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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

April 30, 2014

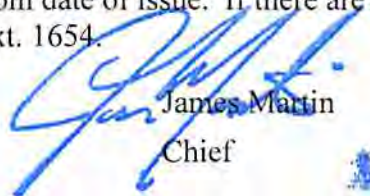
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-1501172, issued to TRIAD HUNTER, 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: J.B. CASTO #101  
Farm Name: HAYNES, ROBERT  
**API Well Number: 47-1501172**  
**Permit Type: Plugging**  
Date Issued: 04/30/2014

Promoting a healthy environment.

05/02/2014

# 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

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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.

1501172P

WW-4B  
Rev. 2/01

1) Date January 30, 20 14  
2) Operator's  
Well No. J.B. Casto # 101  
3) API Well No. 47-015 - 01172

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

5) Location: Elevation 1380' GPS Watershed Grannys Creek  
District Henry 02 County Clay 15 Quadrangle Newton 512

6) Well Operator Triad Hunter, LLC 7) Designated Agent Kim Arnold  
Address 125 Putnam Street Address P.O. Box 154  
Marietta, Ohio 45750 Waverly, W.V. 26184

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Ed Gainer Name N/A  
Address P.O.Box 821 Address \_\_\_\_\_  
Spencer, W.V. 25276

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

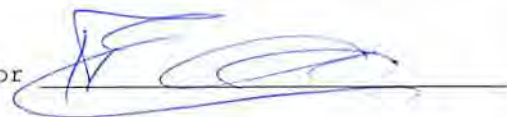
(SEE ATTACHED SHEET)

See changes 1

6% gel between all plugs

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

Work order approved by inspector



Date

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( 2014 )

Plugging Procedure Attachment ( Wells with 8 5/8" Casing )

Well Name : J.B. Casto # 101

Permit Number: 47-015-01172

District: Henry

County: Clay

MIIRU service rig and flowback tank; blow well down.

1. Pull tubing and rods OOH.
2. Check total depth with sandpump; clean out hole below bottom perforation.
3. Run 2 3/8" tubing below bottom perforation.
4. ( Bottom Hole Plug ) Mix/Pump 20 sacks Class A cement,( 23.6 cu. ft.), ¼ lb.flocele/sk., no CaCl.
5. Displace cement through tubing with gel water. (BH PLUG ≈ 2356' - 2106')
6. Pull 2 3/8" tubing OOH.
7. RIH with casing cutter tool, check depth of 1<sup>st</sup> plug and find 4 ½" cement top ( free pipe ).
8. Cut-off 4 ½" casing just above the cement top, break circulation, and pull one jt. of casing OOH.
9. ( Cut Plug ) Mix/Pump 30 sacks Class A cement, (35.4 cu. ft.), ¼ lb. flocele/sk.,no CaCl.
10. Displace cement through casing with gel water.
11. Pull 4 ½" casing up to the subsea elevation depth.
12. ( Elevation Plug ) Mix/Pump 30 sacks of Class A cement,( 35.4 cu. ft.), ¼ lb. flocele/sk., no CaCl. (EL. PLUG 1436'-1366')
13. Displace cement through casing with gel water. (100 ft. across bottom of surface pipe 600-500)
14. Pull 4 ½" casing to 100 feet below surface.
15. ( Surface Plug ) Mix/Pump 30 sacks of Class A cement,( 35.4 cu. ft.), ¼ lb. flocele/sk., no CaCl.
16. Circulate cement to surface.
17. Pull remaining joints of 4 ½" casing OOH. Top load annulus with Class A cement to surface.
18. Weld a three foot monument pipe on to the existing casing. Fill monument pipe with cement and attach identification plate to monument pipe.
19. RDMO service rig and supporting equipment.
20. Reclaim well site and lease road.

ELW 1386

Plug Summary

( Plug Name )	(Thickness )	( Cement Type )	( Sacks )	( Cubic Feet )
1. Bottom Hole	250 ft.	Class A	20	23.6
2. Cut Plug	100 ft.	Class A	30	35.4
3. Elevation Plug	100 ft.	Class A	30	35.4
4. Surface Plug	100 ft.	Class A	30	35.4
5. Totals:			110 sacks	129.8

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PERFORATIONS: 2288 - 2310  
20 SHOTS



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
Oil and Gas Division  
WELL RECORD

Rotary  Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood  Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Quadrangle Otter  
Permit No. Cl-1172

Company <u>Pennzoil Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P. O. Box 1588, Parkersburg, W. Va. 26101</u>				
Farm <u>J. B. Casto</u> Acres <u>260</u>				
Location (waters) <u>Granny's Creek</u>	Size			
Well No. <u>101</u> Elev. <u>1386.40'</u>	<u>20-16</u>			
District <u>Henry</u> County <u>Clay</u>	Cond.			
The surface of tract is owned in fee by _____	<u>13-10"</u>			
<u>Mr. Ray E. King</u>	<u>9 5/8</u>			
Address <u>Ovapa, W. Va. 25150</u>	<u>8 5/8</u>	<u>547.21</u>	<u>547.21</u>	<u>360 sks.</u>
Mineral rights are owned by <u>Kanawha Banking &amp; Trust Co. Agt. Address P. O. Box 393, Charleston, W. Va.</u>	<u>7</u>			
Drilling Commenced <u>July 23, 1976</u>	<u>5 1/2</u>			
Drilling Completed <u>July 29, 1976</u>	<u>4 1/2</u>	<u>2368.73</u>	<u>2368.73</u>	<u>50 sks.</u>
Initial open flow _____ cu. ft. _____ bbls.	<u>3</u>			
Final production _____ cu. ft. per day _____ bbls.	<u>2</u>			
Well open _____ hrs. before test _____ RP.	Liners Used			

Well treatment details: Water Injection Well  
Attach copy of cementing record.

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Big Injun & Squaw Depth \_\_\_\_\_

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			0	104		
Sand			104	134		
Shale			134	174		
Sand			174	200		
Shale			200	471		
Sand			471	495		
Shale			495	599		
Sand			599	749		
Shale			749	776		
Sand			776	928		
Shale			928	999		
Sand			999	1024		
Sandy Shale			1024	1082		
Sand			1082	1149		
Silty Shale			1149	1300		
Sand			1300	1318		
Shale			1318	1371		
Sand			1371	1436		
Shale			1436	1517		
Shaly Sand			1517	1579		
Sand			1579	1616		
Shale			1616	1646		
Salt Sand			1646	2024		
Shale			2024	2075		

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(over)  
\* Indicates Electric Log tops in the remarks section.

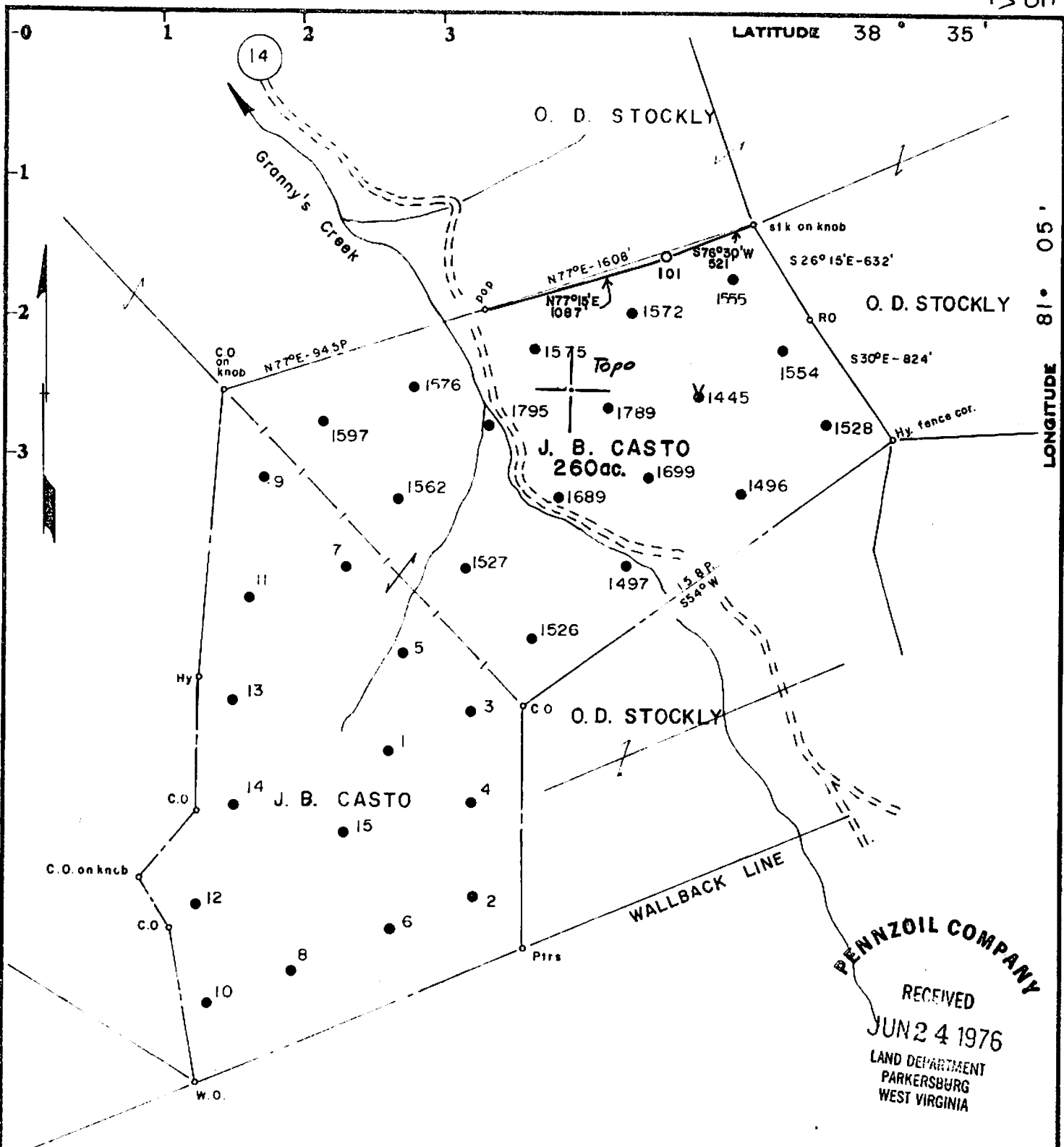
Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sand			2075	2088		
Shale			2088	2106		
Little Lime			2106	2135		
Blue Monday			2135	2155		
Pencil Cave			2155	2160		
Blue Monday			2160	2171		
Big Lime			2171	2214		
Loyalhanna			2214	2286		
Big Injun			2286	2312		
Shale			2312	2345		
Squaw			2345	2364		
Upper Pocono Shale			2364	2376		
P. B. D.				2356		
Total Depth				2376		

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Date Nov. 29

APPROVED Pennzoil Environmental Protection Owner  
By Curtis D. Lumar  
(Title)





SURFACE - R. E. KING OVAPA, W. VA. Minimum Error of Closure 1 in 200  
 Source of Elevation O. D. STOCKLY 15, Elev. 1226.00

Fracture   
 New Location  Water Injection  
 Drill Deeper   
 Abandonment

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: *Curtis A. Lucas*

Map No. 83 Squares: N S 62 E W 31, 32

PENNZOIL COMPANY  
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 JUN 24 1976  
 LAND DEPARTMENT  
 PARKERSBURG  
 WEST VIRGINIA

Company	PENNZOIL COMPANY
Address	P. O. Box 1588, Parkersburg, W. Va. 26101
Farm	J. B. CASTO
Tract	Acres 260 Lease No. 46485-up
Well Farm No.	101 Serial No.
Elevation (Spirit Level)	1386.40
Quadrangle	OTTER 15'
County	CLAY District HENRY
Surveyor	CURTIS A. LUCAS
Surveyor's Registration No.	275
File No.	1626 Drawing No.
Date	June 24, 1976 Scale 1" = 800'

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

**WELL LOCATION MAP**

FILE NO. \_\_\_\_\_

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+ Denotes location of well on United States Topographic Maps, scale 1" to 62500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch Environmental Protection original tracing. WV Department of Environmental Protection

BRUNNEN 521172P



# Basin Surveys, Inc.

PERFORATION DEPTH CONTROL

<b>FILING NO.</b> Permit No. CLA-1172 47-105  Map #83.	<b>COMPANY</b> Pennzoil Company
	<b>WELL</b> S.B. Casto #101
	<b>FIELD</b> Henry District
	<b>COUNTY</b> Clay <b>STATE</b> W. Va.
<b>LOCATION:</b> Granny's Creek Otter Quad. S. 62 - W. 31-32	
<b>OTHER LOGS:</b>	

<b>PERMANENT DATUM</b> Ground Level <b>ELEV.</b> 1386.40	<b>KB.</b> 1394.40
<b>LOG MEASURED FROM</b> Corrected to K.B. 8' Abv. Perm. Dat.	<b>DF.</b> 1392.40
<b>DRILLING MEASURED FROM</b> K.B. 8' A.P.D.	<b>GL.</b> 1386.40

<b>DATE</b>	17 Dec. 1996
<b>RUN NO.</b>	one
<b>TYPE LOG</b>	GR/PDC
<b>DEPTH - DRILLER</b>	2376'
<b>DEPTH - LOGGER</b>	2348'
<b>BOTTOM LOGGED INTERVAL</b>	23.47'
<b>TOP LOGGED INTERVAL</b>	2100'
<b>TYPE FLUID IN HOLE</b>	Empty
<b>SALINITY PPM CL.</b>	
<b>DENSITY LB./GAL.</b>	
<b>LEVEL</b>	
<b>MAX. REC. TEMP. - DEG. F</b>	
<b>OPR. RIG TIME</b>	1 hr.
<b>RECORDED BY</b>	Young
<b>WITNESSED BY</b>	Mr. McCann

RUN NO.	BORE HOLE RECORD			CASING RECORD			
	BIT	FROM	TO	SIZE	WGT.	FROM	TO
	10 3/4"	555'	T.D.	8 5/8"		Surf.	555'
				4 1/2"		Surf.	

THIS HEADING AND LOG CONFORM TO A P I STANDARD PRACTICE RP-33

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FEB 20 2014

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F.R.  
2347  
T.C.  
2348

2300

2310-2315  
205145

2200

J.B. Costo # 101

1102/20/50

15011720

WW-4A  
Revised 6-07

1) Date: January 30, 2014  
2) Operator's Well Number  
J.B. Casto # 101  
3) API Well No.: 47 - 015 - 01172

**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>Robert Haynes</u>	Name <u>N/A</u>
Address <u>4422 Ovapa Road</u>	Address _____
<u>Ovapa, W.V. 25164</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>N/A</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Ed Gainer</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 821</u>	Name <u>N/A</u>
<u>Spencer, W.V. 25276</u>	Address _____
Telephone <u>(304) 389-7582</u>	_____

**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

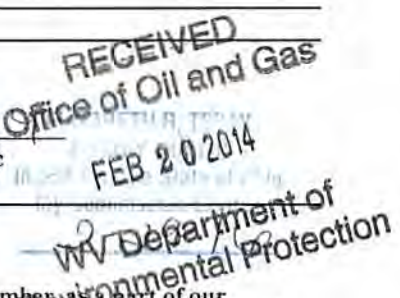
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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 Triad Hunter, LLC  
 By: Rocky Roberts  
 Its: Senior V.P. Appalachian Operations  
 Address 125 Putnam Street  
Marietta, Ohio 45750  
 Telephone (740) 374-2940

Subscribed and sworn before me this 30<sup>th</sup> day of January 2014  
Elizabeth R. Juby Notary Public  
 My Commission Expires 2-29-16



**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](mailto:depprivacyofficer@wv.gov).

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Postmark Here

Robert Haynes  
 4422 Ovapa Rd  
 Ovapa, WV 25164

Instructions

3



J.B. Casto # 101                      47-015-1172

"                      # 102                      47-015-1173

"                      # 103                      47-015-1174

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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 Triad Hunter, LLC OP Code \_\_\_\_\_

Watershed Granny Creek Quadrangle Newton

Elevation 1380' GPS County Clay District Henry

Description of anticipated Pit Waste: No Pit; fluids will be separated at Ovapa Facility; oil stored and salt water re-injected.

Will a synthetic liner be used in the pit? "No Pit"

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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 \_\_\_\_\_ )

APR 29 2014

WV Department of  
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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) Rocky Roberts

Company Official Title Senior V.P. Appalachian Operations

Subscribed and sworn before me this 30th day of January, 2014

[Signature]

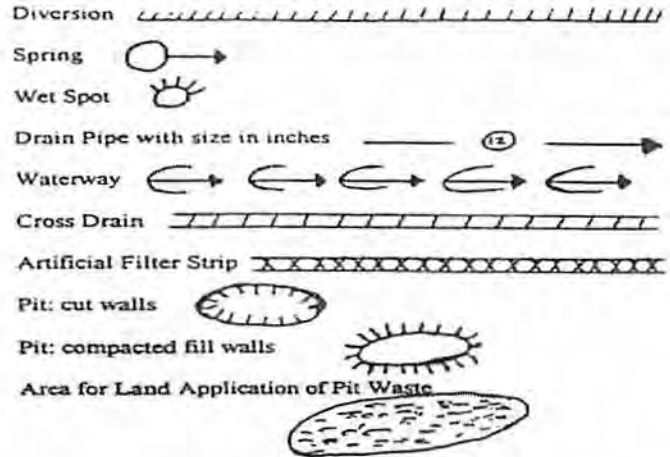
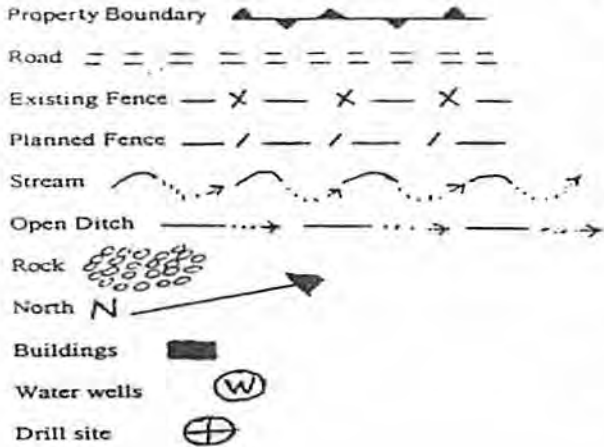


Notary Public  
ELIZABETH R. TEBAY  
NOTARY PUBLIC  
in and for the State of Ohio  
My Commission Expires  
2-29-16

My commission expires 2-29-16

05/02/2014

LEGEND



Proposed Revegetation Treatment: Acres Disturbed One (1) Prevegetation pH 5.5

Lime Two (2) Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 600 lbs/acre (500 lbs minimum)

Mulch 90 - 100 bales/acre Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
Orchard Grass		30%			
Rye ( Annual & BT )		35%			
Timothy ( Climax )		25%			
Clover Med. Red )		10%			

Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

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

Title: Inspector

Date: 2/4/14

Field Reviewed? ( ) Yes (  ) No

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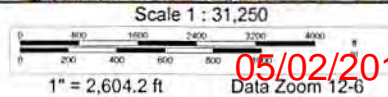




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15 01172P

WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-015-01172 WELL NO.: 101

FARM NAME: J.B. Casto

RESPONSIBLE PARTY NAME: Triad Hunter, LLC

COUNTY: Clay DISTRICT: Henry

QUADRANGLE: Newton

SURFACE OWNER: Robert Haynes

ROYALTY OWNER: Kanawha Banking and Trust Co. et al

UTM GPS NORTHING: 4266327

UTM GPS EASTING: 0487138 GPS ELEVATION: 1380'

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:

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

Survey grade GPS  : Post Processed Differential   
Real-Time Differential

Mapping Grade GPS  : Post Processed Differential   
Real-Time Differential

4. 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.

Ben Metzger  
Signature

Geologist  
Title

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1/16/14  
Date  
Department of Environmental Protection

05/02/2014



# Chuck Taylor Toolbox

## Geographic/UTM Coordinate Converter

You can convert between geographic coordinates and Universal Transverse Mercator (UTM) coordinates using this form.

**Note:** This is a JavaScript-powered form. If you have difficulties using this form, check your browser's settings to make sure you have enabled JavaScript.

Programmers: The JavaScript source code in this document may be copied and reused without restriction.

If you have a Java 1.1-compliant browser, and especially if you need to use an ellipsoid model other than WGS84, you may want to try the [Coordinate and Datum Transformations tool](#).

Geographic (degrees decimal)	To/From	UTM
lon <input type="text" value="-81.147595987333"/>	[ >> ]	x (easting) <input type="text" value="0487138"/>
lat <input type="text" value="38.545270009697"/>	[ << ]	y (northing) <input type="text" value="4266327"/>
		zone <input type="text" value="17"/>
		hemisphere <input checked="" type="radio"/> N <input type="radio"/> S

J.B. Casto #101

*Geographic coordinates are entered and displayed in decimal degrees. Negative numbers indicate West longitudes and South latitudes. UTM coordinates are entered and displayed in meters. The ellipsoid model used for computations is WGS84.*

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