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BATTLE MOUNTAIN (CANADA) INC.

KIRKLAND LAKE PROJECT

DIAMOND DRILLING REPORT

AMALGAMATED KIRKLAND PROPERTY (OCTOBER - DECEMBER, 1990)

TECK TOWNSHIP, LARDER LAKE MINING DIVISION ONTARIO, CANADA

Kirkland Lake, Ontario

January, 1991

W. Benham

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1.0 SUMMARY

During the period October 15, 1990 to December 13, 1990, a diamond drilling programme was carried out by Battle Mountain (Canada) Inc. ("BMCI") on the Amalgamated Kirkland property located in the Kirkland Lake mining district. Twenty-eight holes were drilled to test new gold discoveries and geophysical anomalies outlined by previous exploration work completed by BMCI.

Although no economic mineralization was discovered by the 1990 drill programme, significant anomalous gold mineralization, which is associated with the "102" structure, was intersected in holes drilled along a strike length of 1250 metres, from 7350E to 8600E, and at vertical depths of 20 to 119 metres. Quartz plus pyrite breccia zones, 0.05 to 6.2 metres wide, within a broader zone of hematized, sericitized and silicified altered tuffs, graywackes, mudstones and syenites, assayed from 11.25 g/t Au over 0.60 metres in hole AK90-09 to 7.64 g/t Au over 4.00 metres in hole AK90-06.

Drilling of the "99" and "100" structures failed to intersect any anomalous gold mineralization.

A programme of deeper drilling, at vertical depths of 250 to 300 metres, is recommended to further explore the "102" structure for economic gold deposits. Initial drill tests of the "104" and "105" sub-parallel structures are recommended, as well as deep drill tests of the "106" and "107" structures.

2.0 INTRODUCTION

This report describes the results of the 1990 diamond drilling programme completed by Battle Mountain (Canada) Inc. (BMCI) on the Amalgamated Kirkland property located in the Kirkland Lake mining district. Twenty-eight holes were drilled to test new gold discoveries and geophysical anomalies which were outlined by mapping and geophysical surveys, overburden stripping and channel sampling programmes which were carried out by BMCI during the period July, 1989 to July, 1990.

2.1 Property Location and Access

The Amalgamated Kirkland property consists of 27 mining claims optioned by Queenston Mining Inc. (formerly HSK Minerals Ltd.) from Premier Exploration Inc. The property is currently held by BMCI as part of an option agreement with Queenston Mining Inc. dated June 15, 1989.

An application for lease, mining rights only, was submitted November 12, 1987.

The property is located in the Larder Lake Mining Division in the southeast quarter of Teck Township south and southwest of the town of Kirkland Lake (NTS 42 A/1; UTM 538800E/568600N; See Figure 1).

Access to the northeastern part of the property is provided by Main, Queen and Earl streets in the Town of Kirkland Lake and the Hunton Shaft bush road and to the northwest through Government Road West (Chaput Hughes) and the Industrial Plaza on Highway 66. A gravel road which exits the highway at a point approximately midway between the GM City dealership and the Industrial Mall, provides excellent access for heavy equipment such as diamond drills and backhoes. This road crosses patented claims held by Mr. Joe Morgan of Swastika, who kindly gave his permission to use this private road.

A right-of-way for hydro and natural gas lines crosses the northern part of the property. The south-westerly flowing Murdock Creek divides the property diagonally, approximately in half.

2.2 Topography

The topography consists of seventy percent low rounded knolls and ridges and thirty percent tag alder and black spruce swamps. Elevations range from 305 to 345 metres ASL. There is about thirty percent outcrop and overburden cover consisting of glacial till, one to twenty metres thick over the remainder of the claims.

Most of the property is covered by second growth poplar bush with local small stands of birch, spruce, balsam and pine.



3.0 PREVIOUS WORK

The Amalgamated Kirkland property has a long history of exploration activity which dates back to 1911. Prospecting, mapping, trenching, geophysical surveys and diamond drilling programmes have been carried out on specific geological targets such as the Amalgamated Kirkland syenite body in the north part of the property or carbonate alteration zones in close proximity to the Larder Lake Fault Zones which crosses the central portion of the claim block. The area between the Larder Lake Fault and the Amalgamated Kirkland syenite had not been intensely explored prior to 1989 except for numerous old prospector's trenches which probably date back to the period 1911 to 1924.

During the 1989 field season, a geological mapping and overburden stripping programme carried out by BMCI resulted in the discovery of two anomalous gold-bearing alteration zones (Bottrill, 1990, Benham, 1990). The 101-7290 gold zone averaged 2.48 g/t Au over a width of 6 metres, while the 102-8350 zone assayed 2.22 g/t Au across 6 metres including 5.0 g/t Au over 1.5 metres. Both showings are associated with altered, sericitic, pyritic, ductile-brittle shear zones striking 070° in Timiskaming volcanics and sediments which are intruded by syenite dykes.

In 1990, additional overburden stripping, detailed mapping and channel sampling were completed by BMCI (Benham, 1990a). The interpreted "102" structure was traced intermittently as a gold-bearing, pyritic, sericitic, silicic alteration zone for a strike length of 540 metres from 7910E to 8450E. Selected grab samples returned assays up to 36.55 g/t Au and channel samples up to 8.36 g/t Au over a width of 3.80 metres. A new showing of native gold, which was named the 99-8030 zone, returned a channel sample assay of 797.5 g/t Au across 0.45 metres.

A magnetometer survey (Roth, 1990) and a detailed IP survey (Roth, 1990a) were completed. Low magnetic linear anomalies with intermittent weak chargeability and high resistivity anomalies were found to be associated with the known mineralized structures.

4.0 REGIONAL GEOLOGY

The Kirkland Lake area is situated in the central part of the Archean, Abitibi Greenstone Belt, on the south limb of a major east-west trending, east plunging synclinorium which is located approximately at the mid-point between the Round Lake and Lake Abitibi Batholiths. The northern and southern limbs of this synclinorium are wide east west trending deformation zones known as the Procupine/Destor and Cadillac/Larder Lake Breaks, respectively. The Cadillac/Larder Lake deformation zone can be taced from Val d'Or, Quebec to the Matachewan area in Ontario and lies immediately south of Kirkland Lake. The trace of the more specific and historically referenced Larder Lake Break runs through the centre of the Amalgamated Kirkland property. All the historically significant and presently producing gold mines in the Kirkland Lake district are located to the north of the historical "Larder Lake Break", mostly along a sub-parallel structure known as the Kirkland Lake Main Break.

5.0 PROPERTY GEOLOGY

The property is underlain by three geological domains. The southern domain includes the northern half of the Murdock Creek syenite stock which intrudes altered, spinifex textured komatiitic volcanics of the Larder Lake Group. The central domain consists of complexly folded and faulted Timiskaming ash- and lapilli-tuffs interbedded with conglomerates, graywackes, siltstones and mudstones which are intruded by narrow syenite dykes. The northern domain is dominated by a 100 to 300 metre wide feldspar-porphyritic syenite body, known as the Amalgamated Kirkland Syenite, which intrudes Timiskaming conglomerates and graywackes. The southern and central domains are separated by a 50 to 300 metre wide zone of intense carbonatization and chlorite-carbonate-talc schists associated with the Larder Lake Fault Zone.

The Lakeshore (015° to 025°) and the Murdock Creek (035° to 045°) fault sets offset an earlier alteration-mineralization related ductile-brittle shear set at 055° to 080°.

Anomalous gold mineralization is assocated with the earlier pyritic, sericitic, carbonated shear set. The best mineralization is found in silicified, blue-grey quartz-breccia zones containing up to 30 percent fine grained pyrite and minor galena and molybdenite.

Thin section studies have shown that the pyrite is the result of the total destruction of magnetite present as detrital grains within the tuffs and lapilli tuffs.

6.0 GEOPHYSICS

Total field and vertical gradient magnetic surveys were carried out over the central and northern geological domains along grid lines at 50 metre spacings and readings every 12.5 metres (Roth, 1990). Eight sub-parallel, linear, low magnetic anomalies, which are associated with the alteration-mineralization shear set trending 055° to 080° and offset by faults striking 015° to 045°, were interpreted from the ground magnetics. For reference purposes, these eight magnetic lows were named the "99", "100", "101", "102", "104", "105", "106", and "107" structures.

A pole-dipole IP survey, (a = 12.5m, n = 1 to 6), was completed to test for sulphide concentrations and/or zones of high resistivity associated with the "99", "100", "101" and "102" structures (Roth, 1990a). A weak chargeability anomaly with very high resistivities was detected over the 102-8350 gold zone. Weaker anomalies were located along strike to the east and to the west. Two moderate strength chargeability anomalies were indicated along the "100" structure at 8200E and 8500E to 8700E. A weak chargeability anomaly is associated with the "99" structure. Some IP anomalies are located to the north and south of the known and interpreted altered structures.

7.0 DRILLING

7.1 Drill Programme

Diamond drilling on the Amalgamated Kirkland property was started on October 15th and completed on December 6th by Heath & Sherwood Drilling (1986) Inc. of Kirkland Lake under the supervision of W. Benham. Twenty-eight holes were drilled for a total of 3318.67 metres. A total of 1733 sawn core samples and 145 check assays were assayed for gold by Swastika Laboratories Ltd. The core is presently stored at BMCI's warehouse which is located in the Industrial Plaza on Government Road West in Kirkland Lake.

7.2 Drill Results

The results of the drilling are described in drill logs AK90-01 to AK90-28 (Appendix I) and illustrated on drill sections DC-001 to DC-023 which accompany this report. Twenty-seven holes were logged by M. Masson and one hole, AK90-16, was logged by W. Benham. Drill hole locations are shown on Drawing DP-001. A listing of the significant gold intersections is presented in Table I.

Hole AK90-01, which was drilled to test the 102-8350 gold zone, intersected a 11.2 metre wide sericitic alteration zone from 49.70 to 60.90 metres down the hole. This alteration zone is cut by several low angle cross faults. A 0.75 metre wide breccia zone, with 5 - 10% pyrite and 5% quartz veining, was encountered from 59.40 to 60.15 metres. This zone assayed 0.62 g/t Au over 1.0 metres.

Hole AK90-02 tested the 102-8275 gold zone. A 1.70 metre wide altered fault zone was intersected from 61.90 to 63.60 metres. A 5 cm pyritic quartz vein was cut at 63.60 metres followed by a 45 cm wide syenite dyke. This vein and 50 cm of altered tuff assayed 0.17 g/t Au. A 1.40 metre wide sericitic fault zone, with 10-15% brecciated chloritic quartz veining and traces of pyrite, was intersected from 102.35 to 103.75 metres. A 1.00 metre wide section of this fault zone assayed 0.12 g/t Au.

Hole AK90-03, which tested the 102-8400 gold zone, intersected a 27.1 metre wide sericitic alteration zone from 61.90 to 89.00 metres. Three pyrite-quartz breccia zones were cut from 65.75 to 65.90 metres, 71.50 to 72.00 metres and 75.80 to 76.60 metres. A 5.20 metre wide section from 71.40 to 76.60 metres assayed 0.62 g/t Au including 2.14 g/t Au over 0.70 metres.

Hole AK90-04 was drilled to test a blue quartz breccia vein at 8370E, 10240N. A hematitic fault zone was intersected from 94.20 to 99.20 metres. A 5.1 metre wide section of strongly altered sericitic tuffs with 1% light grey pyritic quartz veinlets was encounted from 99.20 to 104.30 metres. A 2-4 cm quartz vein with 5-10% disseminated pyrite was cut at 100.10 metres. This vein is dislocated by two cross cutting fault slips at 65° and 30° to the core axis. A 0.50 metre sample which included this vein assayed 4.71 g/t Au.

Hole AK90-05 tested the "102" structure along line 8450E. Altered, sericitic, pyritic tuffs with 5% quartz veining were encountered form 56.79 to 58.14 metres. A 3.64 metre wide quartzpyrite breccia zone with multiple phases of white, blue grey and grey quartz-carbonate veining and 5-15% pyrite assayed 0.15 g/t Au over 4.00 metres from 58.00 to 62.00 metres.

A syenite dyke was intersected from 74.07 to 78.94 metres. Sericitic tuffs, mudstones and graywackes, containing irregular 0.2 - 1 cm quartz-carbonate veinlets and traces of pyrite and chalcopyrite, were encountered below the syenite dyke. A section from 82.0 to 86.0 metres assayed 0.12 g/t Au over 4.00 metres.

Hole AK90-06 was planned to test the western part of the 102-8350 gold zone where it is not disrupted by numerous cross faults. Faulted, hematitic lapilli tuffs were intersected from 3.05 to 22.4 metres. This is the fault zone which probably cut out part of the mineralized zone in hole AK90-1, which was drilled 10 metres to the east. Altered sericitic, pyritic tuffs with blue-grey quartz breccia zones containing 5-20% pyrite were intersected from 25.12 to 29.95 metres. A 4.00 metre section from 26.00 to 30.00 metres assayed 7.64 g/t Au, including 10.66 g/t Au over 2.70 metres. Native gold was found at 26.60 metres, where the other half of the core assayed 25.54 g/t Au over 0.60 metres. A hematitic syenite dyke, with sericitic contacts, was intersected from 29.95 to 32.90 metres, and followed by sericitic tuffs from 32.90 to 43.65 metres.

Hole AK90-07 tested the "102" structure along section 8250E between the 102-8275 gold zone and the 102-8170 gold zone. A quartz + chlorite + pyrite breccia zone in sericitic graywacke was intersected from 80.50 to 85.15 metres. This zone assayed 1.53 g/t Au over a width of 4.70 metres including 5.56 g/t Au over 1.00 metres.

Hole AK90-08 was drilled beneath narrow, high grade quartz veinlets in sericitic mudstones and graywackes, which are exposed in the 102-8170 stripped area. A pyritic shear zone, which was intersected from 44.00 to 44.50 metres, assayed 1.19 g/t Au over 0.50 metres. From 75.90 to 76.55 metres, a quartz + pyrite zone, in finely laminated, sericitic mudstones/siltstones, assayed 3.58 g/t Au over 2.55 metres, including 10.04 g/t Au over 0.70 metres.

Hole AK90-09 tested the 102-8170 gold zone at 8150E. A 0.50 cm wide quartz + pyrite zone in mudstones assayed 11.25 g/t Au over 0.60 metres, from 93.65 to 94.25 metres.

Hole AK90-10 tested two low magnetic anomalies located along 8050E. A fault zone, with brecciated, black, quartz + chlorite veinlets, was intersected from 145.55 to 147.40 metres. A 0.50 metre wide sample from this zone assayed 0.65 g/t Au.

Hole AK90-11, which was drilled to test the 102-7912 gold zone, failed to intersect any anomalous mineralization. Bleached, sericitic, ash and lapilli tuffs, which contain no mineralized quartz veining, were intersected at 86.60 to 94.45 metres and 99.90 to 103.80 metres.

Holes AK90-12 to 14 tested, at 50 metre intervals, the low magnetic anomaly, the weak IP anomaly and the sericitic alteration zones which are associated with the 99-8030 high-grade native gold showing. Two altered, weakly pyritic sericite zones with minor quartz veining were intersected in each hole. The sericite zones are separated by a zone hematized tuffs. No anomalous assays were returned.

Holes AK90-15 and AK90-16 tested two relatively strong IP anomalies, which appear to be associated with the interpreted "100" structure. A weak sericitic alteration zone was intersected in hole AK90-15, but insufficient sulphides were encountered to explain the IP anomaly. Hole AK90-16 intersected a 20 metre wide section of silicified quartz-veined, pyritic, foliated, lapilli tuffs and conglomerates which assayed nil to trace gold.

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Holes AK90-17 and 18 were drilled above hole AK90-04. Hole AK90-17 intersected a quartz + pyrite zone in sericitic lapilli tuffs from 24.25 to 32.58 metres. This section assayed 0.80 g/t Au over 8.38 metres including 1.55 g/t Au over 0.70 metres and 1.08 g/t Au over 4.58 metres. Hole AK90-18 intersected strongly altered tuffs from 50.20 to 64.80 metres; a pyritic sericitic and hematitic syenite from 64.80 to 66.15 metres and bleached tuffs from 66.15 to 76.65 metres. Quartz + pyrite zones were cut at 60.50 to 63.60 metres and 67.40 to 67.55 metres. A 6.70 metre wide section assayed 1.67 g/t Au including 2.09 g/t Au over 1.00 metres and 3.14 g/t Au over 2.80 metres, which included 16.40 g/t Au over 0.50 metres.

Holes AK90-19 and 20 were drilled along section 8425E, midway between holes AK90-03 and 05. From 34.90 to 44.62 metres, hole AK90-19 intersected a pyrite + quartz zone, which assayed 0.12 g/t Au over 6.10 metres. A quartz + pyrite zone, from 54.20 to 54.55 metres, assayed 6.30 g/t Au over 0.40 metres. Hole AK90-20 cut a 3.10 metre wide pyrite zone, at 78.50 to 81.60 metres, which assayed 1.59 g/t Au. This zone contains 0.5 - 10% finely disseminated pyrite and 1-3 cm blue grey silicified zones and quartz veins.

Hole AK90-21 tested IP and low magnetic anomalies which are associated with the "102" structure along section 8600E. Weakly to strongly altered sericitic tuffs were intersected from 69.10 to 93.50 metres and 96.50 to 98.90 metres. A pyritic, sericitic syenite was cut at 93.50 to 96.50 metres. A pyritic zone, with 0.5 - 3% pyrite and quartz breccia veins up to 0.50 metres wide, which were intersected from 69.10 to 74.00 metres, assayed 0.75 g/t Au over 5.00 metres. A 0.5 cm wide quartz vein with 1-2% pyrite at 83.10 metres assayed 7.05 g/t Au over 0.20 metres. A 8.45 metre wide section at 90.50 to 98.95 metres assayed 2.25 g/t Au including 12.87 g/t Au over 0.70 metres.

Hole AK90-22, which tested a weak IP anomaly and a magnetic low along 8825E, intersected a 32.9 metre wide section of silicified, sericitic, chloritic, pyritic, molybdenite-bearing, foliated, altered tuffs, from 114.00 to 147.90 metres. No anomalous assays were returned from this section. A fault zone at 82.00 to 82.20 metres assayed 0.42 g/t Au over 1.00 metres. A schistose zone with 1% disseminated pyrite and minor quartz veining at 93.70 to 93.85 metres assayed 0.36 g/t Au over 0.40 metres.

Holes AK90-23, 24 and 25 tested the 102-8170 zone at vertical depths of 119, 110 and 82 metres respectively, below holes AK90-07, 08 and 09, which had intersected significant gold mineralization over widths of 0.60 to 3.50 metres.

Hole AK90-23, an undercut of hole AK90-07, intersected from 129.70 to 168.00 metres, a 38.30 metre wide zone of weakly to moderately altered, chloritic, sericitic, brecciated graywackes with 2-3% quartz + chlorite veining with 0.5% pyrite along the vein contacts. A fault at 141.85 to 142.10 metres assayed 0.19 g/t Au.

Hole AK90-24, an undercut of hole AK90-08, intersected from 136.25 to 143.00 metres, altered, sericitic, silicified graywackes, which are cut by 3-5%, 0.1-0.5 cm, quartz ± chlorite ± pyrite veinlets. A 3.75 metre wide section assayed 2.74 g/t Au, including 6.35 g/t Au over 1.50 metres.

Hole AK90-25, which was drilled 25 metres west of and deeper than hole AK90-09, intersected from 102.65 to 104.50 metres, a pyrite + quartz breccia zone which assayed 2.41 g/t Au over 1.75 metres, including 8.01 g/t Au over 0.50 metres. This mineralized zone is at a fault contact between altered tuffs and mudstones.

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Hole AK90-26, an undercut of hole AK90-21, intersected three mineralized zones down dip of the three zones which were encountered in hole AK90-21. A quartz + pyrite zone from 120.60 to 122.85 metres assayed 1.84 g/t Au over 3.00 metres, including 7.12 g/t Au over 0.75 metres. Moderately deformed, intercalated, sericitic mudstones and graywackes with 2-3% quartz veinlets, from 139.5 to 142.00 metres, assayed 0.10 g/t Au over 2.50 metres. Strongly foliated, pyritic pebble conglomerates and graywackes, at 148.00 to 149.80 metres, assayed 0.28 g/t over 1.80 metres.

Hole AK90-27 tested IP and low magnetic anomalies associated with the interpreted "99" and "100" structures. No significant mineralization was encountered. Moderately sericitized ash tuffs with traces of pyrite were intersected at 40.00 to 49.50 metres. Moderately to strongly deformed sericitic ash tuffs, with 0.5% finely disseminated pyrite, were cut from 123.70 to 124.80 metres.

Hole AK90-28 tested the 101-7290 gold zone along line 7350E. Weakly to moderately altered sericitic grawackes, conglomerates and tuffs with widespread, narrown pyritic quartz-veined zones were intersected. A pyritic, sericitic lapilli tuff at 44.00 to 46.00 metres averages 1.89 g/t Au over 2.0 metres, including 4.03 g/t Au over 0.50 metres.

KIRKLAND LAKE PROJECT, ONTARIO AMALGAMATED KIRKLAND PROPERTY

SUMMARY LISTING OF DIAMOND DRILL HOLES

Hole No.		Collar				Assays	
AK90 -	Easting	Northing	Total Length	From	То	Length (metres)	Au g/t
14	8100	9835	99.45	No sig	gnificant ass	ays	
15	8200	9970	102.75	No sig	gnificant <mark>a</mark> ss	ays	
16	8500	10015	119.62	No sig	gnificant ass	ays	
17	8370	10210	56.55	24.20 incl. 24.20 24.90 28.00	32.58 24.90 28.00 32.58	8.38 0.70 3.10 4.58	0.800 1.550 0.210 1.080
18	8370	10185	77.90	61.00 incl. 62.00 and 64.90 incl. 67.20	67.70 63.00 67.70 67.60	6.70 1.00 2.80 0.50	1.670 2.090 3.140 16.400
19	8425	10205	71.20	34.00 42.00 48.50 54.20	40.10 42.50 49.50 54.60	6.10 0.50 1.00 0.40	0.120 0.100 0.200 6.300
20	8370	10170	99.60	78.50 incl. 78.50	81.60 81.00	3.10 2.50	1.590 1.940
21	8600	10174	117.70	69.00 incl. 69.00 incl. 69.60 and 72.90 82.00 incl. 83.00 and 85.00	98.95 74.05 70.60 73.50 86.00 83.20 86.00	29.95 5.00 1.00 0.60 4.00 0.20 1.00	0.880 0.750 1.490 2.280 0.670 7.050 1.080
				90.50 incl. 90.50 incl. 92.00 incl. 92.00 95.50 and 98.55	98.95 96.50 96.00 92.70 96.00 98.95	8.45 6.00 4.00 0.70 0.50 0.40	2.250 2.970 3.940 12.870 9.833 2.245

TABLE IKIRKLAND LAKE PROJECT, ONTARIOAMALGAMATED KIRKLAND PROPERTY

SUMMARY LISTING OF DIAMOND DRILL HOLES

Hole No.		Collar				Assays	
AK90 -	Easting	Northing	Total Length	From	То	Length (metres)	Au g/t
01	8350	10185	111.10	59.40	60.40	1.00	0.610
02	8300	10175	123.55	63.10	63.65	0.55	0.165
				103.00	104.00	1.00	0.120
03	8400	10185	129.50	65.60	66.10	0.50	0.830
				71.40	76.60	5.20	0.620
				incl. 71.40	72.10	0.70	2.135
				and 75.80	76.60	0.80	0.965
04	8370	10160	125.85	100.00	100.50	0.50	4.710
05	8450	10175	121.55	58.00	62.00	4.00	0.154
				82.00	86.00	4.00	0.118
06	8340	10210	71.80	26.00	30.00	4.00	7.640
				incl. 26.40	30.00	3.60	8.460
				incl. 26.40	29.10	2.70	10.663
				incl. 26.40	27.00	0.60	26.540
07	8250	10165	108.20	80.50	85.20	4.70	1.530
				incl. 80.50	84.00	3.50	2.010
				incl. 83.00	84.00	1.00	5.560
08	8190	10165	123.45	44.00	44.50	0.50	1.190
				74.00	76.55	2.55	3.580
				incl. 75.85	76.55	0.70	10.040
09	8150	10155	124.00	93.65	94.25	0.60	11.250
10	8050	10100	173.70	147.00	147.50	0.50	0.650
11	7900	10175	117.40	No sig	gnificant asse	ays	
12	8000	9840	99.55	No sig	gnificant assa	ays	
13	8050	9845	90.17	No sig	gnificant assa	ays	
				-			

KIRKLAND LAKE PROJECT, ONTARIO AMALGAMATED KIRKLAND PROPERTY

SUMMARY LISTING OF DIAMOND DRILL HOLES

Hole No.		Collar				Assays	
AK90 -	Easting	Northing	Total Length	From	То	Length (metres)	Au g/t
22	8825	10380	155.30	81.50	82.50	1.00	0.420
				93.60	94.00	0.40	0.360
23	8250	10145	191.70	141.85	142.35	0.50	0.190
24	8190	10140	151.00	136.25	140.00	3.75	2.740
				incl. 136.25	138.50	2.25	0.340
				and 138.50	140.00	1.50	6.350
25	8125	10150	142.90	102.65	106.00	3.35	1.300
				incl. 102.65	104.40	1.75	2.407
				incl. 103.90	104.40	0.50	8.010
26	8600	10155	160.68	120.00	123.00	3.00	1.840
				incl. 120.45	122.35	1.90	3.890
				incl. 120.45	121.20	0.75	7.120
				and 139.50	142.00	2.50	0.100
				and 148.00	149.00	1.00	0.280
27	7900	9890	130.10	No sig	nificant assa	iys	
28	7350	10170	122.40	44.00	46.00	2.00	1.890
				incl. 44.70	45.20	0.50	4.030
TOTAL TO DATE			3318.67				

Battle Mountain (Canada) Inc.

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January, 1991

7.3 DISCUSSION OF DRILL RESULTS

Although no economic mineralization was encountered by the 1990 drill programme, significant anomalous gold mineralization, which is associated with the "102" structure, was intersected in holes drilled along a strike length of 550 metres, from 8050E to 8600E, and at vertical depths of 20 to 119 metres. Mineralized intersections vary considerably in width and grade from 11.25 g/t Au over 0.60 metres in hole AK90-09 to 7.64 g/t Au over 4.0 metres in hole AK90-06. In hole AK90-28, a 29.95 metre wide intersection, which averaged 0.88 g/t Au, consists of four anomalous zones which assayed 0.75 g/t Au over 5.0 metres, 0.67 g/t Au over 4.0 metres, 2.97 g/t over 6.0 metres and 2.25 g/t Au over 0.4 metres.

To the east of 8275E, (in holes AK90-1 to 6, AK 90-17 to 21 and AK 90-26) the "102" structure consists of a silicified breccia with 3-5% pyrite, from 0.05 to 6.2 metres wide, within a broader zone of altered sericitized lapilli tuffs. Pyrite + quartz breccia zones in each of these holes appear to be visually almost identical. However, individual samples returned a considerably wide range of assays from 0.25 to greater than 25 g/t Au. Averages for the mineralized zones vary from 0.12 g/t Au over 6.10 metres in hole AK90-19 to 7.64 g/t Au over 4.00 metres in hole AK90-6.

Anomalous gold mineralization was encountered above, within, and below a zone of red, hematite alteration up to three metres wide, which was interpreted in outcrop to be a syenite dyke. In drill core, this unit usually appears to have diffuse sericitic contacts and it is distinguished by its colour and lack of distinct clasts. It may be an earlier hematitic alteration phase or a syenite dyke.

From 8050E to 8275E (in holes AK90-7 to 10 and AK 90-23 to 25) the mineralization is similar to the 102-8170 zone, which is exposed at surface, and consists of 1-3 cm wide grey quartz veins in silicified, pyritic, sericitic, laminated mudstones and chloritic, pyritic, brecciated, sericitic graywackes.

The mineralized zones dip 65 to 85° to the south, and are offset by northwest and southeast dipping cross faults.

Hole AK90-11, along 7900E, intersected over 20 metres of altered sericitic tuffs, graywackes and mudstones which possibly could be the "102" structure. However, no mineralized pyrite + quartz breccia zones were encountered.

The 101-7290 zone, tested by hole AK90-28, may be part of the "102" structure rather than part of a sub-parallel structure. A re-interpretation of the IP and magnetic survey data indicates that the "102" structure may extend from 7290E, 10220N to 8900E, 10240N, (See Drawing GP-001). An anomalous grab sample (150 ppb Au) of sericitic, foliated conglomerates from an old trench at 8900E, 10240N, indicates the possibility that hole AK90-22 may not have been drilled far enough to intersect the "102" structure. This hole was the only one drilled from north to south in anticipation of deep overburden to the south of the drill target. The silicified, pyritic, alteration zone, which was intersected in hole AK90-20, may be a barren sub-parallel structure or it may be related to the crosscutting Murdock Creek fault zone.

Battle Mountain (Canada) Inc.

Diamond Drilling Report

Amalgamated Kirkland Property

Drill tests of the "99" and "100" structures did not return any anomalous assays. The low magnetic and IP anomalies are due to zones of sericite + carbonate + hematite alteration with quartz veining and pyrite mineralization.

8.0 CONCLUSION & RECOMMENDATIONS

The 1990 Amalgamated Kirkland drill programme encountered significant gold mineralization, which is associated with the "102" structure, over a strike length of 1,250 metres, from 7350E to 8600E. The "102" structure exhibits good continuity and strength along strike and down dip. The "102" structure has excellent potential for the discovery of economic gold deposits below or along strike of the 1990 drill intersections.

A programme of deeper drilling is recommended to test the "102" structure at depths of 250 to 300 metres at 200 metre intervals.

Drill tests of the interpreted "104" and "105" sub-parallel structures are recommended.

Drilling, prior to 1989, intersected anomalous gold mineralization which is associated with the interpreted "106" and "107" structures within the Amalgamated Kirkland syenite. Drill holes, to test these structures at vertical depths of 250 to 300 metres, are recommended.

Further drilling of the "99" and "100" structures is not recommended at this time.

FL: KL\DDRPT4QT.NO2

<u>9.0 REFERENCES</u>

Benham, W., 1990

Report on Geological Mapping, Amalgamated Kirkland Property, Kirkland Lake Project, Teck Township, Larder Lake Mining Division, Ontario; Battle Mountain (Canada) Inc.

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Report on Overburden Stripping, Detailed Mapping and Channel Sampling, Amalgamated Kirkland Property, Kirkland Lake Project, Teck Township, Larder Lake Mining Division, Ontario; Battle Mountain (Canada) Inc.

Bottrill, T. J., 1990

Report on Overburden Stripping, Outcrop Washing and Channel Sampling, Amalgamated Kirkland Property (July - December, 1989) Teck Township, Larder Lake Mining Division, Ontario; Battle Mountain (Canada) Inc.

Roth, J., 1990

Report on a Magnetometer Survey, Amalgamated Kirkland Property, Kirkland Lake, Ontario for Battle Mountain (Canada) Inc.; Stratagex Ltd.

Roth, J., 1990a

Report on an IP/Resistivity Survey, Amalgamated Kirkland Property, Kirkland Lake, Ontario for Battle Mountain (Canada) Inc.; Stratagex Ltd.

APPENDIX I

DIAMOND DRILL LOGS

HOLE: AK-90-01

PROPERTY Amalgamated Kirkland DATE LOGGED October 17-20 1990 EASTING 8350.00 LOGGED BY Mark Masson NORTHING DEPTH AZIMUTH 10185.00 DIP TOWNSHIP Teck SIGNED BY **ELEVATION** Collar CLAIM No. L 49163 341 45 DRILLED BY Heath & Sherwood LENGTH 111.10 STARTED October 16, 1990 28.96 45 SURVEYED BY UNITS metres COMPLETED October 18, 1990 K.L. Warehouse 102.10 CORE LOCATION CORE SIZE 40 NQ PURPOSE To test 102-8350 Gold Zone Alteration Zone 49.7-60.9, 11.2 m COMMENTS Pyrite Zone 59.4-60.15, 0.75 m

	SUN	ASSA	ASSAY SUMMARY					
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres			
0.00 2.00 2.00 12.30 12.30 14.10 14.10 14.45 14.45 18.40 18.40 22.70 22.70 41.20 41.20 49.70 49.70 60.90	CASING CONGLOMERATE 7.55 - 7.87 Fault @ 22° tca 9.40 - 9.80 Fault @ 30° tca 11.90 - 12.15 Fault @ 37° tca ASH TUFF CONGLOMERATE LAPILLI TUFF 15.85 - 16.00 Fault @ 52° tca ASH TUFF 22.45 - 22.60 Fault @ 22° tca LAPILLI TUFF 29.80 - 30.00 Sericite Zone 37.26 - 37.70 Fault Zone @ 40° tca ASH TUFF 41.20 - 42.00 Fault Zone @ 37° tca SERICITIC ALTERATION ZONE 50.80 - 51.65 Fault Zone @ 45° tca 52.35 - 53.50 Fault Zone @ 51° tca	60.90 80.10 80.10 83.10 83.10 84.75 84.75 87.80 87.80 92.50 92.50 92.80 92.80 107.50 107.50 111.10 111.10	53.50 - 54.10 Foliation @ 60° tca 54.10 - 56.90 Fault Zone @ 40° tca 59.40 - 60.15 Pyrite Zone 5 - 10 % py, $1 - 3 %$ qtz 60.60 - 60.85 Fault Zone @ 30° tca LAPILLI TUFF ASH TUFF 80.10 - 80.20 Fault @ 17° tca 82.80 - 83.10 Fault @ 20° tca LAPILLI TUFF ASH TUFF 84.75 - 85.20 Fault Zone @ 47° tca LAPILLI TUFF 92.20 - 92.40 Fault @ 47° tca CONGLOMERATE COARSE LAPILLI TUFF LAPILLI TUFF E.O.H.	59.40 60.40	1.00	0.61		

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HOLE: AK-90-01

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INTERVAL		DESCRIPTION						SAN			ACCANC
FROM	то		N	No.	FROM	то	Length	% Rec	DESCRIPTION	Au. g/1	Au.Check Au [*] M
0.00	2.00	CASING	······································		•						
2.00	12.30	 CONGLOMERATE / GRAYWACKE Polymictic pebble conglomerate, matrix suppor to weakly foliated with prominent pebble fabric angular to moderately well rounded, polymictic spotted trachyte) clasts up to 4 cm (avg 2 cm) in lithic fragments (graywacke) groundmass. throughout. 2.85 - 2.87 Fault @ 50° tca tight chlorite and sericite schist 3.74 - 3.85 Fault @ 57° tca Sericite + Ankerite Schist - lea albite veinlet with sharp chlo gradational with wispy sericitie 6.75 - 6.85 Fault @ 23° tca Sericite + chlorite + quartz/al 7.30 - 7.40 Fault @ 15° tca Chlorite + sericite + calcite; t calcite along fault faces. 7.55 - 7.87 Fault @ 22° tca Sericite + ankerite + chlorittwispy to laminated sericite, stro weathering. 9.40 - 9.80 Fault @ 30° tca Sericite + ankerite + quartz/a and brecciated quartz albite ve 	ted, weak to non-magnetic, massive (@ 52° tca. Unit consists of 0 - 25%; c (mafic volcanic, feldspar porphyry, n a finc grained feldspar + quartz + Minor wispy sericite is pervasivet with moderate to strong ankerite. Iding contact marked by 1 cm quartz ritic boundaries. Lower contact is conglomerate.61 	5177 5178 5179 5180 5181 5182 5183 5184 5185 5186 5187 5188	2.00 3.00 3.50 4.00 5.00 6.50 7.00 8.00 9.00 10.00 11.00	3.00 3.50 4.00 5.00 6.00 6.50 7.00 8.00 9.00 10.00 11.00 11.50	1.00 0.50 1.00 1.00 0.50 0.50 1.00 1.00		Foliated Cgl, Fault @ 2.85 - 2.87 Conglomerate - weak sericite Cgl + sericite + ankerite schist Weakly foliated Conglomerate Massive Conglomerate Foliated Cgl, fault @ 6.75 - 6.85 Foliated sheared Conglomerate, fault @ 7.30 - 7.55 Massive to foliated Conglomerate Sheared Cgl - Sericite + Ank + Qtz/Albite Massive Conglomerate Massive Conglomerate Massive Conglomerate	0.02 0.03 0.03 0.04 0.02 0.04 0.02 0.04	0.01
		······································									

HOLE: AK-90-01

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INTE	RVAL	DESCRIPTION					SAN	(PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au [*] M
		11.90 - 12.15 Fault @ 37° tca Scricite + chlorite + calcite + quartz; pseudo brecciated to brecciated quartz vein, 3 cm wide, in sericite chlorite schist.	6189 6190	11.50 12.20	12.20 13.00	0.70 0.80		Scr + Chl Schist + Qtz Breccia Massive Ash Tuff	0.01 0.01	
12.30	14.10	TRACHYTIC TUFF / ASH TUFF Fine grained, massive, purplish-grey, non-magnetic; contains 1% barren milky white quartz veins up to 0.5 cm wide.	6191	13.00	14.00	1.00		Massive Ash Tuff, fault @ 13.70 - 13.85	0.03	
		 13.70 - 13.85 Fault @ 33° tca: sericite + ankerite + chlorite + quartz; boudinaged white quartz ± albite vein <= 1 cm wide in sericite + ankerite schist. 14.00 - 14.10 Quartz ± albite vein: barren, massive, milk white, irregular contact. 								
14.10	14.45	CONGLOMERATE / GRAYWACKE Weakly foliated conglomerate with $< 5\%$ clasts in a fine grained graywacke matrix; moderate sericite to 3%; poorly sorted; contacts appear to be co-incidental with late barren quartz \pm albite veins @ 14.10 and 14.40 m.	6192	14.00	14.50	0.50		Massive Foliated Cgl with white barren quartz veins	0.02	0.01
14.45	18.40	 IAPILLI-TUFF / CONGLOMERATE Massive to moderately well foliated with clast elongation @ 55° tca. Heterolithic clasts from very fine grained dark green to fine grained reddish-brown and spotted trachyte, generally moderately to well rounded in a fine grained feldspar and sericite groundmass. Clast size varies from 1-2 mm to 2 cm (avg. 1 cm) and from 10-50% of unit; poorly sorted; non-bedded and non-magnetic; lower contact marked by 1.5 cm irregular quartz vein. 15.85 - 16.00 Fault @ 52° tca: sericite + quartz/albite schist; strong to moderately sericitized tuff with late, barren white quartz veinlets to 	6193 6194 6195 6196	14.50 15.00 16.00 17.00	15.00 16.00 17.00 17.70	0.50 1.00 1.00 0.70		Massive Lapilli Tuff Massive to foliated Lapilli Tuff - fault @ 15.85 - 16.00 Massive undeformed Lapilli Tuff Massive Lapilli Tuff with minor	0.03 0.02 0.02	
		0.5 cm.	5		1	0.70		late QV's	0.02	

HOLE: AK-90-01

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 17.45 - 17.50 Fault @ 67° tca: sericite + chlorite + quartz schist; 1 cm buff-milk white quartz vein with 1 mm wide chlorite selvage in strongly sheared sericite schist. 18.00 - 18.06 Fault @ 27° tca: sericite + chlorite + quartz pseudo-brecciated to brecciated white quartz vein within sericite-chlorite schist. 18.20 - 18.40 Contact zone with ash tuff is strongly sericitized with very irregular quartz ± albite veinlets throughout. 	6197	17.70	18.40	0.70		Massive Lapilli Tuff	0.02	
18.40	22.70	ASH TUFF Massive to poorly bedded dark-grey to green ash tuff. Unit is fine grained and very homogeneous in composition and texture. Non-magnetic, undeformed and very weakly altered with $< 1\%$ patchy, wispy sericite.								
		 18.70 - 18.90 Fault @ 50° tca: sericite + chlorite + quartz; irregular buff to white quartz veinlets and brecciated masses in sericite + chlorite schist. 19.55 - 19.60 Fault @ 32° tca: caricite + chlorite + chlorite	6198 6199	18.40 19.00	19.00 20.00	0.60 1.00		Massive Ash Tuff with sericite + quartz, fault @ 18.70 Ash Tuff with minor faulting and	0.01 0.01	
		weathered carbonatized shear zone approximately 2 cm wide with	6200	20.00	21.00	1.00		quartz Massive Ash Tuff	nil	
		 19.80 - 20.10 Bedding @ 12 - 15° tca: very finely laminated ash tuff in contacts with slightly coarser ash tuff; small scale micro faulting evident with 0.5 - 1 cm movement. 22.45 22.60 Evaluation of the provide the second state of the provident with the provident of the provident state of the	6202	22.00	22.00 22.70	0.70		Massive Ash Tuff Massive Ash Tuff with fault breccia @ 22.45	0.01 0.01	
		up to 3 cm in a dark green to black chloritic matrix. Minor late calcite in fractures.								
22.70	41.20	LAPILLI TUFF Multi-coloured, poorly sorted, non-bedded lapilli tuff with 1 - 25% clasts; clasts vary from aphanitic light red trachyte to pale green sericitized spotted trachyte to dirty brown porphyritic trachyte with phenocrysts to 1 - 2 mm in holocrystalline	6203 6204	22.70 23.50	23.50 24.00	0.80 0.50		Massive Lapilli Tuff Massive Lapilli Tuff - minor late calcite	0.01 0.01	

HOLE: AK-90-01

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INTE	RVAL	DESCRIPTION					IPLE		ASSAYS		
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		groundmass. poorly sorted	Clasts are angular to sub-rounded from 2 mm - 4 cm (avg. 1 cm), with weak to moderate shear fabric @ 55° tca; unit displays patchy	6205	24.00	25.00	1.00		Massive Lapilli Tuff with late quartz vein	0.01	
		strong magnetism inroughout. 24.50 \sim 24.60 \sim Ouertz \pm albite \pm onlyging weig @ 400 too; buff white to brown			25.00 26.00	26.00 27.00	1.00 1.00		Massive Lapilli Tuff Massive Lapilli Tuff - fault @ 26.50	0.01 0.01	
		24.50 - 24.60 26.50 - 26.60 29.80 - 30.00	Quartz \pm albite + ankerite vein @ 40° tca: buff-white to brown. Fault @ 40° tca: chlorite + quartz + calcite; narrow open chloritic fault with vuggy quartz + calcite infilling. Sericitic zone; moderately sericitized tuff with late buff-brown to white any provide of the two series of two series of the two series of the two series of the two series of the two series of two series of the two series of two series of the two series of two	6208 6209 6210	27.00 28.00 29.00	28.00 29.00 30.00	1.00 1.00 1.00		Massive undeformed Lapilli Tuff Massive Lapilli Tuff Massive to sericitic Tuff @ 29.80	0.01 0.01 0.01	
		30.30 - 30.40 34.32 - 34.40	while quartz veining @ 10° tca. Fault @ 50° tca: chlorite + sericite + quartz. Fault @ 67° tca: sericite + quartz + chlorite; strong sericite schist with brecciated quartz throughout bull while barren quartz	6211	30.00	31.00	1.00		- 30° Massive Lapilli Tuff - minor weak faulting	0.01	0.01
		37.26 - 37.70	Fault zone - fault breccia $(a 27^{\circ} - 40^{\circ})$ tca: brecciated to pseudo- brecciated (crack & seal) zone of chlorite + sericite + quartz in fine grained ash - / lapilli - tuff; pseudo-breccia i.e. an in-situ cracking which is infilled with chlorite; brecciated material is	6212 6213 6214 6215	32.00 33.00 34.00	33.00 34.00 35.00	1.00 1.00 1.00 1.00		Massive Lapilli Tuff Massive Lapilli Tuff Massive Lapilli Tuff - fault @ 34.32	0.01 0.01 0.01 nil	
		40.00 - 40.50	angular quartz clasts in a dark chloritic/sericitic matrix. Ash Tuff - massive, very fine grained, light-green to grey ash tuff with very fine (<= 1 mm) magnetite beds @ $0.5 - 2.5$ cm separation; bedding @ 55° tca.	6216 6217 6218 6219 6220 6221	35.00 36.00 37.00 38.00 39.00 40.00	36.00 37.00 38.00 39.00 40.00 40.50	1.00 1.00 1.00 1.00 1.00 0.50		Massive Lapilli Tuff Massive unaltered Lapilli Tuff Fault Breccia Zone 37.26 - 37.70 Massive Ash/Lapilli Tuff Massive Ash/Lapilli Tuff Undeformed Ash Tuff with 1 mm magnetic beds	nil nil 0.01 nil 0.01 0.01	
		Note: From 35.50 - 41.20 m zone of intercalated ash and lapilli tuffs; Gradational contacts between the units are noted by a sharp decrease in the number of clasts and no apparent change is evident in the groundmass which is a fine to very fine grained, massive trachytic ash with 30% feldspar + 70% lithic clasts.		6222	40.50	41.20	0.70		-	0.01	

HOLE: AK-90-01

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
41.20	50.80	ASH TUFF Unit is generally massive to poorly bedded, very fine to fine grained, dark grey to green to mauve (hematite) and contains < 1% clasts greater than 5 mm. Generally non-magnetic but has some locally strongly magnetic areas; irregular, white quartz veinlets up to 0.5 cm are pervasive throughout.				42.00	0.80		Fault Zonc - Qtz breccia , chlorite and sericite	0.01		
		41.20 - 42.00	Fault Zone - Fault Breccia @ 37° tca: sericite + chlorite + quartz; upper contact marked by a sharp 1 mm chlorite slip with a 2 mm quartz vein; section is semi-massive to foliated fault breccia consisting of fractured and brecciated white to creamy coloured quartz masses and veinlets (10-15%) in a fine grained yellow - green sericitic + chloritic groundmass.	6224	42.00	43.00	1.00		Massive Ash Tuff with 2% late Qtz veinlets	0.01		
		43.32 - 43.40	Fault @ 47° tca: sericite + quartz + chlorite; upper and lower contacts marked by tight, 1 - 5 mm chlorite + quartz vein bounding	6225	43.00	44.00	1.00		Massive Ash Tuff - fault @ 43.32 - 43.40	0.02		
			predominantly sericitic ash tuff.	6226	44.00	45.00	1.00		Ash Tuff - fault @ 44.66 - 44.75	0.01		
		44.66 - 44.75	Fault @ 70° tca: sericite + chlorite + quartz; 4 cm buff to white quartz vein bounded by dark green chlorite and wispy sericite.	6227	45.00	46.00	1.00		Massive weakly sericitic Ash Tuff	nil		
		46.26 - 46.35	Quartz Vein: very irregular quartz vein with moderate to strong sericite alteration at contacts and within 1 - 2 cm inclusion; quartz	6228	46.00	47.00	1.00		Massive Ash Tuff with 1% quartz veins	nil		
			is milk-white to pinkish and appears to have undergone three periods of silicification.	6229	47.00	48.00	1.00		Ash Tuff with 1% quartz and chlorite veinlets	0.02		
		48.90 - 49.30	Well bedded Ash Tuff: very fine grained light grey-green ash tuff with $1 - 2$ mm wide purple (hematite) beds @ 62° tca. These beds	6230	48.00	49.0 0	1.00		Massive Ash Tuff with 1 - 2% quartz veinlets	nil		
		49.30 - 49.38	are cross-cut by $1 - 2$ mm wide quartz veinlets with distinct 0.5 - 1 cm alteration (sericite?) halos evident which obliterates bedding proximal to these veinlets. Fault @ 55° tca: sericite + quartz + chlorite; 3 cm buff-pink to white quartz vcin bounded by tight, irregular sericite + chlorite slips.	6231	49.00	50.00	1.00		Bedded Ash Tuff - fault @ 49.30	nil		

HOLE: AK-90-01

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INTE	RVAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		49.70 - 50.40 Sericite isograd (e 49.70 m: unit becomes weakly, pervasively altered with very fine (<= 1 mm) spotty sericite throughout, leading to highly altered and sheared tuffs.	6232	50.00	50.80	0.80		Weakly sericitic Ash Tuff	0.02	0.05
50.80	51.65	FAULT ZONE (a) 45° tca Sericite + Chlorite + Quartz Very strongly deformed and comprised of 70% sericite, 15% chlorite, 15% quartz; fine grained yellow-green sericite + chlorite encompassing a very fine grained light brown to grey groundmass of sericite + chlorite + quartz.	6233	50.80	51.65	0.85		Fault Zone - sheared Lapilli Tuff	nil	
		51.30 - 51.50 Fine grained reddish-pink trachytic clasts up to 1 cm are evident within a strongly foliated sericite + chlorite schist which gives rise to a "Augen" type texture.								
51.65	52.35	LAPILLI TUFF Moderately well foliated @ 57° tca; heterolithic lapilli tuff with clasts from 2 mm - 7 mm (avg. 3-4 mm), moderately rounded and consisting of 75% brown-green, very fine grained clasts, 10 - 15% fine grained red clasts, 10% sericitized yellow-green clasts; groundmass is well foliated and consists of 75% very fine lithics and 25% sericite	6234	51.65	52.35	0.70		Sericitized Lapilli Tuff	0.05	
52.35	53.50	 FAULT ZONE (@ 51° tca - Sericite + Chlorite + Quartz Strongly deformed lapilli tuff with patchy and wispy sericite + chlorite in a pseudo- brecciated groundmass of lapilli tuff and 10 - 15% irregular quartz masses outlined by dark chloritic boundaries. 53.10 - 53.60 Tight chlorite + sericite fault approximately 2 - 3 mm wide running sub-parallel to core axis. Rusty limonitic stain to gouge material. 	6235 6236	52.35 53.00	53.00 53.50	0.65 0.50		Sericitic fault + Fault Breccia Rubbly core - sericite + chlorite + quartz schist	0.01 0.04	

HOLE: AK-90-01

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INTE	RVAL	DESCRIPTION	S		SAM	AMPI F				
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au 9/1	ADDA 15
53.50	54.10	LAPILLI TUFF Well foliated, multi-coloured, heterolithic lapilli tuff; groundmass is fine grained greyish-brown colour comprising 80% of unit. Clasts comprise 20% of unit and consist of roughly equal proportions of red, reddish-brown, light to dark green, very fine grained trachytic fragments. Clasts are angular to sub-rounded from 2 mm - 1 cm (avg. 0.5 cm); prominent stretching @ 60° tca.	6237	53.50	54.10	0.60		Foliated, moderately sericitic Lapilli Tuff	0.01	
54.10	56.90	 FAULT ZONE (a) 35°- 40° tca Entire section is comprised of strongly foliated to sheared lapilli tuff with closely spaced (10 - 25 cm) tight sericite + chlorite ± quartz faults throughout; sericite alteration is pervasive and occurs as 5 - 10% fine wisps and spots in highly foliated lapilli tuff, to 85% sericite + 15% chlorite + quartz in fault zones. 56.65 Fault Breccia @ 37° tca: angular white-pink quartz + calcite fragments up to 0.5 cm in a 1 cm wide very fine grained black chloritic matrix. 	6238 6239 6240	54.10 55.00 56.00	55.00 56.00 56.90	0.90 1.00 0.90		Strongly sheared, foliated sericitic Tuff Sheared Lapilli Tuff - sericite + chlorite Strongly sheared sericitic Tuff	nil 0.02 0.07	
56.90 59.40	59.40 60.15	ASH TUFF Unit is fine grained greyish-brown to green, massive to moderately well foliated non- magnetic tuff; alteration consists primarily of pervasive sericitization as thin wisps, laminations, spotty sericite and sericitized clasts ranging from $5 - 15\%$ of unit; secondary quartz + chlorite veinlets up to 5 mm comprise 2% of total PYRITIC ZONE - (Rehealed Breccia) Unit is yellow-brown to green in colour and is brecciated by fine grained dark grey irregular pyritic band or veinlets generally 1 - 3 mm in thickness and coalescing into masses up to 1 cm wide; pyritic bands are comprised of very fine grained pyrite + quartz, 75% and 25% respectively; host rock is pervasively sericitized and contains 1 - 3% very fine grained disseminated pyrite interstitial to more massive pyritic veinlets; at least 2 stages of quartz flooding are evident as 1) white, narrow $< = 5$	6241 6242 6243 6244 6245	56.90 57.90 58.90 59.40 59.90	57.90 58.90 59.40 59.90 60.40	1.00 1.00 0.50 0.50 0.50		Moderately foliated, sericitic Ash Tuff Massive to foliated Ash Tuff Massive sericitic Ash Tuff Pyrite Zone, 5 - 10% pyrite in sericitic Tuff Pyrite Zone, 3 - 5% pyrite in sericitic Tuff	0.02 0.07 0.09 0.88 0.36	0.84

HOLE: AK-90-01

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INTE	RVAL	DESCRIPTION								
FROM		DESCRIPTION	<u> </u>				SAN	1PLE		ASSAYS
TROM	10		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au [*] M
		mm quartz \pm chlorite veinlets parallel to fabric and having strong pyritic boundaries and 2) late white cross-cutting quartz veinlets and masses; upper contact is very sharp and somewhat irregular @ 65° tca; lower contact is very irregular, sharp and is marked by a 5 mm quartz vein with semi-massive, fine grained pyrite along vein boundaries 1 - 2 mm wide; average pyrite content 5 - 10%.								
60.15	60.90	SERICITIC ASH TUFF Massive to weakly foliated light green, fine grained sericitic ash tuff; unit contains 1 - 2% very finely disseminated pyrite from $60.50 - 60.60$ m.	6246	60.4 0	60.90	0.50		Sericitic Ash Tuff + Fault Breccia	0.08	
		60.35 - 60.40Fault Breccia @ 53° tca: 3 - 4 cm black, chloritic breccia with angular, sericitic trachyte clasts to 1.5 cm.60.60 - 60.85Fault @ 30° tca: sericite + chlorite + quartz.								
60.90	80.10	LAPILLI TUFF Massive to weakly foliated dark grey to green, fine to medium grained lapilli tuff; groundmass is fine grained, chloritic and moderately to strongly magnetic through out; clast component from $5 - 25\%$ of the unit, are angular to sub-rounded, generally less than 1 cm in size, and are comprised predominantly of light brown coloured, fine arguined to obtain the back to the unit of the unit of the transformation of the transf	6247 6248 6249	60.90 61.90 62.50	61.90 62.50 63.50	1.00 0.60 1.00		Massive weakly sericitic Lapilli Tuff Massive Lapilli Tuff Massive Lapilli Tuff fault @ 63.30	0.04 0.01 0.04	
		clast clongation is a massive, noorly bedded and moderately well contact	6250	63.50	64.50	1.00		Massive chloritic Lapilli Tuff	nil	
		ends elongation, i.e., massive, posity beduce and moderately wen solice.	6252	65 50	65.50	1.00		Massive Lapilli Tuff	0.01	
		63.30 Fault @ 20° tca: sericite + chlorite schist; tight 2 - 3 mm wide sericite +	6253	66.50	67.50	1.00		Massive Lapilli Tuff	0.01	
		chlorite shear.	6254	67.50	68.50	1.00		Massive Lapilli Tuff	0.01	0.01
		73.35 Fault @ 71° tca: Chlorite + Quartz \pm calcite; 1 cm wide chloritic shear	6255	68.50	69.50	1.00		Massive unaltered Lapilli Tuff	0.01	
1		with 0.5 cm pink quartz + calcite.	6256	69.50 70.50	70.50	1.00		Massive unaltered Lapilli Tuff	0.01	
			6258	70.50	72 50	1.00		Massive unaltered Lapilli Tuff	0.02	
			6259	72.50	73.50	1.00		Massive unaltered Lapini Tuff	0.05	
			6260	73.50	74.50	1.00		Massive unaltered Lapilli Tuff	nil	
L	L									

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
			6261 6262 6263 6264 6265 6266	74.50 75.50 76.50 77.50 78.50 79.50	75.50 76.50 77.50 78.50 79.50 80.50	1.00 1.00 1.00 1.00 1.00 1.00		Massive unaltered Lapilli Tuff Massive Lapilli Tuff - fault @ 80.10	nil 0.02 nil 0.01 nil nil	0.01
80.10	80.20	FAULT ZONE @ 17° tca Sericite + Chlorite + Quartz buff to pink quartz + calcite breccia in sericite + chlorite schist; fault marks upper contact of fine grained massive, bleached ash tuff								
80.20	83.10	ASH TUFF / ALTERED LAPILLI TUFF Massive to weakly foliated with weak clast elongation @ 55° tca; unit is buff-brown (bleached?) to greyish-green in colour; framework consists of 5% angular to sub- rounded buff-brown coloured clasts, very fine grained to aphanitic and from 1 - 3 mm in size, and appear to be somewhat altered to sericite; groundmass is fine grained, equigranular composed of 95% feldspar and lithic fragments (indiscernible)								
		and 5% black, fine magnetite grains approximately 0.5 mm in size; unit is therefore strongly magnetic; where groundmass is bleached to a buff-brown colour (possibly	6267	80.50	81.50	1.00		Bleached Ash Tuff with 5% Magnetite	0.01	
		sericite alteration), clasts become obliterated and difficult to distinguish.	6268	81.50	82.50	1.00		Massive to bleached Tuff with 3 - 5% Magnetite	0.01	
		82.80 - 83.10 Lower contact faulted @ 20° tca: sericite + chlorite + pink-buff quartz; minor (<<1%) coarse, euhedral pyrite along slip face.	6269	82.50	83.50	1.00		Bleached to unaltered Ash - / Lapilli Tuff	0.02	
83.10	84.75	LAPILLI TUFF Medium to coarse grained dark grey to green, moderately magnetic lapilli tuff; clasts from 1 - 2 mm to 2.5 cm (avg. 4 - 5 mm) in size and comprise 1 - 10% of the unit; clasts are angular to sub-rounded and are buff-brown in colour and very fine grained;	6270	83.50	84.50	1.00		Massive Lapilli Tuff	nil	

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INTE	RVAL	DESCRIPTION					SAM			A88 AV6	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check	Au*M
		matrix is fine grained dark grey-green, equigranular and consists of 65% feldspar, 35% lithics.									
84.75	85.20	FAULT ZONE Scricite + Chlorite + Quartz @ 47° tca Leading contact marked by 1 - 2 cm pink-white quartz vein with sharp, black chloritic edges 1 - 2 mm wide; lower contact also marked by 0.5 cm pink-buff quartz vein with 2 - 5 mm sericite + chlorite contacts.	6271	84.50	85.20	0.70		Sericite + Chlorite + Quartz Fault	0.01	0.01	
85.20	87.80	ASH TUFF Fine grained, massive dark-green ash tuff with $< = 1\%$ buff-brown lapilli fragments; unit is characterized by patchy buff-brown sericite alteration halos up to 2 cm wide	6272	85.2 0	86.00	0.80		Ash Tuff with sericitic halos	0.01		
		centered on narrow $(1 - 5 \text{ mm})$ white-pink quartz veinlets oriented @ 40° tca (25% + scricite); buff-brown alteration halos have very diffuse boundaries grading outward into less altered, scricitic tuffs with 1 - 5% scricite; contact with lower lapilli tuff unit is gradational and is not service to the scricite tuffs.	6273 6274	86.00 87.00	87.00 87.80	1.00 0.80		Ash Tuff with sericite alteration halos Ash tuff with sericite alteration	0.01 0.01		
87.80	89.10	unit is gradational and is noted by an increase in lapilli size clast content LAPILI.I TUFF Intercalated ash; unit is quite variable in colour and texture from dark grey-green, brown to brown purple and contains from 1 - 5% sub-rounded, buff-brown trachytic clasts in a fine to very fine grained matrix.	6275 6276	87.80 88 50	88.50	0.70		halos Massive unaltered Lapilli Tuff Massive 1 apilli / Ash Tuff with	0.03		
		 88.85 - 89.10 Light brown, fine grained ash tuff with weakly bedded magnetite grains and specks throughout (2 - 3% of total). 	0210	66.50	07.10	0.00		magnetite	0.02		
89.10	92.50	LAPILLI TUFF Massive to weakly foliated light to dark green to brown in colour with patchy, strong magnetics throughout; framework consists of sub-rounded clasts from 3 mm - 1.5 cm of buff-brown to pink trachyte and spotted trachyte in a fine grained equigranular ash matrix.	6277 6278	89.10 90.10	90.10 91.00	1.00 0.90		Massive unaltered Lapilli Tuff Massive weakly sericitic Lapilli Tuff	0.02 nil		

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		91.05 - 92.40 92.20 - 92.40	Fault @ 78° tca: sericite + quartz; 2 cm wide sericite schist with narrow (2 - 3 mm) quartz veinlets. Fault Zone @ 47° tca: sericite + quartz \pm chlorite; strongly foliated, sericitized lapilli tuff with wispy and spotty sericite wrapping around lapilli clasts; 0.5 cm quartz vein + chlorite at lower contact.	6279 6280	91.00 92.00	92.00 92.50	1.00 0.50		Massive Lapilli Tuff - minor sericite alteration Sheared sericitic Lapilli Tuff	0.01 nil	<u>, , , , , , , , , , , , , , , , , , , </u>
92.50	92.80	POLYMICTIC Narrow interbe rounded pebble gradational with spotty and wisp	CONGLOMERATE d of polymictic, jasperoidal conglomerate with 20% angular to well es up to 1.5 cm; contacts are poorly defined and appear to be h bordering lapilli tuffs; unit is pervasively sericitized with $1 - 2\%$ y sericite throughout the matrix.	6281	92.50	93.00	0.50		Massive polymictic conglomerate and Lapilli Tuff	0.01	
92.80	107.50	LAPILLI TUFF Monolithic coa dark-grey to gre from 1 - 2 mm porphyritic (spo displays patchy 94.42 - 94.50	rse lapilli tuff (matrix supported); massive, unaltered, undeformed een in colour with $1 - 5\%$ angular buff-brown clasts; clasts vary in size to $2 - 3$ cm (avg. $0.5 - 1$ cm) and are predominantly fine grained to buted) trachyte floating in a dark fine grained chloritic matrix; unit strong magnetics throughout. Fault @ 50° tca: chlorite + sericite; muddy, tight chlorite + sericite \pm quartz; chloritic shear with minor pink-white quartz + quartz breccia.	6282 6283 6284 6285 6286 6287 6288 6289 6290 6291 6292 6293 6294 6295 6296	93.00 94.00 95.00 96.00 97.00 98.00 99.00 100.00 101.00 102.00 103.00 104.00 105.00 106.00 107.00	94.00 95.00 96.00 97.00 98.00 99.00 101.00 102.00 104.00 105.00 105.00 107.00 107.50	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00		Massive coarse Lapilli Tuff Massive Lapilli Tuff fault @ 94.42 Massive Lapilli Tuff Massive Lapilli Tuff Massive Lapilli Tuff Massive Lapilli Tuff Coarse Lapilli Tuff Massive unaltered coarse Lapilli Tuff	0.02 0.01 ni1 ni1 0.01 0.02 0.01 0.01 0.01 0.01 0.02 0.01 0.01	0.01

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INTEI	RVAL	DESCRIPTION					SAM	PLF.		274224
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au ⁺ M
107.50	111.10	LAPILLI TUFF Heterolithic - massive, dark green to mauve coloured strongly magnetic tuff; clasts are heterolithic, sub-angular and vary from 1 mm - 1.5 cm (avg. 0.5 cm) and comprise 10 - 20% of unit; matrix is fine grained, dark green chloritic and strongly magnetic. 108.95 Fault @ 30° tca; 0.5 cm wide quartz + chlorite shear.	6297 6298 6299 6300	107.50 108.00 109.00 110.00	108.00 109.00 110.00 111.10	0.50 1.00 1.00 1.10		Massive heterolithic Tuff Massive Lapilli Tuff Massive Lapilli Tuff Massive unaltered heterolithic tuff	nil nil nil nil	
	111.10	E.O.H.								
		NOTE: Abbreviations Used Ank = Ankerite, Cgl = Conglomerate Chl = Chlorite, QV = Quartz Vein Qtz = Quartz, Ser = Sericite								

HOLE: AK-90-02

PROPERTY Amalgamated Kirkland DATE LOGGED October 21-22 1990 EASTING 8300.00 DEPTH AZIMUTH LOGGED BY Mark Masson NORTHING 10175.00 DIP TOWNSHIP Teck B SIGNED BY ELEVATION Collar 341 45 CLAIM No. L 491663 **DRILLED BY** Heath & Sherwood LENGTH 123.55 38.10 44 STARTED October 18, 1990 SURVEYED BY UNITS metres COMPLETED October 19, 1990 96.00 41 **CORE LOCATION** K.L. Warehouse CORE SIZE NQ PURPOSE To test 102-8275 Gold Zone Alteration Zone 54.5-64.0, 9.5 m COMMENTS No appreciable sulphide mineralization

					1					
		SUMMA	RY LOG		ASSAY SUMMARY					
INTEI	RVAL	DESCRIPTION	INTERVAL	DESCRIPTION	INTERVAL	LENGTH	AVERAGE			
From	То		From To		From To	in metres	Au g/i			
0.00	2.44	CASING	103.75 123.55	GRAYWACKE	63.10 63.65	0.55	0.165			
2.44	4.10	ASH TUFF		3 - 4 % sericite		0.000	0.100			
4.10	11.20	LAPILLI TUFF			103.00 104.00	1.00	0.12			
	1	8.40 • 9.00 Shear Zone @ 24 • tea	123.55	Е.О.Н.						
11.20	54.50	ASH TUFF								
54.50	61.90	BLEACHED ASH TUFF								
61.90	63.60	FAULT ZONE								
		63.55 - 63.60 Quartz Vein @ 35° tca								
		1 - 3 % pyrite								
63.60	64.00	SYENITE								
64.00	69.50	LAPILLI TUFF								
69.50	79.20	ASH - LITHIC TUFF								
		70.45 - 70.80 Sheared, Sericitic								
		74.75 - 75.15 Fault @ 45° tca								
		78.75 - 79.20 Bleached								
79.20	102.35	COARSE LAPILLI TUFF								
102.35	103.75	FAULT ZONE								
		10 - 15 % brecciated quartz veining and chloritic								
		fractures								

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INTER	VAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	TO		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
0.00	2.44	CASING								
2.44	4.10	ASH TUFF Massive to well bedded, fine grained, equigranular ash tuff; unit is grey-green in colour with very fine (0.5 - 1 mm) dark grey ash beds @ 15° tca; unit is deformed; non-magnetic and intercalated with massive lapilli tuffs with sharp but irregular contacts.								
4.10	11.20	LAPILLI TUFF Matrix supported, heterolithic lapilli tuff; Massive, dark-grey undeformed and unaltered with 1-3% dispersed, sub-angular clasts floating in a massive, fine grained ash matrix. Framework consists of sub- angular clasts to 1.5 cm, from dark green to buff to pink in colour, and have little to no fabric orientation. Unit is non-magnetic and contains less than 0.5% late, white- pink quartz veinlets (<= 0.5 cm) randomly dispersed throughout.	6301 6302	7.00 8.00	8.00 8.42	1.00 0.42		Massive Lapilli Tuff Massive Lapilli Tuff	nil nil	
		8.42 - 9.00 Fault shear zone @ 24° tca: sericite + ankerite + chlorite; rusty weathered highly foliated to sheared with strong sericite and ankerite alteration; upper contact marked by an irregular 0.5 cm quartz + chlorite vein with penetrative carbonate alteration up to 3 cm in wall rock; lower contact is sharp, tight 2 mm quartz + chlorite veinlet; late, vuggy quartz + calcite vein cross-cuts foliation (6.80°)	6303 6304	8.42 9.00	9.00 10.00	0.58 1.00		Sericite + Ankerite Schist Massive Lapilli Tuff	0.01 nil	0.03
		10.47 - 10.55 Fault breccia @ 33° tca: angular white-pink quartz fragments in dark chloritic matrix;	6305	10.00	11.00	1.00		Lapilli Tuff with late cross faulting	0.03	
11.20	54.50	ASH TUFF Massive to well bedded, fine grained, grey-green ash tuff with intercalated clast-rich lapilli tuff beds from 1 cm to 1 m in width and generally averaging <0.5 m wide; unit is unaltered and undeformed with patchy, strongly magnetic zones but is								

HOLE: AK-90-02

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INTER	VAL	DESCRIPTION					SAN	1PLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
FROM 54.50 (TO 61.90	 generally weak to non-magnetic; intercalated lapilli beds are heterolithic with clast component ranging from 5-25% in a fine grained ash matrix; bedding varies from 5 - 20° tca and quite often shows evidence of cross-bedding in ash component. 25.30 - 25.70 White to cream to pink coloured irregular barren quartz vein running sub-parallel to core axis. Minor sericite and chlorite in wall rock. 25.70 - 25.95 Fault @ 17° tca: sericite + chlorite + quartz + calcite; 3 - 5 cm brecciated quartz + calcite vein within tight sericitic, muddy slips 1 - 2 mm wide on both walls. 49.75 - 49.90 Fault @ 40° tca: chlorite + sericite + quartz; strongly sheared, muddy fault with narrow (1 - 3 mm) quartz veinlets. 53.55 - Fault @ 33° tca: tight 1 cm wide chlorite + sericite shear. BLFACHED ASH TUFF This section is characterized by 5-10% cross-cutting quartz veinlets with bleached, buff-brown irregular sericitized alteration halos surrounding them. Unaltered 	No. 6306 6307 6308 6309 6310 6311 6312	FROM 24.00 25.00 25.50 26.00 53.00 54.00 54.50	TO 25.00 25.50 26.00 27.00 54.00 54.50 55.00	Length 1.00 0.50 0.50 1.00 1.00 0.50 0.50 0.50	% Rec	DESCRIPTION Massive Ash / Lapilli Tuff Quartz vein in massive Ash Tuff Fault Zone @ 25.70 m Massive Ash Tuff Massive Ash Tuff Massive Ash Tuff Ash Tuff with sericite alteration	Au, g/1 0.01 0.01 0.03 nil 0.01 0.01	Au,Check	Au*M
		sections are massive, fine grained grey-green ash tuff as at 11.20 - 55.50 metres. At least 3 stages of quartz veining are evident:	6313	55.00	56.00	1.00		on quartz Ash Tuff with quartz veins and	0.01		
		1) Primary quartz flooding with scricite (@ 20° tca) alteration halos up to 2 cm wide bounding milk-white irregular quartz veins @ 15° - 20° tca with inclusions of	6314	56.00	57.0 0	1.00		sericite Sericitized Ash Tuff with quartz veins	nil		
		sericitized wall rock. Veins have 0.5 - 3 cm wide halos.	6315	57.00	58.00	1.00		Bleached Ash Tuff + quartz veins	0.01	0.01	
			6316	58.00	59.00	1.00		Bleached Ash Tuff + quartz veins	0.01		
		2) and 3) I wo stages of later cross-cutting quartz flooding @ 90° to initial veining. These veins are narrow (1, 3 mm) and are frequently stepped due to small coole	6317	59.00	60,00	1.00		Bleached Ash Tutt with 3 - 5%	nıl		
		microfaulting parallel to primary vein orientation.	6318	60.00	61.00	1.00		Bleached Ash Tuff with 5% quartz veins	nil		
			6319	61.00	61.90	0.90		Bleached Ash Tuff with 3 - 5% quartz veins	nil		
1	1							1	ŀ		
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INTER	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au ⁺ M
61.90	63.60	FAULT ZONE Mylonite @ 37 cataclastic to p encompassing s groundmass is irregular quart parallel to schis @ 37° tca (80°	The tca: strongly foliated to sheared, sericitized tuffs; unit displays becaudo-mylonitic texture with wispy to banded sericite $(25 - 50\%)$ tretched and broken lithic clasts up to 5 mm (avg. 1 - 3 mm) in size; unrecognizable due to grain destruction; section is cut by 5% z masses and veinlets (<= 0.5 cm) which have been brecciated stosity and by late cross-cutting, narrow (<= 1 mm) quartz veinlets P to schistosity).	6320 6321	61.90 62.50	62.50 63.10	0.60 0.60		Sheared sericitic Mylonite Sericitic Mylonite	0.01 0.01	
		63.20 - 63.50 63.50 - 63.60	Broken, rubbly schistose core; sericite schist; very strong, muddy breaks throughout this section. Quartz vein : Buff to white quartz vein, 5 cm wide, with sharp sericite-chlorite slip face which marks lower contact @ 35° tca; vein displays crack and seal texture with multiple periods of quartz flooding; sericite slips up to 1 mm wide and carrying $1 - 3\%$ pyrite cross-cut late quartz veinlets $(1 - 3 \text{ mm})$ (i.e., pyrite mineralization post dates latest quartz veining); these pyritic slips display minor sinistral displacement (<= 1 mm); very minor (<<1\%) disseminated pyrite is evident within quartz matrix.	6322	63.10	63.65	0.55		Sericite Schist + 5 cm quartz pyrite vein	0.16	0.17
63.60	64.00	SYENITE Massive very fit fine grained to 1 mm wide). U to core axis wit white poorly de controlled with developed in sy	the grained to porphyritic and reddish-purple in colour. Matrix is very aphanitic with $1 - 2\%$ wispy sericite along micro-fracture planes (<< Jnit is cut by $3 - 5\%$ late irregular white quartz veinlets at all angles h prominent, black chloritic margins. $2-5\%$ sub and anhedral, milk- eveloped phenocrysts average 0.5 - 1 mm in size. Lower contact fault h $3 - 4$ mm wide chlorite + sericite slip and sericite foliation renite for 1 cm at contact (i.e., post syenite fault) @ 75° tca.	6323	63.65	64.00	0.35		Syenite - late quartz chlorite veining	0.01	

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО]		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [•] M
64.00	69.50	LAPILLI TUFI Heterolithic co @ 55° tca; uni cross-cutting qi Framework cor 2 mm to 5 cm types vary from grained, black moderate serici	Farse lapilli tuff; massive to moderately foliated with clast elongation t is grey-green to purple (hematized) in colour and is cut by $2 - 3\%$ uartz veinlets ($1 - 2 \text{ mm}$) wide @ 35° tca sub-parallel to foliation. this sists of poorly sorted angular to subrounded lithic fragments from $1 - 1$ in size (avg $0.5 - 1 \text{ cm}$) and comprising $10 - 15\%$ of unit. Lithology green fine grained clasts to reddish brown, porphyritic and very fine trachyte clasts. Matrix is fine grained lithic ash with pervasive, ite alteration throughout.	6324 6325 6326 6327	64.00 64.50 65.00 66.00	64.50 65.00 66.00 66.50	0.50 0.50 1.00 0.50		Altered sericitic Tuff with 3% quartz veinlets Massive hematitic Lapilli Tuff Massive hematitic Lapilli Tuff Weakly sericitic Lapilli Tuff	0.02 0.01 0.01 0.01	
		66.97 - 67.07 67.30 - 67.45 67.90 - 68.00 69.50	Open, vuggy, drusy quartz + calcite veinlets $(1 - 3 \text{ mm wide})$, sub- parallel to core axis. Core is rusty, carbonatized and sericitic $(5 - 10\%)$. Quartz + sericite schist @ 45° tca: grey to buff-brown coloured quartz veining 3 - 4 cm wide with strong irregular sericitic margins and fault slips. Quartz Vein @ 22° tca: white to buff to pink quartz and sericite vein 2 cm wide. Fault @ 40° tca: strong, tight muddy chloritic break approximately 0.5 cm wide.	6328 6329 6330 6331	66.50 67.10 68.10 69.10	67.10 68.10 69.10 69.60	0.60 1.00 1.00 0.50		Lapilli Tuff with vuggy quartz + calcite Lapilli Tuff with quartz veins Hematized Lapilli Tuff - 3% quartz veins Massive Tuff with faulting @ 69.50	0.02 0.01 0.01 0.01	0.02
69.50	79.20	ASH - LITHIC Massive dark g with minor pa throughout. U rock fragments generally buff-t Unit is cross-c moderate serici	TUFF rey to green generally quite fine grained and moderately well sorted atchy sections of lapilli tuff up to 0.5 metre wide interspersed init consists predominantly of fine grained lithic matrix (feldspars + s) with less than 1% lapilli sized clasts randomly scattered and prown and very fine grained. Unit displays patchy, strong magnetics, cut by 1% white quartz veinlets (1 - 3 mm wide) with weak to itization halos on margins with up to 1 - 2 cm wall rock penetration.								

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		70.45 - 70.80	Sheared to sericitized lithic tuff; dirty brown coloured altered tuff with 5 - 10% pervasive sericite and numerous tight chloritic slips throughout; 70.50 - 70.55 buff-brown, halo-crystalline (cherty), irregular quartz mass, fractured and cut by 0.5 mm black chloritic slips; lower contact sharp 2 - 3 mm chlorite + quartz vein @ 52° tea	6332 6333 6334	69.60 70.40 70.90	70.40 70.90 71.90	0.80 0.50 1.00		Massive Lithic Tuff Sericitic Lithic Tuff - cherty quartz @ 70.45 Massive Lithic Tuff - minor quartz + bleaching Massive Lithic Tuff	ni1 0.01 0.01	
		-	103.	6336 6337	72.50 73.50	73.50 74.50	1.00 1.00		Massive Lithic Tuff Massive Lithic Tuff Massive Lithic Tuff, minor quartz	0.02	0.05
		74.75 - 75.15	Fault (a) 45° tca: foliated to sheared lithic tuff with sericite + quartz throughout; quartz occurs as white to buff disrupted masses and brecciated veinlets up to 0.5 cm with 0.5% disseminated pyrite	6338 6339	74.50 75.50	75.50 76.50	1.00 1.00		Foliated Tuff with quartz and 0.5% pyrite Massive Lithic Tuff	nii nii	
			In wall rock (@ $75.05 - 75.10$ m.	6340	76.50	77.50	1.00		Lithic Tuff with fault breccia	0.01	
		77.00 - 77.03	Fault breccia @ 77° tca: 1 - 1.5 cm white brecciated quartz vein in a dark green fine grained chloritic matrix.	6341	77.50	78.50	1.00		Massive Lithic Tuff	0.01	
		78.75 - 79.20	Bleached lithic tuff: $3 - 5\%$ milk-white quartz veinlets $1 - 5$ mm wide along hair-line slips @ 50° tca with irregular light brown bleached, sericitic halos up to $1 - 2$ cm. Where veins coalesce together bleached areas increase in width but not necessarily in intensity.	6342	78.50	79.20	0.70		Lithic Tuff with bleached veins	0.01	
79.20	102.35	LAPILLI TUFI Monolithic coa with light grey and range from total; 98% of c exotic, very fin moderately ma 3 - 4% pink to	F irsc lapilli tuff; unit is massive, undeformed dark grey-green in colour to reddish clasts; clasts are matrix supported, angular to sub-rounded in 2 mm to 5 cm + (avg. size 1 - 1.5 cm) and comprise 5 - 10% of lasts are buff-grey to reddish fine grained to porphyritic trachyte; 5% ne grained clasts; matrix is dark grey-green fine grain lithic ash, gnetic; upper contact with lithic tuff is sharp @ 40° tca; unit is cut by white quartz veinlets (1 - 3 mm) at various core angles.	6343 6344	79.20 80.00	80.00 81.00	0.80 1.00		Massive coarse Lapilli Tuff Massive Lapilli Tuff	nil nil	

HOLE: AK-90-02

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INTER	VAL	DESCRIPTION					SAN	1PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 81.00 - 81.50 Bleached sericitic zone; leading edge is tight sericite + chlorite slip 57° tca; section is yellow-green in colour, massive to moderately foliated with pervasive wispy sericite throughout; lower contact is gradational; lower contact marked by strong, 1.4 m wide fault zone. 	6345 6346 6347	81.00 81.50 82.00	81.50 82.00 83.00	0.50 0.50 1.00		Bleached sericitic Lapilli Tuff Massive Lapilli Tuff - minor bleaching Massive Lapilli Tuff, quartz veins	0.02 nil 0.02	
			6348 6349 6350	83.00 84.00 85.00	84.00 85.00 86.00	1.00 1.00 1.00		Aassive Lapilli Tuff - bleaching Massive unaltered Lapilli Tuff Massive Lapilli Tuff	0.02 0.03 0.01	0.02
			6351 6352 6353 6354	99.00 100.00 101.00 101.50	100.00 101.00 101.50 102.35	1.00 1.00 0.50 0.85		Massive coarse Lapilli Tuff Massive Lapilli Tuff Massive Lapilli Tuff Massive to foliated Tuff @ fault	nil nil nil 0.01	
102.35	103.75	FAULT ZONE Fault zone @ 57° tca: sericite + chlorite + quartz schist; strongly sheared to brecciated fault zone comprised of 80% massive sericite (yellow-green colour) plus tight chlorite sericite slips (1 - 2 mm) and massive to brecciated white to grey quartz veins throughout (10 - 15%). Trace fine grained pyrite in chlorite slips. This section may include very fine grained, yellow-green sericitic mudstone with sharp, tight sericite + chlorite boundaries.	6355 6356	102.35 103.00	103.00 104.00	0.65 1.00		Fault zone - sericite schist Fault zone - sericitic greywacke	0.01 0.11	0.13
103.75	123.55	GREYWACKE Massive, moderately well sorted, grey-green in colour and cut by $\leq = 1\%$ late, barren white quartz veinlets (0.5 - 2 mm), and contains 1 - 2% scattered, angular, aphanitic mudstone clasts up to 10 - 15 cm (avg. 1 - 2 cm) and jasper (1 mm - 3 cm); matrix comprises 95% + of the unit and consists of very fine grained quartz + feldspar + rock fragments in equal amounts; unit is pervasively sericitized with up to 3 - 4% wispy and spotty sericite prevalent throughout; generally non-magnetic.	6357 6358 6359 6360	104.00 105.00 106.00 107.00	105.00 106.00 107.00 108.00	1.00 1.00 1.00		Scricitic Greywacke @ fault Massive Greywacke, spotty sericite Massive Greywacke - mudstone clasts Massive Greywacke - mudstone clasts	0.02 0.02 0.01 0.01	

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	TO		No.	FROM	ТО	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		108.42 - 108.45 Fault @ 35° tca: 1 - 2 cm chlorite + sericite slip with white- greyish quartz veinlets 108.52; wispy pyritic band 1 mm wide in sericitic Graywacke.	6361 6362 6363	108.00 108.60 109.10	108.60 109.10 110.00	0.60 0.50 0.90		Sericitic Greywacke with faulting and Pyrite @ 108.50 Greywacke with mudstone clasts Massive Greywacke, spotty sericite	0.05 0.01 0.02	
	123.55	E.O.H.								

HOLE: AK-90-03

71.50 - 72.00, 75.80 - 76.60

PROPERTY Amalgamated Kirkland DATE LOGGED October 23-24 1990 EASTING 8400.00 DEPTH AZIMUTH DIP Mark Masson LOGGED BY NORTHING 10185.00 TOWNSHIP Teck SIGNED BY ELEVATION 341 45 Collar CLAIM No. L 491633 DRILLED BY Heath & Sherwood LENGTH 129.50 35.00 43 STARTED October 21, 1990 SURVEYED BY UNITS metres 65.50 42 COMPLETED October 22, 1990 K.L. Warehouse CORE LOCATION CORE SIZE NQ 114.00 41 PURPOSE To test 102-8425 Gold Zone COMMENTS Alteration Zone 61.90 - 89.00, 27.1 m Pyrite Quartz Breccia Zones, 65.75 - 65.90

		SUMMA	RY LOG		AS	SAY SUMMAR	Y
INTER From	RVAL To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
0.00 2.74 3.70 4.00 8.50 16.50 22.70 29.25	2.74 3.70 4.00 8.50 16.50 22.70 29.25 52.65	CASING LAPILLI TUFF FAULT ZONE ASH TUFF LAPILLI TUFF SERICITIC ASH TUFF 22.50 - 29.25 Fault breccia @ 15° tca LAPILLI TUFF Hematitic, foliated @ 52° tca 33.40 - 33.45 Fault @ 22° tca 35.97 - 36.45 Fault @ 22° tca 41.25 - 41.35 Fault @ 30° tca 43.00 - 43.16 Sericite Zone @ 10° tca	Prom 10 71.50 72.00 72.00 75.80 75.80 76.60 76.60 77.35 77.35 77.50 89.00 99.50 99.50 109.60	PYRITE QUARTZ BRECCIA 3 - 5 % pyrite, 50 % Quartz SYENITE PYRITE QUARTZ BRECCIA 1 % pyrite SYENITE FAULT BRECCIA @ 44° tca HEMATITIC LAPILLI TUFF ASH TUFF 99.35 - 99.50 Fault @ 25° tca 54.10 - 56.90 Fault @ 25° tca 1APILLI TUFF 101.05 - 101.70 Fault @ 18° tca 102.20 - 102.60 Fault @ 55° tca	65.60 66.1 71.40 76.6 74.10 72.1 75.80 76.6) 0.50) 5.20) 0.70) 0.80	0.83 0.62 2.135 0.965
52.65	61.90	LITHIC TUFF / LAPILLI TUFF 61.90 Fault @ 55° tca		105.90 - 106.10 Fault Breccia @ 22° tca 109.00 - 109.60 Fault @ 25° tca			
61.90	65.75	SERICITIC TUFF / LAPILI.I TUFF 62.40 - 62.60 Fault @ 40° tca	109.60 120.85 120.85 122.00	SERICITIC LAPILLI TUFF MUDSTONE			
65.75 65.90	65.90 71.50	PYRITE / QUARTZ BRECCIA 3-5 % pyrite SERICITIC TUFF	122.00 129.50 129.50	SERICITIC LAPILLI TUFF E.O.H.			

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HOLE: AK-90-03

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INTER	VAL	DESCRIPTION					SAN	(P) F		ASSAVS
FROM	TO		No.	FROM	то	Length	% Rec	DESCRIPTION	Αμ. 9/1	Au Check Au*M
0.00	2.74	CASING			•					
2.74	4.00	LAPILLI TUFF • HETEROLITHIC Weakly to moderately well foliated (@ 45° tca), poorly sorted, heterolithic lapilli tuff; clasts are angular to moderately well rounded and range from 1 mm to 3 cm in size (avg. $0.5 \cdot 1$ cm) and comprise 20 - 25% of unit; clast lithologies are extremely variable from dark green very fine grained to yellowish-green mudstone to porphyritic red-brown trachyte; matrix (75%) is comprised of very fine grained ash and lithic fragments and is weakly sericitized with 1 - 2% wispy sericite alteration throughout; non-magnetic								
		3.70 - 4.00 Fault zone; rubbly core (approximately 50 - 60% recovery); sericite + chlorite + quartz breccia; angular white quartz fragments up to 1 cm in a sericite + chlorite groundmass.								
4.00	8.52	ASH TUFF Massive, fine grained, moderately well bedded @ 35° tca; unit varies in colour from buff to grey-brown to mauve and contains narrow (1 - 10 cm) lithic beds comprised of fine, angular, red trachytic clasts (1 - 2 mm in size), intercalated with very fine grained ash tuff; unit displays patchy, strong magnetics. 8.50 - 8.52 Fault @ 80° tca: tight 1 cm sericite + chlorite slip at contact.								
8.52	16.50	LAPILLI TUFF - HETEROLITHIC LAPILLI TUFF Massive, dark grey-green, poorly sorted, matrix supported lapilli tuff; framework averages 20 - 25% of unit and consists of angular to well rounded clasts from 1 - 2 mm to 5 cm (avg. 1 cm) of numerous lithology types and colours, buff-brown fine grained to pinkish-red trachyte to dark green, very fine grained mafic (?) clasts; matrix is very fine grained mass of rock fragments + feldspar + chlorite.								

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INTER	VAL.	DESCRIPTION					SAN	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check	Au*M
		*NOTE: This unit is in part intercalated with narrow, jasperoidal conglomerate beds but seem to have little or no quartz associated with them (up to 1 m wide). Unit is also intercalated with moderately well bedded (@ 17° tca) fine grained ash tuffs up to 1 m wide (avg. 25 cm); contacts are gradational with coarse lapilli tuffs.									
		13.65 - 13.80 Quartz + ankerite vein @ 18° tca: dirty, fractured quartz + ankerite vein 2 cm wide with sharp chloritic slip boundaries.									
16.50	22.70	ASH TUFF Massive, fine grained dark green to grey in colour, well sorted with poorly developed bedding; undeformed, unaltered; unit is in part intercalated with coarse, heterolithic lapilli tuff horizons up to 0.5 metres wide with very gradational contacts; unit also contains, narrow, up to 25 cm wide, jasperoidal conglomerate interbeds which also display very gradational contacts; moderately magnetic throughout.									
		 19.20 - 19.30 Quartz + ankerite vein: 7 cm wide milk white quartz + ankerite vein; upper contact is sharp sericitic shear (2 - 3 mm) @ 90° tca; lower contact is irregular with some brecciation of quartz evident; lower contact of unit is arbitrary leading to altered, bleached tuffs but appears to be marked by a tight, sericitic slip @ 22.7 m. 22.70 Fault @ 22°: strong, tight muddy break 1 - 2 mm wide with 	6364 6365	19.00 22.50	19.50 23.50	0.50		Quartz ankerite vein in Ash Tuff Massive Ash Tuff - tight mud	0.01 nil		
		chlorite + sericite gouge and ankerite alteration of wall rock up to 0.5 cm symmetrically about fault.						fault			
22.70	27.50	BLEACHED ASH TUFF Light grey to buff-brown coloured bleached tuffs; unit is massive, non-magnetic, very fine grained with 5% wispy and spotty sericite alteration throughout; unit is cut by 1% late quartz + chlorite veinlets ($< = 1 \text{ mm wide}$) which display symmetrical	6366 6367 6368	23.50 24.50 25.50	24.50 25.50 26.50	1.00 1.00 1.00			nil nil nil		

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [*] M
		sericitic alterat marked by stro	ion (bleaching) around margins up to 0.5 cm wide.; lower contact ng wide fault breccia.	6369	26.50	27.50	1.00		·	nil	
27.50	29.25	FAULT BRECO Very strong m recognizable wi hematized grou comprised of a (avg. 0.5 cm) ar up to 3 - 4 cm hematite + se hematite, 30% is heterolithic lap	CIA undy fault breccia with upper contact @ 15° tca; unit is very th distinct red-purple-yellow colouration due to a very fine grained indmass with wispy sericite; zone displays strong cataclastic texture ngular bright red clasts of hematiie (very fine grained) up to 1 cm id what appear to be narrow disrupted hematitic beds 1 mm wide and long; groundmass is comprised of fine grained dark green chlorite + ricite mix and irregular wispy sericite masses; (70% chlorite + sericite); fault breccia grades into strongly foliated, altered hematized illi tuff.	6370 6371	27.50 28.50	28.50 29.25	1.00 0.75		Hematitic Fault Breccia Hematitic Fault Breccia	nil 0.02	0.01
29.25	52.65	LAPILLI TUFF Hematized, het	erolithic, coarse lapilli tuff.								
		29.25 - 31.50	Unit is highly deformed and well foliated @ 52° tca and consists of 50% heterolithic clasts of multi-coloured and textured trachytic rocks which are angular to sub-rounded with prominent stretching	6372 6373	29.25 30.10	30.10 31.00	0.85 0.90		Foliated Hematized Lapilli Tuff Hematized Lapilli Tuff, 3 cm quartz	0.02 nil	
		31.50 - 33.40	parallel to foliation (1.2 mm - 7 cm in size); matrix is grey to green, fine grained, sericitized and deformed rock fragments and constitutes 50% of unit; pervasive hematite alteration. Unit is somewhat lesser deformed, moderately to well foliated and	6374 6375	31.00 31.50	31.50 32.00	0.50		Foliated Lapilli Tuff	0.01	
			is cut by 2 - 3% narrow (1 - 3 mm) quartz, quartz + chlorite and	6376	32.00	33.00	1.00			0.02	0.02
		33.40 - 33.45	quartz + hematite veinlets. Fault @ 22° tca: strong tight (2 mm) mud gouge with late quartz	6377	33.00	33.50	0.50		Foliated Lapilli Tuff - mud break	0.02	
			(1 mm) infilling on margins.	6378	33.50	34.00	0.50		w 22.70	0.01	
				6379 6380	34.00 35.00	35.00 35.90	1.00 0.90			0.03 0.03	

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INTER	VAL		DESCRIPTION				·····	SAM	IDI E		ASSAVS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check Au [*] M
		35.97 - 36.45	Fault zone @ 70° tca: sericite + quartz + ankerite; strongly foliated to sheared rusty weathered fault zone with 4 cm breeciated	6381	35.90	36.50	0.60		Sericite + Quartz + Ankerite Fault	0.01	
			quartz vein (a) 36.0 m; sharp sericitic boundaries with minor muddy fault gouge.	6382 6383	36.50 37.00	37.00 38.00	0.50 1.00		Foliated Lapilli Tuff Hematized coarse Lapilli Tuff	0.01 0.02	
		41.25 - 41.35	Fault @ 30° tca: sericite + quartz; 3 cm milk-white to pink, massive quartz vein with sharp sericite slip boundaries.	6384 6385	38.00 39.00	39.00 40.00	1.00			0.03	
		43.00 - 43.16	Sericite + chlorite + quartz @ 10° tca: irregular mass of sericite + DSEUdo-brecciated wall rock within a fractured quartz + chlorite	6386	40.00	41.00	1.00		Quarter I. Sociaita fault como	0.02	
			vein; lower contact of unit is faulted with tight sericitic slip and	6388	41.50	42.00	0.50		Massive hematized Lapilli Tuff	0.03	
			moderate to strong scrictle aneration of wait fock.	6390	42.00	43.00 44.00	1.00			0.03 0.05	0.07
				6391 6392	44.00 45.00	45.00 46.00	1.00 1.00			0.02 0.02	
				6393 6394	46.00 47.00	47.00 48.00	1.00 1.00			0.02 0.01	
				6395 6396	48.00 49.00	49.00 50.00	1.00 1.00			0.02	
				6397 6398	50.00 51.00	51.00 52.00	1.00			0.02	
				6399	52.00	52.65	0.65			0.01	0.03
52.65	61.90	LITHIC TUFF Zone of interca	/ IAPILLI TUFF lated lithic and lapilli tuffs; unit is massive, undeformed light brown	6400	52.65	53.00	0.35		Foliated sericitic Lithic Tuff @	0.02	
		to green, non-b tuff comprised	edded and non-magnetic; unit is typically fine-medium grained lithic of 80% very fine grained matrix with 20% angular buff-brown lithic	6401	53.00	54.00	1.00		fault contact	0.01	
		fragments, 1 - (gradational con	3 mm in size; moderately well sorted; section is intercalated $125 - 30\%$ lapilli tuffs with sub-rounded class	6402 6403	54.00 55.00	55.00 56.00	1.00			0.01	
		to 2 cm; clasts	are 75% red-brown fine grained trachyte; 20% grey-green trachyte;	6404	56.00	57.00	1.00			0.02	
		purple-ofor		6406	58.00	58.00 59.00	1.00			0.01	

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INTER	VAL	DESCRIPTION		<u></u>			SAN	IPLE		ASSAYS
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [*] M
		61.9 Fault @ 55° tca: tight (1 mm) chlorite slip with <<0.5% pyrite + chalcopyrite.	6407 6408 6409	59.00 60.00 61.00	60.00 61.00 61.90	1.00 1.00 0.90			0.02 0.02 0.03	
61.90	65.75	BLEACHED TUFFS - LAPILLI TUFF Massive fine to medium grained lithic - and lapilli - tuff with characteristic spotted, porphyritic texture; groundmass comprises 80% of unit and is light grey-green to brown very fine grained and completely sericitized; matrix is comprised of black, irregular to semi-prismatic amphibole crystals 1 - 2 mm in size and are altered to chlorite and/or hematite; altered hornblende and magnetite grains; occasional large, well rounded clasts to 5 cm are evident, dispersed throughout unit, but display weak, diffuse boundaries due to pervasive sericite alteration; these dark grey clasts are medium grained and porphyritic, with white plagioclase phenocrysts to 1 mm.	6410	61.90	62.40	0.50		Bleached, sericitic 'salt + pepper' Tuff	0.01	
		62.40 - 62.60 Fault @ 40° tca: sericite + chlorite + ankerite; rusty weathered, brecciated and sericitized wall rock fragments in a highly altered sericite + chlorite + ankerite groundmass.	6411 6412 6413 6414 6415	62.40 62.90 63.50 64.00 65.00	62.90 63.50 64.00 65.00 65.60	0.50 0.60 0.50 1.00 0.60		Sericite + chlorite + ankerite Fault Breccia Altered, bleached sericitic Tuff	0.01 0.02 0.01 0.02 0.01	0.01
65.75	65.90	PYRITE - QUARTZ BRECCIA ZONE Brecciated, white to grey quartz veins and masses centered in tight 0.5 cm sericite + quartz + pyrite \pm molybdenite slips @ 62° tca; matrix is comprised of irregular, wispy sericite with 3 - 5% fine disseminated pyrite proximal to quartz breccia; sericite and pyrite content decreases away from vein center with 1 - 3% pyrite up to 7 - 10 cm away from vein.	6416	65.60	66.10	0.50		Pyrite zone = 3 - 5% pyrite in sericite + quartz breccia	0.70	0.96

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INTER	VAL		DESCRIPTION				<u>.</u>	SAM	PLE	,	ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
65.90	71.50	BLEACHED TI Massive, pervas groundmass wit cm; unit displ subhedral to an grained, sericiti	UFFS sively sericitized, lapilli tuff with characteristic yellow-green to buff th 10 - 15% coarse, angular to sub-rounded altered clasts up to 5 - 7 lays spotted porphyritic, pseudo-porphyritic texture with black nhedral, chloritized \pm hematized crystals (5 - 25%) in a very fine c groundmass.	6417 6418 6419 6420 6421 6422	66.10 67.00 68.00 69.00 70.00 71.00	67.00 68.00 69.00 70.00 71.00 71.40	0.90 1.00 1.00 1.00 1.00 0.40		Sericitized Lapilli Tuff	0.03 0.02 0.01 0.02 0.01 0.02	
71.50	72.00	PYRITE - QUA Zone is grey in very fine graine 3 - 5% pyrite); + pyrite slip (a for 1 - 2 cm out quartz + pyrite	RTZ BRECCIA ZONE colour with 10 - 15% brecciated quartz fragments up to 0.5 cm in a d sericite + quartz + pyrite groundmass (50% quartz, 45% sericite, leading contact marked by very tight (≤ 1 mm) chlorite + quartz 65° tca; very minor ($\leq 0.5\%$) disseminated pyrite occurs in wall rock iside of this slip plane; lower contact also marked by tight chlorite + slip @ 60° tca.	6423	71.40	72.10	0.70		Pyrite Zonc = 3 - 5 % pyrite in sericite + quartz breccia	2.13	2.14
72.00	77.50	SYENITE									
		72.00 - 74.63	Altered synite (?); massive fine grained to porphyritic (?) yellow- green in colour with 5 - 10% black, subhedral chloritized	6424	72.10	73.00	0.90		Sericitized Syenite ?	0.31	
			upper contact is obscured by pervasive sericite alteration; unit is cut	6425	73.00	74.00	1.00		Sericitized Syenite with 5% quartz veins and < 0.5 % pyrite	0.31	
			by $(1 - 2\%)$ narrow quartz + chlorite veinlets up to 0.5 cm wide @ 40° and 80° tca; unit contains 0.5% disseminated fine pyrite and	6426	74.00	74.60	0.60		Sericitic Syenite with < 0.5%	0.53	
			minor pyrite along chloritic fracture planes; these yellow-green sericitized sections grade into less altered, red syenite with 5% white plagioclase and 7 - 10% black chloritic phenocrysts.	6427	74.60	75.10	0.50		Red weakly altered Syenite	0.10	
	-	75.80 - 76.60	Fault zone: sericite + quartz ± pyrite.	6428	75.10	75.80	0.70		Red massive Syenite	0.02	

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [*] M
		75.80 - 76.20	Sharp upper contact marked by sericite + chlorite + quartz vein @ 22° tca (1 cm wide) within highly sericitic, sheared to brecciated host rock (?); lower contact is rubbly but also appears to be marked by 1 - 2 cm quartz breccia vein with 1 - 2% disseminated pyrite in wall rock.	6429	75.80	76.60	0.80		Sericite + quartz brecciated fault with 0.5 - 1% disseminated pyrite	0.90	1.03
		76.20 - 76.60	Yellow-green sericitic host rock (?) with 5% white-pink quartz veins and masses and $0.5 - 1\%$ disseminated pyrite; lower contact is gradational with reddish-brown syenite. Fault breccia: Fault breccia @ 44° tca: 6 - 7 cm wide quartz + sericite + chlorite fault with angular white to pink quartz clasts in a black, aphanitic groundmass of chlorite + sericite; marks lower boundary of syenite.	6430 6431	76.60 77.35	77.35 77.85	0.75 0.50		Altered Lapilli Tuff with fault breccia	0.05 0.03	
77.50	89.00	BLFACHED LA Massive to wea hematized; fran sub-rounded cla fine grained trad clasts; matrix is hard and non-n narrow (1 - 3 m	APILLI TUFF akly foliated, light grey to reddish-brown in colour where unit is nework constitutes $10 - 15\%$ of the unit and consists of angular to asts from 2 mm - 3 cm in size (avg. $1/2 - 1$ cm) of buff-brown very chyte and red-brown to green trachyte and mauve coloured hematized very fine grained, equigranular buff-brown to red in colour, quite magnetic and maybe silicified; an average unit is cut by <1% late, im) quartz veinlets.	6432 6433	77.85 78.50	78.50 79.50	0.65 1.00		Bleached, massive Lapilli Tuff	0.02 0.02	
		80.00	Fault @ 20° tca: chlorite + sericite + quartz; tight (1 mm) chlorite + sericite slip with 0.5 cm quartz vein on up hole side parallel to the slip and with 8 - 10 cm of quartz veinlets, pseudo- brecciating wall rock; moderate sericite alteration evident; unit grades to purplish (hematized) colour at approximately 83 m; lower contact marked by tight sericite + quartz slip @ 30° tca which displays 1 - 2 cm of symmetrical sericite alteration into wall rock adjacent to slip.	6434 6435 6436 6437 6438 6439 6440	79.50 80.10 81.00 82.00 83.00 84.00 85.00	80.10 81.00 82.00 83.00 84.00 85.00 86.00	0.60 0.90 1.00 1.00 1.00 1.00 1.00		Bleached Tuff with fault + quartz veins @ 80.0 m Massive Bleached Tuff	0.02 0.01 0.03 0.01 0.01 0.01	0.02

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INTER	VAL		DESCRIPTION					SAM	PLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
				6441 6442 6443 6444	86.00 87.00 88.00 88.50	87.00 88.00 88.50 89.10	1.00 1.00 0.50 0.60		Hematized Lapilli Tuff at contact with massive Ash Tuff	nil nil nil 0.03	
89.00	99.50	ASH TUFF Massive, non-be is weak to non-	edded fine grained to very fine grained, dark grey-green ash tuff; unit magnetic.								
		89.95 - 90.10	Mudstone; aphanitic, light green mudstone bed @ 25° ica cut by 5% barren quartz veinlets; unit is in part intercalated with narrow lapilli tuff beds up to 0.5 metres wide; bedding @ 40° ica; lower contact is faulted @ 25° ica.	6445 6446	89.10 89.90	89.90 90.50	0.80 0.60		Massive Ash Tuff Ash Tuff with 5% quartz veinlets	0.01 0.01	0.01
		90.00 - 92.50	unit is cut by 3 - 5% late white, multiphase, cross-cutting quartz veinlets (1 - 4 mm wide).	6447 6448 6449 6450	90.50 91.00 92.00 92.50	91.00 92.00 92.50 93.50	0.50 1.00 0.50 1.00		Ash Tuff with 3 - 5% quartz Massive Ash Tuff	nil nil 0.01 nil	
		99.35 - 99.50	Fault contact @ 25° tca: sericite + chlorite + quartz; 1 cm wide white to pink quartz vein centered on strong sericite slip.	6451 6452	98.00 99.00	99.00 99.60	1.00 0.60		Massive Ash Tuff Fault zone @ 99.35 - 99.50	0.01 0.01	
99.50	109.00	LAPILLI TUFF Unit is moderat matrix of fine rounded clasts u	• MONOLITHIC LAPILLI TUFF ely foliated @ 42° tca and consists of 85% dark grey-green chloritic grained ash supporting 15% light brown-green, angular to sub- up to 2 cm (avg. 1/2 - 1 cm); unit is moderately to strongly magnetic.								

HOLE: AK-90-03

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INTER	VAL	DESCRIPTION					SAM			ASSAVS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check	Au*M
		99.50 - 100.15 Unit is foliated, sericitic and cut by 5 - 10% irregular, white-pink quartz masses and veinlets.	6453	99.60	100.20	0.60	······	Lapilli Tuff with 5 - 10% quartz masses and veinlets	0.01	<u> </u>	· · ·
		to pink quartz vein with strong, ruddy sericitic walls from 101.50 to 101.50; 101.50 - 101.70 sericite schist; strongly foliated to schistose sericitic lanilli tuff	6454 6455	100.20 101.00	101.00 101.80	0.80 0.80		Massive Tuff Sericite + chlorite + quartz and sericite schist	0.01 nil		
		102.20 - 102.60 Fault zone @ 55° tca: sericite + chlorite + quartz.	6456	101.80	102.80	1.00		Fault zone - sericite + chlorite +	nil		
			6457	102.80	103.50	0.70		quartz	0.01		
		105.90 - 106.10 Fault breccia @ 22° tca: 1 cm wide quartz breccia with angular quartz fragments to 0.5 cm in a aphanitic, black chlorite + sericite groundmass.	6458	105.80	106.30	0.50		Quariz breccia zone	0.01	nil	
109.00	109.60	FAULT ZONE Fault zone @ 25° tca: sericite + chlorite + quartz.									
		 109.00 - 109.25 2 - 3 cm buff-pink quartz and brecciated quartz with strong, muddy chloritic boundaries. 109.25 - 109.60 Strongly foliated and sericitized wall rock with 1 - 2% irregular quartz masses. 	6459	108.80	109.80	1.00		Fault zone with 2 cm brecciated quartz vein	nil		
109.60	129.50	BLEACHED LAPILLI TUFF Massive, red-brown to buff in colour with 2 - 5% angular, dark black chloritic clasts (avg. size 2 - 5 mm) and buff-grey aphanitic clasts in a fine grained sericitized matrix of altered feldspar & rock fragments; unit is non-magnetic.									
		120.85 - 122.00 Mudstone; aphanitic yellow-green to grey laminated mudstone bed with sharp, tight contacts @ 27° tca.									

HOLE: AK-90-03

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
	129.50	Е.О.Н.								
		•								

HOLE: AK-90-04

PROPERTY Amalgamated Kirkland DATE LOGGED October 25 1990 EASTING 8370.00 DEPTH AZIMUTH LOGGED BY Mark Masson DIP NORTHING 10160.00 TOWNSHIP Teck SIGNED BY **ELEVATION** Heath & Sherwood Collar 341 45 CLAIM No. L 491633 DRILLED BY LENGTH 125.85 38.00 45 STARTED October 22, 1990 SURVEYED BY UNITS metres COMPLETED October 23, 1990 76.00 42 CORE LOCATION K.L. Warehouse NQ **CORE SIZE** 114.00 39 PURPOSE To test 102-8250 Gold Zone COMMENTS Alteration Zone. 95.10 - 104.30 , 9.2 m

	SUMMARY LOG ASSAY SUMMARY											
		SUMMA	RY LOG		AS	SAY SUMMAR	Y					
INTER	RVAL	DESCRIPTION	INTERVAL	DESCRIPTION	INTERVAL	LENGTH	AVERAGE					
From	То		From To		From To	in metres	Au g/t					
0.00	4.87	CASING		100.10 dislocated 2 cm quartz vein with								
4.87	16.85	ASH TUFF		7% pyrite	100.00 100.5	0 0.50	471					
16.85	39.55	LITHIC TUFF	104.30 111.83	LITHIC TUFF / LAPILLI TUFF	100000 1000							
39.55	81.25	ASH TUFF		108.65 - 108.68 Fault Breccia @ 47° tca								
		61.85 - 62.55 Sericitic Graywacke 1% pyrite	111.83 125.85	LAPILLI TUFF								
		64.50 - 64.85 Fault @ 50° tca										
		67.95 - 69.30 Sericitic	125.85	E.O.H.								
		79.60 - 80.10 Fault @ 55° tca										
		79.60 - 81.25 Hematitic										
81.25	94.20	GRAYWACKE / CONGLOMERATE Sericitic										
		88.05 - 88.03 Fault @ 37° tca										
94.20	95.10	FAULT ZONE Sericitic										
		94.20 Mud Gouge @ 40° tca										
		94.40 - 95.10 Schistose, 1 - 2 mm hematitic veinlets										
		20% quartz veinlets										
95.10	99.20	SERICITIC TUFF	•				1					
00.00	104.00	5 % quartz chlorite veins										
99.20	104.30	ALTERED LAPILLI TUFF										
		Sericitic, "peppered texture"										
L						}	1					

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HOLE: AK-90-04

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INTER	VAL	DESCRIPTION					SAM	(PLE		ASSAYS	
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
0.00	4.87	CASING									
4.87	16.85	ASH TUFF Massive, undeformed, unaltered dark grey-green in colour; generally fine grained ash with very minor local lapilli clasts scattered throughout; unit is non-bedded and displays patchy, strong magnetics; lower contact obscured due to rubbly core.									
16.85	21.96	LITHIC TUFF Massive to very poorly bedded, fine grained, dark grey-green to light green in colour; unit is comprised of 15 - 30% small, angular to sub-rounded, heterolithic clasts from 0.5 - 3 mm (average 1 mm) in size, in a very fine grained ash matrix; moderately chloritic; strongly magnetic; patchy zones of hematization are notable @ 20.00 - 21.00 metres.									
21.96	23.40	CONGLOMERATE Polymictic, jasperoidal pebble conglomerate bed which is fault bounded; unit is moderately well foliated @ 30° tca, and displays pervasive wispy, sericite alteration throughout; contacts are tight chlorite + sericite + quartz \pm ankerite slips @ 35 - 45° tca.									
23.40	39.55	LITHIC TUFF Massive to very poorly bedded, fine grained, dark grey-green to light green in colour; unit is comprised of 15 - 30% small, angular to sub-rounded, heterolithic clasts from 0.5 - 3 mm (average 1 mm) in size, in a very fine grained ash matrix; moderately chloritic; strongly magnetic.									
		29.90 - 30.91 Scricitized tuff; irregular wispy sericite + quartz veining @ 10° tca in a massive fine grained ash-lithic tuff with spotty leucoxene alteration.	6460	29.90	30.40	0.50		Sericitized Tuff	nil		

HOLE: AK-90-04

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INTER	VAL	DESCRIPTION					SAN	PLF.		224224	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		30.66 - 30.8015 cm buff-brown to white brecciated sericite + quartz vein.37.44 - 37.45Fault @ 14° tca; chlorite + quartz; tight (1 mm) chloritic slip with 0.5 cm, buff to pink quartz veinlet.	6461	30.40	31.00	0.60		Sericitized Tuff with quartz vein	nil		
		 39.15 - 39.30 15 cm buff-brown to white, brecciated quartz vein with tight, irregular sericitic boundaries @ 45° tca. 39.30 - 39.55 Bleached, light green sericitized tuff with 5% white quartz masses and veinlets. 	6462	39.00	39.60	0.60		Quartz breccia vein and sericitized tuffs	nil		
39.55	61.85	ASH TUFF Massive to well bedded dark grey to green, very fine grained ash tuff; unit displays sporadic zones of cross-bedding with narrow $(1 - 3 \text{ mm})$ very fine magnetite beds @ $10 - 35^{\circ}$ tca; unit is intercalated with narrow (up to 0.5 metres) lithic and lapilli tuff beds which typically display gradational contacts, and minor conglomerate interbeds (up to 25 cm) which also have gradational contacts.									
		 57.97 - 52.00 Fault @ 45° tca: tight (1 mm) chlorite + sericite slip with 1.5 cm buff-brown to pink quartz vein. 57.20 - 57.50 Quartz Breccia Vein; very irregular buff to white to pinkish coloured, brecciated quartz vein with fragments up to 2 cm in a fine grained sericite + chlorite matrix; contacts are sharp but irregular. 	6463	57.10	57.60	0.50		Quartz breccia vein with sericitized groundmass	0.01		
61.85	62.55	GRAYWACKE Massive to weakly foliated graywacke with pervasive sericite alteration with 3 - 5% wispy sericite in a fine grained chloritic matrix; unit contains 0.5 - 1% disseminated pyrite occurring as very fine subhedral grains and pyritic clots to 1 mm; bedding contact is sharp but irregular @ 10 - 15° tca.	6464	61.80	62.60	0.80		Graywacke bed with 0.5 - 1% disseminated pyrite	0.02		

HOLE: AK-90-04

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
62.55	67.95	ASH TUFF Massive to well sporadic zones c 10 - 35° tca; uni beds which typic (up to 25 cm) w 63.40 - 63.60 64.50 - 64.85 64.50 - 64.53 64.53 - 64.70 64.70 - 64.85	bedded dark grey to green, very fine grained ash tuff; unit displays of cross-bedding with narrow $(1 - 3 \text{ mm})$ very fine magnetite beds @ t is intercalated with narrow (up to 0.5 metres) lithic and lapilli tuff ally display gradational contacts, and minor conglomerate interbeds which also have gradational contacts. Fault @ 27° tca: sericite + chlorite ± quartz; strong, tight (1 - 2 mm) sericite slip @ 63.40 and 63.60 metres; interstitial material is foliated, sericitic tuff with <1% narrow quartz veinlets (1 - 2 mm) and tight (<1 mm) chloritic slips throughout. Fault @ 50° tca: sericite + chlorite + quartz ± calcite. Tight chlorite + sericite slip with 3 cm wide pseudo-brecciated buff- white quartz vein with wispy sericite. Well foliated, sericitized tuff. 15 cm irregular quartz mass with cross-cutting ladder type quartz veinlets (<= 1 mm) in a fine grained sericitic tuff.	6465 6466 6467 6468 6469 6470 6471	62.60 63.20 63.70 64.40 65.00 66.00 67.00	63.20 63.70 64.40 65.00 66.00 67.00 67.90	0.60 0.50 0.70 0.60 1.00 1.00		Patchy sericite, altered Ash Tuff Fault zone @ 63.40 m Massive, weakly sericitic Ash Tuff Fault zone with 25 - 30% quartz veining and masses Massive Ash Tuff - weak sericite Ash Tuff with 5% sericite + quartz Massive Ash Tuff	nil 0.01 0.01 0.01 0.03 0.01	0.02
67.95	70.01	LITHIC TUFF									
		67.95 - 69.30 69.30 - 70.10	Bleached (sericitized) pale yellow-green coloured tuff with $1 - 2\%$ dark green, altered lithic fragments; upper contact is abrupt, lower contact very gradational. Light green to grey, massive to poorly bedded lithic tuff with 15 - 20% angular, heterolithic clasts $1 - 4$ mm in size weakly aligned @ $10 - 15^{\circ}$ tca in a very fine grained light green ash matrix; lower contact gradational with ash tuffs.	6472 6473 6474	67.90 68.50 69.50	68.50 69.50 70.10	0.60 1.00 0.60		Bleached sericitized Lithic Tuff Massive Lithic Tuff	0.01 0.01 0.02	

HOLE: AK-90-04

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/l	Au,Check	Au*M
70.01	79.60	ASH TUFF Massive to well bedded dark grey to green, very fine grained ash tuff; unit displays sporadic zones of cross-bedding with narrow (1 - 3 mm) very fine magnetite beds @ 10 - 35° tca; unit is intercalated with narrow (up to 0.5 metres) lithic and lapilli tuff beds which typically display gradational contacts, and minor conglomerate interbeds (up to 25 cm) which also have gradational contacts.	6475	79.00	79.50	0.50		Massive, weakly sericitic Tuff	0.01	0.02	
79.60	81.25	HEMATIZED ASH TUFF									
		 79.60 - 80.10 Fault zone; sericite + chlorite + quartz + hematite; very sharp, tight (1 mm) chlorite slip @ 55 ° tca marks leading contact; section is dark green to purple in colour with 3% irregular quartz masses in a very fine grained green to purple, sericite + hematized unit with 1% late irregular quartz veins and brecciated masses up to 2 - 3 cm wide; lower contact is tight chlorite + quartz slip @ 40° tca. 	6476 6477 6478	79.50 80.10 80.90	80.10 80.90 81.40	0.60 0.80 0.50		Hematized Tuff with 3% quartz veining and tight chloritic slips Hematized Tuff with 1% quartz Hematized Tuff + Graywacke	0.02 0.02 0.01		
81.25	94.20	 GRAYWACKE / CONGLOMERATE Massive to moderately foliated polymictic pebble conglomerate and graywacke, light to dark green in colour; unit is pervasively sericitized with 5 - 10% sericite development in matrix and selective sericitization of certain clasts (mafic volcanics?) within the conglomerates; this section is also intercalated with very fine grained, red- brown to purple, hematized, ash tuff beds (?), up to 0.5 metres wide, which display gradational contacts with surrounding sediments. 83.85 Fault @ 32° tca; tight chlorite + sericite slip with 0.5 cm quartz vein on south wall. 85.02 - 85.13 Vuggy, buff-pink irregular quartz vein with open cavities up to 0.5 cm partially infilled with drusy quartz, calcite and a few euhedral pyrite crystals. 	6479 6480 6481 6482 6483 6483 6484	81.40 82.10 83.00 84.00 85.00 85.50 86.00	82.10 83.00 84.00 85.00 85.50 86.00 87.00	0.70 0.90 1.00 1.00 0.50 0.50 1.00		Massive weakly sericitic Graywacke Hematized Tuff and Graywacke Hematized Tuff with vuggy quartz vein	0.02 0.02 0.02 0.01 0.01 0.01 0.02	0.01	

HOLE: AK-90-04

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INTER	VAL	DESCRIPTION	1				SAN	PLF.		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		88.05 - 88.30 Fault @ 37° tca: sericite + chlorite + quartz; highly foliated to sheared sericite schist with 50% white-pink fractured, pseudo- brecciated quartz veining; contacts are sharp sericite + chlorite slips.	6486 6487 6488	87.00 88.00 88.50	88.00 88.50 89.00	1.00 0.50 0.50		Fault zone with 50% barren quartz Massive sericitized and hematitic	0.03 0.03 0.01	an ha an
94.20	99.20	FAULT - MYLONITE ZONE	6489 6490 6491 6492 6493	89.00 90.00 91.00 92.00 93.00	90.00 91.00 92.00 93.00 94.00	1.00 1.00 1.00 1.00 1.00		Graywacke, interbedded Ash Tun	0.01 0.01 0.01 0.01 0.01	
99.20	104.30	 94.20 - 94.40 Mud break; strong, ruddy sericite + chlorite break with well developed mud gouge at 40° tca. 94.40 - 95.10 Sericite + chlorite + quartz schist with narrow (1 - 2 mm) disrupted hematite bands and 20% massive to brecciated, white-pink quartz veins up to 1 cm wide. 95.10 - 99.20 Highly deformed, sericitized conglomerates with cataclastic texture and cut by 5% quartz + chlorite and quartz breccia veins up to 1 cm wide. ALTERED LAPILLI TUFF - MONOLITHIC LAPILLI TUFF Unit displays characteristic spotty pseudo-porphyritic texture comprised of 10 - 20% angular, dark grey to black (porphyritic?) medium grained clasts from 1 - 2 mm to 2 - 3 cm (avg. 0.5 cm) in size in a fine grained yellow-brown altered (sericite?) matrix; clast boundaries are often diffuse due to penetrative alteration of the matrix; unit is fairly hard and non-magnetic. 	6494 6495 6496 6497 6498 6499	94.00 95.10 96.10 97.10 98.10	94.50 95.10 96.10 97.10 98.10 99.20	0.50 0.60 1.00 1.00 1.00 1.10		Fault zone - strong mud break Sericite schist - 20% quartz Sheared, sericitic sediment Sheared cataclastic sediments	0.01 0.02 0.05 0.03 0.02 0.02	

HOLE: AK-90-04

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INTER	VAL	DESCRIPTION		 			SAN	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check A	u*M
		100.10 Quartz + pyrite vein; 1 - 2 cm grey-white brecciated quartz vein with quartz fragments 1 - 3 mm in size and 5 - 7% finely disseminated pyrite; vein wall is marked by 1 mm wide semi-massive pyritic margin with 25% subhedral pyrite; vein is dislocated and cut off by two cross-cutting, tight (1 - 2 mm) sericite slips @ 65° and 30° tca; blue-grey hue on slips may be due to molybdenite.	6500 6501 6502 6503 6504 6505	99.20 100.00 100.50 101.00 102.00 103.00	100.00 100.50 101.00 102.00 103.00 104.00	0.80 0.50 0.50 1.00 1.00 1.00		Bleached, sericitized Lapilli Tuff Dislocated pyritic quartz breccia vein, 1 - 2 cm wide Bleached Lapilli Tuff	0.09 5.04 0.04 0.04 0.02 0.02	4.37	
104.30	111.85	 LITHIC TUFF / LAPILLI TUFF Massive fine grained, dark grey-green to purple where hematitic; unit is predominantly fine grained lithic tuff with intercalated, heterolithic lapilli tuff beds which generally have gradational contacts and are less than 0.5 metres wide; units display patchy strong magnetics. 107.00 - 108.70 Unit is cut by 5% quartz + chlorite veinlets up to 4 mm wide @ 45	6506 6507 6508 6509 6510 6511	104.00 105.00 106.00 107.00 108.00 108.70	105.00 106.00 107.00 108.00 108.70 109.70	1.00 1.00 1.00 1.00 1.00		Lithic Tuff with 5% quartz veinlets Lithic Tuff with 3% quartz veins Massive Tuff	0.03 0.01 0.02 0.03 0.02 0.02		
111.85	125.85	LAPILLI TUFF Coarse heterolithic; unit is massive dark green to red-brown matrix with 10 - 20% angular to sub-rounded clasts up to 4 cm (avg. 1 - 1.5 cm); clasts vary from red- brown porphyritic trachyte, to red aphanitic lithics and dark green, fine grained lithics; matrix is fine grained, chloritic ash, lithic tuff; unit is moderately to strongly magnetic; unit is very recognizable due to its dark green to purple matrix and predominantly red-brown porphyritic clasts which comprise 75 % of total clast population.									

HOLE: AK-90-04

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INTER	VAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
	125.85	Е.О.Н.								
							·			
									1	

HOLE: AK-90-05

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	October 27 1990	EASTING	8450.00		DEDTH		
	0	LOGGED BY	Mark Masson	NORTHING	10175.00		DEPTH	AZIMUTH	DIP
TOWNSHIP	Teck	SIGNED BY	Was	ELEVATION			Coller	241	45
CLAIM No.	L 491633	DRILLED BY	Heath & Sherwood	LENGTH	121.55		Cullar	341	45
STARTED	October 24, 1990	SURVEYED BY		UNITS	metres		38.00		44
COMPLETED	October 25, 1990	CORE LOCATION	K.L. Warehouse	CORE SIZE	NO		84.00		42
							114.00		41
PURPOSE	To test 102 - 8425 Zone								
COMMENTS	Alteration Zone 57.50 - 79.95, 22.45m								
	(Weak),								
	Ouartz Pyrite Zone 58.20 - 62.35, 4.15m					1			

		SUMMA	ARY LOG			ASSA	Y SUMMARY	7
INTEF From	RVAL To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTER From	VAL To	LENGTH in metres	AVERAGE Au g/t
0.00 8.50	8.50 58.20	CASING LAPILLI TUFF 32.00 Fault @ 35° tca 38.75 - 39.12 Fault @ 35° tca			58.00 82.00	62.00 96.00	4.00 4.00	0.154 0.118
58.20	62.35	56.00 Fault @ 60° tca QUARTZ PYRITE ZONE Altered, brecciated Lapilli Tuffs, 5 - 10 % pyrite, 10 - 15 % Quartz						
62.35	75.95	GRAYWACKE 5 % Sericite						
75.95 79.90	79.90 121.55	SYENITE GRAYWACKE / CONGLOMERATE 80.0 - 86.0 Sericitic graywacke and mudstone, 0.5 - 1 % pyrite 93.0 - 95.4 Mudstone						
	121.55	E.O.H.						

HOLE: AK-90-05

PAGE: 2 of 7

INTER	VAL		DESCRIPTION				****	SAM	IPLE		ASSAYS	
FROM	то			No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
0.00 8.50	8.50 58.20	CASING LAPILLI TUFF Coarse monolit is fine grained	thic lapilli tuff; unit is massive to weakly foliated @ 50° tca; matrix								1	
		constitutes 90 predominantly which range in sub-rounded; u	- 95% of unit; clasts comprise $5 - 10\%$ of unit and consist of light buff-brown to grayish fine grained to porphyritic trachyte size from 2 - 3 mm to 5 cm (avg. 1 cm) and are generally angular to nit is strongly magnetic, unaltered, undeformed.									
		29.75 - 30.45	Buff to white to pink (multi-phase) quartz vein running sub-parallel to core axis; vein displays banded appearance with interstitial wispy sericite; late bull quartz.									
		32.00 - 32.23	Fault @ 35° sericite + ankerite + chlorite; rusty weathered, ankeritic sericite schist with tight chloritic margins.									
		38.75 - 39.12	Fault @ 35° tca: sericite + ankerite + quartz; rusty, ankeritic fault with 10% late, white quartz veinlets and stockwork in wall rock.	6512	38.50	39.2 0	0.70		Rusty weathered quartz + ankerite Fault	0.02		
		56.00 - 56.05	Fault @ 60° tca: sericite + chlorite + gouge; strong muddy break with fault gouge on slip faces; upper contact very sharp; lower contact grades to foliated, sericitic tuffs for 0.5 metres.	6513 6514 6515 6516	54.00 55.00 56.00 56.50	55.00 56.00 56.50 57.00	1.00 1.00 0.50 0.50		Massive Lapilli Tuff Fault zone @ 56.0 with 0.5m sericitic Tuffs	0.01 nil 0.01 0.01		
		57.50 - 58.20	Weakly foliated, weakly sericitic lapilli tuff with notable pyrite replacement of selective clasts which are dark gray in colour, angular clasts up to 0.5 cm.	6517	57.00	58.00	1.00		Massive Lapilli Tuff - weak sericite	0.02		

HOLE: AK-90-05

PAGE: 3 of 7

INTER	VAL		DESCRIPTION					SAM	PLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
58.20	62.35	QUARTZ - PY Altered + brec gradational con quartz veining a 10% pyrite an	RITE ZONE ciated lapilli tuff; zone is highly altered to brecciated lapilli tuff with tacts marked by notable increase in sericite alteration, pyrite content, and blue-gray (pyrite $+$ molybdenite) diffuse alteration zones with 5 - d 10 - 25% quartz.								
		 58.20 - 58.22 1 - 2 cm white, pseudo-brecciated quartz vein on down hole side tight chloritic slip @ 42° tca; this slip face is sheared by a very figrained, blue-gray sulphide mass (pyrite ± molybdenite or galer mass. 		6518	58.00	58.50	0.50			0.10	
		58.22 - 59.00	Altered tuff: blue-gray to green coloured, altered lapilli tuff with a very fine grained sericite $+$ pyrite matrix with 3 - 5% disseminated pyrite and pyritic altered clasts (semi-massive pyrite) up to 0.5 cm; zone is cut by at least three stages of quartz veining: buff-white to cream, massive to in-situ brecciated quartz veins up to 1 - 2 cm wide, sub-parallel to foliation, which tend to have strong pyritic margins up to 3 mm wide in the wall rock; no pyrite within quartz vein; two stages of late cross-cutting quartz veinlets (1 - 3 mm wide) at low angles to core axis, and transecting earlier quartz veinlets, with no pyrite.	6519	58.50	59.00	0.50			0.13	
		59.00 - 59.35	Quartz Breccia: light gray to green angular pyritic wall rock fragments cemented and brecciated by light gray to white quartz and later cut by cross-cutting (extensional) ladder veins (1 - 2 mm wide). quartz contains little to no pyrite while the wall rock and wall rock fragments carry 5 - 10% finely disseminated pyrite.	6520	59.00	59.50	0.50			0.16	0.19

HOLE: AK-90-05

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INTER	VAL		DESCRIPTION					SAN	1PLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au*M
		59.35 - 60.00	Altered Tuff; light gray-green sericitic matrix with blue-gray alteration patches (very fine sulphides) which display irregular, diffuse alteration fronts; matrix contains 1 - 3% disseminated pyrite.	6521	59.50	60.00	0.50			0.12	
		60.00 - 60.60	Altered Tuff; sericitized tuff with 3 - 5% disseminated pyrite cut by 5 - 10 % quartz, quartz + chlorite veinlets.	6522	60.00	60.5 0	0.50			0.25	0.25
		60.60 - 62.00	Sericitic tuffaceous groundmass with 3 - 10% disseminated pyrite, brecciated by multiphase, milk-white to gray quartz veins and masses up to 0.5 metres wide.	6523 6524 6525	60.50 61.00 61.50	61.00 61.50 62.00	0.50 0.50 0.50			0.07 0.28 0.11	0.26
		62.00 - 62.35	Strongly to moderately sericitic groundmass with $0.5 - 1\%$ disseminated pyrite, cut by 2 - 3% late, buff-white quartz veinlets; lower contact of unit is gradational with gradual decline in pyrite content to 1% at 62.3 metres.	6526	62.00	62.50	0.50			0.02	
62.35	75.95	GRAYWACKE Massive to we quartz, feldspar 5% pervasive s green mudstone also intercalate gradational con	akly foliated @ 50° tca; dark gray to green matrix comprised of and rock fragments in roughly equal proportions with approximately ericite; unit contains $1 - 5\%$ angular, very fine grained, light gray- e clasts up to 3-4 cm in size, randomly distributed throughout; unit is d with narrow (<= 0.5 metre) pebble-rich conglomerate beds with ttacts; non-magnetic.								
		63.55 - 63.95	Chlorite slip, sub-parallel to core axis with 1 - 2 cm wide late white quartz vein and 1% smeared pyrite along slip face.	6527 6528	62.50 63.00	63.00 64.00	0.50 1.00		Massive Graywacke with mudstone clasts Massive Graywacke - weakly sericitic	0.02 0.07	

HOLE: AK-90-05

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
				11834	64.00	65.00	1.00		< 0.5% , 0.1-0.5 cm quartz \pm chlorite veinlets, trace pyrite	0.01		
				11835	65.00	66.00	1.00		as above	0.01		
				11836	66.00	67.00	1.00		as above	0.01		
				1103/	67.00	68.00	1.00		Sericitic Graywacke	nii		
				11830	60.00	70.00	1.00		10 20% sericitic mudstone electe	0.01		
				11059	09.00	70.00	1.00		or disrupted beds up to 20 cm wide	0.01		
				11840	70.00	71.00	1.00		as above	0.01		
				11841	71.00	72.00	1.00		40% sericitic Mudstone, 1% chlorite ± quartz veinlets with trace pyrite	nil		
				11842	72.00	73.00	1.00		1 - 3 mm quartz + chlorite + hematite veinlet with trace pyrite at 72.50	0.01	0.01	
:		73.25 - 74.00	Chlorite + quartz vein sub-parallel to core axis; late white quartz on chloritic slip with minor blebby chalcopyrite masses ($<<0.5\%$).	6542	73.00	74.00	1.00		Quartz vein - parallel to core axis, minor chalcopyrite	0.01		
				6529	74.00	75.00	1.00		Massive Graywacke - mudstone clasts	0.03		
				6530	75.00	75.50	0.50		Graywacke	0.01		
		75.75 - 75.95	Altered rock; strongly sericitized, massive unit with 5% black, chloritic spots (phenocrysts?) and black chloritic rims around irregular white feldspars up to 2 - 3 mm in size, in a fine grained sericitized matrix; possibly altered syenite?	6531	75.50	76.00	0.50		Contact zone - sericitized syenite?	0.01		

HOLE: AK-90-05

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
75.95	79.90	SYENITE									
		75.95 - 76.40	Massive, dirty green-brown colour, with 10% black anhedral chloritized crystals (?), 1 - 2 mm in size, and 2 - 3% white, irregular, milk-white quartz and/or feldspar "clots" in a fine grained, red-green, sericitic matrix; this section grades into more typical, red coloured syenite with 3-5% irregular, white quartz/feldspar masses up to 1 cm (avg. 3 mm) in a fine grained red-brown matrix; characteristic "snowflake" type texture (alteration product?).	6532 6533 6534	76.00 77.00 78.00	77.00 78.00 79.00	1.00 1.00 1.00		Massive Syenite	0.01 0.01 0.01	
		79.00 - 79.90	Unit grades to yellow-green sericitized syenite with 10% black needle-like phenocrysts, 1 - 3 mm in size, in a very fine grained light green matrix; lower contact is sharp and irregular, marked by 1 - 3 mm wide sericite + chlorite \pm quartz + 1 - 2% fine pyrite; contact is offset by later quartz + chlorite slips and veinlets @ 33° tca with 1 - 2 cm of apparent dextral displacement; unit is cut by 1 - 2% transecting quartz veinlets up to 1 cm wide @ 40° tca.	6535	79.00	80.00	1.00		Sericitized Syenite with pyritic contact 1 - 3 mm wide	0.04	
79. 9 0	121.55	GRAYWACKE Massive, fine g beds up to 35 mudstone clast	/ CONGLOMERATE rained, grey-green graywacke with minor intercalated conglomerate cm wide; unit typically contains 1 - 2%, yellow-green, aphanitic s up to 5 cm in size, generally very angular, in a fine grained,	6536 6537	80.00 81.00	81.00 82.00	1.00 1.00		Sericitized Graywacke + Conglomerate Graywacke with mudstone clasts	0.05 0.04	
		equigranular gr angular fuchsit pervasively seri disseminated p cross-cutting qu magnetic.	aywacke matrix (quartz + rock fragments); unit also contains minor ic (lime-green) clasts, generally less than 1 cm in size; matrix is citized with up to $3 - 5\%$ wispy sericite; unit also contains $0.5 - 1\%$ yrite in matrix and also occasionally in mudstone clasts and a few partz veinlets 1 - 5 mm in width @ $30 - 50^\circ$ tca; unit is typically non-	6538 6539 6540 6541 6543	82.00 83.00 84.00 85.00 87.00	83.00 84.00 85.00 86.00 88.00	1.00 1.00 1.00 1.00 1.00		and 0.5% disseminated pyrite Sericitic Graywacke with mudstone clasts + 0.5% pyrite	0.15 0.03 0.16 0.15 0.06	0.15
				6544	88.00	89.00	1.00			0.08	0.07

HOLE: AK-90-05

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check 4	Au*M
		93.00 - 95.40	Laminated mudstone; very fine grained well laminated mudstone with slump textures and small scale microfaulting of bedding planes evident along with small scale "Z" folds; bedding is $<1 - 2$ mm thick @ 5 - 10° tca.	6545 6546 6547 6548 6548	89.00 93.00 94.00 95.00 96.00	90.00 94.00 95.00 96.00 97.00	1.00 1.00 1.00 1.00 1.00		Well laminated Mudstone Massive Graywacke	0.02 0.01 0.02 0.01 0.02		
				6550	106.00	107.00	1.00		Massive Graywacke with mudstone clasts + << 0.5% pyrite and cut by < 1% narrow quartz veinlets @ 50° tca	nil		
				6551 6552	107.00 108.00	108.00 109.00	1.00 1.00		1	0.02 0.02		
				6553	115.00	116.00	1.00		Graywacke with < 0.5% quartz veinlets and very minor pyrite	0.02	0.03	
				6554 6555 6556	116.00 117.00 117.50	117.00 117.50 118.00	1.00 0.50 0.50			0.03 0.03 0.02		
	121.55	Е.О.Н.										

HOLE: AK-90-06

PROPERTY	Amalgamated Kirkland	DATE LOGGED LOGGED BY	October 29 1990 Mark, Masson	EASTING NORTHING	8340.00 10210.00	DEPTH	AZIMUTH	DIP	_
TOWNSHIP CLAIM No. STARTED COMPLETED	Teck L 491663 October 26, 1990 October 27, 1990	SIGNED BY DRILLED BY SURVEYED BY CORE LOCATION	Heath & Sherwood K.L. Warehouse	ELEVATION LENGTH UNITS CORE SIZE	71.80 metres NQ	Collar 42.00	341	45 44	
PURPOSE	To test 102-8350 Gold Zone @ 25m depth, 10m west of AK-90-01								
COMMENTS	Alteration Zone 25.00 - 43.60, 18.6 m Quartz + Pyrite Zone 26.42-29.07, 2.65 m								

	SUMMA	RY LOG	}			ASSA	Y SUMMARY	7
INTERVAL From To	DESCRIPTION	INTER From	VAL To	DESCRIPTION	INTER From	VAL To	LENGTH in metres	AVERAGE Au g/t
0.00 3.00 3.00 10.10 10.10 25.00 25.00 26.42 26.42 29.07 29.07 30.00 30.00 32.90	CASING FAULT ZONE Foliation @ 45 - 50° tca 8.55 - 9.45 Sericite Schist @ 47° tca LAPILLI TUFF Altered, Hematitic 13.50 Fault @ 17° tca 17.00 - 17.90 Fault Breccia @ 30° tca, 10 % quartz chlorite veins 22.30 Fault gouge @ 35° tca ALTERED TUFF Sericitic, 0.5 % pyrite QUARTZ PYRITE ZONE Sericitic Tuffs with 3 - 5 % pyrite, 5% quartz breccia veins with 1 - 3 % pyrite ALTERED TUFF Sericitic, 0.5 - 1.0 % pyrite SYENITE 31.70 - 32.00 Sericitic, 10% quartz veins	32.90	40.37 71.80 71.80	BLEACHED TUFF 5 - 10 % Sericitic 37.40 - 40.37 Quartz veining sub-parallel to core axis LAPILLI TUFF Coarse, monolithic 40.37 - 43.60 Weakly sericitic 43.60 Fault @ 60° tca 69.47 - 70.20 Fault Zone E.O.H.	26.00	30.00 which in 30.00	4.00 cludes the follow 3.60	7.64 ting 8.46

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HOLE: AK-90-06

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INTER	VAL.		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	3.00	CASING									
3.00	10.10	FAULT ZONE Strongly deform displaying varyi well developed foliation @ 45	med and altered conglomerates and intercalated ash tuff horizons ing degrees of deformation from pseudo-brecciated to brecciated with a cataclastic texture to sericite schist and mud gouge; prominent - 50° tca.								
		3.00 - 5.20	Pseudo-brecciated and brecciated conglomerate strongly foliated to cataclastic type texture with broken and fractured clasts, and crushed matrix.	6557 6558	3.00 4.00	4.00 5.00	1.00 1.00			nil 0.02	
		5.20 - 6.00	Bleached, sericitized tuff (light green to white) with strong ankeritic shear @ 15 - 20° tca.	6559	5.00	6.00	1.00			0.01	
		6.00 - 8.55	Massive to moderately well foliated conglomerate and lapilli tuff cut by 10% quartz veinlets and masses up to 2 cm wide; matrix contains 10 - 15% wispy sericite.	6560 6561 6562	6.00 7.00 8.00	7.00 8.00 8.50	1.00 1.00 0.50			nil nil nil	
		8.55 - 9.45	Sericite schist; strongly deformed unit with semi-massive laminated sericite schist developed @ 47° tca; at 9.45 sharp mud break with sericite + chlorite gouge.	6563	8.50	9.50	1.00			nil	
		9.45 - 10.10	Sericite + ankerite; rusty weathered, ankeritic zone with minor quartz veining ($<=1\%$).	6564	9.50	10.50	1.00			0.03	

HOLE: AK-90-06

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/l	Au, Check Au*M
10.10	25.00	LAPILLI TUF Altered tuff; lapilli tuff; un cm, which qu (sericitization interstitial, wi stockwork wit 1) irregu are of 2) later, angle: Unit carries v 13.50 - 13.60 17.00 - 17.90 17.35 - 17.60 20.50 - 20.80	 F red-brown to purple to light green coloured, deformed and altered it is comprised of 10 - 20%, heterolithic, subrounded clasts up to 2-3 ite frequently display diffuse boundaries due to pervasive bleaching of matrix; matrix is fine grained, typically crushed, with 10 - 15% spy sericite pervasive throughout; unit is cut by 3 - 5% irregular quartz h at least two stages of quartz flooding evident: altar quartz masses and veinlets subparallel to foliation @ 40° tca which fiten stretched and boudinaged; cross-cutting ladder vein system of veinlets 1 - 2 mm wide at right is to foliation; ery minor amounts of blebby and disseminated pyrite. Fault @ 17° tca: sericite + chlorite + quartz; upper contact irregular and gradational sericite alteration grading to sericite schist; lower contact sharp, tight, chlorite + sericite slip. Fault Breccia @ 30° tca: strongly deformed, sericitized tuffs with 10% quartz + chlorite veins up to 1 cm brecciating altered wall rock fragments; also angular wall rock fragments to 0.5 cm in black, aphanitic chlorite groundmass. Rubbly broken core approximately 35% recovery; some minor pyrite evident on chloritic slips. Sericite + ankerite schist; rubbly core. 	6565 6566 6567 6568 6570 6571 6572 6573 6574 6575	10.50 11.00 12.00 13.00 13.50 14.00 15.00 16.00 17.00 18.00 19.00	11.00 12.00 13.00 13.50 14.00 15.00 16.00 17.00 18.00 19.00 20.00	0.50 1.00 1.00 0.50 0.50 1.00 1.00 1.00	<i>70</i> Rec	Fault breccia	0.08 nil nil 0.02 0.01 nil 0.01 nil 0.01 nil 0.01	0.07 0.01
				6577	21.00	22.00	1.00			0.01	

HOLE: AK-90-06

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INTERVAL		DESCRIPTION		SAMPLE							ASSAYS		
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M		
		22.30	Fault @ 35° tca; strong, tight (2 - 3 mm) mud break.	6578 6579 6580	22.00 22.50 23.00	22.50 23.00 24.00	0.50 0.50 1.00		Altered Lapilli Tuff with mud break @ 22.30 m	nil nil nil			
25.00	30.00	OUARTZ - PV	RITE ZONE	6581	24.00	25.00	1.00		Bleached Altered Tuff	0.01			
23.00	50.00	Light green to blue grey coloured sericitized tuffs with 3 - 5% disseminated pyrite in matrix and containing 5% quartz breccia veins with 1 - 3% pyrite.											
		25.00 - 26.42	Light green to yellow altered tuff with pervasive sericite alteration and up to 0.5% disseminated pyrite.	6582	25.00	26.00	1.00		Bleached Tuff with 0.5% disseminated pyrite	0.06			
		26.42	Contact marked by 3 mm wide sericite + ankerite + quartz slip @ 15° tca; up hole side of break is 3 - 4 cm of highly sericitized, altered tuff with 0.5 - 1% disseminated pyrite; down hole side of slip is quartz breccia vein system.	6583	26.00	26.40	0.40			0.23			
		26.42 - 26.85	Quartz breccia; fine grained, light green sericitized matrix with $1 - 3\%$ disseminated pyrite transected by blue-grey to white quartz breccia and veinlets with $3 - 5\%$ disseminated pyrite; at least three stages of quartz flooding are evident:	6584	26.40	27.00	0.60		Quartz breccia zone with 3 - 5% pyrite and 1 speck of native gold	25.52	27.87		
			 fine grained, blue-grey to white brecciated quartz + pyrite with angular quartz and wall rock clasts to 0.5 cm; two stages of later cross-cutting quartz veinlets 1 - 3 mm wide, one set @ 0 - 10° tca and one @ 70 - 90° tca; pyrite 										

HOLE: AK-90-06

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INTERVAL		DESCRIPTION		SAMPLE							ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M	
		26.60	also occurs along narrow (<=1 mm)irregular fracture planes which carry 5 - 10% finely disseminated pyrite. 0.01 by 1 mm smeared Native Gold grain along pyritic fracture									
		26.85 - 27.60	plane. Sericitized tuff; section is fine grained, yellow-green pervasively sericitized tuff (occasional remnant clasts) with 1% disseminated pyrite in matrix and cut by 1% narrow (<=1 mm) sericite + chlorite + pyrite slips containing 3 - 5% fine pyrite; pyrite replacement also evident within clasts and as blue-grey, irregular anastomosing masses < 1 cm wide; zone also contains tight slips (< 1 mm wide) with blue-grey hue of aphanitic, smeared sulphides which may include molybdenite and/or galena?	6585	27.00	27.50	0.50		Sericitized Tuff with 3% pyrite and minor quartz	3.91	3.94	
		27.60 - 28.75	Sericitized tuff with 2% quartz breccia veins and 1 - 3% disseminated pyrite in matrix.	6586	27.50	28.00	0.50		Sericitic Tuff with 2 - 3 % quartz, 3% disseminated pyrite	7.17	7.17	
		28.75 - 29.07	Scricitized tuff with 5% quartz breccia mass 30 cm wide with 1 - 3% pyrite; lower contact is sharp, blue-grey sericite + pyrite schist 2 - 3 mm wide, with brecciated quartz slip face @ 75° tca.	6587	28.00	28.50	0.50		Sericitized Tuff with 1% quartz,	8.22	9.24	
				6588	28.50	29.10	0.60		Sericitized Tuff with 5% quartz, 2 - 3% pyrite	4.97	4.87	
		29.07 - 30.00	Light green massive sericitized tuff with $\leq 0.5 - 1\%$ disseminated pyrite in matrix and minor tight (≤ 1 mm) blue-grey smeared sulphides and small pyrite dollars up to 1 mm on chlorite + sericite slips @ 15° tca.	6589	29.10	30.00	0.90		Sericitized Tuff with 0.5% pyrite	2.09	1.61	
HOLE: AK-90-06

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check A	Au*M
30.00	32.90	 SYENITE Red-brown to dark red, massive, fine grained, equigranular groundmass; unit contains 5% wispy sericite interstitial to red, fine grained matrix, giving rise to weak foliation @ 55° tca; unit displays characteristic snowflake texture with 2 - 3% white, irregular, quartz and/or feldspar clots, up to 3 - 4 mm in size, which occasionally are rimmed with dark, aphanitic chlorite and hematite; unit is cut by 3 - 5% thin (1 - 2 mm) white quartz veinlets @ 45 - 50°, generally on very tight chlorite slips, sub-parallel to each other, and by earlier irregular quartz veins and occasional breccia veins (wall rock within quartz) up to 1 cm wide; minor coarse pyrite occurs along chlorite slips and as occasional clots in syenite; upper contact is sharp and irregular with strongly sericitized tuffs; lower contact is sharp with strong sericite alteration of footwall rocks. 31.70 - 32.00 Unit contains 10% quartz stockwork veins in moderately sericitized syenite. 	6590 6591 6592 6593	30.00 31.00 31.50 32.00	31.00 31.50 32.00 33.00	1.00 0.50 0.50 1.00		Massive Syenite - minor quartz veinlets Quartz stockwork in sericitized syenite Massive Syenite + 10 cm sericitic altered wall rock	0.03 0.08 0.02 0.02		
32.90	40.37	BLEACHED TUFF Dark grey-green to brown, sheared, altered and bleached and appears to contain intercalated ash- and lapilli-tuff beds; ash tuff component is grey-green in colour with 10 - 15% black crystals, lath shaped and quite frequently broken, up to 1 mm in size, and moderate lineation fabric developed @ 50° tca; matrix is very fine grained with 5 - 10% pervasive sericite; crystal tuff?; tuff is intercalated with highly altered, coarse lapilli tuff beds which are comprised of very fine grained to aphanitic, soft, sericitic, dirty brown matrix and 5 - 10% coarse grained 1-2 cm clasts; these clasts show strongly corroded and diffuse boundaries due to alteration and have a coarse igneous texture to them.	6594 6595 6596 6597	33.00 34.00 35.00 36.00	34.00 35.00 36.00 37.00	1.00 1.00 1.00 1.00		Bleached crystal Tuff at Syenite contact Bleached Lapilli Tuff	0.01 0.01 nil nil		

HOLE: AK-90-06

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INTER	VAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
40.37	71.80	37.40 - 40.37 LAPILLI TUFF Coarse monolit	Unit is cut by buff-white to pink to grey multi-phase quartz veins with interstitial, wispy sericite and small quartz breccia veinlets $(<=0.5 \text{ cm})$ cemented by black, chloritic groundmass; these veins are sub-parallel to core axis and contain minor, sporadic, subhedral pyrite.	6598 6599 6600 6601 6602	37.00 37.40 38.00 39.00 39.50	37.40 38.00 39.00 39.50 40.40	0.40 0.60 1.00 0.50 0.90		Bleached Tuff with multiphase quartz veins subparallel tca	0.02 nil nil 0.01 nil	
		40.37 - 43.60	Massive, dark green ash matrix which has bleached, light brown, irregular sericitic patches with diffuse boundaries; these bleached zones tend to be proximal to narrow, 1 - 2 mm quartz veinlets and irregular masses up to 1 - 2 cm; unit has distinct patchwork appearance.	6603 6604 6605	40.40 41.00 41.50	41.00 41.50 42.50	0.60 0.50 1.00		Coarse Lapilli Tuff with sericite alteration halos around quartz veinlets Sericitic altered Lapilli Tuff	nil nil nil	
		43.60 - 71.80 43.60 69.47 - 70.20	Unit is characteristically comprised of 80 - 85% dark green fine grained equigranular matrix and 15 - 20% angular to sub-rounded clasts up to 5 cm (avg. 1 cm); clasts are comprised predominantly of red-pink to brown fine grained to porphyritic trachyte (75 - 80% of clasts) with lesser amounts of various lithic clasts; unit is cut by 1% late white-pink quartz veinlets @ 20 - 45° tca; unit is strongly magnetic. Fault @ 60° tca; strong tight 0.5 cm sericite schist with mud gouge. Fault Zone @ 60° tca: sericite + chlorite + quartz; strongly foliated to brecciated tuff with strong mud breaks and quartz breccia	6607 6608 6609 6610	42.50 43.50 44.50 45.00	43.50 44.50 45.00 46.00	1.00 1.00 0.50 1.00		Massive Lapilli Tuff Fault breccia + mud gouge in strongly deformed Lapilli Tuff	nil nil 0.01 nil nil	nil
	71.80	Е.О.Н.	with chloritic groundmass up to 5 cm adjacent to mud breaks.								

HOLE: AK-90-07

PROPERTY Amalgamated Kirkland DATE LOGGED October 30 1990 EASTING 8250.00 AZIMUTH DEPTH LOGGED BY Mark Masson NORTHING 10165.00 TOWNSHIP Teck SIGNED BY J 120 ELEVATION Collar 341 L 491663 CLAIM No. Heath & Sherwood LENGTH DRILLED BY 108.20 38.00 STARTED October 27, 1990 SURVEYED BY UNITS metres 80.00 October 28, 1990 COMPLETED **CORE LOCATION** K.L. Warehouse **CORE SIZE** NQ PURPOSE To test '102' structure between 8275 and 8170 zones Quartz - chlorite vein zone: 80.50 **COMMENTS** - 85.15 m

		SUMMAI	RY LOG				ASSA	SAY SUMMARY		
INTEF From	RVAL To	DESCRIPTION	INTERVAL From T	L Fo	DESCRIPTION	INTER From	VAL To	LENGTH in metres	AVERAGE Au g/t	
0.00 2.44	2.44 16.30	CASING CONGLOMERATE / GRAYWACKE	77.70 78	8.55	MUDSTONE 78.15 - 78.55 Fault @ 37° tca	80.50	85.20	4.70	1.53	
16.30 19.50	19.50 25.50	6.81 - 7.20 Fault @ 32° tca ASH TUFF CONGLOMERATE	78.55 80 80.50 85	5.15	80.50 Fault gouge @ 52° tca OUARTZ CHLORITE BRECCIA ZONE	80 50	n include 84.00	s the following	2.01	
25.50 26.38	26.38 29.70	ASH TUFF LITHIC TUFF	00.00		Sericitic Graywacke, 15% quartz, quartz + chlorite and chlorite breccia veins, 0.5 - 1% pyrite	83.00	84.00	1.00	5.56	
20.70	32 50	29.25 Fault @ 43° tca 29.60 - 29.70 Fault @ 30° tca CPAVWACKE	85.15 108	18.20	GRAYWACKE Weakly to moderately sericitic, 1% chlorite breccia					
32.50 34.85	34.85 71.90	FAULT ZONE @ 10 - 15° tca ASH TUFF / LAPILLI TUFF			101.60 - 101.62 Fault @ 40° tca 104.10 - 105.00 0.5% pyrite					
		Massive to well bedded @ 10° tca 57.34 Fault @ 40° tca 59.95 Fault @ 30° tca	103	8.20	Е.О.Н.					
71.90	73.70	FAULT ZONE @ 32° tca 73.35 Fault gouge								
73.70	77.70	GRAYWACKE Weakly Sericitic								

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DIP

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43

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check	Au*M
0.00	2.44	CASING									
2.44	16.30	CONGLOMERATE / GRAYWACKE Coarse polymictic pebble conglomerate with minor intercalated graywacke beds up to 0.5 metres wide; massive to well foliated with clast elongation @ 50° tca; matrix varies from dark green and chloritic to red-brown where hematized, 20% quartz + 30% feldspar + 50% rock fragments and pervasive 1-2% spotty sericite throughout; lower contact is sharp sericite + chlorite + ankerite slip @ 25° tca with 0.5 cm wide buff quartz vein adjacent to slip wall.									
		 5.30 - 6.81 Light green-brown with moderate sericitization of matrix (5 - 10%) and certain clasts; transected by 1-2% white to pink quartz veinlets (extensional) at right angles to the foliation. 6.81 - 7.20 Fault @ 32° tca: sericite + ankerite ± chlorite; rubbly core; strongly weathered, rusty ankeritic shear with fault gouge on lower contact. 11.50 - 12.75 Very irregular, anastomosing sericite + chlorite slips sub-parallel to core axis; tight (<= 1 mm) chlorite with sporadic quartz along slips; becomes highly sericitic between slip planes. 12.00 - 12.24 Rusty, ankerite + quartz vein in rubbly, broken core. 									
16.30	19.50	ASH-TUFF Massive to well bedded very fine to medium grained (lithic tuff) dark green to green- brown; bedding is defined by very thin (< 1 mm) dark laminae spaced at 3 -5 mm intervals in a dark green, very fine grained groundmass; in part intercalated with coarser, non-bedded lithic tuffs with 25% sub-rounded heterolithic clasts up to 0.5 cm in a fine grained, green-brown matrix; unit is typically non-magnetic; lower contact with conglomerates is sharp @ 10-15° tca (bedding).									

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INTER	VAL	DESCRIPTION					SAM	IPI E		24422	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au. g/t	Au.Check Au*	M
19.50	25.50	 CONGLOMERATE Coarse grained polymictic pebble conglomerate with 5 - 30% well rounded pebbles up to 4 cm (avg. 1 cm) in a dark green, fine grained graywacke matrix; contains very minor pyrite blebs up to 1 cm which appear to be replacing certain pebble clasts; locally weakly magnetic. 20.00 - 21.40 Cemented with white quartz, interstitial to pebble framework and matrix. 									
25.50	26.38	 ASH-TUFF Very fine grained dark green, well bedded @ 10° tca; bedding is marked by 1-2 mm wide dark magnetite beds approximately 0.5 to 1 cm apart. Note: Although bedding planes run parallel to core axis, lithological change is abrupt and appears to be at right angles to core axis but contacts are somewhat marked by irregular quartz veinlets. 									
26.38	29.70	LITHIC-TUFF / GRAYWACKE Massive, medium grained light to dark green, 50 - 60% lithic clasts, angular to well rounded and ranging in size from 1 - 3 mm (well sorted) with moderate elongation fabric @ 50° tca; matrix is very fine grained, light green in colour and quite soft (sericitic); contains minor jasper clasts, as do the graywackes, but there is little or no quartz in the matrix. 28.10 - 29.70 Grades into heterolithic lapilli and ash tuff. 29.25 Fault @ 43° tca: sharp tight (1 - 2 mm) chlorite + sericite slip.	6611	28.00	29.00	1.00			0.01	0.01	

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check A	Au*M
		29.60 - 29.70 Fault @ 30° tca: sericite + chlorite + ankerite + quartz; 1.5 cm wide white to buff quartz vein with strong sericitic margins 1-2 cm up-hole from a tight sericite + chlorite + ankerite slip face; adjacent wall rock is moderately sericitized for 3 - 5 cm around vein and fault slip.	6612	29.00	29.80	0.80		Sericitic Tuff with quartz vein and fault slip	0.01		
29.70	32.50	GRAYWACKE Massive, dark green to grey-green, fine to medium grained; matrix of 10-15% quartz, 30% feldspars and 55-65% heterolithic rock fragments including jasper; matrix is also pervasively sericitized with 1-2% spotty, wispy sericite; cut by 1% white to pink quartz veinlets.	6613 6614 6615 6616	29.80 30.50 31.00 32.00	30.50 31.00 32.00 32.50	0.70 0.50 1.00 0.50		Sericitic Graywacke	nil nil 0.01 0.01		
32.50	34.85	FAULT ZONE Fault zone @ 10° - 15° tca; very strongly deformed fault zone of sericite + quartz + chlorite + calcite; quartz is dirty brown to buff white as veins and brecciated masses and comprises 35-40% of unit; matrix is reddish-brown to green and completely crushed and altered to sericite as pervasive alteration and as wispy foliation planes; strong, tight (<= 1 mm) chlorite + sericite + calcite slip sub-parallel to core axis displays strong slickensides with 50° rake.	6617 6618 6619	32.50 33.00 34.00	33.00 34.00 34.90	0.50 1.00 0.90		Strongly deformed Fault Zone subparallel to core axis	nil nil 0.01		
34.85	71.90	ASH-TUFF / LAPILLI-TUFF Zone of intercalated ash- and lapilli-tuff with very sharp to gradational contacts; ash-tuffs are massive to well bedded @ 10° tca, dark grey-green and very fine grained; bedding is derived from thin (<= 1 mm) magnetite beds which quite often display weak cross bedding; ash- and lapilli-tuff beds are 0.5 to 1 metre wide; lapilli- tuff is medium grained heterolithic, with clasts averaging 2-4 mm (0.1 - 1 cm) of very	6620	34.90	36.00	1.10		Massive Ash Tuff	0.01		

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INTER	VAL		DESCRIPTION				·	SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	A u, g/1	Au,Check Au*M
		fine grained, m rounded; unit units from the similar to the igneous clasts,	ulti-coloured trachyte, and which are angular to sub-rounded to well is strongly magnetic; it is very difficult to distinguish some of these sediments as a lapilli-tuff with moderately rounded clasts looks very conglomerates; clasts are variable from dark green fine grained and a variety of fine ash tuff clasts.								,,,,,,,
		57.34	Fault @ 40° tca; 1 cm wide white to pink quartz vein on tight chloritic slip; wall rock is well foliated, moderately sericitic and contains minor pyrite clots up to 1 mm.	6621	57.00	57.50	0.50		Foliated sericitic Tuffs at fault with minor pyritic clots	0.01	
		59.95 - 60.05	Fault @ 30° ica; open chlorite + quartz + calcite slip with vugs and cavities up to 0.5 cm infilled with drusy quartz and calcite \pm ankerite.	6622	59.85	60.25	0.40		Open vuggy fault in massive Tuffs	0.01	
	:	63.00 - 66.50	Unit is cross-cut by a sub-parallel system of quartz veinlets 1-5 mm wide (avg. 2 mm) with spacing ranging from 0.5 cm to 0.5 metres; using (2.5) to 0.5 metres; using (2.5) to 0.5 metres;	6623	63.00	64.00	1.00		Massive Ash Tuff with 1% cross cutting quartz veinlets	0.02	
		66 50 66 70	Placebad baff barren and this and finite 10 pink, barren quartz.	6625	64.00 65.00	66.00	1.00			0.04	0.02
		00.50 + 00.70	quartz stockwork; bleaching is asymmetrical around quartz veins with 1-2 cm wall-rock penetration.	6626 6627	66.00 66.50	66.50 67.00	0.50 0.50		Bleached Tuff with 15% quartz veining	0.01 0.04	
			·	6628	67.00	68.00	1.00		· · · · · · · · · · · · · · · · · · ·	0.01	
				6629	68.00 69.00	69.00 70.00	1.00			0.01	
				6631	70.00	71.00	1.00			0.01	
				6632	71.00	71.90	0.90			0.03	
71.90	73.70	FAULT ZONE Fault Zone @ altered (sericiti	32° tca; strongly foliated to schistose, light brown to green, highly ic) tuffs with 10% cross cutting quartz veins and brecciated quartz								

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INTER	VAL	DESCRIPTION					SAM	(PI F		2222
FROM	то		No.	FROM	ТО	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		masses which are brecciated by black, aphanitic chlorite slips; upper contact is sharp 1-3 mm wide brecciated quartz vein with black, chloritic groundmass; lower contact is sharp, tight sericitic slip.	6633	71.90	72.40	0.50		Bleached Tuffs in strongly foliated to schistose fault zone with 10% quartz and quartz	0.02	
		73.35 Mud gouge, 0.5 cm wide.	6634 6635	72.40 73.00	73.00 73.70	0.60 0.70		DICULAS	0.03 0.01	
73.70	77.35	LAPILLI-TUFF Light brown to green to purple (hematized), 5% sub-rounded clasts up to 4 cm, in a fine grained, bleached ash matrix; clasts are light green to brown to pinkish.	663 6	73.70	74.50	0.80		Hematized Lapilli Tuff - 1%	0.03	
		generally fine grained trachyte, and frequently have diffuse boundaries due to penetrative sericite alteration; unit is cut by 2-3% white quartz veinlets 1-3 mm wide; lower contact is tight sericite shear with 2 cm quartz vein.	6637	74.50	75.00	0.50		Bleached, hematite + sericite altered Tuffs with 1 - 2% quartz veinlets	0.02	
			6638 6639 6640	75.00 76.00 77.00	76.00 77.00 77.70	1.00 1.00 0.70		Sericitized Ash Tuff with minor	0.02 0.02 nil	0.02
77.35	77.70	GRAYWACKE Medium grained, dark green graywacke with minor quartz veining (1%) and 2-3% spotty sericite in matrix; lower contact is sharp sericitic slip with 1.5 cm quartz vein.						graywacke		
77.70	78.55	MUDSTONE Massive aphanitic dark green mudstone with <1% cross cutting quartz veinlets.	6641	77.70	78.15	0.45		Massive aphanitic Mudstone	0.04	
		78.15 - 78.55 Fault @ 37° tca; upper contact is sheared dark green mudstone with sericitic parting, leading to dirty brown quartz + ankerite vein 6 - 7 cm wide, which tends to be vuggy and infilled with lime muds and altered mudstone clasts.	6642	78.15	78.55	0.45		6 cm wide quartz + ankerite vein	0.01	

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INTERVA	AT	DECODIPTION									•
TRILKVA		DESCRIPTION					SAM	PLE		ASSAYS	
FROM 10	10		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check	Au*M
78.55 80.5).50	LAPILLI-TUFF Dark green to reddish brown lapilli-tuff which contains 1 - 2% cross cutting quartz veinlets which display buff-brown sericite alteration halos up to 2 cm wide and with irregular alteration fronts; lower contact is strong mud break @ 52° tca.	6643 6644 6645	78.55 79.20 79.70	79.20 79.70 80.50	0.65 0.50 0.80		Weakly sericitic Lapilli Tuff Bleached sericite halos with 2 - 3% quartz veinlets	0.01 nil 0.02		
80.50 85.1	5.15	 QUARTZ + CHLORITE + PYRITE BRECCIA Stockwork zone of yellow-green, sericitic graywacke which is brecciated by 15% quartz, quartz + chlorite and chlorite breccias and by narrow, dark quartz chlorite veinlets to give a pseudo-brecciated, "crack and seal" appearance to the unit; graywacke matrix is pervasively sericitized and carries 0.5-1% patchy disseminated pyrite in places. These breccias display four distinct characteristics: Pseudo-brecciated, "crack and seal" texture with <= 1 mm black chlorite ± quartz stringers, pseudo-brecciating graywacke matrix with 0-0.5% disseminated, patchy, pyrite; Chlorite breccia veins up to 30 cm wide with angular wall rock clasts up to 1-2 cm in a black, aphanitic chlorite groundmass; Chlorite + quartz breccia veins; black aphanitic chlorite + quartz groundmass with inclusions of angular wall rock (graywacke) and white to grey quartz fragments; this more siliceous breccia tends to have up to 1% disseminated pyrite, while the chlorite breccias appear to be pyrite poor; Bluish-grey quartz veins up to 1 - 2 cm wide which carry 2 - 3% disseminated pyrite and pyrite along fracture planes. 	6646 6647 6648 6649 6650 6651	80.50 81.00 82.00 83.00 84.00 84.50	81.00 82.00 83.00 84.00 84.50 85.20	0.50 1.00 1.00 1.00 0.50 0.70		Brecciated Graywacke with 0.5% pyrite Pseudo brecciated Graywacke, 0.5% pyrite + blue grey quartz veins (1-2 cm) with 2 - 3% pyrite Sericitic Graywacke with 1 - 2% chlorite breccia and < 0.5% disseminated pyrite Pseudo brecciated Graywacke with 0.5% pyrite	2.23 0.03 0.33 5.45 0.11 0.18	2.21 5.66	

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
85.15	108.20	GRAYWACKE Typically light green to yellow-green, massive fine to very fine grained and well sorted, 15% quartz, 25% feldspar and 60% rock fragments, all less than 1 mm in size; typically non-magnetic; contains less than 1% chlorite breccia veins and "crack and coal" textured areas within meaning for an index to the start of th	6652	85.20	86.00	0.80		Massive Graywacke - very minor chlorite breccias and quartz	0.03		
		graywackes with 1% angular, light green, aphanitic mudstone clasts, up to 3-4 cm in size.	6653 6654 6655 6656	86.00 87.00 88.00 89.00	87.00 88.00 89.00 90.00	1.00 1.00 1.00 1.00		veinlets Little to no pyrite Graywacke with 1% chlorite	nil 0.01 0.01 0.01		
		101.60 - 101.62 Fault @ 40° tca chlorite + quartz + sericite.	6657 6658	90.00 91.00	91.00 92.00	1.00 1.00		breccias	0.01 0.01		
		104.10 - 105.00 0.5% disseminated pyrite in weakly sericitic matrix. 104.75 - 105.00 1-2 mm pyritic band with interstitial wispy sericite.	6659 6660 6661	102.00 103.00 104.00	103.00 104.00 104.50	1.00 1.00 0.50		Massive Graywacke Graywacke with 0.5% disseminated pyrite	0.01 0.01 0.02	0.01	
			6662 6663	104.50 105.00	105.00 106.00	0.50 1.00		1 - 2 mm wide pyritic beds in Graywacke Massive Graywacke	0.02 0.01		
	108.20	Е.О.Н.									

HOLE: AK-90-08

PROPERTY Amalgamated Kirkland October 31 1990 EASTING 8190.00 DATE LOGGED DEPTH AZIMUTH Mark Masson DIP LOGGED BY NORTHING 10165.00 TOWNSHIP Teck **ELEVATION** SIGNED BY Collar 341 45 CLAIM No. L 491663 Heath & Sherwood LENGTH 123.45 DRILLED BY 40.00 43 STARTED October 28, 1990 SURVEYED BY UNITS metres 80.00 40 October 30, 1990 COMPLETED CORE LOCATION K.L. Warehouse **CORE SIZE** NQ 114.00 40 PURPOSE To test 102 - 8170 zone Quartz + Pyrite zone: 75.90 - 76.55, 2.55m COMMENTS in Mudstone/Siltstone

		SUMMA	RY LOG		AS	SAY SUMMARY	Ŷ
INTER	RVAL	DESCRIPTION	INTERVAL	DESCRIPTION	INTERVAL	LENGTH	AVERAGE
From	То		From To	·#	From To	in metres	Au g/t
0.00	3.20	CASING	68.10 70.50 70.50 72.00	ASH TUFF	44.00 44.5	0 0.50	1.19
3.20	43.00	7.20 Fault @ 28° tca	72.00 73.85	LAPILLI TUFF MUDSTONE / SUITSTONE	74.00 76.5	5 2.55	3.58
		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15.05 55.15	75.90 - 76.55 3 - 5% Pyrite, silicified 87.60 Fault @ 32° tca	which inc	udes the following	
12.60	48.00	42.20 Fault gouge @ 40° tca	95.75 106.15	LAPILLI TUFF / ASH TUFF 99.40 Eault @ 05.8 ton	75.85 76.5	5 0.70	10.04
45.00	40.00	Sericitic, chloritic, quartz breccia veins 44.13 - 44.40 10% finely disseminated pyrite	106.15 107.80 107.80 112.15	BLEACHED GRAYWACKE	116.20 116.8	0 0.60	0.07
48.00	48.62	ALTERED LAPILLI TUFF Strongly to weakly sericitic	112.15 115.50 115.50 118.00	GRAYWACKE LAPILLI TUFF			
48.62	61.30	BLEACHED LAPILLI TUFF Hematitic, sericitic		Weakly sericitic 116.25 - 116.50 5 cm gray quartz vein, 1 - 3% pyrite			
61.30	64.40	57.15 Fault @ 30° tca SILTSTONE / MUDSTONE	118.00 121.85 121.85 123.45	GRAYWACKE ASH TUFF			
64.40	65.00	GRAYWACKE 5 - 10% Sericite	123.45	Е.О.Н.			
65.00	68.10	FAULT @ 00° tca					

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INTER	VAL	DESCRIPTION			· · · · · · · · · · · · · · · · · · ·			SAM	PLE		ASSAYS
FROM	то		No	lo. FR	ROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
0.00	3.00	CASING									
3.00	3.20	DIABASE Medium grained, massive dark green from end of casing shoe; corr rubbly and lower contact is not visible to determine whether it is in	e is somewhat situ or not.								
3.20	43.60	 CONGLOMERATE Massive to weakly foliated dark grey to green, polymictic pebble clasts are angular to well rounded and range from 2 mm to 3 cm (avg 35% of unit; prominent clast elongation @ 50° tca; matrix is very find to dark green, chloritic, 60% lithics, 25% feldspar, and 15% quartz; I magnetic; intercalated with pebble poor, graywacke beds up to 1 me generally very gradational contacts noted by a gradual decline in pebb 7.20 - 7.33 Fault @ 28° tca: sericite + ankerite; rusty weathered section; upper contact is rubbly ankeritic sericite contact is irregular, tight sericite slip with mud goug 26.90 - 27.35 Fault zone @ 45° tca: sericite + chlorite + quartz; T to pink, fractured and broken quartz with 25% int sericite and 5% tight (<= 1 mm) chlorite + seric fault zone is cut by a later fault @ 22° tca which is a muddy slip. 28.65 - 28.90 Fault @ 25° tca: sericite + chlorite + quartz; up contacts are sharp, tight sericitic slips with minor gou material is sericitic graywacke with 15% brecciated white to pink quartz. 34.35 - 34.42 Fault breccia @ 40° tca; white to pink brecciated qu to 0.5 cm in a fine grained, dark green, chlor groundmass. 	conglomerate; .5 mm) as 25- grained, light ocally strongly the wide, with le component. d, rubbly core schist; lower ye. 0% buff-white erstitial, wispy ite slips; this tight sericitic, per and lower ge; interstitial and fractured, artz fragments ite + sericite 66	664 24 665 24 6666 31	26.80 28.50 39.00	27.40 29.00 39.50	0.60 0.50 0.50		Fault zone Fault zone Massive Graywacke	0.01 0.01 nil	0.01

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				T				_	····		
INTER	VAL	I	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		41.00 - 42.00 Conglomerate b brecciated by th aphanitic, chlorit	ecomes well foliated to pseudo-brecciated and in black chlorite \pm hematite sutures and by an e groundmass with angular wall rock clasts to 0.5	6667 6668 6669	39.50 40.00 41.00	40.00 41.00 42.00	0.50 1.00 1.00		Massive Ash Tuff with 1 cm barren white quartz vein, sub- parallel to core axis Massive Conglomerate Foliated and brecciated Conglomerate	0.01 0.01 nil	
		42.20 cm; cut by 1% la Mud break @ 40 breccia.	ate, milk-white quartz veinlets up to 1 cm wide. 1° tca, 0.5 to 1 cm wide with 0.5 cm wide chlorite	6670	42.00	43.00	1.00		Massive to pseudo-brecciated Conglomerate	0.01	
				00/1	43.00	43.60	0.60			0.01	
43.60	48.00	FAULT ZONE - MYLONITE - -	AULT BRECCIA one with a wide range of textures from schistose to								
		43.60 - 44.40 Strongly foliated i chlorite + quart fractured and b pervasively seriei	graywacke transected by 10-15% black chlorite and z veinlets 1-3 mm wide @ 40°-50° tca and by roken quartz veins 1-2 cm wide; matrix is tized.	6672	43.60	44.00	0.40		Sheared Conglomerate with 10% quartz	0.01	
		44.13 - 44.40 Pyritic zone, weld disseminated pyrithin chloritic slip slips.	il foliated @ 40°-45° tca with 10% very finely itc in an aphanitic grey-brown groundmass, cut by s (<= 1 mm); borders are sharp chlorite sericite	6673	44.00	44.50	0.50		Altered unit with pyrite + chlorite zone with 10% disseminated pyrite	1.14	1.23
		44.40 - 45.00 Well foliated seri	citized zone @ 40°-45° tca; light green in colour	6674	44.50	45.50	1.00			0.02	
		45.00 - 46.00 Red-brown to alt 10%) and transec cm and by later v width; primary to	ered (silicified), quite hard, with wispy sericite (5- ted by 5% chlorite slips and breccia veins up to 1 vhite-buff cross cutting quartz veinlets 1-3 mm in extures are completely obliterated.	6675	45.50	46.00	0.50		Red brown silicified zone	0.02	

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INTER	VAL		DESCRIPTION					SAM	IPLE	-	ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		46.00 - 46.50	Dirty brown well foliated with pseudo-brecciated texture due to brecciation by black chloritic veinlets ≤ 1 mm wide.	6676	46.0 0	46.50	0.50		Foliated, buff brown altered unit	0.02	
		46.50 - 47.00	Pseudo-brecciated to brecciated zone; dirty, red-brown altered matrix with chloritic suturing and breccia veinlets comprising 15-20% of section.	6677	46.50	47.00	0.50			nil	
		47.00 - 48.00	Fault breccia of 25% coarse angular, light green to pink breccia clasts up to 2 cm (avg. 1 cm), floating in a dark green-black, aphanitic chlorite groundmass; upper and lower contacts are marked by strong chlorite + sericite slips with mud gouge @ 50°-55° tca.	6678	47.00	48.00	1.00		Coarse fault breccia, chloritic groundmass	0.03	
48.00	48.62	ALTERED LAN Dirty green-bro somewhat less	PILLI-TUFF wn altered tuff with strong sericite at upper fault contact, grading to deformed (faint primary clasts evident), sericitized tuff.	6679	48.00	48.62	0.62		Sericitic Tuff at fault contact	0.01	
48.62	61.30	BLEACHED L Light green-bro matrix appears pervasively hem to a light grea alteration front rounded, red-bi cutting quartz lower contact i 57.15 - 57.35	APILLI-TUFF own to dark green to purple (hematized), bleached tuffs; original to be dark green, fine grained and chloritic, which is being hatized to a purple colour which in turn is being bleached (sericitized) en colour; these bleached zones are patchy and display diffuse s; where unit is dark green to purple, primary 5-10% angular, sub- rown to mauve, from 2-7 mm clasts are evident; cut by 2-3% cross weinlets and minor chlorite slips and chlorite breccia veins to 1 cm; s sharp @ 50° tca. Fault @ 30° tca: strong sericite schist with black, interstitial chlorite and brecciated quartz to 3 mm in size.	6680 6681 6682 6683 6684 6685 6686	48.62 49.25 50.00 51.00 52.00 53.00 54.00	49.25 50.00 51.00 52.00 53.00 54.00 55.00	0.63 0.75 1.00 1.00 1.00 1.00		Hematized Lapilli Tuff Bleached sericitic Lapilli Tuff	0.01 nil 0.02 0.01 0.01 0.02	

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INTER	VAL	DESCRIPTION					SAM			ASSAVS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check Au*M
61.30	64.40	SILTSTONE / MUDSTONE Very fine grained, massive, dark green siltstone with minor intercalated light green aphanitic mudstone beds up to 1 cm wide; very well layered, massive and non- magnetic.								
		63.20 - 63.75 Blocky, rubbly core due to chlorite slip sub-parallel to core axis.								
64.40	65.00	GRAYWACKE Fine grained, light green-brown, massive graywacke with 5-10% pervasive sericite in matrix; contact with mudstone is somewhat irregular but sharp.	11551	64.00	65.00	1.00		Bleached Graywacke	0.02	
65.00	68.10	FAULT ZONE Fault @ 0° tca: extremely rubbly broken core (60-70% recovery) due to sericite + chlorite + quartz + ankerite fault running sub-parallel to core axis.	11552 11553 11554	65.00 66.00 67.00	66.00 67.00 68.10	1.00 1.00 1.10	60 60	Fault zone parallel to core axis	0.01 0.01 0.01	
68.10	70.50	ASH-TUFF Fine grained, massive, dirty grey-brown ash-tuff cut by numerous tight chlorite slips; quite soft (sericitic) and non-magnetic; lower contact marked by irregular white to pink quartz vein 4 cm wide, symmetrically centered on a tight sericite slip.	11555 11556 11557	68.10 69.00 70.00	69.00 70.00 70.55	0.90 1.00 0.55			0.01 0.01 0.02	
70.50	72.00	GRAYWACKE Fine grained, massive, light grey-green graywacke with 1% irregular wispy mudstone bands up to 3 mm wide; lower contact marked by irregular 1 cm quartz vein @ 15° tca.	11558 11559	70.55 71.00	71.00 72.00	0.45 1.00			0.01 0.01	
72.00	73.85	LAPILLI-TUFF Fine to medium grained, light brown-white, spotted textured matrix, comprised of 25% subhedral (lath shaped) chloritized amphibole crystals in a fine grained grey- white groundmass; clasts are 2-3% of unit as light red to grey trachyte fragments to 3 cm (avg. 1 cm) often with diffuse boundaries; lower contact is sharp @ 67° tca.	11560 11561 11562	72.00 73.00 73.55	73.00 73.55 74.00	1.00 0.55 0.45			0.01 0.01 0.01	0.01

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INTER	VAL	**** <u>*</u> *******************************	DESCRIPTION					SAM			25275
FROM	то		Disekii How	No	FROM		1	07 D	DESODUTION	A	
TROM	10			140.	FROM	10	Lengin	% Rec	DESCRIPTION	Au, g/l	Au, Check Au*M
73.85	95.75	MUDSTONE / Finely laminate with very fine g 2 cm in thickr	SILTSTONE d, light yellow-green to brown aphanitic mudstone beds intercalated trained dark green siltstone beds; bedding from a few millimetres to tess; unit shows evidence of "S" shaped, small scale folding and	6687	74.00	75.00	1.00		Well laminated Mudstone /	2.06	2.09
		disrupted beddi	ing by small scale micro-faults; bedding @ 40°-55° tca.				1.00		Siltstone	2.00	2.07
		75.00 76.55	ALLARTZ NURTE ZANE	6688	75.00	75.85	0.85			0.03	10.10
		13.90 - 16.33	0.5 mm wide wispy pyrite + sericite slips with 3-5% very fine pyrite and 0.5-1% disseminated pyrite in adjacent wall rock; grey-green,	0089	75.85	76.55	0.70		disseminated to wispy pyrite ± quartz	9.96	10.12
			quite hard (silicified) and marked by 1 cm wide, light grey quartz	6690	76.55	77.55	1.00			0.03	
			breccia vein with 1% pyrite @ upper contact; in part intercalated with narrow lapilli-tuff interbeds < 0.5 metre wide.	6691	77.55	78.00	0.45		Intercalated Mudstone / Lapilli Tuff	nil	
				6692	78.00	79.00	1.00			0.02	
				11563	79.00	80.00	1.00			0.01	
				11564	80.00	81.00	1.00			nil	
				11565	81.00	82.00	1.00			0.01	
				11566	82.00	83.00	1.00			0.02	
				11567	83.00	84.00	1.00			0.03	
				11568	84.00	85.00	1.00			0.02	0.02
				11569	85.00	86.00	1.00			0.02	
				11570	86.00	87.00	1.00			0.02	
		07 60 07 00	Equit @ 200 tons conjects a shipping a guarter buff brown placed	115/1	87.00	87.50	0.50		Fault Zana	0.01	
		07.00 - 07.00	Fault @ 52 ica: sencite + chlorite + quartz; buil-brown altered	0093	87.50	88.00	0.50		Fault Zone	0.01	
			matrix cut by 10% white-grey late quartz veiniets intoughout;	6605	80.00	89.00	1.00		Massive Mudstone/Silistone		
			apper contact is irregular white-pink 5 cm quartz vein on tight	0093	69.00	90.00	1.00				
			cmorae + senche sup.	0090	90.00	91.00	1.00				
	1			6600	03.00	92.00	1.00			0.01	
				6600	92.00	93.00	1.00			0.02	
	1			0099	95.00	94.00	1.00			0.01	

HOLE: AK-90-08

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INTER	VAL	DESCRIPTION	SAMPLE				PI F.	ASSAYS			
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check	Au*M
95.75	106.15	LAPILLI-TUFF / ASH-TUFF Massive fine grained grey-brown to green, predominantly well sorted ash tuff with $\leq 1\%$ angular trachytic clasts to 2 cm, light green to grey in colour; cut by 3% late white quartz veinlets up to 1 cm and by minor chlorite slips and chlorite breccia veins up to 1 cm wide.									
		 99.40 - 100.10 Fault @ 05° tca; tight chloritic slip sub-parallel to core axis, with 2-3 cm wide quartz and quartz breccia vein with angular quartz fragments up to 0.5 cm in a dark chlorite + sericite groundmass. 102.87 - 103.20 Chloritic slip sub-parallel to core axis with white to pink brecciated quartz vein. 									
106.15	107.80	BLEACHED GRAYWACKE Massive, fine grained with a bleached light green-white matrix; some lithic fragments are bright green (fuchsitic) and generally very fine grained (< 0.5 mm); contains a few well rounded pebble clasts up to 1 cm as well as minor jasper within matrix; upper and lower contacts are gradational with irregular, diffuse alteration front evident in surrounding tuffs.									
107.80	112.15	LAPILLI-TUFF Massive, dark green, chloritic ash matrix with 5-10% angular to sub-rounded lapilli clasts, light grey-green to black to pink, poorly sorted, 1 mm - 2 cm; cut by 3-5% white quartz veinlets @ 45° tca, 1-3 mm in width; locally weakly magnetic; lower contact sharp @ 70° tca and marked by 1-2 mm quartz vein.									
112.15	115.50	GRAYWACKE Light to medium green massive, undeformed graywacke with 1% pebble clasts up to 1 cm (avg. 3 mm); contains minor angular mudstone clasts and thin interbeds (<= 1 cm); lower contact is sharp and irregular.	6700 6701 6702	113.00 114.00 115.00	114.00 115.00 115.50	1.00 1.00 0.50		Graywacke with mudstone interbeds and <0.5% wispy pyrite	nil nil nil		

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAY	S
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Chec	k Au*M
115.50	118.00	LAPILLI-TUFF Light grey-green fine grained matrix with 1-2% spotty and wispy sericite, with 5% angular clasts, 80% of dark grey to black and white spotted trachyte from 0.1 to 2 cm.	<702	116.60	116.00	0.70	499 9 8		0.01		
		116.25 - 116.50 Pyrite Zone; 5 cm wide white to grey brecciated quartz vein with angular quartz and wall rock fragments to 0.5 cm and wispy, anastomosing sericite + pyrite interstitial to quartz and rock	6703	115.50	116.20	0.60		1 - 3% pyrite in quartz breccia vein and 1 - 2% in adjacent wall rock	0.01	0.07	
		fragments (1-3% pyrite); wall rock on vein boundaries is well foliated sericite schist for 1-3 cm around vein; wall rock carries 1- 2% fine disseminated pyrite.	6705 6706	116.80 117.50	117.50 118.00	0.70 0.50			0.01 nil		
118.00	121.85	GRAYWACKE Light grey to green massive fine grained graywacke with 10% very irregular, mudstone clasts and interbeds with flame structures and very irregular contacts; lower contact is faulted @ 15° tca by a 0.5 cm white quartz vein with tight sericite + chlorite slip margins.									
121.85	123.45	ASH-TUFF Massive grey-green, strongly magnetic, ash tuff with a few minor lapilli clasts (<1%); matrix is very fine grained grey-white with 10% black subhedral magnetite grains up to 0.5 mm.							-		
	123.45	Е.О.Н.									

HOLE: AK-90-09

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	November 2 1990	EASTING	8150.00	
		LOGGED BY	Mark Masson	NORTHING	10155.00	
TOWNSHIP	Teck	SIGNED BY	13 Pres	ELEVATION		
CLAIM No.	L 491663	DRILLED BY	Heath & Sherwood	LENGTH	124.00	
STARTED	October 30, 1990	SURVEYED BY		UNITS	metres	
COMPLETED	October 31, 1990	CORE LOCATION	K.L. Warehouse	CORE SIZE	NQ	
DUDDOGE	To Loci 102 9170 2020					1

DEPTH	AZIMUTH	DIP
Collar	341	45
38.00		44
80.00		42
114.00		41

PURPOSE To test 102 - 8170 zone

COMMENTS

	SUMMA	RY LOG		ASSAY SUMMARY				
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t		
0.00 3.30 3.30 72.00 72.00 74.75 74.75 79.00 79.00 80.50 80.50 83.10 83.10 85.00 85.00 85.65 85.65 86.00	CASING LAPILLI TUFF 8.50 Fault @ 60° tca 29.00 - 36.38 Hematitic 36.38 - 37.55 Fault @ 55° tca 37.55 - 38.60 Sericitic 58.25 - 58.80 Mudstone MUDSTONE LAPILLI TUFF Trace pyrite 76.70 Fault @ 35° tca ASH TUFF LAPILLI TUFF ALTERED LAPILLI TUFF 5 - 10% Sericite 83.80 - 83.95 Quartz vein 84.00 Fault gouge @ 40° tca GRAYWACKE MUDSTONE	86.00 91.80 91.80 93.70 93.70 94.20 94.20 110.25 110.25 124.00 124.00	85.65 Fault gouge @ 40° tca LAPILLI TUFF MUDSTONE / SILTSTONE Bedding @ 22° tca - 65° tca QUARTZ • PYRITE ZONE 3 • 5% pyrite, 5% quartz MUDSTONE / SILTSTONE 107.55 Fault @ 45° tca - 50° tca GRAYWACKE / MUDSTONE E.O.H.	93.65 94.25	0.60	11.25		

HOLE: AK-90-09

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INTER	VAL		DESCRIPTION					SAM	IPI E		27222
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au.Check Au*M
0.00	3.30	CASING									
3.30	36.38	LAPILLI-TUFH Massive to wea 20% lithic class rounded, from consist of light fine grained, eq of 35% angular white, feldspat disseminated m 8.50 - 8.57 10.50 - 10.65 22.00 - 29.00	kly foliated @ 50° tca, dark grey-green to purple, consisting of 15- ts in a fine grained ash matrix (80-85%); clasts are angular to sub- 2 mm to 8 cm (avg. 0.5 cm), poorly sorted, matrix supported, and grey to buff to pink, very fine to medium grained trachyte; matrix is juigranular dark green to purple (where hematitic) and is comprised r, light green trachytic clasts (0.5-1 mm) in a fine grained, greyish- hic groundmass (60-65%); matrix also contains 1-3% finely agnetite in places; unit is strongly magnetic. Fault @ 60° tca: chlorite + quartz + ankerite; upper and lower contacts are sharp, tight chloritic slips; inter-slip material is dirty brown to pink, multiphase, quartz + ankerite veining. Broken rubbly core with strong ankerite staining and moderate sericite development; unit is readily discernible by its dark green- purple matrix and pink clasts. Unit is transected by 1-2% late, barren, white to pink quartz	6707	28.00	29.00	1.00		Hematized Lapilli Tuff with 1%	0.01	0.05
		29.00 - 36.38	veinlets (1-3 mm wide) @ 40°-70° tca. Unit is strongly hematitic with dark to reddish-purple alteration colours predominant; this section is cut by 3-5% white to pink quartz veinlets, 1-3 mm wide and at various orientations to core axis to give a stockworked appearance to the unit; this alteration is probably related to the strong fault zone @ 36.38 m, and becomes increasingly stronger towards this fault.	6708 6709 6710 6711 6712 6713 6714	29.00 30.00 31.00 32.00 33.00 34.00 35.00	30.00 31.00 32.00 33.00 34.00 35.00 35.50	1.00 1.00 1.00 1.00 1.00 1.00 0.50		late quartz Strongly hematized, weak to moderately foliated Lapilli Tuff with 3 - 5% quartz stockwork veining	nil 0.01 0.02 0.01 nil nil	

HOLE: AK-90-09

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INTER	VAL	DESCRIPTION					SAN	(PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au ⁺ M
26.29	27.55		6715	35.50	36.35	0.85	<u></u>		0.01	
30.30	51.55	FAULT ZONE. Fault zone @ 55° tca: sericite + chlorite + quartz; highly deformed zone of sericite schist, brecciated quartz and fault gouge; upper contact is sharp chlorite + sericite slip with a 2 cm wide brecciated quartz vein with angular quartz fragments to 1 cm (avg. 1-2 mm) in a fine grained, chlorite + sericite groundmass; zone is comprised predominantly of 80-85% pervasive to wispy chlorite + sericite schist with 15-20% irregular, brecciated quartz masses up to 1 cm wide; lower contact is strong mud break with white to pink quartz 1 cm wide.	6716 6717	36.35 37.00	37.00 37.60	0.65 0.60		Fault Zone	0.01 0.01	0.03
37.55	46.20	LAPILLI-TUFF - HETEROLITHIC Massive, comprised of 10-15% sub-angular to well rounded heterolithic clasts in a light green, fine grained matrix; clasts range in size from 2-3 mm to 5 cm (avg. 1 cm) and are quite variable from dark green to grey to pink fine grained to spotted, porphyritic trachytes; matrix comprises 80-85% of unit and consists of very fine grained chloritized lithics (pale green) in a white aphanitic groundmass.								
		Note: This unit looks very much like a conglomerate due to the rounded clasts; however, the matrix contains no visible quartz and the clasts are predominantly trachytic, although variable in colour and texture.								
		37.55 - 38.60 Unit is well foliated, moderately sericitic and cut by 1% quartz veinlets; lower contact sharp, tight, chlorite slip @ 60° tca.	6718	37.60	38.60	1.00		Well foliated Tuff with 1% quartz veinlets	nil	
			6719 6720	38.60 39.50	39.50 40.00	0.90 0.50			nil nil	

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INTER	VAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au ⁺ M
46.20	72.00	IAPII.LI-TUFF 5-10% angular trachytic clasts, up to 4 cm (avg. 1 cm), in a fine grained, medium to dark green trachytic ash matrix; clasts are generally fine grained light grey-green, buff or brown, floating in a very fine grained matrix; moderately to strongly magnetic, massive and undeformed.	11662	70.70	71.70	1.00	diveta		0.01	
		 48.00 Fault @ 42° tca: tight sericite + chlorite slip boundaries with 0.5 cm wide, white to pink brecciated quartz. 58.25 - 58.80 Massive, dark grey-green aphanitic mudstone interbed with sharp contacts @ 20° tca; lower contact of unit is sharp @ 10° tca with 1-2 cm, pink-white irregular quartz vein. 								
72.00	74.75	MUDSTONE Massive, dark green aphanitic mudstone with sharp contacts @ 10°-15° tca; cut by 1% late white to pink quartz veinlets (1-4 mm wide).	11663 11664 11665	71.70 72.70 73.90	72.70 73.90 75.00	1.00 1.20 1.10			0.01 nil nil	
74.75	79.00	 LAPILLI-TUFF - HETEROLITHIC Massive, consisting of 10% angular to sub-rounded dark green to brown coloured trachytic clasts, up to 3 cm, in a fine grained trachytic ash matrix; contains very minor zones with <= 0.5% disseminated pyrite; lower contact is sharp @ 20° tca. 76.70 - 76.85 Fault @ 35° tca: upper and lower contacts are sharp, tight sericite + chlorite slips with minor irregular quartz adjacent to slips (0.5 to 1 cm wide); interstitial material is foliated sericitized tuff with very minor pyrite 1(<<0.5%). 	6721 6722 6723 6724 11829	75.00 76.00 76.50 77.00 78.00	76.00 76.50 77.00 78.00 79.00	1.00 0.50 0.50 1.00 1.00		Sericitic Tuff with fault and 0.5% pyrite	0.01 0.01 0.01 0.01 0.02	

HOLE: AK-90-09

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INTER	VAL	DESCRIPTION					SAN	1PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
79.00	80.50	ASH-TUFF Massive, light to dark green, fine grained trachytic ash with <1% lapilli sized clasts; strongly magnetic; lower contact is gradational with coarser grained lapilli tuffs.	11830 11831	79.00 80.00	80.00 81.00	1.00 1.00		< 0.5% quartz veinlets, 0.5% 1mm chlorite + hematite veinlets	0.01 0.01	
80.50	83.80	LAPILLI-TUFF - HETEROLITHIC								
		80.50 - 83.10 Massive to weakly foliated, dirty green-brown matrix (1-3% sericite) with 15-20% angular trachytic clasts to 4 cm (avg. 1 cm).	11832	81.00	82.00	1.00		1% quartz + chlorite + hematite veinlets with trace pyrite in wall	0.01	
	-	matrix and cut by numerous, tight, chloritic slips.	11833	82.00	83.0 0	1.00		rocks < 0.5% chlorite + quartz + hematite veinlets	0.01	
83.80	84.35	FAULT ZONE Fault zone @ 40° tca.	6725	83.00	83.80	0.80			0.01	
		 83.80 - 83.95 Quartz Vein: vein boundaries are tight chlorite + sericite slip; vein material is massive bull-white quartz with 5% wispy chlorite + sericite stringers and chloritized wall rock fragments within vein. 84.00 0.5 cm wide mud gouge on sericite slip. 84.00 - 84.35 Well foliated, sericitized tuff with 1% irregular quartz masses and veinlets up to 1 cm. 	6726	83.80	84.40	0.60		Fault zone with 15 cm quartz vein and sericitized Tuffs	nil	
84.35	85.00	SERICITIZED LAPILLI-TUFF Moderately well foliated, light yellow-green in colour with 5-10% pervasive and spotty sericite alteration throughout; clasts are angular, form 1-2% of unit and display strong sericite alteration; lower contact somewhat gradational.	6727	84.40	85.00	0.60		Sericitized Lapilli Tuff	nil	

HOLE: AK-90-09

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INTER	VAL		DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
85.00	85.65	GRAYWACKE Massive, light g 0.5 mm)in a lig mudstone clasts	reen, very fine grained with 3-5% well rounded quartz grains (<= ght green feldspathic matrix; contains minor irregular light green ; lower contact is a strong mud break, 0.5 cm wide @ 40° tca.	6728	85.00	85.65	0.65		Massive Graywacke	0.01	
85.65	86.00	MUDSTONE Massive, dark g and irregular wi	reen to blackish, aphanitic mudstone; lower contact is very sharp th minor displacement evident on chlorite slip @ 35° tca.	6729	85.65	86.00	0.35		Mudstone	0.01	0.02
86.00	91.80	LAPILLI-TUFF									
		86.00 - 89.50	Dirty brown-green fine grained matrix with 2-3% coarse angular trachytic clasts up to 5 cm; these clasts are dark green fine grained	6730	86.00	86.50	0.50		Dirty brown 'bleached' Lapilli Tuff	nil	
			and buff to pink coloured porphyritic trachyte; this dirty, bleached zone grades into non-bleached, dark green lapilli tuffs.	6731 6732	86.50 87.10	87.10 88.00	0.60 0.90		Mudstone interbed	nil nil	
		86.70 - 87.10	Dark green, massive, aphanitic mudstone interbed with sharp	6733	88.00	89.00	1.00			nil	
			irregular contacts.	6734	89.00	89.50	0.50		Dirty brown 'bleached' Lapilli Tuff	nil	
				6735	89.50	90.00	0.50			nil	
				6736	90.00	91.00	1.00			0.01	
				0/3/	91.00	91.80	0.80			nıs	
91.80	110.25	MUDSTONE / 9	SILTSTONE								
		Massive to well 1 cm wide) inte	laminated with light yellow-green aphanitic mudstone beds (1 mm - creatated with dark green, very fine grained siltstone beds; unit has	6738	91.80	92.50	0.70		Massive laminated Mudstone / Siltstone	0.01	
		very rhythmic la	avering with mudstone beds displaying convoluted bedding, flame	6739	92.50	93.00	0.50			0.02	
		with minor ash- sharp, but often	ip up clasts; bedding varies from 22° to 65° tca; in part interbedded and lapilli-tuff horizons up to 0.5 metres wide which display very irregular contacts.	6740	93.00	93.65	0.65		Laminated Mudstone	0.01	

HOLE: AK-90-09

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INTER	VAL	DESCRIPTION					SAN	1PLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		 93.70 - 94.20 QUARTZ, PYRITE ZONE Light green to grey, very fine grained to aphanitic mudstone with 3- 5% disseminated to weakly laminated pyrite; pyritic zones are somewhat silicified in places as shown by their relative hardness to the surrounding mudstone; cut by 5% quartz veining which occurs 	6741 6742	93.65 94.25	94.25 95.00	0.60		Pyritic zone (3 - 5% pyrite) in silicified Mudstone Intercalated Mudstone / Lapilli	11.42 0.05	11.08
		as 1) Blue-grey to white quartz and brecciated quartz veinlets paralle to bedding cleavage up to 1 cm wide with a "crack and seal" texture and which are infilled by 5-10% pyrite and with chlorite.	6743 6744 11802 11803 11804	95.00 96.00 97.00 98.00	96.00 97.00 98.00 99.00	1.00 1.00 1.00 1.00		Tuff	0.02 0.02 0.01 0.01	0.01
		2) Late cross-cutting milk- white quartz veinlets up to 3 mm wide at oblique angles.	11804 11805 11806 11807 11808 11809 11810 11811	99.00 100.00 101.00 102.00 103.00 104.00 105.00 106.00 107.00	100.00 101.00 102.00 103.00 104.00 105.00 106.00 107.00	 1.00 			0.01 0.01 0.01 0.01 0.01 0.02 0.01	
		107.55 - 107.85 Fault @ 45°-50° tca: sericite + chlorite + quartz; contacts are strong sharp slips with a moderate amount of mud gouge; faul zone itself is comprised of 65% white to buff irregular quartz veins and masses with interstitial sericite schist.	6745 11813 11814	107.50 108.10 109.00	108.10 109.00 110.00	0.60 0.90 0.90			0.01 0.02 0.02	0.01
110.25	124.00	GRAYWACKE Massive, fine-medium grained, dark green graywacke; unit is well sorted and comprised of 60% lithic clasts (up to 1 mm), 20% quartz and 20% feldspar; lithic clasts include volcanics, quartz porphyry, mudstone and jasper; well sorted and contains <1% rounded, pebble- sized clasts, and is in part intercalated with mudstone beds up to 0.75 metres wide.	11815 11816 11817 11818 11818	110.00 111.00 112.00 113.00 114.00	111.00 112.00 113.00 114.00 115.00	 1.00 1.00 1.00 1.00 1.00 1.00 			0.01 0.01 0.01 0.01 0.01	

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INTER	VAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
	124.00	 118.00 - 118.65 0.5-1.0% finely disseminated pyrite in dark green mudstone grading into graywacke. 118.27 1-2 mm quartz-pyrite veinlet at 90° tca. 120.00 - 121.00 Mudstone with 1-2%, 1-2 mm quartz carbonate veinlets @ 30°-45° tca, trace pyrite. 121.00 - 122.35 Graywacke. 121.00 - 121.40 5%, 0.5-2.0 cm, bleached quartz vein at 45° tca, trace pyrite. 122.35 - 123.00 Mudstone. 123.00 - 124.00 Graywacke, trace pyrite. 	11820 11821 11822 11823 11824 11825 11826 11827 11828	115.00 116.00 116.00 117.00 118.00 120.00 121.00 122.00 123.00	116.00 117.00 118.00 119.00 120.00 121.00 122.00 123.00 124.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00		0.5 - 1% pyrite; Mudstone grading to Graywacke Mudstone, 1 - 2% quartz veinlets, trace pyrite Graywacke Graywacke grading to Mudstone Graywacke, trace pyrite	0.01 0.01 0.02 0.02 0.01 0.03 0.01 0.01	0.01

HOLE: AK-90-10

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland November 5-6 1990 DATE LOGGED EASTING 8050.00 Mark Masson LOGGED BY NOBTHING 10100.00 Collar 341 45 TOWNSHIP Teck SIGNED BY ELEVATION Health & Sherwood 38.00 44 CLAIM No. L 491651 DRILLED BY LENGTH 173.70 76.00 44 STARTED November 1, 1990 SURVEYED BY UNITS metres 114.00 43 COMPLETED November 3, 1990 **CORE LOCATION** K.L. Warehouse **CORE SIZE** NQ PURPOSE To test magnetic low 100 m west 152.00 41 of 102-8170 zone COMMENTS Intersected '102' structure at 145.55 - 147.40m

		SUMMA	RY LOG		ASSA	Y SUMMARY		
INTER From	VAL To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t	
0.00 2.44 24.25	2.44 24.25 27.40	CASING LAPILLI TUFF Weakly sericitic 8.00 - 8.40 Fault @ 10° tca 9.80 - 10.00 Fault @ 43° tca 23.00 - 23.10 Fault @ 42° tca CONGLOMERATE 26.15 - 27.40 Altered, 10% quartz veins	95.00 116.00 116.00 138.30 138.30 143.55 143.55 145.55	ALTERED LAPILLI TUFF Sericitic, trace pyrite 108.45 - 108.70 Fault @ 15° tca ASH TUFF / LAPILLI TUFF Hematitic 132.70 - 136.40 Fault @ 0° tca GRAYWACKE / CONGLOMERATE ASH TUFF	147.00 147.50	0.50	0.65	
27 40	39.20	BLFACHED TUFF Scricitic, quartz-chlorite veining, brecciated 39.20 - 39.21 Fault gouge @ 55° tca	145.55 147.40	FAULT ZONE @ 35° 1ca- 45° 1ca Sericitic, 5% quartz veining 145.55 - 147.00 Fault gouge @ 45° 1ca				
39.20	67.00	LAPILLI TUFF Hematitic	147.40 170.40	LAPILLI TUFF 162.90 - 163.10 Mudstone, sericitic				
67.00 72.00 77.00	72.00 77.00 89.65	CONGLOMERATE LAPILLI TUFF / ASII TUFF CONGLOMERATE	170.40 173.70	ASH TUFF				
89.65	95.00	ASH TUFF 85.65 - 91.00 Fault @ 40° tca 93.15 - 93.65 Fault @ 26° tca ,10% white quartz veining	173.70	Е.О.Н.				

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HOLE: AK-90-10

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INTERVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM TO		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/l	Au, Check Au*M
0.00 2.44	CASING							-	
2.44 24.25	 IAPILLI-TUFF Massive to weakly foliated light greyish green to dark green; foliated @ 45° tea; consists of 10% angular clasts up to 3 cm (avg. 0.5 cm) of light brown to grey-green to pink trachytes; matrix is a fine grained trachytic ash with 1-2% pervasive sericite alteration; unit is weakly to moderately magnetic. 8.00 - 8.40 Fault @ 10° tea: sericite + chlorite + ankerite; tight chloritic slip with 1.5 cm wide open, vuggy quartz + ankerite vein and strong ankerite staining of wall rock. 9.80 - 10.00 Fault @ 43° tea: chlorite + sericite + quartz + ankerite; strong sericite + ankerite mud gouge @ 9.9 m with 1 cm wide irregular white quartz vein @ 10.0 m. 14.20 - 14.70 Dirty brown to green sericitized tuff with 3-5% wispy and spotty sericite in matrix as well as 2-3% chloritic sutures (<= 1/2 mm wide); section is also cut by 2-3% white to pink quartz veining up to 1 cm wide. 14.65 - 14.70 Fault @ 10° tea; strong sericite + ankerite shear with 1-2% irregular quartz. 15.00 - 15.50 Fault @ 10° tea; strong sericite + ankerite shear with 1-2% irregular quartz. 15.00 - 23.10 Fault @ 42° tea; sericite + chlorite + quartz; upper and lower contacts are sharp sericite slips; interstitial material is comprised of sericite + chlorite schist, a brecciated buff-white quartz veinel 3 mm wide and a semi-massive 3-4 cm wide milk-white quartz veinel with ankeritic staining. 	6746 6747 6748	14.20 22.90 23.40	14.80 23.40 24.20	0.60 0.50 0.80		Fault at 14.65m, sericitized Lapilli Tuff, 2-3% quartz veining Fault zone with 3-4 cm quartz vein	0.01 nil 0.03	0.01
	contacts are sharp sericitic slips; interstitial material is comprised of sericite + chlorite schist, a brecciated buff-white quartz veiner 3 mm wide and a semi-massive 3-4 cm wide milk-white quartz vein with ankeritic staining.	6748	23.40	24.20	0.80		vein		0.03

HOLE: AK-90-10

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INTE	RVAL		DESCRIPTION			,		SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
24.25	27.40	CONGLOMER/ Coarse polymict coarse sub-angu grained light to aphanitic trachy contact of unit lower contact is	ATE ic pebble-boulder conglomerate, massive, multi-coloured with 25% lar to moderately rounded clasts up to 8 cm (avg. 2 cm) in a fine o dark green matrix; clasts are multi-textured from light brown the to spotted trachyte to green sericitized mafic (?) clasts; upper is marked by sharp sericitic slip with 1 cm white-buff quartz vein; obscured by late quartz veining.	6749 6750	24.20 25.00	25.00 26.00	0.80 1.00			0.02 0.01	
		26.15 - 27.40 26.20 26.20 - 27.40	Altered conglomerates. Fault @ 47° tca: open, vuggy slip with 0.5 cm wide quartz + calcite + ankerite vein filling. Cut by numerous irregular chloritic slips and chlorite breccia veinlets up to 0.5 cm wide, and by 10% brown to white quartz veins and masses up to 4 cm wide.	6751 6752	26.00 26.50	26.50 27.50	0.50 1.00		Altered Conglomerates with 10% quartz	0.01 0.02	
27.40	39.20	Al.TERED - BI Moderately to s pseudo-brecciat mm) which crea to brown with a lapilli clasts are 30.50 - 30.70	EACHED TUFF trongly deformed with a strong "crushed" appearance that is in part ed by 1-5% irregular chlorite and chlorite + quartz veinlets (1-2 ties a strong "crack and seal" texture; matrix varies from light green a variable amount of sericite alteration (0-10% of matrix); coarse still evident, although quite deformed and brecciated in places. Fault @ 15° tca: tight sericite + chlorite slip with 0.5 cm wide of brecciated wallrock (brecciated by chlorite + quartz veinlets); minor coarse pyrite is evident along some of the chlorite + quartz slips.	6753 6754 6755 6756 6757 6758 6759 6760 6761 6762 6763	27.50 28.00 28.50 29.00 30.00 31.00 32.00 33.00 34.00 35.00 36.00	28.00 28.50 29.00 30.00 31.00 32.00 33.00 34.00 35.00 36.00 36.60	0.50 0.50 1.00 1.00 1.00 1.00 1.00 1.00		Altered sericitized Lapilli Tuff Altered Lapilli Tuff with 8 cm pink quartz vein	0.01 nil 0.01 0.01 nil nil nil nil nil nil nil	

HOLE: AK-90-10

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INTEI	RVAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 36.50 - 36.60 Fault @ 30° tca: sericite + chlorite + ankerite in well foliated sericitized tuff. 39.20 - 39.21 Fault @ 55° tca; strong muddy break with rubbly core (button core) and tight sericitic mud slips. 	6764 6765 6766	36.60 37.50 38.50	37.50 38.50 39.30	0.90 1.00 0.80			nil nil 0.01	0.01
39.20	67.00	HEMATIZED LAPILLI TUFF Massive, undeformed, with a very distinctive dark red-purple, fine grained matrix and 15-20% angular to sub-rounded lapilli clasts which average 2-5 mm in size and are predominantly light grey-green fine grained and reddish-pink trachytic clasts; moderately well sorted, weakly to strongly magnetic.								
		 53.55 - 53.61 Fault @ 20° tca: chlorite + sericite + quartz; tight (1 mm) chlorite + sericite slip with 1.5 cm bull white-pink quartz vein; unit is cut by 1% late white-pink quartz veinlets up to 1 cm wide. 66.90 - 67.00 Lower contact marked by a fault @ 27° tca: chlorite + sericite + quartz; strong chloritic shear with 0.5 cm wide breeciated, white-pink quartz veinlet; weak mud gouge development on foliation planes. 								
67.00	72.00	CONGLOMERATE Massive, polymictic pebble-cobble conglomerate, consisting of 50% well rounded to sub-angular clasts up to 5-6 cm (avg. 2 cm) in a fine grained dark green graywacke matrix; locally is strongly magnetic; lower contact is faulted @ 32° tca; sericite + chlorite + quartz + calcite.								
72.00	77.20	HEMATIZED LAPILLI-TUFF / ASH-TUFF Dark reddish-black to purple, massive lapilli-tuff with minor intercalated ash horizons up to 1 m wide and displaying gradational contacts; weakly to moderately magnetic; lower contact is faulted @ 25° tca; tight (1 mm) chloritic slip with 1-2 cm irregular quartz + calcite vein which is open and vuggy.								

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INTE	RVAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	то		No.	. FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au*M
77.20	89.65	CONGLOMERATE Coarse, polymictic pebble-cobble conglomerate, consisting of 30-4 to well rounded clasts up to 8 cm (avg. 2 cm) of salmon-pink cc dark green mafic volcanic clasts; massive, framework support weakly magnetic, undeformed and unaltered.	0% coarse angular bloured trachyte to led, poorly sorted,							
89.65	91.00	FAULT ZONE Fault Zone @ 40° tca of foliated, sericitized tuffs, brecciated turveinlets and masses.	îs and 10% quartz							
		 89.65 - 90.30 Sericitized tuff; leading contact is marked by 1 cr vein; has a dirty mottled appearance with 10% sericite slips. 90.30 01 00 00 with background ba	n quartz + chlorite spotty sericite and	57 89.5 0	90.50	1.00	70	Fault zone	0.01	
		90.30 - 91.00 Cut by 10% irregular butt-brown to white quart wide and by a later cross-cutting quartz vein sys	z veins up to 2 cm 576 tem 1-3 mm wide.	58 90.50	91.10	0.60			nil	
91.00	95.00	ASH-TUFF Massive to moderately well foliated, fine grained grey-green ash- massive fine grained matrix which appears to be 70% trachyte fi white feldspathic (?) groundmass; contains 1% very fine gr chloritized clasts with very diffuse boundaries due to alteration.	tuff consisting of a agments in a grey- ained, dark green,						nil	
		 91.00 - 91.50 Brown-purple, with a mottled texture and chloric cm, cut by 5% late quartz ± chlorite veinlets 1-91.50 Fault @ 40° tca: sericite + chlorite + quartz; + chlorite slip with 3 mm wide weakly laminate 93.15 - 93.65 Fault @ 26° tca: sericite + quartz + ankerite; a deformed zone with 10% white irregular quartz to centred on sericitic slips. 	tized clasts up to 1 676 3 mm wide. tight 1 mm scricite 6774 d quartz vein. 677 strongly sericitized, 6775 masses and veinlets 6775	59 91.10 70 91.60 71 92.50 72 93.00 73 94.00	91.60 92.50 93.00 94.00 95.00	0.50 0.90 0.50 1.00 1.00		Mottled, altered Tuff with 5% quartz	nil nil nil 0.01	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	TO	Longth	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
95.00	116.00	BLEACHED LAPILLI-TUFF Upper contact of this unit is a very sharp (< 0.5 mm) tight chloritic slip @ 45° tca. This is a unit with a very distinctive light brown-green, very fine grained to aphanitic, sericitized (pervasive) matrix with some very large (5-10 cm) altered clasts which display diffuse, altered boundaries and a certain degree of brecciation; these clasts also show various degrees of sericite alteration from yellow-green fucshitic coloured to pervasive matrix alteration; some clasts are quite coarse grained with white irregular feldspars (0.5 cm) in a sericitized groundmass; the rock has a very distinctive dirty, mottled texture; in places remnant bedding @ 30° - 40° tca; typically non- magnetic, but bedding is defined by irregular fine hematite beds (<= 1 mm wide) which were probably primary magnetite beds; lower contact of unit is somewhat gradational and marked by a gradual colour change from light brown-green to purple hematized tuffs.	6774	95.00	96.00	1.00		Bleached scricitized Tuffs	nil	
		 102.70 - 102.90 Quartz breccia vein; 2-3 cm wide white to buff to pink quartz vein with 2-3% angular wall rock inclusions up to 1 cm which are pervasively sericitized; vein walls are marked by tight chloritic slips with minor calcite. 106.90 - 107.10 Cut by two 1 cm quartz veins @ 106.90 and 107.10 which are milk-white to buff with sharp chlorite + sericite boundaries and very minor (<<0.5%) patchy pyrite. 108.45 - 108.70 Fault @ 15° tca: chlorite + sericite slip; rubbly core with 75% recovery. 	6775 6776 6777 6778 6779 6780 6780 6781 6782 6783 6784 6785	102.60 103.10 104.00 105.00 106.00 106.80 107.30 108.30 108.80 109.50 110.50	103.10 104.00 105.00 106.00 106.80 107.30 108.30 108.80 109.50 110.50 111.00	0.50 0.90 1.00 1.00 0.80 0.50 1.00 0.50 0.70 1.00 0.50	75	Quartz breccia vein Bleached Lapilli Tuff Bleached Tuff with 1 cm quartz vein and very minor blebby pyrite Quartz vein in sericitic Tuff Sericitized Tuff with 5% white- pink quartz veins with < 0.5% pyrite	nil nil 0.01 nil nil 0.01 nil nil nil nil nil	nil

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au*M
116.00	138.30	 HEMATIZED ASH-TUFF / LAPILLI-TUFF Massive fine grained moderately well bedded ash with intercalated clast-rich horizons up to 0.75 metres wide; distinctive dark red-purple colour due to pervasive hematite alteration; matrix is very fine grained, consisting predominantly of 70% trachytic lithic clasts up to 1 mm in a aphanitic grey-white groundmass; matrix also contains sporadic altered magnetite grains (magnetite → hematite) up to 1-2% in places (<=0.5 mm in size) and also hematized magnetite beds up to 1 mm wide @ 20°-30° tca; lapilli-tuff horizons are heterolithic with 10-20% angular trachytic clasts from 1-2 mm to 2 cm in size; these lapilli beds display gradational contacts with ash-tuff; displays patchy, weak magnetism. Lower contact of unit is marked by a 2 cm brecciated pink-white quartz vein on a tight sericite slip. 122.80 - 123.00 Fault @ 45° tca: sericite + quartz; 0.5 cm quartz vein in a tight sericite slip @ 122.85. 122.85 - 123.00 Light grey-green with 5-10% pervasive sericite alteration. 132.70 - 136.40 Fault sub-parallel to core axis; 1 cm wide quartz + chlorite vein running sub-parallel to core following a very irregular, tight chloritic slip. 								
138.30	143.55	GRAYWACKE / CONGLOMERATE Massive to weakly bedded @ 20° tca; grey-green graywacke (60% lithics, 25% feldspar 15% quartz) with minor intercalated pebble rich conglomerate beds with gradational contacts and not over 0.5 metres wide; cut by 1% late white to pink quartz veinlets 1-3 mm wide; lower contact is very sharp @ 75° tca and marked by a 0.5 cm quartz vein with angular wallrock inclusions 1-3 mm in size.								
143.55	145.55	ASH-TUFF								
		143.55 - 144.70 Very fine grained, brown-green, massive ash-tuff with 1-2% late white quartz veinlets (1-2 mm).	6786	143.55	144.55	5 1.00			nil	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		144.70 - 145.55 Becomes increasingly sericitized, cut by 2-3% quartz veinlets and quartz + chlorite breccia veinlets up to 1 cm; very mottled texture.	6787	144.55	145.55	1.00			0.01	
145.55	147.40	FAULT ZONE Fault zone @ 35°-45° tca: sericite + chlorite + quartz + gouge; strongly deformed sericitized unit cut by 5% late quartz and quartz + chlorite veinlets to give a pseudo-brecciated appearance in places; upper contact in sharp mud break @ 45° tca.	6788 6789	145.55 146.50	146.50 147.00	0.95 0.50		Fault zone	nil nil	
		 147.00 - 147.10 Sericite schist with strong mud gouge on parting planes. 147.10 - 147.40 Pseudo-brecciated by white-pink and black quartz chlorite veinlets 1-3 mm wide at all angles tca. 	6790	147.00	147.50	0.50			0.67	0.63
147.40	170.40	COARSE LAPILLI-TUFF Dark green, fine grained ash matrix with 10% coarse, angular lapilli clasts up to 3-4 cm (avg. 1 cm); these clasts consist of 80% buff-brown to pink, very fine grained trachyte and 20% fine grained, dark to light green trachytic; moderately to strongly magnetic; cut by 2-3% late, white-pink quartz veinlets (1-3 mm) @ 45° tca and by a later cross-cutting set @ 10° tca; lower contact of unit is sharp but somewhat deformed with 5-10% wispy sericite and 1-2% quartz veinlets @ contact.	6791	147.50	148.00	0.50			nii	
		 159.35 Fault @ 40° tca: tight chloritic slip with 1-2 cm, irregular, vuggy pink quartz vein with brecciated wallrock clasts to 0.5 cm. 162.90 - 163.10 Yellow-green, aphanitic mudstone with sharp, irregular contacts. 								
170.40	173.70	ASH-TUFF Massive, fine grained moderately magnetic ash tuff, consisting of 60% pale green, sericitized lithic fragments (up to 1 mm) in a grey-white, aphanitic, feldspathic groundmass; looks very much like a graywacke but it has no quartz or jasper.								

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INTERVAL		DESCRIPTION				ASSAYS				
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au.Check Au*M
					a					
	173.70	E.O.H.								
									1	
	1									

HOLE: AK-90-11

DEPTH AZIMUTH PROPERTY Amalgamated Kirkland November 6 1990 DATE LOGGED EASTING 7900.00 LOGGED BY Mark Masson NORTHING 10175.00 Collar 341 TOWNSHIP Teck SIGNED BY ELEVATION 38.00 Hoath & Sherwood CLAIM No. L 491651 DRILLED BY LENGTH 117.40 76.00 STARTED November 3, 1990 SURVEYED BY UNITS metres 114.00 COMPLETED November 5, 1990 K.L. Warehouse **CORE LOCATION CORE SIZE** NQ PURPOSE To test 102-7912 Gold Zone

COMMENTS No anomalous assays

	SUMM	ASSA	ASSAY SUMMARY			
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
0.00 3.40 3.40 44.70 44.70 65.15 65.15 66.55 66.55 75.50	CASING CONGLOMERATE / LAPILLI TUFF 37.35 - 37.45 Fault @ 50° tca LAPILLI TUFF 61.00 - 65.15 5 - 10% Sericite SHEAR ZONE 15 - 20% Sericite ASH TUFF	99.90 103.80 103.80 117.40	97.00 - 97.35 Fault gouge @ 35° tca BLEACHED TUFF 10 - 15 % Sericite 5 - 10 % Quartz veinlets MUDSTONE / GRAYWACKE 116.50 - 117.40 3 - 5% Quartz veinlets 116.90 - 116.92 Fault @ 45° tca			
75.50 76.50 76.50 94.45	Sericitic, hematiticFAULT ZONESericitic, hematitic, chloritic, < 0.5% pyriteLAPILLI TUFF79.00 - 79.02Fault gouge @ 40° tca82.30 - 82.31Fault @ 20° tca82.30 - 86.605 - 10\% Sericite86.60 - 94.4510 - 15\% Sericite94.00 - 94.45Fault breccia @ 50° tca	117.40	Е.О.Н.			
94.45 99.90	MUDSTONE / GRAYWACKE 94.90 - 95.00 Fault gouge @ 20° tca					

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DIP

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44

42

39
HOLE: AK-90-11

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INTEI	RVAL	DESCRIPTION						SAN	1PLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
0.00	3.40	CASING									, , ,, <u>,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,</u>
3.40	44.70	COARSE HET Massive, dark g from 0.2 to 5 c variable from p mainly compris clasts evident; quartz (possibl somewhat subje sedimentary un 18.80 18.80 - 19.40 31.40 - 33.55 33.55 - 34.45 37.35 - 37.45	EROLITHIC LAPILLI-TUFF / CONGLOMERATE green to black, with 5-30% angular to well rounded polymictic clasts m (avg. 1 cm) in a fine grained equigranular matrix; clasts are quite ink-red to grey to dark green, generally fine grained and appear to be ed of trachytic fragments, i.e. there are no quartz porphyry or jasper matrix is very fine grained grey-white and contains little to no visible y trachytic?); displays locally strong magnetics; lower contact is bective as it is very difficult to distinguish the volcanic units from the its. Fault @ 20° tca: tight 1-2 mm wide sericite + chlorite slip with minor brecciated quartz within slip. Cut by 5-10% irregular, white to pink quartz veins and masses. Grades into a medium grained lapilli-tuff with 30% angular,heterolithic, trachytic clasts averaging 3 mm in size in a fine grained, grey-green matrix. Rusty ankeritic, sericitized core interstitial to tight sericite + ankerite slips @ 10°-15° tca. Fault @ 50° tca: chlorite + sericite + quartz + ankerite; very strongly deformed zone with strong mud breaks; interstitial material is strongly deformed, rusty, altered rock cut by wispy chlorite and sericite.	6792 6793 6794 6795 6796 6797 6798 6799	18.50 19.50 33.00 33.50 34.50 35.00 36.00 37.00	19.50 20.00 33.50 34.50 35.00 36.00 37.00 37.50	1.00 0.50 0.50 1.00 0.50 1.00 1.00 0.50		Fault zone with 5 - 10% irregular quartz masses in wall rock 1 - 2% quartz veining Rusty ankeritic core Strong mud break + ankerite	0.01 0.01 0.02 nil 0.02 0.01	0.03

HOLE: AK-90-11

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INTE	RVAL		DESCRIPTION					SAM	PLE		ASSAYS
FROM	то	1		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
44.70	65.15	LAPILLI-TUFF Massive, undefe 2 cm (avg. 0.5 c trachytes; matri in a grey-white horizons up to lapilli-sized clas cut by 1% late,	Formed and comprised of 10-15% angular clasts ranging from 1 mm to cm); these clasts are light grey to buff to pink, generally fine grained ix is fine grained dark grey-green and comprised of 50-60% fine lithics aphanitic groundmass; in part intercalated with minor ash-tuff one metre wide which are massive, fine grained and contain $\leq 1\%$ sts; contacts between units are gradational; locally strongly magnetic; pink-white quartz + calcite veinlets (1-3 mm wide) @ 25°-30° tca.								
		47.53 51.60 61.00 - 65.15	Fault @ 40° tca; 2-3 mm wide, tight sericite slip with late calcite on slip face; weak sericite alteration for 1 cm into wallrock. Fault @ 35° tca; tight sericite slip with calcite on slip face. Becomes increasingly sericitized (light green) with an increasing lighter colour and 5-10% pervasive sericite alteration evident in matrix.	6800	64.00	65.00	1.00		Weakly sericitized Lapilli Tuff	0.02	
65.15 ,	66.55	SHEAR ZONE Well foliated a recovery); orig sericite and se moderate anke	at 45° tca; rusty weathered, ankeritic with very rubbly core (70% ginal rock appears to be a fine grained ash-tuff with 15-20% wispy pricite slips throughout; contacts are somewhat gradational with rite stain penetrating surrounding wallrock.	6801	65.00	66.00	1.00	70	Rusty ankeritic shear zone	0.01	
66.55	75.50	ASH-TUFF Massive, very f to be 60-70% groundmass; s buff quartz veit	ine grained, light green (sericitized) to purple (hematized); appears very fine, trachyte clasts up to 0.5 mm in an aphanitic white trongly magnetic where not hematized and cut by 5% late white to nlets.	6802 6803 11642 11643 11644 11645 11646	66.00 67.00 68.00 69.00 70.00 71.00 72.00	67.00 68.00 69.00 70.00 71.00 72.00 73.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00			0.02 0.01 0.01 0.01 0.01 0.01 0.01	0.01

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
				11647 6804 6805	73.00 74.00 75.00	74.00 75.00 75.50	1.00 1.00 0.50		Weakly sericitized Ash Tuff	0.01 0.01 nil	
75.50	76.50	FAULT ZONE Fault zone @ : contact marked boundaries.	35° tca: sericite + chlorite + quartz + hematite + calcite; upper by 1 cm buff-white quartz vein with sharp, chlorite + sericite slip								
		75.50	Very dirty, mottled texture with crushed and deformed host rock being transected by very irregular wispy sericite, chlorite, hematite and quartz masses and veinlets, to give a highly variable colour; 40-50% sericite, $30%$ quartz, $10%$ hematite, $10%$ chlorite + calcite on slip faces; zone locally carries very minor, coarse blebby <<0.5 pyrite.	6806	75.50	76.50	1.00		Hematitic fault zone << 0.5% pyrite	0.04	
76.50	86.60	LAPILLI-TUFF									
		76.50 - 77.80	Cut by 5% quartz veinlets with weak sericite alteration halos and patchy ankeritic staining on tight, sericitic slips.	6807	76.5 0	77.00	0.50		Bleached Tuff with 5% quartz	0.03	
		77.80 - 82.30 79.00 82.30 82.30 - 86.60	Massive, with 5% sub-angular light pink to buff trachytic clasts, up to 2 cm, in a light green to grey fine grained ash matrix; matrix displays pervasive, moderate sericite alteration. Fault @ 40° tca; mud slip; very strongly deformed sericite + chlorite schist 2 cm wide with mud gouge on slip planes. Fault @ 20° tca: chlorite + sericite + quartz + calcite; 3-5 mm wide fault with a 1-2 mm quartz + calcite veinlet. Light pink rock, with 60% pink lithic clasts (<=0.5 mm) and a very fine grained, yellow-white, sericitized groundmass with 5-10% wispy sericite evident.	6808 11648 11649 11650 11651 11652 11653 11654	77.00 78.00 79.00 80.00 81.00 82.25 84.50 85.50	78.00 79.00 80.00 81.00 82.25 83.50 85.50 86.50	1.00 1.00 1.00 1.25 1.25 1.00 1.00			0.01 nil 0.02 nil 0.01 0.01 0.02 nil	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
86.60	94.45	 BLEACHED LAPILLI-TUFF Sericitized, light grey-brown, lapilli-tuff contains 10-15% pervasive sericite alteration within matrix and in part penetrating lapilli clasts to give them weak, diffuse boundaries; cut by 5% late white quartz veinlets up to 5 mm and also by late quartz breccia veins with wallrock inclusions up to 1.5 cm. 94.00 - 94.45 Fault breccia @ 50° tca; white to pink brecciated quartz fragments to 1 cm within a strongly sheared chlorite + sericite groundmass; strong mud gouge on boundaries 	6809 6810 6811 6812 6813 6814 6815 6816 6817	86.50 87.00 88.00 89.00 90.00 91.00 92.00 93.00 94.00	87.00 88.00 90.00 91.00 92.00 93.00 94.00 94.50	0.50 1.00 1.00 1.00 1.00 1.00 1.00 1.00		Sericitized Lapilli Tuff with 3 - 5% late quartz veining Chloritic fault breecia	0.05 nil 0.02 nil 0.01 0.01 nil 0.02 0.04	0.07
94.45	99.90	 MUDSTONE / GRAYWACKE Massive, aphanitic, dark to light green mudstone with very minor intercalated graywacke interbeds which display sharp but irregular contacts. 94.90 - 95.00 Fault @ 20° tca; strong mud break with brecciated and crushed mudstone fragments. 97.00 - 97.35 Fault @ 35° tca; strongly foliated to sheared mudstone and mudstone breccia cemented by mud, fault gouge. 	6818 6819 6820 6821 6822 6823 6824	94.50 95.00 96.00 97.00 97.50 98.00 99.00	95.00 96.00 97.00 97.50 98.00 99.00 99.90	0.50 1.00 1.00 0.50 0.50 1.00 0.90		Strong mud break in Mudstone	0.02 0.03 0.02 0.09 nil 0.01 0.02	0.10
99.90	103.80	BLEACHED ASH-TUFF Highly altered, light brown ash-tuff with 10-15% pervasive sericite in very fine grained, crushed matrix; cut by 5-10% quartz, and quartz + chlorite veinlets up to 3 mm at all angles, and by numerous, tight sericitic slips, to give unit a pseudo	6825 6826 6827	99.90 100.50 101.00	100.50 101.00 102.00	0.60 0.50 1.00		Bleached sericitized Tuff	0.01 0.01 0.02	

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INTE	RVAL	DESCRIPTION					SAM	PLE		ASSAYS	
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		brecciated texture in places; lower contact is very sharp chlorite slip @ 40° tca.	6828 6829	102.00 103.00	103.00 103.80	1.00 0.80			0.02 0.01	0.03	
103.80	117.40	MUDSTONE / GRAYWACKE Massive to weakly bedded, dark green to yellow-green aphanitic mudstone with intercalated graywacke (conglomerate) beds from 1 cm to 0.5 metres wide with sharp but very irregular contacts.	6830 6831 6832	114.00 115.00 116.00	115.00 116.00 116.50	1.00 1.00 0.50			0.03 0.01 0.01		
		 116.50 - 117.40 Cut by 3-5% quartz veinlets, weakly sericitic. 116.90 - 116.92 Fault @ 45° tca; 1-2 cm wide laminated quartz + chlorite in foliated, sericitic graywacke. 	6833	116.50	117.40	0.90			0.03		
	117.40	E.O.H.									

HOLE: AK-90-12

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	November 7-8 1990	EASTING	8000.00		DEPTH	AZIMUTH	DIP
	-	LOGGED BY	Mark, Masson	NORTHING	9840.00		Collar	341	45
TOWNSHIP	Teck	SIGNED BY	W.B.	ELEVATION			38.00		45
CLAIM No.	L 477299 / 491651	DRILLED BY	Heath & Sherwood	LENGTH	99.55		76.00		12
STARTED	November 5, 1990	SURVEYED BY		UNITS	metres		70.00		42
COMPLETED	November 7, 1990	CORE LOCATION	K.L. Warehouse	CORE SIZE	NO		96.00		40
PURPOSE	To test '99' structure, IP anomaly								
	and 99-8030 Gold Zone								l
COMMENTS	No anomalous assays						· · · · ·		1
	•					L			

	SUMMA	RY LOG		ASSA	Y SUMMARY	ζ.
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENOTH in metres	AVERAGE Au g/t
0.00 1.80 1.80 11.95 11.95 14.20 14.20 15.50 22.25 23.33 23.33 28.35 28.35 43.50 44.60 47.20 47.20 54.65 54.65 56.85 56.85 63.25 63.25 99.55	CASING GRAYWACKE MUDSTONE LAPILLI TUFF CONGLOMERATE ASH TUFF CONGLOMERATE ASH TUFF ALTERED ASH TUFF / MUDSTONE Sericitic, 0.5 - 1% pyrite ALTERED ASH - / LAPILLI TUFF Hematitic ALTERED ASH - / LAPILLI TUFF Hematitic ALTERED ASH TUFF Sericitic, trace pyrite CONGLOMERATE COARSE LAPILLI - / BLOCK TUFF Strongly magnetic 69.00 - 77.40 5 - 10% quartz veining	99.55	E.O.H.			

HOLE: AK-90-12

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INTER	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	1.80	CASING								
1.80	11.95	GRAYWACKE Massive, light to dark green, with a few minor coarse pebbles in places; 60% rock fragments (polymictic), including jasper and minor fuchsitic clasts, 20% quartz and 20% feldspar; cut by 1-2% white-pink quartz veinlets; top 2 metres is moderately to strongly ankeritic.								
		4.70 - 4.80 Chlorite breccia: angular wall rock clasts up to 2 cm in a black, aphanitic, chlorite groundmass; lower contact is a sharp sericitic slip with < 1 cm wide chlorite breccia vein @ 50° tca.								
11.95	14.20	MUDSTONE Massive to weakly bedded, dark grey to green, aphanitic mudstone; bedding is evident as irregular, wispy, dislocated, light grey beds from 1-3 mm wide at 15°-45° tca; lower contact of unit is very sharp but irregular @ 15° tca.								
14.20	15.50	LAPILLI-TUFF Moderately well foliated (45° tca) light green lapilli-tuff; matrix is quite soft (scricitized) and very fine grained and comprises 85% of the unit; clasts are quite clongated (elliptical) parallel to foliation and are comprised of dark green to buff, fine grained trachyte and very fine grained red-pink trachyte; locally strongly magnetic due to the presence of (<= 0.5 mm) anhedral magnetite crystals; lower contact is sharp, rusty chlorite + ankerite slip @ 50° tca.	6834 6835	14.00 14.70	14.70 15.50	0.70 0.80		Mudstone / Lapilli Tuff at contact zone Sericitic Lapilli Tuff	nil 0.01	
15.50	22.25	CONGLOMERATE Massive, undeformed polymictic pebble/cobble conglomerate; matrix is fine grained dark green to black of 60-70% very fine ($<=0.5$ mm) rock fragments in an aphanitic groundmass; clasts are well rounded, poorly sorted and range from 2-3 mm to 5 cm and are quite variable in lithology types and textures; lower contact is very sharp @								

HOLE: AK-90-12

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/l	Au, Check Au*N	Л
		60° ica and marked by a 3 mm wide sericitic slip.									
22.25	23.33	ASH-TUFF Massive, fine to very fine grained, dark brown and quite hard; contains $< 0.5\%$ lapilli sized clasts up to 1/2 cm which are very fine grained light brown trachyte lower contact is very sharp @ 50° tca; unit is strongly magnetic.									
23.33	28.35	CONGLOMERATE Massive, dark green to black, polymictic pebble conglomerate; matrix of 60-70% rock fragments in a very fine grained greyish white groundmass; clasts are moderately well rounded, poorly sorted and range from 2-3 mm to > 5 cm, and although quite variable in composition the most prominent clasts a quite large reddish-brown porphyritic trachyte which are quite often fractured and broken; lower contact of unit is gradational and somewhat subjective.									
28.35	43.50	 ASII-TUFF Massive, fine to very fine grained, and quite variable in colour, from dark green to dirty brown and in texture from very fine grained ash, to a fine grained crystal-tuft to a clast poor lapilli-tuff, all displaying very gradational contacts. 34.00 - 34.20 Fault @ 52° tca. 34.00 - 34.10 Rusty weathered ankeritic zone with numerous chloritic sutures and slip planes; visible magnetite crystals (<<0.5 mm) are eviden within carbonatized zone and within adjacent wall rock. 34.10 - 34.20 I cm wide pink-white quartz + calcite vein within well foliated chlorite ash tuff. 36.40 - 37.45 Crystal-tuff (?) of 15-20% pale green altered, broken to euhedra crystals (altered augite or feldspars ?) in a dark green, aphanitic groundmass; all variations of this unit are strongly magnetic. 	6836 6837	33.00 34.00	34.00 34.50	1.00 0.50		Ankeritic, weathered shear	0.01 0.01		

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INTEI	RVAL		DESCRIPTION					SAM	IPI F		27 A 22 A	
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		40.90 - 41.05 Fault 41.0 mino chlor	1 @ 33° tca: chlorite + quartz + calcite; tight chloritic slip @ m bounded by pink-white, multiphase, quartz + calcite veining; or chalcopyrite; lower contact of unit is a sharp 1-2 mm rite slip with minor amount of rock flour on slip face @ 75° tca.	6844 6838	40.80 43.00	41.20 43.50	0.40 0.50		Fault zone	0.01	nil	
43.50	44.80	LAPILLI-TUFF Massive, strongly mag cm) in a very fine gra scricite slips @ 80° to contact of unit is faul 44.60 - 44.80 Fault with	gnetic, with 5-10% angular, red-pink, trachytic clasts (up to 2 ained, dark green ash matrix; cut by a few tight (≤ 1 mm) a and by 2% white quartz veinlets (1-2 mm) at 45° tca; lower lted @ 50° tca. t zone; well foliated purple-green (hematite + sericite) ash-tuff sharp, tight sericite slip boundaries.	6839 6840	43.50 44.50	44.50 45.00	1.00 0.50		Hematite + sericite shear zone	0.01 0.02	0.01	
44.80	47.20	ASH-TUFF / MUDST Very fine to fine grai mudstone beds from sericitized fragments contains 0.5%-1% dis weakly sericitic with n cm brecciated quartz groundmass.	ONE ned, light grey-green, massive ash with intercalated, aphanitic 2 mm-5 cm wide; matrix of ash is 40-50% pale green, up to $1/2$ mm in an aphanitic grey-white groundmass; unit seminated pyrite throughout; very nondescript, massive unit, ninor pyrite; lower contact of unit is faulted @ 70° tca by a 1.5 \pm calcite vein cemented by an aphanitic chlorite + sericite	6841 6842 6843	45.00 46.00 46.50	46.00 46.50 47.20	1.00 0.50 0.70		Ash Tuff / Mudstone with 0.5% pyrite	0.03 0.03 0.01		
47.20	54.65	ASH-TUFF / LAPILL Massive, undeformed beds 0.5 - 1.0 metre w lapilli size) fragments grained light green to lapilli-tuff, but finer g to strongly magnetic.	I TUFF (HEMATIZED) , intercalated ash- and lapilli-tuff in equal proportions with vide; red-brown to purple with 30-40% fine to coarse (ash to s, hematized (purple) trachytic rock fragments, in a very fine purple groundmass; ash-tuff is compositionally similar to the rained and in places well bedded @ 60° tca; unit is moderately	6845 6846 6847 6848	47.20 48.00 53.00 54.00	48.00 49.00 54.00 54.60	0.80 1.00 1.00 0.60			0.01 0.01 0.01 0.02		

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		52.60 - 52.65 Fault @ 55° tca; chlorite + sericite + quartz; fault boundaries are sharp, tight chlorite slips; interstitial material is well foliated with wispy sericite and 3-4 mm wide white quartz veinlets.					- , <u>, , , , , , , , , , , , , , , , , ,</u>			
54.65	56.85	SERICITIZED ASH-TUFF Massive to moderately well foliated, yellow-green and contains $\leq 1\%$ coarse lapilli sized clasts; matrix of 25% pale green, altered clasts up to 1 mm, in an aphanitic, grey-white sericitized groundmass; matrix also contains 2-3% grey-white specks ($\leq =$ 0.5 mm) of sericite, which also occurs in selective clasts; unit is non-magnetic, with trace pyrile; upper contact in a sharp sericite + quartz slip @ 60° tca; lower contact is somewhat gradational with well rounded pebble clasts in sericitic tuff @ 56.80 to 56.85 m.	6849 6850 6851	54.60 55.20 56.00	55.20 56.00 56.90	0.60 0.80 0.90		Sericitized Tuff	0.01 nil nil	
56.85	63.25	CONGLOMERATE Massive, undeformed polymictic pebble conglomerate; clasts form 40-50% of unit and are angular to well rounded, poorly sorted, and up to > 10 cm in size; clast types include jasper, feldspar porphyry, mafic volcanics, etc.; lower contact of unit is a sharp, tight, sericite slip.								
63.25	99.55	 COARSE MONOLITHIC LAPILLI-TUFF / BLOCK-TUFF This unit is very distinctive and is comprised of bright red-pink, fine grained to porphyritic trachyte clasts, which range in size from 1 mm to 50 cm, in a fine grained dark green matrix which is comprised of the same trachytic clasts but much finer grained; unit is quite hard, massive (crudely bedded on surface) and appears to have undergone some brittle failure as it is stockworked by 5-15% buff-white to pinkish quartz veins 1-2 mm to 2 cm wide at all angles tca; unit is also strongly magnetic. 69.60 - 69.75 Quartz vein; irregular buff white to pink anastomosing quartz vein with semi-massive wall rock within vein; vein boundaries are sharp, with semi-massive wall rock within vein; vein boundaries are sharp, 	6852 6853 6854	69.00 69.50 70.00	69.50 70.00 71.00	0.50 0.50 1.00		Coarse Lapilli - / Block Tuff with 5 - 10% quartz stockwork	0.02 0.01 0.01	
		tight chloritic slips @ 50° 1ca.	6855	71.00	72.00	1.00			0.01	0.01

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INTE	RVAL		DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au*M
	99.55	74.35 - 77.40 76.60 - 77.40 77.30 E.O.H.	Becomes weakly bleached and is cut by numerous chlorite + sericite slips up to 0.5 cm wide; Cut by 15-20% massive and fractured (chlorite sutures) buff white to pink quartz veins up to 10 cm wide. 1 cm vuggy, pink quartz + carbonate vein @ 30° tca with a 1 cm, pseudo-brecciated chalcopyrite clot with malachite staining.	6856 6857 6858 6859 6860 6861 6862 6863 6863	72.00 73.00 74.00 75.00 76.00 76.50 77.40 78.00 79.00	73.00 74.00 75.00 76.00 76.50 77.40 78.00 79.00 80.00	1.00 1.00 1.00 1.00 0.50 0.90 0.60 1.00		15 - 20% quartz veins with minor chalcopyrite	nil 0.03 0.01 0.01 nil 0.01 0.02 0.03 0.01	

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	November 10 1990	EASTING	8050.00	DEPTH	AZIMUTH	DIP
TOWNSHIP CLAIM No. STARTED COMPLETED PURPOSE	Teck L 500058 / 491651 November 7, 1990 November 8, 1990 To test '99' structure and 99-8030 Gold Zone	LOGGED BY SIGNED BY DRILLED BY SURVEYED BY CORE LOCATION	Mark Masson Heath & Sherwood K.L. Warehouse	NORTHING ELEVATION LENGTH UNITS CORE SIZE	9845.00 90.17 metres NQ	Collar 38.00 76.00	341	45 43 43
COMMENTS	No anomaious assays							

		SUMMA	RY LOG		ASSAY SUMMARY					
INTEF From	VAL To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t			
0.00 4.50 5.30 14.40 16.55 37.00	4.50 5.30 14.40 16.55 37.00 45.50	CASING CONGLOMERATE ASH TUFF CONGLOMERATE 16.35 - 16.55 Fault @ 52° tca ASH TUFF ALTERED LAPILLI TUFF Hematitic 40.40 - 40.85 Sericitic, 0.5% pyrite								
45.50 47.00 49.20 54.45	47.00 49.20 54.45 90.17	ALTERED ASH TUFF Sericitic CONGLOMERATE ASH TUFF COARSE LAPILLI • / BLOCK TUFF 5% white to pink quartz veinlets								
	90.17	E.O.H.								

HOLE: AK-90-13

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INTEI	RVAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [•] M
0.00	4.50	CASING								
4.50	5.30	CONGLOMERATE Weakly foliated to massive with a moderate ankerite stain; 5% well rounded, polymictic clasts up to 2 cm in a fine grained graywacke matrix (70% rock fragments, 20% feldspar, 10% quartz and 1-2% spotty sericite); lower contact is faulted @ 10° tca by a tight chlorite + sericite + ankerite slip.								
5.30	14.40	ASII-TUFF Massive to well bedded, dark green-brown and generally quite fine grained, although the unit is in part intercalated with narrow (5-10 cm), clast-rich lapilli-tuff and conglomerate beds; bedding is defined by alternating light and dark green bands @ 50° tca which appears to be comprised of 60% very fine trachytic rock fragments in an aphanitic, dirty brown groundmass; very strongly magnetic; lower contact is a sharp chloritic slip @ 30° tca.								
		 7.65 - 8.35 Fault @ 65° tca: sericite + chlorite + ankerite + quartz; extremely rusty weathered shear comprised predominantly of sericite schist with very minor, cross cutting quartz veinlets (1-3% recovery). 8.10 - 8.35 Rubbly, ground core (30-40% recovery). 	68 65	7.60	8.50	0.90	65	Ankeritic shear with minor quartz	0.01	0.02
14.40	16.35	CONGLOMERATE Massive, coarse grained conglomerate with 30% angular to well rounded, poorly sorted, clasts up to 4 cm in a very fine grained, dark green graywacke matrix; undeformed, unaltered jasperoidal conglomerate; lower contact is strongly faulted.								
16.35	16.55	FAULT • MYLONITE ZONE Fault-mylonite zone @ 52° tea, schistose to well laminated (mylonitic) and consists of alternating bands (2-5 mm wide) of light green sericite, dark green chlorite and dirty brown sericite + ankerite (?).	68 66	16.30	16.70	0.40		Fault - Mylonite zone	0.01	

HOLE: AK-90-13

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
16.55	37.00	ASH-TUFF Massive, very fi pale green, trac unit is very stre mm) are evide: throughout; lo	ine grained, dark green to brown and appears to consist of 60-70% hytic rock fragments ($<= 0.5$ mm) in a dirty aphanitic groundmass; ongly magnetic and in places 1-2% visible magnetite grains ($<= 0.5$ nt; also contains the odd lapilli sized clast, randomly distributed wer contact is faulted @ 40° tca.								
		27.20 - 28.40	Cut by 2-3% white-pink quartz veinlets with black chloritic boundaries (1-3 mm wide) which have sericitic alteration halos up to 0.5 cm into adjacent wall rock; patchy bleached appearance.	6867 6868 6869	27.00 27.50 34.00	27.50 28.40 34.90	0.50 0.90 0.90			0.01 0.01 0.01	0.02
		35.47 - 35.60	Fault @ 47° tca; chlorite + sericite + hematite; very strongly deformed, chloritic shear with a strong mud gouge with purple, hematitic wall rock.	6870 6871 6872 6873	35.40 35.90 36.50	35.90 36.50 37.00	0.50 0.60 0.50		Hematitic Fault	0.01 0.03 0.01 0.01	0.03
37.00	45.50	IIEMATIZED I Massive, media sericite bleachi pinkish-red trac	LAPILLI-TUFF un grained with characteristic reddish-purple colour and patchy ng proximal to quartz veinlets and sericite slips; comprised of 25% chyte clasts (1-3 mm) in a very fine grained, hematized groundmass.								
		37.00 - 37.25	Fault @ 55° tca; well foliated to schistose hematitic tuff with strong sericite and sericite + quartz slip planes.	6874 6875 6876	37.00 37.50 38.50	37.50 38.50 39.00	0.50 1.00 0.50		Sericitic Fault Zone Hematized Lapilli Tuff	0.01 0.02 0.03	0.01
		39.00 - 40.40	Selective pyrite replacement (coarse, clots) in sericitized lapilli clasts.	6877 6878	39.00 39.50	39.50 40.40	0.50		Hematized Tuff with minor clotty pyrite	0.01 0.02	

HOLE: AK-90-13

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INTEF	RVAL	DESCRIPTION		***- -			SAM	IPLE		ASSAYS
FROM	TO		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au ⁺ M
		40.40 - 40.85 Scricitized tuff; zone is light yellow-green with dark green, angular lapilli clasts with spotty sericite; matrix is pervasively sericitized and	6879	40.40	41.00	0.60		Sericitized Tuff with < 0.5% pyrite	0.04	
		contains < 0.5% finely disseminated pyrite; upper contact is sharp sericite + quartz slip @ 40° tca while lower contact is gradational; zone also contains a 2 cm wide chlorite breccia vein with angular wall rock clasts in a dark green anhanitic chlorite groundmass.	6880	41.00	41.50	0.50		Hematized Tuff	0.03	
		41.50 - 42.50 Sericitized tuff, of patchy to pervasive sericite ± quartz bleaching cut by secondary quartz veinlets (1-3 mm) and quartz + chlorite suture planes with small scale movements evident.	6881 6882 6883	41.50 42.50 43.00	42.50 43.00 44.00	1.00 0.50 1.00		Bleached Tuff with 2 - 3% quartz	0.02 0.02 0.02	
			6884 6885	44.00 45.00	45.00 45.50	1.00 0.50			0.02 0.02	
45.50	47.00	SERICITIZED ASH-TUFF Massive to well bedded (60° tca) fine grained, light green ash with narrow interbedded silistone layers up to 0.5 cm; these silistone / mudstone layers are very soft, aphanitic and display convoluted and disrupted bedding; unit is non-magnetic and pervasively sericitized; upper contact is sharp sericite + quartz slip @ 40° tca; lower contact is also sharp but appears to be more of an alteration front.	6886 6887	45.50 46.50	46.50 47.00	1.00 0.50		Sericitized Ash Tuff	0.01 0.01	
47.00	49.20	POLYMICTIC PEBBLE CONGLOMERATE Coarse grained, polymictic pebble conglomerate with well rounded clasts up to 6 cm in a very fine grained graywacke matrix and also as pebble clasts within trachylic ash matrix; unit is also intercalated with fine grained well bedded graywacke with thin (<= 1 mm) magnetite beds.	6888	47.00	48.00	1.00		Intercalated Conglomerate + Wacke	0.01	
49.20	54.45	ASII-TUFF Massive, fine to very fine grained, dark green to brown, with 1% angular lapilli sized clasts scattered throughout; moderate to strongly magnetic and appears to be comprised of 50-60% very fine trachytic rock fragments in a dirty brown, aphanitic matrix; lower contact is 0.5 cm wide chlorite + sericite slip @ 55° tca.								

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CRIPTION Au, g/1	/1 Au,Check Au*M

HOLE: AK-90-14

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	November 12 1990	EASTING	8100.00	DE	ртн	AZIMUTH	DIP
TOWNSHIP CLAIM No. STARTED COMPLETED	Teck L 500058 / 491651 November 8, 1990 November 10, 1990	LOGGED BY SIGNED BY DRILLED BY SURVEYED BY CORE LOCATION	Mark Masson Heath & Sherwood K.L. Warehouse	NORTHING ELEVATION LENGTH UNITS CORE SIZE	9835.00 99.45 metres NQ	Cc 34 70	ollar 8.00 6.00	341	45 44 44
PURPOSE COMMENTS	To test '99' structure 70 metres east of 99-8030 Gold Zone No anomalous assays								

		SUMMA	RY LOG		ASSA	Y SUMMARY	?
INTER	RVAL	DESCRIPTION	INTERVAL	DESCRIPTION	INTERVAL	LENGTH	AVERAGE
From	То		From To		From To	in metres	Au g/t
0.00							
0.00	2.13	CASING	99.45	Е.О.Н.			
2.13	0.33	GRAYWACKE / MUDSTONE					
0.00	18.40	ASH TUFF]				
18.40	25.90	CONGLOMERATE					
25.90	28.55	ALTERED ASH TUFF					
		Hematitic					
28.55	31.00	ASH TUFF					
31.00	35.50	LAPILLI TUFF					
35.50	44.75	ALTERED ASH TUFF					
		Hematitic to sericitic					
44.75	46.85	COARSE LAPILLI TUFF					
46.85	60.00	ALTERED TUFF					
		Bedding @ 60° tca , sericitic					
60.00	61.60	ALTERED TUFF					
		Hematitic					
61.60	71.75	ALTERED LAPILLI TUFF					
		Sericitic, 0.5% pyrite					
71.75	99.45	COARSE LAPILLI - / BLOCK TUFF					
			[

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check	Au*M
0.00	2.13	CASING									
2.13	6.55	GRAYWACKE / MUDSTONE Massive to well foliated, light grey to green fine grained graywacke with thin (2 mm - 0.5 cm) mudstone beds and rip-up clasts; bedding / foliation @ 60°-70° tca; moderate ankerite staining, especially at top of hole which is quite fractured and rubbly; lower contact of unit is rubbly core but appears to be faulted along a sericite slip plane @ 55° tca.									
		5.00 - 6.55 Strongly foliated to schistose with prominent sericite slips and	6889	4.00	5.00	1.00		Massive Graywacke with	0.01		
		5.10 - 5.25 Fault @ 60° tca: sericite + quartz + ankerite; white to clear fractured quartz yein 6-7 cm wide within sericite schist.	6890	5.00	5.50	0.50		Sericitic Graywacke with 7 cm	nil		
		5.60 - 5.70 Milk-white to grey massive, weakly laminated quartz vein cut by numerous, tight sericite slips and bounded by tight (1 mm) sericite	6891	5.50	6.00	0.50		10 cm laminated quartz vein in foliated Graywacke	0.01		
		+ chlorite + ankerite slip planes.	6892	6.00	6.50	0.50		Well foliated sericitic Graywacke	0.01		
6.55	18.40	ASH-TUFF Massive, very fine grained, dark brown to green, in part weakly bedded @ 40° tca as defined by very narrow (<1 mm) irregular magnetite beds, and in part intercalated with narrow (up to 0.5 m), clast rich lapilli-tuff horizon with very gradational contacts; lower contact of unit is very gradational.									
		6.55 - 10.00 Stockwork of 5% white-pink-purple quartz veinlets (1 mm - 4 mm wide) which occasionally display a light brown alteration halo 1-2 mm wide; locally very minor, coarse clotty pyrite.	6893 6894 6895 6896	6.50 7.00 8.00 9.00	7.00 8.00 9.00 10.00	0.50 1.00 1.00 1.00		Ash Tuff with 2% quartz veinlets	nil 0.06 0.03 0.01		

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									· · · · · · · · · · · · · · · · · · ·	
INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
18.40	25.90	CONGLOMERATE Massive, polymictic conglomerate of 10-15% moderately well rounded clasts up to 5 cm (very poorly sorted) of volcanic rocks, quartz-porphyry, jasper etc.; matrix is some what variable from graywacke (50% lithics, 25% feldspar, 25% quartz) to a fine grained hematitic ash tuff comprised of fine trachytic rock fragments; locally strongly magnetic; lower contact is a sharp tight sericite + ankerite slip @ 25° tca.	6897	22.00	22.90	0.90		Conglomerate + intercalated Ash	0.01	
		23.00 - 23.22 Chlorite \pm quartz breccia; angular wall rock fragments up to 2 cm in a black, aphanitic chlorite groundmass; in part cemented by late pink quartz \pm calcite interstitial to wall rock fragments.	6898	22.90	23.40	0.50		Chlorite Breccia + quartz + calcite cement	0.01	0.01
25.90	28.55	HEMATIZED ASH-TUFF Massive to well bedded at 50° tca, very fine grained with minor coarse lapilli-tuff horizons; dark purple (hematized) and cut by 2% white-grey quartz veinlets, 1-3 mm wide, with light brown diffuse alteration (sericite) halos, with up to 1 cm wall rock penetration which gives unit a blotchy colouration; in places non-sericitized, hematitic remnants are still visible within the sericitic halo; strongly magnetic and contains 2% primary (?) magnetite as disseminated grain and as narrow beds (1-2 mm); lower contact is marked by a sharp sericite slip @ 50° tca.								
28.55	31.00	ASH-TUFF Light to dark green, massive, very fine grained with 2% fine magnetite crystals disseminated throughout; the same horizon as at 25.90 - 28.55 but not hematized; lower contact is gradational.	6899	30.00	31.00	1.00		Massive Ash Tuff	nil	
31.00	35.50	LAPILLI-TUFF Massive to weakly foliated @ 45° tca, 5-10% angular trachytic clasts up to 2 cm (avg. 1 cm), dark green to buff in a fine grained, dark green trachytic-ash matrix; intercalated with minor pebble conglomerate interbeds up to 25 cm wide with very gradational contacts; lower contact of unit is very sharp @ 45°-50° tca.								

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		31.45 Fault @ 40° tca: sericite + chlorite; sharp, 1 cm wide sericite + chlorite slip and a prominent foliation developed for 0.5 metres on either side of slip; 5-10% wispy sericite + hematite alteration for up to 25 cm in wall rock.	6900 6901 6902 6903 6904	31.00 32.00 33.00 34.00 35.00	32.00 33.00 34.00 35.00 35.50	1.00 1.00 1.00 1.00 0.50	<u></u>	Altered Lapilli Tuff with fault zone Massive Lapilli Tuff	0.02 nil 0.01 0.01 nil	
35.50	44.55	HEMATIZED ASH-TUFF Massive, very fine grained dark brown to purple to green (mottled, altered variable colouration), very soft with a white (scricite) to red-brown (hematite) streak; predominantly dark brown-purple but cut by 2-3% white-pink quartz veinlets which display irregular alteration (scricite) halos which produces dirty, mottled texture; in places white feldspar clots or masses up to 0.5 cm are prominent ("snowflake" texture) and may be confined to altered fragments with partially to completely obliterated margins; although pervasively sericitized and hematized, this unit is still strongly magnetic; lower contact is a fault.	6905 6906 6907 6908	35.50 36.00 37.00 38.00	36.00 37.00 38.00 39.00	0.50 1.00 1.00 1.00			0.02 0.01 0.01 0.01	0.01
		 39.30 - 39.85 Fractured to pseudo-brecciated with "crack and seal" type texture due to fracturing by narrow (<= 1 mm) chloritic sutures; minor coarse pyrite on fracture planes. 39.85 - 40.00 Fault @ 50° tca; well foliated to schistose tuff with numerous 	6909 6910	39.00 39.50	39.50 40.10	0.50 0.60		Pseudo-brecciated Tuff Pseudo-brecciated Tuff + fault zone	nil 0.01	0.01
		sericitic slips.	6911	44.00	44.55	0.55		Hematitic Ash Tuff with sericite alteration halos on veins	nil	
44.55	44.75	FAULT ZONE Fault zone @ 40° tca; sericite + chlorite \pm quartz; strongly deformed, laminated to schistose with 20-30% wispy sericite + chlorite and 2 stages of quartz veinlets:	6912	44.55	45.05	0.50		Fault zone	nil	
		 Parallel to schistosity; Later cross-cutting quartz ± chlorite veinlets (1-2 mm). 								

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		Contains 4 cm v late, cross-cutti	wide aphanitic pink feldspar (?) vein which is cut by sericite slips and ng quartz veinlets.								
44.75	46.85	COARSE HET This unit is que rounded clasts matrix; clasts (sericitized) tra 20° tca.	EROLITHIC LAPILLI-TUFF uite distinctive, consisting of very poorly sorted, angular to well up to 10-15 cm (avg. 5 cm) in a fine grained red-purple, hematized are dark red-purple to pink (porphyritic) to light green-brown chyte; unit is non-magnetic; lower contact is sharp sericite slip @	6913 6914	45.05 46.00	46.00 46.90	0.95 0.90		Massive bleached Lapilli Tuff	nil 0.01	
46.85	60.00	BLFACHED ASH-TUFF / LAPILLI-TUFF Light green-brown to red, very fine grained, well-bedded ash-tuff and fine grained lapilli-tuff, with bedding @ 60° tca; matrix is very fine grained altered, sericitized rock fragments in a bleached aphanitic sericitized groundmass; the unit is overall very massive, i.e. undeformed; where somewhat coarser it is comprised of 30-40% red trachyte clasts (1-2 mm) in a highly altered, sericitic groundmass; it is non- magnetic and in part contains light green, aphanitic, altered mudstone beds up to 5 cm wide; (this unit appears to be related to a facies change from coarse trachytes in north to sediments in south); lower contact is strong mud-break from 60.00 - 60.20 m.		6915 6916 6917 6918 6919	46.90 48.00 49.00 50.00 51.00	48.00 49.00 50.00 51.00 52.00	1.10 1.00 1.00 1.00 1.00		Bleached sericitized Tuff	0.02 0.02 0.01 0.02 0.01	
		52.55 53.45 - 53.50	Fault @ 30° tca: chlorite + quartz; 1 cm fractured to brecciated quartz vein with sharp chlorite slip and chlorite cementing vein fragments. Fault breccia @ 40° tca; brecciated, white-pink 1 cm quartz vein,	6920 6921	52.00 53.00	53.00 54.00	1.00 1.00			nil 0.01	
		54.15 - 55.00	with dark green, aphanitic chlorite groundmass. 70% core recovery; blocky, rubbly core due to 0.5 cm chlorite + scricite + quartz + calcite slip sub-parallel tca.	6922 6923 6924	54.00 55.00 56.00	55.00 56.00 57.00	1.00 1.00 1.00	70	Blocky core - subparallel fault	0.01 0.01 nil nil	0.01

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INTEI	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au ⁺ M
				6926 6927	58.00 59.00	59.00 60.00	1.00 1.00			nil nil	
60.00	60.20	FAULT ZONE Fault zone @ 50 with strong mud	0-60° tca; strongly deformed sericite + chlorite + hematite schist l-gouge on slip planes.	6928	60.0 0	61.00	1.00			0.02	
60.20	61.60	HEMATIZED T Dark red-purple a very fine grain	UFF e, hematized tuff with 10-15% white feldspar masses up to 3 mm in led matrix; lower contact is sharp and abrupt.	6929	61.00	61.60	0.60			nil	
61.60	71.75	SERICITIZED 1 Light green to b and lapilli-tuffs, matrix and as set green (fuchsitic increase in coars magnetic, with r 0.25 to 3 cm with	LAPILLI TUFF rown to mauve, generally fine grained and massive intercalated ash- with variable sericite alteration as pervasive and spotty sericite in ricite alteration of clasts within lapilli-tuff horizons, which are bright) in colour; lower contact is gradational and noted by sporadic se, bright red lapilli or blocks within weakly sericitic ash-tuff; non- minor pyritic alteration replacement in some clasts. Sericite bands, de @ 55° tca with traces of pyrite at 67.10, 67.15 and 67.25								
		62.35 62.38 - 62.45 63.40 - 63.55 64.50 - 65.15	 0.5 X 3.5 cm lens of fine grained massive pyrite. Grey quartz; carbonate altered section with 0.5% pyrite. Sericitic section foliated @ 55° tca; 2-3% finely disseminated pyrite in 10% grey quartz matrix. Four, 0.5 cm sub-rounded clasts of grey tuff with 2-3% disseminated pyrite. 	6930 6931 6932 6933 6934 6935 6936 6936 6937 6938	61.60 62.10 62.60 63.10 63.70 64.50 65.00 66.00 66.60	62.10 62.60 63.10 63.70 64.50 65.00 66.00 66.60 67.30	0.50 0.50 0.60 0.80 0.50 1.00 0.60 0.70		Hematized Tuff with < 0.5% pyrite	0.02 0.06 0.02 0.01 0.01 0.01 0.01 0.02 nil	0.01

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS	5
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	⟨Au*M
			6939 6940 6941 6942 6943	67.30 68.00 69.00 70.00 71.00	68.00 69.00 70.00 71.00 71.75	0.70 1.00 1.00 1.00 0.75			0.01 0.01 0.01 0.01 0.01		
71.75	99.45	 COARSE MONOLITHIC LAPILLI-TUFF / BLOCK TUFF Very distinctive unit, with bright red-pink coarse trachytic clasts up to > 10 cm, angular to sub-rounded, in a dark green, fine grained, trachytic ash matrix; massive to crudely bedded and cut by 2-3% white-grey quartz veinlets (1-5 mm); this unit also becomes quite fine grained in places where it consists of 50-60% red lithic clasts (<= 1 mm) in an aphanitic, dark green matrix. 77.60 - 77.80 Fault; rubbly core; brecciated red, trachytic rock fragments up to 0.5 cm in an aphanitic, dark green chlorite + sericite groundmass. 	6944 6945	71.75 72.50	72.50 73.50	0.75 1.00			0.01 0.03		
	99.45	E.O.II.									

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	November 13 1990	EASTING	8200.00	DEPTH	AZIMUTH	DIP
TOWNSHIP	Teck	LOGGED BY SIGNED BY	Mark Masson	NORTHING	9970.00	Collar	341	45
CLAIM No.	L 491663	DRILLED BY	Heath & Sherwood	LENGTH	102.75	38.00		45
STARTED	November 10, 1990	SURVEYED BY		UNITS	metres	76.00		43
COMPLETED	November 11, 1990	CORE LOCATION	K.L. Warehouse	CORE SIZE	NQ			
PURPOSE	To test '100' structure and low magnetic and IP anomalies							
COMMENTS	No anomalous assays							

	SUMMA!	RY LOG		ASSAY SUMMARY					
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t			
0.00 0.60 0.60 33.15 33.15 36.30	CASING COARSE LAPILLI TUFF FAULT ZONE @ 40° 1ca								
36.30 72.70 72.70 92.00	LAPILLI TUFF Well foliated @ 50° tca 63.45 - 63.52 Quartz + sericite, 0.5% pyrite ASU / LAPILLI TUFF								
92.00 98.50	ALTERED ASH TUFF Sericitic, 0.5% pyrite, ± quartz 94.50 - 95.10 5% quartz veinlets with 0.5 - 1% pyrite in wallrocks								
98.50 102.75	ASH / LAPILLI TUFF Weakly altered								
102.75	E.O.H.								

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INTEI	RVAL	DESCRIPTION	[SAM	IPLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au*M
0.00	0.60	CASING		9 9						
0.60	33.15	COARSE MONOLITHIC LAPILLI-TUFF / BLOCK TUFF Very distinctive, massive, strongly magnetic, consisting of 15-20% coarse, angular to sub-rounded, very poorly sorted, dark red-pink, 0.1-10 cm trachyte clasts, in a fine grained dark green matrix of 15-20% fine grained, dark red trachyte rock fragments (≤ 1 mm) in an aphanitic, chloritized groundmass.								
		3.70 - 4.20 Rubbly core due to dirty, open vuggy fault @ 15° tca; fault slips are open chloritic ± sericite with late white-pink quartz + calcite veining and cavity infilling.	6946	3.00	4.00	1.00		Foliated Tuff with fault zones	nil	
		4.50 - 4.55 Fault @ 30° tca; chlorite + sericite + quartz + calcite; 4-5 cm wide chlorite + sericite schist with a 0.5-1 cm wide white-pink, quartz + calcite veinlet in centre of schist.	6947	4.00	5.00	1.00			nil	
		 5.10 - 5.30 Rubbly core due to chlorite + ankerite slip at 5° tca. 6.00 - 7.00 Strongly foliated @ 45° tca; clasts are notably fractured and broken while matrix has a dirty appearance due to an abundance of irregular chloritic sutures which gives matrix a micro-brecciated 	6948 6949 6950	5.00 6.00 6.85	6.00 6.85 7.30	1.00 0.85 0.45		Strong, tight mud break	nil nil nil	
		 appearance. 7.00 - 7.05 Fault @ 35° tca; strong, tight chloritic slip with fault gouge. 9.80 - 9.85 Fault @ 45° tca; tight chlorite + sericite slips with 1-2 mm wide, white-pink quartz + calcite veinlets. 18.10 Fault @ 40° tca; strong, tight break with abundant calcite and 								
		 23.70 - 33.15 Increasing deformation in the form of brittle fracturing of both matrix and framework which are cut by two or three stages of 0.1-0.5 cm, white-pink quartz veins at 0°, 15° and 60° tca; matrix also contains abundant chloritic sutures which give rise to a weak, brecciated appearance. 	6951 6952 6953 6954 6955 6956	22.00 23.00 23.50 24.50 25.50 26.00	23.00 23.50 24.50 25.50 26.00 27.00	1.00 0.50 1.00 1.00 0.50 1.00			0.01 nil nil 0.01 0.01 0.01	0.03

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au [*] M
			6957 6958 6959 6960 6961 6962 6963	27.00 28.00 29.00 30.00 31.00 32.00 32.50	28.00 29.00 30.00 31.00 32.00 32.50 33.10	1.00 1.00 1.00 1.00 1.00 0.50 0.60	1		nil nil nil 0.02 0.01 nil	999-999-999-999-999-999-999-999-999-99
33.15	36.30	FAULT ZONE - MYLONITE Fault zone-mylonite @ 40° tca; very strongly deformed schistose to mylonitic fault consisting of sericite + chlorite + quartz \pm calcite \pm talc, as 10-15% irregular quartz masses and boudinaged veinlets within highly altered, dark to light green, chlorite + sericite + calcite \pm talc, aphanitic groundmass; occasional remnants of tuffaceous clasts are seen locally; lower contact is gradational and displayed by a weakening in the foliation of the surrounding rocks and a prominent decrease in quartz veining.	6964 6965 6966 6967	33.10 34.00 35.00 36.00	34.00 35.00 36.00 36.50	0.90 1.00 1.00 0.50		Mylonite - fault zone	0.01 0.01 0.01 0.02	0.02
36.30	72.70	LAPII.LI-TUFF Massive to moderately well foliated $(6, 50^\circ)$ tca, with 10-15% angular, trachytic clasts up to 3 cm (avg. 1 cm) in a fine grained, ash matrix; clasts are from dark to light green to purple to buff and from very fine grained to porphyritic; matrix is from dark purple where hematitic to light green where sericitic; typically weakly magnetic and cut by 1-2% late white quartz and quartz + hematite veinlets (1-3 mm); lower contact is sharp ($(6, 23)^\circ$ tca.								
		36.30 - 48.00 Hematized section, with some sporadic sericitic sections, and more quartz veining (2%) than the non-hematitic sections.	6968 6969	36.50 37.00	37.00 37.50	0.50 0.50		Hematitic Lapilli Tuff 20 cm irregular white quartz mass	nil 0.01	
			6970	37.50	38.50	1.00			0.02	

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INTE	RVAL		DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au*M
				6971	38.50	39.00	0.50		Hematitic Lapilli Tuff with 2% quartz veins	0.01	
				6972 6973 6974 6975	39.00 40.00 41.00 42.00	40.00 41.00 42.00 43.00	1.00 1.00 1.00			0.01 nil 0.01	
				6976 6977	43.00 44.00	44.00 45.00	1.00			0.02	
		61.55 - 63.00	Minor white albite veinlets up to 1 cm with coarse specularite and minor pyrite.	6978	61.50	62.00	0.50		Lapilli Tuff with minor albite veins with specularite and	nil	
		63.45 - 63.52	Fault @ 35° tca; 2 to 3 cm, well foliated to schistose, sericite + quartz shear; <= 0.5% pyrite in a 1 mm wide dark grey-green	6979 6980 6981 6982	62.00 62.50 63.20 63.70	62.50 63.20 63.70 64.45	0.50 0.70 0.50 0.75		Fault with quartz + 0.5% pyrite	0.01 0.01 0.01 0.02	0.01
		69.10 - 69.20 68.50 - 72.70	(quartz + chlorite) veinlet. Fault @ 30° tca; massive white-pink quartz vein with interstitial sericite + specularite slips; fault walls are sharp sericite slips. 2-3% wispy and spotty sericite in matrix.								
72.70	102.75	ASH-TUFF / La Massive to po- intercalated lap and locally stro	APILLI-TUFF orly bedded, very fine grained, dark grey to green ash-tuff with illi-tuff beds up to 1 metre wide with gradational contacts, @ 30° tca ngly magnetic.								
		72.70 - 81.50 87.80	Up to 2-3% sericite alteration as wisps and spots throughout. Fault @ 20° tea; strong tight sericite slip with minor mud gouge.								

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RVAL		DESCRIPTION					SAM	PLE		ASSAYS
то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
	92.00 - 98.80	Weak to moderate light brown bleaching (sericite) halos around narrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated $< 0.5\%$ pyrite; pervasive	6983	91.20	92.20	1.00		Massive Ash / Lapilli Tuff with patchy brown bleaching (sericite) and $< 0.5\%$ disseminated pyrite	0.01	
		alteration (sericite ± quartz).	6984 6985	92.20 93.20	93.20 94.20	1.00			0.01	0.03
	94.50 - 95.10	Fault breccia (hanging wall breccia?); very dirty dark green ash-tuff cut by 5% very irregular white-pink quartz velnlets which in turn have been brecciated by later quartz + chlorite veinlets and sutures	6986 6987 6988	94.20 95.20 96.20	95.20 96.20 97.00	1.00 1.00 0.80		Fault breccia with 0.5 • 1% pyrite Buff brown to green Ash Tuff	0.02 0.02 0.02 0.02	
		which locally gives unit a "crack and seal" texture; contains 0.5-1% disseminated pyrite; lower contact is a sharp, tight mud (chloritic) break @ 20° tca; upper contact is gradational; therefore this appears to be hanging wall breecia (assuming fault dins southerly)	6989	97.00	97.50	0.50			0.01	
	98.00	Fault @ 25° tca; sharp, tight chlorite + scricite slip with wispy sericite penetrating wall rock up to 15 cm.	6990 6991	97.50 98.50	98.50 99.50	1.00 1.00			0.01 0.02	
102.75	Е.О.Н.									
	VAL TO 102.75	Image: Non-system 92.00 - 98.80 94.50 - 95.10 98.00 102.75 E.O.H.	VAL TO DESCRIPTION 92.00 - 98.80 Weak to moderate light brown bleaching (sericite) halos around narrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervasive alteration (sericite ± quartz).	VAL TO DESCRIPTION 92.00 - 98.80 Weak to moderate light brown bleaching (sericite) halos around harrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervasive alteration (sericite ± quartz). 6984 94.50 - 95.10 Fault breccia (hanging wall breccia?); very dirty dark green ash-tuff cut by 5% very irregular white-pink quartz veinlets and sutures which locally gives unit a "crack and seal" texture; contains 0.5-1% disseminated pyrite; lower contact is a sharp, tight mud (chloritic) break @ 20° tca; upper contact is gradational; therefore this appears to be hanging wall breccia (assuming fault dips southerly). 6990 98.00 Fault @ 25° tca; sharp, tight chlorite + sericite slip with wispy sericite penetrating wall rock up to 15 cm. 6991 102.75 E.O.H. E.O.H. E.O.H. E.O.H.	VAL DESCRIPTION TO No. FROM 92.00 - 98.80 Weak to moderate light brown bleaching (sericite) halos around narrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervasive alteration (sericite ± quartz).	VAL TO DESCRIPTION 92.00 - 98.80 Weak to moderate light brown bleaching (scricite) halos around narrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervasive alteration (scricite ± quartz). 6983 91.20 92.20 94.50 - 95.10 Fault breccia (hanging wall breccia?); very dirty dark green ash-tuff cut by 5% very irregular white-pink quartz veinlets which in turn have been brecciated by later quartz + chlorite veinlets and sutures which locally gives unit a 'crack and seal' texture; contains 05-1% disseminated pyrite; lower contact is gradational; therefore this appears to be hanging wall brecci (assuming fault dips southerly). 6980 97.50 98.50 98.00 Fault @ 25° tca: sharp, tight chlorite + scricite slip with wispy sericite penetrating wall rock up to 15 cm. 6991 98.50 99.50 102.75 E.O.H. E.O.H. E.O.H. E.O.H. E.O.H. E.O.H.	VAL TO DESCRIPTION 92.00 - 98.80 Weak to moderate light brown bleaching (scricite) halos around narrow (1-2 mm) white quartz veinlets: these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervasive alteration (scricite ± quartz). 6983 91.20 92.20 1.00 94.50 - 95.10 Fault breccia (hanging wall breccia?); very dirty dark green ash-tuff cut by 5% very irregular white-pink quartz velnlets which in turn have been brecciated by later quartz + chlorite velnets and stures which locally gives unit a 'track and seal' texture; contains 05.1% disseminated pyrite; lower contact is gradational; therefore this appears to be hanging wall breccia (assuming fault dips southerly). 6980 97.50 98.50 1.00 98.00 Fault @ 25° tca; sharp, tight chlorite + scricite slip with wispy sericite penetrating wall rock up to 15 cm. 6990 97.50 98.50 1.00 102.75 E.O.H. E.O.H. E.O.H. E.O.H. E.O.H. E.O.H. E.O.H.	VAL TO DESCRIPTION SAM 92.00 - 98.80 Weak to moderate light brown bleaching (scricite) halos around narrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervasive alteration (scricite ± quartz). 6983 91.20 92.20 1.00 94.50 - 95.10 Fault breccia (hanging wall breccia?); very dirty dark green ash-turt cut by 5% very irregular white-pink quartz veinlets which in turn have been brecciated by later quartz + chlorite veinlets and sutures which locally gives unit a 'crack and seal' texture; contain 0.5-7% disseminated pyrile; lower contact is a sharp, tight mud (chloritic) break @ 20° tea; upper contact is a sharp, tight mud (chloritic) break @ 20° tea; upper contact is gradational; therefore this appears to be hanging wall breccia (assuming fault dips souther), 98.00 97.50 98.50 1.00 102.75 E.O.H. E.O.H. 102 1.00 102	UVAL TO DESCRIPTION SAMPLE 92.00 - 98.80 Weak to moderate light brown bleaching (sericite) halos around narrow (1-2 mm) white quartz veinlets; these alteration halos locally contain erratic, disseminated < 0.5% pyrite ; pervavie alteration (sericite ± quartz). 6983 91.20 92.20 1.00 Massive Ash / Lapilli Tuff with patchy brown bleaching (sericite) and < 0.5% disseminated pyrite cut by 5% very irregular white-pink quartz veinlets which in turn have been herecia: to asharp, tight mud (chlore) which locally gives unit a 'crack and seal' texture; contains 0.5-1% disseminated pyrite; lower contact is a strach, tight mud (chlore) break @ 20* to:; upper contact is a strach tuff gipt mud (chlore) break @ 20* to:; upper contact is a strach, tight mud (chlore) sericite penetrating wall rock up to 15 cm. 6990 97.00 97.50 0.50 102.75 E.O.H. E.O.H. E.O.H. E.O.H. E.O.H. DESCRIPTION	EVAL TO DESCRIPTION SAMPLE 70 No. FROM TO Length % Rec DESCRIPTION Au, g/t 92.00 - 98.80 Weak to moderate light brown bleaching (scricite) halos around narrow (12 mm) white quartz veinlets: these alteration halos locality contain erratic, disseminated > 0.5% pyrite : pervasive alteration (scricite ± quartz). 6983 91.20 92.20 1.00 Massive Ash / Lapilli Tuff with patchy brown bleaching (scricite) and < 0.5% disseminated > 0.0% 0.01 94.50 - 95.10 Fault breccia (hanging wall breccia?): very dirty dark green ash-tuff set by 5% very irregular white-indic switch in ture which locally gives unit a 'crack and seal' texture: otrice is gradianical: therefore its appears to be hanging wall breccia (assuming fault dips southerly). 6984 92.20 93.20 1.00 98.00 Fault @ 25* tea: sharp, tight mod (chloritic) break @ 29* tea: sharp, tight mod (chloritic) break @ 29* tea: sharp, tight chlorite + sericite slip with wisp sericite penetrating wall rock up to 15 cm. 6990 97.50 98.50 1.00 102.75 E.O.H. E.O.H. Fault Accel and the fault of the southerly is the fault dip southerly). Image: fault dip southerly is fault

HOLE: AK-90-16

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland DATE LOGGED November 14 1990 8500.00 EASTING W. Benham LOGGED BY NORTHING 10015.00 Collar 341 45 TOWNSHIP Teck SIGNED BY **ELEVATION** 38.00 44 CLAIM No. L 477419 Heath & Sherwood LENGTH DRILLED BY 119.62 76.00 42 STARTED November 11, 1990 SURVEYED BY UNITS metres 114.00 40 COMPLETED November 13, 1990 CORE LOCATION K.L. Warehouse CORE SIZE NQ PURPOSE To test '100' structure, low magnetic and IP anomalies COMMENTS No anomalous assays

		SUMMA	RY LOG			ASSA	Y SUMMARY	?
INTE	RVAL To	DESCRIPTION	INTERVAL	L	DESCRIPTION	INTERVAL	LENGTH	AVERAGE
FIOM	10		From 10	<u>•</u>		From To	in metres	Au g/t
0.00	2.13	CASING			64.70 · 68.20 1 - 2% pyrite			
2.13	12.77	COARSE LAPILLI TUFF			68.20 - 72.80 < 1% pyrite			
12.77	18.55	CONGLOMERATE		l	72.80 - 78.93 1 - 2% pyrite			
18.55	27.25	LAPILLI TUFF		1	78.93 - 81.72 2 - 3% pyrite, 3 - 5% quartz			
27.25	29.05	LAPILLI TUFF / CONGLOMERATE	81.72 93	3.90	ASH TUFF			
29.05	35.95	CONGLOMERATE			81.72 - 86.90 sericitic, 1% pyrite			
		Chloritic, carbonated, \pm quartz, trace pyrite		1	86.90 - 93.90 weakly chloritic, hematitic			
1		Well foliated @ 55° tca	93.90 97	7.00	CONGLOMERATE			
35.95	46.05	LAPILLI to ASH TUFF	97.00 106	6.40	ASH TUFF			
46.05	47.42	HEMATITIC TUFF	106.40 119	9.62	ASH TUFF to TUFF]		
47.42	60.22	ALTERED CONGLOMERATE						
		Sericitic, silicified						
60.22	61.30	ASH TUFF	119	9.62	E.O.H.			
61.30	61.88	LAPILLI TUFF						
61.88	62.20	ALTERED LAPILLI TUFF						
		Silicified, sericitic, 1% pyrite		1				
62.20	81.72	ALTERED CONGLOMERATE						
		62.20 - 64.70 10 - 15% sericite, 3 - 5% pyrite,						
		10 - 15% grey quariz	1					
L								

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HOLE: AK-90-16

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INTE		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	TO	DESCRIPTION	No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	2.13	CASING								
2.13	12.77	 COARSE MONOLITHIC LAPILLI-TUFF / BLOCK-TUFF Coarse, lapilli- to block-tuff, 60% 2-10 cm sub-rounded, dark red and 10% 0.5-3 cm, sub-rounded, grey to dark green, trachytic clasts in (30%) dark green ash matrix; 1-2%, discontinuous quartz carbonate veinlets and gash fillings; strongly magnetic. 6.60 - 12.77 Decrease in the number of dark red large clasts with 70% medium grained ash- to lapilli-tuff matrix, 20% lapilli size clasts, 10% dark red clasts greater than 5 cm. 12.15 - 12.43 Fault zone, chloritic, broken core, fault gouge, moderately foliated @ 50° tca. 								
12.77	18.55	CONGLOMERATE Rounded, 1.0-10.0 cm, closely packed, unsorted syenite, porphyritic-syenite, trachyte and jasper pebbles in a medium grained matrix (10%), strongly magnetic; intermixing of ash- tuff and pebble conglomerate 0.6 m from upper contact; lower contact broken.								
18.55	27.25	 IAPILLI-TUFF 0.5 to 3 cm sub-rounded to sub-angular dark red trachytic clasts (25%) in a finer grained dark green tuffaceous matrix (75%); strongly magnetic. 18.55 - 19.00 Brown-green, brecciated, chloritic matrix. 24.05 White, pink, grey, banded, 1.0 cm, quartz calcite vein @ 30° tca. 26.30 1.5 cm, white pink, grey, quartz calcite vein @ 40° tca; brecciated with 15% chloritic matrix. 27.23 2.0 cm, fractured, pink-white quartz chlorite ± carbonate vein @ 35° tca at lower contact of tuff unit. 								

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
27.25	29.05	IAPILLI-TUFF / CONGLOMERATE 0.25 to 5 cm red trachyte and feldspar-porphyry clasts in a green tuffaceous matrix.								
29.05	35.95	CONGLOMERATE / SHEAR ZONERounded to stretched quartz, jasper, syenite, mafic volcanic, and trachyte pebbles in well foltated, carbonated, chloritic, graywacke matrix (30%); trace pyrite in matrix and some pebbles; moderately to well foliated @ 50-60° tca.30.45Banded, 30 cm quartz-carbonate-chlorite vein @ 70° tca.32.552 cm quartz-calcite-chlorite veins @ 60° tca.33.500.5-2.0 cm grey quartz-carbonate vein @ 60° tca with trace pyrite.34.80 - 35.30Chloritic fault zone @ 50° 50° tca with 25% white, salmon pink, 0.5-15 cm quartz-carbonate veining @ 40°-50° tca, trace pyrite.34.84 - 34.97White quartz-carbonate-chlorite vein @ 45° tca.	11572 11573 11574 11575 11576 11577 11578 11579	29.00 30.00 31.00 32.00 33.00 34.00 34.70 35.40	30.00 31.00 32.00 33.00 34.00 34.70 35.40 36.00	1.00 1.00 1.00 1.00 0.70 0.70 0.60			nil 0.02 nil nil 0.01 0.01 nil nil	nil
35.95	46.05	 LAPILLI-TUFF / ASH-TUFF Interbedded ash- to lapilli-tuff; 0.25 to 3 cm red to green trachytic clasts in tuffaceous matrix; 15-30 cm dark green ash-tuff units, weakly bedded @ 50°-55° tca; strongly magnetic, trace pyrite, harder in the down hole direction. 35.95 - 36.65 Dark green-brown, fine grained, brecciated with dark green-black chloritic matrix. 37.37 - 37.55 Dark green-brown, fine grained, brecciated with dark green-black chloritic matrix. 	11580 11581	36.00 36.80	36.80 37.60	0.80 0.80			0.01 nil	
46.05	47.42	HEMATITIC TUFF Red to dark red, hematitic, strongly magnetic tuff; trace pyrite, 1% 0.1 mm quartz veinlets; upper contact sharp alteration front @ 55° tca; lower contact gradational.	11582 11583	46.00 47.00	47.00 47.50	1.00 0.50			0.01 nil	

HOLE: AK-90-16

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au*M
47.42	60.22	 ALTERED CONGLOMERATE 48.42 - 52.25 Green-brown-mauve, altered conglomerate; rounded to angular pebbles in an altered, hard "silicified" graywacke matrix; 3-5% pervasive sericite; 1-2%, 0.1-0.5 cm, quartz veinlets; trace fine to medium grained pyrite. 52.25 - 55.80 Bleached, sericitic altered section, yellow-green-brown-pink-purple; hard and siliceous; rounded to angular quartz grains in an altered sericitic matrix, with 10-15% sericite; <1%, 0.1-1 cm quartz veinlets; trace disseminated pyrite; upper and lower contacts gradational. 55.80 - 60.22 Brown to green to purple, hard "silicified" sericitic to hematitic conglomerate with rounded to fractured angular pebbles in a quartz + sericite matrix; trace pyrite in matrix; pebbles consist of altered trachyte, porphyritic-syenite and quartz; 3-5% sericite in fractured 	11584 11585 11586 11587 11588 11589 11590 11591 11592 11593 11594 11595	47.50 48.50 49.50 50.50 51.30 52.25 53.00 54.00 55.00 55.80 56.50 57.50 58.50	48.50 49.50 50.50 51.30 52.25 53.00 54.00 55.00 55.80 56.50 57.50 58.50 59.50	1.00 1.00 0.80 0.95 0.75 1.00 1.00 0.80 0.70 1.00 1.00			nil nil 0.01 nil nil nil nil nil nil nil nil nil	0.01
60.22	61.30	matrix. ASH-TUFF Green, with bleached, light-white to green fractures; fine grained, massive, trace pyrite; lower contact sharp @ 45° tca.	11597 11598	59.50 60.20	60.20 61.20	0.70			0.01 nil	
61.30	61.88	LAPILLI-TUFF Dark green, mottled texture due to irregular 0.5-2 cm quartz- albite clots and veinlets; hard.	11599	61.20	61.70	0.50			0.01	
61.88	62.20	ALTERED LAPILLI-TUFF Hard, quartz-rich rock, weakly foliated @ 60° tca, fractured, cracked, 0.2 x 1.0 cm quartz fragments; 5-10% sericitic matrix; 1% disseminated pyrite.	11600	61.70	62.20	0.50			nil	

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INTERVAL			DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то	1		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
62.20	81.72	ALTERED COI Sheared, sericit jasper, fuchsite, a hard, quartz r 0.5 cm wide and 62.30 62.20 - 64.70 64.70 - 68.20 68.20 - 72.80 71.84 - 71.95 72.80 - 78.93 74.35 78.12 - 78.93	 NGLOMERATE ic, pyritic conglomerate with sub-rounded to sub-angular, quartz, trachyte, sycnite and mudstone pebbles, 0.25-20 cm in diameter in ich, sericitic graywacke matrix; 5-15% sericite as wispy bands up to d in fractures throughout the matrix, foliated @ 50°-60° tca. 2-3 cm broken fault gouge @ 50° tca. 10-15% yellow to brown sericite bands @ 50°-60° tca with 3-5% finely disseminated pyrite; < 0.5% coarse pyrite in matrix; 10-15%, dark grey to grey quartz-rich "lenses" and zones, 0.5-20 cm wide with 2-3% finely disseminated pyrite; 1-2% irregular veinlets and clots of white quartz-albite. Altered conglomerate; hard; 1-2% finely disseminated pyrite; 3-5% sericite in matrix. White quartz-ankerite vein @ 45° tca with chlorite filled fractures; trace molybdenite (?) along fractures and vein contacts. 2-3% white irregular quartz-albite clots in matrix; hard, 1-2% disseminated pyrite, <0.5% medium grained pyrite. 0.5 cm fault gouge @ 55° tca. 	11601 11602 11603 11604 11605 11606 11607 11608 11609 11610 11611 11612 11613 11614 11615 11616 11617 11618 11619 11622 11622	62.20 62.70 63.20 63.70 64.20 64.20 64.20 64.20 65.20 65.20 66.20 67.20 68.20 69.20 70.20 71.20 72.20 72.20 72.80 73.80 74.80 75.80 77.60 78.10 2 78.80	62.70 63.20 63.70 64.20 65.20 66.20 67.20 68.20 69.20 70.20 71.20 72.80 73.80 74.80 75.80 75.80 75.80 75.80 75.80 75.80 75.80 75.80 75.80 75.80	0.50 0.50 0.50 0.50 1.00 1.00 1.00 1.00			0.02 0.02 0.02 0.01 0.01 0.01 0.01 0.01	0.01

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INTERVAL			DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
81.72	93.90	78.93 - 81.72 Lig 3% ASH-TUFF	ghter grey-brown, 5-10% pervasive sericite alteration; hard; 2- % pyrite; 3-5% grey quartz flooding.	11623 11624 11625	79.40 80.10 81.00	80.10 81.00 81.75	0.70 0.90 0.75			0.03 0.03 0.02	
		81.72 - 86.90 Lig 3-5 1% 86.90 - 89.35 Lig 89.35 - 93.90 Pin	ght brown to yellow-green, hard, 10% pervasive sericite alteration; 5% 1 mm green chlorite spots and fracture fillings; trace to locally & disseminated pyrite over 5-10 cm. ght brown to pink-brown; softer than above section; 1-2%, < 1 m green chlorite "spots"; trace pyrite. nk, weakly hematitic, sericitic, 1-2% chlorite porphyroblasts.	11626 11627 11628 11629 11630 11631	81.75 82.60 83.40 84.40 85.40 86.40	82.60 83.40 84.40 85.40 86.40 86.90	0.85 0.80 1.00 1.00 1.00 0.50			0.02 nil 0.01 0.02 0.01	0.01
93.90	97.00	CONGLOMERATE Rounded to sub-rounded, 0.25 to 5.0 cm, syenite, mudstone, trachyte, quartz, mafic volcanic and fuchsitic pebbles in fine to medium grained, pink graywacke matrix; beds 30 to 80 cm thick, with fining in the down hole direction; weak to moderate alteration consisting of pervasive sericite and hematite.									
97.00	106.40	ASH-TUFF Fine-medium grained, pink to light brown tuff with some 5-10 cm wide lapilli-tuff bcds, sericitic, hematitic.						,			
		97.00 - 99.55 3% and 98.62 - 98.60 2-1 atte	 6, 0.1 to 15 cm, barren, white quartz + albite + ankerite veins d breccia zones. 10 cm, quartz + carbonate breccia veins with 0.2 to 3 cm, angular, lered, sericitic tuff fragments in 45% quartz-ankerite matrix. 	11632 11633	97.60 98.60	98.60 99.60	1.00 1.00			0.01	

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INTERVAL		DESCRIPTION				,	SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		 99.55 - 105.27 Breccia zone, 5% blue-green, 0.1 to 0.5 cm chlorite filled fractures in a brecciated, sericitic, hematitic, pink to light brown tuff; 1-2% barren, 0.2 to 2 cm quartz + ankerite veinlets; trace pyrite along chloritic fractures. 98.60 - 106.40 2-3%, 0.1 to 7.0 cm quartz + albite veins. 106.13 - 106.20 Barren quartz + albite + sericite vein at 70° tca. 	11634 11635 11636 11637 11638 11639 11640	99.60 100.60 101.60 102.60 103.60 104.60 105.30	100.60 101.60 102.60 103.60 104.60 105.30 106.40	1.00 1.00 1.00 1.00 1.00 0.70 1.10			0.01 0.02 0.01 0.01 0.01 nil 0.01	0.01
106.40	119.62	 ASH-TUFF TO TUFF Massive, pink-green-brown ash-tuff to tuff; local, narrow 10 cm wide, hematitic lapilli-tuff beds; fining down hole over widths of 40-50 cm; 1-2%, 0.1 to 13.0 cm barren quartz + ankerite veins. 116.80 - 119.62 Bedding @ 70° tca defined by 0.1 cm dark magnetic beds. 117.73 - 117.86 Weakly foliated, quartz-ankerite vein @ 55° tca, with 15% brown, sericitic tuff fragments; trace pyrite in the tuff fragments; wall rock is weakly bleached over 10 cm at upper contact. 	11641	117.55	117.95	0.40			0.01	
	119.62	E.O.H.								

HOLE: AK-90-17

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland DATE LOGGED November 14 1990 EASTING 8370.00 LOGGED BY M. Masson NORTHING 10210.00 Collar 341 45 TOWNSHIP Teck SIGNED BY **ELEVATION** n 38.00 45 CLAIM No. L 491663 DRILLED BY Icath & Sherwood LENGTH 56.55 November 13, 1990 STARTED SURVEYED BY UNITS metres COMPLETED November 14, 1990 **CORE LOCATION** K.L. Warehouse CORE SIZE NQ PURPOSE To test 102-8350 zone above AK-90-04 COMMENTS 102-8350 Mineralized zone intersected at 24.25 - 32.58m

	SUMMA	ASSAY SUMMARY				
INTERVAL DESCRIPTION From To		INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
0.00 2.50 2.50 3.25 3.25 13.65 13.65 19.30 19.30 24.25 24.25 32.58 32.58 34.95 34.95 56.55	CASING LAPILLI TUFF Foliation @ 45° tca ASH TUFF - / LAPILLI TUFF ALTERED LAPILLI TUFF 5 - 10% sericite LAPILLI TUFF Weakly altered QUARTZ - PYRITE ZONE 24.25 - 24.70 1% finely disseminated pyrite 24.90 - 26.50 1% finely disseminated pyrite 24.90 - 26.50 1% pyrite 26.50 - 26.92 3 - 5% pyrite 26.92 - 31.35 Patchy 3 - 5% pyrite 31.35 - 31.45 Bluc quartz vein, 1 - 3% pyrite 31.45 - 32.58 0.5% pyrite SYENITE / ALTERED TUFF Hematitic, gradational contacts LAPILLI TUFF	56.55	34.95 - 36.00 sericitic E.O.H.	24.20 32.58 including 24.20 24.90 24.90 28.00 28.00 32.58	8.38 0.70 3.10 4.58	0.80 1.55 0.21 1.08

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	2.50	CASING								
2.50	3.25	 LAPII.LI-TUFF (DEFORMED & ALTERED) Moderately deformed and foliated @ 45° tca; sub-rounded, red-pink, 0.1-1 cm trachyte clasts in a highly altered, sericite + chlorite, matrix which is quite schistose and moderately ankeritic; trachyte clasts appear to have undergone some rotation and strain as displayed by clast fracturing and pressure shadows which give the rock a pseudo-augen texture. 2.80 - 3.00 Rubbly core (50% recovery); ground-up, rusty weathered, ankeritic tuff; leading edge of ground section is a 0.5 cm buff-brown quartz vein with minor (<0.5%), coarse euhedral pyrite; lower contact is a sharp chlorite + sericite slip @ 40° tca. 								
3.25	19.30	 ASH-TUFF / LAPILLI-TUFF Light brown to buff to green, fine grained to aphanitic and quite strongly deformed and altered by varying degrees of sericitization; intercalated ash- and lapilli-tuff where recognizable; cut by numerous quartz + chlorite veinlets and micro-fractures which in turn are crosscut by later quartz + hematite veinlets all of which are <= 0.5 mm to 2 mm wide; local patchwork appearance from relict, primary dark green, chloritic matrix in areas of sericite alteration (light brown) with diffuse alteration fronts; these areas of diffuse sericite alteration merge into a more intense, pervasive sericite alteration where primary textures are completely obliterated and the rock is light yellow green, very fine grained to aphanitic and quite soft. 4.20 - 4.30 Fault @ 40° tca: chlorite + sericite + ankerite; 1 cm tight chloritic shear within well foliated, ankeritic tuffs. 5.55 - 5.70 Fault @ 35° tca: chlorite + sericite + ankerite; very strong mud gouge (chloritic) within highly foliated sericite + ankerite schist. 5.70 - 6.90 Parallel, chlorite breccia veins up to 1 cm @ 30°-35° tca; angular 								

HOLE: AK-90-17

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INTE	RVAL	DESCRIPTION					SAM	(PLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 wall rock and occasional angular quartz fragments within a dark green, aphanitic chlorite groundmass. 6.90 - 7.40 5%, multiple quartz veins and quartz + hematite veins up to 3 mm wide. 7.75 Fault @ 25° tca; tight chlorite + sericite + ankerite slip plane 0.5 mm wide. 11.20 - 11.90 Fault @ 10° tca: chlorite + sericite + ankerite + quartz; strong tight mud break sub-parallel to core axis with 0.5-1 cm, irregular quartz + ankerite vein on slip wall; entire zone is strongly sericitized with wispy and spotty sericite. 11.90 - 13.65 Fine grained, massive light brown, with 1% finely disseminated (<=0.5 mm) magnetite crystals in a strongly sericitized matrix. 13.65 - 19.30 Altered lapilli-tuff of 5% coarse trachytic clasts up to 5 cm, with sharp to diffuse boundaries due to penetrative sericite alteration in a fine grained pale green to brown sericitized matrix (5-10% sericite). 19.30 Fault @ 35° tca; strong, tight chloritic mud break. 								
19.30 - 24.25	24.25 32.58	HETEROLITHIC LAPILLI-TUFF Massive to moderately well foliated (45° tca), light brown-green, with 10% angular buff-brown to pink to light green, 0.1-2 cm, fine grained to porphyritic trachyte clasts; matrix is fine grained, light brown to buff, 25% trachytic clasts (<= 1 mm) in an aphanitic, sericitized groundmass, with patches of magnetite grains up to 1% although the unit is somewhat bleached and altered it is not very strongly deformed unlike the previous units; pyritic zone is hosted within this lapilli-tuff unit. QUARTZ - PYRITE ZONE Variable from selective pyrite replacement of lapilli clasts, to wormy pyritic sutures to disseminated pyrite and quartz + pyrite breecia veins; lower contact of sulphides is somewhat eradational with a few, narrow (1 mm) pyritic sutures in host rock.	6992 6993 6994	22.00 23.00 23.50	23.00 23.50 24.20	1.00 0.50 0.70		Massive, bleached Lapilli Tuff	0.01 0.02 0.01	

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INTER	RVAL		DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то			No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		24.25 - 24.70	Upper contact of zone is very vague and appears to coincide with sharp, tight (<=0.5 mm) chlorite + quartz slip @ 40° tca; no pyrite is notable up hole; $0.5-1\%$ very finely disseminated pyrite within sericitized lapilli tuff matrix and <=0.5%, <=0.5 mm, pyrite wormy sutures throughout; at 24.50 m there is a 2 cm wide grey-green sericite schist with 2-3% disseminated and blebby pyrite.	6995	24.20	24.70	0.50		Altered Lapilli Tuff with 1% disseminated and wormy pyritic sutures	1.13	
		24.70 - 24.90	Multiphase quartz breccia vein of fractured and brecciated light grey aphanitic siliceous inclusions, up to 0.5 cm wide, within later buff- white irregular quartz veins (1-3 mm) and as angular brecciated masses within very fine grained siliceous groundmass; some strongly sericitized lapilli clasts are still evident within the siliceous matrix; pyrite as very fine grains along irregular sericitic sutures; very finely disseminated pyrite in matrix and as coarse pyritic clots (<= 1 mm) with dark chloritic rims; overall pyrite content 1-2%.	6996	24.70	24.90	0.20		Quartz breccia vein, 1 - 2% disseminated and fracture filling pyrite	2.54	2.64
		24.90 - 26.50	Pyritized lapilli-tuff, essentially undeformed, but sericite altered lapilli- tuff with 10% coarse, angular lapilli clasts within a light green, sericitized matrix; cut by $\leq 1\%$ late white quartz veinlets;	6997	24.90	25.50	0.60		Pyritized Lapilli Tuff with 1% pyrite as replacement and fine disseminations	0.38	
			0.5-1.0% pyrite as:	6998	25.50	26.40	0.90			0.25	
		26.50 - 26.92	 Very fine grained pyrite within selective lapilli clasts with up to 10-15% of clast being replaced. Finely disseminated pyrite within matrix, but preferentially located within patchy, strongly sericitic zones within matrix; Very irregular but sharp contacts to anastomosing sericite + pyrite 	6999	26.40	27.00	0.60		Pyrite zone with 2 - 3% pyrite	0.24	
			alteration zone with 3-5% very finely disseminated pyrite (dark grey) in sericite-schist groundmass; pyrite also replaces some clasts, as well as forming dense, dark grey masses of 3-5% pyrite in sericite schist.							0.04	

HOLE: AK-90-17

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INTER	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		26.92 - 31.35 Pyrite mineralization as very discreet but pate to semi-massive sericite is developed within all	hy zones where wispy 7000 ered tuff; these zones	27.00	28.00	1.00		< 1% patchy pyrite in sericitized	0.04		
		are very irregular and contain 3-5% finely diss minor (<0.5%) pyrite as fine disseminations the unit	eminated pyrite; very 7001 within the matrix of	28.00	28.50	0.50			1.96	1.89	ļ
	:	28.70 - 28.85 Fault @ 15° tca: chlorite + quartz; laminate white-pink quartz veinlets with interstitial ap	d shear with 1-2 mm 7002 hanitic chlorite.	28.50	29.00	0.50		Sericitic Tuff with fault, << 0.5% pyrite	0.47		
		29.95 - 30.05 Fault @ 25° tca: chlorite + quartz; sharp tigl	nt chloritic shear with 7003	29.00	29.50	0.50		Sericitic Tuff	0.55		
		narrow (1-2 mm) white-pink quartz veinlet.	7004	29.50	30.10	0.60		Sericitic Tuff with 5% quartz and 0.5% disseminated pyrite and chlorite	1.21		
			7005	30.10	31.10	1.00		0.5 - 1% patchy pyrite in sericitic Tuff	1.30	1.30	
		31.35 - 31.45 1-2 cm wide, blue-grey, brecciated quartz vein sericite and 3-5% pyrite in breccia and alon	with wispy irregular, 7006 g vein wall; wall rock	31.10	31.68	0.58		1 - 3% pyrite with blue gray quartz vein	1.04		
		for 25 cm symmetrically around vein is cut by pyrite sutures with 3-5% pyrite; overall pyrit	numerous sericite + 7007 e content 1-3%.	31.68	32.58	0.90		Sericitized Tuff with < 0.5% pyrite in sericite sutures	0.96		
32.58	34.95	 SYENITE (RED ALTERED UNIT?) (ALTERATION FRONT Massive, fine grained with distinct red-brown colouration gradational with increasing degree of reddening of the unit, wh altered tuff; micro-fractured textured with wispy sericitic s surrounding red aphanitic matrix which includes 1-2% black la chloritized masses; lower contact is faulted @ 35° tca by sha penetrating chlorite fractures (pseudo-brecciated) in wall rock 34.50 - 34.95 Lower contact of unit may also be gradationa the first clear indication of lapilli tuff at 34.9 	n; upper contact is nich may in fact be an utures (< 0.5 mm) th shaped to irregular irp chloritic slip with (2-3 cm wide). 1 (red to green) with 5 m.	32.58 33.50 34.50	33.50 34.50 35.00	0.92 1.00 0.50		Red altered unit (Syenite ?) Lower contact, gradational	0.07 0.02 0.01		

HOLE: AK-90-17

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INTEI	RVAL		DESCRIPTION					SAM	PLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [•] M
34.95	56.55	LAPILLI-TUFI Massive, poorly 1 cm) trachytic ash matrix.	F (HETEROLITHIC) y sorted grey-green, locally strongly magnetic; 5%, angular, 5 cm (avg. clasts, quite variable in texture and colour, in a fine grained trachyte-								
		35.00 - 56.55 53.35 - 54.45	Massive grey-green, with 10% angular to sub-rounded, pink-brown porphyritic or buff-grey to dark green, fine grained trachyte clasts in a fine grained ash matrix of 30% fine rock fragments in an aphanitic groundmass. 7 cm wide fault breccia @ 40° tca of angular, moderately sericitized	7011 7012 7013	35.00 36.00 37.00	36.00 37.00 38.00	1.00 1.00 1.00		Sericitized Lapilli Tuff Massive Lapilli Tuff	nil 0.02 nil	
			wall rock fragments in a dark green chloritic groundmass.								
	56.55	E.O.H.									
											i

HOLE: AK-90-18

DEPTH AZIMUTH 8370.00 EASTING Nov. 15-16 1990 DATE LOGGED PROPERTY Amalgamated Kirkland 341 10185.00 Collar NORTHING M. Masson LOGGED BY ELEVATION 38.00 Ba SIGNED BY Teck TOWNSHIP ω Heath & Sherwood 77.90 LENGTH 76.00 DRILLED BY L 491663 CLAIM No. metres UNITS SURVEYED BY STARTED November 14, 1990 CORE SIZE NQ K.L. Warehouse CORE LOCATION November 15, 1990 COMPLETED To test 102-8350 Gold Zone above PURPOSE AK-90-04 and below AK-90-17 102-8350 zone intersected at COMMENTS 61.00 - 67.70m

	<u></u>	SUMMAF	RY LOG		А	SSAY	SUMMARY	
INTER	VAL	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVA From T	L To	LENGTH in metres	AVERAGE Au g- /t
From	10	CASING	77.90	Е.О.Н.	61.00 6'	7.70	6.70	1.67
3.50	14.50 17.75	ASH TUFF - / LAPILLI TUFF CONGLOMERATE			includ	ding		
17.75	19.15 20.40	ASH TUFF - / LAPILLI TUFF CONGLOMERATE			62.00 6	3.00	1.00 7.80	2.09
20.40	49.10 50.20	ASH TUFF • / LAPILLI TUFF FAULT ZONE @ 30° tca			04,50 0	ding	2.00	
50.20	60.50 63.60	SERICITIC LAPILLI TUFF PYRITE - OUARTZ ZONE			67.20 6	ang 370	0.50	16.40
00.20		60.50 - 61.00 0.5 - 1% pyrite 61.00 - 63.00 3 - 4% pyrite, 5% guartz			07.20 0	,	0.50	
63.60	64.80	63.00 - 63.60 0.5% pyrite SERICITIC TUFF / LAPILLI TUFF						
64.80	66.15	SYENITE 0.5 - 2% coarse pyrite						
66.15	76.65	SERICITIC LAPILLI TUFF 67.40 - 67.55 Sericite, quartz, pyrite zone @ 50° tca,						
76.65	77.90	1 - 2% pyrite			1			
1 10.05	11.20		1					

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HOLE: AK-90-18

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
0.00	3.50	CASING									<u> </u>	
3.50	49.70	ASH-TUFF / L Massive, grey-p polymictic pebi green trachyti interbedded wi with gradationa irregular quart 14.50 - 17.75 15.55 - 15.60 19.15 - 20.40 22.95 30.80	APILLI-TUFF green, fine grained ash with minor, intercalated lapilli horizons and ble conglomerate interbeds; 20%, $\leq = 1$ mm, bright red-pink to grey- c clasts in a very fine grained grey-white groundmass; locally ith 0.5 metre wide, coarse lapilli-tuff beds of the same composition, al contacts; weakly magnetic; cut by very minor (<0.5%) late white, z veinlets up to 1 cm wide. Ash-tuff is locally moderately well bedded @ 15° tca with weak cross-bedding; bedding is defined by intermixed ash-tuff and lithic- tuff 0.1-1 cm beds and occasionally by $\leq = 1$ mm magnetite layers. Polymictic pebble conglomerate with 25% well rounded, poorly sorted clasts up to 4 cm in a fine grained grey-green graywacke / ash-tuff matrix; upper contact very gradational, lower contact sharp @ 15° tca and is marked by a $\leq =0.5$ mm bed of magnetite. Fault @ 40° tca: chlorite + sericite + ankerite; strong chlorite + sericite shear with moderate degree of mud on slip planes; wall rock is rusty and ankeritic for 2-3 cm symmetrically around fault. Polymictic conglomerate with well rounded pebbles up to 3 cm, in a mixed graywacke/ ash-tuff matrix; very gradational contacts. Fault @ 40° tca: thlorite + sericite + quartz; tight chlorite + sericite slip with 1 cm wide buff-pink quartz veinlet on down hole side of slip.									
										}		

HOLE: AK-90-18

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INTE	RVAL		DESCRIPTION	1				SAM	PLE		274224
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		38.30 - 38.85 38.30 - 38.60 38.60 - 38.85 40.55 - 40.57	Fault zone: chlorite + sericite + quartz. Moderately well foliated and cut by 10%, 1-3 mm wide quartz, quartz + chlorite and chlorite breccia veinlets @ 32° tca; < 0.5% , sporadic pyrite. Massive to laminated, buff to white to pink, multiphase quartz vein with very irregular contacts. Fault @ 40° tca; 2 cm wide white-pink, open, vuggy quartz + calcite veinlet on sharp chloritic slips	7014	38.25	38.90	0.65		Fault zone with 15 - 20% late irregular quartz and very minor pyrite	0.02	
				7015	48.00	49.00	1.00			0.01	
49.70	50.20	FAULT - MYL Rubbly core wi 30° tca and fau core is intact it cm wide which breaks.	ONITE ZONE th 60% recovery; very strongly deformed sericite + chlorite schist @ lt breccia with strong mud gouge developed on slip planes; where is comprised of white-pink quartz \pm K-feldspar (?) veins up to 4-5 have been strongly brecciated by chlorite + sericite suturing and mud	7016	49.00	50.20	1.20	60	Mylonite - cross fault	0.02	0.02
50.20	60.50	BLEACHED L Very strongly a foliated to brec 50.20 - 52.50 52.50	APILLI-TUFF altered tuff, fine grained to aphanitic, light brown-yellow, strongly ciated by chlorite \pm quartz breccia veinlets. Yellow-brown to green, very fine grained to aphanitic, primarily sericite (? - very soft, white streak); pseudo-brecciated (crack and seal) to brecciated by numerous 1-3 mm wide, chlorite and chlorite + quartz stringers. Fault @ 30° tea; 1 cm wide white-pink quartz vein on sharp, tight chloritic slip.	7017 7018	50.20 51.00	51.00 52.00	0.80 1.00		Altered, sericitic Tuff Sericitized Tuff, brecciated Tuff	0.01 0.01	

HOLE: AK-90-18

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INTE	RVAL		DESCRIPTION					SAN	IPLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		52.50 - 60.10	Less altered, well foliated @ 40° - 45° tca, wispy to spotty sericite, with more diffuse, patchy alteration and some primary textures still evident, i.e. lapilli clasts with spotty sericite within well foliated, sericitic tuffs; unit is cut by 1%, 1-3 mm wide, late, white quartz veinlets	7019 7020 7021 7022 7023 7024 7025	52.00 53.00 54.00 55.00 56.00 57.00 58.00	53.00 54.00 55.00 56.00 57.00 58.00 59.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00			0.03 0.02 0.02 0.02 0.02 0.02 0.02		
		60.10 - 60.45	Fault zone @ 25° tca: sericite + chlorite; cut by numerous, tight chlorite + sericite slips with weak mud gouge on slip planes, and by 1-2 mm wide chlorite + quartz stringers; pseudo brecciated texture.	7026	59.00 59.90	59.90 60.40	0.50		Fault zone, sericite + chlorite	0.03		
60.50	63.60	PYRITE QUA Moderately de pyrite mineral	RTZ ZONE formed and altered (5-10% sericite) lapilli-tuff with at least 3 types of ization:									
		1)Pyrite2)Disser3)String	replacement of certain lapilli clasts; ninated pyrite; er pyrite									
		Upper contact from zone. To	of pyrite zone is very abrupt with no pyrite evident further up hole otal pyrite content is 0.5 - 1%.									
		60.50 - 61.00	Upper, leading edge of sulphide zone is coincident with a quartz breccia and 3 cm wide chlorite breccia veinlets; pyrite as very fine grained stringers and minor disseminations.	7028	60.40	61.00	0.60		0.5 - 1% pyrite in sericitic Lapilli Tuff	0.04		

HOLE: AK-90-18

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INTE	RVAL	DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		61.00 - 63.00 Light yellow-green, quite strongly sericitized and cut by 5% late white-buff irregular quartz veinlets and masses up to 1 cm; multiple generations of veins which are typically barren but occasionally contain pyritic inclusions of wall rock, and pyrite stringers on vein walls; section contains 3-4% pyrite as 0.5-1% yery fine	7029 7030	61.00 62.00	62.00 63.00	1.00 1.00		3 - 4% pyrite, 5% quartz veinlets in sericitized Tuff	0.18 2.26	1.92
		 disseminations in matrix, and as irregular stringers. 63.00 - 63.60 Sericitized lapilli-tuff with 10% dark green to grey to buff, angular lapilli clasts up to 2 cm, in a very fine grained sericitized ash matrix; <0.5% pyrite as coarse clots up to 0.5 cm (pyrite replacement of clast?) and very minor disseminated pyrite. 	7031	63.00	63.60	0.60		Sericitized Lapilli Tuff with 0.5% pyrite	0.10	
63.60	64.80	SERICITIC TUFF / LAPILLI-TUFF								
		63.60 - 64.40 Dirty red-brown to green, massive and fine grained with 1% irregular white quartz clots up to 0.5 cm, with dark chloritic boundaries (altered tuff?); contains little to no pyrite and cut by <1% white-pink outputz veinlets	7032	63.60	64.40	0.80		Altered Tuff - no pyrite	0.05	
		 64.40 - 64.80 Lapilli-tuff, moderately well foliated @ 45° tca, sericitized with 5% angular trachytic clasts to 1 cm, in a fine grained sericite altered matrix; no visible pyrite. 64.80 Fault @ 40° tca; sharp, tight chlorite slip with a 0.5 cm quartz + chlorite + sericite veining and alteration in adjacent wall rock. 	7033	64.40	64.90	0.50		Sericitic Lapilli Tuff - no pyrite	0.07	
64.80	66.15	RED ALTERED ROCK? (SYENITE ?) Massive, fine grained, red-brown with micro-fractured, aphanitic red-brown matrix; very fine wispy sericite on fracture planes and interstitial to white-black clots?; 5% very irregular, $< = 0.5$ mm, dark black crystals (?) and irregular white quartz clots with black chloritic rims; sporadic coarse, subhedral pyrite, locally up to 0.5% and sericitic slips (shear zones) which contain 1-2% pyrite.								

HOLE: AK-90-18

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 65.05 1.5 cm wide sericite schist @ 50° tca; augen textured and contains 1% disseminated, coarse subhedral pyrite. 65.25 1 cm wide sericite schist with 1% coarse pyrite. 65.45 2 cm wide sericite schist with 1-2% pyrite @ 50° tca. 66.00 - 66.15 Yellow-green, with 10% black spots (alteration mineral?) and 0.5% 	7034 7035	64.90 65.50	65.50 66.20	0.60 0.70	-	Red altered rock with narrow sericite schist zones with 0.5 - 1% pyrite	0.49	
		45° tca.								
66.15	76.65	BLEACHED LAPILLI-TUFF Massive, light grey to dark grey-green with patchy, buff brown alteration halos up to 1-2 cm wide around 1-3 mm white quartz veinlets and as diffuse patchy alteration throughout; local remnant magnetite beds; lower contact is faulted @ 18° tca as chlorite + sericite + quartz slip.	7036	66 20	67.20	1.00			0.12	
		67.40 - 67.55 PYRITE ZONE: grey-brown, foliated to sheared, with 1-2% finely disseminated pyrite; contacts are sharp sericite + pyrite ± quartz slips @ 50° toa: wall rock up to 10 cm symmetrically around zone	7030	67.20	67.70	0.50		Pyrite zone with 1 - 2% pyrite and 0.5% disseminated pyrite in wall cock	16.27	16.53
		contains <0.5% disseminated pyrite.	7038 7039 7040	67.70 68.60 69.50	68.60 69.50 70.50	0.90 0.90 1.00		Bleached Lapilli Tuff	0.03 0.02 0.04	
76.65	77.90	LAPILLI-TUFF Massive, light grey-green, with 10-15% angular, 0.1-2 cm (avg. 1 cm) lapilli clasts, consisting primarily of buff brown and less grey and dark green trachyte in a fine grained ash matrix; moderately to strongly magnetic.								-
	77.90	Е.О.Н.					·		2 2 2	

HOLE: AK-90-19

DEPTH AZIMUTH DIP Amalgamated Kirkland PROPERTY November 17 1990 DATE LOGGED EASTING 8425.00 M. Masson LOGGED BY NORTHING 10205.00 Collar 341 45 TOWNSHIP Teck SIGNED BY **ELEVATION** 2 38.00 46 CLAIM No. L 491663 DRILLED BY Heath & Sherwood LENGTH 71.20 STARTED November 15, 1990 SURVEYED BY UNITS metres COMPLETED November 16, 1990 CORE LOCATION K.L. Warehouse CORE SIZE NQ To test 102-8425 Gold Zone PURPOSE COMMENTS 102-8425 zone intersected at

34.00 - 40.10m

		SUMMAI	RY LOG			ASSA	Y SUMMARY	ł
INTER From	VAL To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTER From	VAL To	LENGTH in metres	AVERAGE Au g/t
0.00	1.22 34.00	CASING LAPILLI TUFF			34.00	40.10	6.10	0.12
34.00 34.90	44.62	60% recovery PYRITE - QUARTZ ZONE			42.00 48.50	42.50 49.50	0.50 1.00	0.10 0.20
		34.90 - 35.20 1 - 2% pyrite, 10% quartz 35.20 - 35.85 0.5 - 1% pyrite 35.85 - 36.60 3 - 4% pyrite, 10 - 15% quartz breccia zones 36.60 - 39.00 0.5 - 1% pyrite 39.00 - 40.05 2 - 3% pyrite			54.20	54.60	0.40	6.30
44.62 48.45	48.45 71.20	40.05 - 44.62 0.5% pyrite SYENITE SERICITIC LAPILLI TUFF / TUFF 54.20 - 54.55 quartz + pyrite zone @ 55° tca 3 - 4% pyrite, 80% quartz, 10 - 15% scricite, chlorite, carbonate gangue						
	71.20	Е.О.Н.						

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
0.00	1.22	OVERBURDEN								
1.22	3.80	CASING-NX CORE-BOX 1 DISCARDED AFTER LOGGING								
1.22	34.90	IAPILLI-TUFF Massive, dark grey to green, with 10% angular to sub-rounded, 0.5 to 4 cm (avg. 1 cm), fine grained, light grey buff brown trachytic clasts; matrix is very fine grained, dark grey to green, with 25% , $< = 1$ mm, lithic clasts in an aphanitic groundmass: moderately to strongly magnetic.							,	
		 4.50 - 4.60 Fault @ 12° tca: chlorite + quartz + calcite ± ankerite; open, dry chloritic shear with late, drusy pink quartz + calcite infilling. 12.60 - 13.00 Fault @ 14° tca: sericite + chlorite + ankerite; tight (< 1 mm) sericite + chlorite slip with 2-3 cm ankeritic stained wall rock, symmetrically about slip plane. 21.95 - 22.00 Fault @ 40° tca: sericite + chlorite + ankerite; strong, tight slip with weak mud gouge and strong ankeritic stain. 								
:		34.00 - 34.90 Fault; rubbly core; 50-60% recovery; strongly weathered, ankerite	7041	33.00	34.00	1.00		Massive Lapilli Tuff	0.06	
		34.30 - 34.90 Lost core; contact of fault visible @ 34.92 m and is a sharp, tight chlorite + sericite slip @ 25° tca; down hole side of fault slip contains a 2 mm wide pyritic shear @ 55° tca.	7042	34.00	34.90	0.90	40	Ankeritic shear - rubbly core (lost core 34.30 - 34.90)	0.10	0.10
34.90	44.62	PYRITE QUARTZ ZONE Upper contact of zone is marked by a 2 mm wide pyritic shear at 55° tca which is truncated by previous fault @ 25° tca.								

HOLE: AK-90-19

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RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
то	·······		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
	34.90 - 35.20	Highly sericitic and deformed (no primary textures preserved), with $1-2\%$ very finely disseminated pyrite throughout; cut by 10% irregular white-grey quartz \pm chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within it; down hole side of schist is	7043	34.90	35.25	0.35		Strongly deformed sericite + pyrite schist bands (2mm - 1cm wide), overall pyrite 1 - 2%	0.15	
	35.20 - 35.85	marked by a 1 mm chlorite + quartz veinlet @ 60° tca. Altered lapilli-tuff; strongly sericitized, foliated (47° tca) lapilli- tuff (primary clasts preserved) with 0.5-1% disseminated pyrite as <=0.5 mm subhedral grains and as very fine pyrite + sericite slips, <= 1 mm wide.	7044	35.25	35.85	0.60		Lapilli Tuff , 0.5 - 1% pyrite	0.08	
	35.85 - 36.60	10-15% white-grey quartz breccia zones up to 10 cm wide; fractured, brecciated and boudinaged quartz vein material within an altered wall rock + sericite pyrite groundmass; 3-4% total pyrite.	7045	35.85	36.60	0.75		Quartz breccia veins , 3 - 4% pyrite in sericite schist	0.24	
	36.60 - 39.00	Altered lapilli tuff, light yellow-green, sericitized, with primary trachytic clasts; altered but not strongly deformed; 0.5% disseminated subhedral pyrite throughout and as dark grey pyrite +	7046 7047	36.60 37.00	37.00 37.50	0.40 0.50		Pseudo-brecciated Tuff with 2 - 3 % pyrite 0.5 - 1% disseminated and veinlet	0.11	
		sericite shears up to 2 mm wide that contain up to 20-25% pyrite; some clasts also display pyrite replacement; 0.5-1% pyrite.						pyrite in undeformed, sericitic Lapilli Tuffs	0.02	
			7048	37.50	38.00	0.50			0.02	
	30.00 10.05	2.20/ culmbide stringers on to 2 mm wide and 1007 loss 1 to 1 the	7049	38.00	39.00	1.00			0.02	
	59.00 - 40.05	quartz veinlets; lower end of Pyrite Zone is marked by a sharp, 1-2	7050	39.00	39.60	0.60		2 - 3% disseminated pyrite and 10% quartz veining	0.33	0.27
		mm wide, sericite + pyrite shear proximal to a series of small (1-3 mm) en echelon quartz veinlets.	7051	39.60	40.10	0.50		1 · 2% pyrite in altered Lapilli Tuff	0.16	
	40.05 - 44.62	Bleached, sericitized lapilli-tuff with <=0.5% disseminated pyrite in matrix and minor pyritic slips, generally less than 1-2 mm wide.	7052	40.10	41.00	0.90		Sericitized Lapilli Tuff with 0.5% disseminated pyrite	0.04	
			7053	41.00	41.40	0.40			0.04	
			7054	41.40	42.00	0.60		1 - 2% pyritic shears and veinlets along narrow quartz veinlets, 3 - 5% quartz veining	0.08	
	RVAL TO	RVAL 34.90 - 35.20 34.90 - 35.20 35.20 - 35.85 35.20 - 35.85 35.85 - 36.60 36.60 - 39.00 39.00 - 40.05 40.05 - 44.62 40.05 - 44.62	RVAL TO DESCRIPTION 34.90 - 35.20 Highly scricitic and deformed (no primary textures preserved), with 1-2% very finely disseminated pyrite throughout; cut by 10% irregular white-grey quartz ± chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within it; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet @ 60° tca. 35.20 - 35.85 Altered lapilli-tuff; strongly sericitized, foliated (47° tca) lapilli- tuff (primary clasts preserved) with 0.5-1% disseminated pyrite as <=0.5 mm subhedral grains and as very fine pyrite + sericite slips, <= 1 mm wide. 35.85 - 36.60 10-15% white-grey quartz breccia zones up to 10 cm wide; fractured, brecciated and boudinaged quartz vein material within an altered wall rock + sericite pyrite groundmass; 3-4% total pyrite. 36.60 - 39.00 Altered lapilli tuff, light yellow-green, sericitized, with primary trachytic clasts; altered but not strongly deformed; 0.5% disseminated subhedral pyrite throughout and as dark grey pyrite + sericit shears up to 2 mm wide that contain up to 20-25% pyrite; some clasts also display pyrite replacement; 0.5-1% pyrite. 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide and 10% irregular white quartz veinlets; lower end of Pyrite Zone is marked by a sharp, 1-2 mm wide, sericite + pyrite shear proximal to a series of small (1-3 mm) <i>en echelon</i> quartz veinlets. 40.05 - 44.62 Bleached, sericitized lapilli-tuff with <=0.5% disseminated pyrite in matrix and minor pyritic slips, generally less than 1-2 mm wide.	RVAL TO DESCRIPTION 34.90 - 35.20 Highly sericitic and deformed (no primary textures preserved), with 1-2% very finely disseminated pyrite throughout; cut by 10% irregular white-grey quartz ± chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within it; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet @ 60° tca. 7043 35.20 - 35.85 Altered lapilli-tuff; strongly sericitized, foliated (47° tca) lapilli- tuff (primary clasts preserved) with 0.5-1% disseminated pyrite as <=0.5 mm subcdral grains and as very fine pyrite + sericite slips, <= 1 mm wide. 7045 35.85 - 36.60 10-15% white-grey quartz brecia zones up to 10 cm wide; fractured, brecciated and boudinaged quartz vein material within an altered wall rock + sericite pyrite groundmass; 3-4% total pyrite. 7045 36.60 - 39.00 Altered lapilli tuff, light yellow-green, sericitized, with primary trachytic clasts; altered but not strongly deformed; 0.5% disseminated subhedral pyrite throughout and as dark grey pyrite + sericite shears up to 2 mm wide that contain up to 20-25% pyrite; some clasts also display pyrite replacement; 0.5-1% pyrite. 7048 7049 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide and 10% irregular white quartz veinlets; lower end of Pyrite Zone is marked by a sharp, 1-2 mm wide, scricite + pyrite shear proximal to a series of small (1-3 mm) <i>en echelon</i> quartz veinlets. 7051 40.05 - 44.62 Bleached, scricitized lapilli-tuff with <=0.5% disseminated pyrite in matrix and minor pyritic slips, generally less than	RVAL DESCRIPTION TO No. FROM 34.90 - 35.20 Highly scricitic and deformed (no primary textures preserved), with 1-2% very fincly disseminated pyrite throughout; cut by 10% irregular white-grey quartz ± chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz / fragments included within it; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet @ 60° tca. 7043 34.90 35.20 - 35.85 Altered lapili-tuff; strongly scricitized, foliated (47° tca) lapili- tuff (primary clasts preserved) with 0.5-1% disseminated pyrite as e-0.5 mm subhedral grains and as very fine pyrite + sericite slips, <= 1 mm wide. 7044 35.25 35.85 - 36.60 10-15% white-grey quartz breccia zones up to 10 cm wide; fractured, brecciated and boudinaged quartz vein material within an altered wall rock + sericite pyrite groundmass; 3-4% total pyrite. 7046 36.60 36.60 - 39.00 Altered lapili tuff, light yellow-green, sericitized, with primary trachytic clasts; altered but not strongly deformed; 0.5% disseminated subhedral pyrite throughout and as dark grey pyrite + sericite shears up to 2 mm wide that contain up to 20-25% pyrite; some clasts also display pyrite replacement; 0.5-1% disseminated pyrite. 7048 37.50 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide and 10% irregular white quartz veinlets; lower end of Pyrite Zone is marked by a sharp, 1-2 mm wide, scricitized lapilli-tuff with <=0.5% disseminated pyrite in matrix and minor pyritic slips, generally less than 1-2 mm wide. <td< td=""><td>RVAL DESCRIPTION TO No. FROM TO 34.90 - 35.20 Highly scricitic and deformed (no primary textures preserved), with 1-2% very finely disseminated pyrite throughout; 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some clasts also display pyrite replacement; 0.5-1% pyrite. 7048 37.50 38.00 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide and 10% irregular white quartz veinlets. 7051 39.60 40.</td><td>EVAL TO DESCRIPTION 34.90 - 35.20 Highly sericitic and deformed (no primary textures preserved), with 1-2% very finely disseminated pyrite throughout; cut by 10% irregular white-grey quartz ± chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within it; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet@ 60° tca. 7043 34.90 35.25 0.35 35.20 - 35.85 Altered tapili-tuff; strongly sericitized, foliated (47° tca) lapili-tuff (primary clasts preserved) with 0.5-1% disseminated pyrite as <=0.5 mm subhedral grains and as very fine pyrite + sericite slips, <= 1 mm wide. 7044 35.25 35.85 0.60 35.85 - Altered tapilit utff, tight yellow-green, scricitized, with primary trachytic clasts; altered but not strongly deformed; 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cut by 10% irregular white-grey quartz ± chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within it; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet @ 60° tca. 7043 34.90 35.25 35.20 - 35.85 Altered lapilii-tuff; strongly sericitized, foliated (47° tca) plailli-tuff (primary clasts preserved) with 0.51% disseminated pyrite as = 0.5 mm subhedral grains and as very fine pyrite + sericite slips, <= 1 mm wide. 7044 35.25 35.85 36.60 35.85 - 36.60 10-15% white-grey quartz breccia zones up to 10 cm wide; fractured, brecciated and boudinaged quartz vein material within an altered wall rock + sericite pyrite groundmass; 3-4% total pyrite. 7045 35.85 36.60 36.60 - 39.00 Altered lapilit uff, light yellow-green, sericitized, with primary trachytic clasts; altered but not strongly deformed; 0.5% disseminated subhedral pyrite troughout and as dark grey pyrite + sericite shears up to 2 mm wide that contain up to 20-25% pyrite; 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EVAL TO DESCRIPTION 34.90 - 35.20 Highly sericitic and deformed (no primary textures preserved), with 1-2% very finely disseminated pyrite throughout; cut by 10% irregular white-grey quartz ± chlorite veinlets and masses; lower contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within it; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet@ 60° tca. 7043 34.90 35.25 0.35 35.20 - 35.85 Altered tapili-tuff; strongly sericitized, foliated (47° tca) lapili-tuff (primary clasts preserved) with 0.5-1% disseminated pyrite as <=0.5 mm subhedral grains and as very fine pyrite + sericite slips, <= 1 mm wide. 7044 35.25 35.85 0.60 35.85 - Altered tapilit utff, tight yellow-green, scricitized, with primary trachytic clasts; altered but not strongly deformed; 0.5% disseminated subhedral pyrite troploquot and as dark grey pyrite; some clasts also display pyrite replacement; 0.5-1% pyrite. 7046 36.60 37.00 0.40 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide that contain up to 20-25% pyrite; some clasts also display pyrite replacement; 0.5-1% pyrite. 7048 37.50 38.00 0.50 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide and 10% irregular white quartz veinlets; lower end of Pyrite Zone is marked by a sharp, 1-2 mm wide, scricitized lapilli-tuff with <=0.5% disseminated pyrite in matrix and minor pyritic slips, generally less than 1-2 mm wide. 7051 39.00<	SAWTOSAWTODESCRIPTIONNo.FROM TO Length % RecTOJanuary 1000000000000000000000000000000000000	EVAL DESCRIPTION SAMPLE TO No. FROM TO Length % Rec DESCRIPTION 34.90 - 35.20 Highly scricitic and deformed (no primary textures preserved), with 1-2% very finely disseminated pyrite throughout; cut by 10% irregular white-greq quartz technite ventures preserved), with 1-2% very finely disseminated pyrite shore contact is a strong 1 cm wide sericite + pyrite schist with disrupted quartz fragments included within i; down hole side of schist is marked by a 1 mm chlorite + quartz veinlet @ 60° tca. 7044 35.25 35.85 0.60 Lapilli Tuff , 0.5 - 1% pyrite 35.20 - 35.85 Altered lapilli-uff, strongly sericitized, foliated (47° tca) lapilli-uff mu wide. 7044 35.25 35.85 0.60 Lapilli Tuff , 0.5 - 1% pyrite 35.85 - 36.60 10 -15% white-grey quartz breccia zones up to 10 cm wide; fractured wall rock + sericite pyrite groundmass; 3-4% total pyrite. 7045 35.85 36.60 0.75 Quartz breccia veins , 3 - 4% pyrite in sericite schist 39.00 - 40.05 2-3% sulphide stringers up to 2 mm wide and 10% irregular white quartz veinlets; lower end of Pyrite Zone is marked by a sharp, 1-2 mm wide, sericitize 4 pyrite share proximal to a series of small (1-3 mm wide, sericitize 4 pyrite share proximal to a series of small (1-3 mm wide, sericitize 4 pyrite share proximal to a series of small (1-3 mm wide, sericitized Lapilli Tuff with 0.5% disseminated pyrite 7051 39.	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HOLE: AK-90-19

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
			7055	42.00	42.50	0.50		0.5% pyrite along tight slips and vein boundaries	0.10	
			7056	42.50	43.45	0.95		0.5 - 1% pyrite + 2 - 3% quartz veining	0.04	
			7057	43.45	44.20	0.75		< 0.5% disseminated pyrite in sericitized Tuff	0.01	
		44.20 - 44.60 Series of tight chlorite + sericite + quartz + pyrite (10%) shears up to 1 cm wide (at 44.25 m and 44.60 m); interstitial host rock contains <= 0.5% disseminated pyrite.	7058	44.20	44.65	0.45		1% pyrite in < 1 cm wide, tight chlorite + sericite + quartz shears	0.04	
44.62	48.45	RED ALTERED ROCK (SYENITE (?)) Lower contact of unit is sharp and irregular, and appears to be intrusive, with moderate sericite at contact zone.								
		44.60 - 45.90 Massive, fine to medium grained (altered tuff?) and displays a very gradational change from yellow-green and sericitic @ 44.60 m to	7059	44.65	45.30	0.65		Bleached sericitized syenite? possibly Tuff	0.03	
		 red-pink @ 45.90 m. 45.90 Tight sericite + chlorite slip @ 65° tca with 2 cm wide, irregular patchy quartz veining symmetrically around slip. 	7060	45.30	45.90	0.60			0.01	
		45.90 - 48.45 Massive, fine grained, red-purple, cut by a <i>en echelon</i> system of small wispy quartz veinlets (tensional) @ 45° tca; contains irregular white quartz (albite?) blebs and masses, up to 2 cm, with black chloritic rims.	7061 7062 7063 7064	45.90 46.80 47.50 48.00	46.80 47.50 48.00 48.50	0.90 0.70 0.50 0.50		Massive red Syenite Syenite Sericitized Syenite at contact	0.01 0.01 0.01 0.01	
48.45	71.20	BLEACHED LAPILLI-TUFF / TUFF Massive, light brown (bleached) to green, with 10-15% coarse trachytic clasts up to 3-4 cm, which quite (requently have altered, diffuse boundaries which fade into a light brown very fine to aphanitic bleached groundmass; a majority of the clasts are 0.1-5 cm, medium grained, black-white salt and pepper textured trachytes which gives	7065 7066 7067 7068	48.50 49.50 50.50 51.50	49.50 50.50 51.50 52.50	1.00 1.00 1.00 1.00		Bleached Lapilli Tuff	0.18 0.04 0.02 0.01	0.21

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INTE	RVAL	DESCRIPTION					SAM	<u>IPLE</u>		ASSAYS
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		the unit an overall spotted, salt and pepper texture; typically non-magnetic and quite often has a dirty mottled texture due to diffuse irregular brown bleaching throughout.	7069 7070	52.50 53.50	53.50 54.20	1.00 0.70			0.02 0.06	
	71.20	 54.20 - 54.55 QUARTZ + PYRITE ZONE @ 55° tca; well foliated to schistose with quartz flooding (silicified) in matrix and irregular brecciated grey-white, 3-4 cm wide quartz vein with very fine grained pyritic veinlets (1-3 mm) on vein boundary and on fracture planes; entire section contains 3-4% pyrite; upper contact is a sharp, 2 mm wide chlorite + sericite + quartz slip with smeared pyrite on slip face; lower contact is somewhat more gradational with 0.5% disseminated pyrite for 10 - 15 cm in lower wall rock . E.O.H. 	7071 7072 7073 7074	54.20 54.60 55.30 56.00	54.60 55.30 56.00 57.00	0.40 0.70 0.70 1.00		Quartz breccia vein with 3% pyrite	6.21 0.03 0.01 0.02	6.38

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	November 19 1990	EASTING	8425.00		DEPTH	AZIMUTH	DIP
I KOI DATI	7 maigunates 10/kiana	LOGGED BY	, M. Maeson	NORTHING	10170.00	ſ	Collar	341	45
TOWNSHIP	Teck	SIGNED BY	1. En	ELEVATION			38.00		44
CLAIM No.	L 491663	DRILLED BY	Heath & Sherwood	LENGTH	99.60		76.00		42
STARTED	November 16, 1990	SURVEYED BY		UNITS	metres		70.00		72
COMPLETED	November 17, 1990	CORE LOCATION	K.L. Warehouse	CORE SIZE	NQ				
PURPOSE	To undercut hole AK-90-20 and								
	test the 102-8425 gold zone								
COMMENTS	The 102-8425 zone was					l			
	intersected at 78.50 - 81.60 m					C C			

		SUMMA	RY LOG			ASSA	Y SUMMARY	2
INTERV From	'AL To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTER From	VAL To	LENGTH in metres	AVERAGE Au g/t
0.00 1.50 3 32.30 3	1.50 32.30 33.50	CASING LAPILLI TUFF FAULT ZONE @ 25 ° 102			78.50 inc	81.60 luding	3.10	1.59
33.50 6 68.85 7	68.85 73.25	LAPILLI TUFF LAPILLI TUFF Sericitic, hematitic			78.50	81.00	2.50	1.94
73.25 78.50 8	78.50 81.60	SERICITIC TUFF PYRITE - QUARTZ ZONE 2 - 3% pyrite, 2 - 5% quartz veining, sericitic						
81.60 8 85.30 9	85.30 90.00	SYENITE 2 - 5% white quartz veining LAPILLI TUFF						
		Weakly sericitic 89.85 - 90.00 Chloritic breccia, 1% quartz veining, trace pyrite						
90.00	99.60	LAPILLI TUFF Moderately sericitic						
1	99.60	E.O.H.						

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HOLE: AK-90-20

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INTE	RVAL	DESCRIPTION					SAM	IPLE	····	ASSAYS	
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
0.00	1.50	CASING					·				
1.50	32.30	LAPILLI-TUFF / HETEROLITHIC LAPILLI-TUFF Massive to moderately well foliated with prominent clast elongation @ 45° -50° tca; light grey to dark grey-green, with 5-25%, 0.2-5 cm (avg. 1 cm), angular to sub- rounded, light buff pink to dark green to purple, aphanitic to porphyritic trachytic clasts; matrix of 15-20%, <1 mm lithic clasts in a very fine grained, grey-white groundmass; variable from clast rich to clast poor lapilli-tuffs, and in part intercalated with <= 0.5 m ash-tuff horizons; bedding defined by alternating ash- tuff and lapilli-tuff beds and <= 0.5 mm magnetite layers @ 40° -50° tca; weakly magnetic except proximal to magnetite beds.									
		 3.85 Fault @ 35° tca: sericite + ankerite; tight sericite slip with 1-2 cm wide ankerite stain in wall rock. 5.15 - 5.25 Fault @ 40° tca: sericite + ankerite; well foliated to schistose zone with strong ankerite staining. 9.00 - 9.15 Fault @ 45 deg. tca: sericite + chlorite + ankerite; ankerite; rusty stained sericite + chlorite schist with minor vuggy calcite infilling. 9.15 - 15.00 Ash-tuff, fine grained, massive to well bedded @ 50° tca; contacts with lapilli- tuff are quite gradational. 									
		 At approximately 21 metres the tuffs become notably hematized with sporadic patchy purple colour; in places hematite is seen to be replacing magnetite beds within ashtuff which also become moderately to strongly sericitized with 5-10% wispy spotty sericite. 23.75 - 24.50 Bleached, silicified zone, light green strongly sericitized and cut by a dirty buff brown, 15 cm wide quartz + ankerite vein which is fractured and rehealed by light brown quartz + ankerite veining; walls are irregular and some what diffuse. 	7075 7076	23.00 23.70	23.70 24.50	0.70 0.80		Hematized Ash Tuff Sericitized Tuff with 15 cm quartz + ankerite vein	nil 0.01		

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INTE	RVAL		DESCRIPTION					SAM	PLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	: Au*M
		24.50 - 25.00Pseudo-bro rock fragm25.00 - 32.30Becomes i remnant p with pebb framework (no quartz)	exciated to brecciated tuff with angular sericitized wal ents in a sericite + hematite groundmass. ncreasingly bleached to a light green-white, with loca atches of purple, hematized rock; in part intercalated le conglomerate interbeds (well rounded, polymictic conglomerate), although matrix appears to be trachytic) and contacts are gradational.	7077	24.50	25.00	0.50			nil		
32.30	33.50	 (no quartz) and contacts are gradational. FAULT ZONE Fault breccia, mud gouge @ 25° tca (70% recovery); very highly deformed za (cross-fault), highly schistose, sericitized at beginning of fault, with numer chlorite + sericite mud slips; becomes a strong fault breccia and mud gouge who original host rock is pulverized and held together by mud. 32.70 - 33.20 Fault gouge . 33.20 - 33.50 Strongly foliated to schistose, with numerous sericitic slips and hirregular white to pink quartz veinlets and masses (1-2%). 										
33.50	78.50	LAPILLI-TUFF - HETERO Massive to moderately well 33.50 - 37.55 Light gree and cut by veinlets. 37.55 - 40.10 Dark green up to 3 cm veinlets, up 40.10 - 40.20 Fault @ 2 sericite sli quartz vein	PLITHIC foliated @ 45°-50° tca. n, moderately sericitic with 5% wispy + spotty sericite 5% late white-pink quartz veinlets and minor specularite n, chloritic with light grey to pink angular trachyte clast in a very fine grained matrix; cut by 1-2% white quart p to 0.5 cm wide. 0° tca: sericite + chlorite + quartz; sharp chlorite + p boundaries with interstitial, white to pink, irregula ning and masses.									

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INTEF	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	TO			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au*M
		40.20 - 44.55 44.15 - 44.25 44.55 - 45.85 45.85 - 45.90 45.90 - 68.85 54.00 - 54.10 62.10 - 62.30 68.85 68.85 - 73.25	Light to dark green, weakly sericitized and stockworked by 5% late, barren, 0.1-0.5 cm wide, white quartz veinlets. Fault @ 50° tca: sericite + chlorite; sharp, tight, sericitic slips with rock flour and minor, ≤ 1 mm, white quartz veinlets. Pervasively hematized lapilli-tuff, dirty brown-purple, moderately well foliated @ 50° tca. Fault @ 40° tca: sericite + chlorite + quartz; strong, tight mud break with a 1-2 cm wide white-pink quartz vein with sharp chloritic boundaries. Quite variable in colour from dirty brown to light green, with 5- 25% angular, average 1 cm, trachyte clasts (heterolithic) in a fine grained ash matrix of 5-25% lithic clasts in a very fine groundmass; weak to moderate sericite, as fine spots and irregular wisps throughout. Massive, barren, white-brown quartz + ankerite vein with sericite + chlorite suturing. Fault @ 45° tca; contacts of fault are sharp tight sericitic slips; interstitial 20% sericitized host rock and 80% white to pink to brown quartz which in turn has been pseudo-brecciated by sericitic sutures and by a later, cross-cutting quartz + chlorite + calcite veinlets which have smeared pyrite on some of the slip faces (< 0.5% total pyrite) Fault @ 40° tca: sericite + chlorite + quartz; 0.5 cm white buff quartz veinlet on sharp chlorite + sericite slips; adjacent wall rock up to 2 cm from vein is cut by numerous chloritic slips. Dirty red-brown (purple hues), moderately sericitized lapilli-tuff, with 5-10% angular trachytic clasts up to 2 cm (avg. 0.5 cm), which are both hematized (purple) and sericitized (light green), in a very fine grained grey-white matrix.	7078 7079 7080 7081 7082 7082	53.80 61.50 62.00 62.45 72.00 73.00	54.20 62.00 62.45 63.00 73.00 73.50	0.40 0.50 0.45 0.55 1.00 0.50	70 RG	10 cm barren, white quartz vein Moderately sericitic Lapilli Tuff 10 cm buff, brown-pink, quartz vein Lapilli Tuff Weakly hematized Lapilli Tuff Weakly sericitic Lapilli Tuff	0.02 0.01 0.01 0.01 0.05	0.01

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INTER	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		73.25 - 75.00	Sericitized tuff; upper contact is quite gradational with a lighter colour (dirty brown \rightarrow light green) from 73.25 - 74.00 m until the matrix becomes completely altered to a green-white colour at 74.50 m; lapilli clasts are still evident throughout although many are strongly bleached to a light buff; cut by 1-2%, white, 1-3 mm quartz trainlete	7084 7085 7086	73.50 74.00 74.50	74.00 74.50 75.00	0.50 0.50 0.50		Moderately - strongly sericitic tuff Sericitized Tuff with 1% quartz veins	0.01 0.03 0.01	
		75.00 - 78.50	Altered tuff (?); massive, light grey-green, with a patchy mottled texture due to irregular alteration fronts within the matrix; locally matrix contains $5-7\%$ subhedral to lath shaped, dark green	7087 7088	75.00 76.00	76.00 77.00	1.00 1.00		Sericite + chlorite altered unit with 5% angule	0.02 0.01	
			amphibole (augite ?) crystals up to 1 mm, in a very fine grained, grey-white groundmass; these "augites" have been chloritized where the groundmass contains 3-5% spotty sericite alteration; unit also contains what appear to be relict lapilli clasts which frequently display diffuse altered boundaries.	7089	77.00	78.00	1.00			0.01	
		78.00 - 78.50	Increasingly sericitic and contains $<= 0.5\%$ disseminated pyrite.	7090	78.00	78.50	0.50		Sericitized Lapilli Tuff with < 0.5% disseminated pyrite	0.03	
78.50	81.60	PYRITE ZONE Lower contact i	s a sharp, tight chlorite + sericite slip @ 60° tca.								
		78.50 - 79.60 78.80 - 78.90	Strongly foliated to weakly schistose @ 50°-55° tca; yellow-green matrix is pervasively sericitized with 0.5% disseminated pyrite; locally relict lapilli clasts are still evident and the dark grey ones are partially replaced by pyrite; cut by 5% irregular white quartz veins up to 3 cm wide. 2-3 cm blue-grey silicified zone with 2-3% finely disseminated	7091	78.50	79.00	0.50		Sericitic Tuff with 5% quartz	1.11	1.00
			pyrite; up hole side of this zone is fractured and white buff quartz vein with sericite + pyrite sutures within vein.						veining and 2 - 3% pyrite		

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		79.60 - 81.60	Less strongly deformed, massive to weakly foliated, with 5% angular clasts (dark green to buff) in a strongly sericitized (yellow-green) matrix; pyrite as:	7092	79.00	79.60	0.60		Sericitic Tuff with 2% quartz veining and 2 - 3% disseminated pyrite	2.85	2.50
			 Up to 5-10% pyrite as replacement within clasts. 	7093	79.60	80.10	0.50		Sericitic Lapilli Tuff with 1% pyrite	2.77	3.11
			 0.5-1%., fine disseminated pyrite in matrix. Pyritic stringers, <= 1 mm wide, along wispy, sericitic sutures. 	7094	80.10	81.00	0.90		Sericitic Tuff with 2% quartz veining and 1 - 2% pyrite	1.37	1.41
		80.65 80.75 - 81.60	1 cm blue-grey quartz vein with 1% pyrite on vein walls. Cut by 1-2% black, $\leq = 1-2$ mm wide, chlorite \pm quartz veinlets and fractures @ 15° tca.	7095	81.00	81.60	0.60		Sericitic Lapilli Tuff 0.5% pyrite	0.12	
81.60	85.30	SYENITE									
		81.60 - 81.90	Strongly sericitized, yellow-green, with 5% fine black subhedral crystals up to 0.5 mm (augite ?) in an aphanitic, sericitized groundmass.	7096	81.60	82.40	0.80		Sericitized Syenite with 5% quartz, quartz + chlorite veining	0.08	
		81.90 - 82.30	Grades into red-brown coloured syenite with 3-5% black subhedral crystals (augite ?); cut by 5% irregular quartz and quartz + chlorite veinlets sub-parallel to core axis.								
		82.30 - 85.20	Massive, red-brown, very fine grained syenite, micro-fractured and infilled with wispy sericite (< 0.5 mm wide). Cut by 2-3% barren white quartz veinlets	7097	82.40 83.00	83.00 84.00	0.60		Massive Syenite, 2 - 3% quartz veins	0.06	0.06
			1	7099	84.00	84.90	0.90			0.02	0.00
		85.20 - 85.30	Weakly sericitized, light brown, with wispy sericite; lower contact is very sharp, irregular, appears intrusive, and is moderately sericitic.	7100	84.90	85.30	0.40		Weakly sericitic Syenite	0.02	

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INTE	RVAL		DESCRIPTION						S A L			
FROM	то			F	No.	FROM	то	Length	SAN % Rec	DESCRIPTION		ASSAYS
85.30	99.60	LAPILLI-TUFI Angular wall groundmass; c trace pyrite. 90.00 - 99.60	F rock fragments up to 1 cm in a dark green, ap ontacts are sharp chlorite slips @ 50° tca; < 1% gre Massive light grev-green to dirty brown, with 50	phanitic, chlorite ey quartz veining,	7101 7102 7103 7104 7105 7106	85.30 86.00 87.00 88.00 89.00 89.50	86.00 87.00 88.00 89.00 89.50 90.10	0.70 1.00 1.00 0.50 0.60	% Rec	Chloritic fault breccia	Au, g/t 0.01 0.01 0.01 0.01 0.01 0.06	Au,Check Au*M
	99.60	Е.О.Н.	(dark green to buff to black and white spotted), c boundaries; matrix of 3-5% subhedral to lath sha (augite ?) in an aphanitic, moderately sericitized	often with diffuse ped black crystals groundmass.	,10,	90.10	91.00	0.90			0.06	

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	Nov. 20-21 1990	EASTING	8600.00		DEPTH	AZIMUTH	DIP
10/0 B 3 75 1/0 F F F S		LOGGED BY	M. Masson	-NORTHING	10174.00		Collar	341	45
TOWNSHIP	leck	SIGNED BY	W Des	ELEVATION			38.00		44
CLAIM No.	L 477419	DRILLED BY	Heath & Sherwood	LENGTH	117.70		.10.00		
STARTED	November 17, 1990	SURVEYED BY		UNITS	metres		76.00		42
COMPLETED	November 19, 1990	CORE LOCATION	K.L. Warehouse	CORE SIZE	NO		114.00		41
PURPOSE	To test '102' structure, low								
	magnetic and IP anomalies								
COMMENTS	Mineralized '102' structure					1			
	intersected at 69.00 - 98.95m				4				ل حمينية المستعم

		SUMMA	RY LOG	3			ASSA	Y SUMMARY	r
INTER From	RVAL To	DESCRIPTION	INTER From	VAL To	DESCRIPTION	INTER From	VAL To	LENGTH in metres	AVERAGE Au g/l
0.00 3.40 25.00 28.50 44.70	3.40 25.00 28.50 44.70 58.35	CASING ASH TUFF LAPILLI TUFF COARSE LAPILLI TUFF LAPILLI TUFF	93.50 96.50 98.90	96.50 98.90 102.75	SYENITE 93.50 - 94.30 Sericitic, 2 - 5% pyrite IAPILLI TUFF Weakly to moderately sericitic ASH TUFF - / IAPILLI TUFF	69.00 ind 69.00 ind 69.60	98.95 cluding 74.00 cluding 70.60	29.95 5.00 1.00	0.88 0.75 1.49
58.35 69.10	69.10 74.00	LAPILLI TUFF Hematitic PYRITE - QUARTZ ZONE Sericitic, silicified 1 - 2% pyrite, 1% quartz veining	102.75	117.70	GRAYWACKE 1 - 2% sericite, < 0.5% pyrite 113.70 - 117.50 2 - 3% blue grey to white quartz veinlets, trace pyrite	72.90 82.00 in 83.00	73.50 86.00 cluding 83.20	0.60 4.00 0.20	2.28 0.67 7.05
74.00 82.55	82.55 92.80	LAPILLI TUFF Weakly sericitic COARSE LAPILLI TUFF Weakly to moderately sericitic 83.10 0.5 cm bluc quartz vein @ 60° tca with 2% pyrite		117.70	Е.О.Н.	85.00 90.50 90.50 92.00 92.00	86.00 98.95 cluding 92.00 96.00 92.70	1.00 8.45 1.50 4.00 0.70	1.08 2.25 1.24 3.94 12.87
92.80	93.50	92.05 - 92.60 Silicified, 2 - 3% pyrite SERICITIC LAPILLI TUFF 0.5% pyrite				95.50 96.00 98.55	96.00 98.95 98.95	0.50 2.95 0.40	9.84 0.46 2.25

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INTE									1		
INTE	KVAL	DESCRIPTION					SAM			ASSAYS	
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
0.00	3.40	CASING					1				
3.40	25.00	 ASH TUFF Massive to well bedded (@ 50°-60° tca) dark green to purple where hematitie typically very fine grained ash-tuff with minor intercalated lapilli-tuff horizons up t 0.5 metres wide, with gradational contacts; weakly magnetic; bedding is defined b 0.1-1 cm, alternating ash horizons and locally by what appear to be <= 0.5 mm hematized magnetite beds; lower contact of unit is gradational. 9.05 - 9.15 Fault @ 50° tca: chlorite + sericite + ankerite + hematite; rust ankeritic stained shear zone with a 0.5 cm wide white-pink quark + calcite veinlet with minor specularite. 12.50 - 12.70 Fault @ 50° tca: sericite + ankerite; strongly rust-limonite staine shear zone with no primary textures visible; contacts are sharp but some what irregular. 	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;								
25.00	28.50	LAPILLI-TUFF Massive to moderately foliated @ 50° tca, with 5-7% angular, light brown to buff t green, up to 1 cm (avg. 0.5 cm) trachyte clasts; matrix is a light grey-green, 20-30% $< = 0.5$ mm, lithic clasts in an aphanitic groundmass; some minor jasper clast within matrix, possibly due to intermixing with sediments.	5	×							
28.50	44.70	 COARSE LAPILLI TUFF - HETEROLITHIC Massive, light to dark green to brown lapilli-tuff, with 15-20% angular to sut rounded, dark red to pink to brown and green, fine grained or porphyritic trachyt clasts up to 5 cm (avg. 2 cm), in a fine grained, ash matrix; moderately to strong magnetic; areas of moderate to strong hematization. 35.30 Fault @ 45° tca: chlorite + sericite + quartz; tight, chlorite - sericite slip with 0.5 cm buff pink quartz vein on slip wall. 	- - -								

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INTE	RVAL	DESCRIPTION							[
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au. ø/t	ASSAYS Au.Check Au*	M
		 44.70 Fault @ 50° tca: scricite + chlorite + quartz; strong, tight slip with 0.5 cm quartz ± ankerite vein on slip wall. 44.60 - 44.85 Strongly foliated around fault and contains 10% wispy sericite. 		<u>,,, , , , , , , , , , , , , , , , , , </u>							
44.70	58.35	LAPILLI-TUFF Massive to weakly foliated, dark grey-brown to purple (where hematitic) with 15- 20% angular trachyte clasts up to 2 cm (avg. 0.5 cm) in a fine ash matrix; predominant (30%) clast type is a light brown to buff trachyte, with remainder as heterolithic, dark green to pink trachyte; weak to non-magnetic; lower contact of unit is sharp @ 35° tca (bedding) and marked by a 10 cm wide ash-tuff bed.									
		55.75 - 55.95 Fault @ 60° tca: sericite + chlorite + quartz; strongly foliated to schistose shear zone with strong sericite alteration; contacts are sharp slip planes with 0.5 cm wide buff-pink quartz veining.									
58.35	69.10	LAPILLI-TUFF Massive, dark green to purple (hematitic), with 5-15% angular to sub-rounded, buff- brown to pink to dark green, trachytic clasts up to 4-5 cm (avg. 2 cm); moderately to strongly magnetic; patchy, hematized zones to lower contact.	7108 7109 7110 7111	65.00 66.00 67.00 68.00	66.00 67.00 68.00 69.00	1.00 1.00 1.00 1.00		Massive Lapilli Tuff	0.01 nil nil nil		
69.10	74.00	BLEACHED PYRITIC ZONE Upper contact of bleached zone is some what gradational but appears to coincide with a sharp, dark grey, hairline crack @ 25° tca, with smeared pyrite and chlorite.									
		69.10 - 70.35 Light yellow-green to grey-brown lapilli- tuff, bleached but weakly deformed and quite hard; 0.5-1% finely disseminated pyrite throughout matrix; < 1%, irregular white quartz veinlets; matrix is highly altered to an aphanitic, sericitized mass, which is locally	7112 7113	69.00 69.60	69.60 70.10	0.60 0.50		Bleached Lapilli Tuff with 0.5% pyrite 1% disseminated pyrite	0.18 1.54	1.44	

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INTE	RVAL		DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то]		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au [•] M
		70.35 - 70.50	very soft or quite hard and possibly silicified. Grey-brown, very fine grained silicified zone with 1-2% disseminated and wispy pyrite; contacts are diffuse and seem to be quite	7114	70.10	70.60	0.50		Silicified Tuff with 2% pyrite Sericitic Tuff with 0.5 - 1% pyrite	1.49	
		70.50 - 71.60	Massive, moderately sericitized (10% spotty and wispy sericite) tuff with 0.5 - 1% disseminated pyrite; cut by 1%, < 0.1 cm wide chlorite + quartz \pm hematite sutures.	7115 7116	70.60 71.10	71.10 71.60	0.50 0.50			0.01 0.11	
	2	71.60 - 72.00	Quartz breccia vein; very irregular buff-white to grey quartz vein with angular wall rock clasts up to 1.5 cm; this vein has in turn been fractured and brecciated by later quartz + pyrite \pm chlorite which forms brecciated quartz fragments in a fine quartz + pyrite groundmass; 2-3% total pyrite.	7117	71.60	72.00	0.40		Quartz breccia vein, 2 - 3% pyrite	0.08	
		72.00 - 72.45	Massive, weakly to moderately sericitized tuff with $\leq = 0.5\%$ disseminated pyrite.	7118	72.00	72.45	0.45		Massive Lapilli Tuff, < 0.5% pyrite	0.04	
		72.45 - 72.90	Cut by 3% white, irregular quartz veins and quartz + chlorite sutures, with $1-2\%$ disseminated pyrite.	7119	72.45	72.90	0.45		Silicified Tuff with 1 - 2% pyrite	0.88	
		72.90 - 73.40	Quartz breccia vein; massive white to grey quartz vein which is fractured and brecciated by numerous < 0.5 mm sericite + pyrite sutures; 2% total pyrite content.	7120	72.90	73.50	0.60		Quartz vein, 2% pyrite	2.19	2.37
		73.40 - 74.00	Light yellow-green, massive, sericitized lapilli-tuff, with $\leq = 0.5\%$ pyrite; sericite alteration is notably less by 74.0 m.	7121	73.50	74.00	0.50		Sericitized Lapilli Tuff with 0.5 % pyrite	0.58	
74.00	82.55	LAPILLI-TUFF	- HETEROLITHIC								
		74.00 - 75.50	Weakly sericitized with patchy, diffuse sericite alteration fronts evident within matrix, airing patchy, mottled texture	7122	74.00	75.00	1.00		Moderately sericitized Lapilli Tuff	0.02	
		75.50 - 82.55	Massive, dark green to red-brown lapilli- tuff with 10-15% angular trachyte clasts up to 2 cm (avg. 1 cm), in a fine grained ash matrix of 25% , <= 1 mm lithics in an aphanitic groundmass; locally weakly magnetic.	7123 7124 7125 7126 7127	75.60 76.00 77.00 78.00	76.00 77.00 78.00 79.00	0.00 1.00 1.00 1.00		Massive Lapilli Tuff	0.13 0.01 0.04 0.02 0.04	

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INTEI	RVAL		DESCRIPTION	SA No. FROM TO Length % Rec				SAM	PLE		ASSAYS
FROM	TO			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
	-			7128 7129 7130 7131	79.00 80.00 81.00 82.00	80.00 81.00 82.00 82.50	1.00 1.00 1.00 0.50			0.41 0.05 0.02 0.25	
82.55	92.80	COARSE LAPI Massive, light g rounded, very p up to 5 cm (av sericite.	ILLI-TUFF (HETEROLITHIC) green to green-brown, coarse lapilli-tuff, with 10-15% angular to sub- worly sorted, light brown to red (porphyritic) to green, trachyte clasts g. 2 cm); weakly to moderately scricitic with 3-5% wispy and spotty	7122	00.50		0.60			0.02	
		83.10	0.5 cm wide white-blue quartz vein @ 60° tca with smeared 1-2% pyrite + chlorite \pm molybdcnite along hairline fracture planes on vein walls and within the vein.	7132 7133 7134	82.50 83.00 83.20	83.00 83.20 84.00	0.30		0.5 cm quartz vein with 1 - 2% pyrite	7.06 0.05	7.03
				11656 11657 11658 11659 11660 11661	84.00 85.00 86.00 87.00 88.00 89.00	85.00 86.00 87.00 88.00 89.00 90.00	1.00 1.00 1.00 1.00 1.00 1.00			0.02 1.15 0.02 0.02 0.07 0.01	1.00
		90.55 - 90.60	Light green, chlorite + pyrite slip face @ 25° tca with 5% smeared pyrite; down hole side of slip is a 1 cm irregular white-grey quartz vein with 1% disseminated pyrite in sericitized wall rock; 0.3 mm smeared flake of NATIVE GOLD on face of 2 mm pyrite bleb.	7135 7136 7137 7138	90.00 90.50 90.75 91.50	90.50 90.75 91.50 92.00	0.50 0.25 0.75 0.50		Massive Lapilli Tuff 1 cm quartz vcin with 1 - 2% pyrite	0.04 7.10 0.07 0.04	7.13
		92.05 - 92.60	Patchy, diffuse silicified zones @ 92.05 - 92.15 and @ 92.5 - 92.60 m, with 2-3% disseminated pyrite and pyrite + sericite veinlets which are later cut by barren 1-2 mm white quartz veinlets.	7139	92.00	92.70	0.70		Patchy quartz + pyrite zones in Lapilli Tuff, 1% pyrite	12.89	12.84

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INTE	RVAL		DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
92.80	93.50	SERICITIZED Moderately wel green trachyte is very fine gra upper contact of	LAPILLI-TUFF Il foliated, light green sericitized matrix with 5% angular, dark grey to clasts with selective pyrite replacement (< 0.5% total pyrite); matrix ined, highly sericitic and contains 1% subhedral augite (?) crystals; of unit is gradational; lower contact sharp @ 50° tca.	7140	92.70	93.50	0.80		Pyrite replacement of clast in sericitized Tuff	1.02	
93.50	96.50	SYENITE									
		93.50 - 94.30 93.50 - 93.62	Light yellow-green due to pervasive sericitization of matrix which is very fine to aphanitic; contains 2-3% black, anhedral crystals (altered to chlorite) up to 1 mm. Well foliated @ 40°-50° tca, sericitized and contains 2-3% disseminated pyrite.	7141	93.50	94.00	0.50		Sericitic Syenite with 1 - 2% pyrite and silicified zone @ 93.55 with 3 - 5% pyrite	0.89	
	-	93.55 94.40	I cm dark grey slitcified zone with 5% very line pyrite. Sericite alteration becomes very weak and gradation into massive light red-brown syenite, with 2-3% irregular, white quartz clots up to 0.75 cm.	7142	94.00	94.50	0.50		Weakly sericitized Syenite with <0.5% pyrite	0.89	
		94.30 - 96.30	Massive, very fine grained, light red-brown with very thin sericite sutures (micro-fractured) in an aphanitic groundmass; cut by 2-3% buff-white, quartz veinlets up to 0.5 cm wide with bleached vellow-	7143	94.50	95.50	1.00		Massive Syenite with four 0.1 to 1.0 cm quartz veins, one with pyrite and a green sericitic halo	0.13	
			green 0.2-0.5 cm wide alteration halos; << 0.5% pyrite along dark chloritic vein contacts.	7144	95.50	96.00	0.50		Four 0.5 to 1.0 cm quartz veins, two with pyrite and green sericitic halos. (All three may be the same folded vein)	10.79	8.88
		96.30 - 96.50	Light brown, weakly sericitic with strong sericite at very sharp lower contact @ 32° tca.	7145	96.00	96.50	0.50		Lower sericitic contact of Syenite	0.36	

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INTE	RVAL	DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
96.50	98.90	LAPILLI-TUFF 10% angular, buff-brown to pink trachyte clasts up to 2 cm (avg. 1 cm) in a dark green, weakly to moderately sericitized ash matrix; lower contact is sheared @ 50° tea and contains $1\% <= 1$ mm, subhedral pyrite with black, chloritic rims in sericite schist.	7146 7147 7148 7149	96.50 97.00 98.00 98.55	97.00 98.00 98.55 98.95	0.50 1.00 0.55 0.40		Massive Lapilli Tuff, weakly scricitic Sheared contact with < 0.5% coarse pyrite	0.05 0.25 0.02 2.47	2.03
98.90	102.75	ASH-TUFF / LAPILLI-TUFF WITH MUDSTONE Massive to well foliated (50° tca), grey-green to light green intercalated ash- and lapilli-tuff beds up to 0.5 metre wide which have gradational contacts; very patchy sericite alteration of matrix which locally gives a very mottled texture; contains minor mudstone rip clasts and mud horizons up to 10 cm wide.	7150 7501 7502 7503 7504	98.95 99.50 100.00 101.00	99.50 100.00 101.00 101.70	0.55 0.50 1.00 0.70		Intercalated Ash / Lapilli Tuff	0.02 0.03 0.02 nit	
		 101.90 - 101.90 (Massive outrowhite quartz vent with sharp chlottic boundaries @ 60° tca; lower contact has smeared pyrite dollars and minor disseminated pyrite in a 2 mm white quartz veinlet. 101.90 - 102.75 Lapilli tuff with dark grey trachyte clasts with selective clast replacement by pyrite; contacts are sharp; lower contact sericitic @ 55° tca. 	7505	101.90	102.80	0.90		Pyrite replaced clasts in Lapilli Tuff, < 0.5% pyrite	0.04	
102.75	117.70	GRAYWACKE Massive, fine grained, equigranular graywacke, 40% rock fragments, up to 1 mm, including jasper, 40% feldspars and 20% quartz; 1-2% spotty pervasive sericite and << 0.5% disseminated pyrite; occasional mudstone clast up to 1-2 cm.								
		102.85 - 103.40 Dark to light green aphanitic mudstone with sharp contacts.	7506 7507 7508	102.80 103.10 104.00	103.10 104.00 105.00	0.30 0.90 1.00		Mudstone interbed in Graywacke Massive Graywacke	0.01 0.03 0.04	0.07

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INTERV	VAL		DESCRIPTION					SAM	PLE				ASSAYS	
FROM	то			No.	FROM	TO	Length	% Rec	DES	SCRIPTIO	1	Au, g/t	Au,Check	Au*M
	117.70	115.10 - 115.20 E.O.H.	Fault @ 40° tca: quartz breccia; milk-white to grey brecciated quartz vein material, recemented by a later aphanitic, dark grey, siliceous groundmass; fault boundaries are sharp, strong mud breaks with sericite altered wall rock for 5-10 cm around fault; vein carries < 0.5% pyrite.	7509 7510 7511 7512 7513 7514 7515 7516 7517 7518 7519 7520 7521 7522 7523	105.00 106.00 107.00 108.00 109.00 110.00 111.00 113.00 113.00 113.70 114.50 115.30 115.30 116.00 117.00	106.00 107.00 108.00 110.00 111.00 112.00 113.00 113.00 113.70 114.50 115.00 115.30 116.00 117.00 117.70	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.70 0.80 0.50 0.30 0.70 1.00 0.70		Graywacke veinlets Quartz brec pyrite	with 29 cia vein wit	6 quartz h < 0.5%	0.02 0.01 0.04 0.01 0.02 0.02 0.02 0.03 0.01 0.02 0.01 0.02 0.01	0.03	

HOLE: AK-90-22

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland November 22 1990 DATE LOGGED EASTING 8825.00 M. Masson LOGGED BY NORTHING 10380.00 Collar 161 45 TOWNSHIP Teck SIGNED BY ELEVATION 38.00 44 CLAIM No. L 500057 / 477419 Heath & Sherwood DRILLED BY LENGTH 155.30 76.00 42 STARTED November 19, 1990 SURVEYED BY UNITS metres 114.00 38 COMPLETED November 21, 1990 K.L. Warehouse CORE SIZE **CORE LOCATION** NQ PURPOSE To test IP and low magnetic 152.00 38 anomalies Source at the geophysical anomalies was intersected at 114.00 - 147.90 m **COMMENTS**

	SUMMA	RY LOG			ASSA	Y SUMMARY	2
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTER From	/AL To	LENGTH in metres	AVERAGE Au g/t
0.00 1.52 1.52 45.30 45.30 58.80 58.80 59.40 59.40 71.65 71.65 114.00 114.00 147.90 147.90 155.30 155.30	CASING LAPILLI TUFF COARSE LAPILLI TUFF Moderately sericitic FAULT ZONE ASH TUFF Sericitic LAPILLI TUFF Strongly foliated, moderately to strongly sericitic 82.00 - 82.20 Fault gouge with quartz + ankerite vein 93.70 - 93.85 Schistose zone with 1 cm brecciated quartz vein, 1% pyrite ALTERED LAPILLI TUFF Moderately to strongly foliated, sericitic, chloritic and silicified; 40%, 0.15 - 6.50 m wide, silicified zones with 1 - 5% disseminated pyrite. LAPILLI TUFF / GRAYWACKE Weakly sericitic E.O.H.			81.50 93.60	82.50 94.00	1.00 0.40	0.42 0.36
147.90 155.30 155.30	LAPILLI TUFF / GRAYWACKE Weakly sericitic E.O.H.						

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
0.00	1.52	CASING									
1.52	45.30	IAPILLI TUFF Dark grey to a angular trachyt although heter spotted trachyte 5.10 14.40 15.00 18.10 - 18.60 31.80 - 32.10	For the second								
		42.30 - 42.70	sericite. Cut by 5-10% white-brown, very irregular, quartz \pm calcite stringers and masses and by numerous chloritic sutures which gives a pseudo-brecciated appearance.	7633	42.00	43.00	1.00			nil	
		42.70 - 43.70 43.65 - 43.70	Dark green, chloritic and very strongly foliated to schistose @ 40° tca and contains 10-15% very tight chlorite + sericite slips. Fault @ 40° tca; strong chlorite + sericite + mud break, 1.5 cm wide with narrow white quartz + calcite veinlets interstitial to slip planes.	7634	43.00	44.00	1.00			0.01	

HOLE: AK-90-22

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		43.70 - 45.30 Weakly-moderately foliated, moderately sericitic with 5-10% wispy and spotty sericite throughout.	7635	44.00	45.00	1.00			0.01	
45.30	58.80	COARSE, HETEROLITHIC LAPILLI-TUFF Upper contact is marked by a 0.5 cm quartz + chlorite vein @ 15° tca; light pale brown, with 15% coarse, angular to sub-rounded, multi-coloured trachyte clasts up to 5 cm (avg. 1-2 cm), in a very fine grained, pale brown, moderately sericitic matrix; non-magnetic; lower contact is strongly faulted, rubbly core.								
		 56.50 - 58.80 Becomes increasingly deformed and sericitized and cut by 1% barren white irregular quartz veinlets and masses. 57.35 Fault @ 40° tca; 1 cm, white, barren quartz vein on sharp chloritic slips. 	7524	58.00	58.80	0.80		Seriticized Lapilli Tuff	0.01	
58.80	59.40	FAULT ZONE Fault zone $@50^{\circ}$ tca; strongly deformed sericite schist with strong, talcose slip planes throughout, and 1-2% irregular white quartz veinlets; quite rubbly with approximately 65% recovery.	7525	58.80	59.40	0.60	65	Sericite / Talc Schist, fault zone	nil	
59.40	71.65	 ASH-TUFF Massive to well foliated dark grey-green; mottled brown where unit displays diffuse, patchy sericite alteration fronts; tuff is fine grained, with 10%, <= 1 mm, black lithic clasts in a pale to dark green aphanitic groundmass; contains 5% wispy, spotty sericite alteration; minor, intercalated lapilli-tuff horizons up to 0.5 metres wide. 61.00 Fault @ 20° tca; tight chloritic slip with a 2-3 mm wide white quartz veinlet and 2-3 cm of buff-brown sericite alteration on wall rock. 	7526 7527 7528 7529 7530 7531 7532	59.40 60.00 60.90 61.30 62.00 63.00 64.00	60.00 60.90 61.30 62.00 63.00 64.00 65.00	0.60 0.90 0.40 0.70 1.00 1.00 1.00		Ash Tuff Fault	0.01 nil 0.01 nil 0.04 nil nil	0.09

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INTERVAL		DESCRIPTION		SAMPLE							ASSAYS		
FROM	то			No.	FROM	ТО	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M	
		65.30 - 65.50	Fault zone @ 35° tca; highly foliated to schistose zone with strong sericite mud break and minor narrow (1-2 mm) brecciated quartz stringers.	7533 7534	65.00 66.00	66.00 67.00	1.00 1.00	95	Numerous strong mud breaks	0.02 0.01			
		65.80 - 65.90	Fault @ 40° tca; very strong mud break with 1-2 cm white-pink quartz vein with numerous chloritic sutures.										
		67.00 - 67.30	Fault zone, moderately deformed, sericitized, with 2% white brecciated quartz masses with dark green, chloritic interstitial material; contacts are tight sericitic slips @ 45° tca.	7535 7536 7537 7538	67.00 67.50 68.00 69.00	67.50 68.00 69.00 70.00	0.50 0.50 1.00 1.00			0.01 0.02 nil nil		Ĩ	
		70.40 - 70.50	Fault @ 35° tca; strong sericite + talc slip planes and schists with 1 cm wide white-pink quartz vein.	7539 7540	70.00 71.00	71.00 71.65	1.00 0.65	70	Rubbly core near contact with Lapilli Tuff	nil 0.01	nil		
71.65	114.00	LAPILLI-TUFF Massive to strongly foliated, buff-brown to dark green, with 10% angular trachyte clasts up to 2 cm (avg. 0.5 cm); moderately to strongly sericitized and cut by numerous late, cross-faults.											
		72.00	Fault @ 25° tca; sharp, tight chlorite slip with 1-2 mm white-pink quartz veinlet.	7541 7542 7543	71.65 72.75 73.00	72.75 73.00 73.50	1.10 0.25 0.50		Foliated Lapilli Tuff	nil nil nil			
		73.50 - 74.30	Rubbly, broken core; strongly foliated tuff with numerous strong chlorite + sericite \pm talc slip planes throughout.	7544 7545 7546	73.50 74.50 75.50	74.50 75.50 76.50	1.00 1.00 1.00	60	Rubbly, broken, shear zone	0.01 0.01 0.01			
		76.00	Fault @ 40° tca; strong sericite + chlorite + talc shear with 1 cm white-pink quartz vein.	7547	76.50	77.50	1.00			0 .01			
		77.00 - 86.50	Massive, less deformed with only patchy zones of sericite alteration proximal to tight cross-faults.	7548 7549 7550 7551	77.50 78.50 79.50 80.50	78.50 79.50 80.50 81.50	1.00 1.00 1.00 1.00			0.01 0.02 0.05 0.03			

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INTERVAL		DESCRIPTION		SAMPLE							ASSAYS		
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M		
		82.00 - 82.20	Fault @ 27° tca; strong mud break with minor late white-brown quartz \pm ankerite vein, 2-3 mm wide.	7552 7553 7554	81.50 82.50 83.00	82.50 83.00 84.00	1.00 0.50 1.00			0.35 0.02 0.01	0.48		
		86.50 - 88.80	Dirty grey-brown, quite soft (sericitic); micro-fractured by numerous	7555 7556 7557 7558	84.00 85.00 86.00 86.50	85.00 86.00 86.50 87.50	1.00 1.00 0.50 1.00			0.01 nil 0.01 0.01	0.01		
			chlorite ± quartz stringers up to 1 mm wide.	7559 7560 7561 7562	87.50 88.00 89.00	88.00 89.00 90.00	0.50 1.00 1.00			nil nil nil			
		92 40 - 92 70	Series of broken fragmented white buff to nink quartz breccia veins	7563 7564 7565	91.00 92.00 92.40	92.00 92.40 92.40	1.00 1.00 0.40 0.50		Quartz breccia veins	nil nil			
		93.70 - 93.85	up to 2 cm, cemented by dark green chloritic groundmass. Well laminated to schistose, with 1 cm wide pseudo-brecciated quartz vein, rehealed by sericite + pyrite stringers; 1% disseminated	7566 7567	92.90 93.60	93.60 94.00	0.70 0.40		Laminated to schistose zone with 1% pyrite	0.01 0.37	0.35		
			pyrite.	7568	94.00	94.95	0.95		Foliated Lapilli Tuff - minor	0.09			
		95.00 - 95.15 96.50 - 114.00	Fault @ 15° tca; 3 mm wide chlorite breccia slip sub-parallel to core axis. Massive, undeformed heterolithic lapilli- tuff with 1% late, barren irregular while quarta veinlets: local zones of hematization	7569 7570 7571	94.95 95.50 96.00	95.50 96.00 96.50	0.55 0.50 0.50		Foliated Tuff, moderately sericitic	0.01 0.01 0.01			
1		114.00	Fault @ 70° tca; strong, tight (0.5 cm) mud break with gravelly fault gouge.	7572 7573	112.00 113.00	113.00 114.00	1.00 1.00			0.01 0.01			
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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	TO		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
114.00	147.90	ALTERED, DEFORMED LAPILLI-TUFF - PYRITE ZONE Moderately to strongly deformed, altered (sericitic) and cut by numerous chlorite, sericite, sericite + pyrite \pm quartz stringer veinlets and fault slips which locally give rubbly broken core.				<u></u>				
		114.00 - 117.00 Moderately well foliated (@ 50° tca) lapilli- tuff with strongly sericitized matrix; 1-2% barren, white irregular quartz veinlets with no pyrite.	7574	114.00	114.85	0.85		Sericitized, deformed Lapilli Tuff	0.02	
		114.90 - 115.05 Grey-blue silicified zone with 1-2% very fine disseminated pyrite.	7575 7576 7577 7578	114.85 115.30 116.00 116.50	115.30 116.00 116.50 117.00	0.45 0.70 0.50 0.50		Silicified zone with 1 - 2% pyrite	0.02 0.01 0.01 0.01	
		 117.00 - 117.80 Strongly foliated and sericitic, cut by numerous sharp, dark grey slips which appear to be sericite + finely smeared pyrite ± molybdenite (?); 2-3% disseminated and wormy pyrite. 117.80 - 118.50 Moderately deformed, strongly sericitic, with 0.5% finely discussion of the sericite of the seric	7579 7580	117.00 118.00	118.00 118.50	1.00 0.50		Sericitized Tuff with 2 - 3% pyrite	0.01 0.01	
		118.50 - 118.65 Strong tight (2 mm) dark grey mud break with sericite + smeared pyrite @ 70° tca, 2% total pyrite.	7581	118.50	119.00	0.50		Sericitized Tuff with strong mud break and 0.5 - 2% pyrite	0.01	0.01
		118.90 Fault @ 30° tca; strong, tight mud break with blue-grey smeared sulphides.	7582	119.00	119.50	0.50			0.01	
		119.55 - 120.00 Strongly deformed and sericitized tuff with a very strong, tight blue- grey mud slip @ 15° tca; this break appears to be sericite & pyrite	7583	119.50	120.00	0.50	85	3 - 5% pyrite with strong mud break	0.01	
	1	± molybdenite; 0.5 cm grey-white quartz vein parallel to slip, fractured by narrow sericite + pyrite sutures; 3-5% pyrite.	7584	120.00	120.90	0. 90	90	Sericitized Tuff with 1% quartz and 0.5% disseminated pyrite	0.01	
		120.90 - 121.20 Strongly deformed with 5% pyrite and strong, blue-grey sericite + pyrite slips @ 45° and 10° tca; 0.5 cm wide buff-white quartz vein	7585	120.90	121.20	0.30		5% pyrite in strongly deformed Tuff	0.01	
		with 2-3% wormy, dendritic pyrite.	7586	121.20	122.20	1.00		Sericitized Tuff with $< 0.5 \%$	0.01	
			7587	122.20	122.90	0.70		Sericitic Lapilli Tuff	0.01	

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INTEF	RVAL	DESCRIPTION					SAN	(PI E		ASSAVS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 122.90 - 123.50 Blue-grey irregular silicified zones with brecciated wall rock fragments to 0.5 cm, with 2-3% very finely disseminated pyrite. 123.40 2 mm wide sericite + pyrite + talc schist @ 30° tca. 	7588	122.90	123.50	0.60	95	2 - 3% pyrite in blue gray silicified zones in strongly deformed Tuff	0.06	0.04
		123.50 - 124.30 Strongly foliated to schistose to laminated (sericite + chlorite + quartz) zone with numerous blue-grey slips and irregular white	7589	123.50	124.30	0.80	95	Foliated to schistose zone with 2% pyrite	0.01	
		quartz veins; 2% total pyrite as disseminations and pyritic veinlets (sutures).	7590	124.30	124.75	0.45			0.01	
		124.75 - 127.50 Strongly deformed and rubbly with 70-80% total recovery due to very high abundance of strong sericite ± talc ± fuchsite ± quartz	7591	124.75	126.00	1.25	70	Rubbly core, sericite schist, 2%	0.01	
		schists throughout this section; sericite schist contains 5-10% white to blue-grey quartz veinlets and 3-5% disseminated pyrite.	7592	126.00	126.50	0.50	80	Strong sericite + quartz schist, 5% pyrite	0.01	
			7593	126.50	127.50	1.00	70	Rubbly, busted, ground core with 2 - 3% pyrite and 3% blue-white	0.01	
		 127.50 - 128.30 Less strongly deformed, primary textures still evident, but contains some tightly confined pyritic, silicified zones. 127.70 2-3 cm wide dark grey silicified zone with 3-5% disseminated pyrite. 	7594	127.50	128.00	0.50		quartz veining Sericitized Lapilli Tuff with pyritic silicified zones, 3 - 5% pyrite	0.01	
		128.15 - 128.30 Fractured, grey-white silicified zone with 2-3% disseminated pyrite. 128.30 - 129.30 Massive to moderately foliated, moderately sericitized lapilli-tuff with approximately 0.5% stringer pyrite.	7595 7596	128.00 128.30	128.30 129.30	0.30 1.00		17	0.01 0.01	
		129.30 - 135.80 Dark grey silicified zone; primary texture of lapilli tuff maintained locally; however, matrix is light grey, very hard and notably silicified with 1-3% disseminated pyrite; leading edge of this zone is a very sharp hairline pyrite + sericite suture; 2-3% irregular white quartz masses and blebs throughout.	7597 7598 7599 7600 7601 7602 7603 7604	129.30 130.00 130.85 131.80 132.50 133.00 134.00 134.00	130.00 130.85 131.80 132.50 133.00 134.00 134.80 135.50	0.70 0.85 0.95 0.70 0.50 1.00 0.80 0.70		Silicified Tuff with 2% pyrite Moderately silicified with 1 - 2% pyrite Silicified zone with 2 - 3% pyrite	0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.01
				107.00	100.00	0.70			0.02	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО		No.	FROM	ТО	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		135.80 - 138.15 Highly foliated (@ 50° tca) sericitized lapilli-tuff with 10-15% heterolithic clasts (including some jasper) up to 1 cm (avg. 0.4 cm) buff-brown to grey to fuchsitic altered; matrix is light green, very fine gained with $\leq = 0.5\%$ disseminated partie: minor dark grey	7605 7606	135.50 136.00	136.00 136.50	0.50 0.50	<u></u>	Sericitized Tuff with 1% disseminated pyrite and pyrite +	0.01 0.01	<u></u>
		pyrite + quartz zones up to 3 cm wide centred on a sharp sericite + pyrite slip.	7607 7608	136.50 137.35	137.35 138.15	0.85 0.80		Sericitized Tuff with 0.5% pyrite Sericitic Tuff with quartz + pyrite zones @ 137.80 m (3 cm wide)	nil 0.01	
		138.15 - 138.45 Silicified zone of dark grey to white siliceous matrix which is fractured and pseudo-brecciated by numerous <= 0.5 mm pyrite + sericite sutures; contacts are sharp, strong, dark grey, sericite + pyrite + molybdenite slips @ 35° toa: 3.5% total pyrite	7609	138.15	138.45	0.30		Silicified zone with 3 - 5% pyrite	0.02	0.02
		 138.45 - 140.07 Dark grey-blue, moderately silicified, quite hard, with local sericitic, light green sections up to 10 cm wide; silicified sections carry 1-2% disseminated pyrite and 3-5% barren, white quartz veinlets. 140.70 Sharn chlorite + quartz slip @ 60 tca 	7610 7611 7612	138.45 139.00 140.00	139.00 140.00 140.70	0.55 1.00 0.70			0.01 0.01 0.01	
		140.70 - 142.10 Light grey, very fine grained tuff with faint pyrite bands (bedding), 0.5 mm wide at 10°-15° tca, and spaced 0.1-1 cm apart; matrix contains 0.5% disseminated pyrite; lower contact is truncated by a	7613	140.70	141.40	0.70		Ash Tuff with banded pyrite beds? and 0.5% disseminated pyrite	0.02	
		142.10 · 143.40 Massive, dark grey, fine grained tuff with weak spotty sericite	7614	141.40	142.10	0.70			0.01	
		alteration and << 0.5% pyrite; weakly silicified. 143.40 Sharp, dark grey, sericite + pyrite slip @ 40° tca.	7616	142.60	143.40	0.80			0.02	
		143.40 - 145.45 Dark grey-white strongly silicified zone; matrix is fine grained grey- white very hard and contains 1-2% disseminated pyrite; 3-5% white,	7617	143.40	144.00	0.60		Highly silicified zone with 3 - 4%	0.01	0.02
		massive to brecciated quartz veins up to 5-6 cm; relict lapilli tuff is still evident locally.	7618 7619 7620	144.00 144.50 145.00	144.50 145.00 145.45	0.50 0.50 0.45		Silicified zone, 2 - 3% pyrite	0.02 0.02 0.01	

HOLE: AK-90-22

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INTEF	RVAL	DESCRIPTION					SAM	PLE		ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		145.45 - 146.60 Quartz breccia-fault zone; very strongly deformed section comprised of 25% sharp strong sericite + pyrite ± talc slip planes @ 20°-60° tca; matrix is grey-white, silicified, and carries 3-5% disseminated pyrite; 25% late white-buff quartz veins up to 4 cm, fractured to brecciated and intruded by irregular sericite + pyrite sutures; prominent shearing at 50° tca	7621 7622	145.45 146.00	146.00 146.60	0.55 0.60		Quartz breccia zone, 3 - 5% pyrite	0.01 0.01		
		 146.60 - 147.90 Moderately silicified, light to dark grey matrix with 1-2% disseminated and wispy pyrite along sericitic sutures; some primary lapilli clasts are evident, some of which are fuchsitic. 147.70 - 147.90 Series of strong, sharp sericite + chlorite + talc slip planes @ 40° tca with some smeared pyrite; interstitial, very irregular, fractured white-buff quartz veins. 	7623 7624	146.60 147.40	147.40 148.00	0.80 0.60		Moderately silicified Tuff with 1 - 2% disseminated pyrite	0.02 0.01		
147.90	155.30	MIXED LAPILLI-TUFF / GRAYWACKE Massive to well foliated, light to dark green, with 5-15% trachyte clasts, up to 1 cm, in a fine grained ash/graywacke matrix, which locally contains up to 3-5% quartz; within this lapilli-tuff is the occasional (1-2%) well rounded pebble and jasper clast, which are typically considered to be sedimentary; matrix has patchy, mottled, sericite alteration and spotty sericite throughout. E.O.H.	7625 7626 7627 7628 7629 7630 7631 7632	148.00 149.00 150.00 151.00 152.00 153.00 154.00 154.50	149.00 150.00 151.00 152.00 153.00 154.00 154.50 155.30	1.00 1.00 1.00 1.00 1.00 1.00 0.50 0.80		Massive, moderately sericitized Lapilli Tuff / Graywacke	0.01 nil nil nil nil nil nil		

HOLE: AK-90-23

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland DATE LOGGED November 26 1990 EASTING 8250.00 M. Masson NORTHING 10145.00 LOGGED BY Collar 341 55 ELEVATION TOWNSHIP Teck SIGNED BY Health & Sherwood 38.00 55 LENGTH CLAIM No. L 491663 DRILLED BY 191.70 76.00 55 STARTED November 21, 1990 UNITS SURVEYED BY metres 54 114.00 COMPLETED November 25, 1990 K.L. Warehouse **CORE SIZE** CORE LOCATION NQ 54 152.00 To undercut hole AK-90-07 PURPOSE COMMENTS The '102' structure was 50 190.00 intersected at 129.70 - 168.00m

	SUMMA		ASSA	Y SUMMARY	č	
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
0.00 1.20 1.20 22.50 22.50 23.15 23.15 37.00 37.00 75.70 90.70 104.50 104.50 114.40 118.70 122.60 129.70 131.10 131.10 191.70	CASING LAPILLI TUFF FAULT ZONE @ 30° tca LAPILLI / ASH TUFF Hematitic, sericitic LAPILLI TUFF COARSE LAPILLI TUFF LAPILLI TUFF COARSE LAPILLI TUFF LAPILLI / ASH TUFF LAPILLI / ASH TUFF LAPILLI / ASH TUFF FAULT ZONE @ 50° tca GRAYWACKE 131.10 - 168.00 Sericitic, 2 - 3% chlorite + quartz veinlets, 0.5% pyrite 141.85 - 142.10 Fault @ 30° tca, 3 cm quartz vein, trace chalcopyrite	191.70	 157.45 - 157.52 3 cm quartz - pyrite vein @ 60° tca, 2 - 3% pyrite 168.00 - 185.65 Weakly sericitic, 0.5% white quartz veining with trace pyrite 185.65 - 191.70 Very weakly sericitic E.O.H. 	141.85 142.35	0.50	0.19

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	1.20	OVERBURDE	N /CASING DRIVEN TO 4.0 M								
1.20	22.50	LAPILLI-TUFI Massive, dark pink, fine grain fine grained asl 0.5 mm in an a quartz ± calcit	grey-green, with 5-20% angular, heterolithic, buff-brown to grey to ed to spotted trachyte clasts, up to 2 cm (avg. 1 cm), in a dark green, a matrix of 30% lithic clasts (including some very minor jasper) up to phanitic groundmass; moderately magnetic; cut by 1-2% white-pink e veinlets up to 0.5 cm.								
		7.15	Fault @ 50° tca; highly foliated zone with moderate ankerite staining, and tight chlorite slips.								
22.50	23.15	FAULT ZONE Fault zone @ 2 white-pink qua	30° tca; upper contact is a sharp chlorite + sericite slip with 0.5 cm rtz + calcite veinlet.								
		22.70 22.70 - 23.15	Strong fault breccia and mud gouge within highly sericitized and foliated tuff. Strongly foliated and sericitized with weak ankerite staining and late pink quartz veining; lower contact is a sharp, tight sericite slip.								
23.15	37.00	LAPILLI-TUFI Intercalated, r gradational con purple) with in green), genera veinlets.	F / ASH TUFF nassive ash- and lapilli-tuff beds up to 1.5 metres wide, with ntacts; distinctive section, predominantly hematitic (red-brown to regular, patchy zones of sericitized matrix (light brown to yellow- lly proximal to tight faults and late quartz \pm calcite \pm chlorite								
		25.20	Fault @ 30° tca: sericite + chlorite + quartz; 0.5 cm laminated, quartz + sericite + chlorite vein on sharp chlorite + sericite slip.								

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au*M
		 27.27 - 27.70 Fault @ 10° tca; 103 cm, barren, white-buff to pink quartz vein on sharp chlorite + sericite slip running sub-parallel tca. 33.00 - 34.00 Moderate sericite alteration of framework while matrix is predominantly hematitic; lower contact of alteration is very gradational. 								
37.00	75.70	LAPILLI-TUFF Massive, dark, grey-green to red-brown where hematitic, with 5-15% angular, predominantly light grey to pink, fine grained to spotted trachytic clasts, up to 2 cm (avg. 1 cm), in a fine grained, dark grey-green to purple ash matrix of 20%, $<+$ 0.5 mm lithic clasts in an aphanitic groundmass; moderately magnetic; cut by 1-2% late, white-pink quartz ± calcite veinlets up to 1 cm.								
		 40.80 - 41.20 Fault @ 10° tca; 2 cm laminated quartz + sericite + chlorite veinlet on a sharp, irregular chlorite + sericite slip sub-parallel to core axis; wall rock weakly to moderately sericitized. 56.20 - 56.30 Fault @ 25° tca: sericite + chlorite + quartz; contacts are sharp tight chlorite + sericitic ± mud gouge slips; interstitial to slip planes are sericitized lapilli-tuffs with 25% irregular white-pink quartz veinlets and masses. 61.00 Intercalated, minor ash-tuff beds up to 1.5 metres wide, with occasional good bedding @ 30°-35° tca. 75.70 Fault @ 40° tca; sharp (1 mm) chlorite + sericite slip with a 0.5 mm white-pink, quartz + chlorite veinlet. 								
75.70	90.70	COARSE HETEROLITHIC LAPILLI-TUFF Massive, dark grey-green, with 25% coarse angular to sub-rounded, red-brown to pink to grey to black, fine grained to porphyritic trachyte clasts, up to 10 cm (avg 3-5 cm); matrix is dark grey-green, fine grained of 15-20%, <= 1 mm heterolithic clasts in an aphanitic groundmass; locally strongly magnetic; lower contact is								

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		gradational. 89.35 Fault @ 55° (ca: sharp chloritic slip with 0.5 mm quartz veiplet								
		87.35 - 89.85 Moderately sericitized, with 15% wispy and spotty sericite.								
90.70	104.50	LAPILLI-TUFF Massive, dark grey-green, with 5-15% angular, light grey to buff to green trachyte clasts, up to 3 cm (avg. 1 cm); matrix is fine to very fine grained of 10-15% lithic clasts (including minor jasper) in an aphanitic, grey-white, groundmass; moderately magnetic; lower contact gradational.								
104.50	114.40	COARSE, HETEROLITHIC LAPILLI-TUFF Massive, dark green with 15-25% coarse, angular to well rounded trachyte clasts, up to 7 cm (avg. 5 cm), in a very fine grained, dark green matrix; ,this unit appears quite similar to conglomerate, but no quartz is visible in the matrix and all the clasts, although variable in colour and texture, appear to be trachyte; locally strongly magnetic; gradational contacts.	7636	114.00	114.50	0.50		Massive, coarse Lapilli Tuff	0.01	
114.40	118.70	LAPILLI-TUFF / ASH-TUFF Massive, dark grey to green, intercalated ash- and lapilli-tuff beds up to 1.5 metres wide with both sharp and gradational contacts; ash-tuff beds are massive to weakly laminated @ 50° tca and display irregular light brown, mottled texture due to diffuse sericite alteration fronts proximal to late white quartz veinlets up to 0.5 cm wide.								
		115.75 - 115.90 Series of irregular quartz + chlorite veinlets up to 0.5 cm wide with pink-brown soft mineral (altered feldspar?) and minor blebby chalcopyrite.	7637 7638 7639 7640 7641	114.50 115.00 116.00 117.00 118.00	115.00 116.00 117.00 118.00	0.50 1.00 1.00 1.00 0.70		Ash Tuff with weak sericite	0.03 0.04 0.03 0.01 0.03	
			7642	118.70	119.40	0.70		bleaching	0.05	0.03

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INTE	RVAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
118.70	122.60	HETEROLITHIC LAPILLI-TUFF Massive to moderately well foliated, with 15% angular to sub-rounded, buff-brown to pink to grey, fine grained to spotted trachyte clasts, up to 3 cm (avg. 1 cm); matrix is a dark green, chloritic and very fine grained ash-tuff.								
		119.70 - 120.35 Fault zone @ 20° tca; very irregular, chlorite + sericite slips @ 20° tca with 15% white-pink quartz veinlets parallel to slip planes and 5% extensional ladder veinlets @ 90° to slips; host rock is strongly sericitized and cut by numerous quartz + chlorite, <= 1 mm veinlets.	7643 7644	119.40 120.35	120.35 121.00	0.95 0.65		Sericitic fault zone Foliated Lapilli Tuff	0.02 0.03	
		121.10 - 121.55 Fault zone @ 25° tca; contacts are sharp sericite slips; interstitial material is comprised of 25% white to buff quartz veinlets and	7645	121.00	121.60	0.60		Sericitic fault zone with 25% quartz	0.02	
		irregular masses within highly sericitized lapilli-tuff. 122.00 - 122.60 Moderately to strongly foliated @ 20°-25° tca; moderately sericitized with 10-15% wispy and spotty sericite.	7646 7647	121.60 122.00	122.00 122.60	0.40 0.60		Massive Lapilli Tuff Foliated Tuff	0.01 0.01	
122.60	129.70	ASH-TUFF Massive to moderately well bedded, very fine grained, well sorted, light grey-green; very strongly magnetic with 5%, < 0.5 mm black magnetite disseminated throughout a grey-white, aphanitic ground mass; bedding @ 10°-15° tca; unit is also intercalated with minor lapilli-tuff beds up to 50 cm wide.	7648 7649 7650 7651 7652 7653 7654 7655	122.60 123.20 124.00 125.00 126.00 127.00 128.00 129.00	123.20 124.00 125.00 126.00 127.00 128.00 129.00 129.70	0.60 0.80 1.00 1.00 1.00 1.00 1.00 0.70		Ash Tuff with 5% magnetite	0.01 0.01 0.02 0.01 0.01 0.04 0.01 0.01	0.02

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INTERVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM TO		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
129.70 131.10	FAULT ZONE Fault zone @ 50° tca: sericite + chlorite + quartz ± gouge; leading contact of zone is a strong sharp mud break approximately 1 mm wide.								
	129.70 - 130.15 Strongly foliated to schistose zone of predominantly sericite + chlorite with 5% boudinaged quartz veinlets up to 0.5 cm wide.	7656	129.70	130.15	0.45		Sericitized fault zone	0.02	
	130.13 - 130.70 Light pink-brown, possible sincined (very nard) asn-tun? 130.70 - 131.10 Moderately to strongly foliated, with 15-20% wispy and spotty sericite throughout, and 3% boudinaged quartz veinlets.	7657 7658	130.15	130.70	0.55		shcined ? zone	0.01 0.02	0.03
131.10 168.00	 GRAYWACKE Massive, moderately well sorted, light grey-green, with 30% fine lithics, including jasper, in a grey-white groundmass of quartz + feldspar in roughly equal proportion and 3-5% pervasive, spotty sericite; as a whole this unit contains 1-2% light green, aphanitic mudstone clasts up to 5 cm randomly scattered throughout; characteristically weak to non-magnetic; contains 0.5% pervasively disseminated pyrite, and 2-3% quartz ± chlorite veinlets, up to 2-3 cm. Pyrite mineralization in this unit is very limited and scattered, as 0.5 - 2 mm wide pyritic veinlets with no visible preferred orientation. (<0.5% of total unit); the numerous 1-3 mm chlorite ± quartz veinlets throughout locally produce a pseudo-brecciated, "crack and seal" texture. 141.85 - 142.10 Fault @ 30° tca; leading contact is a sharp chlorite slip, weakly talcose; 3 cm wide white quartz vein with chloritic walls and minor sericitized wall rock clasts, as well as very minor, blebby chalcopyrite. 	7659 7660 7661 7663 7664 7665 7666 7667 7668 7669 7670 7671 7672 7673 7674 7675 7676 7676	131.20 132.00 133.00 133.50 134.50 135.50 136.50 137.50 138.00 139.00 140.00 141.00 141.85 142.35 143.00 144.00 145.00 146.00 147.00	132.00 133.00 134.50 135.50 135.50 137.50 138.00 139.00 140.00 141.00 141.85 142.35 143.00 144.00 145.00 145.00 148.00	0.80 1.00 0.50 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.50 1.00 0.50 1.00 0.65 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00		Massive Graywacke Fault zone with 3 cm quartz vein	0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.01	0.18

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		148.10 - 148.40 148.35	< 1 mm wide, <= 1% pyritic stringers. 1 mm wide chlorite \pm quartz slip @ 60° tca with a 2 mm wide	7678	148.00	148.50	0.50		Graywacke with 5% white quartz veining and 1% stringer pyrite	0.02	
		150.05 - 150.30	pyrite veinlet @ slip contact. Series of barren white quartz veins 1-3 cm wide within moderately	7679 7680 7681	148.50 149.00 150.00	149.00 150.00 150.50	0.50 1.00 0.50			0.02 0.04 0.02	0.01
		152 35 . 152 60	sericitic graywacke.	7682 7683 7684	150.50 151.50 152.30	151.50 152.30	1.00 0.80 0.40		Quartz breccia vein	0.02 0.03 0.02	
		152.35 - 152.00	angular wall rock fragments, as well as wall rock fragments in a dark green chlorite groundmass.	7685	152.70 153.50	153.50	0.80			0.02	
				7687 7688 7689	154.00 155.00 156.00	155.00 156.00 157.00	1.00 1.00 1.00			0.02 0.04 nil	
		157.45 - 157.52	3 cm wide white to grey quartz vein $@60^\circ$ tca, centred on a sharp sericite slip, with 2-3% sub-euhedral pyrite.	7690 7691 7692	157.00 157.40 157.80	157.40 157.80 158.50	0.40 0.40 0.70		Quartz + pyrite vein	0.02 0.03 0.02	
		157.52 - 157.80	Sericitic with 0.5% disseminated pyrite.	7693 7694 7695	158.50 159.00	159.00 160.00	0.50			0.03	0.03
				7696	161.00 161.60	161.60 162.10	0.60			0.02	0.04
2 - -				7698 7699 7700	162.10 163.00 163.85	163.00 163.85 164.35	0.90 0.85 0.50			0.02 0.02 0.02	
				7701 7702 7703	164.35 165.00 166.00	165.00 166.00 167.00) 0.65) 1.00) 1.00			0.02 0.02 0.02	
				7704	167.00	168.00) 1.00			0.03	
	1										

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
168.00	185.65	GRAYWACKE Weakly sericitic, with 0.5% white quartz veins with trace pyrite along vein contacts; local chlorite + pyrite filled fractures.	7705 7706 7707 7708 7709 7710 7711 7712 7713 7714 7715 7716 7717 7718 7719 7720 7721	168.00 169.00 170.00 171.00 172.00 173.00 174.00 175.00 176.00 176.00 176.00 177.00 178.00 179.00 180.00 181.00 181.00 183.00 183.00	169.00 171.00 172.00 173.00 173.00 175.00 175.00 177.00 176.00 177.00 178.00 179.00 180.00 181.00 181.00 182.00 183.00 183.00	1.00 1.00		Graywacke with 3 - 4 % pyritic stringers up to 1 mm wide	0.04 0.02 0.03 0.02 nil 0.02 0.03 0.03 nil 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.02	0.02
185.65	191.70	GRAYWACKE Massive with no quartz veining or pyrite mineralization; very weakly sericitic.	7722 7723 7724 7725 7726 7727 7728	185.00 186.00 187.00 188.00 189.00 190.00 191.00	186.00 187.00 188.00 189.00 190.00 191.00 191.70	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.100 0.70			0.01 0.02 0.03 0.02 0.02 0.02 0.02	0.05

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
	191.70	Е.О.Н.				had alor tarra				

HOLE: AK-90-24

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland DATE LOGGED Nov. 27-28 1990 EASTING 8190.00 M. Masson -NORTHING LOGGED BY 10140.00 Collar 341 55 TOWNSHIP Teck **ELEVATION** SIGNED BY 52 38.00 55 CLAIM No. L 491663 Heath & Sherwood LENGTH DRILLED BY 151.00 76.00 54 STARTED November 25, 1990 UNITS SURVEYED BY metres 53 114.00 COMPLETED November 27, 1990 K.L. Warehouse **CORE SIZE CORE LOCATION** NQ To undercut hole AK-90-08 52 151.00 PURPOSE COMMENTS The 102 - 8170 gold zone was intersected at 136.25 - 140.00m

	SUMMA	RY LOG		ASSA	Y SUMMARY	ł
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
0.00 1.20 1.20 36.10 36.10 64.15 64.15 126.75 126.75 136.25 136.25 136.50 136.50 151.00	CASING COARSE LAPILLI TUFF LAPILLI TUFF 47.80 - 49.60 Fault @ 0 - 10° tca 53.70 - 56.70 Fault @ 0 - 10° tca COARSE LAPILLI TUFF 92.20 - 92.35 Silicified zone 96.50 - 96.70 2 - 3% pyrite in brecciated quartz calcite zone SERICITIC LAPILLI TUFF FAULT ZONE @ 40° tca GRAYWACKE 136.50 - 143.00 Moderately to weakly sericitic, 1 - 2% 0.1 to 4 cm white quartz			136.25 140.00 including 136.25 138.50 and 138.50 140.00	3.75 2.25 1.50	2.74 0.34 6.35
151.00	veins, 0.5% pyrite along vein contacts 143.00 - 151.00 Weakly sericitic E.O.H.					

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	1.20	OVERBURDEN - CASING DRIVEN TO 4.0 M								
1.20 36.10	36.10 64.15	COARSE, MONOLITHIC LAPILLI-TUFF Very recognizable unit which is massive, dark green to dark purple (hematitic) and comprised of 5-25% coarse, angular to sub-rounded red-pink trachyte clasts up to 7 cm (avg. 1-3 cm), in a fine grained lithic / ash tuff matrix; matrix of 15-25% lithic clasts (predominantly pink-red), up to 1 mm, in an aphanitic groundmass; the pink- red clasts are fine grained to porphyritic and form 75% of the clasts in the framework and matrix; moderately to strongly magnetic; cut by 1-2% late, barren, pink quartz \pm calcite veins up to 3-4 cm wide; lower contact of unit is quite gradational from 31.50 - 36.10 m. 11.60 - 12.10 Rubbly core due to open chlorite + hematite slips @ 15° tca. HETEROLITHIC LAPILLI-TUFF Massive, dark grey-green , with 5-15% angular, heterolithic, trachytic clasts up to 3 cm (avg. 1 cm), variable in colour and texture, in a very fine grained dark green-grey matrix; intercalated very fine ash-tuff horizons, <= 0.5 metres wide, well bedded @ 20° tca, but with irregular convoluted contacts with lapilli-tuff horizons; moderately magnetic.								
		 47.80 - 49.60 Fault @ 10°-15° tca; sericite + chlorite + quartz + calcite; very highly deformed, schistose zone comprised of 75% wispy and spotty sericite and tight chloritic slips with 25% irregular white-pink quartz + calcite ± chlorite veinlets throughout; contacts are strong, sharp sericite slips with minor mud gouge and talc. 53.70 - 56.70 Fault @ 0°-10° tca; as above. 56.70 - 63.00 Hematized dark red-purple. 63.00 - 64.15 Series of low angle (10°-15° tca), tight chloritic slips with narrow pink quartz + calcite veinlets. 	7729 7730 7731 7732 7733	46.00 47.00 47.80 48.80 49.70	47.00 47.80 48.80 49.70 50.50	1.00 0.80 1.00 0.90 0.80		Cross fault	0.01 nil nil nil nil	

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INTE	RVAL		DESCRIPTION					SAM	IPLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check	Au*M
64.15	126.75	COARSE, HET Dark grey-gree clasts up to 10 c very variable fro looks very muc framework is tr 85.90 - 86.95 86.95 - 110.00 92.20 - 92.35 96.50 - 96.70	 EROLITHIC LAPILLI-TUFF n, massive, with 10-20% coarse, angular to sub-rounded, trachyte cm (avg. 2-3 cm) in a fine grained, dark grey-green matrix; clasts are om dark grey- green to pink to brown, but all appear to be trachyte; th like a conglomerate, but matrix contains no visible quartz, and achyte; locally moderately magnetic. Fault zone @ 35°-40° tca: chlorite + sericite + fault gouge; strong mud break centred @ 86.50 - 86.60 m with strong fault gouge; surrounding unit is strongly foliated to schistose (sericite + chlorite) with minor boudinaged quartz veinlets. 1-2% multiple quartz ± calcite veinlets up to 1 cm wide (2-3 generation), generally barren, but may contain minor chalcopyrite in places. Light grey-brown, very fine grained silicified zone with very gradual diffuse contacts; little to no visible sulphides. Pyritic zone, 2-3 cm wide, bleached (grey-white) with 2-3% disseminated pyrite in a grey-white quartz + calcite groundmass on the up hole side of a 1 cm quartz breccia vein with included wall rock fragments which have 1-2% pyrite; down hole side of quartz vein is a bleached (grey-white) tuff with pyritic stringers and blebs; very little disseminated pyrite; this zone appears to be coincidental with a contact between coarse lapilli-tuff and a finer ash-flapilli-tuff 	7734 7735 7736 7737 7738 7739 7740 7741 7742 7743 7744 7745 7746 7747 7748 7750 7752 7753	85.00 85.90 86.90 87.90 88.50 89.00 90.00 91.00 92.00 92.00 92.00 93.00 94.50 94.50 95.50 96.40 95.50 96.40 97.50 98.00 99.00 100.00	85.90 86.90 87.90 88.50 89.00 90.00 91.00 92.50 93.00 94.00 94.00 94.50 96.40 95.50 96.40 95.50 96.40 95.50 96.00 91.00	0.90 1.00 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 1.0	% Rec	Massive coarse Tuff Fault zone Massive Tuff Massive Lapilli Tuff with 1 - 2% quartz veinlets Silicified zone Sulphide zone with 2 - 3% pyrite + quartz breccia vein	Au, g/t 0.01 nil nil nil nil nil nil nil nil	0.01 0.03	Au [•] M
			horizon; lower contact of zone is very sharp, tight chloritic slip @ 55° tca.		10000		1.00			0.01		

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INTE	RVAL	DESCRIPTION					SAM	(PLE		ASSAVS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check Au*M
		 101.25 - 101.40 Fault @ 20° tca; tight sericite + chlorite slip with 1 -2 mm quartz + calcite veinlet; moderate sericitization of wall rock for 1 cm proximal to slip. 118.00 - 126.75 Predominantly hematitic, but with some patchy zones of diffuse sericitization proximal to veinlets. 	7754 7755 7756	101.00 124.00 125.00	102.00 125.00 126.00	1.00 1.00 1.00		Massive, coarse Lapilli Tuff	0.01 nil nil	
126.75	136.25	 SERICITIZED LAPILLI-TUFF Upper contact is marked by a strong tight sericitic slip @ 30° tca which has some minor euhedral pyrite on the slip face. 126.75 - 128.50 Dark green, with very irregular anastomosing, buff-brown sericitized bleaching which gives a strong mottled appearance. 128.50 - 136.25 Pervasively sericitized with upwards of 25-30% wispy and spotty sericite; relict lapilli clasts are still locally evident, because the zone is only moderately deformed. 	7757 7758 7759 7760 7761 7762 7763 7764 7765 7766 7767 7768	126.00 126.70 127.50 128.00 129.00 130.00 131.00 132.00 133.00 134.00 135.00	126.70 127.50 128.00 130.00 131.00 132.00 133.00 134.00 135.00 135.50 136.25	0.70 0.80 0.50 1.00 1.00 1.00 1.00 1.00 1.00 1.0		Sericitic Tuffs at fault contact	nil nil nil nil 0.01 nil 0.01 0.05 0.02 0.01	nil
136.25	136.50	FAULT ZONE Fault zone @ 40° tca; very strong mud break with brecciated quartz + chlorite veinlets up to 0.5 cm wide.	7769	136.25	136.50	0.25		Mud break	0.59	0.41

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INTE	RVAL	DESCRIPTION					SAM	PLE		ASSAYS
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
136.50	151.00	 GRAYWACKE Massive, light grey-green fine grained, moderately well sorted graywacke of 40% lithics (including jasper), 30% feldspar and 30% quartz; 1-3% pervasive, spotty sericite and 1% light green aphanitic, mudstone clasts up to 3-4 cm; weak to non-magnetic; pyrite mineralization as narrow, discreet veinlets up to 2 mm wide, pyritic boundaries on quartz veins and a <= 0.5% disseminated pyrite. 136.50 - 143.00 Moderately to weakly sericitic, hard silicified, brecciated; 3-5%, 0.1-1.5 cm wide white to grey quartz ± chlorite ± pyrite veinlets at 0° to 55° tca (avg. 20°); 0.5-1.0% pyrite along vein contacts and disseminated in graywacke adjacent to the veins. 136.50 - 137.00 3% chlorite ± quartz veinlets with no pyrite. 								
		136.50 - 137.00 3% chlorite \pm quartz veinlets with no pyrite. 137.10 - 137.25 0.3-1.0 cm grey quartz + chlorite + pyrite vein @ 15° to 0° to 55° tca; 5% quartz, 35% pyrite, 10% chlorite.	7770 7771	136.50 137.00	137.00 137.50	0.50 0.50		Graywacke with 0.5% pyrite Graywacke with narrow quartz + pyrite veins	0.20 0.61	
		 137.25 - 137.85 0.2-1.5 cm quartz + chlorite vein @ 5°-10° tca; 20% chlorite, 80% quartz, < 0.5% pyrite in chlorite along vein contacts. 137.90 - 138.20 Chlorite + grey quartz + calcite breccia zone @ 15°-20° tca with 1% disseminated pyrite. 	7772	137.50	138.50	1.00		Quartz + chlorite breccia + pyritic veinlet	0.24	
		 138.20 - 138.85 Fractured with 3% 1-2 mm quartz veinlets. 138.47 1.5 mm pyrite veinlet @ 70° tca. 138.82 - 139.00 0.2-1.0 cm blue grey quartz + ankerite vein @ 15°-20° tca; 3-5% disseminated pyrite in vein and 1% disseminated pyrite in wall rock over widths of 1.2 cm 	7773	138.50	139.00	0.50			7.44	5.63
		over widths of 1-2 cm. 139.00 - 139.50 0.1 to 0.5 cm quartz + carbonate vein @ 55°-65° tca with 0.5 pyrite: 1% finely disseminated pyrite in graywacke.		139.00	140.00	1.00			6.31	6.19
		139.50 - 143.30 1-2% white quartz + carbonate veinlets, 0.01 - 1.5 cm wide, with trace of pyrite.	7775 7776	140.00 141.00	141.00 141.50	1.00 0.50		Graywacke with < 0.5% pyrite +	0.05 0.03	
		141.35 - 141.40 1 cm white-buff quartz vein with pyritic margins up to 2 mm wide		141.50 142.00	142.00 143.00) 0.50) 1.00		quariz vein	0.02 nil	

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INTE	RVAL	DESCRIPTION					SAN	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		143.30 - 151.00 Weakly sericitic.	7779 7780 7781 7782 7783 7784 7785 7786	143.00 144.00 145.00 146.00 147.00 148.00 149.00 150.00	144.00 145.00 146.00 147.00 148.00 149.00 150.00 151.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00			nil 0.01 0.02 0.02 0.01 0.02 0.01 0.05	0.04
	151.00	Е.О.Н.								

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PROPERTY	Amalgamated Kirkland	DATE LOGGED	Nov.29 - Dec.3 1990	EASTING	8125.00	DEPTH	AZIMUTH	DIP
TOWNSHIP CLAIM No. STARTED COMPLETED PURPOSE COMMENTS	Teck L 491663 November 27, 1990 November 30, 1990 To test 102 - 8170 zone The zone was intersected at 102.65 - 104.50m	LOGGED BY SIGNED BY DRILLED BY SURVEYED BY CORE LOCATION	M. Masson Heath & Sherwood K.L. Warehouse	NORTHING ELEVATION LENGTH UNITS CORE SIZE	10150.00 142.90 metres NQ	Collar 38.00 76.00 114.00	341	55 54 53 50

	SUMMA	RY LOG		ASSAY SUMMARY				
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t		
0.00 3.80 3.80 22.40 22.40 22.60 22.60 23.10 23.10 23.95 23.95 27.50 32.85 68.60 68.60 86.30 86.30 94.10 94.10 102.65 102.65 104.50	CASING ASH TUFF SILTSTONE COARSE LAPILLI TUFF SILTSTONE COARSE LAPILLI TUFF ASH TUFF LAPILLI TUFF LAPILLI TUFF Sericitic LAPILLI TUFF Weakly sericitic ASH TUFF Hematitic QUARTZ - PYRITE BRECCIA ZONE 102.65 - 103.40 Fault zone, trace pyrite 104.10 - 104.25 Brecciated quartz vein, 3 - 5% pyrite 104.40 - 104.50 Fault breccia	104.50 132.35 132.35 142.90 142.90	SILTSTONE / MUDSTONE 114.80 - 115.85 Sericitic graywacke, 0.5% pyrite LAPILLI TUFF 135.50 - 135.60 Silicified, 2 - 3% pyrite 136.10 - 136.70 Siltstone with 30% quartz + sericite veinlets, 0.5% pyrite E.O.H.	102.65 106.00 including 103.90 104.40	3.35 0.50	8.01		

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	-								1	
INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	3.80	CASING								
3.80	22.40	 ASH-TUFF Massive, fine grained, dark grey-green to brown, with 40% heterolithic, trachyte clasts, up to 1 mm, in a dark grey, aphanitic groundmass; minor intercalated lapillituff beds up to 0.5 metres wide; moderately to strongly magnetic. 12.35 - 12.50 Fault @ 27° tca: chlorite + sericite ± quartz; strong, tight chloritic slip with a 3-4 cm wide buff-pink quartz veinlet. 18.50 - 20.20 Moderately well bedded @ 50° tca, with alternating hematitic and non hematitic beds. 20.40 - 22.30 Weakly sericitized, a poly-suturing type texture due to abundant chloritic fractures; cut by 1-2% quartz + chlorite veinlets and slips up to 0.5 cm. 22.30 - 22.40 Fault @ 50° tca; very strong sharp sericite + chlorite mud break with evidence of brecciation in immediate wall rock. 								
22.40	22.60	SILTSTONE Fine grained to aphanitic, dark green siltstone with 2%, < 0.5 mm quartz veinlets with pale green alteration halos; strong tight contacts with chloritic slips.								
22.60	23.10	COARSE, HETEROLITHIC LAPILLI-TUFF Massive, dark green-brown with 25% coarse, angular to sub-rounded, heterolithic, red-pink to green to grey and very fine grained to porphyritic trachyte clasts, up to 5 cm (avg. 2 cm) in a fine grained, chloritic ash matrix; very similar to conglomerate but contains all trachytic clasts and no quartz within matrix.								
23.10	23.95	SILTSTONE Fine grained to aphanitic, dark green siltstone with 2-3% irregular, ≤ 0.5 mm wide, quartz veinlets with light green alteration halos; contacts of unit are sharp								

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
23.95	27.50	chloritic slips @ 30° tca. COARSE, HETEROLITHIC LAPILLI-TUFF As at 22.60 metres; massive, coarse heterolithic tuff with 25% angular to sub- rounded trachyte clasts up to 5 cm (avg. 2 cm), which are extremely variable in colour and texture, in a weakly hematized, aphanitic matrix; weakly magnetic; lower contact of unit is gradational.								
27.50	32.85	ASH-TUFF Massive, fine grained, dark green to purple where hematitic, weakly magnetic and cut by 2% barren buff-white quartz veinlets up to 0.5 cm wide; lower contact of unit is a sharp sericite + talc slip; rubbly core.								
32.85	68.60	LAPILLI-TUFF Massive, dark green to grey-brown, with 5-10% angular, predominantly buff-brown and grey-green, fine grained to spotted trachytic clasts, up to 2 cm (avg. 1 cm) in a very fine ash matrix; intercalated ash-tuff horizons up to 75 cm wide which are massive, non-bedded and display gradational contacts; locally strongly magnetic.								
		 38.35 - 39.50 Fault @ 05° tca; sharp chlorite slips running sub-parallel tca with a 0.5-1 cm white-pink quartz + ankerite vein on slip plane, with local angular wall rock fragments within the vein. 41.50 - 42.30 White-pink quartz + ankerite vein @ 5°-10° tca, with angular wall rock inclusions up to 3-4 cm long which display very weak sericite alteration. 44.10 - 44.60 Fault @ 05° tca; sharp, open, vuggy slip plane with pink-white quartz + ankerite vein. 59.80 Fault @ 30° tca; chlorite + sericite + quartz; 1 cm wide laminated shear zone of alternating chlorite, sericite and quartz. 								

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INTE	RVAL	······································	DESCRIPTION					SAM	PLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au,Check	Au*M
68.60	86.30	SERICITIZED Pale green, with display very dif of unit is perva 1-2% late, whit not deformed of 72.90 - 73.00 73.30 - 73.40 80.90 - 81.40	 LAPILLI-TUFF h 2-3% black and white, salt and pepper textured clasts which often fuse, altered boundaries; possibly matrix rather than clasts?; matrix sively sericitized, very fine grained to aphanitic mush, and is cut by e quartz veinlets 1-3 mm wide. Contacts of unit are sharp but are or faulted and surrounding units are only weakly sericitized. Fault @ 20° tca: sericite + quartz; sharp, tight sericite slip @ 72.90 m with 2 cm buff-white quartz vein on down hole side of slip. Fault @ 25° tca: sericite + quartz ± ankerite; 1-2 cm quartz + ankerite vein on sharp sericite slip. Quartz + chlorite vein with angular wall rock inclusions and very minor chalcopyrite. 	No. 7787 7788 7789 7790 7791 7792 7793 7794 7795 7796 7797 7798 7799 7800 7801 7802 7803 7804 7805 7806 7807 7808	68.60 69.10 70.00 71.00 72.80 73.60 74.30 75.00 76.00 77.00 78.00 79.00 80.50 81.50 82.00 83.00 84.60 84.60 85.10 86.00	69.10 70.00 71.00 72.80 73.60 74.30 75.00 76.00 77.00 78.00 79.00 80.50 81.50 81.50 81.50 83.00 84.00 84.60 85.10 86.00 86.50	0.50 0.90 1.00 0.80 0.80 0.70 0.70 1.00 1.00 1.00 1.00 1.00 1.0	% Rec	DESCRIPTION Sericitized Lapilli Tuff Sericitized Tuff with faulting and quartz veins	Au, g/t 0.01 0.02 0.01 0.02 0.01 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.01 0.02 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.02 0.02 0.02 0.01 0.01 0.01 0.01 0.02 0.02 0.01 0.01 0.01 0.02 0.02 0.02 0.01 0.01 0.01 0.02 0.02 0.01 0.01 0.01 0.02 0.02 0.01 0.01 0.01 0.01 0.01 0.02 0.02 0.01 0.0	0.01 0.01	Au*M

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INTER	JVAT						_			
INTE	TVAL TO	DESCRIPTION			·		SAM	PLE		ASSAYS
FROM	10		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
86.30	94.10	HETEROLITHIC LAPILLI-TUFF Massive to weakly foliated, light grey-green, with 10-20% angular, light brown to grey-green spotty, trachyte clasts, up to 3 cm (avg. 0.5 cm), with sericite alteration; matrix is dark grey-green, very fine grained ash-tuff with minor spotty sericite; typically weakly magnetic; lower contact is very sharp @ 40° tca.	7809 7810 7811 7812 7813	86.50 87.50 88.50 89.50 90.00	87.50 88.50 89.50 90.00 91.00	1.00 1.00 1.00 0.50 1.00		Massive Lapilli Tuff	0.01 nil 0.02 nil nil	
94.10	102.65	ASH-TUFF Massive to weakly bedded @ 50° tca; dark grey-green to purple where hematitic; very fine grained, strongly magnetic and cut by 1% late white irregular quartz veinlets; lower contact is sharp and irregular.	7814 7815 7816	100.00 101.00 102.00	101.00 102.00 102.65	1.00 1.00 0.65		Massive Ash Tuff	nil 0.01 nil	nil
102.65	104.50	PYRITE QUARTZ BRECCIA ZONE								
		102.65 - 103.40 Fault zone @ 20° tca: sericite + chlorite + quartz; strongly foliated to schistose sericite + chlorite + quartz veinlets + laminated mudstone with some very minor, dark grey pyritic bands.	7817	102.65	103.4 0	0.75		Fault zone with quartz + minor pyrite	0.25	
		103.40 - 104.40 Well bedded, yellow-green mudstone with abundant micro-faulting which disrupts bedding @ 15° tca.	7818	103.40	103.9 0	0.50		Laminated Mudstone	0.04	
		104.10 - 104.15 Brecciated, buff-white quartz vein, fragments up to 1 cm with 3-5% very fine grained pyrite within sericitized, interstitial groundmass of altered mudstone.	7819	103.90	104.40	0.50		Pyrite Zone, 3 - 5% pyrite in quartz breccia vein and Mudstone	7.70	8.32
		 104.15 - 104.25 very line (<< 0.5 mm) pyritic veinlets and stringers and 2% disseminated pyrite in aphanitic, yellow-green mudstone bed. 104.40 - 104.50 Fault @ 40° tca: strong mud gouge and fault breccia rubble with weak ankeritic stain. 	7820	104.40	104.90	0.50		Fault gouge + Siltstone	0.12	

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INTE	RVAL	DESCRIPTION	SAMPLE		IPLE		ASSAYS				
FROM	то		No.	FROM	ТО	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*	м
104.50	132.35	SILTSTONE / MUDSTONE Very fine-grained, dark green siltstone with minor, yellow-green mudstone beds @ $20^{\circ}-30^{\circ}$ tca which are frequently disrupted and display convoluted bedding and flame	7821 7822	104.90 105.50	105.50 106.00	0.60 0.50		Massive Siltstone 1% quartz carbonate veins, trace	0.02 0.15		
		gradational contacts and frequently include siltstone clasts; these lapilli-tuff horizons are grey-green and contain 5% light grey to dark green, angular trachyte clasts up to 2-3 cm (avg. 0.5 cm).	7823 7824 7825 7826	106.00 107.00 108.00	107.00 108.00 109.00	1.00 1.00 1.00		pyrite at 105.85 m	0.02 0.01 0.02		
	· · · · · · · · · · · · · · · · · · ·	106.00 - 114.80 0.5 to 1% 0.1 - 1 cm grey white irregular quartz carbonate veinlets and fracture fillings	7820 7827 7828 7829 7829	110.00 1110.00 1112.00 1113.00	110.00 111.00 112.00 113.00	1.00 1.00 1.00 1.00			0.02 0.01 nil nil	0.01	
		114.80 - 115.85 Massive fine grained graywacke interbedded with 2% spotty sericite and <0.5% disseminated pyrite.	7830 7831 7832	114.00 114.80	114.00 114.80 115.30	0.80		Graywacke with 0.5% pyrite and minor quartz + chlorite veinlets	0.01 0.02 nil	0.01	
			7833 7834	115.30 116.00	116.00 117.00	0.70 1.00		Massive to laminated Mudstone / Siltstone with minor intercalated Lapilli Tuff horizons	0.01 nil		
			7835 7836 7837 7838	117.00 118.00 119.00 131.00	118.00 119.00 120.00 132.00	1.00 1.00 1.00 1.00			0.01 0.01 0.01 0.01		
		132.20 - 132.35 Fault @ 30° tca: sericite + quartz; 3 cm wide, barren white-buff quartz vein on a sharp sericitic slip.	7839	132.00	132.50	0.50		Siltstone at fault contact	nil		

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INTE	RVAL	DESCRIPTION	SAMPLE		PI F		ASSAVS			
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au. g/t	Au.Check Au*M
132.35	142.90	 LAPILLI-TUFF Massive grey-green, poorly sorted, with 5-10% angular, buff-brown to grey to dark green trachyte clasts, up to 4 cm (avg. 1 cm), in a fine grained ash matrix; contains fragments and interbeds of siltstone up to 7 cm wide; weakly magnetic. 135.50 - 135.60 2-3% very finely disseminated pyrite in moderately silicified tuff. 135.60 1 cm quartz ± albite (?) vein at contact of 7 cm wide mudstone horizon. 136.10 Fault @ 22° tca: sericite + quartz + gouge; strong, tight mud break with fragmented quartz veinlet 0.5 cm wide. 136.10 - 136.70 Siltstone with 30% quartz + sericite veins up to 4 cm wide with some very minor (<0.5%) pyrite. 	7840 7841 7842 7843 7844 7845 7845 7845 7846 7847	132.50 133.20 134.20 134.70 135.20 136.00 136.70 137.50	133.20 134.20 134.70 135.20 136.00 136.70 137.50 138.50	0.70 1.00 0.50 0.50 0.80 0.70 0.80 1.00			nil nil 0.01 0.01 nil 0.01 nil nil	0.01
	142.90	E.O.H.		15,150	1.0.50	1.00				

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					0.000.00	DEPTH	AZIMUTH	DIP	
PROPERTY	Amalgamated Kirkland	DATE LOGGED LOGGED BY	December 4 1990 M. Masson	EASTING 	10155.00	Collar	341	55	
TOWNSHIP CLAIM No. STARTED COMPLETED PURPOSE COMMENTS	Teck L 477419 November 30, 1990 December 2, 1990 To undercut hole AK-90-21 The '102' structure was	SIGNED BY DRILLED BY SURVEYED BY CORE LOCATION	Héath & Sherwood K.L. Warehouse	ELEVATION LENGTH UNITS CORE SIZE	160.68 metres NQ	38.00 76.00 114.00 152.00		52 52 50	
	intersected at 120.60 - 149.80m								Ċ

	SUMMAR		ASSAY SUMMARY			
INTERVAL	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
From To	CASING		136.00 - 136.60 Sericitic, 2% blue gray quartz	120.00 123.00	3.00	1.84
6.00 18.00	LAPILLI TUFF / ASH TUFF Hematitic		veinlets, trace pyrite 142.65 - 143.35 0.5 - 1% pyrite	including	1	
18.00 42.30	ASH TUFF LAPILLI TUFF		144.15 - 144.80 Quartz + calcute + pyrite vennets 144.80 - 145.50 1% pyrite	120.45 122.35	1.90	3.89
42.50 71.00	42.30 - 48.00 Sericitic 48.00 - 77.00 Hematitic	148.70 149.80	CONGLOMERATE 1 - 2% pyrite, 10% quartz veinlets	and		
77.00 103.60	LAPILLI TUFF Chloritic to hematitic	149.80 160.68	LAPILLI TUFF Sericitic 1555 Eault quarte vein 0.5% putite	120.45 121.20	0.75	7.12
103.60 120.60	IAPILLI TUFF Hematitic, sericitic		156.55 Faun, quartz veni, 0.570 pyrice	139.50 142.00	2.50	0.10
120.60 122.85	QUARTZ PYRITE ZONE 120.60 - 121.00 Quartz-pyrite vein with 3% pyrite,	160.68	E.O.H.	148.00 149.80	1.80	0.28
	trace chalcopyrite 121.00 - 121.80 Sericitic, 0.5% pyrite					
	121.80 - 122.30 Contact zone, silicified, 1 - 2% pyrite					
122.85 148.70	MUDSTONE / GRAYWACKE 122.30 - 122.85 1% pyrite, 2 - 3% quartz veinlets					<u> </u>

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS	<u></u>
FROM	ТО		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
0.00	6.00	CASING									
6.00	18.00	 LAPILLI-TUFF (HEMATIZED) / ASH-TUFF Massive to well bedded @ 60° tca, grey-green to purple-red, with 5-15% angular to sub-rounded, poorly sorted heterolithic in colour and texture, trachyte clasts up to 6 cm (avg. 1 cm) in a fine to very fine grained ash matrix; intercalated with fine, well bedded ash-tuff beds from a few centimetres to 1.5 metres wide, which are of a similar composition to the coarser lapilli-tuffs; bedding is often displayed as <= 1 mm magnetite beds, but overall the tuffs are weakly magnetic. Gradational lower contact into ash-tuff with minor, intercalated lapilli- tuff horizons. 12.85 Fault @ 50° tca: sericite + ankerite; strong, sharp sericitic shear with moderate ankeritic staining. 									
18.00	42.30	 ASH-TUFF Finc to very fine grained, massive to well bedded ash-tuffs, grey-green to purple, consisting of 20-30%, <= 0.5 mm lithics in an aphanitic groundmass; magnetite layers up to 1 mm wide define bedding; sharp lower contact @ 12° tca. 26.50 - 26.70 Fault @ 30° tca: sericite + chlorite + hematite + quartz; strongly deformed, hematized fault zone with 10% irregular, white quartz in a well foliated, sericitized groundmass. 33.20 - 34.00 Strongly hematized and well foliated @ 25° tca around a strong, tight chlorite + hematite slip @ 33.70 m. 38.00 Fault @ 40° tca; sharp tight sericitic slip with 1 cm, white quartz vein. 									
42.30	77.00	LAPILLI-TUFF Very gradational lower contact.									

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INTE	RVAL		DESCRIPTION					SAM	(PLE		ASSAY	S
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Chec	k Au*M
77.00	103.60	42.30 - 45.00 45.00 - 48.00 48.00 56.15 - 57.20 59.75 - 60.00 60.00 - 65.50 72.30 LAPILLI-TUF Dark green wi in a fine gra discernable fro sericitic slip @ 80.40 - 94.50	Moderately to strongly foliated @ $15^{\circ}-20^{\circ}$ tca, with 10-15% wispy sericite developed around lapilli clasts and as spots within matrix. Moderately to weakly sericitic, light grey-green, with 10-15% angular, predominantly dark grey to black and white, porphyritic trachyte clasts, up to 3 cm (avg. 1 cm), in a weakly spotted, sericitized matrix. Increasingly hematitic with purple-brown matrix and light purple clasts. Fault @ 10° tca; sharp, tight sericite + chlorite + ankerite slip running sub-parallel to core axis. Fault @ 25° tca: chlorite + sericite + ankerite + quartz; open, vuggy shear zone with 10% white-buff quartz veins in a strongly rusty, sericitized groundmass. 2-3% barren white, irregular quartz ± chlorite veinlets at all angles tca and up to 1 cm wide. Fault @ 45° tca; very tight sericite slip with 0.5 cm white-pink quartz veinlet. F th buff-brown to grey, angular trachyte clasts up to 4 cm (avg. 1 cm) ined, dark green chloritic matrix; moderately magnetic; easily om the previous, heterolithic lapilli tuff; lower contact is a sharp, 60° tca. Moderately hematized with purple clasts and matrix.									
		94.50 - 94.80 97.30 - 98.20	Bleached, sericitized with purple clasts and matrix. Bleached, sericitized zone with a 3-4 cm barren white quartz vein adjacent to a strong, sharp sericitic slip. Fault @ 15° tca: chlorite + sericite + quartz; strong, tight chlorite + sericite slip plane with 10% irregular white-pink quartz \pm calcite veins sub-parallel tca.									
L				1					1	1		

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INTEI	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
103.60	120.60	HETEROLITHIC LAPILLI-TUFF								
		103.60 - 109.60 Massive, dark red-green, weakly hematitic with 15-20% angular to sub-rounded, heterolithic, trachyte clasts up to 5 cm (avg. 2 cm); 35% of clasts are fine grained, red-pink syenitic rock.	7848	111.00	112.00	1.00		Sample lost; not assayed		
		112.40 - 115.30 Moderately sericitic, light green with 5% wispy sericite.	7849 7850 7851	112.00 113.00	113.00 114.00	1.00		Weakly sericitic Tuff	0.01 0.01 0.03	
		115.30 - 118.35 Weakly hematitic, dirty red-brown and virtually undeformed.	7852 7853 7854	115.00 116.00 117.00	116.00 117.00	1.00 1.00 1.00			0.01 0.01 0.02	
		118.35 - 120.60 Light grey, moderately sericitized and weakly foliated @ 35° tca.	7855 7856 7857 7858	118.00 118.50 119.50 120.00	118.50 119.50 120.00 120.45	0.50 1.00 0.50 0.45			0.02 0.02 0.01 0.31	
120.60	122.85	QUARTZ + PYRITE ZONE								
		120.60 - 121.00 Buff-white to blue-grey vein quartz fragments within a fractured and sericitized lapilli-tuff, containing 2-3% pyrite and minor chalcopyrite; pyrite finely disseminated within wall rock adjacent to veins and as <= 1 mm pyritic veinlets and fracture fillings within matrix and quartz veins.	7859	120.45	121.20	0.75		Quartz + pyrite vein with 2 - 3% pyrite and minor chalcopyrite	7.63	6.60
		121.00 - 121.80 5-10% wispy sericite, 0.5% disseminated pyrite and minor pyritic stringers.	7860	121.20	121.65	5 0.45		Sericitized Tuff with 0.5% disseminated pyrite + minor pyrite stringers	1.00	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		 121.80 - 122.30 Contact zone between lapilli-tuff and silicified and pyritic mudstor buff- white to grey fractured and brecciated quartz veins as silicified mudstone with 1-2% disseminated and stringer pyrite of fracture planes and on sericitic vein boundaries; promine foliation @ 50° tca. 122.30 - 122.85 Well laminated mudstone with minor (<0.5%) disseminated pyriand 0.5-1% pyritic stringers on quartz vein boundaries and on tig sericitic slips; lower contact is a sharp sericite slip with 1 cm which quartz vein @ 55° tca. 	;; 7861 n t e 7862 t e	121.65 122.35	122.35 123.00	0.70 0.65		Silicified contact zone with 1 - 2% pyrite Laminated Mudstone with 0.5 - 1% pyrite and 2 - 3% quartz veinlets	2.40 0.42	2.19
122.85	148.70	 MUDSTONE / GRAYWACKE 122.85 - 124.60 Yellow-green mudstone, laminae 1-3 mm thick, very irregul convoluted with bedding @ 55° tca; up to 15 cm thi graywacke/tuff interbeds. 124.60 - 126.30 Intercalated mudstones, graywacke and lapilli-tuff with very irregul flame structures and convoluted bedding; moderately sericitic. 126.30 - 139.00 Predominantly a massive light grey-green, fine grained graywace consisting of 50% lithics, 30% feldspar and 20% quartz, up to mm; weakly sericitic with <= 1% angular mudstone chips up to 2 cm; locally, < 0.5% disseminated pyrite. 136.00 Fault @ 40° tca; strong, 1 cm mud break with blue-grey gou (smeared pyrite?) on slip planes. 	r 7863 k 7864 7865 r 7866 7867 e 7868 1 - 7869 7870 r 7871 7872 7873 7874 7875 7876 7876	123.00 123.50 124.00 124.65 125.40 126.40 127.00 127.50 128.00 129.00 130.00 131.00 132.00 133.00 133.00	123.50 124.00 124.65 125.40 126.40 127.50 128.00 129.00 130.00 131.00 132.00 133.00 134.00 135.00	0.50 0.50 0.65 0.75 1.00 0.60 0.50 1.00 1.00 1.00 1.00 1.00 0.1.00		Intercalated zone of mixing Massive Graywacke with < 0.5% disseminated pyrite	0.02 0.02 0.01 nil 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.02	0.02

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INTE	RVAL		DESCRIPTION	SAMPLE		PLE		ASSAYS			
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
				7878 7879	135.00 135.50	135.50 136.50	0.50 1.00		Foliated Graywacke with 2% silicified veinlets and very minor pyrite	0.02	
		136.00 - 136.60	Moderately foliated with 5-10% wispy and spotty sericite and 2% blue-grey silicified veinlets up to 2 mm wide with very minor, pyrite.	7880 7881 7882	136.50 137.00 138.00	137.00 138.00 138.90	0.50 1.00 0.90			0.02 0.02 0.02	
		139.00 - 142.55	Intercalated with yellow-green, scricitic mudstone interbeds up to 20 cm wide, frequently sheared due to tight scricite \pm talc slips; moderately deformed: 2.3% milk-white quartz veinlets up to 1 cm	7883 7884 7885	138.90 139.50 140.40	139.50 140.40 141.00	0.60 0.90 0.60			0.02 0.12 0.03	0.22
		142.55	and minor fuchsitic clasts. Fault @ 50° tca; strong sericite + talc shear 5 cm wide with buff-	7886 7887	141.00 142.00	142.00 142.65	1.00 0.65			0.09 0.02	
		142.55 - 148.70	white quartz veinlets up to 1 cm. Massive grey-green, fine grained graywacke with 1-2% angular mudstone clasts up to 5 cm.	7888	142.65	143.35	0.70		Graywacke with 0.5 - 1% disseminated pyrite	nil	
		144.30	1-2 cm white-grey quartz + calcite + pyrite vein, @ 32° tca, with 1-2% pyrite.	7889	143.35 144.15	144.15 144.80	0.80		Graywacke with 2 quartz + calcite + pyrite veinlets	0.01	
		144.70	2 cm wide, open vuggy quartz + calcite vein with 1-2% euhedral pyrite on vein wall and as cavity fillings.	7891	144.80	145.50) 0.70		Massive Graywacke with 1%	0.02	
				7892 7893 7894 7895	145.50 146.00 147.00 148.00	146.00 147.00 148.00 148.70) 0.50) 1.00) 1.00) 0.70		disseminated pyrite	0.01 0.02 0.02 0.20	

HOLE: AK-90-26

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INTE	RVAL	DESCRIPTION	SAMPLE		IPLE		ASSAYS			
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
148.70	149.80	PYRITIC PEBBLE CONGLOMERATE Upper contact is gradational into a pebble rich bed of 35% well rounded, poorly sorted, mudstone, quartzite, and trachyte pebbles, up to 5 cm, in a fine grained sericitized matrix with 1-2% disseminated pyrite.	7896	148.70	149.50	0.80		Conglomerate with 1 - 2% pyrite	0.28	
		149.50 - 149.80 Strongly foliated to schistose, with 10-15% buff-white quartz veinlets and masses, as well as 0.5% pyrite.	7897	149.50	149.80	0.30		Sheared Conglomerate with 10% quartz veins	0.44	0.43
149.80	160.68	 SERICITIZED LAPILLI-TUFF 10% angular, dark grey to buff, frequently sericitized to yellow-green trachyte clasts, up to 6 cm, in a light yellow-green altered and very fine grained to aphanitic matrix, predominantly sericitic. 156.35 - 156.40 Fault @ 55° tca; 1.5 cm quartz vein on tight sericite slips and <0.5% pyrite on adjacent wall rock for 2-3 cm. 	7898 7899 7900 7901 7903 7904 7905 7904 7905 7906 7907 7908 7909 7910	149.80 150.30 151.00 152.00 153.00 154.00 155.00 156.00 156.50 157.00 158.00 159.00 160.00	150.30 151.00 152.00 153.00 154.00 156.00 156.50 157.00 158.00 158.00 159.00 160.00 160.68	 0.50 0.70 1.00 1.00 1.00 0.50 0.50 1.00 1.00 0.50 1.00 0.50 3.68 		Sericitized Lapilli Tuff Sericitic Tuff with fault and 0.5% pyrite	0.06 nil nil 0.02 0.01 0.01 nil 0.01 0.04 0.01 0.02 0.01	0.01
	160.68	F.O.H.								

HOLE: AK-90-27

DEPTH AZIMUTH DIP December 5 1990 EASTING 7900.00 PROPERTY Amalgamated Kirkland DATE LOGGED M. Masson 9890.00 NORTHING 341 45 LOGGED BY Collar ELEVATION TOWNSHIP Teck SIGNED BY 38.00 45 W Heath & Sherwood LENGTH 130.10 CLAIM No. L 491651 DRILLED BY 44 76.00 UNITS metres December 2, 1990 SURVEYED BY STARTED 43 114.00 **CORE SIZE** NQ December 4, 1990 **CORE LOCATION** K.L. Warehouse COMPLETED PURPOSE To test IP anomaly at 9950N and Magnetic low at 10000N No anomalous assays COMMENTS

	SUMMA	RY LOG		ASSA	Y SUMMARY	7
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
0.00 1.55 1.55 10.90 10.90 17.20 17.20 35.80 35.80 40.00 40.00 49.50 49.50 123.70	CASING LAPILLI TUFF Hematitic LAPILLI TUFF Chloritic ASH TUFF 23.70 - 25.10 10% quartz - calcite veins, < 0.5% pyrite LAPILLI TUFF Hematitic ASH TUFF Sericitic 44.00 - 49.50 5% quartz - calcite veinlets, < 0.5% pyrite COARSE LAPILLI TUFF / BLOCK TUFF 113.70 - 123.70 Moderately sericitic	123.70 130.10 130.10	ASH TUFF 123.70 - 124.80 Sheared at 65° tca, 5 - 10% quartz veinlets and masses, 0.5% finely disseminated pyrite E.O.H.			

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HOLE: AK-90-27

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INTERVAL		DESCRIPTION	SAMPLE							ASSAYS	
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M	
0.00	1.55	CASING									
1.55	10.90	HETEROLITHIC LAPILLI-TUFF Massive, dark green to purple where hematitic, with 5-10% angular to sub-rounded predominantly fine grained to porphyritic red trachyte, and dark green to grey aphanitic trachyte clasts up to 3 cm (avg. 1 cm), in a very fine grained ash matrix; jasper is evident within the matrix; narrow ash horizons, up to 15 cm, with distinct magnetite beds @ 60° tca; strongly magnetic; lower contact marked by sharp chlorite slip @ 35° tca.									
		5.55 - 6.00 Fault @ 15° tca; chlorite + ankerite + rubbly core; open, dirty chlorite slip with a strong ankerite staining.									
10.90	17.20	MONOLITHIC LAPILLI-TUFF Dark green massive, with dark green, black spotted, angular trachyte clasts up to 4 cm (avg. 1 cm) in a light green, aphanitic matrix; strongly magnetic and moderately chloritic.									
		17.00 - 17.20 Fault @ 45° tca; chlorite + sericite + quartz + calcite; dirty, irregular white-pink quartz / calcite veinlets on sharp chlorite + sericite slips.									
17.20	35.80	 ASH-TUFF Massive, dark green very fine grained and strongly magnetic; very nondescript, but in places contains minor scattered lapilli clasts; lower contact very sharp and irregular. 23.70 - 25.10 10% white-pink quartz + calcite veins up to 1 cm in a moderately foliated, sericitized ash-tuff; <0.5% disseminated pyrite. 	7911 7912	23.00 23.50	23.50 24.00	0.50 0.50		Ash Tuff Sericitized Ash Tuff with quartz + calcite veinlets and < 0.5% pyrite	0.01 nil		

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INTERVAL		DESCRIPTION					ASSAYS				
FROM TO				No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		26.30 - 26.80 28.00	Pink quartz + calcite breccia vein with angular wall rock fragments up to 2 cm, sub-parallel to core axis. Fault @ 50° tca; 0.5 cm pink quartz + calcite vein with strong chlorite slip boundaries.	7913 7914 7915 7916 7917	24.00 24.50 25.10 26.00 35.00	24.50 25.10 26.00 27.00 35.50	0.50 0.60 0.90 1.00 0.50		Ash Tuff	0.01 nil nil 0.01 nil	0.01
35.80	40.00	 LAPILLI-TUFF Massive, purple-red (hematitic), with 5-20% angular, 75% bright red (syenite ?), fine grained to porphyritic and 25% buff-brown to dark green trachytic clasts, 0.1-5 cm in size, in a very fine grained hematized matrix, with predominantly red trachyte fragments; locally crudely bedded @ 60° tca with minor ash tuff horizons. 36.10 - 36.30 Fault @ 45° tca; strong, rubbly sericite schist with 2 cm quartz + ankerite vein. 		7918 7919 7920	35.50 36.00 36.50	36.00 36.50 37.00	0.50 0.50 0.50	95	Hematized Tuff with fault	0.01 0.01 0.01	
		37.30	Patch of coarse blebby pyrite proximal to a tight chloritic fracture.	7921 7922 7923	37.00 38.00 39.00	38.00 39.00 40.00	1.00 1.00 1.00		Minor blebby pyrite in hematitic Tuff Massive hematized Tuff	0.01 0.04 0.01	0.02
40.00	49.50	ASH-TUFF 40.00 - 44.00 44.00 - 49.50	Moderately sericitized, light green massive to weakly bedded, with up to 5% , $<= 3$ mm dark grey to green to red lapilli clasts; quite soft and pervasively sericitized but is virtually undeformed. Dark green, chloritic ash-tuff.	7924 7925 7926 7927	40.00 41.00 42.00 43.00	41.00 42.00 43.00 44.00	1.00 1.00 1.00 1.00		Sericitized Tuff	0.01 0.01 0.01 0.01	
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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		 45.85 - 47.75 5% white-pink quartz + calcite veins up to 3 cm wide, with weak sericite alteration halos and <= 0.5% pyrite in wall rock. 46.90 - 49.50 Gradational zone from ash-tuff to coarse lapilli-tuff. 	7928 7929 7930 7931 7932 7933 7934 7935 7936	44.00 45.00 45.80 46.30 46.90 47.50 48.00 49.00 50.00	45.00 45.80 46.30 46.90 47.50 48.00 49.00 50.00 51.00	1.00 0.80 0.50 0.60 0.60 0.50 1.00 1.00 1.00		Ash Tuff with quartz + calcite veinlets and minor pyrite	0.01 nil 0.02 0.04 0.03 0.02 0.04 0.02 0.04 0.01	0.03
49.50	123.70	COARSE MONOLITHIC LAPILLI-TUFF / BLOCK-TUFF Massive, dark green to red-black, very poorly sorted, with 5-25% dark red angular to well rounded trachytic (syenitic?) clasts from 1 mm to 7 cm in size, in a fine ash matrix of similar composition; very strongly magnetic; 1-2% white-pink quartz \pm calcite veinlets up to 1 cm throughout; minor ash-tuff horizons up to 1 metre, with similar composition to the lapilli-tuffs, but finer grained.								
		 79.50 - 82.50 Fault @ 5°-10° tca; tight chlorite slip sub-parallel to core axis with sporadic quartz + calcite veining parallel to slip plane. 91.00 - 91.70 Fault @ 10° tca; tight chlorite + sericite slip with irregular, white-pink quartz + calcite + sericite. 105.50 Fault @ 45° tca; sharp, strong chlorite + sericite slip with minor, 1-2 mm quartz veinlets on adjoining wall rock. 113.70 - 123.70 Moderately deformed with 5-10% wispy sericite and numerous quartz + chlorite stringers as a stockwork; prominent foliation @ 	7937 7938 7939 7940 7941	111.00 112.00 113.00 113.50 114.00	112.00 113.00 113.50 114.00) 1.00) 1.00) 0.50) 0.50) 1.00		Massive Coarse Tuff Sericitized foliated Tuff	nil 0.01 0.02 0.01 0.01	
		45° tca; local patchy hematized areas are still preserved within the altered sericitic tuffs.	7942 7943 7944	115.00 115.00 116.00	116.00 117.00 118.00	0 1.00 0 1.00 0 1.00 0 1.00			0.01 0.08 0.01	0.03

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INTER	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/1	Au, Check Au*M
			7945 7946 7947 7948 7949 7950	118.00 119.00 120.00 121.00 122.00 123.00	119.00 120.00 121.00 122.00 123.00 123.70	1.00 1.00 1.00 1.00 1.00 0.70		Sericitized Lapilli Tuff	0.01 0.01 0.01 0.01 0.01 0.01	
123.70	130.10	ASH-TUFF								
		123.70 - 124.80 Shear zone @ 65° tca; moderately to strongly deformed zone with 15-20% wispy sericite and 5-10% irregular white quartz veinlets and masses; < 0.5% finely disseminated pyrite; upper and lower contacts are sharp, sericite slips.	7951 7952	123.70 124.20	124.20 124.80	0.50 0.60		Sericite + quartz shear	0.01 0.01	
		124.80 - 130.10 Massive, very fine grained ash-tuff with patchy, diffuse zones of sericite alteration within hematized portions, which locally produces a dirty mottled texture	7953 7954	124.80 125.30	125.30 125.80	0.50 0.50		Hematitic Ash Tuff	0.01 0.01	
		125.90 - 126.05 Fault @ 60° tca; strong chlorite + sericite slips with brecciated quartz ± ankerite veining.	7955 7956 7957 7958 7959 7960	125.80 126.30 127.00 128.00 129.00 129.50	126.30 127.00 128.00 129.00 129.50 130.10	0.50 0.70 1.00 0.50 0.60			0.01 0.01 0.01 0.01 0.01 0.01	0.04
	130.10	Е.О.Н.								



HOLE: AK-90-28

DEPTH AZIMUTH DIP PROPERTY Amalgamated Kirkland DATE LOGGED December 6 1990 EASTING 7350.00 M. Masson LOGGED BY NORTHING 10170.00 Collar 341 45 Heath & Sherwood TOWNSHIP Teck **SIGNED BY ELEVATION** 38.00 45 CLAIM No. L 491183 DRILLED BY LENGTH 122.40 76.00 44 STARTED December 4, 1990 SURVEYED BY UNITS metres 114.00 43 COMPLETED December 6, 1990 NQ CORE LOCATION K.L. Warehouse CORE SIZE PURPOSE To test 101-7290 gold zone (West Boundary) COMMENTS The 102 - 7290 zone was intersected at 44.00 - 46.00m

	SUMMA	ASSAY SUMMARY				
INTERVAL From To	DESCRIPTION	INTERVAL From To	DESCRIPTION	INTERVAL From To	LENGTH in metres	AVERAGE Au g/t
$\begin{array}{cccccc} 0.00 & 5.50 \\ 5.50 & 10.60 \\ 10.60 & 13.45 \\ 13.45 & 21.60 \\ 21.60 & 24.40 \\ 24.40 & 26.15 \\ 26.15 & 28.30 \\ 28.30 & 44.75 \\ 44.75 & 45.20 \\ 45.20 & 50.70 \\ 50.70 & 55.80 \\ 55.80 & 64.70 \\ \end{array}$	CASING BLEACHED LAPILLI TUFF Sericitic CONGLOMERATE / GRAYWACKE BLEACHED LAPILLI TUFF Sericitic CONGLOMERATE Sericitic ASH TUFF CONGLOMERATE / GRAYWACKE ASH / LAPILLI TUFF Hematitic PYRITIC LAPILLI TUFF Hematitic IAPILLI TUFF Weakly hematitic LAPILLI TUFF Weakly chloritic MUDSTONE / SILTSTONE	64.70 115.00 115.00 118.60 118.60 120.00 120.00 122.40 122.40	 GRAYWACKE Trace to 2% pyrite 69.10 - 69.60 1 - 2% white to blue gray quartz veins, 1% pyrite 71.80 - 72.90 1 - 2% blue gray quartz veins 73.40 - 74.30 2 - 3% blue gray quartz veins, 1% pyrite 93.80 - 93.90 Shear zone, 3% blue gray quartz veins, < 0.5% pyrite 101.80 - 102.15 Shear zone, 25 - 30% gray quartz veining, 1% pyrite, sericitic CONGLOMERATE GRAYWACKE 2 - 3% blue gray quartz veinlets, 1 - 2% pyrite LAPILLI TUFF 	44.00 46.00 including 44.70 45.20	2.00	1.89

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
0.00	5.50	CASING								
5.50	10.60	BLEACHED LAPILLI-TUFF Massive, light buff-brown with 5% black subhedral, chloritic lath shaped crystals up to 2 mm and irregular, anhedral crystal aggregates up to 5 cm as spots and irregular masses, with irregular diffuse boundaries and may represent bleached lapilli clasts; highly altered and bleached matrix with 5-10% wispy sericite within a very fine grained buff-brown groundmass; local relict lapilli clasts up to 1 cm; usually non- magnetic; trace pyrite.	7961 7962 7963 7964 7965 7966	5.50 6.00 7.00 8.00 9.00 10.00	6.00 7.00 8.00 9.00 10.00 10.60	0.50 1.00 1.00 1.00 1.00 0.60		Bleached Lapilli Tuff	0.01 0.01 0.01 0.02 0.02	
10.60	13.45	 PEBBLE CONGLOMERATE / GRAYWACKE Interbedded, with gradational contacts, very poorly sorted, mixed zone of lapilli fragments and conglomerate pebbles fragments within a moderately sericitized graywacke matrix; dirty mottled texture in places due to irregular, patchy sericite alteration of matrix. 12.90 - 13.05 Shear zone @ 70° tca; strongly foliated to schistose sericite + chlorite + ankerite + quartz. 	7967 7968 7969 7970	10.60 11.40 12.40 13.10	11.40 12.40 13.10 14.00	0.80 1.00 0.70 0.90		Sericitic Pebble Conglomerate Foliated to sheared Conglomerate with fault at 12.90 m Sericitized Graywacke + Tuff	0.02 0.02 0.01 0.02	0.01
13.45	21.60	BLEACHED LAPILLI-TUFF Massive, light buff-brown with 5% black subhedral, chloritic lath shaped crystals up to 2 mm and irregular, anhedral crystal aggregates up to 5 cm as spots and irregular masses, with irregular diffuse boundaries and may represent bleached lapilli clasts; highly altered and bleached matrix with 5-10% wispy sericite within a very fine grained buff-brown groundmass; local relict lapilli clasts up to 1 cm; usually non- magnetic; trace pyrite.	7971 7972 7973 7974 7975 7976 7976 7977 7978	14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00	15.00 16.00 17.00 18.00 19.00 20.00 21.00 21.60	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.60		Bleached Lapilli Tuff	0.01 0.01 0.02 0.01 0.01 0.02 0.02 0.02	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
21.60	24.40	PEBBLE CONGLOMERATE								
		 21.60 - 22.90 Moderately sericitized with 5-10% wispy sericite interstitial to pebble framework and some sericite alteration of mafic clasts. 22.90 - 24.40 15% well rounded, polymictic pebbles up to 4 cm in a fine grained sericitized graywacke matrix; lower contact is sharp and somewhat irregular. 	7979 7980 7981 7982	21.60 22.50 23.00 23.50	22.50 23.00 23.50 24.40	0.90 0.50 0.50 0.90		Sericitized Conglomerate	0.02 0.03 0.02 0.02	0.01
24.40	26.15	ASH-TUFF Massive to well bedded @ 40° tca, red-brown very fine grained with very minor, light grey lapilli clasts up to 0.5 cm; very massive, hard and undeformed; 1% quartz + chlorite veinlets up to 0.5 cm; lower contact sharp @ 45° tca.	7983 7984 7985	24.40 25.00 25.50	25.00 25.50 26.15	0.60 0.50 0.65		Massive to well bedded Ash Tuff	0.02 0.01 0.01	
26.15	28.30	CONGLOMERATE / GRAYWACKE Dark grey-green, moderately foliated graywacke with 5% wispy sericite and 2% quartz + chlorite veinlets up to 0.5 cm. Lower contact of unit is somewhat gradational.								
		26.15 - 27.00 Fine polymictic conglomerate with moderately well-rounded pebbles up to 2 cm.	7986 7987	26.15 27.00	27.00 27.50	0.85 0.50		Pebble Conglomerate - sericitized Graywacke with 2% quartz + chlorite veinlets	0.01 nil	
28.30	44.75	ASH-TUFF / LAPILLI-TUFF Light red-brown, alternating, fine grained and well bedded @ 45° tca, ash-tuff and massive lapilli-tuff beds up to 0.75 metres wide; moderately hematitic and weakly magnetic.	7988 7989 7990 7991	27.50 28.30 29.00 30.00	28.30 29.00 30.00 31.00	0.80 0.70 1.00 1.00			nil nil 0.01 nil	nil
		32.70 Fault @ 70° tca; 2 cm sericite schist with narrow (1-2 mm) white quartz veinlets.	7992 7993 7994	31.00 32.00 33.00	32.00 33.00 34.00	1.00 1.00 1.00		Hematized Ash + Lapilli Tuff	nil 0.01 0.01	

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INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
		41.00 - 41.25 Shear zone @ 70° tca; strongly foliated, sericitized tuffs with sharp, tight sericite slip boundaries and minor white quartz adjacent to slip planes.	7995 7996 7997 7998 7999 8000 11701 11702 11703 11704 11705 11706	34.00 35.00 36.00 37.00 38.00 39.00 40.00 41.00 41.00 41.50 42.00 43.00 44.00	35.00 36.00 37.00 38.00 39.00 40.00 41.00 41.50 42.00 43.00 44.00 44.70	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.50 0.5		Ash Tuff with shear zone at 41.00m Hematitic Ash Tuff	nil 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.02	0.01
44.75 45.20	45.20 50.70	 PYRITIC LAPILLI TUFF Light grey-brown, massive with 5% angular buff-grey, trachytic clasts up to 1 cm in a massive, aphanitic groundmass; upper contact is marked by a sharp sericite slip @ 70° tca; 1 % very finely disseminated pyrite. 44.80 2 cm wide sericite + quartz schist with 1-2% very fine disseminated pyrite. ASH-TUFF / LAPILLI-TUFF Weakly hematitic, intercalated ash- and lapilli-tuff beds up to 0.5 metres wide, usually with gradational contacts; light grey-brown to purple (hematitic); very strongly magnetic due to 1% disseminated to bedded magnetite throughout. 	11707	44.70	45.20	0.50		Pyritic Lapilli Tuff, 1 - 2% pyrite	4.31	3.75
		45.20 - 47.00 Moderately sericitized, with irregular patchy sericite alteration which gives unit a dirty, mottled texture; 2-3% barren white-pink quartz veins.	11708	3 45.20 9 46.00	46.00 47.00	0.80 1.00		Sericitized Tuff with 2 - 3% quartz veins Weakly hematitic Ash Tuff	0.03	

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INTE	RVAL	DESCRIPTION				· · · · · · · · · · · · · · · · · · ·	SAM	IPLE		ASSAYS
FROM	то		No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
			11710 11711 11712 11713	47.00 48.00 49.00 50.00	48.00 49.00 50.00 50.70	1.00 1.00 1.00 0.70			0.02 0.01 0.03 0.01	
50.70	55.80	 LAPILLI-TUFF Massive to weakly foliated, grey-green, with 5-10% angular, buff-brown to dark green, trachytic clasts in equal proportions, in a fine grained ash matrix; moderately to strongly magnetic and weakly chloritic; lower contact is somewhat gradational. 54.50 - 55.80 Moderately well foliated and sericitized with patchy diffuse alteration fronts. 54.50 - 55.20 10% white quartz ± chlorite veinlets with some very minor, coarse subhedral pyrite. 	11714 11715 11716 11717 11718 11719	50.70 51.50 52.00 53.00 54.00 55.00	51.50 52.00 53.00 54.00 55.00 55.80	0.80 0.50 1.00 1.00 1.00 0.80		Massive Lapilli Tuff	0.01 0.01 0.02 0.01 0.01	0.02
55.80	64.70	 MUDSTONE / SILTSTONE Intercalated aphanitic, yellow-green mudstone with fine grained, dark green siltstone giving pronounced laminated or striped appearance; mudstone laminations from a few millimetres to 20 cm and typically disrupted, convoluted beds often cut by distinct micro-faults. 58.40 - 59.30 Numerous, tight sericitic slips @ 70° tca; barren, white quartz ± chlorite veinlets up to 1 cm wide. 62.36 - 62.55 Fault zone @ 70° tca: sericite + chlorite + quartz; semi-massive white quartz vein with sericitic fractures and sharp sericite + chlorite slip planes on vein boundaries; lower contact gradational. 64.00 - 64.70 Moderately sericitized, with 1% dark grey quartz + chlorite stringers up to 3 mm wide. 	11720 11721 11722 11723 11724 11725 11726 11727 11728 11729 11730 11731	55.80 56.50 57.00 58.00 58.40 59.40 60.00 61.00 62.00 62.60 63.10 64.00	56.50 57.00 58.00 59.40 60.00 61.00 62.00 62.60 63.10 64.00 64.70	0.70 0.50 1.00 0.40 1.00 1.00 1.00 0.60 0.50 0.50 0.70		Laminated Mudstone / Siltstone Mudstone with numerous sericite slips with quartz veinlets Quartz + sericite shear zone Mudstone with 1% quartz veinlets Sericitized Mudstone / Graywacke , 1% quartz + chlorite stringers	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.02

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INTE	RVAL	······································	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	ТО			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au, Check Au*M
64.7 0	115.00	GRAYWACKE Massive, fine g quartz grains, a	rained, light green graywacke of 40% lithics, 35% feldspar, 25% ll <= 1 mm in size; minor, angular mudstone clasts, fuchsitic clasts	11732	64.70	65.50	0.80		Graywacke with 1 - 2% quartz stringers	nil	
		and minor perv	asive disseminated pyrite.	11733 11734	65.50 66.00	66.00 67.00	0.50 1.00			0.01 0.02	
		69.10 - 69.60	1-2%, grev-white to blue, 1-3 mm quartz veinlets, with 1%	11735 11736 11737	68.00 69.00	69.00 69.60	1.00 1.00 0.60		Gravwacke with 2% quartz	0.01	
			disseminated pyrite in matrix and on vein boundaries.	11738	69.60	70.50	0.90		veinlets and 1 - 2% pyrite	0.01	
				11739 11740	70.50 71.00	71.00 71.80	0.50 0.80			0.01 0.02	
		71.80 - 72.90	1-2%, blue-grey, $<= 1$ mm, quartz veinlets and very minor disseminated pyrite.	11741	71.80	72.50	0.70		1 - 2% narrow blue-gray quartz veinlets	0.01	
		73 40 - 74 30	Stochwork of 2.3% of him area 1.2 mm quartz winlets with 1%	11742 11743	72.50 73.00 73.40	73.00 73.40 74.40	0.50		2 20% quarte staalevarking	0.02	0.01
		15.40 - 74.50	disseminated pyrite; upper contact sharp chlorite slip @ 70° tca; lower contact is a 1 cm chlorite + quartz slip @ 50° tca.	11744	74.40 75.00	74.40	0.60		2 - 5% quartz stockworking	0.01	0.01
		77.25 - 77.57	Shear zone; weakly foliated, sericitized graywacke with 1-2% white	11747 11748	76.00 77.00	77.00 77.60	1.00 0.60		Foliated Graywacke with 2%	0.01	
			quartz veinlets; contacts are strong sharp sericite + quartz slips @ 60° tca.	11749	77.60	78.30	0.70		white quartz	0.01	
				11750 11751	78.30 79.00	79.00 80.00	0.70 1.00		Massive Graywacke	0.03 0.02	
				11752 11753	80.00 81.00	81.00 82.00	1.00 1.00			0.01	
				11754 11755 11756	82.00 83.00 84.00	83.00 84.00	1.00 1.00			0.01	
				11750	04.00	65.00	1.00			0.01	

HOLE: AK-90-28

PAGE: 7 of 8

INTER	RVAL		DESCRIPTION					SAM	PLE		ASSAYS	
FROM	то			No.	FROM	то	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check	Au*M
		90.60 - 90.80 93.80 - 93.90	7 cm wide quartz + chlorite breccia vein with strong sericite alteration of wall rock and 0.5% disseminated pyrite on vein margin. Shear zone @ 60° tca; well foliated, sericitic graywacke with 3%, <	11757 11758 11759 11760 11761 11762 11763 11764 11765 11766 11767	85.00 86.00 87.00 88.00 90.00 90.50 91.00 92.00 93.00 93.60	86.00 87.00 88.00 90.00 90.50 91.00 92.00 93.00 93.60 94.00	1.00 1.00 1.00 1.00 1.00 1.00 0.50 0.50		Sericitized Graywacke with 5 - 7 cm quartz + chlorite breccia vein and 0.5% pyrite Quartz + sericite shear zone	0.01 0.01 nil 0.01 0.01 0.02 0.01 0.01 0.01 0.01 0.04	0.01	
		101.80 - 102.15	1 mm, blue quartz veinlets and < 0.5% pyrite; contacts are sharp, tight sericite + chlorite slips. Shear zone: sericite + quartz + pyrite; upper contact is a strong sharp chlorite + sericite slip @ 37° tca; lower contact is a 1 cm chlorite breccia vein with angular wall rock clasts up to 2 mm; 25- 30% white-grey quartz, with interstitial, sericitic graywacke containing 0.5-1% disseminated pyrite.	11768 11769 11770 11771 11772 11773 11774 11775 11776 11777 11778 11777 11778 11779 11780 11781 11782 11783	94.00 95.00 96.00 97.00 98.00 99.00 100.00 101.00 101.50 102.15 103.00 104.00 104.60 105.60 106.00 107.00	95.00 96.00 97.00 98.00 99.00 101.00 101.50 102.15 103.00 104.00 104.60 105.60 105.60 107.00 107.50	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.50 0.65 1.00 0.60 1.00 0.40 1.00 0.50		Sericite + quartz + pyritic shear zone	0.01 0.02 0.01 0.02 ni1 ni1 ni1 ni1 ni1 ni1 ni1 ni1 ni1 ni1	0.01	

HOLE: AK-90-28

PAGE: 8 of 8

INTE	RVAL	DESCRIPTION					SAM	IPLE		ASSAYS
FROM	то		No.	FROM	TO	Length	% Rec	DESCRIPTION	Au, g/t	Au,Check Au*M
		107.65 - 107.80 5 cm wide chlorite ± quartz vein with angular white quartz breccia fragments and sericitized wall rock fragments up to 0.5 cm; < 0.5% pyrite.	11784 11785 11786 11787 11788 11789 11790 11791 11792	107.50 108.00 109.00 110.00 111.00 112.00 113.00 114.00 114.60	108.00 109.00 110.00 111.00 112.00 113.00 114.00 114.60 115.00	0.50 1.00 1.00 1.00 1.00 1.00 1.00 1.00		Quartz + chlorite breccia vein Aphanitic Mudstone at	0.01 nil 0.01 0.01 0.02 0.01 nil nil nil	
								Conglomerate contact		
115.00	118.60	PEBBLE CONGLOMERATE Upper contact is sharp, irregular and moderately sericitic; massive, undeformed, unaltered, framework supported, polymictic, jasperoidal conglomerate; lower contact marked by a 1 cm barren white quartz vein.	11793 11794 11795 11796	115.00 116.00 117.00 118.00	116.00 117.00 118.00 118.60	1.00 1.00 1.00 0.60		Conglomerate	0.01 nil nil 0.01	0.02
118.60	120.00	GRAYWACKE Massive, fine grained, light grey-green graywacke with 2-3% blue-grey quartz veinlets up to 1 mm wide and up to 1-2% disseminated pyrite; lower contact is sericitized with a 1-2 cm quartz veinlet.	11797 11798	118.60 119.00	119.00 120.00	0.40 1.00		Graywacke with 1% pyrite - silicified	0.02 0.01	
120.00	122.40	LAPILLI-TUFF Massive, grey-green, moderately magnetic with 5-10% buff brown to green, trachyte clasts up to 5 cm (avg. 1-2 cm), in an aphanitic grey-green matrix.	11799 11800 11801	120.00 121.00 122.00	121.00 122.00 122.40	1.00 1.00 0.40		Massive Lapilli Tuff	0.01 0.01 nil	
	122.40	Е.О.Н.								

ASSAY CERTIFICATES

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AND

PROOF OF EXPENDITURES

	BATT	LE MOUNTAIN (CANADA) IN 390 BAY STREET, SUITE 2910, TORONTO, DNTARIO M5H 2Y2	C.	0022
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Г		- NUMEU & DIA	03 /100 DOLLAR	s\$ <u>5,206.03</u>
TO SNA	istika Laborator!	ies,		
	. BOX 10, stike Ontenio		BATTLE MOUNTAIN	
POK	110	•		(CANADA) INC.
L	_			
	Canadian Imperial Banl	k of Commerce		
CIBC	TORONTO, ONTARIO MSI	CE COURT		
			A REAL PROPERTY AND ADDRESS OF AD	Contraction of the second s
		T MAR	r nfratiari fi	
** 00 2 2	•5 0000 : • #££	"0101: 13:46113: ⁰⁰¹	r negotiable <i>i</i>	/NON NÉGO
#°00 2 2	•5 000 0: ••E E	"0101: 13-46113" ^{NOT}	T NEGOTIABLE /	/Non négo
Nº DD 2 2	2 0000 2	HOLDI: 13HILE113H	r negotiable <i>i</i>	/NON NÉGO
Nº OO 2 2 BATTLE MC	2 3 00 00 24 XUNTAIN (CANADA) INC.	MOLON: 13m46113m	r negotiable <i>i</i>	/Non négo '00223
Nº OO 2 2 BATTLE MO DATE	2 3 3 H ^a 3 0000 24 SUNTAIN (CANADA) INC.	DESCRIPTION	r negotiable <i>i</i>	NON NÉGO OO223
BATTLE MC DATE Nov. 21*90	233# 1:00002. XUNTAIN (CANADA) INC.	DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90	F NEGOTIABLE	/NON NÉGO '00223
Nº DD 2 2 BATTLE MC DATE Nov. 21 º 90	233# #:00002+ SUNTAIN (CANADA) INC. Invoice # 2358 # 2358	MID LDI: L3ML6 L13M DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90 7 - Nov. 05*90	619.65 - 34_42-7	/ NON NÉGO '00223
Nº DD 2 2 BATTLE MC DATE Nov. 21 º 90	233# #:000024 SUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23620	DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90 7 - Nov. 05*90 0 - Nov. 07*90	619.65 34.42-7 608.17	NON NÉGO 100223
NºDD 2 2 BATTLE MC DATE Nov. 21 º 90	233# 1:000024 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23620 # 23620 # 23620	DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90 7 - Nov. 05*90 9 - Nov. 08*90	619.65 - 34.42-7 608.17 -	NON NÉGO 100223
NºDDZZ BATTLE MC DATE Nov. 21 º 90	233# 1:000024 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23620 # 23620 # 23644	DETACH & RETAIN THIS STATEMENT DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05'90 7 - Nov. 05'90 0 - Nov. 05'90 9 - Nov. 08'90 8 - Nov. 09'90	619.65 - 34.42 -7 608.17 - 1,354.05 -	NON NÉGO COO223
NOD 22 BATTLE MC DATE NOV. 21 90	233# 1:000024 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23620 # 23620 # 23640 # 23650	MOI DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05'90 7 - Nov. 05'90 0 - Nov. 07'90 9 - Nov. 08'90 8 - Nov. 09'90 4 - Nov. 12'90	619.65 - 34.42-7 608.17 - 1.354.05 - 611.12 -	NON NÉGO 100223
NOD 2 2 BATTLE MC DATE Nov. 21 90	233# 1:00002 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23626 # 23626 # 23626 # 23656 # 23656 # 23656 # 23679	MOI DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05'90 7 - Nov. 05'90 9 - Nov. 07'90 9 - Nov. 08'90 8 - Nov. 09'90 4 - Nov. 12'90 9 - Boy. 14'90	619.65 - 34.42-7 608.17 - 1.354.05 - 611.12 - 172.12 - 802.25 -	NON NÉCO OO22:
Nº DD 2 i BATTLE MC DATE Nov. 21 º 90	233# 1:00002 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23626 # 23626 # 23646 # 23654 # 23654	MID LDI: L3ML6 L13M DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05'90 7 - Nov. 05'90 0 - Nov. 05'90 9 - Nov. 07'90 9 - Nov. 08'90 8 - Nov. 09'90 4 - Nov. 12'90 9 - Lov. 14'90 0 - Nov. 15'90	619.65 - 34.42 -7 608.17 - 1,354.05 - 611.12 - 172.12 - 803.25 -	NON NÉCO OO22:
N°DD 2 i BATTLE MC DATE Nov. 21 °90	233# #:000024 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23624 # 23644 # 23654 # 23654	DETACH & RETAIN THIS STATEMENT DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90 7 - Nov. 05*90 0 - Nov. 05*90 9 - Nov. 05*90 9 - Nov. 08*90 8 - Nov. 09*90 4 - Nov. 12*90 9 - Nov. 12*90 9 - Nov. 15*90 5 - Nov. 15*90 5 - Nov. 16*90	619.65 34.42-7 608.17 1,354.05 611.12 172.12 803.25 550.60	NON NÉCO OO22:
Nº DD 2 I BATTLE MC DATE Nov. 21 º 90	233# #:000024 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23624 # 23654 # 23654 # 23654 # 23654 # 23654 # 23656 # 23656 # 23696	DETACH & RETAIN THIS STATEMENT DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90 7 - Nov. 05*90 9 - Nov. 09*90 4 - Nov. 09*90 4 - Nov. 12*90 9 - Nov. 15*90 5 - Nov. 16*90	619.65 34.42-7 608.17 1.354.05 11.12 172.12 803.25 550.60 252.45	NON NÉCO '0022:
Nº DD 2 I BATTLE MC DATE Nov. 21 º 90	233# 1:000024 DUNTAIN (CANADA) INC. Invoice # 2358 # 2358 # 23624 # 23654 # 23654 # 23654 # 23656 # 23696	DETACH & RETAIN THIS STATEMENT DETACH & RETAIN THIS STATEMENT DESCRIPTION 3 - Nov. 05*90 7 - Nov. 05*90 0 - Nov. 05*90 9 - Nov. 05*90 9 - Nov. 05*90 9 - Nov. 05*90 9 - Nov. 09*90 4 - Nov. 12*90 9 - Nov. 12*90 9 - Nov. 15*90 5 - Nov. 16*90	619.65 34.42-7 608.17 1.354.05 611.12 172.12 803.25 550.60 252.45	NON NÉCO '0022:

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Swastika Laboratories P.D. Box 10 Swastika, Dntario POK 1TO

INVOICE

		NO.:
		23629 Date:
SOLD TO:	SHIP TO:	11-08-90 PAGE:
Battle Mountain Canada Inc Box 635 Kirkland Lake, Dntario P2N 3K1	Same	1 of 1 75 Ju 28 104 779

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	F P UNIT PRICE	
105 704 779 62 18	43 43 39 39 5 5 31 31	1	Au Assays 1AT Sample Handling Cert#0W-1709-RA1 Au Assays 1AT Sample Handling Cert#0W-1718-RA1 Au Assays 1 AT Sample Handing Cert#0W-1710-RA1 Au Assays 1 AT Sample Handling Cert#0W-1724-RA1 -10% Discount	9.750 3.000 9.750 3.000 9.750 3.000 9.750 3.000	419.25. 129.00. 380.25. 117.00. 48.75- 15.00- 302.25 93.00- (150.45)-
COMMENTS			Diller	TOTAL 🛊	1,354.05
	R 1		¥ 113 samples =	1296.68	¥_

APPROVED FOB PAYMENT

asseeps ** Expenditures classical ON 1724 8 395.25 31 samples



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Assay Certificate

0W-1724-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: NOV-08-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	W. BENHAM	2. FAX # 567-6448

We hereby certify the following Assay of 31 SPLIT CORE samples submitted NOV-06-90 by M. MASSON.

Sample	Au	Au check			
Number	g/tonne	g/tonne			
6746	0.01	0.01	***************************************		
6747	Nil				
6748 \	0.03				
6749	0.02				
6750	0.01				
6751	0.01				
6752	0.02				
6753	0.01				
6754	Nil				
6755	0.01				
6756	0.01				
6757	0.01				
6758	Ni l				
6759	Nil				
6760	> AK90 - 10 0.01				
6761	Nil				
6762	Nil				
6763	Nil				
6764	Nil		• • • • •		
6765	Ni l				
6766	0.01	0.01			
6767	0.01				
6768	Nil				
6769	Nil				
6770	Nil				
6771	Ni l				
6772	Ni l				
6773	0.01				
6774	Nil				
0/15 /	Ni I				
6776/	Nil				
Au was o	Au was determined using 1 AT fusions				

Certified by Dama Londner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244, FAX (705)642-3300

Swastika Laboratories P.O. Box 10 Swastika. Dotario PØK 1TØ

.

INVOICE

NO.:	23679		
DATE:	11-14-90		
PAGE:	1 of 1		

SOLD TO: Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario P2N 3K1

	SHIP TO:	0	1090
•	RECEIVED NOV 1 Sam	y e	

75	JU	28	10	4	7	7	9
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ITEM NO.	OUANTITY	UNIT	DESCRIPTION	F P UNIT PRICE	AMOUNT
	15		Au Assays 1 AT Fusions	9.7	50 146.25-
	10		Sample Handling Cert#0W-1753-BA1	3.0	45.00
	27	1	Au Assays 1 AT Fusions	9.7	10 263 25
	27	1	Sample Handling	3.0	00 B1.00
	20		Cert#0W-1745-RA1 <		
	28	1	Au Assays 1 AT Fusions	, 9.7	273.00
			Cert#0W-1754-RA1	3.0	84.00
			-10% Discount		(89.25-
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				6.37	
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A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1745-RA1

Company:	BATTLE MOUNTAIN	Date: NOV-14-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	W. BENHAM	2. FAX # 567-6448

We hereby certify the following Assay of 27 SPLIT CORE samples submitted NOV-08-90 by M. MASSON.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
6792	0.01		
6793	0.01		
6794	0.01		
6795	0.02	0.03	
6796	Nil		
6797	0.01		
6798	0.02		
6799	0.01		
6800	0.02		
6801	0.01		
6802 7	0.02		
6803	0.01		
6804	0.01		
6805	Ni 1		
6806	- AK90-11 0.04		
6807 (0.03		
6808 \	0.01		
6809 \	0.05	0.07	
6810	Ni l		
6811	0.02		
6812	Nil		
6813	0.01		
6814	0.01		
6815	Nil		
6816	0.02		· · · ·
6817 /	0.04	0.05	
6818/	0.02		
6819 N	NOT REC'D		

Au was determined using 1 AT fusions

Certified by Inna Hardner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244. FAX (705)642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1732-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: NOV-12-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 567-6448

We hereby certify the following Assay of 15 SPLIT CORE samples submitted NOV-07-90 by ROBERT PEEVER.

Samp1 Number	e Au r g/tonne	Au check g/tonne	
6777	0 01		• • • • • • • • • • • • • • • • • • • •
6778	Nil		
6779	Nil		
6780	0.01		
6781	Ni l		
6782	Ni 1		• • • • • • • • • • • • • • • • • • • •
6783	Nil		
6784	Nil		
6785	Ni 1	Ni l	
6786	7 AK90-10 Nil		
6787 (0.01		
6788	Nil		
6789	Nil		
6790	0.67	0.63	
6791/	Ni l		
6792	not rec'd		

Au was determined using 1 AT fusions

onna Layener Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244, FAX (705)642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1753-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: NOV-14-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 567-6448

We hereby certify the following Assay of 15 SPLIT CORE samples submitted NOV-09-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	
6819	0.03		
6820) 0.02		
6821	0.09	0.10	·
6822	/ Nil		
6823	0.01		
6824	0.02		
6825	0.01		
6826	0.01		
6827	> 0.02		
6828	AK90-11 0.02	0.03	
6829	0.01		
6830 \	0.03		
6831) 0.01		
6832	/ 0.01		
6833	0.03		

Au was determined using 1 AT Fusions

andmen Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244. FAX (705) 642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1754-RA1

Company:	BATTLE MOUNTAIN CANADA INC	•			Date: NOV-14-90
Project:	75-JV-28	Сору	1.	567-4840	
Attn:	W.BENHAM	•	2.	FAX # 567-6448	

We hereby certify the following Assay of 28 SPLIT CORE samples submitted NOV-09-90 by .

Sample	Au	Au check	
Number	g/tonne	g/tonne	
6834	Ni 1		
6835	0.01		
0830	0.01		
0837	0.01		
0838	AK90-12 0.01		
6839 \	0.01		
6840	0.02	0.01	
11551	0.02		
11552	0.01		
11553	0.01		
11554	0.01		
11555	0.01		
11556	0.01		
11557	0.02		
11558	- 4 K 9 0 - 0 8 0.01		
11559	0.01		
11560	0.01		
11561	0.01		
11562	0.01	0.01	
11563	0.01		
11564	Nil		
11565	0.01		
11566	0.02		
11567	0.03		
11568	0.02	0.02	
11569	0.02		
11570	/ 0.02		
11571/	0.01		

Au was determined using 1 AT fusions

Jonno Lordner Certified by _____

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244. FAX (705) 642-3300 Swastika Laboratories P.O. Box 10 Swastika, Ontario PØK 1TØ

INVOICE

NO.:	
DATE:	23690
PAGE	11-15-90
THEE.	1 of 1

SOLD TO:

assays

Battle Mountain Canada Inc RECEIVED NOV 1 9 1990 Box 635 Kirkland Lake, D-4 Kirkland Lake, Ontario F2N 3K1

4B 1 AL Assays 1 AT Fusions 91750 46B 4B 1 AL Assays 1 AT Fusions 91750 46B 4B 1 Cert#0W-1767-RA1 3.000 144 -10% Discount (61	ITEM NO.	QUANTITY	<u>75</u> J	<u>U Z B</u>	104779	i
4B 4B 1 Au Assays 1 AT Fusions Sample Handling Cert#0W-1767-RA1 -10% Discount 9.750 46B 144 (61 Comments (61			DESCRIPTION		UNIT PRICE	AMOUNT
Cert#0W-1767-RA1 -10% Discount (61 Comments		48 48	Au Assays 1 AT Fusions Sample Handlion		7.750	468.00
COMMENTS			Cert#0W-1767-RA1			144.00
COMMENTS TOTAL ((61.20
COMMENTS:						
COMMENTS:			WP=			
Drilling 550	COMMENTS:		Drilles	5	TOTAL 🌢	550.80
			 			-=X

NOV 2 1 1990 リトロアン ch.#2233! 520603

APPROVED FOR PAYMENT

Alc 75-JV-28/104-779= 550.80



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 2

Assay Certificate

0W-1767-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

Date: NOV-15-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 48 SPLIT CORE samples submitted NOV-12-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
6841	0.03		
6842	0.03		
6843	0.01		
6844	0.01	Ni l	
6845	0.01		
6846	0.01		
6847	0.01		
6848	0.02		
6849	0.01		
6850	Ni I		
6851	Nil		
6852	0.02		
6853	0.01		
6854	0.01		
6855 \	- AK90-12 0.01	0.01	
6856	Nil		
6857	0.03		
6858	0.01		
6859	0.01		
6860	Nil		
6861	0.01		
6862	0.02		
6863	0.03		
6864	0.01		
6865	0.01	0.02	
6866 /	0.01		
6867 (0.01		
6868 7	AK90-13 0.01		
6869 (0.01		
6870)	0.01	0.03	
Au was	determined using 1 AT fusi	ons	

certified by Donna Sandnar

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244. FAX (705) 642-3300



Attn:

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 2

Assay Certificate

WAYNE BENHAM

0W-1767-RA1

Company: BATTLE MOUNTAIN CANADA INC. Project: 75-JV-28

Date: NOV-15-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 48 SPLIT CORE samples submitted NOV-12-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
6871	0.03		
6872	0.01		
6873	0.01		
6874	0.01	0.01	
6875	0.02		
6876	0.03		
6877 /	0.01		
6878	0.02		
6879	0.04		
6880	7 AK90-13 0.03		
6881	0.02		
6882	0.02		
6883	0.02		
6884	0.02		
6885	0.02		
6886	0.01		
6887 /	0.01		
6888/	0.01		

Au was determined using 1 AT fusions

certified by Donna Dardner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300

	TORONTO, ONTARIO M5H 2Y2	
		19-
PAY_UNE	3 Thousand One Hundred & Eighty-One 92,100 DOLLAR	s <u>1,181.92</u>
TO Swas	stika Laboratories,	
P.U. Svas	, BOX 10, BATTLE MOUNTAN Stika. Ontario. BATTLE MOUNTAN	N (CANADA) INC.
РОК	170	
	Canadian Imperial Bank of Commerce	
	MAIN BRANCH-COMMERCE COURT	
	NOT NEGOTIABLE	INON NÉGOGI
15 S O O 🍋 👘 👘	55# 1:00002#0101: 13#46113#	
	DETACH & RETAIN THIS STATEMENT	· · · · · · · · · · · ·
BATTLE MOL	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC.	00225
BATTLE MOL	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION	00225
BATTLE MOL DATE	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Involce # 23707 Koy, 16,90 \$ 711 45 V	00225
BATTLE MOL DATE Nov. 27'90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Involce # 23707 Kov. 16*90 \$ 711.45 4 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOU DATE Nov. 27'90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Involce # 23707 Rov. 16*90 \$ 711.45 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOU DATE Nov. 27'90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Involce # 23707 Nov. 16*90 \$ 711.45 4 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOL DATE Nov. 27 90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Invoice # 23707 Nov. 16*90 \$ 711.45 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOL DATE Nov. 27'90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Involce # 23707 Kov. 16*90 \$ 711.45 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOU DATE NOV. 27'90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Involce # 23707 Nov. 16*90 \$ 711.45 4 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOL DATE Nov. 27 90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Invoice # 23707 Nov. 16*90 \$ 711.45 # 23734 Nov. 20*90 470.47	D0225
BATTLE MOL DATE Nov. 27'90	DETACH & RETAIN THIS STATEMENT UNTAIN (CANADA) INC. DESCRIPTION Invoice # 23707 Kov. 16*90 \$ 711.45 # 23734 Nov. 20*90 470.47	D0225

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e,

Swastika Laboratories P.D. Box 10 Swastika, Ontario P0K 1T0

SOLD TO:

P2N 3K1

INVOICE

RECEIVED NOV 2 1 1990

NO.:

APPROVED FOR PAYMENT

DATE: 11-16-90 PAGE:

1 of 1

23707

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario

SHIP TO:

Same

	0UANTITY 62 62	UNIT 1	DESCRIPTION Au Assays 1 AT Fusions Sample Handling Cert#0W-1781-RA1 -10% Discoupt	F P	UNIT PRICE	AMOUNT 604.50 186.00
			Q			
			WP			
Net 30	Days		Diilling		TOTAL 🌢	711.4

A/C 75-JV-28/104-779 assays



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 3

Assay Certificate

0W-1781-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

Date: NOV-16-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 62 SPLIT CORE samples submitted NOV-14-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
6889	0.01		
6890	Nil		
6891	0.01		
6892	0.01		
6893	Nil		
6894	0.06		
6895	0.03		
6896	0.01		
6897	<i>i</i> 0.01		
6898	0.01	0.01	
6899	Nil		
6900	0.02		
6901	Ni 1		
6902	0.01		
6903 [\]	1K90-14 0.01		
6904	Nil		
6905 /	0.02		
6906	0.01		
6907	0.01	0.01	
6908	0.01		
6909	Nil		
6910	0.01	0.01	
6911	Nil Nil		
6912	\ Nil		
6913	Nil		
6914	0.01		
6915	0.02		
6916	/ 0.02		
6917	/ 0.01		
6918/	0.02		
Au wa	s determined using 1 AT fusion	ons	

certified by Soma Hardner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244. FAX (705) 642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 3

Assay Certificate

0W-1781-RA1

Company:BATTLE MOUNTAIN CANADA INC.Date: NOV-16-90Project:75-JV-28Copy 1. HOLD COPY 567-4840Attn:WAYNE BENHAM2. FAX TO 567-6448

We hereby certify the following Assay of 62 SPLIT CORE samples submitted NOV-14-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
6919	0.01		
6920	Ni l		
6921	0.01		
6922	0.01	0.01	
6923	0.01		
6924	Nil		•••••
6925	Nil		
6926	Ni l		
6927	Ni l		
6928	0.02		
6929	Nil		
6930	0.02		
6931	0.06		
6932	0.02		
6933	~ AK90-14 0.01		
6934	0.01		
6935	0.01		
6936	0.01	0.01	
6937	0.02		
6938	Nil		
6939	0.01		
6940	0.01		
6941	0.01		
6942	0.01		
6943	0.01		
6944	0.01		
6945	0.03		
6946	Nil		
6947)	Nil		
6948	A1290-15 Nil		
Au was	determined using 1 AT fusi	ons	

certified by Long Sarana

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244, FAX (705)642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 3 of 3

Assay Certificate

0W-1781-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

.

Date: NOV-16-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 62 SPLIT CORE samples submitted NOV-14-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	 	
69492 AK 10-15 69505	Ni l Ni l			

Au was determined using 1 AT fusions

Jonna Handner. Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244. FAX (705) 642-3300



Swastika Laboratories P.O. Box 10 Swastika, Ontario PØK 1TØ

SOLD TO:

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INVOICE

		NO.:	
		DATE:	23739
	Ship to:	PAGE:	11-20-90
untain Canada Inc			1 of 1

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario P2N 3K1

Same

ITEM NO.	OUANTITY	1 INUT	75 J (128	104779	
	GOATTA		DESCRIPTION	F P	UNIT PRICE	AMOUNT
an a	34	1	Au Assays 1 AT Fusions	Į.	9.750	331.50
	34	1	Sample Handling		3.000	102.00
ni s	70		Cert#ØW-1805-RA1			
	70 70	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Au Assays 1 AT Fusions		9.750	682.50
	10	-	Cert#0W-1797-RA1	7	3.000	210.00
	27	1	Au Assays 1 AT Fusions	•	9.750	747 75
	27	1	Sample Handling	х. -	3.000	81.00
		· · · · ·	Cert#0W-1800-RA1			
	•		-10% Discount	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	10 No. 20 Pr. 15	167.03-
Net 30	Days		Drilling.		TOTAL	1,503.22
M		- *	Expanditure claimed Cont # 1	797	892.50 89.25 803.25	-
L. NOV	2 7 1990			APPR	OVED FOR PAY	(ENT
	F.	and Gil			12 July	
Left 2	and have a	517.14	•		•	
-						
A C 75	-JV-28/	104-779	= #1,503.22 as	say		



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 3

Assay Certificate

0W-1797-RA1

Company:BATTLE MOUNTAIN CANADA INC.Date: NOV-20-90Project:75-JV-28Copy 1. HOLD COPY 567-4840Attn:WAYNE BENHAM2. FAX TO 567-6448

We hereby certify the following Assay of 70 SPLIT CORE samples submitted NOV-16-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
11572	Nil		
11573	0.02		
11574	Ni l		
11575	Ni 1		
11576	0.01		
11577	0.01		
11578	Nil		
11579	Ni l	Ni l	
11580	0.01		
11581	Nil		
11582	0.01		
11583	Nil		
11584	Nil	0.01	
11585	Nil		
11586	- <u>AKGO - 16</u> 0.01'		
11587	Nil		
11588	Ni l		
11589 _\	Ni l		
11590	Nil		
11591 \	Nil		
11592	0.01		
11593	Ni l		
11594	Ni 1		
11595	Nil		
11596	Ni 1		
11597	0.01		
11598	Nil		
11599 /	0.01		
11600 /	Ni l		
11601	0.02		
Au was d	etermined using 1 AT fusio	ns	

Certified by Donne Handnen

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244. FAX (705)642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 3

Assay Certificate

0W-1797-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: NOV-20-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 567-6448

We hereby certify the following Assay of 70 SPLIT CORE samples submitted NOV-16-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
11602	0.02		
11603 \	0.02		
11604 \	0.02	0.01	
11605	0.01		
11606	0.01		
11607	0.01		
11608	0.01		
11609 /	0.01		
11610 /	0.01		
11611	0.01		
11612	0.01		
11613	0.01		
11614	0.01		
11615	0.01		
11616	AK90-16 0.02	0.01	
11617	0.01		
11618 /	0.02		
11619	0.02		
11620	0.02		
11621	0.02		
11622	0.02		•••••••••••••••••••••••••••••••••••••••
11623	0.03		
11624	0.03		
11625	0.02		
11626	0.02		
11627	Nil		
11628	0.01		
11629 /	0.01		
11630 /	0.02		
11631	0.01	0.01	
Au was de	termined using 1 AT fusion	ons	

Certified by Landner Jandner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244. FAX (705)642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 3 of 3

Assay Certificate

0W-1797-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

Date: NOV-20-90 Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 70 SPLIT CORE samples submitted NOV-16-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	
11632 11633 11634 11635 11636	0.01 0.01 0.01 0.02 2 AK90-16 0.01	0.01	
11637 11638 11639 11640 11641	0.01 0.01 Ni l 0.01 0.01		

Au was determined using 1 AT fusions

Handner Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300 Swastika Laboratories P.O. Box 10 Swastika, Ontario PØK 1T0

SOLD TO:

INVOICE

	NO.:	23778
	DATE:	11-23-90
SHIP TO:	P AGE:	1 of 1

Same

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario F2N 3K1

			75 JU 28	1	104779	
ITEM NO.	QUANTITY	UNIT	DESCRIPTION	FP	UNIT PRICE	AMOUNT
	38 38	1	Au Assays 1 AT Fusions Sample Handling Cert#0W-1823-RA1 -10% Discount		9.750 3.000	370.50 114.00 48.45-
	. · · .		. N			
			WDa			
Net 30	Days		Drilling		TOTAL 🛊	K 436.05

assays

高江へ NOV 2 7 1930 c1 # 2212 - "2317.94 Ak 75-JU-28/104-779- \$436.05

APPROVED FOR PAYMENT



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 2

Assay Certificate

0W-1823-RA1

Company: BATTLE MOUNTAIN CANADA INC.

Date: NOV-23-90

Copy 1. FAX TO 567-6448

Project: 75-JV-28 Attn: W. BENHAM

We hereby certify the following Assay of 38 SPLIT CORE samples submitted NOV-21-90 by .

Sample	Au	Au check	Au 2nd	Au check	
Number	g/tonne	g/tonne	g/tonne	2nd g/t	
7108 ~	0.01				
7109	Nil Nil				
7110	Ni l				
7111	\ Nil				
7112	0.18				
7113	1.54	1.44			
7114	1.49				
7115	0.01				
7116	0.11				
7117	0.08	l			
7118	0.04				
7119	0.88				
7120	2.19	2.37			
7121	0.58	3			
7122	$\rightarrow AK90.31 0.02$				
7123 /	0.13				
7124	0.01				
7125	0.04	ł			
7126	0.02)			
7127	\ 0.04	k i i i i i i i i i i i i i i i i i i i			
7128	0.4				
7129	0.0	5			
7130	0.0	2			
7131	0.2	5			
7132	0.0	2			
7133	7.0	5 7.03			
7134	0.0	5			
7135	/ 0.0	4			•
7136	/ 7.1	7.13			
7137	0.0	7			

Au was determined using 1 AT fusions

Certified by Donna Hardner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244 FAX (705)642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 2

Assay Certificate

0W-1823-RA1

Company: BATTLE MOUNTAIN CANADA INC.

Date: NOV-23-90

Copy 1. FAX TO 567-6448

Project: 75-JV-28 Attn: W. BENHAM

We hereby certify the following Assay of 38 SPLIT CORE samples submitted NOV-21-90 by.

Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
7138 7139	0.04 13.06	12.72	12.58	13.10	
7140 7141 7142	1.02 0.89				
7143 7144	0.13	10.53	8.91	8.85	·····
/145/	0.36				

Au was determined using 1 AT fusions

na Jan Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300


Swastika Laboratories P.D. Box 10 Swastika, Ontario P0K 1T0

SOLD TO:

INVOICE



Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario P2N 3K1

Same

RECEIVED NOV 2 8 1990

			13 .	1028	104 77	9
ITEM NO QUANTITY	UNIT	DESCRIPTION		F P U	NIT PRICE	AMOUNT
28 28 28		Au Assays Sample Handling Cert#ØW-1828-RA1			8.750 3.000	245.00 84.00
		-10% Discount	<u> </u>			
					1	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1				
		I.D				
			5.14 (1993) ·			
					¥	
Net 30 Dave					TOTAL 🌢	
L	ng regingen beveren. T	Du	Ilasa	1		, 296.10

DEC. - 6 1990 Cl# 2288- 296.10

APPROVED FOR PAYMENT

A/c 75- JV-28/104-779= 296.10 assays







A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

RECEIVED 010 - 6 1990

0W-1828-RA1

Company: BATTLE MOUNTAIN CANADA INC. Project: 75-JV-28

Attn: WAYNE BENHAM

Date: NOV-23-90 Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 28 SPLIT CORE samples submitted NOV-22-90 by ROBERT PEEVER.

Sample	Au	Au check	Au 2nd	Au check	
Number	g/tonne	g/tonne	g/tonne	2nd g/t	
7146	0.05				
7147	0.25				
7148	0.02				
7149	2.39	2.54	2.13	1.92	
7150	0.02				
7501	0.03				
7502	0.02				
7503	Ni 1				
7504	0.17				
7505	0.04				
7506	0.01				
7507	0.03				
7508	0.04	0.07			,
7509	0.02				
/510	<u> A(95.7</u> 0.01				
7511	0.01				
7512	0.04				
7513	0.01				
7514	0.01				
7515	1				··
7516	0.02				
7517	0.02	0.00			
7510	0.03	0.03			
7520					
7520					•••••••••••••••••••••••••
7521	/ 0.01				
1522	/ 0.02				
1323	0.01				

Au was determined using 1 AT fusions

Certified by Donna Hardner

	BATTLE MOUNTAIN (CANADA) INC. 390 BAY STREET, SUITE 2910, TORONTO, ONTARIO M5H 2Y2		0023
PAY 11	c Thousand Two Hundred & Twenty-Six	- 15 /100 DOLLARS	\$ 2,226.15
TO Sva TO Sva P.O Sva POK	stika Laboratories, . Box 10, stika, Ontario. 190	BATTLE MOUNTAIN (CANADA) INC.
	Canadian Imperial Bank of Commerce MAIN BRANCH-COMMERCE COURT TORONTO, ONTARIO M5L 109		
#*D0 2 3	D 3 11" 1:0000 2 *** 0 101: 1 3 *** 4 6 1 1 3 11"	NECOTIABLE /	NON NEGO
H [®] DO 2 3 BATTLE MO DATE	DETACH & RETAIN THIS STATEMENT DUNTAIN (CANADA) INC.	NECOTIABLE /	NON NEGO OO231
H [®] DO 23 BATTLE MO DATE Dec. 14*90	D 3 11" 1:0000 2 0 101: 1 3 4 6 1 1 3 DETACH & RETAIN THIS STATEMENT OUNTAIN (CANADA) INC. DESCRIPTION INVOICC # 23806 Kev. 28'90 # 1 # 23819 Kov. 29'90 # 23860 Dec. 05'90	NECOTIABLE/ 229.50 - 711.45 -	00231
HOD 23 BATTLE MO DATE Dec. 14190	Image:	NECOTIABLE / 229.50 - 711.45 -	NON NEGO 0023 Amou \$ 2,226.1
HOD 23 BATTLE MO DATE Dec. 14*90	DBIN 1:0000200101: 130461130 DETACH & RETAIN THIS STATEMENT OUNTAIN (CANADA) INC. DESCRIPTION 10701CC # 23806 Nov. 28'90 # 1 # 23819 Nov. 29'90 # 23860 Dec. 05'90	NECOTIABLE/ 229.50 - 711.45 -	NON NEGO 00231

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Swastika Laboratories P.D. Box 10 Swastika, Ontario FOK 1TO

SOLD TO:

INVOICE

		NO.:	
		DATE:	23806
	SHIP TO:	PAGE:	11-28-90
ttle Mountain Canada Inc			1 of 1
× 635	Same		

Ba Bo Kirkland Lake, Ontario P2N 3K1

		75 JU 28	104	779	
TIEM NO. QUANTITY	UNIT	DESCRIPTION	F P	UNIT PRICE	AMOUNT
112 112	1 1 1	Au Assays 1 AT Fusions Sample Handling Cert#0W-1839-RA1 -10% Discount		9.750 3.000	1,092.00 336.00 142.80-
		RECEIN	/ED n-		-
		0		CIORI	
		15	· .		•
		West			
			aji L		
COMIMENTS:					
Net 30 Days		Drilling			1,285.20
1		V			
		1			•

MALIC ~ DEC 1 3 1990 14 # 2303 - 2226.15

APPROVED FOR P Ch he

Ale 75-JU-28/104-779 · 1,285.20

assays



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 4

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Assay Certificate

0W-1839-RA1

Company: BATTLE MOUNTAIN CANADA INC.

Date: NOV-28-90

Copy 1. FAX TO 567-6448

Project: 75-JV-28 Attn: W. BENHAM

We hereby certify the following Assay of 112 SAWN CORE samples submitted NOV-23-90 by R. PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
7524	0.01		•••••••••••••••••••••••••••••••••••••••
7525	Nil		
7526	0.01		· · · · ·
7527	Nil		
7528	0.01		
7520	NI 1		•••••••••••••••••••••••••••••••••••••••
7520		0.00	
7530	U.04	0.09	· · · · · · · · · · · · · · · · · · ·
7537	INI I Ni I		
7532			
7533			
1334	0.01		
1333	0.01		
1330	0.02		
1231	NII NII		
/338	YAR90-22 NII		
7539	/ Nil	Ni l	
7540	0.01		
7541	Nil		
7542	Nil		
7543	Nil		
7544	0.01		
7545	0.01		
7546	0.01		
7547	0.01		
7548	0.01		
7549	0.02		
7550	0.05		
7551	0.03		
7552	0.35	0.48	
7553	/ 0.02		

Au was determined using 1 AT fusions

certified by Donna Sandna



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 4

Assay Certificate

0W-1839-RA1

Company: BATTLE MOUNTAIN CANADA INC.

Date: NOV-28-90

Copy 1. FAX TO 567-6448

Project: 75-JV-28 Attn: W. BENHAM

We hereby certify the following Assay of 112 SAWN CORE samples submitted NOV-23-90 by R. PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
7554	0.01		***************************************
7555 \	0.01		
7556	Ni1		,
7557	0.01	0.01	
7558	0.01		
7559	Nil	********	
7560	Nil		
7561	Nil		
7562	0.01		
7563	Nil		
7564	Nil		***************************************
7565	0.01		
7566	0.01		
7567	0.37	0.35	
7568	> AK90.22 0.09		
7569	0.01		
7570	0.01		
7571	0.01		
7572	0.01		
7573	\ 0.01		
7574	0.02		
7575	\ 0.02		
7576	0.01		
7577	0.01		
7578	0.01		
7579	0.01		
7580	/ 0.01		
7581	/ 0.01	0.01	
7582	0.01		
7583 /	0.01		

Au was determined using 1 AT fusions

certified by Landren Handren



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 3 of 4

Assay Certificate

0W-1839-RA1

BATTLE MOUNTAIN CANADA INC. Company: Project: 75-JV-28 Attn:

Date: NOV-28-90

Copy 1. FAX TO 567-6448

W. BENHAM

We hereby certify the following Assay of 112 SAWN CORE samples submitted NOV-23-90 by R. PEEVER.

	Sample	Au	Au check	
	Number	g/tonne	g/tonne	
	7584	0.01		• • • • • • • • • • • • • • • • • • • •
	7585	0.01		
	7586	0.01		
	7587	0.01		
	7588	0.06	0.04	
l	7589	0.01		
	7590	0.01		
	7591	0.01		
	7592	0.01		
	7593	0.01		
	7594	0.01		
	7595	0.01		
-	7596	0.01		
	7597	0.01	0.01	
	7598	AK90-22 0.01		
•	7599 /	0.01		
	7600	0.01		
	7601	0.01		
	7602	0.01		
	7603	0.01		
	7604	0.02		
	7605	0.01		
	7606	0.01		
	7607	Ni I		
J	7608	0.01		
	7609	0.02	0.02	
60057	7610	0.01		
177419	7611	0.01		
	7612	/ 0.01		
	7613	/ 0.02		

Au was determined using 1 AT fusions

certified by Dinne, Handren



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 4 of 4

Assay Certificate

0W-1839-RA1

BATTLE MOUNTAIN CANADA INC. Company: 75-JV-28 Project: Attn:

Date: NOV-28-90

Copy 1. FAX TO 567-6448

W. BENHAM

We hereby certify the following Assay of 112 SAWN CORE samples submitted NOV-23-90 by R. PEEVER.

Sample Number	Au g/tonne	Au check	
7614			
7014 \	0.01		
7015	0.01		
/010	0.02		
7617	0.01		
7618	0.02	0.02	
7619	0.02		
7620	0.01	-	
7621	0.01		
7622	0.01		
7623	> AK90-22 0.02		
7624 /	0.01		
7625	0.01		
7626	Ni l		
7627	Ni l		
7628	Nil		
7620	N1: 1		•••••••••••••••••••••••••••••••••••••••
7620	NI I		
7631			
7631	NI I		
7032 -	NII NUI		
/033	/N11		
7634	/ 0.01		
7635 🗸	0.01	0.01	

Au was determined using 1 AT fusions

certified by Dana Harana

Swastika Laboratories P.D. Box 10 Swastika, Ontario FOK 1TO

INVOICE

NO.: 23819 DATE: 11-29-90 PAGE: 1 of 1 .

SOLD TO:

SHIP TO:

Same

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario F2N 3K1

			75 JUZB 1	04779	
ITEM NO.	QUANTITY	AUNIT	DESCRIPTION	F P UNIT PRICE	AMOUNT
	20 20	1 1	Au Assays 1 AT Fusions Sample Handling Cert#0W-1842-RA1	9.750 3.000	195.00- 60.00.
			-10% Discount		25.50-
			IR	RECEIVED DEU 1 U 1	990
			WR		
COMMENTS.	•		Drilling	TOTAL	229.50

110 DEC 1 3 1850 ch#2303=2226.15

APPROVED FOR PAYMENT

Alc 75-JV-28/104-779- 229.50 assays

1



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1842-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:W.BENHAM

Date: NOV-29-90 Copy 1. FAX # 567-6448

We hereby certify the following Assay of 20 SPLIT CORE samples submitted NOV-26-90 by R. PEEVER.

Sample	Au	Au check	Au 2nd	Au check	
Number	g/tonne	g/tonne	g/tonne	2nd g/t	
11642	0.01				
11643	0.01				
11644	0.01				
11645	0.01				
11646	0.01	0.01			
11647	0.01				
11648 /	Ni l				
11649 /	0.02				
11650	Nil			-	
11651	- AK90-21 0.01				
11652	0.01				
11653	0.02				
11654	Nil				
11655	0.01				
11656	0.02				
11657	1.12	1.18	1.03	0.96	
11658	0.02				
11659	0.02				
11660	0.07				
11661 /	0.01				

Au was determined using 1 AT fusions

Jonna Hardner Certified by

	BATTLE 39 TC	MOUNTAIN (CANA 0 BAY STREET, SUITE 29 DRONTO, ONTARIO M5H 2	DA) INC.	002352
				19 <u>90</u>
PAY_1	Dres Phoesand kine	Huidrog & Perfy-		A 8.421.40
۲,		·	/100 DULLA	18
TO SV	asiatia Laboratories	ε, .		
	D. BUX 10,	•	BATTLE MOUNTA	
	Stand, Uncerte.	•		
L		· ·	Station Station and a station of the	
	Canadian Imperial Bank of			1
	MAIN BRANCH-COMMERCE	COURT		5 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
CIBC	TORONTO, ONTARIO M5L 10	39		
BATTLE M	3 5 211° 1:0000 2:110	0101: 13114611 DETACH & RETAIN THIS STA		
BATTLE M DATE	3 5 211° \$2000 2110	DETACH & RETAIN THIS STAT		002352
BATTLE M DATE	35211 1:0002 2:0	DETACH & RETAIN THIS STAT		
BATTLE M DATE Date Date	35211 \$0000200 OUNTAIN (CANADA) INC.	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90	3 II [®]	
BATTLE M DATE Date Date	35211 1:0000200 OUNTAIN (CANADA) INC.	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Three 11160	3 ₩ ⁴ TEMENT \$ 68.85 - \$62.12 -	
BATTLE M DATE Date Date	35211 1:0000200 ountain (canada) inc.) Bycice 1 2:5:74 1 2:3:54 1 2:3:57 1 2:3:57 1 2:3:59 1 2:3:59	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 11*90	€ 68.85 - 505.52 - 502.25 -	
HOD 2: BATTLE M DATE Date Date	352# 1:00002#0 OUNTAIN (CANADA) INC. DIRVCICE # 23074 # 23084 # 23087 # 23984 # 23914	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*96	€ 68.85 - \$68.85 - \$61.12 - \$05.52 - \$73.75 - 1.157.50 -	
HOD 23 BATTLE M DATE Date Date	35211 1:0000200 OUNTAIN (CANADA) INC. JEVCICE 1 23034 1 23034 1 23057 1 23057 1 23914 1 23914 1 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*90 Dec. 13*90	€ 68.85 - \$ 68.85 - \$ 501.12 - \$ 573.75 - 1.147.50 - \$ 40.95 -	002352 AMOUNT
HOD 2 BATTLE M DATE Doc. 26190	35211 1:000020 OUNTAIN (CANADA) INC. DIRVCICE # 23034 # 23057 # 23057 # 23914 # 23914 # 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*90 Dec. 13*90	€ 68.85 - \$ 68.85 - \$ 501.12 - \$ 573.75 - 1.147.50 - \$ 570.95 -	002352 AMOUNT \$ 3,942.95
HOD 23 BATTLE M DATE Date Date	35211 1:000020 OUNTAIN (CANADA) INC. INVCICE 23074 23084 23087 23914 23914 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*96 Dec. 13*96	€ 68.85 - \$68.85 - \$61.12 - \$05.52 - \$73.75 - 1,147.50 - \$1.0.95 -	002352 AMOUNT
HOD 23 BATTLE M DATE Date Date	35211 1:000020 OUNTAIN (CANADA) INC. JEVCICE # 23074 # 23057 # 23057 # 23914 # 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*90 Dec. 13*90	€ 68.85 - \$ 68.85 - \$ 501.12 - \$ 573.75 - 1.147.50 - \$ 510.95 -	002352 AMOUNT \$ 3,942.55
HOD 2 BATTLE M DATE Date Date	35211 1:000020 OUNTAIN (CANADA) INC. DIRVCICE # 23034 # 23057 # 23057 # 23914 # 23914 # 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*96 Dec. 13*96	€ 68.85 - \$ 68.85 - \$ 503.12 - \$ 573.75 - 1,147.50 - \$ 570.95 -	002352 AMOUNT
0023 BATTLE M DATE Date Date	35211 1:000020 OUNTAIN (CANADA) INC. DIRVCICE # 23074 # 23084 # 23087 # 23914 # 23914 # 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*96 Dec. 13*96	€ 68.85 - \$61.12 - \$05.52 - \$73.75 - 1,147.50 - \$40.95 -	002352 AMOUNT
BATTLE M DATE Date Date	35211 1:0000200 OUNTAIN (CANADA) INC. DEVCICE 225074 23684 23684 23697 23914 23914 23920	DETACH & RETAIN THIS STAT DETACH & RETAIN THIS STAT DESCRIPTION Dec. 06*90 Dec. 07*90 Dec. 11*90 Dec. 11*90 Dec. 12*96 Dec. 13*96	€ 68.85 - \$68.85 - \$62.12 - \$05.52 - \$73.75 - 1.147.50 - \$1.0.95 -	002352 AMOUNT \$ 3,942.55

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Swastika Laboratories P.D. Box 10 Swastika. Ontario P0K 1T0

INVOICE

NO.:	
DATE:	23884
PAGE	12-07-90
	1 of 1

SOLD TO:

SHIP TO:

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario P2N 3K1

Same

75 JUZ8 164 779

		5 ONUT	DESCRIPTION	FF	UNIT PRICE	AMOUNT
		•		ţ		
	20	1	Au Assays 1 AT Fusions		9-750	195 00
l i	35	1	Sample Handling		3.000	105.00
1			Cert#ØW-1892-RA1			
	55	1	Au Assays 1 AT Fusions		9.750	536.25
	55	1	Sample Handling		3.000	165.00
			Lert#0W-1882-RA1			
			-10% Discount			100.13-
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COMMENTS.						
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			C			2
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DEC 2 6 1990 CL# 2352= 3941.99

APPROVED FOR PAYMENT

Ak 15-51-28/104-779="901.12 assupt



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Assaying - Consulting - Representation

Page 1 of 2

Assay Certificate

0W-1892-RA1

Company:	BATTLE MOUNTAIN CANADA INC.
Project:	75-JV-28
Attn:	WAYNE BENHAM

Date: DEC-07-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 35 SPLIT CORE samples submitted DEC-04-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
7848 n	nt rec'd				
7849	0.01				
7850	0.01		·		
7851	0.03				
7852	0.01				
7853	0.01				
7854	0.02				
7855	0.02				
7856	0.02				
7857	0.01				
7858	0.31				
7859	7.61	7.65	6.55	6.65	
7860	1.00				
7861	2.40	2.19			
7862	Argo-26 0.42				
7863	0.02				
7864	0.02				
7865	0.01				
7866	Nil				
7867	0.01				
7868	0.02				
7869	0.01				
7870	0.02				
7871	0.01				
7872	0.01				
7873	0.01				
7874	0.02				
7875	0.02	0.02			
1876	0.04				
18/1	0.02				
Au was	determined using 1 AT fusi	ons			

Jonna Havina Certified by



Company: Project:

Attn:

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 2

Assay Certificate

75-JV-28

WAYNE BENHAM

0W-1892-RA1

Date: DEC-07-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 35 SPLIT CORE samples submitted DEC-04-90 by ROBERT PEEVER.

BATTLE MOUNTAIN CANADA INC.

Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
7878	0.02				
7879	0.02				
7880	0.02				
7881	0.02				
7882 /	Argo-23 0.02				
7883	0.02				

Au was determined using 1 AT fusions

Certified by Donna Hardner

Swastika Laboratorie= P.D. Box 10 Swastika. Ontario P0K 1T0

INVOICE



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SHIP TO:

Same

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario P2N 3K1

			75 JUZ8	100	4779	
ITEM NO. OUA	NTITY	UNIT	DESCRIPTION	F P	UNIT PRICE	AMOUNT
27 27		1	Au Assays 1 AT Fusions Sample Handling Cert#ØW-1894-RA1		9.750 3.000	263.25 81.00
			-10% Discount			(34.43
			ND			
		;		;	- - 	
Net 30 Days	i	•	Drilling	•		309.8 2



APPROVED FOR PAYMENT



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1894-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: DEC-10-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 567-6448

We hereby certify the following Assay of 27 SPLIT CORE samples submitted DEC-05-90 by ROBERT PEEVER.

Sample	Au	Au check	
Numper	g/tonne	g/tonne	
7884	0.12	0.22	
7885	0.03		
7886	0.09		
7887	0.02		
7888	Ni l		
7889	0.01		
7890	0.01		
7891	0.02		
7892 /	0.01		·
7893	0.02		
7894	0.02		·····
7895	0.20		
7896	0.28		
7897	0.44	0.43	
7898	AK90-26 0.06		
7899	Nil		
7900	Nil		
7901	0.02		
7902	\ 0.01		
7903	0.01		
7904	Nil		
7905	0.01		
7906	0.04		
7907	0.01		
7908	/ 0.01		
7909	0.02		
7910	0.01	0.01	

Au was determined using 1 AT fusions

Landin Certified by

Swastika Laboratories P.D. Box 10 Swastika, Ontario PØK 1TØ

INVOICE

		NO.:	
	•		23909
SOLD TO:	SHIP TO:	DACE.	12-11-90
Battle Mountain Canada Inc		PAGE:	1 of 1
Box 635 Kirkland Lake, Ontario	Same		

GIEM NO.	QUANTITY	UNIT	DESCRIPTION	F P	UNIT PRICE	AMOUNT
	50 50	1	Au Assays 1 AT Fusions Sample Handling Cert#0W-1905-RA1 -10% Discount		9.750 3.000	487.50 150.00 63.75-

<i>1</i>			
COMMENTS:		Ŧ	
Net 30 Days		TOTAL	573.75

LI DEC 2 6 1350 ch + 2352: 3941,99 Alc 75-JV-28/104-779- 573.75 assays

APPROVED FOR PAYMENT



Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

Page 1 of 2

0W-1905-RA1

Company:	BATTLE MOUNTAIN CANADA INC	
Project:	75-JV-28	_
Attn:	WAYNE BENHAM	Copy 1. HOLD

Date: DEC-12-90

COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 50 SPLIT CORE samples submitted DEC-06-90 by ROBERT PEEVER.

Number $g/10nne$ $g/10nne$ 7911 0.01 7913 0.01 7914 Ni1 7915 Ni1 7916 0.01 7917 Ni1 7918 0.01 7919 0.01 7919 0.01 7920 0.01 7921 0.01 7922 0.04 0.01 0.02 7923 0.01 7924 0.01 7925 $At 90.97$ 0.01 0.01 7928 0.01 7930 0.01 7931 0.02 7933 0.03 7934 0.02 7935 0.04 7936 0.01 7937 Ni1 7938 0.01 7939 0.02 7934 0.02 7935 0.04 7936 0.01	Sample	Au	Au check	RECEIVED 020 2 7 1990
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	number	g/tonne	g/tonne	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7911	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7912	Ni l		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7014	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7015	Ni l		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Nil		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	/916 7017	0.01		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7010	Nil	0.01	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7010	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7920	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7001	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7921	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7922	0.04	0.02	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7923	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7925	0.01		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7020-1	- AK 90-27 0.01		
7928 0.01 7929 Ni1 7930 0.01 7931 0.02 7932 0.04 7933 0.03 7934 0.02 7935 0.04 7936 0.01 7937 Ni1 7938 0.01 7939 0.02 7940 0.01	7920	0.01		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7028	0.01		
Ni1 7930 0.01 7931 0.02 7932 0.04 7933 0.03 0.03 7934 0.02 7935 0.04 7936 0.01 7937 Ni1 7938 0.01 7939 0.02 7930 0.01	7920	0.01		
7931 0.01 7932 0.04 7933 0.03 0.03 7934 0.02 0.03 7935 0.04 0.03 7936 0.01 Ni1 7938 0.01 0.02 7939 0.02 0.01	7930	Nil Nil		
7931 0.02 7932 0.04 7933 0.03 0.03 7934 0.02 0.04 7935 0.04 0.03 7936 0.01 Ni1 7938 0.01 0.02 7939 0.02 0.01	7021	0.01		
7932 0.04 7933 0.03 0.03 7934 0.02 0.04 7935 0.04 0.02 7936 0.01 0.01 7938 0.01 0.02 7939 0.02 0.02 7940 0.01 0.01	7931	0.02		
7934 0.03 0.03 7935 0.02 7936 0.04 7937 Ni1 7938 0.01 7939 0.02 7940 0.01	7932	0.04		
7935 0.02 7936 0.04 7937 Ni1 7938 0.01 7939 0.02 7940 0.01	7934	0.03	0.03	
7936 0.04 7937 0.01 7938 0.01 7939 0.02 7940 0.01	7935	0.02		
7930 0.01 7937 Ni1 7938 0.01 7939 0.02 7940 0.01	7026			
Ni1 7938 0.01 7939 0.02 7940 0.01	7027	0.01		
7939 0.01 7940 0.02 0.01 0.01	7938	Nil		
7940 / 0.01	7939	0.01		
	7940 /	0.02		
		0.01		

nna Hendher Certified by_



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Assaying - Consulting - Representation

Page 2 of 2

Assay Certificate

0W-1905-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: DEC-12-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 567-6448
Attn:	WAYNE BENHAM	2. FAX TO 567-6448

We hereby certify the following Assay of 50 SPLIT CORE samples submitted DEC-06-90 by ROBERT PEEVER.

Sample Number	Au	Au check	
	grtonic	B/ tonne	
7941	0.01		
7942	0.01	0.00	
7943	0.08	0.03	
7944	0.01		
1945	0.01		
7946	0.01		
7947	0.01		
7948	\ 0.01		
7949	\ 0.01		
7950	$\lambda AK90-27$ 0.01		
7951	0.01		
7952	0.01		
7953	0.01		
7954	0.01		
7955	0.01		
7956	0.01		
7957	0.01		·
7958	0.01		
7959	/ 0.01		
7960 /	0.01	0.04	

Jonna Herdner Certified by_

Swastika Laboratories F.O. Box 10 Swastika, Ontario PØK 1TØ

INVOICE

		NO.:	
		DATE	23914
			12-12-90
	SHIP TO:	PAGE	1 of 1
າດ			1 01 1

Same

SOLD TO:

Box 635

P2N 3K1

Battle Mountain Canada In Kirkland Lake, Ontario

TTEM NO.	QUANTITY	UNIT	DESCRIPTION	FP	UNIT PRICE	AMOUNT
	100 100	1 1	Au Assays 1 AT Fusions Sample Handling Cert#0W-1918-RA1		9.750 3.000	975.00 300.00
			-10% Discount	-		127.50
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ļ						
		,				
COMMENTS:	• ••••••••••••••••••••••••••••••••••••				-	·····
Net 30	Days	in the second				1,147.50

DEC 2 6 1390 Cl# 2352= * 3.741.19 A/c 15-JV-28/104-179 - 1,147.50 assays

ATTHONED FOR MOMENT



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 4

Assay Certificate

0W-1918-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

Date: DEC-12-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 100 SPLIT CORE samples submitted DEC-07-90 by ROBERT PEEVER.

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
7962 0.01 7963 0.01 7964 0.01 7965 0.02 7966 0.02 7967 0.02 7968 0.02 7970 0.01 7971 0.01 7972 0.01 7973 0.01 7974 0.02 7975	7961	0.01				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7962	0.01				
7964 0.01 7965 0.02 7966 0.02 7967 0.02 7968 0.01 7970 0.02 7971 0.01 7972 0.01 7973 0.01 7974 0.02 7975 $A f g_0 - f g_0$ 7976 0.01 7977 0.02 7978 0.02 7979 0.02 7977 0.02 7978 0.02 7979 0.02 7980 0.02 7981 0.02 7983 0.02 7984 0.01 7985 0.01 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7963	0.01				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7964	0.01				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7965	0.02				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7966	0.02				
7968 0.02 7969 0.01 0.01 7970 0.02 7971 0.01 7972 0.01 7973 0.01 7974 0.02 7975 $A g e_{10} e_{2} e_{2} \otimes 0.01$ 7976 0.02 7977 0.02 7978 0.02 7979 0.02 7980 0.02 7981 0.02 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7967	0.02				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7968	0.02				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7969	0.01	0.01			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7970 /	0.02				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7971	0.01				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7972	0.01				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7973	0.01				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7974	0.02				
7976 0.01 7977 0.02 7978 0.02 7979 0.02 7980 0.03 7981 0.02 0.01 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni 1 7988 Ni 1	7975 \	Argo 20 0.01				
7977 0.02 7978 0.02 7979 0.02 7980 0.03 7981 0.02 0.01 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7976	0.01				
7978 0.02 7979 0.02 7980 0.03 7981 0.02 0.01 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni 1 7988 Ni 1	7977 /	0.02				
7979 0.02 7980 0.03 7981 0.02 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7978	0.02				
7980 0.03 7981 0.02 0.01 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7979	0.02				
7981 0.02 0.01 7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7980	0.03				<u> </u>
7982 0.02 7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni 1 7988 Ni 1	7981	0.02	0.01			
7983 0.02 7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7982	0.02				
7984 0.01 7985 0.01 7986 0.01 7987 Ni1 7988 Ni1	7983	0.02				
7985 0.01 7986 0.01 7987 Ni 1 7988 Ni 1	7984	0.01				
7986 0.01 7987 Nil 7988 Nil Nil	7985	0.01				
7987 Nil 7988 Nil Nil	7986	0.01				
7988 Nil Nil	7987	Nil				
	7988	Nil	Ni l			
7989 / Nil	7989	/ Nil				
7990 / 0.01	7990	0.01				

andren Certified by



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 4

Assay Certificate

0W-1918-RA1

Company:**BATTLE MOUNTAIN CANADA INC.**Project:75-JV-28Attn:WAYNE BENHAM

Date: DEC-12-90 Copy 1. HOLD COPY 567-4840

2. FAX TO 567-6448

We hereby certify the following Assay of 100 SPLIT CORE samples submitted DEC-07-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
7001	N; 1				
7997	Nil				
7993	0.01				
7994	0.01				
7995	Nil				
7996	0.01				
7997	0.02				
7998	0.02				
7999	0.01	0.01			
8000	0.01				
11701	0.02				
11702	0.02				
11703	0.02				
11704	\ 0.02				
11705	> Argo - 28 0.02				
11706	0.75				
11707	4.39	4.22	3.81	3.70	
11708	1.54				
11709	0.03				
11710	0.02				
11711	0.01				
11712	0.03				
11713	0.01				
11714	0.01				
11715	0.01				
11716	0.01				
11717	0.02	0.02			
11718	0.01				
11719	/ 0.01				
11720	0.01				

Certified by Donna Andrea

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244, FAX (705) 642-3300



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 3 of 4

Assay Certificate

0W-1918-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

Date: DEC-12-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 100 SPLIT CORE samples submitted DEC-07-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
11721	0.01				
11722	0.01				
11723	0.01				
11724	0.01				
11725	0.01	0.02			
11726	0.01				
11727	0.01				
11728	0.01				
11729	0.01				
11730	0.02				
11731	0.01				
11732	Ni l				
11733	0.01				
11734 \	0.02				
11735	AK90-28 0.01				
11736	0.02				
11737 (0.02				
11738	0.01				
11739	0.01				
11740	0.02				
11741	0.01				
11742	0.02				
11743	0.02				
11744	0.01	0.01			
11745	0.01				
11746	0.01				•
11747	0.01				
11748	/ 0.02				
11749	/ 0.01				
11750	0.03				

Certified by Sonna Landner



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 4 of 4

Assay Certificate

0W-1918-RA1

Company:BATTLE MOUNTAIN CANADA INC.Project:75-JV-28Attn:WAYNE BENHAM

Date: DEC-12-90

Copy 1. HOLD COPY 567-4840 2. FAX TO 567-6448

We hereby certify the following Assay of 100 SPLIT CORE samples submitted DEC-07-90 by ROBERT PEEVER.

Sample Number	Au g/tonne	Au check g/tonne	Au 2nd g/tonne	Au check 2nd g/t	
11751	0.02				
11752	0.01				
11753 /	0.01				
11754 (0.01				~
11755	> A(GR-29) 0.01				
11756 /	0.01				
11757	0.01				
11758	0.01				
11759) Ni 1				
11760 /	0.01	0.01			

Certified by

Swastika Laboratories P.D. Box 10 Swastika, Ontario PØK 1TØ

SOLD TO:

SHIP TO:

INVOICE

NO.:	23920				
DATE:	12-13-90				
PAGE:	1 of 1				

Battle Mountain Canada Inc Box 635 Kirkland Lake, Ontario F2N 3K1

Same

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	F	P	UNIT PRICE	AMOUNT
	82 82		Au Assays 1 AT Fusions Sample Handling Cert#0W-1919-RA1 -10% Discount			9.750 3.000	799.50 246.00 104.55
		. 4					
			tine Alternational de la companya de la c			Ň	
	H de AK	90-28 41	samples + 12.75 = 522.75			-	
Net 30	Days	•	-10 % - 52.28 \$ 470.47			STOTAL W	K 940.95
B .							

LI BEC 2 6 1050) CL# 23525_3,941. 99

APPROVED FOR PAYMENT

Ak 15-JV-28/104-179= \$940.95

assays



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 1 of 3

RECEIVED Date 7 1950

Assay Certificate

0W-1919-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: DEC-13-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 267-6448

We hereby certify the following Assay of 82 SPLIT CORE samples submitted DEC-10-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
11761	0.01		
11762	0.01		
11763	0.02	0.02	
11764	0.01		
11765	0.01		
11766	0.01		
11767	0.04		
11768	0.01		
11769	0.01		
11770	0.02		
11771	0.01		· · · · · · · · · · · · · · · · · · ·
11772	0.01		
11773	0.02		
11774	Nil		
11775	>AK90-28 Nil		
11776 /	HISON Net Nil		
11777	Nil		
11778	Nil	0.01	
11779	0.01		
11780	Nil		· · · · · · · · · · · · · · · · · · ·
11781	Nil		
11782	Ni l		
11783	Ni l		
11784	0.01		
11785	Nil		
11786	0.01		
11787	0.01		
11788	0.02		
11789	/ 0.01		
11790 /	Nil		
Au was	determined using 1 AT fusio	ons	

Certified by Donna Hardner



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 3

Date: DEC-13-90

Assay Certificate

0W-1919-RA1

Company:BATTLE MOUNTAIN CANADA INC.Date:Project:75-JV-28Copy 1. HOLD COPY 567-4840Attn:WAYNE BENHAM2. FAX TO 267-6448

We hereby certify the following Assay of 82 SPLIT CORE samples submitted DEC-10-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
11791	Nil		
11792	Nil		
11793	0.01	0.02	
11794	Nil		
11795 \	- AK90-28 Nil		
11796 (0.01		
11797	0.02		
11798	0.01		
11799	0.01		
11800	0.01		
11801	Nil		
11802	0.01	0.01	
11803	0.01		
11804	0.01		
11805	0.01		
11806	0.01		
11807	0.01		
11808	0.01		
11809	0.01		
11810	> AK90-09 0.02		
11811	0.01		
11812	0.01		
11813	0.02		
11814	0.02	0.01	
11815	0.01		
11816	0.01		
11817	0.01		
11818	0.01		
11819	/ 0.01		
11820 /	0.01		
Au was	determined using 1 AT fusion	ons	

nna Hardner Certified by



A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 3 of 3

Assay Certificate

0W-1919-RA1

Company:	BATTLE MOUNTAIN CANADA INC.	Date: DEC-13-90
Project:	75-JV-28	Copy 1. HOLD COPY 567-4840
Attn:	WAYNE BENHAM	2. FAX TO 267-6448

We hereby certify the following Assay of 82 SPLIT CORE samples submitted DEC-10-90 by ROBERT PEEVER.

Sample	Au	Au check	
Number	g/tonne	g/tonne	
11821	0.01		
11822 /	0.01		
11823 /	0.02		
11824	0.02		
11825	-AK90-09 0.01		
11826	0.03		
11827	0.01	0.01	
11828	0.01		
11829	0.02		
11830	0.01		
11831	0.01		
11832 /	0.01		
_11833/	0.01		
(11834	0.01		
11835	0.01		
11836	0.01		
11837	Nil		
√11838 /	0.01		
\11839 /	0.01		
11840	- AK90-05 0.01		
11841	Nil		
(11842)	0.01	0.01	

Au was determined using 1 AT fusions

Certified by Dongo Anor

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300

BATTLE MOUNTAIN (CANADA) INC.

VOLUME 2

KIRKLAND LAKE PROJECT

DIAMOND DRILLING REPORT

AMALGAMATED KIRKLAND PROPERTY (OCTOBER - DECEMBER, 1990)

TECK TOWNSHIP, LARDER LAKE MINING DIVISION ONTARIO, CANADA

Kirkland Lake, Ontario January, 1991

W. Benham

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VOLUME 2

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LIST OF DRAWINGS

Drawing Number	Description	Scale
GP - 001	Magnetic Interpretation	1:5000
DP - 001	Drill Plan	1:5000
DC - 001	Section 7350E	1:500
DC - 002	Section 7900E, S 1/2	1:500
DC - 003	Section 7900E, N 1/2	1:500
DC - 004	Section 8000E	1:500
DC - 005	Section 8050E, \$ 1/2	1:500
DC - 006	Section 8050E, N 1/2	1:500
DC - 007	Section 8100E	1:500
DC - 008	Section 8125E	1:500
DC - 009	Section 8150E	1:500
DC - 010	Section 8190E	1:500

BATTLE MOUNTAIN (CANADA) INC.

VOLUME 3

KIRKLAND LAKE PROJECT

DIAMOND DRILLING REPORT

AMALGAMATED KIRKLAND PROPERTY (OCTOBER - DECEMBER, 1990)

TECK TOWNSHIP, LARDER LAKE MINING DIVISION ONTARIO, CANADA

2.13957

Kirkland Lake, Ontario January, 1991 W. Benham

TABLE OF CONTENTS

VOLUME 3

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LIST OF DRAWINGS

Drawing Number	Description	Scale
DC - 011	Section 8200E, S 1/2	1:500
DC - 012	Section 8200E, N 1/2	1:500
DC - 013	Section 8300E	1:500
DC - 014	Section 8340E	1:500
DC - 015	Section 8350E	1:500
DC - 016	Section 8370E	1:500
DC - 017	Section 8400E	1:500
DC - 018	Section 8425E	1:500
DC - 019	Section 8450E	1:500
DC - 020	Section 8500E, S 1/2	1:500
DC - 021	Section 8500E, N 1/2	1:100
DC - 022	Section 8600E	1:500
DC - 023	Section 8825E	1:500

N	Ainistry of Northern Develop and Mines	-	•	DOC N 910	U.MEN 8. DO	T No.	Instruc - Piezs Datas	itions e type or print. to Subsection	77/40) she bi	linina ânt far se	eacement unri
Contario Report of Work Mining Act (Expenditures, Subsection 77(19)) Type of Work Performed Mining Assaving Diamond Drill Core Lar 42A01NE0111 2.13957 TECK 9200											
Assaying Diamond Drill Core Lar Prospector Ticonce No. Recorded Hokker 2.13957 Prospector Ticonce No. Battle Nountain (Canada) Inc. 2.13957 T 5179											
Address 200 Pay Street Suite 2010 Toronto Ontario M5H 2Y2 (\$16) 867-9815											
390 Bay Street, Suite 2910, Toronto, Untario Mon 212 (410/00/-901) Work Performed By											
Battle Name and	Address of Author	(Canada	$\frac{1}{2}$ 1nc.	nada) Inc	200 1	Ray Str	oot Sui	te 2010	Date When	Work was Perfe	berned
Toron	to, Ontari	o M5H 2Y	ain (Ca 2	anada) Inc.	, 290 1	bay SUI	cet, Sui	6 2 7 1 0	15 18	90 13	1,2, 90
All the wo	rk was performed	d on Mining Cl	aim(s):	Mining Claim	No. of Days	lining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
*See Not	No. of Days Denoting No. 1 on revers	Mining Claim	No. of Day	477299 *	1.53 No. of Days 1	477419 Vining Claim	173.14 No. of Days	491183 Mining Claim	107 .80	491051 Mining Claim	No. of Days
50005	7 - 68.85	500058	3.83				No. of Days	Mining Chaire	No. of Dava	Mining Claim	No. of Dava
Mining Claim	No. of Days	Mining Claim	No. of Day	s Mining Claim	NO. OF Days	Wining Claim ·	SE	E ATTACHE	SCHEI	ULE I	
Instruct	lons	be distributed	l at claim	Calculation of Ex	penditure Di	ays Credits		Total Dava Credita	Total Nun by this Re	nber of Mining C sport of Work	laims Covered
holder's claim in (below).	choice. Enter nu the expenditur	mber of days of re days cred	tredits per t column	\$ 8,116	.65	÷	15 =	541.11		15	
Mining C	laims (List in r	Expend	quence). M	If space is insi ining Claim	Expend.	ttach sch	edules with Jining Claim	required info	rmation	lining Claim	Expend.
Prefix	Number	Days Cr.	Prefix	Number	Days Cr.	Prefix	Number	Days C	r. Prefix	Number	Days Cr.
L	1046442	- 60	L	1046765	41.11			· · · · · · · · · · · · · · · · · · ·			
L	1046443	60	L	1045668	60						
L	1046523	60		· · · · · · · · · · · · · · · · · · ·					-	1	
L	1046526	20			· · ·			<u> </u>			
	1046527	60					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
	1046528	60				- 197 - 1 - 197 - 1	70		REC	EIVED	▶┼──┤
	1040529	60					100	- She f		1 1 1001	
	1040530	00	l	Total Number of D	lavs Claimed		<u> </u>	2 Votal Number	OPDays to b	e Claimed at a F	uture Date
Total NUR	541.11	nneo.		541	.11		K.	97 MI	SINGL/	41800 020	, IÚN
Certifica	tion of Benefic certify that, at the	ial Interest	See Note	e No. 2 on reve ed, the claims cove	rse side red in this re	port Date	\rightarrow	Rg	opered Hold	er or Agent (Sig	nature)
of work w by the c	vere recorded in the urrent recorded ho	current recorde Ider.	d holder's na	ame or held under a l	beneficial inte	erest Fe	6 19, 49	91	mo	LE LE	uget_
Certifica	tion Verifying I	Report of W	ork	window of the facts	set forth in	the Report o	f Work annexe	d hereto, havino	performed th	e work or witnes	used same
during an	d/or after its comp	letion and the a	innexed rep	ort is true.							
Name an 390	Bay Street	t, Suite	Ž 910;	Bottrill, Toronto, 0	Battle ntario	Mounta M5H 2Y2	in (Canac	ia) Inc.			
	Telephone No. (#16) 867-0815 Fold 1994 Aproprie D Date										
L	Received Strip MINING DIVISION										
For Of	fice Use Or	niy 			. 0			LCR	22 199	4	
Total Da Cr. Reco	Cr. Recorded Mining Hecorder										
541	SUILIDAIE Approved as Recorded Provincial Manager, Mining Lands										
⁵⁷	12 day and Barriela										
676 (69/06)	17: (05:00)										

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SCHEDULE I

Number of Day's Work Performed On Each Claim

Hole No.	No. of <u>Samples</u>	477299	477419	491183	491651	500057	500058	Cert. No.	Amount
	~ *			_	255 72	_	_	1724	355 73
AK90 - 10	31	-	-	-	355.73	· _	-	1723	172 12
- 10	15	•	-	-	1/2.12	-	-	1732	1/4.14
- 11	27	-	-	-	309.83	-	-	1/40	309.83
- 11	15	-	-	-	172.12	-	-	1753	172.12
- 12	2	22.95	-	-	-	-	-	1754	22.95
- 12	5	-	-	-	57.38	· –	-	1754	57.38
- 12,	13 48		-	-	550.80	-	-	1767	550.80
- 14	52	-	-	-	596.70	-	-	1781	596.70
- 14	5	-	-	– ¹	-	-	57.38	1781	57.38
- 16	70	-	803.25	-	-	-	-	1797	803.25
- 21	38	-	436.05	-	-	-	-	1823	436.05
- 21	28	-	296.10	-	-	. 🗕	-	1828	296.10
- 22	90	-	-	-	-	1,032.75	-	1839	1,032.75
- 22	22	-	252.45	-	-	-	-	1839	252.45
- 21	20	-	229.50	-	-	-	-	1842	229.50
- 26	35	-	270.00	-	-	. –	-	1892	270.00
- 26	27	-	309.82	-	-	-	-	1894	309.82
- 27	50	-	-	-	573.75	-	-	1905	573.75
- 29	100	-	-	1.147.50	-	-	-	1918	1.147.50
- 20	41	-	· _	470.47	-	· _	-	1919	470.47
- 20	721				1				
Total Expen	diture	22,95	2.597.17	1.617.97	2,788.43	1.032.75	57.38	S	8,116.65
Total Days	Credit	<u>1.53</u>	173.14	107.86	185.90	68.85	<u>3.83</u>		541.11

FL: KL\DAWRKPRF.TK2

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