

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL WORK

KENA CLAIMS

TOAD MTN. AREA

NELSON MINING DIVISION, B.C.

BY

DARREL JOHNSON. B.Sc.

CLAIMS: KENA 1-32 inclusive

LOCATION: Four miles south of Nelson, B.C.

Latitude 49⁰25 N Longitude 117⁰16 W

OWNER: O. Janout

WORK BY: Lacanex Mining Co. Ltd.

DATES: June 24 to September 7, 1975

Vancouver, B.C.

October 17, 1975

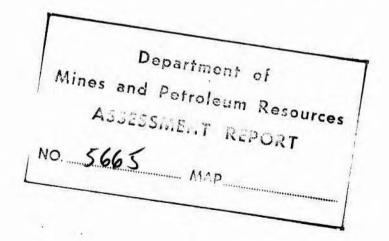


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SUMMARY

During June, July andAugust, 1975, programmes of geochemistry, geological mapping and rock sampling were conducted on the thirty-two claim Kena property south of Nelson, B.C. The majority of the work was on the copper mineralization on Kena 16 - 26 claims, where prospecting and soil sampling work have outlined a zone of copper (1,850 m) (245 m) mineralization about 6,000 feet long and up to 800 feet wide. Only a small amount of work was done in the vicinity of the gold occurrence drilled in 1974.

CONCLUSIONS AND RECOMMENDATIONS

The geochemical survey outlined a series of copper anomalies extending from line 32 E to 96 E, varying in (245 m) width from single samples up to 800 feet, with values in excess of 2000 p.p.m. Cu. The main zone, extending from line 64 E to 96 E has been tested by rock sampling, and proven to represent bedrock copper values in the .15 - .4% range.

Copper values in the .15 to .4% range are certainly far higher than are common in the Rossland Group volcanic rocks, and cannot be dismissed as simply "high background".

It is quite possible that these values are merely the "surface expression" of a richer, deeper deposit somewhere

in the immediate vicinity.

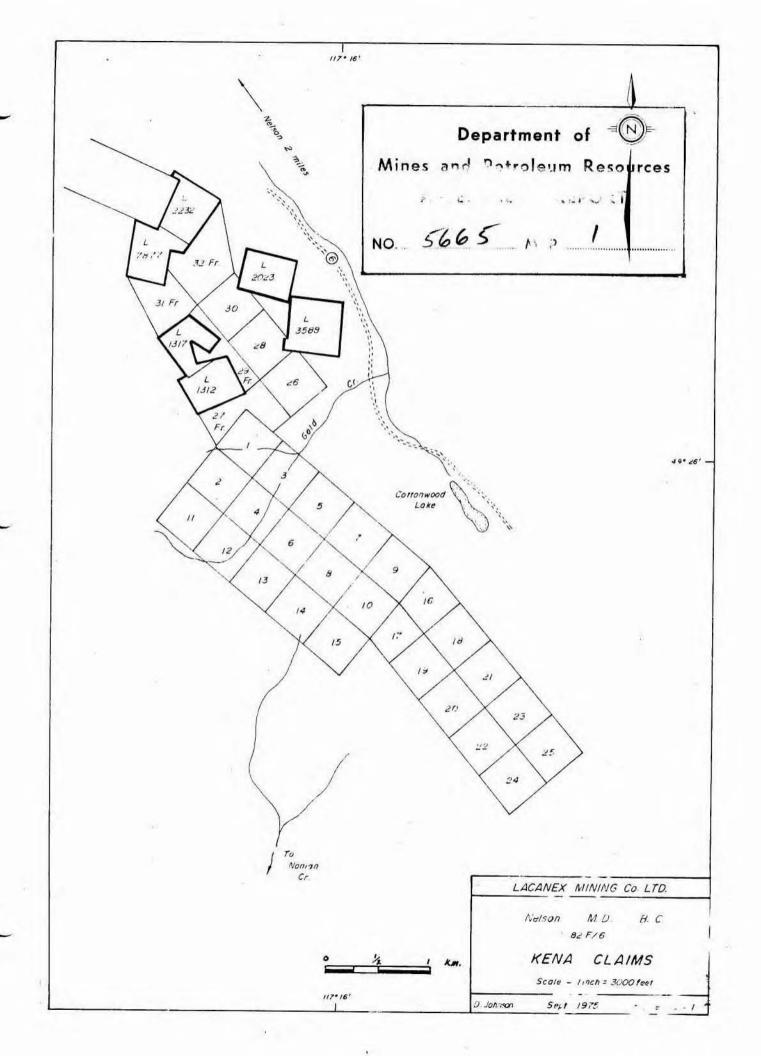
I believe that results of our work to date justify further testing of the main geochem anomaly. I recommend diamond drilling at least two holes, not less than 500 feet deep, at the following sites:

No. 1 78.50 E, 13.50 S, Bearing 220°, Dip -45°

No. 2 68 E, 12 S, Bearing 220°, Dip -45°

Testing of the other anomalous zones should follow if results are encouraging.

On the basis of the 1974 work, and the limited 1975 work, further investigation of the gold zone on Kena 5 and 7 claims cannot be recommended.



- 3 -

INTRODUCTION

Claims

The original 15 Kena claims were recorded November 5, 1973 in the name of Otakar Janout. A Bill of Sale to Ducanex Resources Limited has been completed but not recorded. Assessment work has been applied and rentals paid until November 5, 1975.

Kena 16-26 inclusive, 28 and 30 full-sized claims and Kena 27, 29, 31 and 32 fractional claims were staked during October, 1974 and recorded November 5, 1974 by Murray Morrison, as agent for Mr. Janout.

Location and Access

The claims lie in a northwest trending belt along the easterly flank of Toad Mountain, from two to four miles south of Nelson, B.C. Terrain is generally (1,070 m) (1700 m) rugged, with elevations ranging from 3,500 to 5,500 feet.

Access to the claims from Nelson is south via

Highway No. 6, and then westerly by a network of old

logging and mining access roads. These roads are generally
in rough condition and require a 4-wheel drive vehicle.

A more direct access road up Gold Creek was damaged beyond
repair by flooding in June, 1974.

of the original andesitic texture, with the entire range often being observed in one small outcrop. A definite contact between the Rossland rocks and the metavolcanic schists does not exist.

Although much less common than the chlorite schist, a few outcrops of sericite schist were observed.

Silicification and pyritization of the schists varies widely and apparently randomly, with some specimens nearly completely silicified, and pyrite content up to 10%.

"Silver King" Porphyry

Along the southwestern margin of the property, the volcanic rocks are in contact with the Silver King quartz diorite porphyry, which is possibly an early phase of the Nelson batholith. The intrusive is generally nonfoliated, unaltered, and non-pyritic except for a few locations near the contact where some pyrite and very minor (25 m) amounts of chalcopyrite were seen. An 80 foot wide dyke, which was definitely identified as the Silver King porphyry, occurs in Gold Creek, about 400 feet below the uppermost road crossing.

Various Dykes

Various dykes, ranging in composition from aplite to granodiorite were observed on the property. With the exception of a fine-grained granodiorite found at about

2E, 1 + 10N, which contained some chalcopyrite, the dykes were generally non-mineralized and non-foliated. Their relationship to mineralization is uncertain.

Structure

The Rossland volcanic and metavolcanic schists have a consistent trend throughout the area; strike 310° to 320°, dip 45° to 85° to the southwest. Various minor (5 cm) shear zones and small quartz veins (2") conform to this trend. This trend is also expressed topographically in the form of several distinct gulleys which are probably the surface expression of faults.

The 310° strike is also evident on a regional scale. Most of the prospects and showings in the Nelson area lie within the N. 30° W. trending belt, extending from the Sheep Creek camp northwesterly to the Beasley area.

G.S.C. aeromagnetic map 8480G shows a definite northwesterly trending linear feature extending from just north of Mount Elise to Giveout Creek, just north of the Silver King Mine. This lineation is approximately coincident with the 8 S baseline on the Kena property.

MINERALIZATION

Pyrite is common in all the volcanic and metavolcanic rocks, in amounts estimated at up to 10%. Pyrite is disseminated throughout the rock, in association with silica introduced along foliation planes, and to a lesser extent, along fractures. The amount of pyrite does appear to increase with the degree of silicification.

Copper occurs as chalcopyrite and possibly minor amounts of bornite in association with pyrite in heavily pyritized, silicified zones in the volcanic and metavolcanic rocks. Copper content is not related to the amount of total sulphide mineralization. Two apparently identical specimens of silicified andesite were, when assayed, found to contain vastly different copper values: e.g. Sample No. 752 - .05% Cu, Sample No. 291 - .30% Cu. Visual examination alone cannot be considered a reliable guide to copper content.

Gold, in very minor amounts, .005 oz./ton or less, does occur in most of the heavily silicified pyritized areas. Exact mode of occurrence of the gold is unknown.

GEOCHEMISTRY

A baseline, bearing 130° - 310° was established extending from 96 E to 40 W. Grid lines spaced 800 feet apart, and four additional intermediate lines at 44 E, 52 E, 60 E and 68 E were run with a compass and marked with blazes and flagging. Soil samples, totalling 531, were collected at each station using a mattock. Wherever possible samples were taken from the "B" horizon, which in this area is quite

reddish-brown and occurs at from 4 to 10 inches below surface. At sixteen stations samples were missed because of excessively deep, wet organic soil (especially line 72 E), or very rocky soil close to bedrock.

After collection in kraft paper envelopes, samples were shipped to Acme Analytical Laboratories Ltd. in Burnaby, B.C. for analysis for copper and gold content. Samples were dried and a -80 mesh specimen sifted out. For gold analysis, a 10 gram portion was ignited at 600° C. for one hour, then digested with 25% hydrochloric acid and 80% nitric acid, diluted to 100 ml., and treated with 5 ml.

M.I.B.K. For copper analysis, a 1/2 gram portion was digested with hot aqua regia, then diluted to 10 ml. Analysis for both metals was by atomic absorption using a Perkin-Elmer model no. 305 instrument with background correction.

Copper

Copper values range from less than 20 p.p.m. to more than 2,000 p.p.m. A histogram of copper content versus number of samples was plotted, and from this, background was estimated to be less than 250 p.p.m. Cu. Fig. 3, which has been contoured at intervals of 250, 500 and 1,000 p.p.m. shows copper values at each sample site. Several linear anomalies, roughly coincident with the 130° regional trend

are obvious. The largest of these is a zone with values in excess of 500 p.p.m. extending from 64 E to 96 E.

An odd feature of this anomaly is the "hollow" centre, a zone of less than 250 p.p.m. Cu, surrounded on all sides by higher values. The existence of this low "core" tends to suggest that the anomaly is an accurate reflection of bedrock copper content, rather than simply the downhill dispersion of a small copper source.

Gold

not detectable to 680 p.p.b. and are much more erratic than the copper values. As can be seen from Fig. 4, high gold values occur as single samples, widely scattered, rather than forming a definite anomalous zone, and as such do not outline any areas worthy of further investigation. No attempt was made at contouring the gold geochem map.

ROCK SAMPLING

A total of 38 rock samples were collected and assayed from various sites on the property. Most of these (27) were chip samples taken in (3.05 m) (83 m) (83 m) (270 foot length of an old adit, (circa 1910) with portal 78 + 46 E, 13 + 64 S, tied into our property grid, and direction 220°. This adit was apparently driven to intersect at depth a mineralized 2 foot wide quartz vein which outcrops at about

78 + 50 E, 15 S. Samples from the adit (No.'s 277 - 300, 304 - 306) averaged .16% Cu over 270 feet and No. 292, 15 + 20 to 15 + 30 S gave a value of .40 Cu over 10 feet. A grab sample of quartz from the vein (No. 307) assayed 1.1% Cu and .076 oz./ton Au. Of the other samples taken, only No. 303, .37% Cu and No. 309, .16% Cu gave any values of interest.

Darrel Johnson

Vancouver, B.C. August 27, 1975

APPENDIX I

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis 6455 Laurel St., Burnaby 2, B.C.

Tel: 299-5242	VIIC	8	1975
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Mining	
Granville	St.
	-
	Mining Granville er, B. C.

ANALYSES CERTIFICATE

File No. 4273

Type of Samples Rocks

Disposition 1 year

No.	Sample	Cu %	Silver oz/ton	Gold oz/ton			No.
1	277	,20	.02	. 006	1370 - 80		1
2	278	.20	.015	. 005			2
3.	279	. 15	. 01	.003			3
4	280	.21	.01	.006			4
5	281	.21	.01	.003			5
6	282	. 15	.01	.002		1/23/05-3	6
7	283	. 04	.01	.001			7
8	284	.09	.01	.003			8
9	285	.07	.01	.003	1		9
10	286	.13	.01	.001	.70		10
11	287	. 12	.01	.001	∢		11
12	288	. 06	.01	.001			12
13	289	. 07	.01	.001			13
14	290	. 15	.01	.003			14
1.5	291	.30	.01	. 005			15
16	292	.40	.01	.009			16
7	293	.27	.01	.003			17
18	294	.25	.01	.002			18
9	295	.18	.01	.002			19
20	296	.30	.02	.005	1540-70		20

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED Aug 3,1975
DATE REPORTS MAILED Aug 8,1975

ANALYST

Lacanex Mining		Assaying & Trace Analysis 6455 Laurel St., Burnaby 2, B.C. ANALYSES CERTIFICATE				File No. 4273			
***			Alth	LIBES O	EKTIFIOA	l, 5	Type of Sar Disposition	nples Rocks 1 year	5
No.	Sample	Cu %	Silver oz/ton	Gold oz/ton			- III		No
1	297	. 15	.01	.001	1570-80				1
2	298	.29	.01	.002	AOIT			1900	2
3	299	.24	.01	. 002	1				3
4	300	.26	.01	.009	1600.1610			1/4	4
5	301	.01	.01	.001	24E 4+5	25			5
6	302	. 01	.01	.001	266-95		30. 34.5		6
7	303	. 37	.01	.001	29E-2N				7
8	304	. 09	.01	.006	1610-1620				8
9	305	.24	.01	.002	ADIT				9
10	306	. 16	.01	.003	1630-1638				10
11	307	1.10	.03	.076	78+50E	15 5	072 m	GRAB	11
12	308	.01	.01	.001	88€.115	072 VN	DANCE WE SHIRE ALL		12
13	309	. 16	.01	.002	88E 115	ANDESITE			13
14									14
1.5						and the second			15
16				+					16
L7									17
8									18
19	,		3						19
20									20

TO Lacanex Mining Co. Ltd. ACME ANALYTICAL LABORATORIES LTD.

312 - 409 Granville st., Vancouver, B. C. Assaying & Trace Analysis 6455 Laurel St., Burnaby 2, B.C.

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ANAI	YS	FS	CERT	IFIC.	ATF
WI AVI			CLIVI		

File No. 4315

Type of Samples Rocks

Disposition 1 year

No.	Sample	Cu %	Au oz/ton						No.
1	751	.01	.002	33+50 ~	3 470N				1
2	752	. 05	.002	54E	10 +605				2
3	753	.01	.024	44+50W	2 N				3
4	754	Missi	ng				(6)		4
5	755	Missi							5
6	756	.01	.005						6
7	757	. 02	.006						7
8	758	.01	.003						8
9	759	.02	.004		=				9
10	760	.01	.002	NOT	KENA		NOT THE REAL PROPERTY.		10
11	761	.01	.002						11
12	762	. 01	.001						12
13	763	.01	.001						13
14	764	.01	.001						14
15	765	.01	.001			3			15
16	766	.01	.001	19+50 W	3 N	OLD GOLD	CA. ASHD		16
17	767	.01	.001	16+50W	4 + 3 a N				17
18	768	. 05	.012	17150W	61305	PYRITIZED	COLCANIC AT	CONTACT KING DIKE	18
19	769	.03	.002	. 18+70W	14105			,	19
20									20

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DATE SAMPLES RECEIVED

DATE REPORTS MAILED

Aug. 18, 1975

Aug. 19, 1975

ANALYST

TO Lacanex Mining Co. Ltd. ACME ANALYTICAL LABORATORIES LTD. Assaying & Trace Analysis 312-409 Granville St.,

6455 Laurel St., Burnaby 2, B.C.

Vancouver,	n	•
vancouver.	11 -	١.
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ANALYSES CERTIFICATE

4339 28 1975" Tel: 299-5242

File No. _ Type of Samples Rocks 1 year

Disposition .

No.	Sample	Cu %	Au oz/ton				No.
1	770	.01	.003	17E 2N			1
2	771	. 02	.056	15.50 E 4.50	~		2
3	772	. 02	.004	67E 185			3
4	773	.01	.003	67E 18+3	0 5		4
5	774	.01	.002	71E 14170	5		5
6	775	. 02	.001	70E 2 430	s		6
7	776	.01	.001	60F 45			7
8							8
9							9
10							10
11							11
12							12
13							13
14							14
15							15
16							16
17							17
18							18
19							19
20							20

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DATE SAMPLES RECEIVED

Aug. 25, 1975 Aug. 27, 1975

DATE REPORTS MAILED

ANALYST

APPENDIX II

EM-16 SURVEY

During early September, 1975, D. Johnson conducted a V.L.F. EM survey over lines 32E to 96E. The instrument used was a Geonics EM-16 rented from Ronka Instruments of Vancouver.

Transmitters used were NBA, Panama, 24.0 KHZ, and NAA, Maine, 17.8 KHZ.

The VLF method utilizes radio fields emanating from military transmitters situated throughout the world. The system is usually much more sensitive to well defined linear structures and mineralized zones than to large disseminated deposits. It was felt that the high sulphide content and consistent strike of the rocks on the Kena claims would provide an ideal environment for use of the EM-16.

The parameters read during the survey are in-phase (dip angle) in percent slope, and out-of-phase (quadrature) in percent.

The most important consideration when selecting a transmitter is the primary field direction relevant to the expected strike of the body being sought. Ideally, the transmitter should lie directly on strike with the body; thus, the primary field is at right angles to the deposit and survey lines should be oriented accordingly.

NBA Panama was the ideal transmitter, at least geographically, for use on the Kena claims. The primary field coincided almost exactly with the 040° - 220° grid line orientation. However, signal strength was poor, resulting in a very wide (10%) but reliable null. Results are shown on Fig. 6A. Only one actual "crossover" anomaly is evident, on line 48E at 11S. This is believed to represent a fault which is expressed as a topographic depression extending from line 44E to 56E.

NAA

The primary field direction of NAA Maine (160°) was not very well oriented for use with the existing grid lines. The instrument, however, was equipped with an NAA crystal and the signal was strong, allowing a null to be read within 1%; 1 felt the extra time required to read a second station could be worthwhile. The NAA data (Fig. 6B) does not differ drastically from the NBA plot and shows no anomalies of interest.

ALTIMETER SURVEY

During the EM-16 survey, a Thommen pocket altimeter was used to read the elevation at each station. From this data Fig.2 was drawn, contoured at 50 foot intervals, providing an approximate topographic map to aid interpretation of EM-16 and geochemistry results.

CONCLUSIONS

The EM-16 survey did not outline any anomalies worthy of investigation.

REFERENCES

The reader not familiar with EM principles can find further information in the following publications:

- Geonics Ltd. literature; 2 Thorncliffe Park Drive, Toronto, Ontario.
- 2. Prospecting with Radio Frequency EM-16 in Mountainous Regions; A.B.L. Whittles, Ph.D., B.C. Institute of Technology, Western Miner, February, 1969.

APPENDIX III

STATEMENT OF COSTS

1.	WAGES:			
	D. Johnson	39 days @ \$50/day	\$1950.00	
	J. Orr	29 days @ \$50/day	1450.00	
	P. Cardiff	24 days @ \$50/day	1200.00	\$ 4600.00
2.	FOOD AND ACCOMMON	DATION:		
	Motel	39 days @ \$13/day	507.00	
	Food	39 days @ \$12/day	468.00	975.00
3.		wheel drive pickup tru k Rentals Ltd.):	ck rented	
		39 days @ \$ 20/day		780.00
4.	Rental of E.M. 16	5 unit from Ronka Instr	uments:	90.00
5.	Geochemical Analy	/ses:		
		531 @ \$3.35 each	1778.85	
	Assays:	14 6 67 00	20.22	
		14 @ \$7.00 each	98.00	- Th
		33 @ \$9.50 each	313.50	
	Shipping Charges	(Greyhound):	28.95	2219.30
6.	REPORT PREPARATIO	ON:		
	D. Johnson	4 days @ \$50/day	200.00	
	Global Drafti		308.05	508.05
		Т	OTAL:	\$ 9172.35

Darrel Johnson Geologist

APPENDIX IV

STATEMENT OF QUALIFICATIONS

- I, Darrel Johnson, of the Municipality of Burnaby, in the Province of British Columbia, do hereby state that:
 - I graduated from the University of British Columbia in 1970 with a B.Sc. degree in Geology.
 - I have been working in all phases of mining exploration in British Columbia for the past eleven years.
 - During the past five years 1 have held responsible positions as a geologist with various mineral exploration companies in British Columbia.
 - 1 am presently the geologist-in-charge of the office of Lacanex Mining Co. Limited at 312 - 409 Granville Street, Vancouver, B.C.

5. 1 personally supervised the work described in this report.

Darrel Johnson

Vancouver, B.C. October 17, 1975

