



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

June 04, 2013

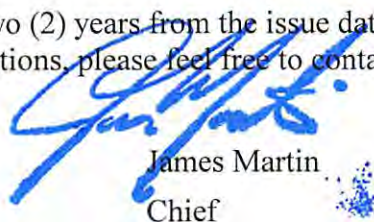
WELL WORK PERMIT
Vertical Well

This permit, API Well Number: 47-8510050, issued to MURVIN & MEIER OIL CO., 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: KIRBY ET AL #2
Farm Name: KIRBY, MARGARET , ET AL
API Well Number: 47-8510050
Permit Type: Vertical Well
Date Issued: 06/04/2013

WW - 2B
(Rev. 8/10)

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

- 1) Well Operator Murvin and Meier Oil Co 307980 Ritchie Murphy Smithville 7.5'
Operator ID County District Quadrangle
- 2) Operator's Well Number: Kirby et al #2 3) Elevation: 1138
- 4) Well Type: (a) Oil _____ or Gas X
 (b) If Gas: Production X / Underground Storage _____
 Deep _____ / Shallow X
- 5) Proposed Target Formation(s): Warren thru Rhinestreet Proposed Target Depth: 6400
- 6) Proposed Total Depth: 6400 Feet Formation at Proposed Total Depth: Rhinestreet
- 7) Approximate fresh water strata depths: 80'
- 8) Approximate salt water depths: 1960'
- 9) Approximate coal seam depths: none
- 10) Approximate void depths,(coal, Karst, other): none
- 11) Does land contain coal seams tributary to active mine? No
- 12) Describe proposed well work in detail Drill and Complete New Well

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	<u>1 1/4</u>	<u>A500</u>	<u>32</u>	<u>300</u>	<u>300</u>	<u>CTS</u>
Coal						
Intermediate	<u>8 5/8</u>	<u>A500</u>	<u>23</u>	<u>2025</u>	<u>2025</u>	<u>CTS</u>
Production	<u>4 1/2</u>	<u>WT65</u>	<u>9.5</u>	<u>6350</u>	<u>6350</u>	<u>550</u>
Tubing						
Liners						

Packers: Kind _____
 Sizes _____
 Depths Set _____

MAY 15 2013
Dul
 Office of Oil and Gas
 WV Dept. of Environmental Protection
06/07/2013

WW-2A
(Rev. 6-07)

1.) Date: May 9, 2013
2.) Operator's Well Number Kirby Etal #2
State County Permit
3.) API Well No.: 47- 085

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

Check #4141
\$ 650.00

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Margaret Kirby</u>	Name <u>None</u>
Address <u>8945 N. Calhoun</u>	Address _____
<u>Big Springs, WV. 26137</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Mr. David Cowan</u>	(c) Coal Lessee with Declaration
Address <u>Route 1 Box 202</u>	Name <u>None</u>
<u>Harrisonville, WV 26362</u>	Address _____
Telephone <u>304-389-3509</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 Murvin and Meier Oil Co.
 By: Gary Hill
 Its: Vice President
 Address PO Box 396
Olney Illinois 62450
 Telephone 618-395-4405



BARBARA A. HILL
NOTARY PUBLIC
STATE OF OHIO
Comm. Expires October 2016

Subscribed and sworn to before me this 9th day of May, 2013

Barbara A Hill

Notary Public
Received

My Commission Expires _____
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

MAY 15 2013

**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
Margaret Kirby	Murvin and Meier Oil Co	7/16	254/853
Ernest Wagener	" " " " "	7/16	254/862
Leota H. Cunningham	" " " " "	13/336	254/844
Ester McCray Bell	" " " " "	29/336	254/835

**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

Received

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.

Well Operator: Murvin and Meier Oil Co.
By: Gary Hill
Its: Vice President

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

If no water well or spring is located within 1000 feet, the Chief may require the operator to sample and analyze water from a water well or spring within 2000 feet of the proposed well site.

Be advised, you have the right to sample and analyze any water supply at your own expense.

The laboratory used by the operator to analyze the samples will be approved by the Chief. The operator named below has decided to use the following laboratory to analyze the water samples:

Certified Laboratory Name Reliance Labs
Contractor Name Smith Land Surveying, Inc. – Environmental Division

Well Operator Murvin & Meier Oil Company
Address P.O. Box 396
Olney, IL 62450
Telephone 618-395-4405

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site please indicate such.

Received

NOTE: There appears to be 2± no potable water sources within 1,000', therefore tests will be offered and samples taken as required.

MAY 15 2013



SMITH LAND SURVEYING, INC.

P.O. BOX 150, GLENVILLE, WV 26351

(304) 462-5634 • FAX 462-5656

OPERATOR: Murvin & Meier Oil Company

LEASE NAME AND NUMBER: Kirby # 2

COMMENTS

The initial mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 1000' of the proposed well site. The following landowners will be notified of the opportunity to request a water sample.

*Please note that the following information is subject to change upon field inspection.

INDIVIDUAL CONTACTED OR NOTIFIED

Owner/Occupant: Lawrence L. & Sandra K. Lenhart

Address: PO Box 169, Arthurdale, WV. 26520 Letter/Notice Date: _____

Comments: Par # 21.1

Owner/Occupant: Margare Kirby

Address: 8945 N. Calhoun HWY, Big Springs, WV. 26137 Letter/Notice Date: _____

Comments: Par # 23

Owner/Occupant: _____

Address: _____ Letter/Notice Date: _____

Comments: _____

Owner/Occupant: _____

Address: _____ Letter/Notice Date: _____

Comments: _____

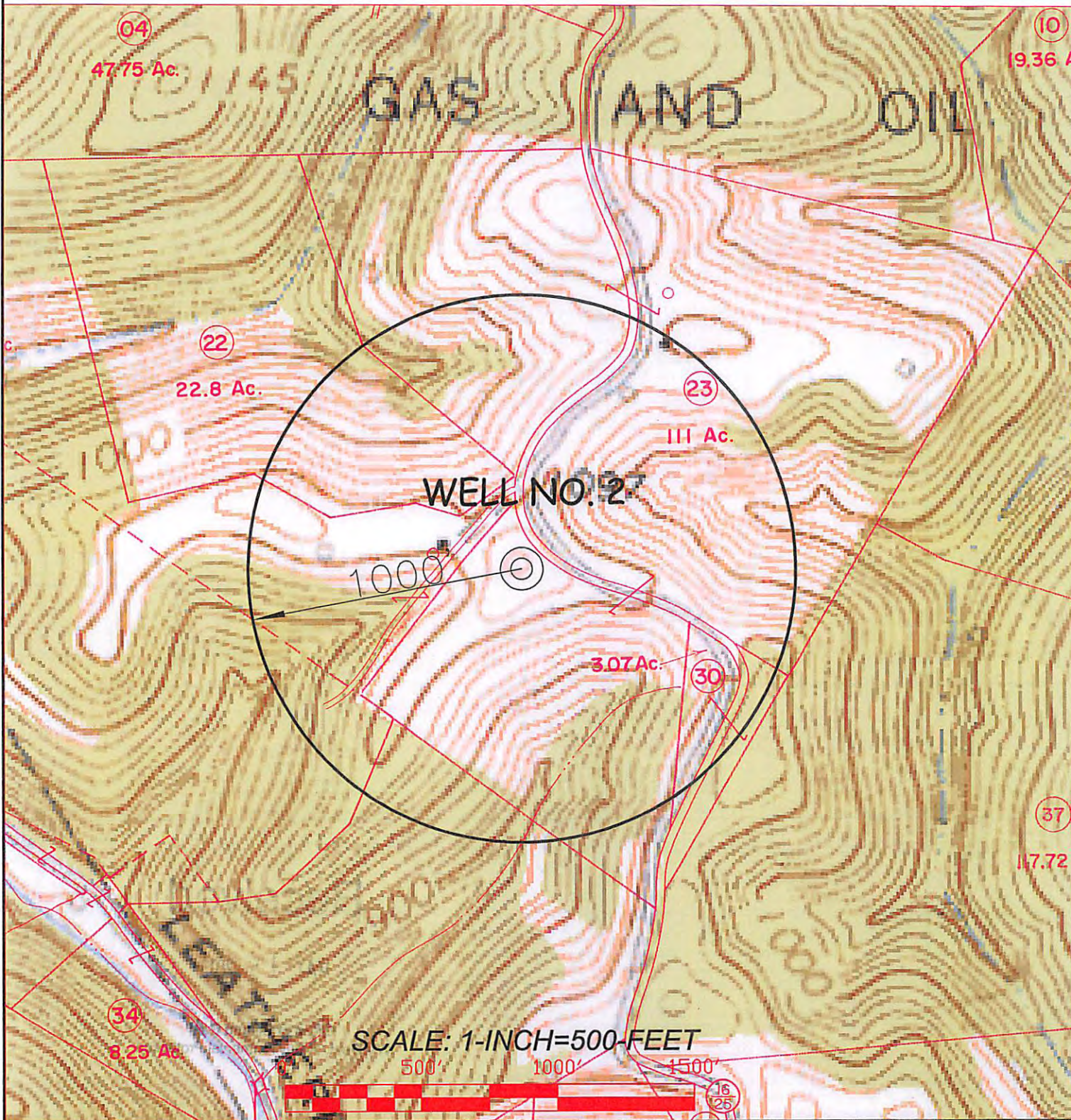
Owner/Occupant: _____

Address: _____ Letter/Notice Date: _____

Comments: _____

MAY 15 2013

KIRBY ET AL LEASE WELL NO. 2



SLS
 SMITH LAND SURVEYING, INC.
 P.O. BOX 150 GLENNVILLE, WV, 26351
 PH(304)462-5634 FAX(304)462-5656 E-MAIL: sls@slssurveys.com

DRAWN BY K.D.W.	FILE NO. 7767	DATE 12/22/11	CADD FILE: 7767WS2.dwg
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TOPO SECTION OF:
SMITHVILLE, WV 7.5' QUAD.

COUNTY	DISTRICT	TAX MAP-PARCEL NO.
RICHIE	MURPHY	44 - 23

OPERATOR:
 MURVIN & MEIER OIL CO.
 P.O. BOX 396 **06/07/2013**
 OLNEY, IL 62450

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 Murvin and Meier Oil Co. OP Code 307980

Watershed Middle Fork of Leatherback Creek Quadrangle Smithville 7.5'

Elevation 1138' County Ritchie District Murphy

Description of anticipated Pit Waste: Drill Fluid, Frac Flow Back, Various Formation Cuttings

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

Will a synthetic liner be used in the pit? yes. If so, what mil.? 6 20 MIL

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 _____)

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air
-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used? Soap

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? _____

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 Gary L. Hill

Company Official (Typed Name) GARY L. HILL

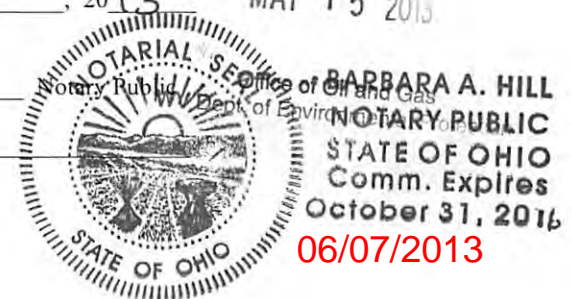
Company Official Title Vice President

Received

Subscribed and sworn before me this 9th day of May, 2013 MAY 15 2013

Barbara A. Hill

My commission expires _____
Form WW-9



LEGEND

- Property Boundary
- Road
- Existing Fence
- Planned Fence
- Stream
- Open Ditch
- Rock
- North
- Buildings
- Water wells
- Drill site

- Diversion
- Spring
- Wet Spot
- Drain Pipe with size in inches
- Waterway
- Cross Drain
- Artificial Filter Strip
- Pit: cut walls
- Pit: compacted fill walls
- Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed 1 +/- Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 ton lbs/acre (500 lbs minimum)

Mulch Hay 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
<u>KY-31</u>	<u>40</u>	<u>Orchard Grass</u>	<u>15</u>
<u>Alsike Clover</u>	<u>5</u>	<u>Alsike Clover</u>	<u>5</u>
<u>Annual Rye</u>	<u>15</u>		

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

Photocopied section of involved 7.5' topographic sheet.

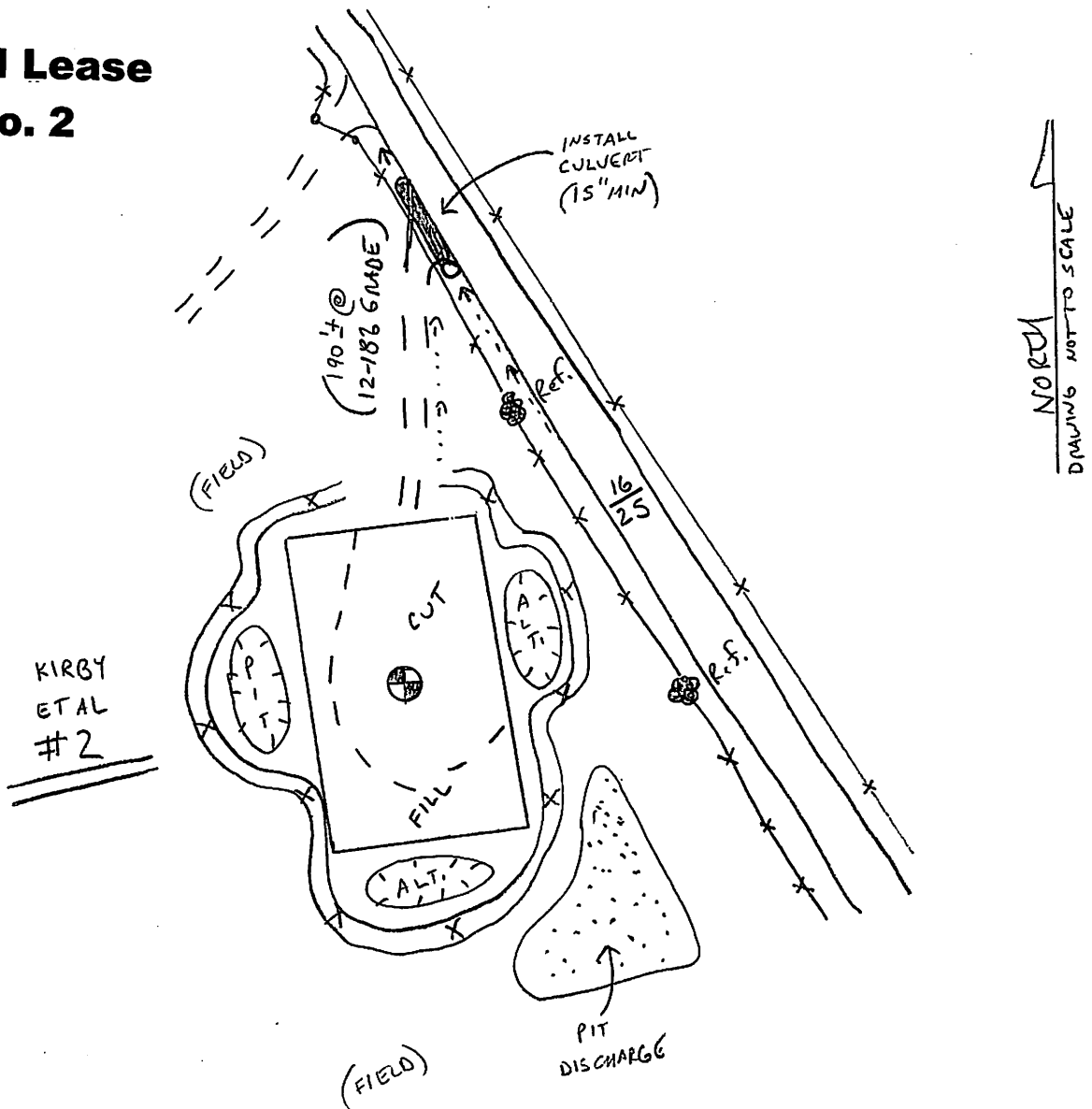
Plan Approved by: David Wilson

Comments: Preserved 4M mulch all cut areas use proper EYS

Title: soil and gas inspector Date: _____

Field Reviewed? Yes No

Kirby et al Lease Well No. 2



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (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.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACK BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.

Received

May 15 2012

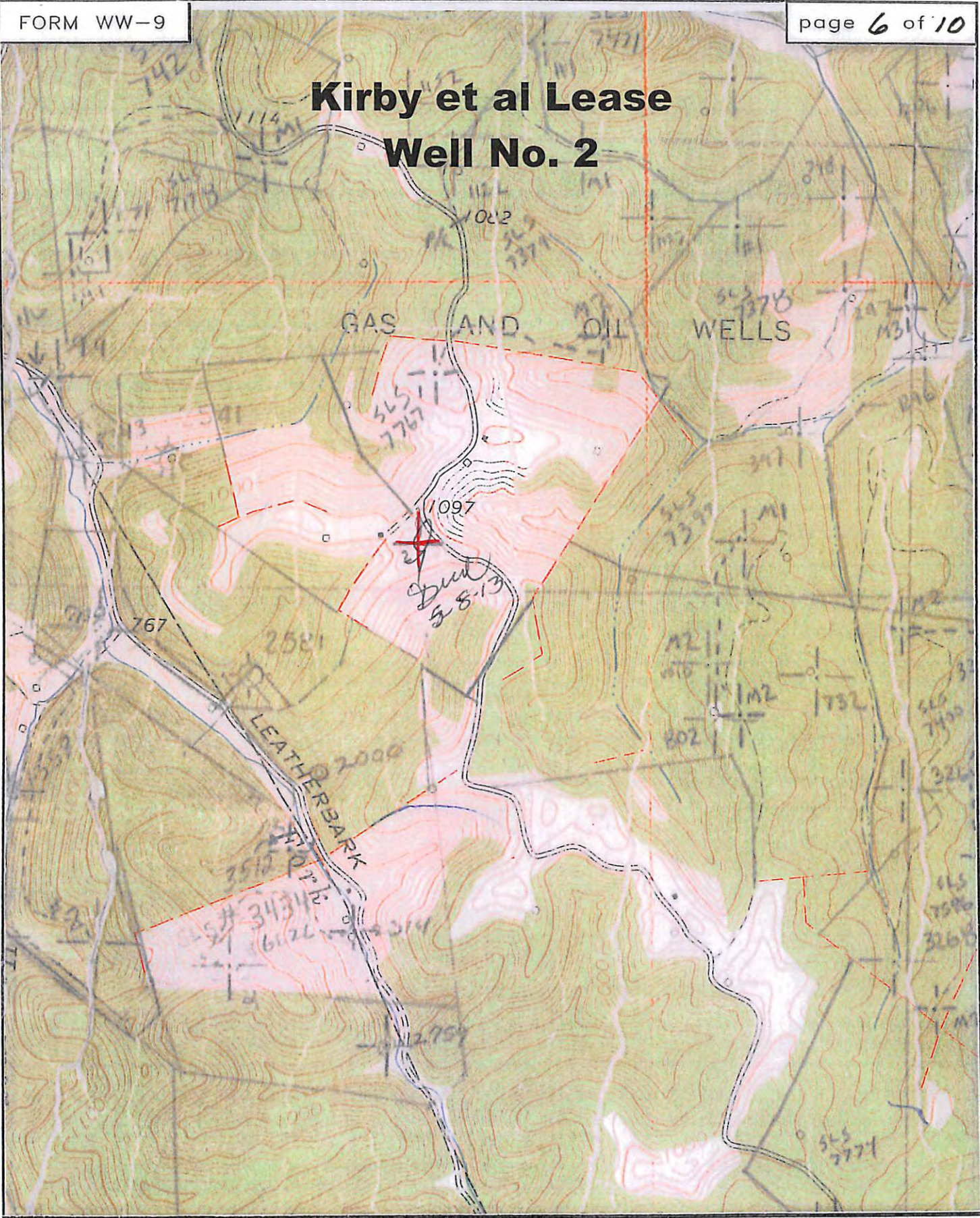
Office of Oil and Gas
West Virginia Department of Environmental Protection

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

Phone: (304) 462-5634 Fax: 462-5656 email: sls@slssurveys.com
DRAWN BY C.P.M. DATE 12/21/11 FILE NO. 7767

06/07/2013

Kirby et al Lease Well No. 2



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

TOPO SECTION OF SMITHVILLE 7.5'

FILE NO. 7767 DATE 12/22/11 ~~06/07/2010~~

KIRBY ET AL LEASE

111 ACRES±

WELL NO. 2

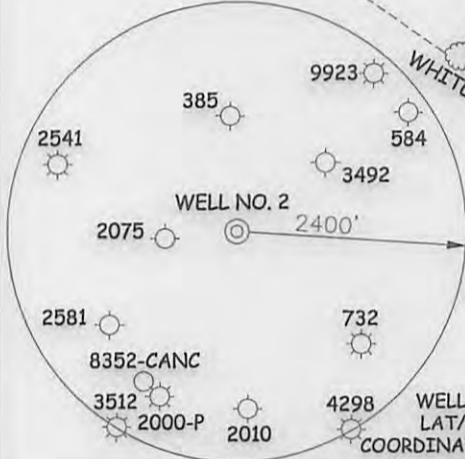
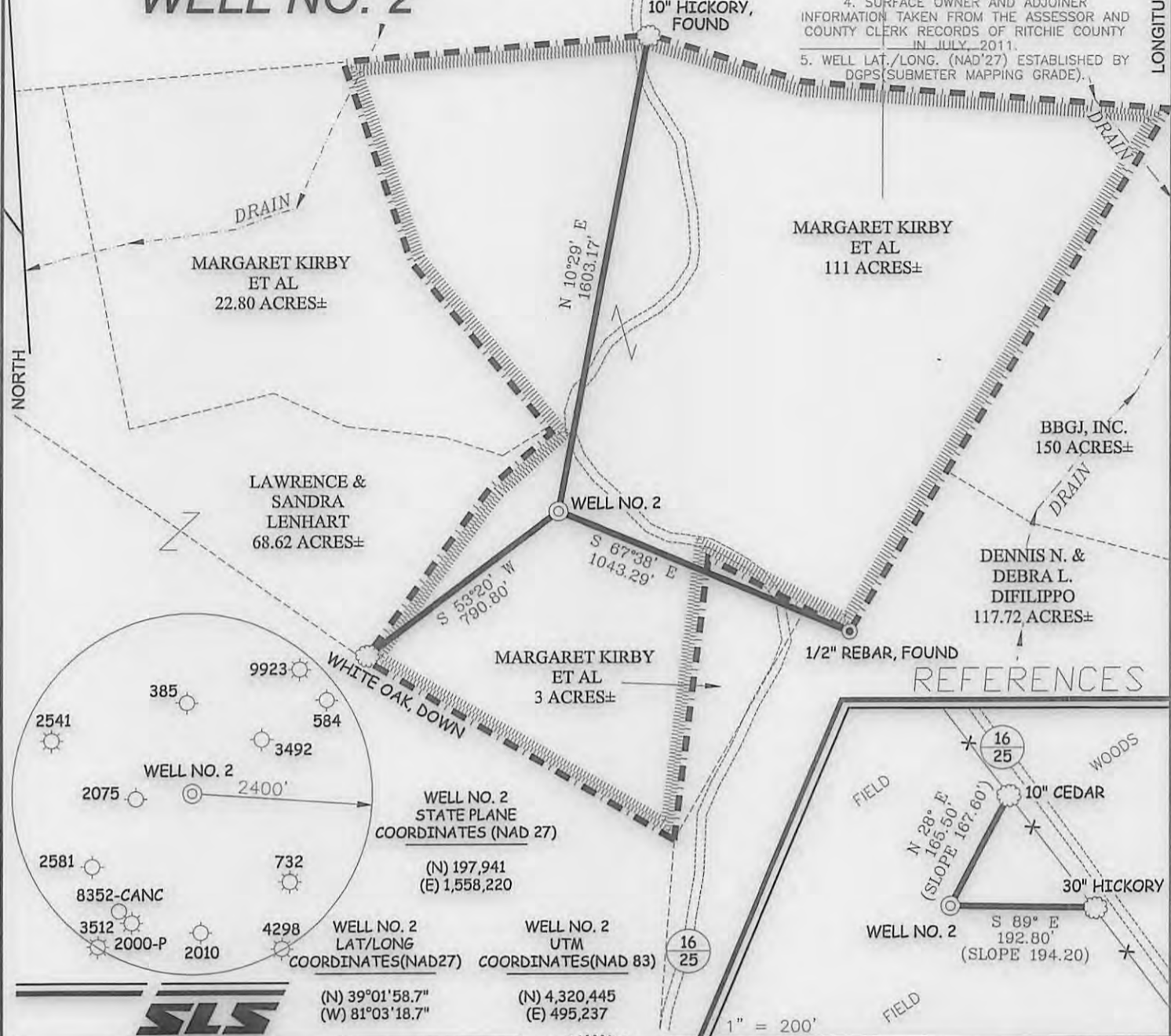
MICHAEL BUEHNER
ET AL
47.75 ACRES±

CHAD THOMS
ET AL
70.75 ACRES±

LATITUDE 39° 02' 30"
NOTES ON SURVEY

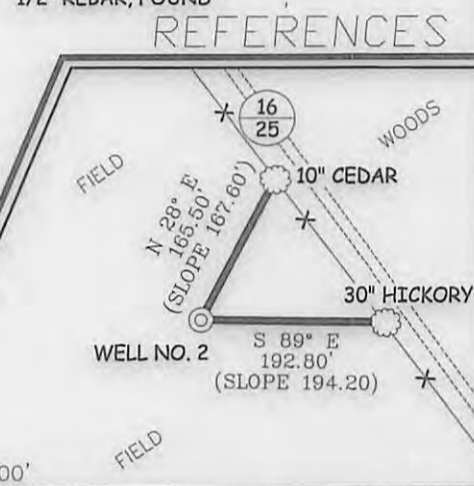
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 12/20/11.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 168 PAGE 403 AND ADJOINING DEEDS.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JULY, 2011.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

LONGITUDE 81° 02' 30"



WELL NO. 2
STATE PLANE
COORDINATES (NAD 27)
(N) 197,941
(E) 1,558,220

WELL NO. 2 LAT/LONG COORDINATES(NAD27)	WELL NO. 2 UTM COORDINATES(NAD 83)
(N) 39°01'58.7" (W) 81°03'18.7"	(N) 4,320,445 (E) 495,237



REFERENCES



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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE DECEMBER 21, 20 11
OPERATORS WELL NO. KIRBY ET AL #2
API WELL NO. 47 - 085 - 10050
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7767P2(396-31)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 500'

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 1,138' WATERSHED MIDDLE FORK OF LEATHERBARK CREEK
DISTRICT MURPHY COUNTY RITCHIE QUADRANGLE SMITHVILLE 7.5'

SURFACE OWNER MARGARET KIRBY, ET AL ACREAGE 111±
ROYALTY OWNER MARGARET KIRBY, ET AL LEASE ACREAGE 111± **06/07/2013**

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 RHINESTREET
ESTIMATED DEPTH 6,300'

WELL OPERATOR MURVIN & MEIER OIL CO. DESIGNATED AGENT P. NATHAN BOWLES, JR.
ADDRESS P.O. BOX 396 ADDRESS P.O. BOX 1237
OLNEY, IL 62450 CHARLESTON, WV 25325

COUNTY NAME PERMIT

3,845'

LATITUDE 39° 02' 30"
NOTES ON SURVEY

KIRBY ET AL LEASE

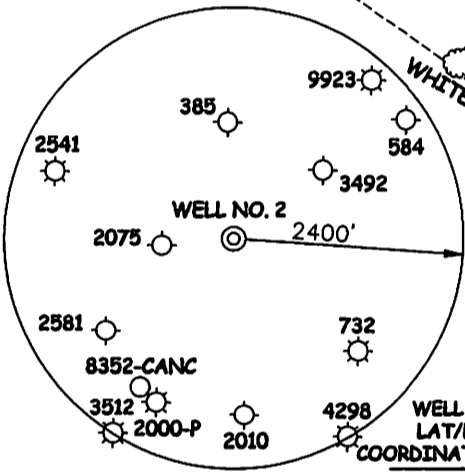
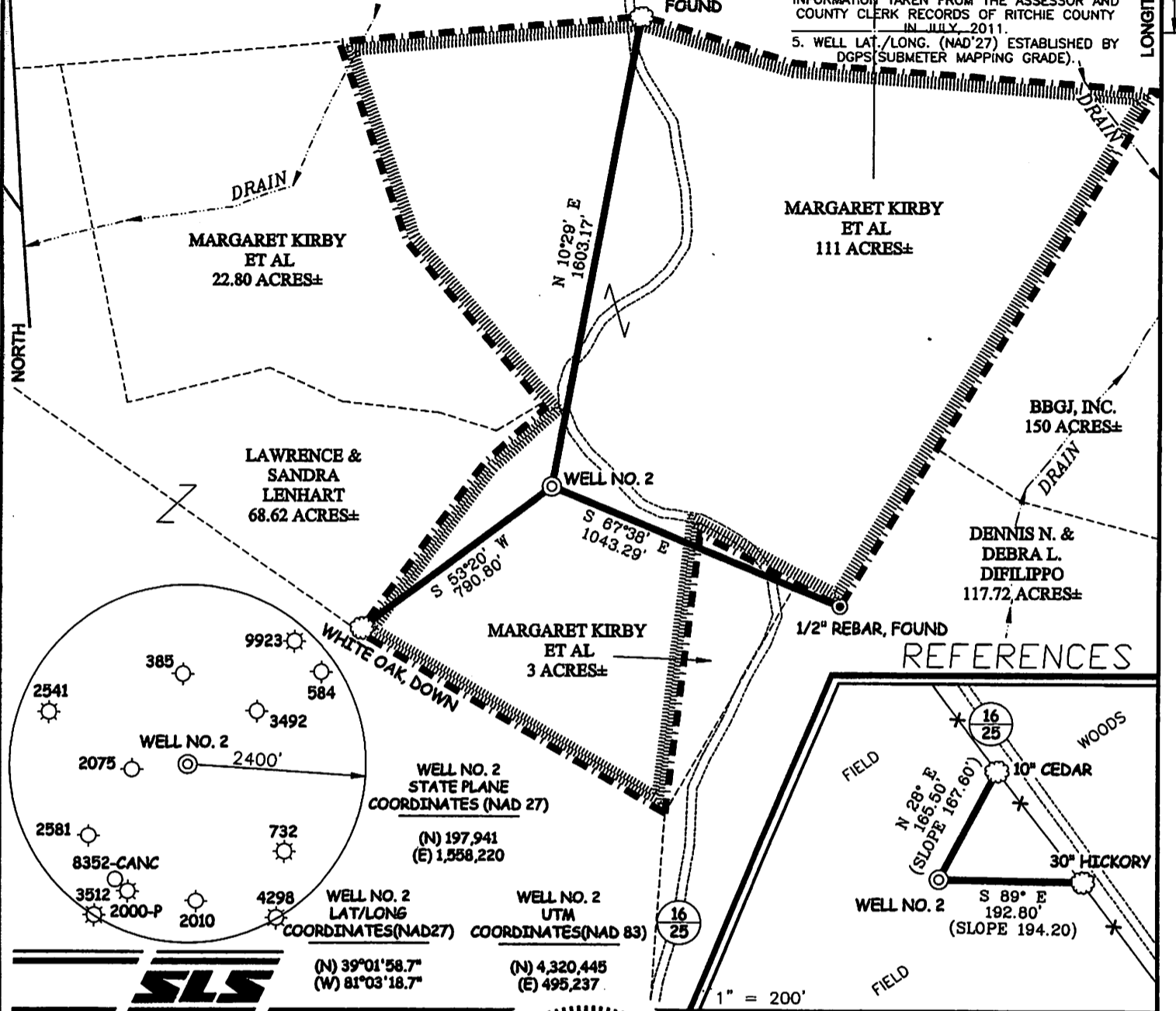
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47.75 ACRES±

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COORDINATES (NAD 27)

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(E) 1,558,220

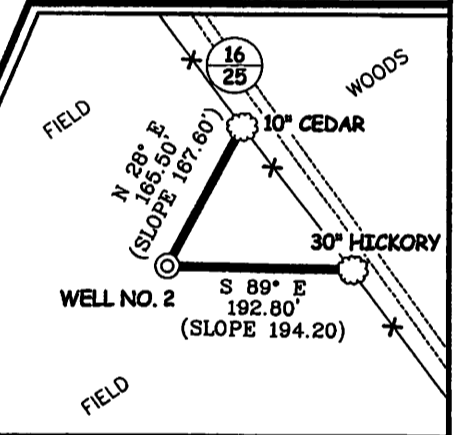
WELL NO. 2
LAT/LONG
COORDINATES (NAD27)

(N) 39°01'58.7"
(W) 81°03'18.7"

WELL NO. 2
UTM
COORDINATES (NAD 83)

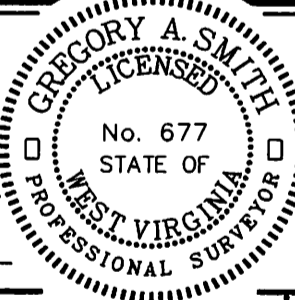
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DATE DECEMBER 21, 20 11
OPERATORS WELL NO. KIRBY ET AL #2
API WELL NO. 47 - 085 - 10050
STATE COUNTY PERMIT

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



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DISTRICT MURPHY COUNTY RITCHIE QUADRANGLE SMITHVILLE 7.5'

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PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION RHINESTREET
ESTIMATED DEPTH 6,300'

WELL OPERATOR MURVIN & MEIER OIL CO. DESIGNATED AGENT P. NATHAN BOWLES, JR.
ADDRESS P.O. BOX 396 ADDRESS P.O. BOX 1237
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