

# **ANNEX 4C-3**

## **WELL COMPLETION LOGS**

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# **ANNEX 4C-3**

## **WELL COMPLETION LOGS FOR RIVER CORRIDOR ENVELOPE**

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**RCE-14**

**Well Completion Log**



<b>PROJECT NUMBER</b> 350.0045.00	<b>BORING NUMBER</b> JN 15-10 MW-1 SHEET 1 OF 1
<b>WELL LITHOLOGIC AND COMPLETION LOG</b>	

PROJECT Jensen II Soil Assessment WELL ID JN15-10 MW-1  
 DRILLER NAME Mark Taggart DRILLING CONTRACTOR Earth Probe  
 DRILLING METHOD AND EQUIPMENT Geo Probe Direct Push  
 WATER LEVEL \_\_\_\_\_ DATE START March 22, 2013 DATE FINISH March 22, 2013 LOGGER MDW  
 WELL LOCATION 1118207.963 N, 2696333.692 E TOC ELEVATION 6884.16 Feet

DEPTH BE (LOW SURFACE) (FT)	SAMPLE			PID Screen (ppm)	SOIL DESCRIPTION	COMMENTS
	INTERVAL RECOVERY (%)	SAMPLE DEPTH INTERVAL (ft bgs)	INTERVAL ID #			
0-6					Cleared by hydrovac; no recovery; water present at bottom of hole.	Water at approx. 5.5 feet bgs in hole.
6-10	50	7.0		0.8	Gravelly sand; sub-angular; matrix moderate yellowish brown; medium- to coarse-grained; gravel to 1-inch diameter; few fines; saturated.	No odor
10-13	50				As above; saturated.	No odor
					Hole caved to 6 feet while building well.	
					Well installed to 13 feet bgs with 10-feet of 2-inch diameter 0.010-inch slot PVC well screen.	
					5 bags of 10/20 silica sand poured into borehole annulus 0.5 feet above well screen.	
					3 bags of bentonite chips added to borehole annulus above filter pack and then saturated.	
					Well is secured inside a steel monument with locking lid (key # 2043). The steel monument is set in place with a sloping cement pad. K-rails are places around surface completion for additional protection	

**RCE-15**  
**Well Completion Log**



<b>PROJECT NUMBER</b> 350.0045.00	<b>BORING NUMBER</b> VB 8-11 MW-1 SHEET   OF
<b>WELL LITHOLOGIC AND COMPLETION LOG</b>	

PROJECT Vible 8-11 WELL ID VB 8-11 MW-1  
 DRILLER NAME Mark Taggart DRILLING CONTRACTOR Earth Probe  
 DRILLING METHOD AND EQUIPMENT Geo Probe Direct Push  
 WATER LEVEL 6.55 feet btoc DATE START March 25, 2013 DATE FINISH March 25, 2013 LOGGER MDW  
 WELL LOCATION 1119984.045 N, 2702616.008 E TOC ELEVATION 6892.19 Feet

DEPTH BE (LOW SURFACE) (FT)	SAMPLE			PID Screen (ppm)	SOIL DESCRIPTION	COMMENTS
	INTERVAL RECOVERY (%)	SAMPLE DEPTH INTERVAL (ft bgs)	INTERVAL ID #			
0-4.5					Cleared by hydrovac; no recovery; water borehole.	
4.5-6.5	50	5-6		0.4	Sandy silt; reddish brown; sand fine-grained; soft; saturated.	No odor/staining
6.5-9.5	50				Sandy gravel; matrix reddish brown; sub-angular to sub-rounded; sand is coarse-grained; gravel to 2-inches in diameter; saturated.	No odor/staining
9.5-13					Gravelly sand; matrix reddish brown; sub-rounded to sub-angular; coarse-grained gravel to 0.5-inches diameter; saturated.	No odor/staining
					Well installed to 13 feet bgs with 10-feet of 2-inch diameter 0.010-inch slot PVC well screen.	
					4 bags of 10/20 silica sand poured in borehole annulus to 0.5 feet above well screen.	
					2 bags of bentonite chips added in borehole annulus above filter pack and then saturated.	
					Casing stickup = 3.0 feet	
					Well is secured inside a steel monument with locking lid (key # 2043). The steel monument is set in place with a sloping cement pad. K-rails are places around surface completion for additional protection.	

**RCE-16**

**Well Completion Log**



<b>PROJECT NUMBER</b> 350.0045.00	<b>BORING NUMBER</b> VB 3-12 MW-1 SHEET   OF
<b>WELL LITHOLOGIC AND COMPLETION LOG</b>	

PROJECT Vible 3-12 Shallow Groundwater Characterization WELL ID VB 3-12 MW-1  
 DRILLER NAME Mark Taggart DRILLING CONTRACTOR Earth Probe  
 DRILLING METHOD AND EQUIPMENT Geo Probe Direct Push  
 WATER LEVEL 6.38 feet bgs (3/21/2013) DATE START March 21, 2013 DATE FINISH March 21, 2013 LOGGER L. McKay  
 WELL LOCATION 1120809.896 N, 2704850.783 E TOC ELEVATION 6897.53 Feet

DEPTH BE (LOW SURFACE) (FT)	SAMPLE			PID Screen (ppm)	SOIL DESCRIPTION	COMMENTS
	INTERVAL RECOVERY (%)	SAMPLE DEPTH INTERVAL (ft bgs)	INTERVAL ID #			
0-6					Cleared by hydrovac from 0-6 feet below ground surface; no recovery; begin drilling @ bottom of borehole.	
6-8.2	90	6-10		1.6	Well graded to poorly graded sand (SW-SP); moderate yellowish brown; ~80 to 60% medium-grained sand (sub-rounded, arkosic); ~20 to 60% coarse-grained sand; trace sand; very soft; rare organics; saturated; no odor.	No odor or staining
8.2-13	100	10-13		1.7	Poorly graded to well graded sand w/gravel (SW-SP); light grayish brown; from 8.2 to 11 feet below ground surface: sand as above [6-8.2 feet below ground surface]; 11-depth: very poorly sorted; ~70% angular to sub-rounded arkosic sand; ~30% medium-grained sand; trace fines; sub-rounded to rounded gravel @ 11 and 12 feet below ground surface; saturated; no odor.	No odor or staining
					2-inch diameter 0.010-inch slot PVC well screen set from 13 to 3.0 feet below ground surface.	
					4 bags of 10/20 silica sand poured in borehole annulus to 2.5 feet (0.5 feet above the top of the well screen).	
					2 bags of bentonite chips added in borehole annulus above filter pack and were then saturated.	
					Casing stickup = 2.83 feet.	
					Well is secured inside a steel monument with locking lid (key # 2043). The steel monument is set in place with a sloping cement pad. K-rails are places around surface completion for additional protection.	

**X-4a-A**  
**Well Completion Log**



# **ANNEX 4C-3**

## **WELL COMPLETION LOGS FOR NORTH ZONE**

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**MS 11-21**  
**Well Completion Log**

FORM U.W. 5  
Rev. 6/07  
FILING FEE SCHEDULE  
ON REVERSE SIDE

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

500 39065  
50.00  
9/17/08

APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and /or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-3-275

PERMIT NO. U.W. 188900  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sublette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Mesa 11-21 WSW  
1- Questar Exploration and Production Company  
2- Bureau of Land Management Phone: 303-308-3068  
1- 1050 17th Street, Suite 500 Denver, CO 80265  
2- P.O. Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)  
3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

- 4. Use to which the water will be applied:  
Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served?\_\_\_\_\_  
Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks?\_\_\_\_\_  
Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).  
Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.  
Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)  
X Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks). Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations. *rd maintenance, dust abatement, well work-over/repairs and reclamation per corresp. Rec'd 10/22/08*  
Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.  
Monitor. Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, NE 1/4 SW 1/4 of Sec. 21, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_ Block \_\_\_ of the Subdivision (or Add'n) of \_\_\_\_\_. Resurvey Location: Tract \_\_\_\_\_, (or Lot) \_\_\_\_\_  
*Per U.W.G. Permit No. U.W. 14752B*

6. Estimated depth of the well or spring is 910 feet. Estimated production interval is 220 750 ft to 940 910 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet.  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

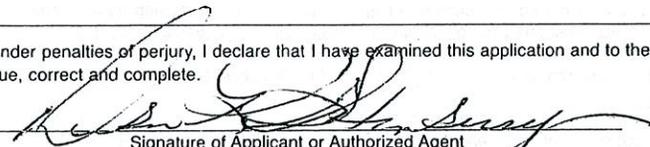
TABULATION BOX

TWP	RNG	SEC	NE 1/4			NW 1/4			SW 1/4			SE 1/4			TOTAL		
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4			
32	109	21								X	X	X	X				

9. If for irrigation use:
- Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - Land will be irrigated from this well only.
  - Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_
11. The well or spring is to be constructed on lands owned by Bureau of Land Management  
 (The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by Bureau of Land Management  
 (If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use. Per Corriga  
Rec'd  
10/22/08

REMARKS: Drilling of oil and gas wells, rd maintenance, dust abatement, well work-overs/repair  
Refile of cancelled permit #147528  
*f reclamation*

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

  
 Signature of Applicant or Authorized Agent  
 Debra K. Stanberry, Supervisor, Regulatory Affairs  
 Date September 10, 2008  
 THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

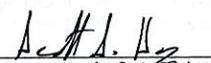
DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
 ) ss.  
 STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 17th day of September, A.D. 2008, at 9:36 o'clock A. M.

Permit No. U.W. 188900  
  
 for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

**FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.**

**This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction and Completion of Beneficial Use is waived.**

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 20~~

~~The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.~~

Witness my hand this 29th day of Oct., A.D. 2008.

  
 PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 138900  
 T.F. No. U.W. 41-3-275

PERMIT STATUS

Priority Date September 17<sup>th</sup>, 2008 Approval Date OCT 29 2008

ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **oil and gas drilling, road maintenance, dust abatement, well work-overs/repairs and reclamation** shall extend until **December 31, 2013**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2013**.
3. If this well is to be drilled on the main portion of the geographic region called "The Mesa", and the surface elevation of the well site is at an altitude greater than 7,250 feet above sea level, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to a depth of at least 500 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
4. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, the well is to be situated within 1,000 feet of an existing domestic or stock watering well, the top of the production zone (perforated interval) utilized by this well shall be located at least 200 feet below that of the bottom of the deepest production zone utilized by existing domestic or stock watering wells located within 1,000 feet of this water supply well. In this case, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to the top of the production zone of this well. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
5. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, this well is not situated within 1,000 feet of an existing domestic or stock watering well, as outlined in Condition 4, this well shall be cased with new or new-like blank unperforated casing from the land surface to a depth of at least 200 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
6. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
7. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
8. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

10/29/2008  
 Date of Approval

  
 PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
 Jade Henderson -Superintendent  
 P.O. Box 277  
 Cokeville, WY 83114

September 17, 2008 - Statement of Completion on November 14, 2002 received.  
 September 17, 2008 - Proof of Beneficial Use on September 4, 2008 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter  
or print neatly with black pen.

PERMIT NO. U.W. 188900 NAME OF WELL/SPRING Mesa 11-21 Water Source Well

1. NAME OF OWNER 1- Questar Exploration and Production Company 2-Bureau of Land Management

2. ADDRESS 1-1050 17th Street, Suite 500 2-P.O.Box 768

1- Denver  Please check if address has changed from that shown on permit  
2- Pinedale  Colorado  State 2- Wyoming Zip Code 2-82941 Phone No. 303-308-3068

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling)  
Oil & Gas Well Drilling

4. LOCATION OF WELL/SPRING NE 1/4 SW 1/4 of Section 21 T. 32 N., R. 109 W. of the 6th P.M. (or W.R.M.)

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83

Geographic Coordinates: Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W (degrees, minutes, seconds)

UTM: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (meters)

State Plane Coordinates: Zone \_\_\_\_\_ Northing 4731686 Easting 594626 (feet)

Land surface elevation (ft. above mean sea level) 7319 Datum  NAVD29  NAVD88

Source  GPS  Map  Survey  Unkown  Other  Altimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled Rotary  Dug  Driven  Other

Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 910 ft.

Depth of static water level 400 ft. (below land surface) Casing height 0 ft. above ground

a. Diameter of borehole (bit size) 9 7/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

6 5/8 diameter from 0 ft. to 910 ft. Material Steel Gage 0.188

diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 500 ft.

Amount of cement/grout used 130 Sacks type Portland

(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen

Type of perforator used Torch Cut Slotted

Size of perforations 12 inches by 1/8 inches.

Number of perforations and depths where perforated

250 perforations from 750 ft. to 910 ft.

perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel Pea Gravel 3/8" Washed

Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Searle Bros., 149 Pollux Drive, Rock Springs, WY 82901

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 11/14/2002

9. PUMP INFORMATION Manufacturer Grundfoss Type Submersible

Source of power Generator Horsepower 30 Depth of pump setting or intake 850 ft.

Amount of water being pumped 80 gal./min.\* (For springs or flowing wells, see item 10)

Total volumetric quantity used per calendar year.\* 15 acre feet

\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch. or \_\_\_\_\_ feet of water.

The flow is controlled by  Valve  Cap  Plug

Does well leak around casing?  Yes  No

Permit No. U.W. 188900 Book No. 1364 Page No. 150

SEE REVERSE SIDE

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to qualify for a water right) \_\_\_\_\_
12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom \_\_\_\_\_  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours
13. LOG OF WELL Total depth drilled 910 ft.  
 Depth of completed well 910 ft. Diameter of well 9 7/8 inches  
 Depth to first water bearing formation 220 ft.  
 Depth to principal water bearing formation Top 805 ft. to Bottom 835 ft.

**DRILL CUTTINGS DESCRIPTION**

From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface	35	Tan Shale		No
35	45	Grey Shale		No
45	60	Sand Stone		No
60	75	Green Shale		No
82	220	Green Blue Red Grey Shale		No
220	224	Broken Sandstone		Yes
224	447	Red Blue and Grey Shale		No
447	456	Sandstone		Yes
456	567	Red and Grey Shale		No
567	572	Sandstone		Yes
572	761	Grey and Blue Shale, Red Clay		No
761	782	Sandstone		Yes
782	805	Blue Shale		No
805	835	Sandstone		No
835	848	Sandstone with Grey Shale		Yes
848	910	Grey Shale		No

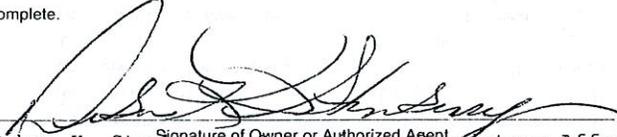
14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No Note: Perforations from 750' to 910'

15. QUALITY OF WATER INFORMATION

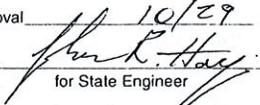
Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No  
 It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).  
 If not, do you consider the water as: Good  Acceptable  Poor  Unusable

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

  
 Debra K. Stanberry, Supervisor, Regulatory Affairs September 10, 2008  
 Signature of Owner or Authorized Agent Date

FOR STATE ENGINEER'S USE ONLY

Permit No. U.W. 188900  
 Date of Receipt SEP 17 2008, 20\_\_\_\_ Date of Approval 10/29, 2008  
 Date of Priority \_\_\_\_\_, 20\_\_\_\_   
 for State Engineer

**MS 12-28**  
**Well Completion Log**

# STATE OF WYOMING

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002  
(307) 777-6163

## STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

SCANNED OCT 30 2014

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.

PERMIT NO. U.W. 173005 NAME OF WELL/SPRING MESA 12-28

Ultra Resources, Inc  
1. NAME OF OWNER SHELL ROCKY MOUNTAIN PRODUCTION, LLC. - Sweepi, LP

2. ADDRESS P O Box 1666, Pinedale WY 82941 1666  
304 Inverness Way South, Englewood, CO 80122

Please check if address has changed from that shown on permit.

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone No. \_\_\_\_\_

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

4. LOCATION OF WELL/SPRING NW 1/4 SW 1/4 of Section 28, T. 32 N., R. 109 W., of the 6th P.M. ( or W.R.M.)

GPS coordinates UTM Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_

Subdivision name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

If surveyed, bearing, distance, and reference point \_\_\_\_\_

Longitude (degrees, minutes, seconds) 109° 50' 46" W Latitude (degrees, minutes, seconds) 42° 42' 59" N

Datum:  1927  1983 Source:  GPS  Map  Survey

5. TYPE OF CONSTRUCTION Drilled  Air Rotary \_\_\_\_\_  Dug  Driven  Other  
Describe Drilled (type of rig, and fluid used, if any)

6. CONSTRUCTION Total depth of well/spring 1,020' ft.

Depth to static water level 270' ft. (below land surface) Casing height 1.5' ft. above ground

a. Diameter of borehole (bit size) 9 7/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

12" diameter from 0 ft. to 60 ft. Material Steel Gage 188

\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 500 ft.

Amount of grout used \_\_\_\_\_ type Pumped Bentonite grout

(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Factory screen  Open hole  Customized perforations

Type of perforator used Torch

Size of perforations 6 inches by 1/8 inches

Number of perforations and depths where perforated

150 perforations from 820 ft. to 880 ft.

150 perforations from 920 ft. to 1000 ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Air How long did development last? 2 1/2 hours

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel Pea Gravel

Filter pack/gravel installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from 0 ft. to 20 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Excel Drilling: P O Box 267: Rock Springs WY

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 07-06-2006

9. PUMP INFORMATION Manufacturer Grundfos Type Submersible

Source of power Generator Horsepower 50 Depth of pump setting or intake 928 ft.

Amount of water being pumped 150 gal./min. (For springs or flowing wells, see item 10)

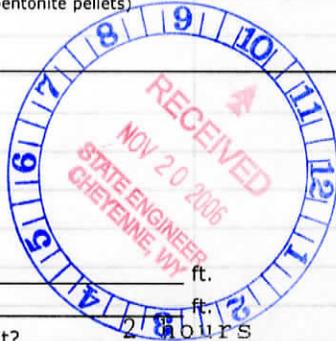
Total volumetric quantity used per calendar year 3.5 million put 2.6 million per uws CV

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If well yields artesian flow or if spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water

The flow is controlled by  Valve  Cap  Plug

Does well leak around casing?  Yes  No





Attachment for the Mesa 12-28 Water Well

Cuttings Description Continued for the

From Feet	To Feet	Rock Type Texture, color	Formation	Water Bearing Formations (Yes or No)	Perforated casing Location
0	16	Gravel and Sand			Pumped Bentonite Grout thr 1" pipe from 500' back to surface
16	35	Green Shale			
35	80	Sandstone			
8	120	Green Shale			
120	170	Blue Shale			
170	200	Brown Shale			
200	230	Blue Shale			
230	240	Sandstone		X	
240	560	Blue and Brown Shale			
560	575	Sandstone			
575	655	Blue and Brown Shale			
655	670	Sandstone			
670	720	Blue and Brown Shale			
720	730	Sandstone			
730	750	Blue and Brown Shale			
750	795	Sandstone			
795	815	Sandstone w/short layer shale			
815	855	Blue Shale	X		Perforation 820-880
855	910	Brown Shale			
910	945	Sandstone		X	
945	960	Blue and Brown Shale			
960	980	Sandstone	X	X	Perforation 920-1000
980	1020	Blue Shale			



**MS 12-33**  
**Well Completion Log**

**STATE OF WYOMING**

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

**STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING**

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 181278 NAME OF WELL/SPRING Mesa 12-33

1. NAME OF OWNER 1.) Shell Rocky Mountain Production, LLC  
2.) Bureau of Land Management

2. ADDRESS 1.) P O Box 1666, Pinedale WY 82941-1666  
2.) P O Box 1828, Cheyenne WY 82001-1828

Please check if address has changed from that shown on permit

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone No. 307-367-7904

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

4. LOCATION OF WELL/SPRING NW 1/4 SW 1/4 of Section 33 T, 32 N., R. 109 W., of the 6th P.M. (or W.R.M.)

GPS Coordinates UTM Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

If surveyed, bearing, distance and reference point \_\_\_\_\_

Longitude (degrees, minutes, seconds) 108° 50.881 Latitude (degrees, minutes, seconds) 42° 42.090

Datum  1927  1983 Source:  GPS  Map  Survey

5. TYPE OF CONSTRUCTION  Drilled Rotary  Dug  Driven  Other

Describe \_\_\_\_\_  
(Type of rig, and fluid used, if any)

6. CONSTRUCTION Total depth of well/spring 1,000 ft.

Depth of static water level 230 ft. (below land surface) Casing height 20 1.5 ft. above ground

a. Diameter of borehole (bit size) 10 5/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

20" diameter from 0 ft. to 12 ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

6" diameter from 12 ft. to 1000 ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 500 ft.

Amount of cement/grout used \_\_\_\_\_ type Pumped Bentonite Grout

(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Factory screen  Open hole  Customized perforations

Type of perforator used \_\_\_\_\_

Size of perforations 6 inches by 1/8 inches.

Number of perforations and depths where perforated

300 perforations from 853 ft. to 895 ft.

\_\_\_\_\_ perforations from 937 ft. to 979 ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method \_\_\_\_\_ How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel Pea 3/8"

Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Excel Drilling: POB 267, Rock Springs WY 82902

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 05-07-2004

9. PUMP INFORMATION Manufacturer Graunfause Type Submersable

Source of power Generator Horsepower 30 Depth of pump setting or intake 800' ft.

Amount of water being pumped 110 gal./min. (For springs or flowing wells, see item 10)

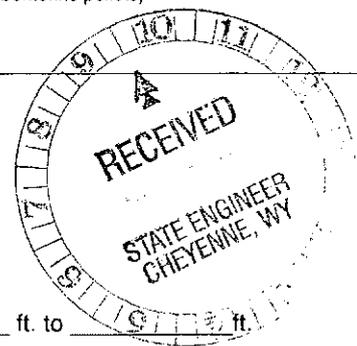
Total volumetric quantity used per calendar year. 8 AF/YR

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian flow or spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.

The flow is controlled by:  Valve  Cap  Plug

Does well leak around casing?  Yes  No



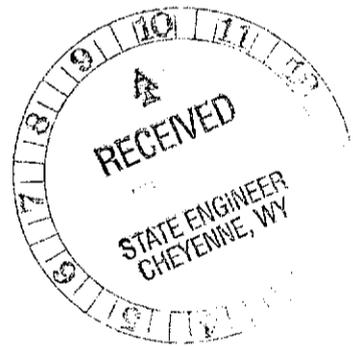


WW 181278

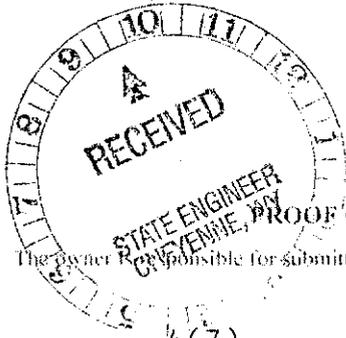
Attachment for the Mesa 12-33 Water Well

Cuttings Description Continued for the

From Feet	To Feet	Rock Type Texture, color	Perforations	Water Bearing Formations (Yes or No)	Perforated casing Location
0	16	Gravel and Sand			
16	35	Green Shale			
35	80	Sandstone			
80	120	Green Shale			
120	170	Blue Shale			
170	200	Brown Shale			
200	230	Blue Shale			
230	240	Sandstone		X	
240	560	Blue and Brown Shale			
560	575	Sandstone			
575	655	Blue and Brown Shale			
655	670	Sandstone			
670	720	Blue and Brown Shale			
720	730	Sandstone			
730	850	Blue and Brown Shale			
850	890	Sandstone	X	X	
890	950	Blue and Brown Shale			
950	975	Sandstone	X	X	
975	1000	Blue and Brown Shale			
<b>Well Completion Log</b>					



NOTE: Do not fold this form. Use type-  
writer or print neatly with black ink



# STATE OF WYOMING

OFFICE OF THE STATE ENGINEER

## PROOF OF APPROPRIATION AND BENEFICIAL USE OF GROUND WATER

The owner is responsible for submitting Parts I and II of this form. Part III will be prepared by a State Engineer representative at time of inspection.

### PART I

WATER DIVISION 4(7) U.W. DISTRICT Sublette  
 PERMIT NO. U.W. 181278 DATE OF PRIORITY October 4, 2002  
 NAME OF WELL Mesa 12-33 LOCATION NW 1/4 SW 1/4 of Section 33  
T. 32 N. R. 109 W.

1. Name of Claimant(s) Shell Rocky Mountain Production, LLC / BLM  
 2. Address P O Box 1666, Pinedale WY 82941-1666 Zip Code \_\_\_\_\_  
Oil and gas development MISC  
 3. For What Purpose(s) is Water Used? Use: dust abatement, construction Date First Used: \_\_\_\_\_  
of pads & roads, reclamation  
 Use: \_\_\_\_\_ Date First Used: \_\_\_\_\_ Use: \_\_\_\_\_ Date First Used: May 7, 2004

If use is for irrigation, give date irrigation was completed on all lands under this Permit: \_\_\_\_\_

### PART II

For Irrigation, Industrial, Municipal, and Miscellaneous Wells

A plat which has been certified by a licensed professional engineer or land surveyor shall be submitted to accompany this form. The plat shall be in accordance with W.S. § 33-29-139 or Chapters V and VI, State Engineers Office Regulations and Instructions (Minimum scale shall be 2" = 1 mile). The map shall be prepared with waterproof black ink on tracing linen or an acceptable equivalent and shall show on a suitable scale the legal subdivisions, the accurate location of the well or wells, storage facilities, main canals, streams, highways and other important cultural features. Land ownership shall be shown. If there is more than one owner under the permit.

#### IRRIGATION WELLS

Acreage irrigated under terms of this permit will be clearly shown with a distinctive pattern and a distinction clearly made between lands having an original supply and those provided an additional supply. Where use is for additional supply for lands with a right from another source, indicate the priority or permit number of the source, the source of supply and the name of the ditch, pipe line, or other well. Conveyance system will be shown and described. Indicate method of irrigation being used.

#### INDUSTRIAL WELLS

In addition to the information outlined above, industrial users will locate and describe conveyance facilities to the point(s) of use, giving as accurately as possible the location of the point(s) of use. Permits for other sources of water must be identified.

#### MUNICIPAL WELLS

The plat will show the area of use and show and describe the means of conveyance of the water from the well to the connection with the municipal water system distribution network.

#### MISCELLANEOUS WELLS

- (1) The linen plat for wells where the use is described as miscellaneous and where the yield or flow of the well exceeds twenty-five (25) gallons per minute must show the area of use and describe and show the means of conveyance from the well to the distribution system and/or point(s) of use.
- (2) The plat for wells where the use is described as miscellaneous and where the yield or flow is twenty-five (25) gallons per minute or less may be a 7 1/2 minute United States Geological Survey Quadrangle map in lieu of a linen tracing, provided that the Quadrangle map is in compliance with the following conditions:
  - (a) The entire Quadrangle map must be submitted to the State Engineer's Office.
  - (b) The scale on said Quadrangle map must be one to twenty-four thousand.
  - (c) An identified section corner or quarter corner must be shown on said Quadrangle map along with the Section, Township, and Range.
  - (d) The section in which the well is located and the section(s) where the area(s) or point(s) of use are located must be subdivided into forty (40) acre tracts and the well location and area(s) or point(s) of use clearly labeled and described.
  - (e) Said Quadrangle map showing the well location and area(s) or point(s) of use must be certified by a professional engineer or land surveyor licensed to practice within the State of Wyoming.

**MS 13-5**  
**Well Completion Log**



# State Engineer's Office

HERSCHLER BUILDING, 4-E CHEYENNE, WYOMING 82002  
(307) 777-7354 FAX (307) 777-5451  
seoleg@seo.wyo.gov

DAVE FREUDENTHAL  
GOVERNOR

PATRICK TYRRELL  
STATE ENGINEER

June 1, 2009

1)WEXPRO COMPANY 2)BLM  
1050 17TH ST., STE 500  
Denver, CO 80265  
ATTN: DEBRA STANBERRY

Dear Applicant or Agent:

You are advised that the State Engineer approved the following application(s) to appropriate ground water for MIS on May 27, 2009. A copy of each permit is enclosed. Also enclosed are forms and instructions for submitting data to the State Engineer relating to the completion of the well and the beneficial use of the water, as required by law.

**PERMIT NUMBER - WELL NAME**

**U.W. 190128 - MESA 13-5 WSW**

**WELL LOCATION - SWSW 5-32-109**

Not Completed or  
in Full Beneficial  
Use - dr

→ By statute the well must be completed and the water beneficially utilized by December 31, 2010. ***IF THE REQUIRED NOTICES ARE NOT RETURNED TO THIS OFFICE WITHIN THE STATUTORY TIME LIMITS SET FORTH, THE PERMIT(S) WILL BE SUBJECT TO CANCELLATION, WHICH ACTS AS A FORFEITURE OF THE WATER RIGHT GRANTED BY THIS PERMIT.***

An extension of time may be requested for completion of work when good reason is provided. A request for such extension must be received in the State Engineer's Office prior to the expiration date shown on the permit. Requests for extension of time must indicate due diligence on the part of the applicant to comply with the time limits imposed by this permit. ***(PLEASE NOTE: The conditions and limitations of your permit may NOT allow an extension of time.)***

Sincerely,

Lisa Lindemann, Administrator  
Ground Water Division

LL:CL  
xc: DIV 4 (7)

Surface Water  
(307) 777-6475

Ground Water  
(307) 777-6163

Board of Control  
(307) 777-6178

**STATE OF WYOMING**  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

09-25-08 0000 0017

(4) *on*

SE039142  
50.00  
9/25/08

**APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER**

APPLICATION FOR WELLS AND SPRINGS  
Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and /or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-60-283

PERMIT NO. U.W. 190128  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sublette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
**ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE**

NAME AND NUMBER OF WELL or SPRING Mesa 13-5 WSW

1. Name of applicant(s) 1- Wexpro Company  
2- Bureau of Land Management Phone: 303-308-3068  
1- 1050 17th Street, Suite 500 Denver, CO 80265

2. Address of applicant(s) 2- P.O. Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:

Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_

Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? 1

Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).

Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.

Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)

Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks). Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations.

Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.

Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, SW 1/4 SW 1/4 of Sec. 5, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_\_\_ Block \_\_\_\_\_ of the \_\_\_\_\_ Subdivision (or Add'n) of \_\_\_\_\_ Resurvey Location: Tract \_\_\_\_\_ (or Lot) Per U.W. 6, U.W. 126625 JH

6. Estimated depth of the well or spring is 950 940 feet. Estimated production interval is 335 780 ft. to 940 930 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 5 acre feet  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

TABLATION BOX

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
32	109	5							X	X							X		
32	109	6								X									
32	109	8					X	X			X						X		
32	109	4									X	X							

*X = location of stock tank*



PERMIT NO. U.W. 190128  
 T.F. No. U.W. 41 - 6 - 283

PERMIT STATUS

Priority Date September 25, 2008

Approval Date MAY 27 2009

This well is a water supply well to supply water for oil/gas well drilling and associated operations within the Pinedale Anticline Project Area (PAPA).

The Additional Conditions and Limitations attached to permits issued by this office for water supply wells in the PAPA are reflective of the requirements for these types of wells listed in the 2000 Record of Decision for the Pinedale Anticline Project, and are designed to insure a level of protection for the users of the shallow sandstone aquifers in the PAPA by limiting the ability of the water supply wells associated with the project to utilize the same resource targeted by the existing stock and/or domestic wells in the PAPA.

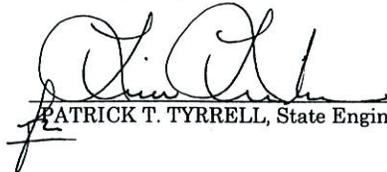
The Additional Condition and Limitation attached to permits issued by this office for water supply wells in this location, located on "The Mesa", normally requires that the well must be cased with un-perforated casing to a depth of 500 feet and that the casing must be fully cemented/grouted in the borehole to that depth. However, due to the variability of the geology of the area, this office is aware that the same level of protection of the shallow sandstone aquifers can be achieved by somewhat less than the 500 foot cemented interval in some cases.

A review of the Statement of Completion and Description of Well form submitted with this application indicates that the well has not been constructed in a manner in which the 500 foot cemented interval Condition described above can be satisfied. A review of the well log associated with the Completion form indicates, however, that an effective seal has been emplaced between the un-perforated well casing and the well bore to eliminate the production of water from any of the shallow sandstone aquifers present between the land surface and 500 feet below land surface in the immediate area. As such, the intent of the Condition, the isolation and protection of the shallow sandstone aquifers, has been achieved in this instance. **Therefore, this permit is approved, as this well is constructed, subject to the following ADDITIONAL CONDITIONS AND LIMITATIONS:**

**ADDITIONAL CONDITIONS AND LIMITATIONS:**

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at the additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **livestock watering, road maintenance, dust abatement, and reclamation** and shall extend until **December 31, 2010**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2010**.
3. **The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.**
4. **The approval of this permit does not obligate the State Engineer to issue any permits for the use of water from this well for any purpose from this point forward, beyond what is authorized by this permit.**
5. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
6. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

May 27, 2009  
 Date of Approval

  
 PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
 Jade Henderson -Superintendent  
 P.O. Box 277  
 Cokeville, WY 83114

**MS 15-20**  
**Well Completion Log**

# STATE OF WYOMING

09-17-08 RCVD 0036

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

5039063  
50.00  
9/17/08

## APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

### APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-1-275

PERMIT NO. U.W. 188898  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sublette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Mesa 15-20 WSW

1. Name of applicant(s) 1- Questar Exploration and Production Company  
2- Bureau of Land Management Phone: 303-308-3068

2. Address of applicant(s) 1- 1050 17th Street, Suite 500 Denver, CO 80265  
2- P.O. Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_.
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_.
  - Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc.) is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks). Per Corr Rec'd 10/22/08  
Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations. Road maintenance, dust abatement, well work-overs/repairs and reclamation.
  - Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.
  - Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec 12 Township 14 North, Range 68 West.)  
Sublette County, SW 1/4 SE 1/4 of Sec. 20, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.).  
Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_\_\_ Block \_\_\_\_\_ of the  
Subdivision (or Add'n) of \_\_\_\_\_ Resurvey Location: Tract \_\_\_\_\_, (or Lot) \_\_\_\_\_.

6. Estimated depth of the well or spring is 1000 feet. Estimated production interval is 650 ft. to 950 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

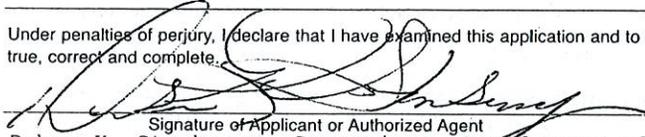
Per Corrs Rec'd 10/22/08

TABULATION BOX																TOTAL			
TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
32	109	20			X					X	X	X	X	X	X	X	X	X	X
32	109	21					X	X	X	X			X						

9. If for irrigation use:
- Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - Land will be irrigated from this well only.
  - Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_
11. The well or spring is to be constructed on lands owned by Bureau of Land Management  
 (The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by Bureau of Land Management  
 (If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: Drilling of oil and gas wells, road maintenance, dust abatement, well work-overs/repairs and reclamation  
Refile of cancelled permit #162526

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

 \_\_\_\_\_  
 Signature of Applicant or Authorized Agent Date September 10, 2008

Debra K. Stanberry, Supervisor, Regulatory Affairs

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
 ) ss.  
 STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 17th day of September, A.D. 2008, at 9:36 o'clock A. M.

Permit No. U.W. 188898 \_\_\_\_\_  
 \_\_\_\_\_  
 for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.

This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction and Completion of Beneficial Use is waived.

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 20\_\_\_\_\_.~~

~~The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.~~

Witness my hand this 29th day of Oct., A.D. 2008.

for \_\_\_\_\_  
 PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 138898  
 T.F. No. U.W. 41 - 1 - 275

PERMIT STATUS

Priority Date September 17<sup>th</sup>, 2008 Approval Date OCT 29 2008

ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **oil and gas drilling, road maintenance, dust abatement, well work-overs/repairs and reclamation** shall extend until **December 31, 2013**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2013**.
3. If this well is to be drilled on the main portion of the geographic region called "The Mesa", and the surface elevation of the well site is at an altitude greater than 7,250 feet above sea level, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to a depth of at least 500 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
4. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, the well is to be situated within 1,000 feet of an existing domestic or stock watering well, the top of the production zone (perforated interval) utilized by this well shall be located at least 200 feet below that of the bottom of the deepest production zone utilized by existing domestic or stock watering wells located within 1,000 feet of this water supply well. In this case, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to the top of the production zone of this well. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
5. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, this well is not situated within 1,000 feet of an existing domestic or stock watering well, as outlined in Condition 4, this well shall be cased with new or new-like blank unperforated casing from the land surface to a depth of at least 200 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
6. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
7. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
8. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

10/27/2008  
 Date of Approval

for John R. Hoey  
 PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
 Jade Henderson -Superintendent  
 P.O. Box 277  
 Cokeville, WY 83114

September 17, 2008 - Statement of Completion on October 18, 2005 received.

September 17, 2008 - Proof of Beneficial Use on August 16, 2008 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 188898 NAME OF WELL/SPRING Mesa 15-20 Water Source Well

1. NAME OF OWNER 1- Questar Exploration and Production Company 2- Bureau of Land Management

2. ADDRESS 1-1050 17th Street, Suite 500 2-P.O.Box 768

City 2- Pinedale State 2- Wyoming Zip Code 2-82941 Phone No. 303-308-3068

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling)  
Oil & Gas Well Drilling, Rd Maintenance, dust abatement, well work-overs/repairs and reclamation

4. LOCATION OF WELL/SPRING SW 1/4 SE 1/4 of Section 20 T. 32 N., R. 109 W., of the 6th P.M. (or W.R.M.)

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83

Geographic Coordinates: Latitude -109° 51' 22.339" N Longitude 42° 43' 42.012" W (degrees, minutes, seconds)

UTM: Zone 12 Northing 7 Easting 7 (meters) JH

State Plane Coordinates: Zone \_\_\_\_\_ Northing 4731282 Easting 593639 (feet)

Land surface elevation (ft. above mean sea level) 7455 Datum  NAVD29  NAVD88

Source  GPS  Map  Survey  Unknown  Other  Altimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled  Rotary  Dug  Driven  Other

Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 1120 ft.

Depth of static water level 560 ft. (below land surface) Casing height 18" ft. above ground

a. Diameter of borehole (bit size) 13 3/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

16 diameter from 0 ft. to 20 ft. Material Steel Gage 1/4 .250

8 diameter from 0 ft. to 1120 ft. Material Steel Gage 1/4 .250

c. Cemented/grouted interval, from 500 ft. to Surface ft.

Amount of cement/grout used 125 Sacks type Cement neat & plug gel

d. Type of completion  Customized perforations  Open hole  Factory screen

Type of perforator used Air Perforator

Size of perforations 1/8 inches by 1 1/2 inches.

Number of perforations and depths where perforated 80 perforations from 840' to 850'

320 perforations from 660 ft. to 690 ft. 480 perforations from 930' to 970'

480 perforations from 760 ft. to 800 ft. 480 perforations from 980' to 1060'

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. 160 perforations from 1080' to 1100'

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? 36 Hours

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 1/4 Minus

Filter/gravel pack installed from 500 ft. to 1120 ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from 0 ft. to 20 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY White Mountain Drilling Co. P.O.Box 2353 Pinedale, WY 82941

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 10/18/2005

9. PUMP INFORMATION Manufacturer Grundfoss Type Submersible

Source of power Generator Horsepower 50 Depth of pump setting or intake 1100 ft.

Amount of water being pumped 100 gal./min.\* (For springs or flowing wells, see item 10)

Total volumetric quantity used per calendar year\* 15 acre feet

\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.

The flow is controlled by  Valve  Cap  Plug

Does well leak around casing?  Yes  No

Permit No. U.W. 188898 Book No. 1364 Page No. 148

SEE REVERSE SIDE

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc.. is necessary to qualify for a water right) \_\_\_\_\_
12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom \_\_\_\_\_  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours
13. LOG OF WELL Total depth drilled 1120 ft.  
 Depth of completed well 1120 ft. Diameter of well 8 inches  
 Depth to first water bearing formation 460 ft.  
 Depth to principal water bearing formation Top 660 ft. to Bottom 1120 ft.

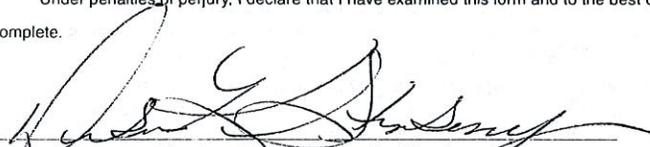
**DRILL CUTTINGS DESCRIPTION**

From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface	460	Shale, Grey		
460	500	Sandstone, Light Grey		
500	660	Shale, Blue Grey		
660	700	Sandstone, Grey		
700	760	Shale, Tan		
760	800	Sandstone, Grey		
800	840	Shale		
840	850	Sandstone		
850	930	Shale, Green		
930	970	Sandstone, Light Grey	Note: Perforations from 660' to 1100'	
970	990	Shale, Grey		
990	1030	Sandstone, Grey		
1030	1120	Shale		

14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No
15. QUALITY OF WATER INFORMATION  
 Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No  
 It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).  
 If not, do you consider the water as Good  Acceptable  Poor  Unusable

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

  
 Debra K. Stanberry, Supervisor, Regulatory Affairs  
 Date September 10, 2008

**FOR STATE ENGINEER'S USE ONLY**

Permit No. U.W. 138898  
 Date of Receipt SEP 17 2008, 20\_\_\_\_ Date of Approval 10/29, 2008  
 Date of Priority \_\_\_\_\_, 20\_\_\_\_  
  
 for State Engineer

**MS 3-17**

**Well Completion Log**

6-5-09  
D. G. ...  
27

**STATE OF WYOMING**  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

58040559  
75.00  
6/5/09

**APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER**

APPLICATION FOR WELLS AND SPRINGS  
Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and /or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-3-480

PERMIT NO. U.W. 190937  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Pinedale Anticline Project

**NOTE: Do not fold this form. Use typewriter or print neatly with black ink.**  
**ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE**

NAME AND NUMBER OF WELL or SPRING Mesa 3-17 WSW

1. Name of applicant(s) 1- Questar Exploration and Production Company 1)303-308-3068  
2- Bureau of Land Management Phone: 2)307-367-5300

2. Address of applicant(s) 1- 1050 17th Street, Suite 500 Denver, CO 80265  
2- P.O.Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Regional Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic. Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served?\_\_\_\_\_
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks?\_\_\_\_\_
  - Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks). Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations. completions road construction/maintenance, dust abatement, well workover s/repairs & reclamation.
  - Coalbed Methane Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.
  - Monitor, Observation Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, NE 1/4 NW 1/4 of Sec. 17, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_ Block \_\_\_ of the \_\_\_ Subdivision (or Add'n) of \_\_\_\_\_. Resurvey Location: Tract \_\_\_\_\_, (or Lot) \_\_\_\_\_.

6. Estimated depth of the well or spring is 1000 feet. Estimated production interval is 700-710 ft. to 950 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 10 acre feet  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

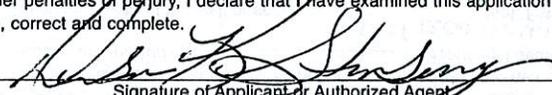
TABULATION BOX

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
32	109	17		X			X	X	X	X			X	X			X		

9. If for irrigation use:
- a. Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - b.  Land will be irrigated from this well only.
  - c.  Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_  
Bureau of Land Management
11. The well or spring is to be constructed on lands owned by \_\_\_\_\_  
(The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by \_\_\_\_\_ Bureau of Land Management  
(If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: This water source well was previously permitted under Permit #176928 which expired on 12/31/07. Water from this well will be used for oil & gas well drilling & completions, road construction/maintenance, dust abatement, well workover's/repairs & reclamation.

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

  
Signature of Applicant or Authorized Agent  
Debra K. Stanbery, Regional Supervisor, Regulatory Affairs

April 30, 20 09  
Date

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

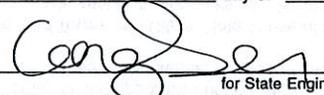
IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
) ss.  
STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 5th day of June, A.D. 20 09, at 9:56 o'clock A M.

Permit No. U.W. 190937

  
for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

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Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

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~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 20\_\_.~~

The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.

Witness my hand this 27th day of July, A.D. 20 09.

for   
PATRICK T. TYRRELL, State Engineer

June 5, 2009 - Statement of Completion on November 14, 2007 received.

June 5, 2009 - Proof of Beneficial Use on November 14, 2007 received.

**STATE OF WYOMING**  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

**STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING**

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 190937 NAME OF WELL/SPRING Mesa 3-17 WSW

1. NAME OF OWNER 1-Questar Exploration and Production Company 2-Bureau of Land Management

2. ADDRESS 1-1050 17th Street, Suite 500 2-P.O.Box 768  
1- Denver  Please check if address has changed from that shown on permit 1-303-308-3068  
City 2- Pinedale State 2- Wyoming Zip Code 2-82941 Phone No. 2-307-367-5300

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) Reclamation,  
Oil & Gas Well Drilling & Completions, road construction/maint., dust abatement, well

4. LOCATION OF WELL/SPRING NE 1/4 NW 1/4 of Section 17 T. 32 N., R. 109 W., of the 6th P.M. (or W.R.M.)  
Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83  
Geographic Coordinates: Latitude 42° 45' 7.54" N Longitude 109° 51' 39.70" W (degrees, minutes, seconds)  
UTM: Zone 12 Northing 4733917.10 Easting 593229.92 (meters)  
State Plane Coordinates: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (feet)  
Land surface elevation (ft. above mean sea level) 7478' Datum  NAVD29  NAVD88  
Source  GPS  Map  Survey  Unknown  Other  Allimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled Rotary  Dug  Driven  Other  
Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 1200 ft.  
Depth of static water level 198 ft. (below land surface) Casing height 0 ft. above ground

a. Diameter of borehole (bit size) 12 1/2 inches  
b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
16" diameter from 0 ft. to 44 ft. Material Steel Gage .250  
8" diameter from 0 ft. to 1200 ft. Material Steel Gage .250

c. Cemented/grouted interval, from 0 ft. to 500 ft.  
Amount of cement/grout used 160 cu. ft. type Cement 1-2 Neat  
(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen  
Type of perforator used Torch Cut  
Size of perforations 1 inches by .25 inches.  
Number of perforations and depths where perforated  
360 perforations from 740 ft. to 1190 ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? 4 days

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 3/4 minus pea gravel  
Filter/gravel pack installed from 500 ft. to 1200 ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
Surface casing installed from 0 ft. to 44 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY White Mountain Drilling Co. P.O. Box 2353  
13 Industrial Site Ext Road, Pinedale, WY 82941

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 11/14/2007

9. PUMP INFORMATION Manufacturer Grundfos Type Submersible  
Source of power Diesel Generator horsepower 50 Depth of pump setting or intake 1180 ft.  
Amount of water being pumped 100-125 gpm @ 50-55 ft. (For springs or flowing wells, see item 10)  
Total volumetric quantity used per calendar year\* 10 acre ft.

\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.  
The flow is controlled by  Valve  Cap  Plug  
Does well leak around casing?  Yes  No

Permit No. U.W. 190937 Book No. 1378 Page No. 87

SEE REVERSE SIDE

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to qualify for a water right) \_\_\_\_\_

12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom \_\_\_\_\_  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

13. LOG OF WELL Total depth drilled 1200 ft.  
 Depth of completed well 1200 ft. Diameter of well 12 1/2 inches  
 Depth to first water bearing formation \_\_\_\_\_ ft.  
 Depth to principal water bearing formation Top 740 ft. to Bottom 1190 ft.

**DRILL CUTTINGS DESCRIPTION**

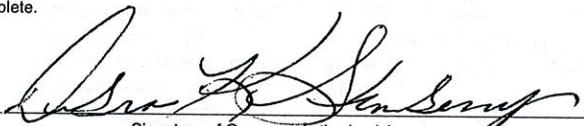
From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface				
0	740	Clay		NO
740	770	Water Sand	Perforation	YES
770	870	Clay		NO
870	890	Water Sand	Perforation	YES
890	1040	Clay		NO
1040	1060	Water Sand	Perforation	YES
1060	1170	Clay		NO
1170	1190	Water Sand	Perforation	YES
1190	1200	Clay		NO

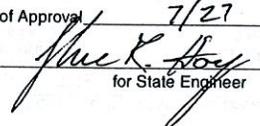
14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No

15. QUALITY OF WATER INFORMATION  
 Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No  
 It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).  
 If not, do you consider the water as  Good  Acceptable  Poor  Unusable

REMARKS Mesa 3-17 WSW is located inside the boundary of the Pinedale Anticline defined in the 2008 Record of Decision and is subject to be included in the groundwater characterization study that is required through the Record of Decision for Final Supplemental EIS for the Pinedale Anticline.

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

 April 30, 2009  
 Signature of Owner or Authorized Agent Date  
Debra K. Stanberry, Regional Supervisor, Regulatory Affairs

FOR STATE ENGINEER'S USE ONLY  
 Permit No. U.W. 190937  
 Date of Receipt MAY 21 2009, 20\_\_\_\_ Date of Approval 7/27, 2009  
 Date of Priority \_\_\_\_\_, 20\_\_\_\_  
  
 for State Engineer

PERMIT NO. U.W. 190937  
T.F. No. U.W. 41-3-480

PERMIT STATUS

Priority Date: June 5, 2009

Approval Date: JUL 27 2009

ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **oil and gas development, road maintenance, dust abatement, well work-over/repairs & reclamation** shall extend until **December 31, 2014**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2014**.
3. If this well is to be drilled on the main portion of the geographic region called "The Mesa", and the surface elevation of the well site is at an altitude greater than 7,250 feet above sea level, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to a depth of at least 500 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
4. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, the well is to be situated within 1,000 feet of an existing domestic or stock watering well, the top of the production zone (perforated interval) utilized by this well shall be located at least 200 feet below that of the bottom of the deepest production zone utilized by existing domestic or stock watering wells located within 1,000 feet of this water supply well. In this case, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to the top of the production zone of this well. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
5. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, this well is not situated within 1,000 feet of an existing domestic or stock watering well, as outlined in Condition 4, this well shall be cased with new or new-like blank unperforated casing from the land surface to a depth of at least 200 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
6. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
7. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
8. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

7/27/2009  
Date of Approval

Patrick T. Tyrrell  
PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
Jade Henderson –Superintendent  
P.O. Box 277  
Cokeville, WY 83114

**MS 3-20**

**Well Completion Log**

# STATE OF WYOMING

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

See 31 890  
50.00

## APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

6/19/06

### APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 39-1-100

PERMIT NO. U.W. 178314  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sublette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Mesa Water Well No. 3-20

1. Name of applicant(s) 1) Questar Exploration and Production Company Phone: 1) 303-672-6970  
2) Bureau of Land Management Phone: 2) 307-367-5300

2. Address of applicant(s) 1) 1050 17th Street, Suite 500 Denver, CO 80265  
2) P.O. Box 768 Pinedale WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

3. Name & address of agent to receive correspondence and notices Jane Seiler, Regulatory Affairs Manager  
1050 17th Street, Suite 500 Denver, WY 80265 Phone: 303-672-6970  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:

- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_
- Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_
- Irrigation: Watering of commercially grown crops (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
- Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
- Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
- Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc Describe in Remarks. Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations. road construction, maintenance, dust abatement, work overs/repairs & reclamation.
- Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production coal bed methane will require a permit from the Wyoming Oil and Gas Conservation Commission.
- Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, NE 1/4 NW 1/4 of Sec. 20, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_\_\_ Block \_\_\_\_\_ of the \_\_\_\_\_ Subdivision (or Add'n) of \_\_\_\_\_ Resurvey Location: Tract \_\_\_\_\_, (or Lot) \_\_\_\_\_

6. Estimated depth of the well or spring is 900 feet. Estimated production interval is 660 ft. to 800 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute. NOTE: if for domestic and/or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 10  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below.

TABULATION BOX

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
32	109	20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
32	109	17	All Quarter-Quarters																
32	109	18	X	X	X	X													
32	109	19	X	X	X	X													

Per e-mail rec'd 9/11/06 H

9. If for irrigation use:
- a. Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - b.  Land will be irrigated from this well only.
  - c.  Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.:
11. The well or spring is to be constructed on lands owned by Bureau of Land Management  
 (The granting of a permit does not constitute the granting of right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by Bureau of Land Management  
 (If the landowner is not the applicant, a copy of the agreement relating to the usage of appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: This water source well was previously permitted under Permit No. U.W. 126623 which expired on 12/31/02. Water from this well will be used for oil/gas well drilling and completions, road construction, maintenance, dust abatement, well workovers and repairs and reclamation

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

[Signature]  
 Questar Exploration and Production Company  
 Signature of Applicant or Authorized Agent  
 Jane Seiler, Regulatory Affairs Manager

June 9, 2006  
 Date

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
 ) ss.  
 STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 19th day of June, A.D. 2006, at 9:00 o'clock a M.

Permit No. U.W. 178314  
[Signature]  
 for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.  
 FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.

This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction And Completion of Beneficial Use is waived

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 2006.~~

~~The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.~~

Witness my hand this 24<sup>th</sup> day of November, A.D. 2006.

[Signature]  
 PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 178314  
*T.F. No. U.W. 39-1-100*

## PERMIT STATUS

Priority Date June 19<sup>th</sup>, 2006

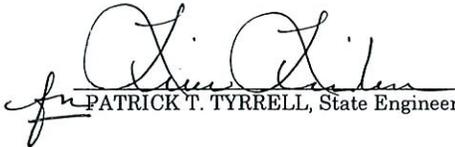
Approval Date

NOV 24 2006

## ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit for oil & gas well drilling, road construction and maintenance, dust abatement, well work-overs/repairs, and reclamation shall extend until December 31, 2009. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to December 31, 2009.
3. This well is located within the Pinedale Anticline Project Area on the geographic area known as "The Mesa", and at an elevation greater than 7,250 feet above sea level. The Additional Conditions and Limitations concerning construction of wells of this type in this location developed in conjunction with the United States Department of Interior, Bureau of Land Management require that the well annulus be fully sealed from land surface to a depth of at least 500 feet in order to eliminate production of water from those zones targeted by the existing stock watering wells located on "The Mesa". This existing well was constructed by emplacing cement within the well annulus from land surface to a depth of 480 feet. The log of the well indicates that cement has been emplaced opposite all of the productive zones targeted by stock watering wells in the area, effectively eliminating production of water from those zones by this well. On November 15, 2006, a letter signed by both the applicant and the United States Department of Interior, Bureau of Land Management, the agency responsible for the implementation of the Record of Decision for the Pinedale Anticline Project was received requesting that the 500 foot cemented interval requirement be waived in this instance, and the request is hereby granted.
4. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
5. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

November 24, 2006  
 Date of Approval

  
 PATRICK T. TYRRELL, State Engineer

COPY OF THIS PERMIT MAILED TO:

Chris Carlsen - Assistant Superintendent  
 Box 1080  
 Big Piney, WY 83113

August 14, 2006 - Statement of Completion on August 20, 2000 received.

August 14, 2006 - Proof of Beneficial Use on August 20, 2000 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 178314 NAME OF WELL/SPRING Mesa Water Well No. 03-20

1. NAME OF OWNER  (1) Questar Exploration and Production Company  (2) BLM

2. ADDRESS  (1) 1050 17th Street, Suite 500  (2) P.O. Box 768  
 Please check if address has changed from that shown on permit  
City (1) Denver State CO Zip Code 80265 Phone No. 303-672-6970  
(2) Pinedale State WY Zip Code 82941 Phone No. 307-367-5300

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

4. LOCATION OF WELL/SPRING NE 1/4 NW 1/4 of Section 20 T. 32 N., R. 109 W., of the 6th P.M. (or W.R.M.)  
GPS Coordinates UTM Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_  
Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
If surveyed, bearing, distance and reference point \_\_\_\_\_  
Longitude (degrees, minutes, seconds) 109.86111 Latitude (degrees, minutes, seconds) 42.73611  
Datum  1927  1983 Source:  GPS  Map  Survey

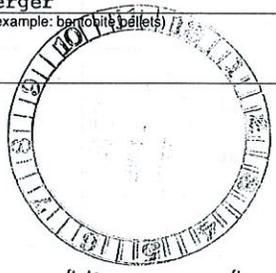
5. TYPE OF CONSTRUCTION  Drilled  Rotary  Dug  Driven  Other  
(Type of rig, and fluid used, if any)  
Describe 15W Gardner Denver

6. CONSTRUCTION Total depth of well/spring 940 ft.  
Depth of static water level 495 ft. (below land surface) Casing height \_\_\_\_\_ ft. above ground

a. Diameter of borehole (bit size) 9-7/8 inches  
b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
6-5/8" diameter from 0 ft. to 940 ft. Material steel Gage .188  
\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 480 ft. to surface ft.  
Amount of cement/grout used \_\_\_\_\_ type done by Schlumberger  
(example: 10 sacks) (example: bag (or) bit balls)

d. Type of completion  Factory screen  Open hole  Customized perforations  
Type of perforator used torch  
Size of perforations 1/8 inches by 8 inches.  
Number of perforations and depths where perforated  
140 perforations from 730 ft. to 930 ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Well screen details  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.



e. Well development method \_\_\_\_\_ How long was well developed? \_\_\_\_\_  
f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 3/8" washed pea  
Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY N.R. Bideau Drilling, 2131 Kingsboro Rd., Casper, WY  
82604

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 8/20/2000

9. PUMP INFORMATION Manufacturer Grundfos Type submersible  
Source of power generator Horsepower 30 Depth of pump setting or intake 920 ft.  
Amount of water being pumped 110 gal./min. (For springs or flowing wells, see item 10)  
Total volumetric quantity used per calendar year. 60,000 gallons, 7H

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
If artesian flow or spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.  
The flow is controlled by:  Valve  Cap  Plug  
Does well leak around casing?  Yes  No

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to quality for a water right)

12. PUMP TEST Was a pump test conducted?  Yes  No

If so, by whom \_\_\_\_\_

Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

13. LOG OF WELL Total depth drilled 940 ft.

Depth of completed well 940 ft. Diameter of well 6-5/8 inches

Depth to first water bearing formation 80 ft.

Depth to principal water bearing formation Top 730 ft. to Bottom 790 ft.

910 935

Land surface elevation (ft. above mean sea level) \_\_\_\_\_ Datum  1929  1988

How determined  Map  Altimeter  Survey  Other

**DRILL CUTTINGS DESCRIPTION**

From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface	8	Sand & Small Boulders		
0	80	Shale, Green		
80	115	Sand (Water)		Yes
115	300	Shale, Blue & Red/Sand Streaks		
300	340	Sand (Water)		Yes
340	730	Clay, Blue & Red/Sand Stringers		
730	790	Sand (Water)		Yes
790	910	Shale, Blue & Red/Sand Stringers		
910	935	Sand		Yes
935	940	Shale		

14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No

15. QUALITY OF WATER INFORMATION

Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No

It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).

If not, do you consider the water as  Good  Acceptable  Poor  Unusable

REMARKS Refiling of expired permit #126623, expired 12/31/02

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

Questar Exploration and Production Company

By



Regulatory Affairs Manager

Signature of Owner or Authorized Agent

8/11/06

Date

,20

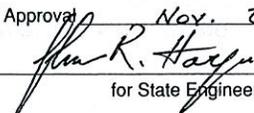
FOR STATE ENGINEER'S USE ONLY

Permit No. U.W. 178314

Date of Receipt AUG 14 2006, 20

Date of Priority \_\_\_\_\_, 20

Date of Approval Nov. 24, 20 06



for State Engineer

**MS 3-22**

**Well Completion Log**

# STATE OF WYOMING

OFFICE OF THE STATE ENGINEER  
 HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002

SE014838

8-1-01  
 50.00

## APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

### APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

PERMIT NO. U.W. 138174  
 WATER DIVISION NO. 4 DISTRICT 7  
 U.W. DISTRICT Sublette Co.

Temporary Filing No. U.W. 32-6-284  
 NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
 ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Mesa Water Well No. 3-22  
 1. Name of applicant(s) (1) Questar Exploration and Production Company 307-382-9791  
(2) Bureau of Land Management Phone: \_\_\_\_\_  
 2. Address of applicant(s) (1) P. O. Box 458, Rock Springs, WY 82902-0458  
(2) P. O. Box 1828, Cheyenne, WY 82002-1828  
 (MAILING ADDRESS) (CITY) (STATE) (ZIP)  
 3. Name & address of agent to receive correspondence and notices Cathy Flansburg, Coordinator, Regulatory Aff.  
Questar E & P, P. O. Box 458, Rock Springs, WY 82902-0458 Phone: 307-352-7555  
 (MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less. Number of houses served? \_\_\_\_\_
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_
  - Irrigation: Watering of commercially grown crops (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities (use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. are classified as miscellaneous use).
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stockwater pipelines, subdivisions, mine dewatering, mineral / oil exploration drilling, potable supplies in office, etc. Describe in remarks.
  - Coal Bed Methane Water produced in production of coal bed methane gas.
  - Monitor, Observation or  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, NE 1/4 NW 1/4 of Sec. 22, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_\_\_ Block \_\_\_\_\_ of the \_\_\_\_\_ Subdivision (or Add'n) of \_\_\_\_\_. Resurvey Location: Tract \_\_\_\_\_, (or Lot) \_\_\_\_\_.

6. Estimated depth of the well or spring is 772 feet.  
 7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
 NOTE: If for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.  
 (b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet.  
 Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below.

TABULATION BOX

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL	
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼		
32	109	16				X	MESA NO. 8-16D										X	MESA NO. 9-16		
32	109	16																X	MESA NO. 10-16	
32	109	16															X	MESA NO. 14-16		
32	109	16																	X	MESA NO. 16-16
32	109	17																	X	MESA NO. 11-17

9. If for irrigation use:  
 a. Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.  
 b.  Land will be irrigated from this well only.  
 c.  Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.

10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_

11. The well or spring is to be constructed on lands owned by Bureau of Land Management  
 (The granting of a permit does not constitute the granting of right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by State of Wyoming  
 (If the landowner is not the applicant, a copy of the agreement relating to the usage of appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.)  
 NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: This well was originally permitted under U.W. No. 110965 by Ultra Petroleum.  
This water well will be used extensively on The Mesa for oil and gas well drilling for  
at least the next twenty years. An extended right to use the ground water is therefore  
requested. In addition to the wells noted in the tabulation, the water will also be used  
to drill the Mesa 5-21 Well located in the SW NW 21-32N-109W.  
 Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

Donald Ells Signature of Applicant or Authorized Agent      7-30-01 Date, 20

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	NO FEE

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
 ) ss.  
 STATE ENGINEER'S OFFICE )  
 This instrument was received and filed for record on the 1ST day of August, A.D. 20 01, at 9:12 o'clock A. M.

Permit No. U.W. 138174 \_\_\_\_\_  
 \_\_\_\_\_  
 for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.  
 FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.

This permit and accompanying notices serve to register an existing well and establish a  
valid water right for the same. Time limit for Completion of Construction and Completion  
of Beneficial Use is waived.

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well excepting. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 2001.~~

~~The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.~~

Witness my hand this 4<sup>th</sup> day of Sept., A.D. 20 01.

Patrick T. Tyrrell  
 Patrick T. Tyrrell, State Engineer

PERMIT NO. U.W. 138174  
T.F. No. U.W. 32-6-284

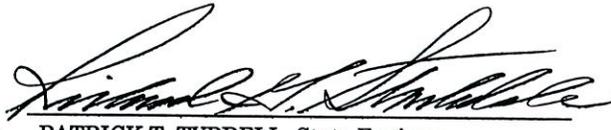
PERMIT STATUS

Priority Date August 1, 2001 Approval Date SEP 04 2001

ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit for oil & gas well drilling shall extend until **December 31, 2022**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2022**.
3. This well shall be cased with new or new-like quality blank unperforated casing from the land surface to a depth of at least 500 feet below land surface. Said casing shall be cemented in place from the land surface to a depth of at least 500 feet.
4. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
5. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

9/4/01  
Date of Approval

*for*   
PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
Loren Smith - Assistant Superintendent  
Box 7  
Big Piney, WY 83113

August 1, 2001 - Statement of Completion on August 13, 1998 received.

August 1, 2001 - Proof of Beneficial use on August 16, 1998 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BUILDING  
CHEYENNE, WYOMING 82002  
(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.

PERMIT NO. U.W. 138174 NAME OF WELL (SPRING) Mesa Water Well No. 3-22

- 1. NAME OF OWNER (1) Questar Exploration and Production Company  
(2) Bureau of Land Management
- 2. ADDRESS (1) P. O. Box 458, Rock Springs, WY 82902-0458  
(2) P. O. Box 1828, Cheyenne, WY 82002-1828

Please check if address has changed from that shown on permit

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone No. \_\_\_\_\_

- 3. USE OF WATER: Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous   
Monitor or Test  Coal Bed Methane  Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

Drilling water for oil and gas wells.

- 4. LOCATION OF WELL (SPRING): NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  of Section 22, T. 32 N., R. 109 W., of the 6th P.M. (or W.R.M.),  
Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

If surveyed, bearing, distance and reference point: \_\_\_\_\_

- 5. TYPE OF CONSTRUCTION: Drilled  Air Rotary \_\_\_\_\_ Dug  Driven  Other   
(Type of Rig)  
Describe: \_\_\_\_\_

- 6. CONSTRUCTION: Total Depth of Well/Spring 772 ft.  
Depth to Static Water Level 350 ft. (Below land surface)

a. Diameter of borehole (Bit size) 8-3/4 inches.

b. Casing Schedule New  Used

6-5/8 diameter from +2 ft. to 772 ft. Material Steel Gage 156  
\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Was casing cemented: Yes  No  Cemented Interval, From 0+5 feet to 400 feet.

d. Number of sacks of cement used 40 type of cement Portland (+8% bentonite)

e. Perforations: Type of perforator used Torch  
Size of perforations 1/8 inches by 6 inches.

Number of perforations and depths where perforated:  
250 perforations from 523 ft. to 772 feet.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ feet.

f. Was well screen installed? Yes  No   
Diameter: \_\_\_\_\_ slot size: \_\_\_\_\_ set from \_\_\_\_\_ feet to \_\_\_\_\_  
Diameter: \_\_\_\_\_ slot size: \_\_\_\_\_ set from \_\_\_\_\_ feet to \_\_\_\_\_

g. Was well gravel packed? Yes  No  Size of gravel 3/8" Washed Pea Gravel

h. Was surface casing used: Yes  No  Was it cemented in place? Yes  No

- 7. NAME & ADDRESS OF DRILLING COMPANY True North Drilling Company, Vernal, Utah 84078

- 8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 8-13-98

- 9. PUMP INFORMATION: Manufacturer Grundfos Type Submersible  
Source of power Generator Horsepower 20 Depth of Pump Setting or intake 550  
Amount of Water Being Pumped 100 Gallons Per Minute. (For Springs or flowing wells, see item 10.)  
Total Volumetric Gallons Used Per Calendar Year. 15 acre feet

- 10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well).  
If well yields artesian flow or if spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq. inch, or \_\_\_\_\_ feet of water.  
The flow is controlled by: valve  cap  plug   
Does well leak around casing? Yes  No



11. If spring, how was it constructed? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to qualify for a water right.) \_\_\_\_\_

12. PUMP TEST: Was a pump test made? Yes  No

If so, by whom \_\_\_\_\_ Address \_\_\_\_\_

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ foot drawdown after \_\_\_\_\_ hours.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ foot drawdown after \_\_\_\_\_ hours.

13. LOG OF WELL: Total depth drilled 772 feet.

Depth of completed well 772 feet. Diameter of well 6 inches.

Depth to first water bearing formation 140 feet. (cemented out)

Depth to principal water bearing formation. Top 540 feet to Bottom 550 feet.

645 650

Ground Elevation, if known \_\_\_\_\_ 745 \_\_\_\_\_ 750

**DRILL CUTTINGS DESCRIPTION:**

From Feet	To Feet	Material Type, Texture Color	Remarks (Cementing, Shutoff)	Indicate Water Bearing Formation & Name	Indicate Perforated Casing Location
0	16	Sand-Gravel-Cobbles	Cased off		
16	140	Clay			
140	145	Sand	Cemented off	Show water	
145	540	Clay - Shale			
540	550	Sand		Water	Perfs
550	645	Clay - Shale			
645	650	Sand		Water	Perfs
650	745	Clay - Shale			
745	750	Sand		Water	Perfs
750	772	Clay - shale			
Casing perforated from 523' - 770' on 1 slot per foot intervals					

**14. QUALITY OF WATER INFORMATION:**

Does a chemical and/or bacteriological water quality analysis accompany this form? Yes  No

It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well. (Contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984.)

If not, do you consider the water as: Good  Acceptable  Poor  Unusable

REMARKS: 6-5/8" casing was pressure grouted using 1" pipe. Cement grout was pumped from 400' back to surface.

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct and complete.

Donald Elly  
Signature of Owner or Authorized Agent

7-30-01, 20\_\_\_\_  
Date

**FOR STATE ENGINEER'S USE ONLY**

Date of Receipt Aug 1 2001, 20\_\_\_\_

Date of Priority Aug 1, 2001

Date of Approval Sept 4, 2001

Richard J. Stubble  
for State Engineer

**MS 6-16**

**Well Completion Log**

1  
a

FORM U.W. 5  
Rev. 6/07  
FILING FEE SCHEDULE  
ON REVERSE SIDE

# STATE OF WYOMING

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

50038943

50.00

9/2/08

## APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

### APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-2-259

PERMIT NO. U.W. 189556  
 WATER DIVISION NO. 4 DISTRICT 7  
 U.W. DISTRICT Sublette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
 ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Mesa 6-16 WSW

1. Name of applicant(s) 1- Wexpro Company Phone: 303-308-3068  
2- State Board of Land Commissioners  
1- 1050 17th Street, Suite 500 Denver, CO 80265

2. Address of applicant(s) 2- Herschler Bldg. 3W, Cheyenne, WY 82002 JH  
 (MAILING ADDRESS) (CITY) (STATE) (ZIP)

3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
 (MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_
  - Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks).  
 Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations. road maintenance, dust abatement, well work-overs/rep and reclamation per correspondence held
  - Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.
  - Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, SE 1/4 NW 1/4 of Sec. 16, T. 32 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract      Block      of the      Subdivision (or Add'n) of     . Resurvey Location: Tract     , (or Lot)     .

6. Estimated depth of the well or spring is 650 feet. Estimated production interval is      ft. to      ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
 NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet.  
 Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

TABULATION BOX

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
32	109	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

189556

SEE REVERSE SIDE

1369

56

Permit No. U.W. \_\_\_\_\_

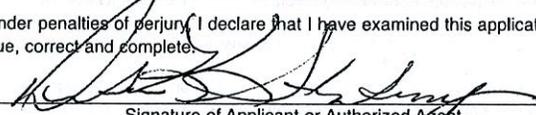
Book No. \_\_\_\_\_

Page No. \_\_\_\_\_

9. If for irrigation use:
- Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - Land will be irrigated from this well only.
  - Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_
11. The well or spring is to be constructed on lands owned by State of Wyoming Office of State Lands & Investments  
(The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by State of Wyoming Office of State Lands & Investments  
(If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use. *Per correspondence Rec'd 10/20/08*

REMARKS: Drilling of oil and gas wells, road maintenance, dust abatement, well work-overs/repairs and reclamation. Refile of cancelled permit #139429

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

  
Signature of Applicant or Authorized Agent  
Debra K. Stanberry, Supervisor, Regulatory Affairs

August 20, 2008  
Date

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

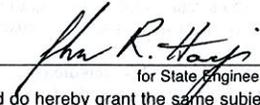
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THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
) ss.  
STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 2nd day of September, A.D. 2008, at 10:45 o'clock A M.

Permit No. U.W. 189556

  
for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

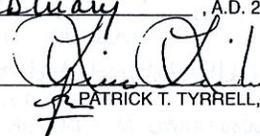
Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

**FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.**

This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction and Completion of Beneficial Use is waived.

- Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.
- Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 2008.
- The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.

Witness my hand this 24<sup>th</sup> day of February, A.D. 2009.

  
PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 189556  
 T.F. No. U.W. 41 - 2 - 259

PERMIT STATUS

Priority Date September 2, 2008

Approval Date FEB 24 2009

This well is a water supply well to supply water for oil/gas well drilling and associated operations within the Pinedale Anticline Project Area (PAPA).

The Additional Conditions and Limitations attached to permits issued by this office for water supply wells in the PAPA are reflective of the requirements for these types of wells listed in the 2000 Record of Decision for the Pinedale Anticline Project, and are designed to insure a level of protection for the users of the shallow sandstone aquifers in the PAPA by limiting the ability of the water supply wells associated with the project to utilize the same resource targeted by the existing stock and/or domestic wells in the PAPA.

The Additional Condition and Limitation attached to permits issued by this office for water supply wells in this location, located on "The Mesa", normally requires that the well must be cased with un-perforated casing to a depth of 500 feet and that the casing must be fully cemented/grouted in the borehole to that depth. However, due to the variability of the geology of the area, this office is aware that the same level of protection of the shallow sandstone aquifers can be achieved by somewhat less than the 500 foot cemented interval in some cases.

A review of the Statement of Completion and Description of Well form submitted with this application indicates that the well has not been constructed in a manner in which the 500 foot cemented interval Condition described above can be satisfied. A review of the well log associated with the Completion form indicates, however, that an effective seal has been emplaced between the un-perforated well casing and the well bore to eliminate the production of water from any of the shallow sandstone aquifers present between the land surface and 500 feet below land surface in the immediate area. As such, the intent of the Condition, the isolation and protection of the shallow sandstone aquifers, has been achieved in this instance. **Therefore, this permit is approved, as this well is constructed, subject to the following ADDITIONAL CONDITIONS AND LIMITATIONS:**

**ADDITIONAL CONDITIONS AND LIMITATIONS:**

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at the additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **oil and gas development, road maintenance, dust abatement, well work-over/repairs & reclamation** and shall extend until **December 31, 2014**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2014**.
3. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
4. The approval of this permit does not obligate the State Engineer to issue any permits for the use of water from this well for any purpose from this point forward, beyond what is authorized by this permit.
5. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
6. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

February 24, 2009  
 Date of Approval

  
 PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
 Jade Henderson -Superintendent  
 P.O. Box 277  
 Cokeville, WY 83114

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 189556 NAME OF WELL/SPRING Mesa 6-16 Water Source Well

1. NAME OF OWNER 1-Wexpro Company 2-State Board of Land Commissioners  
2. ADDRESS 1-1050 17th Street, Suite 500 2-Herschler Bldg. 3W  
 Please check if address has changed from that shown on permit  
City 2-Cheyenne State 2-Wyoming Zip Code 2-80202 Phone No. 303-308-3068

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) Oil & Gas Well Drilling

4. LOCATION OF WELL/SPRING SE 1/4 NW 1/4 of Section 16 T. 32 N., R. 109 W., of the 6th P.M. (or W.R.M.)  
Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83  
Geographic Coordinates: Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W (degrees, minutes, seconds)  
UTM: Zone 12 Northing 4733535 Easting 594834 (meters)  
State Plane Coordinates: Zone \_\_\_\_\_ Northing 4733535 Easting 594834 (feet)  
Land surface elevation (ft. above mean sea level) 7465 Datum  NAVD29  NAVD88  
Source  GPS  Map  Survey  Unknown  Other  Altimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled Rotary  Dug  Driven  Other  
Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 1000 ft.  
Depth of static water level 400 ft. (below land surface) Casing height 0 ft. above ground

a. Diameter of borehole (bit size) 9 7/8 inches  
b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
6 5/8 diameter from 0 ft. to 1000 ft. Material Steel Gage 0.188  
\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 440 ft.  
Amount of cement/grout used 200 Sacks type Class G with 2% CaCl  
(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen  
Type of perforator used Torch Cut  
Size of perforations 6 inches by 1/8 inches.  
Number of perforations and depths where perforated  
200 perforations from 700 ft. to 1000 ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 3/8" Washed  
Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY N.R. Bideau Drilling, 2131 Kingsboro Road, Casper, WY 82604

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 11/01/2001

9. PUMP INFORMATION Manufacturer Grundfoss Type Submersible  
Source of power Generator Horsepower 30 Depth of pump setting or intake 850 ft.  
Amount of water being pumped 100 gal./min.\* (For springs or flowing wells, see item 10)  
Total volumetric quantity used per calendar year.\* 15 Acc feet/year per U.W. 5  
\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.  
The flow is controlled by  Valve  Cap  Plug  
Does well leak around casing?  Yes  No

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to qualify for a water right) \_\_\_\_\_

12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom \_\_\_\_\_

Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

13. LOG OF WELL Total depth drilled 1000 ft.

Depth of completed well 1000 ft. Diameter of well 9 7/8 inches

Depth to first water bearing formation 200 ft.

Depth to principal water bearing formation Top 540 ft. to Bottom 620 ft.  
 860 930

**DRILL CUTTINGS DESCRIPTION**

From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface				
0	20	Sand and gravel		No
20	105	Clay, green		No
105	200	Clay, gray		No
200	225	Sand, green		Yes
225	300	Clay, red & Gray		No
300	420	Sand		No
420	540	Clay, red, sand stringers		No
540	620	Sand		Yes
620	860	Clay, red & Gray		No
860	980	Sand		No
980	1000	Clay & sand stringers		Yes
				Note: Perforations 700' to 1000'

14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No

**15. QUALITY OF WATER INFORMATION**

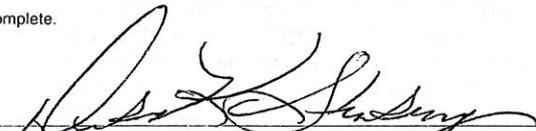
Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No

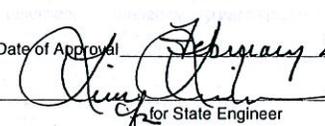
It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).

If not, do you consider the water as Good  Acceptable  Poor  Unusable

REMARKS \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

  
 Debra K. Stanberry, Supervisor, Regulatory Affairs  
 August 20, 2008  
 Date

**189556** FOR STATE ENGINEER'S USE ONLY  
 Permit No. U.W. \_\_\_\_\_  
 Date of Receipt **SEP 02 2008**, 20 \_\_\_\_\_  
 Date of Priority \_\_\_\_\_, 20 \_\_\_\_\_  
 Date of Approval  February 24, 2009  
 \_\_\_\_\_  
 for State Engineer

**SP 14-20**

**Well Completion Log**

# STATE OF WYOMING

09-17-08 RCVD 0936

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

500 39066  
50 .00  
9/17/08

## APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-8-275

PERMIT NO. U.W. 190125  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sublette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Stewart Point 14-20 WSW  
1- Wexpro Company  
2- Bureau of Land Management Phone: 303-308-3068  
1- 1050 17th Street, Suite 500 Denver, CO 80265  
2- P.O. Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)  
3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_
  - Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks). Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.
  - Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, SE 1/4 SW 1/4 of Sec. 20, T. 33 N., R. 109 W. of the 6th P.M. (W.R.M.).  
Wyoming. If located in a platted subdivision, also provide Lot/Tract \_\_\_\_\_ Block \_\_\_\_\_ of the \_\_\_\_\_  
Subdivision (or Addition) of \_\_\_\_\_ Resurvey Location: Tract \_\_\_\_\_, (or Lot) \_\_\_\_\_

6. Estimated depth of the well or spring is 650-1000 feet. Estimated production interval is 700 ft. to 1000 ft. *Per u. 10.6 JH*

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and/or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

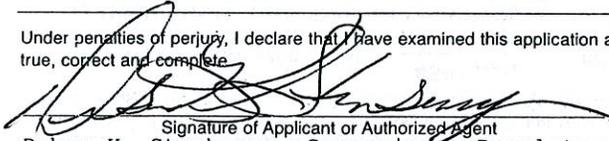
8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

TABULATION BOX			NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
TWP	RNG	SEC	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
33	109	20									X				X	X	X	X	
<i>Per letter vec'd 11/4/2008 JH</i>																			

9. If for irrigation use:
- Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - Land will be irrigated from this well only.
  - Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_
11. The well or spring is to be constructed on lands owned by Bureau of Land Management  
 (The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by Bureau of Land Management  
 (If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: Drilling of oil and gas wells  
Refile of cancelled permit #138913

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

  
 Signature of Applicant or Authorized Agent  
 Debra K. Stanberry, Supervisor, Regulatory Affairs  
 THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

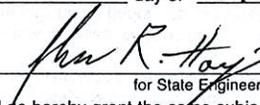
September 10, 2008  
 Date

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.  
 THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
 ) ss.  
 STATE ENGINEER'S OFFICE )  
 This instrument was received and filed for record on the 17th day of September, A.D. 2008, at 9:36 o'clock A M.

Permit No. U.W. 190125

  
 for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source or supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

**FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.**

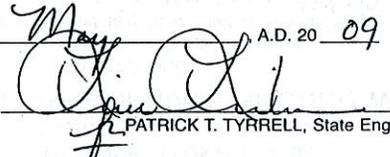
**This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction and Completion of Beneficial Use is waived.**

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 20\_\_.~~

The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.

Witness my hand this 27<sup>TH</sup> day of May, A.D. 2009.

  
 PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 190125  
 T.F. No. U.W. 41 - 8 - 275

PERMIT STATUS

Priority Date September 17, 2008 Approval Date MAY 27 2009

This well is a water supply well to supply water for oil/gas well drilling and associated operations within the Pinedale Anticline Project Area (PAPA).

The Additional Conditions and Limitations attached to permits issued by this office for water supply wells in the PAPA are reflective of the requirements for these types of wells listed in the 2000 Record of Decision for the Pinedale Anticline Project, and are designed to insure a level of protection for the users of the shallow sandstone aquifers in the PAPA by limiting the ability of the water supply wells associated with the project to utilize the same resource targeted by the existing stock and/or domestic wells in the PAPA.

The Additional Condition and Limitation attached to permits issued by this office for water supply wells in this location, located on "The Mesa", normally requires that the well must be cased with un-perforated casing to a depth of 500 feet and that the casing must be fully cemented/grouted in the borehole to that depth. However, due to the variability of the geology of the area, this office is aware that the same level of protection of the shallow sandstone aquifers can be achieved by somewhat less than the 500 foot cemented interval in some cases.

A review of the Statement of Completion and Description of Well form submitted with this application indicates that the well has not been constructed in a manner in which the 500 foot cemented interval Condition described above can be satisfied. A review of the well log associated with the Completion form indicates, however, that an effective seal has been emplaced between the un-perforated well casing and the well bore to eliminate the production of water from any of the shallow sandstone aquifers present between the land surface and 500 feet below land surface in the immediate area. As such, the intent of the Condition, the isolation and protection of the shallow sandstone aquifers, has been achieved in this instance. **Therefore, this permit is approved, as this well is constructed, subject to the following ADDITIONAL CONDITIONS AND LIMITATIONS:**

**ADDITIONAL CONDITIONS AND LIMITATIONS:**

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at the additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for oil and gas well drilling, road maintenance, dust abatement, well work-over/repairs & reclamation and shall extend until December 31, 2010. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to December 31, 2010.
3. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
4. The approval of this permit does not obligate the State Engineer to issue any permits for the use of water from this well for any purpose from this point forward, beyond what is authorized by this permit.
5. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
6. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

May 27, 2009  
 Date of Approval

  
 PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
 Jade Henderson -Superintendent  
 P.O. Box 277  
 Cokeville, WY 83114

September 17, 2008 - Statement of Completion on June 20, 2002 received.

September 17, 2008 - Proof of Beneficial Use on September 1, 2008 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 190125 NAME OF WELL/SPRING Stewart Point 14-20 WSW

1. NAME OF OWNER 1-Wexpro Company 2-Bureau of Land Management

2. ADDRESS 1-1050 17th Street, Suite 500 2-P.O.Box 768  
City 2-Pingdale State 2-Wyoming Zip Code 2-82941 Phone No. 303-308-3068

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) Oil & Gas Well Drilling

4. LOCATION OF WELL/SPRING SE 1/4 SW 1/4 of Section 20 T, 33 N, R. 109 W., of the 6th P.M. (or W.R.M.)  
Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83  
Geographic Coordinates: Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W (degrees, minutes, seconds)  
UTM: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (meters)  
State Plane Coordinates: Zone \_\_\_\_\_ Northing 4740330 Easting 590627 (feet)  
Land surface elevation (ft. above mean sea level) 7500 Datum  NAVD29  NAVD88  
Source  GPS  Map  Survey  Unknown  Other  Allimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled Rotary  Dug  Driven  Other  
Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 1000 ft.  
Depth of static water level 350 ft. (below land surface) Casing height 0 ft. above ground

a. Diameter of borehole (bit size) 10 5/8 inches  
b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
6 5/8 diameter from 0 ft. to 1000 ft. Material Steel Gage 0.188  
\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 65 ft. to 470 ft.  
Amount of cement/grout used 130 Sacks type Class G with 10 sx bentonite bottom seal \*Bentonite plug to  
(example: 10 sacks) Top out 65' to surface (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen  
Type of perforator used Torch Cut  
Size of perforations 1/8 inches by 12 inches.  
Number of perforations and depths where perforated  
250 perforations from 700 ft. to 1000 ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 3/8" Washed pea  
Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Searle Bros., 149 Pollux Drive, Rock Springs, WY 82901

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 06/20/2002

9. PUMP INFORMATION Manufacturer Grundfoss Type Submersible  
Source of power Generator Horsepower 30 Depth of pump setting or intake 870 ft.  
Amount of water being pumped 110 gal./min.\* (For springs or flowing wells, see item 10)  
Total volumetric quantity used per calendar year\* 15 acre feet  
\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.  
The flow is controlled by  Valve  Cap  Plug  
Does well leak around casing?  Yes  No

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to qualify for a water right)
12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom \_\_\_\_\_  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours
13. LOG OF WELL Total depth drilled 1000 ft.  
 Depth of completed well 1000 ft. Diameter of well 10 5/8 inches  
 Depth to first water bearing formation 102 ft.  
 Depth to principal water bearing formation Top 547 ft. to Bottom 972 ft.

**DRILL CUTTINGS DESCRIPTION**

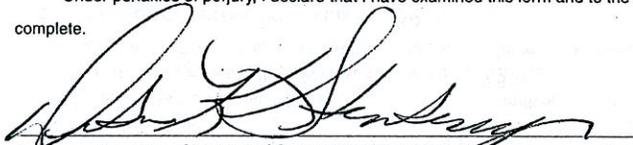
From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface	102	Tan and grey Shale		No
102	191	Sandstone & shale		Yes
191	315	Blue shale & red clay		No
315	321	Sandstone		Yes
321	547	Blue shale & Sandstone		No
547	562	Sandstone		Yes
562	720	Red & Blue Shale		No
720	738	Sandstone		Yes
738	792	Blue shale		No
792	813	Sandstone	Note: Perforations	Yes
813	865	Blue shale	from 700' to 1000'	No
865	881	Sandstone		Yes
881	956	Blue shale		No
956	972	Sandstone		Yes
972	1000	Blue shale		No

14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No \* Bentonite plug surface to 65', cemented from 65' to 470', Bentonite plug 470' to 500'.
15. QUALITY OF WATER INFORMATION

Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No  
 It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).  
 If not, do you consider the water as:  Good  Acceptable  Poor  Unusable

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

  
 Debra K. Stambert, Supervisor, Regulatory Affairs

September 10, 2008  
 Date

FOR STATE ENGINEER'S USE ONLY  
 Permit No. U.W. 190125  
 Date of Receipt SEP 17 2008, 20\_\_\_\_ Date of Approval \_\_\_\_\_, 20\_\_\_\_  
 Date of Priority \_\_\_\_\_, 20\_\_\_\_  
 \_\_\_\_\_  
 for State Engineer

190125

**SP 15-17**  
**Well Completion Log**



# State Engineer's Office

HERSCHLER BUILDING, 4-E CHEYENNE, WYOMING 82002  
(307) 777-7354 FAX (307) 777-5451  
[seoleg@seo.wyo.gov](mailto:seoleg@seo.wyo.gov)

November 14, 2008

DAVE FREUDENTHAL  
GOVERNOR

PATRICK TYRRELL  
STATE ENGINEER

QUESTAR EXPLORATION & PRODUCTION CO.  
1050 17TH ST., SUITE 500  
Denver, CO 80265

Dear Applicant or Agent:

You are advised that the State Engineer approved the following application(s) to appropriate ground water for MIS on **November 13, 2008**. A copy of your permit is enclosed. Also enclosed are the form and instructions for submitting data to the State Engineer relating to the completion of the well and the beneficial use of the water, as required by law.

**PERMIT NUMBER - WELL NAME**

**U.W. 189049 - STEWART POINT 15-17 WSW  
WELL LOCATION - SWSE 17-33-109**

By statute the well must be completed and the water beneficially utilized by December 31, 2009. ***IF THE REQUIRED NOTICES ARE NOT RETURNED TO THIS OFFICE WITHIN THE STATUTORY TIME LIMITS SET FORTH, THE PERMIT(S) WILL BE SUBJECT TO CANCELLATION, WHICH ACTS AS A FORFEITURE OF THE WATER RIGHT GRANTED BY THIS PERMIT.***

An extension of time may be requested for completion of work when good reason is provided. A request for such extension must be received in the State Engineer's Office prior to the expiration date shown on the permit. Requests for extension of time must indicate due diligence on the part of the applicant to comply with the time limits imposed by this permit. ***(PLEASE NOTE: The conditions and limitations of your permit may NOT allow an extension of time.)***

**ALSO NOTE: THE WATER DELIVERY SYSTEM FROM THIS WELL SHALL BE EQUIPPED WITH A FUNCTIONAL BACKFLOW PREVENTION DEVICE TO ELIMINATE THE POSSIBILITY OF FLUIDS OR OTHER MATTER ENTERING THE WELL DURING USE.**

Sincerely,

A handwritten signature in cursive script that reads "Lisa Lindemann".

Lisa Lindemann, Administrator  
Ground Water Division

LL:CL  
xc: DIV 4 (7)

Surface Water  
(307) 777-6475

Ground Water  
(307) 777-6163

Board of Control  
(307) 777-6178

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

09-17-08 RCVD 0936

50039070  
50.00  
9/17/08

APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-7-275

PERMIT NO. U.W. 189049  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sablette Co.

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Stewart Point 15-17 WSW  
1- Questar Exploration and Production Company  
2- Bureau of Land Management Phone: 303-308-3068  
1- 1050 17th Street, Suite 500 Denver, CO 80265  
2- P.O. Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)  
3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_
  - Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks). Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.
  - Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sablette County, SW 1/4 SE 1/4 of Sec. 17, T. 33 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract      Block      of the      Subdivision (or Add'n) of      Resurvey Location: Tract     , (or Lot) 15 *per Gb's Per U.W. 5*

6. Estimated depth of the well or spring is 1000 970 feet. Estimated production interval is 670 ft. to 970 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section. *Per Email rec'd 11/4/08*

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
33	109	17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
33	109	20	X	X		X	X						X						

9. If for irrigation use:
- a. Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - b.  Land will be irrigated from this well only.
  - c.  Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.
10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_  
Bureau of Land Management
11. The well or spring is to be constructed on lands owned by \_\_\_\_\_  
(The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)
12. The water is to be used on lands owned by Bureau of Land Management  
(If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: Drilling of oil and gas wells, road maintenance, dust abatement, well work-over/repairs and reclamation  
Refile of cancelled permit #144088

*Per E-mail  
12/11/08*

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

*[Signature]* \_\_\_\_\_ September 10, 2008  
Signature of Applicant or Authorized Agent Date  
Debra K. Stanberry, Supervisor Regulatory Affairs

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
) ss.  
STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 17th day of September, A.D. 2008, at 9:36 o'clock A.M.

Permit No. U.W. 189049 \_\_\_\_\_  
*[Signature]*  
for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

**FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.**  
**This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction is waived.**

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 2007.~~

~~The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.~~

Witness my hand this 17th day of Nov., A.D. 20 08.

*[Signature]*  
PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 189049  
T.F. No. U.W. 41-7-275

PERMIT STATUS

Priority Date September 17, 2008

Approval Date NOV 13 2008

ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **oil and gas development, road maintenance, dust abatement, well work-over/repairs & reclamation** shall extend until **December 31, 2013**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2013**.
3. If this well is to be drilled on the main portion of the geographic region called "The Mesa", and the surface elevation of the well site is at an altitude greater than 7,250 feet above sea level, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to a depth of at least 500 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
4. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, the well is to be situated within 1,000 feet of an existing domestic or stock watering well, the top of the production zone (perforated interval) utilized by this well shall be located at least 200 feet below that of the bottom of the deepest production zone utilized by existing domestic or stock watering wells located within 1,000 feet of this water supply well. In this case, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to the top of the production zone of this well. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
5. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, this well is not situated within 1,000 feet of an existing domestic or stock watering well, as outlined in Condition 4, this well shall be cased with new or new-like blank unperforated casing from the land surface to a depth of at least 200 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above
6. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
7. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
8. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

11/13/2008  
Date of Approval

*Patrick T. Tyrrell*  
PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
Jade Henderson -Superintendent  
P.O. Box 277  
Cokeville, WY 83114

September 17, 2008 - Statement of Completion on May 22, 2002 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. **189049** NAME OF WELL/SPRING Stewart Point 15-17 WSW

1. NAME OF OWNER 1-Questar Exploration and Production Company 2-Bureau of Land Management

2. ADDRESS 1-1050 17th Street, Suite 500 2-P.O.Box 768  
1- Denver  Please check if address has changed from that shown on permit  
2- Pinedale  State 2- Wyoming Zip Code 2-82941 Phone No. 303-308-3068

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling)  
Oil & Gas Well Drilling

4. LOCATION OF WELL/SPRING SW 1/4 SE 1/4 of Section 17 T. 33 N., R. 109 W., of the 6th P.M. (or W.R.M.)  
Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83  
Geographic Coordinates: Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W (degrees, minutes, seconds)  
UTM: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (meters)  
State Plane Coordinates: Zone \_\_\_\_\_ Northing 4741853 Easting 590908 (feet)  
Land surface elevation (ft. above mean sea level) 7276 Datum  NAVD29  NAVD88  
Source  GPS  Map  Survey  Unknown  Other  Altimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled Rotary  Dug  Driven  Other  
Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 940 ft.  
Depth of static water level 520 ft. (below land surface) Casing height 0 ft. above ground

a. Diameter of borehole (bit size) 10 5/8 inches  
b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
6 5/8 diameter from 0 ft. to 940 ft. Material Steel Gage 0.188  
\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_  
c. Cemented/grouted interval, from 0 ft. to 500 ft.

Amount of cement/grout used 130 Sacks type Class G with 10-SX \*bentonite plug seal below  
(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen  
Type of perforator used Torch Cut  
Size of perforations 10 inches by 1/8 inches.  
Number of perforations and depths where perforated  
300 perforations from 640 ft. to 940 ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 3/8" Washed  
Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
Surface casing installed from 0 ft. to 20 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Searle Bros., 149 Pollux Drive, Rock Springs, WY 82901

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 05/22/2002

9. PUMP INFORMATION Manufacturer Grundfoss Type Submersible  
Source of power Generator Horsepower 30 Depth of pump setting or intake 860 ft.  
Amount of water being pumped 110 gal./min. (For springs or flowing wells, see item 10)  
Total volumetric quantity used per calendar year. 15 acre feet  
\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.  
The flow is controlled by  Valve  Cap  Plug  
Does well leak around casing?  Yes  No

Permit No. U.W. **189049** Book No. **1365** Page No. **149**

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., spring box, cribbing, etc., is necessary to qualify for a water right) \_\_\_\_\_

12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom \_\_\_\_\_  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

13. LOG OF WELL Total depth drilled 940 ft.  
 Depth of completed well 940 ft. Diameter of well 10 5/8 inches  
 Depth to first water bearing formation 97 ft.  
 Depth to principal water bearing formation Top 640 ft. to Bottom 922 ft.

**DRILL CUTTINGS DESCRIPTION**

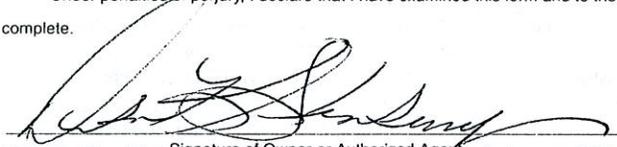
From Feet	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or no)
Surface	4	Gravel		No
4	75	Grey shale		No
75	97	Sandstone		Yes
97	201	Grey shale		No
201	212	Sandstone		Yes
212	322	Grey shale, red clay		No
322	338	Sandstone		Yes
338	640	Grey shale & sand stringers		No
640	656	Sandstone		Yes
656	692	Grey Shale	Note: Perforations	No
692	735	Sandstone	from 640' to 940'	Yes
735	810	Grey shale		No
810	860	Tight sandstone		No
860	872	Red clay		No
872	922	Sandstone		Yes
922	940	Grey shale		No

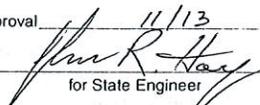
14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No  
 \* Cemented 470' to surface 30' bentonite plug 470' to 500'.

15. QUALITY OF WATER INFORMATION  
 Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No  
 It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well (contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984).  
 If not, do you consider the water as Good  Acceptable  Poor  Unusable

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.

  
 Debra K. Stamberry, Supervisor, Regulatory Affairs  
 September 10, 2008  
 Date

FOR STATE ENGINEER'S USE ONLY  
 Permit No. U.W. **189049**  
 Date of Receipt **SEP 17 2008**, 20\_\_\_\_  
 Date of Priority \_\_\_\_\_, 20\_\_\_\_  
 Date of Approval 11/13, 2008  
  
 for State Engineer

**SP 8-32**

**Well Completion Log**

# STATE OF WYOMING

09-25-03 RCVD 0917

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E CHEYENNE, WYOMING 82002  
(307) 777-6163

50039141  
50.00  
9/25/08

## APPLICATION FOR PERMIT TO APPROPRIATE GROUND WATER

### APPLICATION FOR WELLS AND SPRINGS

Note: Only springs flowing 25 gallons per minute or less, where the proposed use is domestic and/or stock watering, will be considered as ground water appropriations.

FOR OFFICE USE ONLY

Temporary Filing No. U.W. 41-4-283

PERMIT NO. U.W. 189095  
WATER DIVISION NO. 4 DISTRICT 7  
U.W. DISTRICT Sublette Co

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.  
ALL ITEMS MUST BE COMPLETED BEFORE APPLICATION IS ACCEPTABLE

NAME AND NUMBER OF WELL or SPRING Stewart Point 8-32D WSW  
1- Questar Exploration and Production Company  
2- Bureau of Land Management Phone: 303-308-3068  
1- Name of applicant(s) 1- 1050 17th Street, Suite 500 Denver, CO 80265  
2- Address of applicant(s) 2- P.O. Box 768, Pinedale, WY 82941  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)  
3. Name & address of agent to receive correspondence and notices Debra K. Stanberry, Supervisor, Regulatory Affairs  
1050 17th Street, Suite 500 Denver, CO 80265 Phone: 303-308-3068  
(MAILING ADDRESS) (CITY) (STATE) (ZIP)

4. Use to which the water will be applied:
- Domestic: Use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totaling one acre or less. Number of houses served? \_\_\_\_\_
  - Stock Watering: Normal livestock use at four tanks or less within one mile of well or spring. Stockwatering pipelines and commercial feedlots are a miscellaneous use. Number of stock tanks? \_\_\_\_\_
  - Irrigation: Watering of any lands for agricultural purposes not covered by the definition of domestic use (large-scale lawn watering of golf courses, cemeteries, recreation areas, etc., is miscellaneous use).
  - Municipal: Use of water in incorporated Towns and Cities. Note 1: use of water in unincorporated towns, subdivisions, improvement districts, mobile home parks, etc. is classified as miscellaneous use. Note 2: a permit may be required by the Wyoming Department of Environmental Quality (WDEQ) if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Industrial: Long term use of water for the manufacture of a product or production of oil/gas or other minerals (oil field water flood operations, power plant water supply, etc.). (Describe in REMARKS)
  - Miscellaneous: Any use of water not defined under previous definitions such as stock water pipelines, subdivisions, mine dewatering, mineral/oil exploration drilling, potable supplies in office, etc. (Describe in Remarks)  
Note: a permit may be required by the WDEQ if the well will be classified as a public water supply under the WDEQ's rules and regulations.
  - Coalbed Methane: Water produced in the production of coal bed methane gas. Note: wells used in the production of coal bed methane gas will require a permit from the Wyoming Oil and Gas Conservation Commission.
  - Monitor, Observation: Note: a WDEQ permit may be required  Test Well: (Describe in REMARKS)

5. Location of the well or spring: (NOTE: Quarter-quarter (40 acre subdivision) MUST be shown. EXAMPLE: SE 1/4 NW 1/4 of Sec. 12, Township 14 North, Range 68 West.)  
Sublette County, SE 1/4 NE 1/4 of Sec. 32, T. 33 N., R. 109 W. of the 6th P.M. (W.R.M.), Wyoming. If located in a platted subdivision, also provide Lot/Tract 32 Block 33 of the DEF Subdivision (or Add'n) of DEF. Resurvey Location: Tract 8, (or Lot) 8

6. Estimated depth of the well or spring is 1000 1090 feet. Estimated production interval is 810 ft. to 1090 ft.

7. (a) MAXIMUM instantaneous flow of water to be developed and beneficially used: 125 gallons per minute.  
NOTE: if for domestic and / or stock use, this application will be processed for a maximum of 25 gallons per minute. For a spring, after approval of this application, some type of artificial diversion or improvement must be constructed to qualify for a water right.

(b) MAXIMUM volumetric quantity of water to be developed and beneficially used per calendar year: 15 acre feet  
Circle appropriate units: (Gallons) (Acre Feet) A four person family utilizes approximately one (1) acre-foot of water per year or 325,000 gallons.

8. Mark the point(s) or area(s) of use in the tabulation box below. Note: Upper row refers to the quarter of the section. Next row refers to the quarter of the quarter section.

TABULATION BOX

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
33	109	32			X	X			X	X					X	X		X	
33	109	33			X			X					X						
33	109	29											X				X		

9. If for irrigation use:
- a. Describe MAXIMUM acreage to be irrigated in each 40 acre subdivision in the tabulation box above.
  - b.  Land will be irrigated from this well only.
  - c.  Land is irrigated from existing water right(s) with water from this well to be additional supply. Describe existing water right(s) under REMARKS.

10. If for irrigation use, describe method of irrigation, i.e. center pivot sprinkler, flood, etc.: \_\_\_\_\_

11. The well or spring is to be constructed on lands owned by Bureau of Land Management  
 (The granting of a permit does not constitute the granting of a right-of-way. If any easement or right-of-way is necessary in connection with this application, it should be understood that the responsibility is the applicant's. A copy of the agreement should accompany this application, if the land is privately owned and the owner is not the co-applicant.)

12. The water is to be used on lands owned by Bureau of Land Management  
 (If the landowner is not the applicant, a copy of the agreement relating to the usage of the appropriated water on the land should be submitted to this office. If the landowner is included as co-applicant on the application, this procedure need not be followed.) NOTE: Water rights attach to the area(s) and/or point(s) of use.

REMARKS: Drilling of oil and gas wells, road maintenance, dust abatement, well workover  
refill & reactivation Refill of cancelled permit #154968

Under penalties of perjury, I declare that I have examined this application and to the best of my knowledge and belief it is true, correct and complete.

Debra K. Stanberry Signature of Applicant or Authorized Agent      September 17 , 20 08 Date  
 Debra K. Stanberry, Supervisor, Regulatory Affairs

THE LEGALLY REQUIRED FILING FEE MUST ACCOMPANY THIS APPLICATION

DOMESTIC AND/OR STOCK WATERING USES (Domestic use is defined as use of water in 3 single family dwellings or less, noncommercial watering of lawns and gardens totalling one acre or less.)	\$25.00
IRRIGATION, MUNICIPAL, INDUSTRIAL, MISCELLANEOUS, COAL BED METHANE	\$50.00
MONITOR (For water level measurements or chemical quality sampling) or TEST WELL	No Fee

IF WELL WILL SERVE MULTIPLE USES, SUBMIT ONLY ONE (THE HIGHER) FILING FEE.

THIS SECTION IS NOT TO BE FILLED IN BY APPLICANT

THE STATE OF WYOMING )  
 ) ss.  
 STATE ENGINEER'S OFFICE )

This instrument was received and filed for record on the 25th day of September, A.D. 2008, at 9:17 o'clock A M.

Permit No. U.W. 189095      [Signature]  
 for State Engineer

THIS IS TO CERTIFY that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This application is approved subject to the condition that the proposed use shall not interfere with any existing rights to ground water from the same source of supply and is subject to regulation and correlation with surface water rights, if the ground and surface waters are interconnected. The use of water hereunder is subject to the further provisions of Chapter 169, Session Laws of Wyoming, 1957, and any subsequent amendments thereto.

Granting of a permit does not guarantee the right to have the water level or artesian pressure in the well maintained at any specific level. The well should be constructed to a depth adequate to allow for the maximum development and beneficial use of ground water in the source of supply.

If the well is a flowing artesian well, it shall be so constructed and equipped that the flow may be shut off when not in use without loss of water into sub-surface formations or at the land surface.

Coal Bed Methane wells have Additional Conditions and Limitations on attachment sheet.

**FOR ADDITIONAL CONDITIONS AND LIMITATIONS SEE ATTACHED STATUS SHEET.**

**This permit and accompanying notices serve to register an existing well and establish a valid water right for the same. Time limit for Completion of Construction and Completion of Beneficial Use is waived.**

~~Approval of this application may be considered as authorization to proceed with construction of the proposed well or spring. A Statement of Completion will be filed within thirty (30) days of completion of construction, including pump installation.~~

~~Completion of construction and completion of the beneficial use of water for the purposes specified in Item 4 of this application will be made by December 31, 20\_\_\_\_\_.~~

~~The amount of appropriation shall be limited to the quantity to which permittee is entitled as determined at time of proof of application of water to beneficial use.~~

Witness my hand this 2nd day of Dec., A.D. 20 08.

for [Signature]  
 PATRICK T. TYRRELL, State Engineer

PERMIT NO. U.W. 189095  
T.F. No. U.W. 41-4-283

PERMIT STATUS

Priority Date September 25, 2008

Approval Date DEC 2 2008

ADDITIONAL CONDITIONS AND LIMITATIONS:

1. The right to the use of ground water granted under this permit is restricted to the point (s) of use shown. The State Engineer is to be notified in writing at least five (5) days prior to utilizing water under this permit at any additional points of use. The written notification shall contain location of the point of use by 40 acre legal subdivision and approximate length of time the water will be used at additional point of use. A copy of the written notification shall be mailed to the field personnel designated below.
2. The right to the use of ground water granted under this permit is for **oil and gas development, road maintenance, dust abatement, well work-over/repairs & reclamation** shall extend until **December 31, 2013**. At that time the permit will be automatically cancelled unless a written request for an extension of time has been received by the State Engineer prior to **December 31, 2013**.
3. If this well is to be drilled on the main portion of the geographic region called "The Mesa", and the surface elevation of the well site is at an altitude greater than 7,250 feet above sea level, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to a depth of at least 500 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
4. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, the well is to be situated within 1,000 feet of an existing domestic or stock watering well, the top of the production zone (perforated interval) utilized by this well shall be located at least 200 feet below that of the bottom of the deepest production zone utilized by existing domestic or stock watering wells located within 1,000 feet of this water supply well. In this case, this well shall be cased with new or new-like quality blank unperforated casing from the land surface to the top of the production zone of this well. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
5. If this well is to be located in portions of the Pinedale Anticline Project Area that are not specific to "The Mesa" region as outlined in Condition 3, and, this well is not situated within 1,000 feet of an existing domestic or stock watering well, as outlined in Condition 4, this well shall be cased with new or new-like blank unperforated casing from the land surface to a depth of at least 200 feet below land surface. Said casing shall be grouted in place utilizing one or more of the following materials, neat cement, cement/bentonite mixed grout, bentonite pellets/chips, or bentonite slurry, from the land surface to the bottom of the blank unperforated casing, interval specified above.
6. The water delivery system from this well shall be equipped with a functional backflow prevention device to eliminate the possibility of fluids or other matter entering the well during use.
7. Part I of the final Proof of Appropriation is required for this permit; however, Parts II and III are waived.
8. The State Engineer may, upon written request, waive all or any portion of these conditions and limitations.

12/2/2008  
Date of Approval

  
PATRICK T. TYRRELL, State Engineer

**COPY OF THIS PERMIT MAILED TO:**  
Jade Henderson -Superintendent  
P.O. Box 277  
Cokeville, WY 83114

September 25, 2008 - Statement of Completion on December 21, 2003 received.  
September 25, 2008 - Proof of Beneficial Use on July 17, 2008 received.

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 189095 NAME OF WELL/SPRING Stewart Point 8-32D WSW

1. NAME OF OWNER Questar Exploration and Production Company 2-Bureau of Land Management

2. ADDRESS 1050 17th Street, Suite 500 2-P.O.Box 768

City 2- Pinedale State 2- Wyoming Zip Code 2-82941 Phone No. 303-308-3068

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling)  
Oil & Gas Well Drilling

4. LOCATION OF WELL/SPRING SE 1/4 NE 1/4 of Section 32 T. 33 N., R. 109 W. of the 6th P.M. (or W.R.M.)

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83 PP Waiver

Geographic Coordinates: Latitude 42° 47' 17.02" N Longitude 107° 52' 52.98" W (degrees, minutes, seconds)

UTM: Zone \_\_\_\_\_ Northing 4737791.601 Easting 591405.5736 (meters)

State Plane Coordinates: Zone \_\_\_\_\_ Northing 15543935.7 Easting 1940307.0 (feet)

Land surface elevation (ft. above mean sea level) \_\_\_\_\_ Datum  NAVD29  NAVD88

Source  GPS  Map  Survey  Unknown  Other  Altimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled  Rotary  Dug  Driven  Other

Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 1090 ft.

Depth of static water level 400 ft. (below land surface) Casing height 24" ft. above ground

a. Diameter of borehole (bit size) 12 1/4 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

8 5/8 diameter from 0 ft. to 1090 ft. Material Steel Gage 0.188

\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 500 ft.

Amount of cement/grout used 130 Sacks type Cement  
(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen

Type of perforator used Torch Cut

Size of perforations 12 inches by 1/8 inches.

Number of perforations and depths where perforated

320 perforations from 810 ft. to 1090 ft.

\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Rotary How long was well developed? 9 hours

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel 3/8" Pea

Filter/gravel pack installed from 500 ft. to 1090 ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from 0 ft. to 25 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Searle Bros. 149 Pollux Drive, Rock Springs, WY 82901

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 12/21/2003

9. PUMP INFORMATION Manufacturer Grundfoss Type Submersible

Source of power Generator Horsepower 50 Depth of pump setting or intake 1080 ft.

Amount of water being pumped 145725 gal./min.\* (For springs or flowing wells, see item 10) per u.w. 5TH

Total volumetric quantity used per calendar year.\* 15 acre feet

\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch. or \_\_\_\_\_ feet of water.

The flow is controlled by  Valve  Cap  Plug

Does well leak around casing?  Yes  No

Permit No. U.W. 189095 Book No. 1366 Page No. 45

SEE REVERSE SIDE



**EXHIBIT A**  
**Stewart Point 8-32D Water Source Well**

From Feet Surface	To Feet	Rock Type or Description	Formation	Water Bearing? (Yes or No)
0	20	Gravel		No
20	65	Green Sandy Clay		No
65	182	Gray Shale		No
182	360	Gray Siltstone		No
360	375	Red Clay		No
375	403	Gray Shale		No
403	412	Sandstone		Yes
412	453	Tan Shale		No
453	585	Gray Siltstone		No
585	634	Sandstone		Yes
634	694	Gray Siltstone		No
694	721	Red & Gray Shale		No
721	730	Gray Shale		No
730	751	Sandstone		Yes
751	803	Gray Shale		No
803	835	Red & Gray Shale		No
835	861	Gray Shale		No
861	873	Sandstone		Yes
873	931	Gray Siltstone		No
931	1000	Broken Gray Rock		Yes
1000	1029	Gray Siltstone		No
1029	1090	Blue & Red Shale		No

Note: Perforations from 810' to 1090'

# **ANNEX 4C-3**

## **WELL COMPLETION LOGS FOR SOUTH ZONE**

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**AN 5-4**

**Well Completion Log**

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

PERMIT NO. U.W. 200779 NAME OF WELL/SPRING Antelope 5-4

1. NAME OF OWNER Linn Operating, Inc.

2. ADDRESS 600 Travis, Suite 5100  
 Please check if address has changed from that shown on permit

City Houston State Texas Zip Code 77002 Phone No. 713-904-6537

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

4. LOCATION OF WELL/SPRING SW 1/4 NW 1/4 of Section 4 T. 29 N., R. 107 W., of the 6th P.M. (or W.R.M.)

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83

Geographic Coordinates: Latitude 42.51222 N Longitude 109.613889 W (degrees, minutes, seconds)

UTM: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (meters)

State Plane Coordinates: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (feet)

Land surface elevation (ft. above mean sea level) \_\_\_\_\_ Datum  NAVD29  NAVD88

Source  GPS  Map  Survey  Unknown  Other  Allmeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled  Dug  Driven  Other

Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 550 ft.

Depth of static water level 90 ft. (below land surface) Casing height 2.2 ft. above ground

a. Diameter of borehole (bit size) 10 5/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

6 5/8 diameter from 0 ft. to 550 ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 220 ft.

Amount of cemen/grout used 127 type Bentonite seal

(example: 10 sacks) (example: bentonite pallets)

d. Type of completion  Customized perforations  Open hole  Factory screen

Type of perforator used \_\_\_\_\_

Size of perforations 12 inches by 1/8 inches.

Number of perforations and depths where perforated

240 perforations from 430 ft. to 550 ft.

\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method \_\_\_\_\_ How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel pea gravel

Filter/gravel pack installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Searle Bros. Construction 149 Pollux Dr. Rock Springs, WY

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 8/5/14

9. PUMP INFORMATION Manufacturer Grundfos Type 80S200-18

Source of power Generator Horsepower 20 Depth of pump setting or intake 465 ft.

Amount of water being pumped 80 gal./min.\* (For springs or flowing wells, see Item 10)

Total volumetric quantity used per calendar year.\* \_\_\_\_\_

\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.

The flow is controlled by  Valve  Cap  Plug

Does well leak around casing?  Yes  No



**BO 14-32**  
**Well Completion Log**

AUG 18 2006

**STATE OF WYOMING**

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002  
(307) 777-6163

**STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING**

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.

PERMIT NO. U.W. 176438 NAME OF WELL/SPRING BOULDER 14-32

1. NAME OF OWNER SHELL ROCKY MOUNTAIN PRODUCTION, LLC.

2. ADDRESS P O Box 1666, Pinedale WY 82941-1666  
 Please check if address has changed from that shown on permit.  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone No. 307-367-7904

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) Oil and gas development, dust abatement, construction for pads

4. LOCATION OF WELL/SPRING SE 1/4 SW 1/4 of Section 32, T. 31 N., R. 108 W., of the 6th P.M. ( or W.R.M.)  
 GPS coordinates UTM Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_  
 Subdivision name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
 If surveyed, bearing, distance, and reference point \_\_\_\_\_  
 Longitude (degrees, minutes, seconds) 109.745989 Latitude (degrees, minutes, seconds) 42.607369  
 Datum:  1927  1983 Source:  GPS  Map  Survey

5. TYPE OF CONSTRUCTION Drilled  Air Rotary  Dug  Driven  Other  
 Describe \_\_\_\_\_  
 (type of rig, and fluid used, if any)

6. CONSTRUCTION Total depth of well/spring 700 ft.  
 Depth to static water level 65 ft. (below land surface) Casing height 1.5 ft. above ground  
 a. Diameter of borehole (bit size) 9 7/8 inches  
 b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
6 " diameter from 0 ft. to 700 ft. Material Steel Gage \_\_\_\_\_  
 \_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_  
 c. Cemented/grouted interval, from 0 ft. to 200 ft.  
 Amount of grout used 85 sacks type bentonite pellets  
 (example: 10 sacks) (example: bentonite pellets)  
 d. Type of completion  Factory screen  Open hole  Customized perforations  
 Type of perforator used Torch  
 Size of perforations 6 inches by 1/8 inches  
 Number of perforations and depths where perforated  
150 perforations from 380 ft. to 400 ft. 100 perforations from 620 to 660'  
150 perforations from 500 ft. to 580 ft.  
 Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Well screen details  
 Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 e. Well development method Air How long did development last? 1 hour  
 f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel pea gravel  
 Filter pack/gravel installed from 200 ft. to 700 ft.  
 g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
 Surface casing installed from 0 ft. to 20 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Excel Drilling P O Box 267 Rock Springs WY

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 09-21-06

9. PUMP INFORMATION Manufacturer Grundfos Type Submersible  
 Source of power Generator Horsepower 30 Depth of pump setting or intake 672' ft.  
 Amount of water being pumped 85 gal./min. (For springs or flowing wells, see item 10)  
 Total volumetric quantity used per calendar year 3.5 million

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
 If well yields artesian flow or if spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water  
 The flow is controlled by  Valve  Cap  Plug  
 Does well leak around casing?  Yes  No



## Attachment for the Boulder 14-32 Water Well

## Cuttings Description Continued for the

From Feet	To Feet	Rock Type Texture, color	Formation	Water Bearing Formations (Yes or No)	Perforated casing Location
0	12	Sandstone			
12	25	Blue Shale			
25	40	Sandstone			
75	110	Green Shale			
110	120	Sandstone		Yes	
120	210	Green Shale			
210	250	Brown Shale			
250	280	Sandstone		yes	
280	340	Green Shale			
340	380	Brown Shale			
380	390	Sandstone		Yes	Perfs 380-400
390	490	Brown Shale			
490	500	Sandstone		Yes	500'-580'
500	515	Blue Shale			
515	530	Sandstone		Yes	
530	545	Blue Shale			
545	565	Sandstone		Yes	
565	620	Brown Shale			
620	650	Sandstone		Yes	620' - 660'
650	700	Blue Shale			

**RB 15-31**

**Well Completion Log**

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002  
(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter  
or print neatly with black pen.

PERMIT NO. U.W. 200787 NAME OF WELL/SPRING Rainbow 15-31

1. NAME OF OWNER Linn Operating, Inc.

2. ADDRESS 600 Travis, Suite 5100

Please check if address has changed from that shown on permit

City Houston State Texas Zip Code 77002 Phone No. 713-904-6537

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

4. LOCATION OF WELL/SPRING SW 1/4 SE 1/4 of Section 31 T. 30 N., R. 107 W., of the 6th P.M. (or W.R.M.)

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

Resurvey Location Tract \_\_\_\_\_ or Lot \_\_\_\_\_ Datum  NAD27  NAD83

Geographic Coordinates: Latitude 42.519722 N Longitude 109.644444 W (degrees, minutes, seconds)

UTM: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (meters)

State Plane Coordinates: Zone \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_ (feet)

Land surface elevation (ft. above mean sea level) \_\_\_\_\_ Datum  NAVD29  NAVD88

Source  GPS  Map  Survey  Unknown  Other  Altimeter (for elevation only)

5. TYPE OF CONSTRUCTION  Drilled  Dug  Driven  Other

Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 740 ft.

Depth of static water level \_\_\_\_\_ ft. (below land surface) Casing height 3 ft. above ground

a. Diameter of borehole (bit size) 9 7/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

6" diameter from 0 ft. to 740 ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 200 ft.

Amount of cement/grout used 95 bags type Bentonite

(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Customized perforations  Open hole  Factory screen

Type of perforator used \_\_\_\_\_

Size of perforations 1/8 inches by 6 inches.

Number of perforations and depths where perforated

250 perforations from 530 ft. to 698 ft.

\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method \_\_\_\_\_ How long was well developed? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel pea gravel

Filter/gravel pack installed from 200 ft. to 740 ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from 0 ft. to 20 ft.

7. NAME AND ADDRESS OF DRILLING COMPANY Excel Drilling, P.O. Box 267, Rock Springs, WY 82902

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 11/14/13

9. PUMP INFORMATION Manufacturer Grundfos Type 85-5250-19

Source of power generator Horsepower 30 Depth of pump setting or intake 628 ft.

Amount of water being pumped \_\_\_\_\_ gal./min.\* (For springs or flowing wells, see item 10)

Total volumetric quantity used per calendar year. \_\_\_\_\_

\*If these amounts exceed permitted amount an enlargement is required.

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian flow or spring, yield is \_\_\_\_\_ gal./min. \*Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.

The flow is controlled by  Valve  Cap  Plug

Does well leak around casing?  Yes  No

Permit No. U.W. \_\_\_\_\_ Book No. \_\_\_\_\_ Page No. \_\_\_\_\_



**WB 11-4**  
**Well Completion Log**

STATE OF WYOMING

OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002  
(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.

PERMIT NO. U.W. 179159 NAME OF WELL/SPRING WARBONNET 11-4 WW

1. NAME OF OWNER SHELL ROCKY MOUNTAIN PRODUCTION, LLC.

2. ADDRESS P O Box 1666

City Pinedale State WY Zip Code 82941-1666 Phone No. 307-367-7904  
 Please check if address has changed from that shown on permit.

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous  
 Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) \_\_\_\_\_

4. LOCATION OF WELL/SPRING NE SW 1/4 of Section 4, T. 30 N., R. 108 W., of the 6th P.M. ( or W.R.M.)  
GPS coordinates UTM Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_  
Subdivision name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
If surveyed, bearing, distance, and reference point  
Longitude (degrees, minutes, seconds) 109° 43' 34" Latitude (degrees, minutes, seconds) 42° 35' 52"  
Datum:  1927  1983 Source:  GPS  Map  Survey

5. TYPE OF CONSTRUCTION Drilled  Air Rotary \_\_\_\_\_  Dug  Driven  Other  
Describe Drilled \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 800 ft.  
Depth to static water level 187 ft. (below land surface) Casing height 2.5 ft. above ground

a. Diameter of borehole (bit size) 9 5/8 inches  
b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded  
6 5/8 diameter from 0 ft. to 20 ft. Material Steel Gage .250  
\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 200 ft. to Surface ft.  
Amount of grout used \_\_\_\_\_ type Syds cement 10 yards gravel  
(example: 10 sacks) (example: bentonite pellets)

d. Type of completion  Factory screen  Open hole  Customized perforations  
Type of perforator used Pneumatic perforator  
Size of perforations \_\_\_\_\_ inches by \_\_\_\_\_ inches  
Number of perforations and depths where perforated  
10 perforations from 570 ft. to 600 ft. 750 to 800  
10 perforations from 660 ft. to 690 ft.  
Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method Air Rotary How long did development last? \_\_\_\_\_

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel Pea gravel  
Filter pack/gravel installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No  
Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7. NAME AND ADDRESS OF DRILLING COMPANY White Mtn Drilling:POB 2353:Pinedale WY 82941

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 04-20-07

9. PUMP INFORMATION Manufacturer Grundfos Type Submersible  
Source of power Generator Horsepower 30 Depth of pump setting or intake 768 ft.  
Amount of water being pumped 150 gal./min. (For springs or flowing wells, see item 10)  
Total volumetric quantity used per calendar year 8,000,000

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)  
If well yields artesian flow or if spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water  
The flow is controlled by  Valve  Cap  Plug  
Does well leak around casing?  Yes  No

11. IF SPRING, HOW WAS IT CONSTRUCTED? (Some method of artificial diversion, i.e., springbox, cribbing, etc., is necessary to qualify for a water right) \_\_\_\_\_

12. PUMP TEST Was a pump test conducted?  Yes  No  
 If so, by whom Premier Pumps, Farson WY  
 Yield 150 gal./min. with 355 ft. drawdown after 24 hours  
 Yield \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hours

13. LOG OF WELL Total depth drilled 500 ft.  
 Depth of completed well \_\_\_\_\_ ft. Diameter of well \_\_\_\_\_ inches.  
 Depth to first water bearing formation \_\_\_\_\_ ft.  
 Depth to principal water bearing formation top \_\_\_\_\_ ft. to bottom \_\_\_\_\_ ft.  
 Land surface elevation (ft. above mean sea level) 7103' Datum  1929  1988  
 How determined  Map  Altimeter  Survey  Other

**DRILL CUTTINGS DESCRIPTION:**

From	To Ft.	Rock Type Or Description	Formation	Water Bearing? (Yes or No)
Surface				
0	40	Clay sand		
40	250	Clay		
250	310	Sandstone		
310	500	Shale		
500	570	Clay and Shale		
570	600	Water Sand	X	X
600	660	Shale		
660	690	Water Sand	X	X
690	750	CLay		
750	800	Water Sand	X	X

14. DOES A GEOPHYSICAL LOG ACCOMPANY THIS FORM?  Yes  No

15. QUALITY OF WATER INFORMATION  
 Does a chemical and/or bacteriological water quality analysis accompany this form?  Yes  No  
 It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well. (Contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984.)  
 If not, do you consider the quality of water as  Good  Acceptable  Poor  Unusable

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct, and complete.  
Allen Cain \_\_\_\_\_ 30 April, 2007  
 Signature of Owner or Authorized Agent Date

**FOR STATE ENGINEER'S USE ONLY**

Permit No. U.W. 179159  
 Date of Receipt \_\_\_\_\_, 20\_\_\_\_ Date of Approval \_\_\_\_\_, 20\_\_\_\_  
 Date of Priority 1/18/2007  
 \_\_\_\_\_  
 for State Engineer

**WB 8-25**

**Well Completion Log**

STATE OF WYOMING  
OFFICE OF THE STATE ENGINEER  
HERSCHLER BLDG., 4-E  
CHEYENNE, WYOMING 82002

(307) 777-6163

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL OR SPRING

NOTE: Do not fold this form. Use typewriter or print neatly with black pen.

11-13-07  
1:30 pm  
PH  
50-

PERMIT NO. U.W. 183921 NAME OF WELL/SPRING WARBONNET 8-25

1. NAME OF OWNER ULTRA RESOURCES, INC. <sup>2)</sup> U.S.D.I., Bureau of Land Management

2. ADDRESS 304 INVERNESS WAY SOUTH, SUITE 295 <sup>2)</sup> P.O. Box 1828, Cheyenne, WY 82003

Please check if address has changed from that shown on permit

City ENGLEWOOD State CO Zip Code 80112 Phone No. 303-645-9835

3. USE OF WATER  Domestic  Stock Watering  Irrigation  Municipal  Industrial  Miscellaneous

Monitor or Test  Coal Bed Methane Explain proposed use (Example: One single family dwelling) For the geographic area

specified in Paragraph 8 of Form U.W.5 Ultra requests the right to the use of ground water under Permit #162587 for oil & gas well drilling, completion, road construction/maintenance, dust abatement, and reclamation.

4. LOCATION OF WELL/SPRING SE 1/4 NE 1/4 of Section 25 T, 30 N., R. 108 W., of the 6th P.M. (or W.P.M.)

GPS Coordinates UTM Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_

If surveyed, bearing, distance and reference point \_\_\_\_\_

Longitude (degrees, minutes, seconds) W 109\*39.488' Latitude (degrees, minutes, seconds) N 42\*32.499'

Datum  1927  1983 Source:  GPS  Map  Survey

5. TYPE OF CONSTRUCTION  Drilled AIR ROTARY RT 1800  Dug  Driven  Other

(Type of rig, and fluid used, if any)

Describe \_\_\_\_\_

6. CONSTRUCTION Total depth of well/spring 670 ft.

Depth of static water level 290 ft. (below land surface) Casing height 3' ft. above ground

a. Diameter of borehole (bit size) 10 5/8 inches

b. Casing schedule  New  Used Joint type  Threaded  Glued  Welded

6 5/8 diameter from 0 ft. to 670 ft. Material STEEL Gage .188

\_\_\_\_\_ diameter from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Gage \_\_\_\_\_

c. Cemented/grouted interval, from 0 ft. to 200 ft.

Amount of cement/grout used 90 SACKS type BENTONITE PELLETS

(example: 10 sacks)

(example: bentonite pellets)

d. Type of completion  Factory screen  Open hole  Customized perforations

Type of perforator used TORCHED

Size of perforations 12 inches by 1/8 inches.

Number of perforations and depths where perforated

250 perforations from 550 ft. to 670 ft. *per attached well log*

\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Open hole from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Well screen details

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diameter \_\_\_\_\_ slot size \_\_\_\_\_ set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

e. Well development method AIR LIFT How long was well developed? 3 HRS

f. Was a filter/gravel pack installed?  Yes  No Size of sand/gravel PEA

Filter/gravel pack installed from 505 ft. to 670 ft.

g. Was surface casing used?  Yes  No Was it cemented in place?  Yes  No

Surface casing installed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. REMOVED

7. NAME AND ADDRESS OF DRILLING COMPANY SEARLE BROS. CONSTRUCTION, ROCK SPRINGS, WY 82901

8. DATE OF COMPLETION OF WELL (including pump installation) OR SPRING (first used) 10/27/2004

9. PUMP INFORMATION Manufacturer GRUNDFOS Type SUBMERSIBLE

Source of power PUMP Horsepower 40 Depth of pump setting or intake 640 ft.

Amount of water being pumped 150 gal./min. (For springs or flowing wells, see item 10)

Total volumetric quantity used per calendar year. 2,000,000 gallons, Per U.W. 5

10. FLOWING WELL OR SPRING (Owner is responsible for control of flowing well)

If artesian or spring, yield is \_\_\_\_\_ gal./min. Surface pressure is \_\_\_\_\_ lb./sq.inch, or \_\_\_\_\_ feet of water.

The flow is controlled by:  Valve  Cap  Plug

Does well leak around casing?  Yes  No



# Attachment for Statement of Completion U.W. 183921

## Searle Bros. Construction

149 Pollux Drive  
Rock Springs, Wyoming 82901

Name U 1124 Resource  
Address \_\_\_\_\_  
Phone # \_\_\_\_\_  
Well name Warbennett 9-25  
Permit # \_\_\_\_\_

Borehole size 70 5/8 depth 670  
Casing size 6 3/8 new  used  
Perforations 250 size 12" by 1/8"  
screen \_\_\_\_\_ slot size \_\_\_\_\_  
Depth from 550 to 670  
Completed Depth 670'  
Static water level 290'

start finish  
Date 10-22-04 10-22-04  
Test pump Yes \_\_\_\_\_ No   
Gravel pack Per  
Surface Casing NO

FROM FEET	TO FEET	MATERIAL	PERFORATIONS	WATER ZONES	REMARKS (CEMENTING)
0	5	Gray Shale			3' Pipe Stick up
5	9	Red Clay			
9	10	Tan Sand			
10	78	Red Shale			200' Bentonite Seal
78	125	Gray Siltstone			90 sacks
125	137	Tan Sand			
137	223	Gray Siltstone			3 hrs Developing
223	226	Gray Shale			Air Lift Method
226	279	Sandstone			
279	321	Gray Siltstone		V	6 3/8 Steel Pipe
321	746	Red Shale			Torch Cut Perfor
346	374	Gray Shale			Welded
374	412	Gray Siltstone			
412	428	Sandstone		Y	
428	433	Gray Shale			
433	452	Sandstone		X	
452	466	Gray Shale			
466	471	Red Shale			
471	488	Gray Siltstone			
488	498	Red Shale			
498	505	Sandstone		Y	
505	575	Gray Shale	Y		
575	601	Sandstone	Y	Y	} Main water
601	638	Red Shale	Y		
638	645	Gray Shale	Y		
645	658	Sandstone	Y	X	
658	670	Gray Shale	Y		

Well Completion Log