

LOG NO: 17-01

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FILE NO:

KOKANEE EXPLORATIONS LTD.

REPORT ON DIAMOND DRILL HOLES E90-4 AND 5

**ENG PROPERTY**

ENG 2 CLAIM

FORT STEELE MINING DIVISION

YAHK AREA

N.T.S. 82F/1E

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

LAT: 49°04'N

LONG: 116°05'W

**20,828**  
OWNER

KOKANEE EXPLORATIONS LTD.

Suite 104, 135 - 10th Avenue South  
Cranbrook, B.C.  
VIC 2N1

Work Performed from August 26, 1990 to September 5, 1990

Report: L. Stephenson  
Submitted: December, 1990

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KOKANEE EXPLORATIONS LTD.

REPORT ON DIAMOND DRILL HOLE E90-4 and 5

ENG PROPERTY

L. Stephenson

December, 1990

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1.00      Introduction

This report has been written to outline the exploration drilling work and results on the Eng claim group, at Yahk, British Columbia, 50 kilometres south of Cranbrook.

2.00      Claims

The property consists of three 4-post claims (Eng 1 = 15 units, Eng 2 = 16 units and Eng 205 = 20 units) and 206 2-post claims (Eng 3 to 204 and Eng 205 to 209) held directly by Kokanee Explorations Ltd. and eight 2-post claims (Yahk 1 to 8), under option.

3.00      Access and Location

These claims are located astride British Columbia Highway 3/95 around the town of Yahk, in southeastern British Columbia (see Location Map). Kokanee has built access roads into the main areas of the claim groups.

4.00      Regional Geology

The claims lie within the central portion of the Purcell Anticlinorium, which consists of sedimentary argillites, quartzites and related intruded gabbro sills and dykes of the Aldridge Formation. This formation hosts both the Sullivan deposit and the St. Eugene deposit approximately 72 kilometres north and 25 kilometres north, respectively.

5.00      Property Geology

The property is located within the Middle Aldridge rocks with the southern portion closely associated with the Lower Aldridge/Middle Aldridge contact (stratigraphic time horizon of the Sullivan Mine).

Limited exploration mapping of the property by Cominco Ltd. and Kenneco Inc. have shown the presence of Moyie gabbro intrusive within the Aldridge quartzites. The reports also indicate a presence of quartz veins with sulphides and some disseminated pyrrhotite and sphalerite in samples taken on the northern part of the property.

6.00 1990 Work Program

Kokanee commenced exploration work on this project in early July of 1990. The exploration work consisted of base linecutting, soil geochem, geophysical surveying, geological mapping and diamond drilling of five drill holes.

7.00 Diamond Drilling

Five diamond drill holes were spotted to test the coincident geochem and geophysics anomalies on both the north and south grids and to drill test the Yahk vein at depth. A total of 1550 metres of core was drilled. Geologically, the rocks were typically Middle Aldridge quartzites and argillites.

7.10 Drill Hole E90-4 and 5

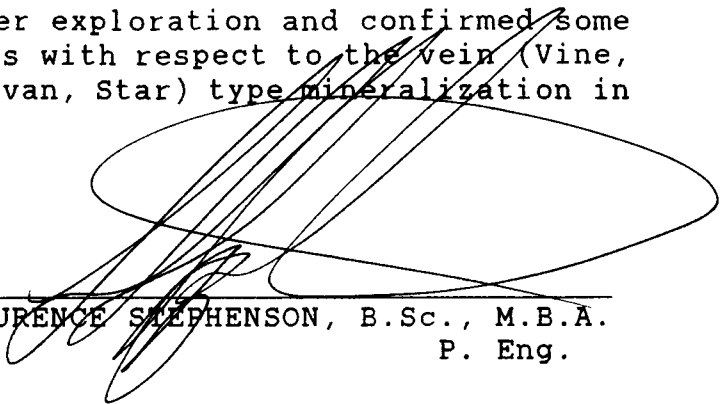
E90-4	-45°	070°	Line 6100W, 2875N
E90-5	-45°	070°	Line 6100W, 3050N

These two holes were drilled to test the south grid's coincident geochem and geophysical anomalies. Again, the mineralization was spotty with traces of lead and zinc, however, one small zone was intersected in E90-4 that had native silver and copper. The mineralization occurred in a 15cm zone that was easily ground up and had very poor core recovery within a quartzitic argillite horizon with some disseminated pyrite and pyrrhotite mineralization. (Assay of one fragment 0.008 oz/ton gold, 997.0 oz/ton silver, 10.3% copper).

Geologically, the hole encountered markers and stratigraphy just above the Lower/Middle Aldridge contact. The contact area itself was as indicated previous indistinct.

8.00      Conclusion

The work completed to date on the Eng Property has not delineated any substantial zones of mineralization. However, it has outlined two areas for further exploration and confirmed some of the regional geological factors with respect to the vein (Vine, North Star) and stratiform (Sullivan, Star) type mineralization in the area.



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LAURENCE STEPHENSON, B.Sc., M.B.A.  
P. Eng.

EXHIBIT "A"  
STATEMENT OF EXPENDITURES  
DIAMOND DRILLING PROGRAM  
(E90-4+5)  
ON ENG 2 CLAIM  
FT. STEELE M.D.

Covering the period of August 26th to September 5th, 1990

INDIRECT

SALARIES:

R. Edmunds - Geologist - Supervision/core  
logging, sampling - 6.5 days @ \$200/day \$ 1,300.00  
P. Daignault - Geologist - Core logging  
2 days @ \$250/day 500.00

DOMICILE: 6 days @ \$65/day (Edmunds) 390.00

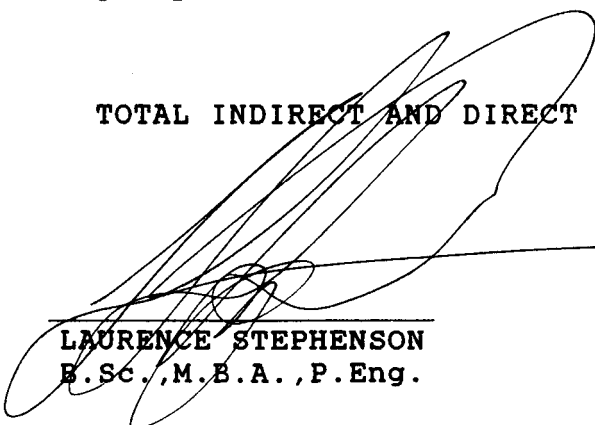
TRANSPORTATION: 1 - 4X4 truck; 6 days @ \$50/day 300.00

DIRECT

Connor's Drilling Ltd.  
2007 West Trans Canada Highway,  
Kamloops, B.C.

68,360.05

TOTAL INDIRECT AND DIRECT = \$70,850.05



LAURENCE STEPHENSON  
B.Sc., M.B.A., P.Eng.

IN THE MATTER OF THE  
B.C. MINERAL ACT  
AND  
IN THE MATTER OF A DIAMOND DRILLING PROGRAM  
CARRIED OUT ON THE ENG PROPERTY  
YAHK AREA

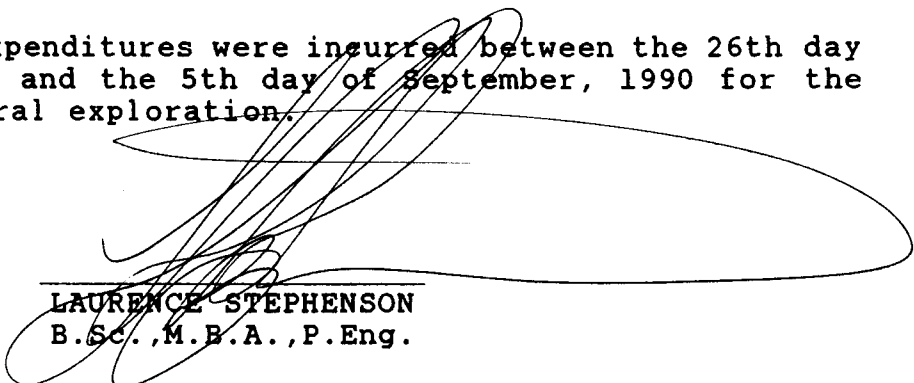
in the Ft. Steele Mining Division of  
of the Province of British Columbia

More Particularly N.T.S. 82G/11W

A F F I D A V I T

I, L. Stephenson, of the City of Cranbrook, in the Province of British Columbia, make oath and say:

1. That I am employed as a Geologist by Kokanee Explorations Ltd. and as such have a personal knowledge of the facts to which I hereinafter depose:
2. That annexed hereto and marked as Exhibit "A" to this my Affidavit is a true copy of expenditures incurred on a diamond drilling program, on the Eng mineral claims;
3. That the said expenditures were incurred between the 26th day of August, 1990 and the 5th day of September, 1990 for the purpose of mineral exploration.

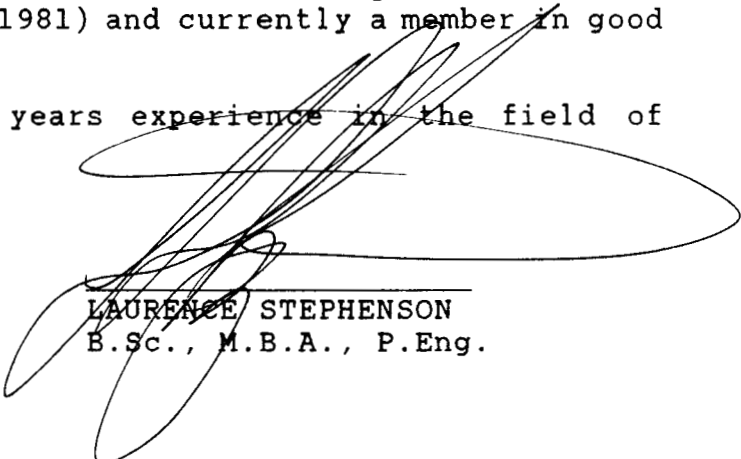


LAURENCE STEPHENSON  
B.Sc., M.B.A., P.Eng.

AUTHOR'S QUALIFICATIONS

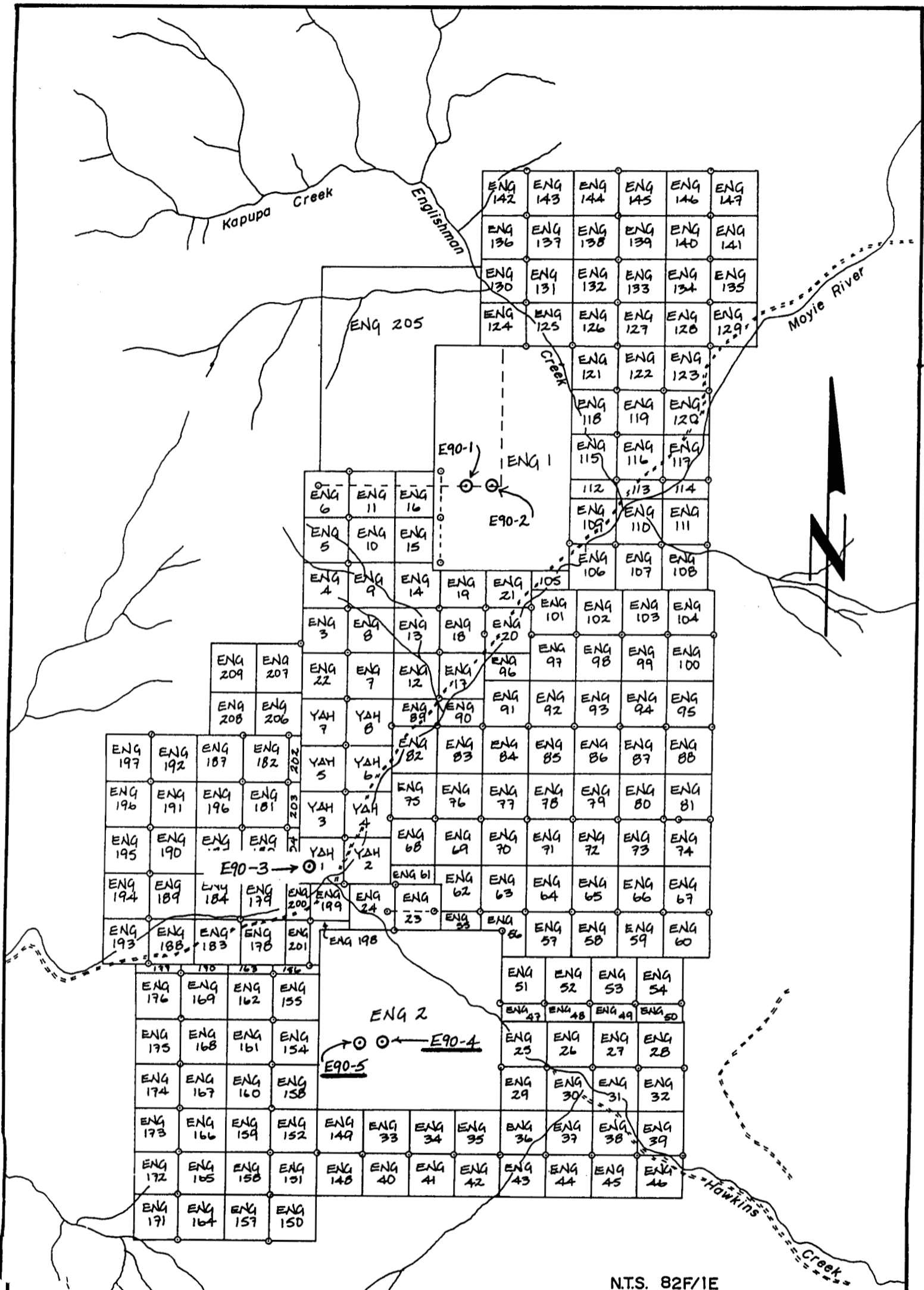
I, Laurence Stephenson, of Cranbrook, B.C., in the Province of British Columbia, do hereby certify that:

1. I graduated from Carleton University in 1975 with a Bachelor of Science degree in Geology then, in 1985, graduated from York University with a Masters of Business Administration;
2. I am registered as a Professional Engineer for the Province of Ontario (1981) and currently a member in good standing;
3. I have had over 23 years experience in the field of mining exploration.



LAURENCE STEPHENSON  
B.Sc., M.B.A., P.Eng.





N.T.S. 82F/1E

**KOKANEE EXPLORATION**  
**ENG PROPERTY**

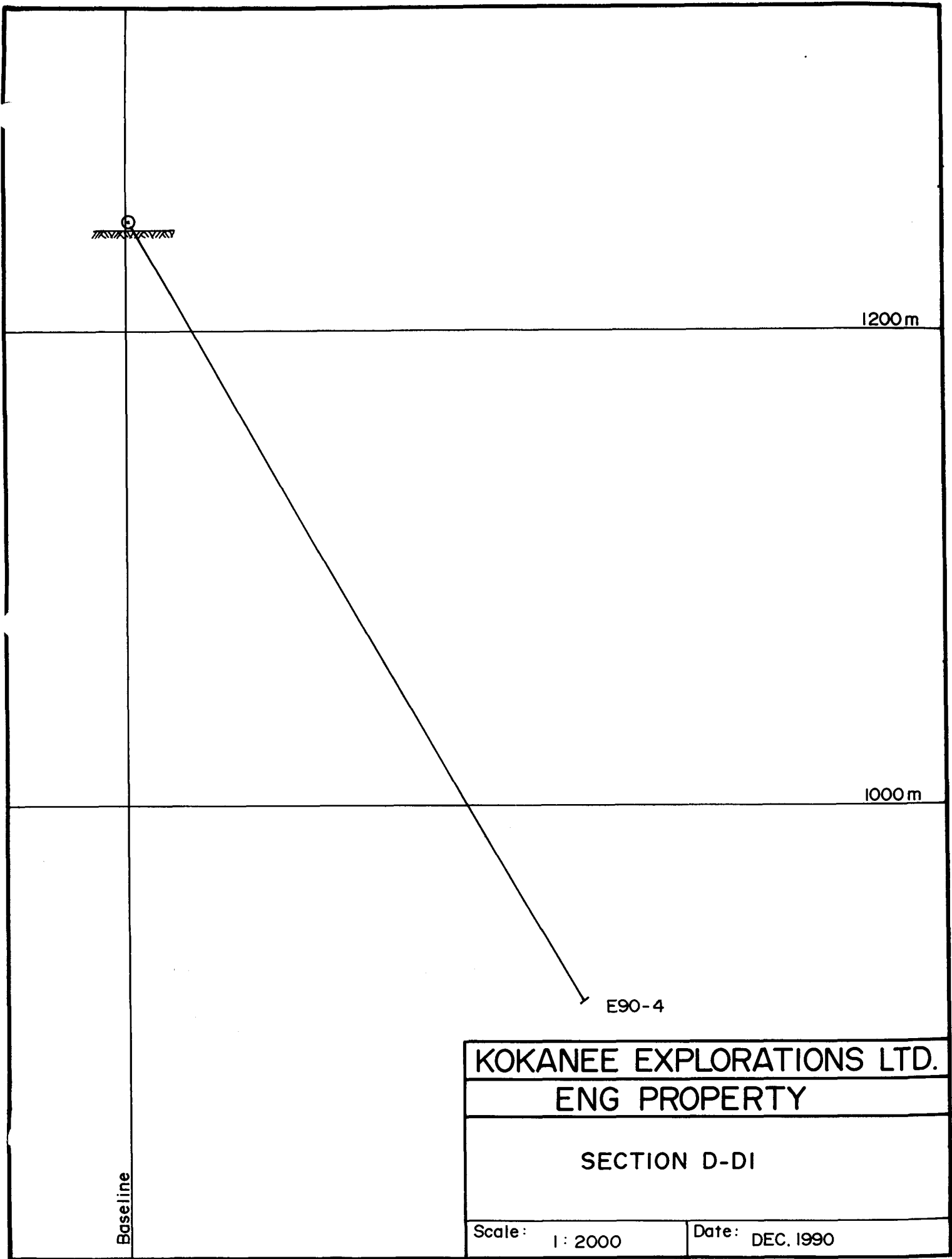
LOCATION MAP

DRILL HOLES E90-4 + 5



Scale: 1:50 000

Date: Dec/90



1200m

1000m

E90-4

Baseline

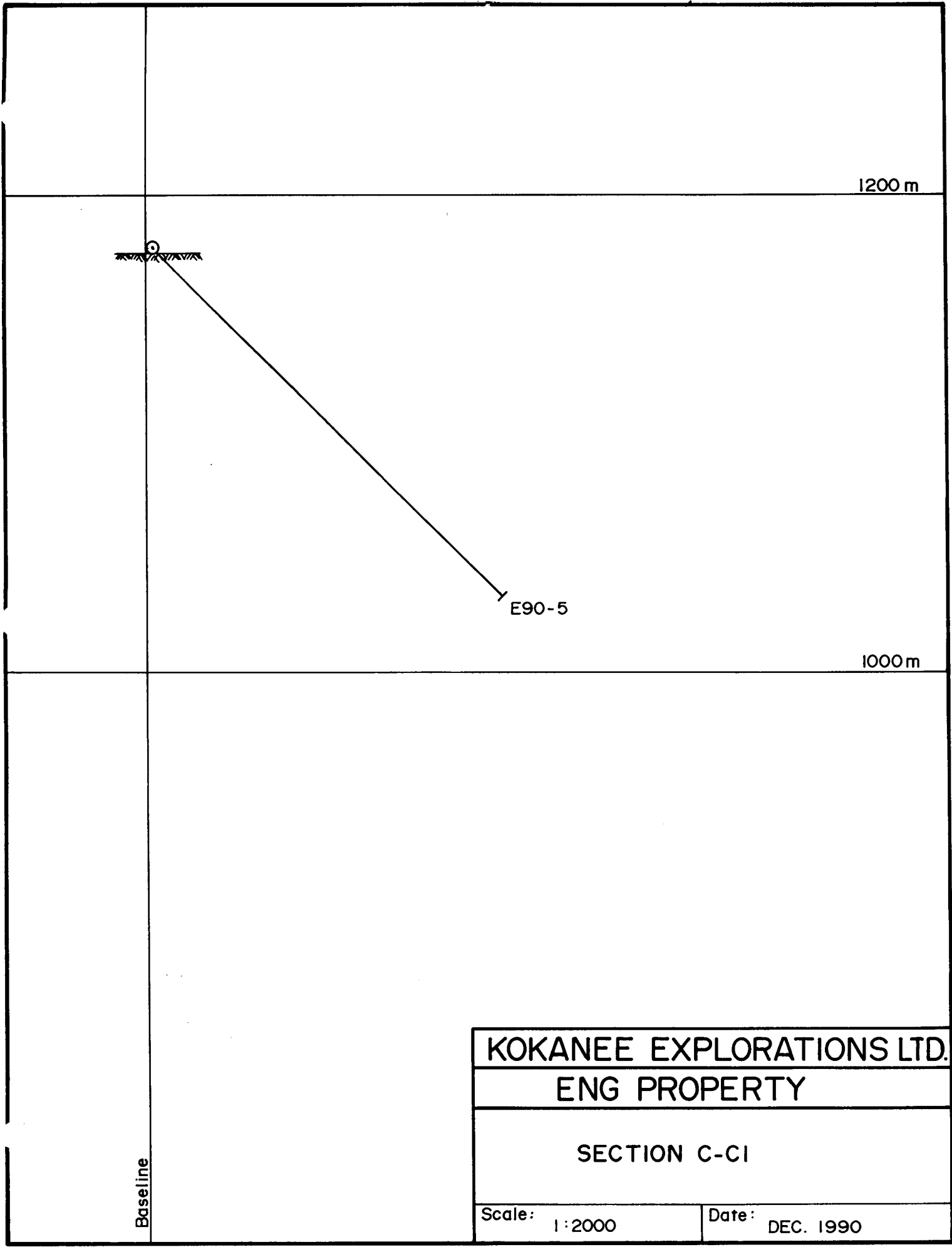
KOKANEE EXPLORATIONS LTD.

ENG PROPERTY

SECTION D-DI

Scale: 1:2000

Date: DEC. 1990



KOKANEE EXPLORATIONS LTD.	
ENG PROPERTY	
SECTION C-CI	
Scale: 1:2000	Date: DEC. 1990





KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page 3

Property: ENG

Hole No.: E90-4

Location: Eng 2 Claim

M E T E R A G E		D E S C R I P T I O N			S a m p l e				
From	To	No.	From	To	Au ppb	Ag ppm	Pb %	Zn %	Cu ppm
	66.56 - 70.40:								
	zone of faintly laminated, calcareous, slightly purple argillites and 30% thin bedded quartzites with low dissemination of pyrrhotite and pyrite throughout. Fractures are faced with pyrite. Quartzites locally contain dendritic Mn oxide forms, muscovite, and regions of pale green alteration. <u>66.89</u> : 15cm of fine, short (0.5cm) cracks @ ~20° to bedding (45° to core axis) containing very fine pyrite. <u>86.60 - 87.20</u> : frequent rusty fractures within quartzites @ 25 - 40° to core axis. <u>87.20 - 117.50</u> : occasional fractures faced with pyrite and pyromorphite encrustations predominantly @ ~45° to core axis (~60° to bedding). Occasional dark, pyrite bearing cracks -irregular and ± parallel to core axis. <u>102.08 - 103.34</u> : strongly sericitized, partially slump disturbed argillite and patches of quartzite. Variable dissemination of pyrite in bleached quartzite around pyritic cracks, seams, and bedded aggregates. At <u>103.10</u> , 20cm of sericitic sediments containing bedded and cross-cutting concentration of rusty and pyritic veinlets and seams and speck of chalcopyrite. <u>104.06</u> : vuggy veinlet, ~3m @ ~55° to core axis of	1016	102.00	103.34	5	-	.005	.01	30

KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page 4

Property: ENG

Hole No.: E90-4

Location: Eng 2 Claim

M E T E R A G E		D E S C R I P T I O N	S a m p l e			Au	Ag	Pb	Zn	Cu
From	To		No.	From	To	ppb	ppm	%	%	ppm
		inward growing quartz crystals encrusted with pyrite, pyrite aggregates and pyromorphite. 106.34: rusty seaming over 6cm as described at 103.10.								
117.50	129.37	<u>Thin Bedded Argillaceous Quartzites:</u> +15cm, diminishing downwards in a sequence of coarse laminated argillites and quartzitic argillites. The argillites become purple and occasionally seamed with cream and greenish sericitic lamination. Short sections of dark, pyrite filled cracks. Occasional fractures, generally faced with pyrite ± pyromorphite. Apparently non-calcareous.								
129.37	162.25	<u>As 24.00 - 117.50:</u> occasional rusty and pyritic fractures @ 10 - 20° to core axis; more numerous, irregular fractures coated with pyrite ± pyromorphite. <u>139.00 - 143.00:</u> zone of moderately intense fracturing @ ~25° to core axis - open, rusty, locally coated with pyrite. <u>144.76 - 145.00:</u> minor fracture zone and slip in plane of bedding associated with smeared pyrite, pyromorphite, fine pyrite veinlets and bedded seams. <u>145.86 - 146.70:</u> blocky fracture zone with faces coated with pyromorphite and	1017	160.9	161.1	5	—	.005	.01	4

KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page 5

Property: ENG

Hole No.: E90-4

Location: Eng 2 Claim

M E T E R A G E		D E S C R I P T I O N	S a m p l e			Au	Ag	Pb	Zn	Cu
From	To		No.	From	To	ppb	ppm	%	%	ppm
		pyrite. Minor slickensiding. 155.30 - 160.30: frequent dark irregular cracks and veinlets, singly and in short (10cm) zones containing fine pyrite. The longer, single veins are approximately parallel to core axis. The shorter (2 - 5cm) cracks in zones are $\pm 55^\circ$ to core axis ( $\pm 25^\circ$ to bedding). May amount to 3% pyrite over short sections.								
162.25	168.25	<u>Fine to Medium Grained Quartzite and Argillite:</u> thick (+1.5m) units about 60% fine to medium grained quartzite and 40% argillite. Argillites are medium coarse (5mm - 2cm) banded and largely undisturbed by slump effects. 167.49: centre of frozen, 3cm quartz vein @ $13^\circ$ to core axis. Vein contains coarse aggregates of bronze biotite and pale pyrite. Within zone of pale green alteration.								
168.25	324.90	Medium ( $\pm 25$ cm) sequences of 25% coarse laminated argillites, 60% quartzitic argillites, more or less disturbed by soft rock disaggregation, and 15% narrow quartzites and argillite quartzites. Moderate to strong metamorphic development of biotite and feldspar phenocrysts in argillites and garnets in	1018	171.9	172.1	5	-	.005	.01	23
			1019	180.0	180.2	5	-	.005	.01	2
			1020	190.0	190.2	5	-	.005	.01	14
			1021	209.5	209.7	5	-	.005	.01	7
			1022	220.0	220.1	5	-	.005	.01	13
			1023	229.9	230.0	5	-	.005	.01	3
			1024	240.2	240.3	5	-	.005	.01	6



KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page 6

Property: ENG

Hole No.: E90-4

Location: Eng 2

M E T E R A G E		D E S C R I P T I O N	S a m p l e			Au	Ag	Pb	Zn	Cu
From	To		No.	From	To	ppb	ppm	%	%	ppm
		quartzites. Fracturing is very minor: faces generally contain pyrite platings when oblique to bedding. Occasional minor bedding parallel slip. There is down hole increase in quartzite thickness and content, as noted below. <u>168.80 - 170.05</u> : strong and irregular development of pyrite bearing cracks as <u>155.30 - 160.30</u> . <u>190.00</u> : quartzites amount to $\pm 40\%$ , mostly fine to medium grained, with occasional patches of hard, pale green alteration and garnet and biotite concretionary material. Sequence is running in cycles, 5 - 10m thick, that terminate as described above and start (at base) in thicker quartzites ( $\pm 1m$ ) amounting to $>80\%$ . <u>203.40</u> : quartz vein as at 167.49 from 1m to 1cm wide @ $12^\circ$ to core axis within zone of pale green alteration of fine grained quartzite. <u>205.46 - 206.20</u> : zone of welded disturbance. At top, 12cm of soft rock fragmental with aggregates of pyrite in matrix and surrounding one 3cm fragment. This followed by welded crush zones in approximately plane of bedding, 1 to 3cm wide, of siliceous fragments and pyrite and pyrrhotite aggregates associated with dark pyrite filled cross fractures and purplish and	1025	250.0	250.20	5	-	.005	.01	28
			1026	260.9	261.1	5	-	.005	.01	39
			1027	269.9	270.0	25	-	.005	.01	24
			1028	268.1	268.5	5	-	.01	.02	45
			1029	268.5	268.9	5	-	.005	.01	84













KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page 2

Property: ENG

Hole No.: E90-5

Location: Eng 2

M E T E R A G E		D E S C R I P T I O N	S a m p l e			Au	Ag	Pb	Zn	Cu
From	To		No.	From	To	ppb	ppm	%	%	ppm
25.60	103.70	<p><u>Quartzite (~2/3) and Siltstone (~1/3):</u>                      typical Middle Aldridge sedimentations                      basically as described for the interval                      103.70 - 146.70. B.C.A.: 73° @ <u>31.20</u>,                      70° @ <u>37.80</u>, 71° @ <u>51.10</u>, 72° @ <u>58.70</u>,                      70° @ <u>69.90</u>, 68° @ <u>81.00</u>, 73° @ <u>87.70</u>,                      72° @ <u>100.00</u>.</p>								
103.70	146.70	<p><u>Quartzite (~60%) and Siltstone (~40%):</u>                      quartzites are generally medium to thick                      bedded separated by short (generally                      &lt;1m) intervals of siltstone and sandy                      siltstone. Siltstones are medium to                      dark grey, locally slightly brownish                      grey, generally very thin                      bedded/laminated with occasional soft                      sediment deformation structures. The                      siltstones are notable by the ubiquitous                      development of very fine grained                      sericite(?) which imparts a phyllitic                      appearance to the bedding plane                      surfaces. The quartzites are locally                      weakly chlorites with the occasional                      short (&lt;1dm) interval containing small                      (&lt;2mm) pink garnet porphyroblasts. An                      approximate 5 - 6cm (true thickness)                      light grey calcite/quartz veinlet cuts                      the core axis as ~5° from <u>113.60</u> -  <u>114.40</u>. The veinlet locally contains</p>								





