



west virginia department of environmental protection

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

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

Wednesday, August 03, 2016
WELL WORK PERMIT
Vertical / Plugging - 2

EXCO RESOURCES (PA), LLC
260 EXECUTIVE DRIVE

CRANBERRY TOWNSHIP, PA 16066

Re: Permit approval for DEK 42
47-035-01407-00-00

This well work permit 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 any additional specific 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: DEK 42
Farm Name: HUGHES, WAYNE
U.S. WELL NUMBER: 47-035-01407-00-00
Vertical / Plugging - 2
Date Issued: 8/3/2016

Promoting a healthy environment.

08/05/2016

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.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

1) Date _____, 20____
2) Operator's
Well No. DEK 42
3) API Well No. 47-035 - 01407

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil x / Gas _____ / Liquid injection _____ / Waste disposal _____ /
(If "Gas, Production x or Underground storage _____) Deep _____ / Shallow x

5) Location: Elevation 726 Watershed Cedar Run (ohio River)
District Union County Jackson Quad Ravenswood 7.5

6) Well Operator EXCO Resources (PA), LLC 7) Designate Agent Diana Stampler/C.T. Corp.
Address PO Box 8, Ravenswood WV Address 5400 D Big Tyler Road
26164 Charleston, WV 25301

Oil and Gas Inspector to be notified:
Jamie Stevens
105 Kentuck Rd.
8) Kenna WV 25248

9) Plugging Contractor
Name R&R Well Service
Address 42 Lynch Ridge, Walton WV
25286

Phone 304 290 7775
206

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

Remove all Equipment used in production

Run Tubing to TD =/-3830 on perm b plug

Cement 3830 to 3630 over perfs

*Previously plug back to 3830' April 1978
See affidavit.*

Gel 3630 to 2300

*• FREEPOINT, CUT & POINT w/ 4 1/2" @ 2750'
• SET 100' CIA PLUG ACROSS CUT.*

Cement with 100' 2300 to 2200 over 7" seat

2249' Hgt 7" 755AX.

Gel 2200' to 1600'

• FREEPOINT, CUT & POINT w/ 7" @ 1600'

Cement 1600 to 1500 over sands & casing cut.

Gel 500 to 780

Cement 780 to 680 over elevation

Gel 680 to 265

Cement 265 to surface

Set Monument with API

*pull all pipe possible
set plugs. if unable
cut & shoot holes till
find the free point.
JS
6/22/2016.*

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*CUT 7" @ FREEPOINT ~ 2750'
CUT 4 1/2" @ FREEPOINT ~ 1600'*

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

Work order approved by inspector _____
Date _____

Jamie Stevens

Date _____

*6/22/2016
08/05/2016*

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

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE IN TRIPLICATE, ONE COPY MAILED TO THE DEPARTMENT, ONE COPY TO BE RETAINED BY THE WELL OPERATOR AND THE THIRD COPY (AND EXTRA COPIES IF REQUIRED) SHOULD BE MAILED TO EACH COAL OPERATOR AT THEIR RESPECTIVE ADDRESSES.

COAL OPERATOR OR OWNER	Devon Corporation
ADDRESS	P.O. Box 1433, Charleston, WV 25325
COAL OPERATOR OR OWNER	NAME OF WELL OPERATOR
ADDRESS	July 27th 1982
LEASE OR PROPERTY OWNER	WELL AND LOCATION
Wayne and Mary Hughes	Union District
Rt. 1 Box 82 Ravenswood, WV 26164	Jackson County
Well No. DEK-42 (Jac. 1407)	
Wayne Hughes	Farm

STATE INSPECTOR SUPERVISING PLUGGING: Richard J. Morris

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Jackson } ss:
R. A. Pryce and

being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by Kaiser Expl. and Mining Co., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 26th day of April, 1978, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD	FILLING MATERIAL	PLUGS USED	CASING	
			CSG PULLED	CSG LEFT IN
FORMATION		SIZE & KIND		
PARTIAL PLUGGING OF ORISKANY AND MARCELLUS SHALE			No CSG pulled	4 1/2": 4515'
Oriskany interval was not perforated				
Marcellus interval was perforated from 4155 - 4337'				7": 2249'
Set permanent bridge plug in 4 1/2" csg at a depth of 3830 ft. Dumped 10 Ft. of Cal-Seal on top of plug.		4 1/2" permanent bridge plug.		9 5/8": 211'
COAL SEAMS			RECEIVED Office of Oil and Gas JUL 05 2016 WV Department of Environmental Protection DESCRIPTION OF MONUMENT PARTIAL PLUGGING: no change to wellhead at surface.	
(NAME) none				
(NAME) reported				
(NAME)				

and that the work of plugging and filling said well was completed on the 26th day of April, 1978.

And further deponents saith not.

R.A.P. 08/05/2016

Sworn to and subscribed before me this 9th day of August, 1982

Faith Ann Halbert
Notary Public.

My commission expires: December 1, 1985

Permit No. Jac.-1407



3501407P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
REVISED
Oil and Gas Division

WELL RECORD

Quadrangle Ravenswood 15'

Permit No. Jac 1407

Rotary XXX Oil _____
Cable _____ Gas XXX
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Company Kaiser Exploration & Mining Co.
Address Box 98, Ravenswood, WV
Farm Wayne Hughes Acres 78.25
Location (waters) Cedar Run of Ohio River
Well No. DEK # 42 Elev. 726
District Union County Jackson
The surface of tract is owned in fee by _____
Wayne and Mary Hughes
Address Rt 1, Box 82, Ravenswood, WV
Mineral rights are owned by Same as above
_____ Address _____
Drilling Commenced 8/5/77
Drilling Completed 8/20/77
Initial open flow Show 213 MCFD - BS cu. ft. _____ bbls.
Final production 25 MCFD ~~cu. ft.~~ per day _____ bbls.
Well open _____ hrs. before test 1000 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10"			
9 5/8	211'	211'	110 Sax
8 5/8			
7	2249'	2249'	75 Sax
5 1/2			
4 1/2	4515	4515	150 Sax
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton
Perforated Marcellus with 27 omeja jet shots from 4155'-4337'. Displaced 1500 gal of HCl.

Marcellus Shale interval uneconomical; Set permanent bridge plug at 3830. Perforated the Brown Shale interval from 3681-3791 with 19 holes. Foam fractured the Brown Shale using 70 quality foam with 310 bbls of water, 21,000# of 80/100 sand, 21,000# of 20/40 sand at a rate of 10 BPM and a pressure of 2500 psig. Instantaneous shut-in pressure was _____
Coal was encountered at _____ Feet _____ Inches 1100 psig.

Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Marcellus Shale & Brown Shale Depth 4155-4337 3681-3791

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			0	156		
Sand			156	165		
Shale			165	196		
Sand			196	225		
Shale			225	304		
Sand			304	323		
Shale			323	411		
Sand			411	499		
Red Rock			499	520		
Shale			520	544		
Red Rock			544	575		
Sand			575	586		
Red Rock			586	669		
Sand			669	690		
Red Rock			690	740		
Shale			740	811		
Sand			811	823		
Shale			823	917		
Red Rock			917	958		
Sand			958	1017		
Shale			1017	1026		
Sand			1026	1088		
Shale			1088	1157		
Sand			1157	1187		

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(over)

* Indicates Electric Log tops in the remarks section.

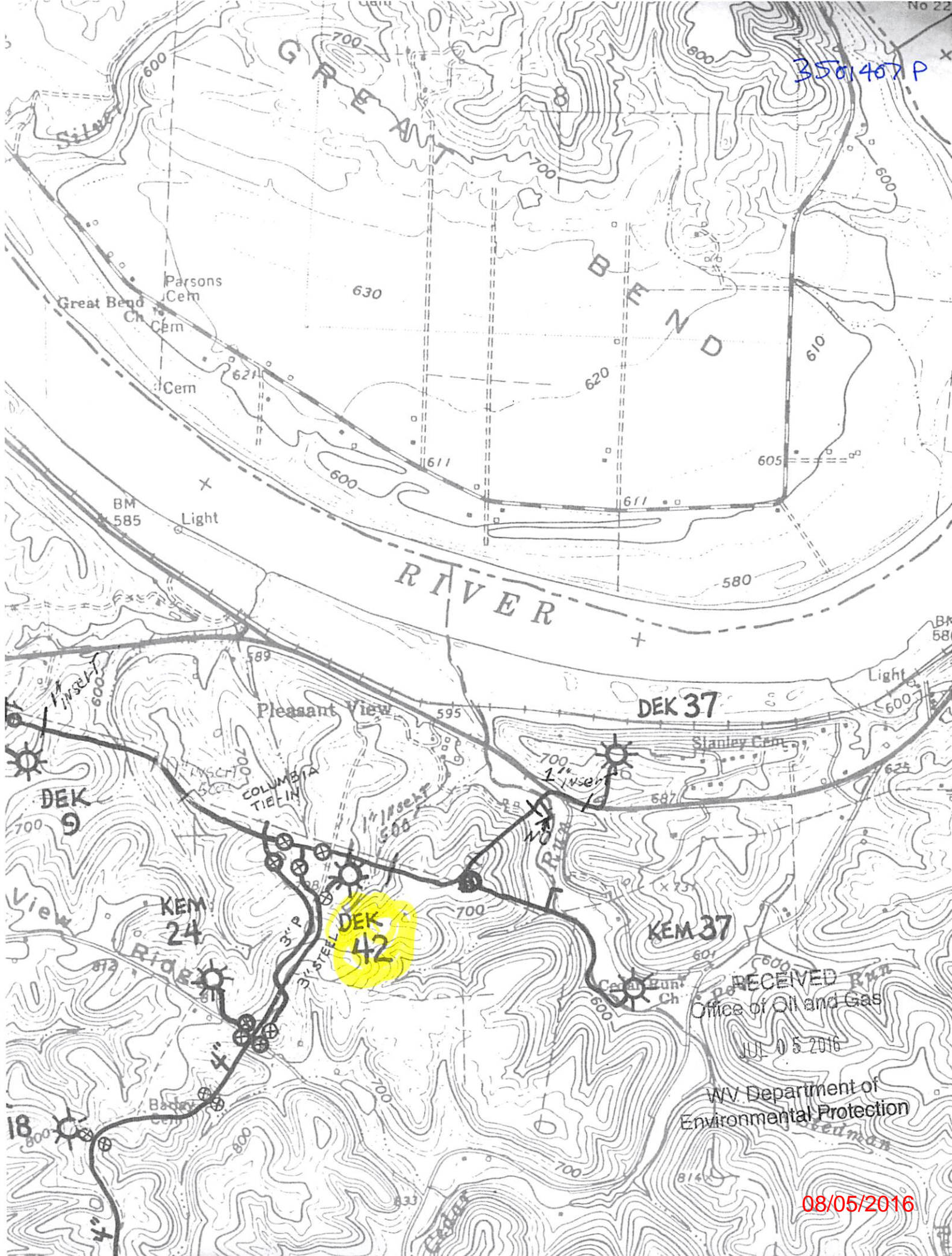
Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			1187	1286		<p><i>EXCD.</i> <i>47-035-01407-P</i></p> <p><i>1600' -1500' plus.</i></p> <p><i>plus back to 3830' 1978</i> <i>JBS</i></p>
Sand			1286	1316		
Shale			1316	1323		
Sand			1323	1337		
Shale			1337	1347		
Sand			1347	1391		
Shale			1391	1404		
Sand			1404	1420		
Shale			1420	1440		
Sand			1440	1454		
Shale			1454	1498		
Sand			1498	1511		
Shale			1511	1615		
Maxon Sand			1615	1653		
Big Lime			1653	1741		
Shale			1741	1851		
Injun Sand			1851	1882		
Shale			1882	2176		
Coffee Shale			2176	2195		
Shale			2195	3336		
Brown Shale			3336	3796		
Shale			3796	4206		
Marcellus			4206	4340		
Corniferous			4340	4420		
Oriskany			4420	4447		
Lime			4447	4533		

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Date March 2, 19 78

APPROVED *Kath A. [Signature]* Owner
By Operations Manager
(Title)



3501407 P

RIVER

DEK 37

DEK 9

KEM 24

DEK 42

KEM 37

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EXCO Resources (PA), LLC OP Code 307860

Watershed (HUC 10) Cedar Run(ohio River) Quadrangle Ravenswood 7.5

Elevation 711 County Jackson District: union

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ no ✓

ANY WELL EFFLUENT MUST BE CONTAINED IN TANKS BEFORE DISPOSING OFF SITE gmm

Will a pit be used for drill cuttings? Yes _____ No ✓

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes _____ No ✓ If so, what ml.? _____

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)
- X Other (Explain fluid to be captured & disposed off properly.)

Will closed loop system be used? _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. _____

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-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

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

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-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

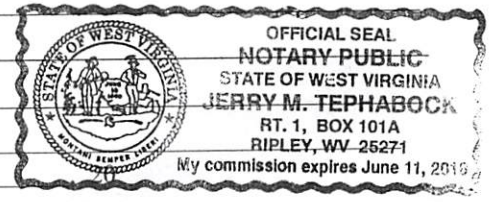
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and any 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 Randall D. Sheets

Company Official (Typed Name) Randall Sheets

Company Official Title Superintendent

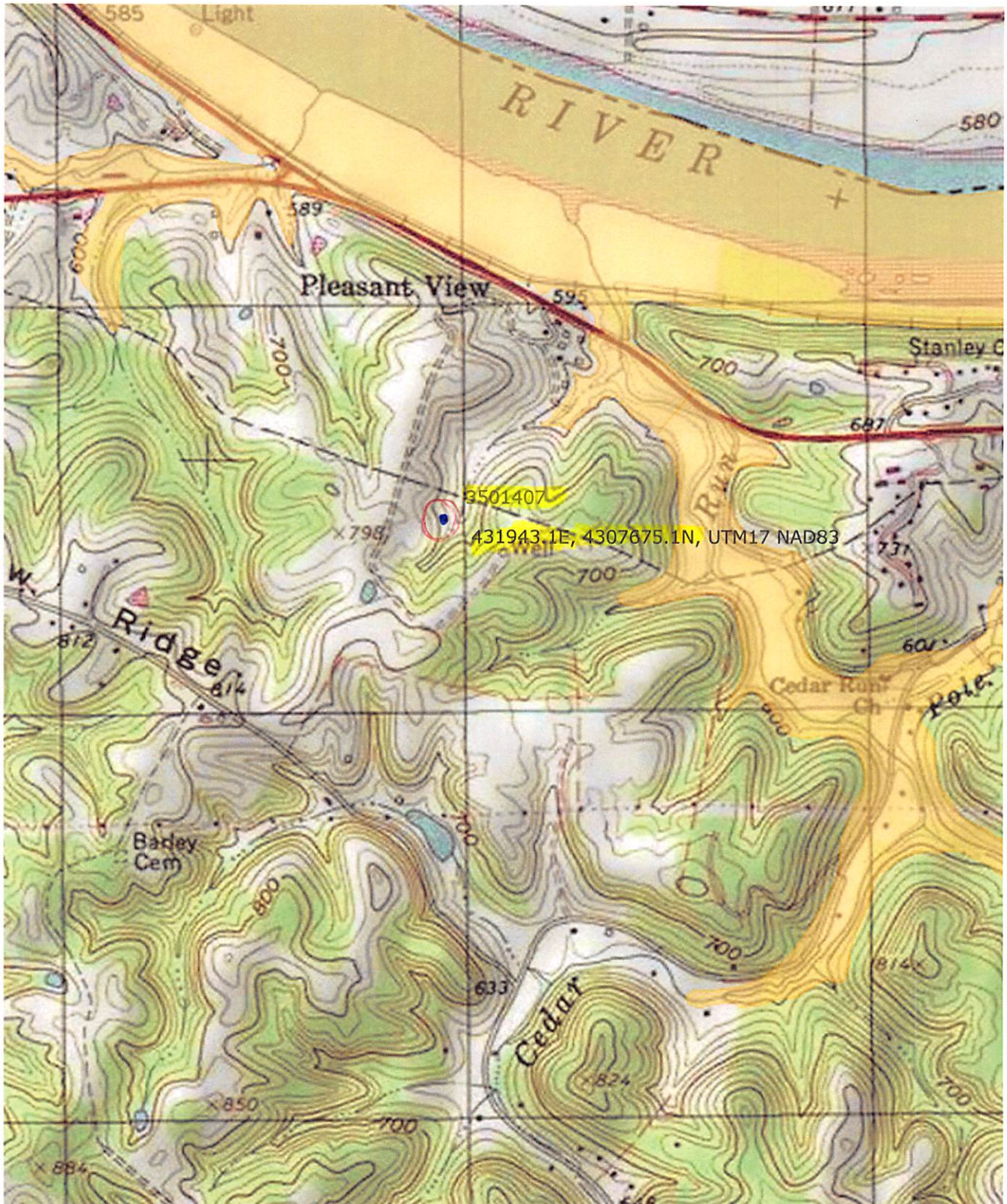


Subscribed and sworn before me this 22nd day of June, 2016

Jerry M. Tephabock
Notary Public

My commission expires 6/11/16

08/05/2016



08/05/2016

WW-7
8-30-06



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

API: 47 035 01407 WELL NO.: DEK 42

FARM NAME: Wayne Hughes

RESPONSIBLE PARTY NAME: EXCO Resources (PA), LLC

COUNTY: Jackson DISTRICT: Union - 4

QUADRANGLE: Ravenswood 7.5 - 570

SURFACE OWNER: Lowell Gene Hughes

ROYALTY OWNER: Lowell Gene Hughes

UTM GPS NORTHING: 4307675

UTM GPS EASTING: 431943 GPS ELEVATION: 711

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.

Randall D. Sleeth
Signature

Supervisor
Title

6/22/16
Date

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