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

3501407 P

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.

3501407P

WW-4B
Rev. 2/01

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
Address PO Box 8, Ravenswood WV 26164

7) Designate Agent DianaStampler/C.T.Corp.
Address 5400 D Big Tyler Road
Charleston, WV 25301

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

Phone 304 290 7775
206

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

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 & POOH w/4½" @ ≈2750'
- SET 100' CLA PLUG ACROSS CUT.

Cement with 100' 2300 to 2200 over 7'seat 2249' ftg 7" 75sx.

Gel 2200' to 1600'

- FREEPOINT, CUT & POOH w/ 7" @ 1600'

Cement 1600 to 1500 over sands & CASING CUT.

Gel 500 to 780

726

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 freepoint.

JS 6/22/2016.

CUT 7" @ FREE POINT ≈ 2750'

CUT 4½" @ FREEPOINT ≈ 1600'

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

Work order approved by inspector Jamie Stevens Date 6/22/2016

Signature Date

PARTIAL PLUGGING

3501407P

FORM OG-8

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

ADDRESS

COAL OPERATOR OR OWNER

ADDRESS

Wayne and Mary Hughes
LEASE OR PROPERTY OWNER

Rt. 1 Box 82 Ravenswood, WV 26164
ADDRESS

Devon Corporation
NAME OF WELL OPERATOR

P.O. Box 1433, Charleston, WV 25325
COMPLETE ADDRESS

July 27th 19 82
WELL AND LOCATION

Union District

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, 19 78, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD FORMATION	FILLING MATERIAL	PLUGS USED SIZE & KIND	CASING CSG PULLED	CASING CSG LEFT IN
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		4 1/2" permanent		
at a depth of 3830 ft. Dumped		bridge plug.		
10 Ft. of Cal-Seal on top of plug.				9 5/8": 211'

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COAL SEAMS	DESCRIPTION OF MONUMENT
(NAME) none	PARTIAL PLUGGING: no change
(NAME) reported	to wellhead at surface.
(NAME)	
(NAME)	

and that the work of plugging and filling said well was completed on the 26th day of April, 19 78.

And further deponents saith not.

R A P

Sworn to and subscribed before me this 9th day of August, 19 82

Faith Ann Halbert
Notary Public.

My commission expires:
December 1, 1985

Permit No. Jac.-1407

OG-10
Rev. - 9-71

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

WELL RECORD

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

Quadrangle Ravenswood 15'

Permit No. Jac 1407

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 ~~XXXX~~ 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 1100 psig.

Coal was encountered at ____ Feet ____ Inches
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.

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Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			1187	1286		EXCO 47-035-01407-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		1600' - 1500' plug
Maxon Sand			1615	1653		
Big Lime			1653	1741		
Shale			1741	1851		
Injun Sand			1851	1882		
Shale			1882	2176		
Coffee Shale			2176	2195		Plug Back to 3830' 1978
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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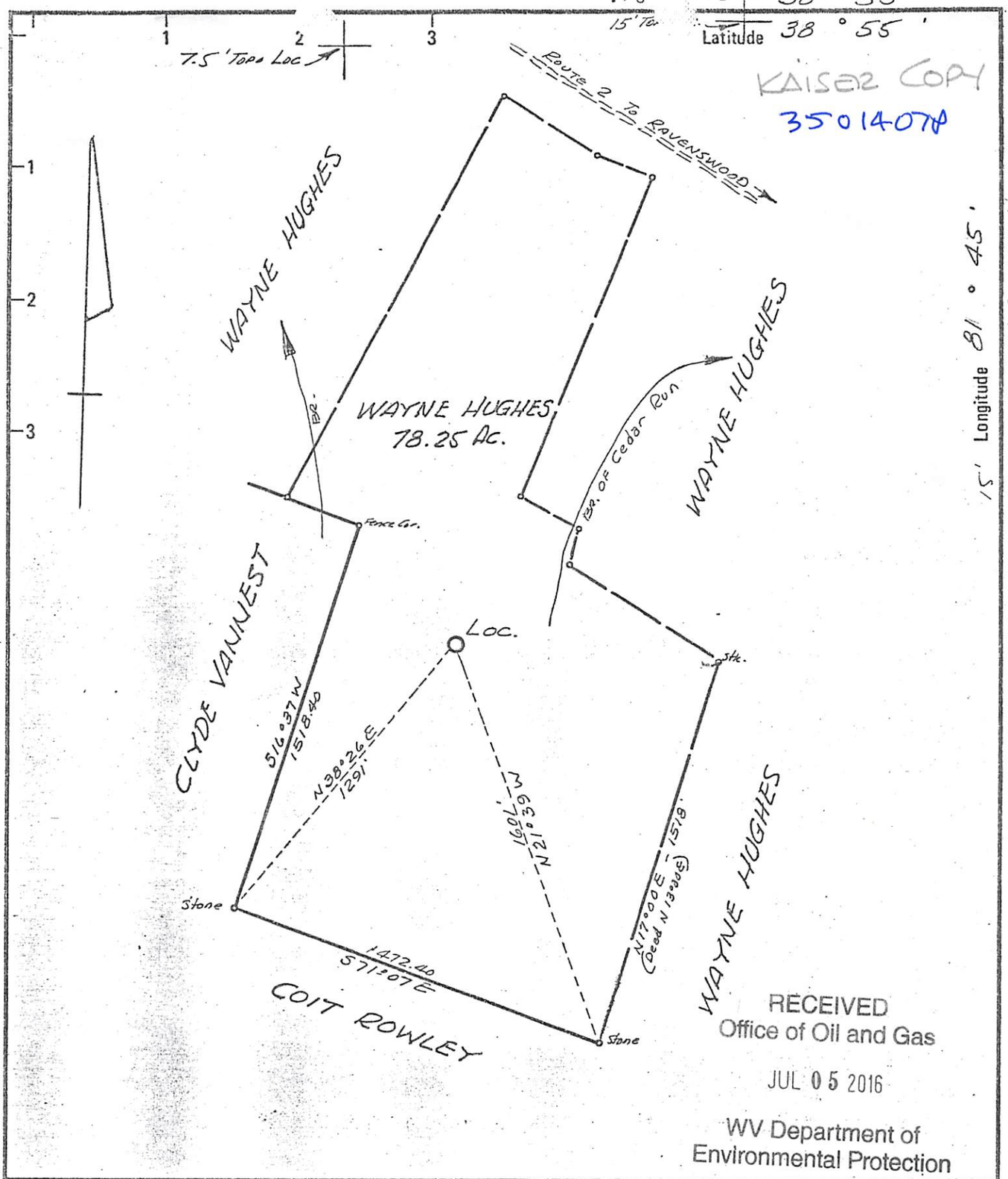
Date March 2, 19 78

APPROVED [signature], Owner

By Operations Manager
(Title)

7.5' Topo = 38° 55'
15' To... Latitude 38° 55'

KAISER COPY
3501407P



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New Location ■
Drill Deeper ☐
Abandonment ☐

Minimum Error of Closure 1 IN 200
Source of Elevation U.S.G.S. Elev. 798' Top of Knob South West of Loc.

"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."

Company KAISER EXPL. & MINING CO.
Address BOX 98 RAVENSWOOD, WV
Farm WAYNE HUGHES
Tract _____ Acres 78.25 Lease No. 2566
Well (Farm) No. DEK #42 Serial No. _____
Elevation (Spirit Level) 726.0
Quadrangle 7.5' RAVENSWOOD 15' RAVENSWOOD
County JACKSON District UNION
Engineer N L Sefton
Engineer's Registration No. 1832
File No. _____ Drawing No. _____
Date 4-23-77 Scale 1" = 500'

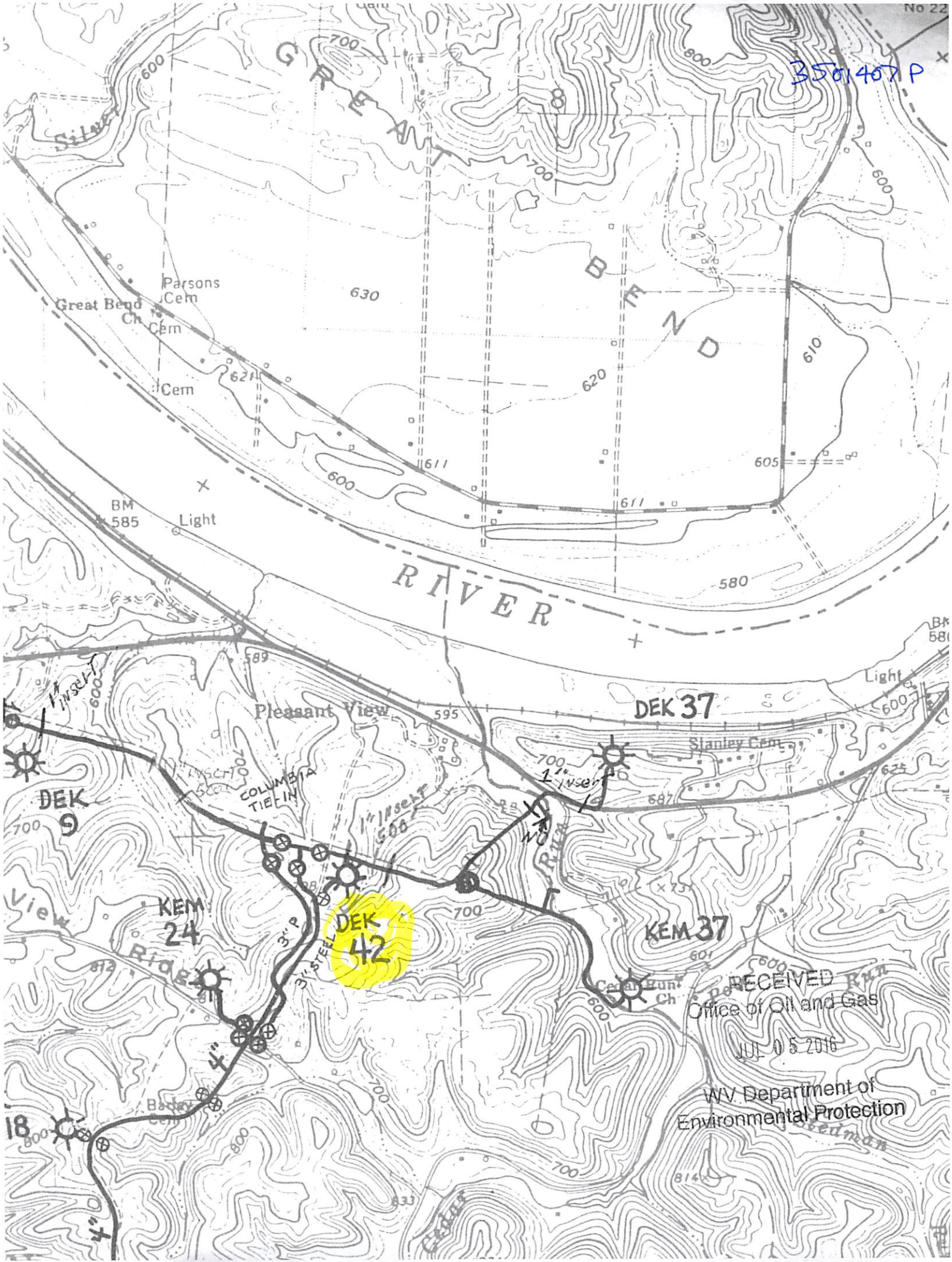
STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO. 47-035-01407P

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500 latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

N21664



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3501407P

WW-4A
Revised 6-07

1) Date: 6/20/16
2) Operator's Well Number
DEK 42
3) API Well No.: 47 - 035 -01407

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name Lowell Gene Hughes
Address 4649 Pt. Pleasant RD. Ravenswood, WV 26164

(b) Name
Address

(c) Name
Address

5) (a) Coal Operator
Name None
Address

(b) Coal Owner(s) with Declaration
Name
Address

Address

6) Inspector JAMIE STEVENS
Address 105 Kentuck Rd.
Kenna WV 25248
Telephone 304 206 7775

(c) Coal Lessee with Declaration
Name
Address

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; andu im.µ
(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 EXCO Resources (PA), LLC
By: Randall Sheets Randall D Sheets
Its: Supervisor
Address POBox 8, Ravenswood WV 26164

Telephone 304 273 5371

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

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JERRY M. TEPHABOCK
RT. 1, BOX 101A
RIPLEY, WV 25271
My commission expires June 11, 2018

My Commission Expires 6/11/18 Jerry M Tephabock

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 depprivacyoffier@wv.gov.

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WW-9
(5/13)

Page _____ of _____

API Number 47 - 035 - 01407

Operator's Well No. DEK 42

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 of properly.

Will closed loop system be used? _____

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

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

Additives to be used in drilling medium? _____

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

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

-Landfill or offsite name/permit number? _____

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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 Randall Sheets

Company Official (Typed Name) Randall Sheets

Company Official Title Supervisor

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

Jerry M. Tephabock Notary Public

My commission expires 6/11/16

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JERRY M. TEPHABOCK
RT. 1, BOX 101A
RIPLEY, WV 25271
My commission expires June 11, 2016

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Form WW-9

Operator's Well No.Siv 12 Jack 644

Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.0

Lime 2 Tons/acre or to correct to pH 6,5

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

Mulch 2.0 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Fescue 40			
Alsike 5			
Annual Rye 16		Same	

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Jamie Stevens

Comments:

Title: Inspector Date: 6/22/2016

Field Reviewed? (✓) Yes ( ) No

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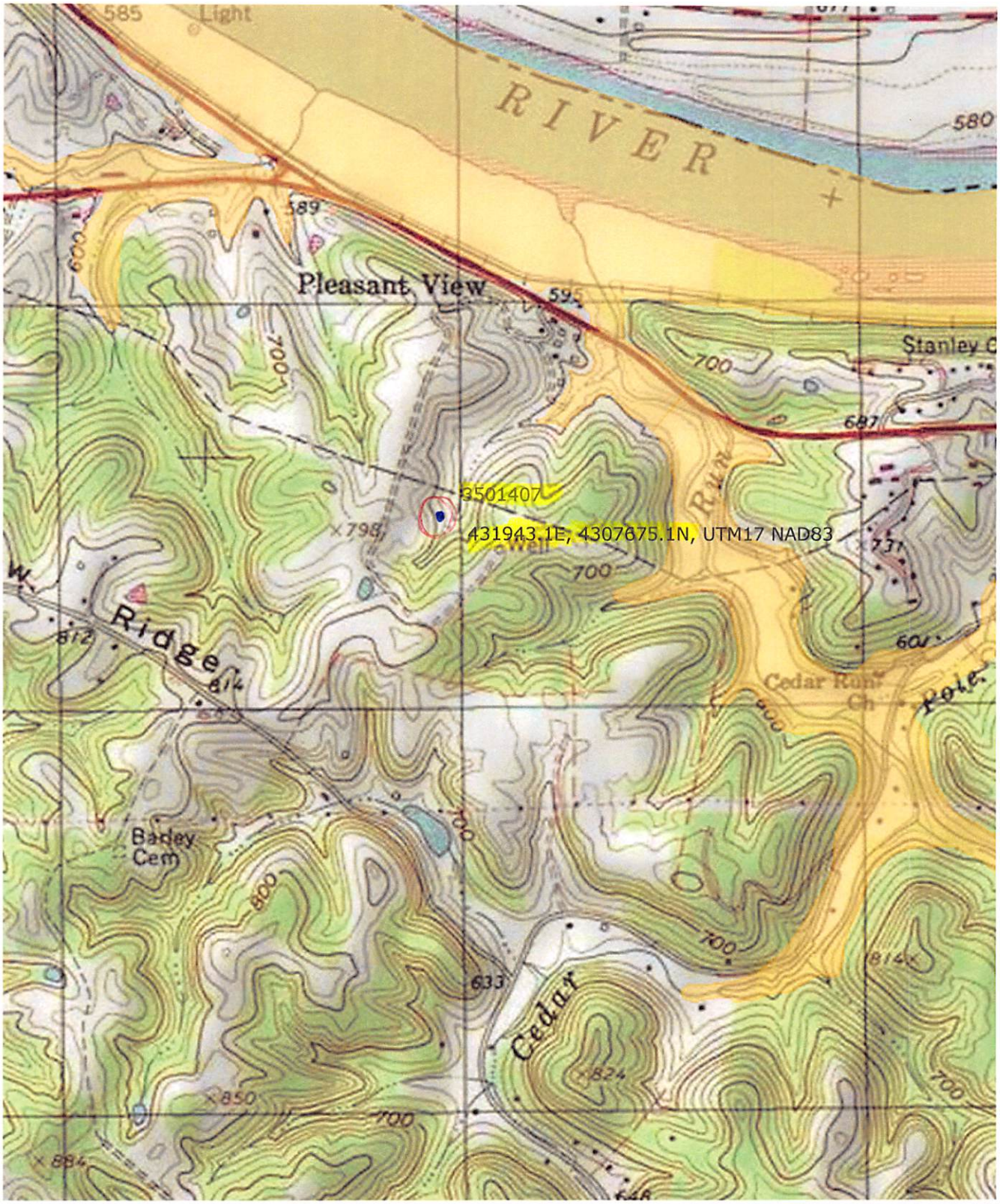
585
Light
RIVER
580
589
Pleasant View
595
Stanley C
700
687
3501407
431943.1E, 4307675.1N, UTM17 NAD83
798
Well
731
Ridge
812
814
601
Cedar Run
Ch
Pole
Barley
Cem
800
633
Cedar
824
850
884

35 01407 P

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 X: Post Processed Differential _____

Real-Time Differential _____

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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