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ASSESSMENT REPORT

on

1995 SPRING DRILL PROGRAM

TAM O'SHANTER PROPERTY

NTS 82E/2 E&W

Lat: 49° 05'N
Long: 118° 44'W

Kettle River Resources Ltd.
Box 130, 330 Copper St.
Greenwood, B.C.
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Linda Caron
September, 1995

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1.0 SUMMARY

The Tam O'Shanter property consists of 33 claims, totalling 129 units, located about 5 kilometres west of Greenwood, B.C. This report describes the June - July 1995 drill program on the property.

The claims are underlain by volcanics and sediments of the Late Paleozoic Knob Hill and Attwood Groups, intruded by Cretaceous and Tertiary dykes and stocks, and covered in part by Tertiary (Eocene) sediments and volcanics. The Tertiary rocks form the eastern part of the Toroda Creek Graben in this part of the property. A major northeast trending fault, the Deadwood Fault, runs through the property, forming the eastern boundary of the graben. A large epithermal alteration system occurs in the Tertiary sediments adjacent to this fault. Epithermal alteration and veining also occurs to the east of the fault in the older Knob Hill Group rocks, with locally significant gold values.

Previous drilling identified a northwest trending structurally controlled vein, the Wild Rose vein, at the contact of Attwood Group sediments and overlying (older) Knob Hill volcanics. The vein is mesothermal in nature, averaging 1 - 2 metres in thickness, and with grades up to 20.6 g/t. The current drill program was designed to test the Wild Rose vein near the discovery area, and also west of this near the intersection of this structure with a north trending Tertiary structure with known late stage epithermal mineralization.

Five holes were drilled (a total of 935 metres) and all were successful in intersecting the Wild Rose structure. Holes 95-01 and -02 tested the vein 50 metres northwest of the discovery interscept in Hole 91-20. Hole 95-01 tested the vein at a depth of 75 metres down dip. Recoveries were very poor, however the zone exceeded 7 metres in width, with a number of quartz veins within. One of the veins returned 5.09 g/t over 2.9 metres. Holes 95-03, -04, and -05 tested the zone 300 metres to the northwest. Here the Wild Rose zone exceeds 20 metres in width and is marked by serpentine or listwanite with quartz-pyrite-mariposite alteration. The zone is anomalous in gold (up to 405 ppb locally) with up to 0.19% copper over the width of the zone.

Further drilling is recommended to test the gold bearing vein along the Wild Rose Fault, as well as the large low grade area adjacent to the fault which is located east of the drilling described in this report.

2.0 INTRODUCTION

2.1 Location, Access and Terrain

The Tam O'Shanter property is located about 5 kilometres west of Greenwood, B.C. (see Figure 1). Access to the property is from Greenwood, via the Motherlode road. The claims can be reached either from a branch road heading west from the Motherlode road, just south of the Deadwood flats, or via an old logging road which heads south off the Motherlode road at kilometre 6.

The claims are situated on the north facing slope of the Motherlode Creek valley, and on the ridge between Ingram and Motherlode Creeks. Elevations range from 1460 metres in the southern part of the claim group, to 915 metres in the eastern section. The terrain is hilly, with several steep cliffy sections. The forest cover is moderate, with mature pine, larch and fir forest and minimal underbrush.

The climate is generally quite dry, with hot summers and little rainfall. Snowfall is minimal, generally less than 1 metre. In the area of current exploration, water for drilling is available from two old drill collars.

2.2 Property and Ownership

The Tam O'Shanter property consists of 33 mineral claims (129 units), as shown in Figure 2 and summarized below. All claims are owned 100% by Kettle River Resources Ltd.

Claim Name	Record #	# of units	Expiry Date*
Tam O'Shanter	214125	1	11/20/97
Iva Lenore	214126	1	11/20/97
Shanter	214168	16	07/07/98
Viceroy Fr.	214246	1	06/11/97
Arlington Fr.	214247	1	06/11/97
Salamanca Fr.	214248	1	06/11/97
Buck	214277	8	06/28/98
Tam	214278	6	06/28/97
Montrose Fr.	214288	1	07/09/97
Hot	214315	8	08/29/97
Mother	214463	8	04/29/98
Wet	214465	6	04/29/98
Gold Bug No.2	214482	1	06/05/97
Ingram 2	215200	18	01/08/99
Min 1	215479	20	12/22/98
Min 3	215481	12	12/23/98
Mule 12	215550	1	03/14/98
Min 6	215551	6	03/15/98
Mule 13	215552	1	03/14/98
Mule 14	215553	1	03/14/98
Mule 15	215554	1	03/14/98
Mule 4 Fr.	215555	1	03/15/98
Ingram 1	327001	9	06/29/97
Mule 1	327002	1	06/30/97
Mule 2	327003	1	06/30/97
Mule 3	327004	1	06/30/97

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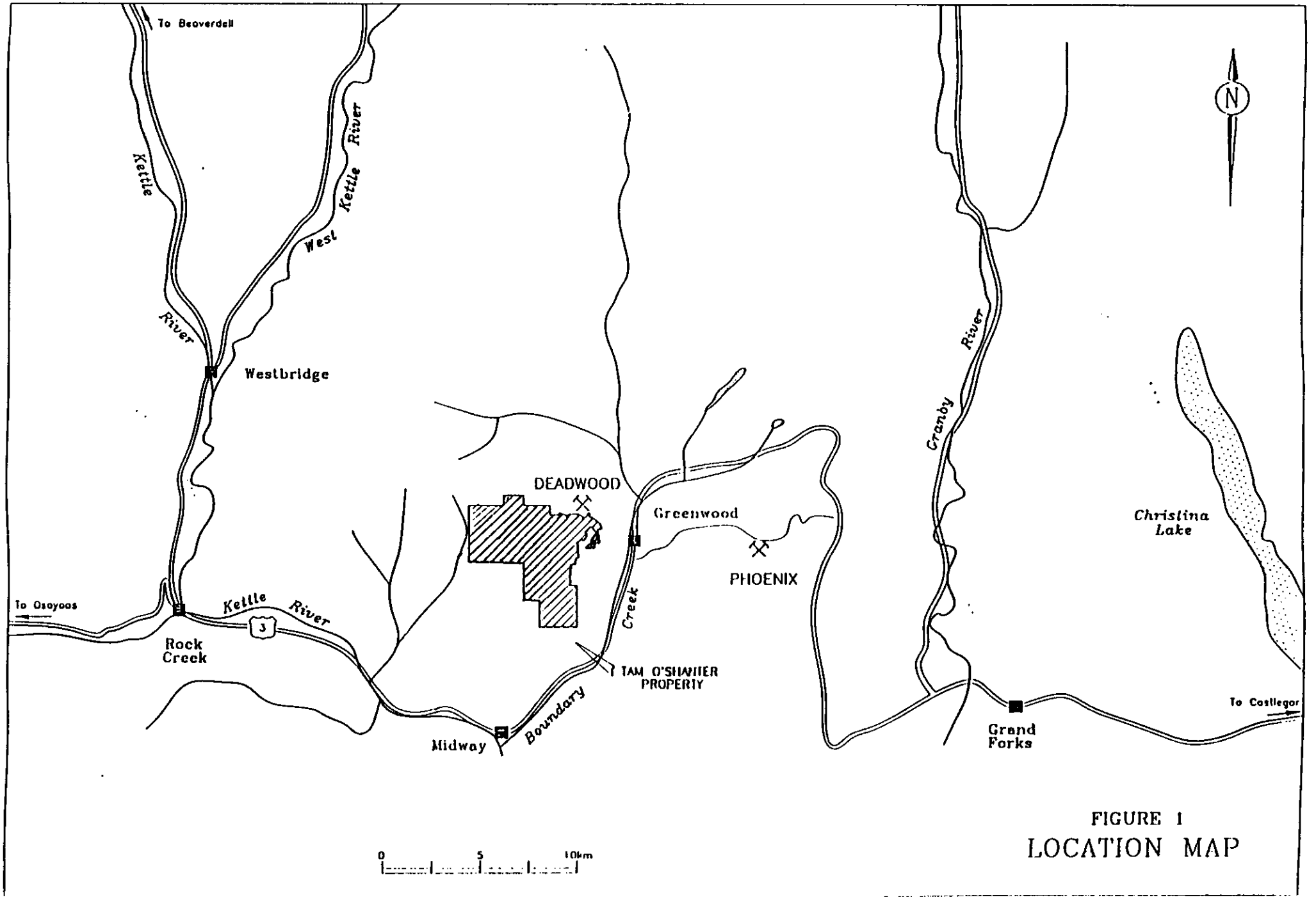

FIGURE 1
LOCATION MAP

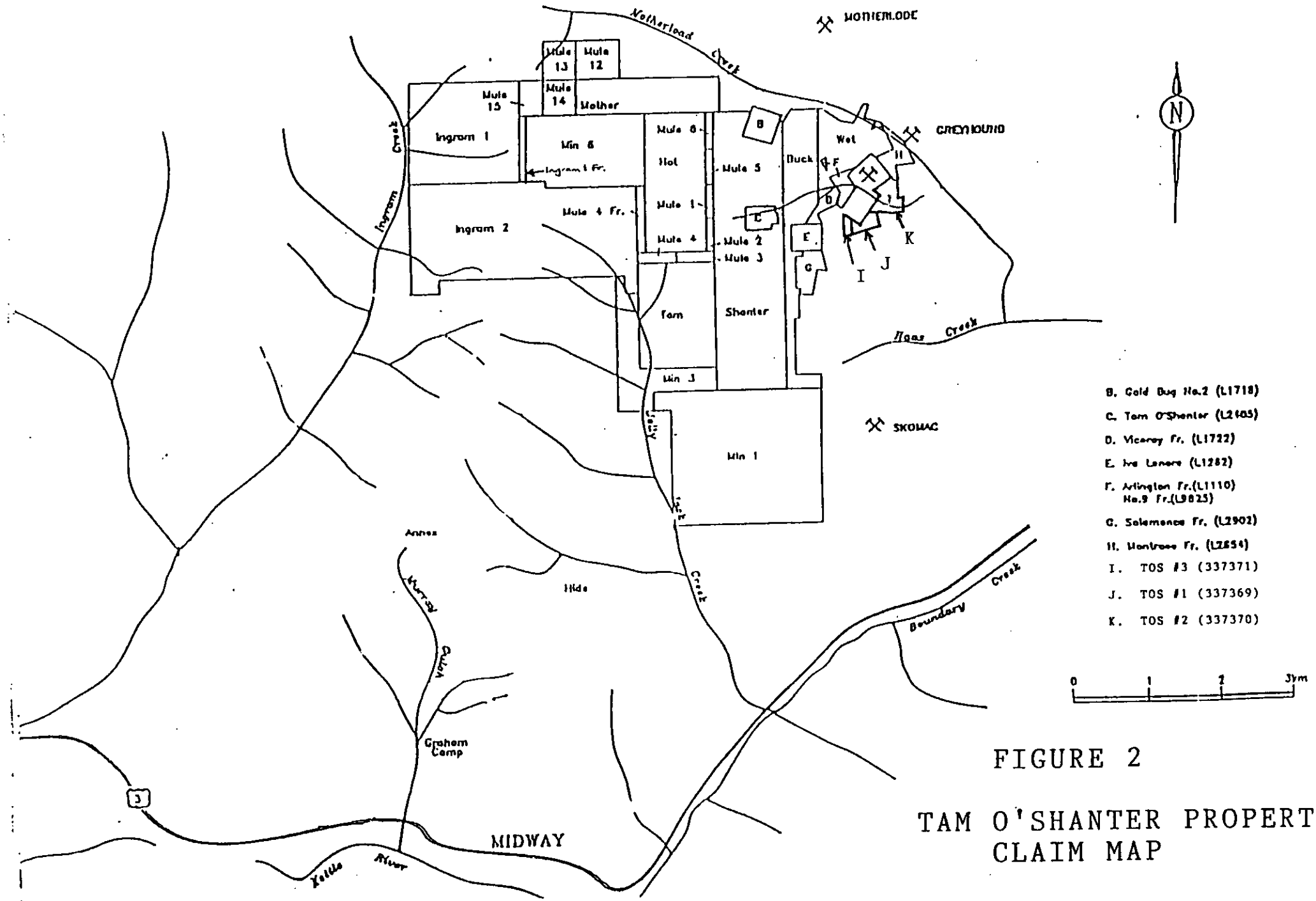

FIGURE 2

TAM O'SHANTER PROPERTY
CLAIM MAP

82E2 E&W

Claim Name	Record #	# of units	Expiry Date*
Mule 4	327005	1	06/30/97
Mule 5	327006	1	06/30/97
Mule 6	327007	1	06/30/97
Ingram 1 Fr.	327668	1	07/11/97
Tos #1	337369	1	06/30/98
Tos #2	337370	1	06/30/98
Tos #3	337371	1	06/30/98

* Expiry dates are after acceptance of this report.

2.3 History

A number of showings occur on the Tam O'Shanter property and a significant amount of work has been done on the claims in the past. A detailed description of the history of the area prior to 1990 is given in Lee (1990). The following is taken largely from this, with several additions.

Exploration in the area dates back to 1981 with the discovery of the Motherlode, about 1 kilometre north of the Tam O'Shanter property, in the Deadwood Camp. In 1894, the first record of work is documented on the Buckhorn, immediately adjacent to the Montrose Fr. and Arlington Fr, No 9 claims of the Tam O'Shanter property. As a result of these discoveries, exploration in the area has historically concentrated on copper prospects in the older rocks.

1896 - A 40 foot shaft is reported on the Iva Lenore and on the Goldconda. On the Last Chance, a 65 foot shaft was sunk (BCDM Annual Report 1896).

1898 - A 35 foot shaft is reported on the Iva Lenore, and a 40 foot shaft on the Emerald. Considerable work is reported to have been done on the Iron Pyrites and Herbert Spencer (BCT 1898).

1903 - The Emerald (L1263) and Gold Bed (L1388) Crown Grants were issued (BCDM Annual Report 1903).

1904 - Bengal (L2375) and Tam O'Shanter (L2405) Crown Grants issued (BCDM Annual Report 1904).

1906 - Goldconda Fr.(L2149) and Laocooon (L2147) Crown Grants issued (BCDM Annual Report 1906).

1908 - Salamanca Fr. (L2902) Crown Grant issued (BCDM Annual Report 1908).

1912 - X.L.C.R. (L1556s) and X.L.C.R. Fr.(L1557s) Crown Grants issued (BCDM Annual Report 1912).

1919 - Tam O'Shanter (L2405) Crown Grant issued (different grantee than 1904 reference, same lot) (BCDM Annual Report 1919).

1921-23 Work was recorded on the Tam O'Shanter. 2 old shafts (from the turn of the century?) and a recent cross-cut tunnel and an inclined shaft are documented. Work in 1921 included 300 feet of drifting and a 75 foot raise (BCDM Annual Report 1921, 1922, 1923). Work is also described on the Goldconda.

1933 - Considerable work reported on the Goldconda (BCDM Annual Report 1933).

1964 - Silver Dome Mines did extensive work on claims in the Iva Lenore and Tam O'Shanter area. 10 miles of road were built, 13,000 feet of stripping and 6,118 feet of diamond drilling done. Line cutting, magnetometry and soil sampling were also done. Assessment Report 562 covers the soil and magnetometer surveys. There is no (public) record of drilling or trenching, although a later report shows the locations.

1966-67 - Utah did a geophysical survey (IP, resistivity) Assessment Report 1067.

1966-67 - San Jacinto Exploration did an IP survey (Assessment Report 881).

1969 - Consortium of companies including Silver Dome did aeromag survey (Assessment Report 1878).

1972 - Sun Oil did percussion drilling (Sun Oil, 1972)

1972 - Phelps Dodge did minor geological mapping and data compilation (Assessment Report 4125).

1973 - Mapletree Exploration had topo base of area surveyed and completed a geological mapping and percusion drilling program in the area (Dickinson and Simpson, 1973).

1973-74- Mascot Mines drilled 27 percussion drill holes. Drill logs are available, but no analytical results (Assessment Report 5023).

1975 - Oneida Resources acquired property.

1979 - Oneida drilled 3 diamond drill holes (1560 feet). Target was porphyry Cu-Mo mineralization. Discovered new zone on intense hydrothermal alteration (Assessment Report 8795).

1981 - G. Rayner completed detailed mapping around the Bengal Shaft area. Several old trenches elsewhere on the propety were re-explored using a boackhoe (rayner, 1981).

1982 - Oneida Resources amalgamated with three other companies to form New Frontier Petroleum.

1983 - 200 feet of backhoe trenching was done near the Bengal shaft and about 100 feet of trenching was done about 1.5 km north of this to test copper staining exposed by a recent logging road. new Frontier Petroleum went into receivership, giving the Reciever an interest in the property. The remaining interest was transfered to a subsidiary of New Frontier Petroleum, Bulkley Silver Resources Inc.

1984 - H. Shear prepared a compilation of data on the Tam O'Shanter property for Bulkley Silver Resources (Shear, 1984).

1984-85- Geological mapping and interpretation was done in the Tam O'Shanter area for Kettle River Resources Ltd. by J. Fyles (Fyles, 1984-85).

1985-87- Bulkley Silver Resources merged with several other companies to form Houston Metals. Houston Metals was rolled back to form Pacific Houston.

1987 - The property was examined by Echo Bay Mines and BP Selco. The 1979 drill core was relogged and a brief report was prepared (Fraser, 1987; Wong, 1987).

1988 - Pacific Houston had the present Tam grid established and an IP survey completed (Arnold, 1989a). Three diamond drill holes (2,645 feet) were drilled to test anomalies resulting from the above program (Arnold, 1989b).

1990 - Kettle River Resources Ltd. and Dentonia Resources Ltd. acquired the current Tam O'Shanter property by staking and purchasing the interest held by the Receiver and by Pacific Houston. The claims were optioned to Minnova Inc as part of a larger block of ground. An airborne magnetic and VLF/EM survey was done by Aerodat over the entire property. In the Tam O'Shanter area, the 1988 grid was re-established. Geological mapping, ground geophysics (mag & VLF/Em), and rock and soil sampling were done over the grid area (Lee, 1990).

1991 - Minnova continued to work on the property. The 1988 grid was expanded (The Tam 91 grid) with an additional 25.9 line kilometres established. Soil and rock sampling was done over the grid, and geological mapping was done. IP and magnetometry was run over a portion of the grid, and 20 diamond drill holes were completed to test soil and geophysical targets. The Wild Rose property adjacent to the Tam O'Shanter property was optioned and grid work was done over a portion of this property as well (Clayton, 1992).

1992 - Minnova established the Wild Rose grid over their main area of interest, completed detailed mapping over the grid, and drilled an additional 19 diamond drill holes on the property. Several drill holes were also done on the adjoining Wild Rose property. The options were dropped on both properties early in 1993 (Heberlein, 1993, Heberlein and McDowell, 1992).

1995 - Kettle River Resources completed a compilation of previous work, plus the drill program described in this report.

2.4 Summary of Work Done, June, 1995 - July, 1995

Five NQ diamond drill holes were drilled in June and July, 1995, for a total of 935 metres. Drilling was done under contract by Lone Ranger Drilling of Lumby, B.C. Core was logged and split at Kettle River's core storage facility at Boundary Falls, B.C.. Logging was done by L. Caron, with sawing and splitting done by J. Kemp. A total of 226 drill core samples were collected and sent to either Eco-Tech or Min-En Labs for 31 element ICP plus Au analysis. The program was supervised by G. Stewart.

3.0 GEOLOGY AND STRUCTURE

The Greenwood area has been mapped on a regional basis by Fyles (1990), and prior to this, by Little (1983) and Church (1986). Fyles' mapping shows the pre-Tertiary rocks form a series of thrust or detachment slices, which lie above a basement high grade metamorphic complex. A total of at least five thrust slices are recognized, all dipping gently to the north, and marked in many places by bodies of serpentine. Fyles' interprets these serpentinite bodies as representing part of a disrupted ophiolite suite, belonging to the Knob Hill Group of late Paleozoic age. Commonly, these serpentinite bodies have undergone Fe-carbonate alteration to listwanite, as a result of the thrusting event.

The oldest rocks in the camp belong to the late Paleozic Knob Hill Group of dominantly volcanic affinity, and consist mainly of chert, greenstone and related intrusives, and serpentine. Overlying these rocks are sediments and volcanics (largely argillite, siltstone, limestone and andesite) of the late Paleozic Attwood Group. In many cases evidence for thrusting is seen by the older Knob Hill Group rocks resting over the younger Attwood Group rocks. Rocks of the Knob Hill and Attwood Groupas are unconformably overlain by the Triassic Brooklyn Formation, represented largely by limestone, clastic sediments and pyroclastics. The historically important skarn deposits in the Greenwood area (ie. Phoenix, Motherlode-Greyhound) area hosted within the Triassic rocks.

Three separate intrusive events cut the above sequence, the probable Jurassic aged Lexington porphyry, and the Cretaceous Nelson intrusives, and the Eocene Coryell pulaskite dykes and stocks. Tertiary sediments and volcanics unconformably overly the older rocks. The distribution of these Tertiary rocks is largely controlled by series of north-south trending faults which form the Toroda Creek graben in the western portion of the map area, and the Republic graben in the east.

The Tam O'Shanter property is located at the eastern boundary of the Toroda Creek graben. A large area of mixed chert, greenstone and related diorite intrusives of the Knob Hill Group occurs in the area of drilling in the eastern portion of the property. These rocks are separated from underlying sediments and conglomerate which may belong to the (younger) Attwood Group by a major northwest trending, moderate northeast dipping fault (the Wild Rose Fault). This makes the Wild Rose fault a thrust/detatchment fault, a theory which is supported by the serpentinite and listwanite encountered in drilling along the structure. A 1-3 metre wide gold bearing quartz vein occurs along the Wild Rose Fault, with grades up to 20.6 g/t Au over 1.2 metres. Intense alteration of Tertiary dykes along the fault zone is evidence of very late stage alteration event, although an earlier higher temperature event may be responsible for some of the gold. In the northern portion of the property, the Paleozoic rocks are intruded by a fine to medium grained diorite of the Cretaceous Nelson Group. Low grade copper mineralization is known at a number of locations within and near the contacts of this intrusion (ie. the Tam O'Shanter, Buckhorn and Iva Lenore showings). A moderate west dipping, north-south trending Tertiary fault (the Deadwood Fault) forms the eastern margin the the Toroda Creek graben and separates the older rocks from the Tertiary cover to the west. Tertiary pulaskite dykes also cut the older rocks. A large area of epithermal alteration (silica flooding, hydrothermal brecciation and widespread argillic alteration) occurs in the Tertiary sediments adjacent to this structure. Epithermal alteration (silicification and chalcedonic veining) also occurs to the east in the older rocks. Widespread silicification, argillic and phyllic alteration with elevated gold values (ie. 0.9 g/t over 63 metres) occurs in the Knob Hill rocks adjacent to the Wild Rose Fault.

4.0 DRILLING

Five NQ diamond drill holes were drilled on the property by Lone Ranger Drilling of Lumby, B.C. to test the Wild Rose Fault zone. Drill hole locations are shown on Figure 3, and specifications of the holes are listed below. Complete drill logs are contained in Appendix 1, with analytical results of drill samples contained in Appendix 2.

DRILL HOLE	CO-ORDINATES*	AZIMUTH	DIP	DEPTH
TAM-95-01	2+35 N 3+65 E	220°	-65°	149.3 m
TAM-95-02	2+35 N 3+65 E	n/a	-90°	166.1 m
TAM-95-03	4+26 N 0+78 E	220°	-45°	144.8 m
TAM-95-04	4+26 N 0+78 E	220°	-65°	174.0 m
TAM-95-05	4+26 N 0+78 E	n/a	-90°	300.8 m

* Co-ordinates are given on the Tam 91 grid.

Hole 95-01 and 95-02 were drilled to tested the Wild Rose fault, 50 metres northwest of the discovery interscept in Hole 91-20. Hole 95-01 tested the vein at a depth of 75 metres down dip. Recoveries through the zone were very poor, however the zone exceeds 7 metres in width, with several quartz veins within, and with grades up to 4.09 g/t over 2.9 metres. Hole 95-02 was drilled from the same set-up, to test the vein deeper in the section. The vein was intersected 150 metres down dip and was 1.2 metres in width with a grade of 20.6 g/t Au.

Hole 95-03, -04, and -05 were drilled in a fence from the same set-up to test the fault zone about 300 metres northwest of holes 95-01 and -02, along the strike of the zone. The zone, intersected in all three drill holes, ranges up to 20 metres in width with serpentinite or listwanite with quartz-pyrite-mariposite alteration. The zone is anomalous in gold (up to 405 ppb locally) with up to 0.19% copper over the width of the zone. A zone of epithermal alteration was encountered near the tops of holes 95-03 and -04, up to 50 metres in width, with values up to 2.2 g/t Au over narrow intervals within the larger zone.

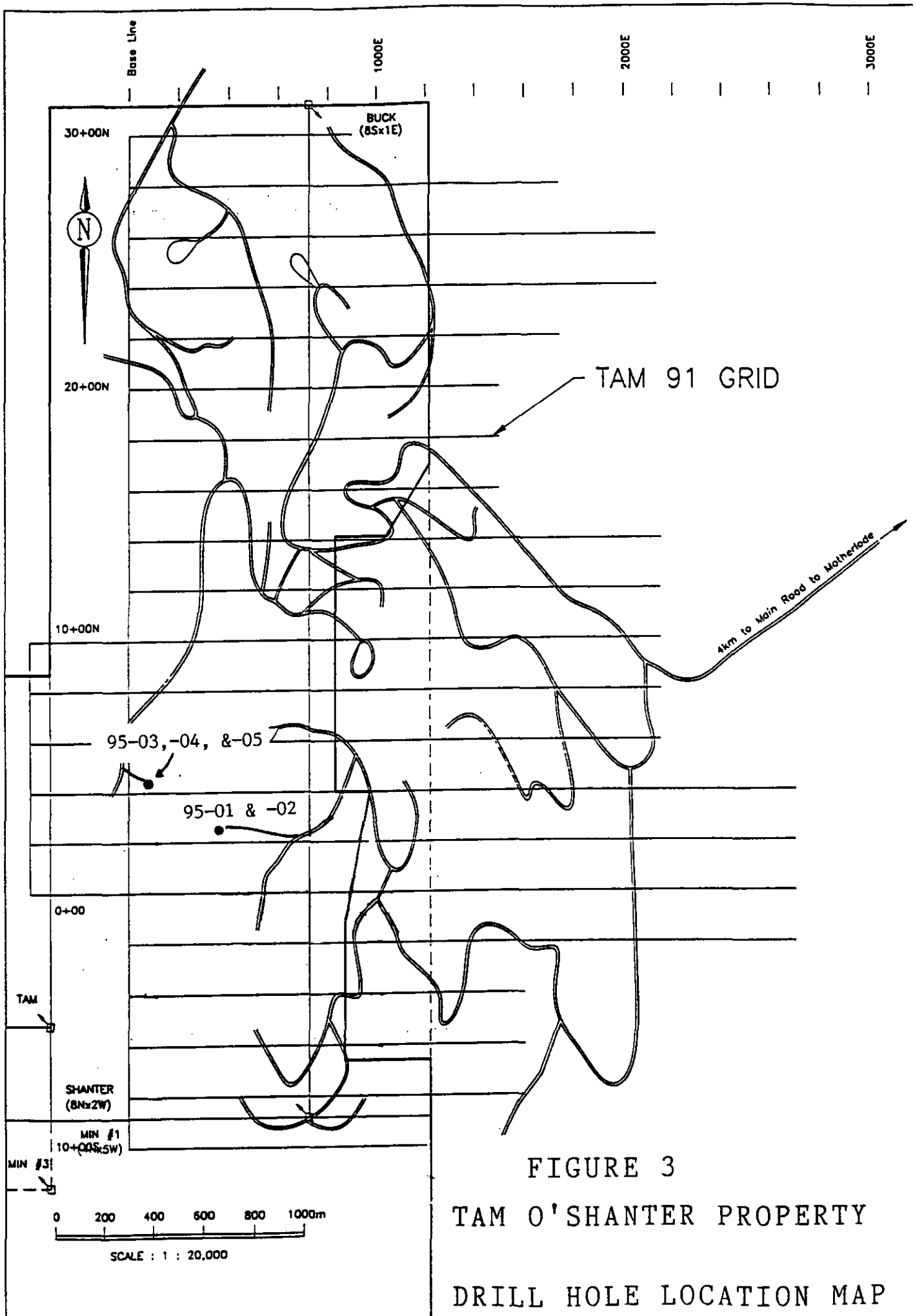

FIGURE 3

TAM O'SHANTER PROPERTY

DRILL HOLE LOCATION MAP

5.0 RECOMMENDATIONS

Further drilling should be done on the Wild rose vein in the area of Holes 91-20, 95-01 and 95-02 to test the high grade portion of the vein. The northwest extension of the Wild Rose structure near the intersection of the north trending Deadwood Fault should also be tested. Detailed mapping, followed by trenching and diamond drilling is also recommended to test the low grade bulk tonnage target east of the area of current drilling (Hole 92-27 area).

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APPENDIX 1

Diamond Drill Logs

KETTLE RIVER RESOURCES LTD.
Diamond Drill Log

Property: Tam O'Shanter	**Hole:** 95-01

Purpose of Drill Hole: To test the Wild Rose Vein deeper, in the area of good gold values, down section from the Hole 92-33 intercept

Co-ordinates:
Grid Name: Tam 91 Grid
Northing: 2+35 N
Easting: 3+65E
Elevation:

Specifications:	**Dip:** -65° **Azimuth:** 220° **Length of Hole:** 149.3 m (490 feet)	**Dip Tests:** -65° at 406'
Drilled by:	Lone Ranger	
Casing in Hole:	No	
Core Storage:	Boundary Falls	

Logged by: Linda Caron

Date Started: June 16/95
Date Completed: June 20/95
Date Logged: June 19-21/95

DRILL HOLE: 95-1

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
0 - 10.4	Overburden					
10.4 - 41.2	KNOB HILL GROUP Quartzite/chert with minor mudstone and gst interbeds	10.4 - 12.3 Quartzite -tuff. chert. Pale grey - green color, 10 - 30% grey chert clasts and irregular zones in v. silicious - fng equigranular rx with 10 - 15% possible relic plag <1mm, but prob clay filled voids, 30% quartz grains. Weak fol'n. 2% vugs with quartz druse, rusty fracs.		10.4 - 12.3 Seric on fracs. Qtz druse, rusty fracs, minor qtz stringers.	10.4 - 12.3 5-10% coarse py, blebs & fracture filling	10.4 - 12.3 85% recovery
		12.3 - 13.2 Narrow muddy interbed pale grey green v. fng, very silicious. Only rarely see zones with possible relic plag. Weak bedding at 70°.	70	12.3 - 13.2 Rusty fracs.	12.3 - 13.2 2-5% py	12.3 - 13.2 70% recovery
		13.2 - 16.8 Quartzite. Pale yellow-grey, med - fng, equigranular, qtz rich with minor clay filled voids (or poss relic plag). Bleached appearance, soft, perv clay alt'n. Weak to mod bedding at 70°. This is same as unit logged as felsic intrusion in DDH-91-20a 53.3 - 56.5m. @ 13.2 Sharp upper contact - no good orient. @ 16.8 grad contact to grey, finer grained rx	70	13.2 - 16.8 Grey qtz-py vnlts. Seric on fracts, perv clay alt'n	13.2 - 16.8 5-10% py as xcutting py strngrs, plus coarse py on fracs and as dissem blebs	13.2 - 16.8 90% recovery
		16.8 - 20.8 Quartzite. Pale - dark grey, locally yellowish as in 13.2 - 16.8m, v. siliceous, possible relic plag visible locally. Minor muddy interbeds. Change from interval above is colour, grain size, degree of siliceousness is >> here. Weak bedding @ 65°. @ 20.8 broken, bx contact, rusty @ 45°	65 45	16.8 - 20.8 Minor seric on fracs	16.8 - 20.8 5% py as above	16.8 - 20.8 95% recovery 20.8 - 21.0 FAULT @ 45° to C/A, 60% recovery 21.0 - 24.4
		20.8 - 24.4 Mudstone-siltstone. Very fng, med-dark grey-brown colour. Massive with weird zones of bx? looking seds (chem ppt texture??) Soft - not siliceous. @ 24.4 irregular gradational lower contact		20.8 - 24.4 Minor seric on fracs, Bx rusty fault zn @ upper contact	20.8 - 24.4 2% py on fracs	80% recovery
		24.4 - 27.2 Cherty mudstone as above with >> cherty component to seds. Much more siliceous. Still get minor muddy layers. Very fng, weak banded appearance. @ 27.2 sharp contact, narrow (2 cm) bx clay zone @ 30°	30	24.4 - 27.2 Qtz-py vnlts. Minor yellow qtz-clay filled fracs cut earlier random grey qtz-py vnlts	24.4 - 27.2 2-5% py on early fracs and with qtz in vnlts	24.4 - 27.2 75% recovery

DRILL HOLE: 95-1

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
		27.2 - 28.7 Quartzite. Pale yellowy-grey fng-med grained, as in 13.2-16.8. Possible relic plag texture visible. Bleached appearance. Soft, perv clay alt'n. @ 28.7 Sharp contact at 80° to C/A	80°	27.2 - 28.7 Minor seric, qtz-py vnlts, perv clay alt'n, bleached.	27.2 - 28.7 2% py - vnlts and blebs	27.2 - 28.7 95% recovery
		28.7 - 29.6 Mudstone. V. fng, locally siliceous, but gen quite soft. Dark grey-green colour, bedding at 70°. @ 29.6 grad change to gst below	70° 70°	28.7 - 29.6 Minor late qtz vnlts @ 70° to C/A, 40° to bedding.	28.7 - 29.6 1% coarse py on fracs	28.7 - 29.6 95% recovery
		29.6 - 31.9 Greenstone. Dark grey-green, fng, becoming paler, coarser grained down interval. 10-20% rem plag (incr down interval), 20% qtz grains, 10% fine mafics. Locally siliceous, but gen quite soft. @ 31.9 sharp irregular contact		29.6 - 31.9 Buff clay filled fracs (montmorill?) 31.3 - 31.4 zone of grey qtz-py vnlts @ 30° + perv silic'n	29.6 - 31.9 2% py - vnlts and diss	29.6 - 31.9 95% recovery
		31.9 - 34.0 Mixed qtzite/chert and mudstone as above. Cherty sections are crackled looking with >> qtz/py than muddy sections. 2-5% vugs with qtz druse in cherty sections	30°	31.9 - 34.0 Qtz-py vnlts, minor buff clay on fracs (montmorill?)	31.9 - 34.0 5% py - vnlts and diss	31.9 - 34.0 85% recovery
		34.0 - 35.4 Greenstone-microdiorite. Greyish-green gst as in 29.6 - 31.9. Sharp but irreg and broken contacts. Fine-med grained with 30% rem plag and 15% mafics, soft with perv clay-chl alt'n. Plag saus, mafics to chl.		34.0 - 35.4 Perv clay-chl alt'n	34.0 - 35.4 10-15% py - diss and as coarse clots	34.0 - 35.4 95% recovery
		35.4 - 41.2 Chert and lesser mudstone in FAULT ZONE. Mixed section of chert and mudstone - dominantly chert. Cherty intervals are very broken with poor recovery. Large zone with a number of minor faults within, pref in chert sections dt brittle nature of rx. Faults are marked by clay gouge or broken/bx zones. Fault zones @ 35.4-35.8 - poor recov, minor cpy 37.0-37.5 - v broken			35.4 - 41.2 5-10% py, diss, vnlts and clots. @ 35.4 2% cpy right @ contact with chert 37.7-37.9 2-5% cpy + 1 cm wide zone with red hem vnlts @ 60°to C/A	35.4 - 41.2 70% recovery

DRILL HOLE: 95-1

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
41.2 - 87.2	KNOB HILL GROUP Greenstone - Microdiorite	38.7 - 1 cm clay gouge zone @ 65° 38.9 - 2 cm bx zone @ 60° 40.9-41.2 - v broken, poor recov	65° 60° 60°	41.2 - 46.9 weak-mod clay/chl alt'n, minor late qtz strngrs	41.2 - 69.6 2% py, vnlts, diss + with white qtz & chl in coarse xtalline vnlts @ 60°	41.2 - 69.6 95% recovery
		41.2 - 46.9 Microdiorite. Med grey-green colour, fine-med grained, equigran, massive. 40-50% plag (5% gone to buff clay-montmoril?), 20-30% mafics (alt'd to chl?), soft, weak-mod perv clay-chl alt'n. Non magnetic. 45.9 - 46.3 FAULT ZONE Pale grey clay gouge and silic'd bx zone		45.9 - 46.3 silic'd, gouge	45.9 - 46.3 5% py	
		46.9 - 49.8 As above but darker colour, coarser grained. Locally intense clay-chl alt'n.		46.9 - 49.8 mod-str chl/clay alt'n		
		49.8 - 59.7 Gst. Change to dark grey, fng to v. fng gst. No prop alt'n. Hard, siliceous. Grades locally into slightly coarser sections. Grad change to alt'd micordior below.				
		59.7 - 64.6 Gst. Dark brownish grey, soft with perv clay-chl alt'n. >> muddy component than above?. Locally narrow muddy looking bands.		59.7 - 64.6 mod perv chl/clay alt'n		
		64.6 - 69.6 Gst. Fng - v. fng, dark grey, hard siliceous as in 49.8 - 59.7m. Rx become coarser, >> alt'd towards bottom of interval (69.0 - 69.6m).		69.0 - 69.6 mod-str perv chl/clay alt'n		
		69.6 - 73.0 FAULT ZONE in KH gst/microdiorite as detailed below 69.6 - 69.9 v. broken, bx section, strong clay alt'n, poor recov 69.9 - 70.5 pale green, strong clay alt'n, local silic'n, banded appearance at 70-90° to C/A with weak v fine py and clay bands. 70.5 - 71.0 grey green, siliceous microdior with mottled appearance 71.0 - 72.0 v. broken, poor recov, dark green-black silic microdior with qtz rich siliceous zones, including a 10 cm white qtz vn @ 71.7m, and a 20 cm green intense clay alt'd zone @ 71.8m.	70-90°	69.6-69.9 str clay alt'n 69.9-70.5 str clay, local silic, late white qtz vnlts 70.5-71.0 silic 71.0-72.0 silic, clay alt	69.6 - 69.9 10-20% v fine drk gry py 69.9 - 70.5 10% fine-coarse diss py + py vnlts & py with grey qtz in vns @ 50° 70.5 - 71.0 10% py 71.0 - 72.0 10% py, tr cpy	69.6 - 69.9 50% recovery 69.9 - 70.5 75% recovery 70.5 - 71.0 60% recovery 71.0 - 72.0 40% recovery

DRILL HOLE: 95-1

INTERVAL	ROCK TYPE	DESCRIPTION	•	ALTERATION	MINERALIZATION	COMMENTS
		72.0 - 72.9 dark grey-green, very soft, strong clay-prop alt'n 72.9 - 73.0 v broken with clay gouge		72.0-72.9 str clay 72.9-73.0 clay gouge	72.0 - 72.9 5% diss py	72.0 - 73.0 90% recovery
		73.0 - 78.4 Microdiorite-gst. Dark grey-green fng microdiorite, v. soft with strong clay-chl alt'n. Rem plag and mafics visible locally. Local fault zones marked by strong gouge or v. broken zones with intense clay alt'n @ 74.5 - 74.7 75.6 - 75.7 76.1 - 76.3		73.0 - 78.4 strong clay-chl alt'n	73.0 - 78.4 10-15% py 78.4 - 79.8 10-15% py, fng black & coarser dissem, also xcutting vnlts.	73.0 - 79.8 85% recovery
		78.4 - 79.8 Gradational change to bleached, pale grey-green micordior with 2-5% vugs.		78.4 - 79.8 strong perv clay alt'n, bleached, white qtz + gougy zones + py/cpy/qtz	Locally cpy with py & with qtz-py vnlts (ie 79.5-79.8)	79.8 - 82.0
		79.8 - 85.0 FAULT ZONE - WILD ROSE ZONE, as detailed below. 79.8 - 81.0 v. strong clay alt'n + bleaching of microdiorite, broken, poor recovery, minor qtz vning 81.0 - 81.2 White qtz vn, 40% green chl alt'd wall rx in interval. V. broken, crackled, poor recovery, locally heavily mineralized. 81.2 - 82.0 Strongly alt'd microdior, broken, poor recov, local small chunks of qtz and massive sulfides (py + lesser cpy) 82.0 - 82.9 White qtz vn with 20% int chl-serp alt'd wall rx. Very broken, poor recov, vuggy with coarse qtz xtals. Locally heavily minz'd with py/cpy. 82.9 - 83.9 Dark green-black, int chl-serp alt'd gst/micordiorite. 83.9 - 85.0 White qtz vn with 10-15% v chl alt'd wall rx, chl on fracs, v. broken, poor recov, 5% vugs with coarse qtz xtals, brittle, crackled looking @ 85.0 lower contact @ 60° to C/A	60°	vnlts all @ 60° 79.8 - 81.0 v strong clay alt'n, bleaching 82.9 - 83.9 int chl-serp alt'n	79.8 - 81.0 5% py - diss & in grey qtz-py vnlts 81.0 - 81.2 locally heavily minz'd with py, cpy 81.2 - 82.0 local py, cpy 82.0 - 82.9 locally heavily minz'd with py 82.9 - 83.9 trace cpy, minor py 83.9 - 85.0 Minor py, v fine dissem and on fracs	79.8 - 82.0 50% recovery 82.0 - 82.9 40% recovery 82.9 - 83.9 40-50% recovery 83.9 - 85.0 30-40% recovery
		85.0 - 87.2 Microdiorite. Grey-green, mod-strongly perv clay alt'd micordior, with chl alt'd mafics. Minor white xtalline qtz vnlts with py + tr cpy. Broken lower contact with seds.		85.0 - 87.2 mod-str perv clay/chl alt'n	85.0 - 87.2 2-5% py, diss & in qtz vnlts with tr cpy	85.0 - 87.2 80% recovery

DRILL HOLE: 95-1

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
87.2 - 149.3	ATTWOOD? GROUP Sediments. Mudstone with interbedded congl and wacke	Mixed sequence of Attwood? seds, dominantly mudstone, with lesser wacke and conglom. Increasing coarser material down hole. 87.2 - 98.3 Mudstone. Fng, med greenish-grey, bedded mudstone. Good bedding @ 60° to C/A. Minor white qtz vnlts, grey qtz-py vnlts (60° to C/A) and late py vnlts (0-30° to C/A). Sharp contacts with coarser gritty intervals (wacke - fine conglomerate), up to 10 cm wide, grey salt-pepper type appearance, also irregular clasts/lenses of this material in the mudstone (<1 cm-3 cm in size). This rx is siliceous and may be heavily minz'd with py where the adjacent mudstone has negligible amts. Wacke sections make up 10-15% of sedimentary interval (% increases downwards to conglom bed at 98.3 m) @ 98.3 bedding at 65° 98.3 - 98.5 Conglomerate. Grey chert pebble conglom. V. siliceous, 90% clasts, dom chert, < 1cm, + lesser gst and buff clay alt'd rx clasts. Matrix greenish, chl rich with fine py. @ 98.5 contact at 65° 98.5 - 99.3 Mudstone with 15% wacke as fine interbeds every 1 - 2 cm. Siliceous with sections that can be heavily minz'd with py. 99.3 - 100.6 Conglomerate. Grey chert pebble conglom as in 98.3-98.5 m. 100.6 - 104.9 Mudstone. As above with 20% wacke and minor conglom beds and clasts, pref pyritized as above. 104.9 - 105.2 Wacke. Grey, v. siliceous, coarse wacke or v. fine conglom. Heavily minz'd with py, 5% fine black chl (may be repl of mafics?) + 5% buff clay (montmorill?) looks like rem plag but may be clay filled voids.	60° 0-30° 65° 65°	87.2 - 87.8 silic'd & vuggy with 5-10% white qtz vnlts & vuggy vnlts. Large clear fluorite xtal in one vug - 1 cm across	87.2 - 87.8 2% py, tr cpy, v minor moly? on fracs 87.8 - 98.3 1-2% py, with qtz in grey vnlts + in late x-cutting py vnlts @ 0 - 30° to C/A. Locally chl with py in vnlts. Up to 10% diss py & network of py vnlts in wacke sections 98.3 - 98.5 2% py - finely diss in congl mtrx + on fracs and in vnlts 98.5 - 99.3 loc heavily minz'd with py 99.3 - 100.6 2% py - finely diss in congl mtrx & on fracts & in vnlts 100.6 - 104.9 5-10% py - diss & in vnlts in wacke zones. Minor py vnlts in mudstn 104.9 - 105.2 10% py, diss & vnlts	87.2 - 98.3 85% recovery 98.3 - 98.5 75% recovery 98.5 - 99.3 80% recovery 99.3 - 100/6 85% recovery 100.6 - 104.9 80% recovery except in 103.2 - 104.3 40% recovery 104.9 - 105.2 95% recovery

DRILL HOLE: 95-1

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
		105.2 - 125.3 Mudstone - wacke. Greenish br-grey - grey, coaser mudstone that above with increased amt of wacke and conglom interbeds, 50% mudst/50% wacke-congl as alternating beds <1 cm to 15 cm in width (wider beds are always coarser material). Again pref pyritization in coarser intervals, but some py vnlts in mudstone. % mudstone decreases down section so that by 110 m, zone is 80-90% wacke-conglom. Mudstone becomes paler yellow brown colour down section. @ 116.2 bedding @ 70° @ 124.5 narrow 1-2 cm wide bx zone with gouge @ 15° to C/A. Minor fault @ 124.8 bedding 80-90° to C/A	30° 70° 15°	105.2 - 125.3 Minor pale br clay (montmorill?) on vuggy fracs @ 118.6 1/2 cm wide grey qtz vn @ 30°to C/A @ 123 minor ep in congl	105.2- 125.3 2-5% py - diss, vnlts & on fracs in wacke and congl intervals, minor py in mudstone	105.2 - 125.3 85% recovery
		125.3 - 125.5 Fault? V. broken zone with poor recov, 10-15% grey qtz vning, to 1 cm, within zone			125.3 - 125.5 minor py	125.3 - 125.5 50% recovery
		125.5 - 149.3 Mudstone and interbedded wacke. Grey brown mudstone with 20-30% coarser wacke beds, clasts and grains. Mudstone becomes coarser grained down hole, % wacke increases to 50%. 1-2% vugs with qtz xtals or dry. @ 126.4 bedding @ 30-40° to C/A. Note change in bedding orient. 126.6 - 126.9 Fault?. v broken core, << py than higher up in seds., even wacke sections have little py. Minor qtz and clay vnlts. @ 136.3 bedding @ 30° 139.6 - 139.9 Dark green - chl alt'n of wacke (or poss narrow bed of microdior in seds??). Minor py/cpy + qtz vning in interval. 141.4 - 141.8 local bx, very broken, local silic'n, strong clay on fracs, coning into fit zone @ 142.1 1.5 cm wide grey qtz/py/clay bx zone @ 30°to C/A (parallel to bedding) @ 145.5 1 cm clay zone 149.3 E.O.H.	30-40° 30°	125.5 - 149.3 Minor buff clay on fracs, minor qtz vnlts 132.9 - 133.3 abund white clay (alunite?) on fracs 139.6 - 139.9 minor qtz vning, chl alt'n 141.4 - 141.8 broken with strong clay on fracs	125.5 - 149.3 < 1% py 139.6 - 139.9 2-5% py, tr cpy with minor qtz vning 142.1 qtz/py/clay bx zone. Increased py/qtz adj to this zone	125.5 - 139.6 80% recovery 139.6 - 142.0 60% recovery 142.0 - 149.3 70% recovery

Sample	From (m)	To (m)	Length (m)
137101	34.0	35.4	1.4
137102	35.4	37.5	2.1
137103	37.5	39.5	2.0
137104	39.5	41.2	1.7
137105	45.9	46.3	0.4
137106	46.3	49.3	3.0
137107	67.1	69.6	2.5
137108	69.6	71.0	1.4
137109	71.0	73.0	2.0
137110	73.0	75.5	2.5
137111	75.5	78.4	2.9
137112	78.4	79.8	1.4
137113	79.8	81.0	1.2
137114	81.0	81.2	0.2
137115	81.2	82.0	0.8
137116	82.0	82.9	0.9
137117	82.9	83.9	1.0
137118	83.9	85.0	1.1
137119	85.0	87.2	2.2

Sample	From (m)	To (m)	Length (m)

KETTLE RIVER RESOURCES LTD.
Diamond Drill Log

Property: Tam O'Shanter	**Hole:** 95-02

Purpose of Drill Hole: To test the Wild Rose fault/vein deeper down dip in same section as 95-01 and 92-33

Co-ordinates:
Grid Name: Tam 91
Northing: 2+35 N
Easting: 3+65 E
Elevation:

Specifications: **Dip:** -90° **Azimuth:** n/a **Length of Hole:** 166.1 m (545 ft)	**Dip Tests:** -86° @ 545'
Drilled by: Lone Ranger	
Casing in Hole: No	
Core Storage: Boundary Falls	

Logged by: Linda Caron

Date Started: June 20/95
Date Completed: June 24/95
Date Logged: June 26-27/95

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
0 - 12.2	Overburden					
12.2 - 44.1	KNOB HILL GROUP Quartzite/Chert with minor mudstone interbeds	as in 95-01 10.4 - 29.6 m 12.2 - 17.8 Quartzite. Grey green, locally white-grey, grades into bleached yellow locally, v fng. Broken with rusty fracs. Qtz rich with 90+% fine qtz grains, poss see minor rem plag (or clay filled voids?) 15.4 - 16.7 local bx texture with grey siliceous clasts with greenish-yellow interstitial siliceous mtrx. Looks skarny??? Grades downwards into yellow bleached qtzite. Bedding? @ 60° 17.8 - 20.3 Mudstone. Fng, grey-br, coarsens downwards. Very broken, poor recov, grad change to qtzite/chert below. Broken upper contact, grad lower contact. 20.3 - 23.4 Mixed zone of grey-green qtz rich sst/qtzite + v fng grey chert. Locally bleached and bx looking as in 15.4-16.7 (ie @ 20.6 - 20.9, 22.0-22.4). Greenish colour poss fng epidote? Looks skarny. 23.4 - 25.8 Mudstone - siltstone, locally cherty. Grey-brown, fine-med grained. Poor bedding @ 70°, coarsens downwards to qtzite below. 25.8 - 28.1 Qtzite. Pale grey-br, med grained with 70-80% rounded qtz grains + 20% rem plag (clay alt'd). Coarsens down and plag increases down. @ 28.1 sharp lower contact with 2 cm clay gouge zone @ 70° to C/A	80-90° 40° 60° 70° 50° 0° 70°	12.2 - 17.8 Locally bleached, skarny looking, rusty fracs + locally seric on fracs 17.8 - 20.3 minor white clay on fracs 20.6 - 20.9, 22.0 - 22.4 Bleached, looks skarny @ 24.5 grey brown clay? vn on frac 25.8 - 28.1 Seric on fracs, bleached looking	12.2 - 17.8 5% py, diss + as fine vnlts/beds @ 80-90° to C/A + coarser py in later vns @ 40° (up to 1 cm) with qtz 17.8 - 20.3 1% py - diss & vnlts 20.3 - 23.4 5-10% py as in 12.2 - 17.8, Cherty sections have >> py. 23.4 - 25.8 2-5% py. Py pref in cherty zones but also in mudst. Py diss, + fine vnlts/beds @ 50° also with qtz in later vns @ 0°to C/A 25.8 - 28.1 2% py - diss & in grey vnlts with qtz	12.2 - 17.8 85% recovery 17.8 - 20.3 65% recovery 20.3 - 23.4 85% recovery 23.4 - 25.8 70% recovery 25.8 - 28.1 90% recovery

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
		28.1 - 28.6 Mudstone. Greenish-grey, v fng, siliceous. Grad change to qtzite below. Bedding @ 60°. Lower contact @ 45-50°.	60° 45-50°	28.1 - 28.6 seric on fracs, siliceous	28.1 - 28.6 2% py - diss & with qtz	28.1 - 28.6 60% recovery
		28.6 - 33.4 Qtzite-chert. Grey - grey-br, fine-med grained, sim to 25.8-28.1, with local muddy sections. Generally 80+% qtz grains, 10-20% rem plag? visible (or poss clay filled voids). Grad change to mudst/chert below.		28.6 - 33.4 py/seric on fracs	28.6 - 33.4 5 - 10% py, diss + vnlts with white & grey qtz	28.6 - 33.4 85% recovery
		33.4 - 36.9 Mudstone/Chert. Greenish grey, locally purplish tinge (adularia?). v fng, bedding @ 80-90° to C/A, core broken, poor recov near lower contact.	80-90°	33.4 - 36.9 Minor py/seric on fracs, adularia??	33.4 - 36.9 1% py	33.4 - 36.9 75% recovery
		36.9 - 39.4 Qtzite. Grey - yellow/grey qtzite as above. Med grained, 80% qtz grains, 20% rem fsp.		36.9 - 39.4 1-2% vugs	36.9 - 39.4 2% py as clots & vnlts with qtz	36.9 - 39.4 80% recovery
		39.4 - 40.7 Mudstone - locally cherty. Grey br, v fng. Bx, faulted lower contact @ 45°	60° 45°	39.4 - 40.7 minor buff clay on fracs	39.4 - 40.7 1% py as vnlts & on fracs @ 60°	39.4 - 40.7 85% recovery
		40.7 - 44.1 Mixed KN seds as detailed below: 40.7 - 41.3 Qtzite/mudstone		40.7 - 44.1 mod-str clay on fracs	40.7 - 44.1 1-2% py throughout interval	
		41.3 - 41.5 Fault zone @ 45°, broken, clayey, poor recov	45°	41.3 - 41.5 clay - fault zone		
		41.5 - 42.4 Yellow grey - yellow br qtzite			42.4 - 42.7 2-5% py	
		42.4 - 42.7 grey v fng chert			42.7 - 43.9 2-5% py, locally heavy py. @ 43.3 banded py @ 90° below this fine network of py strngrs @ 80°and random, giving rx dendritic like appearance	
		42.7 - 43.9 mudstone ⊕ chert, fng, grey - brown - yellow br 43.9 - 44.1 bx faulted contact with buff qtz vn + bx gouge zone with grey pyritic qtz. Low temp vning, vuggy with 5-10% open space + yellow clay.	90°	42.7 - 43.9 str clay on fracs, 2 cm qtz vn @ 43.6 m 43.9 - 44.1 bx fault zone, qtz vning, clay	43.9 - 44.1 2-5% v fine grey py	

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
44.1 - 54.5	KNOB HILL GROUP Hornblende Diorite	Massive, dark green-brown KH hnbld diorite. Med grained, non magnetic. 44.1- 44.7 Fng, equigranular (chilled contact?), 60% fine plag, 40% mafics. Less intens altered than below. 44.7 - 46.5 Coarse hnbld diorite, dark brown, mottled appearance, fng near top of interval, becoming coarser grained down section with large clusters of alt'd plag. 40% plag, individ xtals 2-4mm, 15% mafics (hnbld) 2-4 mm, in finer grained dark mafic rich mtrx. 46.5 - 46.9 FAULT ZONE @ 70° to C/A 46.5 - 46.6 clay gouge 46.6 - 46.8 broken, bx microdiorite 46.8 - 46.9 buff/white bx qtz vn + clay gouge, white qtz frags in buff siliceous mtrx 46.9 - 49.3 Coarse grained, massive hnbld diorite, 60% plag, 25% mafics, avg 3 - 4mm, up to 5% bluey-grey interstitial material locally. ie) 48.0. Soft, perv clay-chl alt'n. Weakly deformed locally. 49.3 - 54.5 Med grained, massive, dark grey-green diorite, 60% fsp, 40% mafics 53.0 - 53.3 Fault zone - v. broken, poor recov, vuggy bx dior, locally mod silic 54.0 - 54.5 Diorite looses it's igneous texture. Mottled appearance with fsp visible, no distinct mafics (chilled contact?) This unit is intrusive into KH seds @ 54.5 Sharp contact with chert @ 70°to C/A	70°	44.7 - 49.3 Strong chl-clay alt'n, late qtz, clay-carb vnlts. fsp saus, mafics to chl 46.5 - 46.9 Fault zone + qtz vning 46.9 - 49.3 strong clay-chl alt'n 49.3 - 52.5 Dark grey, siliceous, minor late qtz + qtz carb vnlts 52.5 - 54.5 Duller green-grey with mod perv chl-clay alt'n, mafics to chl, minor late qtz + qtz carb vnlts 53.0 - 53.5 vuggy, bx, silic	44.1 - 44.6 10% py - diss & vnlts, locally massive banded py 44.7 - 46.5 minor py 46.5 - 46.9 minor py 46.9 - 49.3 2-5% py - diss and vnlts, 5% bluey-grey interstitial material? 49.3 - 52.5 1% py diss and vnlts 52.5 - 54.5 1-2% py, diss & vnlts	44.1 - 54.5 95% recovery 46.5 - 46.9 60% recovery

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
54.5 - 71.9	KNOB HILL GROUP SEDIMENTS	54.5 - 54.7 Chert. V. fng, grey, massive with 2-3% dark green-black chl on fracs defining weak fabric @ 60°to C/A 54.7 - 57.6 Mudstone. Grey-green, fng, weak bedding @ 70° to C/A. Minor narrow chert interbeds/large clasts? @ 55.0, 55.9 Grad change to chert below 57.6 - 69.3 Chert/muddy chert. Pale grey-green, v fng, bx and vuggy near upper contact. Grades locally to fng qtzite, pale yellow-grey 57.6 - 59.4 broken interval with poor recov @ 60.5 10 cm vuggy bx chert/qtzite with 5% grey qtz vning @ 61.2 10 cm clast of v fng dark br metavolc?? with minor diss cpy. Is this br colour secondary bio?? 63.1 - 63.5 finely bx with 30% of material white-tan clasts, avg 0.5 mm with grey qtz/py mtrx, 70% of material is massive white-tan chert. 64.7 - 65.0 bx vuggy chert with minor clay gouge on fracs @ 30°. Dry looking. Fault zone. >> py than in adjacent rx. 67.1 - 67.7 bx vuggy crackled chert. Dry looking. Fault zone. Possible orient @ 45°to C/A. 69.3 - 71.9 Rx become slightly darker than above with local soft unalt'd muddy sections + sections of grey-green muddy chert as above but with increasing amt of dark brown fng rx as in clast @ 61.2 m. Poss secondary biotite alt'n. Is this a cooked zone adj to unerlying intrusive?? Possible didn't see this @ top of seds because chert is non-reactive. Here seds>>muddy component, more reactive to intrusion? Sharp contact with intrusion @ 71.9 @ end of run. Contact lost, no good orientation. Bedding @ 70°	60° 70° 45° 70°	54.5 - 54.7 2-3% chl on fracs @ 60° 57.6 - 71.9 Minor seric on fracs @ 61.2 v fine secondary bio? in clast?? 69.3 - 71.9 Local zones of secondary biotite alt'n?? Minor late white qtz vnlts @ 40°	54.5 - 54.7 minor diss py 54.7 - 57.6 <1% v fine dark stringers py + chl?? 57.6 - 63.1 1-2% v fine xcutting network of dark py + chl? strngs. 1-2% coarse py - diss and vnlts. Tr diss cpy 63.1 - 63.5 5% py, v fine in mtrx of bx 63.5 - 69.3 1-2% py, diss, vnlts & as fine black vnlts with chl. Less py than near top of chert/muddy chert interval 69.3 - 71.9 1-2% py, >> in darker intervals, tr cpy in darker intervals	54.5 - 71.9 85% recovery

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
71.9 - 107.4	KNOB HILL GROUP DIORITE	71.9 - 84.9 Diorite. Fine-med grained, massive, dark grey-green diorite. V. fng near upper contact (chill zone) becoming slightly coarser @ 73.5 m. Coarsening again to a med grained dior @ 76.5 m with 50-60% plag, 20% mafics (hnbld?) avg 2mm in fng mafic rich mtrx. Hard rx, siliceous, very clinky. 84.9 - 90.3 Diorite. Grad change to paler green, slightly softer, mottled looking dior with chl alt'n of mafics. Now rx looks to be about 70% fst, 30% mafics. Chl alt'n increased down interval, by 86.7m str perv clay/chl alt'n. Dior is slightly coarser grained, darker green-grey and appears to be >> mafics here than above. 90.3 - 107.4 Diorite. Sharp change over 5-10 cm to pale green-grey, fng strongly alt'd diorite. Extremely soft. Epithermal alt'n system with stockworking banded qtz + montmorill alt'n? 95.8 - 96.3 finely bx with 70% alt'd pale green dior clasts in grey pyritic mtrx @ 97.3 5 cm clay gouge @ about 104.0 grad change to med grained dior - coarser grained than above with intrusive texts still visible. Still str perv clay-chl alt'n, perhaps slightly less than at top of section. Sharp but irreg contact to metavolcanics below.	85° 20-40°	71.9 - 84.9 fsp partially alt'd to clay, v siliceous (clinky) 84.9 - 86.7 Chl alt'n of mafics + chl on fracs. Minor qtz vning with py, hem/chl 86.7 - 90.3 str perv clay-chl alt'n 90.3 - 107.4 v strong clay-chl alt'n, up to 5% banded grey-white qtz vns with py, dom @ 20-40°, but also stockworking, vns locally vuggy 95.8 - 96.5 buff-pale br clay on fracs & in bx (montmorill?) 97.3 - 98.1 int clay-chl alt'n	71.9 - 84.8 1-2% diss py, minor banded qtz/py/clay-carb/chl + minor hem vnlts, dom @ 85° 84.9 - 86.7 2% py - diss & in vnlts with qtz/minor hem/chl 86.7 - 90.3 2-5% py - diss & in banded vns with qtz/chl/clay, tr cpy 90.3 - 107.4 2 py as above, tr cpy 95.8 - 96.3 10% v fine py in bx mtrx	71.9 - 107.4 95% recovery
107.4 - 122.2	KNOB HILL METAVOLCANIC (ANDESITE?)	107.4 - 122.2 Metavolcanic. Fng, grey brown, massive. Occasionally see fine plag/mafic relics, gen fng. Soft with mod perv clay-chl alt'n. 10% grey chert clasts + grey qtz vns have >> py than volcs. @ upper contact coaser grained, strongly alt'd dior above appears to be intrusive into this. 2ndary biotite?? alt'n in volcs @ contact @ lower contact this intrusive relationship is not apparent 111.6 - 112.1 Bx zone, dry looking, 30-50% clasts of volcs + white qtz with fng volcs and locally white qtz or grey fng py + qtz as a mtrx.	60°	107.4 - 119.0 mod perv clay-chl, up to 5% white-buff qtz-carb vns, dom @ 60° 107.4 - 108.4 dark br colour, poss 2ndary biot alt'n, 10% buff-pale br clay in coarse blebby zones 119.0 - 122.2 siliceous, clinky. Pinkish br colour-mottled Adularia??	107.4 - 122.2 5% py, didd & in vnlts with qtz (+carb), tr cpy. Py>> in cherty clasts. vnlts locally have pale pink tinge (hem?)	107.4 - 122.2 95+% recovery

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
122.2 - 159.1	KNOB HILL DIORITE	122.2 - 133.1 Diorite. Fine-med grained, massive with locally good igneous textures visible. Med grey-green colour. Siliceous (clinky). Locally mod deformed hnfelsed/chl alt;s mafics (no relic texts visible) around fsp. Doesn't look like good dior as higher up in hole, but coarser grained than volcs above. 2% xenoliths of chert & mafic rich volc?, gen 1-2 cm but occasionally larger. See fng hnfels/bio alt'n zones (ie 127 - 129.5) 123.8 - 124.0 massive tight white xtalling qtz vn, locally bx zones & fine black *pyritic qtz* 133.1 - 146.9 Diorite. Coarser grained, not deformed, still siliceous (clinky) but good ign tests visible with equigranular plag/mafics avg 1-3 mm, 60% fsp, 40% mafics, mafics alt'd to chl. 135.5 - 135.8 Epithermal zone. Nice zone of epithermal looking banded bx qtz vns + alt'd dior. 50% of interval is veining. tight vns. *Banded vns with dark grey centres in* white qtz vns + white qtz bx frags with grey py rich mtrx. Zone @ 40° to C/A @ 139.9 12 cm white coarsely xtalling massive qtz vn, not minz'd. @ 45°to C/A	 40° 45°	122.2 - 133.1 silic'd, hnfelsed? 2ndary biotite alt'n?? 129.5 - 130.1 *extr siliceous/hard* 133.1 - 140.0 siliceous, mafics to chl 135.3 - 136.1 15-20% fsp alt'd to apple green mineral 140.0 - 146.9 rx become softer - weak-mod chl-clay alt'n	122.2 - 133.1 10% diss py & py vnlts with qtz, tr cpy 133.1 - 146.9 5% py - diss & in vnlts up to 1 cm with qtz. tr *cpy*	122.2 - 146.9 95+% recovery
146.9 - 158.7	WILD ROSE FAULT ZONE	146.9 - 147.2 Bx zone with 20-30% white qtz clasts up to 5 cm, but gen <0.5 cm *with fine grey py rich mtrx* and green alt'd dior. Low temp?. @ 25°to C/A. 147.2 - 148.45 Str alt'd dior with minor qtz/py vning + qtz/carb vns 148.45 - 148.6 bx pyritic zone as in 146.9 0 147.2, @ 45° to C/A 148.6 - 148.8 Str alt'd dior with minor qtz/py vning + qtz/carb vns 148.8 - 149.1 bx pyritic zone as in 146.9 0 147.2, @ 45° to C/A 149.1 - 149.2 Str alt'd dior with minor qtz/py vning + qtz/carb vns	25° 45° 45°	Mod chl alt'd dior between vnx and bx zones from 146.9 - 149.3	5-10% py, diss and vnlts in dior between bx zones and vns 146.9 - 147.2 10% py v fng, in mtrx of bx 147.2 - 147.5 *strong py minz'n for* 30 cm in rx below bx zone. 148.45 - 148.6 10% py, v fine in bx mtrx 148.8 - 149.1 10% py, v fine in bx mtrx	146.9 - 159.1 90% recovery

DRILL HOLE: 95-02

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
146.9 - 158.7 cont...	WILD ROSE FAULT ZONE cont...	149.2 - 149.3 Grey clay gouge 149.3 - 152.0 Dior. Fng, grey, mod hard, weakly silic with relic mafics visible alt'd to chl 152.0 - 153.2 Qtz vn. Massive white qtz with with 10-15% chl on fracs and as inclusions of wall rx. Local zones of buff qtz, parallel to vn with pale green fucsite? (is this later epithermal overprint?) @25°to c/a 153.2 - 157.75 Dior. Med grey-greeen, relic ign text visible locally, chl alt'd mafics, locally silic @ 155.1 5 cm white qtz vn @ 40°, heavily minz'd with py • cpy 157.75 - 158.7 Qtz vn. White massive qtz vn with one large (10 cm) inclusion of dior wall rx. 5% chl on fracs, 2% py on fracs & locally as massive vnlts to 1 cm. White qtz vns with py/cpy cut earlier white qtz. 158.7 - 159.1 Diorite as in 153.2 - 157.75 @ 159.1 sharp contact of dior with mudstone @ 85°	 25° 40° 85°	 149.3 - 152.0 weak silic'n, 2% white qtz vnlts 153.2 - 157.75 chl alt'd mafics, locally silic'd	 149.3 - 152.0 5% py - diss & vnlts 152.0 - 153.2 5% py, locally up to 15%. tr cpy @ 155.1 5 cm qtz vn, heavily minz'd with py, cpy 157.75 - 158.7 2% py, minor cpy	 @ 152.5 drilled added qtz pebbles to sharpen bit. They have been removed.
159.1 - 166.1	ATTWOOD? GROUP SEDIMENTS (MUDSTONE)	Fng, grey green mudstone with minor v narrow wacke interbeds. Bedding @ 25°to C/A 161.1 - 161.9 Broken core, poor recov, with narrow gougy zones 166.1 EOH	25°	Minor white qtz vnlts + buff qtz carb vnlts, cut by later py strngrs	minor py as fine strngrs	159.1 - 166.1 85% recovery

Sample	From (m)	To (m)	Length (m)
137005	12.2	15.4	3.2
137006	15.4	17.8	2.4
137007	20.3	23.4	3.1
137008	40.7	42.4	1.7
137009	42.4	43.9	1.5
137010	43.9	44.1	0.2
137011	44.1	44.7	0.6
137012	44.7	46.5	1.8
137013	46.5	46.9	0.4
137014	46.9	49.3	2.4
137015	49.3	51.0	1.7
137016	51.0	53.0	2.0
137017	53.0	53.3	0.3
137018	53.3	55.3	2.0
137019	55.3	57.6	2.3
137020	57.6	59.4	1.8
137021	63.1	63.5	0.4
137022	64.7	65.0	0.3
137023	67.1	67.7	0.6
137024	67.7	69.3	1.6
137025	69.3	71.9	2.6
137026	86.7	88.7	2.0
137027	88.7	90.3	1.6
137028	90.3	93.3	3.0
137029	93.3	96.3	3.0
137030	96.3	99.3	3.0
137031	99.3	102.3	3.0
137032	102.3	105.0	2.7
137033	105.0	107.4	2.4
137034	107.4	110.4	3.0
137035	110.4	111.6	1.2
137036	111.6	112.1	0.5
137037	119.0	122.2	3.2
137038	122.2	125.2	3.0
137039	125.2	128.2	3.0
137040	128.2	131.0	2.8
137041	131.0	133.1	2.1
137042	133.1	135.5	2.4
137043	135.5	135.8	0.3
137044	135.8	138.0	2.2
137045	138.0	139.9	1.9
137046	145.0	146.9	1.9
137047	146.9	147.2	0.3
137048	147.2	148.45	1.25

Sample	From (m)	To (m)	Length (m)		Sample	From (m)	To (m)	Length (m)
137049	148.45	149.3	0.85					
137050	149.3	152.0	2.7					
137051	152.0	153.2	1.2					
137052	153.2	155.2	2.0					
137053	155.2	157.75	2.55					
137054	157.75	158.7	0.95					
137055	158.7	159.1	0.4					
137056	159.1	161.9	2.85					

KETTLE RIVER RESOURCES LTD.
Diamond Drill Log

Property:	Tam O'Shanter	Hole: 95-03
Purpose of Drill Hole:	To test the Wild Rose Fault near the intersection with the perpendicular N trending fault with epithermal veining exposed in old workings. This will test the zone 300 metres west of hole 95-01 and -02, and about 200 metres east of the Deadwood Fault.	
Co-ordinates:	Grid Name: Tam 91 Northing: 4+26 N Easting: 0+78 E Elevation:	
Specifications:	Dip: -45° Azimuth: 220° Length of Hole: 144.8 m (475 feet)	Dip Tests: -40° @ 395'
Drilled by:	*Lone Ranger*	
Casing in Hole:	No	
Core Storage:	Boundary Falls	
Logged by:	Linda Caron	
Date Started: Date Completed: Date Logged:	June 27/95 June 30/95 July 4-5/95	

DRILL HOLE: 95-03

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
0 - 9.8	overburden					
9.8 - 50.3	KNOB HILL METAVOLCANICS	9.8 - 24.8 Metavolcanics. Dark grey-green, fng, mottled appearance with local clasts or narrow irreg zones of grey chert & also of darker porph gst in fng paler mtrx. Locally see up to 30% relic plag, < 1 mm. grades into zones of cherty gst or soft muddy gst. Generally mod perv chl alt'n. Locally perv carb alt'n + mod magnetite (and locally fine epidote). The distrib of this alt'n may be more a function of primary lithology than dt proximity to dyking/structure. Darker more dom volc zones >> carb (ep) mag alt'n (ie. 9.8 - 16.1, 23.4 - 24.3) (or is mag primary and destroyed by later alt'n?)	85°	9.8 - 24.8 mod perv chl alt;n, + local carb-mag-ep (in dom volc intervals ie 9.8 - 16.1, 23.4 - 24.3. White qtz-carb (+hem)vnlts & vns dom @ 85°to C/A	9.8 - 24.8 up to 5% py throughout, tr cpy. >> py in volc zones. fng sed zones have very little sulfides	Good recovery throughout hole 90+%
		12.2 - 12.8 Tertiary dyke. Grey med grained siliceous dyke. 40% coarse euhedral white fsp, avg 1mm, weak alignment to fsp, 5% dark mafic phenos < 1mm in fng fsp rich mtrx. Strongly magnetic. Occassional clasts of muddy gst to 8 cm. Sharp contacts @ 80° to C/A. Narrow chill zones @ contact.	80°	12.2 - 12.8 13.2 - 13.4 siliceous	12.2 - 12.8 13.2-13.4 2% py diss & in qtz-carb vnlts (+hem)	
		13.2 - 13.4 Tertiary dyke as in 12.2 - 12.8				
		15.6 - 16.4 pale br, soft, muddy gst				
		17.8 - 18.2 pale grey-green, muddy & cherty interval, bx looking but tight with no movement or sol'ns.				
		21.5 - 21.75 Qtz vn. Massive white qtz vn @ 45° to C/A. Lower 5 cm is vuggy, clear-pale br xtalline qtz vn + bx zone with grey py rich mtrx + white qtz in mtrx with grey fng frags + white qtz frags	45°		21.5 - 21.75 Minor py - v fine in vnlts & vn, + in bx mtrx	
		@ 24.8 change to cherty gst with no carb-ep-chl alt'n. v. silc, locally muddy				
		24.8 - 41.7 Cherty gst. V. fng, siliceous cherty gst, becoming softer, muddier down section. Grey-green, v hard. Locally get slightly coarser grained zones with relic plag visible - volc/intr text.		24.8 - 41.7 Minor late white qtz-carb vnlts	24.8 - 41.7 gen <1% py but local zones of up to 5-10% py + tr cpy	

DRILL HOLE: 95-03

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
9.8 - 50.3 cont...	KNOB HILL METAVOLCANICS cont...	24.8 - 41.7 cont... 27.7 - 29.5 Tertiary dyke. Grey, equigran, fsp rich, siliceous, as in 12.2-12.8 & 13.2-13.4 but non magnetic. Mafics alt'd to chl. 35.2 - 35.5 buff coloured, heavily qtz-clay alt'd, bleached zone of volcs (ankerite?) 35.5 - 37.1 Metavolcanics - cherty gst. Coarser grained metavolcanics, v siliceous with good relic plag visible - cherty gst? Local zones of heavy sulfides @ 41.7 narrow grey-green gougy zone @ 10-20° to C/A. Not good sharp contact of microdiorite with gst above. 41.7 - 45.4 Microdiorite (dykes?). Change to coarser grained KH microdiorite with local fng muddy zones. Looks like 2 KH dykes cutting muddy gst? or poss large xenolith (43.1 - 43.9) in one dyke. Microdiorite is weak-mod magnetic, str chl alt'n, local epid alt'n. @ 43.9 sharp contact with microdiorite below - intrusive with chilled contact. Some contacts area not sharp and obvious like these. @ 45.4 sharp contact @ 45° 45.4 - 50.3 Cherty metavolcanic. v. fng, pale yellow-grey, locally with pinkish caste (adularia?, secondary biotite?), coarsens locally to give rem fsp textures typical of metavolc. Dark patch zones of magnetite, locally zones of str epid alt'n.	70° 10-20° 45°	27.7 - 29.5 siliceous 35.5 - 35.8 str perv br alt'n as in hole 95-05 41.7 - 45.4 Weak-mod mag, str chl alt'n, local fine ep alt'n. Minor late qtz-carb vnlts + minor clay + br ?? vnlts as in hole 95-05 @ 43.3 str ep-mag alt'n 45.4 - 50.3 silic'd with patchy mag-ep alt'n, local adularia?? 47.7 - 47.8 v str ep-mag 46 - 46.3 gouge zn + qtz/carb vn 46.4 - 46.5 gouge zn	27.7 - 29.5 5-10% diss py 35.2- 35.5 10% py as coarse blebs, diss, vnlts 35.5 - 37.1 2% py throughout + local zones to 20 cm of up to 10% py + lesser cpy. py/cpy vn @ 36.4 m @ 70° to C/A 41.7 - 45.4 1% py diss & vnlts 45.4 - 50.3 2-3% diss py & py vnlts	
50.3 - 69.8	KNOB HILL MICRODIORITE	50.3 - 51.5 Microdiorite. Dark grey, med grained, equigranular with 50% plag, 30% mafics avy 1mm, in fng dark mtrx. Weak alignment of mafic phenos @ 90°to C/A. Weakly magnetic. @50.3 fng chilled margin, 30 cm wide	90°	50.3 - 51.5 mod chl alt'n of mafics	50.3 - 51.5 1-2% diss py & py vnlts	

DRILL HOLE: 95-03

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
50.3 - 69.8, cont...	KNOB HILL MICRODIORITE cont...	51.5 - 53.6 Microdiorite. Pale grey-green, bleached microdiorite, str clay alt'n + gouge, local silic, qtz vns & bx zones. Strong white clay (seric? alunite?) on fracs. @ 51.5 alt'n front sharp @ 45°	45°	51.5 - 53.6 bleached, gougy & clay alt'd zone with local qtz rich zone	51.5 - 53.6 2% py - diss & vnlts	51.5 - 60.3 FAULT ZONE WITH CENTRAL CORE OF EPITHERMAL SILIC'D BX, NEAR VERTICAL
		53.6 - 56.2 Epithermal bx zone. bx zone with 30% ang clasts, dom muddy gst but also black siltst + bleached intrusive? (white clay with brown oolitic? clay - evid that clay/br alt'n is an earlier event, chalc qtz is later) in fng tight grey silica mtrx. Low temp, epithermal looking. Patchy brown alt'n as in hole 95-05. vn @ 45-60° to C/A ie) near vertical	45-60°	53.6 - 56.2 silic, bx epithermal zone	53.6 - 56.2 2% py - diss	
		56.2 - 57.0 Microdiorite. Pale grey, bleached microdiorite, str clay alt'n, with local silic + qtz vns & bx zones. Strong white clay (seric or alunite?) on fracs as in 51.5 - 53.6 Fracs @ 45°	45°	56.2 - 57.0 str clay alt'n, bleaching, silic'n, str alunite? / sericite? on fracs	56.2 - 57.0 2% diss py	
		57.0 - 60.3 Microdiorite. Grey-green strongly clay alt'd microdior, with abund fault gouge. Local hem stained zones + qtz vning, clay filled fracs		57.0 - 60.3 str clay alt'n + gouge	57.0 - 60.3 2% diss py	
		60.3 - 61.6 Metavolcanic. Fng, grey-green, mottled KH metavolc, siliceous with mod fine ep alt'n @ 61.6 grad coarsening to coarse grained KH diorite		60.3 - 61.6 mod ep alt'n	60.3 - 61.6 5% py - diss & vnlts 61.6 - 69.5 2% py vnlts & diss	
		61.6 - 69.5 Diorite. Dark grey, massive, coarse grained KH diorite, equigranular with 40-50% fsp, 50-60% mafics (alt'd to chl) avg 2 mm. hard, non magnetic. @ 69.5 grad change to metavolc below. doesn't look like intrusive contact		61.6 - 69.5 Minor late white qtz-carb vnlts + py		
		69.5 - 125.8 Metavolcanic. Mottled, dark-med grey-green, massive locally becoming muddy or cherty as higher up in hole. Also locally grading into coarser grained microdiorite. Hard, siliceous rx with no perv clay-chl alt'n as seen higher up. Mafics alt'd to chl. In cherty sections see black chl bands.	80°	69.5 - 125.8 mafics alt'd to chl, minor late white qtz-carb vnlts + qtz-py ep vnlts with alt'n halo's up to 1 cm @ 80°	69.5 - 125.8 2% py diss + vnlts + with qtz-ep in vnlts	

DRILL HOLE: 95-03

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
69.5 - 125.8	KNOB HILL METAVOLCANIC	69.5 - 125.8, cont...				
		81.8 - 87.5 coarser grained KH microdiorite. Sharp contact with cherty gst above @ 65° and grad change to cherty gst below. Possibly intrusive into gst but not conclusive.	65°			
		95.0 - 97.1 Cherty gst. Pale grey-green with local white cherty zones @ 60° (or poss silica flood/qtz vn) which are heavily minz'd with py + cpy.	60°	95.0 - 97.1 alt'n adj to fault zn	95.0 - 97.1 2% py throughout, cherty zones have 15% py, 1% cpy. Local massive py vnlts.	
		97.1 - 98.7 Fault zone. White, bleached, str clay alt'd + gouge zone with local bx clasts in gougy mtrx + local silic'n/qtz		97.1 - 98.7 str clay alt'n - gouge in Fault zone	97.1 - 98.7 5% py - diss & vnlts	
		98.7 - 107.2 KH diorite. Coarse grained, dark grey-green, hard, massive as in 81.8-87.5, 61.6-69.5. Chl alt'd mafics show local alignment/fol'n @ 70°	70°	98.7 - 99.9 alt'n adj to fault zone. Pale green, perv clay alt'n, fsp alt'd to br clay (montmorill?)	98.7 - 99.9 zones of heavy sulfides adj to fault zone. 10% py.	
				99.9 - 107.2 Minor qtz-py-ep vns + qtz-carb vns. Minor fsp alt'd to montmorill (br clay?)	99.9 - 107.2 2% py - diss & as vnlts + with qtz-ep in vnlts	
		107.2 - 110.6 @ 107.2 sharp contact @ 60°to fng dark grey-green massive hard silic KH metavolc. Becomes slightly paler down section towards fault.	60°	107.2 - 110.6 pink alt'n halos around py vns	107.2 - 110.6 5-10% py - fine diss & vnlts. @ 108.3, 108.9, 110.5, 110.1 massive 1-2cm py vns @ 40° have pale pink (adularia?) siliceous alt'n halo with 10% fine diss py	
		@ 110.6 sharp fault contact @ 40°	40°			
		110.6 - 113.0 Fault zone. Dark grey with gougy zones @ 110.6-110.8, 112.2-113.0, with core zone of weak-mod clay-chl alt'd med grained metavolc with heavy white clay (seric? alunite?) on fracs and local silic'n.		110.6 - 113.0 clay gouge + weak-mod clay-chl alt'd metavolc	110.6 - 113.0 5% py - diss & vnlts	
		@ 113.0 sharp contact @ 50°	50°			
		113.0 - 115.0 Massive coarse grained KH dior as in 98.7 - 107.2, but with > fsp		113.0 - 115.0 Minor qtz-carb vns	113.0 - 115.0 2% py	

DRILL HOLE: 95-03

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
		115.0 - 117.8 Metavolc. pale green, mottled with patchy brown stain/alt'n. Weak fizz. Local irreg bleached muddy zones. 117.8 - 118.1 Fault zone. Grey clay gouge. 118.1 - 120.6 Chert. Massive grey chert with minor gouge zones to 3 cm. 120.6 - 125.8 KH metavolc. Grey green fng, siliceous, becoming >> bleached with >> perv clay alt'n down section. Locally med grained with good plag textures. @ 122.8 20 cm grey gouge zone @ 75-80° 124.5 - 124.7 white silica flood zone in volcs cut by network of brown fracs. Rem plag visible.	75-80°	115.0 - 117.8 Weak carb alt'n • qtz-carb vns 117.8 - 118.1 Fault gouge 118.1 - 120.6 Minor gouge zone 120.6 - 125.8 perv clay alt'n adj to fault 122.8 - 123.0 grey gouge with 10 cm br clay alt'n adj to gouge 123.0 - 124.5 bleached with perv clay alt'n 124.5 - 124.7 intense silica flood	115.0 - 117.8 2% py 117.8 - 118.1 2-5% euhedral py xtals in gouge 118.1 - 120.6 2% py - diss & vnlts 120.6 - 125.8 2% py	
125.8 - 132.8	WILD ROSE FAULT ZONE	125.8 - 126.15 Qtz vn. Massive white qtz vn, heavily minz'd with py, cpy with br clay + chl on fracs. vn @ 85°to C/A. 126.15 - 126.3 Grey clay gouge 126.3 - 129.1 Tertiary pulaskite dyke. Pale brown, strongly alt'd. soft with perv clay alt'n, graining looking with rare rem fsp visible. 128.1 - 129.1 int clay/gouge zone @ 129.1 broken lower contact with mariposite zone @ 90° 129.1 - 132.8 Qtz-mariposite?? zone. Mottled/banded white-bright green zone of qtz + mariposite with local gougey/sulfide rich zones. Marip? is on fracs & in softer clayey rich zones between qtz bands + in siliceous zones. vning/banding within zone @ 50°	85° 40° 90° 50°	126.3 - 129.1 str-intense clay alt'n, late fracs with clay filling @ 40° 129.1 - 132.8 Qtz-mariposite? • str clay locally	125.8 - 126.15 15% py, 3-5% cpy in qtz vn 126.3 - 129.1 minor diss py 129.1 - 132.8 20% py - diss, vns & rotten massive zones of grey xtalline py • ? • minor cpy	

DRILL HOLE: 95-03

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
132.8 - 140.1	KNOB HILL METAVOLCANICS	132.8 - 140.1 Metavolcanic. Mottled grey-green, fine-med grained with rem fsp visible locally. Gen siliceous with local str carb alt'n and zones of *strong, v fng pale pink adularia??*. Soft with perv clay alt'n at top of interval. Possible dyke 133.2 - 133.6, fng, equigr, pale grey with mafics alt'd to chl/py. @ 134.2 - sharp contact @ 55° with adularia? zone	55°	132.8 - 134.2 perv clay • local str carb alt'n 134.2 - 135.9 pale pink, v fng, v hard adularia?? 135.9 - 140.1 mod adularia?, v hard	132.8 - 140.1 2-5% diss py	
140.1 - 144.8	ATTWOOD? GROUP SEDIMENTS (MUDSTONE)	Pale grey-br fng, massive mudstone with good bedding. Minor v narrow wacke bands @ 85° to C/A and minor tuffaceous interbeds. 144.8 EOH	85°		*minor diss py*	

Sample	From (m)	To (m)	Length (m)
137120	20.0	21.5	1.5
137121	21.5	21.75	0.25
137122	21.75	24.8	3.05
137123	24.8	27.7	2.9
137124	27.7	29.5	1.8
137125	35.2	37.1	1.9
137126	41.7	43.5	1.8
137127	43.5	45.4	1.9
137128	45.4	47.8	2.4
137129	47.8	50.3	2.5
137130	50.3	51.5	1.2
137131	51.5	53.6	2.1
137132	53.6	56.2	2.6
137133	56.2	57.0	0.8
137134	57.0	60.3	3.3
137135	95.0	97.1	2.1
137136	97.1	98.7	1.6
137137	98.7	99.9	1.2
137138	108.0	110.6	2.6
137139	110.6	113.5	2.9
137140	115.0	118.0	3.0
137141	118.0	118.3	0.3
137142	118.3	120.6	2.3
137143	120.6	122.8	2.2
137144	122.8	124.5	1.7
137145	124.5	125.8	1.3
137146	125.8	126.15	0.35
137152	126.15	126.3	0.15
137147	126.3	129.1	2.8
137148	129.1	131.0	1.9
137149	131.0	132.8	1.8
137150	132.8	134.2	1.4
137151	134.2	135.9	1.7

KETTLE RIVER RESOURCES LTD.
Diamond Drill Log

Property:	**Tam O'Shanter**	**Hole:** 95-04
Purpose of Drill Hole:	To test the Wild Rose zone deeper in the same section as hole 95-03.	
Co-ordinates:	**Grid Name:** Tam 91 Grid **Northing:** 4+26 N **Easting:** 0+78 E **Elevation:**	
Specifications:	**Dip:** -65° **Azimuth:** 220° **Length of Hole:** 174.0 m (571 feet)	**Dip Tests:** -67° at 445'
Drilled by:	Lone Ranger	
Casing in Hole:	No	
Core Storage:	Boundary Falls	
Logged by:	Linda Caron	
Date Started:	July 1/95	
Date Completed:	July 3/95	
Date Logged:	July 5/95	

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
0 - 7.3	overburden					
7.3 - 32.4	KNOB HILL GROUP GREENSTONE - MICORDIORITE	7.3 - 32.4 Fine grained, dark grey, massive KH metavolcanics. Mod-strongly magnetic at top of interval. Locally see rem fsp. Hard, weak fizz locally. Also locally v. fng and cherty. @ 12.8 1.5 cm white qtz vn @ 60°with py/cpy 12.8 - 13.9 Grey fsp porph dyke as in Hole 95-03 12.2-12.8m, 13.2-13.4m. *Med grained, siliceous, with 40% euhedral fsp, avg 1mm* with weak alignment @ 80°, 10% coarse mafics in fng siliceous mtrx. Occassional large xenoliths of metavolc. Non-magnetic. Sharp upper contact with qtz vn @ 60° Sharp lower contact @ 65° 17.1 - 17.8 v fng cherty gst @ 17.8 sharp contact @ 40° 17.8 - 20.5 Med-coarse grained KH diorite. Finer grained near top of interval. Sharp upper and lower contacts. Non-magnetic. 22.3 - 22.9 White-pale pink chert or strongly silic'd cherty gst cut by network of xcutting py-chl filled fracs and qtz-hem vnlts. 25.0 - 26.2 Pale grey, v fng Tertiary puleskite? dyke. 5% porphyroblasts (clusters of euhedral fsp), + individual euhedral fsp, 1-3 mm, 2% mafics (bio?), variably resorbed and alt'd to chl ± hem, in fng pale grey muddy looking mtrx. 29.2 - 29.4 Cherty metavolcs cut by vuggy xtalling qtz vnlts. 31.4 - 32.1 Coarser grained volcs with 50-60% fsp <1mm, with perv brown alt'n 32.1 - 32.4 Massive tight white qtz vn/bx zone, with 30-40% intensely chl alt'd volcs as irreg bands and zones within. Hard to get orient of.	 60° 80° 60° 65° 40° 50°	7.3 - 17.1 Mod-strongly magnetic. Mod perv carb alt'n, local weak epid. Mafics to chl + chl on fracs, Late qtz-carb vnlts + rare xtalline fluor vnlts 12.8 - 13.9 Minor late carb vnlts 16.5 - 16.8 Patchy zone of clotty py + py + hnfelsing 17.8 - 20.5 mafics to chl, qtz-carb vnlts 22.3 - 22.9 Chert or silica flood zone? py-chl vnlts, qtz-hem vnlts 22.9 - 25.0 Str perv carb alt'n, qtz-carb-hem vnlts, patchy ep-chl alt'n adj to Tert dyke 25.0 - 26.2 Mafics (bio) to hem-chl. Minor qtz vnlts ± clay on fracs 26.2 - 29.2 weak-mod perv clay-chl alt'n adj to dyke with minor grey fng qtz vns @50° ± patchy br alt'n 29.2 - 29.4 vuggy xtalline qtz vnlts 31.4 - 32.1 perv brown alt'n	7.3 - 32.4 1-2% py - diss & in vnlts with qtz @ 12.8 m 1.5 cm qtz vn with py/cpy 12.8 - 13.9 2 - 5% py- diss & vnlts 17.8 - 20.5 5-10% py - diss & vnlts 22.3 - 22.9 10% py - fracs & diss 25.0 - 26.2 1% py	Box 1 7.3 - 12.9 95+% recov Box 2 12.9 - 18.6 95+% recov Box 3 18.6 - 24.3 95+ recov Box 4 24.3 - 29.9 99% recov Box 5 29.9 - 35.6 95+% recov
32.4 - 40.5	TERTIARY FSP PORPH DYKE + QTZ VN	32.4 - 40.0 Grey fsp porph dyke, as in 12.8 - 13.9 m. >> large xenoliths of wall rx than other places where we've seen this unit. Slightly less siliceous than before. Look to be drilling down this dyke & qtz vn @ edge of dyke. Keep going back and forth between dyke-vn-wall rx.		32.4 - 34.2 Minor qtz carb ± clay vnlts + occassional fluor vns	32.4 - 34.2 10% py	

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
32.4 - 40.5, cont...	TERTIARY FSP PORPH DYKE + QTZ VN, cont...	32.4 - 40.0 cont... 35.2 - 35.4 Qtz vn @ 30° 36.2 - 37.1 Qtz vn @ 20° - chl bx gougy upper contact 40.0 - 40.5 Massive white qtz vn - heavily minz'd with py/cpy. Internal weak banding of qtz and sulfides @ 30°.	30°		40.0 - 40.5 5-10% cpy + lesser py (about 5%)	Box 6 35.6 - 40.9 95+% recov Box 7 40.9 - 46.3 95+% recov
40.5 - 94.9	KNOB HILL GROUP METAVOLCANICS	40.5 - 43.7 Dark grey-green massive fng gst - locally fine equigran text with abund visible rem fsp. Occassionally mottled looking, rare white chert clasts (py rich) to 5 cm. @ 41.9 4 cm grey chalcedonic qtz vn + fluor on selveges @ 40° 43.7 - 44.6 White-grey v fng chert or cherty gst - or poss intense silic flooded metavolc??? Cut by later grey qtz vnlts @ 60° and by py vnlts. Patchy green coloured areas (chl from gst?) @ 44.6 contact sharp @ 90° 44.6 - 46.3 Epithermal bx zone as in 95-03 53.6 - 56.2m, but less intense. Interval has approx 60% wall rx as bx clasts (clay alt'd) & larger zones, with grey v fng silica mtrx. Late qtz/fluor vnlts @ 60-70°. hard to get orient on zone. 46.3 - 57.1 Med grey-green KH metavolc as in 40.5 - 43.7. @ 46.7 is 6 cm grey-white fng qtz vn - epithermal. Weak banding and narrow bx zone within. Fracs have heavy white-pale green clay. 57.1 - 60.0 Quartz Vein. Upper contact sharp @ 40°, lower contact sharp @ 30°. Massive white qtz vn with local tight bx sections with white qtz clasts in green siliceous mtrx. Internal banding in vn by chl/gst bands. 20-30% chl alt'd gst wall rx clasts, zones and thin bands. 20 cm of wall rx @ 58.5-58.7m (poss 2 close vns). Generally tight massive vn, but occas vuggy with coarse qtz and fluor druse. Does this correlate with epithermal bx zone in hole 95-03 53.6 - 56.2m??	40° 60° 90° 60-70° 50-60° 20° 40° 30°	40.5 - 43.7 Mod-str white clay on fracs, locally br perv alt'n as above in metavolcs. Weak perv clay-chl alt'n 43.7 - 44.6 intense silic'n or chert? late qtz vnlts 44.6 - 46.3 Bx zone, silica mtrx, clay alt'd frags. late qtz-fluor vns 46.3 - 57.1 Mod perv brown alt'n (ankerite?) as higher in hole and in Hole 95-05. Alt'n fronts par to sulf vns @ 50-60°. Late qtz vns @ 20° cut sulf vns.	40.5 - 43.7 2-5% py - diss & vnlts 43.7 - 44.6 2% py - diss & vnlts 44.6 - 46.3 1-2% py 46.3 - 57.1 Minor cpy. 5% py - diss but dom in vns with qtz+cpy @ 50-60° 57.1 - 60.1 Poorly minz'd with tr cpy, tr py (large bleb of cpy @ 58.4m)	Box 8 46.3 - 52.0 99% recov Box 9 52.0 - 57.5 95% recov Box 10 57.5 - 63.2 95% recov

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
40.5 - 94.9, cont...	KNOB HILL GROUP METAVOLCANICS, cont...	60.0 - 69.4 Med grey-green, fng metavolc - gst - cherty gst as in 46.3 - 57.1m with occas. purplish banded texture @ 80° (ie. 67.9m) - looks like hornfelsing?. Mod perv chl. Occassional chert clasts to 10 cm.	80°	60.0 - 69.4 Minor late qtz ± qtz-carb vnlts. Perv chl.	60.0 - 69.4 1% py - mainly as vnlts	Box 11 63.2 - 67.4 85% recov
		69.4 - 70.1 Grey clay gouge zone @ 70° to C/A	70°	69.4 - 70.1 str clay alt'd gst + clay gouge	69.4 - 70.1 Heavily minz'd with py, about 20%, as coarse euhedral xtals in gouge + fng semi-massive bands 69.4-69.5, 70.0-70.1	Box 12 67.4 - 73.6 85% recov
		70.1 - 73.1 Pale grey-green bleached gst. Str perv clay alt'n adj to fault with zone of heavy py @ 72.3 - 72.8m.		70.1 - 73.1 str perv clay with strong seric on fracs	70.1 - 73.1 1% py throughout as narrow vnlts. From 72.3-72.8 is zone of heavy py minz'n - 30% fng py in clay alt'd gst	Box 13 73.6 - 79.0 95% recov
		73.1 - 82.4 Fng med grey-green metavolc - gst - cherty gst as in 60.0 - 69.4 with mod chl alt'n of mafics. Weak banding @ 60° defined by > cherty zones.	60°	73.1 - 82.4 Perv chl. Minor qtz-carb vnlts. 76.4 - 77.7 Str perv clay, patchy br (ankerite?) alt'n, str seric on fracs	73.1 - 82.4 1% py - dom as vnlts	
		79.0 - 80.3 grey qtz/silica flood into gst - vnlts + bx zones up to 20% of rx >> at top of interval @ 90°?? Interval has 40 cm core of str perv clay.			79.0 - 80.3 2-5% py - dom as vnlts @ 45°	Box 14 79.0 - 84.6 95% recov
		@ 82.4 m change to darker grey fine-med grained gst. Coarser grained, less cherty than above. Contact v. irregular.	90°			
		82.4 - 88.1 KH gst. Fine-med grained. Dark grey-green, massive with rem fsp/mafics visible. Mafics alt'd to chl. Locally becomes coarse grained (ie. 86.8 - 87.0m). Occass fng grey-white cherty zones/clasts have >> py than gst. Weak (flow?) banding within @ 70° Contact @ 70°.	70°	82.4 - 88.1 Mafics to chl. Minor late qtz-carb vnlts.	82.4 - 88.1 1% py - diss & vnlts par to banding @ 70°	Box 15 84.6 - 90.0 95% recov
		88.1 - 94.9 Change to interval of fng cherty gst & chert, pale grey-green, v. hard- changes back and forth down interval from chert to cherty gst with zones of these up to 0.75 m wide.			88.1 - 94.9 2% py - diss & vnlts	Box 16 90.0 - 95.2 95% recov
		@ 94.9 m Contact @ 50-60°. Looks intrusive. 20 cm zone @ contact of mixed intrusive/cherty gst.	50-60°			

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
94.9 - 119.2	KNOB HILL DIORITE	94.9 - 107.6 *Dark green-grey, coarse-med grained KH diorite. Massive with 50% fstp, 30% mafic phenos in fng mtrx. Mafics alt'd to chl. Occs clasts of fng dark grey gst.* 99.1 - 101.2 Interval of fng, dark grey, v. hard metavolc. Finer grained than above but still see fsp/mafic pheno text. 107.4 - 107.6 Green coloured fsp porph - poss small dyke? 107.6 - 112.2 Med grained grey-green KH dior with zones of chert + cherty gst near *top of interval*. Str chl-clay alt'n (in coarser zones). Cut by numerous narrow gouge zones to 1 cm dom @ 55°. @ 112.2m sharp contact @ 55° 112.2 - 119.2 Int clay alt'n + gouge. Less intensely alt'd zones show vauge porph texture of dior. Minor qtz vns + silica zones with heavy py.	 55° 55° 60-70°	94.9 - 107.6 Mafics to chl. Minor qtz-carb vnlts. *Incr alt'n* to bottom of zone. Rx become mottled, str chl. 107.6 - 112.2 Str chl-clay alt'n. Minor late qtz-carb+hem vnlts & *alt'n envelopes of br ???* 112.2 - 119.2 Intense clay alt'n + gouge. pale greenish clay on fracs locally + fibrous white zeolite? *Intense seric. Brown* alt'n (ankerite?) on fracs & vnlts + locally perv.	94.9 - 107.6 2-5% py - as vnlts & *frac filling with chl,* + coarse clots & diss 107.6 - 122.2 2% py - diss & vnlts 112.2 - 119.2 py vnlts @ 60-70°, 5 py - diss ⊕ as vnlts + with qtz in vns	Box 17 95.2 - 101.2 99% recov Box 18 101.2 - 106.8 99% recov Box 19 106.8 - 112.3 95% recov Box 20 112.3 - 118.0 95% recov
119.2 - 122.0	TERTIARY PULASKITE DYKE	Pale brown, soft strong perv clay alt'd dyke. Fng with 5% euhedral plag to 3mm + 5% *alt'd mafics (prob bio) gone to py + hem* + brown mineral?? @ 119.2 sharp contact @ 45° @ 122.0 hard to see lower contact, poss @ 85°	 40-55° 45° 85°	Strongly alt'd dyke. very soft, perv clay. Mafic phenos (bio) to py+hem+br??. Minor qtz + qtz/py vning.	2-5% py - after bio + as massive vnlts with qtz @ 40-55°	Box 21 118.0 - 123.8 95% recov
122.0 - 128.7	INTENSELY ALT'D KH DIOR?/GST BETWEEN 2 DYKES (or poss heavily alt'd dyke)	Very intense alteration. Hard to tell original lithol. Poss still Tert dyke but colour changes from above and below and alt'n >>> intense + qtz flood + vning. Probably this is intensely alt'd KH dior/metavolc between 2 Tert dykes. Very soft, pale green colour - *locally brown* alt'n. Sulf vning within zone @ 45° and 80°. Contacts not clear.	 45° 80°	*Intense clay alt'n + pale* green colour dt perv *manip stain.* Locally brown (ankerite?) alt'n. Local qtz vns (ie 122.0-122.1, 128.4-128.5)	5-10% *py* - diss, as coarse clots & as semi massive vns with qtz	Box 22 123.8 - 129.5 95+% recov
128.7 - 133.1	TERTIARY PULASKITE DYKE	Pale brown-pink intensely clay alt'd Terty dyke. See rem fsp as in dyke 119.2 - 122.0, *mafic phenos alt'd to py - white alt'd halos* around py (after bio?).	 50°	Intense perv clay alt'n. Str seric on fracs - dom @ 50°	2% py - after bio + rare vnlts	Box 23 129.5 - 135.6 85-90% recov 30-40% loss @ 135.3 - 135.6

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
133.1 - 146.4	WILD ROSE ZONE - Main Qtz-Mariposite alt'n zone	133.1 - 134.5 Intense gouge/alt'n. Grey-green colour. Str marip - perv stain. Qtz-py vns @ 50° within zone. Qtz as milled bx frags + vns - makes up 10-20% of interval >>> at top. Green colour looks to be late - coating open spaces.	50°	134.0 - 134.5 Dark green - str serpentinization	133.1 - 134.5 10% py - diss & in vns with qtz >> at top of interval. Less in serp zone.	
		134.5 - 135.6 Brown, fng strongly clay weak carb alt'd dyke?? with green stained, int sepentinized core zone to interval. Upper contact @ 60°, Lower contact @ 80-90°.	60° 80-90°	134.5 - 135.6 Str clay - weak carb alt'n. Green stain & serpeninization from 134.7 - 135.4	134.5 - 135.6 Minor py	Box 24 135.6 - 140.9 85-90% recov
		135.6 - 136.4 Intense clay-serpentinization (talc) + mariposite with heavy sulfides 136.1 - 136.4. Rotten sulfides with qtz. About 10% of zone is qtz as milled grains with sufides + vnlts.		135.6 - 136.4 Int clay-serp-marip	135.6 - 136.4 10% py throughout. Up to 40% sulfides (py) 136.1-136.4	
		136.4 - 136.6 Possible dyke @ 50°. Brown with clay-seric alt'n.	50°	136.4 - 136.6 Intense clay-seric		
		136.6 - 137.4 Grey-white, qtz-py mottled zone with 10% mariposite, 70% grainy qtz, 20% sulfides (py). Gougy upper contact. Gouge + py + mariposite zones @ 45-55°. Massive py zones 80-90°.	45-55° 80-90°	136.6 - 137.4 Qtz-py-marip alt'n zone	136.6 - 137.4 20-30% py	
		137.4 - 138.75 Grey-white qtz-py-mariposite zone as above but > mariposite. Weak fol'n defined by py-marip @ 70°, 50-70% grainy qtz, 10-40% py, 10-20% marip.		137.4 - 138.75 Qtz-py-marip alt'n zone	137.4 - 138.75 10% py at top grading up to 40% at bottom of zone.	
		138.75 - 141.2 As above but consistent >> sulfides. Start to see cpy. About 50% qtz, 10% marip, 40% py, tr cpy. Dom fol'n is 60-70°, but sulf vnlts also @ 80-90°. 138.75 at upper contact is 8 cm qtz-py-cpy-marip vn @ 60° 141.2 Lower contact sharp @ 75°	70° 60-70° 80-90° 60° 75°	138.75 - 141.2 Qtz-py-marip alt'n zone	138.75 - 141.2 40% py, minor cpy 138.75 - 138.83 qtz-py-cpy-marip vn, 5% cpy	Box 25 140.9 - 146.5 90-95% recov
		141.2 - 141.9 Buff-yellowy grey, v. strong clay alt'd zone with local qtz rich zones. Minor maripos. Sharp lower contact @ 45°.	45°	141.2 - 141.9 v. strong clay alt'n	141.2 - 141.9 Minor py	
		141.9 - 143.7 Qtz-py(+cpy)-mariposite alt'n zone as above but less grainy & rotten looking. Mod well foliated defined by py/qtz bands @ 40-70° Interval is about 60% qtz, 10-15% marip, 20-30% sulfides (dom py, minor cpy). 5-10% good white qtz vns to 2 cm with cpy+py, par to fol'n.	40-70°	141.9 - 143.7 Qtz-py-marip alt'n zone with qtz vning + cpy/py	141.9 - 143.7 20-30% py, Minor cpy - dom with qtz in vns (up to 5% of vns is cpy)	

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
133.1 - 146.4, cont...	WILD ROSE ZONE - Main Qtz-Mariposite alt'n zone, cont...	143.7 - 143.85 Massive white qtz vn with sharp marip/gougy contacts @ 50°	50°	143.7 - 143.85 Qtz vn	143.7 - 143.85 2% cpy, 2% py	
		143.85 - 144.22 Qtz-py-marip zone as in 141.9-143.7 with v. minor qtz vning + cpy.		143.85 - 144.22 qtz-py-marip alt'n zone	143.85 - 144.22 20% py, minor cpy	
		144.22 - 144.28 White qtz vn @ 85° with internal banded sulfides (dom py) + large euhedral py. Minor cpy.	85°	144.22 - 144.28 qtz vn	144.22 - 144.28 5% py, minor cpy	
		144.28 - 144.45 Bright green marip - clay + lesser qtz zone with well dev fol'n/banding defined by narrow parallel qtz vnlts @ 70°. Also ang qtz bx frags.	70°	144.28 - 144.45 marip-clay-qtz alt'n zone	144.28 - 144.45 v minor py, dom in qtz bx frags	
		144.45 - 144.50 Narrow zone with 2 1cm wide qtz vns @ 80-90° to C/A with 5% sulfides (dom py, lesser cpy)	80-90°	144.45 - 144.50 qtz vns		
		144.50 - 144.90 Bright green marip-clay zone as in 144.28-144.45, with 5 cm massive py (+ marcasite) + minor cpy/qtz vn @ 144.65 @ 55°	55°	144.5 - 144.9 marip-clay-qtz alt'n zone	144.5 - 144.9 10% py, up to 40% in qtz vns	
		144.9 - 145.1 White, bleached, very broken with intense clay-seric alt'n		144.9 - 145.1 int clay-seric	144.9 - 145.1 Minor py	
		145.1 - 145.3 White bleached with very strong clay seric alt'n		145.1 - 145.3 v. strong clay-seric	145.1 - 145.3 Minor py	
		145.3 - 145.8 145.3 - 145.5 20 cm gouge zone. Sharp lower contact @ 40°. Qtz py mariposite alt'n as in 141.9-143.7 but less well foliated. Interval is 70% qtz, 15% maripos, 15% py. @ 145.8 grad change to more clay alt'd qtz-py-marip zone below.	40°	145.3 - 145.8 qtz-py-marip alt'n	145.3 - 145.8 15% py	
		145.8 - 146.4 Softer than above with >> perv clay alt'n, << marip << sulf. Interval is made up of 50% qtz, 30% clay, 10% marip, 10% py. Locally get patchy brown pervasive alt'n.		145.8 - 146.4 qtz-py-marip with perv clay alt'n	145.8 - 146.4 10% py	
146.4 - 147.8	BLEACHED, CLAY ALT'D MUDDY KH GREENSTONE	Pale grey brown, fng with minor green clay-marip stained fracs. 2-5% py (after mafic phenos?). Bleached and weak-mod perv clay alt'n, Rem fsp visible. Prob this is bleached alt'd KH muddy metavolc as below.		bleached, perv clay. Minor xtalline qtz vnlts with pale green marip? + pink Co bloom? - Li mica? as radiating clusters	2 - 5% py, diss & minor vnlts	Box 26 146.5 - 152.1 98% recov

DRILL HOLE: 95-04

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
147.8 - 166.2	ATTWOOD? GROUP MUDSTONE - MUDDY GREENSTONE	Pale grey-green mudstone - muddy gst. Rare fsp visible + local coarser wacke beds & fine white-grey cherty bands. Good bedding @ 60°.	60°	Minor qtz vning	1 - 2% py - fine dissem & vnlts, pref in cherty & coarse gritty bands. Locally fine py stringers give dendritic appearance.	
		149.3 - 151.0 Qtz bx? 50% white qtz or chert? clasts. Looks bx but poss mtrx supported chert conglom?				
		151.2 - 151.3 bx texture with ang green muddy clasts with brown qtz/ankerite? mtrx.		151.2 - 151.3 bx with brown qtz-ank mtrx, gst clasts		Box 27 152.1 - 157.7 98% recov
		153.9 - 154.2 bx with 60-70% ang green muddy clasts, avg < 1 cm in dark grey py rich mtrx. Zone @ 85° to C/A.	85°	153.9 - 154.2 bx zone	153.9 - 154.2 10% fine py in bx mtrx	Box 28 157.7 - 163.5 98+% recov
		165.4 - 165.8 DYKE. Equigranular, med grained, med grey-green colour. Fsp rich with 50% fsp, 20% qtz eyes. sharp upper and lower contacts @ 60°. Brownish carb stain.	60°		165.4 - 165.8 5% fine diss py	Box 29 163.5 - 169.0 98+% recov
		@ 166.2 sharp contact @ 45°	45°			
166.2 - 174.0	ATTWOOD GROUP? CHERT PEBBLE CONGLOMERATE	Clast supported, grey-pale green conglom. Clasts avg 0.5 cm, rounded, dom chert with lesser gst. 80% clasts, mtrx is fine chert-gst grains + muddy?		rare bright green blebs/stain of marip?. Minor qtz vnlts.	minor py - diss & vnlts	Box 30 169.0 - 174.0 EOH 98% recov
		166.9 - 167.5 Dyke as in 165.4 - 165.8, cut by minor grey qtz vnlts @ 45°	45°			

Sample	From (m)	To (m)	Length (m)
137153	22.3	22.9	0.6
137154	22.9	25.0	2.1
137155	26.2	29.2	3.0
137156	29.2	32.1	2.9
137157	32.1	32.4	0.3
137158	32.4	35.2	2.8
137159	35.2	35.4	0.2
137160	35.4	36.2	0.8
137161	36.2	37.1	0.9
137162	37.1	40.0	2.9
137163	40.0	40.5	0.5
137164	43.7	44.6	0.9
137165	44.6	46.3	1.7
137166	46.3	49.3	3.0
137167	49.3	52.3	3.0
137168	52.3	55.0	2.7
137169	55.0	57.1	2.1
137170	57.1	58.6	1.5
137171	58.6	60.1	1.5
137172	69.4	70.1	0.7
137173	70.1	73.1	3.0
137174	79.0	80.3	1.3

Sample	From (m)	To (m)	Length (m)
137175	112.2	114.6	2.4
137176	114.6	117.0	2.4
137177	117.0	119.2	2.2
137178	119.2	120.5	1.3
137179	120.5	122.0	1.5
137180	122.0	124.2	2.2
137181	124.2	126.4	2.2
137182	126.4	128.7	2.3
137183	128.7	130.9	2.2
137184	130.9	133.1	2.2
137185	133.1	134.5	1.4
137186	134.5	135.6	1.1
137187	135.6	136.4	0.8
137188	136.4	136.6	0.2
137189	136.6	137.4	0.8
137190	137.4	138.75	1.35
137191	138.75	141.2	2.45
137192	141.2	141.9	0.7
137193	141.9	143.7	1.8
137194	143.7	143.85	0.15
137195	143.85	144.22	0.37
137196	144.22	144.28	0.06

Sample	From (m)	To (m)	Length (m)
137197	144.28	144.45	0.17
137198	144.445	144.50	0.05
137199	144.5	144.9	0.4
137200	144.9	145.1	0.2
137001	145.1	145.3	0.2
137002	145.3	145.8	0.5
137003	145.8	146.4	0.6
137004	146.4	147.8	1.4
137057	147.8	149.3	1.5
137058	149.3	151.0	1.7
137059	151.0	153.9	2.9
136060	153.9	154.2	0.3
137061	166.9	167.5	0.6
137062	167.5	170.5	3.0

Sample	From (m)	To (m)	Length (m)

KETTLE RIVER RESOURCES LTD.
Diamond Drill Log

Property: Tam O'Shanter	Hole: 95-05
Purpose of Drill Hole: To test the Wild Rose Zone deeper in the same section as Holes 95-03 and -05	
Co-ordinates: Grid Name: Tam 91 Northing: 4+26 N Easting: 0+78 E Elevation:	
Specifications: Dip: -90° Azimuth: n/a Length of Hole: 300.8 m (987 feet) Drilled by: Lone Ranger Casing in Hole: Yes Core Storage: Boundary Falls	Dip Tests:
Logged by: Linda Caron	
Date Started: July 4/95 Date Completed: July 9/95 Date Logged: July 20/95	

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
0 - 6.1	OVERBURDEN					
6.1 - 18.3	KNOB HILL GROUP *GREENSTONE*	6.1 - 18.3 *Dark grey-geen fng gst - occassionally coarsens to show mafic & fsp* phenos. Mottled appearance, rare cherty clasts. Weakly magnetic. 14.45 - 14.65 grey green clay gouge 14.65 - 14.8 crackled bx with 95+% clasts, little movement but fine py rich mtrx between frags 14.8 - 15.3 brownish green, soft with strong clay chl alt'n 16.5 - 16.65 20% grey gouge as fine bands in finely bx, str chl gst. gouge/banding @ 30° @ 17.5 2 cm white qtz + chl/py/hem vn @ 40° @ 18.1 3 cm grey gouge zone @ 40°with 1-2 cm fsp porph dyke as in 18.8 - 22.7 in hw of gouge	50° 60° 30° 40° 40°	6.1 - 18.3 Weak-mod perv chl-carb alt'n. Minor white qtz-carb vnlts dom @ 50° 14.8 - 15.3 Brown stn, soft with str clay-chl alt'n.	6.1 - 18.3 2% *py* - as coarse blebs but dom as vnlts with chl @ 60°. Py increases down interval towards Tert dyke	Box 1 6.1 - 11.7 m 90% recovery Box 2 11.7 - 17.3 m 95% recovery Box 3 17.3 - 23.1 m 95+% recovery
18.3 - 18.8	TERTIARY PULASKITE DYKE	Greenish grey Tert pulaskite dyke as in 95-04 25.0-26.2. V fng with 5% plag phenos & clusters of euhedral phenos 1-3mm. 2% mafic (bi+px?)phenos, avg 1mm alt'd to chl-hem. In fine pale grey-green muddy mtrx. Sharp upper contact @ 25°. Church calls this feeder to Nimpit? volcanics and puts it as older than the fsp porph dyke 18.8-22.7m	25°	Mafics alt'd to chl/hem		
18.8 - 22.7	TERTIARY FSP PORPH DYKE	Grey fsp porph dyke as in 95-04 12.8 - 13.9, 32.4 - 40.0. Medium grained, soft - perv clay alt'n, 40-60% euhedral plag avg 1mm with v. weak local alignment @ 70° 15% mafics 1-2mm, alt'd to py/chl, v. weakly magnetic. Church calls this feeder to Park Rill volcs? and puts it as the most recent episode of dyking. Sharp upper contact @ 50°. Sharp lower contact @ 55° with underlying diorite/gst. Not clear here that this dyke postdates pulaskite.	70° 30° 50° 55°	Perv clay alt'n. Mafics alt'd to py/chl. Clay alt'n decreases down dyke (poss is this a result of pulaskite intrusion?) <5% of interval is grey low temp chalc qtz vning dom @ 30° with indiv vns up to 3 cm, some stckwrking, locally bx vns	10% py - diss and as alt'n of mafics + in low temp vning	Box 4 23.1 - 28.7 m 95% recovery
22.7 - 24.9	KNOB HILL MICRODIORITE	Med-fine grained, dark green with good porph text visible above dyke @ 23.5 - 23.9. Here mafics area alt'd to chl. 23.4 - 23.9 Dark grey-green fsp porph dyke @ 20° as in 18.8 - 22.7, but darker green, no perv clay alt'n. Sharp contact. Below dyke rx are harder, finer grained. Sharp lower contact @24.9 @ 70°	20° 70°		2% py - finely diss & vnlts. Tr cpy.	

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
24.9 - 146.3	KNOB HILL GROUP - MUDDY AND CHERTY GST, MINOR CHERT AND DIORITE	24.9 - 54.1 Muddy gst. Fine grained, med greenish grey, mottled appearance. Local brown perv stain (ankerite?), non-mag, v weak fizz, mod soft. Py/chl on fracs. Weakly bleached. Rarely fsp &/or mafic phenos are visible. Rare cherty clasts. @ 28.2 pale yellow-white gouge + 30 cm pale yellow coloured rx Common low tem grey chalc qtz vning • low temp grey chalcedonic qtz vning + low temp white - pale green clay vning, & qtz bx vns with brownish clasts of alt'd gst. Gen appear near very, v. minor py. 30.6 - 31.0 3 cm wide bx vn @ @ 10-15° to C/A, 30% ang clasts of alt'd gst in dark grey & white qtz mtrx + white-brown clay mtrx locally @ 32.7 10 cm of coarse bx with dense white clay as mtrx between large angular gst clasts 33.5 - 34.8 Irreg pale grey clac qtz vn, pinches and swells <0.5 cm to > 4 cm in width. Gen near vert. Minor small rounded inclusions of white clay. 35.3 - 35.4 grey-green fault gouge @ 38.8 2 cm white clay (alunite?) vn with abund brown circular ?? ankerite stain?? This is same brown mineral that is pervasively altering rx ie 35.4 - 54.1. Here is evidence that is is related to epithermal event. 39.5 - 39.6 clear-white qtz + minor clay bx vn with 30% ang brown alt'd gst frags. @ 44.4 2 cm banded white qtz-hem vn @ 40° @ 45.1 2 cm white qtz @ 70° - looks higher temp @ 47.7 15-20 cm of white-grey banded qtz bx zone with 50% ang brown clasts. Zone @ 50°. Grades down into zon of grey low temp qtz flood/bx to 58.4m 50.8 - 50.9 grey chalc bx qtz vn with 30% ang alt'd clasts in banded grey qtz with minor clay inclusions 51.4 - 51.7 grey-green flt gouge 52.4 - 52.6 grey-green flt gouge	70° 10-15° 40° 70° 50°	24.9 - 54.1 Weak carb-chl alt'n. Chl/py on fracs. Minor qtz-carb vning + py, tr cpy. Weakly bleached with brownish alt'n, locally intense (ankerite). This brownish colour is what makes this interval distinct from above or below. Common low temp chalced qtz vning + clay vning 35.4 - 54.1 @ 35.4 brown alat'n >> intense now to bottom of zone. Also >> clay (seriv) on fracs than above, >> py than above. 47.7 - 48.4 30% of interval is low temp qtz. 48.5 - 51.0 Strong bleaching & perv brown stn	24.9 - 54.1 2% py with chl • clay in vnlts, dom @ 70°. Tr cpy.	Box 5 28.7 - 34.4 95+% recovery Box 6 34.4 - 40.0 m 98% recovery Box 7 40.0 - 45.8 m 95+% recovery Box 8 45.8 - 51.1 m 95+% recovery

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
24.9 - 146.3, cont...	KNOB HILL GROUP - MUDDY AND CHERTY GST, MINOR CHERT AND DIORITE	54.1 - 57.0 med grey-green, fine grained muddy gst, soft with mod perv clay-chl alt'n. Common low temp qtz-clay vnlts. Look to be running down system. @ 57.0 grad change to coarser dark green gst below 57.0 - 60.9 Dark green, med grained gst, mod chl-carb alt'n, rem fsp/mafics visible, avg <1mm, Mafics alt'd to chl. Weak ep alt'n near bottom of interval. 57.0 - 58.0 1-2 cm low temp qtz-clay bx vn @ 05° to C/A @ 60.9 grad fining to muddy and cherty gst below 60.9 - 70.3 fine grained, med-pale grey-green muddy to cherty gst. Muddy sections are soft with weak-mod perv clay-chl alt'n. Common clasts/bands of grey chert (pref py rich). 'bedding' @ 90°. Good bedding seen in places. Locally mottled looking. 63.6 - 63.9 grey-green fault gouge 65.0 - 65.1 grey-green fault gouge 70.3 - 121.7 @ 70.3 grad change to more massive, darker grey green coarser grained gst with xenoliths of dark grey gst. Rx are still fng to med grained. This is mostly a colour call + gr size. Still locally grades to fng cherty gst or muddy gst. Gen quite hard. Local weak carb alt'n. 74.8 - 75.05 grey-green flt gouge @ 80° 76.6 - 78.1 muddy - weak br alt'n - epithermal? 82.0 - 82.1 grey-green flt gouge 82.5 - 83.3 grey-green flt gouge 85.8 - 86.0 grey-green flt gouge 87.1 - 87.6 Grey green chert bx - 75% ang cherty clasts, lots v small (2mm) and v large (2-8 cm) with fng greenish py rich mtrx. Cut by 0.5 cm low tem qtz-clay vn @ 25° with abund brown mineral	05° 90° 15° 80° 25°	54.1 - 57.0 Mod perv clay-chl. Common low temp qtz-clay vnlts. 57.0 - 60.9 Mod chl-carb alt'n. Mafics to chl + chl as blebs and on fracs. Weak epid alt'n near bottom of interval 60.9 - 70.3 Weak-mod perv clay-chl alt'n in muddy gst. Minor qtz-carb vnlts. 60.9 - 70.1 mod epid alt'n in 1 cm bleached halos to py vnlts. 65.1 - 65.6 bleached with weak br alt'n (ank) 70.3 - 121.7 Weak carb alt'n locally. Chl on fracs & as alt'n of mafics. Minor qtz-carb-py vnlts with epid/chl/hem cut by rare later low temp chalced qtz vns @ 15° to C/A. (ie 76.2m) 76.6 - 78.1 weak br alt'n 86.0 - 86.8 weak-mod br alt'n	54.1 - 57.0 2% py - diss & vnlts @ 50° 57.0 - 60.9 5% py - coarse blebs, diss & vnlts. Tr cpy. Py vnlts have chl selveges 60.9 - 70.3 2% py - diss & in vnlts with chl. Py pref in cherty clasts & bands. 60.9 - 70.1 5% py/chl vnlts @ 45° have 1 cm bleached ep alt'd halos. 70.3 - 121.7 2% py - diss + vnlts with qtz/chl	Box 9 51.1 - 57.3 m 95+% recovery Box 10 57.3 - 63.1 m 98% recovery Box 11 63.1 - 68.8 m 95% recovery Box 12 68.8 - 74.4 m 95+% recovery Box 13 74.4 - 80.1 m 95+% recovery

DRILL HOLE: 95-05						
INTERVAL	**ROCK TYPE**	**DESCRIPTION**	**°**	**ALTERATION**	**MINERALIZATION**	**COMMENTS**
24.9 - 146.3, cont...	KNOB HILL GROUP - MUDDY AND CHERTY GST, MINOR CHERT AND DIORITE	70.3 - 121.7, cont... 89.0 - 89.3 grey-green flt gouge 89.4 - 89.6 grey-green flt gouge 90.0 - 90.2 grey-green flt gouge				Box 14 80.1 - 86.2 m 95+% recovery
		90.4 - 93.9 Dark green med-coarse grained. Coarser grained and darker than above with good intrus texts visible. V hard. Mafics alt'd to chl, + chl on fracs		90.4 - 98.0 weak epid alt'n assoc with qtz-py vnlts.		Box 15 86.2 - 91.6 m 95+% recovery
		93.9 - 94.2 Grey chert (fragment?) @ 94.2 change back to gen finer grained dark grey-green gst which locally grades to cherty gst or muddy gst.		102.0 - 106.1 weak carb alt'n, weak br perv alt'n. Increase in # of py-qtz-carb (+hem) vnlts @ 70° + 45°. No good low temp vning in this interv.		Box 16 91.6 - 97.3 m 98% recovery
		108.6 - 109.0 Steep bx zone, 10° to C/A, 5 cm wide with fine str clay alt'd gst in clay-carb mtrx.	70°,45° 10°			Box 17 97.3 - 102.8 m 98% recovery
		109.1 - 109.8 Bleached and weakly bx looking with clasts of str clay alt'd gst or silic'd gst + chert in muddy clay alt'd &/or siliceous mtrx. Low temp yellow-white clay. Zone @ 80° to C/A. Sharp lower contact.	80°	109.1 - 109.8 bleached, silic'd & str clay alt'd. Low temp alt'n		Box 18 102.8 - 108.7 m 99% recovery
		112.4 - 114.9 Grey fng silic'd gst or chert with large xenol? of bleached, clay alt'd + silic'd intrus. Locally see good ign text grading into pale green clay chl alt'd gst. Possible this is intens silic'n of same rx, or poss chety zone.		112.4 - 114.9 silic'd & bleached		Box 19 108.8 - 114.5 m 98% recovery
		@ 144.5 1 cm grey chalc qtz + br ankerite? vn @ 30°	30°			
		@ 114.9 lower contact @ 45°	45°	114.9 - 117.7 Mod chl-clay alt'n. Minor white clay vnlts + ankerite		Box 20 114.5 - 120.3 98% recovery
		114.9 - 117.7 Green mod soft, chl-clay alt'd gst. Fine-coarse grained with abund fsp rems. Locally weak muddy gst bx & locally cherty. N. Church took piece @ 118.0 m		116.9 - 117.7 weak perv ank + ank+white clay vnlts		
		121.7 - 124.0 Sharp upper contact @ 90°. 10 cm of grey py rich chert, then sharp contact @ 50° with zone 121.8 - 122.6 of v. hard pale pink-brown cherty rx. Poss adularia in silic'd gst. Minior chl on fracs. Look like igneous texts visible locally. Cut by qtz vnlts & abund py vnlts + diss py. Abrupt change @ 122.6 to massive grey chert again, but less py than above. Took sample @ 122.5 m for thin section		121.8 - 122.6 adularia? silic'd gst/cherty gst??	121.7 - 121.8 10-15% coarse py as stockworking vnlts + diss 121.8 - 122.6 5-10% py as above 122.6 - 124.0 2% diss py	Box 21 120.3 - 126.0 95% recovery

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
24.9 - 146.3, cont...	KNOB HILL GROUP - MUDDY AND CHERTY GST, MINOR CHERT AND DIORITE	124.0 - 142.5 Cherty gst - gst, Pale-med grey-green, gen v fng, mottled cherty gst - gst. Locally see mod well dev fabric @ 50-70°. Clasts of chert & irreg cherty zones, whitish grey, in pale greensih fng gmass, locally coarser grained with igneous textrues. Chl on fracs & in coarser zones. Local weak bx zones (ie. 129.1 - 129.2). Grades into soft muddy gst 133.0-134.0, and into cherty gst/chert (as in 121.7-124.0) from 136.8-137.9, 139.7-140.1, 140.3-140.5, 141.7-142.5 Took sample @ 124.7 m for thin section 142.5 - 146.3 Micordiorite. Med-coarse grained, good equigran intrus texts with 50% fsp avg <1mm, 50% mafics alt'd to chl. Locally sheared looking with br clay ?, fabric @ 35-55° to C/A.	50-70° 35-55°	124.0 - 142.5 weak chl alt'n & local perv chl-clay in non-cherty zones. Minor qtz-carb vnlts. 142.5 - 146.3 Weak perv carb alt'n. Min qtz-carb vnlts +/- hem /epid. Local str clay alt'n &/or gouge, mod chl.	124.0 - 142.5 2-5% py - diss & vnlts 142.5 - 146.3 1-2% py - diss & vns	Box 22 126.0 - 131.6 m 95% recovery Box 23 131.6 - 136.9 m 90% recovery Box 24 136.9 - 142.6 m 95+% recovery Box 25 142.6 - 148.4 m 95+% recovery
146.3 - 150.0	TERTIARY PULASKITE DYKE	Tertiary pulaskite dyke. Dark grey, slight pinkish tinge. Fng but slightly coarser gmass than elswehere this unit is seen. 5% euhedral fsp 1-3 mm & clusters of fsp (occas pink) + rare mafic phenos. Sharp upper and lower contacts @ 55°.	55°			Box 26 148.4 - 154.0 m 95+% recovery
150.0 - 208.9	KNOB HILL GROUP - MUDDY AND CHERTY GST, MINOR CHERT AND DIORITE	150.0 - 165.5 Dark grey-green fine-med grained gst. Gen quite hard. Non-magnetic. Locally coarsens to show fine equigranular intrusive texture. Locally softer with weak-mod perv clay-chl alt'n, also locally becomes cherty although <<< than above. 150.0 - 151.7 Grey chert/cherty gst - weak pale pink colour (adularia?) as in 121.8-122.6, with weak bx texture and local fine grey pyritic mtrx. Sharp contact @ 151.7 @ 45°to C/A. 154.7 - 154.9 banded and localy finely bx with blue qtz + calcite vns/bands @ 80° to C/A with one 1.5-2 cm parallel band of up to 60-70% py, + str clh alt'd gst bands. 165.6 - 172.3 Coarse-med grained. Looks like intr equigr texts with 40% fine fsp, very hard. Pale green. Because of abund relic plag + coarse-med grained look to rx are calling this silic'd dior. Possibly it is just cherty gst and intrusive looking texts are micorbx + plag??? Took sample for thin sect. @ 168.8 m.	45° 80° 80°	150.0 - 165.5 Minor qtz-carb vnlts +qtz+py +/- hem/chl cnlts. Locally weak-mod perv clay-chl alt'n 150.0 - 151.7 weak adularia. Minor white clay (seric) on fracs 154.7 - 154.9 qtz-cc banding 160.2 - 161.5 weak carb alt'n 165.5 - 172.3 Str silic'd dior with pale pinkish brown clay (montmorill?) filling voids and on fracs. Minor chl-qtz/carb vnlts	150.0 - 151.7 5% py, frac filling + diss + vnlts 154.7 - 154.9 1.5-2 cm vn of 70% py @ 80° to C/A 165.5 - 172.3 2-5% diss py + tr cpy assoc'd with qtz + qtz-carb vning @ 168.9 m 5 cm irreg zone of heavy sulfide (py + cpy) perhaps a xenolith?	Box 27 154.0 - 159.7 m 95+% recovery Box 28 159.7 - 165.5 m 95+% recovery Box 29 165.5 - 171.2 m 95% recovery

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
150.0 - 208.9, cont...	KNOB HILL GROUP - MUDDY AND CHERTY GST, MINOR CHERT AND DIORITE, cont...	172.3 - 175.0 Pale grey-green coarse-med grained dior. Soft-mod perv clay-chl alt'd. Mafics to chl. About 65-70% fsp avg 1-2mm. 175.0 - 181.4 Silic'd dior/cherty gst? as in 165.6-172.3. V. hard. 181.4 - 188.9 Med grained diorite. Med-dark green-grey as above but not silic'd. Equigran with about 60% fsp, 40% mafics (alt'd to chl). Sharp lower contact @ 80° to C/A. 188.9 - 197.9 Dark grey, fine grained cherty or siliceous gst. V hard. See fine fsp and mafics. Rare dark cherty clasts to 3 cm. 192.4 - 193.7 Paler green, coarser grained than main zone, sim to 181.4-188.9 but softer and >> chl-clay alt'n. 196.5 - 197.9 Slightly coarser grained with montmorill filling voids. 197.9 - 208.9 Gen fng, grey-green gst - microdior - muddy gst with good bedding @ 60-70° to C/A, locally coarser grained with good intr text, local cherty sections &/or clasts. 198.7 - 198.0 10 cm white qtz vn heavily minz'd with py+cpy @ 70°to C/A 201.4 - 203.4 Paler green, coarser grained dior with mod clay-chl alt'n 207.9 - 208.7 Qtz vn. White massive vn, 30% of interval is large chl/py rich gst xenoliths. In one place look to be drilling down vn, but contacts suggest not. Upper contact @ 50°, lower contact @ 45°.	45° 80° 60-70° 70° 50° 45°	172.3 - 175.0 Mod perv clay-chl alt'n. Minor low temp qtz with ankerite stn. Local weak fabric defined by clay @ 45°. Minor qtz-carb vning 174.6-174.8 Pale yellow, str silic'd, vuggy with clay being weathered out 175.0 - 181.4 Str silic'd dior with pale br-pink montm? filling voids • on fracs. Minor chl, qtz, carb vnlts 181.4 - 188.9 Carb vnlts + weak perv carb alt'n. Mafics to chl. Pale br-pink mont? filling voilds & on fracs 188.9 - 197.9 Minor carb cnlts, qtz + chl/py vnlts 192.4 - 193.7 mod chlay-chl alt'n 196.5 - 197.9 Montmorill filling voids 197.9 - 208.9 Gen weak chl-clay alt'n, carb + qtz vnlts 198.7 - 198.8 10 cm white qtz vn heavily minz'd with py, cpy 201.4 - 203.4 mod clay-chl alt'n 207.9 - 208.7 Qtz vn, white, py/cpy minz'd	172.3 - 175.0 Minor py • tr cpy 175.0 - 181.4 2-5% py, diss & vnlts + tr cpy assoc'd with qtz vnlts 181.4 - 188.9 2% py - diss & vnlts + tr cpy 188.9 - 197.9 1-2% py, diss but dom as vnlts with qtz + tr cpy 197.9 - 208.9 2% py - locally diss, gen as vnlts with qtz • tr cpy 198.7 - 198.8 40% sulfides - py + lesser cpy (5-10% cpy) 207.9 - 208.7 5% sulfides - py • lesser cpy	Box 30 171.2 - 176.7 m 95% recovery Box 31 176.7 - 182.4 m 98% recovery Box 32 182.4 - 188.1 m 98% recovery Box 33 188.1 - 193.8 m 98+% recovery Box 34 193.8 - 199.7 m 95% recovery Box 35 199.7 - 205.2 m 95% recovery Box 36 205.2 - 210.4 m 85% recovery

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
208.9 - 215.2	TERTIARY PULASKITE DYKE	Pale green-grey, fng with 5% euhedral fsp phenos + clusters of phenos, 5% subhedr mafic phenos (bi + ?) in fng mtrx. Cut by numberous grey gougy zones @ 45° ie. 208.9 - 208.92 209.2 - 209.6 210.4 - 210.6 210.7 - 211.0 212.3 - 212.5 214.9 - 215.2 - grey gouge with white qtz bx frags	45°			Box 37 210.4 - 216.4 m 85% recovery
215.2 - 244.2	KNOB HILL GROUP GREENSTONE	Dark grey-green fng gst, locally muddy or cherty & locally coarsening to microdior. Gst contains xenoliths of chert & also of diorite. May be mottled or bx looking & locally weakly banded or foliated. 215.7 - 215.9 White qtz vn with 5% chl alt'd gst xenolith + chl on fracs. Minor py minz'n. Contacts @ 45°. 216.2 - 216.8 Pale grey, weak-mod fol'n/banding @ 50°. silic'd with fine py/qtz/silic'd gst? bands. Minor qtz vning/bands. 226.7 - 227.7 Med-coarse grained dior, greenish, fsp sauss, mafics to chl. sharp but v. irreg contacts. 227.1 - 227.2 grey gouge/intense clay alt'n.	45° 50°	215.2 - 244.2 Chl alt'n of mafics. Minor carb + qtz vnlts. Chl on fracs. 216.2 - 216.8 Pale grey, silic'd 219.0 - 230.5 Weak pale pink-brown colour (adularia?) V fng, hard	215.2 - 244.2 1% coarse py - diss + vnlts 215.7 - 215.9 Minor py 216.2 - 216.8 5% v fine py bands	Box 38 216.4 - 221.3 m 85% recovery Box 39 221.3 - 226.8 m 95% recovery Box 40 226.8 - 232.7 m 95% recovery Box 41 232.7 - 238.0 m 95% recovery Box 42 238.0 - 243.5 m 95% recovery
244.2 - 268.5	KNOB HILL GROUP GREENSTONE - MICORDIORITE	244.2 - 255.5 Pale green-grey med grained gst/microdior. Soft with mod perv clay alt'n. Minor fng muddy gst xenoliths. @ 248.0 1 cm epith chalc qtz vn @ 10° to C/A. 244.5 - 245.0 Tertiary pulaskite dyke. Fng grey dyke as in 208.9 - 215.3 @ 40° to C/A. 250.8 - 252.8 Dark grey, fng cherty gst. Sharp lower contact @ 60° 254.8 - 255.2 Grey gouge with white qtz vnlts within	10° 40° 60°	244.2 - 255.5 Mod perv clay alt'n, locally v strong. Minor qtz vnlts with py + chl	244.2 - 255.1 2-5% diss py 244.5 - 245.0 Nil	Box 43 243.5 - 249.1 m 95% recovery Box 44 249.1 - 255.0 m 95% recovery

DRILL HOLE: 95-05

INTERVAL	ROCK TYPE	DESCRIPTION	°	ALTERATION	MINERALIZATION	COMMENTS
244.2 - 268.5, cont...	KNOB HILL GROUP GREENSTONE - MICORDIORITE, cont...	255.5 - 268.5 Fine grained, dark grey with local fsp and mafic phenos visible, gen v hard, locally coarsens to med grained gst. 266.0 - 266.2 Grey clay gouge zone wiht euhedral py xtals + white qtz & carb vnlts @ 80-90° to C/A. 267.4 - 268.5 Str chl-talc alt'n. Distinction between str alt'd gst/serp is hard to make. Contact is picked at start of str magnetism. Alt'd gst is non-magnetic.	80-90° 70-85°	255.1 - 256.1 Pale yellow brown perv alt'n. V soft, bleached looking 256.1 - 256.8 Mod-str perv clay alt'n 260.6 - 263.0 Vuggy, local gouge zones, locally silic'd, gen mod-str clay alt'n + qtz vnlts @70-85° 267.4 - 268.5 Str chl-talc alt'n	255.2 - 256.1 10% py - fine dendritic + diss + with qtz in vnlts 260.6 - 263.0 10% fine py - diss + vnlts 266.0 - 266.2 10% py	Box 45 255.0 - 260.9 m 95% recovery Box 46 260.9 - 266.4 m 90% recovery Box 47 266.4 - 272.2 m 95% recovery
268.5 - 290.8	KNOB HILL GROUP SERPENTINE	Dark grey - pale grey, mottled, v. soft, str magnetic. What look to be poss rem fsp - str alt'd to clay-talc are visible locally, avg <1mm, up to 25%. Locally see weak fol'n @ 30-40°. Sharp lower contact with qtz vn @ 50°	30-40° 50°	Minor qtz vnlts	Minor diss py	Box 48 272.2 - 277.6 m 95% recovery Box 49 277.6 - 283.4 m 95% recovery Box 50 283.4 - 288.7 m 95% recovery
290.8 - 300.8	KNOB HILL GROUP GREENSTONE	Dark grey, gen fng, hard gst, weak chl alt'n. Locally cherty or coarser grained with good fsp phenos visible. Coarser grained intervals are mod-str clay alt'd. 290.8 - 290.9 10 cm zone of banded foliated white qtz (high temp looking) @ 50° to C/A.	50°	Minor qtz-carb vnlts. Minor clay vnlts. Weak chl alt'n. Mod-str perv clay in coarser intervals (ie. 297.9 - 298.1, 300.4 - 300.8m) 298.6 - 300.3 Pale pink-br colour (adularia). V hard.	Minor py	Box 51 288.7 - 294.0 m 90% recovery Box 52 294.0 - 299.9 m 95% recovery Box 53 299.9 - 300.8 m EOH 95% recovery

Sample	From (m)	To (m)	Length (m)
137063	11.5	14.45	2.95
137064	14.45	15.3	0.85
137065	15.3	18.3	3.0
137066	18.3	18.8	0.5
137067	18.8	20.8	2.0
137068	20.8	22.7	1.9
137069	22.7	24.9	2.2
137070	24.9	28.0	3.1
137071	28.0	31.0	3.0
137072	31.0	34.0	3.0
137073	34.0	37.0	3.0
137074	37.0	40.0	3.0
137075	40.0	43.0	3.0
137076	43.0	46.0	3.0
137077	46.0	49.0	3.0
137078	49.0	52.0	3.0
137079	52.0	54.1	2.1
137080	54.1	57.0	2.9
137081	57.0	60.0	3.0
137082	72.0	75.05	3.05
137083	75.05	78.1	3.05
137084	85.8	86.8	1.0

Sample	From (m)	To (m)	Length (m)
137085	86.8	87.6	0.8
137086	87.6	90.2	2.6
137087	102.0	104.2	2.0
137088	104.0	106.1	2.1
137089	108.6	109.8	1.2
137090	109.8	112.4	2.6
137091	112.4	114.9	2.5
137092	114.9	117.7	2.8
137093	121.7	122.6	0.9
137094	122.6	124.0	1.4
137095	124.0	127.0	3.0
137096	127.0	130.0	3.0
137097	150.0	151.7	1.7
137098	151.7	154.9	3.2
137099	165.5	167.5	2.0
137100	167.5	169.5	2.0
127926	169.5	172.3	2.8
127927	172.3	175.0	2.7
127928	175.0	178.0	3.0
127929	178.0	181.4	3.4
127930	197.9	200.9	3.0
127931	200.9	203.0	2.1

Sample	From (m)	To (m)	Length (m)
127932	203.0	205.5	2.5
127933	205.5	207.9	2.4
127934	207.9	208.7	0.8
127935	208.7	208.9	0.2
127936	208.9	211.9	3.0
127937	211.9	215.2	3.3
127938	215.2	216.2	1.0
127939	216.2	216.8	0.6
127940	230.0	233.0	3.0
127941	246.0	249.0	3.0
127942	249.0	250.8	1.8
127943	252.8	255.5	2.7
127944	255.5	256.8	1.3
127945	260.6	263.0	2.4
127946	263.0	265.5	2.5
127947	265.5	268.5	3.0
127948	268.5	271.5	3.0
127949	277.5	280.5	3.0
127950	287.5	290.8	3.3
127951	290.8	292.8	2.0

Sample	From (m)	To (m)	Length (m)

COMP: KETTLE RIVER RESOURCES
PROJ: TAM O'SHANTER-#20
ATTN: Linda Caron

MIN-EN LABS — ICP REPORT

8282 SHERBROOKE ST., VANCOUVER, B.C. V5X 4E8
TEL:(604)327-3436 FAX:(604)327-3423

FILE NO: 5V-0291-RJ1+2
DATE: 95/08/15
• rock • (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	GA PPM	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SN PPM	SR PPM	TH PPM	TI %	U PPM	V PPM	W PPM	ZN PPM
127926	.9	2.06	1	29	2.3	7	4.35	.1	40	49	532	5.95	1	.05	14	2.29	579	13	.03	36	1190	56	1	5	85	1	.07	1	144.4	3	56
127927	1.0	2.56	1	65	2.8	4	4.27	.1	36	42	504	6.61	1	.10	21	2.60	471	17	.01	40	1020	63	2	7	198	1	.01	1	119.2	1	48
127928	.7	2.31	1	30	2.9	7	4.39	.1	50	34	552	7.16	3	.05	15	2.10	426	2	.02	30	1330	72	1	6	139	1	.03	1	121.3	2	43
127929	.9	2.47	1	37	3.1	12	3.88	.1	46	22	620	8.51	2	.05	13	1.88	424	1	.02	24	1800	84	1	7	72	1	.10	1	136.6	1	49
127930	2.7	3.43	1	26	3.4	1	4.34	.1	61	364	3174	7.71	1	.03	24	7.10	673	1	.01	271	640	34	1	11	179	1	.01	1	109.3	10	91
127931	1.1	3.46	1	28	3.3	1	2.27	.1	49	336	1163	7.75	1	.07	23	5.56	490	1	.01	145	780	44	1	10	106	1	.01	1	102.7	11	59
127932	1.2	3.49	1	24	3.0	1	1.41	.1	51	237	1437	6.75	1	.04	27	5.41	410	1	.01	130	680	32	1	9	25	1	.01	1	84.8	7	58
127933	2.8	4.17	1	29	3.2	1	2.83	.1	58	343	2597	7.13	1	.04	28	6.87	415	1	.01	191	380	24	2	11	99	1	.01	1	122.5	10	74
127934	8.3	.84	649	12	2.3	1	1.87	.1	88	636	8042	6.47	2	.01	3	2.31	239	10	.01	301	150	80	1	6	53	1	.01	1	28.6	30	144
127935	1.1	5.17	1	20	3.2	1	3.93	.1	37	304	506	6.74	1	.04	22	10.71	767	1	.01	168	340	1	1	11	61	1	.02	1	153.9	2	100
127936	.5	2.49	1	26	2.7	1	1.60	.1	14	63	293	3.54	1	.07	41	2.99	385	4	.01	42	2160	40	3	5	216	1	.01	1	99.6	2	80
127937	.6	2.57	1	53	2.6	4	1.23	.1	13	44	45	3.11	1	.10	43	2.95	245	4	.01	46	2150	40	4	5	148	1	.01	1	88.3	2	76
127938	1.9	1.59	679	31	2.2	1	6.54	.1	43	590	748	4.00	1	.01	13	6.23	545	2	.01	389	80	10	1	7	752	1	.01	1	59.0	22	43
127939	1.6	2.21	376	28	2.4	1	6.26	.1	46	547	1215	4.82	1	.02	20	6.70	715	1	.01	498	10	13	1	8	426	1	.01	1	94.8	20	49
127940	.9	2.74	1	28	2.0	1	2.63	.1	30	138	288	4.32	1	.06	25	4.30	459	1	.01	50	10	23	1	6	115	1	.01	1	168.6	5	36
127941	.9	2.49	1	96	2.2	1	4.72	.1	33	85	434	4.84	1	.10	18	3.85	489	4	.01	39	10	37	1	6	251	1	.01	1	136.5	3	38
127942	.6	2.96	1	36	2.6	1	4.79	.1	42	179	527	5.58	1	.10	29	3.90	650	8	.01	59	10	44	3	7	275	1	.01	1	156.9	7	43
127943	.4	2.65	1	43	2.3	1	4.81	.1	29	179	338	4.68	1	.07	19	4.08	683	2	.01	51	10	33	2	6	322	1	.01	1	146.7	7	40
127944	.4	2.57	1	111	2.3	4	5.90	.1	31	74	251	4.73	1	.10	20	3.52	826	1	.01	50	300	41	4	6	373	1	.01	1	141.3	3	54
127945	.6	2.85	1	118	2.1	1	4.72	.1	34	138	419	4.66	1	.06	19	3.95	613	1	.01	52	10	34	3	6	181	1	.01	1	195.8	6	39
127946	.3	2.36	1	73	1.8	1	4.39	.1	34	76	396	4.41	1	.07	17	3.15	589	1	.02	47	20	36	1	6	106	1	.01	1	183.5	3	36
127947	.4	2.97	1	147	2.1	1	4.20	.1	30	189	277	3.87	1	.04	24	5.78	762	1	.01	133	10	5	1	6	261	1	.01	1	160.5	5	46
127948	.6	.28	1200	20	1.7	1	2.46	.1	55	421	59	2.88	1	.01	1	6.97	479	1	.01	336	10	1	1	7	167	1	.01	1	22.4	12	20
127949	.6	.65	1171	37	1.9	1	4.38	.1	49	481	45	3.33	1	.01	4	8.48	616	1	.01	387	10	1	1	8	196	1	.01	1	50.4	12	23
127950	.6	.47	1375	79	1.8	1	4.42	.1	60	361	62	2.86	1	.01	6	8.72	637	1	.01	551	10	1	1	7	214	1	.01	1	28.2	5	23
127951	.2	3.23	1	159	2.3	1	4.49	.1	38	228	232	4.09	1	.10	41	5.88	765	1	.01	148	140	3	1	7	381	1	.01	1	133.1	6	56
137005	.2	1.12	1	44	1.3	1	.29	.1	13	86	266	2.82	1	.22	9	.79	201	4	.01	43	350	30	1	1	1	1	.01	1	13.9	4	23
137006	.6	1.19	1	41	1.7	3	.36	.1	23	71	358	4.11	1	.21	8	.70	96	5	.02	49	400	41	1	2	1	1	.01	1	17.0	3	28
137007	.1	1.25	1	34	1.9	2	.39	.1	26	79	408	4.66	1	.19	11	.71	88	1	.01	43	430	49	1	3	1	1	.01	1	17.0	2	24
137008	.8	1.53	1	30	1.9	2	.48	.1	23	98	341	4.46	4	.19	13	1.31	185	8	.01	50	720	48	1	3	1	1	.01	1	31.9	5	27
137009	.1	1.15	1	18	1.8	3	.45	.1	21	63	217	4.14	1	.09	9	.82	635	2	.02	53	450	42	1	3	1	1	.01	1	34.8	3	22
137010	.4	1.97	1	31	1.7	3	.59	.1	17	124	168	3.58	2	.18	17	2.05	211	2	.01	59	1130	32	1	4	1	1	.01	1	93.6	6	32
137011	.2	3.84	1	27	3.9	5	.73	.1	52	144	561	11.00	1	.14	24	3.90	681	1	.01	77	1560	85	1	9	1	1	.01	1	192.2	5	57
137012	.1	3.47	1	28	4.1	13	.95	.1	37	78	124	9.89	1	.10	18	2.71	1699	1	.01	69	1770	84	1	8	1	1	.01	1	175.3	3	73
137013	.1	3.07	1	30	4.4	15	.85	.1	40	11	151	11.92	1	.10	18	2.24	4513	1	.01	65	1520	121	1	9	1	1	.01	1	210.5	1	82
137014	.1	3.60	1	35	3.5	12	.97	.1	41	166	193	8.87	1	.10	19	3.05	728	1	.03	83	1270	68	1	7	1	1	.07	1	147.7	7	78
137015	.8	2.44	1	32	2.3	11	1.90	.1	33	120	215	5.87	1	.05	11	2.47	493	1	.08	80	1180	50	1	5	1	1	.11	1	94.0	5	63
137016	.4	2.81	1	63	2.5	12	4.23	.1	38	158	104	6.28	1	.07	19	3.11	782	1	.07	95	1100	49	1	5	89	1	.08	1	108.3	7	92
137017	.1	3.97	1	30	3.7	8	.92	.1	50	251	169	8.70	1	.11	38	4.25	484	1	.01	126	1210	55	1	8	1	1	.01	1	142.4	9	88
137018	.2	2.49	1	49	2.9	7	4.36	.1	55	128	173	6.49	1	.15	23	2.46	662	1	.04	77	1010	54	1	6	97	1	.03	1	90.1	5	50
137019	.2	1.34	1	36	1.6	4	.82	.1	12	28	37	2.68	1	.19	8	1.10	262	1	.01	35	720	27	2	2	1	8	.01	1	17.0	1	22
137020	.1	.72	1	23	.7	2	.38	.1	6	90	33	1.14	1	.12	6	.60	113	2	.01	22	360	12	1	1	1	1	.01	1	14.9	4	13
137021	.6	.99	1	26	1.2	3	2.31	.1	17	83	101	2.75	1	.12	10	.92	177	2	.01	29	210	31	1	2	30	1	.01	1	24.5	3	19
137022	.1	.25	1	12	1.2	4	.20	.1	22	117	189	3.45	1	.06	2	.19	914	6	.01	28	90	43	1	1	1	1	.01	1	6.2	5	18
137023	.1	.68	1	22	.9	2	.31	.1	9	89	85	1.83	1	.12	6	.56	602	2	.01	29	250	24	1	1	1	1	.01	1	14.8	4	24
137024	.2	.95	1	30	1.0	2	.59	.1	11	85	92	1.85	1	.13	8	.92	241	3	.01	35	530	23	1	1	1	5	.01	1	25.9	4	28
137025	.4	1.35	1	20	1.7	2	1.27	.1	16	69	190	3.22	2	.09	9	1.20	151	2	.01	36	550	39	1	3	1	3	.01	1	42.2	3	38
137026	.1	2.63	1	41	3.1	12	1.13	.1	35	37	362	7.37	1	.13	13	2.25	592	1	.04	67	1330	62	1	6	1	1	.02	1	95.1	1	49

COMP: KETTLE RIVER RESOURCES
PROJ: TAM O'SHANTER-#20
ATTN: Linda Caron

MIN-EN LABS — ICP REPORT

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FILE NO: 5V-0291-RJ3+4
DATE: 95/08/15
* rock * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	GA PPM	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SN PPM	SR PPM	TH PPM	TI %	U PPM	V PPM	W PPM	ZN PPM
137027	.1	2.84	1	45	3.6	13	1.02	.1	36	25	263	7.80	1	.12	13	2.06	557	1	.04	63	1320	78	2	5	1	1	.03	1	92.4	2	57
137028	.2	1.54	1	30	2.7	8	.74	.1	31	28	266	6.25	1	.19	10	1.31	606	24	.01	63	1260	71	1	4	1	1	.01	1	63.0	2	49
137029	2.4	1.66	1	28	2.7	6	.93	.1	36	21	540	6.20	1	.17	12	1.65	524	11	.01	63	1270	68	1	4	1	1	.01	1	60.5	1	56
137030	.1	1.45	1	30	2.8	12	2.22	.1	32	14	301	6.69	1	.15	12	1.75	1487	3	.01	75	1320	76	1	3	24	1	.01	1	70.6	1	75
137031	.1	1.53	1	33	3.0	8	2.63	.1	35	19	502	7.13	1	.17	13	1.91	1124	3	.01	65	1310	79	1	4	20	1	.01	1	69.5	1	57
137032	.2	1.47	1	32	3.2	9	1.03	.1	39	28	528	7.96	1	.15	11	1.51	645	3	.01	58	1510	88	1	3	1	1	.01	1	87.7	2	40
137033	.1	1.52	1	31	3.9	7	1.52	.1	37	7	922	9.83	1	.14	10	1.40	552	4	.01	37	1980	103	1	3	1	1	.01	1	126.3	1	52
137034	.4	2.38	1	51	3.3	8	3.91	.1	43	28	613	8.13	3	.09	18	2.14	486	2	.01	58	1170	78	2	5	79	1	.01	1	134.8	2	47
137035	.8	1.89	1	29	2.7	8	5.13	.1	34	32	654	6.74	2	.14	16	1.88	604	3	.01	49	1340	73	2	5	268	1	.01	1	62.5	2	40
137036	.1	1.46	1	31	2.8	9	12.83	.1	24	19	279	6.53	1	.05	13	2.87	1131	1	.01	42	850	67	1	7	1227	1	.01	1	56.7	1	31
137037	.8	2.34	1	37	3.2	7	3.47	.1	38	28	541	7.29	3	.10	20	2.43	260	1	.02	62	1400	72	2	6	79	1	.01	1	99.3	2	39
137038	.9	2.16	1	39	2.7	9	4.72	.1	29	57	440	5.61	1	.13	24	2.55	266	2	.01	53	880	53	3	6	355	1	.01	1	72.8	3	32
137039	.8	2.38	1	35	3.1	9	3.39	.1	36	64	446	7.15	1	.10	21	2.60	280	1	.04	57	1030	67	2	6	82	1	.03	1	109.1	4	41
137040	.7	1.90	1	28	2.5	10	1.85	.1	28	82	315	5.83	4	.07	15	2.13	277	1	.04	57	950	56	1	4	49	1	.05	1	90.3	4	40
137041	.6	2.26	1	30	3.2	10	2.79	.1	39	56	476	7.96	1	.06	16	2.42	319	2	.02	55	1480	79	1	6	50	1	.02	1	113.1	3	40
137042	.7	1.98	1	35	2.5	9	3.55	.1	29	175	289	5.80	2	.07	16	2.56	397	1	.02	71	960	55	1	5	92	1	.02	1	92.8	9	51
137043	.7	.77	470	63	3.0	6	9.47	.1	32	44	385	6.17	1	.14	6	4.50	829	1	.01	63	560	56	1	9	678	1	.01	1	26.5	1	41
137044	.3	2.25	1	34	2.8	8	4.15	.1	33	180	322	6.39	1	.10	21	2.70	513	1	.02	78	900	62	2	5	125	1	.01	1	89.9	8	63
137045	.3	2.39	1	66	2.7	9	3.98	.1	30	219	221	5.90	1	.10	20	2.92	540	1	.01	75	870	56	2	7	149	1	.01	1	101.8	11	65
137046	.3	3.20	1	44	3.2	7	5.22	.1	35	250	467	6.27	1	.08	36	4.32	870	1	.01	141	750	51	6	8	560	1	.01	1	67.7	10	68
137047	.9	2.84	1	53	3.3	7	6.90	.1	47	193	600	7.34	1	.09	29	4.10	932	1	.01	148	620	69	5	8	710	1	.01	1	60.6	7	82
137048	1.1	2.92	1	41	3.8	3	6.83	.1	49	218	1196	9.40	1	.08	33	3.89	852	1	.01	195	610	85	4	9	632	1	.01	1	58.1	9	92
137049	.7	1.79	1	118	3.3	8	6.04	.1	29	58	570	6.88	1	.11	21	3.20	998	3	.01	79	690	74	2	7	212	1	.01	1	36.3	2	55
137050	.6	1.45	1	43	2.0	5	4.83	.1	16	13	335	3.68	1	.12	16	1.59	530	2	.01	27	1240	49	2	4	308	1	.01	.1	21.2	1	42
137051	5.8	.40	161	165	1.1	1	1.51	.1	26	197	5314	2.84	1	.04	5	.70	206	11	.01	52	180	44	2	3	37	1	.01	.1	12.8	10	86
137052	2.8	2.21	1	36	2.9	1	1.61	.1	69	71	2820	7.87	1	.16	22	2.02	264	6	.01	42	1860	84	4	3	1	1	.01	1	47.6	3	59
137053	.5	2.71	1	37	3.3	6	3.38	.1	51	70	735	8.49	1	.17	22	2.55	421	3	.01	54	2380	85	2	7	71	1	.01	1	72.7	2	46
137054	.9	.61	122	14	1.4	1	2.29	.1	29	133	665	3.52	3	.06	6	.94	198	4	.01	43	540	47	1	2	75	1	.01	1	44.9	6	18
137055	.5	1.98	1	50	1.8	7	1.23	.1	16	166	118	3.51	1	.10	21	2.73	297	5	.01	61	220	37	5	5	1	1	.01	1	66.7	8	32
137056	.2	1.92	1	30	2.1	5	.83	.1	22	131	280	3.93	1	.15	21	2.39	389	3	.01	69	550	41	3	4	1	1	.01	1	93.9	7	31
137057	.1	2.06	1	77	2.0	3	1.20	.1	27	358	208	4.08	1	.09	18	3.25	630	5	.01	114	160	50	2	6	10	1	.01	1	120.8	17	46
137058	.2	.87	12	95	1.0	1	.50	.1	15	172	182	1.88	2	.09	9	1.16	151	8	.01	51	270	25	1	3	5	1	.01	1	47.4	9	17
137059	.6	1.55	1	231	1.6	2	.62	.1	19	197	167	3.13	2	.10	15	2.03	162	6	.01	83	570	32	2	5	5	1	.01	1	90.3	10	27
137060	1.5	.78	409	98	1.3	5	.33	.1	19	121	61	2.84	4	.09	7	.92	87	124	.01	94	290	44	5	2	1	1	.01	1	50.9	6	15
137061	2.4	1.07	62	69	2.4	6	.75	.1	39	36	482	5.95	3	.15	9	1.31	164	4	.01	42	1020	71	5	4	34	1	.01	1	99.9	3	33
137062	.3	.64	39	21	.8	3	.30	.1	7	104	76	1.45	5	.05	6	.80	67	5	.01	34	210	21	1	2	6	1	.01	1	36.5	6	15
137063	.1	2.65	1	82	2.6	7	4.31	.1	40	199	96	5.68	1	.05	24	3.70	936	2	.02	97	720	48	3	7	213	1	.01	1	92.0	9	49
137064	.1	2.76	1	33	3.1	8	2.04	.1	47	153	122	6.87	1	.04	23	3.62	751	1	.01	122	670	64	1	6	132	1	.01	1	114.8	7	62
137065	.1	3.18	1	111	3.4	12	5.91	.1	51	233	143	7.13	1	.06	27	4.33	1441	1	.01	149	1050	64	4	7	361	1	.05	1	127.6	10	71
137066	.5	1.92	1	69	1.7	6	1.13	.1	11	41	38	2.84	6	.14	17	1.73	281	7	.01	30	2010	41	7	2	148	4	.01	1	80.0	3	60
137067	.3	.71	119	74	2.1	10	2.82	.1	43	39	35	5.21	3	.15	6	1.34	344	8	.01	22	950	70	.1	3	251	1	.01	1	33.8	2	19
137068	.4	1.11	1	81	2.0	8	3.62	.1	37	49	167	4.95	1	.18	9	1.51	339	3	.01	25	1070	60	1	4	172	1	.01	1	48.9	3	25
137069	.7	2.14	1	48	2.7	16	3.89	.1	44	176	302	6.60	1	.11	18	3.07	758	1	.04	107	1100	66	1	5	150	1	.12	1	101.3	8	45
137070	.1	3.07	1	48	3.8	12	2.22	.1	75	219	295	9.91	1	.08	29	4.03	1024	1	.01	181	790	88	1	7	116	1	.01	1	135.8	9	65
137071	.1	1.84	1	154	2.7	12	4.05	.1	49	125	130	6.55	1	.04	16	2.16	1014	19	.01	96	890	72	1	5	393	1	.02	1	97.0	6	42
137072	.1	3.09	1	116	3.5	12	3.46	.1	64	234	246	8.94	1	.09	23	3.41	767	4	.01	168	1150	86	2	6	550	1	.01	1	133.0	11	64
137073	.1	1.84	1	93	3.8	11	3.53	.1	51	174	362	9.42	1	.07	14	2.46	1187	4	.01	132	930	104	1	4	481	1	.01	1	120.7	8	62
137074	.1	2.74	1	91	3.7	11	3.34	.1	46	333	378	9.34	1	.08	14	1.95	925	9	.01	148	1050	99	1	4	96	1	.01	1	146.0	17	73

COMP: KETTLE RIVER RESOURCES
PROJ: TAM O'SHANTER-#20
ATTN: Linda Caron

MIN-EN LABS — ICP REPORT

8282 SHERBROOKE ST., VANCOUVER, B.C. V5X 4E8
TEL:(604)327-3436 FAX:(604)327-3423

FILE NO: SV-0291-RJ5+6+7
DATE: 95/08/15
* rock * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	GA PPM	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SN PPM	SR PPM	TH PPM	TI %	U PPM	V PPM	W PPM	ZN PPM
137075	.1	1.73	1	73	3.1	9	1.18	.1	48	206	188	8.17	1	.06	13	1.91	648	21	.01	152	1330	77	1	6	62	1	.01	1	127.2	9	61
137076	.1	1.79	1	69	3.1	2	1.08	.1	54	198	682	8.46	1	.09	12	2.13	513	5	.01	149	1180	78	1	6	18	1	.01	1	129.0	9	57
137077	.1	1.13	83	77	3.6	8	1.36	.1	53	136	379	10.32	1	.10	10	1.53	639	2	.01	170	1030	100	1	7	67	1	.01	1	155.2	6	70
137078	.1	1.48	1	77	3.7	12	1.50	.1	56	119	186	9.91	1	.09	10	1.25	1010	2	.01	147	1090	92	1	6	102	1	.01	1	130.2	5	59
137079	.1	1.96	1	49	3.1	5	2.70	.1	66	114	569	8.27	1	.10	13	2.34	872	1	.02	154	1270	79	1	7	302	1	.02	1	121.1	5	54
137080	.1	3.00	1	41	3.5	11	2.61	.1	64	120	208	10.30	1	.07	22	3.28	959	4	.01	113	990	86	1	9	648	1	.01	1	129.8	3	64
137081	.1	3.28	1	76	3.2	10	4.91	.1	49	175	184	8.09	1	.05	26	3.92	1238	1	.01	99	1120	58	1	7	301	1	.02	1	141.7	6	63
137082	1.3	2.14	1	86	2.3	16	3.02	.1	46	136	143	5.76	1	.12	17	2.98	608	1	.03	127	980	46	1	5	129	1	.19	1	93.5	6	41
137083	.1	2.77	1	98	2.9	10	3.00	.1	45	141	145	7.16	1	.06	22	3.82	982	1	.01	111	1050	51	1	7	148	1	.07	1	124.9	5	55
137084	.1	2.64	1	88	4.0	6	3.89	.1	55	420	30	8.68	1	.18	27	5.75	1430	1	.01	371	730	56	1	10	362	1	.01	1	78.5	14	73
137085	.1	2.84	1	21	2.5	4	.83	.1	44	286	40	5.20	1	.06	38	4.22	469	1	.01	189	640	25	1	7	33	1	.01	1	76.1	11	46
137086	.3	3.38	1	36	2.9	11	2.17	.1	47	125	73	7.00	1	.11	21	3.59	705	1	.02	100	2000	47	1	7	181	1	.06	1	104.1	4	51
137087	.2	3.50	1	32	3.3	5	5.41	.1	49	301	225	6.87	1	.07	35	4.99	1099	1	.01	205	730	38	1	7	340	1	.01	1	114.6	11	60
137088	.1	3.67	1	152	3.3	4	3.56	.1	38	375	40	6.73	1	.04	47	6.27	1374	1	.01	237	770	25	1	8	173	1	.01	1	99.5	12	68
137089	.1	2.96	1	42	2.5	2	4.41	.1	29	203	23	4.65	1	.06	37	4.95	1232	1	.01	149	340	19	1	6	277	1	.01	1	79.4	6	46
137090	.1	3.35	1	72	2.7	3	3.57	.1	35	213	72	5.59	1	.04	37	4.67	812	1	.01	154	700	22	1	7	142	1	.01	1	98.0	7	51
137091	.2	1.52	1	49	2.1	4	1.89	.1	33	66	96	4.58	1	.07	13	2.11	425	1	.01	52	600	43	1	4	142	1	.01	1	43.7	2	28
137092	.4	3.07	1	15	2.7	4	.87	.1	39	186	157	6.02	1	.06	32	3.98	458	1	.01	125	940	40	1	7	1	1	.01	1	117.2	6	55
137093	.5	.88	103	19	2.6	11	3.01	.1	66	62	60	7.66	1	.05	9	1.34	128	1	.02	82	320	75	1	5	15	1	.01	1	31.5	1	22
137094	.2	.28	29	33	.8	3	1.96	.1	25	59	36	2.20	1	.04	3	.33	70	2	.02	15	120	23	1	1	61	1	.01	1	7.3	2	9
137095	.6	2.27	1	29	2.7	3	3.96	.1	41	107	209	5.63	1	.09	17	3.41	542	1	.01	67	880	45	1	6	160	1	.01	1	65.8	3	37
137096	.8	2.79	1	19	2.9	3	5.11	.1	49	121	416	6.74	1	.09	20	3.62	766	1	.01	89	1390	53	1	7	226	1	.01	1	71.8	3	44
137097	1.1	2.51	1	66	2.9	1	3.74	.1	56	50	920	6.95	1	.08	19	2.70	448	4	.01	81	1050	59	1	6	110	1	.01	1	78.3	1	50
137098	.1	3.45	1	23	3.3	5	5.44	.1	56	359	381	7.80	1	.06	31	4.84	1363	1	.01	226	710	50	1	9	169	1	.01	1	95.7	14	61
137099	1.0	2.71	1	20	2.6	1	4.39	.1	45	244	577	5.64	1	.07	18	3.57	471	1	.02	131	950	40	1	6	75	1	.02	1	89.0	10	53
137100	1.3	2.30	1	16	2.8	1	2.86	.1	49	25	1198	7.00	1	.05	12	2.18	390	1	.02	33	2220	63	1	6	6	1	.01	1	111.9	1	47
137128	.5	1.69	1	77	2.0	3	4.41	.1	17	57	137	3.86	1	.10	19	2.10	436	1	.04	35	1120	38	1	4	228	1	.01	1	48.5	2	32
137129	1.6	1.14	1	92	2.1	1	3.84	.1	38	47	1626	5.40	1	.08	11	1.16	214	1	.06	41	420	55	1	4	109	1	.01	1	31.6	1	25
137130	.9	1.85	1	128	1.6	10	2.93	.1	27	126	118	3.88	1	.04	12	2.30	450	1	.08	56	710	30	1	4	98	1	.12	1	68.0	6	32
137131	.1	1.60	1	147	2.9	10	1.74	.1	37	130	117	7.30	1	.08	9	1.12	954	3	.01	79	580	69	1	5	70	1	.01	1	92.6	6	54
137132	.5	1.11	1	30	1.5	6	1.59	.1	24	61	96	4.08	1	.16	6	.38	151	56	.01	37	310	44	1	2	1	1	.01	1	38.9	2	20
137133	.1	.53	58	74	2.7	8	1.19	.1	25	85	116	6.49	1	.09	4	.70	606	3	.01	63	790	68	1	4	90	1	.01	1	90.6	4	46
137134	.1	1.43	1	60	3.5	6	2.25	.1	43	53	476	9.11	1	.10	7	1.49	676	1	.01	67	690	89	1	6	102	1	.01	1	52.6	1	46
137135	.8	1.56	1	35	2.5	1	2.09	.1	57	95	1047	6.47	1	.10	11	1.58	309	1	.01	80	530	65	1	5	78	1	.01	1	41.5	4	32
137136	1.9	1.07	1	53	1.8	1	4.82	.1	29	49	696	3.74	1	.20	6	1.66	394	6	.01	35	590	42	1	4	223	1	.01	1	27.0	1	36
137137	.7	2.54	1	50	3.5	5	5.94	.1	30	62	281	7.62	1	.11	17	3.99	1039	1	.01	44	1250	128	1	8	217	1	.01	1	136.8	1	94
137153	.1	.98	21	41	2.8	11	4.82	.1	88	72	86	8.35	1	.05	9	1.18	628	1	.01	98	230	85	1	6	131	1	.01	1	34.0	1	26
137154	.1	2.77	1	65	2.9	8	4.97	.1	50	181	162	7.02	1	.05	23	3.81	1082	1	.01	138	850	57	1	7	242	1	.03	1	118.9	7	55
137155	.2	3.14	1	34	3.2	7	.93	.1	50	292	167	8.12	1	.08	32	4.12	586	7	.01	218	1050	62	1	8	1	1	.01	1	139.1	12	71
137156	.6	3.02	1	44	3.3	1	.94	.1	46	306	581	8.46	1	.07	26	4.21	594	4	.01	180	890	62	1	9	1	1	.01	1	122.1	12	77
137157	2.0	1.80	1	15	1.7	1	.48	.1	16	129	696	3.84	1	.08	12	2.36	356	13	.01	77	450	45	1	4	1	1	.01	1	62.4	6	74
137158	2.2	1.63	1	22	2.0	1	.98	.1	39	47	1424	4.86	1	.15	10	1.54	241	9	.01	63	800	52	2	4	1	1	.01	1	61.4	2	55
137159	10.5	.92	1	14	1.1	183	1.89	.1	20	142	2600	2.39	2	.12	6	.79	115	115	.01	66	210	37	4	2	1	1	.01	1	25.0	7	36
137160	6.1	2.73	1	16	2.6	1	.52	.1	46	195	2114	6.51	1	.11	19	3.33	315	38	.01	127	760	54	1	8	1	1	.01	1	81.5	8	105
137161	.4	.35	64	225	.5	1	.19	.1	6	146	248	1.30	1	.02	2	.46	114	16	.01	32	50	16	1	1	1	1	.01	1	17.6	10	18
137162	1.7	1.26	1	29	1.5	1	.69	.1	31	28	1257	3.84	1	.17	7	1.11	195	10	.01	33	940	38	1	3	1	1	.01	1	52.0	1	40
137163	80.0	.46	156	10	1.6	1	.18	.1	68	137	>10000	5.17	1	.03	3	.48	53	23	.01	75	550	75	19	4	1	1	.01	1	12.2	8	510
137164	1.0	.56	1	19	.5	1	1.21	.1	13	57	550	1.24	1	.09	3	.30	80	4	.01	21	360	15	1	1	1	1	.01	1	13.1	3	15
137165	1.9	2.92	1	293	1.2	1	6.86	.1	28	101	739	2.62	4	.44	11	.53	126	49	.02	47	590	27	16	2	1	1	.01	1	60.6	7	32
137166	.1	1.50	1	127	3.3	1	1.22	.1	46	88	1002	9.45	1	.08	9	1.53	799	3	.01	81	1040	95	1	6	51	1	.01	1	125.6	4	58
137167	.1	2.79	1	79	3.8	2	1.57	.1	66	287	1001	10.41	1	.07	16	3.31	800	2	.01	206	1060	93	1	9	19	1	.01	1	156.3	13	70
137168	.1	3.13	1	23	3.0	4	.69	.1	60	249	543	8.09	1	.04	18	4.09	572	3	.01	183	630	62	1	9	1	1	.01	1	116.4	10	59
137169	.1	2.72	1	114	2.4	6	.84	.1	42	209	184	5.63	1	.06	20	3.55	445	2	.01	146	640	40	1	7	1	1	.01	1	83.8	9	50
137170	5.5	.97	35	15	1.0	1	4.37	.1	12	191	4516	2.25	4	.10	6	.96	121	47	.02	46	180	33	6	3	1	1	.01	1	25.1	10	28
137171	1.1	1.25	1	40	1.3	3	1.54	.1	9	116	347	2.42	5	.09	10	1.40	315	35	.01	59	180	28	4	3	1	1	.01	1	28.8	6	39
137172	.4	1.28	1	41	3.1	8	.95	.1	47	51	504	7.42	2	.12	7	1.20	391	4	.01	66	380	86	1	3	115	1	.01	1	35.7	2	31
137173	.5	.77	1	45	2.4	4	.71	.1	52	26	574	6.23	1	.17	5	.71	221	4	.01	51	630	68	1	3	40	1	.01	1	28.1	1	24
137174	1.1	1.87	1	22	2.5	1	.51	.1	56	83	697	6.01	1	.14	15	2.11	177	23	.01	104	810	60	1	6	1	1	.01	1	51.2	4	34

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SMITHERS LAB:
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SMITHERS, B.C. CANADA V0J 2N0
TEL (604) 847-3004
FAX (604) 847-3005

Assay Certificate

5V-0291-RA1

Company: KETTLE RIVER RESOURCES
Project: TAM O'SHANTER-#20
Attn: Linda Caron

Date: AUG-16-95
Copy 1. Kettle River Res., Greenwood, B.C.

We hereby certify the following Assay of 5 rock samples submitted JUL-28-95 by L. Caron.

Sample Number	Cu %
127934	.820
137051	.526
137163	2.675

ORIG to LC
AUG 25 1995
copy to A/P.

Certified by ____________________

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Geochemical Analysis Certificate

5V-0291-RG1

Company: **KETTLE RIVER RESOURCES** Date: AUG-16-95
Project: TAM O'SHANTER-#20 Copy 1. Kettle River Res., Greenwood, B.C.
Attn: Linda Caron

We hereby certify the following Geochemical Analysis of 24 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au PPB	Tl PPB	Hg PPB
127926	26		
127927	14		
127928	13		
127929	12		
127930	172		
127931	57		
127932	156		
127933	104	20	10
127934	479	20	20
127935	22		
127936	41		
127937	2		
127938	100		
127939	18		
127940	6		
127941	13		
127942	11		
127943	7		
127944	12		
127945	5		
127946	3		
127947	1		
127948	14		
127949	5		

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SMITHERS LAB:
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FAX (604) 847-3005

Geochemical Analysis Certificate

5V-0291-RG2

Company: **KETTLE RIVER RESOURCES** Date: AUG-16-95
Project: TAM O'SHANTER-#20 Copy 1. Kettle River Res., Greenwood, B.C.
Attn: Linda Caron

We hereby certify the following Geochemical Analysis of 24 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au-fire PPB
127950	21
127951	3
137005	31
137006	112
137007	29
137008	37
137009	36
137010	13
137011	35
137012	80
137013	30
137014	96
137015	37
137016	46
137017	53
137018	146
137019	18
137020	6
137021	59
137022	35
137023	14
137024	16
137025	24
137026	112

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SMITHERS LAB:
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SMITHERS, B.C. CANADA V0J 2N0
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FAX (604) 847-3005

Geochemical Analysis Certificate

5V-0291-RG3

Company: **KETTLE RIVER RESOURCES**
Project: TAM O'SHANTER-#20
Attn: Linda Caron

Date: AUG-16-95
Copy 1. Kettle River Res., Greenwood, B.C.

We hereby certify the following Geochemical Analysis of 24 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au-fire PPB
137027	26
137028	60
137029	129
137030	344
137031	128
137032	407
137033	110
137034	62
137035	32
137036	29
137037	50
137038	96
137039	47
137040	37
137041	310
137042	325
137043	85
137044	53
137045	58
137046	57
137047	61
137048	166
137049	204
137050	232

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SMITHERS LAB:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TEL (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

5V-0291-RG4

Company: **KETTLE RIVER RESOURCES** Date: AUG-16-95
Project: TAM O'SHANTER-#20 Copy 1. Kettle River Res., Greenwood, B.C.
Attn: Linda Caron

We hereby certify the following Geochemical Analysis of 24 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au-fire PPB	Au-fire g/tonne	Au-fire oz/ton	Tl PPB	Hg PPB
137051	>10000	20.16	.588		
137052	481				
137053	179				
137054	815				
137055	72				
137056	245				
137057	16				
137058	7				
137059	14				
137060	34				
137061	58				
137062	36				
137063	10				
137064	15				
137065	10				
137066	2				
137067	29			20	50
137068	22			20	35
137069	14				
137070	29				
137071	13				
137072	26				
137073	28				
137074	23				

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FAX (604) 847-3005

Geochemical Analysis Certificate

5V-0291-RG5

Company: **KETTLE RIVER RESOURCES**
Project: TAM O'SHANTER-#20
Attn: Linda Caron

Date: AUG-16-95
Copy 1. Kettle River Res., Greenwood, B.C.

We hereby certify the following Geochemical Analysis of 24 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au-fire PPB
137075	14
137076	58
137077	25
137078	16
137079	38
137080	145
137081	11
137082	16
137083	13
137084	5
137085	7
137086	13
137087	19
137088	6
137089	4
137090	7
137091	19
137092	11
137093	20
137094	6
137095	18
137096	25
137097	26
137098	18

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SMITHERS LAB:
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SMITHERS, B.C. CANADA V0J 2N0
TEL (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

5V-0291-RG6

Company: **KETTLE RIVER RESOURCES**
Project: TAM O'SHANTER-#20
Attn: Linda Caron

Date: AUG-16-95
Copy 1. Kettle River Res., Greenwood, B.C.

We hereby certify the following Geochemical Analysis of 24 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au-fire PPB	Tl PPB	Hg PPB
137099	13		
137100	27		
137128	8		
137129	33		
137130	8		
137131	8		
137132	57	140	105
137133	7		
137134	28		
137135	23		
137136	11		
137137	21		
137153	19		
137154	13		
137155	12		
137156	63		
137157	2237		
137158	48		
137159	150		
137160	54		
137161	14		
137162	27		
137163	1980		
137164	24		

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SMITHERS LAB:
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FAX (604) 847-3005

Geochemical Analysis Certificate

5V-0291-RG7

Company: **KETTLE RIVER RESOURCES** Date: AUG-16-95
Project: TAM O'SHANTER-#20 copy 1. Kettle River Res., Greenwood, B.C.
Attn: Linda Caron

We hereby certify the following Geochemical Analysis of 10 CORE samples submitted JUL-28-95 by L. Caron.

Sample Number	Au-fire PPB	Tl PPB	Hg PPB
137165	33	130	50
137166	35		
137167	30		
137168	22		
137169	12		
137170	1670		
137171	2938		
137172	41		
137173	25		
137174	38		

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CERTIFICATE OF ANALYSIS AK 95-405

KETTLE RIVER RESOURCES
BOX 130, 330 COPPER ST.
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V0H 1J0

13-Jul-95

ATTENTION: LINDA CARON

72 core samples received July 8, 1995
Project #: #20

ET #.	Tag #	Au (ppb)
1	137101	600
2	137102	275
3	137103	70
4	137104	345
5	137105	65
6	137106	>1000
7	137107	180
8	137108	120
9	137109	15
10	137110	120
11	137111	>1000
12	137112	175
13	137113	110
14	137114	>1000
15	137115	495
16	137116	300
17	137117	195
18	137118	555
19	137119	325
20	137120	50
21	137121	65
22	137122	15
23	137123	5
24	137124	10
25	137125	15
26	137126	5
27	137127	15
28	137138	60
29	137139	15
30	137140	30

KETTLE RIVER RESOURCES AK 95-405 13-Jul-95

ET #.	Tag #	Au (ppb)
31	137141	10
32	137142	5
33	137143	5
34	137144	5
35	137145	15
36	137146	405
37	137147	5
38	137148	90
39	137149	70
40	137150	5
41	137151	5
42	137152	5
43	137175	130
44	137176	5
45	137177	10
46	137178	5
47	137179	10
48	137180	5
49	137181	5
50	137182	5
51	137183	5
52	137184	5
53	137185	35
54	137186	5
55	137187	40
56	137188	10
57	137189	5
58	137190	35
59	137191	80
60	137192	5
61	137193	290
62	137194	140
63	137195	225
64	137196	170
65	137197	15
66	137198	5
67	137199	10
68	137200	5
69	137001	5
70	137002	5
71	137003	5
72	137004	5

KETTLE RIVER RESOURCES AK 95-405 13-Jul-95

ET #.	Tag #	Au (ppb)
QC DATA:		
Resplit:		
RS1	137101	650
RS36	137146	390
RS71	137003	5
Repeat:		
1	137101	575
10	137110	135
19	137119	350
36	137146	445
45	137177	5
54	137186	5
71	137003	
Standard:		
GEO95		150
GEO95		150
GEO95		150

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Fax (604) 573-4557

CERTIFICATE OF ASSAY AK 95-405

KETTLE RIVER RESOURCES
BOX 130, 330 COPPER ST.
GREENWOOD, B.C.
V0H 1J0

14-Jul-95

ATTENTION: LINDA CARON

72 core samples received July 8, 1995
Project #: #20

ET #.	Tag #	Au (g/t)	Au (oz/t)
6	137106	1.07	0.031
11	137111	4.09	0.119
14	137114	2.53	0.074

QC DATA:

Standard:

STD-L	2.69	0.078

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Dept.:
Fax No.:
No. of Pages: 1+
From: Sandy
Date: July 14
Company:
Fax No.:
Comments: 605-AU

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XLS/kettle

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17-Jul-95

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V2C 6T4

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Fax : 604-573-4557

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BOX 130, 330 COPPER ST.
GREENWOOD, B.C.
V0H 1J0

ATTENTION: LINDA CARON

72 core samples received July 8, 1995
Project #: 820

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	137101	600	<.2	4.37	<5	50	<5	0.52	1	43	208	1117	11.20	<10	4.25	479	7	0.01	97	1430	10	<5	<20	12	0.04	<10	198	<10	1	63
2	137102	275	<.2	1.57	<5	25	<5	0.27	<1	11	69	175	3.15	20	1.13	188	2	<.01	44	500	4	<5	<20	7	<.01	<10	24	<10	4	16
3	137103	70	1.0	1.29	10	20	<5	0.12	<1	30	109	1037	5.18	<10	0.88	229	6	0.01	31	130	2	<5	<20	3	<.01	<10	25	<10	<1	25
4	137104	345	0.6	1.23	10	25	<5	0.20	<1	18	102	404	3.21	10	0.81	143	4	<.01	46	380	6	<5	<20	5	<.01	<10	21	<10	2	21
5	137105	65	2.2	1.23	<5	45	<5	0.50	<1	47	47	269	9.49	<10	0.56	3451	12	<.01	62	1320	6	<5	<20	9	<.01	<10	38	<10	13	68
6	137106	>1000	0.4	2.83	<5	40	<5	0.57	1	44	41	362	10.30	<10	2.05	1044	9	<.01	46	1730	8	<5	<20	12	<.01	<10	119	<10	3	43
7	137107	180	<.2	3.16	<5	40	<5	1.34	<1	46	279	202	8.88	<10	3.31	458	5	0.03	150	980	4	<5	<20	47	0.02	<10	105	<10	<1	49
8	137108	120	0.4	2.75	<5	30	<5	5.63	<1	69	689	216	8.81	<10	6.58	816	4	<.01	650	380	4	<5	<20	199	<.01	<10	65	<10	<1	74
9	137109	15	<.2	3.10	25	35	<5	1.86	<1	31	233	522	6.69	<10	3.47	231	4	<.01	301	1180	8	<5	<20	89	<.01	<10	79	<10	<1	68
10	137110	120	0.2	2.67	<5	30	<5	0.42	<1	39	69	781	7.24	<10	2.53	159	7	<.01	51	1030	10	<5	<20	8	<.01	<10	107	<10	<1	28
11	137111	>1000	0.8	2.50	15	30	<5	0.43	<1	40	36	1051	7.79	<10	2.27	504	8	<.01	34	1140	8	<5	<20	7	<.01	<10	91	<10	<1	29
12	137112	175	1.2	2.45	40	30	<5	0.40	<1	42	29	1436	6.75	<10	2.57	157	7	<.01	28	1150	8	<5	<20	5	<.01	<10	74	<10	<1	35
13	137113	110	0.4	2.57	60	30	<5	0.44	<1	55	27	874	6.21	<10	2.48	148	7	0.01	26	1250	6	<5	<20	7	<.01	<10	95	<10	<1	36
14	137114	>1000	2.8	1.93	170	35	<5	0.16	<1	77	174	2460	12.70	<10	1.65	139	16	<.01	327	360	8	<5	<20	2	<.01	10	40	<10	<1	42
15	137115	495	1.8	2.47	55	35	<5	0.34	<1	27	81	1492	5.73	<10	2.54	672	6	<.01	85	1160	6	<5	<20	5	<.01	<10	85	<10	2	71
16	137116	300	10.6	1.90	150	35	<5	0.18	1	31	119	6500	4.99	<10	2.02	239	26	<.01	134	580	4	<5	<20	2	<.01	<10	40	<10	<1	232
17	137117	195	0.4	3.48	25	40	<5	0.26	<1	11	56	463	4.74	<10	3.92	420	5	<.01	47	1070	10	10	<20	1	<.01	<10	69	<10	<1	50
18	137118	555	1.6	1.08	60	10	<5	0.08	<1	11	261	1208	2.45	<10	1.26	201	5	<.01	67	80	2	<5	<20	2	<.01	<10	38	<10	<1	47
19	137119	325	0.2	4.23	50	35	<5	0.09	<1	46	359	729	9.49	<10	5.18	466	7	<.01	232	<10	12	<5	<20	2	<.01	<10	137	<10	<1	42
20	137120	50	0.8	3.69	<5	35	<5	0.24	<1	42	365	252	7.81	<10	4.48	532	10	<.01	279	780	14	<5	<20	8	<.01	<10	78	<10	<1	158
21	137121	65	1.8	1.60	<5	155	<5	7.36	<1	9	253	70	1.95	<10	0.81	148	294	0.04	71	140	14	10	<20	42	<.01	<10	35	<10	5	38
22	137122	15	0.8	3.32	<5	40	<5	2.17	<1	43	190	400	7.98	<10	3.46	805	18	0.02	140	1230	10	<5	<20	127	0.04	<10	90	<10	2	50
23	137123	5	<.2	1.85	<5	55	<5	1.49	<1	11	88	190	3.22	10	1.54	256	3	0.02	54	630	6	5	<20	78	<.01	<10	41	<10	5	17
24	137124	10	<.2	1.58	<5	30	<5	1.35	<1	35	72	421	4.90	<10	1.35	192	5	0.03	15	1040	2	<5	<20	49	0.01	<10	71	<10	3	24
25	137125	15	1.0	1.21	<5	30	<5	1.38	<1	28	51	818	5.27	<10	0.77	252	6	<.01	48	450	2	<5	<20	84	<.01	<10	15	<10	3	19
26	137126	5	<.2	2.18	<5	15	<5	3.81	<1	28	87	138	5.31	<10	1.77	445	8	0.02	57	610	6	<5	<20	1243	<.01	<10	72	<10	5	24
27	137127	15	<.2	2.55	<5	50	<5	4.41	<1	29	145	65	5.39	<10	2.39	708	4	0.05	62	820	8	5	<20	212	0.04	<10	90	<10	3	30
28	137128	60	0.8	2.30	<5	35	<5	2.35	1	41	44	1238	8.01	<10	2.11	543	3	0.04	51	1450	30	<5	<20	87	0.12	<10	88	<10	2	40

KETTLE RIVER RESOURCES AK 95-405

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Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Tl %	U	V	W	Y	Zn
29	137139	15	0.6	2.92	<5	35	<5	1.17	1	59	291	421	11.20	<10	3.06	449	8	<.01	136	760	50	<5	<20	399	<.01	<10	106	<10	<1	69
30	137140	30	<.2	4.80	5	80	<5	6.80	<1	64	655	146	7.85	<10	4.16	549	4	0.01	440	780	10	<5	<20	846	<.01	<10	94	<10	4	44
31	137141	10	<.2	2.31	<5	50	<5	1.09	<1	58	87	256	7.99	<10	2.59	498	7	<.01	140	1270	10	<5	<20	187	<.01	<10	96	<10	2	35
32	137142	5	0.4	1.44	10	20	<5	0.45	<1	41	143	362	4.94	<10	1.25	167	6	<.01	52	540	8	<5	<20	122	<.01	<10	46	<10	<1	16
33	137143	5	<.2	2.48	<5	30	<5	2.41	<1	36	178	248	5.93	<10	2.57	533	2	0.03	74	590	8	<5	<20	116	0.05	<10	101	<10	<1	29
34	137144	5	<.2	3.92	<5	55	<5	1.01	<1	42	397	96	6.89	<10	4.82	752	2	<.01	217	590	10	<5	<20	142	<.01	<10	108	<10	<1	41
35	137145	15	<.2	4.34	40	55	<5	0.22	<1	44	264	332	7.11	<10	5.91	360	5	<.01	189	540	16	<5	<20	17	<.01	<10	98	<10	<1	44
36	137146	405	11.0	0.81	80	30	<5	2.21	2	196	611	>10000	5.32	<10	1.77	1058	77	<.01	363	<10	<2	<5	<20	100	<.01	<10	27	<10	<1	117
37	137147	5	<.2	1.28	<5	170	<5	1.22	<1	16	63	73	6.93	30	0.78	1114	12	0.01	84	2170	20	<5	<20	186	<.01	<10	89	<10	3	74
38	137148	90	3.2	0.38	350	25	<5	7.64	<1	107	347	2874	4.47	<10	3.52	3418	56	<.01	1784	90	20	15	<20	335	<.01	<10	13	<10	<1	36
39	137149	70	2.0	0.18	375	30	<5	9.14	<1	87	199	2315	6.26	<10	4.67	2380	13	<.01	1196	<10	<2	5	<20	400	<.01	<10	12	<10	<1	39
40	137150	5	<.2	3.92	75	25	<5	2.76	<1	49	706	439	6.38	<10	5.33	785	2	<.01	185	130	12	5	<20	101	<.01	<10	178	<10	<1	44
41	137151	5	<.2	2.57	50	25	<5	3.00	<1	33	219	368	4.70	<10	3.30	457	3	0.02	74	30	4	15	<20	76	0.02	<10	201	<10	<1	27
42	137152	5	0.2	1.22	10	325	<5	0.73	<1	12	103	270	2.03	30	0.54	484	56	<.01	84	1770	24	<5	<20	97	<.01	<10	62	<10	5	29
43	137175	130	<.2	1.33	<5	45	<5	2.18	<1	37	40	247	7.03	<10	1.31	457	6	0.01	73	1470	28	<5	<20	299	<.01	<10	70	<10	3	45
44	137176	5	0.2	1.27	<5	35	<5	1.44	<1	60	79	190	6.80	<10	1.27	264	6	<.01	112	510	4	<5	<20	392	<.01	<10	64	<10	<1	40
45	137177	10	<.2	1.27	<5	40	<5	3.76	1	58	83	270	7.76	<10	1.13	287	9	<.01	92	920	18	<5	<20	132	<.01	<10	56	<10	<1	36
46	137178	5	<.2	0.99	<5	130	5	5.80	1	15	20	41	7.35	20	1.80	1219	7	0.02	120	1800	32	<5	<20	447	<.01	<10	75	<10	2	108
47	137179	10	<.2	0.82	<5	80	<5	6.27	1	34	86	224	8.16	<10	1.02	1669	6	0.01	168	1170	10	<5	<20	569	<.01	<10	74	<10	2	74
48	137180	5	0.4	0.66	<5	20	<5	5.12	<1	71	127	169	7.93	<10	0.68	947	8	<.01	181	830	8	<5	<20	478	<.01	<10	54	<10	2	50
49	137181	5	<.2	0.81	<5	20	<5	0.87	<1	82	177	115	5.90	<10	0.42	520	20	<.01	178	1420	4	<5	<20	96	<.01	<10	53	<10	<1	28
50	137182	5	<.2	0.80	<5	40	5	0.86	<1	41	154	41	5.72	<10	0.51	697	24	<.01	218	1170	8	<5	<20	112	<.01	<10	58	<10	<1	33
51	137183	5	<.2	0.95	<5	100	<5	1.05	<1	12	19	50	3.28	30	0.46	358	6	<.01	252	2500	20	<5	<20	200	<.01	<10	47	<10	7	32
52	137184	5	<.2	1.00	<5	130	<5	0.96	<1	13	16	41	2.16	40	0.44	221	5	<.01	471	2460	14	<5	<20	179	<.01	<10	38	<10	8	16
53	137185	35	<.2	0.63	80	25	<5	0.63	<1	259	544	397	6.08	<10	0.55	269	237	<.01	2204	160	10	<5	<20	53	<.01	<10	29	<10	<1	37
54	137186	5	<.2	0.76	<5	90	20	2.21	4	177	855	104	> 15	<10	2.19	1845	43	0.03	3445	<10	<2	<5	<20	310	<.01	<10	43	<10	<1	57
55	137187	40	<.2	0.54	165	40	<5	1.18	<1	303	471	2184	> 15	<10	1.13	1081	72	0.01	4331	<10	<2	<5	<20	165	<.01	<10	27	<10	<1	42
56	137188	10	<.2	0.67	35	35	<5	0.99	<1	99	130	333	6.46	<10	0.85	699	21	<.01	1722	700	<2	<5	<20	177	<.01	<10	21	<10	<1	10
57	137189	5	<.2	0.29	215	15	<5	0.57	<1	235	293	1256	4.65	<10	0.44	113	761	<.01	3888	10	<2	<5	<20	92	<.01	<10	11	<10	<1	28
58	137190	35	<.2	0.26	255	20	<5	2.24	<1	194	270	638	3.64	<10	1.20	287	188	<.01	3426	<10	<2	<5	<20	129	<.01	<10	11	<10	<1	36
59	137191	80	0.8	0.28	170	25	<5	2.34	<1	212	368	1744	7.78	<10	1.34	638	93	<.01	3536	<10	<2	<5	<20	160	<.01	<10	13	<10	<1	32
60	137192	5	<.2	0.65	<5	55	10	8.23	2	109	268	110	> 15	<10	4.60	4421	85	0.02	2462	<10	<2	<5	<20	390	<.01	<10	45	<10	<1	40
61	137193	290	1.8	0.28	220	25	<5	4.71	<1	110	250	2727	5.04	<10	2.28	1160	49	<.01	1871	<10	6	<5	<20	246	<.01	<10	10	<10	<1	35
62	137194	140	5.6	0.24	150	30	<5	1.38	<1	80	233	7285	4.21	<10	0.83	346	41	<.01	1426	<10	<2	<5	<20	90	<.01	<10	7	<10	<1	86
63	137195	225	1.0	0.37	200	25	<5	1.49	<1	178	358	2355	7.99	<10	1.02	1048	52	<.01	1888	<10	<2	<5	<20	93	<.01	<10	13	<10	<1	27
64	137196	170	3.4	0.14	330	35	<5	0.74	<1	275	358	7145	12.20	<10	0.66	541	38	<.01	2273	<10	<2	<5	<20	35	<.01	<10	7	<10	<1	53
65	137197	15	0.4	1.00	165	15	<5	3.02	<1	59	454	708	2.83	<10	1.39	1290	16	<.01	450	320	<2	5	<20	161	<.01	<10	32	<10	1	25
66	137198	5	0.4	0.28	105	5	<5	3.68	<1	71	394	660	2.88	<10	1.64	940	385	<.01	680	20	<2	<5	<20	143	<.01	<10	11	<10	<1	19
67	137199	10	0.4	0.42	515	15	<5	3.02	<1	109	218	733	5.00	<10	1.44	718	21	<.01	628	260	<2	<5	<20	186	<.01	<10	17	<10	<1	18

KETTLE RIVER RESOURCES AK 95-405

ECO-TECH LABORATORIES LTD.

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
68	137200	5	<.2	0.82	5	35	<5	1.07	<1	35	132	44	4.62	<10	0.72	810	10	<.01	319	560	<2	<5	<20	158	<.01	<10	93	<10	<1	18
69	137001	5	<.2	0.72	10	45	<5	0.59	<1	43	130	86	5.60	<10	0.57	449	18	<.01	354	280	<2	<5	<20	141	<.01	<10	77	<10	<1	22
70	137002	5	0.4	0.23	155	25	<5	4.54	<1	106	283	550	7.36	<10	2.20	2906	18	<.01	1417	<10	<2	<5	<20	131	<.01	<10	21	<10	<1	16
71	137003	5	<.2	0.54	60	65	<5	6.50	<1	74	275	254	8.86	<10	3.54	2250	9	0.01	819	130	<2	<5	<20	250	<.01	<10	93	<10	<1	35
72	137004	5	<.2	1.77	10	25	<5	0.24	<1	19	196	176	2.89	<10	1.88	167	4	<.01	92	350	6	10	<20	26	<.01	<10	104	<10	<1	16
QC DATA:																														
Resplit:																														
RS1	137101	650	<.2	4.32	<5	50	<5	0.52	1	42	205	1031	10.90	<10	4.21	478	6	0.01	85	1470	16	<5	<20	11	0.03	<10	195	<10	1	60
RS36	137146	390	8.2	0.89	60	30	<5	2.08	2	146	579	>10000	4.66	<10	1.80	1008	82	<.01	288	<10	2	<5	<20	84	<.01	<10	29	<10	<1	106
RS71	137003	5	<.2	0.65	65	60	<5	6.46	<1	75	300	220	8.94	<10	3.51	2245	8	0.01	821	130	<2	<5	<20	244	<.01	<10	96	<10	<1	35
Repeat:																														
1	137101	575	<.2	4.37	<5	50	<5	0.53	1	43	207	1101	11.10	<10	4.25	476	6	0.01	98	1410	8	<5	<20	13	0.04	<10	195	<10	<1	59
10	137110	135	0.2	2.61	5	30	<5	0.41	<1	38	68	757	7.08	<10	2.45	156	6	<.01	51	1030	10	<5	<20	8	<.01	<10	105	<10	<1	28
19	137119	350	0.2	4.28	80	35	<5	0.11	<1	50	364	729	9.65	<10	5.32	476	6	<.01	236	<10	14	<5	<20	<1	<.01	<10	139	<10	<1	43
36	137146	445	10.6	0.81	80	30	<5	2.23	2	180	617	>10000	5.18	<10	1.74	1061	73	<.01	343	<10	<2	<5	<20	100	<.01	<10	27	<10	<1	118
45	137177	5	0.2	1.29	10	40	<5	3.76	<1	59	86	258	7.74	<10	1.13	289	9	<.01	100	930	18	<5	<20	131	<.01	<10	57	<10	<1	37
54	137186	5	<.2	0.75	<5	85	20	2.18	4	178	861	104	> 15	<10	2.17	1839	43	0.03	3434	<10	<2	<5	<20	306	<.01	<10	43	<10	<1	57
71	137003	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard:																														
GEO95		150	1.2	1.69	65	150	<5	1.65	<1	18	58	88	4.02	<10	0.92	650	<1	0.02	27	630	22	<5	<20	56	0.11	<10	76	<10	4	78
GEO95		150	1.2	1.61	60	155	<5	1.62	<1	17	56	86	3.89	<10	0.88	641	<1	0.02	26	650	20	<5	<20	55	0.11	<10	73	<10	4	76
GEO95		150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

df/420
XLS/95kettle

APPENDIX 3

Cost Statement

COST STATEMENT

Labour:		
G. Stewart	5 days @ $ 450/day	$ 2,250.00
L. Caron	30 days @ $ 180/day	5,400.00
J. Kemp	11 days @ $ 175/day	1,925.00
		$ 9,575.00
Drilling		
Lone Ranger Drilling Ltd		
	2681 feet @ $14/ft	$37,534.00
	387 feet @ $15/ft	5,805.00
	mob/demob, cat work, supplies	7,904.44
		$51,243.44
Geochemical Analyses		
(31 element ICP, plus Au) - Echo Tech Labs, Kamloops and Min-En Labs, Vancouver.		
226 samples @ $20.69 (including shipping)		$ 4,676.07
		$ 4,676.07
Supplies		
General Field Supplies		$ 285.03
Saw blades		1,023.10
		$ 1,308.13
Transportation		
Vehicle rental	20 days @ $45/day	$ 900.00
Fuel		337.29
		$ 1,237.29
Office Expenses		
Phone, fax		$ 37.10
Drafting and office supplies		123.22
Misc		29.92
		$ 190.24
TOTAL:		**$68,230.17**

APPENDIX 4

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Linda J. Caron, certify that:

1. I am an exploration geologist residing at Bubar Road (RR #2), Rock Creek, B.C.

2. I obtained a B.A.Sc. in Geological Engineering (Honours) in the Mineral Exploration Option, from the University of British Columbia (1985).

3. I graduated with an M.Sc. in Geology and Geophysics from the University of Calgary (1988).

4. I have practised my profession since 1987 and have worked in the mineral exploration industry since 1980.

5. I am employed by Kettle River Resources Ltd. as an exploration geologist.

L. Caron

Linda Caron

STATEMENT OF QUALIFICATIONS

I, George Stewart certify that I:

Was born in Halifax, Nova Scotia, Canada and attended Elementary and High School in Halifax, N.S.

1957 - 1962	Attended St. Mary's University and Dalhousie University, studied Geology.
1959 - 1960	Sheep Creek Mines Ltd., Engineer Department
1960 - 1967	Geologist for Kenno (Western) Ltd.
1967 - 1970	Exploration/Mine Manager Nadina Exploration Ltd.
1970 - 1973	Mine Manager for Colt Resources Ltd.
1975 - 1981	Exploration Manager for New Frontier and New Nadina Explorations Ltd.
1981 - 1986	Mine/Exploration Manager for Dentonia Resources Ltd, Kettle River Resources Ltd.
1986 - 1987	Attended Gemological Institute of America.
1986 - 1993	Exploration Manager for Kettle River Resources Ltd, Dentonia Resources Ltd., and New Nadina Explorations Ltd.
1994 - present	Exploration Manager for Kettle River Resources Ltd, and New Nadina Explorations Ltd.

George O.M. Stewart