152	4	9	1.46	71	.23	2	1.78	.04	.46	3	17
8910	7	172	3	54	.1	13	29	796	5.41	11	5	ND	1	77	1	2	2	148	.75	.149	5	10	2.27	218	.30	2	2.56	.04	.90	1	15
8911	5	140	7	49	.5	12	26	633	4.51	12	7	ND	1	101	1	3	2	120	.94	.151	4	8	1.84	239	.31	3	2.44	.04	1.12	3	27
8912	3	111	2	48	.2	11	26	665	4.47	13	6	ND	1	114	1	3	2	132	1.08	.157	5	5	1.82	174	.24	3	2.22	.03	.62	3	14
8913	7	157	9	32	.1	8	23	476	4.13	16	5	ND	1	96	1	2	2	106	.98	.166	4	3	1.30	108	.23	2	1.76	.03	.69	2	58
8914	8	100	5	38	.1	8	16	592	4.44	11	5	ND	2	70	1	4	2	115	.81	.167	7	5	1.75	49	.21	4	2.01	.04	.71	2	29
8915	10	178	7	30	.2	13	28	584	4.70	30	5	ND	1	135	1	2	2	115	1.21	.164	5	6	1.29	70	.21	2	1.89	.04	.23	4	30
8916	8	185	8	27	.4	9	21	519	4.55	26	5	ND	1	80	1	3	2	98	.85	.170	6	5	1.24	65	.23	3	1.70	.04	.58	2	27
8917	14	177	2	19	.2	11	24	377	4.62	45	5	ND	1	53	1	2	3	90	.79	.167	3	6	.89	35	.24	2	1.32	.05	.34	3	110
8918	67	221	6	10	.5	9	23	226	5.93	59	5	ND	1	53	1	2	2	112	.59	.183	4	8	.50	34	.31	2	1.03	.04	.21	3	73
8919	29	233	3	23	.2	15	31	453	5.28	125	5	ND	1	67	1	2	2	101	.90	.161	5	8	1.03	46	.25	4	1.60	.06	.28	4	19
8920	14	283	3	31	.2	18	40	544	5.10	38	5	ND	1	70	1	2	3	98	.95	.155	4	7	1.41	70	.25	2	1.87	.07	.56	3	46
8921	14	135	6	18	.1	9	20	355	3.87	30	5	ND	1	74	1	2	4	79	.88	.165	6	4	.80	32	.23	2	1.30	.06	.29	1	33
8922	29	98	5	11	.3	5	10	233	4.33	31	5	ND	1	71	1	2	2	92	.68	.155	6	7	.51	31	.30	2	1.05	.05	.16	5	50
8923	129	180	10	25	.4	10	20	458	5.92	39	5	ND	1	81	1	2	6	128	.77	.171	6	8	1.23	78	.31	2	1.81	.05	.56	7	66
8924	19	139	12	34	.1	11	22	536	4.66	23	5	ND	1	68	1	2	3	115	.81	.153	5	9	1.61	259	.28	2	2.12	.05	1.03	4	38
8925	9	99	3	41	.1	11	22	663	4.77	8	5	ND	1	64	1	3	2	132	.75	.148	5	9	2.14	348	.28	2	2.46	.04	1.49	4	5
8926	48	172	2	27	.1	9	22	473	4.30	22	5	ND	1	85	1	2	2	99	.91	.156	5	8	1.30	138	.26	2	1.81	.05	.82	9	33
8927	51	208	3	19	.3	10	33	454	2.67	14	5	ND	1	81	1	2	3	53	.74	.135	5	12	.45	44	.19	2	.93	.06	.18	12	20
8928	65	322	9	34	.3	14	67	971	3.40	18	5	ND	1	42	1	2	3	63	.45	.126	7	13	.80	60	.16	2	1.44	.06	.26	18	62
8929	36	326	8	36	.2	14	39	730	3.07	11	5	ND	1	77	1	2	3	71	.65	.132	6	18	.98	54	.22	2	1.55	.05	.43	8	52
8930	77	611	2	30	.3	32	138	1517	3.13	9	5	ND	1	131	1	4	4	65	.69	.140	6	16	.69	141	.16	3	1.76	.04	.09	25	38
8931	29	167	6	25	.2	7	16	357	2.82	10	5	ND	1	67	1	2	2	68	.64	.141	4	15	.71	27	.23	2	1.05	.05	.33	11	24
8932	31	148	4	26	.4	9	19	335	3.21	23	5	ND	1	56	1	2	2	68	.66	.141	5	16	.75	27	.22	3	1.12	.04	.30	8	15
8933	29	188	5	33	.2	9	19	355	3.42	22	5	ND	1	57	1	2	3	66	.66	.139	5	18	.91	28	.21	2	1.24	.04	.35	14	18
8934	2	181	38	275	.7	14	36	3510	7.68	15	6	ND	2	101	1	2	2	221	3.42	.143	7	11	2.60	124	.34	2	3.43	.07	2.45	1	62
8935	2	175	15	255	.3	10	31	3583	7.04	13	5	ND	1	89	1	2	2	213	3.02	.152	7	5	2.59	179	.37	2	3.41	.12	2.28	1	52
8936	2	79	8	153	.1	12	27	2671	7.52	5	5	ND	1	54	1	4	2	248	2.00	.156	6	10	2.88	506	.36	2	3.41	.10	2.10	1	28
STD C/AU-R	22	60	38	137	7.2	70	30	1107	3.97	42	21	8	34	49	18	14	19	64	.48	.109	37	59	.88	183	.08	33	1.73	.06	.14	13	510

AR

## LACANA MINING PROJECT - 6101BICYCLE FILE# 86-3105

PAGE 2

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	At 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 PPM	S %	Al %	Na PPM	K %	W PPM	AuR PPB
8937	1	138	24	129	.3	15	32	1430	6.27	12	5	ND	1	28	1	2	2	182	.84	.156	3	39	2.35	55	.28	5	2.39	.05	1.50	1	165
8938	1	91	27	199	.2	29	29	1361	5.03	11	5	ND	1	48	1	2	2	132	.75	.155	2	105	2.44	469	.29	3	2.27	.06	1.25	1	80
8939	3	81	46	254	.3	33	36	2801	5.25	13	5	ND	1	36	1	2	2	140	1.19	.149	2	109	2.80	136	.23	4	2.63	.07	.86	1	17
8940	2	126	13	187	.1	23	29	2260	7.20	9	5	ND	1	23	1	2	2	194	.38	.136	3	79	3.61	303	.32	4	3.63	.03	1.81	1	49
8941	2	111	22	182	.1	25	24	1642	7.33	9	5	ND	1	30	1	2	2	208	.42	.149	3	90	3.34	53	.32	2	3.17	.06	1.47	1	7
8942	1	178	16	196	.1	16	28	1505	7.75	8	5	ND	1	27	1	2	2	215	.37	.176	5	36	2.80	105	.32	5	2.97	.05	1.70	1	49
8943	2	200	35	271	.3	14	32	1810	7.15	12	5	ND	1	47	1	2	2	201	1.08	.152	4	21	2.05	125	.33	2	3.05	.03	2.06	1	26
8944	19	78	10	36	.1	19	17	584	4.99	21	5	ND	1	69	1	2	2	120	.77	.147	5	54	1.90	159	.30	2	1.88	.04	1.32	11	27
8945	10	105	8	5	.1	7	15	175	5.31	21	5	ND	1	84	1	2	2	91	.68	.128	2	31	.18	23	.31	5	.56	.04	.15	18	33
8946	20	39	3	8	.1	13	13	200	3.37	14	5	ND	1	77	1	2	3	71	1.16	.130	3	28	.35	19	.27	2	.81	.05	.19	13	25
8947	32	59	9	7	.2	9	15	919	8.82	38	5	ND	3	41	1	2	10	100	4.53	.084	3	26	.11	37	.21	2	.50	.03	.12	7	880
8948	4	111	5	29	.1	17	23	484	4.01	26	5	ND	1	67	1	2	2	104	.93	.146	4	47	1.34	102	.27	4	1.60	.04	.89	9	155
8949	2	62	5	43	.1	19	18	594	4.25	18	5	ND	1	45	1	2	2	99	.72	.129	6	58	2.02	103	.27	3	2.28	.03	1.15	2	15
8950	59	89	11	16	.1	7	11	307	4.52	17	5	ND	1	115	1	2	2	102	1.02	.119	5	28	.65	56	.36	5	1.24	.04	.39	6	54
8951	39	33	5	7	.1	6	9	169	3.52	21	5	ND	1	97	1	2	2	87	.79	.125	3	29	.24	37	.28	3	.70	.03	.19	6	23
8952	11	59	4	6	.1	14	17	240	2.02	20	5	ND	1	60	1	2	2	57	1.06	.123	3	25	.21	21	.21	3	.63	.03	.14	4	14
8953	33	116	13	7	.1	16	18	260	3.49	20	5	ND	1	86	1	2	2	85	.95	.136	2	33	.23	22	.27	2	.74	.03	.09	9	23
8954	3	149	135	907	2.8	23	37	8497	8.52	33	9	ND	3	139	4	2	2	162	3.36	.152	8	94	3.30	65	.17	2	3.08	.04	1.27	1	20
8955	3	64	40	242	.8	14	20	2296	3.61	43	5	ND	1	12	2	2	5	56	.14	.061	2	39	1.20	46	.02	2	1.29	.01	.18	1	8
8956	21	285	8677	24109	130.8	4	20	29696	5.14	28	18	ND	5	175	168	7	227	31	9.44	.757	3	4	1.07	25	.04	2	.70	.01	.17	26	210
8957	2	102	49	201	2.3	22	27	3080	7.87	15	5	ND	1	45	1	2	2	134	1.60	.132	4	73	2.83	41	.22	2	2.76	.03	1.65	1	24
8958	2	110	106	319	3.7	28	34	2362	8.05	25	5	ND	1	35	2	3	3	123	.88	.126	4	77	2.17	35	.20	4	2.36	.02	1.33	1	18
8959	3	17	170	67	8.9	1	3	438	2.70	15	5	ND	1	18	1	2	2	41	.09	.052	3	8	.40	59	.24	3	.63	.01	.41	1	48
8960	3	227	147	1213	3.0	13	32	2979	6.60	68	5	ND	1	53	10	2	2	127	1.15	.159	5	12	2.08	107	.27	2	3.16	.10	1.41	1	13
8961	2	170	105	709	3.9	24	32	3162	7.75	50	5	ND	2	47	6	2	2	103	1.52	.148	4	52	1.83	39	.18	3	2.22	.05	.78	1	17
8962	4	176	546	1188	6.4	9	30	3070	5.85	69	5	ND	3	71	7	2	2	60	2.80	.192	6	4	1.20	50	.14	2	1.44	.01	.86	1	31
8963	1	219	10	170	1.7	10	27	2501	5.49	9	5	ND	1	61	1	2	2	135	1.49	.179	9	16	2.17	119	.29	2	2.93	.10	1.51	1	4
8964	1	138	29	89	.9	16	32	1719	7.65	14	5	ND	1	46	1	2	2	200	1.80	.151	6	25	2.21	32	.29	2	2.30	.07	1.17	1	2
8965	2	145	30	211	2.1	8	29	3977	6.26	27	5	ND	2	71	1	2	2	126	3.14	.122	5	10	1.88	67	.24	2	2.18	.04	1.25	1	35
8966	1	105	43	176	3.6	7	26	2744	7.24	40	5	ND	1	38	1	3	2	105	1.17	.125	6	6	1.65	57	.19	4	2.12	.06	1.23	1	13
8967	19	503	6217	25076	46.7	6	33	24113	7.49	72	13	ND	4	131	133	14	11	37	5.57	.173	4	5	1.42	50	.04	3	.95	.01	.28	26	285
8968	2	115	48	201	2.1	29	32	2067	7.02	19	5	ND	1	56	1	2	2	170	.72	.117	5	175	3.89	28	.19	4	3.64	.09	1.33	1	10
8969	1	208	29	227	1.8	12	33	1757	6.85	18	5	ND	2	63	1	2	2	216	1.30	.153	6	32	2.99	46	.28	4	3.35	.12	1.70	3	28
8970	1	193	26	184	.5	14	34	2080	6.87	13	5	ND	1	56	1	2	2	223	1.12	.148	6	31	2.88	354	.29	2	3.26	.10	1.71	1	21
8971	3	180	523	2909	2.2	11	28	6795	6.38	26	6	ND	3	132	15	2	2	203	3.25	.129	6	30	2.70	73	.28	2	3.57	.15	2.10	1	42
8972	1	174	27	196	.6	11	30	2175	6.93	16	5	ND	1	49	1	2	2	223	.71	.153	6	37	3.03	40	.33	2	3.86	.14	2.43	1	9
STD C/AU-R	21	58	39	135	6.8	68	30	1024	3.96	43	20	B	33	48	18	16	18	63	.48	.107	36	58	.88	180	.08	36	1.73	.06	.13	13	510

✓ Accy, required for correct result —

## LACANA MINING PROJECT-6101BICYCLE FILE # 86-3105

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SAMPLE#	No	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mo	Ba	Ti	B	Al	Na	F	N	Au†
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPB	
8973	1	210	139	584	2.0	18	31	2507	6.58	13	5	ND	2	80	3	2	2	175	1.74	.148	8	42	2.73	47	.28	2	3.77	.17	2.40	1	24
8974	2	171	82	679	1.8	18	30	2635	6.48	31	5	ND	2	83	3	2	2	157	2.02	.129	7	35	2.54	41	.24	2	3.45	.09	2.07	1	46
8975	11	189	85	1049	2.9	14	30	3133	6.41	28	5	ND	2	158	6	2	2	169	2.63	.144	6	22	2.71	42	.25	2	4.44	.15	2.11	1	138
8976	5	171	153	1321	2.1	16	31	3231	6.48	39	5	ND	2	158	7	2	2	152	2.79	.124	6	21	2.47	37	.22	2	3.92	.22	1.83	1	240
8977	2	16	141	647	.6	5	10	2301	3.59	36	5	ND	2	50	4	2	2	31	1.29	.081	6	5	.75	59	.08	2	1.03	.03	.52	1	310
8978	1	162	33	334	1.4	19	27	2052	6.53	16	5	ND	1	65	1	2	2	177	1.21	.124	6	63	2.81	83	.24	2	3.26	.09	1.71	1	34
8979	1	231	23	317	.7	12	31	2373	6.80	11	5	ND	2	45	1	2	2	195	.91	.155	9	19	2.22	316	.22	2	2.80	.06	1.39	1	28
8980	26	149	9	20	.3	22	14	322	4.39	15	5	ND	2	72	1	2	2	100	.83	.158	4	25	.65	40	.27	2	1.16	.05	.16	4	95
8981	12	92	5	14	.3	10	17	203	4.02	18	5	ND	1	55	1	2	3	76	.72	.124	5	17	.34	22	.22	4	.66	.03	.17	7	52
8982	5	128	410	1700	8.0	11	25	4132	6.03	53	5	ND	2	101	8	2	4	76	3.00	.119	5	9	1.00	50	.14	2	1.27	.02	.71	1	81
STD C/AU-R	21	59	40	132	6.9	65	30	1002	3.94	37	19	7	33	47	16	15	21	62	.48	.101	36	58	.88	177	.08	37	1.73	.06	.13	13	490

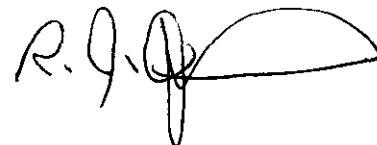
APPENDIX IV

STATEMENT OF QUALIFICATIONS

I, ROBERT J. JOHNSTON of the City of Vancouver, B.C. do hereby certify that:

1. I am a graduate of the University of Saskatchewan with a B.Sc in Geological Services, 1982.
2. I am presently employed as a geologist with Lacana Mining Corporation of 312 - 409 Granville St., Vancouver, B.C.
3. I have practiced my profession with various mining companies in B.C., Yukon, Northwest Territories and Ontario during fields seasons since 1976.
4. I personally oversaw the project on which this report is based.

DATED at Vancouver, B.C. this 22nd day of Dec. 1986.

A handwritten signature in black ink, appearing to read "R.J. Johnston". The signature is fluid and cursive, with a large, stylized "J" and "N". A small, curved flourish or underline is present at the end of the signature.