



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

July 16, 2013

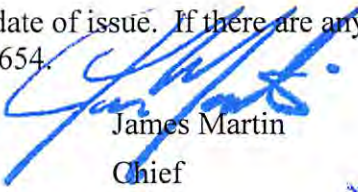
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-10900027, issued to CABOT OIL & GAS CORPORATION, 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: SHARP #5
Farm Name: JACKSON, JOHN DAVID., ET UX.
API Well Number: 47-10900027
Permit Type: Plugging
Date Issued: 07/16/2013

1) Date June 12, 2013
2) Operator's
Well No. Sharp #5
3) API Well No. 47-109 - 00027

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 ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1,769.31' Watershed Marsh Fork of Rockcastle Creek
District Center 03 County Wyoming 109 Quadrangle Matheny 463

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Brian D. Hall
Address Five Penn Center West, Ste. 401 Address 6804 Lick Creek Road
Pittsburgh, PA 15276 Danville, WV 25053

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Barry Stollings Name Francis Brothers, LLC
Address P.O. Box 1228 Address 622 Church St., N.
Chapmanville, WV 25508 Ripley, WV 25271

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

See Attached Sheet

OK JNM

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

Work order approved by inspector ROSS ELLER JNM Date _____
Barry Stollings

07/19/2013

C. C. Sharp #5

API # 47 - 109 - 00027

PLUGGING PROCEDURE

Current Configuration

TD @ 2861'
13-3/8" conductor @ 25'
10-3/4" – 32.75# casing @ 150' on shoe
8-5/8" – 24# casing @ 1020' on shoe
7" – 20# casing @ 2507' on Hookwall packer
2-3/8" – 4.6# V thd. tubing @ 2860' with Hookwall packer set @ 2750'
Fresh water @ 106' & 130'
Coal @ 200' – 202'
Big Lime with gas shows @ 2534' & 2792' – 2808'
Big Lime acidized @ 2536' with 1,000 gal
Maxton @ 2191' – 2300' with gas show @ 2210'
Ravencliff @ 1230' – 1254' with gas show @ 1235'

PROCEDURE

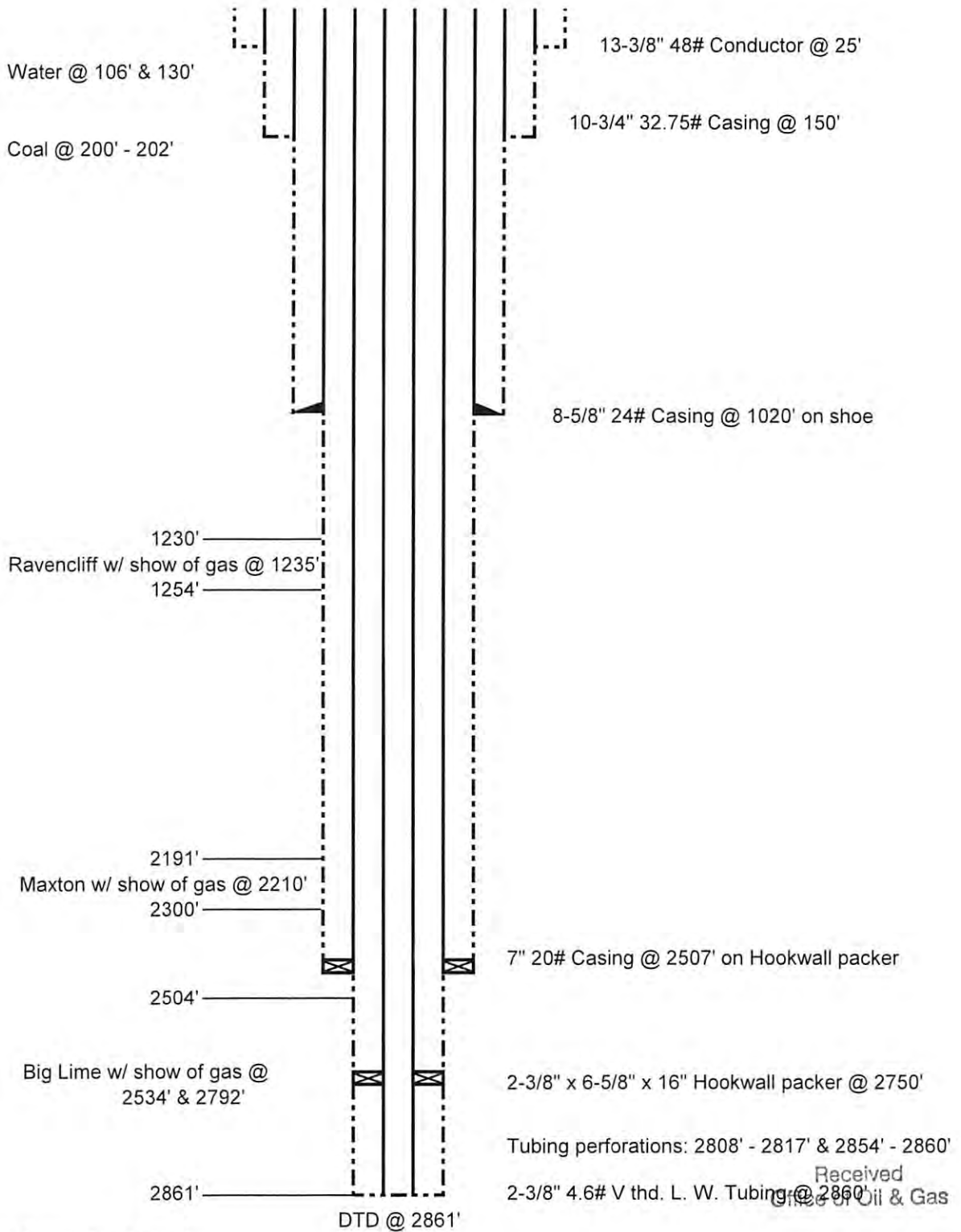
1. Contact Pineville Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work.
3. MIRU service rig and blow down well.
4. Lay 2" line from wellhead to pit/tank and stake down securely.
5. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
6. Unpack wellhead.
7. Pull 2-3/8" tubing.
8. If unable to pull tubing, run freepoint, cut above freepoint, and POOH.
9. Attempt to pull 7" casing.
10. If unable to pull 7", run freepoint, cut above freepoint, and POOH.
11. TIH with 2-3/8" work string to 2800' or top of cut tubing.
12. MIRU Cement Company and pump 50 bbls 6% Gel.
13. Pump 170 sks of Class A cement for plug 1 from 2800' to 2100'.
14. Displace w/ 8 bbls of 6% Gel.
15. Pull work string up to 1300' and pump 70 sks of Class A cement for plug 2 from 1300' to 1050'.
16. Displace w/ 4 bbls of 6% Gel.
17. Pull work string up to 1050' and pump 75 bbls 6% gel.
18. TOOH with work string.
19. Pull 8-5/8" and 10-3/4" casing strings.
20. Pull 13-3/8" conductor.
21. TIH with work string to 220' and pump 140 sks of Class A cement for plug 3 from 220' to surface.
22. TOOH with work string and lay down.
23. RDMO Cementing Company.
24. Place monument as required by law on top of well bore.
25. Reclaim well site.

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Office of Oil & Gas

JUN 12 2013

07/19/2013

C. C. SHARP #5
 API 47-109-00027
 CURRENT CONFIGURATION



Schematic is not to scale

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 JUN 13 2013
 T. Ou 03/07/13
 Office of Oil & Gas

07/19/2013

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Wyo 27				Gas Well
Pineville Quadd.				CASING & TUBING
Company	Godfrey L. Cabot, Inc.			
Address	Charleston, W.Va.	13 3/8	25	25
Farm	C.C. Sharp et al(G.L.C.Fee)	10 1/2	150	150
Location		8 5/8	1020	1020Shoe
Well No	Five-Ser 1102	Elev. 1728.56	7 24#	2507 2507
District	Center	Wyoming County(4.6#)	2 3/8	2860 2860
Surface				
Mineral				
Commenced	July 21, 1943		8 5/8 - shoe	
Completed	Oct. 18, 1943		#42443 Parmco Hookwall Packer	
Net shot			7 x 8 5/8 x 16"	
Volume			2 3/8- 11 1/2 thd. L.W. Tubing.	
Rock Pressure	2210-2217 Maxon	84 MCF	Net Gauges	Wood Plug
Fresh Water	2536 Big Lime	327 MCF	"	
	280 lbs, Maxon; 710# Big Lime	--Hrs.	Tubed and	
	106 1/2 12" bailer every 2 hrs.		shut in 10-20-	
	130 H.F.			43
	Perf. top	bot	Spand Hook Wall Packer	
	2808	2817	Size 2 3/8 x 8 1/2 x 16 R	
	2854	2860	Depth 2750'	
			Anchor 2 3/8 x 110'	

Day	0	25	Slate & Shells	SLM 2300	234
Sand	25	120	Lime	2347	2387
Slate	120	175	Slate & Shells	2387	2440
Sand	175	200	Lime	2440	2455
Coal	200	202	Slate & Shells	2455	2504
Sand	202	280	Big Lime	2504	2861SLM
Slate	280	290	TOTAL DEPTH		2861SLM
Lime	290	368			
Sand	368	450	Gas 1235	60 M	
Slate & Shells	450	500	Gas 2534	179 M	
Sand	500	560	Gas 2792-2808	327 M	
Slate & Shells	560	580			
Sand	580	612			
Lime	612	650			
Sand	650	755			
Slate & Shells	755	795			
Sand	795	865			
Slate	865	875			
Lime	875	930			
Slate & Shells	930	960			
Red Rock	960	970			
Lime	970	985			
Slate & Shells	985	1000			
Sand	1000	1105			
Red Rock	1105	1120			
Lime	1120	1200			
Slate & Shells	1200	1230			
Sand	1230	1254	SLM		
Slate & Shells	1254	1355			
Lime	1355	1390			
Sand	1390	1450			
Lime	1450	1522			
Red Rock	1522	1572			
Lime	1572	1600			
Slate & Shells	1600	1660			
Lime	1660	1700			
Broken Lime	1700	1755			
Slate & Shells	1755	1868			
Lime, Gritty	1868	1895			
Sand	1895	2000			
Red Rock	2000	2025			
Slate	2025	2040			
Lime	2040	2088			
Slate & Shells	2088	2191			
Sand	2191	2300	SLM		

Received
Gas

07/19/2013

WW-4A
Revised 6-07

1) Date: June 12, 2013
2) Operator's Well Number
Sharp #5
3) API Well No.: 47 - 109 - 00027

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>John David & Sharon Jackson</u> ✓	Name <u>N/A</u>
Address <u>P.O. Box 627</u>	Address _____
<u>Pineville, WV 24874</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>WPP, LLC</u> ✓
_____	Address <u>5260 Irwin Road</u>
_____	<u>Huntington, WV 25705</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Barry Stollings</u> ✓	(c) Coal Lessee with Declaration
Address <u>P.O. Box 1228</u>	Name <u>See Attached Sheet</u> ✓
<u>Chapmanville, WV 25508</u>	Address _____
Telephone <u>(304) 552-4194</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 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 <u>Cabot Oil & Gas Corporation</u>
	By: <u>Kenneth L. Marcum</u> <i>Kenneth L. Marcum</i>
	Its: <u>Regulatory Supervisor</u>
	Address <u>Five Penn Center West, Suite 401</u>
	<u>Pittsburgh, PA 15276</u>
Telephone <u>(412) 249-3850</u>	

Subscribed and sworn before me this 12th day of June
Constance C. Carden Notary Public
My Commission Expires November 16, 2013

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Office of Oil & Gas
JUN 13 2013

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.

SHARP #5
47-109-00027

COAL LESSEE(S)

- ✓ Consolidation Coal Company
c/o CNX Gas Company
1000 Consol Energy Drive
Canonsburg, PA 15317
- ✓ Spartan Mining Company
208 Business Street
Beckley, WV 25801
- ✓ Brooks Run Mining Company, LLC
208 Business Street
Beckley, WV 25801
- ✓ Chief Mining, Inc.
P.O. Box 446
Glen Daniel, WV 25844
- ✓ Baylor Mining, Inc.
P.O. Box 577
Mabscott, WV 25871

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JUN 13 2013

WW-9
(5/13)

Page _____ of _____
API Number 47 - 109 - 00027
Operator's Well No. Sharp #5

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Cabot Oil & Gas Corporation OP Code _____

Watershed (HUC 10) Marsh Fork of Rockcastle Creek Quadrangle Matheny

Elevation 1,769.31' County Wyoming District Center

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: ANK EFFLUENT MUST BE CONTAINED IN A TANK.

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 No treated pit wastes will be produced)

Will closed loop system be used? N/A

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. no drilling proposed

-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. No cuttings produced during plugging operation

-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 Kenneth L. Marcum

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

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Office of Oil & Gas

JUN 13 2013

Subscribed and sworn before me this 12th day of June, 20 13

Constance C. Carden

COMMONWEALTH OF PENNSYLVANIA
Notary Public
Notarial Seal
Constance C. Carden, Notary Public
McDonald Boro, Washington County
My Commission Expires Nov 5, 2013
Member, Pennsylvania Association of Notaries

My commission expires 11/16/2013

07/19/2013

Form WW-9

Operator's Well No. _____

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch Pulp Fiber at 1000 to 1500 Tons/acre

Seed Mixtures

Area I			Area II		
Seed Type	lbs/acre		Seed Type	lbs/acre	
Grain Rye - 100	Red Clover - 5	Fescue - 40	Grain Rye - 100	Red Clover - 5	Fescue - 40
Annual Rye - 20	White Clover - 5		Annual Rye - 20	White Clover - 5	
Perennial Rye - 10	Alta Sweet Clover - 5		Perennial Rye - 1	Alta Sweet Clover - 5	
Yellow Clover - 5	Birdsfoot Trefoil - 10		Yellow Clover - 5	Birdsfoot Trefoil	

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

*OK by PHOENIX JMM
BARRY STOLLINGS & ROSS ELLER*

Title: _____

Date: _____

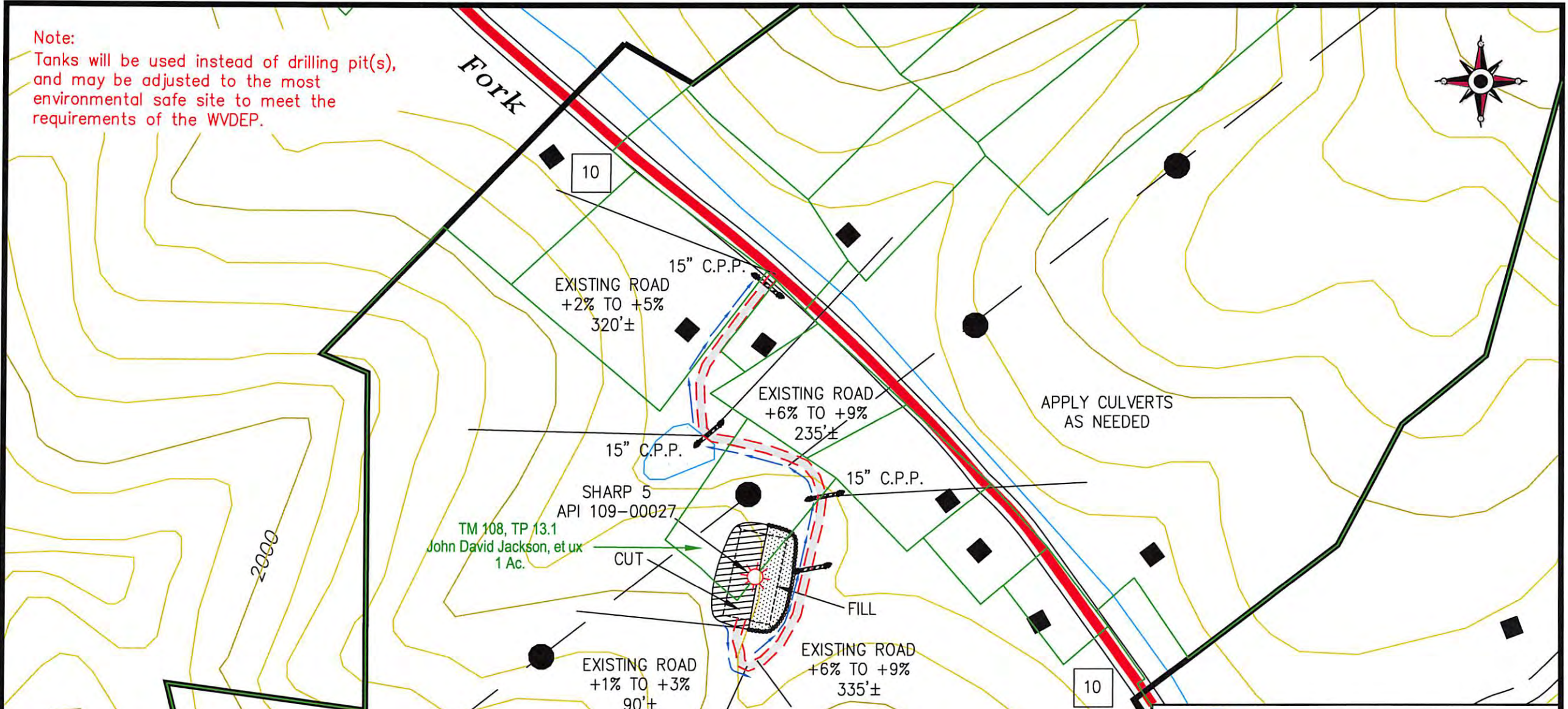
Field Reviewed? () Yes () No

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Office of Oil & Gas

JUN 1 2013

10900027P


Note:
Tanks will be used instead of drilling pit(s),
and may be adjusted to the most
environmental safe site to meet the
requirements of the WVDEP.



APPLY CULVERTS
AS NEEDED

DRAWING LEGEND		
PROPOSED ROAD	ROAD DITCH	
EXISTING ROAD	GAS LINE	
STRAW BALES	FENCE LINE	
SILT FENCE	ROCK OUTCROP	
BRUSH BARRIER	WATER WELL	
TREE LINE	HOUSE/STRUCTURE	
ROCK RIP RAP	UTILITY POLE	
CROSS DRAIN	SPRING	
CULVERT	WET SPOT	
DRILLING PIT	PIT WASTE APP. AREA	



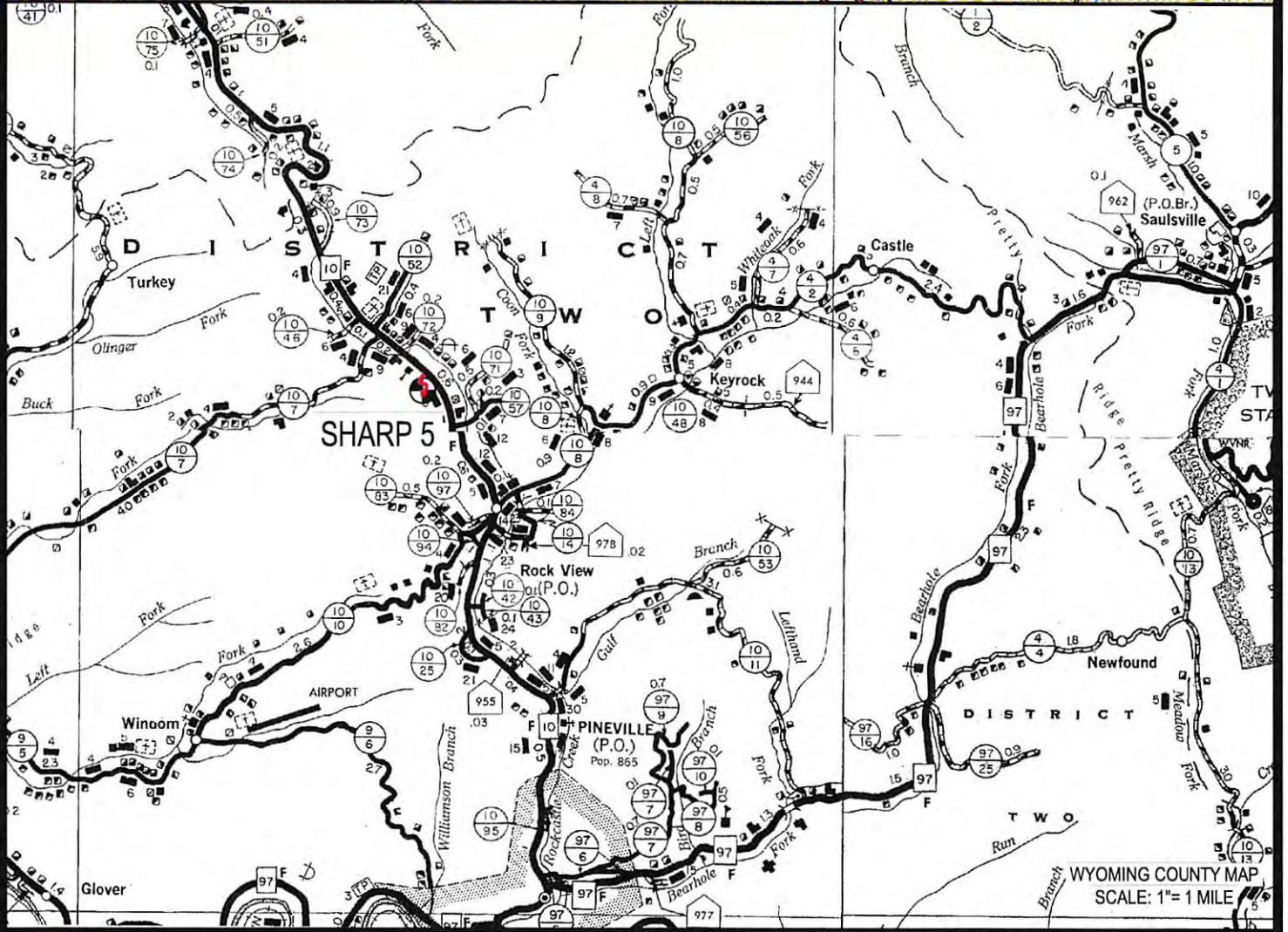
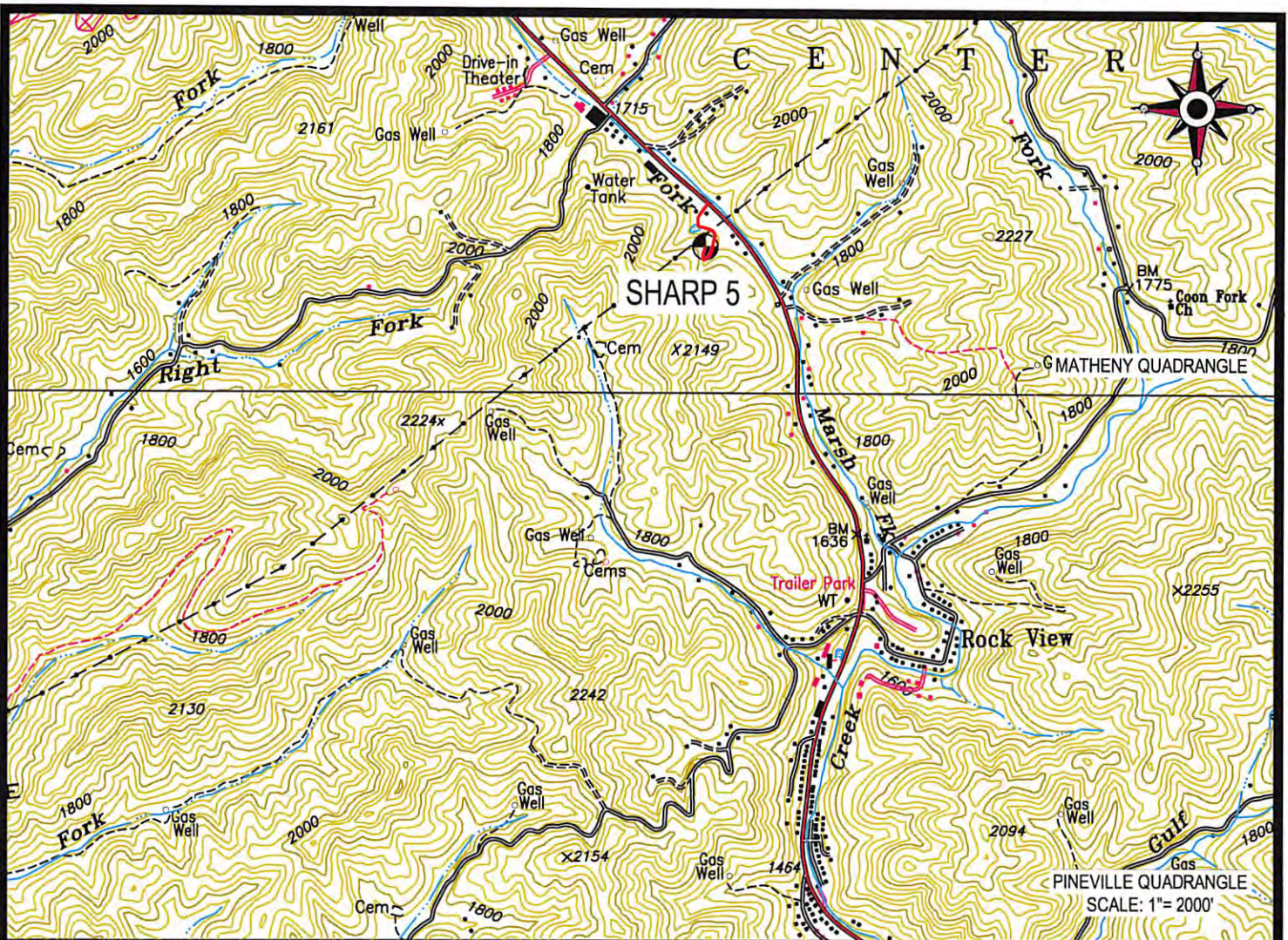
 **Cabot Oil & Gas Corporation**

SHARP 5

CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF MARSH FORK OF ROCKCASTLE CREEK
CENTER DISTRICT, WYOMING COUNTY, W.VA
MATHENY QUADRANGLE

SHEET NUMBER 1 OF 1	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 05-20-13	CHK'D. BY: DKC
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 Cabot Oil & Gas Corporation

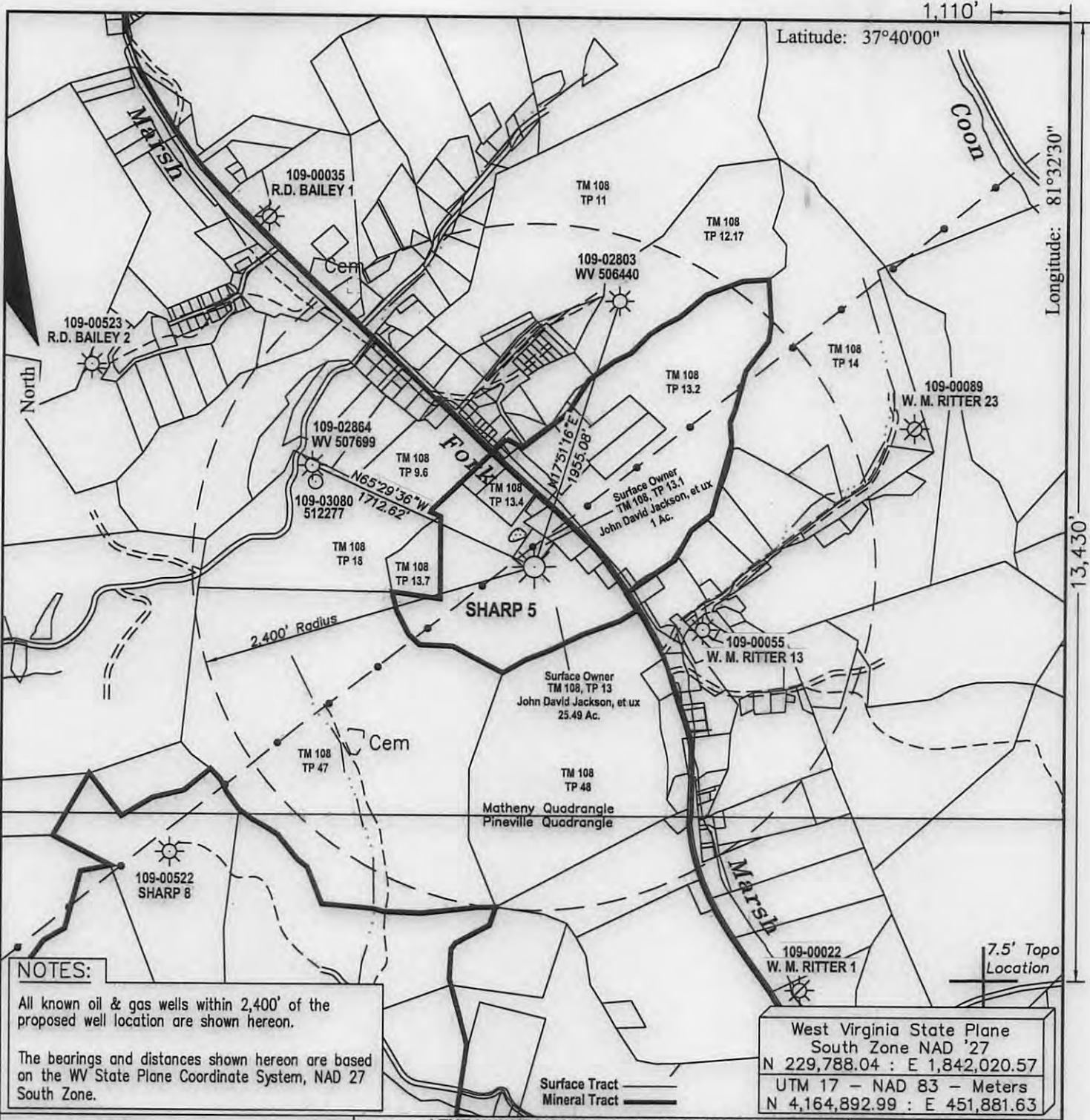
SHARP 5
LOCATION MAP 07/19/2013

 **CUNNINGHAM**
LAND SURVEYING & MAPPING SERVICES, LLC

LOCATED ON THE WATERS OF MARSH FORK
OF ROCKCASTLE CREEK
CENTER DISTRICT, WYOMING COUNTY, W.VA
MATHENY QUADRANGLE

• 5213 STEPHEN WAY •
• CROSS LANES, WEST VIRGINIA 25313 •
• VOICE (304) 561-4129 • FAX (304) 776-0703 •
• E-MAIL ADDRESS • DKCUNNINGHAM@SUDDENLINK.NET •

PROJECT NO. CABOT	DWG. NO. SHARP 5 LOC.DWG
DATE: 5-13-13	SCALE: AS NOTED
DRAWN BY: G. PERKINS	CHK'D BY: D.K.C.
	FILE: C:\PROJECT FOLDER\CABOT



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

West Virginia State Plane
South Zone NAD '27
N 229,788.04 : E 1,842,020.57
UTM 17 - NAD 83 - Meters
N 4,164,892.99 : E 451,881.63

FILE #:

DRAWING #: Sharp 5 ww6

SCALE: 1" = 1000'

MINIMUM DEGREE OF ACCURACY: 1 : 12,729

PROVEN SOURCE OF ELEVATION: Global Positioning System (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 ENVIORNMENTAL PROTECTION.

Signed: Don K. Cunningham

R.P.E.:

L.L.S.: 701

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP

OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: May 13, 2013

OPERATOR'S WELL #: Sharp 5

API WELL #: 47 109 00027 P

STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep Gas Liquid Injection Storage Shallow

WATERSHED: Marsh Fork of Rockcastle Creek ELEVATION: 1,769.31'

COUNTY/DISTRICT: Wyoming / Center QUADRANGLE: Matheny

SURFACE OWNER: John David Jackson, et ux (TP 13 & 13.1) ACREAGE: 25.49 & 1

OIL & GAS ROYALTY OWNER: Edward B. Sharp, et al ACREAGE: 79.04 **07/19/2013**

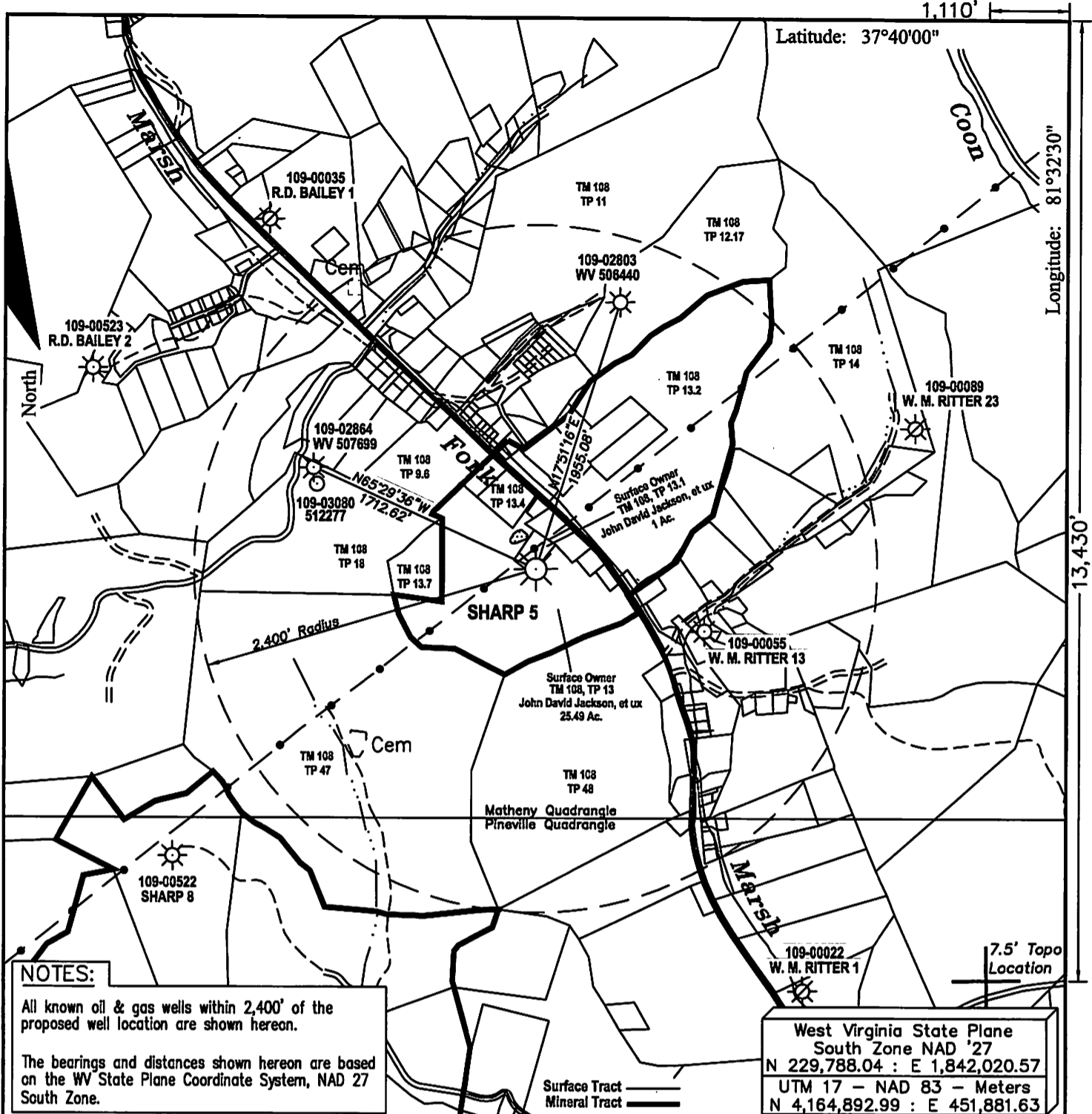
LEASE #: 47-9144 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: ESTIMATED DEPTH:

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Brian Hall

Address Five Penn Center West, Suite 401 Address P.O. Box 260

City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

West Virginia State Plane
South Zone NAD '27
N 229,788.04 : E 1,842,020.57
UTM 17 - NAD 83 - Meters
N 4,164,892.99 : E 451,881.63

FILE #:
DRAWING #: Sharp 5 ww6
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1 : 12,729
PROVEN SOURCE OF ELEVATION: Global Positioning System (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 ENVIORNENTAL PROTECTION.

Signed: Don K. Cunningham
R.P.E.: _____ L.L.S.: 701

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: May 13, 2013
OPERATOR'S WELL #: Sharp 5
API WELL #: 47 109 00027P
STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: Marsh Fork of Rockcastle Creek ELEVATION: 1,769.31'
COUNTY/DISTRICT: Wyoming / Center QUADRANGLE: Matheny
SURFACE OWNER: John David Jackson, et ux (TP 13 & 13.1) ACREAGE: 25.49 & 1
OIL & GAS ROYALTY OWNER: Edward B. Sharp, et al ACREAGE: 79.04
LEASE #: 47-9144 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: _____ ESTIMATED DEPTH: _____
WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Brian Hall
Address Five Penn Center West, Suite 401 Address P.O. Box 260
City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053