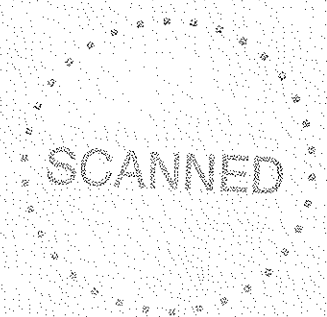


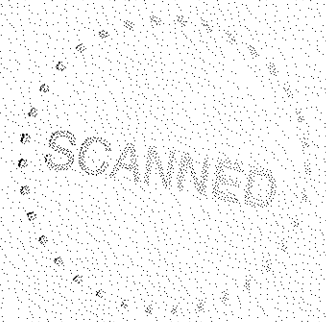
SAMPLE DESCRIPTIONS

Samples described by K. M. Hebertson

<u>Depth</u>	<u>Description</u>
0 - 200	Ss, lt, gry, brn sity, mic.
200-230	Ss, lt gry, tuff.
230-260	A/a. (As above)
260-290	A/a.
290-320	A/a.
320-350	A/a.
350-380	No sample. (lost circ.)
380-410	Ss, lt gry, tuff.
410-440	A/a.
440-470	A/a.
470-500	Sltst, lt gry, tuff.
500-530	A/a w/bent strgs.
530-560	A/a.
560-590	A/a, w/qtz g.
590-600	Sltst, lt gry, tuff, w/qtz strgs.
600-615	A/a.
615-630	A/a.
630-645	A/a.
645-660	A/a w/strgs of bent sh.
660-675	Sh, sity, lt gry, bent.
675-690	Sh, lt gry bent.
690-705	A/A.
705-720	A/A
720-735	A/A
735-750	A/A w/strgs of bent sh.



<u>Depth</u>	<u>Description</u>
750-765	A/A.
765-780	A/A, w/tuff ss strgs.
780-795	A/A.
795-810	Sh, lt gry, bent.
810-825	A/A.
825-840	A/A.
840-855	Ash, lt, gry, slty, non-calc.
855-870	A/A.
870-885	A/A.
885-900	A/A.
900-915	Ash, lt gry slty, w/ss strgs.
915-930	A/A.
930-945	A/A.
945-960	Ash, lt-drk gry volcanic.
960-975	A/A.
975-990	A/A.
990-1005	Ash, lt gry bent, volc.
1005-1020	Sh, lt gry, bent w/ss strgs.
1020-1035	A/A, no sd.
1035-1050	Sh, lt gry bent, w/sltst, strgs.
1050-1065	Sh, lt gry, bent, and ash beds in strgs.
1065-1080	Sh, lt gry bent. No sd.
1080-1095	A/A.
1095-1100	A/A w/ash. strgs.
1100-1150	Ash, lt gry, sli calc.
1150-1160	A/A.
1160-1170	Ash, lt gry.
1170-1180	A/a.



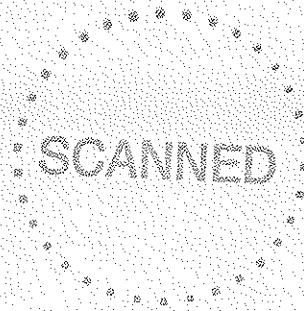
<u>Depth</u>	<u>Description</u>
1180-1190	A/A, w/li gry tuff ss strgs.
1190-1200	A/A.
1200-1210	A/A.
1210-1220	Ash, lt gry bent.
1220-1230	Sh, lt gr.
1230-1240	Sh, lt gry, tuff.
1240-1250	A/A.
1250-1260	A/A.
1260-1270	A/A w/fine gr tuff ss strgs.
1270-1280	A/A.
1280-1290	Ss, lt gry, f g tuff.
1290-1300	A/A.
1300-1310	A/A.
1310-1320	A/A.
1320-1330	No sample.
1330-1340	No sample.
1340-1350	Sh, lt gry, tuff, no sd.
1350-1360	A/A.
1360-1370	A/A.
1370-1380	A/A w/bent strgs, no sd.
1380-1390	Sh, lt gry, tuff, no sd.
1390-1400	A/A, w/bent strgs. No sd.
1400-1410	A/A.
1410-1420	A/A No sd.
1420-1430	A/A.
1430-1440	A/A.
1440-1450	A/A. No sd..
1450-1460	A/A w/tuff ss, strgs & bent.
1460-1470	Sh, lt gry bent.



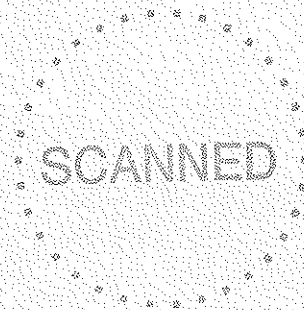
<u>Depth</u>	<u>Description</u>
1470-1480	A/A w/f g tuff ss strgs.
1480-1490	Ss, lt gry, f g tuff.
1490-1500	Sh, lt gry tuff.
1500-1510	Ss, lt gry, vf-g tuff.
1510-1520	A/A w/sh strgs.
1520-1530	Sh, lt gry bent.
1530-1540	Sd, lt gry f g tuff.
1540-1550	Sh, lt gry tuff.
1550-1560	Sh, lt gry tuff, w/f g tuff sd strgs.
1560-1570	A/A.
1570-1573	Circ sample a/a.
1573-1583	Core # 1. Corrected depths at this point. Pipe tally was incorrect. Corrected top of Core 1515. Core # 1 1515-1525.
1530-1540	Sh, lt gry tuff w/sd strgs.
1540-1550	Sh, lt gry tuff w/li gry f g tuff ss. strgs.
1550-1560	A/A.
1560-1570	Sh, lt gry tuff.
1570-1573	Circ sample, lt gry tuff sh.
1580-1590	A/A
1590-1600	A/A.
1600-1610	A/A w/lt gry tuff ss strgs.
1610-1620	A/A.
1620-1630	Sh, lt gry tuff.
1630-1640	A/A w/pyr. incl.
1640-1650	Sh, lt gry tuff w/pyr incl.
1650-1660	A/A.
1660-1670	A/A.
1670-1680	A/A.
1680-1690	Sh, lt gry tuff, w/pyr incl.

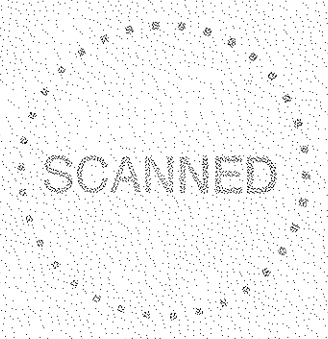
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<u>Depth</u>	<u>Description</u>
1690-1700	A/A
1700-1710	A/A
1710-1720	A/A
1720-1730	A/A
1730-1740	A/A
1740-1750	A/A
1750-1760	Sh, lt gry tuff.
1760-1770	A/A
1770-1780	A/A bent.
1780-1790	A/A
1790-1800	Sh, lt gry, tuff, bent.
1800-1810	A/A w/f g tuff, sd strgs.
1810-1820	Sh, lt gry tuff bent.
1820-1830	Sh, lt gry tuff.
1830-1840	A/A
1840-1850	Sltst, lt gry tuff.
1850-1860	Slt, lt gry f g tuff and sh showing hydrothermal alt. and vein minerals.
1860-1870	A/A.
1870-1880	Sh, lt gry tuff.
1880-1890	Sh, lt gry tuff.
1890-1900	A/A
1900-1910	A/A.
1910-1920	A/A w/abd pyr incl.
1920-1930	Sh, lt gry tuff, showing hydrothermal alt. and vein minerals.
1930-1940	Sh, lt gry tuff, sl alt. w/ovr incl.
1940-1950	Sh, lt gry tuff, w/pyr incl. Harder than previous samples.
1950-1960	A/A.



<u>Depth</u>	<u>Description</u>
1960-1970	A/A
1970-1980	A/A glauc.
1980-1990	A/A w/vein minerals.
1990-2000	A/A
2000-2010	A/A
2010-2020	Sh, lt gry tuff.
2020-2030	Sh, lt gry tuff bent w/lt gry -grn glauc tuff ss.strgs.
2030-2040	A/A.
2040-2050	A/A iron stained frag may be basalt.
2050-2060	Sh, lt red. strgs in gry tuff sh, not magnetic.
2060-2070	Sh, lt gry tuff.
2070-2140	Lost circ. No returns.
2140-2150	Sh, lt gry tuff. w/pyr incl.
2150-2160	A/A w/vein minerals.
2160-2170	Sh, lt gry tuff.
2170-2180	A/A
2180-2190	A/A
2190-2200	A/A
2200-2210	A/A w/vein minerals
2210-2220	Sh, lt gry tuff/w/vein minerals.
2220-2230	A/A w/black basalt strgs.
2230-2240	Sh, lt gry tuff. w/basalt cavings.
2240-2250	A/A
2250-2260	Sh, lt gry tuff, w/basalt strgs. Sh exhibits some alt.
2260-2270	Sh, a/a contact metamorphism evident.
2279-2280	Sh, lt gry, tuff w/black basalt.
2280-2290	Basalt, dns, blk, w/sh cavings.
2290-2300	A/A
2300-2310	Basalt, dns, blk, and lt gry tuff sh.





<u>Depths</u>	<u>Description</u>
2310-2320	Sh and basalt a/a.
2320-2330	Basalt, dns blk.
2330-2340	Basalt, dns blk.
2340-2350	A/A.
2350-2360	Basalt a/a, w/ contact zone minerals.
2360-2370	Basalt dns blk. apparently passed from one separate flow into another.
2370-2380	Lost circ material.
2380-2390	Lost circ material.
2390-2400	Lost Circ material.
2400-2410	Lost circ material and blk f g basalt.
2410-2420	Lost circ material and basalt a/a.
2420-2430	A/A.
2430-2440	Basalt blk f g .
2440-2450	Basalt blk f g, w/ lt gry tuff sh.
2450-2460	Sh, lt gry tuff
2460-2470	Sh, lt gry tuff and blk f g basalt.
2470-2480	Basalt a/a.
2480-2490	A/a.
2490-2500	Basalt a/a w/contact zone indicating two separate flows.
2500-2510	Basalt, blk fg.
2510-2520	A/A pyr. in samples believed to be caving from above.
2520-2530	Basalt a/a.
2530-2540	A/a.
2540-2550	Basalt blk f g.
2550-2560	A/A
2560-2570	A/A
2570-2580	A/A
2580-2590	Lost circ material.
2590-2600	A/A

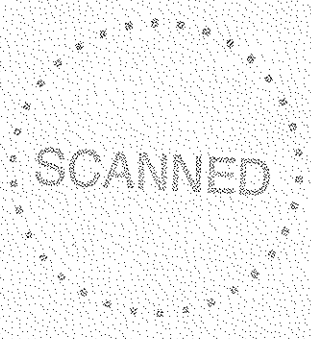
<u>Depth</u>	<u>Description</u>
2600-2610	A/A
2610-2620	Lost circ material. and blk f-g basalt.
2620-2630	S/A.
2630-2640	A/A
2640-2650	A/A
2650-2660	A/A
2680-2690	Lost circ material, dns blk basalt & gry tuff siltst strgs.
2690-2700	A/A
2700-2710	Lost circ material
2710-2720	Lost circ material and lt gry tuff siltst.
2720-2730	A/A w/basalt.
2730-2740	A/A
2740-2750	No returns.
2750-2760	Basalt, blk f g w. vesicular minerals (calcite & barite)
2760-2770	A/A
2770-2780	No returns.
2780-2790	Ss, lt gry tuff w/basalt a/a.
2790-2800	A/A
2800-2810	A/A
2810-2820	Siltst, lt gry, tuff. and sh w/basalt strgs.
2820-2830	Basalt dns, blk.
2830-2840	A/a w/tr of weathering.
2840-2850	A/A.
2850-2860	A/A
2860-2870	Sh, lt gry tuff bent.
2870-2880	A/A.
2880-2890	Siltst, lt gry tuff, & sh.
2890-2900	A/A

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<u>Depth</u>	<u>Description</u>
2900-2910	Sh, lt gry bent.
2910-2920	A/A
2920-2930	Sh, lt gry tuff and basalt drk grn (olivine)
2930-2940	Olivine basalt a/a.
2940-2950	Basalt a/a and lt gry tuff sh w/contact zn alteration.
2950-2960	A/A
2960-2970	A/A
2970-2980	Circ sample sh, lt gry tuff, slty sd.
2980-2990	Basalt dns drk grn olivine.
2990-3000	A/A
3000-3010	Basalt a/a w/contact zn minerals.
3010-3020	Sh, lt gry tuff bent.
3020-3030	Basalt, dns blk-drk grn.
3030-3040	A/A weathered.
3040-3050	A/A
3050-3060	Sh, bent lt gry tuff.
3060-3070	A/A w/dns drk grn basalt.
3070-3080	A/A basalt badly broke and weathered.
3080-3090	Sh, basalt a/e, instrgs.
3090-3100	A/A
3100-3110	Sh, lt gry tuff.
3110-3120	Basalt, dns blk w/small frac.
3120-3130	Basalt a/a, weathered.
3130-3140	Basalt, dns drk grn.
3140-3150	Basalt a/a w/lt gry tuff bent sh.
3150-3160	No returns.
3160-3170	No returns.
3170-3180	Sh and basalt a/a.

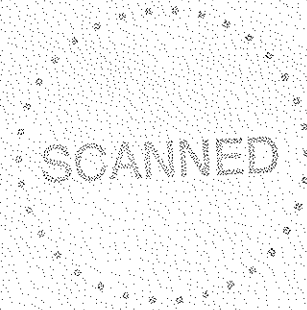
<u>Depth</u>	<u>Description</u>
3190-3200	Basalt, drk grn badly broken, olivine.
3200-3210	Sh, lt gry bent.
3210-3220	A/A w/drk grn-blk basalt.
3220-3230	Basalt a/a. Badly broken.
3230-3240	Sh, tuff bent a/a, badly Baked.
3240-3250	Sh, a/a w/ drk grn-blk basalt.
3250-3260	Sh, drk-lt gry bent badly baked.
3260-3270	Sh, a/a.
3270-3280	Sh, lt gry tuff w/alt minerals.
3280-3290	Sh, a/a.
3290-3300	Sh, a/a.
3300-3310	Basalt , dns drk grn-blk.
3310-3318-	Circ smp1. Sh, blu-gry bent.
3320-3330	Basalt, dns, drk grn-blk.
3330-3340	Basalt a/a.
3340-3350	Sh, blu gry bent.
3350-3360	Sh, a/a w/contact zn minerals and basalt stros.
3360-3370	A/A
3370-3380	A/A basalt badly broken.
3380-3390	Sh, lt gry bent w/basalt cavings.
3390-3400	Sh, a/a w/pyr.
3400-3410	A/a w/lost circ material.
3410-3420	Basalt, dns blk grn w/lost circ material,
3420-3430	A/A
3430-3440	Basalt a/a.
3440-3450	Basalt a/a, w/lost circ material.
3450-3460	Basalt , a/a w/lt gry bent sh.
3460-3470	Sh, a/a.



<u>Depth</u>	<u>Description</u>
3470-3480	A/A
3480-3490	Sh, lt gry, bent.
3490-3500	A/A
3500-3510	A/A
3510-3520	Sh, lt gry a/a w. basalt strgs.
3520-3530	Sh, lt gry tuff
3530-3570	Sh, lt gry-brn, tuff w/ contact alt.
3540-3550	Sh, a/a w/dns blk basalt.
3550-3560	Lost circ material
3560-3570	Basalt & sh a/a.
3570-3580	Basalt, dns, blk w/lt gry tuff sh & sltst.
3580-3590	Basalt a/a, w/hydrothermally alt tuff sh & sltst.
3590-3600	Basalt dns, grn glassy.
3600-3610	Basalt, a/a.
3610-3620	Basalt, a/a.
3620-3630	Basalt, dns drk grn olivine.
3630-3640	A/A
3640-3650	Basalt, a/a. Hydrothermal alt.
3650-3660	Basalt, a/a w/tuff sh showing alt.
3660-3670	Basalt a/a hl alt.
3670-3680	Basalt, dns, dk grn-blk w/sil alt to opalite
3680-3690	Basalt a/a w/bent and ben tuff sh strgs.
3690-3700	Basalt dk grn grit composed of alt mat.
3700-3710	Serpentine? pyr
3710-3720	Grit composed of grn & blk basalt & olivine particles.
3720-3730	A/A
3730-3740	A/A w/pink sh.
3740-3750	Basalt dk grn.
3750-3760	Sh, gry-pink tuff.

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<u>Depth</u>	<u>Description</u>
3760-3770	Sh, a/a(cavings)
3770-3780	Drk grn olivine & serpentine basalt? Samples are very poor.
3780-3790	A/A
3790-3800	A/A
3800-3810	Greenstone
3810-TD	Greenstone breccia as proven by Core # 2
TD	4504 Drill Pipe
TD	4506 Schlumberger



T O P S

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Surface - 2220	Tertiary Idaho formation.
2120 - 3750	Tertiary Columbia River Basalts
3750 - T. D.	Basement Rock - Hydrothermally altered, porphyritic andesitic Basalt, age unknown.

SHOWS, CORES AND DRILL STEM TESTS

This well had shows of gas in several zones throughtout the formations penetrated. However, none were considered significant. One show at 1480 feet was carefully drilled and a core was taken at 1515-1525 feet. (See description Core # 1) This show was not tested because of the composition of Core # 1.

Core # 1: 1515-1525 Rec. 6', badly broken shale w/sand partings. Hard and tight.

Core # 2: 1399-1415 Barrel Jammed:
Rec. 9' Greenstone breccia w/considerable fracturing and vein materials. For analysis and composition of this core see attached analysis by William G. Park.

Well was drilled to a total depth of 4506 feet while conditioning mud and waiting on Schlumberger.

Keith M. Hebertson
Geologist