

FINAL REPORT

1974 PROGRAMME

823130

KENA CLAIMS

TOAD MOUNTAIN AREA

NELSON MINING DIVISION, B.C.

BY

DARREL JOHNSON

Vancouver, B.C.

December 10, 1974

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Claim and Location Map (Figure 1) - after page 2

Property Map (Figure 2) - in pocket

Geochem Maps (Figures 3 and 4) - in pocket

Detailed Geology and Rock
Sample Map (Figure 5) - in pocket

SUMMARY

During August and September, 1974, programmes of geochemistry and percussion drilling were conducted on the fifteen-claim Kena property south of Nelson, B.C. Results were moderately encouraging. After some prospecting work by the vendors of the property, an additional seventeen claims were staked. A programme of geochemistry, mapping, trenching and drilling is being planned for 1975.

CONCLUSIONS AND RECOMMENDATIONS

The Kena claims contain an interesting gold-copper environment which is worthy of continued exploration.

1. Geological Mapping

The entire claim group should be mapped in detail, paying special attention to any faults cutting across the trend of bedding.

2. Geochemical Survey

Soil sampling should prove useful for defining any mineralized zones running parallel to bedding. An initial sample spacing of 800 feet by 100 feet should be suitable, and may be altered as dictated by the geological mapping.

3. Trenching

Good road access and shallow overburden make trenching a practical technique. The old trench on the gold showing should be re-dug to better expose the mineralized zone.

4. Drilling

Ease of road access and construction make the area ideal for use of a truck-mounted percussion drill.

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. A Bill of Sale to Ducanex is being prepared. No assessment work has been done or filed on these claims.

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 rugged, with elevations ranging from 3,500 to 5,500 feet. Most of the 1974 work was concentrated on a relatively flat area near the 4,500 foot level.

117° 16'



Nelson 2 miles



49° 26'

117° 16'

DUCANEX RESOURCES LTD.		
Nelson	M. D.	B. C.
B2 F/6 W		
KENA CLAIMS		
Scale - 1 inch = 3000 feet		
D. Johnson	Dec. 1974	Figure No - 1

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.

History

Numerous gold, silver and copper showings in the Toad Mountain area have been worked since 1886. The most notable of these is the Silver King Mine, about two miles west of the Kena claims, which from 1889 to 1948 produced about 15 million pounds of copper, 4.5 million ounces of silver and 280 ounces of gold. Most of the other gold-silver showings in the vicinity were only minor erratic producers. None has been worked to any extent since the 1950's.

The Kena property, known then as the Cottonwood Mine, is mentioned briefly in G.S.C. Annual Report, 1888-89, Volume IV, by G.M. Dawson. A search of G.S.C. and B.C. Department of Mines publications found no further reference to the claims.

While staking Kena claims No.'s 24 and 25 in late October, 1974, M. Morrison discovered several old

adits run into a pyritic zone with quartz veins near the southeast limit of the claim block. The history of these workings is so far unknown.

REGIONAL GEOLOGY

Regional geology is shown fairly accurately on G.S.C. Map 1090A, Nelson, West Half, by J.W. Little, 1960. The Rossland Group (Lower Jurassic) volcanic and metamorphic rocks have been intruded by the Nelson batholith. Varying amounts of pyrite are common throughout the area. A northwesterly striking contact between the Nelson and Rossland rocks occurs on the Kena claims.

PROPERTY GEOLOGY

Schists

1. Chlorite Schist

Much of the property is underlain by this well bedded rock. Colour is quite uniform; dark grey to black. Silicification is widespread. Pyrite is present in amounts ranging up to 10%.

2. Sericite Schist

Less common than the chlorite schist, the sericite schist is light grey to yellowish in colour. Isolated blebs of quartz and feldspar create almost an augen texture. Pyrite content is up to 5%.

Origin

All the schistose rocks in the area are believed to be the product of regional metamorphism of Rossland Group volcanic rocks.

Silicification

Silica enrichment, mainly in the form of quartz eyes, is widespread throughout the various schistose rocks. Grains vary in size, and are usually oriented parallel to foliation. Occasional quartz veins can be found on the property.

Plutonic Rocks

The western part of the claim group is underlain by quartz diorite of the Lower Cretaceous Nelson batholith. Minor diorite dykes undoubtedly related to this body occur randomly.

Structure

Strike and dip of the schists appears to be fairly regular; strike 310° to 320° , dip from 50° to 65° to the southwest.

The strike of 310° to 320° conforms quite well with regional topographic and geologic trends. Most of the prospects and mineral occurrences in the immediate Nelson area are within a $N30^{\circ}W$ trending belt, six to

eight miles wide, and thirty miles long, extending from the Sheep Creek camp northwesterly to the Fortynine Creek area. Also, the Nelson intrusive rocks on the west side of the Kena claims occur as an elongate body, about four miles long by 3/4 mile wide, striking about N 30° W.

MINERALIZATION

Chalcopyrite and malachite occur in various parts of the property in quartz veins, and as disseminations within the chlorite schist. Selected samples have assayed as high as .67% Cu.

Pyrite is found in varying amounts throughout the schistose rocks.

Gold occurs in association with pyrite in silica-rich zones within the sericite schist. Values in the .03 range are common, with one sample assaying .21 oz./ton Au.

A. Gold Showing

Most of the work on the property has been focused on a small area which is thought to be the "Cottonwood Mine" described by G.M. Dawson in 1889. In 1973 an old trench at this site was cleaned out and examined. Samples taken averaged .07 oz./ton Au over 32.5 feet, with one grab sample assaying .21 oz./ton Au.

The mineralized zone appears to conform quite well to the bedding of the schists ($310^{\circ}/60$ SW). Possible cross-faults make any estimate of length uncertain.

As no native gold has been seen, the exact mode of occurrence is still unknown. Assays indicate that gold values are closely related to the degree of silicification. Thin section work has suggested that the gold occurs at the contact of quartz grains with sericite.

B. Copper Showing

During October, 1974, while prospecting the area southeast of the original Kena 1-15 claim block, O. Janout discovered copper mineralization. Further work by Murray Morrison found copper mineralization over an area about 600 feet wide by 1,200 feet long. Chalcopyrite is disseminated in silicified chlorite schist, and in quartz veins up to two inches thick. As with the gold, copper values appear to depend entirely upon silica content. Examination of hand specimens shows chalcopyrite to be concentrated with quartz grains that appear to have been introduced along foliation planes.

GEOCHEMISTRY

Soil samples, totalling 364, were collected during August, in an attempt to detect any extension of

the gold showing to the southeast. A spacing of 100 ft. x 25 ft. was used over the main trench area, and 100 ft. x 50 ft. over the suspected southeast extension. Samples were analyzed by Bondar-Clegg for Au, Ag, As and Cu. Results were erratic and inconclusive, but a few points of interest were noted. Copper values were unexpectedly high, up to 1,100 p.p.m. Gold values were very high, up to 4,600 p.p.b. with a background about 350 p.p.b. Also notable was the apparent lack of correlation between Au and As values.

During some later work in October, 21 additional samples were taken and analyzed for Au and Cu. Nine of these were a reconnaissance line over a copper occurrence on Kena claims No.'s 18 and 19, and twelve were an extension of line 9W from 4S to 15S.

DRILLING

In early September, 1974, four percussion drill holes, totalling 820 feet were completed by H.N. Horning Percussion Drilling Co. of Kamloops, B.C. The drill rig was a truck-mounted Atlas Copco air-powered rig, producing a hole 1 7/8 inch in diameter. Use of a 2-inch bit was attempted, but abandoned due to slow penetration in the hard siliceous rock. Cost of the drilling, including

road and site construction, mobilization and supervision was about \$4.50 per foot.

Samples were dried and split on the property, prior to shipment to Bondar-Clegg for assay.

Drill site locations and hole data are given in Table I. Hole No. 1 was stopped at 50 feet after complete loss of air and water circulation, making sample recovery impossible.

The drilling programme was designed to intersect both the downdip and the strike continuations of the gold showing which had been examined in 1973. It was also hoped to obtain an accurate indication of thickness of the zone.

Results appear to indicate the existence of a continuous mineralized zone. Values at surface were .07/32.5 feet. Hole No. 2 intersected the probable downdip extension of this zone between 230 and 270 feet, averaging .05/40 feet. Hole No. 4, about 200 feet along strike cut a 40-foot zone of .05 from 110 to 150 feet. A possible extension of this zone is indicated by a 5-foot sample (D016) across an outcrop at 6 + 50W, 1 + 55S to 1 + 60S which assayed .07/5 feet. This same outcrop assayed .04 across 20 feet (D015-018). These results suggest a mineralized zone from 20 to 40 feet thick of about .04 to .05 oz./

ton gold, striking about 290° , dipping 60° to the southwest. Strike length from the original trench to the outcrop mentioned above is 750 feet.

POTENTIAL

Gold

It is believed that the 1974 percussion drilling programme tested the projected extension of the mineralized zone exposed in the old trench. The best intersection was 10 feet of .095 oz./ton Au which is simply not ore.

However, both the drilling and the geochemical results indicate that we were working in a definite gold-rich environment, and that the possible existence of an economic gold deposit in this immediate area has not been exhausted.

Two possible modes of occurrence for an ore deposit are suggested:

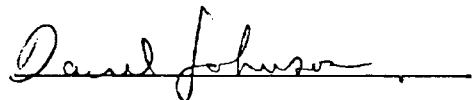
1. The gold mineralization exposed in the old trench may be part of an ore deposit, but the trend of this deposit has been mis-interpreted, and rather than conforming to the bedding of the schists, the mineralized zone actually cuts across bedding, and is related to faulting.

2. It is possible that an orebody exists, but is not actually connected to the trench showing, even though

they are related genetically.

Copper

The presently known dimensions (1,200 feet x 600 feet) of the copper showings on Kena claims No. 16 to 19 are the results of a very brief, precursory examination of the area, and cannot be considered as an accurate representation of the extent and grade of mineralization. Any judgment of the potential (or lack thereof) of these claims would be premature.



Darrel Johnson

Vancouver, B.C.
December 10, 1974

TABLE 1

DRILL HOLE DATA

<u>Hole</u> <u>No.</u>	<u>Location</u>	<u>Dip</u>	<u>Bearing</u>	<u>Depth</u>	<u>Diameter</u>
1	0+66 S 0+70 W	-60°	040°	50'	2"
2	0+68 S 0+70 W	-90°	-	270'	1 7/8"
3	4+08 W 0+86 S	-60°	040°	250'	1 7/8"
4	3+00 W 0+98 S	-60°	040°	250'	1 7/8"

Telephones:
Bus: 576-8148
Res: 576-8170

D.L. COOKE AND ASSOCIATES LTD.
MINERAL EXPLORATION CONSULTANTS

16331 Bell Road,
Surrey, B.C.
Canada

PETROGRAPHIC REPORT

NUMBER: #4

LOCALITY: Ducanex Res.

DATE: February 26, 1974

NAME AND CLASSIFICATION: BIOTITE SERICITE SCHIST

MEGASCOPIIC DESCRIPTION: The specimen is dark green and schistose. It contains abundant fine grained pyrite.

MICROSCOPIC DESCRIPTION:

Minerals	%	Remarks
1. Sericite	40	Fine grained sericite accounts for the schistose structure which is the most strongly developed feature.
2. Biotite	20	Coarser green, pleochroic, biotite blades, up to 1 mm. in length, are also aligned in subparallel streaks within the sericite framework.
3. Quartz	10	Equigranular quartz grains are generally associated with the biotite lenses and streaks.
4. Alkali Feldspar	8	Anhedral alkali feldspar grains occur as elongate remnants, or porphyroblasts within sericite-rich areas.
5. Epidote	7	Biotite lenses also host granular epidote patches. Quartz-epidote streaks are also present.
6. Carbonate	5	Carbonate appears most frequently in fractures and streaks that transect the foliation. It weathers in part to produce a yellowish limonite rust.
7. Magnetite	5	Abundant anhedral magnetite is noted within quartz-biotite areas.
8. Apatite	2	Irregular apatite grains occur in close proximity to magnetite.
9. Leucoxene	1	Granules of leucoxene occur on the rims of some magnetite grains.
10. Hematite	1	Secondary limonitic material is derived from the weathering of both pyrite and carbonate.
11. Pyrite	1	A few grains of pyrite occur within quartz patches.

TEXTURE: A schistose texture is well-developed by the abundance of fine grained sericite. Within this framework are streaks and lenses of biotite-quartz-epidote-magnetite material. "Augens" of alkali feldspar and larger patches of quartz and epidote are common.

CONCLUSION:

The plagioclase "augens" may be remnants of an original feldspathic rock from which the sericite is derived. Biotite, quartz, epidote and magnetite appear to have recrystallized as a result of regional metamorphism. There is less pyrite in the section than may be expected from looking at the hand specimen.

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Canada

PETROGRAPHIC REPORT

NUMBER: #8

LOCALITY: Ducenex Res.

DATE: February 26, 1974

NAME AND CLASSIFICATION: SILICIFIED SERICITE SCHIST

MEGASCOPIIC DESCRIPTION: The specimen seems siliceous and rich in sericite and pyrite. It is fine grained, and grey in appearance.

MICROSCOPIC DESCRIPTION:

Minerals	%	Remarks
1. Microcline	35	Anhedral microcline grains show only a slight orientation parallel to the foliation of sericite. Some grains are untwinned, others exhibit grid twins.
2. Sericite	30	Fine sericite permeates the section, and is aligned to give a foliated structure. It also occurs along the grain boundaries of quartz and feldspar.
3. Quartz	20	Equigranular quartz occurs throughout in a similar manner to microcline. Grain size is variable. Some zones contain mainly quartz and are concordant or discordant to the foliation.
4. Pyrite	10	Subhedral pyrite grains are confined mainly to the quartz-rich sections.
5. Leucoxene	5	Granular leucoxene is arranged in streaks parallel to the foliation.
6. Native Gold (?)	Tr.	A few minute yellowish metallic (?) specks occur in cracks and are surrounded by yellow stains. These may be free gold or weathered sulphides.

TEXTURE: The texture is essentially schistose due to the presence of abundant fine grained sericite flakes. Patches, streaks, and lenses of microcline and quartz are enclosed by foliated sericite. Pyrite cubes are abundant in quartz-rich areas, some of which transect the foliation.

CONCLUSION:
The specimen is a sericite schist that may belong to a shear zone. It has been silicified and impregnated with pyrite. No other sulphides are present, hence any gold that is present is probably in the free state within tiny yellow stained spots.

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Res: 576-8170

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16331 Bell Road,
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Canada

PETROGRAPHIC REPORT

NUMBER: #11

LOCALITY: Ducanex Res.

DATE: February 26, 1974

NAME AND CLASSIFICATION: BIOTITE FELDSPAR SCHIST

MEGASCOPIIC DESCRIPTION: The green coloration and foliation are similar to specimen #4. However, pyrite and secondary rust seem more abundant.

MICROSCOPIC DESCRIPTION:

Minerals	%	Remarks
1. Biotite	25	Green blades of medium grained biotite form streaks and equant pseudomorphs (?) that are aligned parallel to the foliation.
2. Alkali Feldspar	25	Equigranular, fine grained alkali feldspar is associated with epidote and sericite to form a weakly foliated matrix.
3. Epidote	20	Fine grained epidote occurs in the matrix; coarser material occurs in epidote-pyrite streaks.
4. Sericite	15	Fine sericite occurs both in biotite "pseudomorphs" and in the matrix. It is fine grained.
5. Quartz	5	A few equant grains of quartz and ^{quartz} lenses are present. Some fine grained quartz is also found within biotite patches.
6. Sphene	3	Granular patches of sphene appear to have crystallized from leucoxene.
7. Carbonate	3	Tiny grains of carbonate are scattered throughout.
8. Pyrite	2	Euhedral pyrite crystals appear to be most abundant in coarse epidote streaks and knots.
9. Apatite	1	Euhedral apatite crystals are present in accessory amounts.
10. Hematite	1	Yellow as well as brown limonitic rust forms on pyrite grains and in epidote streaks.

TEXTURE: The schistose structure is not strongly developed. Elongate tabular areas and lenses consisting of biotite, sericite and quartz are aligned parallel to the foliation plane. These intergrowths have the appearance of pseudomorphs. Streaks and knots, made up of epidote, pyrite, and quartz, seem to be incipient growths.

CONCLUSION: The rock may have been derived from volcanic material, having recrystallized because of regional metamorphic forces. No magnetite is present, and pyrite seems to have "grown" in quartz-epidote areas. No other sulphides are evident.

312 - 409 Granville Street

CERTIFICATE OF ASSAY

Samples submitted: Sept. 10/74

Results completed: Sept. 23/74

Vancouver, B. C.

V2C 1T2

SEP 24 1974

I hereby certify that the following are the results of assays made by us upon the herein described sludge samples.

=MARKED	GOLD		SILVER								TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
P74-1	10 - 20	0.01	0.02								
	20 - 30	0.02	0.05								
	30 - 40	0.02	0.02								
	40 - 50	0.02	0.03								
P74-2	10 - 20	0.02	0.02								
	20 - 30	0.06	0.03								
	30 - 40	0.02	0.02								
	40 - 50	0.02	0.02								
P74-3	140 - 150	0.02	0.02								
	40 - 50	0.04	0.08								
	50 - 60	0.01	0.03								
	60 - 70	0.01	0.07								
	70 - 80	0.06	0.09								
	80 - 90	0.01	0.02								
	90 - 100	0.02	0.03								
	100 - 110	0.005	0.02								
	120 - 130	trace	trace								
	150 - 160	0.01	0.05								
170 - 180	0.01	0.02									
190 - 200	0.02	0.02									
200 - 210	0.01	0.02									


 Registered Assayer, Province of British Columbia

To: Du ex Resources Ltd.

REPORT No A2/ 701

PAGE No. 1

BONDAR-CLEGG & COMPANY LTD.

DATE: Sept. 24, 1974

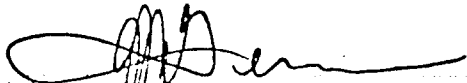
312 - 409 Granville Street
Vancouver 2, B.C.

CERTIFICATE OF ASSAY

Samples submitted: Sept. 11, 1974
Results completed: Sept. 24, 1974

I hereby certify that the following are the results of assays made by us upon the herein described sludge samples.

MARKED	GOLD		SILVER								TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
P 74-2	50-60	0.010	0.02								
	60-70	0.030	0.02								
	70-80	0.015	0.02								
	80-90	0.015	0.02								
	90-100	0.015	0.02								
	100-110	0.010	0.01								
	110-120	0.010	0.02								
	130-140	0.010	0.01								
	150-160	0.015	0.01								
	170-180	0.015	0.02								
	180-190	0.010	0.02								
	190-200	0.005	0.01								
	240-250	0.035	0.02								
	260-270	0.020	0.02								
P 74-3	15-20	0.010	0.02								
	20-30	0.010	0.02								
	110-120	0.005	0.01								
	140-150	0.005	0.01								
	160-170	0.005	0.01								
	180-190	0.020	0.02								
	210-220	0.010	0.01								
P 74-4	10-20	0.030	0.02								
	20-30	0.015	0.02								
	30-40	0.020	0.02								

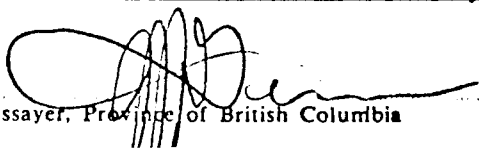

Registered Assayer, Province of British Columbia

CERTIFICATE OF ASSAY

I hereby certify that the following are the results of assays made by us upon the herein described sludge samples.

MARKED		GOLD		SILVER							TOTAL VALUE PER TON (2000 LBS.)
		Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	
P 74-4	40-50	0.040		0.02							
	50-60	0.070		0.02							
	60-70	0.025		0.02							
	80-90	0.010		0.02							
	120-130	0.080		0.06							
	130-140	0.020		0.02							
	150-160	0.010		0.01							
	160-170	0.015		0.01							
	170-180	0.020		0.02							
	190-200	0.020		0.02							
	210-220	0.020		0.02							

P74-4
 7.0282 AVER.
 5.0269


 Registered Assayer, Province of British Columbia

312 - 409 Granville Street
Vancouver, B. C.

CERTIFICATE OF ASSAY

Samples submitted: Sept. 12, 1974
Results completed: Sept. 27, 1974I hereby certify that the following are the results of assays made by us upon the herein described sludge samples.

MARKED	GOLD		SILVER								TOTAL VALUE PER TON (2000 LBS.)
	Ounces per. Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
P74-2	120 - 130	0.010	0.02								
	160 - 170	0.025	0.02								
	200 - 210	0.010	0.02								
	210 - 220	0.010	0.02								
	220 - 230	0.015	0.02								
	230 - 240	0.095	0.04								
	250 - 260	0.045	0.03								
P74-3	30 - 40	0.030	0.06								
	130 - 140	0.010	0.01								
	220 - 230	0.015	0.02								
	230 - 240	0.010	0.02								
	240 - 250	0.005	0.02								
P74-4	70 - 80	0.025	0.02								
	90 - 100	0.020	0.02								
	100 - 110	0.010	0.01								
	110 - 120	0.065	0.07								
	140 - 150	0.030	0.02								
	180 - 190	0.025	0.03								
	200 - 210	0.025	0.02								
	220 - 230	0.020	0.02								
	230 - 240	0.020	0.02								
240 - 250	0.035	0.02									