NU-ENERGY DEVELOPMENT - McDAME PROPERTY

EXCERPTS FROM J. M. BLACK'S REPORTS:

AND ASSESSMENT BY D. H. BROWN

January 24, 1978 N.T.S. 104/5E.

104P5-E

REPORT ON

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The following is an excerpt covering location, early history, 1975-76 program, geology and geochemistry from Dr. J. Black's Sept./76 report.

INTRODUCTION

The Jennie vein outcrops near Erickson Creek, about eight miles south-southeast of the community of Cassiar. In 1973, after a long period of inactivity, interest in this vein was resumed. That year some trenching was done and a limited geochemical survey carried out. In 1975 the vein was drilled. This work has been reported on by K. L. Daughtry, P.Eng. and by J. M. Dawson, P.Eng. Work was continued this year and this report describes results to date.

PROPERTY

It comprises three Crown-granted claims, eight old style claims and four new claims of seventeen units.

EARLY HISTORY

The vein was discovered in 1936 by prospectors. It appears to dip moderately northward. It was drilled in 1937. Some of the holes were not drilled far enough to intersect the vein because, as is now known, it dips steeply. After this a short adit was driven toward the vein. It also was stopped short of the vein. Subsequently, about 130 tons were mined from surface outcrops and milled in a small mill brought to the site.

1975-76 PROGRAM

In 1975, 700 feet of percussion drilling was done in six holes and 755 feet of diamond drilling was done in three holes. This year, 1,300 feet of diamond drilling was completed in eighteen holes. Of these, fifteen cored the vein. No. 13 is in very blocky ground and could not be completed to the vein. Nos. 15 and 16 were drilled near Erickson Creek, where a reversal of dip was suspected. They were drilled northward and the

vein also dips northward and the vein was not reached by them.

In addition, the geology near the vein was mapped and a geochemical prospecting program was carried out to look for evidence of any veins like the Jennie.

GEOLOGY

The rock exposed near the creek and cored in the drill holes is dark and thin-bedded. It is predominantly an impure argillite and is now almost slate. Thin ashy beds are also present.

The beds generally are gently dipping. Locally they dip steeply, possibly caused by drag along minor faults.

The rocks have been intensely fractured and large amounts of silica have been introduced. Some has replaced the rock minerals and the rest has formed veins. Most of these are narrow and are only an inch or so wide. They have a great variety of attitudes. Some of them are essentially parallel to the Jennie vein. Most of them comprise only quartz and minor carbonate. The Jennie vein differs inasmuch as it is generally much wider and, wherever it is cored, it is mineralized.

Some copper mineralization occurs near the Jennie vein, especially in the hanging wall and elsewhere on the property. Its presence is marked by a bright green stain caused by thin films of malachite.

GEOCHEMISTRY

Soil samples taken on traverses of the area, mostly north of the Jennie vein, and silt samples taken from Erickson and other creeks generally contain only small amounts of gold and copper. Greater amounts are present in Erickson creek below the Jennie vein and can be attributed to it. A few samples from south of the vein, that is uphill from it, are also anomalous and, therefore, this area is worthy of more prospecting.

The following is an excerpt from Dr. Black's April 4, 1977 report:

"INTRODUCTION

The Erickson Creek property of Nu-Energy Development Corporation continues to be explored with encouraging results. At a depth of 225 feet below the apex of the Jennie vein and at a level about 125 feet below the bottom of the drill intersections, a cross-cut adit has been driven south-southeastward. At a point 630 feet from the portal, it exposes a vein 2 to 3 feet wide. It was discovered on Valentines Day, and has been named the Valentine Vein. It is the first exposure underground of a vein on this property.

It contains free gold. This is significant because it establishes the fact that the gold occurs free in these veins below the level of weathering and is not limited to near-surface exposures where it has been freed from sulphides by weathering processes.

GEOLOGY

The rock in the cross-cut comprises impure tuffs. In part these are massive. Elsewhere they are thin-bedded. No distinctive bed or group of beds has yet been identified."

Dr. Black goes on to describe the Alteration thusly:

"Near the ——— Jennie Vein explored in 1976, silicification is widespread. This may have had the desireable effect of transforming relatively weak beds into a hard, competent suite of beds.

The beds near the veins have been otherwise altered. This is most noteable in the hanging-wall of the Jennie Vein at and near the surface. However, it also occurs underground where the rock is greenish

colored, largely because of the presence of mariposite mica. In small part it is due to the presence of minute grains of tetrahedrite which have become surrounded by haloes of malachite.

The green-colored alteration is exposed fairly abundantly to the west of the present exploration area. This suggests that favourable alteration zones extend westward on the property.

The following is an excerpt from Dr. Black's May 24, 1977 report:

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.

Dr. Black goes on to make the following points:

1. Drill hole vein intersections tend to assay lower than channel samples of vein underground due to losses of fine free gold and tetrahedrite which is very friable and difficult to core.

2. Values generally increase upward in a given ore shoot. On the basis of drilling done below the adit level, Dr. Black surmises that the economic bottom of No. 1 Ore Shoot is at or near the drift level.

3. In his May 24, 1977 report, Dr. Black makes the following recommendations (among others).

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.

Nu-Energy Property Examination by D. H. Brown

The Nu-Energy property on Erickson Creek, McDame Area (NTS 104P/5E) was visited between January 4 and January 6, 1978 in the company of Jim Black, consultant for that company.

Thursday morning, Jan. 5th., accompanied by Jim Black, Dave and Kristian Ross, Bill Botel and Brodie Hicks representing Royal Bank interests, went underground and examined all openings.

The vein varies in width on the adit level from 20 cm. (8") to 240 cm. (8') and dips at angles from 85° S. on the east end through vertical (in a distance of 7.6 m.) then from vertical to 45° N. at the west face (Jan. 5th.). A diabase dyke varying in width from 30 cm. to 1 m. occupies the same structure as the vein at the drift horizon but varies in dip so that at times it is present near the foot wall of the vein and at other points is present near the hanging wall or cuts the vein off at the hanging wall and enters the volcanic sediments.

The vein appears to be in a fault structure which is also occupied by the diabase dyke. The structure undulates and the dyke within the structure varies in thickness producing highly variable dimensions to the mineralized quartz vein in the two dimensions of the drift. If the vein is as variable in dip direction it would produce ore shoots with no more than 10 to 15 m. in length and breadth and averaging approximately 1.5 m. in thickness or approximately 60 tons (m.)

Although Mr. Dave Ross is currently negotiating the purchase of Silver Standard's Van Silver mill near Smithers at a bargain basement price and has been assured it can be transported to McDame for less than $5,000 it seems impractical to proceed to production before exploring the dip dimension with raises. It is Nu-Energy's intention to bring in an underground diamond drill to do some definition drilling.

However, even this cannot possibly outline the ore shoots with any certainty and they would be better advised to revert to raises and sublevels for this information. (Although Dr. Black recommended doing some raising on the vein in his April 1977 report, he now seems to have been subdued by Dave Ross and the other Company directors into agreeing to go straight to production.)

More Recent Developments

Drifting was resumed January 6th and was continued until January 12th. during which time the drift was advanced 34 metres or 115 feet. Although the first round exposed vein material running 1.07 Au., .43 Ag. over .38m. it did widen out (I am told) to 2.4 m. in the last round before drifting was suspended.

The drift now exposes the Jennie vein for 175 metres or 575 feet. In the first 112 m. or 365' it is stated that there are five sections with an average grade of 1.21 oz. Au. and 0.68 oz. Ag. per ton, with an average width of 100 cm. or 3.28'.

CONCLUSIONS

1. To date the 175 m. of the Jennie Vein exposed contains six sections of ore-grade mineralization averaging 12m. in length and 1 m. in width containing 1.2 oz. Au. and 0.7 oz. Ag.

2. The vein undulates along strike and swells and pinches in both the strike and dip directions. Although the vein is in a strong, continuous fault structure, the structure is also occupied by a late dyke which would either produce dilution or cause mining problems in extracting the vein material on either side of it.

3. Without testing any of the 'ore shoots' along the dip direction of the vein by raising it is questionable whether any of the 'shoots' will produce more than 60 to 100 m. tons before pinching out. To commence production with no better certainty than this appears to be impractical and definitely overoptimistic.

D. H. Brown, P. Eng.

File No: 1555

November 14th, 1977

Nu-Energy Development Corporation,
203 - 1209 East 4th Street,
North Vancouver, B. C.
V7J 1G8

Attention: Mr. Dave Ross

Dear Sir,

We have carried out a preliminary beneficiation test on a sample of ore from your Table Mountain prospect to establish the manner in which this material could be processed.

The sample tested consisted of approximately twenty pounds of mineralized quartz which you delivered to our office. The entire sample was crushed to minus ¼ inch and a 2000 gram portion was split for testing.

The sample was ground in a laboratory rod mill for 15 minutes to give a flotation feed of 30% by weight minus 200 mesh. This material was found to be very hard and power consumption for grinding can be expected to be a significant cost.

The ground sample was subjected to flotation and jigging. The flotation conditions and test results are appended to this report.

The total recoveries in the flotation and jig concentrates was 98.6% for gold and 87.7% for silver.

The flotation concentrate was also assayed for copper and found to contain 15.22% Cu. By using a cleaner flotation stage in addition to the rougher stage used in this test, a material which can be marketed as a copper concentrate can likely be produced. Before marketing agreements can be entered into, it will be necessary to produce sufficient concentrate so that minor constituents can be assayed for.

... 2

The jig concentrate can also be improved on so that less than 500 pounds of jig concentrate are produced from 100 tons of ore.

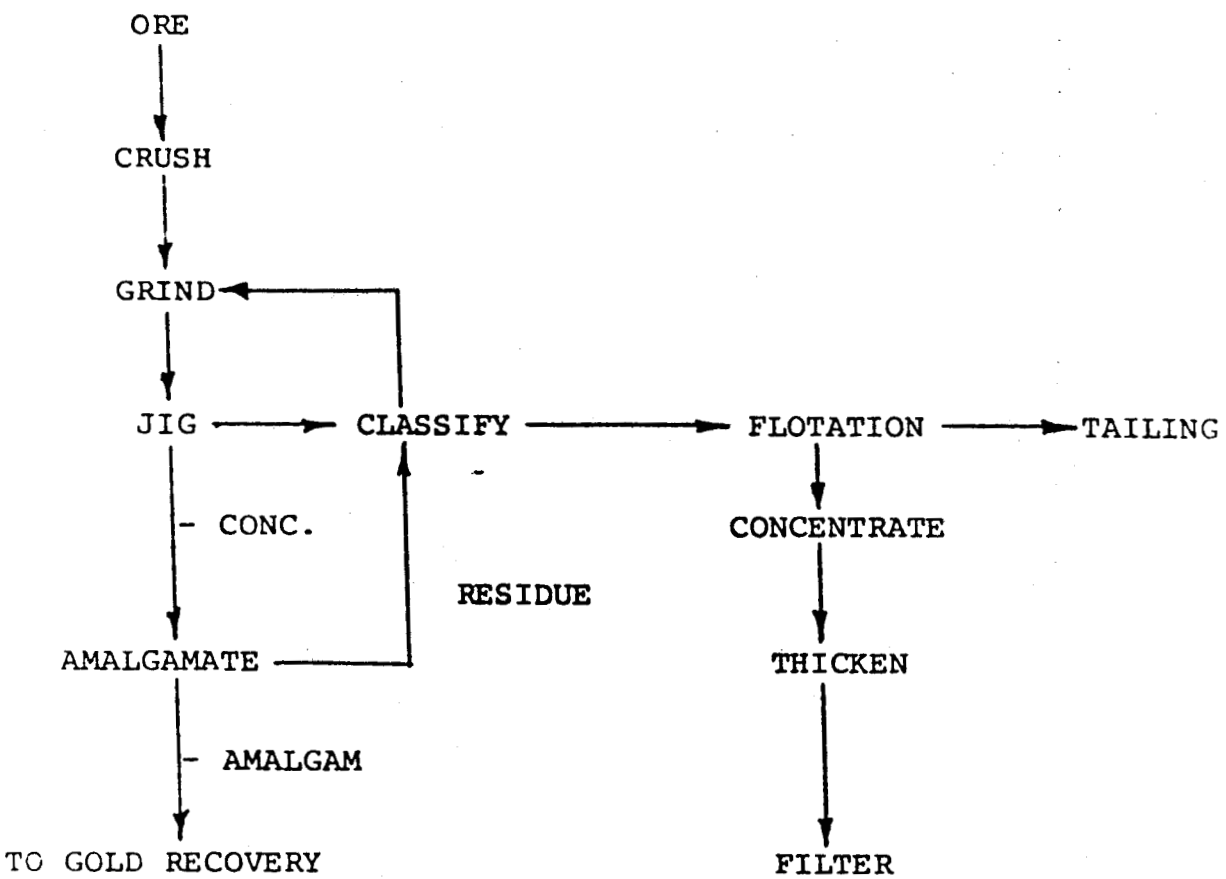
A simplified flowsheet is enclosed with this report. Crushing can best be carried out in two stages, a jaw crusher followed by a cone crusher in closed circuit with a screen. Jigging will likely be most effective in two stages, a rougher jig and a cleaner jig. For a small operation (less than 300 TPD) a spiral classifier is recommended, rather than a cyclone. Amalgamation can be carried out in a Denver type amalgamation barrel. This is followed by treatment of the amalgam to recover both the gold and mercury. Flotation should consist of both rougher and cleaner stages to produce a suitable product. The concentrate can be stored and partially dewatered in a thickener and then filtered.

When you obtain suitable samples from your underground work, we would be pleased to carry out more detailed testwork to establish additional operating conditions and provide further design data.

Yours truly,

BACON, DONALDSON & ASSOCIATES LTD.

M. J. Vreugde, P. Eng.



SIMPLIFIED FLOWSHEET FOR GOLD RECOVERY

FLOTATION PROCEDURE:

Conditioning - 2 minutes
Soda Ash to pH = 9.5
0.05 lb/ton 3477
Aerofroth 65 as needed

Flotation - 15 minutes

RESULTS:

		Assay oz/ton		Units		Distribution	
PRODUCT	Wt.%	Au	Ag	Au	Ag	Au	Ag
Flotation Conc.	2.1	87.216	298.91	183.15	627.71	30.9	79.2
Jig Conc.	2.8	143.165	24.06	400.86	67.37	67.7	8.5
Jig Cleaner Tail	3.3	.306	.44	1.01	1.45	.2	.2
Tailing	91.8	.076	1.04	6.98	95.47	1.2	12.1
Head		5.92	7.92	5.92	792.		

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 23	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

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

Otis Bloom

common. Also the veins have a similar ribboned appearance and a scanty proportion

LONGITUDINAL SECTION ALONG JENNIE VEIN

LOOKING NORTH SHOWING ASSAY RESULTS AT VEIN INTERSECTIONS

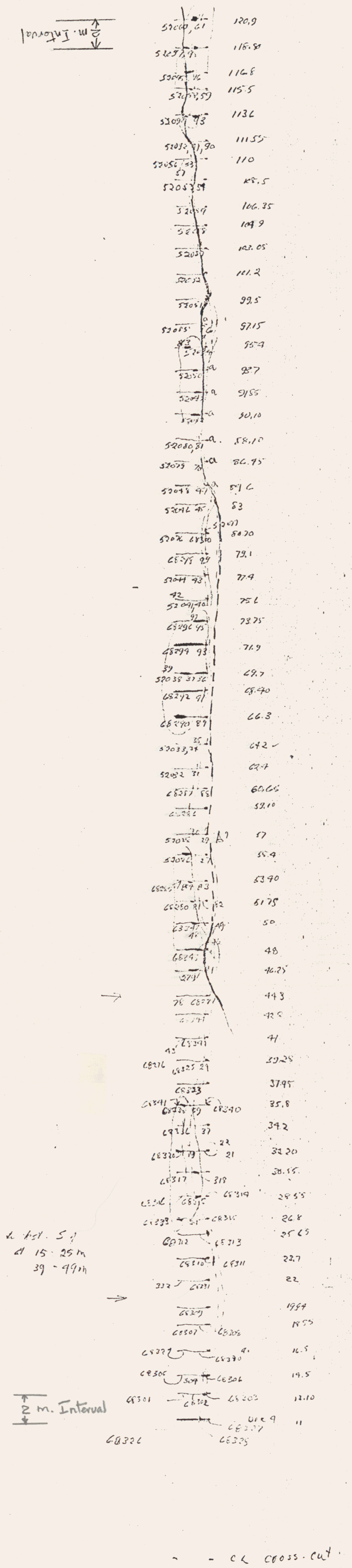
NU ENERGY DEVELOPMENT CORP.

NOV. 9, 1977 J M BLACK P.ENG

SCALE 1:300 METERS

LEGEND

	METERS	OZ AU/TON	OZ AG/TON
⊙ VEIN INTERSECTION	0.13	0.67	0.42



No.	Cm.	Au.	Ag.
61	20	.082	.14
52060	50	8.108	2.24
98	10	.390	.43
52097	45	.218	.30
96	10	.072	.20
52095	62	.308	.26
59	30	.152	.15
52058	35	.024	.10
? dyke 94	51	.005	.03
93	29	.276	.08
92	04	.010	.02
91	15	.064	.05
52090	85	.003	.02
57	50	.022	.06
56	90	.010	.07
52055	20	.056	.14
54	70	.005	.01
52053	20	.016	.05
52089	145	.005	.03
? dyke only 52088	54	.003	.08
52087	55	.034	.13
52052	25	.003	.01
52051	–	.028	.05
86	55	.003	.12
52085	130	.003	.01
52084	76	.034	.06
83	36	.118	.18
52050	90	.180	.14
52049	30	.486	.20
52082	74	.875	.40
81	40	.036	.10
52080	110	.062	.32
79	140	.056	.08
52078	50	.024	.07
78	160	.128	.09
52077	60	.005	.02
46	190	.01	.01
52045	55	.04	.02
077	15	.02	.08
52036	104	.040	.05
68300	34	.096	.12
99	90	.028	.04
68298	106	.003	.01
44	140	.036	.05
52043	100	.038	.06
42	75	.074	.05
41	50	.005	.01
52040	115	.02	.01
97	25	.112	.10
96	110	.156	.14
68295	104	.804	.70
94	110	2.620	.86
68293	130	6.508	2.508
39	30	.007	.02
38	65	1.005	.70
37	10	.098	.14
52036	120	1.510	.77
92	115	.276	.23
68291	120	.168	1.37
90	105	5.096	2.43
68289	87	.039	.06
35	25	.03	.18
34	50	.03	.01
52033	95	.336	.21
32	80	.068	.05
52031	60	.036	.06
88	30	.010	.03
68287	130	.020	.01
68336	110	.032	.01
30	61	.005	.01
29	25	.003	.03
52028	56	.014	.03
27	45	.022	.34
52026	110	2.108	1.34
85	80	.072	.07
84	35	.110	.09
83	33	.036	.05
68282	33	.088	.02
81	43	.108	.08
68280	35	.040	.02
49	25	.005	.20
48	110	.082	.10
68347	100	.109	.25
46	40	.322	.38
68345	80	.258	.16
68279	130	.364	.18
78	102	.036	.01
68277	90	.054	.01
68344	170 (110?)	.003	.01
43	80	.005	.02
68342	80	.005	.01
68326	170	.003	.03
25	99	.003	.08
68324	57	.003	.05
68323	130	.003	.03
41	20	.007	.01
40	20	.005	.03
39	20	.012	.08
68338	110	.534	.23
37	80	.005	.04
68336	80	.003	.01
33	95	.02	.01
31		.003	.02
30	101	.134	.10
19	35	.003	.02
18	35	.396	.41
68317	105	<.003	.01
16	82	.02	.16
15	26	2.772	1.37
68314	52	.016	.01
35	–	.003	.01
68334	45	.010	.05
68333	150	.216	.18
13	125	.02	.014
68312	179	.06	.042
311	–	.03	.005
68310	235	.01	.01
68332	120	.012	.03
68331	120	.022	.08
68309	248	.05	.005
308	45	.05	.06
68307	256	.034	.07
30	100	<.003	.07
68329	190	<.003	.05
06	–	.188	.10
05	60	.01	.01
68304	100	.054	.04
03	–	.036	.09
02	110	.04	.08
68301	170	.056	.06
28	90	.019	.14
27	20	.092	.07
68326	135	.178	.20
No	Cm.	Au	Ag