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Date Logged	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Comments
2/7/2006	24PB-405-410-D	405.00	410.00	From 405ft to 420 ft samples are a 1/2 split. Bedrock is pinkish gray and crystal-rich. Contains prominent quartz. Also the presence of glassy shards.
2/7/2006	24PB-410-415-D	410.00	415.00	
2/7/2006	24PB-415-420-D	415.00	420.00	First water at 417.5 ft. From 417.5ft-475 ft water production is greater than 1 gpm.
2/7/2006	24PB-420-425-D	420.00	425.00	1/4 split from 420ft-977ft with the Anaconda wet splitter.
2/7/2006	24PB-425-430-D	425.00	430.00	Red iron-oxide on fracture surfaces. Mafics altered to bronze color.
2/7/2006	24PB-430-435-D	430.00	435.00	
2/7/2006	24PB-435-440-D	435.00	440.00	
2/7/2006	24PB-440-445-D	440.00	445.00	
2/7/2006	24PB-445-450-D	445.00	450.00	
2/7/2006	24PB-450-455-D	450.00	455.00	
2/7/2006	24PB-455-460-D	455.00	460.00	
2/7/2006	24PB-460-465-D	460.00	465.00	Color becomes more red.
2/7/2006	24PB-465-470-D	465.00	470.00	Color changes to yellowish red.
2/7/2006	24PB-470-475-D	470.00	475.00	Lost circulation apparently due to open fractures - but not evident in the chips.
2/7/2006	24PB-475-480-D	475.00	480.00	
2/7/2006	24PB-480-485-D	480.00	485.00	
2/7/2006	24PB-485-490-D	485.00	490.00	
2/7/2006	24PB-490-495-D	490.00	495.00	
2/7/2006	24PB-495-500-D	495.00	500.00	
2/12/2006	24PB-500-505-D	500.00	505.00	Thick calcite on fracture surface. Pumice flattened 5:1.
2/12/2006	24PB-505-510-D	505.00	510.00	Very slow drilling rate.
2/12/2006	24PB-510-515-D	510.00	515.00	Finer grained. More quartz, less silica. Rare amphibole.
2/12/2006	24PB-515-520-D	515.00	520.00	Presence of quartz on fractures and numerous chips of calcite.
2/12/2006	24PB-520-525-D	520.00	525.00	
2/12/2006	24PB-525-530-D	525.00	530.00	One chip of obsidian with conchoidal fractures is present.
2/12/2006	24PB-530-535-D	530.00	535.00	
2/12/2006	24PB-535-540-D	535.00	540.00	Presence of a couple of chips of nonwelded tuff.
2/12/2006	24PB-540-545-D	540.00	545.00	Opaline-silica coatings. 1 large dark gray lithic (N4), is 10mm in diameter.
2/12/2006	24PB-545-550-D	545.00	550.00	
2/12/2006	24PB-550-555-D	550.00	555.00	Bit dropped 3" through a fracture. Calcite fracture fill in chips. Maintained circulation.

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Date Logged	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Comments
2/12/2006	24PB-555-560-D	555.00	560.00	Numerous chips of calcite fracture fill.
2/12/2006	24PB-560-565-D	560.00	565.00	
2/12/2006	24PB-565-570-D	565.00	570.00	
2/12/2006	24PB-570-575-D	570.00	575.00	
2/13/2006	24PB-575-580-D	575.00	580.00	
2/13/2006	24PB-580-585-D	580.00	585.00	
2/13/2006	24PB-585-590-D	585.00	590.00	
2/13/2006	24PB-590-595-D	590.00	595.00	
2/13/2006	24PB-595-600-D	595.00	600.00	
2/13/2006	24PB-600-605-D	600.00	605.00	
2/13/2006	24PB-605-610-D	605.00	610.00	Chips of white (N8) calcite are present from fracture fill.
2/13/2006	24PB-610-615-D	610.00	615.00	
2/13/2006	24PB-615-620-D	615.00	620.00	
2/13/2006	24PB-620-625-D	620.00	625.00	There's more hornblende than biotite. Also, chatoyant sanidine is present.
2/13/2006	24PB-625-630-D	625.00	630.00	
2/13/2006	24PB-630-635-D	630.00	635.00	MnOx coating on fracture surfaces are present. A few crystals of bronze biotite.
2/13/2006	24PB-635-640-D	635.00	640.00	
2/13/2006	24PB-640-645-D	640.00	645.00	Bluish gray pumice, flattened. Replaced by opalescent silica.
2/13/2006	24PB-645-650-D	645.00	650.00	Bluish gray pumice, flattened. Replaced by opalescent silica.
2/13/2006	24PB-650-655-D	650.00	655.00	Increased drill rate coincides with increase in calcite content (650 ft-710 ft).
2/13/2006	24PB-655-660-D	655.00	660.00	Chips display thick (7-8mm) through-going fractures filled with calcite.
2/13/2006	24PB-660-665-D	660.00	665.00	Fast drilling rate. Calcite chips in sample (650 ft-710 ft).
2/13/2006	24PB-665-670-D	665.00	670.00	Lots of large calcite chips up to 1cm. Probably drilling through fractures.
2/13/2006	24PB-670-675-D	670.00	675.00	
2/13/2006	24PB-675-680-D	675.00	680.00	
2/13/2006	24PB-680-685-D	680.00	685.00	
2/13/2006	24PB-685-690-D	685.00	690.00	
2/14/2006	24PB-690-695-D	690.00	695.00	
2/14/2006	24PB-695-700-D	695.00	700.00	Trace of opalescent silica present in one chip. Pumice content increases.
2/14/2006	24PB-700-705-D	700.00	705.00	Welding increases. A rough alighment of textural elements can be seen in places.
2/14/2006	24PB-705-710-D	705.00	710.00	Some of the fracture fill quartz is blue in color.

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2/14/2006	24PB-710-715-D	710.00	715.00	Marked reduction in chips of calcite fracture fill @ 710 ft.
2/14/2006	24PB-715-720-D	715.00	720.00	Marked increase in pumice. Pumice is flattened 10:1.
2/14/2006	24PB-720-725-D	720.00	725.00	
2/14/2006	24PB-725-730-D	725.00	730.00	Presence of dendritic manganese. Pumice content is decreasing.
2/14/2006	24PB-730-735-D	730.00	735.00	Numerous micro-fractures filled with quartz.
2/14/2006	24PB-735-740-D	735.00	740.00	
2/14/2006	24PB-740-745-D	740.00	745.00	
2/14/2006	24PB-745-750-D	745.00	750.00	
2/14/2006	24PB-750-755-D	750.00	755.00	Pumice content increasing slightly. Some of the pumice is elongated and wispy.
2/14/2006	24PB-755-760-D	755.00	760.00	
2/14/2006	24PB-760-765-D	760.00	765.00	
2/14/2006	24PB-765-770-D	765.00	770.00	Pumice content reduced to 2%.
2/14/2006	24PB-770-775-D	770.00	775.00	Quartz on fractures. Matrix becomes darker brown.
2/14/2006	24PB-775-780-D	775.00	780.00	Heavy MnOx coatings on fracture surfaces and the presence of opalescent silica.
2/14/2006	24PB-780-785-D	780.00	785.00	Absence of pumice.
2/14/2006	24PB-785-790-D	785.00	790.00	
2/14/2006	24PB-790-795-D	790.00	795.00	
2/15/2006	24PB-795-800-D	795.00	800.00	Pumice is reddish yellow, wispy and flattened 10:1.
2/15/2006	24PB-800-805-D	800.00	805.00	A few pumice clasts are vitric and yellow (5Y 6/8).
2/15/2006	24PB-805-810-D	805.00	810.00	MnOx on fracture surfaces.
2/15/2006	24PB-810-815-D	810.00	815.00	
2/15/2006	24PB-815-820-D	815.00	820.00	
2/15/2006	24PB-820-825-D	820.00	825.00	Fractures filled with 5mm thick quartz fracture-fill.
2/15/2006	24PB-825-830-D	825.00	830.00	Drill rate increasing markedly.
2/15/2006	24PB-830-835-D	830.00	835.00	Fine grained chips. Welding decreases. Rock is softer.
2/15/2006	24PB-835-840-D	835.00	840.00	Pumice content and size increases. Flattening of pumice is 5:1.
2/15/2006	24PB-840-845-D	840.00	845.00	Drilling very fast. Sample size reduces.
2/15/2006	24PB-845-850-D	845.00	850.00	Fewer feldspar and quartz crystals. Predominantly matrix and pumice.
2/15/2006	24PB-850-855-D	850.00	855.00	Pumice is vitric. Welding seems to be decreasing. Fractures are not apparent.
2/15/2006	24PB-855-860-D	855.00	860.00	Marked reduction in sample size. Rock is soft.
2/15/2006	24PB-860-865-D	860.00	865.00	

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Date Logged	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Comments
2/15/2006	24PB-865-870-D	865.00	870.00	
2/15/2006	24PB-870-875-D	870.00	875.00	
2/15/2006	24PB-875-880-D	875.00	880.00	
2/15/2006	24PB-880-885-D	880.00	885.00	
2/15/2006	24PB-885-890-D	885.00	890.00	Crystal poor. 75% matrix. Pumice becomes pinkish.
2/15/2006	24PB-890-895-D	890.00	895.00	Matrix becomes very light brown.
2/15/2006	24PB-895-900-D	895.00	900.00	Matrix becomes light reddish brown. The finer material is felsic and pumice.
2/15/2006	24PB-900-905-D	900.00	905.00	895 ft-900 ft is pre-Bullfrog bedded. At 900 ft-905 ft is conglomerate.
2/15/2006	24PB-905-910-D	905.00	910.00	Matrix is washed away in borehole. We're only recovering clasts in sample.
2/15/2006	24PB-910-915-D	910.00	915.00	Clasts in sample are multi-rock types: welded tuff, siltstone, sandstone.
2/15/2006	24PB-915-920-D	915.00	920.00	Fine grained. Well rounded. Volcaniclastic sandstone.
2/15/2006	24PB-920-925-D	920.00	925.00	Conglomeratic sandstone.
2/15/2006	24PB-925-930-D	925.00	930.00	
2/15/2006	24PB-930-935-D	930.00	935.00	Immature sandstone with poorly developed rounding of grains.
2/15/2006	24PB-935-940-D	935.00	940.00	
2/15/2006	24PB-940-945-D	940.00	945.00	Very soft volcaniclastic clasts and hard siltstone clasts.
2/15/2006	24PB-945-950-D	945.00	950.00	Contact: sandstone/ashflow tuff. Contact is sharp. Ashflow is Tram.
2/15/2006	24PB-950-955-D	950.00	955.00	Matrix is red, and partially weathered-soft.
2/15/2006	24PB-955-960-D	955.00	960.00	
2/15/2006	24PB-960-965-D	960.00	965.00	
2/15/2006	24PB-965-970-D	965.00	970.00	Sugary texture from 970 ft-1015 ft.
2/15/2006	24PB-970-975-D	970.00	975.00	
2/15/2006	24PB-975-980-D	975.00	980.00	Splitter set to 3/16 from 977 ft-997 ft.
2/15/2006	24PB-980-985-D	980.00	985.00	
2/15/2006	24PB-985-990-D	985.00	990.00	
2/15/2006	24PB-990-995-D	990.00	995.00	
2/15/2006	24PB-995-1000-D	995.00	1000.00	Splitter set to 6/16 from 997 ft-1010 ft.
2/15/2006	24PB-1000-1005-D	1000.00	1005.00	
2/15/2006	24PB-1005-1010-D	1005.00	1010.00	Starting to see red siltstone clasts up to 3mm.
2/15/2006	24PB-1010-1015-D	1010.00	1015.00	Splitter set at 1/2 from 1010 ft-1395 ft (T.D.).
2/16/2006	24PB-1015-1020-D	1015.00	1020.00	Lack of welding creates an open and porous matrix.

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2/16/2006	24PB-1020-1025-D	1020.00	1025.00	No glass shards are visible. The matrix is devitrified.
2/16/2006	24PB-1025-1030-D	1025.00	1030.00	
2/16/2006	24PB-1030-1035-D	1030.00	1035.00	
2/16/2006	24PB-1035-1040-D	1035.00	1040.00	
2/16/2006	24PB-1040-1045-D	1040.00	1045.00	
2/16/2006	24PB-1045-1050-D	1045.00	1050.00	
2/16/2006	24PB-1050-1055-D	1050.00	1055.00	Red over-print on matrix. Possibly FeOx alteration.
2/16/2006	24PB-1055-1060-D	1055.00	1060.00	
2/16/2006	24PB-1060-1065-D	1060.00	1065.00	
2/16/2006	24PB-1065-1070-D	1065.00	1070.00	
2/16/2006	24PB-1070-1075-D	1070.00	1075.00	Crystal and lithic poor ash flow samples.
2/16/2006	24PB-1075-1080-D	1075.00	1080.00	
2/16/2006	24PB-1080-1085-D	1080.00	1085.00	
2/16/2006	24PB-1085-1090-D	1085.00	1090.00	1-2% orange glassy shards in matrix.
2/16/2006	24PB-1090-1095-D	1090.00	1095.00	Samples have been uniform in mineralogy and texture since ~ 1020 ft.
2/16/2006	24PB-1095-1100-D	1095.00	1100.00	Red and black siltstone and sandstone clasts from 1095 ft-1375 ft.
2/16/2006	24PB-1100-1105-D	1100.00	1105.00	Numerous chips of clear quartz fracture fill are present (1100 ft-1130 ft).
2/16/2006	24PB-1105-1110-D	1105.00	1110.00	2% of chips are quartz fracture fill.
2/16/2006	24PB-1110-1115-D	1110.00	1115.00	Black (N2.5) sandstone clast 10mm x 5mm.
2/16/2006	24PB-1115-1120-D	1115.00	1120.00	Light greenish gray (N7) sandstone clast 5mm x 5mm.
2/16/2006	24PB-1120-1125-D	1120.00	1125.00	Black sandstone clast 5mm x 5mm. Sample contains 2mm chips of quartz.
2/16/2006	24PB-1125-1130-D	1125.00	1130.00	Contains 1-2% soft, weathered, pinkish white (2.5YR 8/2) pumice. Contains chips of quartz.
2/16/2006	24PB-1130-1135-D	1130.00	1135.00	Red siltstone clast 10mm x 7mm and white pumice.
2/16/2006	24PB-1135-1140-D	1135.00	1140.00	
2/21/2006	24PB-1140-1145-D	1140.00	1145.00	Chips are platy.
2/21/2006	24PB-1145-1150-D	1145.00	1150.00	
2/21/2006	24PB-1150-1155-D	1150.00	1155.00	Lithic and pumice content increases markedly.
2/21/2006	24PB-1155-1160-D	1155.00	1160.00	
2/21/2006	24PB-1160-1165-D	1160.00	1165.00	
2/21/2006	24PB-1165-1170-D	1165.00	1170.00	Large red siltstone clast 1cm x 1cm.
2/21/2006	24PB-1170-1175-D	1170.00	1175.00	Crystal-poor and lithic-rich.

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2/21/2006	24PB-1175-1180-D	1175.00	1180.00	
2/21/2006	24PB-1180-1185-D	1180.00	1185.00	Matrix color changes but unit is still the same lithic-rich tuff.
2/21/2006	24PB-1185-1190-D	1185.00	1190.00	Loss of feldspar.
2/21/2006	24PB-1190-1195-D	1190.00	1195.00	
2/21/2006	24PB-1195-1200-D	1195.00	1200.00	
2/21/2006	24PB-1200-1205-D	1200.00	1205.00	
2/21/2006	24PB-1205-1210-D	1205.00	1210.00	
2/21/2006	24PB-1210-1215-D	1210.00	1215.00	
2/21/2006	24PB-1215-1220-D	1215.00	1220.00	Sample contains quartz fracture fill (<1%).
2/21/2006	24PB-1220-1225-D	1220.00	1225.00	
2/21/2006	24PB-1225-1230-D	1225.00	1230.00	
2/21/2006	24PB-1230-1235-D	1230.00	1235.00	
2/21/2006	24PB-1235-1240-D	1235.00	1240.00	
2/21/2006	24PB-1240-1245-D	1240.00	1245.00	
2/21/2006	24PB-1245-1250-D	1245.00	1250.00	
2/21/2006	24PB-1250-1255-D	1250.00	1255.00	
2/21/2006	24PB-1255-1260-D	1255.00	1260.00	
2/21/2006	24PB-1260-1265-D	1260.00	1265.00	
2/21/2006	24PB-1265-1270-D	1265.00	1270.00	50% of sample is comprised of pale yellow (2.5Y 7/3) platy, fine sandstone clasts.
2/21/2006	24PB-1270-1275-D	1270.00	1275.00	No sandstone present. Apparently the above sandstone clast was a very thin layer.
2/21/2006	24PB-1275-1280-D	1275.00	1280.00	
2/21/2006	24PB-1280-1285-D	1280.00	1285.00	Fine-grained matrix and crystals.
2/21/2006	24PB-1285-1290-D	1285.00	1290.00	Matrix color becomes more yellowish.
2/21/2006	24PB-1290-1295-D	1290.00	1295.00	
2/21/2006	24PB-1295-1300-D	1295.00	1300.00	
2/21/2006	24PB-1300-1305-D	1300.00	1305.00	
2/21/2006	24PB-1305-1310-D	1305.00	1310.00	Sample contains small (~5mm) red siltstone clasts.
2/21/2006	24PB-1310-1315-D	1310.00	1315.00	
2/22/2002	24PB-1315-1320-D	1315.00	1320.00	
2/22/2002	24PB-1320-1325-D	1320.00	1325.00	25% of the chips are soft and clayey due to argillization of pumice (1320 ft-1330 ft).
2/22/2002	24PB-1325-1330-D	1325.00	1330.00	

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2/22/2002	24PB-1330-1335-D	1330.00	1335.00	
2/22/2002	24PB-1335-1340-D	1335.00	1340.00	
2/22/2002	24PB-1340-1345-D	1340.00	1345.00	
2/22/2002	24PB-1345-1350-D	1345.00	1350.00	
2/22/2002	24PB-1350-1355-D	1350.00	1355.00	10% of the chips are argillized. Sample contains 1% fragments of quartz fracture fill.
2/22/2002	24PB-1355-1360-D	1355.00	1360.00	
2/22/2002	24PB-1360-1365-D	1360.00	1365.00	Sample contains <1% yellowish green quartz fracture fill.
2/22/2002	24PB-1365-1370-D	1365.00	1370.00	
2/22/2002	24PB-1370-1375-D	1370.00	1375.00	Sample contains ~50% pinkish white (7.5YR 8/2) argillization.
2/22/2002	24PB-1375-1380-D	1375.00	1380.00	Contact @ 1377.3 ft: Tram/siltstone. Siltstone is platy, fissile, pale olive (5Y 6/3).
2/22/2002	24PB-1380-1385-D	1380.00	1385.00	Siltstone is very thin. Contact at 1378 ft: siltstone/sandstone.
2/22/2002	24PB-1385-1390-D	1385.00	1390.00	Sample contains large clay balls > 1cm. Unit is probably interbedded claystone and sandstone. At 1389 ft siltstone: equal proportions of red and green.
2/22/2002	24PB-1390-1395-D	1390.00	1395.00	Finely laminated, fissile, and calcareous. TD @ 1395 ft.