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 penalities 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.

3902969P

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged under the terms of that agreement.

3902969P

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
Address 2000 Park Lane, Suite 300
Pittsburgh, PA 15275

7) Designated Agent Phillip Hill - Cabot Oil & Gas Corporation
Address 900 Lee Street East, Suite 1500
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

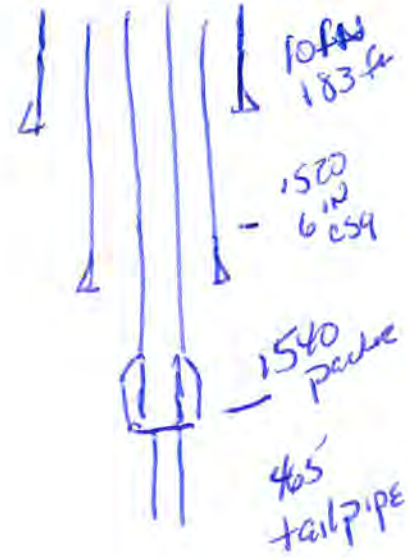
See prog Sheet

RECEIVED
Office of Oil and Gas
MAY 16 2016
WV Department of
Environmental Protection

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

Work order approved by inspector [signature] Date 5-16-16

3902969P



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' salt 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' Elevation

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 CAN NOT PULL, MAY HAVE TO PERFORATE & CEMENT ALL SHOWS
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 ½ 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 ½ 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 tbg may be able to circulate

Operator will zone good Salt Sand

One plug

5-16-16

RECEIVED
Office of Oil and Gas

MAY 16 2016

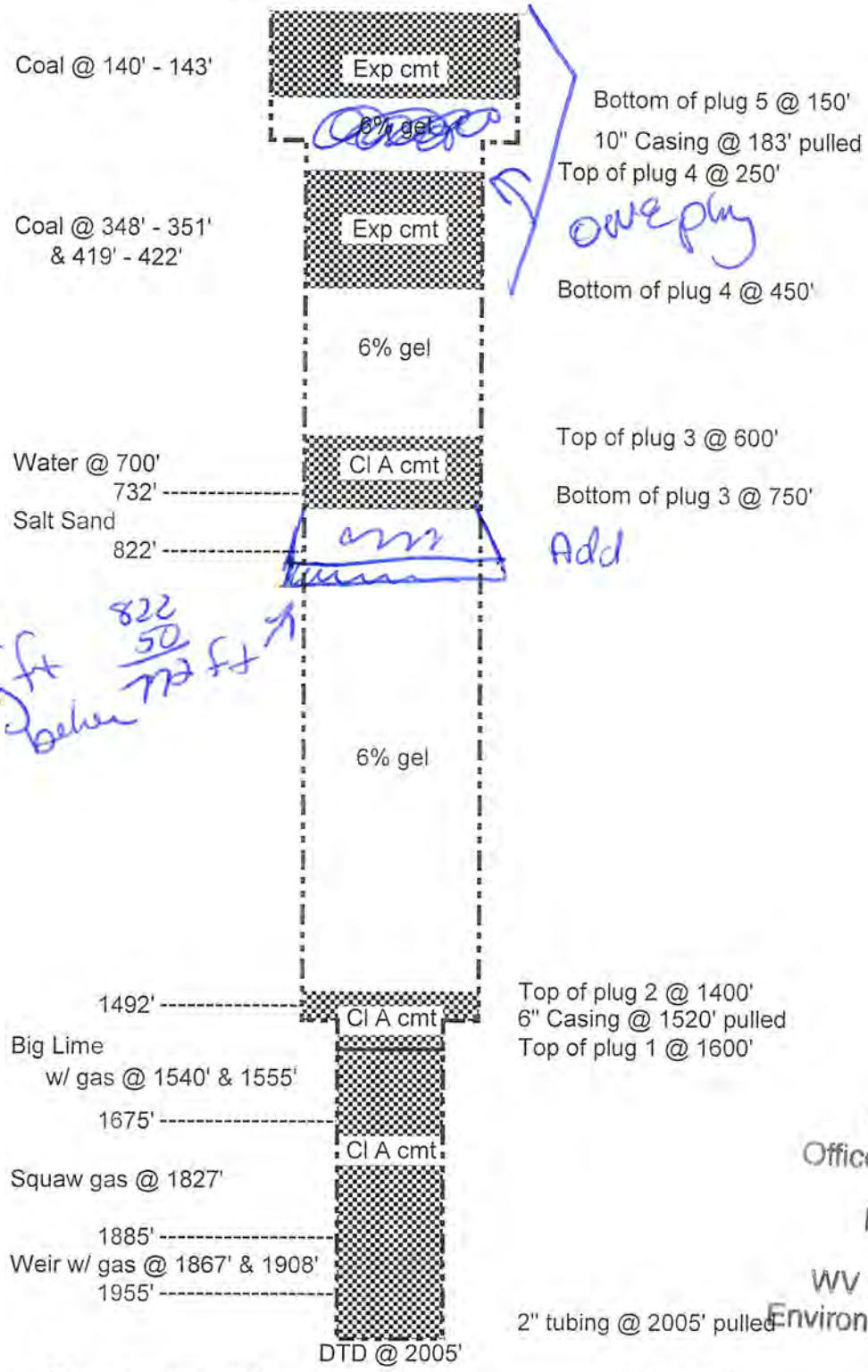
WV Department of
Environmental Protection

3902969P

MARMET COAL #7

API 47-039-02969

PROPOSED CONFIGURATION



Schematic is not to scale

T. Ott 04/07/14

RECEIVED
Office of Oil and Gas
MAY 16 2016
WV Department of
Environmental Protection

3902969P

Serial 17

039-2969

Copy of Well Record.

The Owens Bottle Co.

Marmet Well No. 7.

Kanawha County W. Va.

Drilling commenced: July 24, 1918.

completed: October 2, 1918.

Casing left in well: 10" 183'
6" 1520'

Tubing: 3"

Packer: 6x3x16
Set at 1540'

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

Initial open flow: 1,780,000 cuft.

Initial Rock pressure: 400#
in 24 hrs.

Elevation: 845'

Drillers Record.

Formations	Top	Bottom	Thickness	Remarks
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	Water 700 ft.
Slate	822	852	30	Hole full 820
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 Maxton	1342	1447	105	
Little Lime	1447	1482	35	
Pencil Slate	1482	1492	10	
Big Lime	1492	1675	183	Gas in Lime 1540 to 1555
Indian Sand	1675	1720	45	
Lime	1720	1760	40	
Sand	1760	1885	125	1st gas in Squaw sand at
Weir Sand	1885	1955	70	1827 to 1842'
Slate	1955	2005	50	
Total Depth		2005		Pay gas 1867 to 1883
				" " 1908 to 1915
				Drilling 50' pocket in slate

RECEIVED
Office of Oil and Gas
MAY 16 2016
WV Department of
Environmental Protection

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: _____

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 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Blackhawk Land & Resources, LLC
Address: 3228 Summit Square Place, Ste 180
Lexington, KY 40509
(b) Name: HC Dickinson, LLC
Address: c/o MC Hager Inc. Manager / P.O. Box 14744
Richmond, VA 23221
(c) Name:
Address:

5) (a) Coal Operator
Name: See Attached Exhibit "A"
Address:

(b) Coal Owner(s) with Declaration
Name: Blackhawk Land & Resources, LLC
Address: 3228 Summit Square Place, Suite 180
Lexington, KY 40509
Name:
Address:

6) Inspector: Terry Urban
Address: P.O. Box 1207
Clendenin, WV 25045
Telephone: (304) 549-5915

(c) Coal Lessee with Declaration
Name: None of Record
Address:

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

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

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

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

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.

3902969P

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

May 10, 2016

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

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

WWMV, LLC
315 70th 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

RECEIVED
Office of Oil and Gas

MAY 17 2016

WV Department of
Environmental Protection

3902969 P

WW-9
(2/15)

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 ☑ MS 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.

RECEIVED
Office of Oil and Gas
MAY 16 2016
WV Department of
Environmental Protection

Company Official Signature

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

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

Constance C Carden Notary Public

My commission expires 11/16/2017

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

Form WW-9

3902969 P

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	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 - 10) (Alta Sweet Clover - 5)	
(Yellow Clover - 5) (Birdsfoot Trefoil - 10)		(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.

RECEIVED
Office of Oil and Gas
MAY 16 2016
WV Department of
Environmental Protection

Plan Approved by:

Comments

Title: Field Insp Oil & Gas Date: 5-16-16

Field Reviewed? (✓) Yes ( ) No

3902969P

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.

TABLE 11-4 SPACING OF CROSS DRAINS	
ROAD GRADE (%)	DISTANCE (FT)
1	400
2	250
5	135
10	80
15	60
20	45

TABLE 11-7 SPACING OF CULVERTS	
ROAD GRADE (%)	DISTANCE (FT)
2-5	500-300
6-10	300-200
11-15	200-100
16-20	100

DIG WITH C.A.R.E. CALL MISS UTILITY KEEP WEST VIRGINIA SAFE

1-800-245-4848

DRAWING LEGEND

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

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".

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

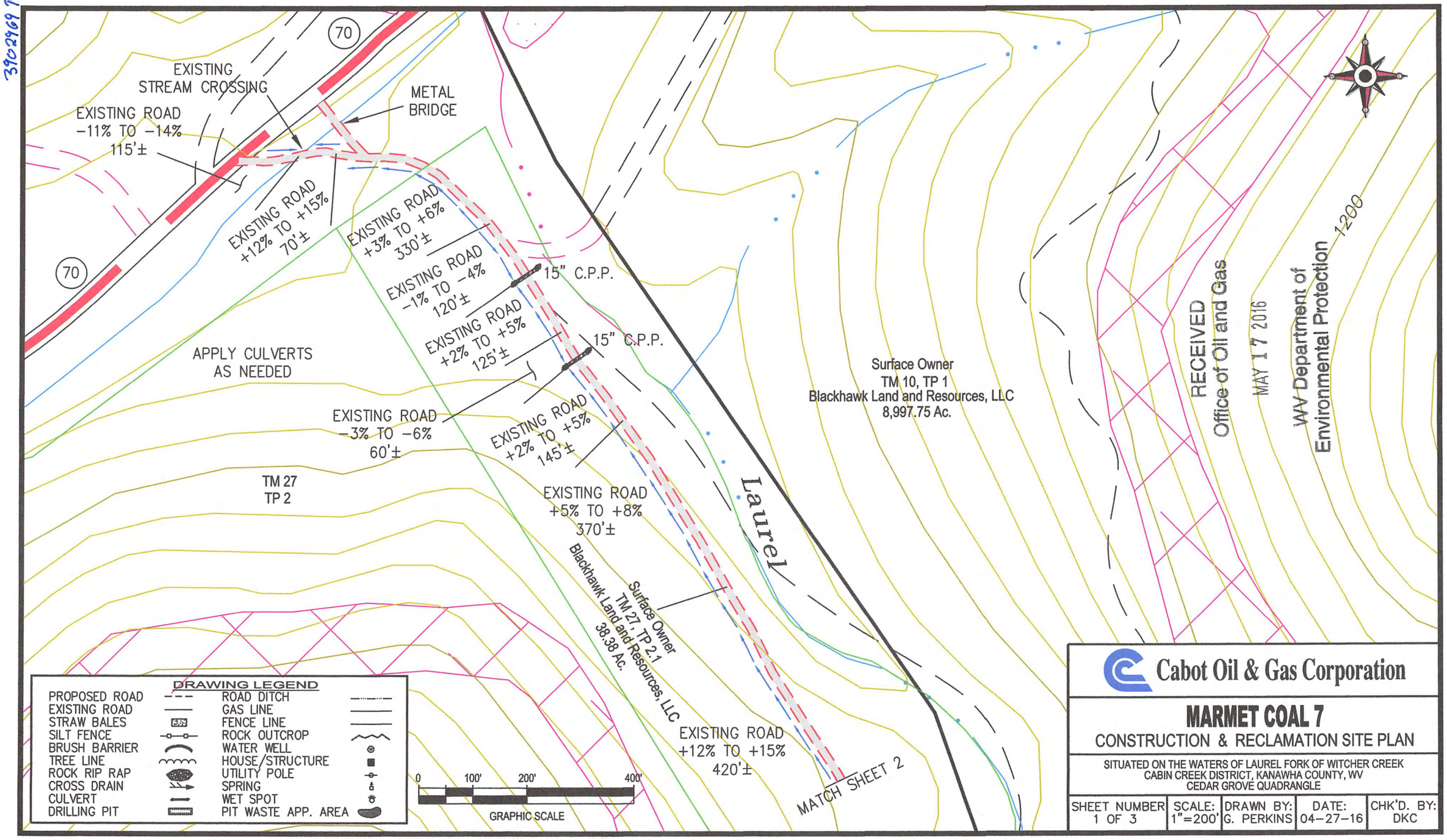
RECEIVED
Office of Oil and Gas
MAY 17 2016
WV Department of

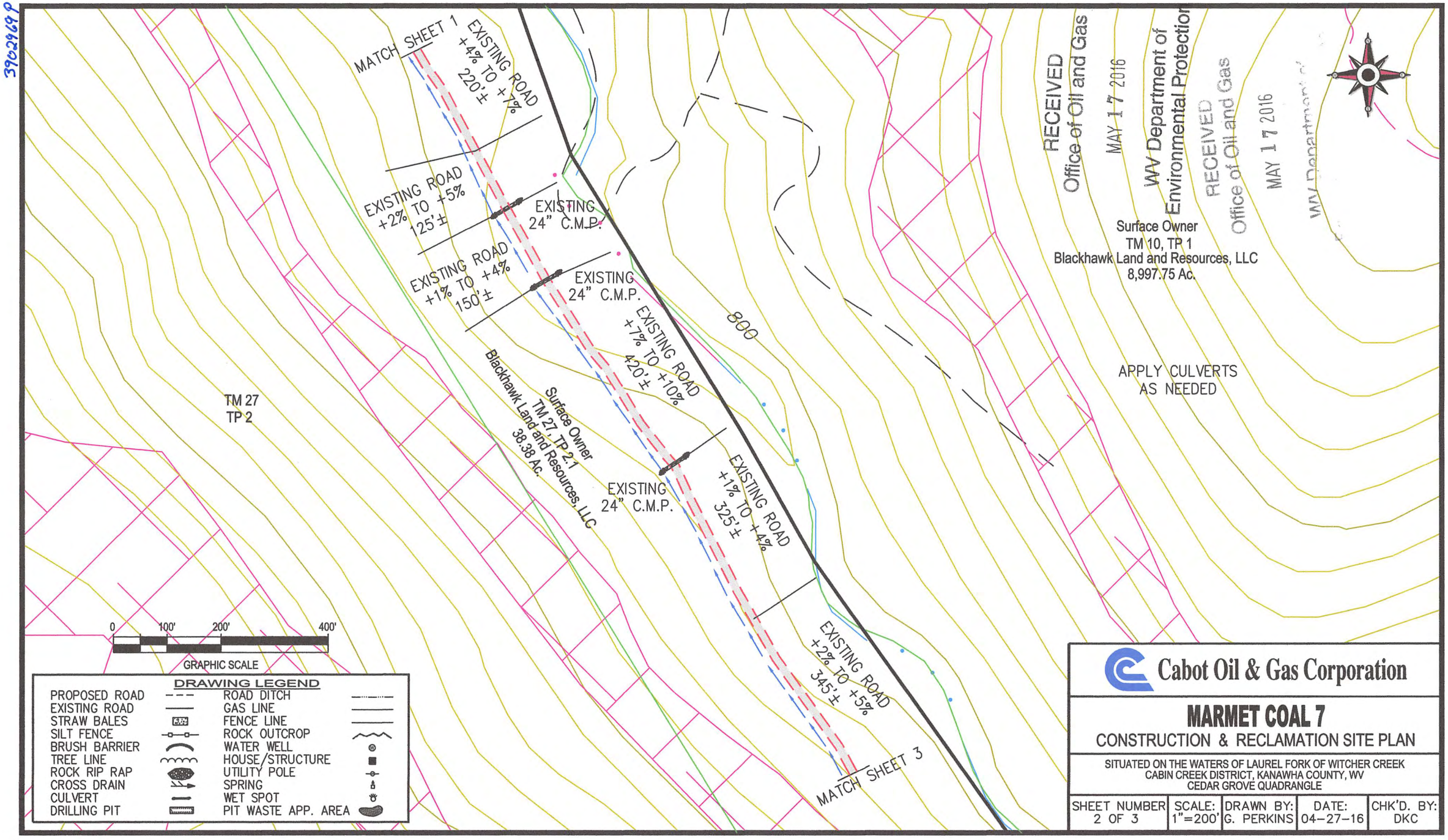
Cabot Oil & Gas Corporation

MARMET COAL 7

CABIN CREEK DISTRICT, KANAWHA COUNTY, WV
CEDAR GROVE 7.5' QUADRANGLE

3902969 P

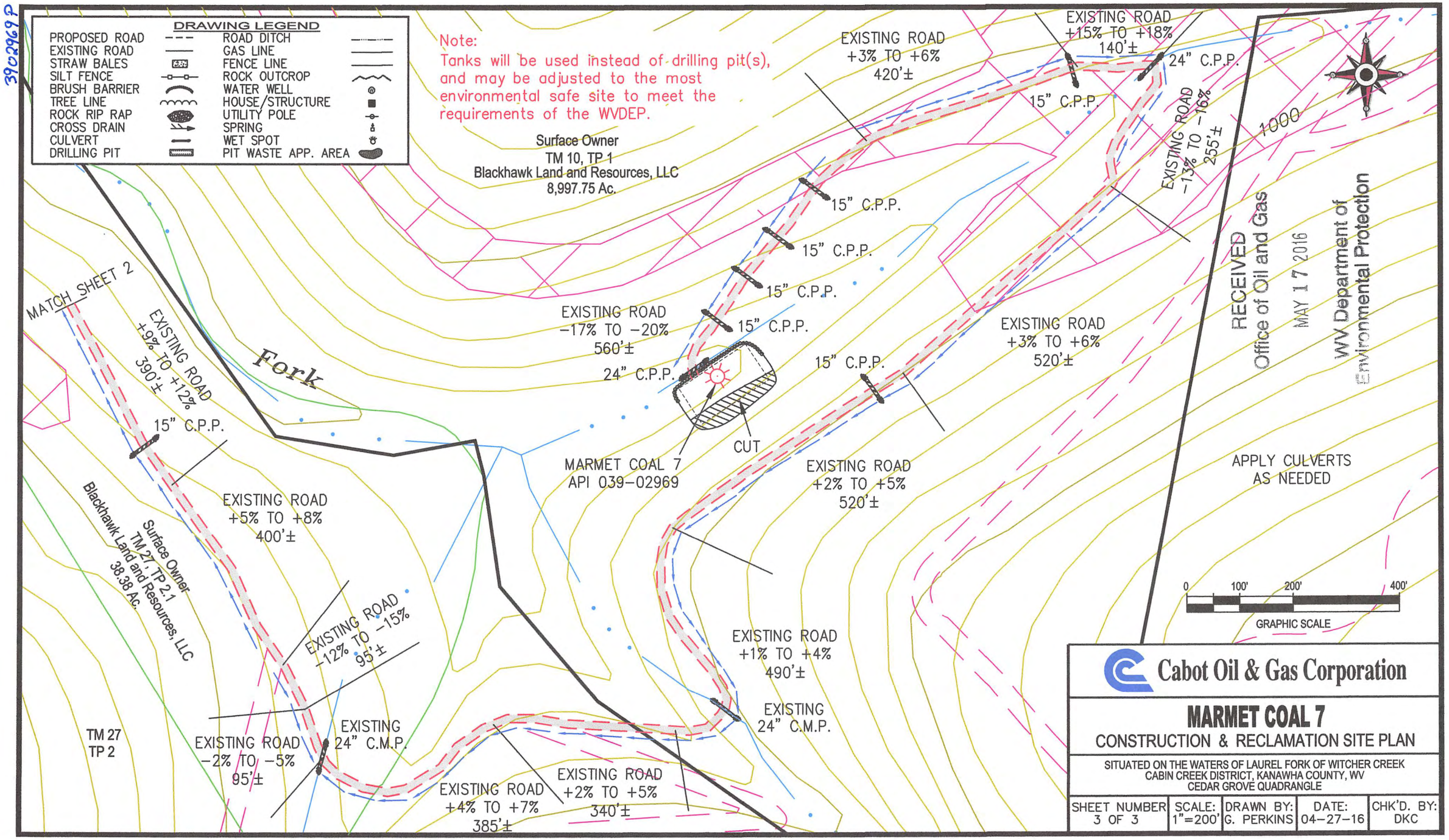

70
EXISTING STREAM CROSSING
METAL BRIDGE
EXISTING ROAD
-11% TO -14%
115'±
EXISTING ROAD
+12% TO +15%
70'±
EXISTING ROAD
+3% TO +6%
330'±
EXISTING ROAD
-1% TO -4%
120'±
15" C.P.P.
EXISTING ROAD
+2% TO +5%
125'±
15" C.P.P.
APPLY CULVERTS
AS NEEDED
EXISTING ROAD
-3% TO -6%
60'±
EXISTING ROAD
+2% TO +5%
145'±
TM 27
TP 2
EXISTING ROAD
+5% TO +8%
370'±
Laurel
Surface Owner
TM 10, TP 1
Blackhawk Land and Resources, LLC
8,997.75 Ac.
Surface Owner
TM 27, TP 2.1
Blackhawk Land and Resources, LLC
38.38 Ac.
EXISTING ROAD
+12% TO +15%
420'±
MATCH SHEET 2
1200
RECEIVED
Office of Oil and Gas
MAY 17 2016
WV Department of
Environmental Protection
DRAWING LEGEND
PROPOSED ROAD
EXISTING ROAD
STRAW BALES
SILT FENCE
BRUSH BARRIER
TREE LINE
ROCK RIP RAP
CROSS DRAIN
CULVERT
DRILLING PIT
ROAD DITCH
GAS LINE
FENCE LINE
ROCK OUTCROP
WATER WELL
HOUSE/STRUCTURE
UTILITY POLE
SPRING
WET SPOT
PIT WASTE APP. AREA
0
100'
200'
400'
GRAPHIC SCALE
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 1 OF 3
SCALE: 1"=200'
DRAWN BY: G. PERKINS
DATE: 04-27-16
CHK'D. BY: DKC



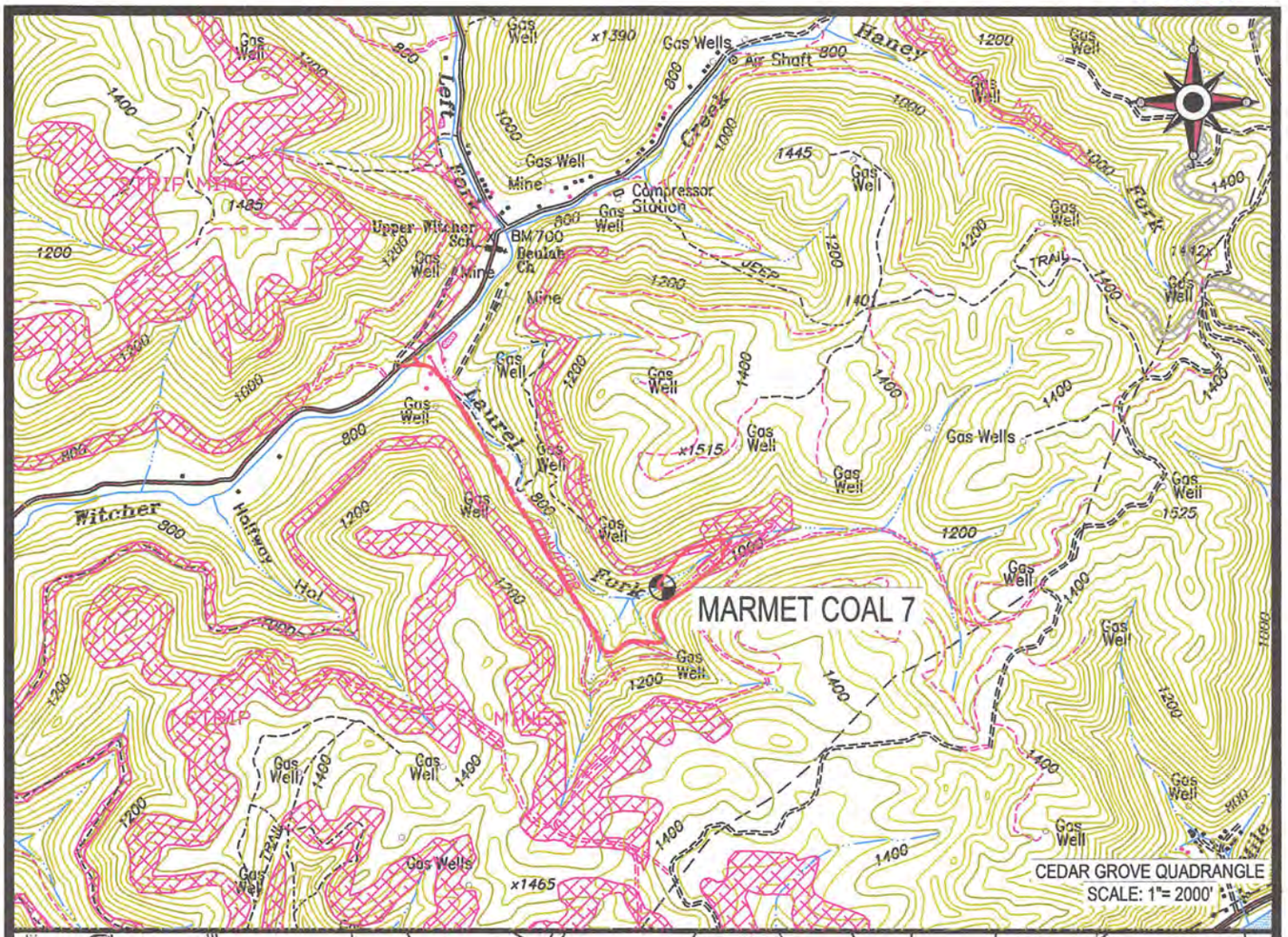
RECEIVED
Office of Oil and Gas
MAY 17 2016
WV Department of Environmental Protection
RECEIVED
Office of Oil and Gas
MAY 17 2016

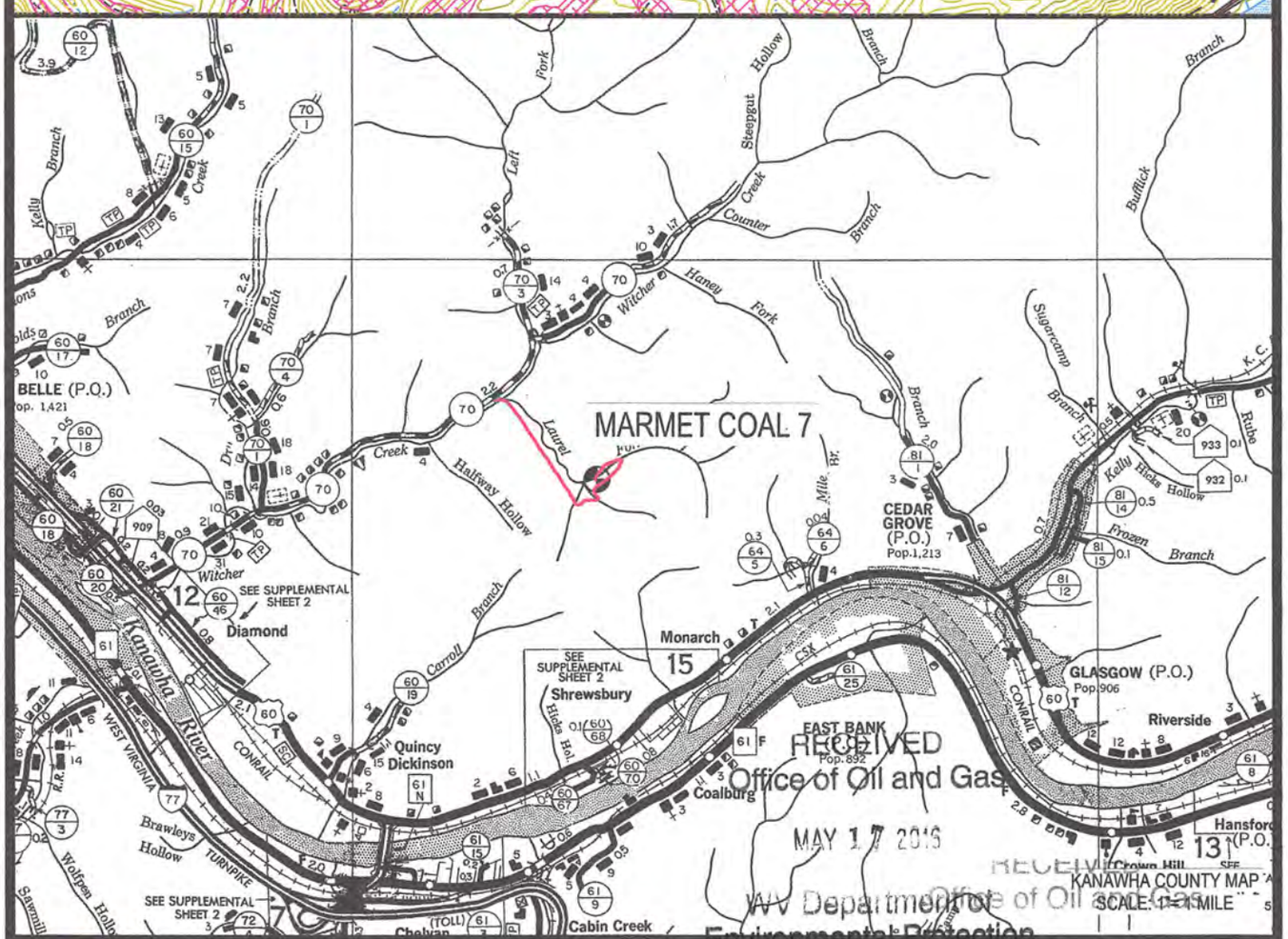
3902969 P

39-02969 P


DRAWING LEGEND
PROPOSED ROAD
EXISTING ROAD
STRAW BALES
SILT FENCE
BRUSH BARRIER
TREE LINE
ROCK RIP RAP
CROSS DRAIN
CULVERT
DRILLING PIT
ROAD DITCH
GAS LINE
FENCE LINE
ROCK OUTCROP
WATER WELL
HOUSE/STRUCTURE
UTILITY POLE
SPRING
WET SPOT
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 +3% TO +6% 420'±
EXISTING ROAD +15% TO +18% 140'±
24" C.P.P.
15" C.P.P.
EXISTING ROAD -13% TO -16% 255'±
1000
15" C.P.P.
15" C.P.P.
15" C.P.P.
15" C.P.P.
15" C.P.P.
EXISTING ROAD -17% TO -20% 560'±
24" C.P.P.
EXISTING ROAD +3% TO +6% 520'±
MATCH SHEET 2
EXISTING ROAD +9% TO +12% 390'±
Fork
15" C.P.P.
CUT
MARMET COAL 7
API 039-02969
EXISTING ROAD +2% TO +5% 520'±
APPLY CULVERTS AS NEEDED
EXISTING ROAD +5% TO +8% 400'±
Surface Owner
TM 27, TP 2.1
Blackhawk Land and Resources, LLC
38.38 Ac.
EXISTING ROAD -12% TO -15% 95'±
EXISTING ROAD +1% TO +4% 490'±
EXISTING 24" C.M.P.
TM 27
TP 2
EXISTING ROAD -2% TO -5% 95'±
EXISTING 24" C.M.P.
EXISTING ROAD +4% TO +7% 385'±
EXISTING ROAD +2% TO +5% 340'±
0 100' 200' 400'
GRAPHIC SCALE
RECEIVED
Office of Oil and Gas
MAY 17 2016
WV Department of Environmental Protection
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 3 OF 3
SCALE: 1"=200'
DRAWN BY: G. PERKINS
DATE: 04-27-16
CHK'D. BY: DKC

39029698





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

Cabot Oil & Gas Corporation

MARMET COAL 7

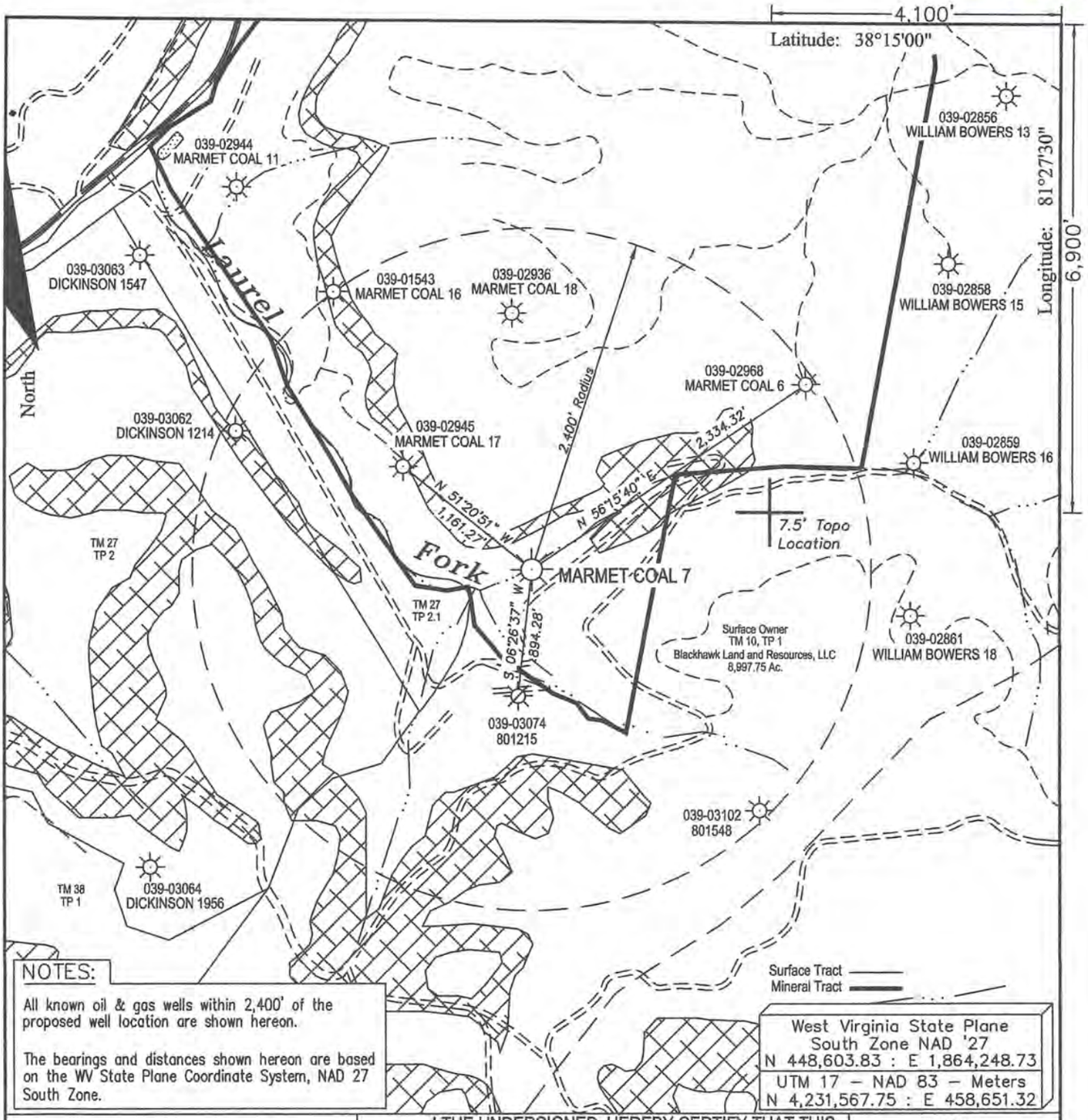
LOCATION MAP

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

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 •

PROJECT NO. CABOT	DWG. NO. MARMET 7 LOC.DWG	
DATE: 04-27-16	SCALE: AS NOTED	CHK'D BY: D.K.C.
DRAWN BY: G. PERKINS	FILE: C:\PROJECT FOLDER\CABOT	

3902969P



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 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

GREGORY A. PERKINS LICENSED No. 1993 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) 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 P
STATE COUNTY PERMIT

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

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

WATERSHED: Laurel Fork of Witcher Creek ELEVATION: 838.42'

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

SURFACE OWNER: Blackhawk Land and Resources, LLC ACREAGE: 8,997.75

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 ☒

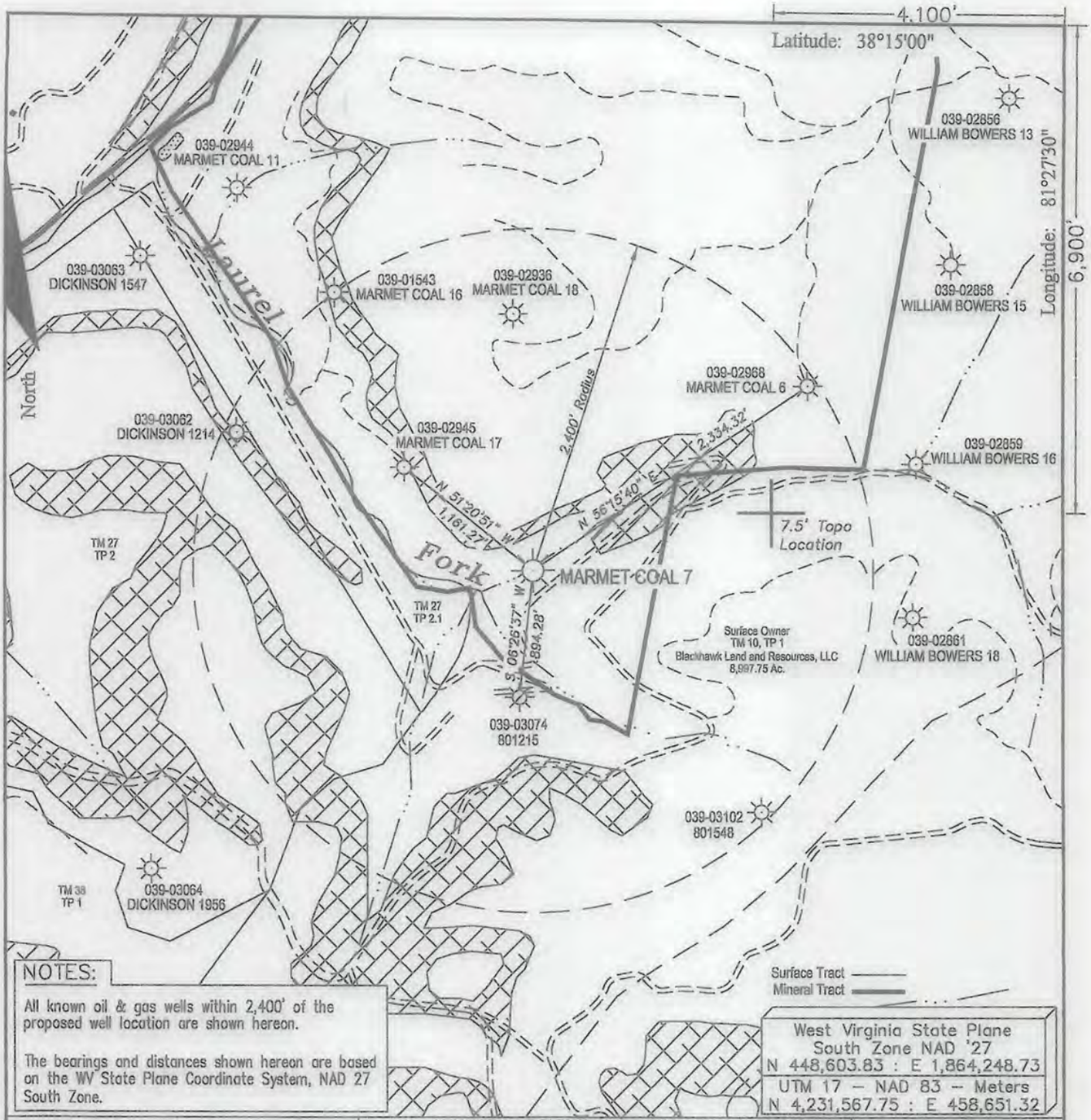
CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY):

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



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 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

GREGORY A. PERKINS LICENSED No. 1993 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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

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

STATE OF WEST VIRGINIA

DATE: April 26, 2016

OPERATOR'S WELL #: Marmet Coal 7

API WELL #: 47 (STATE) 039 (COUNTY) 02969 P (PERMIT)

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

WATERSHED: Laurel Fork of Witcher Creek ELEVATION: 838.42'

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

SURFACE OWNER: Blackhawk Land and Resources, LLC ACREAGE: 8,997.75

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