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|---|---|
| <h3 style="margin: 0;">MONTANA WELL LOG REPORT</h3> <p style="margin: 0;">This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.</p> | <p style="margin: 0;">Other Options</p> <p style="margin: 0; text-align: right;">Return to menu</p> <p style="margin: 0; text-align: right;">Plot this site in State Library Digital Atlas</p> <p style="margin: 0; text-align: right;">Plot this site in Google Maps</p> <p style="margin: 0; text-align: right;">View hydrograph for this site</p> <p style="margin: 0; text-align: right;">View field visits for this site</p> <p style="margin: 0; text-align: right;">View scanned well log (7/7/2010 9:21:00 AM)</p> |
|---|---|

Site Name: MCNAMARA MIKE AND ANNIE
 GWIC Id: 176388

Section 7: Well Test Data

Section 1: Well Owner(s)
 1) MCNAMARA, MIKE (MAIL)
 5509 GENE SARAZEN DR
 BILLINGS MT 59106 [07/22/1999]

Total Depth: 50
 Static Water Level: 2
 Water Temperature:

Air Test *

24 gpm with drill stem set at 47 feet for 1 hours.
 Time of recovery 0.5 hours.
 Recovery water level 2 feet.
 Pumping water level feet.

Section 2: Location

| Township | Range | Section | Quarter Sections |
|----------|-------|---------|------------------|
| 07S | 20E | 28 | NW¼ NW¼ NE¼ SW¼ |
| County | | | Geocode |

CARBON

| Latitude | Longitude | Geomethod | Datum |
|--------------------------|-----------------------|-----------|-----------------------|
| 45.188555627777 | -109.273909375 | SUR-GPS | NAD83 |
| Ground Surface Altitude | Ground Surface Method | Datum | Date |
| 5719.67 | SUR-GPS | NAVD88 | 7/29/2010 |
| Measuring Point Altitude | MP Method | Datum | Date Applies |
| 5722.37 | | | 10/31/2004 1:30:00 PM |
| Addition | Block | Lot | |

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

Section 8: Remarks

Section 3: Proposed Use of Water
 DOMESTIC (1)

Section 4: Type of Work
 Drilling Method: ROTARY
 Status: NEW WELL

Section 5: Well Completion Date
 Date well completed: Thursday, July 22, 1999

Section 6: Well Construction Details

Borehole dimensions

| From | To | Diameter |
|------|----|----------|
| 0 | 50 | 6 |

Casing

| From | To | Diameter | Wall Thickness | Pressure Rating | Joint | Type |
|------|----|----------|----------------|-----------------|-------|-------|
| -2 | 30 | 6 | 0.250 | | | STEEL |
| 10 | 50 | 4 | | 160.00 | | PVC |

Completion (Perf/Screen)

| From | To | Diameter | # of Openings | Size of Openings | Description |
|------|----|----------|---------------|------------------|-------------|
| 50 | 50 | 4 | | | OPEN BOTTOM |

Annular Space (Seal/Grout/Packer)

| From | To | Description | Cont. Fed? |
|------|----|-------------|------------|
| 0 | 0 | BENTONITE | |

Section 9: Well Log

Geologic Source

125TGRV - TONGUE RIVER MEMBER (OF FT UNION FM.)

| From | To | Description |
|------|----|----------------------------|
| 0 | 3 | SOIL |
| 3 | 23 | GRAVEL |
| 23 | 26 | CLAY |
| 26 | 42 | BROWN DECOMPOSED SANDSTONE |
| 42 | 44 | BRN GRAY CLAY |
| 44 | 45 | COAL |
| 45 | 49 | GRAY CLAY |
| 49 | 50 | COAL |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
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| | | |

Driller Certification

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

| |
|--|
| <p>Name:</p> <p>Company: B & H</p> <p>License No: WWC-309</p> <p>Date Completed: 7/22/1999</p> |
|--|

07S 20E 28 CABB
MONTANA WELL LOG REPORT

137004

Form No. 603 R2-99

Well ID# _____

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 60 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 Mike Mc Namara
 Mailing address 5509 Game Sanctuary Dr
Billings, MT 59106

2. WELL LOCATION: List ¼ from smallest to largest
NE ¼ NW ¼ NE ¼ SW ¼, Section 28
 Township 7 N Range 20 E County Carbon
 Lot _____ Tract/Blk _____ Subdivision Name _____
 Well Address _____
 GPS Yes No
 Latitude N45° 11' 18.9" Longitude W 109° 16' 23.3"
 Error as reported by GPS locator (± feet) 18
 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 DETAILS:
 Borehole:
 Dia. 10 in. from 0 ft. to 50 ft.
 Dia. _____ in. from _____ ft. to _____ ft.
 Dia. _____ in. from _____ ft. to _____ ft.
 Casing:
 Steel: Wall thickness .250 Threaded Welded
 Dia. 10 5/8 in. from ± 7 ft. to 30 ft.
 Dia. _____ in. from _____ ft. to _____ ft.
 Plastic: Pressure Rating 160 lbs. Threaded Welded
 Dia. 4 in. from 10 ft. to 50 ft.

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

Screens: Yes No
 Material _____
 Dia. _____ Slot size _____ from _____ ft. to _____ ft.
 Dia. _____ Slot size _____ from _____ ft. to _____ ft.

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

Packer: Yes No
 Type _____ Depth(s) _____
 Grout: Material used Portland
 Depth from _____ ft. to _____ 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 7 ft. below top of casing or
 Closed-in artesian pressure _____ psi.

How was test flow measured:
bucket/stopwatch, weir, flume, flowmeter, etc _____

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*
74 gpm with drill stem set at 47 ft. for 1 hours
 Time of recovery 1/2 hrs/min. Recovery water level 2 ft.

OR Baller 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. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. WELL LOG:

| Depth, Feet | | Material: color/rock and type/descriptor (example: blue/shale/hard, or brown/gravel/water, or brown/sand/heaving) |
|-------------|----|--|
| From | To | |
| 0 | 3 | soil |
| 3 | 23 | loam |
| 23 | 26 | clay |
| 26 | 47 | Brown decomposed sandstone |
| 42 | 44 | Brown clay |
| 44 | 45 | loam |
| 45 | 49 | Brown clay |
| 49 | 50 | clay |

RECEIVED

AUG 2 1999

DEPT OF NATURAL RESOURCES
 AND CONSERVATION
 BILLINGS OFFICE

ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 7-22-99

9. REMARKS: _____

10. DRILLER/CONTRACTOR'S CERTIFICATION:

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

Name, firm, or corporation (print) B-H DRILLING

Address Fishtail MT 59028

Signature R.B. Murphy

Date 7-26-99 License no. 309



Montana DNRC P.O. BOX 201601 HELENA, MT 59620-1601 444-6610

MBMG ID#

176388

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