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**west virginia** department of environmental protection

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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 12, 2013

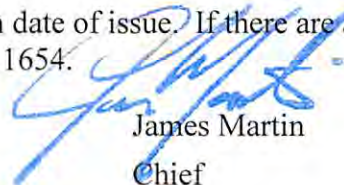
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-9500424, 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 penalties 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: P.M FURBEE NO. 1-A  
Farm Name: MASON, KENNETH & JENNIFER  
**API Well Number: 47-9500424**  
**Permit Type: Plugging**  
Date Issued: 12/12/2013

## 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

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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.

1) Date: October 1, 2013  
 2) Operator's Well Number P.M Furbee No.1-A  
 3) API Well No: 47 - 095 - 0424  
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: 789' Watershed: McElroy Creek  
 District: McElroy 05 County: Tyler 05 Quadrangle Shirley 7.5' 607

6) WELL OPERATOR: Gastar Exploration, Ltd. 494487685 7) DESIGNATED AGENT Mike McCown  
 Address 229 W. Main St., Suite 301 Address 229 W. Main St., Suite 301  
Clarksburg, WV 26301 Clarksburg, WV 26301

8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) PLUGGING CONTRACTOR  
 Name Joe Taylor Name \_\_\_\_\_  
 Address 497 Claylick Road Address \_\_\_\_\_  
Ripley, WV 25271 \_\_\_\_\_

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

CASING	
10"	290'
6 5/8"	1,690'
5 3/16" Liner	233' ?
LINERS	

TD-1,900' Coal: NA

Verify existence of 5 3/16" Liner. Pull or perforate if present.

Gel 1900 - 1830  
 Plug No. 1 1830 - 1640  
 Freepoint, Cut & Pull 6 5/8" Casing at 1,400' (Est.)  
 Plug No. 2 1450 - 1350  
 Plug No. 3 840 - 740  
 Plug No. 4 340 - 240  
 Plug No. 5 100 - 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' THICK CLASS A CEMENT WITH NO MORE THAN 3% CaCl2 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



OG-10



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS WELLS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage   
Oil or Gas Well Oil (KIND)

Quadrangle **West Union**

Permit No. **TYL - 424**

**WELL RECORD**

Company	<b>Quaker State Oil Refining Corporation</b>		Casing and Tubing	Used in Drilling	Left in Well	Packers
Address	<b>P. O. Box 1327, Parkersburg, W. Va.</b>		Size			
Firm	<b>P. M. Furbee Hrs</b>	Acres <b>316</b>	16			Kind of Packer
Location (waters)			13			
Well No.	<b>1-A</b>	Elev. <b>789.2</b>	10	<b>290</b>	<b>290</b>	Size of
District	<b>McElroy</b>	County <b>Tyler</b>	8 3/4	<b>1036</b>	<b>0</b>	Depth set
The surface of tract is owned in fee by <b>P.M. Furbee Hrs.</b>			6 3/4	<b>1694</b>	<b>1690</b>	Perf. top
<b>1/2 Fred Furbee</b>			5 3/16			Perf. bottom
Address <b>Marietta, Ohio</b>			4 1/2			Perf. top
Mineral rights are owned by <b>Same</b>			3			Perf. bottom
Address			2			
Drilling commenced <b>April 14, 1970</b>			Liners Used <b>5 3/16 233</b>	<b>233</b>		
Drilling completed <b>May 8, 1970</b>						
Date Shot <b>5-14-70</b> From <b>1836</b> To <b>1880</b>						
With <b>170 qts</b>						

Open Flow /10ths Water in Inch Attach copy of cementing record.  
/10ths Merc. in Inch CASING CEMENTED 10" SIZE 290 No. Ft. 4-16-70 Date

Volume Cu. Ft. Amount of cement used (bags) 100

Rock Pressure Vacuum lbs. Name of Service Co. Halliburton

Oil Show bbls. 1st 24 hrs. COAL WAS ENCOUNTERED AT None FEET INCHES

WELL ACIDIZED (DETAILS) N.A. FEET INCHES

WELL FRACTURED (DETAILS) N.A. FEET INCHES

RESULT AFTER TREATMENT (Initial open flow or bbls.) Est. 7-9 B.O.P.P. A.S. **SAME**

ROCK PRESSURE AFTER TREATMENT Vacuum HOURS

Fresh Water None reported Feet Salt Water None Reported Feet

Producing Sand Big Injun Depth 1836 - 1880

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Red Rock			0	10			
Sand			10	20			
Slate			20	40			
Red Rock			40	120			
Slate			120	150			
Red Rock			150	185			
Slate			185	245			
Lime		Hard	245	260			
Red Rock			260	285			
Lime		Hard	285	315			
Red Rock			315	335			
Sand			335	375			
Slate			375	390			
Lime			390	460			
Red Rock			460	470			
Lime			470	500			
Slate			500	540			
Sand			540	570			
Lime		Hard	570	590			
Slate			590	615			
Red Rock			615	625			
Lime			625	640			
Red Rock			640	660			
Slate			660	670			
Sand			670	700			
Red Rock			700	720			
Slate			720	745			
Lime			745	762			
Slate			762	805			

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Office of Oil and Gas  
WV Dept. of Environmental Protection

RECEIVED

JUN 30 1970

OIL & GAS DIVISION  
DEPT. OF ENV. PRO.

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Red Rock			805	860			
Slate			860	965			
Lime			965	1000			
Sand			1000	1010			
Slate			1010	1040			
Lime			1040	1080			
Sand			1080	1150			
Sand			1150	1175			
Slate			1175	1200			
Slate			1200	1380			
Sand			1380	1400			
Lime			1400	1430			
Slate			1430	1450			
Lime			1450	1465			
Sand			1465	1496			
Slate			1496	1608			
Red Rock			1608	1630			
Slate			1630	1645			
L. Lime		Hard	1645	1659			
Pencil Cove			1659	1670			
Big Linq.			1670	1775			
Big Injon			1775	1882			
Sandy Shale			1882	T.D.	Oil Pay	1824-82	
T.D.				1900			

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Office of Oil and Gas  
 Dept. of Environmental Protection

Date Nov 6 2013, 10: 45  
 APPROVED James H. Hinkle (Title)  
 By [Signature] (Title)

95 00424P

WW-4A  
Revised 6-07  
Surface Owner Copy

CK 35127  
10000

1) Date: October 1, 2013  
2) Operator's Well Number P.M Furbee No.1-A  
3) API Well No: 47 - 095 - 0424  
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 Kenneth & Jennifer Mason ✓  
Address P.O. Box 99  
Alma, WV 26320  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Joe Taylor  
Address 497 Claylick Road  
Ripley, WV 25271  
Telephone 304-380-7469  
5) (a) Coal Operator:  
Name NA  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name NA  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_

**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

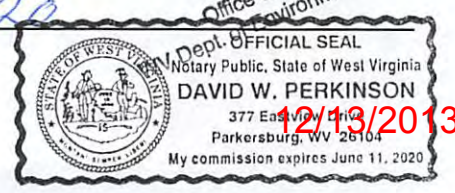
The reason you have received these documents is that you have rights regarding the application which are summarized in the intructions on the reverse side. However, you are not required to take any action at all.

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

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

My Commision Expires June 11, 2020  
Notary Public  
Office of Oil and Gas  
Environmental Protection







Legend

Property Boundary		Diversion	
Road		Spring	
Existing Fence		Wet Spot	
Planned Fence		Drain Pipe	
Stream		Waterway	
Open Ditch		Cross Drain	
Rock		Filter Strip	
North		Pit: Cut Walls	
Buildings		Pit: Compacted Fill Walls	
Water Wells		Area of Land Application of Pit Waste	
Drill Site			

Proposed Revegetation Treatment: Acres Disturbed Area I Approx. 0.2 Ac. Prevegetation pH \_\_\_\_\_

Area II  
Approx. 0.1 Ac.

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**

	<u>Area I (Location)</u>	
Seed Type		Lbs./Ac.
Tall Fescue		<u>40</u>
Ladino Clover		<u>5</u>

	<u>Area II (Road)</u>	
Seed Type		Lbs./Ac.
Tall Fescue		<u>40</u>
Ladino Clover		<u>5</u>

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

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 WV Dept. of Environmental Protection

Plan Approved by:

Comments: \_\_\_\_\_

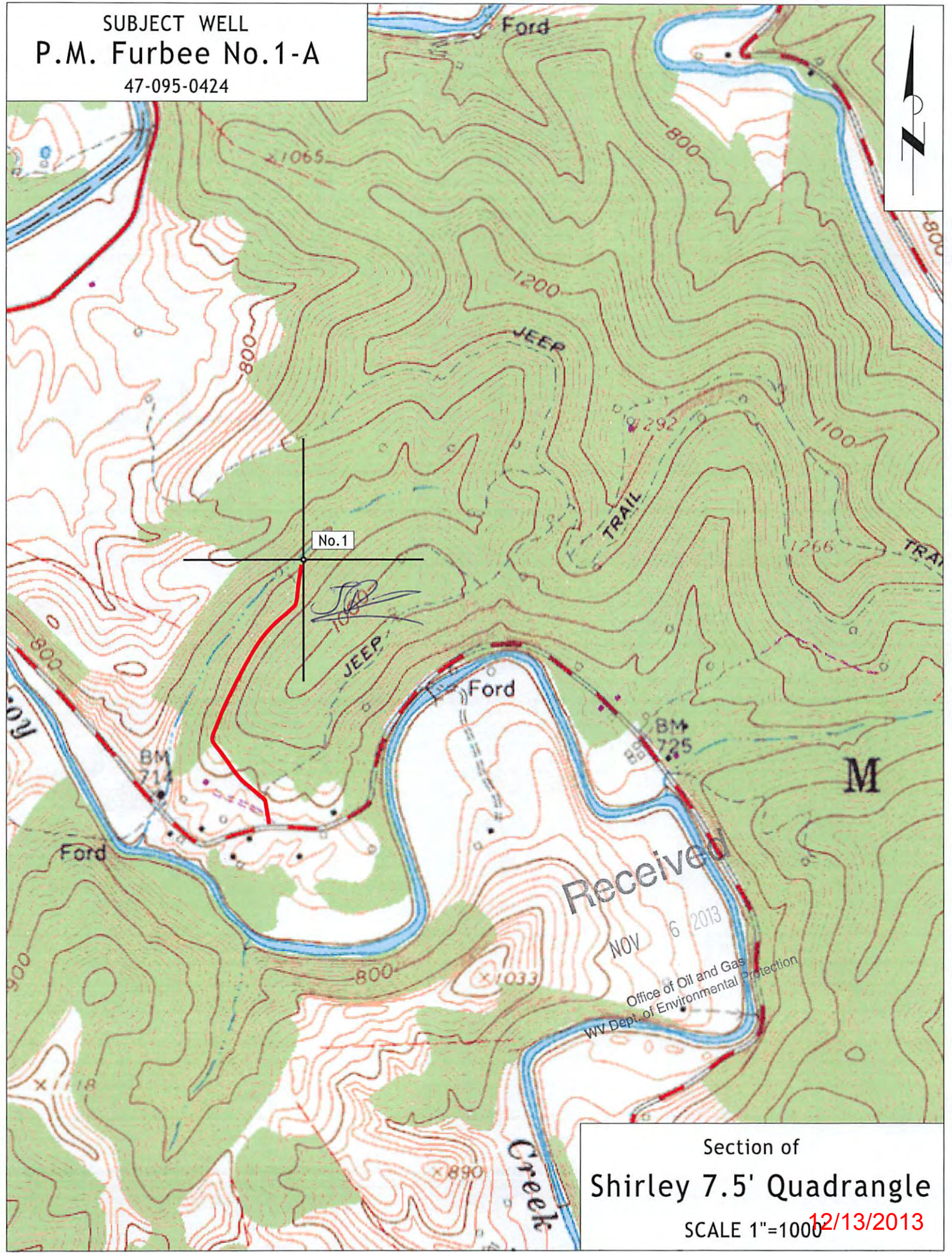
Title: Aspack

Date: 10-28-13

Field Reviewed?  Yes  No



SUBJECT WELL  
P.M. Furbee No.1-A  
47-095-0424



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

Section of  
Shirley 7.5' Quadrangle  
SCALE 1"=1000' 12/13/2013



95 00424 P

WW-7  
5-02

West Virginia Department of Environmental Protection  
Office of Oil & Gas

**WELL LOCATION FORM: GPS**

API: 47- 095 - 0424 WELL NO: No.1-A

FARM NAME: P.M Furbee

RESPONSIBLE PARTY NAME: Gastar Exploration, Ltd.

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Shirley 7.5'

SURFACE OWNER: Kenneth & Jennifer Mason

ROYALTY OWNER: Kenneth & Jennifer Mason

UTM GPS NORTHING: 4,364,490 (NAD 83)

UTM GPS EASTING: 515,859 (NAD 83) GPS ELEVATION: 241 m. (789 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	<input type="checkbox"/>	Post Processed Differential	<input type="checkbox"/>
		Real-Time Differential	<input type="checkbox"/>
Mapping Grade GPS	<input checked="" type="checkbox"/>	Post Processed Differential	<input checked="" type="checkbox"/>
		Real-Time Differential	<input type="checkbox"/>

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NOV 6 2013

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.

Office of Oil and Gas  
WV Dept. of Environmental Protection

  
Signature Mike McCown

COO & Designated Agent  
Title

October 1, 2013  
Date

12/13/2013