



**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 24, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-3902969, 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: 7-17  
Farm Name: MARMET COAL  
**API Well Number: 47-3902969**  
**Permit Type: Plugging**  
Date Issued: 05/24/2016

**Promoting a healthy environment.**

**05/27/2016**

## 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

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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 under the terms of that agreement.

39029 69P

WW-4B  
Rev. 2/01

1) Date May 10, 2016  
2) Operator's  
Well No. Marmet Coal #7  
3) API Well No. 47-039 - 02969

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 X or Underground storage     ) Deep      / Shallow X

5) Location: Elevation 838' Watershed Witcher Creek  
District Cabin Creek County Kanawha Quadrangle Cedar Grove

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Phillip Hill - Cabot Oil & Gas Corporation  
Address 2000 Park Lane, Suite 300 Address 900 Lee Street East, Suite 1500  
Pittsburgh, PA 15275 Charleston, WV 25301

8) Oil and Gas Inspector to be notified Name Terry Urban  
Address P.O. Box 1207  
Clendenin, WV 25045  
9) Plugging Contractor Name Contractor Services, Inc.  
Address 929 Charleston Road  
Spencer, WV 25276

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

See prog sheet

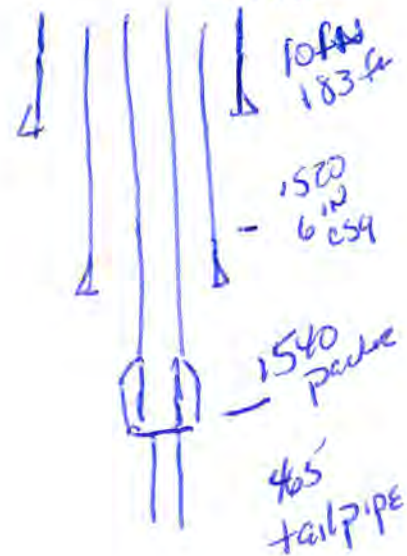
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Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector  Date 5-16-16

05/27/2016

# Marmet Coal #7 API # 47 - 039 - 029698 PLUGGING PROCEDURE



### Current Configuration

- DTD @ 2005'
- 10" casing @ 183'
- 6" casing @ 1520'
- 2" tubing @ 2005' with packer set @ 1540'
- Water @ 700' *2nd Water*
- Coal @ 140' - 143', 348' - 351', & 419' - 422'
- Weir @ 1885' to 1955' with gas shows @ 1867' & 1908'
- Squaw gas show @ 1827' - 1842'
- Big Lime @ 1492' - 1675' with gas show @ 1540' - 1555'

*845 Elevate*

### PROCEDURE

1. Contact Glasgow Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work.
3. Lay 2" line from wellhead to pit/tank and stake down securely.
4. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
5. Unpack wellhead.
6. Pull 2" tubing.
7. If unable to pull tubing, run freepoint, cut above freepoint, and POOH.
8. TIH with 2-3/8" work string to TD.
9. MIRU Cement Company and pump 10 bbls 6% Gel followed by 70 sks of Class A cement for plug 1 from TD to 1600'.
10. Displace w/ 6 bbls of 6% Gel.
11. TOOH with work string. Let cement plug set for a minimum of eight hours.
12. **Pull 6" and 10" casing strings.** *IF CANNOT PULL, MAY HAVE TO PERFORM 2nd CEMENT ALL SACKS*
13. TIH with work string to TOC and pump 70 bbls 6% Gel followed by 70 sks of Class A cement for plug 2 TOC @ 1400'.
14. Displace w/ 5 1/2 bbls of 6% Gel.
15. Pull work string up to 750' and pump 10 bbls 6% Gel followed by 70 sks of Class A cement for plug 3 from 750' to 600'.
16. Displace w/ 2 1/2 bbls of 6% Gel.
17. Pull work string up to 450' and pump 112 cubic feet of expanding cement (95 sacks Class A cement with 10 % salt added) for plug 4 from 450' to 250'.
18. ~~Displace w/ 1 bbl of 6% Gel.~~
19. Pull work string up to 150' and pump 118 cubic feet of expanding cement (100 sacks Class A cement with 10 % salt added) for plug 5 from 150' to surface.
20. TOOH with work string and lay down.
21. RDMO Cementing Company.
22. Place monument as required by law on top of well bore.
23. Reclaim well site.

*May want to pump on top may be able to circulate*

*OPERATOR  
w/ 11  
2nd 900ft  
Salt Seal*

*one plug*

*Raymond [Signature]  
5-16-16*

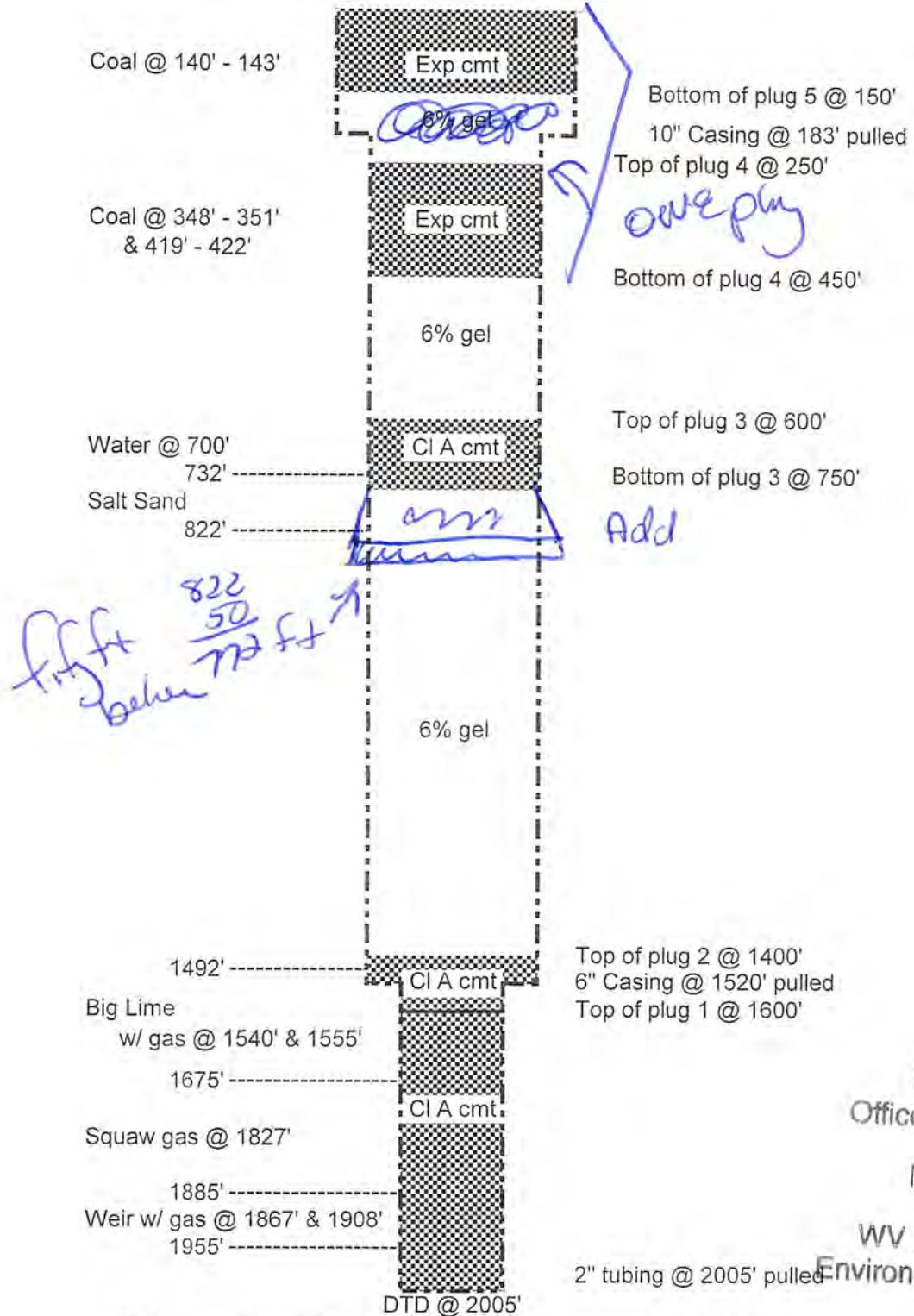
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MARMET COAL #7  
API 47-039-02969  
PROPOSED CONFIGURATION



Schematic is not to scale

T. Ott 04/07/14

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Copy of Well Record.

3902969P

Serial 17

039-2969 ✓

The Owens Bottle Co.

Marnet Well No. 7.

Kanawha County W. Va.

Drilling commenced: July 24, 1918.

Completed: October 2, 1918.

Casing left in well: 10" 183'

Packer: 6x5x16  
Set at 1540'

Tubing: 6" 1520'  
3"

1st perforation 21' off bottom  
2nd perforation 47' " "

Initial open flow: 1,780,000 cuft.

Initial Rock pressure: 400#  
in 24 hrs.

Elevation: 845'

Formations	Drillers Record		Thickness	Remarks
	Top	Bottom		
Surface Gravel	0	9	9	
Sand	9	90	81	
Slate	90	140	50	
Coal	140	143	3	
Lime	143	218	75	
Sand	218	348	130	
Coal	348	351	3	
Sand	351	411	60	
Slate	411	419	8	
Coal	419	422	3	
Sand	422	567	145	
Slate	567	732	165	
Salt Sand	732	822	90	
Slate	822	852	30	
Salt Sand	852	1087	235	
Slate	1087	1147	60	
Lime	1147	1242	95	
Rock Red	1242	1257	15	
Lime	1257	1282	25	
Red Rock	1282	1302	20	
Lime	1302	1342	40	
Sand Marton	1342	1447	105	
Little Lime	1447	1482	35	
Pencil Slate	1482	1492	10	
Big Lime	1492	1675	183	
Indian Sand	1675	1720	45	
Lime	1720	1760	40	
Sand	1760	1885	125	
Weir Sand	1885	1955	70	
Slate	1955	2005	50	
Total Depth		2005		

Water 700 ft.  
Hole full 820

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Gas in Lime 1540 to 1555

1st gas in Squaw sand at  
1827 to 1842'

Pay gas 1867 to 1883  
" " 1908 to 1915

Drilling 50' pocket in slate

I certify that the above is a true and correct copy of  
the original well record on file in the Owens Bottle Co.  
Office.

Charleston July 28, 1922.

by: \_\_\_\_\_

05/27/2016

3902969 P

WW-4A  
Revised 6-07

1) Date: May 10, 2016  
2) Operator's Well Number  
Marmet Coal #7  
3) API Well No.: 47 - 039 - 02969

**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>Blackhawk Land &amp; Resources, LLC</u>	Name <u>See Attached Exhibit "A"</u>
Address <u>3228 Summit Square Place, Ste 180</u>	Address _____
<u>Lexington, KY 40509</u>	_____
(b) Name <u>HC Dickinson, LLC</u>	(b) Coal Owner(s) with Declaration
Address <u>c/o MC Hager Inc. Manager / P.O. Box 14744</u>	Name <u>Blackhawk Land &amp; Resources, LLC</u>
<u>Richmond, VA 23221</u>	Address <u>3228 Summit Square Place, Suite 180</u>
(c) Name _____	<u>Lexington, KY 40509</u>
Address _____	Name _____
_____	Address _____
6) Inspector <u>Terry Urban</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 1207</u>	Name <u>None of Record</u>
<u>Clendenin, WV 25045</u>	Address _____
Telephone <u>(304) 549-5915</u>	_____

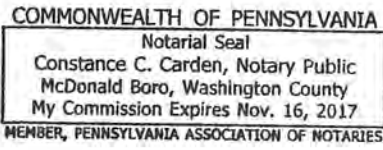
**TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:**

- (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 Cabot Oil & Gas Corporation  
 By: Kenneth L. Marcum  
 Its: Regulatory Supervisor  
 Address 2000 Park Lane, Suite 300  
Pittsburgh, PA 15275  
 Telephone (412) 249-3850



Subscribed and sworn before me this 10th day of May, 2016  
Constance C. Carden Notary Public  
 My Commission Expires November 16, 2017

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**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](mailto:depprivacyofficer@wv.gov).

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05/27/2016

May 10, 2016

**MARMET COAL #7  
COAL OPERATOR(S)  
47-039-02969**

Pritchard Mining Co., Inc. ✓  
P.O. Box 3311  
Charleston, WV 25333

Administrative Services, Inc. ✓  
1719 Pleasant Valley Rd.  
Given, WV 25245

WWMV, LLC ✓  
315 70<sup>th</sup> Street, SE  
Charleston, WV 25304

Development Permits, LLC ✓  
400 Patterson Lane #200  
Charleston, WV 25311

Upper Kanawha Valley Development Corp. ✓  
400 Patterson Lane #200  
Charleston, WV 25311

Coyote Coal Company, LLC ✓  
63 Corporate Centre Drive  
Suite 408  
Scott Depot, WV 25560

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API Number 47 - 039 - 02969

Operator's Well No. Marmet Coal 7

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 08145

Watershed (HUC 10) Laurel Fork of Witcher Creek Quadrangle Cedar Grove

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

Will a pit be used? Yes  No

*AKS 5-16-16*

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: \_\_\_\_\_

*MUST USE TANKS TO CONTAIN ANY WELL EFFLUENT.*

- 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? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. no drilling proposed

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

Additives to be used in drilling medium? NL/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? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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.

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MAY 16 2016

Company Official Signature *Kenneth L. Marcum*

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

WV Department of Environmental Protection

Subscribed and sworn before me this 10th day of May, 2016

*Constance C. Carden*

Notary Public  
COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
Constance C. Carden, Notary Public  
McDonald Boro, Washington County  
My Commission Expires November 16, 2017  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

My commission expires 11/16/2017

05/16/2016

Operator's Well No. Marmet Coal 7

**Cabot Oil & Gas Corporation**

Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20/20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch Pulp Fiber at 1000 to 1500 lbs. Tons/acre

Seed Mixtures

**Temporary**

**Permanent**

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

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

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments:

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Title: Field Insp. Del. 6/25

Date: 5-16-16

Field Reviewed?  Yes  No

**GENERAL NOTES:**

THIS DRAWING REPRESENTS A SCHEMATIC REPRESENTATION OF THE PROPOSED WELL SITE AND ACCESS ROAD. PROPOSED STRUCTURES SUCH AS THE DRILLING PIT, ROADWAY, CULVERTS, SEDIMENT BARRIERS, ETC. ARE SHOWN IN THEIR APPROXIMATE PREPLANNING CONFIGURATION. GIVEN UNFORESEEN CIRCUMSTANCES, THE AS-BUILT LOCATION OF THESE STRUCTURES MAY VARY SLIGHTLY FROM THE LOCATION SHOWN ON THE ATTACHED DRAWINGS.

ALL ROADS SHOWN THEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH GUIDELINES AND REQUIREMENTS OF WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL.

ALL CULVERTS SHOWN ON THIS DRAWING ARE PROPOSED AND WILL BE A MINIMUM OF 15" IN DIAMETER UNLESS OTHERWISE NOTED.

DITCH LINES AND CULVERTS WILL BE INSTALLED WHENEVER PRACTICAL. HOWEVER PORTIONS OF THE EXISTING/ PROPOSED ROADS WHICH ARE LOCATED IN SOLID ROCK SHALL NOT REQUIRE DITCHES OR CROSS DRAINS, UNLESS OTHERWISE WARRANTED BY FIELD CIRCUMSTANCES.

SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL STRUCTURES MEASURES IN ADDITION TO THOSE SHOWN ON THE ATTACHED DRAWINGS WILL BE INSTALLED WHEN AND WHERE DEEMED NECESSARY. SUCH ADDITIONAL MEASURES MAY CONSIST OF EITHER STRAW BALES, SILT FENCES OR OTHER MEASURES OUTLINED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

SEDIMENT BASINS (TRAPS) WILL BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAINS INLETS AS REQUIRED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL 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.

A SEDIMENT BARRIERS OF EITHER BRUSH, STRAW BALES, FILTER FENCE, ETC. WILL BE INSTALLED AND MAINTAINED BELOW THE OUT FALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DRAINAGE POINTS FROM EITHER THE ROADWAY OR THE LOCATION.

ALL NECESSARY TIMBER OR BRUSH WILL BE REMOVED FROM ROUTE OF THE ROADWAY AND LOCATION BY CLEANING AND GRUBBING ACTIVITIES. ANY SALVAGEABLE TIMBER WILL BE CUT AND STACKED TO THE SIDE OF THE ROADWAY OR REMOVED TO A STOCKPILE AREA. THE REMAINING TIMBER OR BRUSH WILL BE CUTUP AND WIND ROWED BELOW THE OUTSLOPE OF THE CONSTRUCTION AREAS TO BE UTILIZED AS A SEDIMENT BARRIER.

SEPARATE PERMITS WILL BE OBTAINED FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ALL POINTS OF INGRESS AND EGRESS FROM COUNTY AND STATE ROADS. THESE INGRESS AND EGRESS POINTS WILL BE MAINTAINED IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS. A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF 8" OF CRUSHED STONE WILL BE CONSTRUCTED FOR A MINIMUM DISTANCE OF 50' FROM THE INGRESS AND EGRESS POINTS OF ALL PUBLIC ROADWAYS IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS.

ALL CULVERTS SHOWN ON THE ATTACHED DRAWINGS ARE TO BE CONSIDERED PERMANENT AND WILL REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE. A STABILIZED OUTLET CONTROL DEVICE SUCH AS RIP RAP, NATURAL STONE, BRUSH, ETC. WILL BE INSTALLED BELOW THE OUT FALL OF ANY ROADWAY CULVERT(S) WHICH ARE NOT LOCATED IN A STREAM OR CREEK.

PERMANENT CROSS DRAINS OR WATER BARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED IN ACCORDANCE WITH AS-BUILT ROADWAY SLOPES AND TABLE 11-4 OF THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

TEMPORARY SEEDING AND MULCHING WILL BE UTILIZED TO PROVIDE A VEGETATIVE COVER ON ALL DISTURBED AREAS I.E. ROADWAYS, LOCATION, ROAD/LOCATION SLOPES AND ANY OTHER AREAS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES.

THE LOCATION OF DRILLING PIT(S) MAY BE ADJUSTED TO THE MOST ENVIRONMENTAL SAFE SITE TO MEET THE REQUIREMENTS OF THE WVDEP.

**CONTRACTORS NOTE:**

IT IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND CONDITION OF ALL UNDERGROUND UTILITIES, SANITARY SEWERS, STORM SEWERS, ETC. PRIOR TO THE COMMENCEMENT OF ANY/OR CONSTRUCTION ACTIVITIES. DIG WITH C.A.R.E. CALL MISS UTILITY 1-800-245-4848.

ROAD GRADE (%)	DISTANCE (FT)
1	400
2	250
5	135
10	80
15	60
20	45

ROAD GRADE (%)	DISTANCE (FT)
2-5	500-300
6-10	300-200
11-15	200-100
16-20	100



1-800-245-4848

**DRAWING LEGEND**

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

**DRIVING DIRECTIONS FOR MARMET COAL 7**

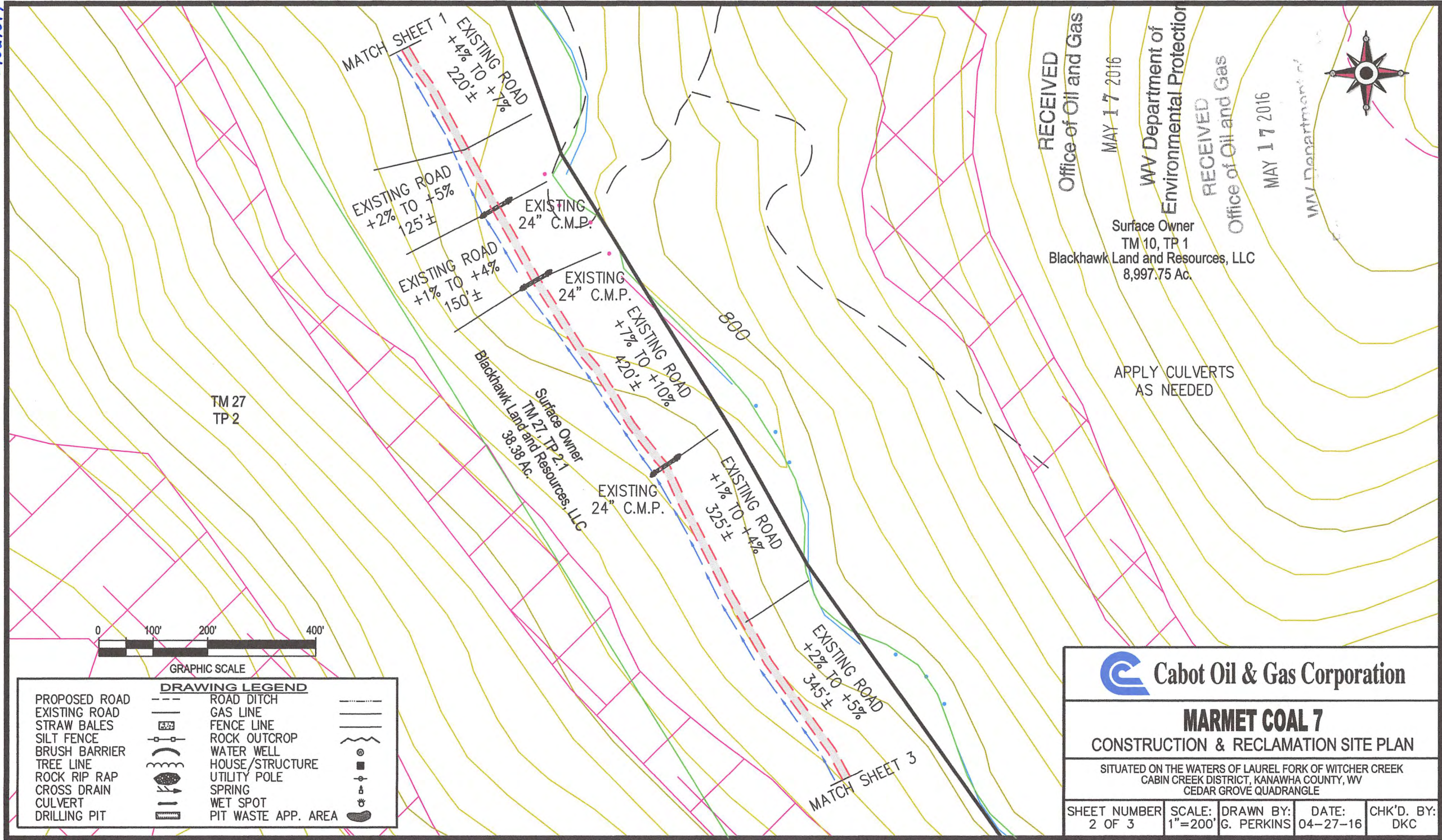
- 1.) FROM INTERSTATE 77, EXIT 96 IN CHARLESTON, WV, TRAVEL SOUTH ON U.S. ROUTE 60 FOR 7.6 MILES± TO SECONDARY ROUTE 70 (WITCHER CREEK ROAD).
- 2.) TURN LEFT ONTO SECONDARY ROUTE 70 AND GO 2.8 MILES± TO THE BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD.
- 3.) TURN RIGHT ONTO THE EXISTING ACCESS ROAD AND GO APPROXIMATELY 1.5 MILES± TO THE EXISTING WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

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 05/27/2016



3902969 P



TM 27  
TP 2

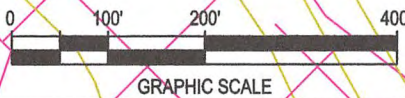
Surface Owner  
Blackhawk Land and Resources, LLC  
TM 27, TP 2.1  
38.38 Ac.

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Surface Owner  
TM 10, TP 1  
Blackhawk Land and Resources, LLC  
8,997.75 Ac.

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**

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**MARMET COAL 7**  
CONSTRUCTION & RECLAMATION SITE PLAN

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SITUATED ON THE WATERS OF LAUREL FORK OF WITCHER CREEK  
CABIN CREEK DISTRICT, KANAWHA COUNTY, WV  
CEDAR GROVE QUADRANGLE

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SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
2 OF 3	1"=200'	G. PERKINS	04-27-16	DKC

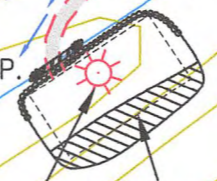
3902969 P

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	

**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.

Surface Owner  
TM 10, TP 1  
Blackhawk Land and Resources, LLC  
8,997.75 Ac.

EXISTING ROAD  
-17% TO -20%  
560'±  
24" C.P.P.



MARMET COAL 7  
API 039-02969

EXISTING ROAD  
+2% TO +5%  
520'±

EXISTING ROAD  
+1% TO +4%  
490'±

EXISTING  
24" C.M.P.

EXISTING ROAD  
+4% TO +7%  
385'±

EXISTING ROAD  
+2% TO +5%  
340'±

EXISTING ROAD  
+3% TO +6%  
420'±

EXISTING ROAD  
+15% TO +18%  
140'±

EXISTING ROAD  
-13% TO -16%  
255'±

EXISTING ROAD  
+5% TO +8%  
400'±

EXISTING ROAD  
-12% TO -15%  
95'±

EXISTING ROAD  
-2% TO -5%  
95'±

EXISTING  
24" C.M.P.

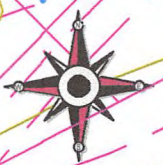
Surface Owner  
TM 27, TP 2.1  
Blackhawk Land and Resources, LLC  
38.38 Ac.

TM 27  
TP 2

MATCH SHEET 2

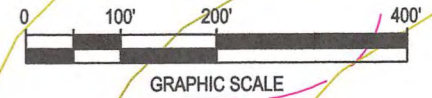
EXISTING ROAD  
+9% TO +12%  
390'±  
15" C.P.P.

Fork



RECEIVED  
Office of Oil and Gas  
MAY 17 2016  
WV Department of  
Environmental Protection

APPLY CULVERTS  
AS NEEDED

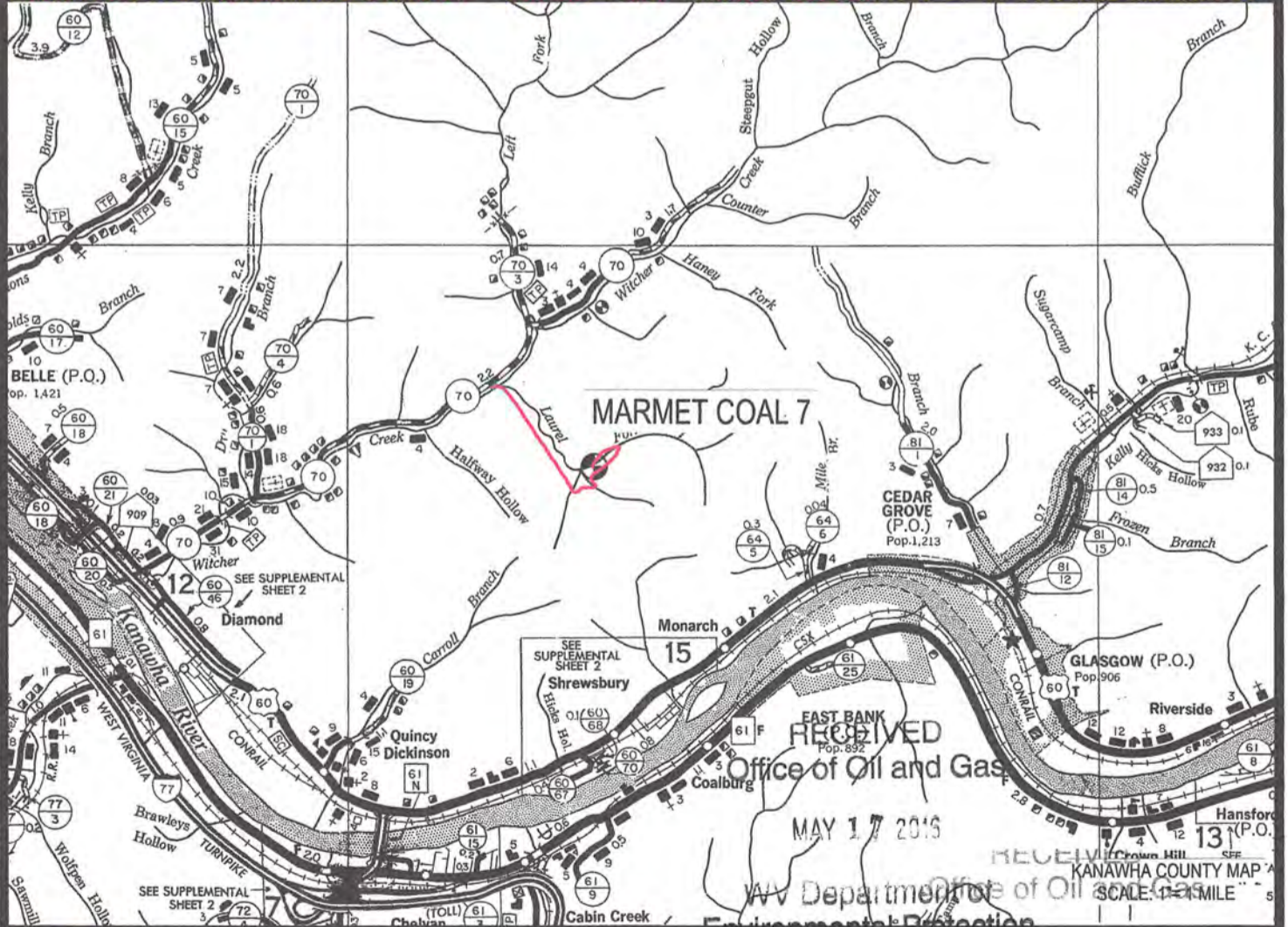
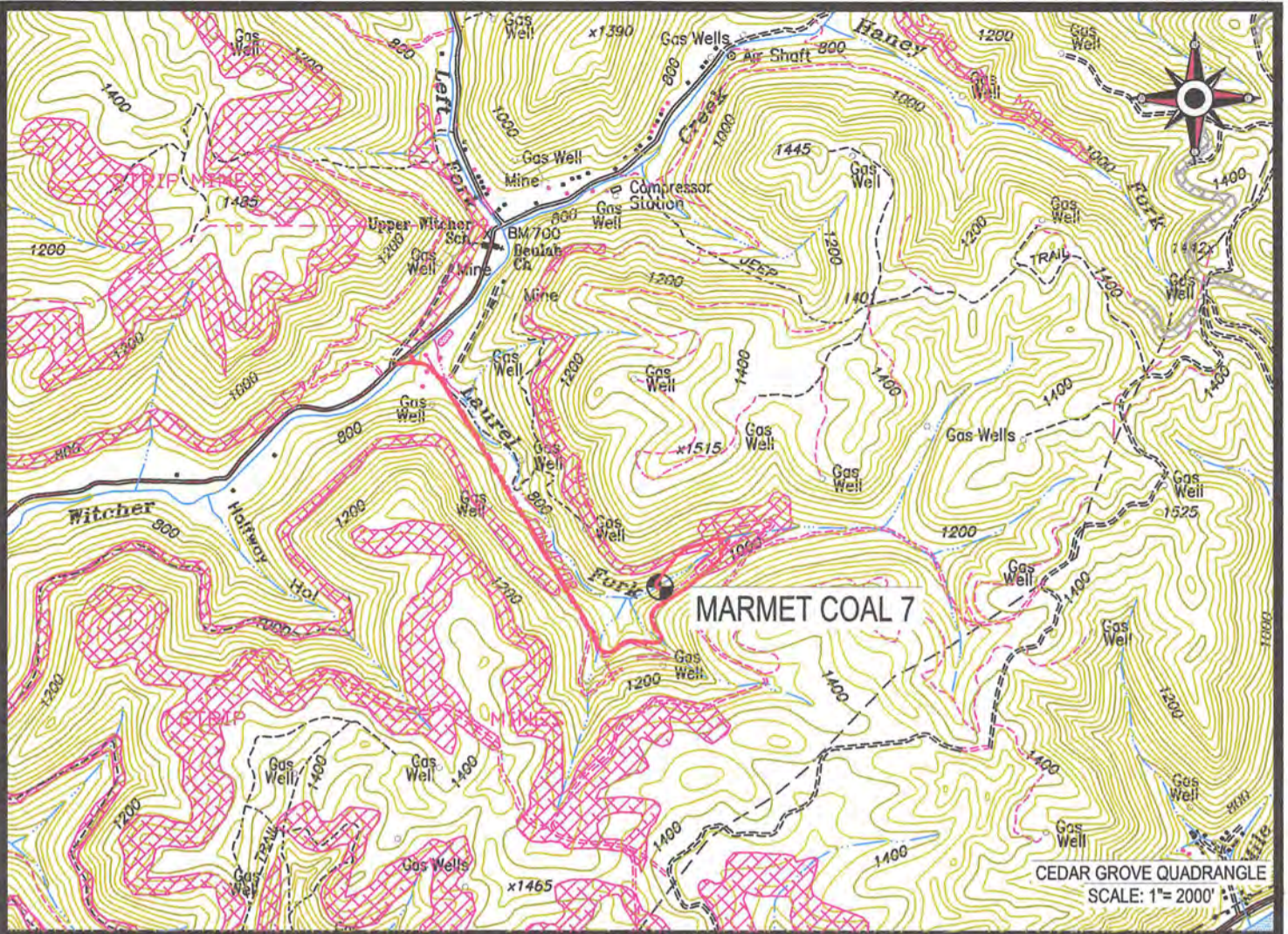


Cabot Oil & Gas Corporation

**MARMET COAL 7**  
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF LAUREL FORK OF WITCHER CREEK  
CABIN CREEK DISTRICT, KANAWHA COUNTY, WV  
CEDAR GROVE QUADRANGLE

SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
3 OF 3	1"=200'	G. PERKINS	04-27-16	DKC



 Cabot Oil & Gas Corporation

**MARMET COAL 7**  
LOCATION MAP **05/27/2016**

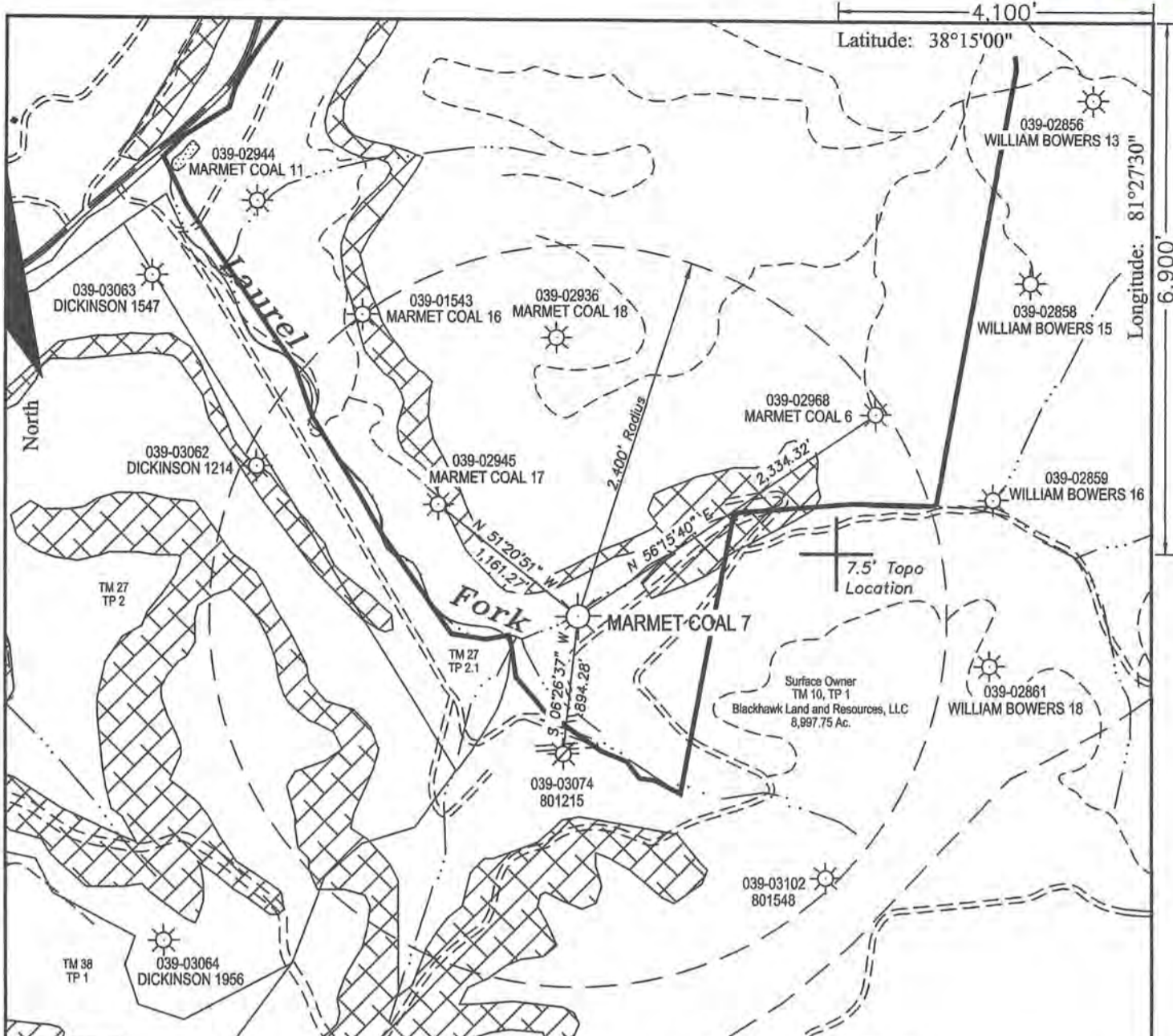


**CUNNINGHAM**  
LAND SURVEYING & MAPPING SERVICES, LLC

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

LOCATED ON THE WATERS OF LAUREL FORK  
OF WITCHER CREEK  
CABIN CREEK DISTRICT, KANAWHA COUNTY, WV  
CEDAR GROVE QUADRANGLE

PROJECT NO. CABOT	DWG. NO. MARMET 7 LOC.DWG
DATE: 04-27-16	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.

Surface Tract Mineral Tract

West Virginia State Plane  
South Zone NAD '27  
N 448,603.83 : E 1,864,248.73  
UTM 17 - NAD 83 - Meters  
N 4,231,567.75 : E 458,651.32

FILE #:

DRAWING #: Marmet 7 ww6

SCALE: 1" = 1000'

MINIMUM DEGREE OF ACCURACY: 1 : 2,500

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 ENVIROMENTAL PROTECTION.

Signed:

R.P.E.: \_\_\_\_\_ L.L.S.: 1993



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



DATE: April 26, 2016

OPERATOR'S WELL #: Marmet Coal 7

API WELL #: 47 039 02969

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

WATERSHED: Laurel Fork of Witcher Creek ELEVATION: 838.42' MAY 17 2016

COUNTY/DISTRICT: Kanawha / Cabin Creek QUADRANGLE: Cedar Grove

SURFACE OWNER: Blackhawk Land and Resources, LLC ACREAGE: 888

OIL & GAS ROYALTY OWNER: Pardee Minerals, LLC ACREAGE: 888

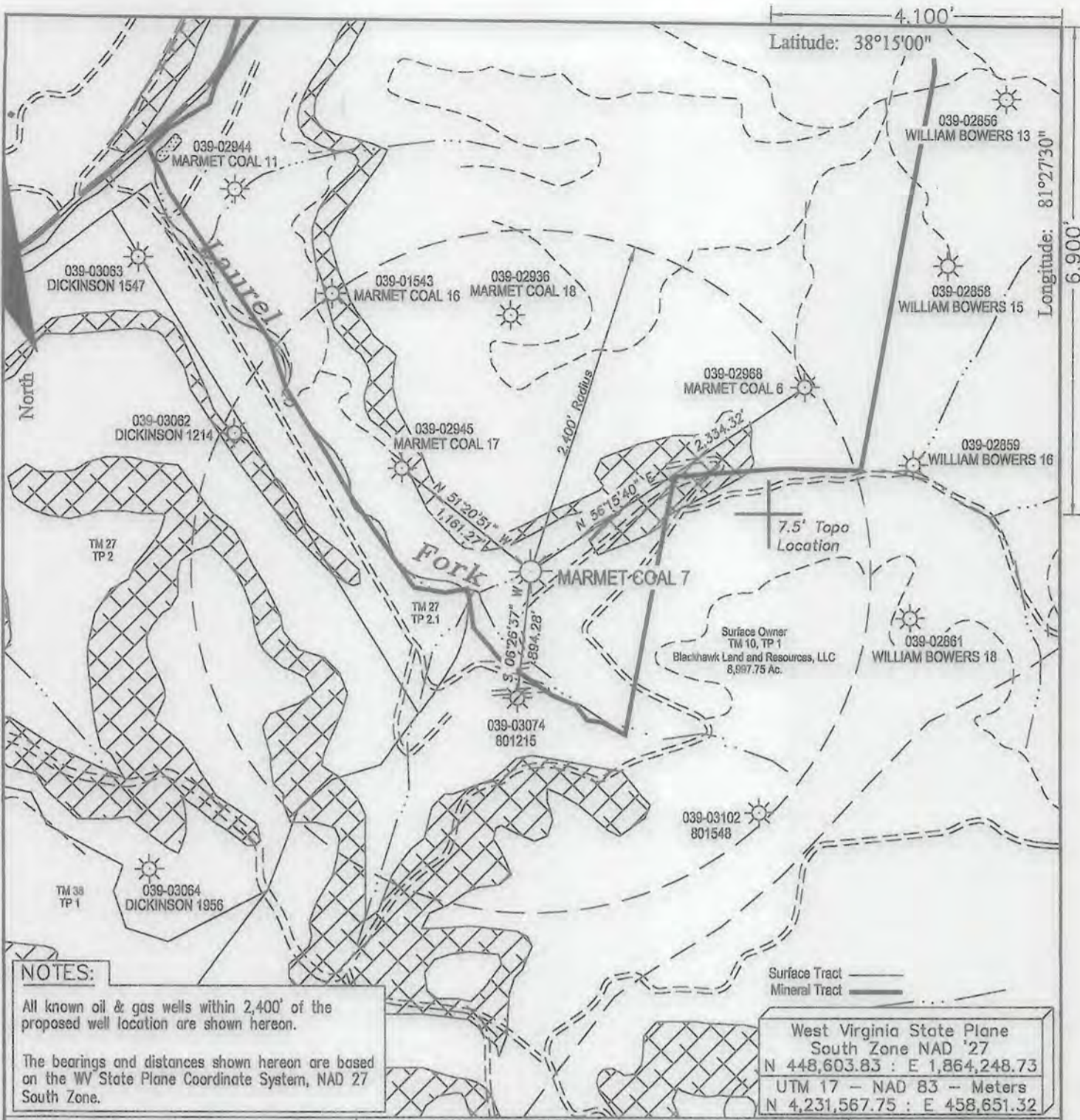
LEASE #: 47-4005 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

TARGET FORMATION: \_\_\_\_\_ ESTIMATED DEPTH: \_\_\_\_\_

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Phillip Hill  
Address 2000 Park Lane, Suite 300 Address 900 Lee Street, Suite 1500  
City Pittsburgh State PA Zip Code 15275 City Charleston State WV Zip Code 25301

RECEIVED  
Office of Oil and Gas  
MAY 17 2016  
Environmental Protection  
05/27/2016





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 STATE COUNTY PERMIT

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 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 Phillip Hill  
 Address 2000 Park Lane, Suite 300 Address 900 Lee Street, Suite 1500  
 City Pittsburgh State PA Zip Code 15275 City Charleston State WV Zip Code 25301

05/27/2016