



## NNWSI HOLE HISTORIES

USW VH-1  
USW VH-2

DECEMBER, 1986

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HYDROLOGY DOCUMENT NUMBER 277

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Printed in the United States of America  
Available from:

National Technical Information Service  
U. S. Department of Commerce  
5285 Port Royal Road  
Springfield, Virginia 22161

Price: Printed Copy \_\_\_\_\_  
Microfiche A01

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HOLE HISTORIES**

**USW VH-1  
USW VH-2**

**BY  
FENIX & SCISSON, INC.**

**PREPARED FOR  
U. S. DEPARTMENT OF ENERGY  
NEVADA OPERATIONS OFFICE  
UNDER CONTRACT DE-AC08-84NV10322**

**DECEMBER, 1986**

Prepared by Nevada Nuclear Waste Storage Investigations (NNWSI) Project Participants as part of the Civilian Radioactive Waste Management Program. The NNWSI Project is managed by the Waste Management Project Office of the U. S. Department of Energy, Nevada Operations Office. NNWSI Project work is sponsored by the U. S. Department of Energy, Office of Civilian Radioactive Waste Management, Washington D.C.

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HOLE HISTORIES**

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**by**

**Reports and CEP Section**

**Abstract**

This report is a compilation of data from two boreholes drilled within the Bureau of Land Management (BLM) lands adjacent to the Nevada Test Site (NTS). The boreholes were drilled to obtain hydrologic, geologic, geophysical data to help determine the volcanic eruption rate in Crater Flat, the aeromagnetic anomalies east of Red and Black volcanic cones, and to help define the rate of vertical tectonism in western Crater Flat. Data presented in this publication include locations, daily activities, reviews of hole condition, geophysical log listings, video tape listings, and microfiche copies of all geophysical logs run by the Fenix & Scisson (F&S) subcontractors.

**FENIX & SCISSON, INC.**  
**HOLE HISTORY DATA**  
**NNWSI**

Approved: Jerry Hill Covington  
 Date: Dec 22, 1986

Hole No.: USW VH-1 | Type Hole: Exploratory-Volcanic/Hydrologic  
 User: USGS | Area: Off Site | Site Prep. W.O. #:  
 Location: NTS | County: Nye | W.O. #: 3404-117  
 Surface Coordinates: N 743,355.50' E 533,625.96'  
 Ground Elev.: 3161.0' | Pad Elev.: | Top Casing Elev.: 3160.2'  
 Bottom Hole Coord: N 743,270.89' E 533,712.52' @ 2480' MD | Ref: Gyro. 12-24-80  
 Rig On Location: | Spudded: 10-28-80 | Completed: 02-18-81  
 Circulating Media: Air foam, Air foam and polymer  
 Main Rig & Contractor: Joy #1/REEC  
 No. Of Compressors & Capacity: One IR-900, two IR-1500

Bore Hole Record				Casing Record			
From	To	Size	I.D.	Wt/Ft.	Wall	From	To
0'	52'	12-1/4"	8.921"	36.00#		0'	48'
52'	912'	8-3/4"	6.969"	26.40#		0'	910.57'
912'	2501'	6-1/4"	*				

Total Depth: 2501' | Plugs:  
 Junk: Electric log tool at 2484', 01-13-81; 2# hammer at 830', 01-22-81.  
 Logging Data: Vibroseis (3), Caliper (6), Fluid density (4), Induction (1),  
 Gamma ray-neutron (4), Density (1), Temperature (3), Gyroscopic (1), Electric  
 (2), 3-D velocity (4), Epithermal neutron (2), Density (2), Neutron (2)

Rigs Used						
Rig No.	Name	Class	Days Operating	Sec. W/Crew	Sec. W/O Crew	Total Days On Location
85172	Joy #1	VIII	97.62	1.39	16.99	116.00

Remarks: \* Pump in hole at 695' on 2-7/8" tubing with 1.9" tubing monitor  
 at 674', 07-08-82

Prepared By: JEC:LLF:ps

Time Breakdown on Next Page

TIME BREAKDOWN			
MAIN HOLE CONSTRUCTION			
Hole No.: USW VH-1			
Drilling Operation Time (DOT)		Other Scheduled Time (OST)	
Operational Delay Time (ODT)			
Drill	1.50	Mobe & Demobe	9.74
Trips	0.65	Core	
Dress Drilling		Log	4.82
Assembly		Unload Hole	
Fluid Probe		Run Mandrel	
Connections		Hydrological	
Open Hole		Tests	10.67
Single Shot Dev.		Core Time	23.42
Surveys	0.09	Core Trips	2.80
		Gyro	0.19
Main Hole DOT	2.24 Days	Open Core Hole	8.89
Casing Operation Time (COT)			
Run Casing	1.98		
Run Casing			
Cement Casing	0.58		
Cement Casing			
Drill Out Shoe			
Main Hole COT: 2.56 Days		Main Hole OST: 60.53 Days	
Main Hole ODT: 33.68 Days			
Total Main Hole Construction Time: 99.01 Days			
Remarks:			
TOTAL ELAPSED TIME			
Total Site Prep. Time		Days	Remarks:
Total Main Hole Construction		99.01 Days	
Secured W/O Crew Site Prep.		Days	
Secured W/O Crew Main Hole Const.		16.99 Days	
Total Suspended Time (No Rig)		Days	
TOTAL ELAPSED TIME		116.00 Days	



**USW VH-1**  
**HOLE HISTORY**

10-27-80 Moved in Joy #1, rig #85172 and started rigging up.

10-28-80 Rigged up and drilled 12-1/4" hole from 0' to 52' using air foam.

10-29-80 Conditioned hole, hole was sloughing. Set 47' of 9-5/8" O.D., 36.00# casing with 1.8' casing head at 48'. Cemented the annulus to surface using National Cementers with 120 ft<sup>3</sup> of neat cement + 2% CaCl<sub>2</sub>. CIP at 1900 hours. Calculated annular volume was 15 ft<sup>3</sup>.

10-30-80 Made trip in with 6-1/4" bit on 3-1/2" HCQ rods. Cleaned out cement and hole to 52'. Drilled 6-1/4" hole from 52' to 110' using air foam, hole sloughing. Conditioned hole using 5 sacks of petro seal and 5 gallons polymer. Made trip out. Ran in 4-1/2" HW casing to 110' and rotated casing to 111'. Made trip in with 3.937" diamond core bit and core barrel on HCQ rods. Cut 3.937" cores #1 and #2 from 110' to 124' using air foam and polymer.

10-31-80 Cut 3.937" cores #3 thru #15 from 124' to 194' using air foam. Lost returns from 141' on.

11-01-80 Cut 3.937" cores #16 thru #27 from 194' to 288'.

11-02-80 Cut 3.937" core #28 from 288' to 295'. Started cutting core #29 to 295.10', rods stuck. Worked stuck pipe, rods parted at box at 228'. Screwed back into box. Circulated hole with water, worked and rotated rods out, left burnt crown in the hole. Pulled out 4-1/2" HW casing. Rigged up to open hole to 6-1/4".

11-03-80 Made trip in. Moved in and rigged up 2 larger compressors. Opened 3.937" hole to 6-1/4" from 110' to 164.8' using air foam.

11-04-80 Opened 3.937" hole to 6-1/4" from 164.8' to 295.1'. Drilled 6-1/4" hole to 374.8'. Secured rig from 1500 hours to 1600 hours. Made trip out to unplug bit.

11-05-80 Made trip in and reamed the hole from 126.3' to 374.8'. Drilled 6-1/4" hole from 374.8' to 414.8'. Made trip for bit change and reamed the hole from 127.8' to 157'. Drilled 6-1/4" hole from 414.8' to 494.8'.

11-06-80 Drilled 6-1/4" hole from 494.8' to 635.0'. Made trip for core bit and barrel. Cut 3.937" core #29 from 635.0' to 645.0'. Made trip out for rock bit.

11-07-80 Made trip in and opened 3.937" hole to 6-1/4" from 635.0' to 645.0'. Made trip out. Ran Birdwell vibroseis survey on 25' stations to 636' and caliper log to 632'. Made trip, cleaned out

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11-07-80 15' fill and conditioned hole using 60 barrels of high viscosity  
(Cont.) bentonite mud. Ran fluid density log to 645', fluid at 524'. Ran  
induction log to 643' and gamma ray-neutron log to 645'.

11-08-80 Ran formation density log to 645' and temperature log to 644'. Ran  
in 4-1/2" HW casing with a casing shoe on bottom and tagged bottom  
at 645'. Rotated the casing to 646' using bentonite mud. Laid  
down 3-1/2" drill pipe. Made trip in with core bit and barrel on  
HCQ rods.

11-09-80 Displaced mud with foam. Cut 3.937" cores #30 thru #36 from 645'  
to 677' using air foam.

11-10-80 Cut 3.937" cores #37 thru #46 from 677' to 706'. Made trip out and  
secured rig at 2400 hours.

11-12-80 Rig secured from 11-10-80 to 0800 hours, 11-12-80. Made trip in  
and reamed the hole from 695' to 706'. Cut 3.937" cores #47 thru  
#49 from 706' to 730'.

11-13-80 Cut 3.937" cores #50 thru #57 from 730' to 782'.

11-14-80 Cut 3.937" cores #58 thru #64 from 782' to 811.5'. Made trip for  
core bit and barrel change at 806'. Made trip out for rig motor  
repair.

11-15-80 Started replacing rig motor.

11-16-80 Continued replacing rig motor.

11-17-80 Replaced rig motor. Made trip in and reamed bottom 10'. Cut  
3.937" cores #65 thru #70 from 811.5' to 857'.

11-18-80 Cut 3.937" cores #71 thru #74 from 857' to 867'. Rods torqued up  
and made trip out, left bit and thread end of shell in the hole.  
Made trip in with a used core bit and new barrel. Cut 3.937" cores  
#75 thru #77 from 867' to 881', recovered part of junk. Made trip  
for used bit change.

11-19-80 Cut 3.937" cores #78 thru #88 from 881' to 950'.

11-20-80 Cut 3.937" cores #89 thru #99 from 950' to 1013'.

11-21-80 Cut 3.937" core #100 and #101 from 1013' to 1029'. Made trip for  
bit change, washed thru tight hole at 900' going in and reamed 18'  
to bottom. Cut 3.937" cores #102 thru #108 from 1029' to 1062'.

11-22-80 Cut 3.937" cores #109 thru #121 from 1062' to 1134'.

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- 11-23-80 Made trip for inner barrel wire line repair. Washed hole from 695' to bottom. Cut 3.937" cores #122 thru #129 from 1134' to 1175'. Made trip for bit change and cleaned out 10' fill to 1175'.
- 11-24-80 Cut 3.937" cores #130 thru #137 from 1175' to 1217'. Pulled up to 1187' and blew out fluid for USGS hydrological test. Cleaned out 15' fill and cut 3.937" cores #138 thru #141 from 1217' to 1230.5'. Cores #138 and #140 were cut using water and #139 and #141 using mud.
- 11-25-80 Cut 3.937" cores #142 thru #150 from 1230.5' to 1295' using polymer mud.
- 11-26-80 Cut 3.937" cores #151 thru #158 from 1295' to 1348'. Pulled core barrel up into 4-1/2" casing and secured rig at 2400 hours.
- 11-28-80 Rig secured from 11-26-80 to 0800 hours, 11-28-80. Washed hole to bottom. Cut 3.937" cores #159 thru #163 from 1348' to 1384.5'.
- 11-29-80 Cut 3.937" cores #164 thru #170 from 1384.5' to 1425'. Made trip out, left bit, shell and inner barrel in the hole. Made trip in with belled 3-1/2" HQ rod to fish at 1413'. Attempted to lower rods over inner barrel. Made trip out, no recovery. Cut drilling lugs in HQ rod, made trip in thru tight spots from 1301' to fish. Tried to shear latch springs. Made trip out, no success.
- 11-30-80 Made trip in with reaming shoe and reamed 5' over fish. Made trip out, recovered latch spring and 10" of inner barrel. Made trip in with used 3.937" diamond core bit and barrel. Worked junk to bottom and drilled on junk at 1416'. Made trip out, recovered 1.5' of inner barrel. Made trip in with swaged HCQ rod and core shoe. Rotated over inner barrel to 1424.5'. Made trip out, no recovery. Made trip in with used 3.937" core bit and barrel. Drilled on junk at 1417.5', bit plugged. Made trip out, no recovery.
- 12-01-80 Made trip in with swaged HCQ rod and core shoe. Washed hole to 1413' and rotated over junk to 1424'. Made trip out, no recovery, left core shoe in the hole. Made trip in with core bit and barrel to top of fish, core barrel torqued up. Made trip out. No recovery. Made trip in with modified fishing tool on 3-1/2" x 20' drill pipe. Worked fish free with up to 40,000# pull over weight of drill pipe.
- 12-02-80 Made trip out, recovered inner barrel and miscellaneous junk. Made trip in with core bit and barrel to 1418', recovered formation and some junk. Drilled on junk and made trip out. Fabricated a 3.937" flat bottom mill and made trip in. Milled on junk from 1424.5' to 1426'. Made trip out, mill was 1/4" undergauge.

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12-03-80 Made trip in with new 3.937" core bit and stabilized barrel and reamed hole 2' to bottom. Cut 3.937" cores #171 thru #174 from 1426' to 1435'. Pulled 4-1/2" HW casing. Made trip in with 6-1/4" button hammer bit on 3-1/2" drill pipe and cleaned out bridge at 576'. Opened 3.937" hole to 6-1/4" from 645' to 664' using air foam.

12-04-80 Opened 3.937" hole to 6-1/4" from 664' to 924'. Started blowing out water inflow at 2300 hours.

12-05-80 Opened 3.937" hole to 6-1/4" from 924' to 984'. Drill pipe parted at weld below box at 120'. Made trip with 5-3/4" skirt on 3-1/2" grapple, hole too tight to rotate. Made trip with Bowen jars and overshot, recovered fish. Laid down drill pipe and hammer bit. Secured rig at 2400 hours.

12-07-80 Rig secured from 12-05-80 to 0800 hours, 12-7-80. Checked fluid level at 601.5' at 0900 hours. Repaired rig motor. Checked fluid level at 600' at 1500 hours. Made trip in with 6-1/4" hammer bit to bridge at 890'.

12-08-80 Cleaned out bridge and reamed hole from 971' to 984'. Opened 3.937" hole to 6-1/4" from 984' to 986'. Made trip and dressed hammer drill assembly. Hole bridged and tight from 95' to 964', had good returns. Hammer bit quit working below 940'. Started working out of tight hole with no returns.

12-09-80 Worked pipe free and made trip out with good returns. Worked pipe through tight spot at 106'. Made trip in with 6-1/4" rock bit, washed hole from tight spot at 106' to 986'. Opened 3.937" to 6-1/4" from 986' to 1066' using air, soap and polymer.

12-10-80 Opened 3.937" hole to 6-1/4" from 1066' to 1366'. Made trip for bit check at 1316'.

12-11-80 Opened 3.937" hole to 6-1/4" from 1366' to 1435' and drilled 6-1/4" hole to 1437'. Laid down tools. Started repairing rig at 1530 hours.

12-12-80 Repaired rig to 1230 hours. Made trip in with casing shoe on 4-1/2" HW casing and cleaned out 2' fill to 1437' using high viscosity mud.

12-13-80 Rotated 4-1/2" casing from 1437' to 1437.6' using high viscosity mud. Made trip in with 3.937" Huddy diamond core bit on HCQ rods. Cut 3.937" cores #175 thru #185 from 1437' to 1500' using water.

12-14-80 Cut 3.937" cores #186 thru #198 from 1500' to 1581'.

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12-15-80 Cut 3.937" cores #199 thru #207 from 1581' to 1649'. Made trip for bit change at 1638' and reamed hole from 1495' to 1638'.

12-16-80 Cut 3.937" cores #208 thru #218 from 1649' to 1748'. Made trip at 1676' and washed hole from 1666' to 1676'.

12-17-80 Cut 3.937" cores #219 thru #229 from 1748' to 1857'.

12-18-80 Cut 3.937" cores #230 thru #248 from 1857' to 2032'.

12-19-80 Cut 3.937" cores #249 thru #262 from 2032' to 2148'.

12-20-80 Cut 3.937" cores #263 thru #272 from 2148' to 2230'.

12-21-80 Made trip for bit change. Cut 3.937" cores #273 thru #280 from 2230' to 2304'.

12-22-80 Cut 3.937" cores #281 thru #290 from 2304' to 2397'. Made trip for bit change at 2387'.

12-23-80 Cut 3.937" cores #291 thru #299 from 2397' to 2476'. Made trip for wire line change and bit check at 2407'.

12-24-80 Cut 3.937" cores #300 thru #302 from 2476' to 2501'. Ran Eastman gyroscopic multishot survey using Birdwell truck in and out on 25' stations to 2480'. Pulled HCQ rods up to 1381' and secured rig at 1600 hours.

01-05-81 Rig secured from 12-24-80 to 0800 hours, 1-5-81. Rigged up and laid down HCQ rods. Attempted to pull 4-1/2" HW casing using a Bowen spear. Pumped 82 barrels of water and soap down the annulus, casing still stuck. Laid down spear and made up Kelly on the casing.

01-06-81 Worked stuck HW casing with 350 psi circulation, casing freed at 0400 hours. Laid down casing. Made trip in with 6-1/4" bit on 3-1/2" drill pipe. Cleaned out bridges at 565', 626', 696', 1265', 1370' and hole to 1437' using water, detergent and polymer mud.

01-07-81 Opened 3.937" hole to 6-1/4" from 1437' to 1801.14' using air foam.

01-08-81 Opened 3.937" hole to 6-1/4" from 1801.14' to 2261.23'.

01-09-81 Opened 3.937" hole to 6-1/4" from 2261.23' to 2388.30'. Made trip for bit change at 2313.93'.

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01-10-81      Opened 3.937" hole to 6-1/4" from 2388.30' to 2495', bit quit drilling. Made trip out, bit worn, hole undergauged. Attempted to run Birdwell vibroseis survey, tool stopped at 248'. Made trip with 6-1/4" bit and cleaned out bridges at 466' and 840', hole clean to 1400'. Ran sinker bar, tool stopped at 1670'.

01-11-81      Made trip in with 6-1/4" bit, reamed hole from 2440' to 2495' and opened 3.937" hole to 6-1/4" from 2495' to 2501'. Made trip out. Attempted to run vibroseis survey, tool stopped at 525' and at 855' with sinker bar. Made trip in with core barrel and conditioned hole to bridge at 2458'.

01-12-81      Cleaned out bridge and hole from 2458' to 2501'. Made trip out and repaired crown sheaves. Ran sinker bar to bridge at 846'. Started in with 4-1/2" HW casing.

01-13-81      Set HW casing at 870'. Ran sinker bar, tool stopped at 886'. Made trip with core barrel and cleaned out hole from 880' to 1400'. Ran sinker bar, tool stopped at 870'. Lowered HW casing to 998'. Ran caliper and maximum temperature log to 2479'. Ran electric log to 2479', lost tool at bottom of casing. Ran sinker bar and tagged tool at 2484'. Ran 3-D velocity log on 6' spacing to 2479'.

01-14-81      Ran 3-D velocity log on 3' spacing, epithermal neutron and gamma ray logs to 2482'. Ran Dresser Atlas borehole compensated density and neutron logs to 2452'. Ran Birdwell neutron-neutron log to 2469', gamma ray log to 2462' and temperature log to 2459'.

01-15-81      Ran vibroseis survey on 25' stations to 2473'. Pulled 4-1/2" casing up to 610'. Ran Dresser Atlas compensated density and neutron logs to 854'. Cleaned hole from 610' to 1000' using 4-1/2" casing and pulled casing up to 900'. Ran Birdwell caliper log to 1200'.

01-16-81      Ran electric log to 1200'. Pulled 4-1/2" casing up to 610'. Ran electric log to 845', 3-D velocity log on 6' spacing to 845', 3-D velocity log on 3' spacing to 843', gamma ray log to 843', caliper log to 855', neutron-neutron-gamma ray log to 847', epithermal neutron log to 840', temperature log to 864' and vibroseis survey on 25' station to 850'. Laid down 4-1/2" casing.

01-17-81      Made trip in with 5.44" O.D. Centrilift pump on 2-3/8" tubing and 1.9" monitor line. Set bottom of pump at 697.25' with intake port at 681.32'. Checked fluid level at 601.5'. Pumped fluid for 6 minutes, level stabilized at 602.8'. Ran pump test from 1845 hours to 2100 hours at 60 gpm. Made trip out.

01-18-81      Rigged up. Opened 6-1/4" hole to 8-3/4" from 52' to 304' using air foam.

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- 01-19-81      Opened 6-1/4" hole to 8-3/4" from 304' to 847.52'.
- 01-20-81      Opened 6-1/4" hole to 8-3/4" from 847.52' to 910'. Conditioned hole using air foam and made trip out. Made up 6" junk basket and made trip in. Cleaned out bridge at 866' and cleaned hole to 1244' using air foam.
- 01-21-81      Cleaned hole to 1424'. Made trip for 6-1/4" bit. Cleaned hole to 2484', top of fish (electric log tool).
- 01-22-81      Conditioned hole using air foam and polymer. Made trip out. Ran Birdwell caliper tool to 461', could not get deeper. Ran sinker bar to 830', could not get deeper. Dropped 2# hammer in hole. Ran in with 6-1/4" bit to bridge at 825' and pumped in polymer. Cleaned out bridge to 853' and hole to 1013'. Ran caliper tool to 461', could not get deeper. Ran in with 8-3/4" bit to 651', could not drill bridge. Made trip for new bit. Cleaned out bridge from 604' to 614' and hole to 856'. Drilled bridge and reamed hole to 912'. Started out of the hole.
- 01-23-81      Made trip out. Ran caliper log with centralizer on bottom to 460', no log. Removed centralizer and ran caliper log to 912'. Ran in 2-3/8" Hydril tubing to 771.72', bottom joint was orange peeled and slotted. Ran in 180 HP Centrilt pump on 3-1/2" Hydril tubing. Set bottom of pump at 768.83' with intake port at 734.40'. Installed flow line and started running pump test at 2315 hours.
- 01-24-81      Ran hydrologic pump test to 0300 hours. Laid down 3-1/2" Hydril tubing and pump. Laid down 2-3/8" Hydril tubing. Ran junk basket to bridge at 866', basket plugged up. Made trip for 6-1/4" bit and cleaned out bridge from 880' to 890'.
- 01-25-81      Rigged up and cleaned out hole from 890' to 2492'. Made trip for junk basket. Attempted to circulate at 806'. Made trip out to unplug basket.
- 01-26-81      Made trip in with float and junk basket. Washed hole and cleaned out bridges at 1773', 2170', 2200', and 2204'. Started out of hole. Started working tools through bridge from 875' to 860', could not break circulation.
- 01-27-81      Worked stuck tools up to 850', pipe backed off at kelly and dropped down hole. Made trip with 6-1/4" bit to top of fish at 104'. Made trip with 3-1/2" drill pipe and screwed into fish and pulled tools up to 760'. Tools came free with returns at 750 psi using air foam, started out.

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01-28-81 Made trip out and laid down junk basket. Made trip in with 8-3/4" bit, cleaned out bridge at 450' and washed hole to 878', hole was caving and unable to keep clean. Made trip out. Welded 8-5/8" well head on surface casing. Made trip in with 6-1/4" bit and washed hole from 853' to 905', hole was caving. Pumped in polymer, unable to keep hole clean.

01-29-81 Made trip out and waited on orders from 0100 hours to 1430 hours. Ran Birdwell caliper log. Waited on orders from 1800 hours.

01-30-81 Waited on orders to 1230 hours. Made trip in with 6-1/4" bit to bridge at 835'. Cleaned out bridge and hole to 975'.

01-31-81 Cleaned out hole from 975' to 1455', conditioned hole and pumped in 16 barrels of high viscosity polymer. Pulled up to 1055' and pumped in 10 barrels of high viscosity polymer. Made trip out and welded casing head on 9-5/8" casing. Made trip in with 8-3/4" bit and cleaned out bridges from 853' to 912'. Conditioned hole.

02-01-81 Conditioned hole using air foam. Made trip out. Lowered 7-5/8" O.D., 26.40# casing to 864.19'. Ran 2-3/8" tubing to 857' and washed hole to 910'. Pumped in 50 ft<sup>3</sup> of neat cement using National Cementers. CIP at 1730 hours. Laid down the tubing. Lowered and secured 7-5/8" casing at 910.57'. Calculated annular volume was 4 ft<sup>3</sup>. Made trip in with 6-1/4" bit on 3-1/2" drill pipe.

02-02-81 Tagged top of cement at 874.78' and drilled out cement to 914.78'. Made trip in to 2142.79', unable to circulate hole using air and water. Made trip out for plugged drilling assembly. Made trip in with 6-1/4" bit on float and stabilizer. Washed and cleaned hole to 2250' using air and soap.

02-03-81 Washed and cleaned hole to probable junk at 2475'. Blew soap out of hole and made trip out. Started in with Centrilift pump on 2-7/8" upset tubing along with 2-3/8" Hydril monitor line strapped to the 2-7/8" tubing.

02-04-81 Set bottom of pump at 872.80', intake port at 856' and bottom of monitor line at 811.54'. Checked fluid level at 604'. Started hydrologic pump test at 0500 hours.

02-05-81 Continued running hydrologic pump test.

02-06-81 Continued running hydrologic pump test.

02-07-81 Continued running hydrologic pump test.

02-08-81 Continued running hydrologic pump test.



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02-09-81 Continued running hydrologic pump test.

02-10-81 Continued running hydrologic pump test.

02-11-81 Continued running hydrologic pump test.

02-12-81 Ran hydrologic pump test to 0915 hours. Laid down 2-7/8" tubing, Centrilift pump and 2-3/8" Hydril monitor line.

02-13-81 Made trip in with 3-3/4" rock bit on 2-3/8" Hydril tubing to bridge at 2249'. Attempted to clean out bridge. Made trip to unplug bit and tagged bridge at 2186', unable to clean out bridge.

02-14-81 Pulled up and set tubing at 2154.19'. Pumped rubber plug down the tubing. Started rigging down and moving out.

02-15-81 Continued rigging down and moving out. Secured rig at 2400 hours.

02-17-81 Rig secured from 2-15-81 to 0800 hours, 2-17-81. Continued rigging down and moving out.

02-18-81 Rigged down and moved out. Hole completed 2-18-81.

07-08-82 Moved in Failing 1500, rig #85133 and rigged up. Pulled 2-3/8" tubing. Made trip in hole with pump on 2-7/8", EUE, 8rd. tubing and set at 695'. Ran 1.9" tubing monitor line to 674'.

07-09-82 Made up well head connections, rigged down and moved out.

USW VH-1  
CORE RECORD  
(No cores oriented)

<u>Core No.</u>	<u>Interval</u>		<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
1	110.0	- 119.5	9.5	8.1	85
2	119.5	- 124.0	4.5	4.5	100
3	124.0	- 126.0	2.0	2.0	100
4	126.0	- 141.0	15.0	15.0	100
5	141.0	- 149.0	8.0	8.0	100
6	149.0	- 153.0	4.0	4.0	100
7	153.0	- 157.0	4.0	3.5	88
8	157.0	- 161.0	4.0	4.0	100
9	161.0	- 163.0	2.0	2.0	100
10	163.0	- 165.0	2.0	2.0	100
11	165.0	- 169.0	4.0	4.0	100
12	169.0	- 172.5	3.5	1.8	51
13	172.5	- 183.0	10.5	6.5	62
14	183.0	- 188.0	5.0	1.0	20
15	188.0	- 194.0	6.0	1.8	30
16	194.0	- 199.0	5.0	0.5	10
17	199.0	- 204.0	5.0	1.0	20
18	204.0	- 207.0	3.0	0.5	17
19	207.0	- 208.0	1.0	0.5	50
20	208.0	- 223.0	15.0	1.5	10
21	223.0	- 238.0	15.0	0.7	4
22	238.0	- 245.0	7.0	1.0	14
23	245.0	- 257.0	12.0	1.3	11
24	257.0	- 266.0	9.0	1.5	17
25	266.0	- 279.0	13.0	1.5	12
26	279.0	- 282.0	3.0	2.0	67
27	282.0	- 288.0	6.0	2.0	33
28	288.0	- 295.0	7.0	1.2	17
29	635.0	- 645.0	10.0	8.8	88
30	645.0	- 651.0	6.0	5.4	90
31	651.0	- 657.0	6.0	6.0	100
32	657.0	- 662.0	5.0	5.0	100
33	662.0	- 667.0	5.0	5.0	100
34	667.0	- 672.0	5.0	5.0	100
35	672.0	- 674.0	2.0	2.0	100
36	674.0	- 677.0	3.0	3.0	100
37	677.0	- 681.0	4.0	4.0	100
38	681.0	- 683.0	2.0	2.0	100
39	683.0	- 685.0	2.0	2.0	100
40	685.0	- 688.0	3.0	3.0	100
41	688.0	- 691.5	3.5	3.5	100
42	691.5	- 695.0	3.5	3.5	100
43	695.0	- 697.0	2.0	2.0	100
44	697.0	- 700.0	3.0	3.0	100
45	700.0	- 705.0	5.0	5.0	100
46	705.0	- 706.0	1.0	1.0	100
47	706.0	- 716.5	10.5	10.0	95

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Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
48	716.5 - 720.0	3.5	3.5	100
49	720.0 - 730.0	10.0	10.0	100
50	730.0 - 740.0	10.0	10.0	100
51	740.0 - 745.0	5.0	5.0	100
52	745.0 - 755.0	10.0	10.0	100
53	755.0 - 756.0	1.0	1.0	100
54	756.0 - 757.0	1.0	1.0	100
55	757.0 - 763.0	6.0	6.0	100
56	763.0 - 773.0	10.0	10.0	100
57	773.0 - 782.0	9.0	9.0	100
58	782.0 - 785.5	3.5	3.5	100
59	785.5 - 788.0	2.5	0.4	16
60	788.0 - 795.0	7.0	7.0	100
61	795.0 - 805.0	10.0	0.0	0
62	805.0 - 806.0	1.0	1.0	100
63	806.0 - 808.5	2.5	2.5	100
64	808.5 - 811.5	3.0	3.0	100
65	811.5 - 821.0	9.5	9.5	100
66	821.0 - 830.0	9.0	9.0	100
67	830.0 - 835.5	5.5	5.5	100
68	835.5 - 837.5	2.0	2.0	100
69	837.5 - 847.5	10.0	10.0	100
70	847.5 - 857.0	9.5	0.3	3
71	857.0 - 859.0	2.0	0.8	40
72	859.0 - 860.0	1.0	0.0	0
73	860.0 - 863.0	3.0	0.0	0
74	863.0 - 867.0	4.0	4.0	100
75	867.0 - 877.0	10.0	3.0	30
76	877.0 - 880.0	3.0	3.0	100
77	880.0 - 881.0	1.0	1.0	100
78	881.0 - 887.0	6.0	6.0	100
79	887.0 - 892.0	5.0	4.0	80
80	892.0 - 896.0	4.0	4.0	100
81	896.0 - 902.0	6.0	6.0	100
82	902.0 - 910.0	8.0	8.0	100
83	910.0 - 919.0	9.0	9.0	100
84	919.0 - 927.0	8.0	8.0	100
85	927.0 - 935.0	8.0	8.0	100
86	935.0 - 941.0	6.0	6.0	100
87	941.0 - 946.0	5.0	4.5	90
88	946.0 - 950.0	4.0	4.0	100
89	950.0 - 951.5	1.5	1.5	100
90	951.5 - 960.0	8.5	8.5	100
91	960.0 - 962.5	2.5	1.8	72
92	962.5 - 968.0	5.5	5.5	100
93	968.0 - 972.0	4.0	3.5	88
94	972.0 - 976.0	4.0	2.6	65

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Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
95	976.0 - 982.0	6.0	5.0	83
96	982.0 - 992.0	10.0	1.0	10
97	992.0 - 996.0	4.0	1.0	25
98	996.0 - 1006.0	10.0	2.0	20
99	1006.0 - 1013.0	7.0	4.0	57
100	1013.0 - 1023.0	10.0	8.0	80
101	1023.0 - 1029.0	6.0	3.2	53
102	1029.0 - 1030.0	1.0	1.0	100
103	1030.0 - 1038.0	8.0	6.4	80
104	1038.0 - 1042.0	4.0	3.0	75
105	1042.0 - 1045.0	3.0	1.5	50
106	1045.0 - 1046.0	1.0	0.5	50
107	1046.0 - 1054.0	8.0	6.0	75
108	1054.0 - 1062.0	8.0	6.0	75
109	1062.0 - 1072.0	10.0	8.6	86
110	1072.0 - 1074.0	2.0	2.0	100
111	1074.0 - 1082.0	8.0	6.6	83
112	1082.0 - 1092.0	10.0	3.5	35
113	1092.0 - 1095.0	3.0	0.0	0
114	1095.0 - 1102.0	7.0	4.2	60
115	1102.0 - 1104.0	2.0	1.7	85
116	1104.0 - 1112.0	8.0	4.1	51
117	1112.0 - 1117.0	5.0	2.7	54
118	1117.0 - 1124.0	7.0	6.0	86
119	1124.0 - 1125.5	1.5	1.5	100
120	1125.5 - 1129.0	3.5	3.5	100
121	1129.0 - 1134.0	5.0	5.0	100
122	1134.0 - 1135.0	1.0	1.0	100
123	1135.0 - 1141.0	6.0	5.0	83
124	1141.0 - 1144.0	3.0	2.5	83
125	1144.0 - 1149.0	5.0	4.0	80
126	1149.0 - 1152.0	3.0	2.5	83
127	1152.0 - 1160.0	8.0	8.0	100
128	1160.0 - 1170.0	10.0	7.0	70
129	1170.0 - 1175.0	5.0	1.0	20
130	1175.0 - 1179.0	4.0	3.0	75
131	1179.0 - 1182.0	3.0	3.0	100
132	1182.0 - 1191.0	9.0	9.0	100
133	1191.0 - 1195.0	4.0	4.0	100
134	1195.0 - 1202.0	7.0	5.3	76
135	1202.0 - 1207.0	5.0	4.3	86
136	1207.0 - 1215.0	8.0	7.3	91
137	1215.0 - 1217.0	2.0	2.0	100
138	1217.0 - 1219.0	2.0	2.0	100
139	1219.0 - 1220.0	1.0	1.0	100
140	1220.0 - 1230.0	10.0	4.6	46
141	1230.0 - 1230.5	0.5	0.5	100

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Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
142	1230.5 - 1235.0	4.5	4.5	100
143	1235.0 - 1242.0	7.0	5.6	80
144	1242.0 - 1253.0	11.0	2.5	23
145	1253.0 - 1257.0	4.0	0.0	0
146	1257.0 - 1264.0	7.0	5.0	71
147	1264.0 - 1268.5	4.5	4.5	100
148	1268.5 - 1275.0	6.5	5.5	85
149	1275.0 - 1284.0	9.0	6.5	72
150	1284.0 - 1295.0	11.0	11.0	100
151	1295.0 - 1297.0	2.0	2.0	100
152	1297.0 - 1304.5	7.5	7.5	100
153	1304.5 - 1310.0	5.5	5.0	91
154	1310.0 - 1319.0	9.0	9.0	100
155	1319.0 - 1321.0	2.0	2.0	100
156	1321.0 - 1329.0	8.0	8.0	100
157	1329.0 - 1339.0	10.0	10.0	100
158	1339.0 - 1348.0	9.0	9.0	100
159	1348.0 - 1353.0	5.0	5.0	100
160	1353.0 - 1363.0	10.0	10.0	100
161	1363.0 - 1371.0	8.0	7.8	98
162	1371.0 - 1377.0	6.0	6.0	100
163	1377.0 - 1384.5	7.5	7.5	100
164	1384.5 - 1392.0	7.5	7.5	100
165	1392.0 - 1399.0	7.0	7.0	100
166	1399.0 - 1404.0	5.0	4.0	80
167	1404.0 - 1408.0	4.0	4.0	100
168	1408.0 - 1417.0	9.0	8.0	89
169	1417.0 - 1421.0	4.0	4.0	100
170	1421.0 - 1425.0	4.0	2.0	50
171	1426.0 - 1427.0	1.0	0.5	50
172	1427.0 - 1431.0	4.0	2.0	50
173	1431.0 - 1433.0	2.0	1.5	75
174	1433.0 - 1435.0	2.0	0.0	0
175	1437.0 - 1438.0	1.0	1.0	100
176	1438.0 - 1445.0	7.0	4.9	70
177	1445.0 - 1451.0	6.0	6.0	100
178	1451.0 - 1452.0	1.0	1.0	100
179	1452.0 - 1457.0	5.0	3.9	78
180	1457.0 - 1461.0	4.0	4.0	100
181	1461.0 - 1470.0	9.0	9.0	100
182	1470.0 - 1478.0	8.0	6.0	75
183	1478.0 - 1485.0	7.0	3.5	50
184	1485.0 - 1493.0	8.0	8.0	100
185	1493.0 - 1500.0	7.0	7.0	100
186	1500.0 - 1504.0	4.0	3.5	88
187	1504.0 - 1510.0	6.0	6.0	100
188	1510.0 - 1518.0	8.0	7.2	90

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Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
189	1518.0 - 1524.0	6.0	6.0	100
190	1524.0 - 1530.0	6.0	3.0	50
191	1530.0 - 1540.0	10.0	9.5	95
192	1540.0 - 1542.0	2.0	2.0	100
193	1542.0 - 1544.0	2.0	2.0	100
194	1544.0 - 1550.0	6.0	6.0	100
195	1550.0 - 1560.0	10.0	8.0	80
196	1560.0 - 1561.0	1.0	1.0	100
197	1561.0 - 1571.0	10.0	10.0	100
198	1571.0 - 1581.0	10.0	10.0	100
199	1581.0 - 1588.0	7.0	6.0	86
200	1588.0 - 1595.0	7.0	8.0	114
201	1595.0 - 1605.0	10.0	10.0	100
202	1605.0 - 1613.0	8.0	7.0	88
203	1613.0 - 1623.0	10.0	10.0	100
204	1623.0 - 1632.0	9.0	9.0	100
205	1632.0 - 1638.0	6.0	6.0	100
206	1638.0 - 1639.0	1.0	1.0	100
207	1639.0 - 1649.0	10.0	10.0	100
208	1649.0 - 1659.0	10.0	10.0	100
209	1659.0 - 1669.0	10.0	4.5	45
210	1669.0 - 1676.0	7.0	1.5	21
211	1676.0 - 1684.0	8.0	7.5	94
212	1684.0 - 1688.0	4.0	4.0	100
213	1688.0 - 1698.0	10.0	10.0	100
214	1698.0 - 1708.0	10.0	10.0	100
215	1708.0 - 1718.0	10.0	10.0	100
216	1718.0 - 1728.0	10.0	10.0	100
217	1728.0 - 1738.0	10.0	10.0	100
218	1738.0 - 1748.0	10.0	9.7	97
219	1748.0 - 1757.0	9.0	9.0	100
220	1757.0 - 1767.0	10.0	10.0	100
221	1767.0 - 1777.0	10.0	10.0	100
222	1777.0 - 1787.0	10.0	10.0	100
223	1787.0 - 1797.0	10.0	10.0	100
224	1797.0 - 1807.0	10.0	10.0	100
225	1807.0 - 1817.0	10.0	10.0	100
226	1817.0 - 1827.0	10.0	10.0	100
227	1827.0 - 1837.0	10.0	9.0	90
228	1837.0 - 1847.0	10.0	10.0	100
229	1847.0 - 1857.0	10.0	4.0	40
230	1857.0 - 1861.0	4.0	0.0	0
231	1861.0 - 1871.0	10.0	10.0	100
232	1871.0 - 1881.0	10.0	10.0	100
233	1881.0 - 1891.0	10.0	10.0	100
234	1891.0 - 1901.0	10.0	10.0	100
235	1901.0 - 1911.0	10.0	10.0	100

<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
236	1911.0 - 1921.0	10.0	9.1	91
237	1921.0 - 1931.0	10.0	10.0	100
238	1931.0 - 1941.0	10.0	3.0	30
239	1941.0 - 1951.0	10.0	8.8	88
240	1951.0 - 1961.0	10.0	10.0	100
241	1961.0 - 1971.0	10.0	9.8	98
242	1971.0 - 1981.0	10.0	9.6	96
243	1981.0 - 1991.0	10.0	9.8	98
244	1991.0 - 2001.0	10.0	10.0	100
245	2001.0 - 2011.0	10.0	10.0	100
246	2011.0 - 2021.0	10.0	10.0	100
247	2021.0 - 2025.0	4.0	3.6	90
248	2025.0 - 2032.0	7.0	7.0	100
249	2032.0 - 2038.0	6.0	5.5	92
250	2038.0 - 2048.0	10.0	4.0	40
251	2048.0 - 2053.0	5.0	5.0	100
252	2053.0 - 2063.0	10.0	10.0	100
253	2063.0 - 2070.0	7.0	7.0	100
254	2070.0 - 2080.0	10.0	9.3	93
255	2080.0 - 2084.0	4.0	4.0	100
256	2084.0 - 2094.0	10.0	10.0	100
257	2094.0 - 2104.0	10.0	10.0	100
258	2104.0 - 2114.0	10.0	10.0	100
259	2114.0 - 2120.0	6.0	6.0	100
260	2120.0 - 2130.0	10.0	10.0	100
261	2130.0 - 2140.0	10.0	10.0	100
262	2140.0 - 2148.0	8.0	8.0	100
263	2148.0 - 2155.0	7.0	7.0	100
264	2155.0 - 2158.0	3.0	3.0	100
265	2158.0 - 2167.0	9.0	8.8	98
266	2167.0 - 2177.0	10.0	10.0	100
267	2177.0 - 2187.0	10.0	9.8	98
268	2187.0 - 2197.0	10.0	10.0	100
269	2197.0 - 2207.0	10.0	10.0	100
270	2207.0 - 2214.0	7.0	6.5	93
271	2214.0 - 2224.0	10.0	10.0	100
272	2224.0 - 2230.0	6.0	6.0	100
273	2230.0 - 2238.0	8.0	7.6	95
274	2238.0 - 2247.0	9.0	8.5	94
275	2247.0 - 2255.0	8.0	8.0	100
276	2255.0 - 2264.0	9.0	9.0	100
277	2264.0 - 2274.0	10.0	9.5	95
278	2274.0 - 2284.0	10.0	10.0	100
279	2284.0 - 2294.0	10.0	10.0	100
280	2294.0 - 2304.0	10.0	10.0	100
281	2304.0 - 2314.0	10.0	10.0	100
282	2314.0 - 2324.0	10.0	9.6	96

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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>
283	2324.0 - 2334.0	10.0	10.0	100
284	2334.0 - 2344.0	10.0	9.3	93
285	2344.0 - 2354.0	10.0	7.5	75
286	2354.0 - 2363.0	9.0	9.0	100
287	2363.0 - 2367.0	4.0	4.0	100
288	2367.0 - 2377.0	10.0	9.5	95
289	2377.0 - 2387.0	10.0	10.0	100
290	2387.0 - 2397.0	10.0	10.0	100
291	2397.0 - 2407.0	10.0	10.0	100
292	2407.0 - 2413.0	6.0	6.0	100
293	2413.0 - 2418.0	5.0	4.5	90
294	2418.0 - 2428.0	10.0	10.0	100
295	2428.0 - 2438.0	10.0	10.0	100
296	2438.0 - 2447.0	9.0	9.0	100
297	2447.0 - 2457.0	10.0	10.0	100
298	2457.0 - 2466.0	9.0	9.0	100
299	2466.0 - 2476.0	10.0	9.5	95
300	2476.0 - 2486.0	10.0	10.0	100
301	2486.0 - 2496.0	10.0	10.0	100
302	2496.0 - 2501.0	5.0	4.4	88



**USW VH-1  
MUD RECORD**

**F&S SPECIALISTS TIME LOG**

<u>Date</u>	<u>Detergent Gallons</u>	<u>Water Barrels</u>	<u>Polymer Gallons</u>	<u>Other Additive</u>	<u>Remarks</u>
11-02-80	130	65			
11-05-80	25	125			
11-06-80	60	55			
11-08-80		25		60	Bentonite
11-11-80		28			Soap & Water
11-13-80		48			
11-14-80		230			
11-15-80	84	20			
11-17-80		72			
11-18-80	63	53			
11-19-80		24			
11-20-80		32			
11-21-80		59			
11-23-80		129			
11-24-80		151	39		
11-25-80		52			
11-26-80		258	43		
11-27-80		280	41		
11-29-80		299	60		
12-01-80		694			
12-02-80		389	41		
12-03-80		361	49		
12-04-80		178			
12-05-80	116	66			
12-08-80		74			
12-10-80	28				
12-11-80	95	114	15		
12-14-80		328			
12-15-80		208			
12-16-80		313			
12-17-80		414	15		
12-18-80		120	18		Slug hole
12-19-80		40	15		
12-20-80		867	16		
12-21-80		776	13		Slug hole
12-22-80		1067	22		
12-23-80		809	20		
12-24-80		805	23		
01-06-81	30	107			
01-07-81	40	55	6		
01-08-81	120	571			
01-10-81	100	275			
01-11-81		325	15		
01-12-81	20	73			
01-19-81	61	235			
01-20-81	115	200			

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Mud Record  
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<u>Date</u>	<u>Detergent Gallons</u>	<u>Water Barrels</u>	<u>Polymer Gallons</u>	<u>Other Additive</u>	<u>Remarks</u>
01-21-81	35	135			
01-22-81	150	104	45		
01-23-81	10	154			
01-26-81	50				
01-28-81		45			
01-29-81		393	10		Soap & Water
01-31-81	200	340	95		Slug hole
02-01-81	70	91	45		
02-03-81	25	135			
02-04-81	<u>50</u>	<u>124</u>	<u>        </u>	<u>        </u>	
TOTALS	1,677	12,990	646	60	

USW VH-1  
REVIEW OF HOLE CONDITIONS

244 mm (9-5/8") casing was set at 14.6 m (48') in a 311 mm (12-1/4") hole drilled to 15.8 m (52'). The annulus was cemented to surface with 3.40 m<sup>3</sup> (120 ft<sup>3</sup>) of cement slurry. Calculated annular volume was 0.42 m<sup>3</sup> (15 ft<sup>3</sup>). 159 mm (6-1/4") hole was drilled to 33.5 m (110') using air foam. Twenty nine 100 mm (3.937") cores were cut to 196.6 m (645'). The core hole was opened to 159 mm (6-1/4") to 196.6 m (645'). Vibroseis survey, caliper, NAIL, induction, gamma ray-neutron, density and temperature logs were run 11-07-80 and 11-08-80. Two hundred and seventy three 100 mm (3.937") cores were cut to a total depth of 762.3 m (2501') and then opened to 159 mm (6-1/4") to 762.3 m (2501'). Gyroscopic survey was run 12-24-80. Caliper, electric, 3-D velocity on 0.91 m and 1.83 m (3' and 6') spacings, epithermal neutron, gamma ray, compensated density neutron-neutron-gamma ray, temperature logs and vibroseis survey on 7.6 m (25') stations were completed 01-16-81. Hydrologic tests were conducted. 159 mm (6-1/4") hole was opened to 222 mm (8-3/4") to 278.0 m (912'). Caliper log was run 01-23-81. Hydrologic tests were conducted. 194 mm (7-5/8") casing was set at 277.5 m (910.57') and the annulus cemented to 266.6 m (874.78') with 1.42 m<sup>3</sup> (50 ft<sup>3</sup>) of cement slurry. Calculated annular volume was 0.11 m<sup>3</sup> (4 ft<sup>3</sup>). Hydrologic tests were completed 02-12-81. 60 mm (2-3/8") tubing with 95 mm (3-3/4") rock bit was landed at 656.6 m (2154.19'). Hole was completed 02-18-81. 60 mm (2-3/8") tubing was pulled and pump was set in hole at 211.8 m (695') on 73 mm (2-7/8") with 48 mm (1.9") tubing monitor line at 205.4 m (674'), 07-08-82.

**FENIX & SCISSON, INC.**  
**HOLE HISTORY DATA**  
**NNWSI**

Approved: *Gregory J. Covington*  
 Date: *Dec. 22, 1986*

Hole No.: USW VH-2 | Type Hole: Exploratory-Volcanic/Hydrologic  
 User: USGS | Area: Off Site | Site Prep. W.O. #: None  
 Location: NTS | County: Nye | W.O. #: 3404-155  
 Surface Coordinates: N 748,319.43' E 526,264.21'  
 Ground Elev.: 3197.1' | Pad Elev.: | Top Casing Elev.: 3199.6'  
 Bottom Hole Coord: N 748,280.98' E 526,248.57' @ 3930' MD | Ref: Gyro, 04-23-83  
 Rig On Location: 02-11-83 | Spudded: 02-15-83 | Completed: 04-27-83  
 Circulating Media: Air Foam-Polymer  
 Main Rig & Contractor: Ideco #37-REECO  
 No. Of Compressors & Capacity: 1/IR-1500

Bore Hole Record					Casing Record			
From	To	Size	I.D.	Wt/Ft.	Wall	From	To	Ft <sup>3</sup> Cement
0'	20'	17-1/2"	12.615"	54.50#		0'	19'	30
20'	197'	12-1/4"	8.921"	36.00#		0'	198'	
197'	716'	8-3/4"	4.950"	15.50#		0'	720'	
716'	4000'	3.937"	1.62"	2.90#		0'	3986'	

Total Depth: 4000' | Plugs: None

Junk: None

Logging Data: Caliper (2), Fluid density (4), Epithermal neutron (2), Density (2), Electric (5), Gamma ray-caliper (2), Magnetometer (5), Gyro, Gamma ray-density (3), Gamma ray spectrum, 3-D velocity (6), Neutron (3)

**Rigs  
Used**

Rig No.	Name	Class	Days Operating	Sec. W/Crew	Sec. W/O Crew	Total Days On Location
85122	Portadrill	IV	0.33			0.33
85116	Ideco #37	III	73.00		3.00	76.00

Remarks:

Prepared By: JEC:LLF:ps

Time Breakdown on Next Page

TIME BREAKDOWN			
MAIN HOLE CONSTRUCTION			
Hole No.: USW VH-2			
Drilling Operation Time (DOT)	Other Scheduled Time (OST)	Operational Delay Time (ODT)	
Drill <u>41.17</u>	Mobe & Demobe <u>7.93</u>	Rig Repairs <u>3.23</u>	
Trips <u>6.87</u>	Core <u>0.27</u>	W.O. Equipment <u>0.08</u>	
Single Shot Dev. <u>0.69</u>	Log <u>3.34</u>	Fish <u>0.84</u>	
Surveys <u>0.69</u>	Unload Hole <u>      </u>	Clean Out Fill <u>3.40</u>	
Fluid Probe <u>      </u>	Run Mandrel <u>      </u>	Ream Hole <u>1.36</u>	
Connections <u>      </u>	Hydrological <u>      </u>	Plug Back <u>      </u>	
Open Hole <u>1.27</u>	Tests <u>      </u>	Drill Out Plugs <u>      </u>	
Drill <u>0.10</u>	Gyro <u>0.23</u>	Secured W/Crews <u>      </u>	
		Condition Hole <u>0.96</u>	
		Mix Mud <u>0.22</u>	
Main Hole DOT 50.10 Days			
Casing Operation Time (COT)			
Run Casing <u>0.65</u>			
Pull Casing <u>0.24</u>			
Cement Casing <u>0.25</u>			
Cement Casing <u>      </u>			
Drill Out Shoe <u>      </u>			
Run Tubing <u>0.23</u>			
Main Hole COT: 1.37 Days Main Hole OST: 11.77 Days Main Hole ODT: 10.09 Days			
Total Main Hole Construction Time: 73.33 Days			
Remarks:			
TOTAL ELAPSED TIME			
Total Site Prep. Time <u>      </u>	Days	Remarks:	
Total Main Hole Construction <u>73.33</u>	Days		
Secured W/O Crew Site Prep. <u>      </u>	Days		
Secured W/O Crew Main Hole Const. <u>3.00</u>	Days		
Total Suspended Time (No Rig) <u>      </u>	Days		
TOTAL ELAPSED TIME <u>76.33</u>		Days	

USW VH-2  
HOLE HISTORY

02-11-83      Moved in Ideco #37, rig #85116 and started rigging up.

02-12-83      Attempted to drill anchor holes with air using Portadrill rig #85122, ground caved in.

02-13-83      Rig secured to 1600 hours. Moved in equipment.

02-14-83      Drilled 4 anchor holes and set anchors using Portadrill rig #85122. Started rigging up Ideco #37 rig.

02-15-83      Rigged up. Drilled 17-1/2" surface hole from 0' to 20' with conventional circulation using polymer mud. Conditioned hole.

02-16-83      Laid down tools. Ran and set 13-3/8" O.D., 54.50# casing at 19'. Cemented the annulus to surface using Halliburton with 8 barrels of water ahead of 30 ft<sup>3</sup> of neat cement + 2% CaCl<sub>2</sub>. CIP at 0212 hours. Calculated annular volume was 13 ft<sup>3</sup>. Displaced cement in casing with wiper plug ahead of 4.5 barrels of water. Rigged up Acker core unit on rig.

02-17-83      Cleaned out cement and hole from 15' to 20' and drilled 12-1/4" hole to 22'. Drilled 12-1/4" rat and mouse holes and set in pipe. Ran and set 9-5/8" O.D., 36# casing at 22'. Ran 5-1/2" O.D., 15.50# casing with teeth cut in bottom in hole. Rotated casing to 23'. Rigged up and cut 3.937" core #1 from 23' to 31' using polymer mud. Made trip out to check bit, 9-5/8" and 5-1/2" casing moved up 1'. Pumped casing back down and welded casing to 13-3/8" casing. Made trip in and cut 3.937" cores #2 thru #6 from 31' to 63'.

02-18-83      Cut 3.937" cores #7 thru #15 from 63' to 82'. Made trips for core barrel and bit change at 72' and bit change at 82'. Pulled tools up into casing and worked on Acker unit from 1100 hours.

02-19-83      Worked on Acker unit to 1600 hours. Made trip in and cut 3.937" cores #16 thru #28 from 82' to 111'. Made trip for bit check at 99.5' and cleaned out 2' fill.

02-20-83      Cut 3.937" cores #29 thru #54 from 111' to 175'. Made trip for bit check at 131.5', cleaned out 8' fill and bit change at 158', cleaned out 2' fill. Made trip out and secured rig at 2400 hours.

02-22-83      Rig secured from 02-20-83 to 0800 hours 02-22-83. Made trip in. Cut 3.937" cores #55 thru #61 from 175' to 197'. Made trip for bit change at 191'. Made trip out, rigged up, pulled 5-1/2" and 9-5/8" casing and made trip in with 8-3/4" hole opener with 6-1/4" pilot bit. Opened 5-1/2" hole to 8-3/4" from 22' to 23' and 3.937" hole to 96' using air foam.

USW VH-2  
Hole History  
Page 2

02-23-83      Opened 3.937" hole to 8-3/4" to 197'. Changed to gel mud and polymer at 162', bit kept plugging up. Made trip for 12-1/4" hole opener. Opened 8-3/4" hole to 12-1/4" from 22' to 188', had trouble keeping hole clean.

02-24-83      Mixed and circulated mud in hole to 1800 hours. Added K-280 mud pump and cleaned out fill from 177' to 188'. Opened 8-3/4" hole to 12-1/4" from 188' to 197' using high viscosity mud. Pulled up to check for fill.

02-25-83      Lowered tools to 197', no fill. Made trip out. Ran Birdwell caliper log to 195' T.D. Ran fluid density log, checked fluid level at 44'. Ran epithermal neutron log to 196' T.D., borehole compensated density log to 195' T.D. and electric log to 196' T.D. Made trip in with Hunt sidewall sample tool on 6-5/8" drill pipe and took samples between 190' and 35'. Made trip for 12-1/4" bit to condition hole for 9-5/8" casing. Cleaned out hole from 195' to 197' and made trip out.

02-26-83      Ran and landed 5 joints of 9-5/8", 36# casing at 197'. Ran and rotated 5-1/2", 15.50# casing to 202'. Made trip in with 3.937" core bit and barrel on HCQ rods. Cut 3.937" cores #62 thru #68 from 201' to 226' using polymer mud.

02-27-83      Cut 3.937" cores #69 thru #85 from 226' to 310'. Had problems with inner barrel sanding up.

02-28-83      Made trip for bit change and reamed hole from 300' to 310'. Cut 3.937" cores #86 thru #101 from 310' to 397' with 85% returns. Made trip for bit change at 340.5'.

03-01-83      Cut 3.937" cores #102 thru #114 from 397' to 487'. Tools torqued and pressured up at 460', made trip for bit change.

03-02-83      Cut 3.937" cores #115 to #132 from 487' to 667'.

03-03-83      Cut 3.937" cores #132 thru #139 from 667' to 716'. Made trip out. Pulled and laid down 5-1/2" casing. Rigged up to open hole to 8-3/4".

03-04-83      Made trip in with 8-3/4" hole opener. Opened 5-1/2" hole to 8-3/4" to 202' and 3.937" hole to 716' using polymer mud. Mixed 3 sacks of petro gel with 42 barrels of polymer mud and conditioned hole.

03-05-83      Made trip out. Ran Birdwell fluid density log to 716' T.D., checked fluid at 97'. Ran caliper log to 716' T.D. and epithermal neutron log to 712' T.D. Ran fluid density log to 716' T.D., checked fluid level at 138'. Ran induction log to 713' T.D.,

USW VH-2  
Hole History  
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03-05-83 magnetometer log to 716' T.D. and borehole compensated density log to 712' T.D. Made trip in with Hunt sidewall sample tool. Took sidewall samples between 212' and 203'. Laid down tools.

03-06-83 Rigged up to run 5-1/2" casing. 9-5/8" casing welded to 13-3/8" casing broke loose, 9-5/8" casing dropped 1' to 198'. Rewelded casing to 13-3/8" casing. Ran and rotated 5-1/2", 15.50# casing to 720.47'. Rigged up and made trip in with 3.937" core bit and barrel on HCQ rods. Cleaned out casing from 710' to 720'. Cut 3.937" cores #140 thru #147 from 720' to 777' using polymer mud with good returns.

03-07-83 Cut 3.937" cores #148 thru #162 from 777' to 901'.

03-08-83 Cut 3.937" cores #163 thru #170 from 901' to 967'. Made trip for bit change at 940' and pulled up into casing to repair rig motor at 959'.

03-09-83 Cut 3.937" cores #171 thru #179 from 967' to 1014'. Made trip for bit change. Made trip out to replace bent rods.

03-10-83 Made trip in and redrilled mismatched core #179 from 1011' to 1014' for core #180. Cut 3.937" cores #181 thru #192 from 1014' to 1132'.

03-11-83 Cut 3.937" cores #193 thru #202 from 1132' to 1218'. Made trip to replace latch-in coupling at 1208'.

03-12-83 Cut 3.937" cores #203 thru #215 from 1218' to 1348' with returns.

03-13-83 Cut 3.937" cores #216 thru #233 from 1348' to 1524'. Lost returns from 1367' to 1377' then full returns.

03-14-83 Cut 3.937" cores #234 thru #251 from 1524' to 1679'. Made trip for core bit change and reamed hole from 1339' to 1360' with approximately 50% returns.

03-15-83 Reamed hole from 1360' to 1679'. Cut 3.937" cores #252 thru #265 from 1679' to 1770' with 50% returns.

03-16-83 Cut 3.937" cores #266 thru #273 from 1770' to 1801'. Made trip for bit check at 1778'.

03-17-83 Cut 3.937" cores #274 thru #286 from 1801' to 1861' with 50% returns.

03-18-83 Cut 3.937" cores #287 thru #296 from 1861' to 1928' with medium returns. Made trip for core bit change at 1872'. Changed mud and conditioned tight hole at 1908'.



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Hole History  
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03-19-83 Cut 3.937" cores #297 thru #309 from 1928' to 2008'. Made trip to clean core barrel at 1977' and cleaned out 4' fill.

03-20-83 Cut 3.937" cores #310 thru #322 from 2008' to 2128' with erratic returns.

03-21-83 Cut 3.937" cores #323 thru #332 from 2128' to 2198' with approximately 40% returns. Made trip for core bit change at 2178', reamed and washed hole from 2160' to bottom.

03-22-83 Cut 3.937" cores #333 thru #346 from 2198' to 2257' with 50% returns.

03-23-83 Cut 3.937" cores #347 thru #356 from 2257' to 2326' with 25% returns.

03-24-83 Cut 3.937" cores #357 thru #364 from 2326' to 2383'. Made trip for core #361 at 2361'. Made trip to repair inner barrel at 2383'.

03-25-83 Washed hole to bottom. Cut 3.937" cores #365 thru #372 from 2383' to 2444' with 20% to 25% returns.

03-26-83 Cut 3.937" cores #373 thru #381 from 2444' to 2523'.

03-27-83 Cut 3.937" cores #382 thru #387 from 2523' to 2563' with no returns. Made trip for core bit change at 2559'.

03-28-83 Cut 3.937" cores #388 thru #398 from 2563' to 2630' with no returns. Cleaned out 2' fill at 2626'.

03-29-83 Cut 3.937" cores #399 thru #411 from 2630' to 2693' with 20% returns after 1/2 hour of coring.

03-30-83 Cut 3.937" cores #412 thru #419 from 2693' to 2760' with 20% to 15% returns, no returns from 2730' to 2739'.

03-31-83 Cut 3.937" cores #420 thru #424 from 2760' to 2794'. Made trip out for core bit change. Made trip in to tight hole at 2360', unable to get circulation. Attempted to retrieve inner barrel, sand line parted 200' above cable head. Made trip to recover sand line. Restrung sand line and started in the hole.

04-01-83 Made trip in and reamed hole from 2340' to 2590'. Made trip for new bit and washed hole to 2550'. Reamed hole from 2550' to 2794'. Cut 3.937" core #425 from 2794' to 2798'. Made trip to retrieve core.

04-02-83 Made trip to unplug core barrel. Mixed gel and polymer mud to 45 viscosity and stage circulated from 2300' to 2798'. Cut 3.937" cores #426 thru #431 from 2798' to 2841' with 10% returns.

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04-03-83 Cut 3.937" cores #432 thru #441 from 2841' to 2924' with 5% returns.

04-04-83 Cut 3.937" cores #442 thru #448 from 2924' to 2986.5' with 5% returns.

04-05-83 Cut 3.937" cores #449 thru #455 from 2986.5' to 3041' starting with 5% returns and ending with 25% returns. Made trip for bit change at 3004' and stage circulated in from 2500'.

04-06-83 Cut 3.937" cores #456 thru #467 from 3041' to 3130' with 10% to 15% returns.

04-07-83 Cut 3.937" cores #468 thru #476 from 3130' to 3177' with 50% to 25% returns. Rods parted at 5'. Attempted to retrieve rods, box and pin kept parting. Pulled up rods using a spear and replaced damaged joints. Cut 3.937" core #477 from 3177' to 3180'.

04-08-83 Cut 3.937" cores #478 thru #484 from 3180' to 3196' with 40% returns, hole caving. Made trip for bit change and cleaned out bridges and fill from 2825' to 3196'.

04-09-83 Cut 3.937" cores #485 thru #495 from 3196' to 3253.5' with 10% to 20% returns.

04-10-83 Cut 3.937" cores #496 thru #503 from 3253.5' to 3312' with no returns. Made trip for bit change at 3281', cleaned out bridge at 2600', reamed and washed hole from 3202' to bottom.

04-11-83 Cut 3.937" cores #504 thru #511 from 3312' to 3373' with no returns.

04-12-83 Cut 3.937" cores #512 thru #515 from 3373' to 3392', hole sloughing. Made trip out, left 3 sections of bit crown in the hole. Attempted to make up new stabilized core barrel, box too short for latch. Made up new core bit on original barrel and started in the hole, replaced 4 damaged rods. Cleaned out bridge at 3253'. Reamed and cleaned out fill from 3243' to 3370', recovered several large rocks in inner barrel.

04-13-82 Cleaned out fill and reamed hole from 3370' to 3392'. Cut 3.937" cores #516 thru #520 from 3392' to 3420' with no returns. Made trip for 18' core barrel with reaming shell. Cleaned out bridge at 3243'.

04-14-83 Cleaned out bridge and reamed hole from 3243' to 3420'. Cut 3.937" cores #521 thru #524 from 3420' to 3445' with no returns. Made trip out. Made up anti jam inner barrel and changed bit. While making up core barrel with power tongs, barrel twisted off at box

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Hole History  
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04-14-83  
(Cont.) and dropped down hole. Made trip in with spear, worked thru bridge from 3228' to 3245' and washed to 3431'. Made trip out, full recovery. Laid down fishing tools.

04-15-83 Made up stabilized core barrel and made trip in to bridge at 3220'. Cleaned out bridge, washed hole and reamed hole from 3440' to corrected depth of 3447'. Cut 3.937" cores #525 thru #529 from 3447' to 3482'.

04-16-83 Cut 3.937" cores #530 thru #533 from 3482' to 3518'. Made trip for 18' core barrel, 15' inner barrel and bit change at 3496'. Cleaned out bridges at 3248', 3288' and reamed hole from 3456' to 3496'.

04-17-83 Cut 3.937" cores #534 thru #536 from 3518' to 3536', tools torqued up and hole sloughed. Worked tools free at 3200' with 20,000# pull. Cleaned out bridges and fill from 3224' to 3536'. Conditioned hole with 100 barrels of 50 viscosity mud. Cut 3.937" cores #537 and #538 from 3536' to 3552' with no returns.

04-18-83 Cut 3.937" cores #539 and #540 from 3552' to 3559'. Made trip for bit change, core barrel plugged at 3248'. Made trip to unplug tools. Cleaned out bridge at 3248', washed hole and cleaned out fill from 3552' to bottom. Cut 3.937" core #541 from 3559' to 3565'.

04-19-83 Cut 3.937" cores #542 thru #548 from 3565' to 3640' with no returns and fluid level at approximately 60'.

04-20-83 Cut 3.937" cores #549 thru #555 from 3640' to 3726' with no returns.

04-21-83 Cut 3.937" cores #556 thru #565 from 3726' to 3872' with no returns.

04-22-83 Cut 3.937" cores #566 thru #574 from 3872' to 4000'. Pumped in 50 barrels of 60 viscosity ASP 700 and Petro Jel mud ahead of 25 barrels of polymer. Started running Eastman gyroscopic survey using Birdwell equipment.

04-23-83 Completed gyroscopic survey to 3930' in and out on 50' stations. Conditioned hole with 60 barrels of 140 viscosity mud and made trip out, rods had 5000# drag from 3280' to 3240'. Ran Birdwell fluid density log to bridge at 3246', checked fluid level at 538' and worked tools free at 1952' coming out. Ran Westech TV camera, fluid indicated at 544' and tight hole from 1952' to 1998' no pictures. Ran Dresser Atlas gamma ray-caliper log to bridge at 3246', density-neutron-gamma ray log to bridge at 1952' and induction log to bridge at 1952'.

04-24-83 Ran gamma ray spectrum log to bridge at 1952'. Ran Birdwell magnetometer log to bridge at 1952', 3-D velocity log to bridge at 1956' and took water samples. Made trip in with a casing shoe on HCQ rods to bridge at 2100'. Cleaned out bridge and washed hole to

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- 04-24-83  
(Cont.) 3240'. Cleaned out bridges and hole to 4000'. Pumped in 50 barrels of 90 viscosity mud ahead of 25 barrels of 45 viscosity polymer mud. Pulled tools up to 3308'. Ran Dresser Atlas gamma ray-caliper log to 3992' T.D. and density-neutron-gamma ray log to 3992'.
- 04-25-83 Ran electric-gamma ray tool to bridge at 3423'. Lowered rods, cleaned out hole to 4000' and pulled up to 3308'. Ran Dresser Atlas electric-gamma ray log to 3975' T.D. Ran LLNL magnetometer log on Birdwell truck to 3989' T.D. and Birdwell 3-D velocity log 3989' T.D. Pulled rods up to 1990'. Ran LLNL magnetometer log on Birdwell truck to 3450' and 3-D velocity log to 3389'. Pulled rods up to 1970'. Ran Dresser Atlas density-neutron-gamma ray log to 3357' and dual induction-gamma ray log to 3325'. Lowered rods, cleaned out bridge at 3330' and washed hole to 4000'. Pulled HCQ rods up to 3950'.
- 04-26-83 Ran 1.9" O.D., 10rd. thread tubing inside HCQ rods and set tubing on fill at 3986'. Pumped wiper plug down the tubing using fresh water and cut off 1.9" tubing level with 5-1/2" casing. Pulled and laid down HCQ rods. Started moving out equipment and rigged up to pull 5-1/2" casing.
- 04-27-83 Attempted to pull 5-1/2" casing with 125,000# pull, unable to move. Started moving out equipment and moved out rig. Hole completed 04-27-83.
- 04-28-83 Completed moving out equipment.

USW VH-2  
CORE RECORD

<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
1	23.0 - 31.0	8.0	0.6	8	
2	31.0 - 34.5	3.5	0.8	23	
3	34.5 - 43.0	8.5	1.6	19	
4	43.0 - 49.0	6.0	1.7	28	
5	49.0 - 58.0	9.0	1.0	11	
6	58.0 - 63.0	5.0	0.9	18	
7	63.0 - 69.0	6.0	2.0	33	
8	69.0 - 72.0	3.0	0.2	7	
9	72.0 - 73.0	1.0	0.3	30	
10	73.0 - 75.0	2.0	1.5	75	
11	75.0 - 77.0	2.0	1.6	80	
12	77.0 - 79.0	2.0	1.8	90	
13	79.0 - 81.0	2.0	2.0	100	
14	81.0 - 81.5	0.5	0.2	40	
15	81.5 - 82.0	0.5	0.0	0	
16	82.0 - 84.5	2.5	0.5	20	
17	84.5 - 88.0	3.5	1.5	43	
18	88.0 - 89.5	1.5	1.0	67	
19	89.5 - 90.5	1.0	1.0	100	
20	90.5 - 92.5	2.0	1.5	75	
21	92.5 - 97.0	4.5	0.0	0	
22	97.0 - 99.5	2.5	1.0	40	
23	99.5 - 103.0	3.5	0.0	0	
24	103.0 - 105.0	2.0	1.7	85	
25	105.0 - 106.0	1.0	2.2	220	
26	106.0 - 107.0	1.0	0.6	60	
27	107.0 - 110.0	3.0	1.4	47	
28	110.0 - 111.0	1.0	1.0	100	
29	111.0 - 113.0	2.0	1.4	70	
30	113.0 - 115.0	2.0	1.4	70	
31	115.0 - 117.0	2.0	1.8	90	
32	117.0 - 119.0	2.0	2.0	100	
33	119.0 - 120.5	1.5	1.1	73	
34	120.5 - 123.5	3.0	2.5	83	
35	123.5 - 125.5	2.0	1.0	50	
36	125.5 - 127.0	1.5	0.8	53	
37	127.0 - 129.0	2.0	2.3	115	
38	129.0 - 129.5	0.5	0.6	120	
39	129.5 - 131.5	2.0	0.3	15	
40	131.5 - 133.5	2.0	1.5	75	
41	133.5 - 135.0	1.5	1.4	93	
42	135.0 - 138.5	3.5	2.0	57	
43	138.5 - 141.0	2.5	1.7	68	
44	141.0 - 148.0	7.0	1.0	14	
45	148.0 - 151.0	3.0	1.2	40	
46	151.0 - 154.0	3.0	1.3	43	
47	154.0 - 156.0	2.0	1.5	75	
48	156.0 - 158.0	2.0	0.3	15	

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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
49	158.0 - 161.5	3.5	2.0	57	
50	161.5 - 163.0	1.5	1.2	80	
51	163.0 - 167.0	4.0	2.9	73	
52	167.0 - 169.0	2.0	0.9	45	
53	169.0 - 171.5	2.5	0.5	20	
54	171.5 - 175.0	3.5	3.5	100	
55	175.0 - 180.0	5.0	2.0	40	
56	180.0 - 184.0	4.0	0.5	13	
57	184.0 - 188.0	4.0	1.5	38	
58	188.0 - 191.0	3.0	0.0	0	
59	191.0 - 193.0	2.0	1.4	70	
60	193.0 - 195.0	2.0	0.0	0	
61	195.0 - 197.0	2.0	1.6	80	
	197.0 - 201.0				Fill
62	201.0 - 206.0	5.0	5.0	100	
63	206.0 - 209.0	3.0	3.0	100	
64	209.0 - 211.0	2.0	2.0	100	
65	211.0 - 214.0	3.0	3.0	100	
66	214.0 - 217.0	3.0	2.3	77	
67	217.0 - 223.0	6.0	6.0	100	
68	223.0 - 226.0	3.0	2.6	87	
69	226.0 - 227.0	1.0	0.0	0	
70	227.0 - 229.0	2.0	1.5	75	
71	229.0 - 237.0	8.0	6.5	81	
72	237.0 - 239.0	2.0	2.0	100	
73	239.0 - 244.0	5.0	4.0	80	
74	244.0 - 246.0	2.0	1.0	50	
75	246.0 - 247.0	1.0	0.6	60	
76	247.0 - 251.0	4.0	3.3	83	
77	251.0 - 257.0	6.0	7.0	117	
78	257.0 - 259.5	2.5	2.5	100	
79	259.5 - 269.5	10.0	10.0	100	
80	269.5 - 278.0	8.5	7.3	86	
81	278.0 - 288.0	10.0	10.0	100	
82	288.0 - 298.0	10.0	9.5	95	
83	298.0 - 308.0	10.0	10.0	100	
84	308.0 - 309.0	1.0	0.9	90	
85	309.0 - 310.0	1.0	0.0	0	
86	310.0 - 313.0	3.0	3.0	100	
87	313.0 - 323.0	10.0	10.0	100	
88	323.0 - 328.0	5.0	4.0	80	
89	328.0 - 331.0	3.0	3.2	107	
90	331.0 - 337.0	6.0	4.6	77	
91	337.0 - 339.5	2.5	0.3	12	
92	339.5 - 340.5	1.0	0.6	60	
93	340.5 - 341.0	0.5	0.5	100	
94	341.0 - 342.0	1.0	1.5	150	

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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
95	342.0 - 349.0	7.0	7.0	100	
96	349.0 - 357.0	8.0	8.0	100	
97	357.0 - 367.0	10.0	10.4	104	
98	367.0 - 373.0	6.0	6.0	100	
99	373.0 - 381.0	8.0	8.0	100	
100	381.0 - 387.0	6.0	6.0	100	
101	387.0 - 397.0	10.0	10.0	100	
102	397.0 - 406.0	9.0	9.0	100	
103	406.0 - 414.0	8.0	7.5	94	
104	414.0 - 424.0	10.0	10.5	105	
105	424.0 - 434.0	10.0	9.0	90	
106	434.0 - 443.0	9.0	10.4	116	
107	443.0 - 444.0	1.0	0.6	60	
108	444.0 - 453.0	9.0	10.3	114	
109	453.0 - 454.0	1.0	1.3	130	
110	454.0 - 459.0	5.0	5.0	100	
111	459.0 - 460.0	1.0	1.9	190	
112	460.0 - 467.0	7.0	6.7	96	
113	467.0 - 477.0	10.0	10.4	104	
114	477.0 - 487.0	10.0	9.7	97	
115	487.0 - 497.0	10.0	10.4	104	
116	497.0 - 507.0	10.0	9.7	97	
117	507.0 - 517.0	10.0	10.2	102	
118	517.0 - 527.0	10.0	10.0	100	
119	527.0 - 537.0	10.0	10.4	104	
120	537.0 - 547.0	10.0	9.5	95	
121	547.0 - 557.0	10.0	10.0	100	
122	557.0 - 567.0	10.0	10.0	100	
123	567.0 - 577.0	10.0	9.9	99	
124	577.0 - 587.0	10.0	10.2	102	
125	587.0 - 597.0	10.0	10.0	100	
126	597.0 - 607.0	10.0	10.0	100	
127	607.0 - 617.0	10.0	9.5	95	
128	617.0 - 627.0	10.0	10.0	100	
129	627.0 - 637.0	10.0	10.3	103	
130	637.0 - 647.0	10.0	10.0	100	
131	647.0 - 657.0	10.0	10.7	107	
132	657.0 - 667.0	10.0	10.2	102	
133	667.0 - 677.0	10.0	10.0	100	
134	677.0 - 683.0	6.0	6.0	100	
135	683.0 - 693.0	10.0	10.3	103	
136	693.0 - 700.0	7.0	7.3	104	
137	700.0 - 704.0	4.0	4.0	100	
138	704.0 - 709.0	5.0	2.0	40	
139	709.0 - 716.0	7.0	5.5	79	
	716.0 - 720.0				Reamed
140	720.0 - 725.0	5.0	4.8	96	

<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
141	725.0 - 729.0	4.0	4.5	113	
142	729.0 - 738.0	9.0	9.0	100	
143	738.0 - 745.0	7.0	7.0	100	
144	745.0 - 755.0	10.0	10.0	100	
145	755.0 - 760.0	5.0	5.0	100	
146	760.0 - 769.0	9.0	9.0	100	
147	769.0 - 777.0	8.0	8.0	100	
148	777.0 - 787.0	10.0	10.0	100	
149	787.0 - 788.0	1.0	1.0	100	
150	788.0 - 798.0	10.0	10.0	100	
151	798.0 - 802.0	4.0	4.0	100	
152	802.0 - 812.0	10.0	10.0	100	
153	812.0 - 816.0	4.0	4.0	100	
154	816.0 - 826.0	10.0	10.0	100	
155	826.0 - 836.0	10.0	10.0	100	
156	836.0 - 846.0	10.0	10.0	100	
157	846.0 - 856.0	10.0	10.0	100	
158	856.0 - 866.0	10.0	10.0	100	
159	866.0 - 876.0	10.0	10.0	100	
160	876.0 - 886.0	10.0	10.0	100	
161	886.0 - 891.0	5.0	4.7	94	
162	891.0 - 901.0	10.0	10.0	100	
163	901.0 - 908.0	7.0	6.5	93	
164	908.0 - 917.5	9.5	9.5	100	
165	917.5 - 927.5	10.0	10.0	100	
166	927.5 - 937.5	10.0	10.0	100	
167	937.5 - 940.0	2.5	2.5	100	
168	940.0 - 949.0	9.0	8.0	89	
169	949.0 - 959.0	10.0	9.0	90	
170	959.0 - 967.0	8.0	5.6	70	
171	967.0 - 970.0	3.0	2.0	67	
172	970.0 - 974.0	4.0	4.0	100	
173	974.0 - 979.0	5.0	5.0	100	
174	979.0 - 989.0	10.0	10.0	100	
175	989.0 - 994.0	5.0	4.5	90	
176	994.0 - 999.0	5.0	3.0	60	
177	999.0 - 1000.5	1.5	0.8	53	
178	1000.5 - 1009.0	8.5	1.5	18	
179	1009.0 - 1014.0	5.0	0.8	16	
180					F111
181	1014.0 - 1022.0	8.0	10.0	125	
182	1022.0 - 1032.0	10.0	10.0	100	
183	1032.0 - 1042.0	10.0	9.8	98	
184	1042.0 - 1052.0	10.0	10.2	102	
185	1052.0 - 1062.0	10.0	9.7	97	
186	1062.0 - 1072.0	10.0	10.0	100	
187	1072.0 - 1082.0	10.0	10.0	100	



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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
188	1082.0 - 1092.0	10.0	10.0	100	
189	1092.0 - 1102.0	10.0	10.2	102	
190	1102.0 - 1112.0	10.0	10.2	102	
191	1112.0 - 1122.0	10.0	10.0	100	
192	1122.0 - 1132.0	10.0	9.8	98	
193	1132.0 - 1142.0	10.0	10.0	100	
194	1142.0 - 1152.0	10.0	7.0	70	
195	1152.0 - 1156.0	4.0	4.0	100	
196	1156.0 - 1163.0	7.0	8.1	116	
197	1163.0 - 1173.0	10.0	10.0	100	
198	1173.0 - 1183.0	10.0	9.7	97	
199	1183.0 - 1193.0	10.0	10.3	103	
200	1193.0 - 1203.0	10.0	10.0	100	
201	1203.0 - 1208.0	5.0	5.0	100	
202	1208.0 - 1218.0	10.0	10.0	100	
203	1218.0 - 1228.0	10.0	10.0	100	
204	1228.0 - 1238.0	10.0	10.0	100	
205	1238.0 - 1248.0	10.0	10.0	100	
206	1248.0 - 1258.0	10.0	10.0	100	
207	1258.0 - 1268.0	10.0	10.0	100	
208	1268.0 - 1278.0	10.0	9.0	90	
209	1278.0 - 1288.0	10.0	10.0	100	
210	1288.0 - 1298.0	10.0	10.0	100	
211	1298.0 - 1308.0	10.0	10.0	100	
212	1308.0 - 1318.0	10.0	10.0	100	
213	1318.0 - 1328.0	10.0	10.0	100	
214	1328.0 - 1338.0	10.0	10.0	100	
215	1338.0 - 1348.0	10.0	10.0	100	
216	1348.0 - 1358.0	10.0	10.0	100	
217	1358.0 - 1367.0	9.0	9.5	106	
218	1367.0 - 1377.0	10.0	9.6	96	
219	1377.0 - 1387.0	10.0	10.0	100	
220	1387.0 - 1397.0	10.0	10.3	103	
221	1397.0 - 1407.0	10.0	10.0	100	
222	1407.0 - 1417.0	10.0	10.0	100	
223	1417.0 - 1427.0	10.0	10.0	100	
224	1427.0 - 1437.0	10.0	10.0	100	
225	1437.0 - 1447.0	10.0	10.0	100	
226	1447.0 - 1457.0	10.0	7.0	70	
227	1457.0 - 1464.0	7.0	10.0	143	
228	1464.0 - 1474.0	10.0	9.6	96	
229	1474.0 - 1484.0	10.0	10.0	100	
230	1484.0 - 1494.0	10.0	10.0	100	
231	1494.0 - 1504.0	10.0	10.0	100	
232	1504.0 - 1514.0	10.0	10.0	100	
233	1514.0 - 1524.0	10.0	8.4	84	
234	1524.0 - 1534.0	10.0	10.3	103	

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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
235	1534.0 - 1544.0	10.0	10.0	100	
236	1544.0 - 1554.0	10.0	10.0	100	
237	1554.0 - 1564.0	10.0	10.0	100	
238	1564.0 - 1574.0	10.0	10.0	100	
239	1574.0 - 1584.0	10.0	10.0	100	
240	1584.0 - 1594.0	10.0	10.0	100	
241	1594.0 - 1604.0	10.0	6.0	60	
242	1604.0 - 1614.0	10.0	9.5	95	
243	1614.0 - 1624.0	10.0	10.0	100	
244	1624.0 - 1634.0	10.0	10.0	100	
245	1634.0 - 1641.0	7.0	7.5	107	
246	1641.0 - 1649.0	8.0	8.0	100	
247	1649.0 - 1654.5	5.5	5.5	100	
248	1654.5 - 1661.0	6.5	6.5	100	
249	1661.0 - 1669.0	8.0	8.0	100	
250	1669.0 - 1677.5	8.5	8.5	100	
251	1677.5 - 1679.0	1.5	0.4	27	
252	1679.0 - 1687.0	8.0	6.5	81	
253	1687.0 - 1695.0	8.0	7.5	94	
254	1695.0 - 1705.0	10.0	10.0	100	
255	1705.0 - 1715.0	10.0	10.0	100	
256	1715.0 - 1725.0	10.0	10.0	100	
257	1725.0 - 1735.0	10.0	10.0	100	
258	1735.0 - 1745.0	10.0	10.0	100	
259	1745.0 - 1753.0	8.0	8.0	100	
260	1753.0 - 1757.0	4.0	4.0	100	
261	1757.0 - 1761.0	4.0	3.0	75	
262	1761.0 - 1765.0	4.0	3.9	98	
263	1765.0 - 1767.5	2.5	2.0	80	
264	1767.5 - 1768.5	1.0	0.2	20	
265	1768.5 - 1770.0	1.5	1.3	87	
266	1770.0 - 1771.5	1.5	0.3	20	
267	1771.5 - 1773.5	2.0	2.0	100	
268	1773.5 - 1775.5	2.0	1.1	55	
269	1775.5 - 1778.0	2.5	1.7	68	
270	1778.0 - 1785.0	7.0	3.9	56	
271	1785.0 - 1789.5	4.5	2.6	58	
272	1789.5 - 1796.0	6.5	6.5	100	
273	1796.0 - 1801.0	5.0	5.0	100	
274	1801.0 - 1804.0	3.0	2.5	83	
275	1804.0 - 1808.0	4.0	4.5	113	
276	1808.0 - 1811.0	3.0	2.5	83	
277	1811.0 - 1815.0	4.0	4.5	113	
278	1815.0 - 1821.0	6.0	5.0	83	
279	1821.0 - 1826.0	5.0	1.0	20	
280	1826.0 - 1832.0	6.0	3.6	60	
281	1832.0 - 1837.0	5.0	4.5	90	

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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
282	1837.0 - 1843.0	6.0	4.5	75	
283	1843.0 - 1848.0	5.0	4.5	90	
284	1848.0 - 1854.0	6.0	5.6	93	
285	1854.0 - 1857.0	3.0	3.8	127	
286	1857.0 - 1861.0	4.0	3.4	85	
287	1861.0 - 1865.0	4.0	1.0	25	
288	1865.0 - 1866.0	1.0	0.4	40	
289	1866.0 - 1867.5	1.0	0.9	60	
290	1867.5 - 1872.0	4.5	4.5	100	
291	1872.0 - 1881.0	9.0	11.6	129	
292	1881.0 - 1891.0	10.0	10.0	100	
293	1891.0 - 1900.0	9.0	9.8	109	
294	1900.0 - 1908.0	8.0	7.8	98	
295	1908.0 - 1918.0	10.0	10.0	100	
296	1918.0 - 1928.0	10.0	10.0	100	
297	1928.0 - 1938.0	10.0	10.0	100	
298	1938.0 - 1948.0	10.0	10.0	100	
299	1948.0 - 1954.0	6.0	6.0	100	
300	1954.0 - 1962.0	8.0	8.0	100	
301	1962.0 - 1966.0	4.0	3.5	88	
302	1966.0 - 1972.0	6.0	2.8	47	
303	1972.0 - 1973.0	1.0	1.2	120	
304	1973.0 - 1974.0	1.0	1.1	110	
305	1974.0 - 1980.0	6.0	8.0	133	
306	1980.0 - 1984.0	4.0	4.0	100	
307	1984.0 - 1989.0	5.0	5.5	110	
308	1989.0 - 1998.0	9.0	8.5	94	
309	1998.0 - 2008.0	10.0	9.5	95	
310	2008.0 - 2018.0	10.0	10.0	100	
311	2018.0 - 2028.0	10.0	10.0	100	
312	2028.0 - 2038.0	10.0	10.0	100	
313	2038.0 - 2047.5	9.5	9.5	100	
314	2047.5 - 2057.5	10.0	9.6	96	
315	2057.5 - 2067.5	10.0	10.0	100	
316	2067.5 - 2077.5	10.0	10.0	100	
317	2077.5 - 2088.0	10.5	10.0	95	
318	2088.0 - 2098.0	10.0	10.0	100	
319	2098.0 - 2108.0	10.0	10.0	100	
320	2108.0 - 2111.0	3.0	3.5	117	
321	2111.0 - 2120.0	9.0	9.0	100	
322	2120.0 - 2128.0	8.0	7.5	94	
323	2128.0 - 2135.0	7.0	7.0	100	
324	2135.0 - 2142.0	7.0	6.1	87	
325	2142.0 - 2149.0	7.0	7.8	111	
326	2149.0 - 2153.0	4.0	4.0	100	
327	2153.0 - 2158.0	5.0	5.0	100	
328	2158.0 - 2168.0	10.0	9.5	95	

<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
329	2168.0 - 2178.0	10.0	2.7	27	
330	2178.0 - 2182.0	4.0	4.5	113	
331	2182.0 - 2188.0	6.0	6.0	100	
332	2188.0 - 2198.0	10.0	9.5	95	
333	2198.0 - 2200.0	2.0	2.0	100	
334	2200.0 - 2204.0	4.0	4.2	105	
335	2204.0 - 2212.0	8.0	8.0	100	
336	2212.0 - 2214.0	2.0	2.0	100	
337	2214.0 - 2217.0	3.0	2.6	87	
338	2217.0 - 2222.0	5.0	5.0	100	
339	2222.0 - 2229.0	7.0	6.4	91	
340	2229.0 - 2236.0	7.0	6.2	89	
341	2236.0 - 2237.0	1.0	0.9	90	
342	2237.0 - 2241.0	4.0	4.0	100	
343	2241.0 - 2242.0	1.0	0.6	60	
344	2242.0 - 2247.0	5.0	5.5	110	
345	2247.0 - 2251.0	4.0	4.0	100	
346	2251.0 - 2257.0	6.0	5.4	90	
347	2257.0 - 2258.0	1.0	0.1	10	
348	2258.0 - 2267.0	9.0	9.6	107	
349	2267.0 - 2272.0	5.0	5.3	106	
350	2272.0 - 2278.0	6.0	6.0	100	
351	2278.0 - 2285.0	7.0	7.0	100	
352	2285.0 - 2290.5	5.5	5.5	100	
353	2290.5 - 2296.0	5.5	5.3	96	
354	2296.0 - 2306.0	10.0	9.5	95	
355	2306.0 - 2316.0	10.0	10.0	100	
356	2316.0 - 2326.0	10.0	9.0	90	
357	2326.0 - 2336.0	10.0	10.0	100	
358	2336.0 - 2343.0	7.0	7.4	106	
359	2343.0 - 2348.0	5.0	5.0	100	
360	2348.0 - 2358.0	10.0	2.0	20	
361	2358.0 - 2361.0	3.0	3.0	100	
362	2361.0 - 2363.0	2.0	2.0	100	
363	2363.0 - 2373.0	10.0	5.0	50	
364	2373.0 - 2383.0	10.0	0.4	4	
365	2383.0 - 2389.0	6.0	6.5	108	
366	2389.0 - 2396.0	7.0	7.0	100	
367	2396.0 - 2406.0	10.0	10.0	100	
368	2406.0 - 2415.0	9.0	9.0	100	
369	2415.0 - 2425.0	10.0	9.5	95	
370	2425.0 - 2429.5	4.5	3.1	69	
371	2429.5 - 2438.0	8.5	8.5	100	
372	2438.0 - 2444.0	6.0	7.5	125	
373	2444.0 - 2454.0	10.0	10.0	100	
374	2454.0 - 2464.0	10.0	9.8	98	
375	2464.0 - 2471.0	7.0	7.8	111	

USW VH-2  
Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
376	2471.0 - 2481.0	10.0	10.0	100	
377	2481.0 - 2489.0	8.0	8.0	100	
378	2489.0 - 2499.0	10.0	9.2	92	
379	2499.0 - 2508.0	9.0	8.6	96	
380	2508.0 - 2518.0	10.0	9.2	92	
381	2518.0 - 2523.0	5.0	6.5	130	
382	2523.0 - 2533.0	10.0	10.0	100	
383	2533.0 - 2543.0	10.0	10.0	100	
384	2543.0 - 2550.0	7.0	7.5	107	
385	2550.0 - 2557.0	7.0	7.0	100	
386	2557.0 - 2559.0	2.0	2.4	120	
387	2559.0 - 2563.0	4.0	1.6	40	
388	2563.0 - 2573.0	10.0	10.0	100	
389	2573.0 - 2583.0	10.0	10.0	100	
390	2583.0 - 2589.5	6.5	6.5	100	
391	2589.5 - 2595.0	5.5	5.8	105	
392	2595.0 - 2601.0	6.0	6.0	100	
393	2601.0 - 2607.0	6.0	6.3	105	
394	2607.0 - 2611.0	4.0	3.2	80	
395	2611.0 - 2617.5	6.5	5.5	85	
396	2617.5 - 2621.5	4.0	4.0	100	
397	2621.5 - 2626.0	4.5	4.5	100	
398	2626.0 - 2630.0	4.0	4.0	100	
399	2630.0 - 2634.0	4.0	4.0	100	
400	2634.0 - 2636.0	2.0	2.0	100	
401	2636.0 - 2642.0	6.0	6.0	100	
402	2642.0 - 2647.0	5.0	5.0	100	
403	2647.0 - 2648.0	1.0	1.6	160	
404	2648.0 - 2652.0	4.0	4.5	113	
405	2652.0 - 2656.0	4.0	3.9	98	
406	2656.0 - 2663.0	7.0	5.8	83	
407	2663.0 - 2669.0	6.0	5.0	83	
408	2669.0 - 2676.0	7.0	6.4	91	
409	2676.0 - 2681.0	5.0	4.0	80	
410	2681.0 - 2689.0	8.0	7.0	88	
411	2689.0 - 2693.0	4.0	3.7	93	
412	2693.0 - 2703.0	10.0	8.9	89	
413	2703.0 - 2712.0	9.0	9.2	102	
414	2712.0 - 2716.0	4.0	4.0	100	
415	2716.0 - 2725.0	9.0	9.6	107	
416	2725.0 - 2735.0	10.0	9.0	90	
417	2735.0 - 2745.0	10.0	9.0	90	
418	2745.0 - 2751.0	6.0	7.0	117	
419	2751.0 - 2760.0	9.0	9.0	100	
420	2760.0 - 2770.0	10.0	8.9	89	
421	2770.0 - 2774.0	4.0	4.9	123	
422	2774.0 - 2784.0	10.0	9.9	99	

USW VH-2  
Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
423	2784.0 - 2792.0	8.0	6.6	83	
424	2792.0 - 2794.0	2.0	2.2	110	
425	2794.0 - 2798.0	4.0	0.8	20	
426	2798.0 - 2799.0	1.0	1.0	100	
427	2799.0 - 2808.0	9.0	8.7	97	
428	2808.0 - 2814.0	6.0	8.0	133	
429	2814.0 - 2824.0	10.0	10.0	100	
430	2824.0 - 2834.0	10.0	10.0	100	
431	2834.0 - 2841.0	7.0	5.4	77	
432	2841.0 - 2850.0	9.0	10.3	114	
433	2850.0 - 3860.0	10.0	10.0	100	
434	2860.0 - 2870.0	10.0	8.5	85	
435	2870.0 - 2875.0	5.0	2.3	46	
436	2875.0 - 2878.0	3.0	2.6	87	
437	2878.0 - 2887.0	9.0	10.3	114	
438	2887.0 - 2894.0	7.0	7.8	111	
439	2894.0 - 2904.0	10.0	10.0	100	
440	2904.0 - 2914.0	10.0	10.0	100	
441	2914.0 - 2924.0	10.0	10.0	100	
442	2924.0 - 2934.0	10.0	10.0	100	
443	2934.0 - 2943.0	9.0	9.0	100	
444	2943.0 - 2952.0	9.0	8.4	93	
445	2952.0 - 2962.0	10.0	10.0	100	
446	2962.0 - 2966.5	4.5	4.5	100	
447	2966.5 - 2976.5	10.0	10.0	100	
448	2976.5 - 2986.5	10.0	10.0	100	
449	2986.5 - 2994.0	7.5	8.4	112	
450	2994.0 - 3004.0	10.0	10.0	100	
451	3004.0 - 3005.0	1.0	0.5	50	
452	3005.0 - 3013.0	8.0	9.5	119	
453	3013.0 - 3023.0	10.0	10.0	100	
454	3023.0 - 3033.0	10.0	10.4	104	
455	3033.0 - 3041.0	8.0	7.6	95	
456	3041.0 - 3048.0	7.0	6.3	90	
457	3048.0 - 3058.0	10.0	10.0	100	
458	3058.0 - 3068.0	10.0	9.9	99	
459	3068.0 - 3075.0	7.0	7.0	100	
460	3075.0 - 3085.0	10.0	10.0	100	
461	3085.0 - 3093.0	8.0	9.0	113	
462	3093.0 - 3100.0	7.0	7.5	107	
463	3100.0 - 3103.0	3.0	2.6	87	
464	3103.0 - 3111.0	8.0	8.0	100	
465	3111.0 - 3119.0	8.0	8.0	100	
466	3119.0 - 3124.0	5.0	4.7	94	
467	3124.0 - 3130.0	6.0	6.0	100	
468	3130.0 - 3136.0	6.0	7.2	120	
469	3136.0 - 3141.0	5.0	3.5	70	

USW VH-2  
Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
470	3141.0 - 3149.0	8.0	8.4	105	
471	3149.0 - 3156.0	7.0	7.0	100	
472	3156.0 - 3164.0	8.0	8.2	103	
473	3164.0 - 3171.0	7.0	7.0	100	
474	3171.0 - 3173.0	2.0	2.0	100	
475	3173.0 - 3174.0	1.0	0.8	80	
476	3174.0 - 3177.0	3.0	3.0	100	
477	3177.0 - 3180.0	3.0	3.0	100	
478	3180.0 - 3185.0	5.0	4.5	90	
479	3185.0 - 3187.0	2.0	2.0	100	
480	3187.0 - 3188.0	1.0	1.0	100	
481	3188.0 - 3189.0	1.0	0.5	50	
482	3189.0 - 3191.0	2.0	1.0	50	
483	3191.0 - 3194.0	3.0	2.7	90	
484	3194.0 - 3196.0	2.0	1.5	75	
485	3196.0 - 3197.0	1.0	2.0	200	
486	3197.0 - 3203.0	6.0	6.0	100	
487	3203.0 - 3208.0	5.0	5.0	100	
488	3208.0 - 3218.0	10.0	8.8	88	
489	3218.0 - 3226.0	8.0	10.2	128	
490	3226.0 - 3231.0	5.0	4.4	88	
491	3231.0 - 3234.0	3.0	2.0	67	
492	3234.0 - 3237.0	3.0	4.0	133	
493	3237.0 - 3240.0	3.0	3.5	117	
494	3240.0 - 3247.0	7.0	6.8	97	
495	3247.0 - 3253.5	6.5	6.5	100	
496	3253.5 - 3263.0	9.5	8.8	93	
497	3263.0 - 3269.0	6.0	6.7	112	
498	3269.0 - 3273.0	4.0	5.0	125	
499	3273.0 - 3281.0	8.0	4.0	50	
500	3281.0 - 3284.0	3.0	3.0	100	
501	3284.0 - 3292.0	8.0	8.5	106	
502	3292.0 - 3302.0	10.0	10.0	100	
503	3302.0 - 3312.0	10.0	10.2	102	
504	3312.0 - 3322.0	10.0	9.1	91	
505	3322.0 - 3332.0	10.0	9.8	98	
506	3332.0 - 3340.0	8.0	8.0	100	
507	3340.0 - 3350.0	10.0	10.0	100	
508	3350.0 - 3360.0	10.0	10.0	100	
509	3360.0 - 3366.0	6.0	6.0	100	
510	3366.0 - 3368.0	2.0	1.1	55	
511	3368.0 - 3373.0	5.0	5.9	118	
512	3373.0 - 3383.0	10.0	10.0	100	
513	3383.0 - 3389.0	6.0	6.0	100	
514	3389.0 - 3390.5	1.5	0.8	53	
515	3390.5 - 3392.0	1.5	2.3	153	
516	3392.0 - 3393.0	1.0	0.1	10	

USW VH-2  
Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
517	3393.0 - 3398.0	5.0	4.5	90	
518	3398.0 - 3407.0	9.0	9.8	109	
519	3407.0 - 3415.0	8.0	7.6	95	
520	3415.0 - 3420.0	5.0	6.0	120	
521	3420.0 - 3432.0	12.0	12.5	104	
522	3432.0 - 3438.0	6.0	6.5	108	
523	3438.0 - 3440.5	2.5	2.4	96	
524	3440.5 - 3445.0	4.5	4.3	96	
					+2' Depth Correction
525	3447.0 - 3457.0	10.0	9.6	96	
526	3457.0 - 3459.0	2.0	2.5	125	
527	3459.0 - 3467.0	8.0	7.5	94	
528	3467.0 - 3472.0	5.0	5.8	116	
529	3472.0 - 3482.0	10.0	9.4	94	
530	3482.0 - 3492.0	10.0	9.6	96	
531	3492.0 - 3496.0	4.0	4.9	123	
532	3496.0 - 3508.0	12.0	12.0	100	
533	3508.0 - 3518.0	10.0	10.0	100	
534	3518.0 - 2531.0	13.0	13.0	100	
535	3531.0 - 3534.0	3.0	3.0	100	
536	3534.0 - 3536.0	2.0	2.1	105	
537	3536.0 - 3543.0	7.0	7.2	103	
538	3543.0 - 3552.0	9.0	9.0	100	
539	3552.0 - 3556.0	4.0	4.0	100	
540	3556.0 - 3559.0	3.0	1.8	60	
541	3559.0 - 3565.0	6.0	5.8	97	
542	3565.0 - 3580.0	15.0	15.0	100	
543	3580.0 - 3586.0	6.0	6.0	100	
544	3586.0 - 3590.0	4.0	4.8	120	
545	3590.0 - 3595.0	5.0	5.3	106	
546	3595.0 - 3610.0	15.0	15.0	100	
547	3610.0 - 3625.0	15.0	14.8	99	
548	3625.0 - 3640.0	15.0	15.0	100	
549	3640.0 - 3651.0	11.0	10.0	91	
550	3651.0 - 3666.0	15.0	15.0	100	
551	3666.0 - 3681.0	15.0	15.0	100	
552	3681.0 - 3694.0	13.0	14.3	110	
553	3694.0 - 3709.0	15.0	15.3	102	
554	3709.0 - 3724.0	15.0	14.0	93	
555	3724.0 - 3726.0	2.0	1.4	70	
556	3726.0 - 3741.0	15.0	15.2	101	
557	3741.0 - 3752.0	11.0	11.6	105	
558	3752.0 - 3767.0	15.0	15.2	101	
559	3767.0 - 3782.0	15.0	15.0	100	
560	3782.0 - 3797.0	15.0	15.0	100	
561	3797.0 - 3812.0	15.0	15.1	101	
562	3812.0 - 3827.0	15.0	14.4	96	



USW VH-2  
Core Record  
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<u>Core No.</u>	<u>Interval</u>	<u>Footage Cored</u>	<u>Footage Recovered</u>	<u>% Recovery</u>	<u>Remarks</u>
563	3827.0 - 3842.0	15.0	15.1	101	
564	3842.0 - 3857.0	15.0	15.1	101	
565	3857.0 - 3872.0	15.0	15.2	101	
566	3872.0 - 3887.0	15.0	15.2	101	
567	3887.0 - 3902.0	15.0	15.2	101	
568	3902.0 - 3917.0	15.0	14.9	99	
569	3917.0 - 3925.0	8.0	8.2	103	
570	3925.0 - 3940.0	15.0	15.0	100	
571	3940.0 - 3955.0	15.0	15.0	100	
572	3955.0 - 3970.0	15.0	15.2	101	
573	3970.0 - 3985.0	15.0	14.8	99	
574	3985.0 - 4000.0	15.0	15.1	101	

**USW VH-2  
FLUID USAGE  
REECO Mud Report**

<u>Date</u>	<u>Depth Feet</u>	<u>Hole Inches</u>	<u>Water Gal. Daily</u>	<u>Water Gal. Cum.</u>	<u>ASP 700 Gal. Daily</u>	<u>ASP 700 Gal. Cum</u>	<u>Other Gal. Lbs. WFR-II Bent.</u>
02-17-83	63	3.937	1753	1753			25
02-18-83	82						
02-19-83	111						
02-20-83	175						
02-21-83	Secured						
02-22-83	96	8-3/4					
02-23-83	188	12-1/4	42122	43875	100	100	200 1000
02-24-83	197		73244	117119			
02-25-83	Log						
02-26-83	226	3.937	3160	120279	30	130	
02-27-83	310		7637	127916			60
02-28-83	397		14262	142178			
03-01-83	487		17937	160115			
03-02-83	665		19201	179316			
03-03-83	716		8156	187472			
03-04-83	716	8-3/4	3736	191208			300

**F&S Mud Report**

03-04-83	716	8-3/4	3314	3314	40	40	
03-05-83	Log						
03-06-83	777	3.937	6774	10088	40	80	20
03-07-83	901		15009	25097	47	127	77
03-08-83	967		13681	38778	44	171	4
03-09-83	1014		11437	50215	22.5	193.5	
03-10-83	1132		11305	61520	40	233.5	15
03-11-83	1218		10931	72451	38.5	272	
03-12-83	1348		10770	83221	40	312	
03-13-83	1524		10279	93500	5	317	
03-14-83	1679		17725	111225	36	353	
03-15-83	1770		13820	125045	33	386	
03-16-83	1801		16373	141418	40	426	
03-17-83	1861		9848	151266	43.5	469.5	
03-18-83	1936		6480	157746	12	481.5	
03-19-83	2013		1570	159316	47.5	529	
03-20-83	2128		15545	174861	50	579	
03-21-83	2198		6592	181453	35	614	
03-22-83	2257		15828	197281	38	652	
03-23-83	2331		13256	210537	21	673	
03-24-83	2383		8008	218545	21	694	
03-25-83	2444		4182	222727	39	733	
03-26-83	2523		6760	229487	54	787	
03-27-83	2572		6370	235857	50	837	

USW VH-2  
Fluid Usage  
Page 2

<u>Date</u>	<u>Depth Feet</u>	<u>Hole Inches</u>	<u>Water Gal. Daily</u>	<u>Water Gal. Cum.</u>	<u>ASP 700 Gal. Daily</u>	<u>ASP 700 Gal. Cum</u>	<u>Other Gal. Lbs. WFR-II Bent.</u>
03-28-83	2630	3.937	11988	247845	90.5	927.5	
03-29-83	2693		17040	264885	68	995.5	
03-30-83	2760		15083	279968	68	1063.5	
03-31-83	2794		6570	286538	25	1088.5	
04-01-83	2798		7982	294520	42.5	1131	
04-02-83	2841		13746	308226	44	1175	
04-03-83	2924		12905	321171	82	1257	
04-04-83	2986		14362	335533	75	1332	
04-05-83	3041		10138	345671	55.5	1387.5	
04-06-83	3130		13702	359373	71	1458.5	
04-07-83	3180		16177	375550	57	1515.5	
04-08-83	3196		12453	388003	36	1551.5	
04-09-83	3259		21333	409336	52	1603.5	
04-10-83	3312		10482	419818	65	1668.5	
04-11-83	3376		12586	432404	105	1773.5	
04-12-83	3392		11709	444113	77	1850.5	
04-13-83	3420		8767	452880	58	1908.5	
04-14-83	3445		17328	470208	65	1973.5	
04-15-83	3484		10772	480980	128	2101.5	
04-16-83	3518		27022	508002	79	2180.5	
04-17-83	3552		21254	529256	82	2262.5	
04-18-83	3565		7031	536287	35	2297.5	
04-19-83	3650		14711	550998	90	2387.5	
04-20-83	3735		9100	560098	68	2455.5	
04-21-83	3872		7718	567816	59	2514.5	
04-22-83	4000		13201	581017	71	2585.5	
04-23-83	Logging		1119	582136	22	2607.5	
04-24-83	Logging		5110	587246	24	2631.5	
04-25-83	Logging		480	587726	5	2636.5	
REEC0				191208		130.0	285 1300
Fenix & Scisson				<u>587726</u>		<u>2636.5</u>	<u>116</u> <u>0</u>
Total Used				778934		2766.5	401 1300

ASP 700 - Polymer drilling fluid  
WFR-II - Polymer drilling fluid  
Bent. - Bentonite clay

USW VH-2  
REVIEW OF HOLE CONDITIONS

340 mm (13-3/8") casing was set at 5.8 m (19') in a 445 mm (17-1/2") hole drilled to 6.1 m (20'). The annulus was cemented to surface with 0.85 m<sup>3</sup> (30 ft<sup>3</sup>) of cement slurry 02-16-83. Calculated annular volume was 0.37 m<sup>3</sup> (13 ft<sup>3</sup>). 100 mm (3.937") cores were cut from 7.0 m (23') to 60.0 m (197') with conventional circulation using polymer mud. The hole was opened to 311 mm (12-1/4") to 60.0 m (197') using air foam and mud. Caliper, fluid density, epithermal neutron, density, electric logs were run and sidewall samples taken 02-25-83. 244 mm (9-5/8") casing was set at 60.0 m (197'). 100 mm (3.937") cores were cut to 218.2 m (716'). The hole was opened to 222 mm (8-3/4") to 218.2 m (716'). Fluid density, caliper, epithermal neutron, electric, magnetometer, density logs were run and sidewall samples taken 03-05-83. 244 mm (9-5/8") casing dropped 0.3 m (1') to 60.4 m (198'). 140 mm (5-1/2") casing was rotated and set at 219.5 m (720'). 100 mm (3.937") cores were cut to a total depth of 1219.2 m (4000'). Gyroscopic survey, fluid density, gamma ray-caliper, density-neutron-gamma ray, electric, gamma ray spectrum, magnetometer, 3-D velocity, electric-gamma ray, dual induction-gamma ray logs were run between 04-22-83 and 04-25-83. Caliper logs #1 and #2 indicated very slight erosion with a maximum hole enlargement to 292 mm (11-1/2") at 595.6 m (1954'). 48 mm (1.9") tubing was landed on fill at 1214.9 m (3986') and filled with fresh water. Hole completed 04-27-83. A total of 574 cores were cut.

Appendix A  
GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 1 of 3

HOLE: USW VH-1

VOLCANIC HYDROLOGY HOLE

<u>LOG TYPE</u>	<u>MICROFICHE (sheet,row)</u>	<u>RUN NO.</u>	<u>LOG DATE</u>	<u>LOGGING COMPANY</u>	<u>LOGGED INTERNAL</u>	
					<u>BTM LOG</u>	<u>TOP LOG</u>
Caliper	(1,1)	1	11/7/80	Birdwell	632'	30'
Caliper	(1,3)	2	1/13/81	Birdwell	2,478'	890'
Caliper	(1,5)	3	1/15/81	Birdwell	1,202'	870'
Caliper	(1,5)	4	1/16/81	Birdwell	855'	540'
Caliper	(2,2)	5	1/23/81	Birdwell	876'	20'
Caliper	(2,4)	6	1/29/81	Birdwell	826'	20'
Density Borehole Compensated	(3,1)	1	11/8/80	Birdwell	644'	40'
Compensated Densilog (2")	(3,2)	1	1/14/81	Dresser Atlas	2,449'	1,000'
Compensated Densilog (2")	(3,2)	2	1/15/81	Dresser Atlas	851'	608'
Compensated Densilog (5")	(3,3)	1	1/14/81	Dresser Atlas	2,449'	1,000'
Compensated Densilog (5")	(3,3)	2	1/15/81	Dresser Atlas	851'	608'
Fluid Density for Water Location	(3,5)	1	11/7/80	Birdwell	620'	570'
Fluid Density for Water Location	(3,5)	2	11/7/80	Birdwell	620'	670'
Fluid Density for Water Location	(3,5)	3	11/7/80	Birdwell	549'	500'
Fluid Density for Water Location	(3,5)	4	11/7/80	Birdwell	553'	500'
Epithermal Neutron Porosity	(6,3)	1	1/14/81	Birdwell	2,482'	1,050'

GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 2 of 3

HOLE: USW VH-1 (continued)

VOLCANIC HYDROLOGY HOLE

<u>LOG TYPE</u>	<u>MICROFICHE (sheet,row)</u>	<u>RUN NO.</u>	<u>LOG DATE</u>	<u>LOGGING COMPANY</u>	<u>LOGGED BTM LOG</u>	<u>INTERNAL TOP LOG</u>
Gamma Ray	(6,3)	2	1/14/81	Birdwell	2,472'	1,050'
Epithermal Neutron- Porosity	(6,5)	2	1/16/81	Birdwell	840'	606'
Compensated Neutron (2")	(5,5)	1	1/14/81	Dresser Atlas	2,450'	1,000'
Compensated Neutron (2")	(5,5)	2	1/15/81	Dresser Atlas	852'	608'
Compensated Neutron (5")	(6,1)	1	1/14/81	Dresser Atlas	2,450'	1,000'
Compensated Neutron (5")	(6,1)	2	1/15/81	Dresser Atlas	852'	608'
Gamma Ray Neutron	(4,5)	1	11/7/80	Birdwell	636'	10'
Gamma Ray	(5,1)	3	1/14/81	Birdwell	2,451'	580'
Gamma Ray	(5,3)	4	1/16/81	Birdwell	843'	606'
Gamma Ray	(5,3)	5	1/16/81	Birdwell	839'	606'
Neutron	(4,5)	1	11/7/80	Birdwell	644'	26'
Neutron	(5,1)	2	1/14/81	Birdwell	2,458'	587'
Neutron	(5,3)	3	1/16/81	Birdwell	847'	606'
Electric	(4,2)	1	1/13/81	Birdwell	2,478'	980'
Electric	(4,4)	2	1/15/81	Birdwell	1,200'	600'
Induction	(4,1)	1	11/7/80	Birdwell	638'	40'
Temperature	(7,1)	1	11/8/80	Birdwell	644'	0'
Temperature	(7,2)	2	1/14/81	Birdwell	2,459'	1,000'

GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 3 of 3

HOLE: USW VH-1 (continued)

VOLCANIC HYDROLOGY HOLE

<u>LOG TYPE</u>	<u>MICROFICHE (sheet,row)</u>	<u>RUN NO.</u>	<u>LOG DATE</u>	<u>LOGGING COMPANY</u>	<u>LOGGED INTERNAL</u>	
					<u>BTM LOG</u>	<u>TOP LOG</u>
Temperature	(7,3)	3	1/16/81	Birdwell	864'	20'
3-D/Velocity	(7,4)	1	1/13/81	Birdwell	2,479'	1,050'
3-D/Velocity	(7,4)	2	1/13/81	Birdwell	2,478'	1,022'
3-D/Velocity (6')	(8,1)	3	1/16/81	Birdwell	845'	590'
3-D/Velocity (3')	(8,1)	4	1/16/81	Birdwell	843'	590'
Geophone Survey (VSP)	(8,2)	1	11/7/80	Birdwell	625'	50'
Geophone Survey (VSP)	(8,2)	2	1/15/81	Birdwell	2,450'	1,005'
Geophone Survey (VSP)	(8,2)	3	1/16/81	Birdwell	853'	625'

GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 1 of 4

HOLE: USW VH-2

VOLCANIC HYDROLOGY HOLE

LOG TYPE	MICROFICHE (sheet,row)	RUN NO.	LOG DATE	LOGGING COMPANY	LOGGED INTERNAL	
					BTM LOG	TOP LOG
Caliper	(1,1)	1	2/25/83	Birdwell	188'	10'
Caliper	(1,2)	2	3/5/83	Birdwell	708'	140'
Caliper (2")	(1,4)	1	4/23/83	Dresser Atlas	3,246'	720'
Caliper (2")	(1,4)	2	4/24/83	Dresser Atlas	3,990'	3,308'
Caliper (5")	(1,5)	1	4/23/83	Dresser Atlas	3,246'	3,990'
Caliper (5")	(1,5)	2	4/24/83	Dresser Atlas	720'	3,308'
Density Borehole Compensated	(2,2)	1	2/25/83	Birdwell	193'	10'
Density Borehole Compensated	(2,3)	2	3/5/83	Birdwell	711'	170'
Densilog Gamma Ray (2")	(2,4)	1	4/23/83	Dresser Atlas	1,960'	486'
Densilog Gamma Ray (2")	(2,4)	2	4/24/83	Dresser Atlas	3,986'	3,308'
Densilog Gamma Ray (2")	(2,4)	3	4/25/83	Dresser Atlas	3,332'	1,886'
Densilog Gamma Ray (5")	(3,1)	1	4/23/83	Dresser Atlas	1,960'	486'
Densilog Gamma Ray (5")	(3,1)	2	4/24/83	Dresser Atlas	3,986'	3,308'
Densilog Gamma Ray (5")	(3,1)	3	4/25/83	Dresser Atlas	3,332'	1,886'
Fluid Density for Water Location	(3,4)	1	2/25/83	Birdwell	60'	30'



GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 2 of 4

HOLE: USW VH-2 (continued)

VOLCANIC HYDROLOGY HOLE

<u>LOG TYPE</u>	<u>MICROFICHE (sheet,row)</u>	<u>RUN NO.</u>	<u>LOG DATE</u>	<u>LOGGING COMPANY</u>	<u>LOGGED BTM LOG</u>	<u>INTERNAL TOP LOG</u>
Fluid Density for Water Location	(3,5)	2	3/5/83	Birdwell	120'	70'
Fluid Density for Water Location	(4,1)	3	3/5/83	Birdwell	160'	70'
Fluid Density for Water Location	(4,2)	4	4/23/83	Birdwell	600'	500'
Epithermal Neutron Porosity	(5,4)	1	2/25/83	Birdwell	195'	10'
Epithermal Neutron Porosity	(5,5)	2	3/5/83	Birdwell	711'	170'
Spectralog Gamma Ray	(7,4)	1	4/24/83	Dresser Atlas	1,954'	0'
Compensated Neutron (2")	(6,1)	1	4/23/83	Dresser Atlas	1,952'	496'
Compensated Neutron (2")	(6,1)	2	4/24/83	Dresser Atlas	3,980'	3,308'
Compensated Neutron (2")	(6,1)	3	4/25/83	Dresser Atlas	3,322'	1,886'
Compensated Neutron (5")	(6,2)	1	4/23/83	Dresser Atlas	1,952'	496'
Compensated Neutron (5")	(6,2)	2	4/24/83	Dresser Atlas	3,980'	3,308'
Compensated Neutron (5")	(6,2)	3	4/25/83	Dresser Atlas	3,322'	1,886'
Induction Electric	(4,3)	1	2/25/83	Birdwell	191'	10'
Induction Electric	(4,4)	2	3/5/83	Birdwell	708'	110'
Induction Electro- log (2")	(4,5)	1	4/23/83	Dresser Atlas	1,954'	720'

GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 3 of 4

HOLE: USW VH-2 (continued)

VOLCANIC HYDROLOGY HOLE

LOG TYPE	MICROFICHE (sheet,row)	RUN NO.	LOG DATE	LOGGING COMPANY	LOGGED INTERNAL	
					BTM LOG	TOP LOG
Induction Electro- log (2")	(4,5)	2	4/24/83	Dresser Atlas	3,976'	3,308'
Induction Electro- log (2")	(4,5)	3	4/25/83	Dresser Atlas	3,330'	1,968'
Induction Electro- log (5")	(5,1)	1	4/23/83	Dresser Atlas	1,954'	720'
Induction Electro- log (5")	(5,1)	2	4/24/83	Dresser Atlas	3,976'	3,308'
Induction Electro- log (5")	(5,1)	3	4/25/83	Dresser Atlas	3,330'	1,968'
3-D Magnetometer	(6,5)	1	3/5/83	Lawrence Livermore National Laboratory	710'	211'
3-D Magnetometer	(7,1)	3	4/24/83	Lawrence Livermore National Laboratory	1,960'	725'
3-D Magnetometer	(7,2)	4	4/25/83	Lawrence Livermore National Laboratory	3,980'	3,310'
3-D Magnetometer	(7,3)	5	4/25/83	Lawrence Livermore National Laboratory	3,400'	1,980'
3-D/Velocity (3')	(7,5)	1	4/24/83	Birdwell	1,958'	669'
3-D/Velocity (6')	(7,5)	2	4/24/83	Birdwell	1,961'	667'
3-D/Velocity (3')	(8,2)	3	4/25/83	Birdwell	3,989'	3,259'

# GEOPHYSICAL LOGS RUN IN DRILL HOLE

PAGE 4 of 4

HOLE: USW VH-2 (continued)

## VOLCANIC HYDROLOGY HOLE

<u>LOG TYPE</u>	<u>MICROFICHE (sheet, row)</u>	<u>RUN NO.</u>	<u>LOG DATE</u>	<u>LOGGING COMPANY</u>	<u>LOGGED INTERNAL</u>	
					<u>BTM LOG</u>	<u>TOP LOG</u>
3-D/Velocity (6')	(8,2)	4	4/25/83	Birdwell	3,988'	3,258'
3-D/Velocity (3')	(8,2)	5	4/25/83	Birdwell	3,503'	1,950'
3-D/Velocity (6')	(8,2)	6	4/25/83	Birdwell	3,243'	1,950'

<b>Item Description:</b>	NNWSI Hole Histories  USW VH-1 USW VZ-2
<b>Availability:</b>	<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available
<b>Sensitivity:</b>	<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Non-Sensitive—Copyright <input type="checkbox"/> Sensitive <input type="checkbox"/> Sensitive—Copyright
<b>Electronic Media Type:</b> (If applicable)	Microfiche
<b>Contact:</b>	US Nuclear Regulatory Commission Office of Nuclear Materials Safety and Safeguards Yucca Mountain Project Manager
<b>Storage/File Location:</b>	US Nuclear Regulatory Commission Office of Nuclear Materials Safety and Safeguards Two White Flint North Room T7- E34 11545 Rockville Pike Rockville, Maryland 20852-2738