

Newberry Volcano - USGS Drill Holes

Newberry #2

Location

South side of crater, between Paulina and East Lakes, T 21S, R13E,
Sec 31 (SW $\frac{1}{4}$, SW $\frac{1}{4}$) Lat. 43° 42.48' Long. 121° 13.55'

Altitude ~ 6400 ft.

Spudded: 9/12/78; completed 9/18/81; abandoned 10/5/81.

Drilling Co's.

E.E. Storey and Son, Klamath Falls, OR, David Storey, Driller
(9/12/78 - 9/29/78).

Boyles Bros. Drilling Co., Salt Lake City, Utah, Robert Goldsworthy,
Driller, (7/10/79 - 10/21/79).

Jex and Miller Drilling Co., Orem, Utah, Everett Miller, Driller,
(6/22/81 - 10/5/81).

Total depth drilled

3057 feet

Flow test: 9/29 - 9/30/81. 20-hr. test; Flow induced by swabbing
inside 2.390" NXWL drill pipe. Producing horizon: 3051-3057; open
hole. Max. flow rate (steam, gas, liquid): 800,000 ft³/day; max.
press. at 1" choke 800 psig.

Hole diameters

15" to 32'

9 7/8" to 1026'

3.937" (NCWL) to 1878'. Cemented from 1638' to bottom and redrilled
with NXWL bit (3.032")

3.032" (NXWL) 1638' to 3057'

Drilling Method

Mud rotary to 1026'

Diamond core (wireline) to 3057'

Core diameters: 2.400", 1023' to 1878'

1.875", 1878' to 3057'

Casing

10 3/4" OD, 10 1/4" ID pipe, 0' to 32' (backfilled)

8 5/8" OD, 8 1/8" ID pipe, 0' to 543' (cemented, 100 sacks)

4 1/2" OD, 4" ID pipe, 0' to 1023' (cemented, 120 sacks; cement
to 175' below top of casing
between 4" and 8" casing)

3.500" OD, 3.062" ID NXWL pipe, 0' to 1800' (cemented to surface)

2.875" OD, 2.390" ID NXWL drill pipe, 298' to 2770' with diamond
bit at bottom (3.032" OD, 1.875" ID), cemented surface to
300', 1835' to 2100', 2600' to bottom (3057').

Lithology: field descriptions (EAS) (See later descriptions by MacLeod
and others).

Newberry 2 (Cont.)

Abandonment: Casing and drill pipe cemented as described above; cut off 4' below land surface; 3" pipe plug welded to pipe; 6'x6' pit back-filled and leveled.

Newberry #3

Location:

South side of crater, between Paulina and East Lakes, T 21S, R13E, Sec 31 (SW $\frac{1}{4}$, SW $\frac{1}{4}$). At same site as and 29.2 ft. south of Newberry #2. (bearing S 10°W from #2).

Spudded: 7/15/80; completed: 8/7/81; abandoned: 10/5/81.

Drilling Co's.

Boyles Bros. Drilling Co., Salt Lake City, Utah; Dunlap, Driller (7/15/80-8/8/80).

Jex and Miller Drilling Co., Orem, Utah; Everett Miller, Driller (7/18/81-8/7/81).

Total depth drilled: 1102 ft.

Hole completed with 1 $\frac{1}{2}$ " pipe to 1100 ft. as heat-flow observation hole. However, cement was left in pipe to within 325 ft. of land surface.

Hole diameters:

5 7/8", 0 to 335 ft.

3.937", 336-610 ft. (NCWL)

3.032", 610-1102 ft. (NXWL)

Drilling method:

Mud rotary, 0 to 336 ft.

Diamond coring, wireline, continuous, 336 to 1102 ft.

Core diameter: 2.4", 336 to 610 ft.

1.875", 610 to 1102 ft.

Recovery: 40% (336' - 610')

87% (610' - 1102')

Casing:

4.500" OD, 4.000" ID pipe casing, 0 to 336 ft., cemented at bottom only.

3.500" OD, 3.062" ID NXWL pipe casing, 0 to 610 ft., cemented to surface.

1.900" OD, 1.500" ID pipe, 0 to 1100 ft., cemented to 160 ft. below land surface outside and 325 ft. below land surface inside pipe.

Newberry 3 (Cont.)

Lithology: See description for Newberry #2.

Logs available

Lithologic log

Temperature log (0 to 325 ft.) in 1½" pipe

γ-log (0 to 325 ft.) in 1½" pipe

Abandonment:

Pipe cut off at land surface, capped and covered by backfill material.