

LATITUDE 2 + 00 N

Vinland Resources Limited
DIAMOND DRILL CORE LOG

Sheet No. 1 of 7

DEPARTURE 2 + 00 E

Tests Depth	Dip	Magnetic Bearing	Correcting Bearing
100m	-54°		140°
214m	-53°		143°
328m	-51°		154°
421m	-49°		154°

Project No.

Hole No. BJ-00-09

ELEVATION 160 metres

DIP AT COLLAR -55°

BEARING 133°

TOTAL DRIFT CORE SIZE NQ

REMARKS Pyritic alteration zones at 195.7-213.4 and 295.4-316 metres

Property	Buchans Junction	
NTS	12A/16	Grid Name
Date Started	Apr 22, 2000	Date Completed Apr 27, 2000
Contractor	Logan Drilling Limited	
Logged By	R. M. Graves	

DEPTH & LITHOLOGY	DESCRIPTION	REMARKS
0 - 9m	<u>Overburden</u>	
9 - 20.0m	<u>Mafic Volcanic (Basalt)</u> - fine grained (unit is fine-medium grained equigranular from 13-16metres), dark green, magnetic, minor calcite in matrix and as veins, core extensively broken from 10-13 metres, slickensides at 13.2 metres - graphite and chlorite on joint faces at 9.8m - graphite occurring as veins and along fault faces from 16.0 - 20.0 metres - epidote veinlets at 16.0 metres - graphite-calcite vein at 10° TCA at 16.2m - graphite-calcite breccia and fault gouge over 30cm zone from 19.7 - 20.0m; this unit is in faulted contact with unit beneath, fault at 20-30° TCA - fault gouge weakly conductive	
20.0 - 23.9m	<u>Intermediate Volcanic</u> - medium green, non-magnetic, brecciated, flooded with calcite from 20.5 - 21.5m due to faulting, graphitic from 22 - 22.5metres, hosts 5-10% of <.5mm amygdules; trace pyrite at 23.8 metres - lower contact is in sharp contact with unit below	
23.9 - 26.5m	<u>Felsic Dyke</u> - pinkish green, aphanitic, non-magnetic, core is extremely broken due to faulting beneath; a vein of unit beneath is injected into this rock at 26.4 metres	
26.5 - 47.8m	<u>Quartz-Feldspar Phyrlic Felsic/Fault</u> - orange, medium grained equigranular, 5-10% quartz and feldspar crystals from 1-5mm in diameter; rock has a brecciated appearance; similar to quartz phyrlic felsic in BJ-00-08 - the upper contact from 26.5 - 28.0 is entirely graphitic fault gouge, weakly conductive locally; other graphitic zones at 30.5 - 31.0m, 31.2 - 31.4 and 39.8 - 40.2 metres - fault face at 27 metres is 15° TCA - black chlorite common on fractures - core quite broken from 31 - 35 metres - xenolith of pre-existing volcanic at 31.2 metres - intermediate mafic flow from 40.5 - 42.0m similar to intermediate volcanic at 20.0 - 23.9m; upper and lower contacts are chilled over 2-3cm - chalcopryite on chloritic fracture face at 43.0 metres - intermediate-mafic dyke at 47.0 - 47.8m, upper contact chilled and lower contact is broken core	

47.8 – 49.0m	<u>Quartz-Feldspar Felsic</u> - greenish pink, medium grained equigranular, massive, non-magnetic, upper 5cm of unit is a quartz vein - contact with unit below is sharp at 30° TCA	
49 – 49.5m	<u>Mafic Volcanic</u> - fine grained, non-magnetic, minor calcite lower contact in broken core	
49.5 – 52.0	<u>Quartz-Feldspar Felsic Volcanic</u> - medium grained equigranular, non-magnetic, graphitic, minor quartz-calcite veining	
52.0 – 52.5	<u>Mafic Volcanic/Fault</u> - unit is entirely brecciated and comprises fault gouge - fabric at 20-30° TCA	
52.5 – 54.0m	<u>Quartz-Feldspar Felsic Volcanic</u> - orange, medium grained equigranular, graphitic and faulted from 52.7 – 52.9m, sharp lower contact with unit below at 30° TCA	
54.0 – 56.0m	<u>Mafic Volcanic</u> - fine grained, equigranular, non-magnetic, minor calcite in matrix, 2-3% hematite specks in area of upper contact - lower contact sharp and at 30° TCA	
56.0 – 57.0m	<u>Quartz-Feldspar Felsic</u> - same as previous units, sharp lower contact	
57.0 – 61.0m	<u>Mafic Volcanic (Flow?)</u> - fine grained, equigranular, magnetic, significant calcite in matrix, upper and lower contacts are chilled; contact with second mafic unit at 60.5m, contact orthogonal TCA - lower contact at 61.0m also orthogonal TCA - hosts 30-40% epidotized plag crystals that are <1mm in diameter	
61.0 – 65.6m	<u>Quartz-Feldspar Phyrlic Felsic</u> - orange-pink, medium grained equigranular, massive, hosts .5mm – 1cm orange coloured fragments, unit may be felsic crystal lithic tuff, chloritic on fractures - 30cm of mafic at 61.3m, lower contact at 30° TCA	
65.6 – 71.5m	<u>Mafic volcanic (Flow?)</u> - dark green, magnetic, fine grained, hosts 30-40% greenish plagioclase xtals (1mm), upper and lower contacts are chilled - high angle faulting at 68.5 near felsic material, fault at 10° TCA, calcite and graphite along fault - numerous epidote veinlets	
71.5 – 72.4m	<u>Felsic Crystal Lithic Tuff</u> - greyish green, 5% feldspar and quartz crystals, 5% of 1-2cm red-grey-green volcanic clasts, upper and lower contacts are sharp and epidotized	
72.4 – 72.8m	<u>Mafic Volcanic</u> - fine grained, dark green, equigranular, chilled sharp contact; hosts 10-15% dark green chloritic spots <.5mm in diameter	
72.8 – 73.6m	<u>Felsic Crystal Lithic Tuff</u> - grey medium grained equigranular, massive, quartz and feldspar crystals - bottom 10cm have reddish rip-up clasts (?) that may have been derived from the underlying reddish	

	siliceous sediment; indicates a younging up the hole - lower contact at 90° to core axis	
73.6 – 74.4m	<u>Mafic Volcanic</u> - same as at 72.4 – 72.8	
74.4 – 79.9m	<u>Quartz-Feldspar Phyric Felsic Volcanic</u> - dark greyish green, 10-15% quartz and feldspar xtals, chlorite veinlets on fractures - strongly sheared in the bottom .5 metres, veined with chlorite and hematite in this zone	
79.9 – 90.1m	<u>Mafic Volcanic/Fault</u> - zone of brittle and ductile deformation encompassing the entire unit - unit flooded with silica, jasper and hematite veins from 79.9 – 83.0m, zones of broken and lost core at 80.5 – 81.0m veining comprises 30% of unit and tends to have attitude at 45° TCA; lost core and fault gouge at 83.5 – 84.0 metres - zone of silica veining and brecciation from 83.0 – 85.5m, veins comprise 30% of unit - zone of complete silicification and brecciation from 83.0 – 90.1m; strong ductile deformation gives unit a banded appearance with fabric at 45 - 90° TCA and sometimes contorted - sharp contact with unit below, brecciation continues into unit beneath	
90.1 – 92.1m	<u>Felsic Volcanic/Breccia</u> - brecciated and fractured felsic volcanic; matrix totally hematized; quartz and feldspar crystals and lithic fragments visible in hematized matrix	
92.1 – 92.6m	<u>Mafic Volcanic</u> - altered, siliceous, flooded with pinkish silica - sharp contact with unit below at 45° TCA	
92.6 – 103.1m	<u>Hematitic Quartz Phyric Felsic Volcanic</u> - sheared hematized and brecciated quartz phyric felsic volcanic, the unit comprises 10-15% anhedral quartz eyes (1-5mm in diameter) in a hematitic matrix, sericitic locally as at 92.6 – 93.0, minor silica veining - 10cm thick crush zone at 92.6 metres, fabric at 45° TCA - chlorite veining common - 20cm thick calcite cemented breccia zone at 101.5m - bottom 20cm of unit comprises highly comminuted greenish fault gouge, fabric in fault at 25° TCA	
103.1 – 104.1m	<u>Siliceous Felsic Volcanic</u> - reddish orange, aphanitic, very siliceous, massive, sharp contact with unit below at 20° TCA	
104.1 – 104.6m	<u>Mafic Volcanic (Flow)</u> - dark green, massive, fine grained, magnetic, lower contact sharp and at 30° TCA	
104.6 – 104.9m	<u>Quartz Feldspar Tuff</u> - red, massive, 5% quartz eyes and 5% pink plag/k-spar crystals, lower contact sharp and at 45° TCA	
104.9 – 109.5m	<u>Basalt</u> - dark green, massive, magnetic, minor quartz-calcite veining, hosts 2-3% black amygdules <.5mm in diameter, core extensively broken, chlorite on fractures, epidote and hematite veining at 108.9 metres - lower contact sharp at 90° TCA	
109.5 – 110.0m	<u>Quartz-Feldspar Tuff</u> - same as at 104.6 – 104.9, lower contact anthogara TCA	

110.0 – 110.5m	<u>Basalt</u> - same as at 104.9 – 109.5 - lower contact sharp and at 45° TCA	
110.5 – 114.8m	<u>Felsic Volcanic (Rhyolite?)</u> - pink massive, non-magnetic, 2-3% quartz eyes at 1-2mm diameter - minor chlorite veining - bottom 70cm is totally sericitic	
114.8 – 120.3m	<u>Rhyolite</u> - pinkish grey, massive, non-magnetic, core extensively broken - lower contact at 90° TCA	
120.3 – 128.3m	<u>Basalt</u> - dark green, massive, non-magnetic, hosts 1-2% light brown crystals (leucoxene?) that are <.5mm in diameter, 5% hematite amygdules at 122.2 metres - hematitic calcite veins at 120.9, 121.6, 123.1 and 123.5 metres - slickensides on joint face at 123.8 metres - hosts 1-3% plag crystals from 126.5 – 129.0 metres - lower contact sharp and at 45° TCA	
128.5 – 187.4m	<u>Sericitic Mafic Volcanic</u> - fine grained, massive, sericite green in colour, epidote common in matrix of unit and as veinlets, chlorite on fractures minor quartz-calcite veining - matrix of unit is almost entirely sericitized, calcite common in matrix - silicified zones at 134.5, 136.5, 140.8, 143.0, 156.5 - chlorite and graphite veins and pods comprising 10-70% are associated with sericitic alteration at 136.5m – 140.5, 142.0 – 150.0 and 174 – 178.0 metres - minor sericite veins - original plagiophyric textures still present locally as at 152 – 155 metres - 10cm thick zone of brittle and ductile deformation at 150.5 metres, fabric at 40° TCA - unit hosts 5-10% quartz veins - quartz-calcite veins have flooded unit from 179.5 – 180.3 metres, veins are paralleling core axis	
187.4 – 190.3m	<u>Rhyolite</u> - colour varies from pink to green, massive, very siliceous, trace pyrite, fractured from 188.5 – 190, fractures filled with chlorite; minor quartz-calcite veining - lower contact sharp at 45° TCA	
190.3 – 196.7m	<u>Sericitized Mafic Volcanic</u> - sericitic green in colour, 5% plagioclase crystals <.5mm in diameter, minor calcite in matrix, unit virtually entirely sericitized - silicified zones at 194.9 – 195.0 and 195.6 – 196.3m - fabric at 45° TCA	
196.7 – 213.4m	<u>Pyrite-Silica-Sericitic Chlorite Zone (Box 51-55)</u> - colour varies from greyish to greenish black, greyish areas are sericitic whereas the greenish black zones are chloritic - unit is a completely altered zone comprising bands of pyrite, silica, sericite and chlorite; overall the unit is approximately 10-20% fine grained pyrite, approximately half of the pyrite is disseminated within the	

	- sericite and chlorite - altitude of banding varies from 45 - 65° TCA - best example of pyritic banding is at 204.8 metres - unit has a purplish hue from 198m – 199m which may be due to fine grained sphalerite - chlorite-pyrite bands common in zone - hosts a brownish clay-like mineral - intermediate dyke at 10° TCA from 211 – 212 metres	
213.4 – 215.2m	<u>Altered Mafic Volcanic</u> - sericitic green in colour, protolith appears to be amygdaloidal basalt, unit almost entirely altered to sericite and perhaps epidote; quite sheared from 213.4 - 213.8 metres	
215.2 – 222.4m	<u>Rhyolite</u> - colour varies from buff to pink, aphanitic, feldspar-phyric in part from 218.5 – 218.8, massive, very siliceous - the rhyolite appears to be silicified in part - mafic rock from 218.8 – 219.1	
222.4 – 278.5m	<u>Basalt</u> - dark green, fine grained non-magnetic to weakly magnetic, upper 20cm of unit is silicified - bleached locally which may be due to sericitic alteration - 10 – 15% quartz-calcite and epidote veining - amygdaloidal locally - silicified zone from 233.3 – 233.8 - mafic dyke ? from 228.4 – 229m magnetic - ductile shear zone at 240.5m is 20° TCA - possible contact between two mafic units at 242.8m, upper unit is plagiophyric and epidotized whereas lower unit is dark green and massive - epidotized from 231 – 231.5 metres - calcite amygdules common particularly at 247 – 248, 261 – 263.5, amygdules sometimes hematitic - zones of amygdular epidotization (pillow selvages?) at 245.0 – 245.2, 245.5 – 245.8, 248.7 – 249.0, 250.2 – 250.3 - silicified over 10cm at 251.2m - thick epidote veining (1-2cm) from 256 – 256.5 - 20cm thick massive chlorite veins at 264.7 – 264.9 and 268.0 – 268.2, thin chlorite vein paralleling core axis over 30cm at 266.0 metres - zone of sericitic veining and flooding from 271 – 274.0 metres - lower contact is faulted against unit below, contact at 30° TCA - felsic material from unit beneath at	
278.5 – 320.2m	<u>Rhyolite</u> - greyish yellow in colour, massive, siliceous, non-magnetic, numerous irregular fractures filled with thin chlorite veins, chlorite veining can comprise 10% of unit, upper 20cm in contact with unit above is brecciated and crushed due to faulting, sericite flooding of rhyolite common - core completely broken from 281 – 282.5 metres, fault gouge indicating location of fault - thin zones of mafic material at 284 – 284.5 metres - chloritic zones at 288.2 – 288.3 and 293.6 – 293.8m	

	- fine disseminated pyrite starts at 294.5 metres and continues to 316 metres, pyrite content is 1-3%, minor pyritic veins as at 301.4 metres, minor blotchy pyrite - mafic dyke ? from 293.5 – 298.8m, fine grained equigranular, magnetic, hosts dark green chloritic spots up to 3mm in diameter, contacts at 70° TCA; contacts aren't chilled but lower contact seems to be cooked up over 1cm - chlorite veining brecciating rock at 312.8 metres - fabric seem locally at 30-45° TCA, fabric defined by chlorite veining - lower contact at 40° TCA - no pyrite in last 4 metres of unit although same degree of chloritization and sericitic alteration as from 278.5 – 316 metres	
320.2 – 321.8m	<u>Mafic Volcanic</u> - fine grained, green, equigranular, calcite rich matrix, non-magnetic, sericitized, minor chlorite veining, trace pyrite in chlorite veining at 321.8; lower contact is faulted at 20° TCA	
321.8 – 322.8m	<u>Rhyolite</u> - greenish pink in colour, numerous chloritic veins, sericitic - lower contact sharp at 30° TCA	
322.8 – 323.3m	<u>Mafic Volcanic</u> - same as at 320.2 – 321.8 - lower contact faulted at 40° TCA, .5cm of fault gouge	
323.3 – 323.5m	<u>Rhyolite</u> - same as at 321.8 – 322.9	
323.5 – 329.0m	<u>Mafic Volcanic</u> - same as at 320.2 – 321.8 - disseminated pyrite (trace – 2%) at 323.8, 325 and 327 associated with rhyolite injected into mafic volcanic - lower contact gradational over 10cm	
329.0 – 342.1m	<u>Rhyolite (Sheared & Altered)</u> - same as at 278.5 – 320.2 except highly sheared, strong fabric at 40° TCA defined by chlorite alignment, locally fabric is paralleling core axis - fine disseminated pyrite at 329.5, 330, 330.4, 331.1 – 331.4, 332.7 – 332.9, 335.5, 336.3, 337, 338.0, 339.3, 339.7, 340.7 and 342.1 metres - lower contact at 70° TCA	
342.1 – 350m	<u>Mafic Volcanic</u> - dark green, fine grained, highly sheared; injected with significant amount of felsic material from 342.1 – 346.0 which pyrite is associated as at 342.4, 342.6, 343.0, 343.4, 343.7, 345.5, 345.7, 346.2, 348.0 - jasper at 342.5 and 348.2 - thin green vein at 349.3m, deep green sericite ? * if felsic material in mafic volcanic is associated with rhyolite then felsic material would have been injected into a previously existing mafic therefore younging direction is up the hole	
350 – 352m	<u>Hetero-Lithic Pyroclastic</u> - green, generally mafic looking however clasts are predominantly felsic, unit comprises 20-30% angular	

	felsic fragments that are 1-3cm in diameter, fragments vary in colour from light green – pink to red	
352 – 362.1m	<u>Mafic Volcanic (Basalt)</u> - dark green, massive, non-magnetic, 10% quartz-calcite veinlets - 5cm of fault gouge at 359.5 metres, may be faulted contact between different mafic volcanic below which is a lighter green - high angle shearing at 20° TCA from 361 – 38\61.8 metres - lower contact is sharp at 45° TCA	
362.1 – 363.9m	<u>Rhyolite</u> - some rhyolite as at 278.5 – 320.2 metres, massive, yellowish in colour with numerous fractures hosting chlorite - 2-3% pyrite at 363.2 metres	
363.9 – 367.0m	<u>Mafic Volcanic</u> - dark green, massive, trace pyrite in rhyolitic material at 364.5 metres, 10% quartz calcite veinlets	
367.0 – 370.1m	<u>Silica-Sericite Zone</u> - strongly banded zone of silica and sericite similar to the zone seen in BJ-00-08 at this stratigraphic level, sericite is yellowish brown and the bands are .5 – 1cm thick	
370.1 – 371.5m	<u>Mafic Volcanic</u> - medium green, extremely sheared, unit comminuted to breccia zones at 370.9 – 371.0 and 371.3 – 371.5 metres	
371.5 – 382.5m	<u>Fault Breccia</u> - rock has been crushed to breccia and fault gouge over a large thickness, faulting crosses a number of lithologies: 371.5 – 373.2 – hematitic breccia with felsic fragments, 373.2 – 375.2 – mafic volcanic fault breccia, 375.2 – 382.5 – predominantly hematitic fault breccia with lesser mafic material, hematitic breccia comprises rhyolitic material	
382.5 – 421.0m EOH	<u>Rhyolite</u> - orangish pink in colour, highly fractured, k-spar phyrlic locally, jasperoidal from 395.0 – 395.9, brecciated by quartz veining at 386.3 – 386.7, numerous zones of flooding and veins of sericite and chlorite from 282.5 – 393.0 ⇒ margin alteration zone as in basal rhyolitic dome as in BJ-00-08 - small fault at 386 and 388.2 metres - rhyolite is bright orange and quartz phyrlic from 393.0 – 402.3, 2-3% anhedral quartz eyes that are 2-10mm in diameter - anastomosing quartz veining from 398.5 – 398.8, 399.5 – 399.6 and 401.6 – 401.7 metres - zone of sericitic flooding and veining from 400.6 – 401.7 metres - jasperoidal zone bounded by 2mm thick greenish margins from 402.0 – 402.2, similar jasperoidal zone 5cm thick at 402.3 metres - 10cm thick white rhyolite at 402.4 metres with 5cm of jasper at lower margin - red rhyolite with 5-10% quartz eyes (1-5mm in diameter) starting at 403.5m; basically unaltered compared to rhyolite above - pyrite on chloritic fracture at 412m, chlorite zone at 414.9 metres - chlorite cemented breccia vein at 416.4 metres at 20° TCA	