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

Tuesday, September 13, 2016
WELL WORK PERMIT
Vertical / Plugging - 2

EXCO RESOURCES (PA), LLC
260 EXECUTIVE DRIVE

CRANBERRY TOWNSHIP, PA 16066

Re: Permit approval for 2
47-035-00644-00-00

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: 2
Farm Name: SUCK, E. F.
U.S. WELL NUMBER: 47-035-00644-00-00
Vertical / Plugging - 2
Date Issued: 9/13/2016

3500644P

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.

3500644P

WW-4B
Rev. 2/01

1) Date _____, 20_____
2) Operator's
Well No. Siv 12
3) API Well No. 47- 035 - 00644

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 755 Watershed Straight Fork
District Ravenswood County Jackson ✓ Quadrangle Ripley

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~~ 206 7775

9) Plugging Contractor
Name R&R Well Service - Dary Rexroad
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
Pull 2322' of tubing set on midget packer
Run Tubing to TD =/-2317

Cement with 100' 2317 to 2217
Gel ~~2217~~ to 2040
Cement 2040 to 1940 across seat 65/8
Gel 1940' to 1440''
Cement 1440'to1340 across 81/2 csg
Gel 1340'to 770
Cement 770 to 540 over coal &101/2 csg
Gel to 540' to 270'
Cement 270'to surface
Set Monument with API

or if packer can't be pulled set plug cut pull pipe

Pull all pipe possible
Plug Hole or Rip & set Plugs.

* CUT & PULL 6 5/8"
SET 100' PLUG ACROSS CUT.

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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

T 12/10
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WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
WELL RECORD

Permit No. Jac 644
Ripley Quad.

Oil Well
CASING & TUBING

Company	Columbian Carbon Company			
Address	Box 873, Charleston 23, W.Va.	16 65#	13'9	Same
Farm	E.F. Suck Acres 97	10¾ 40#	720'6	pld. Gone?
Location	Straight Fork.	8¼ 24#	1387	pld.
Well No.	2 GW 1105 Elev. 753.2 G	6 5/8 24#	1990'4	1990'4
District	Ravenswood Jackson County	2 3/8	2322'6	2322'6
Surface	E.F. Suck, R.F.D. #2, Millwood, W.Va.	with 2" tubing		?
Mineral	Same	cage		
Commenced	11-19-48	Midget B.M. Packer		
Completed	1-7-49	Size 6 5/8		
Date shot	1-11-49 Depth 2274 SLM to 2284 SLM	Depth 1976 SLM		
	with 67# gelatin	Coal 588' 24" ?		
Oil	Approx. 28 bbls. daily			
Fresh Water	220' 2-13" blr. per hr.; 322' 2½-13" blr. per hr.			
	670' H.F.; 1080' 2-10" blr. per hr. Salt Water;			
Salt Water	1275' 5-10" blr. per hr.; 1322' 8-10" blr. per hr.			

Surface	0	10
Sand	10	39
Red Rock	39	80
Slate	80	116
Red Rock	116	180
Slate	180	195
Red Rock	195	235
Slate	235	254
Red Rock	254	265
Sand	265	360
Slate & Shells	360	383
Red Rock	383	400
Slate & Shells	400	425
Red Rock	425	445
Slate & Shells	445	477
Red Rock	477	500
Slate	500	515
Red Rock	515	550
Sand	550	585
Slate	585	588
Coal	588	590 ?
Slate	590	664
Sand	664	705
Slate	705	725
Red Rock 708DLM-712 SLM	725	756
Slate	756	785
Red Rock	785	823
Slate	823	1028
Sand	1028	1115
Slate	1115	1145
Sand	1145	1163
Slate	1163	1240
Sand	1240	1283
Black Slate	1283	1290
Slate & Shells	1290	1308
Sand	1308	1340
Slate & Shells 1363 DLM-1374 SLM	1340	1445
Black Slate	1445	1455
Slate & Shells	1455	1495
Sand	1495	1512
Slate	1512	1554
Sand	1554	1575
Slate	1575	1622
Sand	1622	1653
Pencil	1653	1659
Big Lime	1659	1805
Big Injun Sand	1805	1920
Slate & Shells 1965 DLM-1976 SLM	1920	2244
Brown Shale	2244	2268 DLM
		2274 SLM
Berea Sand	2268 DLM	
	2274' SLM	2284

Slate & Shells	2284	2317
Total depth		2317

Gas 2274 SLM show
Oil pay 2274' SLM

CEMENT RECORD:
12-2-48 10¾" casing ran 11 sacks of aquagel. Circulation and returns.

12-9-48 8 5/8" casing ran 16 sacks of aquagel. Circulation and returns.

12-23-48 6 5/8" casing ran 16 sacks of aquagel. Circulation and returns.

C.C.Co. Crew

Jamie 6/22/2016

API 47-035-00644-P

Now Plugging
Ex Co Resources

SIV #12

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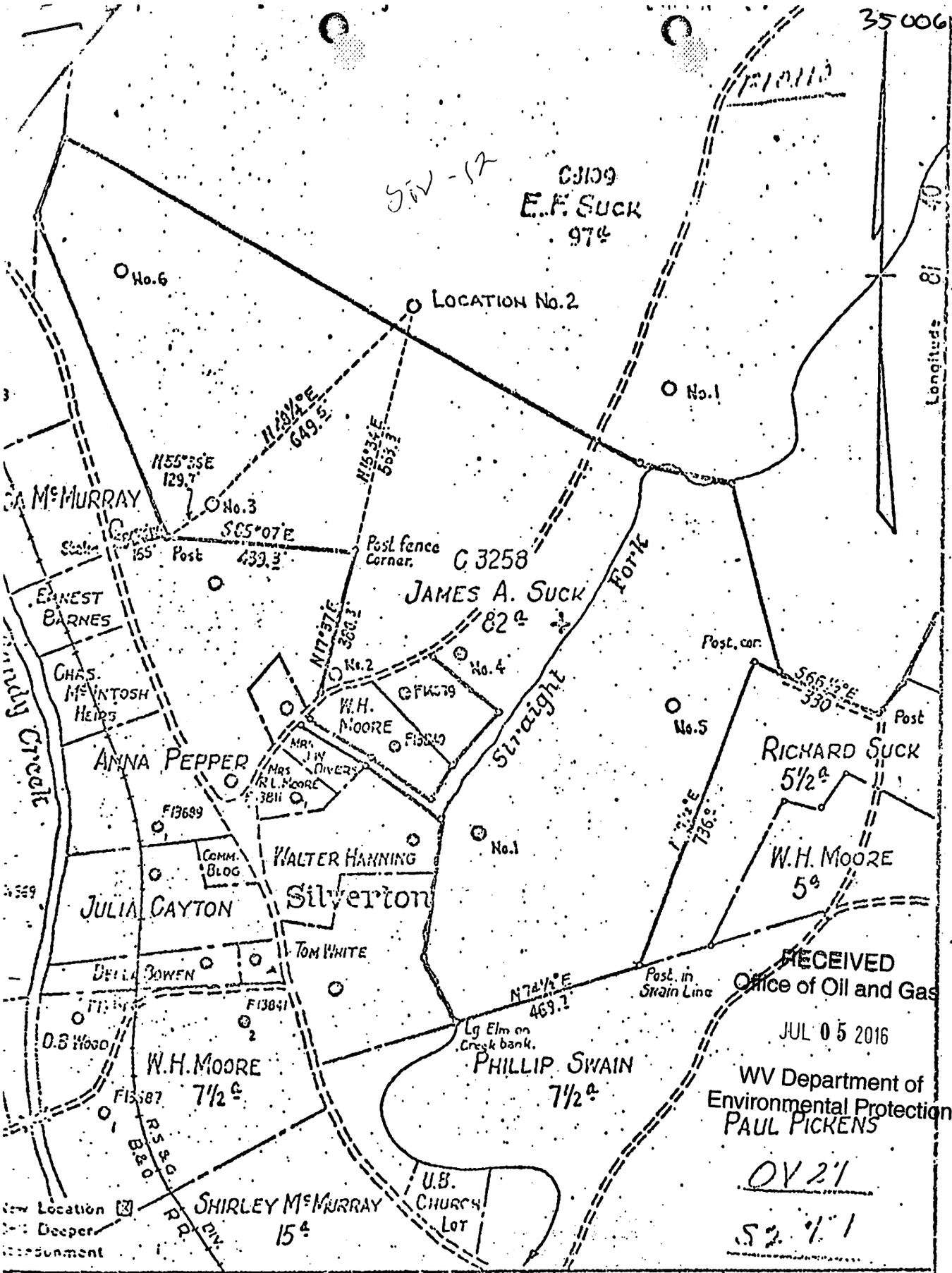
was

3500644P



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PAUL PICKENS

OV 21

S2 41

Company COLUMBIAN CARBON COMPANY
Address Box 873 CHARLESTON, W.VA.
Farm E.F. SUCK
Tract Acres 97 Lease No. C3109
Well (Farm) No. 2 Serial No.
Elevation (Spirit Level) 753.2'
Quadrangle RIPLEY 3 S494 W291
County JACKSON District RAVENSWOOD
Engineer [illegible]
Engineer's Registration No. 683
Drawing No. W53/43
Date Oct 22, 1943 Scale 1" = 300'

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

WELL LOCATION MAP

FILE NO. JAC-644

+ 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.

3500644P

WW-4A
Revised 6-07

1) Date: 6/20/16
2) Operator's Well Number
Siv 12
3) API Well No.: 47 - 035 -00644

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:
(a) Name James Suck, Jr.
Address 468 Wilding 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; 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 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

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JERRY M. TAPHABOCK
RT. 1, BOX 101A
RIPLEY, WV 25271
My commission expires June 19, 2018

My Commission Expires 6/19/18 Jerry M. Taphabock

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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3500644P

WW-9
(5/13)

Page _____ of _____
API Number 47 - 035 - 00644
Operator's Well No. Siv - 12

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) Straight Fork Quadrangle Ripley

Elevation 755 County Jackson District Ravenswood

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

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

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes _____ No x 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)
_____ Other (Explain All waste will be capured and Disposed OFF SITE)

Will closed loop system be used? no

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

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

Additives to be used in drilling medium? none

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

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) no pit

-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/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.

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

Company Official Signature Randall Sheets

Company Official (Typed Name) Randall Sheets

Company Official Title Supervisor

Subscribed and sworn before me this 12th day of Sept, 20 16

Jerry M. Tephabock Notary Public

My commission expires 6/11/18

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47-035-00644-P

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: James S. Stevens, Jr.

Comments:

Title: Inspector Date: 6/22/2016

Field Reviewed? (✓) Yes ( ) No

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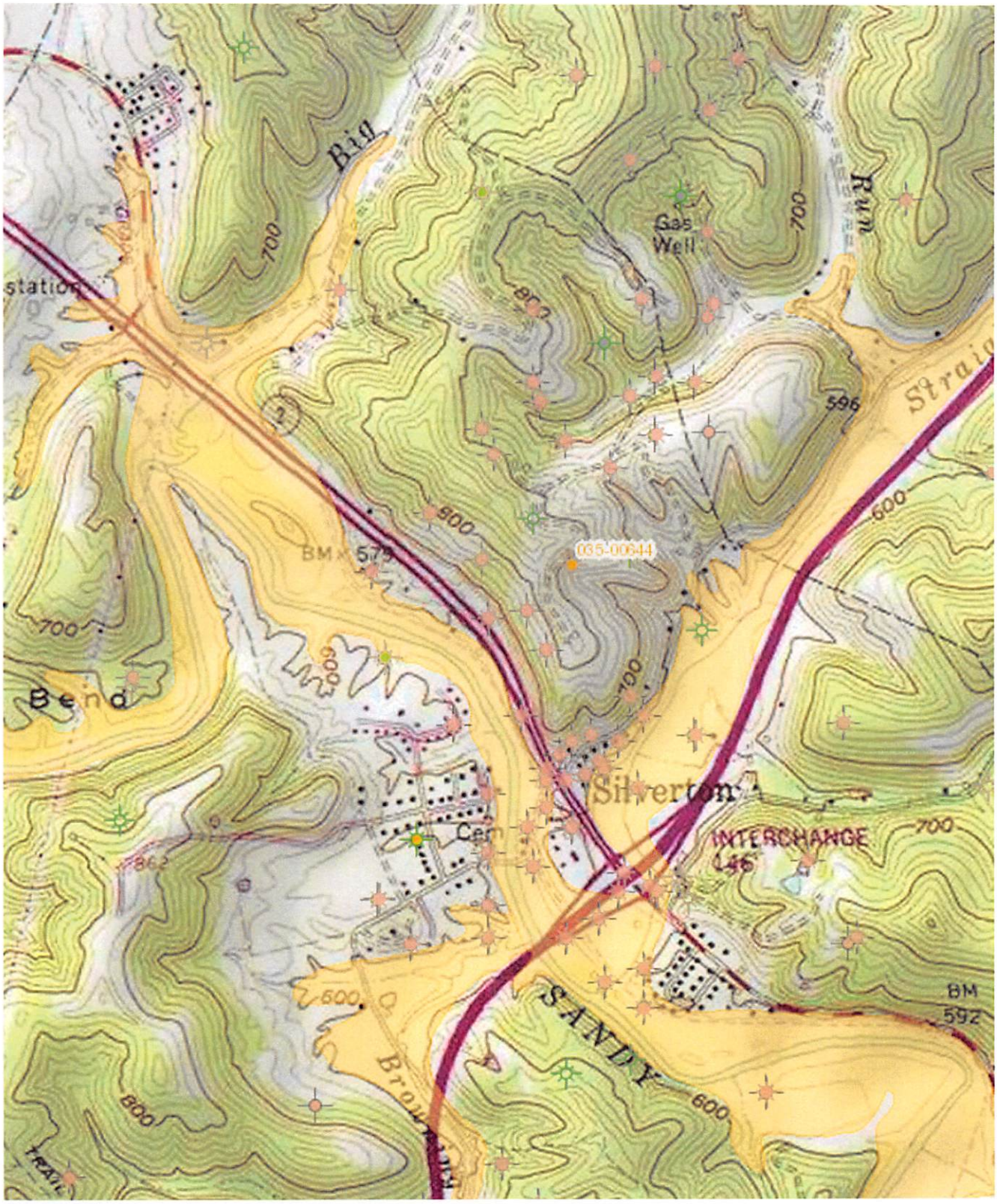
Big
Run
Gas Well
700
800
596
600
BM 579
035-00644
Bend
Silverton
Cem
INTERCHANGE 146
SANDY
BM 592
Brown
862

3500644 P

WW-7
8-30-06

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

API: 47 035 0644 P **WELL NO.:** Siv 12

FARM NAME: Suck

RESPONSIBLE PARTY NAME: EXCO Resources (PA)LLC

COUNTY: Jackson **DISTRICT:** Ravenswood

QUADRANGLE: Ripley

SURFACE OWNER: James Suck

ROYALTY OWNER: James Suck

UTM GPS NORTHING: ~~4309175~~ 4309319.6

UTM GPS EASTING: ~~0437550~~ 437442 **GPS ELEVATION:** 742

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 R Slater — Supervisor — 6/22/16

Signature — Title — Date