west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

December 04, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9500658, issued to GASTAR EXPLORATION USA, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: M.W. SPENCER NO. 17
Farm Name: SPENCER, ALVA D. ,. ESTATE
API Well Number: 47-9500658
Permit Type: Plugging
Date Issued: 12/04/2013

Promoting a healthy environment.

9500658P

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.

2. Well work activities shall not constitute a hazard to the safety of persons.

9500658P

WW-4B
Rev. 2/01

1) Date: September 22, 2013
2) Operator's Well Number
M.W. Spencer No.17
3) API Well No: 47 - 095 - 0658
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) WELL TYPE: Oil X Gas X Liquid Injection ____ Waste Disposal ____
(If "Gas", Production ____ Underground Storage ____) Deep ____ Shallow X

5) LOCATION: Elevation: 1007' Watershed: Indian Creek
District: McElroy 05 County: Tyler 95 Quadrangle Shirley 7.5' 607

6) WELL OPERATOR: Gastar Exploration, Ltd. 494487685
Address 229 W. Main St., Suite 301
Clarksburg, WV 26301

7) DESIGNATED AGENT Mike McCown
Address 229 W. Main St., Suite 301
Clarksburg, WV 26301

8) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Joe Taylor
Address 497 Claylick Road
Ripley, WV 25271

9) PLUGGING CONTRACTOR
Name
Address

10) WORK ORDER: The work order for the manner of plugging this well is as follows:

CASING	
6"	1,902'
5"	130'
LINERS	

TD-2,090' Coal: NA

Gel	2090	-	1995
Plug No. 1	1995	-	1850
Pull 5" Casing			
Freepoint, Cut & Pull 6" Casing at 1,000' (Est.)			
Plug No. 2	1050	-	950
Plug No. 3	500	-	400
Plug No. 4	100	-	Surface

NOTES:
Free point, cut and pull all casing strings present. Place 100 ft. cement plug at bottom of any casing left in well.
Fill Well Bore with 6% Gel Between all Cement Plugs
Erect Monument with API No.

CEMENT PLUGS MUST BE A MINIMUM OF 100' CLASS A CEMENT WITH NO MORE THAN 3% $CaCl_2$ AND NO OTHER ADDITIVES.

Received
NOV 6 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

Inspector 24 hours before permitted work can commence.

Work order approved by Inspector ____ Date 10-28-13

9500658P

WELL RECORD

Operator: Gastar Exploration, Ltd.
229 West Main Street
Clarksburg, WV 26301
(304) 622-4796

Well: M.W. Spencer No.17

API 47-095- 0658

Latitude: 39°25'39.3"
Longitude: 80°47'26.3"
Elevation: 1,007

UTM Coordinates (NAD 1983)
Northing: 4,364,256
Easting: 518,033

TD: 2,090
Producing Formation: Big Injun
Spud Date: 10/9/1919
Completion Date: 11/19/1919

Casing Record

6"	1,902
5"	130

Well Log

Not Available

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NOV 6
Office of Oil and Gas
WV Dept. of Environmental Protection

9500658P

WW-4A
Revised 6-07
Surface Owner Copy

CK 35127
100.00

1) Date: September 22, 2013
2) Operator's Well Number
M.W. Spencer No.17
3) API Well No: 47 - 095 - 0658
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name Alva D. Spencer Estate
Address C/O Marcia Mronzinski
3471 Maradee Ct.
(b) Name Farwell, MI 48622
Address
(c) Name
Address

5) (a) Coal Operator:
Name NA
Address
(b) Coal Owner(s) with Declaration
Name NA
Address
Name
Address
NA
(c) Coal Lessee with Declaration
Name
Address

6) Inspector Joe Taylor
Address 497 Claylick Road
Ripley, WV 25271
Telephone 304-380-7469

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

1) The Application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work, and describes the well and its location and the plugging work order; and
2) The plat (surveyor's map) showing the well location on Form WW-6

The reason you have received these documents is that you have rights regarding the application which are summarized in the intructions on the reverse side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator Gastar Exploration, Ltd.
By: Mike McCown
Its: COO & Designated Agent
Address 229 W. Main St., Suite 301
Clarksburg, WV 26301
Telephone (304) 622-4796

Received
NOV 6 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

Subscribed and sworn before me this 4th day of October, 2013
Notary Public
My Commision Expires June 11, 2020

OFFICIAL SEAL
Notary Public, State of West Virginia
DAVID W. PERKINSON
377 Eastview Drive
Parkersburg, WV 26104
My commission expires June 11, 2020

95006 58P

SURFACE OWNER WAIVER

Operator's Well Number: M.W. Spencer No.17
47- 095- 0658

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

1) The proposed well work will constitute a hazard to the safety of persons.
2) The soil erosion and sediment control plan is not adequate or effective;
3) Damage would occur to publicly owned lands or resources;
4) The proposed well work fails to protect fresh water sources or supplies;
5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON ETC.

Signature _____ Date 11/5/2013

FOR EXECUTION BY A CORPORATION, ETC.

Name _____
By _____
Its _____ Date _____

Signature _____ Date _____

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WV Department of Environmental Protection

9500658 P

Form WW-9

API Number 47- 095 - 0658

Operator's Well No. M.W. Spencer No.17

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator: Gastar Exploration, Ltd. OP Code: 494487685

Watershed: Indian Creek Quadrangle: Shirley 7.5'

Elevation: 1007' County: Tyler District: McElroy

Description of anticipated Pit Waste: Fluids encountered in plugging subject well

Do you anticipate more than 5,000 bbls of water to complete the proposed well work? Yes ____ No X

Will a synthetic liner be used in pit? Yes If so, what mil.? ~~10~~ 20

Proposed Disposal Method For Treated Pit Wastes:

X Land Application

____ Underground Injection (UIC Permit Number ____)

____ Reuse (at API Number ____)

____ Off Site Disposal (Supply Form WW-9 for disposal location)

____ Other (Explain ____

Drilling medium anticipated for this well? Air, fresh water, oil based, etc. NA

- If oilbased, what type? Synthetic, petroleum, etc. ____

Additives to be used? ____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. NA

- If left in pit and plan to solidify, what medium will be used? Cement, lime, sawdust NA

- Landfill or offsite name/permit number? ____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Received NOV

Company Official Signature: [signature]

Company Official (Typed Name): Mike McCown

Company Official Title: COO & Designated Agent

Subscribed and sworn before me this 4th day of October, 2013

[signature] Notary Public

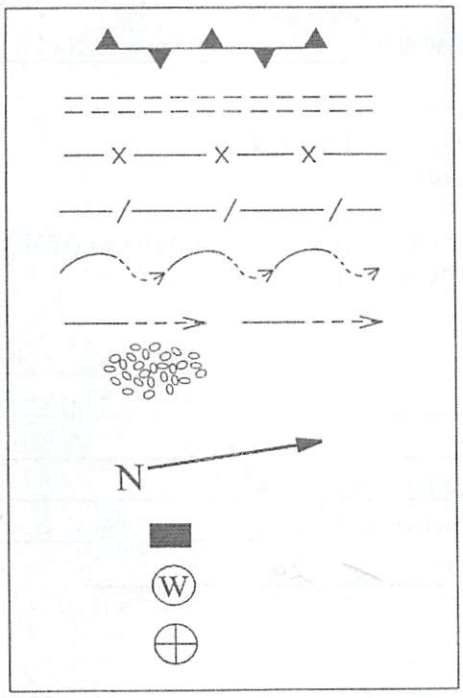
My commission expires June 11, 2020

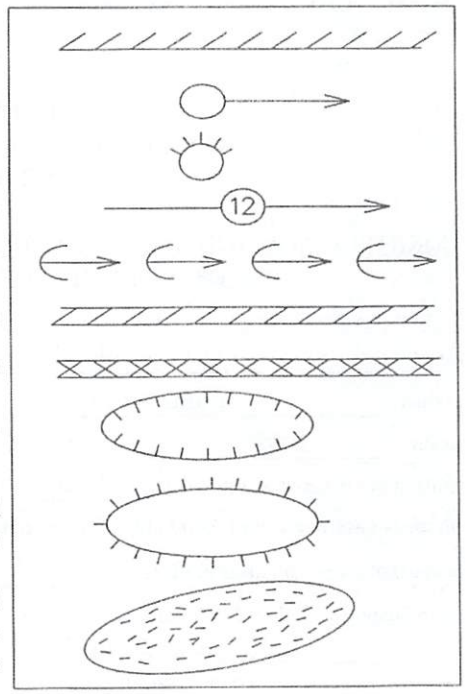
Form WW-9

OFFICIAL SEAL
Notary Public, State of West Virginia
DAVID W. PERKINSON
377 Eastview Drive
Parkersburg, WV 26104
My commission expires June 11, 2020

9500658P

Legend





Proposed Revegetation Treatment: Acres Disturbed

Area I
Approx. 0.2 Ac.

Area II
Approx. 0.1 Ac.

Prevegetation pH _____

Lime 2 Tons/Acre or Correct to pH 6.5
Fertilizer (10-20-20 or Equivalent) 500 Lbs./Acre (500 lbs. Minimum)
Mulch Straw 2 Tons/Acre

SEED MIXTURES

Area I (Location)

Seed Type	Lbs/Ac.
Tall Fescue	40
Ladino Clover	5

Area II (Road)

Seed Type	Lbs/Ac.
Tall Fescue	40
Ladino Clover	5

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Attach:
Drawing(s) of road, location, pit and proposed area for land application
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments: _____

Title: Inspector Date: 10-28-13

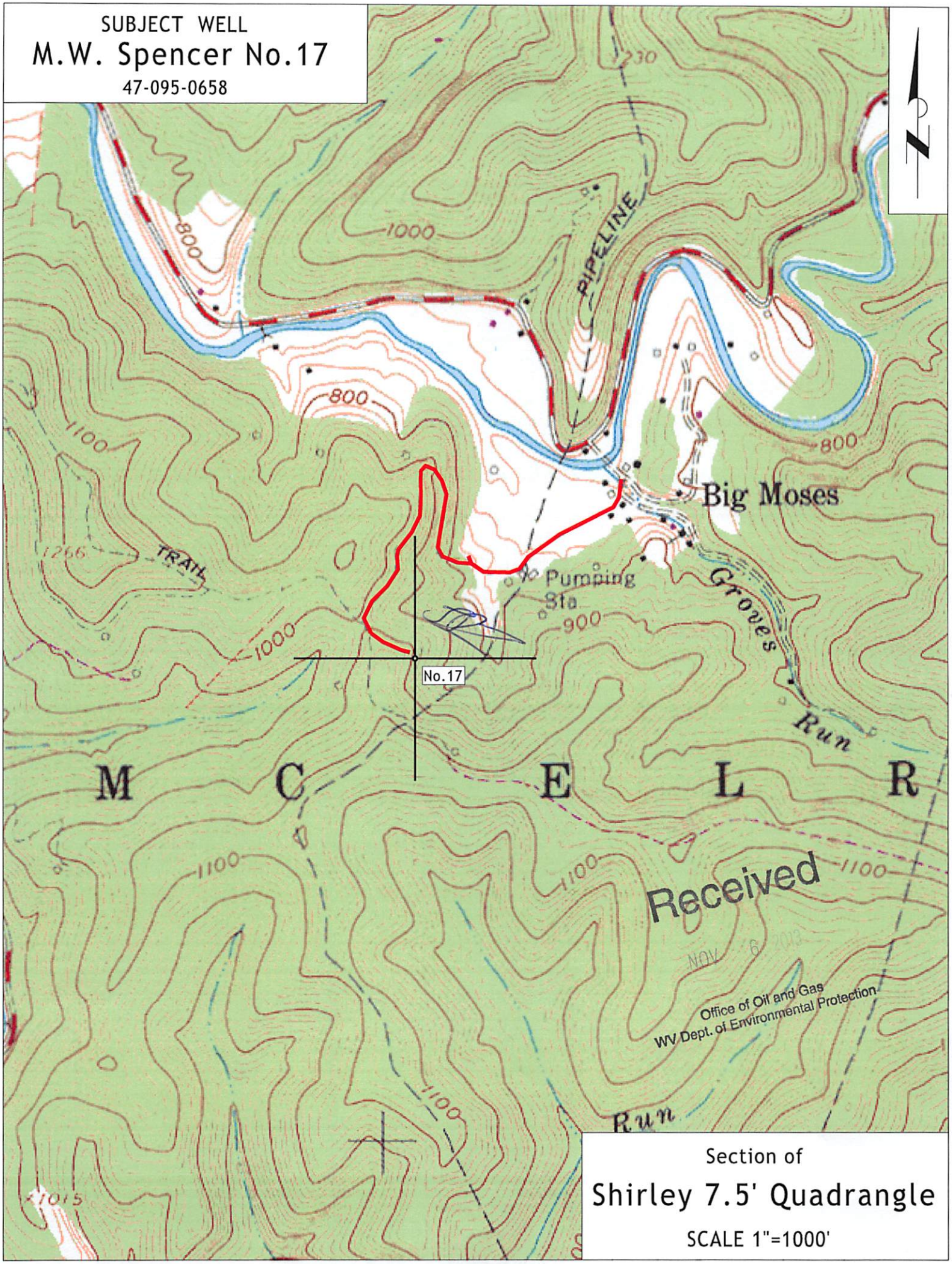
Field Reviewed? X Yes ____ No

9500658P

SUBJECT WELL

M.W. Spencer No.17

47-095-0658



Section of

Shirley 7.5' Quadrangle

SCALE 1"=1000'

9500658 P

WW-7
5-02

West Virginia Department of Environmental Protection
Office of Oil & Gas
WELL LOCATION FORM: GPS

API: 47- 095 - 0658 **WELL NO:** No.17

FARM NAME: M.W. Spencer

RESPONSIBLE PARTY NAME: Gastar Exploration, Ltd.

COUNTY: Tyler **DISTRICT:** McElroy

QUADRANGLE: Shirley 7.5'

SURFACE OWNER: Alva D. Spencer Estate

ROYALTY OWNER: Alva D. Spencer Estate

UTM GPS NORTHING: 4,364,256 (NAD 83)

UTM GPS EASTING: 518,033 (NAD 83) **GPS ELEVATION:** 307 m. 1007 FT.

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit on the above well. The Office of Oil & Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone:17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) - meters.
2. Accuracy to Datum - 3.05 meters
3. Data Collection Method:

Survey Grade GPS	___	Post Processed Differential	___
		Real-Time Differential	___
Mapping Grade GPS	X	Post Processed Differential	X
		Real-Time Differential	___

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Office of Oil and Gas
WV Dept. of Environmental Protection

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Mike McCown — COO & Designated Agent

Signature — Title

September 22, 2013

Date