

02S 09E 29 N A B B

MONTANA WELL LOG REPORT

Well ID# 1046

Form No. 803 R2-90

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. **This form is to be completed by the driller and filed with DNRC within 90 days of completion of the work.** Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing of this report.

Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena).

For fields that are not applicable, enter NA. Optional fields have a grayed background. Record additional information in the REMARKS section.

1. WELL OWNER:

Name Kevin Jordan
 MAILING ADDRESS PO Box 211
Livingston, MT 59047

2. WELL LOCATION: List 1/4 from smallest to largest

NW 1/4 NW 1/4 NE 1/4 NE 1/4, Section 29
 Township 2S NRS Range 9E EW County Park
 Lot _____ Tract/Blk: _____ Subdivision Name _____
 Well Address 220 N. Wineglass Loop
 GPS Yes No
 Latitude 45 38 28.2 N Longitude 110 38 10.3 W
 Error as reported by GPS locator (± feet) 19
 Horizontal datum NAD27 WGS84

3. PROPOSED USE: Domestic Stock Irrigation
 Public Water Supply Monitoring Well Other: _____

4. TYPE OF WORK:

New well Deepen existing well Abandon existing well
 Method: Cable Rotary Other: _____

5. WELL CONSTRUCTION DETAIL:

Borehole:
 Dia. 8 in. from 0 ft. to 78 ft.
 Dia. 6 in. from 78 ft. to 344 ft.
 Dia. _____ in. from _____ ft. to _____ ft.

Casing:
 Steel Wall thickness 250 Threaded Welded
 Dia. 6 in. from +2 ft. to 78 ft.
 Dia. _____ in. from _____ ft. to _____ ft.

Pvc: Pressure Rating Sch 40 lbs. Threaded Welded
 Dia. 4.5 in. from 44 ft. to 344 ft.

Perforations/Slotted Pipe:
 Type of perforator used _____
 Size of perforator/slots _____ in. by _____ in.
 no. of perforator/slots from _____ ft. to _____ ft.
 no. of perforator/slots from _____ ft. to _____ ft.

Screens: Yes No
 Material Factory Slotted Sch 40 PVC
 Dia. 4.5 Slot size 0.25 from 204 ft. to 244 ft.
 Dia. 4.5 Slot size 0.25 from 304 ft. to 344 ft.

Gravel Packed: Yes No
 Size of gravel _____
 Gravel placed from _____ ft. to _____ ft.

Packer: Yes No
 Type _____ Depth(s) _____

Grout: Material used Bentonite
 Depth from 0 ft. to 78 ft. OR Continuous feed

6. WELL TEST DATA:

A well test is required for all wells. (See details on well log report cover.)

Static water level 145 ft. below top of casing or
 Closed-in artesian pressure _____ psi.

How was test flow measured:
 bucket/stopwatch, weir, flume, flowmeter, etc. Bucket/Stopwatch

Yellowstone groundwater closure area only - Water Temperature _____ °F

AQUIFER TEST DATA FORM ATTACHED

Test - 1 hour minimum

Drawdown is the amount water level is lowered below static level.
 All depth measurements shall be from the top of the well casing.
 Time of recovery is hours/minutes since pumping stopped.

Air test*

25 gpm with drill stem set at 320 ft. for 1.5 hours
 Time of recovery 1 hr. hrs/min. Recovery water level 145 ft.

OR Beller test*

_____ gpm with _____ ft. of drawdown after _____ hours
 Time of recovery _____ hrs/min. Recovery water level _____ ft.

OR Pump test*

Depth pump set for test _____ ft.
 _____ gpm pump rate with _____ ft. of drawdown after _____ hrs pumping
 Time of recovery _____ hrs/min. Recovery water level _____ ft.

OR Flowing Artesian*

_____ gpm for _____ hours
 Flow controlled by _____

*During the well test the discharge rate shall be as uniform as possible. The test may not be the sustainable yield of the well. Sustainable yield does not include the effect of the well casing.

7. WELL LOG:

Depth, Feet		Material
From	To	color/text and type/descriptor (example: blue/haishard, or brown/gravelwater, or brown/sandstone)
0	24	Soft brown clays & weathered shales
24	30	Weathered sandstone
30	60	Brown shales & clay - soft
60	71	Gray shales & clay - soft
71	74	Green clay
74	78	Gray shales - harder
78	137	Dark gray shales, some clay - hard
137	142	Brown shales
142	148	Blue & yellow sandstones - hard
148	175	Bluish gray shales & clay - hard
175	177	White bentonite clay
177	204	Bluish gray shales & clay - hard
204	218	Blue sandstone - hard
218	224	Brown sandstone (4 gpm)
224	230	Brown shales - hard (2 gpm)
230	234	Black shale - hard
234	248	Blue shale & clay
248	275	Dark gray shales - hard
275	280	Gray sandstone - hard (2 gpm)
280	312	Blue shales - hard
312	317	Hard gray shales - fractured (10 gpm)

ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 9/15/2006

9. REMARKS: _____

10. DRILLER/CONTRACTOR'S CERTIFICATION:

All work performed and reported in this well log to be in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name, firm, or corporation (print)

Hayes Drilling Co

Address 2403 Par Court - Bozeman, MT 59715

Signature [Signature]

Date 10/7/2008

License no. 2810724

