



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

May 23, 2014

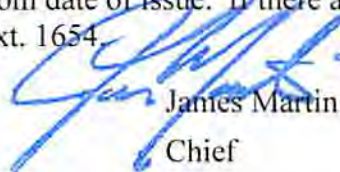
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3500574, issued to EXCO RESOURCES (PA), 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: SIV-5 ASHCRAFT 3
Farm Name: ANKRUM, CHARLES & LINDA
API Well Number: 47-3500574
Permit Type: Plugging
Date Issued: 05/23/2014

Promoting a healthy environment.

05/23/2014

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.
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 January 15, 2014
2) Operator's Well No. SV5
3) API Well No. 47-035-00574P

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

47-035-00574P

Surface water attached

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 597' Watershed Sandy Creek
District Ravenswood County Jackson Quadrangle Ripley/Sandyville 7.5

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

8) Oil and Gas Inspector to be notified Name Jamie Stephens *Stevens*
Address 105 Kentuck Road
Kenna, WV 25248
9) Plugging Contractor Name _____
Address _____

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

1. pooh rods & tubing
2. RIH check TD @ + or - 2100'
3. RIH tbg to 2100' - load hole of 6% gelled water - spot 100' plug of class A cement 2100' - 2000' - pooh tbg
4. WOC 8 hours
5. RIH tag toc @ 2000' - if necessary add additional class A cement to get TOC to 2000' ✓
6. pooh tbg
7. RIH freepoint and cut 7" casing est 1800' pooh 7" casing *1" on mid-st. rodler if unable to pull all pipe cut & set plug.*
8. RIH tubing to casing cut - spot 100' plug of class A cement @ casing cut
9. pooh tubing to 1050', spot 100' plug of class A cement 1050' - 950' - pooh tbg to 380'
10. Spot 100' plug of class A cement 380'-280' - pooh tbg
11. Rig up and pooh 163' of 13 3/8" casing. RIH tbg to 200'
12. Spot 200' - surface plug of class A cement. Erect monument with API# *OK.*

1947 well shot hole 2100' to 2120'
FW 106-115' 145'
266 local at 405-408' Pittsburgh sent 340-405'

APR 17 2014

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

Work order approved by inspector *James Stevens* Date 3/18/2014

3/18/2014

EXCO Resources (PA), LLC
Well No. SW 5 API, W-035-005-14P

OIL WELL
CASING & TUBING

Existing

Permit No. Jpc 574
Kipley Quad.
Company
Address
Farm
Location
Well No.
District
Surface
Mineral

Columbian Carbon Company
Box 573, Charleston 25, W.Va.
Blanco Ashcraft et al. A 350.5
Sandy Creek
3-67-986 Bl. ov. 597.1 C. ✓597

13 3/8	52'	233'5	Same ✓
10 1/2	40'	233'5	Pld.
8 1/2	25'	233'5	Pld.
7 1/2	22'	233'10	Same ✓
2 3/8		233'5	Same ✓

Commenced
Completed
Date shot

Ravenswood Jackson County
Blanco Ashcraft et al, Ravenswood, W.Va.
Blanco Ashcraft et al, (for further address contact C.C. Co.),
11-27-41
2-19-42
2-20-48 Depth 2100 to 2120
with 5" gelatin - 200#

1-2" tubing csgo
Midcot B.S. Secker
Size 7"
Depth 180' SIM

Oil
Fresh Water
Salt Water

Making approximately 10 bbls. oil daily
100-115'; 145' 6 blrs. / hr.
1100' H.P.; 1100 H.P.; 1145' H.P.

Clay	0	85
Red Rock	85	100
Sand	100	169
Blue Slate	169	178
Red Rock	178	182
Blue Slate	182	200
Red Rock	200	206
Blue Slate	206	226
Red Rock	226	256
Gray Lime	256	293
Red Rock	293	324
Blue Slate	324	340
Sand Pittsburgh	340	405
Coal	405	408
Blue Slate	408	433
Red Rock	433	445
Blue Slate	445	475
Sand	475	525
Blue Slate	525	535
Red Rock	535	582
Blue Slate	582	600
Sand	600	610
White Slate	610	623
Red Rock	623	635
Blue Slate	635	715
Black Slate	715	720
Gray Sand	720	732
Blue Slate	732	742
Red Rock	742	755
Slate & Shells	755	850
Red Rock	850	860
Slate & Shells	860	867
Gray Sand	867	955
Slate	955	960
Sand	960	990
Slate & Shells	990	1045
Salt Sand	1045	1108
Slate 1118' DLM-1111 SIM	1108	1137
Gray Sand	1137	1170
Slate & Shells	1170	1305
Black Slate	1305	1350
Limo	1350	1470
Maxon Sand	1470	1495
Brook	1495	1497
Little Limo	1497	1515
Foncell Cavo	1515	1518
Big Limo	1518	1655
Injun Sand	1655	1680
Blue Slate	1680	1705
Sand	1705	1795
Slate	1795	1800
Limo Shells	1800	1810

Slate & Shells 1812' DLM-1804 SIM
2080
Brown Shale 2104
Berca Grit 2113
Slate & Shells 2145
Total Depth 2145
Oil Pays 2104-14'
Cement record:
1-1-48 10 1/2" casing - not aquagelled -
C.C.Co.Crow
1-12-48 8 5/8" casing - ran 24 bags
aquagel - returns O.K. C.C.Co.Crow
2-9-48 7" casing - not aquagelled -
C.C.Co.Crow

2104
597
-15.07

Received

APR 17 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

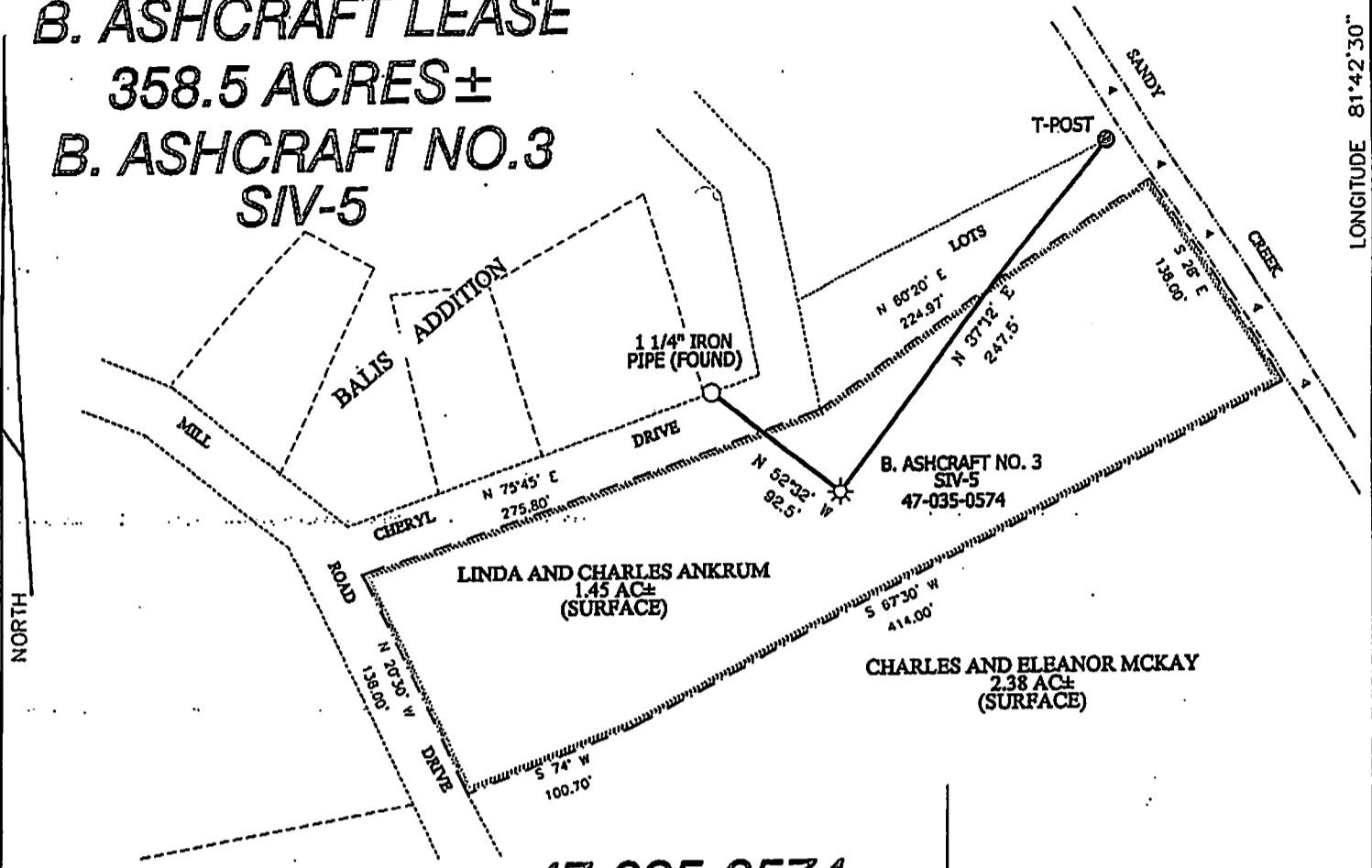
Oil 1045-50' show

05/23/2014

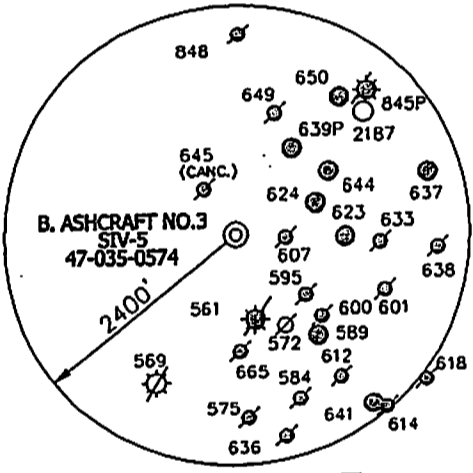
3500574P

LONG. 81°43'31.0" 4820' LATITUDE 38°57'30"

B. ASHCRAFT LEASE 358.5 ACRES ± B. ASHCRAFT NO.3 SIV-5



47-035-0574



NOTES ON SURVEY

1. TIES TO CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 352 PAGE 209.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF JACKSON COUNTY IN FEBRUARY, 2001.
4. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

47-035-0574
SIV-5
B. ASHCRAFT NO.3
STATE PLANE
COORDINATES

(N)702,471
(E)1,793,852

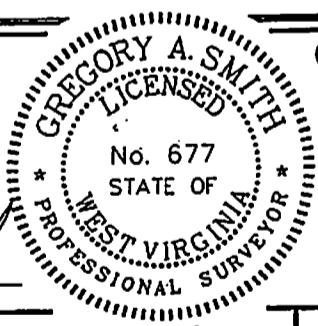
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APR 17 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

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.

P.S. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE FEBRUARY 27, 2001
OPERATORS WELL NO. B. ASHCRAFT NO. 3
SIV-5
API WELL NO. 47 - 035 - 0574P
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 4663P3 (99-27)
PROVEN SOURCE OF ELEVATION BENCH MARK ELEVATION 579' SCALE 1" = 100'

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



WELL TYPE : OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION : ELEVATION 599' WATERSHED SANDY CREEK
DISTRICT RAVENSWOOD COUNTY JACKSON QUADRANGLE SANDYVILLE 7.5'
SURFACE OWNER LINDA AND CHARLES ANKRUM ACREAGE 1.45
ROYALTY OWNER B. ASHCRAFT HEIRS LEASE ACREAGE 358.5±
PROPOSED WORK :
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION BIG INJUN
ESTIMATED DEPTH 2145'

WELL OPERATOR PEAKE ENERGY INC. DESIGNATED AGENT TOM LIBERATORE
ADDRESS P.O. BOX 8 RAVENSWOOD, WV 26164 ADDRESS P.O. BOX 8 RAVENSWOOD, WV 26164

COUNTY NAME PERMIT

WW-4A
Revised 6-07

1) Date: January 15, 2014
2) Operator's Well Number
SIV 5

3) API Well No.: 47 - 035 - 00574

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

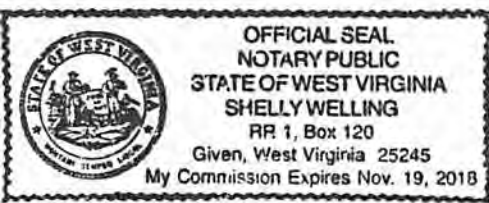
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Linda & Charles Ankrum</u> <i>W</i>	Name _____
Address <u>216 Mill Dr</u>	Address _____
<u>Ravenswood, WV 26164</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Jamie Stephens</u>	(c) Coal Lessee with Declaration
Address <u>105 Kentuck Road</u>	Name _____
<u>Kenna, WV 25248</u>	Address _____
Telephone <u>304-206-7775</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 reverse 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: Rick Green *R. Green*
 Its: Construction Specialist I
 Address PO Box 8
Ravenswood, WV 26164
 Telephone 304-273-5371

Received

Subscribed and sworn before me this 19 day of Feb 2014
Shelly Welling Notary Public
 My Commission Expires 11/19/18

APR 17 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

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.

SURFACE OWNER WAIVER

Operator's Well
Number

SIV 5

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate Office of Review of the WV Dept. of Environmental Protection violation...".

Received

APR 17 2014

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,

Charles W. [Signature] Date 2/22/14 Name _____
Signature By _____

Its _____ Date _____

Signature

Date
05/23/2014

WW-9
Rev. 5/08

Page 1 of 6
API Number 47 - 035 - 00574
Operator's Well No. SIV5

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 EXCO Resources (PA), LLC OP Code 307860

Watershed Sandy Creek Quadrangle Ripley/Sandyville 7.5

Elevation 597' County Jackson District Ravenswood

Description of anticipated Pit Waste: cement, gel, water

Will a synthetic liner be used in the pit? yes

RECEIVED
Office of Oil and Gas

MAY 21 2014

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 solidified with cement on site)

WV Department of
Environmental Protection

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 *Rick Green*

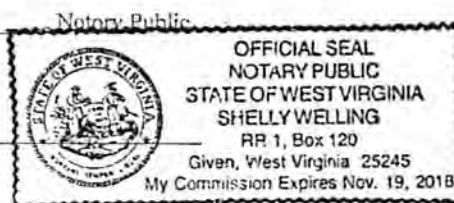
Company Official (Typed Name) Rick Green

Company Official Title Construction Specialist I

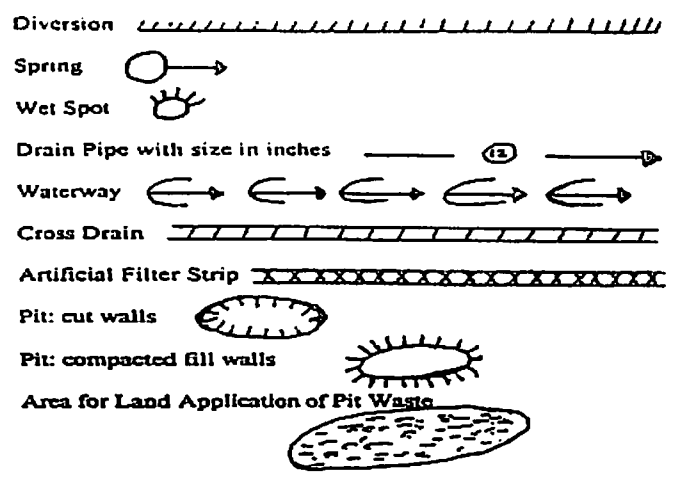
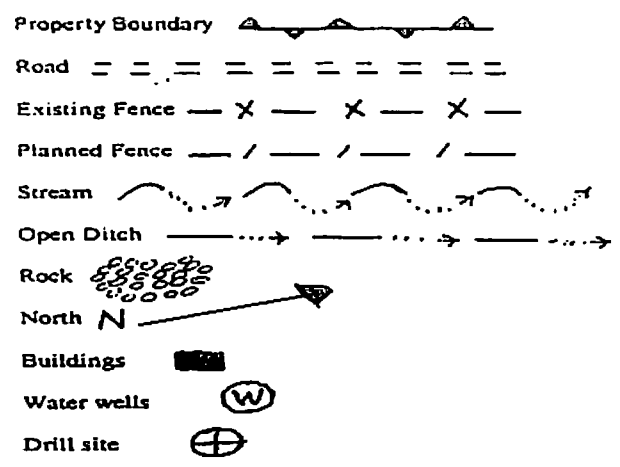
Subscribed and sworn before me this 19 day of Feb, 2014

Shelly Welling

My commission expires 11/19/18



LEGEND



Proposed Revegetation Treatment: Acres Disturbed >1 Prevegetation pH _____

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 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY 31 Fescue	40	same as Area I	
Alsike Clover	5		
Annual Rye	16		

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

Photocopied section of involved 7.5' topographic sheet.

Received

APR 17 2014

Plan Approved by: Jamie Stevens

Comments: _____

Office of Oil and Gas
WV Dept. of Environmental Protection

Title: _____

Date: March 18th, 2014

Field Reviewed? Yes No

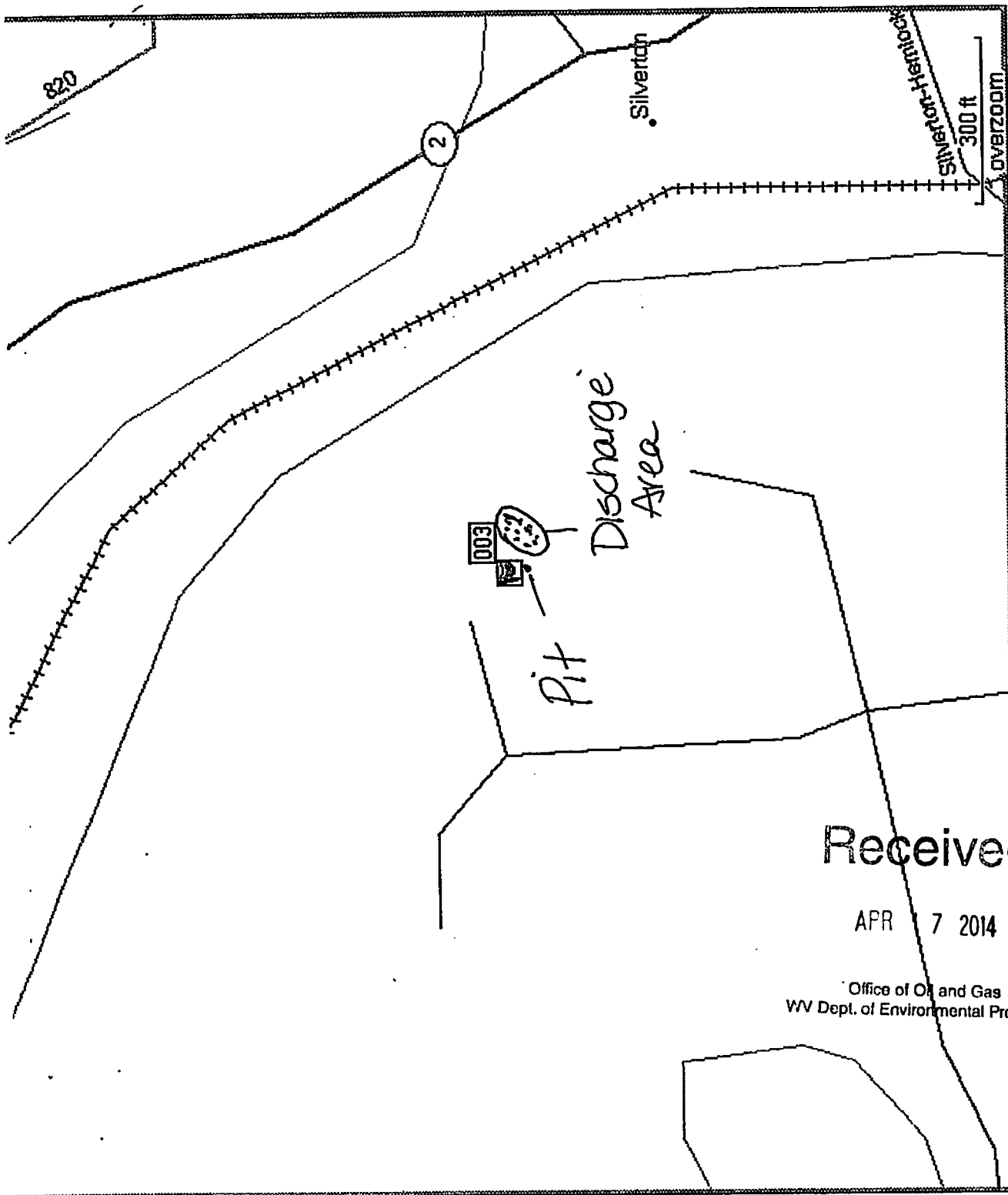
Endo Resources (A.)
LLC

Well No.
SIV 5

API well No.
47-035-00574P.

Pressing

James
3/18/2014



Received

APR 7 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

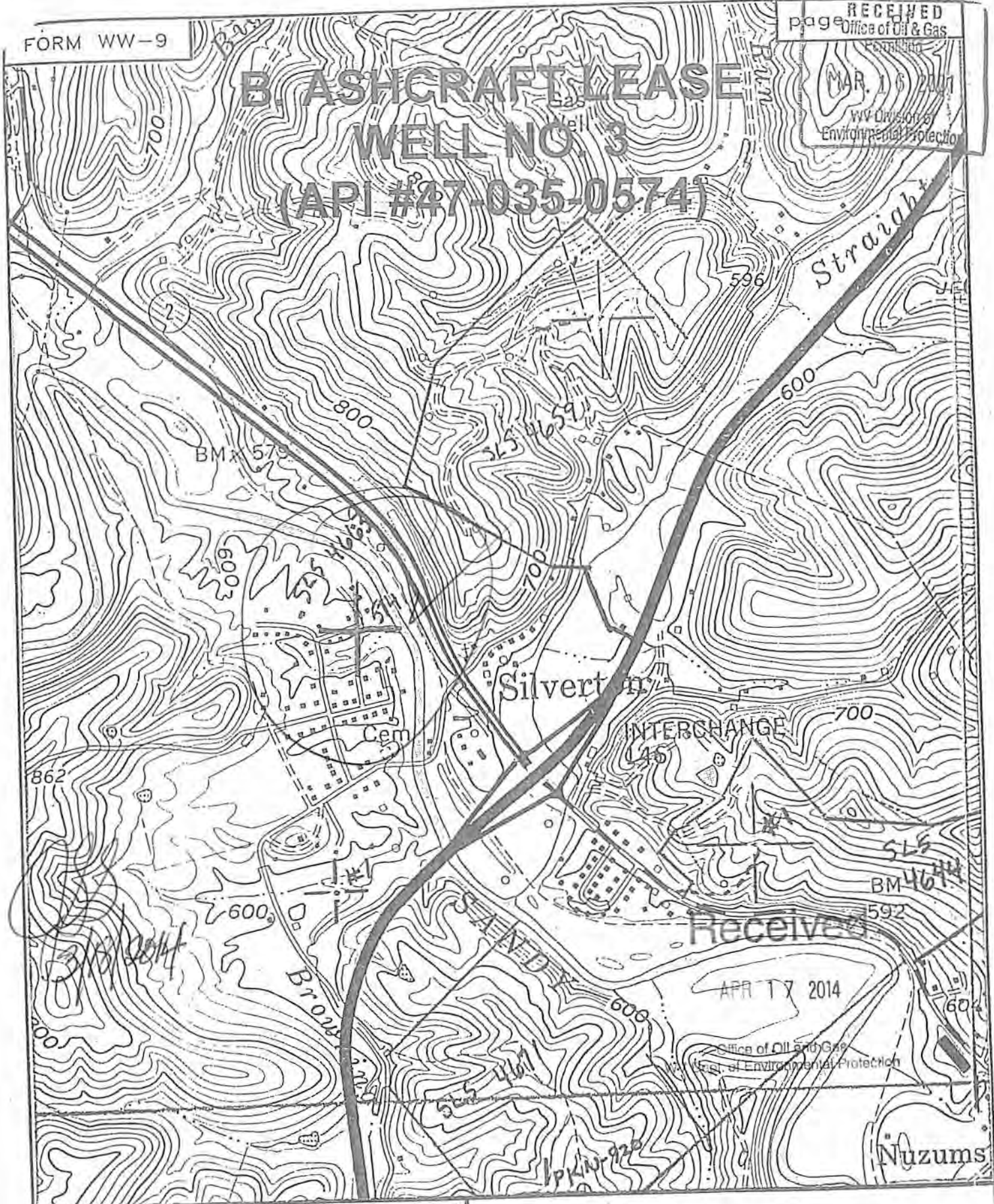
05/23/2014

35005746
35-574P

FORM WW-9

RECEIVED
Office of Oil & Gas
MAR. 16 2007
WV Division of
Environmental Protection

B. ASHCRAFT LEASE WELL NO. 3 (API #47-035-0574)



Received
APR 17 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

SLS
SMITH LAND SURVEYING
P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF Sandyville 7.5'
FILE NO. 4663 DATE 2/27/01 SCALE 1"=1000'
05/23/2014

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-035-00574 WELL NO.: 5

FARM NAME: Charles and Linda Ankrum

RESPONSIBLE PARTY NAME: Exco Resources

COUNTY: Jackson DISTRICT: Ravenswood

QUADRANGLE: Sandyville

SURFACE OWNER: Charles and Linda Ankrum

ROYALTY OWNER: Blanch Ashcraft et al

UTM GPS NORTHING: 4308925.00 m

UTM GPS EASTING: 437143.00 m GPS ELEVATION: 597 FT (182.57m)

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

Received

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Office of Oil and Gas
WV Dept. of Environmental Protection

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.

[Signature] construction specialist 4-21-14
Signature Title Date