

Assessment Report
on
1995 Fall Drill Program
Tam O'Shanter Property

Kettle River Resources Ltd.
Linda Caron, P.Eng.
Sept, 1996

24543

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORTS

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ASSESSMENT REPORT
on
1995 FALL DRILL PROGRAM

TAM O'SHANTER PROPERTY

NTS 82E/2 E&W

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Long: 118° 44'W

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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

Linda Caron. P. Eng.
September, 1996

24,543

TABLE OF CONTENTS

	Page
1.0 SUMMARY	1
2.0 INTRODUCTION	2
2.1 Location, Access and Terrain	2
2.2 Property and Ownership	2
2.3 History	3
2.4 Summary of Work Done, Sept, 1995 - Nov, 1995	5
3.0 GEOLOGY AND STRUCTURE	6
4.0 DRILLING	8
5.0 RECOMMENDATIONS	10
6.0 REFERENCES	11

LIST OF FIGURES

	Page
Figure 1 - Location Map	aft p.2
Figure 2 - Claim Map	aft p.2
Figure 3 - Drill Hole Location Map	aft p.8

LIST OF APPENDICES

APPENDIX 1 - Diamond Drill Logs
APPENDIX 2 - Drill Sample Results
APPENDIX 3 - Cost Statement
APPENDIX 4 - Statement of Qualifications

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 September - October 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 east of the discovery area, near the low grade bulk tonnage zone intersected in Hole 92-27. Drilling also tested the Laocoon zone, an area of highly altered quartz diorite (Golden Fleece) intrusive cutting Knob Hill Group cherts.

Five holes were drilled (a total of 797 metres). Holes 95-06 and -07 tested the Wild Rose Fault in the area of Hole 92-27, which collared essentially on the fault and drilled parallel to the structure. Hole 95-08 stepped back and tested the structure deeper in the same section, intersecting the fault at a depth of 245 metres down dip. The fault measures 5 to 10 metres in width where intersected by the drill holes, comprised of numerous small (typically 0.5 m wide) veins within a wide zone of silicified breccia. The hanging wall of the fault is elevated in gold with values in the range of 100-500 ppb Au, over widths of up to 180 metres. Veins within the fault returned values of 1- 2 g/t Au in this section.

Holes 95-09 and 95-10 tested the Laocoon zone, a contact area between altered Golden Fleece quartz diorite and Knob Hill Group chert and metasediments. Numerous B phase dykes cut earlier rocks. Gold, silver and copper values were not anomalous.

As a result of the current drilling program and detailed mapping done in the area of the Wild Rose structure, the geology appears to be much more complicated, but better understood, than previous interpretations. In particular, at least seven different intrusive events can be recognized, and it appears that the contact areas of one of these intrusives (the Golden Fleece quartz diorite) with the Knob Hill Group is an important control in gold mineralization. Detailed mapping is recommended to identify areas of favorable geology and structure, especially in the area north of the Wild Rose Fault, where little work (and no drilling) has been done.

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.

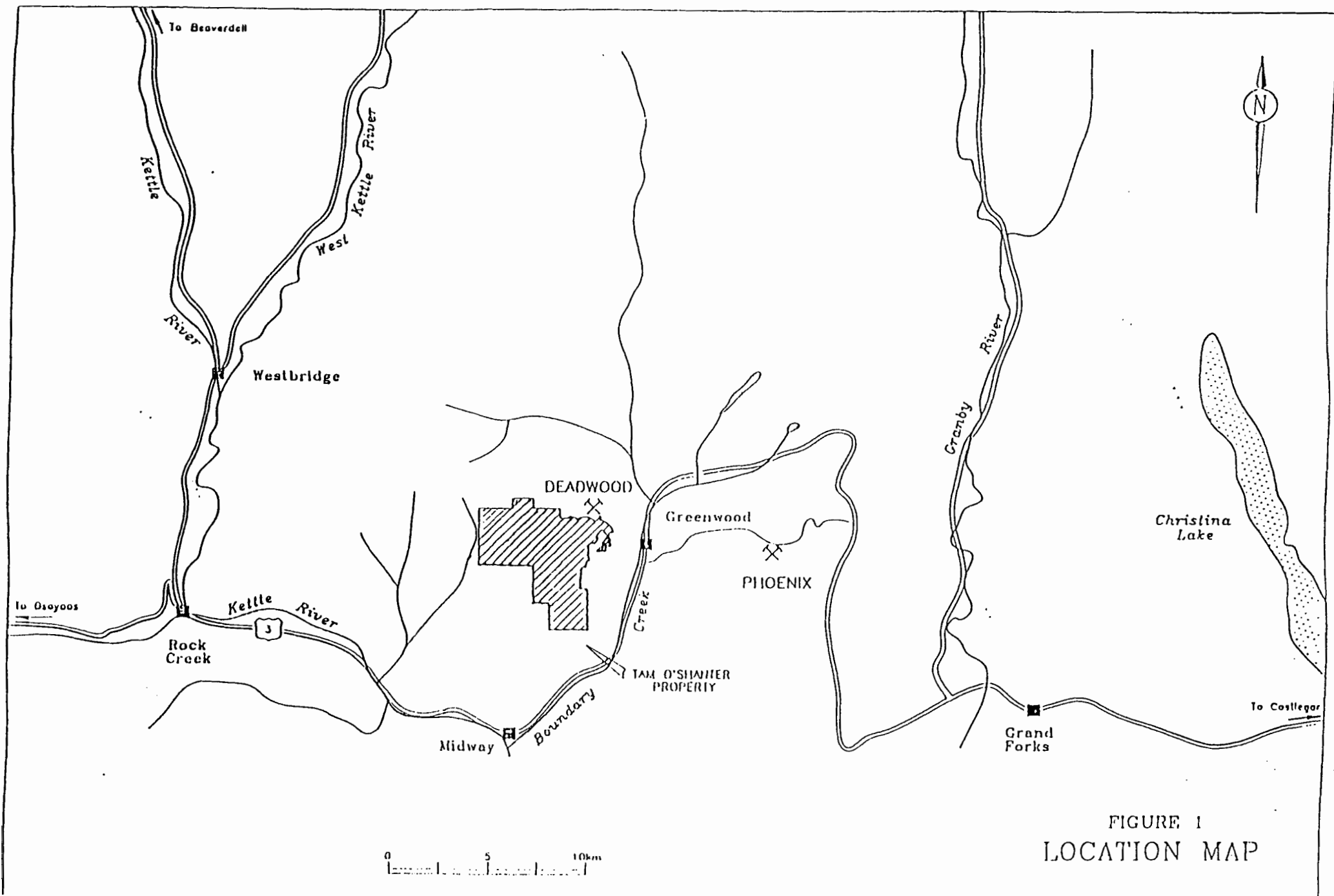
The claims are situated on the north facing slope of the Motherlode Creek valley, and on the ridge between Ingram and Motherlode Creeks. Elevations range from 1460 metres in the southern part of the claim group, to 915 metres in the eastern section. The terrain is hilly, with several steep cliffy sections.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

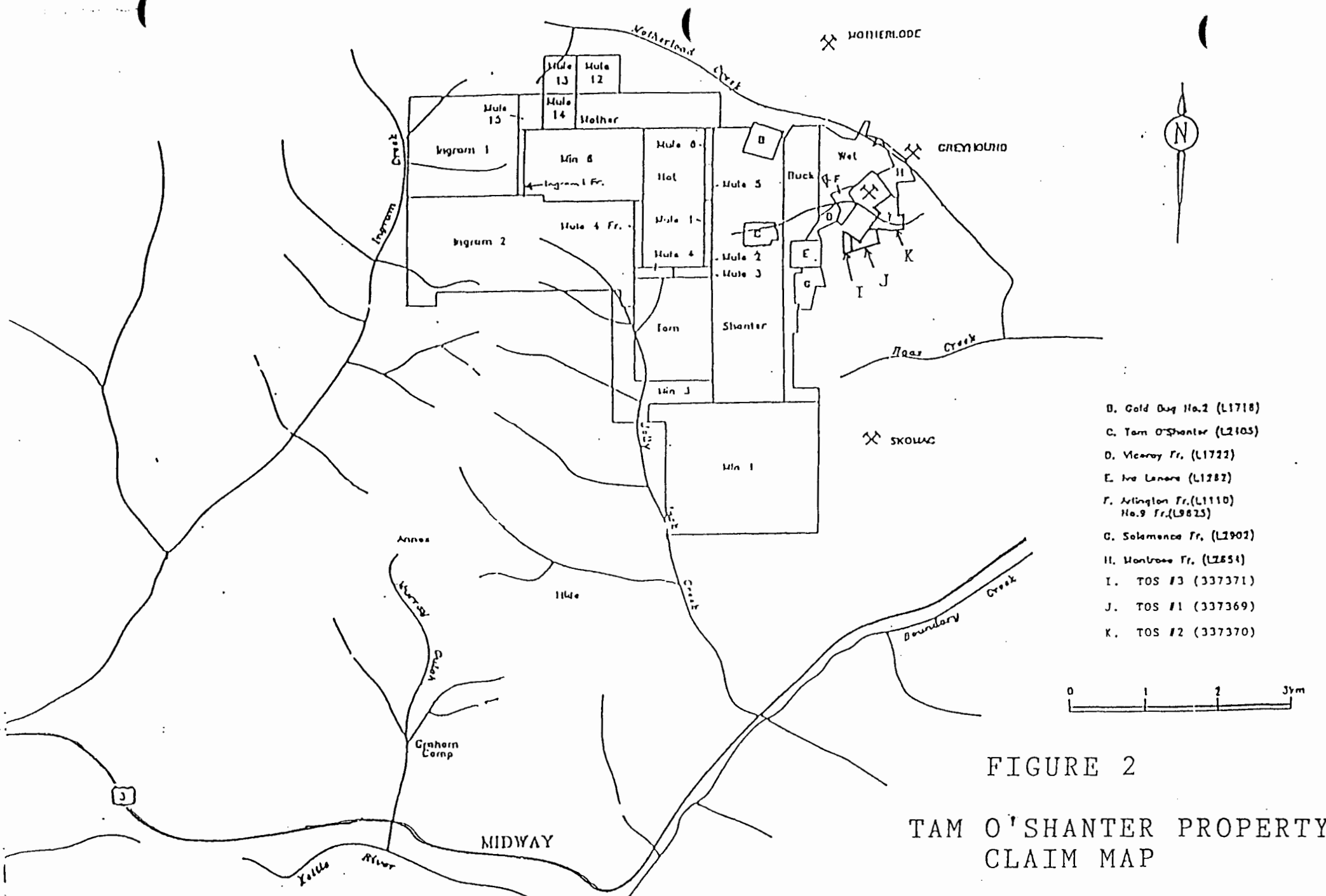
The climate is generally quite dry, with hot summers and little rainfall. Snowfall is minimal, generally less than 1 metre. In the area of current exploration, water for drilling is available from two old drill collars.

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. Work documented in this report is filed on the Tam 96A Group, as shown in Figure 2.

<u>Claim Name</u>	<u>Record #</u>	<u># of units</u>	<u>Expiry Date</u>
Tam O'Shanter	214125	1	11/20/97
Iva Lenore	214126	1	11/20/97
Shanter	214168	16	07/07/2001
Viceroy Fr.	214246	1	06/11/97
Arlington Fr.	214247	1	06/11/97
Salamanca Fr.	214248	1	06/11/97
Buck	214277	8	06/28/2001
Tam	214278	6	06/28/2001
Montrose Fr.	214288	1	07/09/2001
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	06/29/2001
Mule 1	327002	1	06/30/2001
Mule 2	327003	1	06/30/2001
Mule 3	327004	1	06/30/2001
... cont next page			





- D. Gold Dug No.2 (L1718)
- C. Tam O'Shanter (L2103)
- D. Vearoy Fr. (L1722)
- E. Ivo Lenore (L1282)
- F. Arlington Fr.(L1110)
No.9 Fr.(L9823)
- G. Solomence Fr. (L1902)
- H. Montrose Fr. (L2854)
- I. TOS #3 (337371)
- J. TOS #1 (337369)
- K. TOS #2 (337370)

FIGURE 2

TAM O'SHANTER PROPERTY CLAIM MAP

82E2 E&W

<u>Claim Name</u>	<u>Record #</u>	<u># of units</u>	<u>Expiry Date</u>
Mule 4	327005	1	06/30/2001
Mule 5	327006	1	06/30/2001
Mule 6	327007	1	06/30/2001
Ingram 1 Fr.	327668	1	07/11/2001
Tos #1	337369	1	06/30/2001
Tos #2	337370	1	06/30/2001
Tos #3	337371	1	06/30/2001

* 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 Laocoon (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 percussion 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 property were re-explored using a backhoe (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 Receiver an interest in the property. The remaining interest was transferred to a subsidiary of New Frontier, Bulkley Silver Resources.
- 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 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, 935 metres of NQ drilling in 5 hole to test the Wild Rose Fault (see Assessment Report filed Sept, 1995) plus detailed mapping in the Wild Rose area, and the drill program described in this report.

2.4 Summary of Work Done, September, 1995 - November, 1995

Five NQ diamond drill holes were drilled in September and October, 1995, for a total of 797 metres. Drilling was done under contract by Beaupre Diamond Drilling of Princeton, 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 C. Esovaloff. Drill supervision and lay-out of drill sites was done by T. Parsons. A total of 156 drill core samples were collected and sent to Min-En Labs for 31 element ICP plus Au analysis. Seven samples were tested for metallic gold. 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 recognised, 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 Paleozoic 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 Paleozoic 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 Groups 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 (i.e. Phoenix, Motherlode-Greyhound) area hosted within the Triassic rocks.

Three separate intrusive events are known regionally to 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 overlie 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/detachment 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.

Intrusive activity on the property is much more complex than previous workers have described. In the area of drilling, the earliest intrusive is the Knob Hill Group Diorite. Ultramafic rocks are seen cutting Knob Hill rocks, but their relationship to other intrusives is unknown. Next in the sequence of intrusives is the Golden Fleece quartz diorite, which is typically strongly altered and named for the type locality at the Golden Fleece workings. There are some similarities between the Golden Fleece intrusive and the Lexington quartz-feldspar, suggesting a possible Jurassic age to the Golden Fleece. Contact areas of the Golden Fleece intrusive with Knob Hill group rocks seems to be an important control for gold mineralization. The Golden Fleece intrusive is cut by relatively fresh "B-phase" dykes and stocks of probable Nelson affinity. Three distinct, probable Tertiary aged dykes cut earlier intrusives, including a dark gabbroic dyke, which may be related to olivine basalt flows? seen on surface, and a coarse quartz-eye dyke both of which are

unknown elsewhere in the camp, and the typical pulaskite dykes which are common throughout the area. 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). The relationship of this intrusive to the "B-phase" unit to the south is unknown at this time.

A moderate west dipping, north-south trending Tertiary fault (the Deadwood Fault) forms the eastern margin 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 Beaupre Diamond Drilling of Princeton, 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-95-06	0+46 N 7+45 E	220°	-65°	129.8 m
TAM-95-07	0+46 N 7+45 E	220°	-85°	199.3 m
TAM-95-08	1+00 N 8+40 E	220°	-65°	231.3 m
TAM-95-09	4+40 N 5+60 E	220°	-45°	123.7 m
TAM-95-10	4+40 N 5+60 E	220°	-65°	112.8 m

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

Hole 95-06 and 95-07 tested the Wild Rose fault in same section as Hole 92-27, drilling to the west to cut the fault rather than paralleling it as Hole 92-27 had done. Hole 95-06 tested the fault 80 metres vertically below surface, while Hole 95-07 intersected the fault 170 metres below surface. Both holes had wide intersections of Golden Fleece quartz diorite, plus chill and contact breccia phase cutting older Knob Hill Group chert and metavolcanics above the fault. The Golden Fleece phase may be moderately to strongly altered (silicified, sericitized) and cut by stockworking quartz veinlets. Later fresh B phase dykes cut earlier rocks. Gold values are anomalous and erratic throughout the hanging wall zone, with values ranging from 8 ppb to 940 ppb, but generally 100-500 ppb, over widths up to 180 metres. The Wild Rose Fault is a wide zone, 5 to 10 metres in width where intersected by the drill holes, comprised of an intensely silicified tectonic breccia with clasts of Golden Fleece and Knob Hill Group rocks in a very fine siliceous matrix. Hole 92-07 also revealed a Tertiary dyke intruding along the fault zone, as well as a 0.5 metre wide, early high temperature white quartz vein. This vein ran 1.85 g/t Au, 0.27% Cu and 9.0 g/t Ag. Below the Wild Rose Fault, both holes intersected zones of mylonite/silicified, sheared intrusive before passing into Attwood Group sediments.

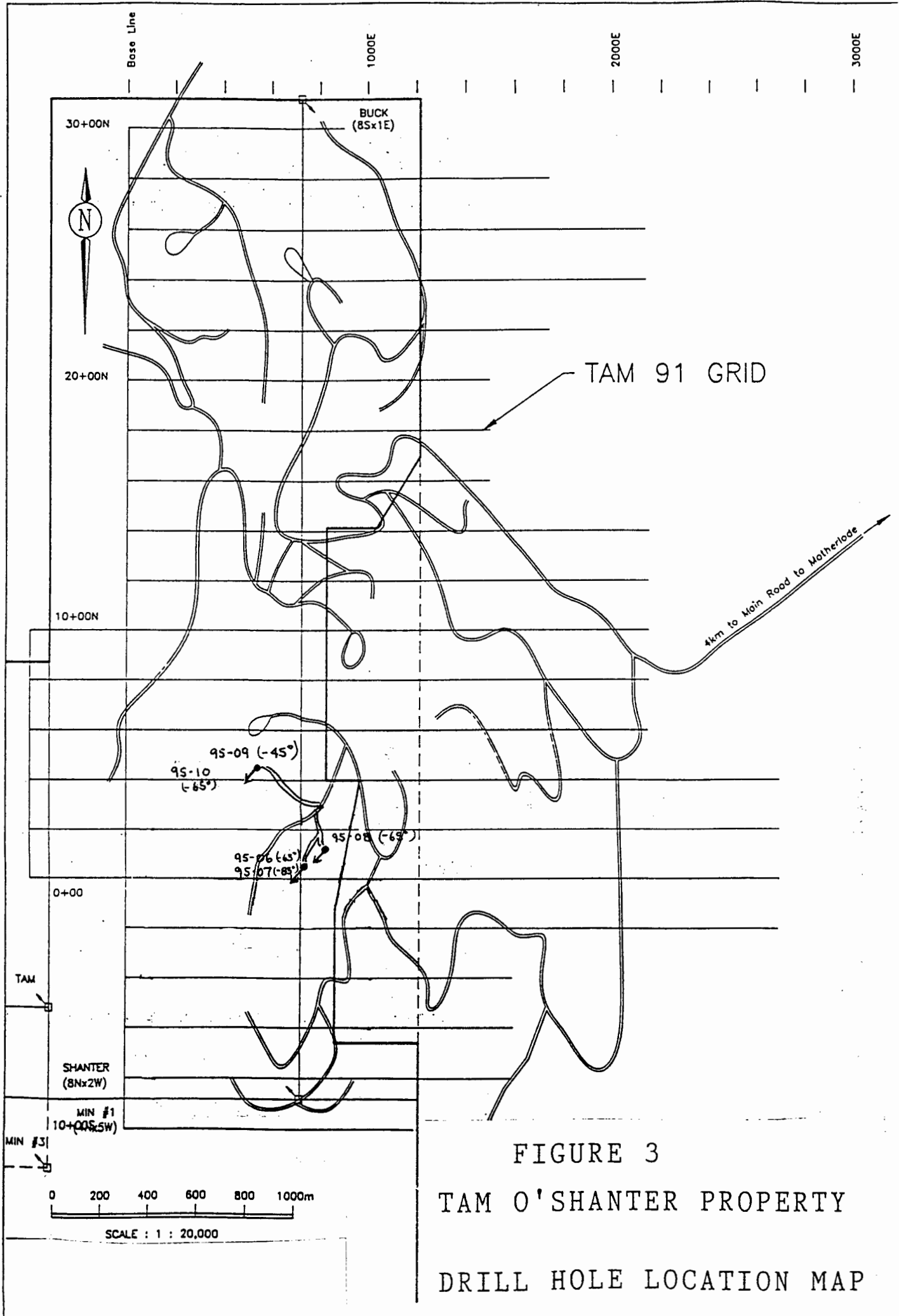


FIGURE 3
 TAM O'SHANTER PROPERTY
 DRILL HOLE LOCATION MAP

Hole 95-08 tested the fault zone at depth in the same section as Holes 95-06 and -07. The hole collared 180 metres from the surface trace of the fault, drilling perpendicular to the strike of the fault. No Golden Fleece intrusive was intersected in this hole, however a wide zone of mottled and sheared mylonite similar to that in the bottom of Holes 95-06 and -07 occurred.

Below this are Knob Hill Group rocks, cut by later, fresh B phase dykes and by a late Tertiary gabbroic dyke which intrudes along the hanging wall of the Wild Rose Fault. The Knob Hill rocks are bleached, clay altered and weakly silicified over a width of about 30 metres, with anomalous Au values (93-622 ppb). The fault was intersected 205 metres vertically below surface, was 6 metres in width and comprised of narrow early white quartz veins cutting altered Knob Hill and possible altered Golden Fleece rocks. One quartz vein, 0.51 metres in width, returned 1137 ppb Au, 0.6% Cu and 20.4 g/t Ag, with highly anomalous As. Below the fault a narrow zone of Knob Hill Group rocks was intersected before ending the hole in typical Attwood Group sediments.

Hole 95-09 and 95-10 tested the Laocoon zone, a contact area between altered Golden Fleece quartz diorite, and Knob Hill Group chert and metasediments. Numerous B phase dykes cut earlier rocks. Gold, silver and copper values are not anomalous, with the exception of one sample running 173 ppb Au.

5.0 RECOMMENDATIONS

Detailed mapping is recommended to identify areas of favorable geology north of the Wild Rose Fault where little work has been done, prior to any further drilling on the property. In particular, the area of the Golden Fleece workings needs detailed mapping and sampling. The intersection of the Wild Rose structure with the Deadwood Fault remains untested by drilling.

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APPENDIX 1

Diamond Drill Logs

Hole Tam 95-06 To test the Qtz-eye porphyry, 4 oz intercept, and large low grade area in Hole 92-27, and to test the Wild Rose Fault in the sample plane as 92-27.

Northing: Tam 91 Grid 0+46 N
 Easting: 7+45 E
 Azimuth: 220°
 Dip: -65° (no dip test)
 Depth: 129.8 metres

Drilled Sept 30 - Oct 1, 1995
 Drilled by: Beaupre Drilling
 Logged by: L. Caron
 Core stored at Boundary Falls.

Interval		Rock type	Description	Alteration	Mineralization	Sample			
From (m)	To (m)					Sample Number	From (m)	To (m)	Interval (m)
0	2.8	Overburden	0 - 2.4 m Casing 2.4 - 2.8 m Rubble of ultramafic						
2.8	3.4	Ultramafic	Dark bluey-grey, strongly magnetic, mod soft, serpentinized ultramafic	Mod qtz and carb vnlt's + small silic'd (qtz flood) zones.	5-10% diss py	128551	2.4	3.4	1.0
3.4	73.5	Golden Fleece Intrusive	<p>Large interval of qtz diorite (rare qtz eye) intrusive. Top 30 m or so is complex zone of contact bx, chilled margin, dykes of B phase. Qtz eyes are v difficult to see throughout but espec in top complex zone where they are cracked and overprinted by fine py & py vnlt's. At 31.4 m becomes good, massive Golden Fleece intrusive.</p> <p><u>3.4 - 4.85</u> Golden Fleece int, Fe stained, cut by numerous qtz strings which incorporate 2-3 mm qtz eyes. Soft, perv clay alt'd. Looks like Hole 92-27 intercept near 4 oz zone. This also somewhat resembles Tert fsp porpy dyke as in Holes 95-03, 04, and 05. @ 4.85 m is sharp bx contact zone (3 cm wide) @ 65° with dark intrusive + grey chert frags in silic'd intrusive mrtx.</p> <p><u>4.85 - 5.7</u> B PHASE DYKE (or poss Olivine Basalt dyke). V fng, dark grey with epid alt'n. Loks like fng B phase dyke. Occass see large qtz eyes but these look to be ang frags of qtz eye unit within this fng intrusive (this is not always obvious). See irreg tight bx zones with</p>						
				<u>3.4 - 4.85</u> Abund grey qtz stringers, dom @ 15-25° to C/A, rare fluor xtals. Perv clay alt'n.	<u>3.4 - 4.85</u> 2-5% fine diss py	128552	3.4	4.85	1.45
				<u>4.85 - 5.7</u> Minor ep with qtz in tight vns and bx zones	<u>4.85 - 5.7</u> Hairline qtz-py stringers + 2-5% diss py.	128553	4.85	5.7	0.85

	<p>dark intrus, white qtz, grey chert + qtz-eye porph. Rare oliv (or could be clots of epid??). @ 5.7 m is sharp contact with grey qtz-eye porph @ 45°</p> <p><u>5.7 - 10.5</u> Complex interval of pale grey-brown chilled Golden Fleece + contact bx with grey chert clasts in intrusive mtrx + large irreg dyke?/clasts of dark grey B phase + v soft, clay alt'd stressed looking intrusive. Minor rusty frags.</p> <p><u>10.5 - 12.5</u> Golden Fleece int. Med grained, grey, rare qtz eyes. 25% euhedral (saus) fsp, avg 1mm, rare 2-3 mm qtz eyes, 20% small qtz phenos/gmass qtz, 15% mafics (being alt'd to py) in fng qtz rich gmass.</p> <p><u>12.5 - 20.6</u> DARKER, MORE MAFIC INTRUSIVE (prob B phase, or poss Knob Hill?) 12.5 - 13.5 Good porph intrus test with 50% 1-2mm fsp (saus) in str clay alt'd mtrx. Grey colour. Good alt'n front @ 60° @ 13.5 m. 13.5 - 20.6 Darker grey. Looks fng but text sim to above on split surface. Strongly alt'd to clay/chl/2ndary bio. V soft. >>> mafic component than in Golden Fleece. Could be alt'd B phase, or poss Knob Hill Group.</p> <p><u>20.6 - 31.2</u> CONTACT ZONE. CHILL ZONE - CONTACT BX ZONE, above main body of Golden Fleece intrusive. 20.6 - 20.7 White chill zone, 60% fine granular qtz cut by dark chl vnlt. 20.7 - 31.2 Contact/intrusive bx zone with irreg zones & bx frags of pale br chilled Golden Fleece/rhyolite?, grey & white chert, older fsp porph intrusive (as in 12.5 - 13.5) in intrusive qtz-eye porph mtrx. In places bx frags avg 1-3 cm and make up 40-50% of the rx. Other places bx frags exceed 5-8 cm, or rx may be pale br chilled qtz-eye porph for 20-30 cm with no bx frags.</p>	<p><u>5.7 - 10.5</u> V minor qtz-carb-py stringers</p> <p><u>10.5 - 12.0</u> Py altering mafics, fsp saus, minor grey qtz vnlt <u>12.0 - 12.5</u> silic'd, bx, v rusty</p> <p><u>12.5 - 13.5</u> Fsp saus. Mod perv clay-chl alt'n. Alt'n front @ 13.5 m @ 60° to C/A.</p> <p><u>13.5 - 20.6</u> Str chl-clay alt'n + reddish 2ndary biotite. Minor qtz+carb vning. @17.2 m 4 cm white qtz vn @30°</p> <p><u>20.7 - 31.2</u> Minor grey qtz vnlt, minor white clay/seric on frags. @ 23.5 m 3 cm zone of parallel grey-white banded qtz vnlt @ 40° to C/A 31.1 - 31.2 @ lower contact is zone of 10% vugs, with white clay partially filling</p>	<p><u>5.7 - 10.5</u> v minor py</p> <p><u>10.5 - 12.0</u> 5% py - altering mafics + diss</p> <p><u>12.0 - 12.5</u> 5-10% py</p> <p><u>12.5 - 20.6</u> Minor diss py + py vnlt. Locally up to 5%. Tr cpy.</p>	128554	5.7	8.2	2.5
				128555	8.2	10.5	2.3
				128556	10.5	12.5	2.0
				128557	12.5	15.5	3.0
				128558	15.5	18.2	2.7
				128559	18.2	20.6	2.4
				128560	20.6	23.1	2.5
				128561	23.1	25.6	2.5
				128562	25.6	28.1	2.5
				128563	28.1	31.2	3.1

			31.2 - 73.5 GOLDEN FLEECE INTRUSIVE	vugs + > py than above					
				<u>31.2 - 33.0</u> Mod-str py+ clay??/seric alt'n. Soft, local greenish caste.	<u>31.2 - 33.0</u> Minor py + tr cpy in vuggy vnlt with Qtz. 1-2% diss py.	128564	31.2	33.0	1.8
				<u>33.0 - 34.9</u> Vuggy, locally silic'd & cut by Qtz-py stringers & bx zones. Bx zones are epithermal looking with kaolinized intrus frags & fsp in grey Qtz mrtx - may have up to 10% vugs to 0.5 cm locally. Sharp upper and lower contacts @ 33.0 & 34.9 m @ 20° to C/A.	Locally py stringers define weak fabric. Also local 1-2 cm zones of massive py + tr cpy.	128565	33.0	34.9	1.9
			39.2 - 40.4 This zone is paler grey, med grained with strong intrus texts.		<u>34.0 - 34.9</u> 5% fine py	128566	34.9	38.0	3.1
						128567	38.0	41.0	3.0
						128568	41.0	44.0	3.0
				<u>34.9 - 60.8</u> Fsp saus, Py partially altering mafics. Mod soft. Minor grey Qtz + white clay/seric vnlt. Pale greenish tinge (from seric?). Rx are slightly harder here, texts blurred and sugary looking than in 31.2 - 33.0. Is this weaker alt'n or poss d.t. silica here (ie. phyllic)?	<u>34.9 - 60.8</u> 2-5% py, diss & as partial alt'n of mafics + locally as large patches. Minor hairline py vnlt. Minor cpy, gen with py in large patches.	128569	44.0	47.0	3.0
						128570	47.0	50.0	3.0
						128571	50.0	53.0	3.0
						128572	53.0	56.0	3.0
						128573	56.0	58.4	2.4
						128574	58.4	60.8	2.4
						128575	60.8	63.8	3.0
			<u>60.8 - 66.7</u> Pale grey, med grained fsp porphyry with rare Qtz-eyes. Good intrus texts. Coarser grained and paler than above or below. Rare chert clasts to 6 cm.	<u>60.8 - 66.7</u> Fsp saus. Mafics part alt'd to py. Minor grey chalc & xtalline Qtz vnlt with chl &	<u>60.8 - 66.7</u> 5% py - diss, vnlt, and part alt'n of mafics	128576	63.8	66.7	2.9

			<p><u>66.7 - 70.2</u> Med grey-green Golden Fleece with rare qtz eyes. Finer grained than above and darker. Stronger alt'n than above with seric fsp & zones of silic'n, bx & vning throughout.</p> <p><u>70.2 - 73.5</u> Pale grey, med grained qtz-eye fsp porph as in 60.8-66.7. Mod soft, mod alt'd & increasingly vuggy from 71.5 - 73.5.</p>	<p>clay/seric zones within. Vns dom @ 40° & 80° to C/A. Minor white seric? on frags.</p> <p><u>66.7 - 70.2</u> Fsp pale green, sericitized, mafics chlitized. Local silic'd or silic'd bx zones to 30 cm within this interval. 30% of this interval is silic'd intrus or vning. Qtz vns are clear-white, may have fluor, may also have py as selveges and may be banded clear-white-grey qtz & may be vuggy with qtz or fluor druse.</p> <p><u>70.2 - 73.5</u> Fsp saus. Pale green-grey mod soft, sericitized mtrx. Mafics part alt'd to py. Minor qtz vnlt may be vuggy.</p>	<p><u>66.7 - 70.2</u> 5% py - dom in large patches with tr cpy in silic'd zones & vns.</p> <p><u>70.2 - 73.5</u> 5% py, as part. alt'n of mafics, coarse clots, diss, & +/- with qtz in vnlt.</p>	<p>128577</p> <p>128578</p> <p>128579</p>	<p>66.7</p> <p>68.4</p> <p>70.2</p>	<p>68.4</p> <p>70.2</p> <p>73.5</p>	<p>1.7</p> <p>1.8</p> <p>3.3</p>
73.5	85.6	Contact / Intrusive Breccia	<p>Complex zone of 1) Intrusive bx with angular clasts of chert & intrusive + large qtz eyes with fng, often chilled intrusive mtrx. Clasts range from <0.5 cm to >6 cm. Bx is mtrx supported with gen 20-40% clasts. and 2) Pale br chilled Golden Fleece and 3) Med grained med gry-green qtz-eye porph with saus fsp.</p>	<p>Local silic'd zones. Mod-abund white qtz +/- carb vnlt & space finning + grey qtz vnlt</p>	<p>2-5% py - finely diss + vnlt + hairline stringers may define weak fabric @80° to C/A.</p>	<p>128580</p> <p>128581</p> <p>128582</p> <p>128583</p>	<p>73.5</p> <p>76.5</p> <p>79.5</p> <p>82.5</p>	<p>76.5</p> <p>79.5</p> <p>82.5</p> <p>85.6</p>	<p>3.0</p> <p>3.0</p> <p>3.0</p> <p>3.1</p>
85.6	90.1	Fault Zone	<p>Mixed zone of chert/qtz frag bx with black pyritic mtrx, chert, intrusive, gouge/vning. Core is very broken - poor recoveries.</p> <p><u>85.6 - 85.8</u> Bx - 40% ang frags, 3mm - 3cm in size, of alt'd intrus, chert & qtz in fng dark grey-green pyrite rich mtrx.</p>		<p><u>85.6 - 85.8</u> 10-15% py - coarse clots & v fine in bx mtrx</p>	<p>128584</p>	<p>85.6</p>	<p>88.0</p>	<p>2.4</p>

			<p><u>85.8 - 86.1</u> Pale grey-brown fine grained chilled intrusive, mod soft, cut by abund grey qtz vnlt. Weak fabric defined by qtz vnlt & hairline py strngs @70° to C/A.</p> <p><u>86.1 - 89.1</u> Med grained, pale grey Golden Fleece intrusive with rare qtz eyes, 50% alt'd fsp, with bx, gouge and silic'd zones @ 87.32-87.33; 87.55-87.80 Chert crackle zone 87.8-88.0 Gouge/Qtz vn/chert bx zone @ 88.0-88.5</p> <p><u>89.1 - 90.1</u> Grey chert- mod broken, with chl stringers and on fracs</p>	<p><u>85.8 - 86.1</u> Abund stkrk grey qtz vnlt cutting less common earlier white qtz vnlt. Mafics alt'd to py.</p> <p><u>86.1 - 89.1</u> Fsp saus, mafics alt'd to py + chl</p>	<p><u>85.8 - 86.1</u> 10% py as part alt'n of mafics, with qtz in vnlt, and as hairline stringers</p> <p><u>86.1 - 89.1</u> 2% py, as part alt'n of mafics + with chl in hairline stringers</p> <p><u>89.1 - 90.1</u> 2% py - diss + with chl in stringers</p>	128585	88.0	90.1	2.1
90.1	91.1	Chilled Intrusive / Contact Bx zone	Pale grey brown chilled intrusive with 20% large angular-round clasts of grey chert to 15 cm in size. Weak fabric defined by chl-py vnlt @50° to C/A.	Minor seric & chl on fracs. Minor qtz vnlt.	2% py - as narrow vnlt	128586	90.1	91.1	1.0
91.1	93.0	Chert	Grey - pale green chert. Textureless with rare clasts of pale br chilled, silic'd intrusive- also v fng & v siliceous, but characteristic pale br colour and rarely see rem fsp & qtz phenos + gmass qtz grains.	Minor chl on fracs and with py.	3% py - diss & as narrow vnlt.	128587	91.1	93.0	1.9
93.0	117.1	Silic'd Intrusive / Mylonite Zone	<p>Majority of zone is medium grey, fine grained, hard with rem intrusive text visible. Looks to be same intrusive we've been in, although darker here and silic'd. Has stressed appearance with paler fng material around clasts of chert or silic'd int which gives weak fabric @ 60°. Hornfelsed looking zones locally near lower contact. Also locally get zones of paler grey, soft alt'd pyritic intrusive as higher in hole. Also, locally looks like grey chert, or poss so intensely silic'd intr that no texts left.</p> <p>99.4 - 100.4 Qtz vn - white, crackled looking with seric + py/chl on fracs. V. broken with poor recov.</p> <p>102.0 - 102.1 10 cm qtz vn as above @50° to C/A.</p> <p>102.3 - 102.4 Bx vn with 5 cm zone of massive py, then 5 cm of white qtz frags in py mtrx @55° to C/A.</p>	Gen mod-str silic'n. Mod white & grey qtz vnlt.	2-4% py - diss & coarse in vnlt.	128595	93.0	96.0	3.0
						128588	96.0	99.9	3.9
						128589	99.9	100.4	0.5
						128590	100.4	104.0	3.6
						<u>102.3 - 102.4</u> 40% py, 2% cpy in vn & bx intrx			

			<p><u>102.4 - 103.6</u> Minor narrow qtz bx zones with intrus frags in qtz mtrx & occasional large patches of py.</p> <p><u>106.9 - 107.0</u> Qtz bx zone with grey silic'd intr frags in whit qtz mtrx</p> <p><u>107.3 - 107.5</u> Qtz bx zone as above, @ 10° to C/A, could be same zone as in 106.9-107.0, but running down zone?</p> <p>112.2 - 3 cm grey clay gouge zone</p>	<p><u>102.4 - 103.6</u> mod pale-emerald green clay - poss marip? In vnlt & on frags.</p> <p><u>104.2 - 106.9</u> Pale grey with saus fsp, soft alt'd mtrx & mafics alt'd to py. Cut by numerous grey qtz vnlt.</p>		128591	104.0	107.5	3.5
						128592	107.5	110.5	3.0
						128593	110.5	113.5	3.0
						128594	113.5	117.1	3.6
117.1	129.8	Attwood Group Mudstone	<p>Typical greenish-grey Attwood interbedded mudstone/grit with rare chert clasts. Gritty sst may be as ang clasts within mudstone. Locally weakly vuggy but unalt'd, unminz'd. Bedding @ 50°. 2 cm grey gouge zones @ 117.4m and 118.0 @ 60° @ 117.1 sharp contact @ 30°</p>		1% euhedral diss py + py vnlt.				

Hole Tam 95-07

Test Hole 92-27 zone deeper in same section as Hole 95-06, same set-up as 95-06.

Northing: Tam 91 Grid 0+46 N
 Easting: 7+45 E
 Azimuth: 220°
 Dip: -85°
 Depth: 199.3 metres

Drilled Oct 1-3, 1995
 Drilled by: Beaupre Drilling
 Logged by: L. Caron
 Core stored at Boundary Falls.

Interval		Rock type	Description	Alteration	Mineralization	Sample			
From (m)	To (m)					Sample Number	From (m)	To (m)	Interval (m)
0	2.1	Overburden							
2.1	4.5	Ultramafic	Dark blue-grey, fng, strongly magnetic, 20-30% fine fsp visible, 70% fine mafics. Same as @ top of 95-06. Dyke cutting KH Group metavolcs, contact @ 80°.	Mod white qtz vnls, dom @ 60°	5% diss py				
4.5	6.8	Knob Hill Group Metavolcs	Pale grey-green, fng, mod hard, up to 10% xenoliths of chert & dark alt'd intrusive. Flow bx? 4.5 - 5.7 Broken with rusty frags, bleached gougy zone @ 5.6-5.7m.	v minor qtz vnls	2-4% py, diss & vnls				
6.8	8.9	Ultramafic	as in 2.1 - 4.5 m						
8.9	25.8	Knob Hill Group interbedded Metavolcs and Chert	<u>8.9 - 16.1</u> Metavolc as in 4.5 - 6.8. Rem fsp, 20%, <1mm visible locally. Mottled appearance dt alt'n. <u>16.1 - 16.45</u> Chert, v fng, grey, v hard, cut by minor buff clay-carb vnls + py vns. <u>16.45 - 16.75</u> Metavolc as above <u>16.75 - 17.3</u> Chert as above	<u>8.9 - 16.1</u> mod perv clay-chl, minor qtz vnls <u>16.1 - 16.45</u> Minor buff clay-carb vns <u>16.45 - 16.75</u> as in 8.9 - 16.1	<u>8.9 - 16.1</u> 2% py, dom with qtz in vnls. <u>16.1 - 16.45</u> 1-2% py <u>16.45 - 16.75</u> 2% py, dom with qtz in vns	128601	16.75	18.4	1.65

			<p><u>17.25 - 17.3</u> Qtz vn</p> <p><u>17.3 - 18.4</u> Metavolc, clast supported bx with 90+% ang clasts of alt'd volc, may be silic or clay alt'd with silic mtrx. 5% vugs with rusty clay partial filling.</p> <p><u>18.4 - 19.8</u> KH intrusive, med grained, mod fabric @ 40° to C/A defined by hairline mafic segregations alt'd partially to py. 60-70% fsp, 30% mafics, darker than G Fleece and missing qtz.</p> <p><u>19.8 - 20.0</u> Metavolc as above</p> <p><u>20.0 - 22.5</u> Chert as above, minor chl on frags.</p> <p><u>20.7 - 20.8</u> narrow dyke of pale green alt'd intrusive</p> <p><u>21.1 - 21.5</u> alt'd dyke as above, @ 70°</p> <p><u>21.5 - 21.8</u> Fault zone. Tight bx with 60% clasts, avg < 1cm of metavolc, chert and pale pink intrusive? + rare qtz eyes with greenish chl mtrx.</p> <p><u>22.5 - 25.8</u> KH intrusive as in 18.4 - 19.8m.</p>	<p><u>17.25 - 17.3</u> qtz vn, vuggy open space, with grey chert clasts in drusy qtz vn, 30° to C/A.</p> <p><u>17.3 - 18.4</u> bx, silic mtrx</p> <p><u>20.7 - 20.8</u> and <u>21.1 - 21.5</u> str clay alt'n</p>	<p><u>17.25 - 17.5</u> 2-5% fine py</p> <p><u>17.3 - 17.84</u> 1-2% diss py</p> <p><u>18.4 - 19.8</u> 3% py, part alt'n of mafics.</p> <p><u>20 - 22.5</u> 2-3% py, except for tr. in dykes</p> <p><u>22.5 - 25.8</u> 3% py, part alt'n of mafics</p>				
25.8	39.6	Contact Bx	<p>Contact phase of qtz-eye porph unit (G Fleece) with KH Group. Mixes zone of KH metavolcs, qtz-fsp porph, and bx with clasts of chert and metavolcs in intrusive mtrx + chilled G Fl intrusive. Minor frags @ 40° show weak slicks + qtz vnlt.</p> <p><u>28.5 - 29.7</u> Dyke of B phase intrusive</p> <p><u>31.0 - 31.7</u> Zone has up to 10% epithermal grey-white bx vns @ 40°, to 3 cm wide. Bx vns may be open space, with small ang alt'd clasts in fng silica mtrx.</p>	<p><u>31.0 - 31.7</u> up to 10% epith qtz bx zones to 3 cm wide.</p>	<p>2-3% py, diss and vnlt.</p> <p><u>28.5 - 29.7</u> 5% py, diss and vnlt.</p>	128602	25.8	28.5	2.7
						128603	29.7	31.7	2.0

39.6	68.4	Golden Fleece Intrusive	Pale grey, med grained with 30% fsp, 20% qtz phenos, 10% mafics, avg 1mm in fng gmass. Massive with good core recov. Up to 5% xenoliths locally, <1 cm, round to subangular, of dark grey mafic rich rx, part alt'd to py in places. Also rare chert xenoliths. Mod soft with pale green tinge from saus of fsp phenos & gmass fsp. Mtrx may have pink tinge locally. Local zones of contact bx as above ie) 41.9 - 42.7 @ 30° to C/A.	Mafics part alt'd to py + chl, fsp saus (phenos and gmass). Mior white qtz vnlt, rare grey qtz epith bx vnlt @ 30° ie) 41.9, 62.4m.	5% py, diss and vnlt. Tr cpy and minor patchy pyrrhotite ie)47.8	128604	39.6	42.6	3.0
			47.7 - 52.0 Interval of >> qtz vning, espec 50.2 - 52.0. Low angle, white xtalline bull qtz with fng grey qtz selveges. Gen unminz'd.			128605	47.7	50.2	2.5
			Pale grey gouge/intense clay alt'd zones @ 55.7 - 55.75			128606	50.2	52.0	1.8
			56.5 - 56.6			128607	55.7	57.5	1.8
			57.2 - 57.25			128608	57.5	59.3	1.8
			57.8 - 57.83 @ 25° to C/A	59.3 - 62.1 str silic'd		128609	59.3	62.1	2.9
			58.3 - 58.5			128610	62.1	63.8	1.7
			63.8 - 68.4 characteristic pale grey-yellow-br fng mod soft, chill phase of G Fleece intrusive.			128611	63.8	66.8	3.0
						128612	66.8	69.3	2.5
			68.4	69.3	Contact Bx	Contact phase of G Fleece intrusive, sim to above but with >> chilled intrus, < bx clasts of chert + ?, chilled mtrx soft.	Minor qtz vnlt	2-4% diss py	
69.3	117.9	B phase intrusive	Dark grey, fng, hard. Massive with good core recov and minimal qtz vning. Occas coarsens slightly to show 30-40% fine fsp about 0.5 mm. Here it looks like G Fleece is intrusive into this by chilled G Fleece zones and contact bx zones, but relationships elsewhere suggest B phase intruded late along pre-existing G FI contact.	V minor qtz-py-chl vnlt + late epith qtz vnlt	2% py dom as vnlt and in large patches with po and tr cpy. Dom dir of py vnlt @ 60° to C/A.				
			Becomes v fng, v hard locally. Rare xenoliths of chert + alt'd intrusive. A number of intervals of pale yellow chilled G Fleece within, as remnans within B phase, or B phase intruded as dykes into chilled G FI. 92.2 - 94.0 Chilled G Fleece with 10 cm weak epith bx zone within, Sharp lower contact @ 80° to C/A.	92.2 - 94.0 str clay alt'n, local gouge, minor qtz vnlt, 10 cm epithermal zone @ 93.2m	92.2 - 94.0 Minor py	128613	92.2	94.0	1.8
						128614	95.8	98.5	2.7

			<p><u>95.8 - 100.9</u> Chilled G Fl as above. Str clay alt'n.</p> <p>Also a number of intervals of KH chert, again remnants within B phase.</p> <p><u>105.5 - 106.1</u> Chert.</p> <p><u>111.4 - 115.7</u> Mixed zone of chert, chilled G Fleece and B phase intrusive with mod qtz vning and str silic of G Fl. Mylonite zone?</p>	<p><u>95.8 - 100.9</u> Str clay, str white clay on frags, minor qtz and epith qtz vnlt and bx zones</p> <p><u>111.4 - 115.7</u> Str silic, mod qtz vning dom @ 45°.</p>	<p><u>95.8 - 100.9</u> Minor py</p> <p><u>111.4 - 115.7</u> 2-5% py</p>	<p>128615</p> <p>128616 128617</p>	<p>98.5</p> <p>111.4 113.5</p>	<p>100.9</p> <p>113.5 115.7</p>	<p>2.4</p> <p>2.1 2.2</p>
117.9	129.0	Contact Bx, Mylonite zone	<p>Contact bx zone, sim to where seen above but stressed looking without good bx texts for the most part. Mylonite zone sim to 111.4 - 115.7. Chert frags are large, commonly > 6cm, make up to 15% of zone. Material between frags is chilled G Fl. Fol'n and dom dir of epithermal vning is 50° to C/A.</p> <p><u>122.0 - 122.7</u> Fault. v broken, poor recov, pyritic with qtz vning.</p>	<p>Mod white qtz vnlt and epith grey qtz vnlt and bx zones to 4 cm which may have fine py rich mtrx</p> <p><u>122.0 - 122.7</u> Fault zone</p>	<p><u>122.0 - 122.7</u> 15-20% fine diss py</p>	<p>128618</p>	<p>121.8</p>	<p>124.8</p>	<p>3.0</p>
129.0	169.6	Knob Hill Group, older Diorite intrusive	<p>As in 95-08 109.8m</p> <p>Mixed sequence of dark green, med-fine grained, massive hard B phase intrusive as dykes cutting paler med grained intrusive, also massive but bleached and silic'd, more alt'd than typical B. Also intervals of KH chert and gst. Prob older intrusive cut by B dykes.</p> <p><u>132 - 133</u> chert/tuff weak bedding @ 50°.</p>	<p><u>129.0 - 133.1</u> silic'd throughout with zones of more intense silic + bleaching</p> <p><u>130.2 - 131.2</u> intense silic, minor grey silica flood zones</p> <p><u>133.0 - 133.8</u> bleached, silic'd</p> <p><u>134.2 - 137.7</u></p>	<p>Minor diss py throughout. Str py in qtz vns as selveges and bands.</p>	<p>128619</p> <p>128620</p> <p>128621</p>	<p>130.2</p> <p>131.2</p> <p>134.2</p>	<p>131.2</p> <p>134.2</p> <p>135.9</p>	<p>1.0</p> <p>3.0</p> <p>1.7</p>

				bleached, silic'd, mod qtz vning		128622 128623	135.9 137.7	137.7 139.9	1.8 2.2
				<u>139.9 - 153.1</u> bleached, silic'd, mod qtz vning		128624	139.9	143.0	3.1
				<u>153.1 - 165.1</u> clay alt'd, mod qtz vning and flood zones.		128625 128626	143.0 146.0	146.0 149.0	3.0 3.0
			<u>153.1 - 165.1</u> Mottled, greenish-grey intrusive, soft, clay-chl alt'd, cut by qtz vns, heavy py locally, local silic'd zones. V rare qtz eyes in soft, mottled stressed looking zones.	<u>153.5 - 153.9</u> int silic'd zone or chert?		128627 128628	149.0 151.0	151.0 153.1	2.0 2.1
				<u>154.3 - 154.6</u> white qtz vn, 40% banded py	<u>154.3 - 154.6</u> 40% py as bands and zones within qtz vn, banding 60° to C/A.	128629 128630	153.1 156.0	156.0 159.0	2.9 3.0
				<u>156.1 - 156.2</u> sulfide rich qtz vn @ 45° to C/A	<u>156.1 - 156.2</u> 20% py, diss and as bands within qtz vn, banding 45°.	128631 128632 128633	159.0 162.0 165.1	162.0 165.1 167.3	3.0 3.1 2.2
			<u>165.1 - 169.6</u> Pale grey-yellow, typical G Fleece chill zone. Fine grained, hard, siliceous, rare mafics.			128634	167.3	169.6	2.3
169.6	196.3	Mixed zone Wild Rose Fault (169.6-182.1) and Contact Bx zone	Complex section of tectonic and stressed contact bx. Looks like G Fleece intrudes along flt zone with existing qtz vn, flt zone thus becomes a contact bx zone of intrusive, later movement on flt and intrusion of Tert dyke causes tectonic bx overprint.		3-5% diss py				

			<p><u>169.6 - 172.0</u> Pale grey-green, int silic'd bx zone. Tect/epith bx overprint to contact bx. Ang clasts of chert, qtz and intrus in fng silica or silic'd intrus mtrx.</p> <p><u>172.0 - 173.5</u> Contact bx with chert + ? clasts in mtrx of chilled G Fl + silic'd G Fl. Also interval of softer more clay alt'd G Fl as in large interval above flt.</p> <p><u>173.5 - 174.0</u> White qtz vn, high temp looking, looks early, v irreg contacts.</p> <p><u>174.0 - 178.9</u> Stressed contact bx zone as in 169.6 - 172.0, but clay alt'd, not silic'd.</p> <p><u>178.9 - 182.1</u> Tertiary FP dyke. Massive, unaltd, chilled contacts @ 75° to C/A.</p> <p><u>182.1 - 196.3</u> Contact bx zone with indistinct large clasts of med grained intrusive and less common chert with mtrx of chilled or fine grained G Fleece intrusive. Mod-str perv clay-chl, stressed looking.</p>	<p><u>169.6 - 172.0</u> int silic bx zone</p> <p><u>174.0 - 178.9</u> mod clay alt'd, mod qtz vning and bx zones.</p> <p><u>182.1 - 196.3</u> mod-str perv clay-chl alt'n, minor qtz vns and chl-seric on fracs.</p>	<p><u>173.5 - 174.0</u> Minor py and cpy.</p>	128635	169.6	172.0	2.4
						128636	172.0	173.5	1.5
						128637	173.5	174.0	0.5
						128638	174.0	176.5	2.5
						128639	176.5	178.9	2.4
196.3	199.3	Attwood Group seds	Characteristic Attwood Group sed in fw of Wild Rose Fault. Pale green-brown mudstone with grit bands, bedding 20-30° to C/A.	str seric on fracs.					

Hole Tam 95-08 To test the Wild Rose zone deeper in the same section as Holes 92-27, 95-06 and 95-07.

Northing: Tam 91 Grid 1+00 N
 Easting: 8+40 E
 Azimuth: 220°
 Dip: -65°
 Depth: 231.3 metres

Drilled Oct 3-5, 1995
 Drilled by: Beaupre Drilling
 Logged by: L. Caron
 Core stored at Boundary Falls.

Interval		Rock type	Description	Alteration	Mineralization	Sample Number	From (m)	To (m)	Interval (m)
0	7.4	Overburden							
0	26.6	B phase intrusive with intermixed Knob Hill Group intrusive + lesser chert and gst	<u>7.0 - 7.4</u> Fine grained, dark grey-green, weakly magnetic, B phase dyke. Massive, unalt'd.		Minor diss py and py vnlt.				
			<u>7.4 - 10.8</u> Older intrusive, soft clay alt'd, broken with v rusty frags, local heavy bands of py + mod qtz vning. Strongly bleached locally.	<u>7.4 - 10.8</u> perv clay alt'd. Mod qtz vning, may be strongly bleached	<u>7.4 - 10.8</u> Local band to 50% py, to 0.5 cm wide, with qtz.	128651	7.4	10.8	3.4
			<u>10.8 - 13.2</u> Massive fresh B phase dyke as above, with sharp contacts @ 60°.						
			<u>13.2 - 16.8</u> Older fsp rich intrusive as in 7.4 - 10.8	<u>13.2 - 16.8</u> as in 7.4 - 10.8		128652	13.2	16.8	3.6
			<u>14.5 - 14.7</u> grey int clay alt'd/gouge zone						
			<u>14.7 - 15.8</u> banded cherty zones - mylonite?						
		<u>16.8 - 21.3</u> Massive fresh B phase dyke as above @ 50° to C/A.							
		<u>21.3 - 24.4</u> Mixed zone of KH chert, muddy gst and str clay alt'd older intr with rusty frags and mod qtz vning	<u>21.3 - 24.4</u> str clay alt'd, mod qtz vns and bx zones.	<u>24.4 - 26.6</u> Minor qtz vnlt with 10% py + minor cpy	128653 128654	21.3 24.4	24.4 26.6	3.1 2.2	
		<u>24.4 - 26.6</u> Massive fresh B phase dyke as above, @ 70° to C/A							

26.6	87.0	Mylonite zone	Mixed zone of pale green, fine-med grained, older intrus + chert + gst, sheared looking, textures are mottled and indistinct. Looks sim to contact bx/mylonite zone seen in Holes 95-06 & -07. Mod qtz vning and qtz-py vning and minor epith chalc qtz bx zones. Mod broken with rusty fracs and minor seric on fracs. Cut by rare late B phase dykes.	Mod qtz & qtz/py vning. Min epitherm chalc bx zones. Minor seric on fracs. Local mod-str clay alt'n.	2-3% diss py + >> py in cherty clasts & minor py in qtz vns.	128655	26.6	29.0	2.4
			128656			29.0	31.4	2.4	
			128657			31.4	32.2	0.8	
			128658			32.2	35.4	3.2	
			128659			35.4	38.4	3.0	
			128660			79.0	82.0	3.0	
			128661			82.0	85.0	3.0	
			<u>31.4 - 31.8</u> bx zone with 10-20% small chert + qtz vn clasts in grey gougy py mtrx.						
			<u>31.8 - 32.1</u> v broken, rusty						
			<u>32.1 - 32.2</u> grey epith chalc qtz bx zone with 10-20% small chert and intr clasts in grey chalc qtz mtrx.						
			<u>48.6 - 50.2</u> Dyke of fng dark grey B phase intrusive						
			<u>51.8 - 57.6</u> aphanitic volc or poss chilled Knob Hill intrusive. Muddy grey, cherty appearance but not hard enough, abund fine fsp on stain. Massive unalt'd with little vning.						
			<u>70.7 - 73.3</u> aphanitic volc or chill zone as in 51.8 - 57.6m. V sharp but irreg contacts.						
			<u>79.0 - 85.0</u> Same contact bx/mylonite zone, but looks slightly alt'd here. Zone is about 15% chert clasts with stressed intrusive mtrx, may be chilled. Minor clay-chl on fracs.						
			<u>81.3 - 81.4</u> bx zone with 30% small white qtz and chert frags in grey qtz-py mtrx.						
			@ <u>85.0</u> bx/mylonite becomes dom aphan volc mtrx with only minor chert clasts and irreg zones						
87.0	109.8	Knob Hill Group Chert	<p>Pale grey-white, fng, v hard chert. Locally cut by tight networking clear qtz vnlt (looks remobilized, not introduced silica), which can locally make up 30% of rx ie)93.0m</p> <p><u>92.0 - 92.1</u> narrow yellowish chilled G Fleece dyke @ 60°</p>	Minor late white qtz-clay vnlt. Minor chl+py on fracs.	<u>87.0 - 99.6</u> Minor diss py & rare large patches				

			99.6 - 106.0 chert has v peculiar texture, small grey wavy blebs, not visible on sawn surface.	99.6 - 106.0 Minor chl+py on fracs. Rare narrow bx zones to 1 cm with ang chert clasts supported by grey pyritic soft mtrx.	99.6 - 106.0 5% py - diss & vnlt & large patches with chl on fracs				
109.8	180.0	Knob Hill Group intrusive, chert and gst, intruded by B phase and G Fleece dykes	Mixed zone of dom older KH Group diorite intrusive, lesser chert and gst, cut by dykes of fresh, B phase intrusive and pale yellow-grey chilled alt'd G Fleece intrusive. <u>109.8 - 118.3</u> KH diorite <u>118.3 - 118.4</u> B phase dyke @ 60° <u>118.4 - 119.2</u> KH diorite <u>119.2 - 120.0</u> alt'd chilled G Fleece dyke <u>120.0 - 121.1</u> B phase dyke <u>121.1 - 122.0</u> KH Group greenstone <u>122.0 - 122.3</u> Alt'd Golden Fleece dyke with minor gouge zone on lower contact <u>122.3 - 126.6</u> B phase dyke <u>126.6 - 133.8</u> KH Group diorite with slight increase in qtz vning from 126.6-129.5m <u>133.8 - 138.3</u> KH Group greenstone, pale grey-green aphanitic volc. Mod hard with minor irreg xenoliths of dark green mafic ?, part alt'd to py with bleached rims. <u>137.8 - 138.2</u> crackle bx, silic'd	weak-mod qtz vning in KH dior & mod chl alt'n <u>119.2 - 120.0</u> str perv clay <u>122.0 - 122.3</u> weak-mod perv clay <u>135.1 - 135.4</u> alt'd zone in KH gst, gouge + bleaching with abund qtz vnlt and pale pink tinge.	2-3% py as repl of mafics + with qtz in vns in KH intrus. Tr-1% py in G Fl and B phase dykes. <u>133.8 - 135.1</u> 3-5% py as large patches, repl mafic xenol in volcs	128662	126.6	129.3	2.7
						128663	133.0	135.5	2.5
						128664	135.5	138.3	2.8

		<p><u>138.3 - 140.8</u> KH Group diorite as above. Local bleaching and str-int clay alt'n & minor silic'n. Mod qtz vning + py.</p> <p><u>140.8 - 142.8</u> KH greenstone</p>	<p><u>138.3 - 140.8</u> local str-int clay alt'n & bleaching. Minor zones of str silic</p>	128665	138.3	140.8	2.5
		<p><u>142.8 - 147.2</u> alt'd KH intrusive, stressed looking with rare clasts of chert >> alt'd than above and cut by stockworking vnltis of qtz. 5cm gouge zone @ 145.9m</p>	<p><u>142.8 - 147.2</u> pale bleached intrusive, gen weak-mod clay alt'd, locally silic'd, stkwrk qtz vnltis. Alt'n stronger in zone 142.8 - 144.6.</p>	128666	142.8	145.0	2.2
		<p><u>147.2 - 148.7</u> KH greenstone as above, massive, unalt'd</p>	<p><u>147.2 - 148.7</u> pale bleached intrusive, gen weak-mod clay alt'd, locally silic'd, stkwrk qtz vnltis. Alt'n stronger in zone 142.8 - 144.6.</p>	128667	145.0	147.2	2.2
		<p><u>148.7 - 155.9</u> B phase dyke, Sharp contacts @ 60°. Massive, fresh except for zone 151.4 - 153.6. 6cm gougy contact @ 60° @ 151.4.</p>	<p><u>151.4 - 153.6</u> alt'd, bleached, int perv clay, mod vuggy qtz vnltis</p>	128668	151.4	153.6	2.2
		<p><u>155.9 - 158.9</u> Mixed zone of KH chert, gst and intrusive, stressed and alt'd (silic'd and perv clay) in intrusive zones.</p>	<p><u>155.9 - 158.9</u> mod-str clay alt'n and bleaching, qtz vning and local silic'n in stressed intrusive.</p>	128669	155.9	158.9	3.0
		<p><u>158.9 - 163.0</u> Massive fresh B phase dyke with 4 cm zone of white qtz vning @ 90° to C/A.</p>	<p><u>158.9 - 163.0</u> Massive fresh B phase dyke with 4 cm zone of white qtz vning @ 90° to C/A.</p>				
		<p><u>163.0 - 166.2</u> Alt'd KH intrusive, weak bleaching and weak clay-chl alt'n. Stressed looking.</p>	<p><u>163.0 - 166.2</u> weak bleaching and clay/chl alt'n. Min qtz vning</p>	128670	165.0	166.9	1.9
		<p><u>166.2 - 166.9</u> Mixed zone of volc & intrus, weak bx text. Contact bx??</p>	<p><u>166.2 - 166.9</u> Mixed zone of volc & intrus, weak bx text. Contact bx??</p>				
		<p><u>166.9 - 180.0</u> KH aphanitic volc</p>	<p><u>166.9 - 180.0</u> crackled with network of tight chl/qtz stringers</p>	128671	175.1	177.5	2.4
				128672	177.5	180.0	2.5

180.0	209.9	Tertiary Gabbroic Dyke	Dark grey-black med grained dyke. Mod magnetic. Darker and coarser grained than B phase dykes. Str chl on frags. Porphyritic with 2-5% biotite phenos to 2mm, 5-10% subhedral px? to 3mm, both which are largely resorbed + 5% lath shaped fsp in fng dark mtrx. Rare chert frags. Sharp upper contact @ 30° to C/A.	Bleached zone @ contacts with clay/gouge.		128673	208.7	209.9	1.2
209.9	216.6	Wild Rose Fault zone	<u>209.9 - 211.7</u> KH gst with chert frags, mod chl, slicks on frags @ 30° <u>211.7 - 211.85</u> Qtz vn, white, massive, 2-5% cpy + lesser py as large patches. Sharp upper and lower contacts @ 70°. <u>211.85 - 212.35</u> KH diorite? <u>212.35 - 212.86</u> Qtz vn, white, with up to 30% wall rx. Massive vn to 212.7, then becomes stockworking vn in wall rx. Vn @ 80° to C/A. 5% py, 5% cpy. <u>212.86 - 213.7</u> Silic'd G Fl? Intrus cut by min qtz vnls. <u>213.7 - 213.92</u> Massive white qtz vn, tr py + cpy <u>213.92 - 215.9</u> clay alt'd G Fl intrus?, but by minor qtz vnls + py vnls. <u>215.9 - 216.0</u> Massive white qtz vn, unminz'd.			<u>209.9 - 211.7</u> Minor py 128674	209.9	211.7	1.8
						<u>211.7 - 211.85</u> 2-5% cpy + lesser py 128675	211.7	211.85	0.15
						<u>211.85 - 212.35</u> minor py 128676	211.85	212.35	0.5
						<u>212.35 - 212.86</u> 5% cpy, 5% py 128677	212.35	212.86	0.51
				<u>212.86 - 213.7</u> silic'd		<u>212.86 - 213.7</u> 5% py 128678	212.86	213.7	0.84
						<u>213.7 - 213.92</u> tr py + cpy 128679	213.7	213.92	0.22
				<u>213.92 - 215.9</u> clay-seric alt'd		<u>213.92 - 215.9</u> 10% py - diss & vnls 128680 128681 128682	213.92 215.9 216.0	215.9 216.0 219.0	1.98 0.1 3.0
216.0	228.0	Knob Hill Group chert and gst	Locally looks like Attwood Group below. <u>216.0 - 217.6</u> Grey-white chert & rare muddy interbeds. <u>217.6 - 221.0</u> v fng muddy looking, up to 15% clasts of chert to 5cm, muddy tuff?? @ <u>219.5</u> 5 cm white-buff qtz/bx zone	Minor qtz vnls	Minor py - diss and vnls	128683	219.0	222.0	3.0
						128684	222.0	225.0	3.0
						128685	225.0	228.0	3.0

			<p>221.0 - 228.0 slightly coarser grained, mod hard, fng fsp rich volc? or fine wacke? Cut by minor white qtz vnits. May have slicks on fracs @ 70°.</p> <p>@ 228.0 1.5 cm qtz vn, heavily minz'd with py-cpy @ contact of volcs andseeds @ 75° to C/A.</p>						
228.0	231.3	Attwood Group sediments	<p>Characteristic brown-grey Attwood group mudstone with gritty bands. Good bedding @ 60° to C/A.</p> <p>@ 228.0 contact @ 75° to C/A.</p>						

			@ 22.75m sharp contact @ 70° to C/A.	<u>21.75 - 22.75</u> perv clay-seric, mod qtz vnlt		128710 128711	22.75 25.75	25.75 28.75	3.0 3.0
22.75	114.5	Knob Hill Group Qtzite-Chert, cut by numerous B phase dykes which may be altered	<p><u>22.75 - 55.8</u> Metased. Grey-brown mottled colour with possible weak bedding @ 50°. Very hard. Locally segregations of qtz in fine muddy rx, gen fng, locally granular.</p> <p><u>55.8 - 57.3</u> Alt'd B phase dyke. Fng, mod soft, perv chl-clay with rusty fracs and minor qtz-py vnlt. Sim to 62.5 - 66.0m.</p> <p><u>57.3 - 62.5</u> Grey chert with rusty fracs and up to 5% vugs with qtz druse & tan clay.</p> <p><u>62.5 - 66.0</u> Alt'd B phase dyke as in 55.8 - 57.3 m with perv chl-clay alt'n. Contact @ 80° to C/A.</p> <p><u>66.0 - 68.1</u> Grey chert, fine grained, locally finely granular.</p> <p><u>68.1 - 74.3</u> B phase dyke. Massive, unalt'd except in chill zones, str magnetic.</p> <p><u>74.3 - 75.9</u> Grey chert as above.</p> <p><u>75.9 - 77.3</u> Alt'd B phase dyke. Fng, soft, perv chl-clay. Sharp gougy contacts @ 70° to C/A. Rusty fracs and local gougy zones. Weakly magnetic near upper contact where</p>	<p><u>22.75 - 55.8</u> v siliceous, minor qtz vnlt.</p> <p><u>34.7 - 38.6</u> local bx zones with silic mtrx, mod-str qtz vnlt.</p> <p><u>55.8 - 57.3</u> perv chl-clay. Minor qtz-py vnlt. Rusty fracs.</p> <p><u>62.5 - 66.0</u> as in 55.8 - 57.3</p> <p><u>68.1 - 74.3</u> weak-mod ep- hem with qtz in vnlt. Mod clay alt'n.</p> <p><u>75.9 - 77.3</u> Mod-str perv clay. Minor qtz</p>	Minor py.	128712 128713 128714 128715 128716	34.7 36.7 55.8 57.3 75.9	36.7 38.6 57.3 60.3 77.3	2.0 1.9 1.5 3.0 1.4

			<p>alt'n less intense.</p> <p><u>77.3 - 88.6</u> Grey chert as above. @ 88.6 m sharp contact @ 25° to C/A.</p> <p><u>88.6 - 96.2</u> B phase dyke. Fng, magnetic, unalt'd in core, muddy, non magnetic, clay-chl alt'd adj to contacts.</p> <p><u>96.2 - 102.2</u> Grey chert, locally vuggy with Qtz and clay filling.</p> <p>96.2 - 98.3 Local bx zones and grey chert clasts in tight grey mtrx.</p> <p><u>102.2 - 107.3</u> Alt'd B phase dyke, gen str-int alt'd. @ 102.2 contact @ 70° @ 107.3 contact @ 25°</p> <p><u>107.3 - 114.5</u> Grey-dark grey, fng chert.</p>	<p>vnlt.</p> <p><u>77.3 - 88.6</u> Minor Qtz vnlt @ 60°. Minor chl/py on fracs.</p> <p><u>88.6 - 96.2</u> clay-chl alt'd adj to contacts.</p> <p><u>102.2 - 107.3</u> str - int clay-chl alt'n. Minor Qtz vnlt.</p>	<p>and vnlt.</p> <p><u>77.3 - 88.6</u> 2% py - diss & on fracs with chl.</p> <p><u>88.6 - 96.2</u> 2% py - diss and vnlt.</p> <p><u>102.2 - 107.3</u> Minor py with Qtz +/- hem in vnlt.</p>	128717	88.6	89.9	1.3
						128718	89.9	92.1	2.2
						128719	92.1	96.2	3.9
						128720	96.2	99.2	3.0
						128721	99.2	102.2	3.0
						128722	102.2	104.7	2.5
						128723	104.7	107.3	2.6
114.5	123.7 m	B phase intrusive	Dark grey, massive fresh fng fsp-px porph, magnetic B phase intrusive cut by minor Qtz +/- hem/py/ep vnlt.	Minor Qtz +/- hem/py/ep vnlt	Minor py with Qtz in vnlt. Tr cpy.	128724	117.2	120.2	3.0

Interval		Rock type	Description	Alteration	Mineralization	Sample			
From (m)	To (m)					Sample Number	From (m)	To (m)	Interval (m)
0	3.7	Overburden							
3.7	12.5	Golden Fleece Qtz Diorite	<p><u>3.7 - 7.8</u> as in 95-09 0-9.6 m Med grained, grey Golden Fleece intrusive, broken with Fe-Mn frags.</p> <p><u>6.4 - 7.8</u> bleached, rusty, perv clay alt'n</p> <p><u>7.8 - 12.5</u> Chill zone, as in 95-09 9.6 - 10.9 m, Grey-buff, weakly rusty, fine grained granular text. @ 12.5m v sharp contact @ 90°.</p>	<p><u>6.4 - 7.8</u> Bleached, perv clay, minor rusty qtz vnlt</p> <p><u>7.8 - 12.5</u> Mod rusty vuggy qtz vnlt.</p>	<p><u>3.7 - 7.8</u> 2-5% diss py</p> <p><u>7.8 - 12.5</u> Minor py</p>	128726	3.7	6.4	2.7
						128727	6.4	7.8	1.4
						128728	7.8	10.1	2.3
						128729	10.1	12.5	2.4
12.5	112.8	Knob Hill Group Metaseds and Chert cut by B phase dykes and rare G Fl? dykes	<p><u>12.5 - 46.8</u> as in 95-09 22.75-55.8m Grey-muddy br chert/metased, mottled, weak bedding? @ 50°, Mod to extrem hard, fng. Local qtz segregations.</p>	<p>Minor qtz vnlt. Local brownish caste, may be fng secondary biotite?</p> <p><u>28.6 - 29.8</u> 10% grey xtalline qtz stkwking vuggy vnlt.</p>	Tr py	128730	28.6	29.8	1.2

Hole Tam 95-10

To test Laocoon zone deeper in section below 95-09

Northing: Tam 91 Grid 4+40 N
 Easting: 5+60 E
 Azimuth: 220°
 Dip: -65° (no dip test)
 Depth: 112.8 m

Drilled Oct 7-8, 1995
 Drilled by: Beaupre Drilling
 Logged by: L. Caron
 Core stored at Boundary Falls.

			<u>36.7 - 37.5</u> crackled looking with 10% limonite stained vugs and minor qtz vns.	<u>36.7 - 37.5</u> crackled, 10% vuggy, minor qtz vns.		128731	36.7	39.0	2.3
			<u>39.0 - 45.8</u> green-red ep/hem skarn zone. Hard to tell protolith.	<u>39.0 - 45.8</u> skarny <u>39.0 - 41.7</u> bleached, perv hem, str clay, weak chl-ep		128732	39.0	41.7	2.7
			<u>41.7 - 45.2</u> is dark green, gen soft, muddy chl-clay-ep alt'd, may be B phase dyke? Weak-mod magnetic.	<u>41.7 - 45.2</u> str clay-chl-ep alt'n	<u>41.7 - 45.2</u> 5% py, diss and vnlts.	128733	41.7	45.2	3.5
			<u>45.8 - 46.8</u> rx broken with rusty fracs, no good contact with chert.	<u>45.2 - 45.8</u> as in 39.0 - 41.7		128734	45.2	46.8	1.6
			<u>46.8 - 55.0</u> Grey-green chert-metased as above, hard, mottled appearance, locally crackled with weak chl on fracs	<u>55.0 - 55.8</u> muddy green, mod-str clay-chl	<u>46.8 - 55.0</u> 2% py.				
			<u>55.0 - 60.2</u> B phase dyke, Gen fng, dark grey, weak-mod magnetic, massive with mod clay-chl alt'n at edges. Chert xenoliths.	<u>59.8 - 60.2</u> weak chl-clay	<u>55.0 - 60.2</u> Minor py with qtz in vnlts.				
			<u>60.2 - 71.9</u> Grey chert with minor chl on fracs.	<u>67.8 - 68.3</u> and <u>70.1 - 70.5</u> mod clay-chl	<u>60.2 - 71.9</u> Minor py, tr cpy.				
			<u>67.8 - 68.3</u> and <u>70.1 - 70.5</u> narrow muddy alt'd B phase dykes with sharp lower contacts @ 80°.	<u>71.9 - 81.5</u> Minor qtz +/- py/ep/hem vnlts.	<u>71.9 - 81.5</u> 2% py in vnlts.				
			<u>71.9 - 81.5</u> B phase dyke as in 55.0 - 60.2, locally alt'd.	<u>71.9 - 73.8</u> str chl-clay <u>80.3 - 80.5</u> weak-mod chl-clay		128735	71.9	73.8	2.9

			<p><u>81.5 - 84.9</u> Grey chert as above.</p> <p><u>84.9 - 85.8</u> B phase dyke , weak-v weak chl-clay alt'n, sharp contacts @ 45°.</p> <p><u>85.8 - 92.6</u> Grey chert as above</p> <p><u>92.6 - 94.8</u> typical B phase dyke, locally alt'd.</p> <p><u>94.8 - 101.7</u> Grey chert as above.</p> <p><u>101.7 - 112.0</u> Pale grey massive intrusive, probably Golden Fleece but less distinct texts that at top of hole. Texts blurred by weak-mod perv silic'n. Looks like mafic-plag phenos in fng qtz rich gmass. <u>101.7 - 102.0</u> is contact bx zone with large clasts of chert and gst in fng intr mtrx.</p> <p><u>112.0 - 112.2</u> Unalt'd B phase dyke, sharp upper contact @ 90° to C/A, irreg lower contact.</p> <p><u>112.2 - 112.8</u> Knob Hill group chert and metaseds as above.</p>	<p><u>84.9 - 85.8</u> weak-v. weak chl clay</p> <p><u>92.6 - 92.7</u> <u>93.9 - 94.0</u> <u>94.5 - 94.8</u> mod chl-clay alt'n</p> <p><u>101.7 - 112.0</u> weak-mod silic'n, minor qtz +/- py vnlt.</p>	<p><u>101.7 - 112.0</u> 10% py, diss + vns.</p>	<p>128736</p> <p>128737</p> <p>128738</p>	<p>101.7</p> <p>105.2</p> <p>108.5</p>	<p>105.0</p> <p>108.5</p> <p>112.0</p>	<p>3.3</p> <p>3.5</p> <p>3.5</p>
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APPENDIX 2

Drill Sample Results

1706 95-06

COMP: KETTLE RIVER RESOURCES LTD
PROJ: #20
ATTN: L.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-0443-RJ1-2
DATE: 95/10/20
* ROCK * (ACT:F31)

P. 02
604 327 3423

TOTAL P. 02

SAMPLE NUMBER	AG PPM	AL %	AS PPM	BA PPM	BE PPM	BI PPM	CA %	CO PPM	CO PPM	CR PPM	CU PPM	FE %	GA PPM	K %	LI PPM	MG %	MM PPM	MO PPM	NA %	NI PPM	P PPM	PR PPM	SB PPM	SM PPM	SR PPM	TH PPM	TI %	U PPM	V PPM	W PPM	ZN PPM	Au-fire PPB
128551	.2	.73	527	139	3.2	3	4.15	.1	69	220	50	5.40	1	.01	7	5.00	1192	1	.01	329	460	22	1	6	180	1	.01	1	37.2	4	46	33
128552	.1	3.29	1	78	4.6	9	1.55	.1	49	51	34	7.63	1	.06	25	4.25	1487	1	.01	111	1980	47	6	3	1	1	.01	1	103.0	1	97	11
128553	1.2	1.47	1	51	2.9	14	1.90	.1	37	90	28	5.25	1	.14	10	2.03	680	1	.03	69	1140	51	2	2	23	1	.12	1	66.1	4	49	10
128554	.5	2.30	1	40	3.1	9	5.06	.1	42	172	55	5.52	1	.08	13	3.24	1530	1	.02	199	760	58	4	3	60	1	.05	1	93.4	7	77	26
128555	.4	3.11	1	60	3.7	9	3.94	.1	47	188	46	5.80	1	.14	23	4.65	1735	1	.02	173	830	167	6	5	67	1	.06	1	106.2	6	638	8
128556	.7	.97	373	17	3.1	5	3.94	.1	44	104	50	5.01	1	.05	13	3.41	666	1	.01	307	430	42	1	5	150	1	.01	1	32.3	1	60	35
128557	.5	3.08	1	26	4.1	8	3.49	.1	45	215	99	7.25	1	.05	27	4.61	1323	1	.01	135	1250	54	4	6	50	1	.01	1	104.9	6	114	61
128558	1.3	1.85	260	49	4.0	4	4.64	.1	49	311	81	6.27	1	.01	11	6.33	847	1	.01	409	810	14	1	6	398	1	.02	1	67.3	7	58	33
128559	1.3	2.29	1	29	3.3	3	3.96	.1	44	196	74	4.81	1	.01	17	5.38	736	1	.01	331	640	11	1	5	152	1	.02	1	62.5	4	56	18
128560	.6	3.39	1	22	4.5	7	2.26	.1	52	209	120	7.46	1	.05	25	5.30	1069	1	.01	227	930	35	5	5	1	1	.01	1	96.5	5	75	27
128561	1.0	2.65	1	21	3.8	9	1.20	.1	39	169	97	6.34	1	.08	20	3.43	575	1	.01	114	940	49	8	4	1	1	.01	1	93.6	6	62	29
128562	.5	2.95	1	39	4.2	8	2.95	.1	39	164	141	7.06	1	.07	25	3.67	916	1	.01	110	1050	50	7	4	6	1	.01	1	119.1	5	76	80
128563	5.6	2.73	377	22	4.3	12	.78	.1	39	114	231	7.76	1	.08	22	3.03	782	3	.01	88	1000	595	28	4	1	1	.01	1	99.3	6	2509	382
128564	3.1	2.44	1	38	4.7	11	.66	.1	34	17	551	9.46	1	.17	25	2.07	415	2	.01	39	1080	326	9	2	1	1	.01	1	108.3	1	918	194
128565	6.0	1.88	1	51	3.9	13	1.45	.1	30	29	462	8.01	1	.22	24	1.87	669	63	.01	36	830	365	11	4	1	1	.01	1	65.3	1	1134	224
128566	6.0	2.67	1	42	4.8	40	1.14	11.2	28	13	430	10.34	1	.18	37	2.24	1096	24	.01	37	900	910	23	6	1	1	.01	1	94.8	2	3833	447
128567	1.9	2.64	1	43	4.4	13	.91	.1	29	28	413	9.13	1	.15	30	2.10	339	2	.01	32	1110	119	10	3	1	1	.01	1	119.2	1	131	198
128568	1.2	2.44	1	46	3.8	9	3.53	.1	23	16	322	7.32	1	.14	27	1.93	382	1	.01	22	1140	96	9	2	19	1	.01	1	112.9	1	129	81
128569	3.8	2.43	1	58	4.1	11	2.64	.1	28	21	432	8.26	1	.18	31	1.89	464	1	.01	26	1180	258	12	3	1	1	.01	1	110.9	1	685	50
128570	1.1	2.61	1	76	4.3	11	1.04	.1	29	22	431	8.93	1	.18	26	2.05	428	1	.01	27	1240	92	9	2	1	1	.01	1	128.4	1	88	78
128571	4.3	2.41	1	62	3.9	12	1.62	.1	29	20	402	8.06	1	.19	31	1.81	421	1	.01	24	1100	319	11	3	1	1	.01	1	99.0	1	1112	158
128572	3.2	2.52	1	59	4.2	11	.73	.1	31	22	433	8.55	1	.17	27	2.00	521	8	.01	29	1150	336	12	3	1	1	.01	1	99.4	1	1050	110
128573	1.9	2.51	1	58	4.4	11	.79	.1	37	29	621	8.99	1	.21	29	1.95	406	1	.01	32	1110	127	13	3	1	1	.01	1	94.3	1	153	202
128574	1.8	2.23	1	51	4.3	8	.51	.1	34	26	666	8.93	1	.22	27	1.69	211	2	.01	31	1110	118	13	3	1	1	.01	1	72.4	1	97	90
128575	3.0	2.06	1	42	3.2	3	.55	.1	24	35	744	6.52	1	.18	23	1.98	262	3	.01	24	1090	203	9	2	1	1	.01	1	98.1	1	568	178
128576	2.4	2.12	1	57	3.7	5	.55	.1	35	29	968	7.77	1	.26	27	1.63	126	1	.01	24	1100	85	10	2	1	1	.01	1	73.3	1	52	236
128577	1.7	1.92	1	71	3.6	9	.90	.1	37	44	534	7.53	1	.34	24	1.26	110	3	.01	30	920	82	8	2	1	1	.01	1	41.9	1	41	405
128578	1.5	2.58	1	54	4.0	7	1.22	.1	40	57	578	7.63	1	.26	30	2.07	244	10	.01	51	1120	76	8	2	1	1	.01	1	82.9	1	64	164
128579	2.1	3.07	1	50	4.1	4	1.05	.1	33	29	731	7.90	1	.23	37	2.28	165	19	.01	23	1170	117	10	2	1	1	.01	1	120.4	1	255	67
128580	1.0	1.99	1	27	2.9	1	.53	.1	21	68	441	5.05	1	.15	24	1.81	162	31	.01	44	1270	50	5	2	1	1	.01	1	45.2	2	39	43
128581	1.1	1.72	1	36	3.0	5	.53	.1	27	36	543	5.65	1	.21	21	1.44	148	11	.01	34	980	70	6	2	1	1	.01	1	44.0	1	76	355
128582	.8	1.94	1	28	2.9	3	1.30	.1	24	71	364	4.69	1	.18	23	1.90	233	13	.01	48	750	46	6	2	1	1	.01	1	37.9	2	41	99
128583	.8	2.75	1	30	3.7	4	3.37	.1	33	114	270	6.83	1	.14	27	3.39	598	2	.01	85	870	58	5	3	95	1	.01	1	92.3	3	56	297
128584	1.2	2.81	1	33	4.1	6	1.25	.1	36	146	328	7.34	1	.16	27	3.17	472	1	.01	85	790	82	7	3	1	1	.01	1	86.9	12	119	99
128585	.5	1.60	1	24	2.6	3	1.36	.1	19	72	270	4.41	1	.15	18	1.95	303	5	.01	39	720	45	3	4	16	1	.01	1	41.2	2	32	56
128586	.4	1.07	1	44	1.8	3	.74	.1	14	63	178	3.03	1	.28	10	1.05	184	5	.01	36	610	31	1	2	1	1	.01	1	13.4	2	21	38
128587	.4	1.10	1	27	2.3	4	.74	.1	19	90	249	4.02	1	.13	12	1.10	296	5	.01	28	350	43	2	1	1	1	.01	1	19.4	4	40	71
128588	1.5	2.26	1	65	3.3	4	.50	.1	27	87	395	6.37	1	.18	25	2.63	175	4	.01	84	810	60	8	3	1	1	.01	1	48.0	2	51	106
128589	.1	1.23	1	47	2.0	5	5.05	.1	9	111	80	3.43	1	.23	12	2.67	3377	2	.01	39	450	118	3	3	93	1	.01	1	30.2	4	234	126
128590	3.6	2.13	283	44	4.5	6	3.68	.1	46	285	937	9.09	1	.15	25	3.55	678	7	.01	318	490	88	1	5	111	1	.01	1	43.4	10	69	495
128591	1.8	2.66	1	31	3.1	4	.96	.1	23	89	299	5.36	1	.14	31	3.54	448	5	.01	79	730	36	7	3	1	1	.01	1	71.6	2	108	225
128592	4.0	2.74	1	33	3.9	7	.75	.1	38	134	274	7.59	1	.15	28	3.23	465	4	.01	101	530	68	8	3	1	1	.01	1	85.5	4	70	132
128593	.6	2.74	1	22	3.1	5	1.01	.1	27	197	66	5.12	1	.11	24	3.36	644	2	.01	69	110	44	6	4	1	1	.01	1	147.6	8	77	52
128594	.3	2.78	1	41	3.2	3	3.70	.1	27	176	56	4.85	1	.09	26	3.31	967	1	.01	74	60	40	7	3	207	1	.01	1	155.6	8	98	46
128595	1.1	2.31	1	33	4.0	4	.63	.1	35	132	411	7.34	1	.14	23	2.65	308	1	.01	73	800	69	5	3	1	1	.01	1	52.5	4	54	128

MIN-EN LABS
OCT-20-1995 16:00



**MINERAL
ENVIRONMENTS
LABORATORIES**
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

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

Metallic Assay Certificate

5V-0472-RM1

Company: **KETTLE RIVER RESOURCES LTD**
Project: **20**
Attn: **LINDA CARON**

Date: **NOV-03-95**
Copy 1. Kettle River Resources, Greenwood, B.C.

We hereby certify the following Metallic Assay of 7 PULP samples submitted OCT-27-95 by LINDA CARON.

Sample Number	Total		+150 M		Assay Value Au		Total Weight Au		Metallic Au		Net Au	
	Wt (g)	Wt (g)	Wt (g)	Wt (g)	+150 (g/t)	-150 (g/t)	+150 (mg)	-150 (mg)	(oz/ton)	(g/t)	(oz/ton)	(g/t)
128563	487.0	57.36			.43	.45	0.025	0.193	0.001	0.05	0.013	0.45
128564	452.7	46.70			.43	.28	0.020	0.114	0.001	0.04	0.009	0.30
128565	447.0	27.21			.49	.23	0.013	0.097	0.001	0.03	0.007	0.25
128566	415.4	23.97			1.44	.69	0.035	0.270	0.002	0.08	0.021	0.73
128590	473.2	44.40			.66	.54	0.029	0.232	0.002	0.06	0.016	0.55
128591	517.3	61.39			.23	.22	0.014	0.100	0.001	0.03	0.006	0.22
128592	494.8	35.14			.12	.11	0.004	0.051	0.000	0.01	0.003	0.11

HOLE 95-07

COMP: KETTLE ISOURCES LTD
 PROJ: #20
 ATTN: L.CARON

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

FILE NO: 5v-0448-RJ1+2
 DATE: 95/10/27
 * 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	Au-fire PPB
128601	.7	2.90	1	228	4.7	8	.78	.1	41	105	77	6.04	1	.06	33	4.06	1303	16	.01	98	920	294	16	4	1	1	.01	1	70.4	5	1362	18
128602	.1	2.98	1	29	5.3	11	1.04	.1	49	139	78	7.53	1	.13	26	3.65	1411	2	.01	141	1470	71	12	5	1	1	.01	1	98.4	6	76	24
128603	.4	3.18	1	25	5.3	11	.98	.1	50	204	110	7.49	1	.12	30	3.76	1194	3	.01	169	1140	93	14	4	1	1	.01	1	100.6	9	215	32
128604	1.8	2.61	1	63	4.8	11	3.07	.1	24	65	257	6.73	1	.20	29	2.32	496	2	.02	43	1010	119	15	4	79	1	.01	1	103.9	3	238	58
128605	3.1	2.36	1	66	5.0	12	3.80	.1	29	23	333	7.92	1	.15	30	1.68	749	2	.02	30	1000	204	18	2	68	1	.01	1	90.3	3	847	193
128606	.6	1.89	1	134	4.7	15	9.77	.1	38	17	230	7.15	1	.13	22	1.01	1696	3	.01	49	760	66	17	1	376	1	.01	1	61.9	2	49	300
128607	1.6	2.12	1	51	3.7	11	3.86	.1	18	13	269	5.33	1	.15	24	1.87	614	2	.01	18	1150	64	16	3	150	1	.01	1	98.1	2	48	287
128608	1.9	2.39	1	88	4.3	11	3.05	.1	23	12	325	6.32	1	.14	23	2.08	447	6	.01	20	1220	67	17	2	100	1	.01	1	117.5	2	43	99
128609	1.3	2.30	1	66	4.0	12	2.78	.1	21	17	227	6.05	1	.12	18	1.97	463	2	.05	19	1160	62	15	1	69	1	.01	1	114.2	2	43	102
128610	1.6	2.02	1	34	4.0	10	1.42	.1	25	17	259	5.76	1	.19	21	1.90	312	3	.01	30	1240	62	15	3	1	1	.01	1	97.8	2	41	940
128611	1.0	3.72	1	32	6.6	14	1.43	.1	59	231	172	9.85	1	.06	34	4.59	980	1	.01	220	1010	77	14	2	1	1	.03	1	129.9	9	101	72
128612	1.3	2.62	1	20	7.4	14	1.06	.1	74	163	754	12.28	1	.06	22	2.75	842	1	.01	218	1030	116	7	1	1	1	.01	1	128.4	7	92	581
128613	.2	3.14	1	18	6.1	17	3.78	.1	51	129	162	9.45	1	.07	24	2.50	1664	4	.01	138	1200	100	20	1	1	1	.02	1	134.7	7	106	85
128614	1.3	3.79	1	17	7.2	13	.87	.1	60	231	235	11.42	1	.08	38	5.02	710	1	.01	198	910	88	13	2	1	1	.01	1	173.3	9	144	188
128615	1.5	3.41	1	24	6.2	12	2.75	.1	50	246	394	9.24	1	.07	32	4.45	1105	1	.01	173	1010	223	16	4	14	1	.01	1	155.6	23	780	415
128616	1.3	1.66	13	22	2.9	7	2.35	.1	17	99	115	3.68	2	.06	22	2.10	322	2	.04	47	400	39	10	4	103	1	.02	1	69.0	6	42	187
128617	2.0	2.35	73	31	4.8	9	3.20	.1	32	130	407	6.73	1	.07	28	3.65	580	1	.04	79	720	57	11	4	244	1	.03	1	109.6	6	58	237
128618	3.2	2.67	12	25	5.5	12	2.73	.1	39	192	207	8.15	1	.14	32	3.53	514	1	.01	98	780	97	13	4	70	1	.01	1	82.1	8	148	235
128619	1.1	3.01	1	46	5.1	13	3.12	.1	42	190	117	7.45	1	.08	27	3.62	990	1	.06	91	1070	65	16	4	162	1	.03	1	133.7	9	81	161
128620	1.5	2.21	1	40	3.8	13	2.27	.1	29	81	69	5.47	1	.15	19	2.35	586	1	.07	61	1090	53	12	5	43	1	.07	1	85.1	4	50	82
128621	1.6	2.24	1	30	4.2	15	2.62	.1	32	42	62	6.10	1	.05	14	2.37	678	2	.05	51	1380	66	13	2	54	1	.07	1	98.2	4	72	116
128622	1.2	2.42	1	36	4.4	12	2.91	.1	30	32	114	6.30	1	.07	18	2.50	794	2	.05	53	1300	61	14	2	99	1	.04	1	99.1	2	59	796
128623	1.7	2.08	1	45	3.5	15	1.62	.1	29	32	32	4.99	1	.07	11	2.15	548	2	.09	52	1450	53	11	2	46	1	.10	1	77.4	3	49	75
128624	1.2	2.54	1	44	4.7	12	2.91	.1	31	28	62	6.41	1	.10	21	2.69	780	3	.04	50	1340	59	14	4	133	1	.03	1	100.3	2	63	137
128625	1.0	2.73	1	34	5.2	15	2.60	.1	33	71	143	7.51	1	.09	20	2.83	699	1	.03	59	1400	68	14	1	108	1	.01	1	116.9	3	60	328
128626	1.0	2.32	1	32	5.3	16	2.25	.1	33	43	145	8.00	1	.05	15	2.22	688	3	.04	35	1860	78	10	1	67	1	.07	1	147.4	3	58	246
128627	1.4	2.18	1	38	4.5	16	2.47	.1	31	37	46	6.49	1	.05	12	2.34	753	1	.05	41	1660	64	10	2	82	1	.11	1	114.4	2	61	111
128628	1.1	2.47	1	43	4.5	14	2.47	.1	33	39	49	6.38	1	.07	14	2.76	749	1	.05	50	1430	57	13	2	74	1	.08	1	112.6	2	66	72
128629	1.4	3.26	1	22	5.9	14	2.19	.1	44	191	499	9.05	1	.09	32	4.23	582	1	.01	151	780	73	15	3	16	1	.01	1	81.4	7	90	482
128630	1.3	3.46	1	33	5.1	9	2.45	.1	34	246	293	7.12	1	.11	31	4.21	496	1	.01	98	810	47	16	4	139	1	.01	1	90.1	10	73	485
128631	1.3	3.82	1	33	5.5	7	2.27	.1	41	313	255	7.46	1	.11	37	4.81	547	1	.01	164	850	44	17	4	110	1	.01	1	95.7	12	78	365
128632	.9	3.56	1	31	5.6	10	1.41	.1	40	288	277	8.04	1	.10	30	4.26	502	5	.01	161	770	57	16	1	27	1	.01	1	88.7	12	73	88
128633	.8	2.23	1	31	3.4	8	1.20	.1	20	127	126	4.66	1	.13	21	2.49	323	2	.01	73	450	43	13	3	47	1	.01	1	45.5	6	41	140
128634	.7	2.92	1	80	4.9	8	.71	.1	30	213	231	6.90	1	.11	28	3.70	411	1	.01	162	430	54	11	3	1	1	.01	1	55.7	9	53	81
128635	1.0	2.03	1	26	3.5	8	.34	.1	23	133	141	4.68	1	.14	21	2.22	219	15	.01	113	330	49	9	3	1	1	.01	1	31.9	6	44	61
128636	4.8	2.38	1	44	4.0	11	.29	.1	26	116	266	5.43	1	.21	25	2.57	254	13	.01	79	420	63	13	3	1	1	.01	1	51.6	6	52	363
128637	9.0	1.75	152	12	3.4	43	1.86	.1	32	326	2731	4.46	1	.03	26	2.71	444	11	.01	177	80	52	9	4	35	1	.01	1	31.6	15	106	1673
128638	2.3	2.15	312	41	4.4	9	2.93	.1	43	362	828	6.31	1	.15	27	3.92	938	1	.01	386	480	53	7	5	141	1	.01	1	45.4	15	76	191
128639	1.6	2.37	1	37	4.0	9	2.45	.1	22	132	196	5.31	1	.14	27	3.49	689	2	.01	123	390	95	12	3	105	1	.01	1	48.6	5	354	154

OCT-27-1995 14:09 MIN-EN LABS 604 327 3423 P.02



**MINERAL
• ENVIRONMENTS
LABORATORIES**
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
8282 SHERBROOKE STREET
VANCOUVER, B.C. CANADA V5X 4E8
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SMITHERS LAB:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
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6015

Assay Certificate

5V-0448-PA1

Company: **KETTLE RIVER RESOURCES LTD**
Project: #20
Attn: L.CARON

Date: OCT-30-95

We hereby certify the following Assay of 2 pulp samples submitted OCT-27-95 by Linda Caron.

Sample Number	Au-fire g/tonne	Au-fire oz/ton
128610	.96	.028
128637	1.85	.054

Certified by _____

MIN-EN LABORATORIES

COMP: KETTLE HILL RESOURCES
 PROJ: #20
 ATTN: LINDA CARON

MIN-EN LABS — JP REPORT
 8282 SHERBROOKE ST., VANCOUVER, B.C. V5X 4E8
 TEL:(604)327-3436 FAX:(604)327-3423

FILE NO. JY-0476-RJ1+
 DATE: 95/11/0
 * 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	SH PPM	SR PPM	TH PPM	TI %	U PPM	V PPM	W PPM	ZN PPM	Au-fire PPM
128651	.4	3.65	1	36	2.9	2	2.06	.1	41	382	145	8.29	1	.09	36	4.57	1448	1	.01	195	820	20	1	11	1	1	.01	1	128.4	10	95	24
128652	.5	3.13	1	25	2.5	1	2.10	.1	60	320	106	6.77	1	.09	37	4.91	1125	1	.01	215	600	1	1	8	1	1	.01	1	96.8	7	76	29
128653	.1	2.21	1	20	1.8	1	1.51	.1	31	104	79	5.06	1	.14	25	2.46	505	1	.02	54	660	14	1	7	1	1	.01	1	79.7	1	47	48
128654	.8	2.73	1	28	2.0	1	3.59	.1	34	132	294	7.14	1	.10	21	3.29	831	1	.05	70	910	26	1	10	27	1	.07	1	131.5	1	61	79
128655	.2	2.77	1	31	2.2	1	4.70	.1	32	203	126	6.18	1	.10	27	3.42	880	1	.01	74	690	20	1	8	155	1	.01	1	108.5	4	62	53
128656	.1	3.33	1	87	2.6	1	3.02	.1	44	325	714	7.44	1	.07	38	5.06	1583	1	.01	210	610	9	1	10	1	1	.01	1	103.5	6	83	36
128657	.6	2.91	1	28	2.4	2	2.14	.1	49	296	132	7.12	1	.05	34	3.99	1127	1	.01	229	390	25	1	9	1	1	.01	1	79.7	7	91	93
128658	1.3	3.07	1	19	2.1	1	.96	.1	34	123	235	7.00	1	.12	25	3.60	563	1	.01	59	1540	25	1	10	1	1	.01	1	124.7	1	79	35
128659	1.1	2.56	1	36	2.0	1	.79	.1	31	99	274	6.71	1	.13	23	2.86	347	1	.01	56	2060	37	1	8	1	1	.01	1	80.5	1	78	67
128660	.2	1.99	1	20	1.8	1	1.87	.1	24	129	453	5.38	1	.17	18	2.70	840	1	.01	75	1270	24	1	7	1	1	.01	1	60.9	1	54	61
128661	.9	1.66	1	29	1.5	1	1.30	.1	23	57	366	4.49	1	.25	12	1.83	426	1	.01	51	650	67	1	6	1	1	.01	1	30.4	1	256	216
128662	.4	3.92	1	27	2.6	2	2.34	.1	52	291	189	8.79	1	.08	31	4.96	1064	1	.01	179	610	13	1	12	1	1	.01	1	133.7	4	97	96
128663	.1	2.53	1	126	2.2	1	3.14	.1	31	86	96	5.64	1	.11	18	2.50	658	1	.01	69	880	23	1	7	71	1	.01	1	74.2	1	54	71
128664	.1	1.62	1	34	1.3	1	1.42	.1	14	61	30	3.36	1	.14	11	1.50	350	1	.01	27	130	7	1	4	1	1	.01	1	34.4	1	31	45
128665	.4	2.73	1	29	2.3	1	2.16	.1	35	242	200	7.21	1	.09	23	2.99	689	1	.03	92	1020	25	1	10	1	1	.04	1	123.4	7	67	108
128666	.4	2.75	1	26	2.2	1	4.78	.1	32	256	152	6.61	1	.07	30	3.29	870	1	.01	100	1020	19	1	9	9	1	.03	1	132.2	7	86	93
128667	.4	2.45	1	22	2.0	7	2.07	.1	37	246	47	7.13	1	.06	27	3.06	732	1	.04	130	1030	26	1	10	1	1	.07	1	90.7	5	75	190
128668	.3	3.30	1	43	2.6	4	2.90	.1	55	212	115	9.07	1	.06	43	4.01	1020	1	.01	170	1120	28	1	13	1	1	.01	1	144.2	2	102	622
128669	.4	3.48	1	24	2.4	1	4.95	.1	41	276	127	7.77	1	.05	42	4.51	1005	1	.01	137	730	14	1	11	50	1	.02	1	139.4	4	85	174
128670	4.6	3.38	1	21	2.0	1	3.08	.1	39	256	142	7.01	1	.07	32	4.37	1306	1	.01	156	450	148	1	10	1	1	.01	1	96.5	4	764	165
128671	5.4	1.72	1	25	1.4	1	.62	.1	21	70	275	4.23	1	.19	13	1.69	323	1	.01	40	200	357	1	4	1	1	.01	1	29.7	1	1363	142
128672	.1	1.50	1	30	1.3	1	.51	.1	17	68	37	3.10	1	.17	13	1.40	196	1	.01	28	290	31	1	4	1	1	.01	1	29.2	1	117	11
128673	.2	3.07	1	25	2.3	1	2.46	.1	23	225	32	4.99	1	.10	45	3.83	564	1	.01	41	2470	4	1	7	119	1	.01	1	108.2	4	108	4
128674	.3	3.86	1	30	2.9	1	1.33	.1	38	246	180	7.52	1	.11	46	4.34	577	1	.01	132	830	6	1	11	1	1	.01	1	110.0	3	86	175
128675	4.4	.22	158	6	.7	1	1.76	.1	7	170	3238	1.22	1	.01	3	1.09	129	1	.01	26	40	11	2	1	35	1	.01	1	8.2	8	65	16
128676	3.0	1.96	1165	16	2.0	1	6.66	.1	81	868	431	4.94	1	.01	13	6.79	1067	1	.01	797	30	1	3	6	219	1	.01	1	51.0	28	82	413
128677	20.4	1.28	3340	54	2.1	1	5.11	5.4	47	235	6008	6.30	1	.03	10	3.48	830	1	.01	311	220	90	57	6	99	1	.01	1	32.5	6	244	1137
128678	2.7	2.42	102	38	2.0	1	4.44	.1	36	123	573	5.35	1	.13	19	3.03	644	1	.01	110	910	34	2	5	9	1	.01	1	60.5	1	73	52
128679	4.9	.48	138	7	.7	1	4.45	.1	8	123	1662	1.59	1	.01	5	1.60	681	1	.01	27	90	11	1	2	47	1	.01	1	13.4	4	41	93
128680	2.3	2.09	1	36	1.9	1	1.91	.1	21	65	538	5.44	1	.18	21	2.47	283	1	.01	60	990	35	1	6	24	1	.01	1	51.9	1	56	61
128681	1.2	.09	194	6	.5	6	4.06	.1	3	146	52	1.02	1	.01	1	1.14	279	1	.01	14	20	10	1	1	114	1	.01	1	5.2	6	10	14
128682	1.9	1.31	1	46	1.5	7	2.23	.1	15	110	104	2.86	1	.12	13	2.20	286	1	.01	63	450	17	1	3	82	1	.01	1	28.7	2	44	142
128683	2.2	2.54	1	37	1.9	1	3.02	.1	30	220	148	5.10	1	.10	27	3.46	507	1	.01	128	370	157	1	6	56	1	.01	1	100.0	7	546	132
128684	1.8	2.34	1	31	1.6	2	2.85	.1	23	210	126	4.60	1	.08	19	3.05	444	1	.01	57	10	67	1	5	47	1	.01	1	140.7	7	238	128
128685	1.9	2.04	1	39	1.7	2	2.85	.1	18	211	89	4.05	1	.08	21	2.82	439	1	.01	43	50	160	1	4	93	1	.01	1	92.7	8	616	66

NOV-08-1995 12:03 MIN-EN LABS

1106 95-09

LAOCCON ZONE

COMP: KETTLE R. SOURCES

PROJ: 20

ATTN: LINDA CARON

MIN-EN LABS — REPORT
8282 SHERBROOKE ST., VANCO. B.C. V5X 4E8
TEL: (604)327-3436 FAX: (604)327-3423

FILE NO: 175-RJ1
D. 5/11/07
* 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	Au-fire PPB
128701	.9	1.13	1	131	.9	1	1.16	.1	10	35	253	2.55	1	.14	6	.94	292	1	.03	11	750	33	1	2	21	1	.01	1	42.7	1	49	15
128702	.8	1.11	1	151	1.0	1	1.30	.1	9	39	270	2.45	1	.20	6	.95	312	1	.03	11	750	27	1	2	25	1	.01	1	35.7	1	54	12
128703	.6	.95	1	168	.8	1	.41	.1	10	29	220	2.60	1	.20	6	.65	167	1	.01	10	770	29	1	2	1	1	.01	1	32.7	1	57	23
128704	.5	.67	1	15	.6	1	.15	.1	5	94	113	1.15	1	.10	8	.85	150	2	.01	15	80	8	1	1	1	1	.01	1	30.7	4	37	63
128705	.9	1.04	1	51	1.0	1	.53	.1	15	36	412	2.91	1	.19	7	.91	137	1	.01	13	800	29	1	2	1	1	.01	1	40.0	1	61	31
128706	.6	1.12	1	66	1.0	1	.46	.1	14	71	124	2.38	1	.12	9	1.30	276	2	.01	21	280	14	1	2	1	1	.01	1	47.6	2	93	36
128707	.8	.67	1	38	.7	1	.59	.1	10	59	167	1.40	2	.12	7	.74	164	3	.01	18	170	10	1	1	1	1	.01	1	21.4	3	48	38
128708	1.1	1.17	1	69	1.2	1	3.00	.1	10	37	309	2.90	2	.17	6	1.01	278	1	.03	14	810	22	1	2	79	1	.01	1	55.7	1	31	17
128709	1.2	1.29	1	202	1.3	1	2.19	.1	14	38	613	3.09	1	.24	9	1.15	229	1	.01	18	890	24	1	3	63	1	.01	1	58.0	1	34	34
128710	1.0	1.04	1	419	1.0	1	1.74	.1	13	70	240	2.01	1	.16	10	1.18	256	3	.01	31	420	12	1	2	29	1	.01	1	35.0	3	35	32
128711	.7	.89	1	40	.9	1	1.18	.1	10	75	43	1.52	1	.13	10	1.17	209	1	.01	23	110	6	1	1	4	1	.01	1	24.5	3	31	37
128712	.8	1.00	1	27	1.0	1	.67	.1	13	66	75	1.99	1	.17	13	1.42	170	3	.01	27	510	13	1	2	1	1	.01	1	32.9	2	52	14
128713	.5	.75	1	17	.8	1	.49	.1	11	75	89	1.49	1	.15	10	1.09	193	3	.01	23	790	9	1	1	1	1	.01	1	22.6	3	37	9
128714	1.5	3.06	1	30	2.4	1	.67	.1	31	103	392	6.93	1	.15	43	3.67	453	1	.01	65	2120	29	1	7	1	1	.01	1	125.2	1	101	54
128715	.5	.62	1	12	.8	1	.37	.1	12	67	93	1.68	1	.10	7	.86	128	1	.01	22	650	14	1	1	1	1	.01	1	27.2	2	32	59
128716	.1	2.73	1	147	3.1	10	2.08	.1	49	246	79	8.52	1	.59	22	3.66	3443	1	.01	140	1690	55	1	6	1	1	.09	1	149.3	8	96	14
128717	1.0	3.83	1	65	2.8	6	3.98	.1	40	31	90	8.39	1	.15	40	3.91	1510	1	.01	48	2820	28	1	8	16	1	.01	1	130.3	1	98	56
128718	1.5	2.84	1	120	2.4	7	4.74	.1	33	36	56	6.58	1	.31	35	3.58	1300	1	.02	43	2450	35	1	6	163	1	.06	1	129.4	1	75	22
128719	1.1	3.51	1	76	2.7	3	4.61	.1	33	65	135	7.76	1	.15	45	4.09	1613	1	.01	65	2200	30	1	8	128	1	.01	1	124.7	1	90	23
128720	.5	.39	1	10	.6	2	1.20	.1	9	58	47	1.81	1	.07	4	.61	365	1	.01	15	380	18	1	1	11	1	.01	1	11.4	2	20	21
128721	.6	.39	8	8	.4	2	.85	.1	9	70	66	1.71	1	.06	4	.50	248	1	.01	14	360	17	1	1	1	1	.01	1	13.9	3	22	27
128722	1.3	2.84	1	64	2.7	6	4.63	.1	39	63	78	7.11	1	.18	32	3.41	1414	1	.01	70	2380	37	1	6	120	1	.02	1	141.2	1	83	18
128723	1.3	2.81	1	99	2.9	6	3.15	.1	35	45	161	7.15	1	.32	23	2.87	1606	1	.01	62	2680	39	1	6	32	1	.05	1	137.3	1	80	13
128724	3.0	1.13	38	149	1.2	1	2.54	.1	29	298	1135	3.77	1	.07	9	1.90	395	1	.03	53	1890	20	1	3	68	1	.16	1	67.4	14	44	32

NOV-07-1995 13:42

MIN-EN LABS

604 327 3423

P.02

HOLE 95-10

COMP: KETTLE RIVER RESOURCES
 PROJ: #20
 ATTN: LINDA CARON

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

FILE # 0489-RJ1
 DATE: 95/11/07
 * 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	Au-fire PPB
128726	.7	1.07	1	132	.9	1	.92	-.1	10	47	240	2.27	1	.22	6	.95	265	2	.08	8	690	24	2	3	1	1	.01	1	37.6	2	44	10
128727	.6	1.10	1	37	1.1	1	.41	-.1	14	29	285	2.80	1	.22	8	.94	469	4	.01	20	580	29	2	3	1	1	.01	1	33.0	1	100	53
128728	.7	.90	1	32	.9	1	.18	-.1	10	63	223	1.72	1	.20	8	.99	276	7	.01	26	230	65	3	2	1	1	.01	1	29.3	3	86	173
128729	.7	.69	1	35	.8	2	.48	-.1	15	51	177	1.63	1	.20	7	.78	195	6	.01	26	170	15	2	2	1	1	.01	1	26.0	3	44	68
128730	.9	.96	1	19	1.0	1	.38	-.1	19	49	183	2.47	1	.15	11	1.26	235	3	.01	29	640	22	1	3	1	1	.01	1	29.8	2	30	27
128731	.5	.49	9	17	.6	4	.16	-.1	8	69	109	1.14	1	.14	5	.50	386	6	.01	21	100	18	3	1	1	1	.01	1	15.2	4	37	13
128732	.1	.75	1	14	1.7	2	.58	-.1	25	23	328	4.55	1	.04	7	.55	2434	1	.01	40	620	48	1	4	1	1	.01	1	33.1	1	37	33
128733	.8	1.17	1	27	2.0	1	.96	-.1	21	42	263	3.51	2	.03	6	.52	423	1	.04	36	770	28	1	3	1	1	.03	1	17.9	2	56	34
128734	1.7	2.06	11	59	2.1	4	5.30	-.1	31	246	80	5.25	1	.07	35	3.16	783	1	.05	60	1390	23	1	7	165	1	.05	1	119.2	8	58	18
128735	.3	.89	1	14	1.3	1	.57	-.1	24	38	416	3.53	1	.09	7	.87	1086	2	.01	31	960	38	1	3	1	1	.01	1	25.6	2	51	42
128736	.4	2.49	1	36	2.7	1	1.05	-.1	41	245	323	6.70	1	.08	18	3.01	2027	1	.01	89	1520	40	1	7	1	1	.01	1	118.2	9	114	26
128737	1.3	1.47	1	104	1.8	5	4.90	-.1	16	36	67	4.03	1	.12	15	2.01	594	1	.06	22	1110	26	1	5	62	1	.01	1	110.9	1	35	23
128738	1.6	1.45	38	100	2.1	7	3.23	-.1	22	54	23	5.30	1	.13	12	2.04	293	1	.06	26	1190	36	1	5	55	1	.02	1	89.9	1	37	16

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MIN-EN LABS

604 327 3423

P.05

APPENDIX 3

Cost Statement

COST STATEMENT

Labour:

G. Stewart	5 days @ \$450/day	\$ 2,250.00
L. Caron	20 days @ \$200/day	4,000.00
T. Parsons	10 days @ \$175/day	1,750.00
C. Esovaloff	15 days @ \$100/day	1,500.00
		\$ 9,500.00

Drilling

Beaupre Diamond Drilling		
	2614 feet @ \$13/ft	\$ 33,982.00
	mob/demob, cat work, supplies	2,449.15
		\$ 36,431.15

Geochemical Analyses

(31 element ICP, plus Au) Min-En Labs, Vancouver.		
156 samples @ \$20.69 (including shipping)		\$ 3,227.64
7 metallic gold assay @ \$50.00		350.00
		\$ 3,577.64

Supplies

General Field Supplies		\$ 360.00
Saw blades		500.00
		\$ 860.00

Transportation

Vehicle rental	20 days @ \$45/day	\$ 900.00
Fuel		265.00
		\$ 1,165.00

Office Expenses

Phone, fax		\$ 30.00
Drafting and office supplies		120.00
Misc		25.00
		\$ 175.00

	=====
TOTAL:	\$ 51,708.79

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 a member in good standing with the Association of Professional Engineers and Geoscientists of B.C. with professional engineer status.
6. I am employed by Kettle River Resources Ltd. as an exploration geologist.



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
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,
1994 - present	Exploration Manager for Kettle River Resources Ltd, and New Nadina Explorations Ltd.

George O.M. Stewart