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COGEMA Resources Inc..

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Geology and Geochemistry

**LUCAS WEST PROPERTY
(Nechako Project)
1994**

Omenica Mining Division
British Columbia

NTS 93F/11W

FILMED

GEOLOGICAL BRANCH
ASSESSMENT REPORT
K. Schumann
Miner 1995
94-CND-78-10

23,744

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Map 1	Lucas West Property, Geology and Geochemistry 1:15 000

INTRODUCTION

The Lucas West Property was acquired by staking in late 1994, based on the release of a Geological Survey Branch regional geochemical lake sediment survey and COGEMA's evaluation of the regional geology. It is located in the Nechako Basin, in the south-central part of British Columbia (figure 1). Mineral showings and deposits with both high-grade vein and low-grade bulk tonnage potential occur in this region.

The property lies in the central part of the Stikine Terrane. The geology of this part of the Stikine Terrane contains three volcanic stratigraphic groups of latest Upper Cretaceous to Miocene age, underlain by Cretaceous and older basement rocks. Mineralization is associated with an Eocene tectonic event that involved crustal extension, felsic and basic volcanism, unroofed metamorphic complexes, large and small scale calderas and associated plutons, pull-apart sedimentary basins, and basin and range geomorphology. This Eocene tectonic-metallogenic belt extends from northwestern British Columbia and crosses all major geologic terranes of the northern Cordillera to the Columbia River basalt plateau in Washington State. The Tertiary tectonic evolution and volcanism of the Nechako Basin are similar to that of the Great Basin of Nevada and adjacent States and the potential for volcanic-hosted and hot-spring type epithermal deposits is similar.

Two epithermal precious metals deposits are currently being mined within this Eocene metallogenic province: the Cannon mine (Wenatchee District), and the Golden Promise in the Republic District. Three have recently been mined out the Equity Silver Mine, the Blackdome, and the Kettle deposits. High sulphide replacement deposits of the Republic graben, although not strictly epithermal, are part of the same metallogenic event.

PHYSIOGRAPHY AND ACCESS


The Nechako Basin is part of the Interior Plateau of the Canadian Cordillera, comprising the Nechako Plateau north of the Blackwater River, and the Fraser Plateau south of it.

The North of the Basin, where the Lucas West property is located, is a plateau with a fairly constant overall elevation, but quite dissected at the local scale in a distinctive basin and range (horst and graben) topography producing more abundant outcrop than in the other two areas. Elevations vary from 1,417 m at the top of Deerhorn Hill to 715 m on François Lake.

Access is good, using a network of forestry roads starting from Highway 16. The 500 Forestry road runs alongside the property less than 1 kilometre from its south boundary. There are no major environmental concerns.

On the Lucas West property, outcrop conditions are quite good on the main hills, but poor in the low-lying areas; this makes it difficult to clearly define the geology.





COGEMA
Resources Inc.

BRITISH COLUMBIA

NECHAKO PROJECT

LOCATION OF PROPERTIES

Figure 1

REGIONAL GEOLOGY

The Tertiary geologic elements of the Nechako Basin are part of a regional extensional system that extends from the Republic area of northern Washington State, northwesterly for some 1000 kilometres into the Babine district of north central British Columbia. This belt trends northwest with the approximate dimensions of 1000 X 200 kilometres. It crosses major terrane boundaries and underlies the Quesnel, Kootenay and Omineca Terranes in the south and the Stikine Terrane in the north, crossing the oceanic Cache Creek Group. It overlaps the southern margin of the Bowser Basin where it continues northward as a thin strip along the eastern margin of the Coast Range.

Stratigraphic and intrusive rocks in the Stikine Terrane range in age from Palaeozoic to Pleistocene. With respect to the Eocene mineral setting, the geologic elements of the Stikine Terrane may be divided into three separate packages: basement rocks, latest Upper Cretaceous-Eocene rocks associated with mineralization, and cover rocks (Table 1).

LEGAL DESCRIPTION OF THE PROPERTY

The Lucas West property consists of 20 2-post claims with a total of 20 units. They are owned 100% by COGEMA Resources Inc. The claims are listed in table 1 and shown on figure 2.

METHODOLOGY

The Lucas West property was worked from a camp located on Stubb Bay of the Nechako Reservoir, some 40 kilometres to the East. Systematic geological mapping and prospecting for alteration and mineralization in outcrop and float covered the whole property. An interpretation of the geology, based on field work and air photo interpretation is shown on map 1. The locations of rock and silt samples is shown on map 2. No indication was found of previous mineral exploration activities.

Analyses of all rock and silt samples were done by Acme Analytical Laboratories Ltd. The analytical procedures were as follows:

- Au: Aqua regia digestion, MIBK extraction, atomic absorption; 50 g for till;
- 30 Elements: Aqua regia digestion, ICP on 0.5 g for till and rock
- Hg: Flameless atomic absorption

Aqua regia digestion results in partial analysis for the following elements: Ca, Mg, Fe, Mn, Cr, Ba, Sr, U, Th, La, Ti, B, Al, Na, K.

Table 1: Main Geologic Map Units of the Nechako Basin

<u>Stratified Rocks</u>	<u>Intrusive and Metamorphic Rocks</u>
11. Anahim Volcanics (Pliocene-Pleistocene)	
10. Chilcotin Volcanics (Miocene)	
9. Endako Group (Eocene-Oligocene)	
8. Ootsa Lake Group (Eocene and Palaeocene)	G. Eocene (stocks, plugs, dykes, rhyolite, felsite, porphyry, diorite, gabbro)
7. Kasalka-Kingsvale Groups (Upper Cretaceous)	F. Upper Cretaceous-Palaeocene (Quanchus Intrusions: stocks and batholiths, diorite to quartz monzonite)
6. Skeena-Jackass Mountain Groups (Lower Cretaceous)	E. Mid-Cretaceous (mainly tonalite to quartz monzonite of Coast Range complex)
5. Gambier Group (Upper Jurassic-Lower Cretaceous)	D. Jurassic-Cretaceous (François Lake Batholith; quartz diorite to granite, includes quartz-feldspar porphyry)
4. Relay Mountain-Bowser Groups (Upper Jurassic-Lower Cretaceous)	
3. Hazelton Group (Lower and Middle Jurassic)	C. Middle Jurassic (locally foliated granodiorite and quartz monzonite)
2. Stuhini Group (Upper Triassic)	
1. Cache Creek Group (Upper Palaeozoic)	B. Permian (mainly granodiorite in lower Chilcotin River)
	A. Metamorphic Rocks (gneiss, schist, metavolcanics, cataclasites)

Table 2 List of Claims: Lucas West Property

NAME	RECORD	UNITS	STAKED	GOOD	MINING	NTS
	No		DATE	YEAR	UNTIL	DIVISION
LUCAS WEST PROPERTY						
CR41	326642	1	04-Jun	1994	1996	OMINECA 93F/11W
CR42	326643	1	04-Jun	1994	1996	OMINECA 93F/11W
CR43	326644	1	04-Jun	1994	1996	OMINECA 93F/11W
CR44	326645	1	04-Jun	1994	1996	OMINECA 93F/11W
CR45	326646	1	04-Jun	1994	1996	OMINECA 93F/11W
CR46	326647	1	04-Jun	1994	1996	OMINECA 93F/11W
CR47	326648	1	04-Jun	1994	1996	OMINECA 93F/11W
CR48	326649	1	04-Jun	1994	1996	OMINECA 93F/11W
CR49	326650	1	04-Jun	1994	1996	OMINECA 93F/11W
CR50	326651	1	04-Jun	1994	1996	OMINECA 93F/11W
CR57	326654	1	04-Jun	1994	1996	OMINECA 93F/11W
CR58	326655	1	04-Jun	1994	1996	OMINECA 93F/11W
CR59	326656	1	04-Jun	1994	1996	OMINECA 93F/11W
CR60	326657	1	04-Jun	1994	1996	OMINECA 93F/11W
CR61	326670	1	04-Jun	1994	1996	OMINECA 93F/11W
CR62	326671	1	04-Jun	1994	1996	OMINECA 93F/11W
CR63	326672	1	04-Jun	1994	1996	OMINECA 93F/11W
CR64	326673	1	04-Jun	1994	1996	OMINECA 93F/11W
CR65	326674	1	04-Jun	1994	1996	OMINECA 93F/11W
CR66	326675	1	04-Jun	1994	1996	OMINECA 93F/11W
	TOTAL	20				

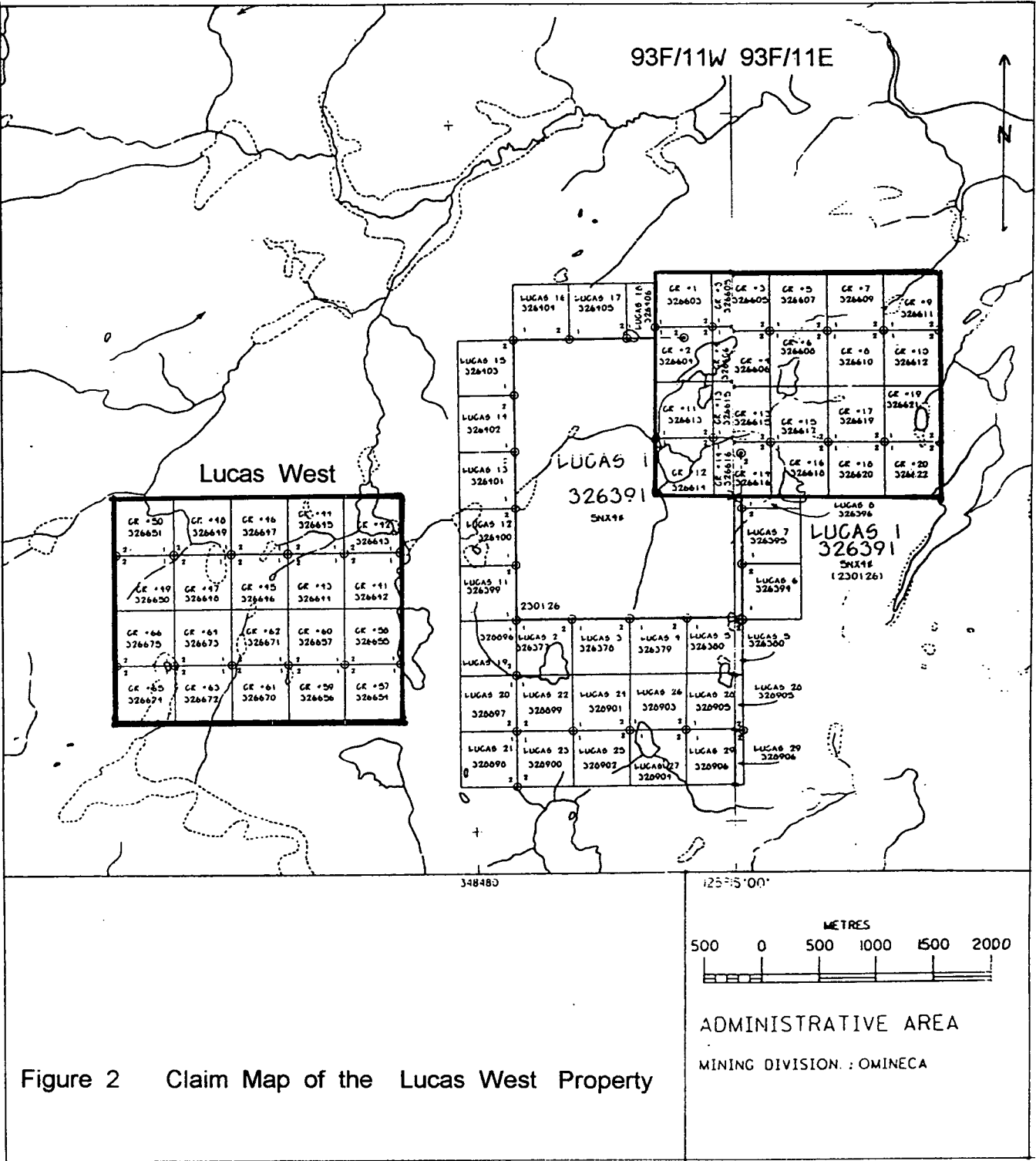


Figure 2 Claim Map of the Lucas West Property

GEOLOGY

The high hills in the central part of the property are underlain by flat lying Upper Endako basalt. Ootsa Group rhyolites underlie these basalts to the East and Ootsa Group tuffaceous conglomerate have been observed in the West.

The western ridge of basalt appears to follow a fault controlled valley.

Large (up to 3 x 1 m) boulders of chalcedonic quartz have been found in the central part of the property. They consist of quartz breccia in a host of rhyolitic composition; they are sub-angular to sub-rounded, and they probably originate from the structural lineament in the centre of the property or west of the western ridge.

GEOCHEMISTRY

Analyses of the chalcedonic quartz boulders show them to be anomalous mainly in Hg, with elevated As and Sb, characteristic of the upper or peripheral part of an epithermal mineralizing system.

One sample of stream sediments from a creek flowing out of the lake in the northeastern corner of the property has 45 ppb Au, which is strongly anomalous; it is also anomalous in As and Hg.

CONCLUSIONS

The 1994 exploration work on the Lucas West property found indications of mineralization on/or near the property in the form of large mineralized epithermal quartz boulders and a strong Au anomaly in stream sediment. Further work is warranted to define the source of the boulders and the location of mineralization in place.

Appendix 1
Rock Descriptions and Analyses

Area	Number	Type	Name	Description	Sampler
LW	5013	oc	rhy	chalced. qz veining in biotite rich rhyolite	KS
LW	5124	flt	Qtz bx	Qtz bx float '4', no vis sulphides, 12m isolated bldr.	JB
LW	5125	sc	Rhy	Siliceous vuggy oxidized rhy .	JB
LW	5127	oc	Sil.	Massive 1.5x2m silica, dark colored bldr., no vis sulphides.	JB
LW	5128	flt	Sil.	2m silica bldr '4' dk colored qts, no sulphide vis.	JB
LW	5233	flt	Rhy bx	80 cm; Loc along shore, 5m from lk marsh where DM 2nd last post to W is. Rhy bx, no sulphides/ o/c are coarse biotite rhy to fine +- flow banded rhy.	RB
LW	5300	flt	Qtz	20x50 cm; Qtz boulder, rusty with secondary qtz veins.	LA
LW	5301	flt	Bx	1mx3m ; Large crackle bx.	LA
LW	5302	flt	Bx	40 cm; Large silica welded breccia bldrs, rusty.	LA
LW	5303	flt	Bx	40 cm; Large silica welded breccia bldrs, rusty.	LA

Area	Sample	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K
		ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
LW	5013R	1	0.1	2	5	25	1	7	4	15	366	2	4	2	113	0.60	11	119	0.19	0.70	0.06	0.018	29	5	7	0.2	2	2	1	1.22	0.06	1.07
LW	5124R	2	0.1	26	13	1290	13	4	9	9	19	7	8	1	885	2.04	5	3	0.01	0.01	0.01	0.009	50	5	9	0.2	2	2	2	0.13	0.01	0.15
LW	5125R	3	0.1	13	4	715	23	2	12	43	8	7	7	1	36	1.12	5	4	0.01	0.03	0.01	0.018	141	5	6	0.2	4	2	1	0.21	0.04	0.16
LW	5127R	2	0.1	25	42	285	18	12	6	1	5	14	16	1	70	0.65	3	5	0.01	0.04	0.01	0.005	2	8	2	0.2	2	2	5	0.01	0.01	0.02
LW	5128R	1	0.1	97	37	2040	27	5	2	1	4	16	14	1	70	1.16	2	2	0.01	0.01	0.01	0.005	2	5	2	0.2	2	2	1	0.01	0.01	0.05
LW	5233R	1	0.2	8	3	15	3	4	7	3	8	8	9	1	103	0.36	2	1	0.01	0.01	0.01	0.006	34	5	7	0.2	2	2	2	0.13	0.01	0.15
LW	5300R	5	0.1	69	11	2330	5	3	7	1	14	10	9	1	58	0.32	2	2	0.01	0.01	0.01	0.003	28	5	8	0.2	2	2	1	0.15	0.01	0.15
LW	5301R	2	0.1	21	3	20	5	4	4	3	6	5	8	1	76	0.32	2	1	0.01	0.01	0.01	0.004	29	5	7	0.2	2	2	2	0.15	0.01	0.16
LW	5302R	2	0.1	69	28	130	46	7	2	1	2	11	14	1	85	1.31	2	1	0.01	0.01	0.01	0.003	2	5	2	0.2	2	3	2	0.01	0.01	0.01
LW	5303R	2	0.1	34	149	200	34	8	5	1	3	17	18	1	139	0.57	2	1	0.01	0.01	0.01	0.001	2	5	2	0.2	2	2	1	0.01	0.01	0.01

Silt Sample Analyses

Area	Sample	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K
		ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
LW	5012S	45	0.1	13	2	80	2	8	5	55	82	12	20	7	578	2.15	39	59	0.57	0.58	0.08	0.084	22	5	3	0.2	2	2	1	1.2	0.05	0.14

Appendix 2
Statement of Expenditures

STATEMENT OF EXPENDITURES

LUCAS WEST PROPERTY

Geology and Geochemistry,

July to December 1994

Personnel	K. Schimann	1 day @ \$438	\$ 438
	R. Bilquist, J. Boutwell, and L. Allen	4 days @ \$201	\$ 804
Field Costs		5 days @ \$131	\$ 655
	(Food, camp, truck and ATV rentals, freight and misc. supplies)		
Rock analyses		10 samples @ \$15	\$ 150
Silt analyses		1 samples @ \$15	\$ 15
Data processing and report preparation			\$ 165
		Total	\$ 2 227

Appendix 3
Statement of Qualifications

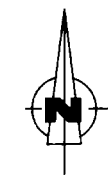
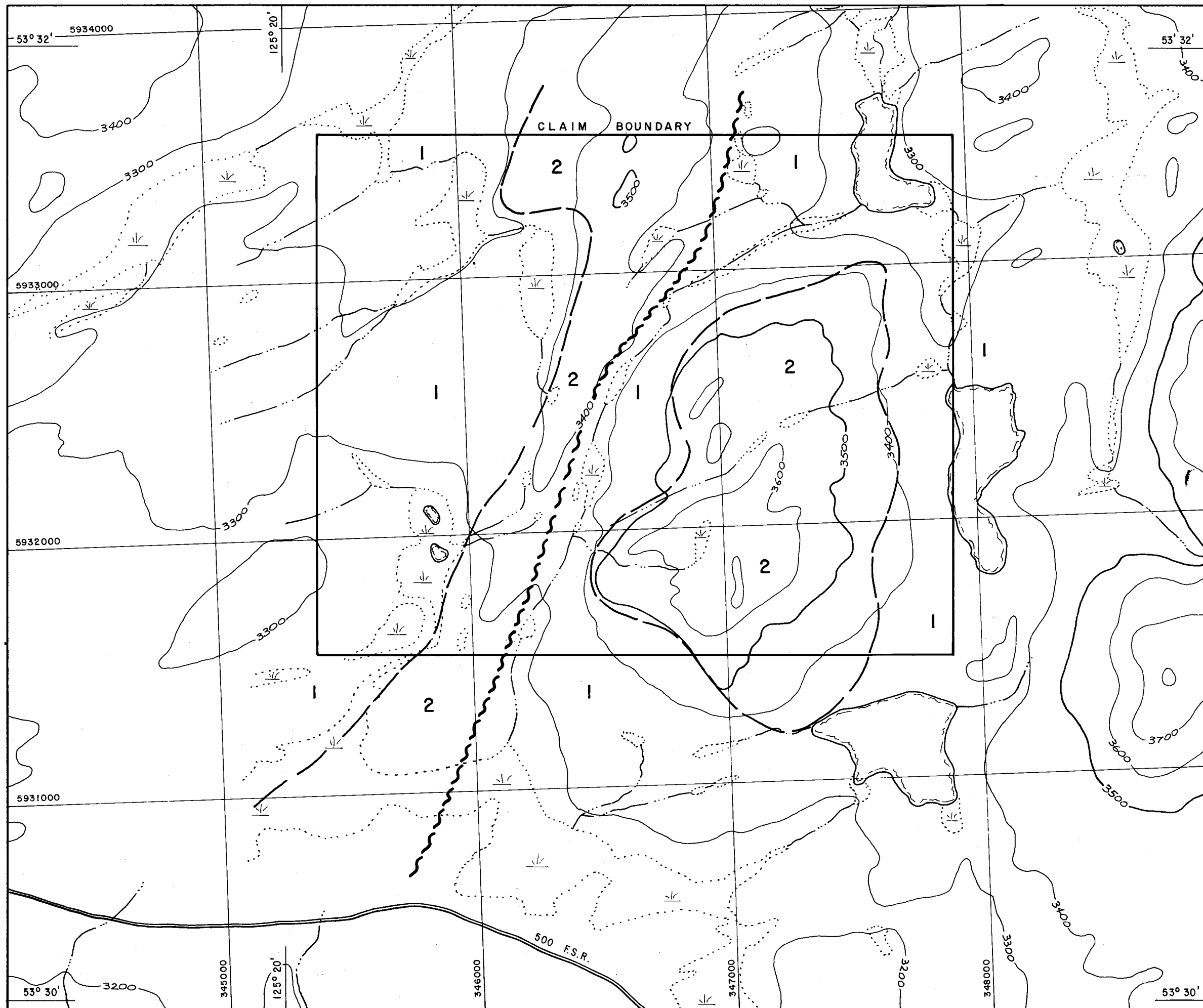
STATEMENT OF QUALIFICATIONS

I, **Karl Schimann**, residing at 5442 Columbia Street, Vancouver, B.C., hereby states that:

1. I am the author of the report *Geology and Geochemistry, Lucas West Property (Nechako Project), 1994, Omineca Mining Division.*
2. I have worked on the property from July to December 1994 for COGEMA Resources Inc. and supervised the work described in this report.
3. I graduated from the Université de Montréal with a B.Sc. in Geology in 1968.
4. I graduated from the University of Alberta with a Ph.D. in Geology in 1978.
5. I am a Fellow of the Geological Association of Canada.
6. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia



Karl Schimann
District Geologist



LEGEND

- 2 Upper Endako Group Basalt
- 1 Ootsa Lake Group Rhyolite, pyroclastics and volcanics
- Inferred contact
- Inferred fault

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,744

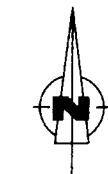
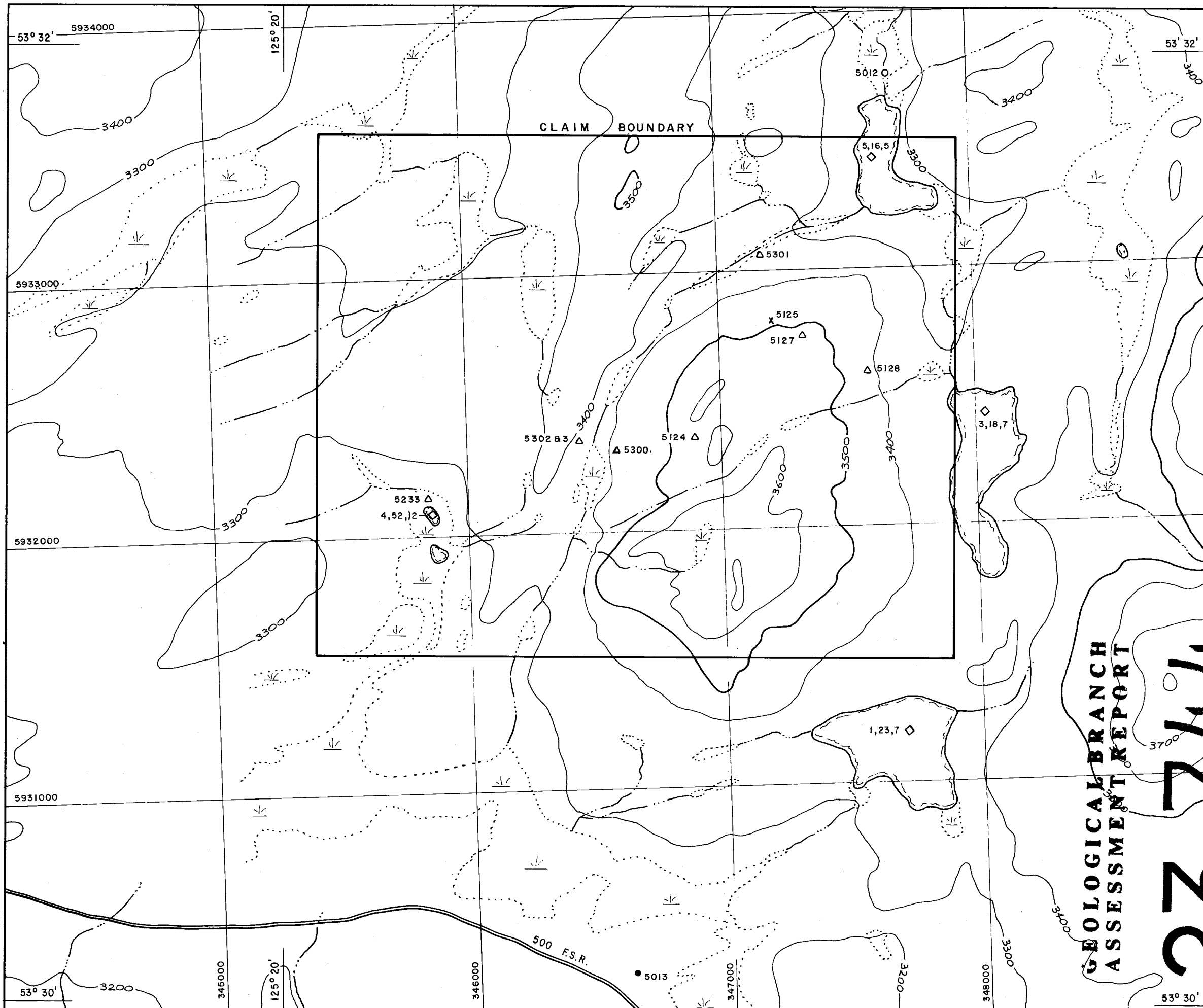


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NECHAKO PROJECT

**LUCAS WEST PROPERTY
GEOLOGY**

Compiled by: K.S.	Date: 09/94	Report no.: 94-CND-78-10
Drafted by: Alpha-2000 Drafting K.L.J.	Anex. no.:	MAP NO: 1
Base map:		
Revised by:		



LEGEND

ROCK SAMPLES

- Outcrop
- x Subcrop
- △ Float
- Silt Sample
- ◇ RGS - Lake sediment sample, Au ppb, As ppm, Sb ppm

Sample	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn
	ppb	ppm	ppm	pp	ppb	pp	ppm	ppm	ppm
NE-5013R	1	0.1	2	5	25	1	7	4	15
NE-5124R	2	0.1	26	13	1290	13	4	9	9
NE-5125R	3	0.1	13	4	715	23	2	12	43
NE-5127R	2	0.1	25	42	285	18	12	6	1
NE-5128R	1	0.1	97	37	2040	27	5	2	1
NE-5233R	1	0.2	8	3	15	3	4	7	3
NE-5300R	5	0.1	69	11	2330	5	3	7	1
NE-5301R	2	0.1	21	3	20	5	4	4	3
NE-5302R	2	0.1	69	28	130	46	7	2	1
NE-5303R	2	0.1	34	149	200	34	8	5	1
NE-5012S	45	0.1	13	2	80	2	8	5	55

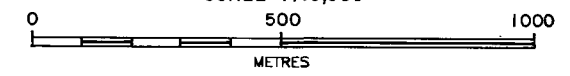
GEOLOGICAL BRANCH ASSESSMENT REPORT

23,744



COGEMA
Resources Inc.

SCALE 1:15,000



NECHAKO PROJECT

LUCAS WEST PROPERTY

GEOCHEMISTRY

by : K.S.	Date : 09/94	Report no. : 94-CND-78-10
Drafted by : Alpha-2000 Drafting K.L.J.	Alpha no. :	
Base map :		MAP NO : 2
Revised by :		