

J. TUACH GEOLOGICAL CONSULTANTS, INC.
DIAMOND DRILL CORE LOG

Sheet No. 1

GPS CO-ORDINATES <u>13891.82 E</u> <u>9296.8 N</u>	Tests	Dip	Magnetic	Corrected	Project No. _____ Hole No. <u>BE-97-18</u>
GRID CO-ORDINATES <u>L139 E</u> <u>9350 N</u>	Depth		Bearing		Property <u>Buchans River Ltd.</u>
ELEVATION <u>272.98</u>	<u>206 m</u>	<u>-96°</u>	<u>Acid Test</u>		NTS <u>12A/15</u> Grid Name <u>Buchans East</u>
DIP AT COLLAR <u>-90°</u>					Date started <u>28/09/97</u> Completed <u>01/10/97</u>
BEARING _____					Contractor <u>Logan Drilling</u>
TOTAL DEPTH <u>206 m</u> CORE SIZE <u>NQ</u>					
REMARKS _____					Logged by <u>Jim Harris</u>

Depth & Lithology	Description	Alteration	Mineralization
0 - 6 m	Overburden		
6.0 - 9.8	Felsic to intermediate tuff - fragmental mainly felsic volcanic clasts and chloritic pumice in a chloritic "mafic" matrix felsic clasts are mainly altered, some are of altered rhyolitic quartz - feldspar porphyry clasts are locally flattened at $\approx 75^\circ$ to the core	strong quartz - sericite - pyrite alteration of felsic clasts. local black chloritic alteration, especially of "pumice"	20% +, pyrite in clasts and matrix 2% + of sphalerite, galena and cpy as disseminations in altered clasts and as semi-massive to massive "stringers" and disseminations in the matrix (some mineralization appears to be fragments)
9.8 - 11.1	Felsic tuff/fragmental similar to 6.0 - 9.8 but very little chloritic matrix mainly altered felsic fragments some chloritic and sericitic pumice foliated to layered at $\approx 70 - 75^\circ$ to the core	strong quartz - sericite alteration and some chloritic alteration	mineralization as for 6.0 - 9.8 but 9.8 - 10.4 less base metals
11.1 - 17.4	Mafic tuff? could be sheared basalt locally dark green, fairly fine grained local amygdules - calcite contains altered felsic volcanic fragments locally, especially over upper 0.9 m local pale green plagioclase crystals layered and/or foliated at $65 - 75^\circ$ to the core 13.6 - 14.1 - mafic dyke, chilled contacts, upper at $\approx 80^\circ$ to the core, lower at $\approx 15^\circ$	local epidote alteration weak chloritic alteration felsic clasts, strong quartz - sericite $\pm$ pyrite alteration	to 1% pyrite, mainly in felsic clasts
17.4 - 18.4	Felsic and mafic tuff mainly fine grained felsic alteration with some mafic tuff over upper 0.4 m	strong quartz - sericite - pyrite alteration. some blotchy epidote alteration	30% + fine pyrite in felsic "clasts". some possible disseminated sphalerite

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Sheet No. 2

Depth & Lithology	Description	Alteration	Mineralization
18.4 - ~ 33.1	Fault zone large gouge and breccia zones with fragments of mafic and felsic volcanic and some of mafic dyke 18.4 - ~ 21.0 - mostly mafic tuff 21.0 - 28.1 - mainly altered felsic - locally fragmental with mafic matrix, between 23.0 and 26.0 ~ 1' of greenish brown intrusive 28.1 - 29.0 - mafic dyke 29.0 - 33.1 - mainly felsic fragmental with mafic tuff as for above fault core recovery generally 95 - 100% except 23.0 - 26.0 m ~ 0.8 - 0.9 m lost	blotchy epidote alteration felsic "zones"/fragments are strongly altered quartz-sericite-pyrite some weak chloritic alteration	18.4 - 21.0 - to 1% pyrite, possible minor cpy 21.0 - 28.1 ~ 10% pyrite, minor cpy, possible barite 29.0 - 33.1 - ~ 10 - 15% pyrite with zones of 30% py, minor cpy, possible sp
33.1 - 45.0	Fragmental unit grey to green colour, looks mafic overall but has fragments of strongly altered pyritic "felsic" volcanic some mafic fragments matrix likely all mafic tuff? small fault gouge @ 41.0 and @ 45.0	strong silicification and quartz - sericite pyrite alteration of felsics fairly common epidote alteration	pyrite ~ 10 - 15% finely disseminated local sphalerite <1%, pyrite content decreases down hole
45.0 - 60.3	Mafic volcanic - basalt? dark to medium green, fairly massive to locally fragmental still contains a few small altered and pyritic felsic clasts mafic is locally amygdoidal - rare - faint pale green plagioclase crystals are common contact from above unit gradational 55.6 - 56.0 - pyritic felsic inclusion or altered mafic, contacts indistinct lower contact not sharp lower 0.5 m moderately foliated @ about 45° to the core	blotchy epidote alteration "clasts" of silicic and pyritic alteration - could be altered mafic - contacts are often hazy	pyrite 2 - 3%, finely disseminated in alteration and rarely as irregular semi-massive clots. i.e. 50.1 m common disseminated and locally stringer magnetite 10 - 15% pyrite over lower 1 m
60.3 - 86.2	Felsic tuff? very strongly foliated, light grey rock, fragmental with generally small lenses (augen) of pyritic felsic volcanic fragmental texture could be due to deformation foliation varies considerably ~ 45° to the core from 60.3 - 61.0 from 61.0 to 84.5 varies from 40° to along the core with local kink folding from 84.5 - 86.2 foliation at ~ 45° to the core 75.0 - 75.2 and 75.8 - 76.0 some fault gouge 77.3 - 83.5 common quartz clots and stringers with some included k-spar, also some white and pink carbonate stringers	strong quartz - sericite - pyrite alteration local bright green mica 77.3 - 80.0 local chloritic alteration	~ 10% pyrite overall 61.5 - 62.3 - 30% py local disseminate sphalerite and chalcopryrite throughout sphalerite locally in tiny quartz stringers
86.2 - 97.2	Mafic and felsic fragmental very likely well foliated equivalent of 11.1 to 17.4 and 33.1 - 45.0 - felsic fragments in a mafic "tuff"? matrix foliation mainly @ 40 - 45° but locally kinked and folded local altered plagioclase crystals clasts are well flattened and elongate parallel to foliation some larger felsic zones or fragments i.e. 89.0 - 89.3 and 92.8 - 93.0 91.7 - 92.0 common quartz boudans parallel to foliation thin fault gouge on lower contact	moderate green chloritic alteration strong quartz - sericite - pyrite alteration of felsic clasts - zones	pyrite 3 - 8% throughout mainly with felsic fragments but some disseminated in mfaic vol. @ 95.75 possible pyrite clast locally minor sphalerite with felsic vol. i.e. 92.8 - 93.0 and 89.0 - 89.3

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Sheet No. 3

Depth & Lithology	Description	Alteration	Mineralization
97.2 - 160.5	Altered volcanic mainly deformed and altered "felsic" volcanic, may be in part altered mafic grey to grey-green - well foliated at $\approx 45 - 50^\circ$ to the core fragments flattened - elongated parallel to foliation some short chloritic mafic sections 102.9 - 105.3 - chloritic mafic 99.4 - 99.8 - fault - fracture zone, some gouge 109.4 - 109.5 - fault gouge and breccia more mafic zones locally contain pyritic silicified felsic clasts 114.8 - 115.0 - fault gouge and breccia 119.8 - 120.1 - mafic volcanic, also 122.6 - 123.1 local quartz and quartz-carbonate veining more commonly mafic from ≈ 145 to 160.5 mafic is locally amygdoidal with calcite and quartz infill still some felsic zones and/or fragments 159.5 - 160.5 - strong foliation/shearing	strong quartz - sericite - pyrite $\pm$ chlorite alteration 109 - 116.2 - stronger chloritic alteration with silicification common brownish mica 145 to 160.5 - local epidote alteration	20 - 25% pyrite mainly as fine disseminations along foliation down to 109 m 101 - 103 $\approx 30 - 35\%$ py local sphalerite and cpy with the alteration throughout 102.9 - 105.3 - 2 - 3% pyrite 109.0 - 116.2 - 5 - 10% pyrite 116.5 - 117.5 - 30 - 35% pyrite stronger sphalerite - galena and cpy other local zones to 1 m with 30% pyrite sphalerite - galena and chalcopryrite, mostly disseminated or banded with the foliation local honey coloured and possible reddish coloured sphalerite 145 - 160.5 - somewhat less pyrite $\approx 5 - 8\%$ overall
160.5 - 206.0	Mafic volcanic dark green chloritic may be tuffaceous at least from 160.5 - 175.0 some short zones or clasts of pyritic felsic volcanic over this interval moderate to strong foliation at $45 - 50^\circ$ to the core 166 - 167 - foliation disrupted and locally along core faint - flattened plagioclase crystals locally 176 - 176.1 - small mafic dyke locally amygdoidal with quartz - epidote local quartz - carbonate stringers 186.7 - 187.0 - fault gouge and breccia 187.5 - 188.2 - chloritic fault breccia - small chloritic breccias common down to 191.0 m 192.6 - 194.0 - streaky white and green 194.5 - 195.6 - fault zone 4 or 5 small gouge and breccia zones 196 - 206 - basalt, plagioclase phenos, locally amygdoidal with pink quartz and calcite, somewhat weaker foliation than above - 206.0 E.O.H. -	weak chloritic alteration local quartz - sericite - pyrite alteration 184.5 - 186 - moderate quartz - sericite - pyrite alteration of mafic 192.6 - 194.0 - moderate to strong quartz - sericite - calcite - chlorite alteration	2 - 3% pyrite 173.8 - 174.2 - 10% + pyrite in a felsic zone 192.6 - 194.0 - 3 - 5% fine pyrite

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**J. TUACH GEOLOGICAL CONSULTANTS, INC.
DIAMOND DRILL CORE ASSAYS**

SHEET NO. _____

PROJECT NO. _____

HOLE NO. BE-97-18

PROPERTY Buchans East

Sample No.	From (metres)	To (metres)	Length (metres)	DESCRIPTION	Cu* ppm(%)	Pb* ppm(%)	Zn* ppm(%)	Ag* (ppm)	Au* ppb(g/t)	Ba** ppm	
Be-97-18	6.0	7.0	1.0	fragmental - 30% sulphides	295 (0.03)	1073 (0.12)	0.65% (0.66)	10.3 (11.0)	194 (0.23)	1292	
	7.0	8.0	1.0	fragmental - 30% sulphides	268 (0.03)	642 (0.08)	0.59% (0.56)	6.9 (6.8)	166 (0.20)	1471	
	8.0	9.0	1.0	fragmental - 30% sulphides	291 (0.03)	525 (0.06)	0.56% (0.52)	6.9 (4.8)	229 (0.27)	1283	
	9.0	9.7	0.7	fragmental - 20% sulphides	661 (0.06)	0.22% (0.21)	1.49% (1.53)	18.9 (16.6)	634 (0.66)	3283	
	9.7	10.4	0.7	fragmental - 20% sulphides	127	83	783	2.0	51		
	10.4	11.0	0.6	tuff - 30% sulphides	740 (0.07)	0.31% (0.31)	1.59% (1.62)	13.4 (8.7)	391 (0.45)	1595	
	11.0	11.9	0.9	mafic tuff - 5 - 10% py	108	41	114	0.6	5		
	17.4	18.4	1.0	altered felsic frag. - 30% + py, sp?	91	57	290	1.4	22		
	23.0	26.0	3.0	fault zone - minor cpy 10% py	102	7	106	0.5	5		
	29.1	31.0	2.9	fault zone - minor cpy 10% + py, minor cpy	110	17	55	0.7	13		
	36.5	38.0	1.5	fragmental - 20% + py, minor sp	128	5	65	0.5	5		
	40.0	41.0	1.0	fragmental - 20%+ py, minor sp	116	5	84	0.5	5		
	59.3	60.4	1.1	mafic vol. 1 - 2% py	105	9	224	0.8	5		
	60.4	61.0	0.6	altered felsic vol. 5 - 8% py	103	31	144	42.86 g/t	398		
	61.0	61.7	0.7	altered felsic - 10% py, minor sp	489 (0.04)	329 (0.03)	1555 (0.12)	92.6 (97.9)	1630 (1.84)	6513	
	61.7	63.0	1.3	altered felsic - 10 - 15% py, minor sp	111	173	126	13.0	431		
	63.0	65.0	2.0	altered felsic vol. 5 - 8% py	165	385	733	32.57 g/t	113		

* (-) Duplicate assays performed by Bondar-Clegg; Val d'Or, PQ

** Assays performed by Bondar-Clegg; Val d'Or, PQ

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Sample No.	From (metres)	To (metres)	Length (metres)	DESCRIPTION	Cu* ppm(%)	Pb* ppm(%)	Zn* ppm(%)	Ag* (ppm)	Au* ppb(g/t)	Ba** ppm	
BE-97-18	65.0	66.9	1.9	altered felsic vol. 5 - 8% py	236	227	423	42.51 g/t	120		
	66.9	68.9	2.0	altered felsic - 10% py, minor sp	188 (0.01)	813 (0.08)	1679 (0.12)	9.6 (8.4)	946 (1.02)	2262	
	68.9	71.0	2.1	altered felsic vol. - 5 - 8% py	187	114	134	5.3	81		
	71.0	73.2	2.2	altered felsic vol. - 5 - 8% py	81	270	235	4.1	828		
	73.2	75.4	2.2	altered felsic vol. - 5 - 8% py	109	143	286	2.7	498		
	75.4	76.4	1.0		109	322	478	1.3	266		
	76.4	78.4	2.0	altered felsic vol. - 5 - 8% py	72	135	289	1.6	146		
	78.4	80.1	1.7	altered felsic vol. - 5 - 8% py	72	202	468	1.8	157		
	80.1	81.9	1.8	altered felsic vol. - 5 - 8% py	65	193	209	1.9	130		
	81.9	83.1	1.2		161	473	1731	5.7	417		
	83.1	85.1	2.0	altered felsic vol. - 5 - 8% py	110	442	679	27.09 g/t	449		
	85.1	86.2	1.1	altered felsic vol. - 5 - 8% py	124	85	318	20.23 g/t	5		
	96.5	97.5	1.0	altered felsic and mafic vol. - 2-3% py	95	68	163	0.7	44		
	97.5	98.5	1.0	altered felsic - 20% py, minor Pb-Zn	178 (0.02)	733 (0.08)	789 (0.06)	1.3 (1.6)	1310 (1.39)	1886	
	98.5	100.4	1.9	altered felsic vol. - 4 - 5% py	100	294	448	1.7	59		
	101.0	102.0	1.0	altered felsic - 20% py, minor Pb-Zn	127	536	1341	1.3	227		
	107.6	108.6	1.0	altered felsic - 30% py, minor Pb-Zn	227	173	502	2.1	90		
	108.6	109.6	1.0	altered felsic - 30% py, minor Pb-Zn	126	24	195	0.7	36		

* (-) Duplicate assays performed by Bondar-Clegg; Val d'Or, PQ

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Sample No.	From (metres)	To (metres)	Length (metres)	DESCRIPTION	Cu* ppm(%)	Pb* ppm(%)	Zn* ppm(%)	Ag* (ppm)	Au* ppb(g/t)	Ba** ppm	
BE-97-18	116.4	117.1	0.7	altered felsic - 20 - 30% py, Pb-Zn-Cu	333	816	1944	1.2	223		
	117.1	118.1	1.0	altered felsic - 20 - 30% py, Pb-Zn-Cu	110	34	296	0.6	39		
	125.1	126.9	1.8	altered felsic - 20 - 30% py, Pb-Zn-Cu	117	139	911	2.1	62		
	131.0	132.0	1.0	Altered felsic vol. - 2 - 3% py, minor sp and Ga	115	208	531	1.3	32		
	132.0	132.6	0.6		573	966	0.52%	0.5	25		
	132.6	133.6	1.0	Altered felsic vol. - 2 - 3% py, minor sp and Ga	268	467	1006	0.8	23		
	137.0	138.0	1.0		104	167	1104	0.5	11		

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** Assays performed by Bondar-Clegg; Val d'Or, PQ