

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

LATITUDE <u>L138E</u>	Tests	Dip	Magnetic	Corrected	Project No. _____	Hole No. <u>BE-96-13</u>
DEPARTURE <u>66 + 65N</u>	Depth		Bearing	Bearing	Property <u>Buchans East</u>	
ELEVATION _____	<u>198.7</u>	<u>-59°</u>	_____	_____	NTS <u>12A/15</u>	Grid Name <u>Feb. 25/96</u>
DIP AT COLLAR <u>-60°</u>	_____	_____	_____	_____	Date started <u>Feb 17/96</u>	Completed _____
BEARING <u>180°</u>	_____	_____	_____	_____	Contractor <u>IDEAL DRILLING (NFLD.) LTD</u>	
TOTAL DEPTH <u>198.7</u> CORE SIZE <u>BO</u>	_____	_____	_____	_____		
REMARKS _____	_____	_____	_____	_____	Logged by <u>Jim Harris</u>	

Depth & Lithology	Description	Alteration	Mineralization
0 - 9.8	OVERBURDEN		
9.8 - 111.5	QUARTZ PORPHYRY - pink aphanitic groundmass w/ large creamy white somewhat rounded qtz phenos. Also pink feldspar phenos. Purplish hematite alt'n, irregular contacts, locally - also red hematite on fractures 13.5-13.7 - soft chloritic "inclusion?" other small inclusions locally. May be tuff 42.5-44.1 - bleached & fractured. Small carbonate vein breccia @43.3 45.0-45.1 & 45.8-46.0 - small mafic dykes or mafic inclusions 46.55-46.58 - qtz carbonate vein breccia @60° TCA 48-50 - occasional thin sericitic shearing @50° TCA 50.0-55.0 - bleached & pale pink w/ fracturing & faulting 53.7-54.0 - clayey gouge & breccia zones 54.0-59.0 - fractured qtz-carbonate stringers & inclusions of fine grey-green altered mafic porphyry has more chlorite below 55.0m 62.4-66.5 - brecciated by silicification below 66.1, darker groundmass more k-spar phenos	- red hematite minor sericite association w/ fractures - occasional cherty qtz stringers - local bleaching & development of clay minerals - qtz & qtz-carbonate stringers locally - sericite locally w/ shearing 50.0-55.0 - clay & qtz-carbonate alt'n associated w/ faulting. Also some chlorite added 62.4-66.5 - cherty pale green & white silicification veins & stockwork & breccia. Fuzzy irregular contacts common. 62.9-63.1 - all silicified	- disseminated hematite & magnetite - local sphalerite stringers (fracture infill) & disseminations usually associated w/ fractures 15.2-15.3 sphalerite veinlet 36.7-37.7 disseminated & stringer sphalerite to 1% locally 41.3-41.8 - to 1% dissem sphalerite - dissem py w/ sericite shears & patchy alt'n 52.0-55.0 - occasional sphalerite in stringers 60.3-66.5 - to 1% sphalerite in stringers 62.4-60.5 - 1-5% sphalerite w/ the silicification 62.9-63.1 - 8-10% sphalerite 66.5 - 9.6 - less sphalerite but minor dissem. & in stringers and/or along fractures

HOLE NO. BE-96-13

Depth & Lithology	Description	Alteration	Mineralization
9.8 - 111.5 (Cont'd)	69.6-69.9 - carbonate qtz vein breccia. Below 70.0m, occasional inclusions of mafic vol. or dyke. Thin white & green cherty qtz stringers 75.7-76.5 - thin cherty white qtz veinlet (1-3m) along core, minor sphalerite - fine grained black to grey-green mafic dykes or inclusions (chlorite-sericite-clay alt'n) 78.4-78.6, 79.1-79.15, 84.2-84.3, 84.5-84.6, 87.6-87.8 & other small inclusions between 84.6-87.6. Contacts generally irregular & fairly sharp 86.9 - small fault breccia 91.8-92.1 - pale grey-green, altered mafic dyke or inclusion 96.4-96.7 - bleached pale pink w/ small fault @96.6 105.8-111.5 - unit is much more chloritic - dark grey-green colour - but still has qtz phenos. Gradational change from above - groundmass altered 111.2-111.3 - sheared & brecciated foliation $\approx 80^\circ$ TCA	70.0-80.0 - occasional thin silicification veinlets 78.3-111.5 - weak chloritic & sericitic alt'n of groundmass, @101.3 small 0.1m breccia - cherty qtz brecciated & cemented by same - some black chlorite along fractures	69.6-69.9 - to 1% sphalerite, possible cpy 70.0-78.0 - minor sphalerite dissem in & near cherty veinlets 81.4-82.0 - minor dissem & fracture controlled sphalerite 84.2-111.5 - disseminated & stringer sphalerite to 1% locally. Minor disseminated py below 78.0-111.5 105.8-105.85 & 106.3-106.4 - silicification or vein qtz w/ to 40% sulphides. Mainly sphalerite but galena, chalc & pyrite also 105.8-105.85 - fragment or clast, doesn't go all the way through core, irregular contacts
111.5 - 120.3	FELSIC VOLCANIC - pale pink to green colours, fine grained rhyolitic, locally appears tuffaceous (welded tuff) & fragmental agglomerate locally. Some grey "silicified" fragments, some of brecciated or agglomerate appearance may be due to alt'n 117.0-120.3 - commonly qtz porphyritic similar to above unit (may be altered porphyry throughout)	- qtz sericite alt'n, brecciated appearance may be due to alt'n. Alt'n is quite strong locally	<1% dissem sulphides mainly sphalerite w/ lessor py & cpy. Sphalerite is commonly associated w/ fractures or strong alt'n. Occasional greyish "clasts" w/ very fine py to 10% (similar to Hole 11)
120.3 - 123.0	MAFIC VOLCANIC - green to reddish chloritic & locally hematized, flecked by white & pink carbonate amygdules & by irregular carbonate-qtz stringers. - upper 0.1m fault gouge & breccia - lower contact irregular & fractured at about 15° TCA	- wormy carbonate qtz alt'n or infill, epidote alt'n fairly common - hematized locally	
123.0 - 134.0	MAFIC DYKE - very fine grained, magnetic, black, upper 0.5m bleached & brecciated w/ carbonate infill. Lightly flecked w/ chlorite "phenos", lower contact at about 10° TCA & lined w/ carbonate from 134.0-134.3		
134.0 - 198.7	MAFIC VOLCANIC - dark green w/ reddish hematized sections, mottled w/ creamy white carbonate & silicification. Carbonate predominates. Fragmental - agglomerate in part 161.6 - small fault	- locally strong hematization, wormy carbonate qtz & qtz stockwork. Also stockwork epidote alt'n. Strong chloritic alt'n locally 161.1-162.0 - totally altered, greenish & white silicification, & epidote	- very rare dissem. py generally w/ silicification 161.1-162.0 - possible fine cpy - rare

Depth & Lithology	Description	Alteration	Mineralization
134.0 - 198.7 (Cont'd)	164.0-180.3 - strongly hematized, agglomerate locally 180.3-182.3 - mafic dyke as for 123.0-134.0 194.5-198.7 - agglomerate hematized mafic vol. & lessor felsic vol. clasts in a hematized & sericitic groundmass 198.3-198.5 - sandy fault gouge, hematitic		
198.7 E.O.H.	Core recovery excellent throughout.		

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

SHEET NO. 1

PROJECT NO. _____

HOLE NO. BE-96-13PROPERTY Buchans East

Sample No.	From (metres)	To (metres)	Length (metres)	DESCRIPTION	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)			
✓	14.2	15.2	1.0	Qtz porphyry dissem. hematite	6	15	35	0.2	5			
✓	15.2	16.2	1.0	" " minor zns	3	92	128	0.2	5			
✓	16.2	17.4	1.2	Qtz porphyry dissem. hematite	4	78	156	0.2	5			
✓	23.2	24.2	1.0	" " "	9	396	310	0.2	5			
✓	24.2	25.2	1.0	Qtz porphyry zns	6	494	1206	0.2	5			
✓	25.2	25.7	0.5	Qtz porphyry w/ stringer zns	1	216	370	0.2	5			
✓	25.7	26.7	1.0	Qtz porphyry	1	58	116	0.2	5			
✓	34.7	36.7	2.0	" "	1	30	104	0.2	5			
✓	36.7	37.7	1.0	Qtz porphyry to 1% dissem zns	3	978	1282	0.2	37			
✓	37.7	38.7	1.0	Qtz porphyry	1	58	104	0.2	5			
✓	41.0	42.0	1.0	Qtz porphyry dissem zns	3	813	948	0.2	5			
✓	52.0	55.0	3.0	Qtz porphyry, bleached minor zns	1	160	300	0.2	5			
✓	60.0	61.0	1.0	Qtz porphyry <1% zns stringers	3	411	703	0.2	5			
✓	61.0	62.4	1.4	Qtz porphyry	22	303	447	0.2	5			
✓	62.4	63.1	0.7	Qtz porphyry & silicification to 5% zns	163	1.08%	1.97%	1.3	30			
✓	63.1	66.1	3.0	Qtz porphyry & silicification to 1% zns	67	0.33%	0.48%	0.3	5			
✓	66.1	69.2	3.1	Qtz porphyry & silicification minor zones	29	881	1479	0.2	5			

Sample No.	From (metres)	To (metres)	Length (metres)	DESCRIPTION	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)			
✓	69.2	69.9	0.7	Qtz porphyry & qtz-carb vein breccia to 1% zns	39	1861	1575	0.2	5			
✓	69.9	72.9	3.0	Qtz porphyry minor zns	1	150	269	0.2	5			
✓	84.2	87.2	3.0	Qtz porphyry <1% sphalerite	3	964	1522	0.2	5			
✓	90.2	93.2	3.0	Qtz porphyry <1% zns	41	327	552	0.2	5			
✓	93.2	94.8	1.6	" " "	7	760	1596	0.2	5			
✓	94.8	96.6	1.8	Qtz porphyry	32	230	180	0.2	5			
✓	100.0	102.7	2.7	Qtz porphyry <1% zns	17	320	499	0.2	5			
✓	102.7	105.8	3.1	Qtz porphyry minor zns	20	231	579	0.2	5			
✓	105.8	106.4	0.6	Qtz porphyry w/ significant zns, cpy, pbs	730	0.61%	2.49%	2.9	38			
✓	106.4	108.4	2.0	Chloritic qtz porphyry minor zns & cpy	47	1278	1902	0.3	5			
✓	108.4	111.5	3.1	" " "	5	420	1173	0.4	5			
✓	111.5	114.3	2.8	Altered felsic to 1% sulphides	47	240	739	0.2	5			
✓	114.3	117.3	3.0	" " "	14	756	1170	0.3	5			
✓	117.3	120.3	3.0	Altered felsic vol. to 1% py, zns, cpy	18	648	677	0.2	5			
✓	151.5	152.5	1.0	Atered mafic vol.	61	24	136	0.2	5			
✓	161.0	162.0	1.0	Altered mafic rare sulphides	46	11	55	0.2	5			

HOLE NO. BE-96-13