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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](http://www.dep.wv.gov)

November 18, 2014

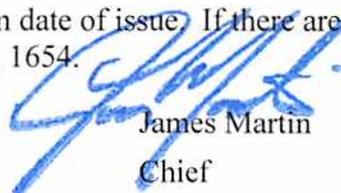
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-10903032, issued to EQT PRODUCTION COMPANY, 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: W RITTER 507491  
Farm Name: HEARTWOOD FORESTLAND FU  
**API Well Number: 47- 10903032**  
**Permit Type: Plugging**  
Date Issued: 11/18/2014

**Promoting a healthy environment.**

## 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.

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### CONDITIONS

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged under the terms of that agreement.

10903032 P

CK 1836  
100.00

Form WW-4 (B)  
Permit Copy  
(Rev 2/01)

Date: September 23, 2014  
Operator's Well  
Well No. 507491 (Ritter Lumber #7491)  
API Well No.: 47 109 - 03032

**STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS**

**APPLICATION FOR A PERMIT TO PLUG AND ABANDON**

4) Well Type: Oil \_\_\_\_\_ Gas X Liquid Injection \_\_\_\_\_ Waste Disposal: \_\_\_\_\_  
If Gas, Production X Or Underground storage \_\_\_\_\_ Deep \_\_\_\_\_ Shallow X

5) Elevation: 1340 ft Watershed: Big Cub Creek Branch  
Location: Clear Fork County: Wyoming Quadrangle: Mallory  
District: \_\_\_\_\_

6) Well Operator EQT Production Company  
120 Professional Place  
Address: Bridgeport, WV 26330

7) Designated Agent: Rex C. Ray  
Address: 120 Professional Place  
Bridgeport, WV 26330

8) Oil & Gas Gary Kennedy  
Name: P. O. Box 268  
Address: Nimitz, WV 25978

9) Plugging Contractor:  
Name: HydroCarbon Well Service  
Address: PO BOX 995  
Buckhannon, WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:  
**See Attachment for details and procedures.**

**OFFICE USE ONLY**

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector *Gary Kennedy* Date 11/3/14

PLUGGING PROGNOSIS

**507491 (MAL4H1)**

Wyoming County, West Virginia  
API # 47-109-03032H

BY: Chris Hendrick  
DATE: 7/22/14

**CURRENT STATUS:**

13 3/8" csg @ 35' (Cemented)  
9 5/8" csg @ 678' (Cemented/Grouted to surface)  
7" csg @ 2526' (Cemented to surface)  
4 1/2" csg pulled, csg was run to 3984', but was pulled due to Bon Log showing no cement on backside.  
TD @ 3998', total depth was 4211' but was filled back with cement to 3998'

COAL: 106'-108'  
171'-174'

FRESH Water: 318'

COAL 594'-599'  
COAL 613'-615'  
Lee Swos 700'-1253'

Oil Shows - None Reported FW Shows - 430' - 600' Coal Shows - None Reported Elevation - 1347'  
Gas shows - 4010', 3579', 3168', 2944'

Stimulation: None

1. Notify State Inspector, **Ross Eller**, 1-304-923-6844, 48 hrs prior to commencing operations.
2. TIH w/ tubing and check condition.
3. TIH w/ tubing @ 3998'; Gel hole @ 3998' to 3579'
4. TOOH w/tubing @ 3579', set 100' C1A cement plug @ 3579' to 3479'. (3579' Gas Show)
5. TOOH w/ tubing @ 3479'; Gel hole @ 3479' to 3168'.
6. TOOH w/tubing @ 3168'; set 324' C1A cement plug @ 3168' to 2844'. (3168' and 2944' Gas Shows)
7. TOOH w/ tubing @ 2844'; Gel hole @ 2844' to 2576'.
8. TOOH w/ tubing @ 2576'; set 100' C1A cement plug @ 2576' to 2476'. (7" csg pt)
9. TOOH w/ tubing @ 2476' and Gel hole to 1400'.
10. TOOH w/ tubing @ 1400'; set 200' C1A cement plug @ 1400' to 1200'. (Elevation)
11. TOOH w/ tubing @ 1200'; Gel hole @ 1200' to 728'.
12. TOOH w/ tubing @ 728'; set 378' C1A cement plug @ 728' to <sup>300'</sup>350'. (9 5/8" csg pt and FW shows)
13. TOOH w/ tubing @ 350'; Gel hole @ <sup>398'</sup>350' to 200'.
14. TOOH w/ tubing @ 200'; set 200' C1A cement plug to surface. (13 3/8" csg pt)
15. Top off as needed.
16. Set Monument to WV - DEP Specifications
17. Reclaim Location & Roads to WV - DEP Specifications.

OK JWH

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601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
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Joe Manchin III, Governor  
Randy C. Huffman, Cabinet Secretary  
www.wvdep.org

January 19, 2010

**NOTIFICATION OF NON-COMPLIANCE**

**WR-35**

EQT PRODUCTION COMPANY,

The FINAL INSPECTION REPORT for the permit, API Well Number: 47-10903032, issued to EQT PRODUCTION COMPANY, and listed below has been received in this office, and reclamation requirements approved. However, according to our records, the reports identified (WR-34, WR-35, WR-38) have not been filed. Consequently, the permit cannot be released. Additionally, failure to submit these reports within 15 days will result in enforcement action.

James Martin  
Chief

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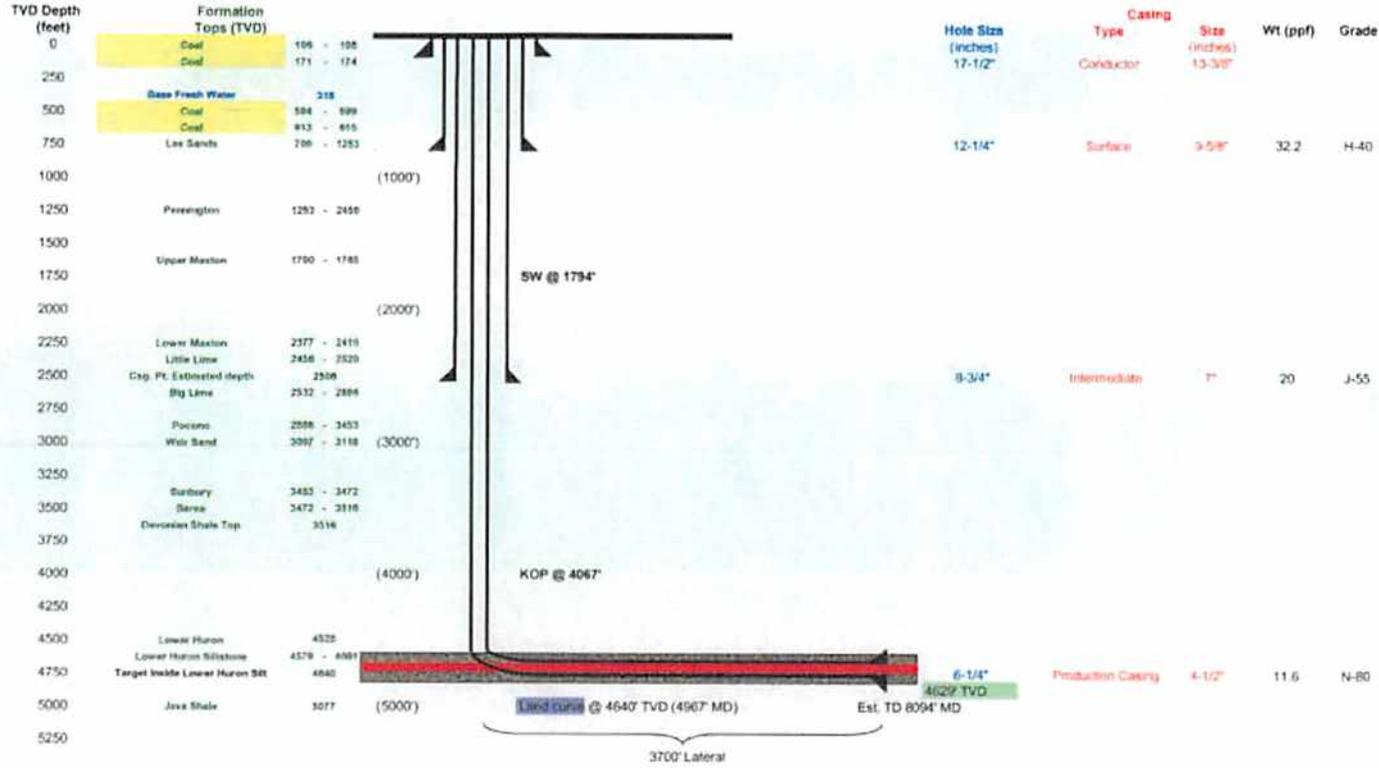
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Operator: EQT PRODUCTION COMPANY  
Operator's Well No: WRITTER 507491  
Farm Name: HEARTWOOD FORESTLAND FU  
**API Well Number: 47-10903032**  
Date Issued: 05/21/2008

**Promoting a healthy environment.**

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Well 507491  
 Equitable Resources  
 Quad: Mallory  
 Wyoming County: West Virginia



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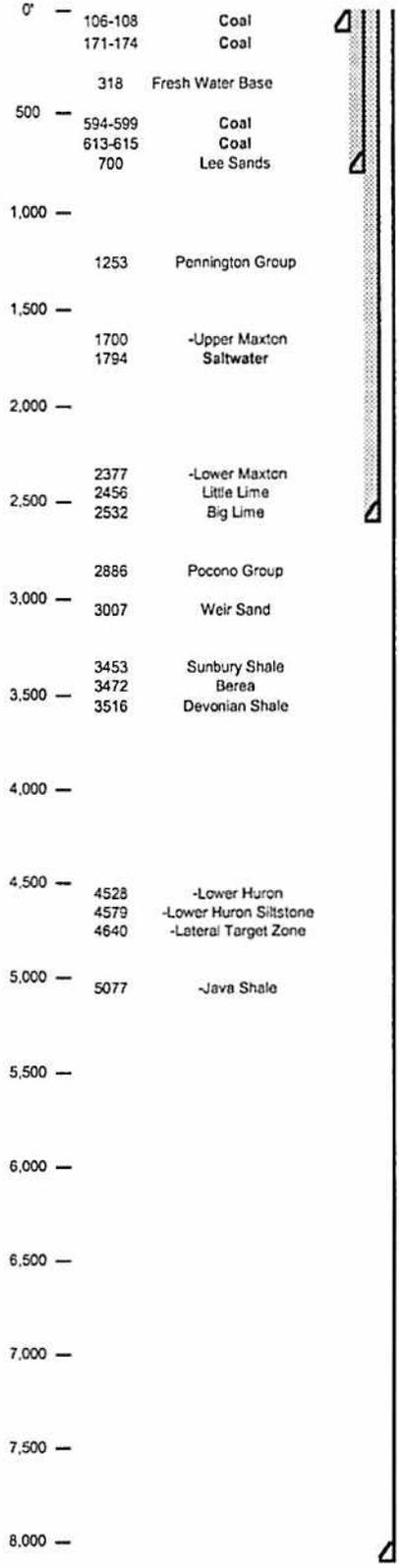
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BS 10/31/08

Well Schematic  
Equitable Resources

Well Name 507491  
County Wyoming  
State West Virginia

Elevation KB: 1357  
Target 4640' TVD (4967' MD)  
Prospect Lower Huron Siltstone



Hole Size 17 1/2" - 13 3/8" Conductor @ 40'  
Bit Size 17 1/2"

TOC @ Surface  
9 5/8" LS/32.2# @ 670' MD  
Bit Size 12 1/4"

TOC @ surface  
7" J-55/20# @ 2506' MD  
Bit Size 8 3/4"

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KOP=4067', 10 Deg DLS

Land @ 4967' MD, 4640' TVD

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4 1/2" N-80/11.50 @ 8094' MD, 4629' TVD

0026 10903032P

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

API # 4710903032

**MAILED**  
2-1-10

Farm Name Heartwood Forestland Well Number 507491  
Location Elevation 1,347 Quadrangle MALLORY  
District Clear Fork County Wyoming, WV  
Latitude 9670 FSL Degree 37.00 Minute 40.00 Second 0.00  
Longitude 4480 FWL 81.00 45.00 0.00

Company	EQT Production Company 1710 Pennsylvania Avenue Charleston, WV 25328	Casing & Tubing Size	Used In Drilling	Left in Well	Cement Fill Up Cubic Ft
Agent	Cecil Ray	13 3/8	35	35	
Inspector	Barry Stollings	9 5/8	678	678	324.30
Permit issued	05/21/2008	7	2,526	2,526	552.10

Well Work Commenced 11/04/2008  
Well Work Completed Well has not been completed

Verbal Plugging  
Permission granted on \_\_\_\_\_  
Rotary Rig  Cable Rig \_\_\_\_\_

Total Depth 5,204

**Water Encountered**

Type From  
Fresh water 5' stream @ 430'

**Coal & Open Mines**

Type From

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Open Flow Data

Producing Formation \_\_\_\_\_ Pay Zone Depth (ft): See attached for details

Gas: Initial Open Flow 0 MCF 01/01/1900 Date Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow 0 MCF \_\_\_\_\_ Date Final Open Flow \_\_\_\_\_

Time of open flow between initial and final tests 0 hours

Static Rock Pressure 0 after 0 hours

Second Producing Formation \_\_\_\_\_ Pay Zone Depth (ft) \_\_\_\_\_

Gas: Initial Open Flow \_\_\_\_\_ MCF \_\_\_\_\_ Date Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow \_\_\_\_\_ MCF \_\_\_\_\_ Date Final Open Flow \_\_\_\_\_

Time of open flow between initial and final tests \_\_\_\_\_ hours

Static Rock Pressure \_\_\_\_\_ after \_\_\_\_\_ hours

NOTE: On back of this form put the following  
1) Details of Perforated Intervals, fracturing or stimulating, physical change, etc.  
2) The well log, a systematic detailed geological record of all formations including coal encountered in the well bore

For Equitable Production Company  
By Mike Butcher  
Date 1-25-2010

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Well Number 507491

**EQT Company**  
**WR-35 Completion Report - Attachment**  
**Well Treatment Summary**

API # 4710903032

Stage 1
Date
FracTyp
Zone
# of Perfs
From/To
BD Press
ATP Psi
Avg Rate
Max Press Psi
ISIP Psi
10min SIP 5 min
Frac Gradient
Sand Proppant
Water-bbl
SCF N2
Acid-gal gal

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Formation Name	Depth To	Depth Bottom	Formation Thick
SALT SAND	700.00	1,253	553.00
RAVENCLIFF SAND	1,477.00	1,517	40.00
UPPER MAXTON SAN	1,700.00	1,765	65.00
MIDDLE MAXTON SA	2,155.00	2,263	108.00
LOWER MAXTON SA	2,377.00	2,410	33.00
LITTLE LIME	2,456.00	2,520	64.00
Greenbrier MKR 1	2,485.67	0	0.00
PENCIL CAVE SHALE	2,520.00	2,532	12.00
BIG LIME	2,532.00	2,886	354.00
UNION	2,616.30	0	0.00
PICKAWAY	2,694.22	0	0.00
TAGGARD SHALE	2,803.46	0	0.00
DENMAR	2,812.62	0	0.00
PS 30	3,006.38	0	0.00
WEIR SAND	3,007.00	3,118	111.00
PS 20	3,065.62	0	0.00
SUNBURY	3,453.00	3,472	19.00
BEREA SAND	3,472.00	3,516	44.00
UPPER DEVONIAN	3,515.42	0	0.00
GORDON SAND	3,810.02	3,824	13.98

**Gas Tests**

Depth	Remarks
2,944	trace
3,168	trace
3,579	trace
4,010	trace

estimated tops



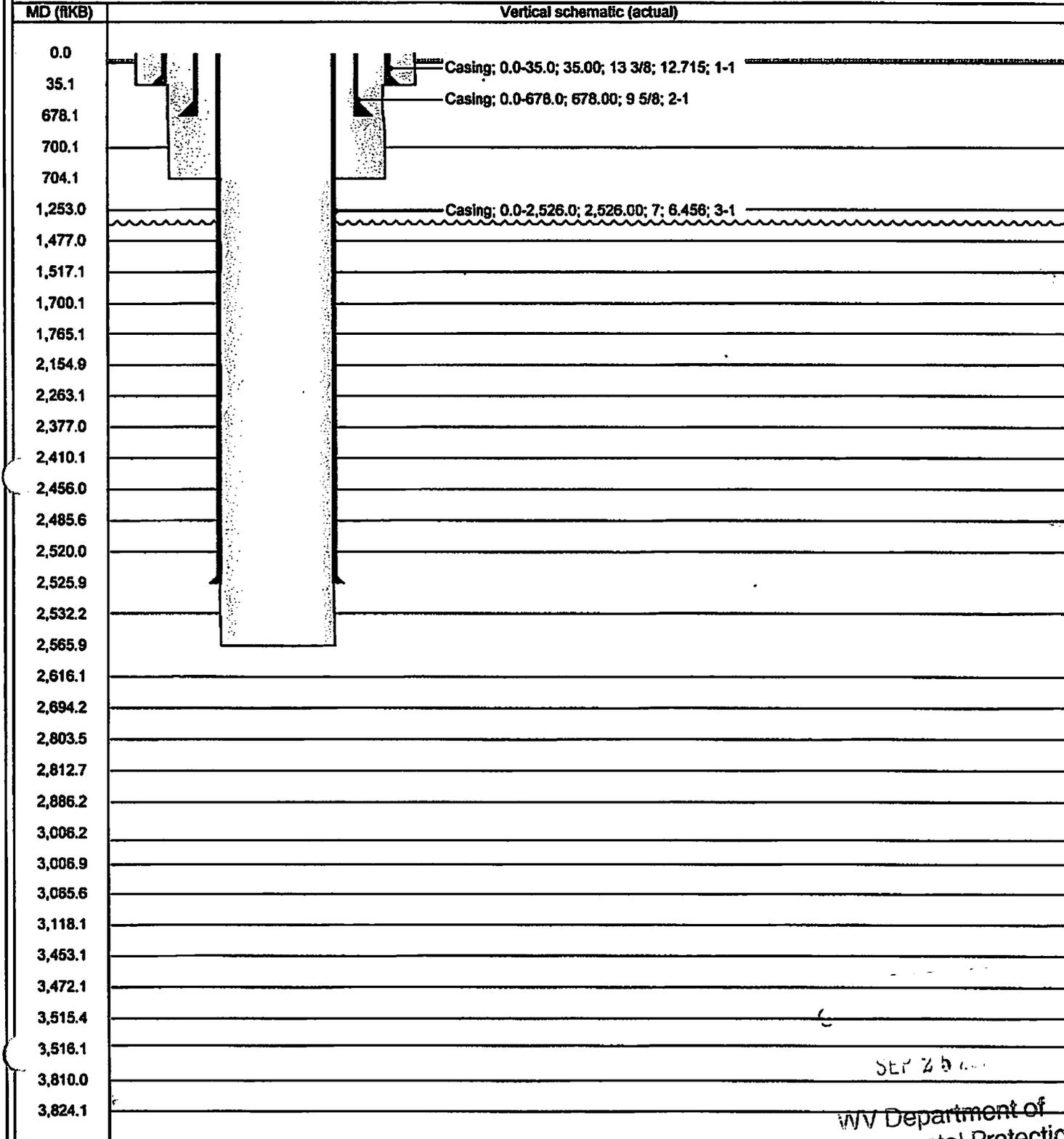
Schematic - Current

Well Name: 507491 WV-507491 (MAL4H1)

API 4710903032	Energy Well Number 507491	PUD Name & Number MAL4H1	Permit Number 4710903032	Permit Date 5/21/2008	Farm Name (WV)	Operator Equitable Production Company	State WV
KB Elev (ft) 1,357.00	Spud Date 11/4/2008	Planned Well Geometry	Well Type Conventional	Loc Stat from LHM Spud	Area	County Wyoming	Quad

<b>Most Recent Job</b>		Job Category Completion/Workover	Primary Job Type Completion	Secondary Job Type	Start Date 3/16/2009	End Date 10/6/2009
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TD: 2,566.0 Horizontal - Original Hole, 7/8/2014 7:02:53 AM



SEP 25 2014



### Historical Well Chronology

Well Name: 507491 WV-507491 (MAL4H1)

AP#	Energy Well #	PUC Name & #	Permit Number	Permit Date	Prod Resp Party	Farm Name (WV)	Operator	State
710903032	507491	MAL4H1	4710903032	5/21/2008			Equitable Production Company	WV
KB Elev.	Spud Date	Planned Well Geometry	Well Type	Loc Stat from LM	Area	County	Quad	
1,357.00	11/4/2008		Conventional	Spud		Wyoming		

**Job Category: Drilling, Job Start Date: 11/1/2008**

Job Category	AFE Number	Start Date	Date TD Reached (wellbore)	Target Depth (ftKB)	Total AFE Amount (Cost)
Drilling	2175074911A	11/1/2008			811,488.00

Summary

**Report #: 1.0 DFS: -3.46 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/1/2008 06:00		

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
4,849.00	4,849.00	0.0	0.0			

Operations Summary

AM Status: Gasfield MIRU. On 10/31 Rebuilding loc w/Gas Field.

**Report #: 2.0 DFS: -2.46 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/2/2008 06:00		

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
4,848.00	9,697.00	0.0	0.0			

Operations Summary

AM Status: Gasfield bldg location. On 11/1: Gasfield MI, preseeded location.

**Report #: 3.0 DFS: -0.46 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/4/2008 06:00		Conductor, 35.0ftKB

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
6,339.00	16,036.00	0.0	0.0			

Operations Summary

AM Status: Cont to re-build loc w/Gas Field. On 11/03: Re-building loc w/Gas Field. Pre-seed 1 ac with .25 ton of lime w/Massie.

**Report #: 4.0 DFS: 0.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/5/2008 06:00	MIRU	Surface, 678.0ftKB

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
4,735.00	20,771.00	0.0	0.0			

Operations Summary

AM Status: Cont to build loc w/Gas Field. Drilling ahead with 12-3/8" hammer bit @ 600'(wet with 5" stream of water from 430') . On 11-4-08: MIRU. N/U 16-1/4" hammer bit. Spud @ 5:00 PM on 11/4/08. **Set 35' of 13-3/8" conductor. N/U 12-3/8" hammer bit. Drilled from 35' to 430'. Went wet with 5" stream of water.** Soaped hole. Drilled from 430' to 600'. 12' of freeboard in pit. EQT-Chris Carter  
On 11/4 Hauled 74.73 ton of stone w/Boxley. Building loc w/Gas Field.

**Report #: 5.0 DFS: 1.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/6/2008 06:00	SD	Surface, 678.0ftKB

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
32,507.40	53,278.40	0.0	0.0			

Operations Summary

AM Status: Shut Down for the weekend. On 11-5-08: Drilled from 600' to 704'. Cleaned hole. TOOH. **Ran 16 joints = 670.4' of 9-5/8", R3, 32.2#/ft. LS, 8md casing set @ 678' KB. Ran 4 centralizers on joint #'s 7,9,12,14. Ran 1 Basket on joint # 7 set @ 385'. R/U Halliburton and pumped 19 bbls H2O, 30 bbls gel, 10 bbls H2O, 230sx of NE surf 204 @ (14.7ppg, 1.41 yield), dropped plug, 53.4 bbls H2O. Did not circulate anything. Grouted backside with 71 sacks of Standard class A cement @ (15.6ppg, 1.18yield) Plug was down @ 2:10PM.WOC. N/U 8-7/8" Hammer bit. Drilled out cement and plug. Dried hole. Drilled from 704' to 1200'. 9' of freeboard in pit. EQT-Chris Carter**

**Report #: 6.0 DFS: 2.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/7/2008 06:00	SD	Surface, 678.0ftKB

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
	53,278.40	0.0	0.0			

Operations Summary

AM Status: SD. On 11/6: SD for weekend.

**Report #: 7.0 DFS: 5.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time	Last Casing String
11/10/2008 06:00	02 - Drilling	Intermediate, 2,520ftKB

Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Dnll Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts
	53,278.40	0.0	0.0			

Operations Summary

AM Status: Drilling ahead with 8-7/8" hammer bit @ 2110'. On 11/9/08: Rig started back @ 7:00PM. Drilled from 1200' to 2110' (dusting). 10' of freeboard in pit. EQT-Chris Carter

Office of Oil and Gas  
SEP 25 2014  
WV Department of Environmental Protection



### Historical Well Chronology

Well Name: 507491 WV-507491 (MAL4H1)

API #	Enertia Well #	PUD Name & #	Permit Number	Permit Date	Prod Resp Party	Farm Name (WV)	Operator	State
710903032	507491	MAL4H1	4710903032	5/21/2008			Equitable Production Company	WV
KB Elev.	Spud Date	Planned Well Geometry	Well Type	Loc Stat from LM	Area	County	Quad	
1,357.00	11/4/2008		Conventional	Spud		Wyoming		

<b>Report #: 8.0</b>	<b>DFS: 6.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
11/11/2008 06:00	02 - Drilling		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
77,420.42	130,698.82	0.0	0.0
Operations Summary AM Status: Drying the hole up with 6-3/8" hammer bit On 11/10/08: Drilled from 2110' to 2566' (dusting). Gas check @ 2566' = N/S. Cleaned hole. TOOH. Ran 58 joints = 2517.9' of 7".20#/ft. R3. LS. 8rnd casing set @ 2526'KB. Ran 6 centralizers on joint # 1, 12, 24, 37, 47, 56. Ran 1 basket on joint # 56 set @ 95'. R/U Halliburton and pumped 40 bbls H2O. 30 bbls gel. 40bbls H2O. 190 sacks of MidApp223 @ (12 ppg, 2.44 yield). 75 sacks of Standard class A cement @ (15.6ppg, 1.18 yield). Dropped Plug. 102 bbls H2O. Circulated 8 bbls of cement to surface back into the pit. Plug down @ 5:45PM .WOC. N/U 6-3/8" hammer bit. TIH. Drilled out cement and plug. 9' of freeboard in pit. EQT-Chris Carter			

<b>Report #: 9.0</b>	<b>DFS: 7.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
11/12/2008 06:00	RDMO		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
6,736.80	137,435.62	0.0	0.0
Operations Summary AM Status: Moving off 507491 On 11/11/08: Drilled from 2566' to 3480'. Bit down. TOOH. N/U 6-1/4" hammer bit. TIH. Drilled from 3480' to 4010'(dusting). Gas checks @ 2944' = trace, 3168' = trace, 3579' = trace, 4010' = trace. Cleaned hole. TOOH. RDMO. 8' of freeboard in pit. EQT- Chris Carter			

<b>Report #: 10.0</b>	<b>DFS: 93.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/6/2009 06:00	MIRU		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
	137,435.62	0.0	0.0
Operations Summary MIRU Highlands #4.			

<b>Report #: 11.0</b>	<b>DFS: 94.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/7/2009 06:00	21 - Other		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
52,900.00	190,335.62	0.0	0.0
Operations Summary AM status: Setting w/c @ 3695'. On 2/6, rigged down, changed out hoist cylinder on rig and moved from well# 511745 to well# 507491. Rigged up on new end, racked DP, picked up motor set @ 1.83° and started TIH. Freeboard - 9'. Kelly Dunbar			

<b>Report #: 12.0</b>	<b>DFS: 95.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/8/2009 06:00	02 - Drilling		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
30,741.00	221,076.62	0.0	0.0
Operations Summary AM status: dusting curve w/motor. On 2/7, TIH broke circ 90' off bottom, unloaded large amount of H2O. Circ way to bottom, mixed soap 2.5gal soap. 1gal Stable 900, 1gal Sta Clear 120, broke circ with foam @ injection rate of 12-15gpm. Drilled 3jts, sent 10gal soap/5gal water slug around and proceeded to drill with air only. Started puffing dust 15' down on first kelly. Continued drilling and had very good dust on the next jt. Proceeded dusting curve, motor output 9-10.5"/100'. Drgl parameters: Rotating: WOB - 5-10K, Torque - 1-2K, ROP - 30-150'/hr, SPP - 450-460psi, air flow - 2050cfm. Sliding WOB -5-10K Freeboard - 6'. Kelly Dunbar  Note: 1hr Repair hyd hose on rig			

<b>Report #: 13.0</b>	<b>DFS: 96.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/9/2009 06:00	02 - Drilling		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
30,800.00	251,876.62	0.0	0.0
Operations Summary AM status: dusting horizontal w/motor. On 2/8, dusted curve, motor started putting out 13° DL around 65° and then 15's @ 75°. Landed curve @ 4619'(1' high)/91°. Hole wanting to build and having trouble knocking the angle down. Seven foot slides ineffective. Gas check @ 4600' = 21K. Drgl parameters: Rotating - WOB 8-12K, ROP - 25-100'/hr, Torque - 3K, SPP - 470-500psi, air volume - 2100cfm. Sliding - WOB - 15-20K, ROP - 25-60'/hr, SPP - 470-500psi. Freeboard - 6'. Kelly Dunbar			

Office of Oil and Gas  
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WV Department of  
Environmental Protection

10903032P



# Historical Well Chronology

Well Name: 507491 WV-507491 (MAL4H1)

AP#	Enertia Well #	PUD Name & #	Permit Number	Permit Date	Prod Resp Party	Farm Name (WV)	Operator	State
10903032	507491	MAL4H1	4710903032	5/21/2008			Equitable Production Company	WV
J KB Elev.	Spud Date	Planned Well Geometry	Well Type	Loc Stat from LM	Area	County	Quad	
1,357.00	11/4/2008		Conventional	Spud		Wyoming		

**Report #: 14.0 DFS: 97.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time			Last Casing String			
2/10/2009 06:00	08 - Repair Rig			Intermediate, 2,526.0ftKB			
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
30,127.00	282,003.62	0.0	0.0				

Operations Summary  
 AM status: repairing hoist cylinder on rig. On 2/9, dusted horizontal to 5204', air pressure instantly started climbing while rotating, ROP went from 43 to 100'/hr and torque increased by 3K mudlogger said we had a gas show of 1500 units. Had no returns and very faint circ. Air pressure up to 840psi, circ 4jts out of hole and pulled very tight and lost all circ. Worked the majority of the day to get string free, circ one jt at a time. String finally came free at 45". Circ 5 more jts to be safe, still no circ and pulled up to the bottom of the curve with boost and dead pull. Put air on the hole again and couldn't get motor to run, air psi up to 650psi, and still no circ. Continued to TOH with boost and no rotation. Hoist cylinder started leaking, tried to continue out of the hole, pulled 15 more jts and leak got significantly worse. Chris called the shop and they wanted to shut down and fix it now. Freeboard - 6'. Hauled 19.17 tons of stone w/Pattersons. Kelly Dunbar

Note: 10hrs Repair/weld hoist cylinder on rig

**Report #: 15.0 DFS: 98.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time			Last Casing String			
2/11/2009 06:00	21 - Other			Intermediate, 2,526.0ftKB			
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
30,714.00	312,717.62	0.0	0.0				

Operations Summary  
 AM status: unloading H2O from hole. On 2/10, finished repairing hoist cylinder, total down time-19hrs. TOH and motor tested fine at surface, inspected and broke down all directional tools, everything checked out fine. Picked up new motor and a good RR bit. started TIH, rabbiting every jt. TIH to 4504', tried to break circ, pressured up and had no circ back to surface, checked all surface equipment. Pulled 25jts, tried again, still no circ. Pulled steering tool and an additional 20 jts, put air on hole @ 3026'. Pressured up to 580psi and started unloading large amounts of salt water. Allowed hole to unload, pressure slowly decreasing after 40min of circulation. Mixing foam recipe @ 3gal StaFoam D, 1.5gal Stable 900, 1.5gal StaClear120/10bbl H2O. And preparing to stage in the hole with foam returns. Freeboard - 6'. Kelly Dunbar

Note: 9hrs Repair/weld hoist cylinder on rig

**Report #: 16.0 DFS: 99.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time			Last Casing String			
2/12/2009 06:00	21 - Other			Intermediate, 2,526.0ftKB			
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
30,572.00	343,289.62	0.0	0.0				

Operations Summary  
 AM status: Strapping in hole to set Baker inflatable packer. On 2/11, tried to stage into hole with foam, hole making too much fluid, diluting foam. Orders to TOH, lay down directional tools, release wireline and directional personnel (Navigator charged only standby). Decided to complete the hole as a vertical. Ordered M-65, 9.5# csg, baffles, float shoe, latch down collar and plug. Ordered inflatable packer from Baker Oil Tools to seal off bottom of hole @ 4010'. Waited on packer until 12AM on the 12th. Fishing hand advised that we run in hole with wireline to pinpoint top of fluid. Setting pressure of packer is 2400psi and over pressure on the packer element is 3500psi. Therefore it is crucial to know the hydrastatic pressure on the backside that needs to be overcome, to prevent damage to the packer element. Ran in hole with Navigator wireline hot with bare wires and established top of fluid @ 1930'. Pulled wireline back out of hole, made up packer and began strapping in hole. -Kelly Dunbar

**Report #: 17.0 DFS: 100.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time			Last Casing String			
2/13/2009 06:00	06 - Trips			Intermediate, 2,526.0ftKB			
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
11,887.00	355,176.62	0.0	0.0				

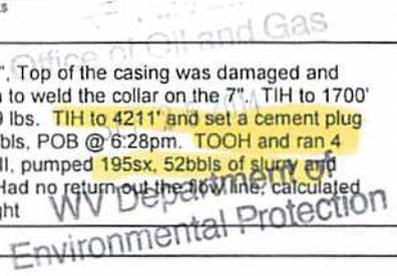
Operations Summary  
 AM Status : TOOH. On 2/12 TIH to set Backer inflatable packer. Pumped w/BJ Services, pumped 20bbls over displacement and the packer would not set. TOOH to check the packer and bottom shive on the block went down. Repaired shive and continued to TOOH. Inflatable packer still in the hole, TBIH to see were the packer is or if it set. Ran DP to 30 degrees in the curve and never tagged the packer. TOOH. Free board - 6'. Rob Wright

Note: 10.5hrs Repaired bottom shive on the block

**Report #: 18.0 DFS: 101.54 Rigs: Gasco, Gasco 4 Job Category: Drilling**

Report End Date	Operations at Report Time			Last Casing String			
2/14/2009 06:00	21 - Other			Intermediate, 2,526.0ftKB			
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
93,167.00	448,343.62	0.0	0.0				

Operations Summary  
 AM Status : Waiting on wireline truck to run a CCL and Bon Log. On 2/13 Finished TOOH and had to work on the 7". Top of the casing was damaged and had trouble getting the collar on. There is still 1/2" of threads on the 7". I will schedule a welder to out to the location to weld the collar on the 7". TIH to 1700' and put air on the hole to find where the H2O was, at 1800' had a return of H2O, weight of the fluid in the hole was 9 lbs. TIH to 4211' and set a cement plug w/BJ Services. Cemented w/Surflite II, pumped 1/2bbl ahead and 4.2bbls of slurry at 14.2 then chased it with 15.2bbls, POB @ 6:28pm. TOOH and ran 4 1/2" casing, ran 3984' of casing. Set 2 baffles, 1st baffle @ 3857' and the 2nd baffle @ 2887'. Cemented w/Surflite II, pumped 195sx, 52bbls of slurry and needed 65bbls to displace and land the plug, displaced 70bbls and never landed the plug. Shut down @ 4:35am. Had no return out the flow line, calculated 845psi of differential pressure and only got to 40psi. Called out Meeks to log the hole. Free board - 5'. Rob Wright



10903032P



# Historical Well Chronology

Well Name: 507491 WV-507491 (MAL4H1)

API #	Enertia Well #	PUD Name & #	Permit Number	Permit Date	Prod Resp Party	Farm Name (WV)	Operator	State
710903032	507491	MAL4H1	4710903032	5/21/2008			Equitable Production Company	WV
KB Elev.	Spud Date	Planned Well Geometry	Well Type	Loc Stat from LM	Area	County	Quad	
1,357.00	11/4/2008		Conventional	Spud		Wyoming		

<b>Report #: 19.0</b>	<b>DFS: 102.54</b>	<b>Rigs: Gasco, Gasco 4</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/15/2009 06:00	12 - Run Casing & Cement		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
24,922.00	473,265.62	0.0	0.0
Operations Summary AM Status : Waiting on a guide shoe and casing. On 2/14 Meeks wireline truck showed up @ 10:30am. Ran wireline in the hole to find the plug tagged bottom @ 3998'. Ran a Bon Log and Collar locator. There was no show of Cement on the backside of the casing, w/Logging tools only showed to 3984'. Called out a pump truck to try to circulate the hole. Rigged up to circulate w/BJ Services. Pumped 2.5bbls and pressured up to 1315lbs and held. Rigged BJ down and the 4 1/2" casing was holding fluid. Pulled casing w/elevators and used power tongs, pulled 54K off bottom with no drag. Damaged 8jts coming out of the hole. Latch down plug was in the casing where it was supposed to be. Waiting on a guide shoe to TBH. Free board - 5'. Rob Wright			

<b>Report #: 20.0</b>	<b>DFS: 103.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/16/2009 06:00	RDMO		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
18,804.00	492,069.62	0.0	0.0
Operations Summary AM Status : De-Mobilizing Drlg Rig, moving to well # 511953. On 2/15, while waiting on guide shoe and casing, the decision was made to run DP back to bottom and load the hole w/H2O and see if we could break circulation. Loaded the hole w/BJ Services, pumped 215 bbls of H2O and never broke circulation. TOOH, capped well and started Rigging down to move to the next location. Free board - 5'. Rob Wright			

<b>Report #: 21.0</b>	<b>DFS: 113.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Drilling</b>
Report End Date	Operations at Report Time		Last Casing String
2/26/2009 06:00			Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
568.00	492,637.62	0.0	0.0
Operations Summary AM Status: Cont to work loc w/Gas Field. On 2/25 Digging out around well w/Gas Field.			

<b>Job Category: Completion/Workover, Job Start Date: 3/16/2009</b>					
Job Category	AFE Number	Start Date	Date TD Reached (wellbore)	Target Depth (ftKB)	Total AFE Amount (Cost)
Completion/Workover	2175074911A	3/16/2009			704,752.00
Summary					

<b>Report #: 1.0</b>	<b>DFS: 132.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Completion/Workover</b>
Report End Date	Operations at Report Time		Last Casing String
3/17/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
384.00	384.00	0.0	0.0
Operations Summary AM Status: Move off site w/Gas Field. On 3/16 Reconstruct fence w/Gas Field.			

<b>Report #: 2.0</b>	<b>DFS: 290.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Completion/Workover</b>
Report End Date	Operations at Report Time		Last Casing String
8/22/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
1,500.00	1,884.00	0.0	0.0
Operations Summary On 8/21 Treated pit w/Elite.			

<b>Report #: 3.0</b>	<b>DFS: 293.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Completion/Workover</b>
Report End Date	Operations at Report Time		Last Casing String
8/25/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
	1,884.00	0.0	0.0
Operations Summary On 8/24 Discharged pit w/Elite.			

<b>Report #: 4.0</b>	<b>DFS: 315.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Completion/Workover</b>
Report End Date	Operations at Report Time		Last Casing String
9/16/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)
	1,884.00	0.0	0.0
Operations Summary ON 9/16/2009 MI Ferguson, begin reclamation.			

109 03032 P



# Historical Well Chronology

Where energy meets innovation

Well Name: 507491 WV-507491 (MAL4H1)

API #	Energy Well #	PLD Name & #	Permit Number	Permit Date	Prod Resp Party	Farm Name (WV)	Operator	State
710903032	507491	MAL4H1	4710903032	5/21/2008			Equitable Production Company	WV
g KB Elev...	Spud Date	Planned Well Geometry	Well Type	Loc Start from LM	Area	County	Quad	
1,357.00	11/4/2008		Conventional	Spud		Wyoming		

Report #: 5.0 DFS: 316.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/17/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,829.00	3,713.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Reclaiming w/Ferguson. On 9/16: MI Ferguson, began reclamation.

Report #: 6.0 DFS: 317.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/18/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,690.00	5,403.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/17: Ferguson reclaimed site.

Report #: 7.0 DFS: 318.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/19/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,700.00	7,103.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/18: Ferguson reclaimed location.

Report #: 8.0 DFS: 319.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/20/2009 06:00	Idle		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
	7,103.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson idle. On 9/19: Ferguson idle.

Report #: 9.0 DFS: 320.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/21/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
	7,103.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/20: Ferguson idle.

Report #: 10.0 DFS: 321.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/22/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,700.00	8,803.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/21: Ferguson reclaimed location.

Report #: 11.0 DFS: 322.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/23/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,700.00	10,503.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/22: Ferguson reclaimed site.

Report #: 12.0 DFS: 323.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/24/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,700.00	12,203.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/23: Ferguson reclaimed location.

Report #: 13.0 DFS: 324.54 Rigs: <Rig?> Job Category: Completion/Workover

Report End Date	Operations at Report Time		Last Casing String				
9/25/2009 06:00	Reclamation		Intermediate, 2,526.0ftKB				
Day Total (Cost)	Cum To Date (Cost)	Start Depth (ftKB)	End Depth (ftKB)	Drill Hrs (hr)	Avg ROP (ft/hr)	Daily Contacts	
1,700.00	13,903.00	0.0	0.0	0.0			

Operations Summary  
AM Status: Ferguson reclaiming. On 9/24: Ferguson reclaimed location.



### Historical Well Chronology

Well Name: 507491 WV-507491 (MAL4H1)

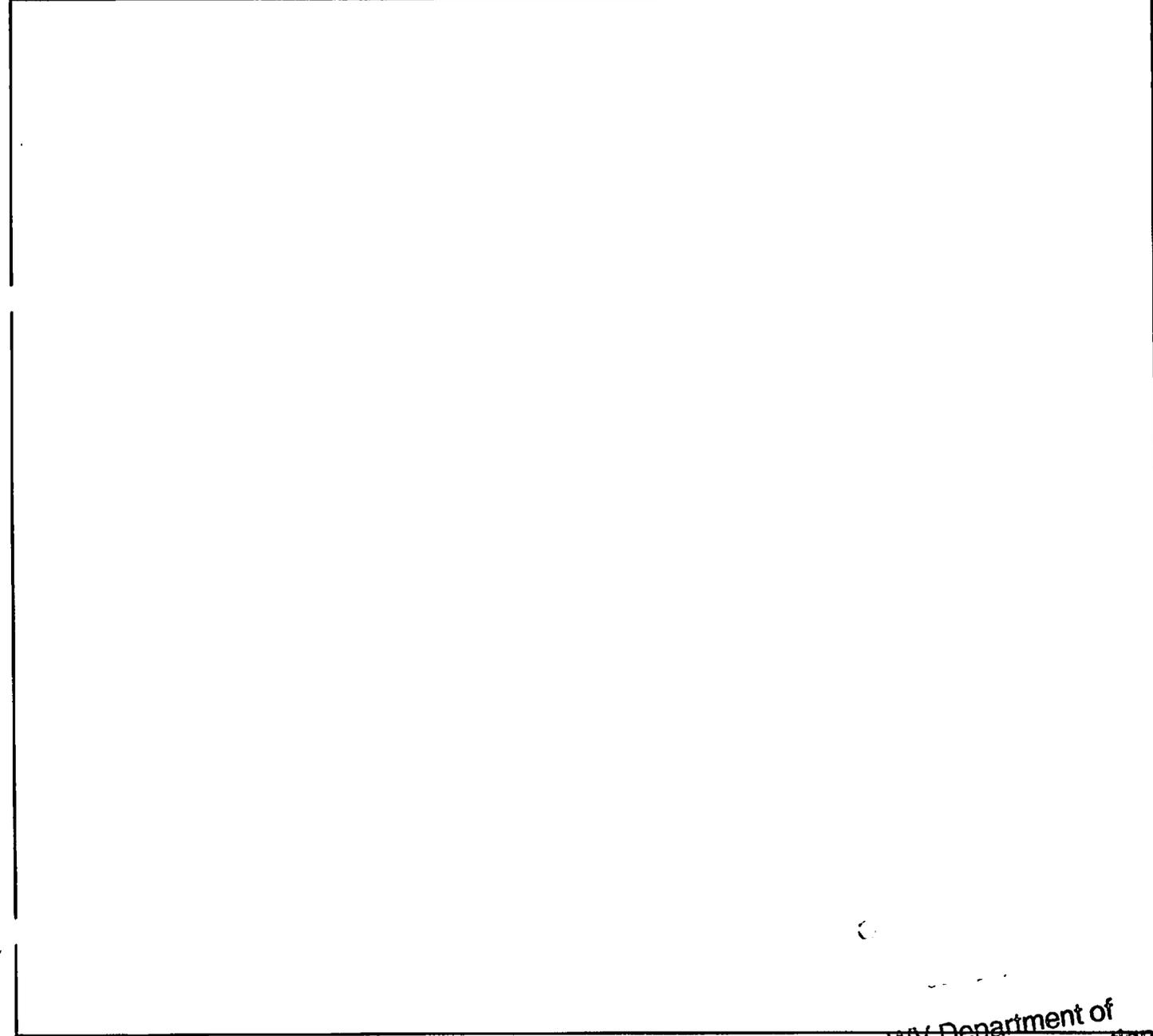
API 4710903032	Energy Well # 507491	PUD Name & # MAL4H1	Permit Number 4710903032	Permit Date 5/21/2008	Prod Resp Party	Farm Name (WV)	Operator Equitable Production Company	State WV
3 KB Elev... 1,357.00	Spud Date 11/4/2008	Planned Well Geometry	Well Type Conventional	Loc Stat from LM Spud	Area	County Wyoming	Quad	

<b>Report #: 14.0</b>	<b>DFS: 325.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Completion/Workover</b>
Report End Date 9/28/2009 06:00	Operations at Report Time		Last Casing String Intermediate, 2,526.0ftKB
Day Total (Cost) 1,700.00	Cum To Date (Cost) 15,603.00	Start Depth (ftKB) 0.0	End Depth (ftKB) 0.0
		Drill Hrs (hr)	Avg ROP (ft/hr)
Daily Contacts			

Operations Summary  
AM Status: Reclamation finished. On 9/25: Ferguson mulched, finished reclamation.

<b>Report #: 15.0</b>	<b>DFS: 335.54</b>	<b>Rigs: &lt;Rig?&gt;</b>	<b>Job Category: Completion/Workover</b>
Report End Date 10/8/2009 06:00	Operations at Report Time Reclamation		Last Casing String Intermediate, 2,526.0ftKB
Day Total (Cost) 2,615.00	Cum To Date (Cost) 18,218.00	Start Depth (ftKB) 0.0	End Depth (ftKB) 0.0
		Drill Hrs (hr)	Avg ROP (ft/hr)
Daily Contacts			

Operations Summary  
AM Status: Ferguson mulching. On 10/5: Ferguson mulched site.



10903032P



Completion Daily Operations Date: 10/6/2009, Report #: 15.0, DFS: 335.54

Well Name: 507491 WV-507491 (MAL4H1)

Job Type: Completion

API 4710903032	Energy Well Number 507491	PUD Name & Number MAL4H1	Permit Number 4710903032	Permit Date 5/21/2008	Farm Name (WV)	Operator Equitable Production Company	State WV
KB Elev (ft) 1,357.00	Spud Date 11/4/2008	Planned Well Geometry	Well Type Conventional	Loc Stat from LM Spud	Area	County Wyoming	Quad

Job: Completion/Workover, Job Start Date: 3/16/2009 00:00

Job Category Completion/Workover	Primary Job Type Completion	Start Date 3/16/2009 00:00	End Date 10/6/2009 08:00	Spud Date 11/4/2008 17:00	Summary
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Phase Type 1	Phase Type 2	Actual Start Date	Actual End Date
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Daily Operations Data From: 10/5/2009 08:00 - Date To: 10/6/2009 06:00

Send Report?

Report Start Date 10/5/2009 06:00	Report End Date 10/6/2009 06:00	Status at Reporting Time	Last Phase
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Operations at Report Time

Reclamation

Weather

Temperature (°F)

Road Condition

Operations Summary

AM Status: Ferguson mulching. On 10/5; Ferguson mulched site.

Remarks

Operations Next Report Period

Operations Summary Extension

Comment

Daily Contacts

Carry forward?	Company	Job Contact	Position	Mobile	Office
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Time Log

Start Time	End Time	Dur (hr)	Cum Dur (hr)	Code 1	Code 2	Com
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Fuel Consumption

Date	Supply Item Desc	Unit Label	Unit Sz	Vendor	Note	Consumed	Grouping
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Safety Checks

Date	Type	Days to Next Check (days)	Inspected By	Des	Result	Com
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SEP 20 2009  
 WV Department of  
 Environmental Protection  
 Permitting Unit, 7/8/2014



### Other in Hole & Cement Plugs

Bridge Plugs, Retainers, Cement Plugs, etc.

Where necessary, specify formation.

Well Name: 507491 WV-507491 (MAL4H1)

API 4710903032	Energy Well Number 507491	PUID Name & Number MAL4H1	Permit Number 4710903032	Permit Date 5/21/2008	Farm Name (WV)	Operator Equitable Production Company	State WV
1 KB Elev (ft) 1,357.00	Spud Date 11/4/2008	Planned Well Geometry	Well Type Conventional	Loc Stat from LM Spud	Area	County Wyoming	Quad

#### Other in Hole

Des	Run Date	Pull Date	Top (ftKB)	Botn (ftKB)	OD (in)	Com
Cmt Basket	11/10/2008		95.0	95.0		

#### Cement (filtered for Type=Plug)

Description	Type	String	Cementing Start Date	Cementing End Date	Wellbore

#### Cement Stages

Stage Number	Description	Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Bottom Depth (ftKB)	Bottom Depth (TVD) (ftKB)

#### Cement Fluids

Fluid Type	Estimated Top (ftKB)	Est Botn (ftKB)	Cement Blend	Amount (sacks)	Yield (ft <sup>3</sup> /sack)	Volume Pumped (bbl)

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SEP 20 2008

10903032 P

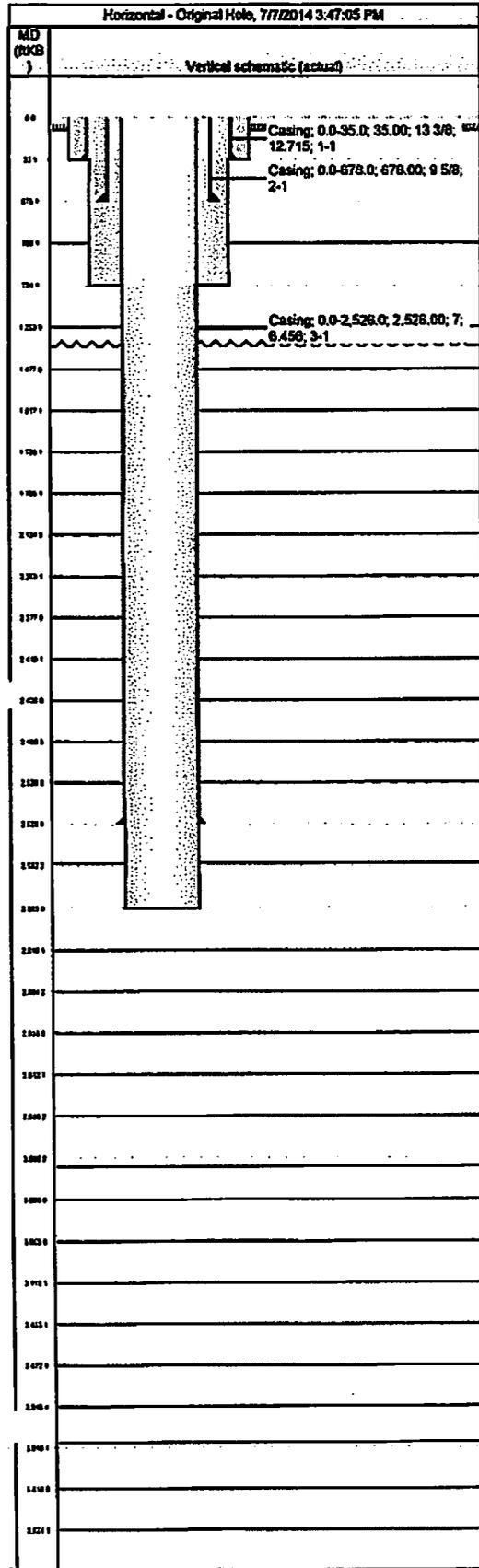


Casing, Liner and Cement report

Well Name: 507491 WV-507491 (MAL4H1)

Intermediate

API #	Enriba Well #	PUD Name & #	Permit Number	Permit Date	Prod Resp Party	Farm Name (WV)	Operator	State
710903032	507491	MAL4H1	4710903032	5/21/2008			Equitable Production Company	WV
g KB Elev...	Spud Date	Planned Well Geometry	Well Type	Loc Stat from LM	Area	County	Quad	
1,357.00	11/4/2008		Conventional	Spud		Wyoming		



Wellbore			
Wellbore Name	Profile Type	Kick Off Depth (ftKB)	Vertical Section Azimuth (°)
Original Hole			
Section Des	Size (in)	Act Top (ftKB)	Act Btm (ftKB)
Conductor	16 1/4	0.0	35.0
Surface	12 3/8	35.0	704.0
Intermediate	6 3/8	704.0	2,566.0

Wellhead				
Wellhead Type				
Des	Make	Model	SN	WP Top (psi)

Last Mud Check							
Date	Type	Depth (ftKB)	Dens (lb/gal)	Va (s/cf)	Gel (10s) (lb/100ft³)	Gel (10m) (lb/100ft³)	YP CR (lb/100ft³)

Casing									
Casing Description			Run Date		Set Depth (ftKB)		Wellbore		
Intermediate			11/10/2008 00:00		2,526.0		Original Hole		
Centrifugers					Scratchers				
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)	
58	Casing	7	6.456	20.00	LS	2,526.00	0.00	2,526.00	

Cement: Intermediate		
Cementing Start Date	Cementing End Date	Wellbore
11/10/2008		Original Hole
Evaluation Method	Barrels Circulated	
Circulated		
Comment		

Cement Stage: Intermediate					
Top Depth (ftKB)	Bottom Depth (ftKB)	Fluid Return?	Vol Ceme... (bbl)	Top Plug?	Bottom Plug?
			8.0		
Q Pump In (bbl/min)	Q Pump Final (bbl/min)	Avg Pump Rate (bbl/min)	Final Pump Pressure (psi)	Plug Bump Pressure (psi)	
Pipe Reciprocated?	Stroke (ft)	Reciprocation Rate (spm)	Pipe Rotated?	Pipe RPM (rpm)	
Tagged Depth (ftKB)	Tag Method	Depth Plug Unltd Out...	Drill Out Diameter (in)	Drill Out Date	

Cement Fluid: Intermediate					
Fluid Type	Fluid Description	Amount (s...)	Cnt Blend	Volume Pumped (bbl)	
Lead		190	mid-App	223	
Estimated Top (ftKB)	Est Btm (ftKB)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	Free Water (%)	
		2.44			
Density (lb/gal)	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)		
12.00					

Cement Fluid Additives		
Add	Type	Conc

Cement Fluid: Intermediate					
Fluid Type	Fluid Description	Amount (s...)	Cnt Blend	Volume Pumped (bbl)	
Tail		75	A		
Estimated Top (ftKB)	Est Btm (ftKB)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	Free Water (%)	
		1.18			
Density (lb/gal)	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)		
15.80					

Cement Fluid Additives		
Add	Type	Conc

SEP 25 2014

WV Department of Environmental Protection  
Report Printed: 7/7/2014

WW-4-A  
Revised 6/07

1) Date: September 23, 2014  
2) Operator's Well Number  
507491 (Ritter Lumber #7491)  
3) API Well No.: 47 109 - 03032  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT**  
**DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS**  
**NOTICE AND APPLICATION TO PLUG AND ABANDON WELL**

4) Surface Owner(s) to be served:  
(a) Name Heartwood Forestland Fund IV LP  
Address 19045 Stone Mountain Road  
Abingdon, VA 24210  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Ross Eller  
Address 121 Brierhill Drive  
Beckley, WV 25801  
Telephone 304-932-6844

5) (a) Coal Operator:  
Name Dynamic Energy Inc.  
Address Coal Mountain Road  
Coal Mountain, WV 24823  
(b) Coal Owner(s) with Declaration  
Name Natural Resource Partners  
5260 Irwin Road  
Address Huntington, WV 25705  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name Dynamic Energy Inc.  
Address Coal Mountain Road  
Coal Mountain, WV 24823

**TO THE PERSONS 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 its and the plugging work order; and
  - (2) The plat (surveyor's map) showing the well location on Form WW-6.
- The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses 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 Division 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.



OFFICIAL SEAL  
STATE OF WEST VIRGINIA  
NOTARY PUBLIC  
Misty S Christlets  
1207 Briercliff Rd  
Bridgeport, WV 26330  
My Commission Expires February 20, 2018

Well Operator:  
EQT Production Company  
Victoria J. Roark  
Permitting Supervisor  
PO Box 280  
Bridgeport, WV 26330  
(304) 848-0076

Subscribed and sworn before me this 23rd day of September, 2014  
Misty S. Christlets Notary Public  
My Commission Expires: 2/20/18

The Office of Oil & Gas processes your personal information, such as name, address and phone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

10903032 P

**EQT**  
C/O Vicki Roark  
P.O. Box 280  
Bridgeport, WV 26330

SENDER COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete Items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		A. Signature <b>X</b> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
1. Article Addressed to:  <b>Dynamic Energy, Inc.</b> <b>Coal Mountain Road</b> <b>Coal Mountain, WV 24823</b>  <small>Plug 507491</small>		B. Received by (Printed Name) C. Date of Delivery	
2. Article Number <small>(Transfer from service label)</small> <b>7014 1820 0001 2406 7526</b>		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
PS Form 3811, July 2013		Domestic Return Receipt	
3. Service Type <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express™ <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	

PS Form 3800, July 2014

City, State, ZIP+4®  
 Street & No.  
 Sent To  
**Coal Mountain, WV 24823**

Total Postage  
 Certified Fee  
 Return Receipt Fee  
 Restricted Delivery Fee  
 Endorsement Required

**Dynamic Energy, Inc.**  
**Coal Mountain Road**  
**Coal Mountain, WV 24823**

Postmark Here

**OFFICIAL USE**

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**U.S. Postal Service**  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

7014 1820 0001 2406 7526  
7014 1820 0001 2406 7526



neopost #  
09/24/2014  
**US POSTAGE**

RECEIVED  
Office of Environmental Protection  
SEP 25 2014  
ZIP 26330-1502  
FIRST CLASS MAIL  
**\$07.61**

WV Department of Environmental Protection

10903032P

**EQT**  
C/O Vicki Roark  
P.O. Box 280  
Bridgeport, WV 26330

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Natural Resource Partners  
5260 Irwin Road  
Huntington, WV 25705

Plug 507491

2. Article Number  
(Transfer from service label)

7014 1820 0001 2406 7540

PS Form 3811, July 2013

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X  Agent  
 Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Certified Mail®  Priority Mail Express™  
 Registered  Return Receipt for Merchandise  
 Insured Mail  Collect on Delivery

4. Restricted Delivery? (Extra Fee)  Yes

PS Form 3800, July 2014 See Reverse for Instructions

City, State, ZIP or PO Box No  
Street & Apt. No  
Sent to  
Huntington, WV 25705

Total Postage \$5260 Irwin Road  
Natural Resource Partners

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark Here

**OFFICIAL USE**

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**CERTIFIED MAIL RECEIPT**

U.S. Postal Service™

Domestic Mail Only

Plug 507491

7014 1820 0001 2406 7540  
7014 1820 0001 2406 7540



POSTNET

repost: 09/24/2014  
US POSTAGE

RECEIVED  
Office of...  
SEP 25 2014  
ZIP 26330  
4410228888

WV Department of Environmental Protection

10903032A  
**FEI**  
 C/O Vicki Roark  
 P.O. Box 280  
 Bridgeport, WV 26330

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete Items 1, 2, and 3. Also complete Item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		A. Signature X <span style="float: right;"><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</span>	
1. Article Addressed to:		B. Received by (Printed Name)	C. Date of Delivery
Heartwood Forestland Fund IV LP 19045 Stone Mountain Road Abingdon, VA 24210 <small>Plg 507491</small>		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
2. Article Number <i>(Transfer from service label)</i>		7014 1820 0001 2406 7557	
PS Form 3811, July 2013		Domestic Return Receipt	

PS Form 3800, July 2014

DO NOT REMOVE OR DESTROY THIS LABEL

Plg 507491

City, State, ZIP or PO Box No.  
 Abingdon, VA 24210

Send To  
 Heartwood Forestland Fund IV LP  
 19045 Stone Mountain Road  
 Abingdon, VA 24210

Total Postage	2406 7557
Restricted Delivery Fee (Endorsement Required)	
Return Receipt Fee (Endorsement Required)	
Certified Fee	
Postage	

Postmark Here

**OFFICIAL USE**  
 For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

U.S. Postal Service

Plg 507491



repost# 09/24/2014  
**US POSTAGE**  
 FIRST-CLASS MAIL  
**\$07.82**  
 ZIP 26330  
 041110228802

SEP 25  
 WV Department of Environmental Protection

10403032P

**EQT**

C/O Vicki Roark  
P.O. Box 280  
Bridgeport, WV 26330

neopost  
09/24/2014  
**US POSTAGE**

FIRST-CLASS MAIL  
**\$01.82**



ZIP 26330  
041L10228892

SEP 25 2014

Ross Eller  
121 Brierhill Drive  
Beckley, WV 25801

PM 507491

WV Department of  
Environmental Protection

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS**  
**CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM**  
**GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE**

Operator Name: EQT PRODUCTION COMPANY OP ID: \_\_\_\_\_  
Watershed: Big Cub Creek Branch Quadrangle: Mallory  
Elevation: 1340 ft County: Wyoming District: Clear Fork

Description of anticipated Pit Waste: Formation Fluids

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes \_\_\_ No X  
Will synthetic liner be used in the pit? Yes Is so, what ml.? 40-ml 20ML.

Proposed Disposal Method for Treated Pit Wastes:  
X Land Application  
\_\_\_\_ Underground Injection - UIC Permit Number \_\_\_\_\_  
\_\_\_\_ Reuse (at API Number) \_\_\_\_\_  
\_\_\_\_ Offsite Disposal Permit #. \_\_\_\_\_  
\_\_\_\_ Other: Explain \_\_\_\_\_

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. \_\_\_\_\_  
If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_  
Additives to be used? \_\_\_\_\_

Will closed loop system be used? \_\_\_\_\_  
Drill Cuttings disposal method? Leave in pit, landfill, remove offsite, etc. \_\_\_\_\_  
If left in pit and plan to solidify what medium will be used? Cement, Lime, sawdust \_\_\_\_\_  
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 Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms 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.

Company Official Signature *Victoria Roark*

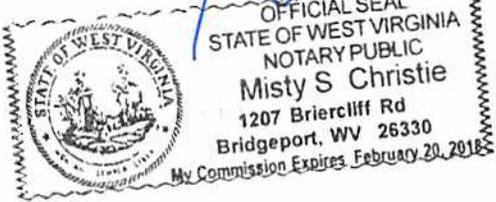
Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 23rd day of September, 2014

*Misty S. Christie* Notary Public

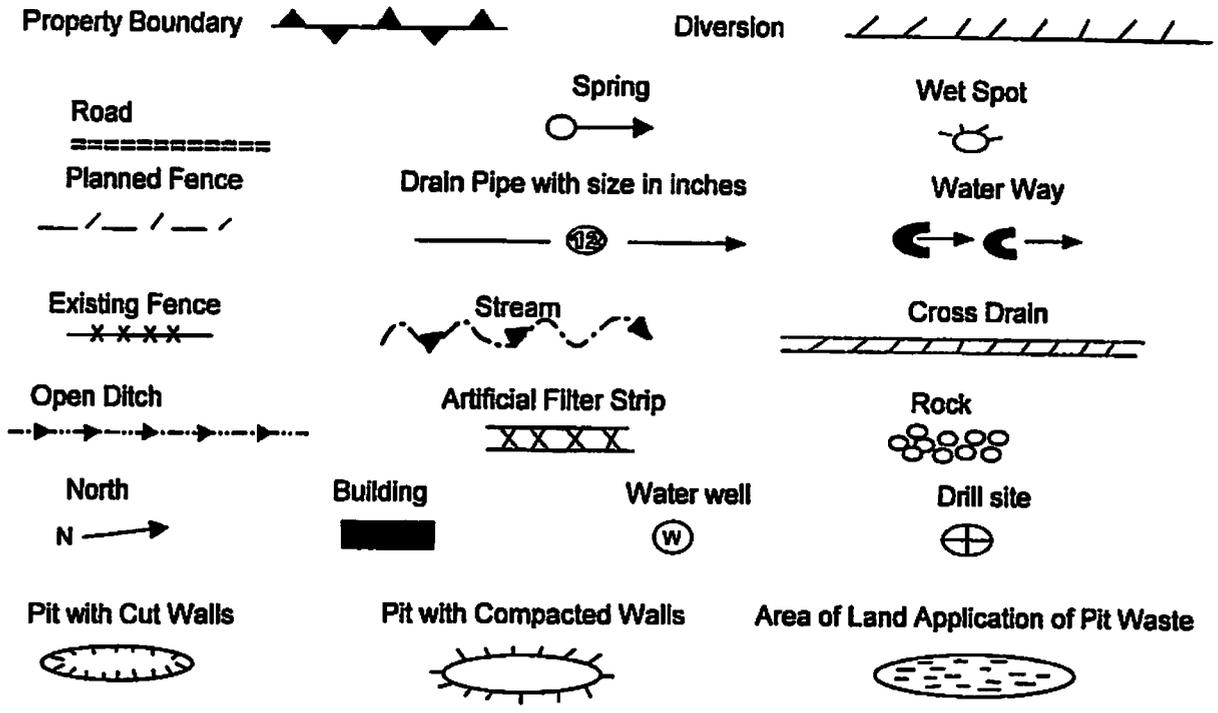
My Commission Expires 2/20/18



SEP 25 2014

**OPERATOR'S WELL NO.:**  
507491 (Ritter Lumber #7491)

**LEGEND**



Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 5.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20) or equivalent 1/3 ton lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre or hydroseed.

**SEED MIXTURES**

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

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

Plan approved by: *Henry Kennedy*

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

Title: *Inspector* Date: *11/3/14*

Field Reviewed? Yes  No

10903032 P

Topo Quad: Mallory 7.5'

Scale: 1" = 2000'

County: Wyoming

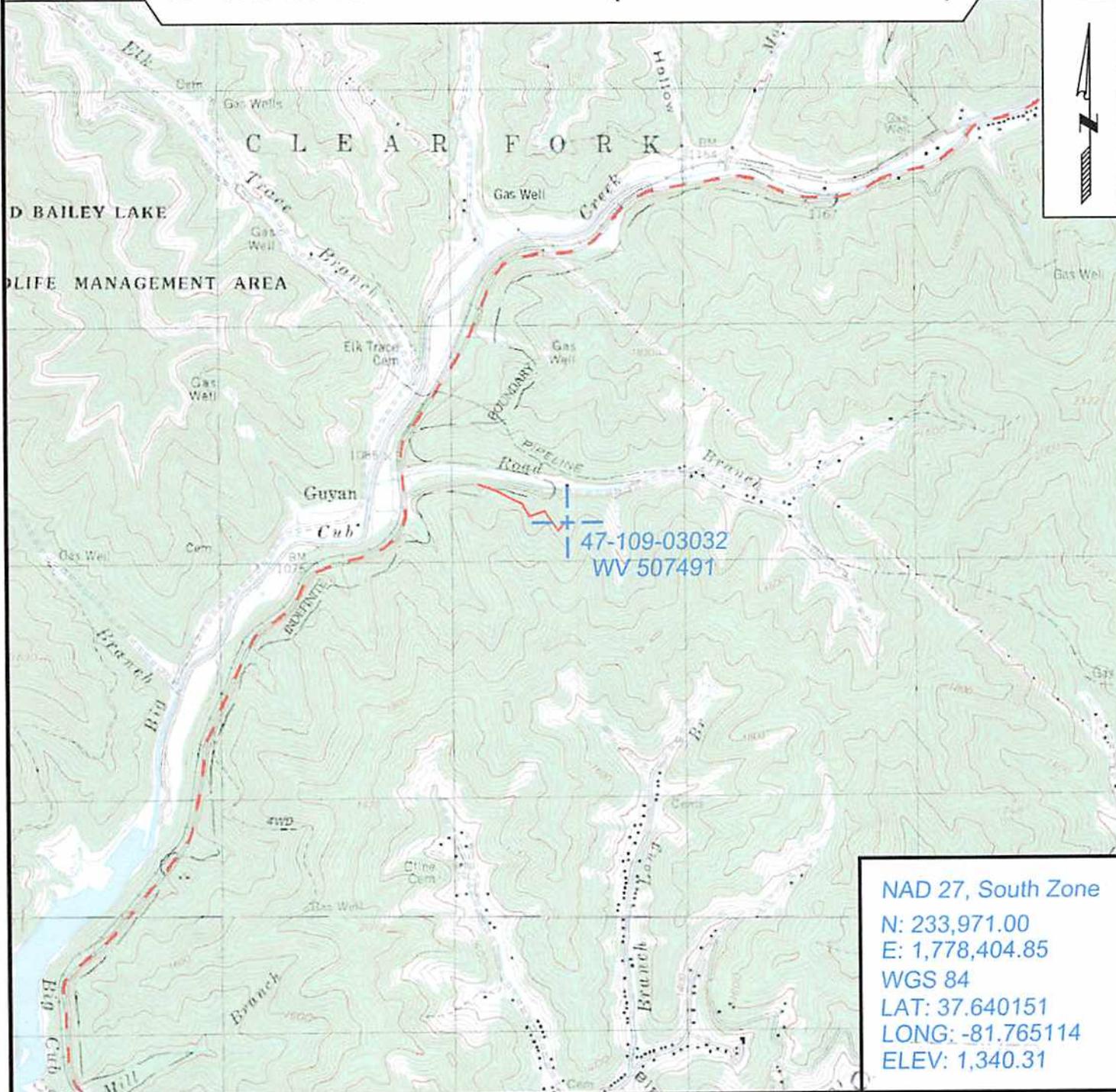
Date: May 5, 2014

District: Clear Fork

Project No: 22-22-00-08

47-109-03032 WV 507491 (Ritter Lumber #7491)

Topo



NAD 27, South Zone  
 N: 233,971.00  
 E: 1,778,404.85  
 WGS 84  
 LAT: 37.640151  
 LONG: -81.765114  
 ELEV: 1,340.31



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330  
 WV Department of Environmental Protection

WW-7  
8-30-06



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

API: 47-109-03032 WELL NO.: WV 507491 (Ritter Lumber #7491)

FARM NAME: Heartwood Forestland Fund

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Wyoming DISTRICT: Clear Fork

QUADRANGLE: Mallory 7.5'

SURFACE OWNER: Heartwood Forestland Funds IV, LP

ROYALTY OWNER: Plum Creek Timberlands, LP, et al.

UTM GPS NORTHING: 4166166

UTM GPS EASTING: 432498 GPS ELEVATION: 408 m (1340 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 or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

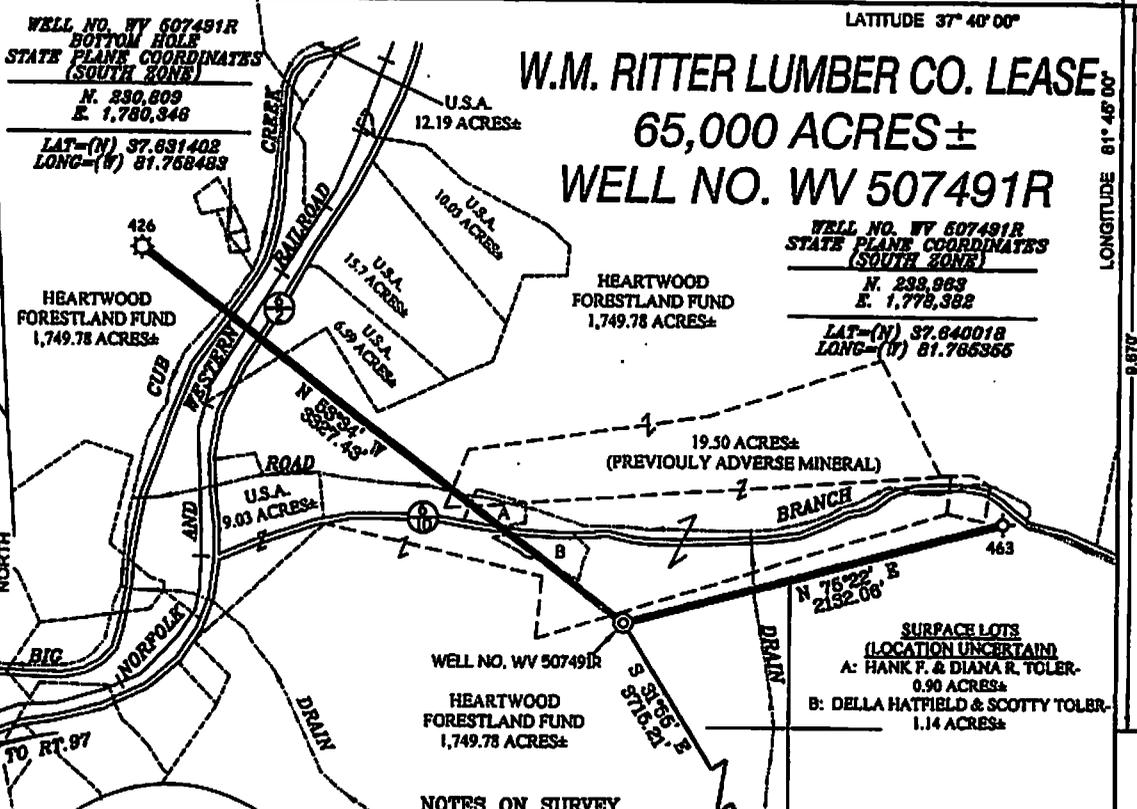
- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:  
Survey grade GPS     : Post Processed Differential       
Real-Time Differential       
Mapping Grade GPS X: Post Processed Differential X  
Real-Time Differential
- Letter size copy of the topography map showing the well location.**

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.

*Steph...*  
Signature

PS # 2180  
Title

RECEIVED  
Office of Oil and Gas  
5/7/14 SEP 25 2014  
Date  
WV Department of  
Environmental Protection



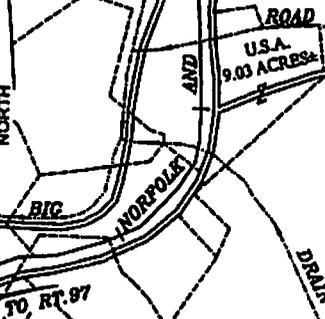
WELL NO. WV 507491R  
 BOTTOM HOLE  
 STATE PLANE COORDINATES  
 (SOUTH ZONE)  
 N. 230,809  
 E. 1,780,348  
 LAT-(N) 37.631402  
 LONG-(W) 81.768483

**W.M. RITTER LUMBER CO. LEASE**  
**65,000 ACRES ±**  
**WELL NO. WV 507491R**

WELL NO. WV 507491R  
 STATE PLANE COORDINATES  
 (SOUTH ZONE)  
 N. 233,963  
 E. 1,778,382  
 LAT-(N) 37.840018  
 LONG-(W) 81.768355

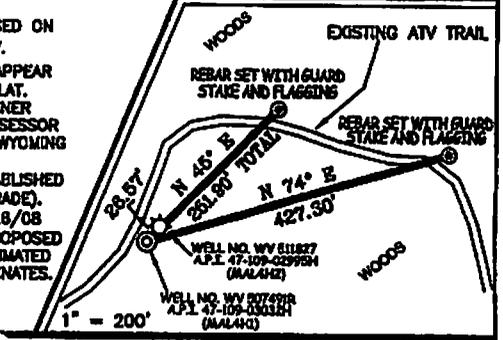
HEARTWOOD  
 FORESTLAND FUND  
 1,749.78 ACRES ±

HEARTWOOD  
 FORESTLAND FUND  
 1,749.78 ACRES ±



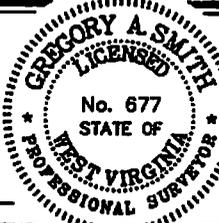
- NOTES ON SURVEY**
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
  2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 11/28/07.
  3. LEASE BOUNDARY DOES NOT APPEAR WITHIN THE SCOPE OF THIS PLAT.
  4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF WYOMING COUNTY IN JULY, 2007.
  5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).
  6. PLAT ORIGINALLY DATED 03/28/08 REVISED 09/28/08 TO CHANGE PROPOSED HORIZONTAL PATH DIRECTION, ESTIMATED DEPTH AND BOTTOM HOLE COORDINATES.

**REFERENCES**



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.  
 677 *Gregory A. Smith*



(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE SEPTEMBER 28, 20 08  
 OPERATORS WELL NO. WV 507491R  
 API WELL NO. 47-109-03032H  
 STATE WV COUNTY MALLORY PERMIT REVISED

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3889P507491R (249-05)  
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 800'

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

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 1,347 WATERSHED ROAD BRANCH OF BIG CUB CREEK  
 DISTRICT CLEAR FORK COUNTY WYOMING QUADRANGLE MALLORY 7.5'

SURFACE OWNER HEARTWOOD FORESTLAND FUND ACREAGE 1,749.78 ±  
 ROYALTY OWNER PLUM CREEK TIMBERLANDS, L.P. LEASE ACREAGE 65,000 ±

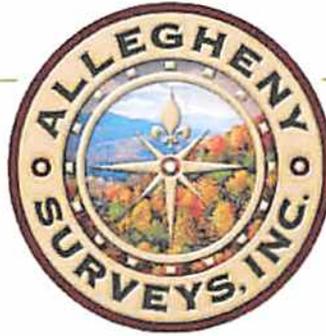
PROPOSED WORK: LEASE NO. 004157  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION   
 PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION LOWER HURON/SILTSTONE  
 ESTIMATED DEPTH 4,750' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQUITABLE PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY  
 ADDRESS 1710 PENNSYLVANIA AVE ADDRESS 1710 PENNSYLVANIA AVE  
 CHARLESTON, WV 25302 CHARLESTON, WV 25302

COUNTY NAME  
 PERMIT

Environmental Protection  
 Mallery 9



## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY  
LEASE NAME AND WELL No. Ritter Lumber #7491 WV 507491 (47-109-03032)

The initial mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 1000' of the existing well site. The following landowners will be notified of the opportunity to request a water sample.

\*Please note that the following information is subject to change upon field inspection.

### POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 500' +/- Owner: Hank F. & Diana R. Toler  
Address: PO Box 23, Coal Mountain, WV 24823 Phone No. \_\_\_\_\_  
Comments:

Site: 2 Spacing: 440' +/- Owner: Della Hatfield, Scotty Toler, Le Ivory Toler  
Address: Box 357 Hatfield Br, Coal Mountain, WV 24823 Phone No. \_\_\_\_\_  
Comments:

Site: 3 Spacing: 540' +/- Owner: Hank F. & Diana R. Toler.  
Address: PO Box 23, Coal Mountain, WV 24823 Phone No. \_\_\_\_\_  
Comments:

Site: 4 Spacing: 600' +/- Owner: Della Hatfield, Scotty Toler, Le Ivory Toler  
Address: Box 357 Hatfield Br, Coal Mountain, WV 24823 Phone No. \_\_\_\_\_  
Comments:

**BIRCH RIVER OFFICE**  
237 Birch River Road  
Birch River, WV 26610  
phone: 304-649-8606  
fax: 304-649-8608

**BRIDGEPORT OFFICE**  
172 Thompson Drive  
Bridgeport, WV 26330  
phone: 304-848-5035  
fax: 304-848-5037

**CALDWELL OFFICE**  
212 Cumberland Street  
Caldwell, OH 43724  
phone: 740-305-5007  
fax: 740-305-5126

**ALUM CREEK OFFICE**  
P.O. Box 108 • 1413 Childress Road  
Alum Creek, WV 25003  
phone: 304-756-2949  
fax: 304-556-2948  
SEP 25 2014

Site: 5 Spacing: 990' +/- Owner: Earnest E. Toler & Earnest E. Toler, Jr.

Address: Box 305 Hatfield Br, Coal Mountain, WV 24823

Phone No. \_\_\_\_\_

Comments:

Site: 6 Spacing: 580' +/- Owner: Della Hatfield, Scotty Toler, Le Ivory Toler

Address: Box 357 Hatfield Br, Coal Mountain, WV 24823

Phone No. \_\_\_\_\_

Comments:

Site: 7 Spacing: 590' +/- Owner: Della Hatfield, Scotty Toler, Le Ivory Toler

Address: Box 357 Hatfield Br, Coal Mountain, WV 24823

Phone No. \_\_\_\_\_

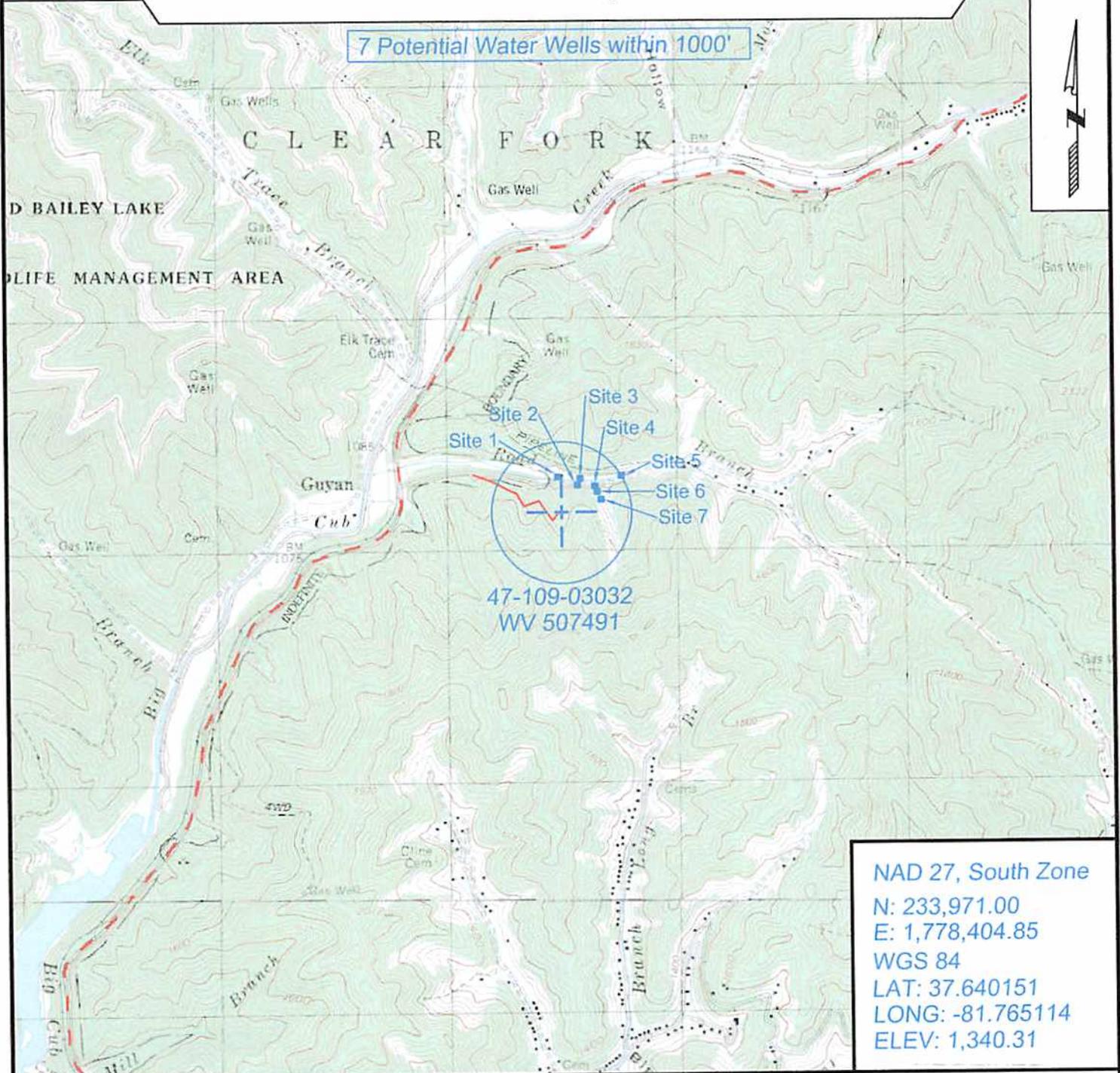
Comments:

SEP 25 2014

Topo Quad: Mallory 7.5' Scale: 1" = 2000'  
 County: Wyoming Date: May 5, 2014  
 District: Clear Fork Project No: 22-22-00-08

Water

47-109-03032 WV 507491 (Ritter Lumber #7491)



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**  
 P.O. Box 280 Z 5 2014  
 Bridgeport, WV 26330

WV Department of  
 Environmental Protection