



Lahontan GeoScience, Inc.

Well Abandonment Log

Project:  
Water Well Closures  
in Dixie Valley

Project No.:  
NASF: 03140

Sheet 1 of 1

Contract No:  
HC 49162

Boring No.:  
031D

Location (T/R/S):  
T. 21N, R. 35E, Sec. 9, NE¼, SW¼

Location (Lat/Lon): 39° 42.428' N, 118° 02.936' W

Elevation:  
3395 ft

Permit No.: none

Well Log: none

Measured Depth: 251 ft

Perf. Date: 10/23/03

Borehole Dia.: unknown

Casing Size: 16", steel

Measured Casing Size: 16", steel

Plug Date: 11/04/03

Borehole Depth: unknown

Casing Depth: unknown

Static Water Level: Ground surface

Supervised by:  
J. R. Humphrey

Perforations at time of construction: unknown

Additional Perforations: 10 - 148 ft

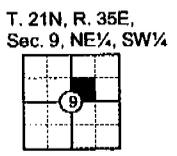
Driller:  
W. E. Knoblock

AB2213

Depth (feet)	Lithology	Detail	Well Construction	
	*Recorded at time of drilling		*Recorded at time of drilling	Abandonment
0	No well log available			Well flowing at surface
50				Plug date: 11/04/03 vol. of cement = 15.0 cu. yds nominal density = 18.6 lbs./gal.  Waiver Number R-453
100				Additional perforations: 10 - 148 ft 8 perms per foot
150				Could not advance mills knife past 148 ft. Possible casing break, bend, or well screen obstructing tool.
200				Measured Depth = 251 ft

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the land surface. Approximately 1.4 cubic yards of grout weighing about 18 lbs/gal was placed in the well. The amount of grout used was 694 percent of the cylindrical well volume, indicating that the grout permeated the surrounding formation through the bottom of the casing and/or through existing perforations. Subsequent to grouting the well casing was cut down to 1 foot below land surface.

#### **Well 31D**

Well 31D was located in SW¼, NE¼, section 9, T21N, R35E. A search of the records archived at the Carson City office of DWR failed to identify a log that could be confidently associated with this well. This well was used for crop irrigation. The 16-inch diameter steel casing was measured to a depth of 251 feet bgs. At the time of abandonment the static water level was at ground surface although it was clear that the well had been flowing at the surface recently.

An attempt to pull the casing failed. Perforation of the casing started on October 23, 2003. An obstruction or casing break at 115 feet bgs briefly hung up the perforation tool. At 148 feet bgs the tool could not be advanced further. This could be due to a casing break or bend, or it could have been the start of a screened interval in the well. The well sounder passed this depth without difficulty. Using the mills knife, 8 perforations per foot were cut into the casing from 10 feet to 148 feet. A waiver from NAC 534.420-5(b) was requested from DWR to allow sealing after perforating this interval. Waiver number R-453 was received on October 30, 2003, approving this approach.

Well sealing took place from November 3 to November 4, 2003, by placing 248 feet of 2-inch diameter steel pipe in the well and pumping neat cement grout to the land surface. Approximately 15 cubic yards of grout weighing about 18 pounds per gallon (lbs/gal) was placed in the well. The amount of grout used was 116 percent of the cylindrical well volume. Subsequent to grouting the well the casing was cut down to land surface.

#### **Well 34A**

Well 34A was located off Dempsey Lane in SW¼, NW¼, section 9, T21N, R35E. A search of the records archived at the Carson City office of DWR failed to identify a log that could be confidently associated with this well. This well was used for pasture irrigation. The 4-inch diameter PVC casing was measured to a depth of 194 feet bgs. At the time of abandonment the well was flowing at the surface at a rate of about 20 gpm.

No obstructions, debris, or foreign materials were found in this well. An attempt to pull the casing failed. Perforation of the casing started on November 5, 2003. The PVC casing was ripped in 10-foot vertical cuts every 90 degrees from 185 feet to 30 feet bgs. At 30 feet the knife snagged on a coupling and pulled the remaining section of casing out of the hole. During perforation the flow increased significantly, ejecting sand and gravel from the well. An attempt was made