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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

August 20, 2013

**WELL WORK PERMIT**  
**Rework-Brine Disposal**

This permit, API Well Number: 47-3902419, issued to EXCO RESOURCES (WV), INC., 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: L. C. WILSON 4  
Farm Name: GROSE, RICHARD A. & PATRICIA  
**API Well Number: 47-3902419**  
**Permit Type: Rework-Brine Disposal**  
Date Issued: 08/20/2013

**Promoting a healthy environment.**

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08/23/2013

3902419 R

WW - 2B  
(Rev. 8/10)

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

39 04 258

1) Well Operator: EXCO Resources (PA), LLC      307860      Kanawha      Elk      Blue Creek  
Operator ID      County      District      Quadrangle

2) Operator's Well Number: 47-039-02419      3) Elevation: 1039'

4) Well Type: (a) Oil \_\_\_\_\_ or Gas X  
(b) If Gas: Production \_\_\_\_\_ / Underground Storage X  
Deep \_\_\_\_\_ / Shallow X

5) Proposed Target Formation(s): Salt Sands      Proposed Target Depth: 1568-1674'

6) Proposed Total Depth: 1850' Feet      Formation at Proposed Total Depth: \_\_\_\_\_

7) Approximate fresh water strata depths: 250'

8) Approximate salt water depths: 1100'

9) Approximate coal seam depths: N/A

10) Approximate void depths, (coal, Karst, other): N/A

11) Does land contain coal seams tributary to active mine? N/A

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

Locate leak in production casing and repair

13) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor						
Fresh Water	8-5/8	H-40	24	254		Surface
Coal						
Intermediate						
Production	4-1/2	J-55	13.5	2,169		TOC 1,090'
Tubing	2-7/8	J-55	4.7	1,510		
Liners						

*Handwritten signature and initials*

Received TOC 1,090'  
Received

Packers: Kind: Halliburton R-4  
Sizes: 4-1/2"  
Depths Set 1,510

Office of Oil and Gas  
WV Dept. of Environmental Protection  
JUN 11 2013  
Office of Oil and Gas  
WV Dept. of Environmental Protection

08/23/2013

WW-2A  
(Rev. 6-07)

1.) Date: 5/24/2013  
2.) Operator's Well Number L C Wilson #4  
State 47- County 039 Permit 02419  
3.) API Well No.:

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Richard A. &amp; Patricia Grose</u> <i>W</i>	Name <u>N/A</u>
Address <u>PO Box 277</u>	Address _____
<u>Pinch, WV 25156</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>N/A</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Terry Urban</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 1207</u>	Name <u>N/A</u>
<u>Charleston, WV 25045</u>	Address _____
Telephone <u>304-549-5915</u>	_____

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

x Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

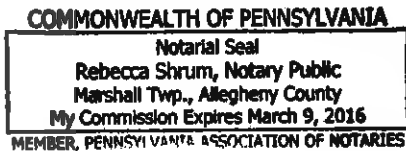
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_ on the above named parties by:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- x \_\_\_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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 and imprisonment.



Well Operator EXCO Resources (PA), LLC  
 By: Brian E. Rushe, P.E. *Brian E. Rushe*  
 Its: Designated Agent  
 Address 3000 Ericsson Drive, Suite 200  
Warrendale, PA 15086  
 Telephone 724-720-2500

Subscribed and sworn before me this 24th day of May, 2013

*Rebecca Shrum*  
My Commission Expires March 9, 2016

15/24/2013

Notary Public **Received**

Oil and Gas Privacy Notice County of Allegheny

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)

JUN 11 2013  
Office of Oil and Gas  
WV Dept. of Environmental Protection

08/23/2013

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Kanawha

Operator  
Operator well number

EXCO Resources (PA), LLC  
L C Wilson #4

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A**

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (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 57<sup>th</sup> 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 **FIFTEEN (15) 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 a 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 or seek review of the violation..."

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.

**List of Water Testing Laboratories.** The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

**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 Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

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

FOR EXECUTION BY A CORPORATION, ETC.

Richard A. Grose  
Signature

Date 6-3-13

Company Name  
By  
Its

Richard A. GROSE

Print Name

Received Date

Signature JUN 11 2013 Date

Office of Oil and Gas  
WV Dept. of Environmental Protection

08/23/2013

WW-2A1  
(Rev. 1/11)

Operator's Well Number L.C. Wilson # 4

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
SEE ATTACHED LAND OWNER AGREEMENT			

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Received

AUG - 7 2013

Office of Oil and Gas  
WV Dept. of Environmental Protection  
Well Operator:  
By: Its:

Exco Resources (PA), LLC  
3000 Ericsson Drive Suite 200  
Warrendale, PA 15086  
Brian E. Rushe, P.E.  
Brian E. Rushe

08/23/2013



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) Wills Creek Quadrangle Blue Creek

Elevation 1039' County Kanawha District Elk

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 \_\_\_\_\_ 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 \_\_\_\_\_ )

Will closed loop system be used? No

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. No

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

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-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/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.

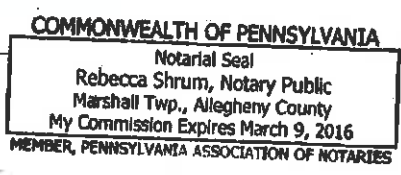
Company Official Signature Brian E. Rushe

Company Official (Typed Name) Brian E. Rushe, P.E.

Company Official Title Regulatory Manager

Subscribed and sworn before me this 24th day of July, 2013

Rebecca Shrum  
Notary Public  
WV Dept. of Environmental Protection



My commission expires March 9, 2016

Commonwealth of Pennsylvania, County of Allegheny

Form WW-9

Operator's Well No. L.C. Wilson #4

**EXCO Resources (PA), LLC**

Proposed Revegetation Treatment: Acres Disturbed 0.0 Prevegetation pH N/A

Lime N/A Tons/acre or to correct to pH N/A

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

Mulch N/A Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
N/A		N/A	

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

Photocopied section of involved 7.5' topographic sheet.

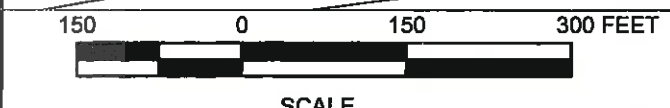
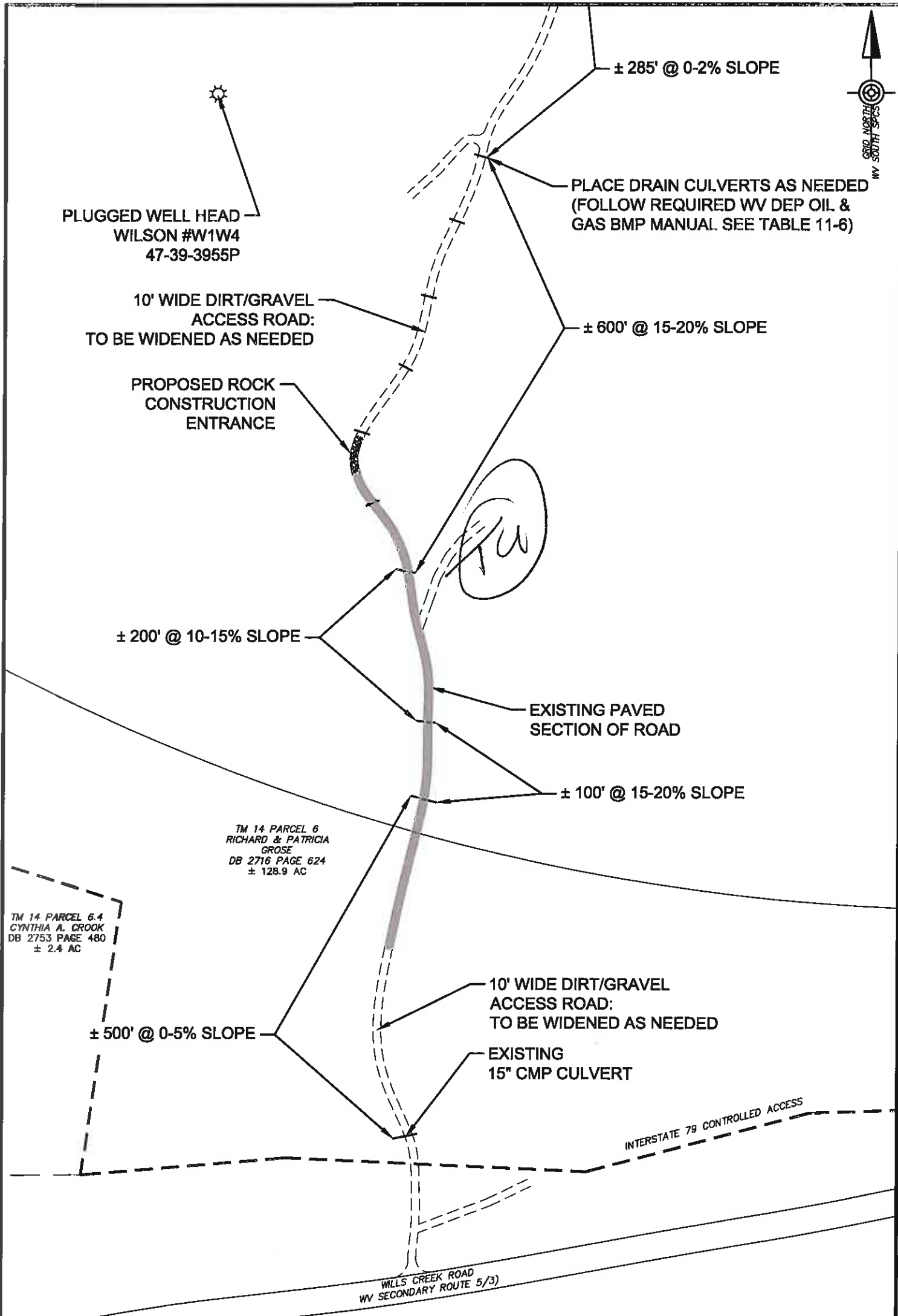
Plan Approved by: [Signature]

Comments: All Roads Existing

Title: Inspute Date: 7-25-13

Field Reviewed?  Yes  No

**Received**  
AUG -7 2013  
Office of Oil and Gas  
WV Dept. of Environmental Protection



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08/23/2013  
Received

**RECLAMATION PLAN  
LC WILSON WELL #4**

ELK DISTRICT, KANAWHA COUNTY, WEST VIRGINIA

PROJECT NO.: 8013-005  
SHEET NO.: 1 of 3

**EXCO RESOURCES, INC**  
P.O. BOX 8  
RAVENSWOOD, WV 26164  
PHONE (304) 273-5371  
DATE: 7/1/13 DRAWN BY: RTC CHECKED BY: THK

**Larson Design Group** • Architects Engineers Surveyors  
2502 Cranberry Square  
Morgantown, WV 26508  
PHONE 877.323.6603  
FAX 570.323.9902 • www.larsondesigngroup.com

Office of Environmental Protection  
WV Dept. of Environmental Protection  
Larson Design Group®





TM 14 PARCEL 5.1  
JEAN M. OTT  
DB 2579 PAGE 535  
± 54.6 AC

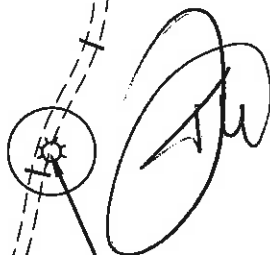


± 600' @ 15-20% SLOPE

LC WILSON #4  
WELL HEAD  
47-39-2419

**NOTES**

1. ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE WVDEP OIL & GAS BMP MANUAL. ALL CULVERTS SHOWN ON THIS PLAN ARE PROPOSED AND WILL BE A MINIMUM OF 12" IN DIAMETER UNLESS OTHERWISE DESIGNATED AND WILL BE PACKED AS NEEDED AND REQUIRED BY WVDEP OIL AND GAS BMP MANUAL.
2. SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL MEASURES IN ADDITION TO THOSE SHOWN ON THIS PLAN WILL BE INSTALLED WHEN AND WHERE DEEMED NECESSARY. THE ADDITIONAL MEASURES MAY CONSIST OF STRAW BALES, SILT FENCES, OR OTHER MEASURES AS OUTLINED IN THE EROSION AND SEDIMENT CONTROL FIELD MANUAL.
3. SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAIN INLETS AS REQUIRED IN THE WVDEP OIL & GAS BMP MANUAL. FIELD CONDITIONS SUCH AS ROCK OUTCROPS AND BEDROCK MAY PROHIBIT INLET TRAPS BEING INSTALLED, WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.
4. A SEDIMENT BARRIER OF EITHER BRUSH, STRAW BALES OR FILTER FENCE WILL BE MAINTAINED BELOW THE OUT FALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DISCHARGE POINTS FROM EITHER THE ROADWAY OR THE LOCATION.
5. ENTRANCES AT COUNTY/STATES ROAD SHALL BE MAINTAINED IN ACCORDANCE WITH D.O.T. REGULATIONS, SEPERATE PERMITS MAY BE REQUIRED BY THE WVDOT INSTALLED FOR A MIN. DISTANCE OF 50'.
6. A STABILIZED CONSTRUCTION ENTRANCE WILL BE INSTALLED AS SHOWN UNLESS OTHERWISE DIRECTED BY WVDEP INSPECTOR AND/OR WVDOT.
7. CROSS DRAINS AND/OR WATERBARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED IN ACCORDANCE WITH THE WVDEP CONTROL FIELD MANUAL.



PLUGGED WELL HEAD  
WILSON #U1U3  
47-39-3954P

EXISTING  
12" CMP CULVERT

± 200' @ 10-15% SLOPE

TM 14 PARCEL 6  
RICHARD & PATRICIA  
GROSE  
DB 2716 PAGE 624  
± 128.9 AC

PLACE DRAIN CULVERTS AS NEEDED (FOLLOW  
REQUIRED WV DEP OIL & GAS BMP MANUAL  
SEE TABLE 11-6)

10' WIDE DIRT/GRAVEL  
ACCESS ROAD:  
TO BE WIDENED AS NEEDED

± 300' @ 0-5% SLOPE

± 285' @ 0-2% SLOPE

150 0 150 300 FEET



SCALE

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**RECLAMATION PLAN  
LC WILSON WELL #4**

ELK DISTRICT, KANAWHA COUNTY, WEST VIRGINIA

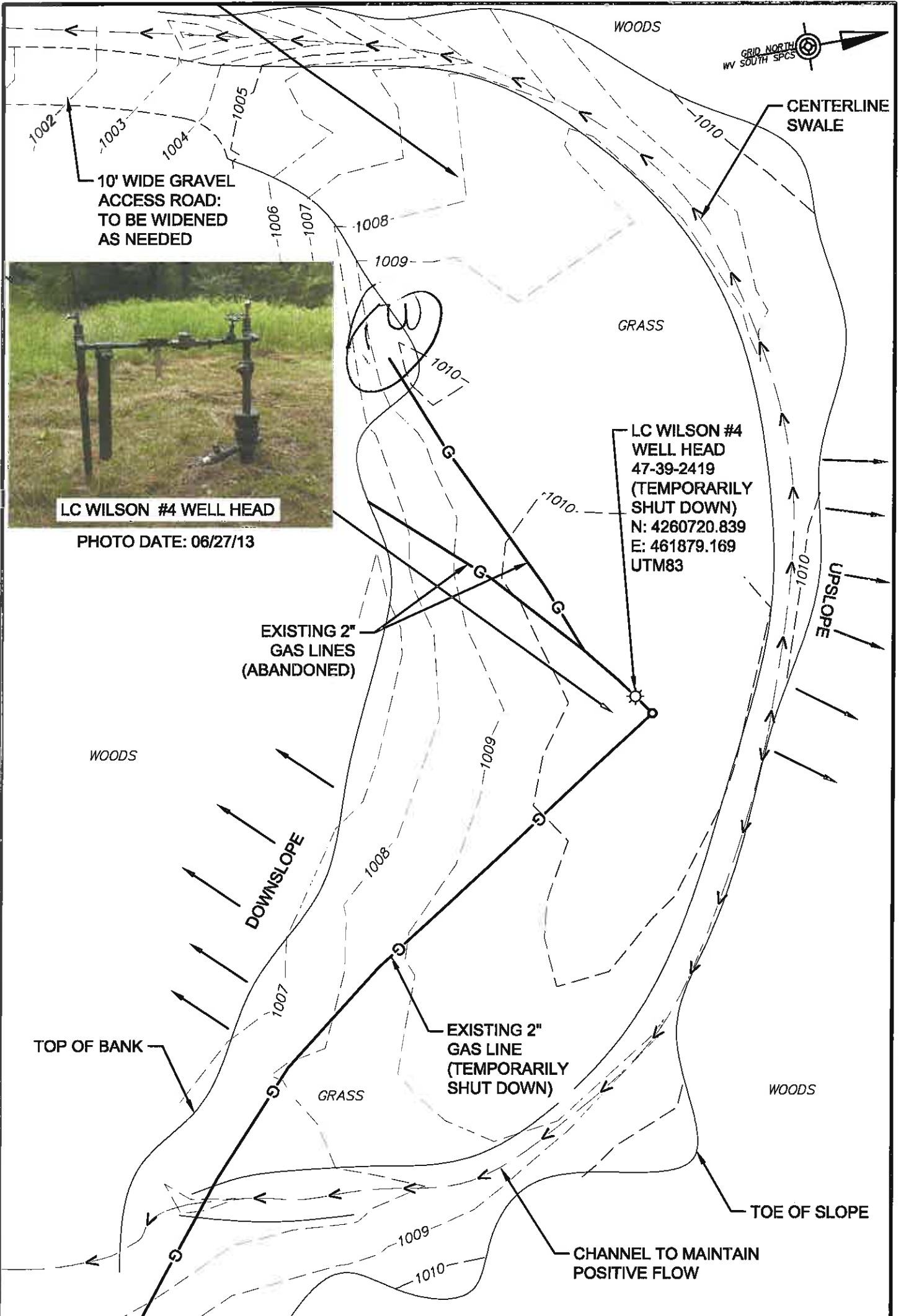
EXCO RESOURCES, INC  
P.O. BOX 8  
RAVENSWOOD, WV 26164  
PHONE (304) 273-5371  
DATE: 7/1/13 DRAWN BY: RTC CHECKED BY: THK

Larson Design Group • Architects Engineers Surveyors  
2502 Cranberry Square  
Morgantown, WV 26508  
PHONE 877.323.6603  
FAX 570.323.9902 • www.larsondesigngroup.com



Office of Oil and Gas Regulation  
WV Dept. of Environmental Protection

PROJECT NO.: 8013-005  
SHEET NO.: 2 of 3

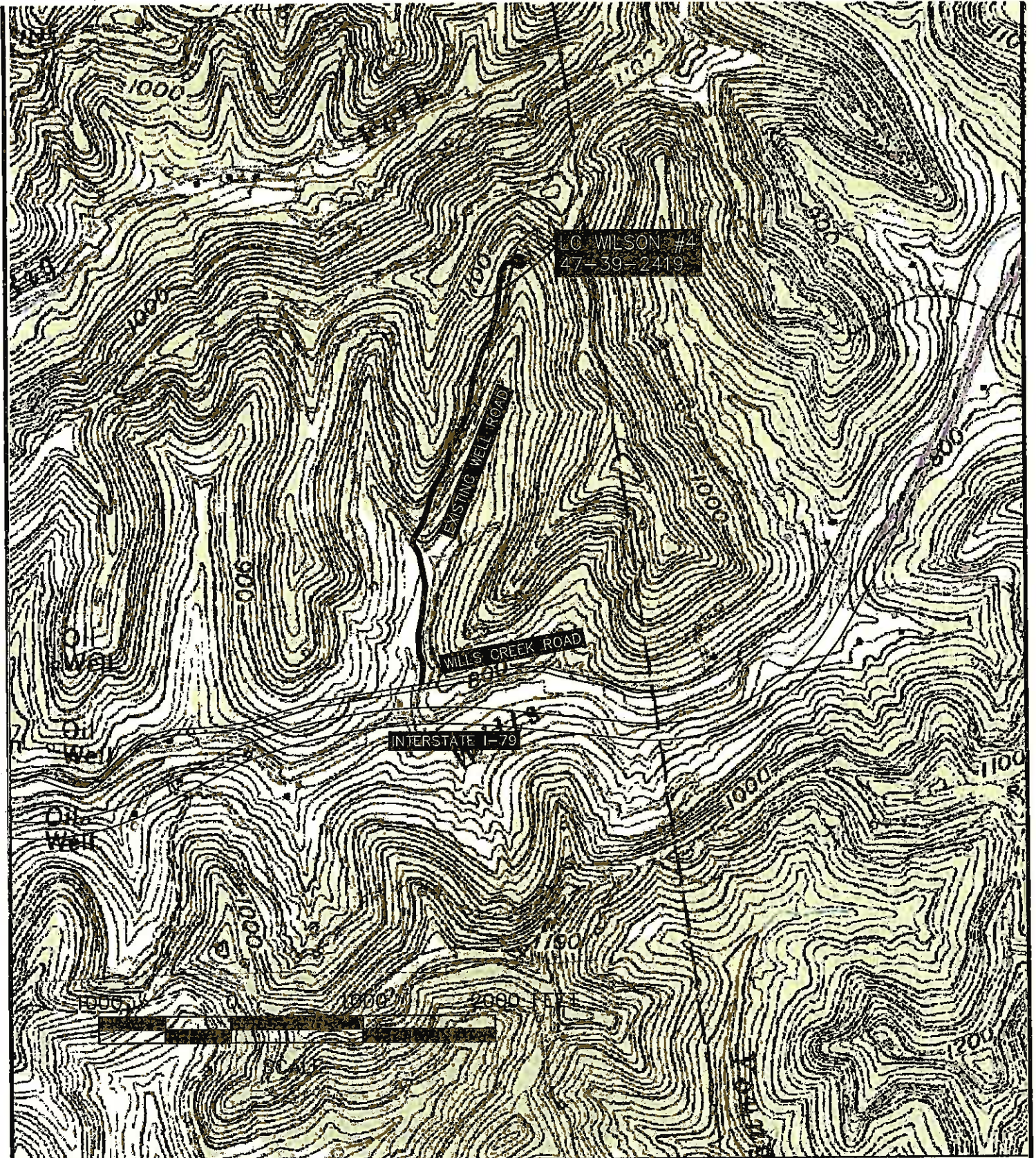


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08/23/2013

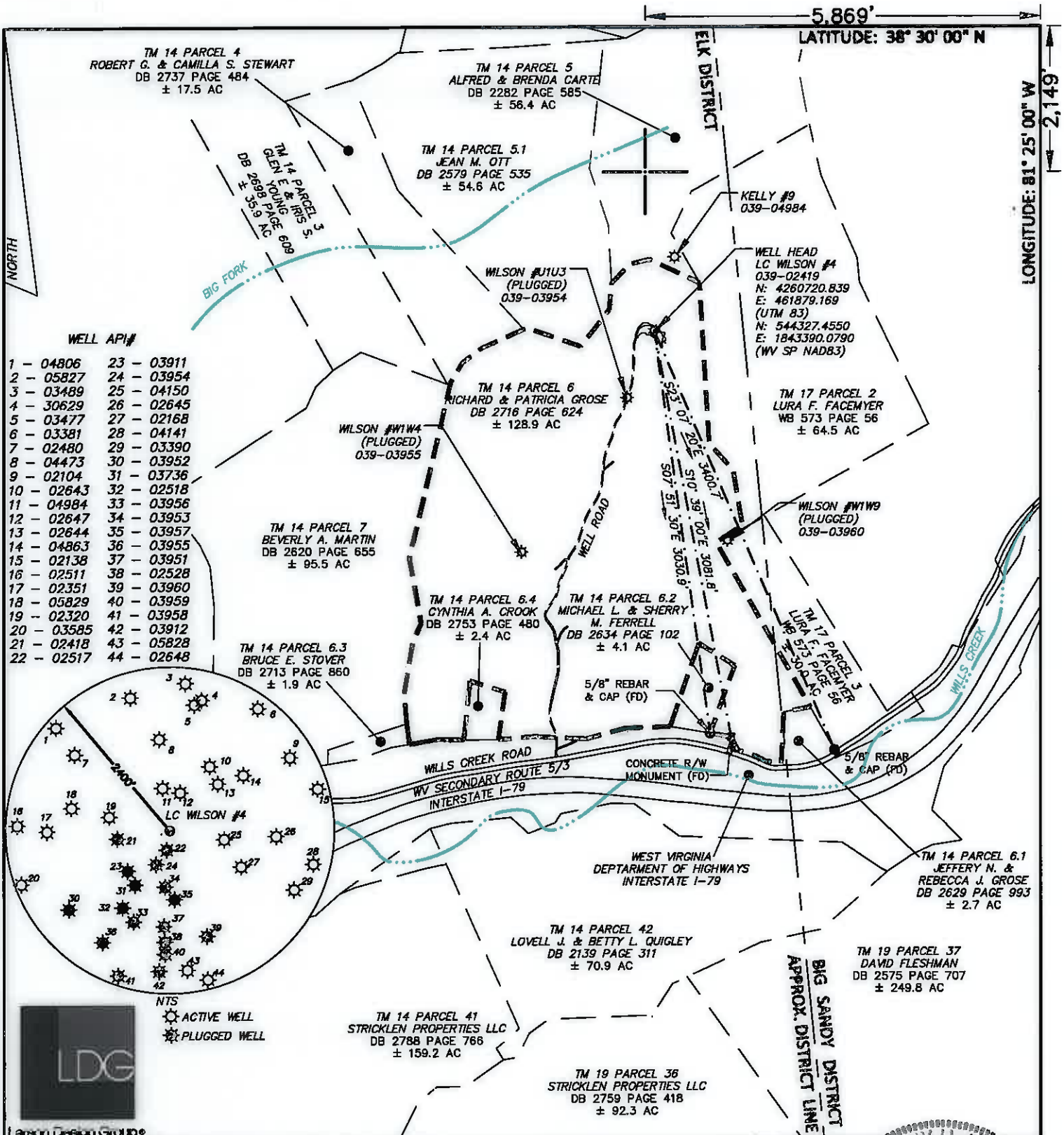
PROJECT NO.: 8013-005	SHEET NO.: 3 of 3	<b>RECLAMATION PLAN</b> <b>LC WILSON WELL #4</b> ELK DISTRICT, KANAWHA COUNTY, WEST VIRGINIA		 Larson Design Group®
		<b>EXCO RESOURCES, INC</b> P.O. BOX 8 RAVENSWOOD, WV 26164 PHONE (304) 273-5371 DATE: 7/1/13 DRAWN BY: RTC CHECKED BY: THK	<b>Larson Design Group</b> - Architects Engineers Surveyors 2502 Cranberry Square Morgantown, WV 26508 PHONE 877.323.6603 FAX 570.323.9902 • www.larsondesigngroup.com	





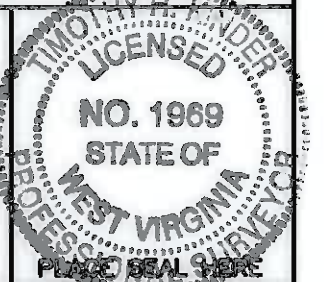
PROJECT NO.: 8013-005	SHEET NO.: 1	<b>LOCATION MAP</b> <b>LC WILSON WELL #4</b> ELK DISTRICT, KANAWHA COUNTY, WEST VIRGINIA		 Larson Design Group®
		<b>EXCO RESOURCES, INC</b> P.O. BOX B RAVENSWOOD, WV 26164 PHONE (304) 273-5371 DATE: 7/24/13 DRAWN BY: SLN CHECKED BY: THK	<b>Larson Design Group</b> • Architects Engineers Surveyors 2502 Cranberry Square Morgantown, WV 26508 PHONE 877.323.6603 FAX 570.323.9902 • www.larsondesigngroup.com	





FILE NO. 2013-005  
 DRAWING NO. 1  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 2500'  
 PROVEN SOURCE OF ELEVATION SURVEY GRADE PPS

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 ENVIRONMENTAL PROTECTION.  
 (SIGNED) [Signature]  
 R.P.E. \_\_\_\_\_ L.L.S. 1969



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

DATE JULY 11, 2013  
 OPERATOR'S WELL NO. LC WILSON #4  
 API WELL NO. 47-039-02419 R  
 STATE COUNTY PERMIT

WELL TYPE: OIL    GAS    LIQUID INJECTION    WASTE DISPOSAL     
 (IF "GAS,") PRODUCTION    STORAGE    DEEP    SHALLOW X  
 LOCATION: ELEVATION 1010 WATERSHED WILLS CREEK  
 DISTRICT ELK COUNTY KANAWHA  
 QUADRANGLE BLUE CREEK

SURFACE OWNER RICHARD A. or PATRICIA A. GROSE ACREAGE 128.85  
 OIL & GAS ROYALTY OWNER N/A LEASE ACREAGE N/A LEASE NO. N/A

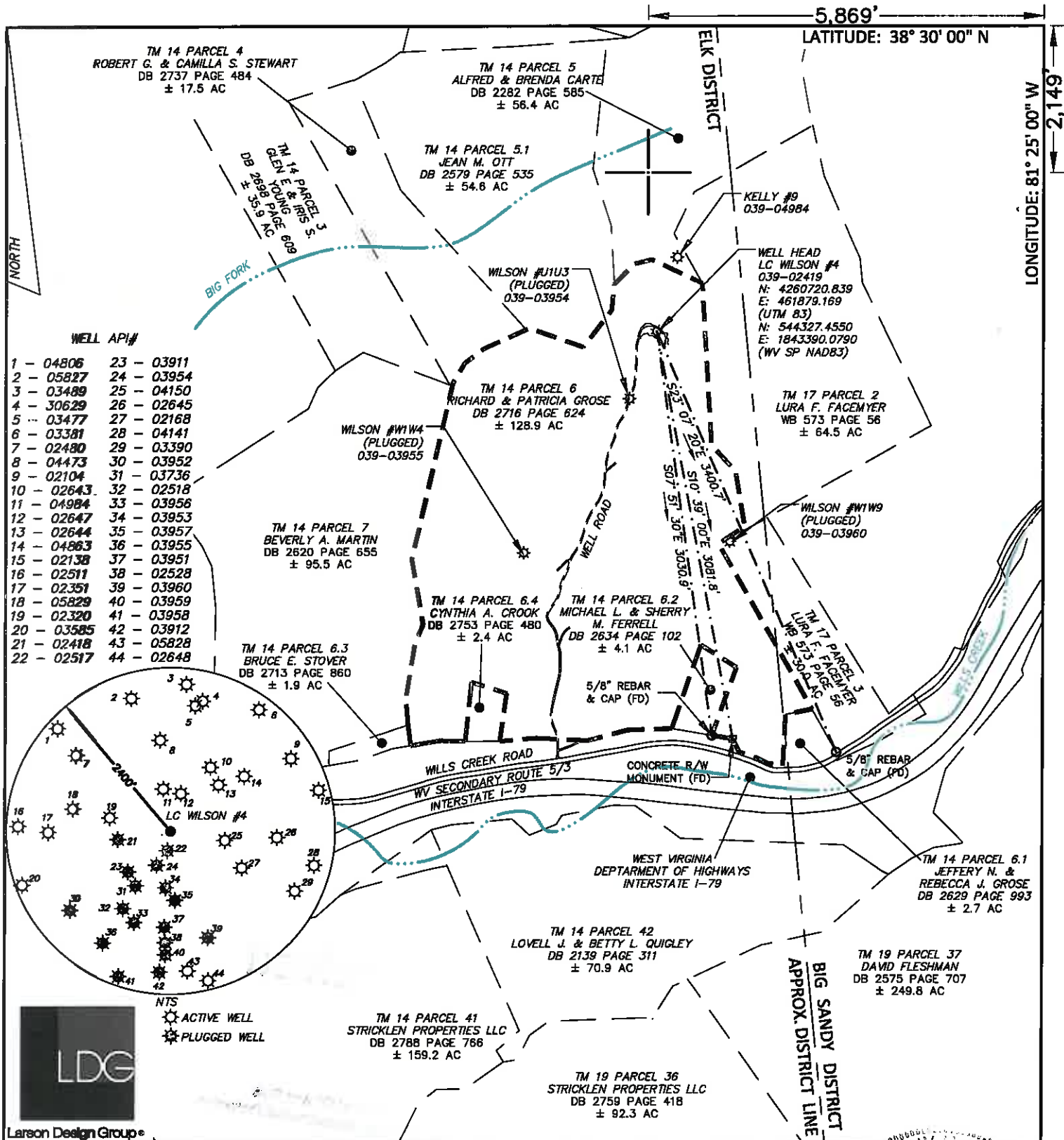
PROPOSED WORK: DRILL    CONVERT    DRILL DEEPER    REDRILL    FRACTURE OR STIMULATE    PLUG OFF OLD FORMATION    PERFORATE NEW FORMATION    OTHER PHYSICAL CHANGE IN WELL (SPECIFY) X (WORK IS TO LOCATE AND REPAIR A LEAK IN PRODUCTION CASING)

PLUG AND ABANDON    CLEAN OUT AND REPLUG     
 TARGET FORMATION SALT SANDS ESTIMATED DEPTH 1588'-1674'  
 WELL OPERATOR EXCO Resources (PA) LLC DESIGNATED AGENT MIKE CHURCH-EXCO RESOURCES  
 ADDRESS 3000 ERICSSON DRIVE SUITE 200 WARRENDALE PA 15082 ADDRESS P.O. BOX 8 RAVENSWOOD, WV 26164

COUNTY NAME  
 PERMIT

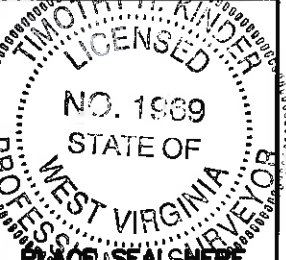
DATE PLOTTED

08/23/2013



FILE NO. 8013-005  
 DRAWING NO. 1  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 2500'  
 PROVEN SOURCE OF ELEVATION SURVEY GRADE GPS

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 ENVIRONMENTAL PROTECTION.  
 (SIGNED) [Signature]  
 R.P.E. \_\_\_\_\_ L.L.S. 1969



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

DATE JULY 11, 2013  
 OPERATOR'S WELL NO. LC WILSON #4  
 API WELL NO. 47 039 02419  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1010 WATERSHED WILLS CREEK  
 DISTRICT ELK COUNTY KANAWHA  
 QUADRANGLE BLUE CREEK

SURFACE OWNER RICHARD A. or PATRICIA A. GROSE ACREAGE 128.85  
 OIL & GAS ROYALTY OWNER N/A LEASE ACREAGE N/A LEASE NO. N/A

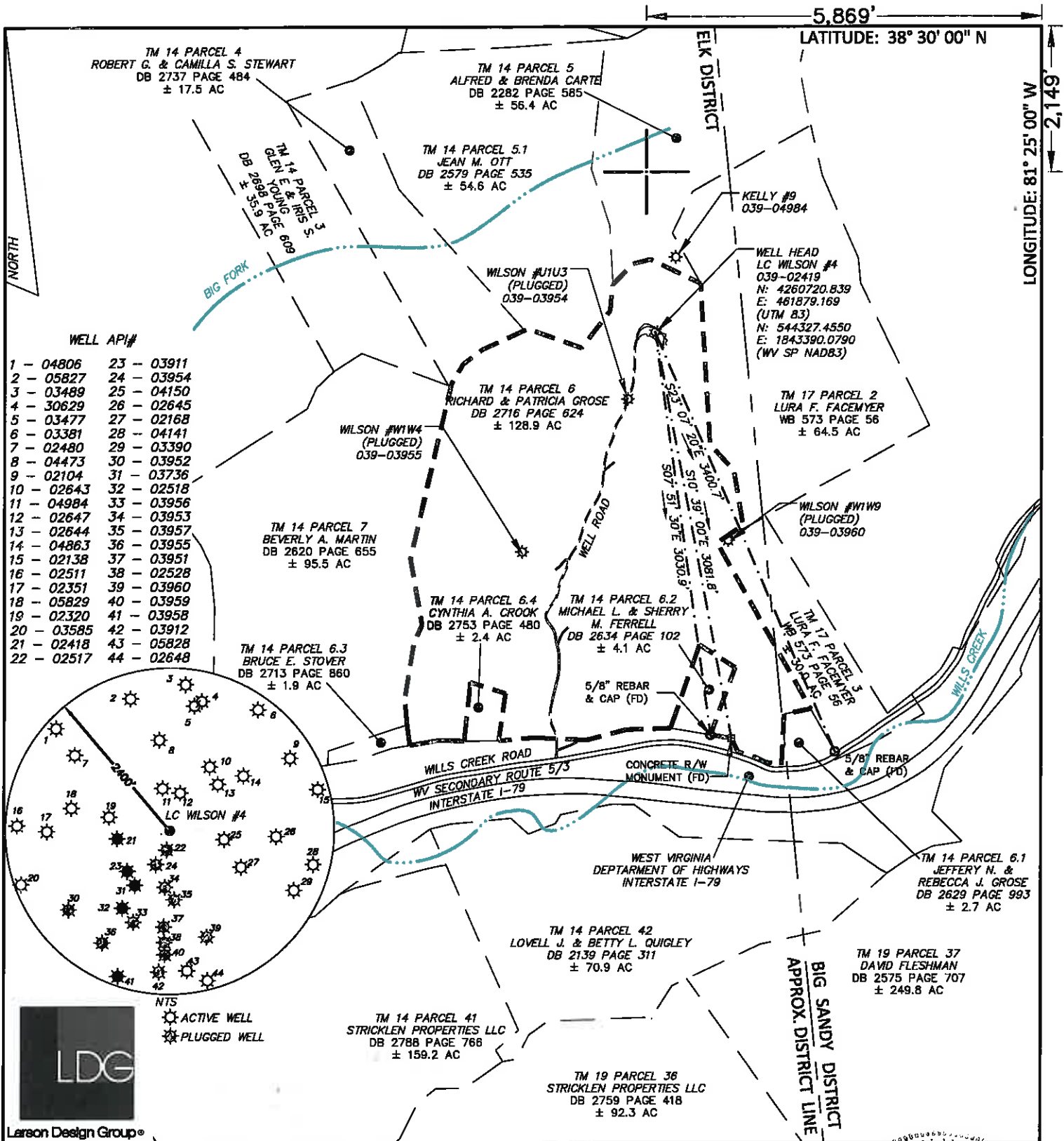
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  (WORK IS TO LOCATE AND REPAIR A LEAK IN PRODUCTION CASING)

PLUG AND ABANDON  CLEAN OUT AND REPLUG   
 TARGET FORMATION SALT SANDS ESTIMATED DEPTH 1568'-1674'  
 WELL OPERATOR EXCO Resources (PA), LLC DESIGNATED AGENT MIKE CHURCH-EXCO RESOURCES  
 ADDRESS 3000 ERICSSON DRIVE, SUITE 200 WARRENDALE, PA 15086 ADDRESS P.O. BOX 8 RAVENSWOOD, WV 26164

COUNTY NAME  
 PERMIT

08/23/2013





FILE NO. 8013-005  
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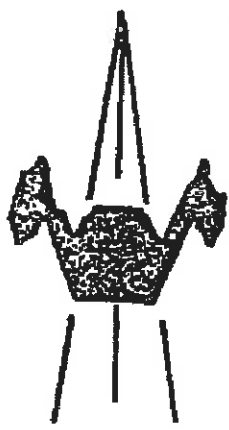
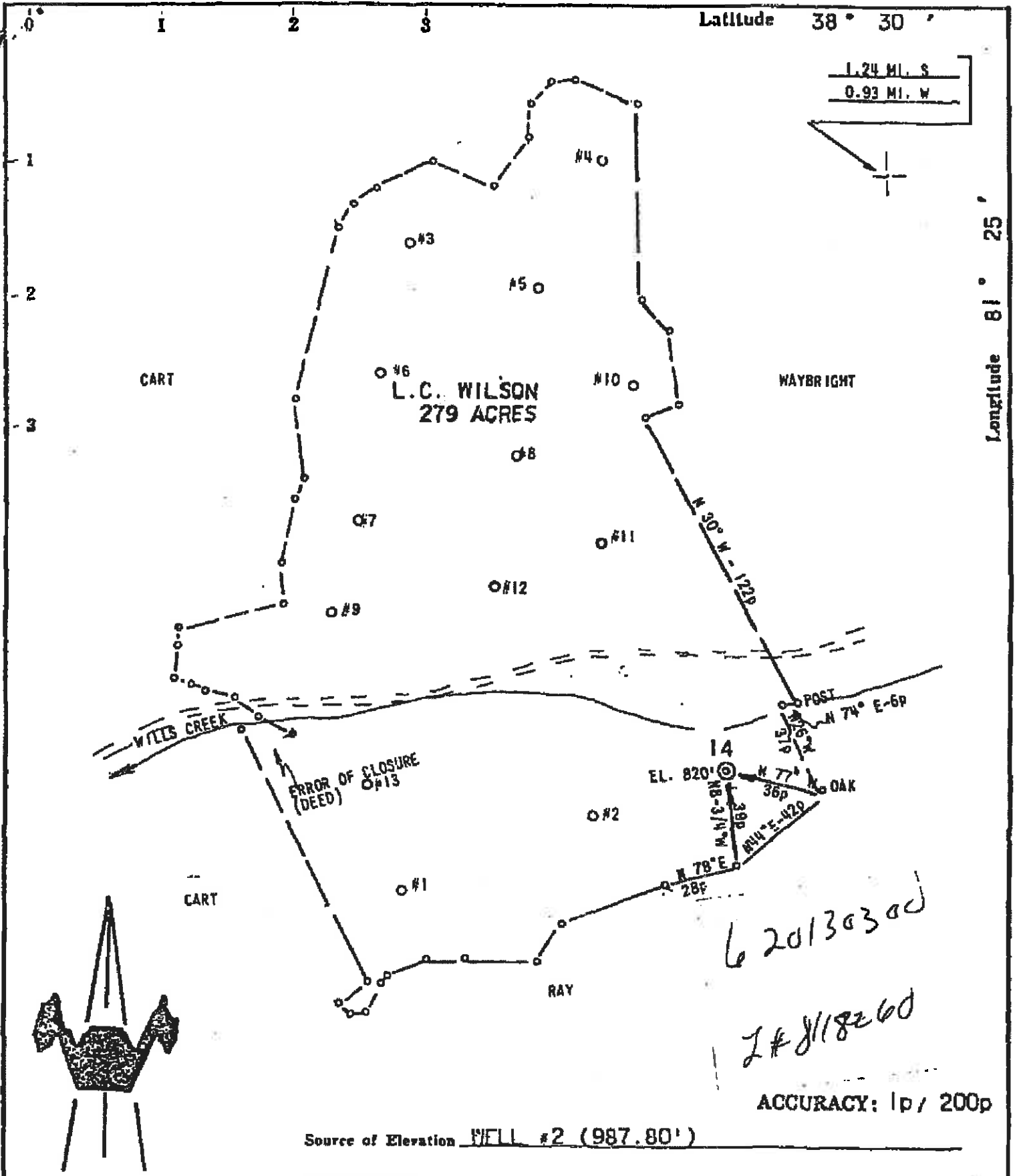
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  (WORK IS TO LOCATE AND REPAIR A LEAK IN PRODUCTION CASING)

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COUNTY NAME  
 PERMIT

08/23/2013





- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

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.

*Chet Waterman*  
 Received  
 July 11 2013  
 State of West Virginia  
 DEPARTMENT OF MINING, OIL AND GAS  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 CHARLESTON

Company QUAKER STATE OIL REF. CORP.  
 Address PARKERSBURG, WV  
 Farm L.C. WILSON  
 Tract \_\_\_\_\_ Acres 279 Lease No. \_\_\_\_\_  
 Well (Farm) No. 14 Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 820'  
 Quadrangle CLENDENIN  
 County KANAWHA District ELK  
 Engineer CHET WATERMAN  
 Engineer's Registration No. 3788  
 File No. 74003-63 Drawing No. \_\_\_\_\_  
 Date 2/14/74 Scale 1" = 50p

**WELL LOCATION MAP**  
 FILE NO. 08/23/2013

+ 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.

**Nottingham, Justin E**

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**From:** Nottingham, Justin E  
**Sent:** Wednesday, June 12, 2013 9:45 AM  
**To:** 'rshrums@excoresources.com'  
**Subject:** Well Work Permit Application Deficiency  
**Attachments:** CHECK LIST FOR FILING A PERMIT 7-29-09.doc; Permit Packet. 05-07-2013.pdf; 47-039-02419 W.pdf

Rebecca ,

I received an application for a Well Work Permit from EXCO Resources (PA), LLC for well # 47-039-02419 "L C Wilson #4" Injection Well in Kanawha ,WV. After looking over it, I found that it is lacking some of the required paperwork we need to review and approve it. If you would look at the attachments and links that I provided below and return the remainder of the paperwork that is needed , then I can get your application entered and reviewed. I have also attached the application in question. If you have any questions , then feel free to contact me.

<http://www.dep.wv.gov/oil-and-gas/GI/Forms/Documents/Permit%20Packet.%2005-07-2013.pdf>

<http://www.dep.wv.gov/oil-and-gas/GI/Forms/Pages/default.aspx>

Thanks,  
Justin

***Justin E. Nottingham***

***West Virginia Department of Environmental Protection***

***Office of Oil and Gas***

***Environmental Technician***

***601 57<sup>th</sup> Street, S.E.***

***Charleston, WV 25304***

***(304)-926-0499 (Ext. 1650)***

***(304)-926-0452 (fax)***

***Jusitn.E.Nottingham@wv.gov***

**Received**

**JUN 11 2013**

**Office of Oil and Gas  
WV Dept. of Environmental Protection**

**08/23/2013**