



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 10, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-10901037, issued to HARPER, HAYDEN ENERGY KA, LLC, 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: WB-7
Farm Name: POCAHONTAS LAND CORP.
API Well Number: 47-10901037
Permit Type: Plugging
Date Issued: 12/10/2014

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. 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.

10901037A

WW-4B
Rev. 2/01

1) Date AUGUST 22, 2014
2) Operator's
Well No. WB 07
3) API Well No. 47-109 - 01037

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 ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1281' Watershed INDIAN CREEK
District CENTER County WYOMING Quadrangle PINEVILLE 7.5

6) Well Operator HAYDEN HARPER ENERGY KA, LLC 7) Designated Agent BRETT MCDONOUGH
Address 1001 MOOREHEAD SQ. DR. STE 350 Address 1001 MOOREHEAD SQ. DR. STE 350
CHARLOTTE, NC 28203 CHARLOTTE, NC 28203

8) Oil and Gas Inspector to be notified
Gary Kennedy
PO Box 268
Nimitz, WV 25978

9) Plugging Contractor
Name PATCHWORK OIL & GAS, LLC
Address 8165 ELIZABETH PIKE
ELIZABETH, WV 26143

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

Plugging schematic and procedure on next page.

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 10/31/14

12/12/14

WB #07
47-109-01037

PROPOSED PLUGGING PROCEDURE

1. Prepare plugging permit application.
2. Certify to surface and coal owners.
3. Certify to designated State inspector for signature.
4. Once all signatures are obtained, copy for our records and certify to Jeff at the State Office for approval.
5. Receive plugging permit good for 2 years.
6. Notify the designated State inspector 24 hours prior to commencing operations.
7. Take equipment to location and begin prepping for plug.
8. Rig up
9. Verify total depth of 1401'
10. Run tubing to bottom of tubing at 1308'. Set first plug with 13.5 sacks of Class A cement with no more than 3% CaCl₂ and no other additives from 1308' up to 1118'. This will cover bottom plug, pay and elevation.
11. Pull tubing back, wait 8 hours, run in and tag plug.
12. Begin looking for free point.
13. Run 1 sack of 6% Bentonite gel from 1118' up to 848'.
14. Based on cement fill up on records the 4 1/2 free point should be around 798'. (500')
15. Attempt to rip and remove 798' of 4 1/2, run tubing back in to 848', run 8 sacks for second plug (casing rip) of Class A cement with no more than 3% CaCl₂ and no other additives from 848' up to 748'.
16. Pull tubing back, wait 8 hours
17. Run in and tag plug.
18. Run 4 sacks of 6% Bentonite gel from 748' up to 200'.

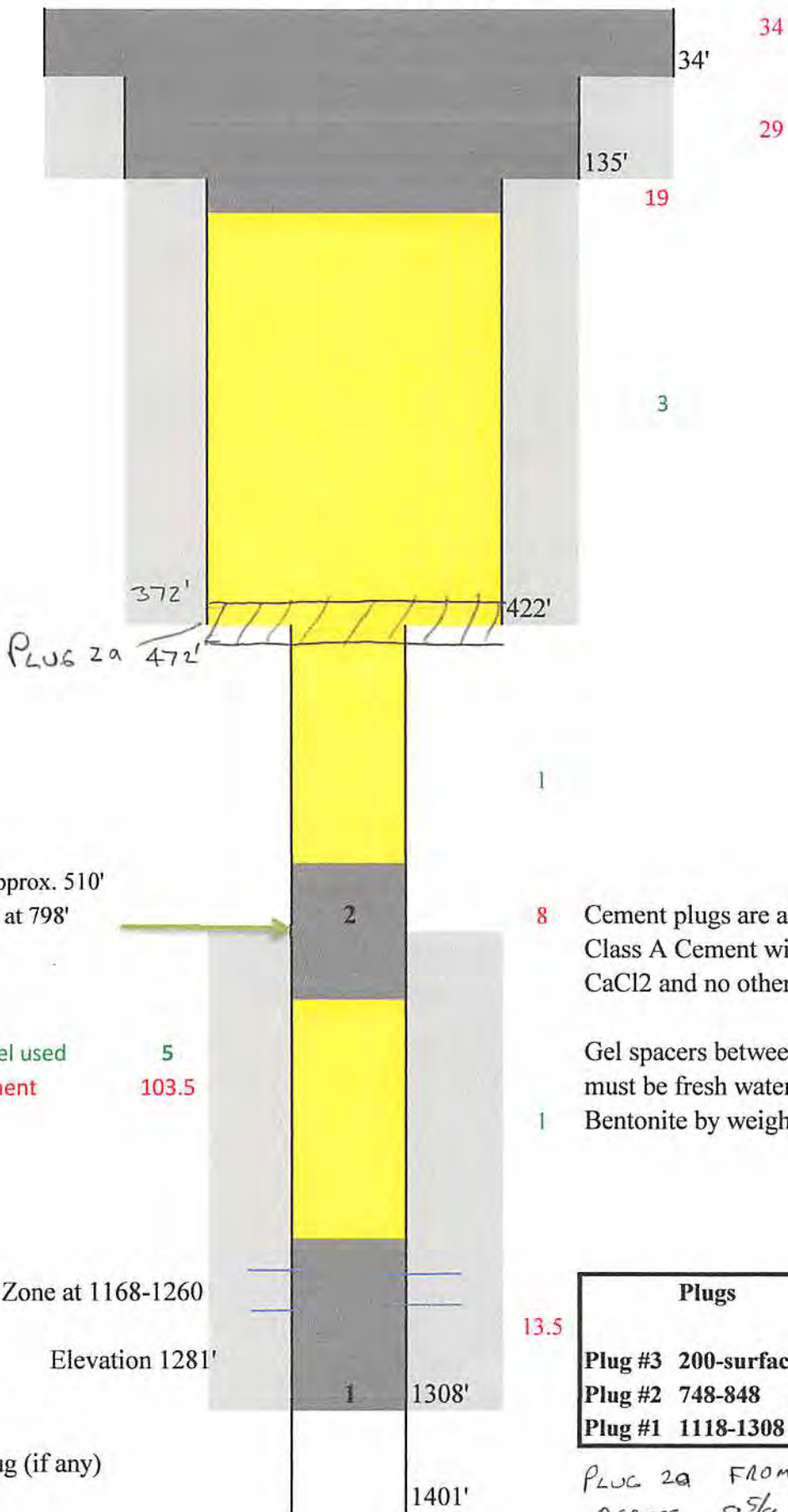
TDC ≈ 500'

(500')

JK

20. Pull tubing back to 200' and run 82 sacks of Class A cement with no more than 3% CaCl₂ and no other additives from 200' up to surface.
21. Solidify pit if necessary with more cement and lime, then bury.
22. Set 6" x 12.5" steel pipe with concrete with 1/2" API identification.
23. Rig down, and move equipment out.
24. Reclaim location
25. Prepare WR-34 & WR-38 for permit release.





Cement fill up to approx. 510'
attempt to rip 4 1/2 at 798'

50lb sacks of 6% gel used 5
100lb sacks of cement 103.5

8 Cement plugs are at a minimum of 100' Class A Cement with no more than 3% CaCl₂ and no other additives.

Gel spacers between all cement plugs must be fresh water with at least 6%

1 Bentonite by weight

JK

Plugs	
Plug #3	200-surface, water, coal
Plug #2	748-848 Casing rip
Plug #1	1118-1308 bottom, pay, elev.

PLUG 2a FROM 472' - 372'
ACROSS 8 5/8" CASING SHOE

Grey : Cement
Yellow : Gel
Red line : Bridge Plug (if any)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

STAGE I RAVENCLIFF PERFORATE WITH 20 (21) HOLES, FRAC WITH 140 BBL 75Q FUM,
1234-1254 40000# 2740 SAND, 500 GAL 15% HCL, ATP-2400#, AIR-2528PM, ISEP-1600#

STAGE II RAVENCLIFF PERFORATE WITH 20 (21) HOLES, FRAC WITH 140 BBL 75Q FUM,
1195-1220 40,000# 2740 SAND, 500 GAL 15% HCL, ATP-2500#, AIR-3288PM, ISEP-1650#

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and gas
SAND & FILL			0	16	
SAND & SHALE			16	50	4" STREAM @ 35-40'
SAND			50	147	10" STREAM @ 80'
SHALE			147	165	
COAL (SAND)			165	170	
SHALE			170	282	2" STREAM @ 190'
SAND			282	395	
SAND & SHALE			395	450	
SAND			450	475	
SAND & SHALE			475	760	2" STREAM @ 440'
SAND & SHALE			760	1167	
SAND			1167	1265	GAS SHOW
LIME			1265	1300	
Red Rock (SHALE)			1300	1315	
SAND & SHALE			1315	1401	
			DTD - 1401		
			LTD - 1401		
<u>GAMMA RAY LOG</u>					
RAVENCLIFF SAND			1168	1260	
AVIS LIME			1260	1302	

RECEIVED
JAN 08 1988
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

Bowie, Inc.
Well Operator
By: Bradley W. Thomas, Geologist
Date: 1-6-87

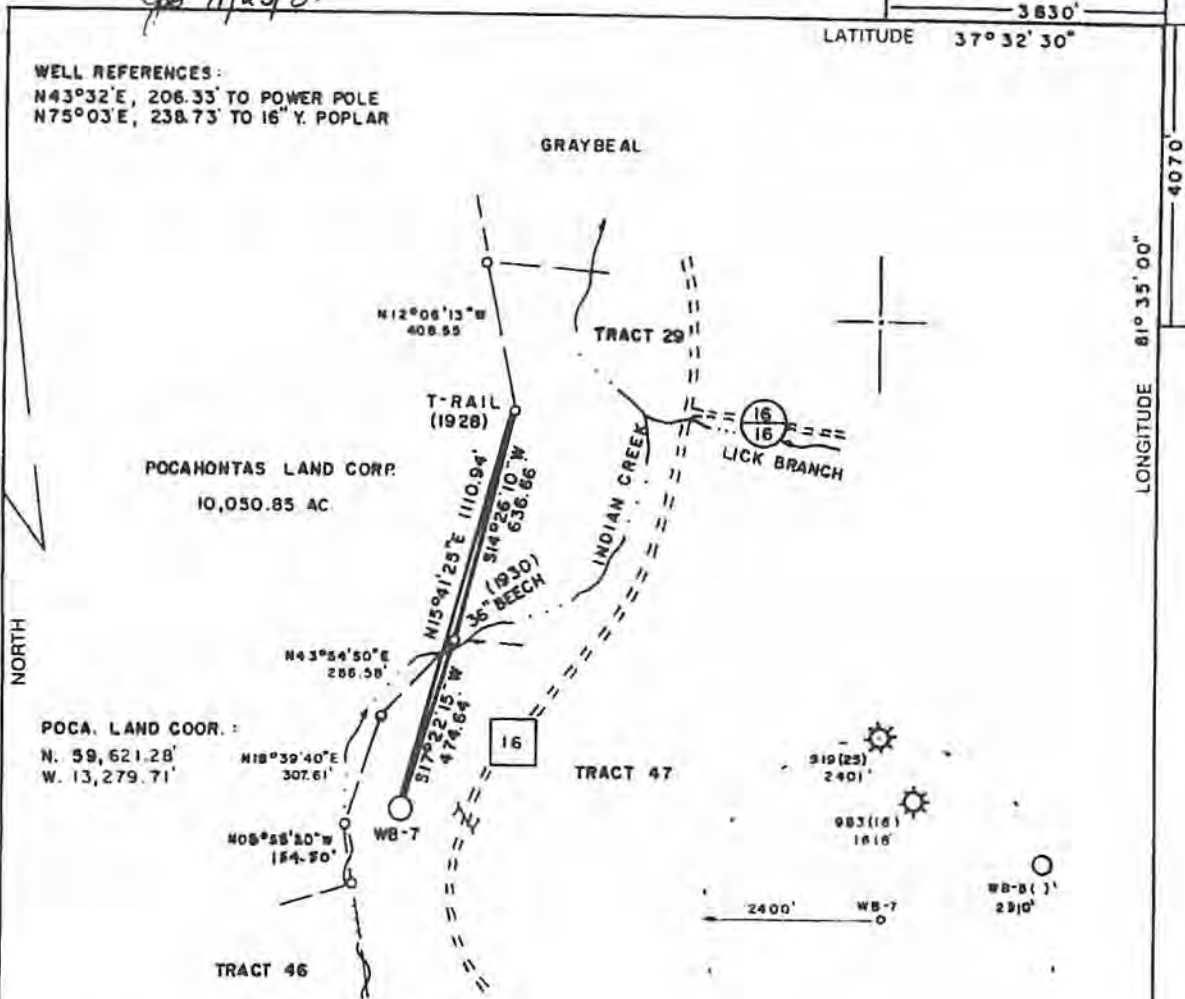
Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

WJK

12/12/14

11/23/07

10901037P



LAND SURVEYING SERVICES
 21 CEDAR LANE
 BRIDGEPORT, WV 26330
 PHONE 304-842-2018

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____ DRAWING NO. _____ SCALE 1" = 400' MINIMUM DEGREE OF ACCURACY 1 in 2500 PROVEN SOURCE OF ELEVATION BM 1300' N.E. OF LOCATION ELEV. - 1281'	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 DEPARTMENT OF ENERGY. (SIGNED) <i>Stephen D. Losh</i> R.P.E. _____ L.L.S. 674 STEPHEN D. LOSH	PLACE SEAL HERE
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STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION		DATE <u>OCTOBER 29</u> 19 <u>87</u> OPERATOR'S WELL NO. <u>WB-7</u> API WELL NO. <u>47-109-1037</u> STATE COUNTY PERMIT
WELL TYPE: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> (IF "GAS,") PRODUCTION <input checked="" type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>		
LOCATION: ELEVATION <u>1281.49'</u> WATER SHED <u>INDIAN CREEK</u> DISTRICT <u>CENTER</u> COUNTY <u>WYOMING</u> QUADRANGLE <u>PINEVILLE 7.5 min.</u>		
SURFACE OWNER <u>POCAHONTAS LAND CORP</u> ACREAGE <u>24,980.40</u> OIL & GAS ROYALTY OWNER <u>POCAHONTAS LAND CORP</u> LEASE ACREAGE <u>10,050.85</u> LEASE NO. <u>56244</u>		
PROPOSED WORK: DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____		
PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/>		
TARGET FORMATION <u>BIG LIME</u> ESTIMATED DEPTH <u>2900'</u> WELL OPERATOR <u>BOWIE, INC.</u> DESIGNATED AGENT <u>WILLIAM BOWIE</u> ADDRESS <u>132 WALDECK ST.</u> ADDRESS <u>132 WALDECK ST.</u> <u>CLARKSBURG, WV 26301</u> <u>CLARKSBURG, WV 26301</u>		

FORM WW-6

COUNTY NAME WYOMING PERMIT 1037

12/12/14

WW-4A
Revised 6-07

1) Date: AUGUST 22, 2014
2) Operator's Well Number
WB 07
3) API Well No.: 47 - 109 - 01037

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:	5) (a) Coal Operator
(a) Name <u>PINNACLE LAND COMPANY</u>	Name <u>PINNACLE LAND COMPANY</u> ✓
Address <u>PO BOX 446</u> ✓	Address <u>PO BOX 446</u>
<u>MAN, WV 25635</u>	<u>MAN, WV 25635</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NRP, WPP LLC</u> ✓
	Address <u>5260 IRWIN RD.</u>
	<u>HUNTINGTON, WV 25705</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 268</u>	Name <u>PINNACLE LAND COMPANY & MECHEL BLUESTONE</u>
<u>Nimitz, WV 25978</u>	Address <u>PO BOX 446</u> <u>PO BOX 1085</u>
Telephone <u>304-382-8402</u>	<u>MAN, WV 25635</u> ✓ <u>BECKLEY, WV 25802</u>

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 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 HAYDEN HARPER ENERGY KA, LLC
 By: ERIC P LINN *EPL*
 Its: VICE PRESIDENT
 Address 1001 MOREHEAD SQ DRIVE, SUITE 350
CHARLOTTE, NC 28203
 Telephone 704-343-2447

COMMONWEALTH OF PENNSYLVANIA
 Notarial Seal
 Lynne M. Coogle, Notary Public
 City of Pittsburgh, Allegheny County
 My Commission Expires March 18, 2016
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 5th day of SEPTEMBER 2014
Lynne M Coogle Notary Public
 My Commission Expires March 18 2016

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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.

10901037P

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> 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. 	<p>A. Signature <input checked="" type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to:</p> <p>Mechel Bluestone Po Box 1085 Beckley, WV 25802</p>	<p>3. Service Type</p> <p><input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Transfer from service label)</p> <p>7014 0510 0001 8220 1527</p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1541</p>	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> 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. 	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to:</p> <p>Pinnacle Land Po Box 446 Man, WV 25635</p>	<p>3. Service Type</p> <p><input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Transfer from service label)</p> <p>7014 0510 0001 8220 1503</p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> 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. 	<p>A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to:</p> <p>NPP, WPP, LLC 5260 Irwin Rd. Huntington, WV 25705</p>	<p>3. Service Type</p> <p><input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Transfer from service label)</p> <p>7014 0510 0001 8220 1510</p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>	

12/12/14

10901037A

WW-9
Rev. 5/08

Page 1 of 1
API Number 47 - 109 - 01037
Operator's Well No. WB 07

✓ + 80
10000

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 Name HAYDEN HARPER ENERGY KA, LLC OP Code 494495359

Watershed INDIAN CREEK Quadrangle PINEVILLE 7.5

Elevation 1281' County WYOMING District CENTER

Description of anticipated Pit Waste: FLUIDS AND OTHER MATERIALS ASSOCIATED WITH PLUGGING

Will a synthetic liner be used in the pit? YES 20 ML. *[Signature]*

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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.

Company Official Signature *[Signature]*
Company Official (Typed Name) ERIC P LINN
Company Official Title VICE PRESIDENT

RECEIVED
Office of Oil and Gas
NOV 06 2014
WV Department of
Environmental Protection

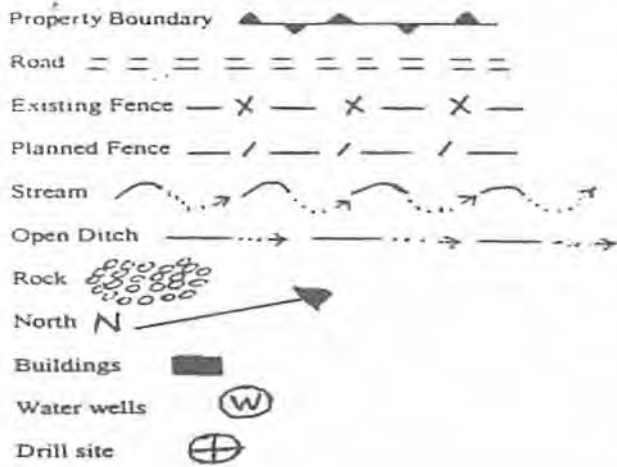
Subscribed and sworn before me this 5TH day of SEPTEMBER, 20 14

[Signature]
Notary Public

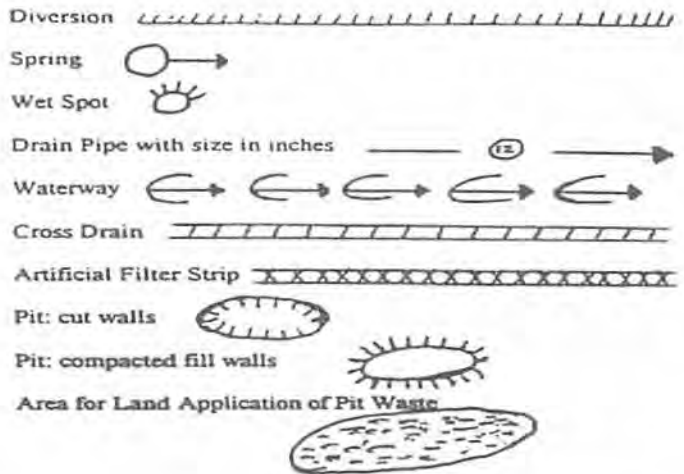
My commission expires March 18, 2016

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Lynne M. Coogle, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires March 18, 2016
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

12/12/14



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 3.2 Prevegetation pH 6.67

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch STRAW Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
TALL FESCUE		40	"		
LADINO CLOVER		5	"		

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: 10/31/14

Field Reviewed? () Yes () No



WB 07 47-109-01037

12/12/14

