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Report on
ERICKSEN CREEK PROPERTY
Cassiar District, B.C.
for
Nu Energy Development Corporation Ltd. (NPL)

by
J. M. Black, P.Eng.,Ph.D.

May 24, 1977

somewhat similar in appearance. To the extent that this resemblance is in value

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CONCLUSIONS

1) The vein being explored occupies an important fault zone continuously for over 420 feet and down the dip for over 400 feet.

2) An ore shoot with a grade of 1.55 oz. gold per ton and 1.48 oz. silver per ton, across an average width of 4.3 feet, is indicated. Half of the samples used in the calculations came from the lower margin of the ore shoot and are probably not as high grade as samples would be that included some from the central part of the shoot. Also, the recovery of the vein in some holes was poor and some values may have been lost.

3) An extension of the vein westward, above a section of the vein already drilled, probably will be found to be of ore grade.

4) Other shoots may be found along strike or down dip where favorable conditions exist.

5) The vein has many voids and vugs and these are filled with water, probably enough to make the vein a conductor and therefore detectable by a V.L.F.-E.M. survey.

6) The vein strikes from West 20° South to West 30° North and has a curved trace.

7) The ore shoot occurs where the vein curves.

8) The vein continues strongly beyond the shoot and section explored. This shows that in this and other similar veins on the property, a low-grade section does not disprove the existence of an ore shoot elsewhere in the vein.

9) Four other veins on the property with similar attitudes, are exposed for very short lengths. They may also contain ore shoots.

RECOMMENDATIONS

1) Explore for the extensions of the Jenny vein and other known and any unknown veins with a geophysical survey.

2) Map geology in order to use geology as a guide in exploration and to determine, if possible, controls of mineralization.

3) Do detailed geochemical survey of selected areas if necessary to check geology or geophysics.

4) Trench indications of veins to find out what they are like.

5) Drill extensions of the Jenny vein and any other veins to find ore shoots.

6) Drill the central part of shoot marked area A and the probable extension westward marked area B.

7) Raise up in the Jenny vein to explore between the lower and upper parts of the shoot. This raise will decrease the number of holes needed. Also, it will provide more adequate samples than does drill core and will provide a representative sample through the shoot that can be used for recovery tests. The raise can be designed so that it can be used later for production.

INTRODUCTION

The location and access are described in earlier reports.

The Ericksen Creek property of Nu Energy Development Corporation continues to be explored with encouraging results. It has been reported on in March 1976 and September 1976 and March 1977. This report presents results to date and a longitudinal section through the vein.

In January and February this year a cross-cut was driven from a point about 200 feet lower than the surface showings. A vein was cut 630 feet from the portal. Its attitude is different from that of the Jenny vein near the surface. This vein was named the Valentine. It was followed in a drift for 120 feet and much farther by drill holes. A dyke is alongside it or in it.

Subsequently, 22 holes were drilled toward this vein. A few did not reach it or core it. This drilling showed that the attitude at the cross-cut is restricted and that the general attitude is similar to that of the Jenny. Also, it is aligned with the Jenny and therefore it is believed to be the downward extension of the Jenny. The name Valentine has been abandoned.

The Jenny vein has been described in the earlier reports. The present work shows that it continues along strike for over 420 feet and continues down dip for over 400 feet. It does not appear to be disrupted. It is an important vein, occupying an important fault.

Five holes were drilled southward from south of the vein to seek the extension downward of the vein exposed at the surface. These holes did not core any important veins. This is taken as confirmation of the fact that the Jenny vein dips steeply to moderately northward and becomes the vein in the drift.

The long cross-cut exposes the rock for over 600 feet north of the vein. Only minor veins are exposed. The work north and south of the Jenny shows that the fault and the Jenny vein in it, are exceptional and are likely to continue for a considerable distance.

JENNY VEIN

The vein near the surface curves from about West 20° South to West 30° North. At the adit level it curves less. At the adit, it is dipping southward. However, this is only for a short distance and above this and below this it dips northward.

The reason for the change in attitude is not known. It can only be conjectured until more is known about the attitude of the vein beyond the length so far explored. If the curving attitude was caused by forces after the fault formed, the lengthening may have caused fracturing near the fault, which was favorable to subsequent mineralization. However, the attitude may have changed due to different formations that the fault crosses.

Where exposed at the cross-cut, the vein contains native gold. The vein is described in the March 1977 report and earlier reports. It is strong at the present limits of exploration, with no indication that it is weakening. It is likely that the fault and the vein that occupies it extend for a considerable distance. Below the one shoot found so far, the vein splits.

If the cross-cut had been driven a few feet lower, it would have exposed the Jenny vein, where it is thin and low-grade. This shows that each vein of this type in this camp merits exploration. This does not apply to narrow veins not occupying faults and otherwise lacking the characteristics of this ribboned vein.

WALL ROCK AND ALTERATION

The wall rock at the adit level is tuffaceous. Some beds are massive. One sequence comprises many thin beds. Some are argillaceous. No distinctive bed has been recognized and the structure is not known.

The beds are relatively soft and have not been silicified to the same extent as the ones near the surface. Some schist and talcose sections were noted. The rock at this level appears to be less competent and this may be a reason why the ore shoot is much shorter.

VALUES

The distribution of gold in detail is erratic.

The grade in the drift is substantially lower than in the near surface

section of the vein. The drift happens to be at the lower edge of the ore shoot, just above where it thins out.

Some of the holes that cored little or low-grade vein, may not have recovered all the core because faults parallel the vein and some of the core tends to be broken and to become ground up.

It has been the experience on a nearby property, and in other camps with native gold in veins, that results from drill intersections tend to be low compared with results obtained later from development or mining. If this holds true also for this vein, the drill results may be lower than the true values.

Holes drilled below the level, cored narrow, generally low-grade sections. Holes drilled above the level, cored higher grade sections. Cores east andwest of a central section, are of lower grade. It appears that the lower limit of the ore shoot is as shown on Figure 2. This is a longitudinal section, with drill intersections projected onto a curving plane that approximates the curvature of the vein.

The lower shoot probably continues upward to join the shoot indicated by the surface drill holes. The section of vein between the two indicated shoots (area A) needs to be explored by drill holes and/or a raise.

The values generally increase upwards. A good example of this is seen in holes 10, 8, 7 and 9. This is their order from bottom to top and each one is better grade than the one below it. It is likely that a hole a few feet higher would have cored the vein where it is ore grade.

Generally, samples close to the outline of the shoot are higher grade than those from furtheraway. From this it can be postulated that the central part of the shoot may be the highest grade and conditions for ore formation were optimal there.

Within the shoot, grades are highest and the vein is widest where intersected in holes 6, 10 and 11 - 1976. These are towards the west end of the upper part of the shoot and they are almost directly above the central part of the shoot at the adit level. If these are near the central part of the shoot, vein of good grade may extend westward for a considerable distance. (See area B, Figure 2.)

The upper part of the shoot probably has been removed by erosion.

Almost one half of the samples used in the calculations for the ore shoot, are from the lower margin where it is thin. Presumably these samples are lower grade than samples from more widely-spaced points in the shoot.

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ORE SHOOT

The shape is of interest. The shoot is long near the surface where the strike changes markedly. The shoot is short at the adit level where the strike changes less. It may be that the forces that curve the fault, may have caused fracturing that provided easy access for mineralizing solutions.

The shape of the shoot, or the eastern half of the shoot, as now postulated, corresponds to the curvature of the fault. However, silicification and alteration may also have controlled mineralization. Near the surface silicification is widespread and, at the adit, is essentially absent.

OTHER VEINS

See Figure 1.

A is several feet wide and is exposed for only a few feet in a small gully.

B has been explored by some trenches. It contains some tetrahedrite.

C is up to 10 feet wide. No mineralization was seen in it.

D is a vein on claims explored some years ago. It is reported to contain native gold.

J. M. Black, P.Eng., Ph.D.
Consulting Geologist
May 24, 1977

Samples used to calculate average grade

Hole No.	Sample #	True Width Ft.	oz. gold/ton	oz. silver/ton
75 1	37137	1.75	1.908	1.21
75 2		3.5	0.996	1.29
76 1	S-B.9 July 13	4.2	1.32	0.425
76 2	S-3 July 19	4	4.36	1.08
76 4	48526	5	0.168	0.13
76 5	48525	3.3	0.358	0.18
76 6	48519-22	10.5	1.98	5.72
76 8	48512	5.8	0.484	0.38
76 9	48510	3.6	0.502	0.90
76 10	48507-09	15	1.405	1.339
76 11	48504-05	7.8	4.32	3.36
76 12	48501	1.3	4.01	1.12
Drift	53826) 53828)	2.25	0.496	0.22
"	53829	3	0.738	0.28
"	53830	2.5	4.174	0.86
"	53831	3.5	1.314	0.61
"	53853	2.25	0.434	0.32
"	53855	2.0	0.542	0.24
77 3	53905	1.7	0.525	0.29
77 4	53907-09	4	0.406	0.476
77 17	53960	5	0.834	0.735
77 20	53964	2.75	0.768	0.39
	Average	4.3	1.55	1.48

somewhat similar

Samples not used to calculate average grade

Hole No.	Sample #	True Width Ft.	oz. gold/ton	oz. silver/ton
75 3	37162	2	0.272	0.02
76 3	48529	1.8	0.152	0.15
76 7	48513	1	0.058	0.46
76 14	48585	2	0.012	0.16
76 17	48578	1.2	0.118	0.44
76 18	48581	1.6	0.19	0.47

DDH 76 13 blocked and did not reach vein.
DDH 76 15 & 16 were drilled away from the vein.

77 1	Did not core vein.			
77 2	53902	0.3	0.610	0.37
77 7	53927	2.4	0.068	0.20
77 8	53928	0.8	0.012	0.02
77 9	53932	5	0.228	0.22
77 10	53934	1.5	0.008	0.01
77 12	53939	3	0.028	0.03
77 13	53947	0.9	0.012	0.45
77 14	53954	5	0.084	0.18
77 16	53955	4.5	0.158	0.42
77 18	53961	2.5	0.014	0.03
77 19	No vein			
77 21	53966	1	0.286	0.25
77 24	53974	sludge	0.01	0.02
77 25	53976	1	2.045	2.06
77 26	53982	2	0.010	0.03
77 27	53985	1	.01	0.005

DDH's 5, 6, 15, 22 and 23 were drilled south, south of the vein.

Samples in drift from west to east:

53888	1.3	0.164	0.22
53887	2.8	0.072	0.20
53851	2.75	0.242	0.04
53857	3	0.049	0.02
53860	2	0.260	0.20
53862	1.5	0.194	0.19
53864	1.75	0.196	0.29
53868	0.5	0.232	0.41
53869	1.5	0.014	0.03
53874	1	0.026	0.04
53875	1.9	0.003	0.02
53878	1.6	0.012	0.03
53882	3.3	0.02	0.08

See GC 123, 1977
176, 1977

Otis Bloom

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This information on Canadian Gold Producers (December 31, 1973) is included as a basis of comparison. Also, these mines hoist their ore from underground. As we are on the side of a mountain, no lifting of the ore in shafts will be necessary, thus our mining costs should be less.

Principal Canadian Gold Producers, Grade, Tonnage and Reserves 1974

Company and Location	Mill or Mine Cap. (tons/day)	Grade Gold (oz./ton)	Ore Treated (tons)	Gold Produced (troy ounces)	Reserves (as of Dec. 31, 1973 unless otherwise noted) (millions of tons/troy oz Au/ton
Agnico-Eagle Mines, Joutel, P.Q.	1000	0.250	194,702	31,079	2.7/0.329 drill ind. & Poss.
Camflo Mines Ltd., Malartic, P.Q.	1000	0.216	377,521	81,589	2.6/0.22 ind. & proven
East Malartic Mines, Malartic, P.Q.	1800	0.099	516,711	42,248	2.7/0.123 prov. broken and in place
Lamaque Mining (Teck) Val d'Or, P.Q.	2100	0.113	527,000	55,850	.585/0.145 as of Sept. 30/73
Norban Gold Mines, Malartic, P.Q.	355	0.110	96,133	10,347	.025/0.10
Sigma Mines, Val d'Or, P.Q.	1400	0.153	498,410	73,019	1.24/0.220 broken & in place
Madsen Red Lake (Bulora), Red Lake Ont.	800	0.257	90,127 note(a)	22,195	0.22/0.22
Campbell Red Lake, Red Lake, Ont.	800	0.743	289,833	197,369	1.48/0.699 bkn & in place
Dickenson Mines, Red Lake, Ont.	470	0.388	105,563	37,640	0.344/0.472
Dome Mines Limited, South Porcupine, Ont.	1900	0.178	701,600	121,032	1.69/0.255
Hollinger Mines Limited, Ross mine, Holtyre, Ont.	450		115,000		0.336/0.193
Kerr Addison Mines Limited, Virginiatown, Ont.	760	0.40	277,000	108,820	1.351/0.54 (1973)

Note (a) 8½ months production

Principal Canadian Gold Producers, Grade, Tonnage and Reserves 1974

Company and Location	Mill or Mine Cap. (tons/day)	Grade Gold (oz./ton)	Ore Treated (tons)	Gold Produced (troy ounces)	Reserves (as of Dec. 31, 1973 unless otherwise noted) (millions of tons/troy oz Au/ton
Pamour Porcupine Mines Limited, Nos. 1, 2 & 3 mines, Pamour, Ont.	2500	0.115	859,525	91,571	2.908/0.17 - all prop. 1.454/0.112 (Pamour)
Robin Red Lake Mines Limited, Red Lake, Ontario	124	0.730	45,446	30,454	0.103/0,834
Willroy Mines Limited, Macassa Div. Kirkland Lake	500	0.508	90,186	43,611	0.248/0.5684
Cominco Ltd., Con and Rycon Mines, Yellowknife, N.W.T.	500	0.60	145,000	82,650	1.2/0.62
Giant Yellowknife Mines Limited, Yellowknife, N.W.T.	1000	0.32	254,918	71,095	0.991/0.36
Lolor Mines Limited, Yellowknife, N.W.T.	70	0.286	25,460	6,367	0.094/0.37
Supercrest Mines Limited, Yellowknife, N.W.T.	131	0.578	47,721	24,052	0,088/0.62

Sources: Canadian Mineral Yearbook, G.S.C. 1974, Gold
Canadian Mines Handbook, Northern Miner, 1974-75

October 11, 1977

, the directors of Nu-Energy Development Corporation

The most westerly holes drilled to the Jennie vein, have intersected it ; what appears to be a third ore shoot. This is about 900 feet west of the ly outcrops of the vein.

The vein here continues strongly and it has the same appearance and haracteristics as previously described, that is, it pinches and swells and hanges attitude.

An intersection in DDH 56 runs 1.188oz. Au/ton across 0.6 m. or 2 ft. bout 60 ft. further west in hole 58, a very high grade section of 0.23 m. or runs 18.078 oz. Au/ton. These intersections are about 360 feet below the rface. About 50 ft. below those two intersections, the vein thickens to about 0 ft. and some sections are mineralized.

East of those are deeper intersections. In hole 55, 1.26 m. or 4.1 ft. uns 0.264 oz. Au/ton. In hole 54, 0.6 m. or 2 ft. runs 0.412 oz. Au/ton. hese intersections are over 500 feet below the surface.

Holes 56 & 58 intersect the vein where its attitude changes, and this area resents a good target for exploration. Holes 55 & 54 are 150 ft. apart and the rea near them is also a good target.

At the most westerly point drilled, from the sub outcrop of the vein down to the deepest point intersected on the vein is over 180 m. or 600'. The slope distance is over 700 ft.

The much greater dimensions now established for this vein have greatly increased the potential tonnage. Some holes now being drilled at higher levels will permit the upward extension of the 3 ore shoots to be determined.

Insert Report Oct 27/77 2p

J. M. Black, P.Eng.