



---

west virginia department of environmental protection

---

Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Tuesday, February 27, 2018  
WELL WORK PERMIT  
Vertical / Plugging

CABOT OIL & GAS CORPORATION  
2000 PARK LANE, SUITE 300

PITTSBURGH, PA 15275

Re: Permit approval for 28  
47-081-00212-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin  
Chief

Operator's Well Number: 28  
Farm Name: BEAVER COAL CO.  
U.S. WELL NUMBER: 47-081-00212-00-00  
Vertical / Plugging  
Date Issued: 2/27/2018

Promoting a healthy environment.

03/02/2018

## 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.

1) Date January 9, 2018  
2) Operator's  
Well No. Beaver Coal 28  
3) API Well No. 47-081 - 00212

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 1,974.17' Watershed Mill Branch of Winding Gulf  
District Slab Fork County Raleigh Quadrangle Lester

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Phillip Hill - Cabot Oil & Gas Corporation  
Address 2000 Park Lane, Suite 300 Address 29 Starbuck Lane  
Pittsburgh, PA 15275 Saulsville, WV 25876

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Gary Kennedy Name Francis Brothers  
Address 252 Circle Avenue Address 622 North Church Street  
Rainelle, WV 25962 Ripley, WV 25271

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

RECEIVED  
Office of Oil and Gas

JAN 23 2018

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 *Gary Kennedy* Date 1/22/18

# Beaver Coal #28 API # 47 - 081 - 00212 PLUGGING PROCEDURE

### Current Configuration

- TD @ 2003'
- 13-3/8" conductor @ 11' grouted at surface
- 10-3/4" casing @ 395' on shoe grouted at surface
- 8-5/8" casing @ 1026' on B.H. Packer
- 4 1/2" casing @ 985' on Parmaco Tension packer
- 2-3/8" tubing @ 2003' with cave catcher @ 1982'
- Fresh water @ 25' & 830'
- Coal @ 341' - 345'
- Ravencliff @ 1020' - 1150' with gas show @ 1058' & 1130'
- Maxton @ 1982 - 2003'
- Maxton shot from 1986' to 2003'

### 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. Lay 2" line from wellhead to tank and stake down securely.
4. MIRU service rig and blow down well. *Have vacuum truck available to catch any fluids circulated from well.* *WORK TANK?*
5. Unpack wellhead.
6. Pull 2-3/8" tubing.
7. If unable to pull tubing, run freepoint, cut above freepoint, and POOH.
8. Latch onto 4 1/2" casing, unset Parmaco tension packer, POOH.
9. RIH and set CIBP in open hole @ 1970' or just above top of cut tubing.
10. TIH with 2 3/8" work string to 1970' or to just above top of CIBP.
11. MIRU Cement Company and pump 25 bbls 6% Gel.
12. Pump 61 sks (13 bbls) of Class A cement for cement plug #1 @ 1970' - 1700'.
13. Displace w/ 7 bbls of 6% Gel.
14. Pull work string up to +/- 1500', safely above cement top. WOC minimum 8 hours.
15. RIH with workstring, tag TOC to confirm.
16. TOOH with tubing.
17. Run freepoint on 8 5/8" casing.
18. Cut 8 5/8" casing above freepoint and POOH.
19. TIH with workstring to 1200'.
20. Pump 25 bbls 6% gel followed by 157 sks (33 bbls) of Class A cement for cement plug #2 @ 1200' - 750'.
21. Displace w/ 3 bbls of 6% Gel
22. Pull work string up to +/- 600', safely above cement top. WOC minimum 8 hours.
23. RIH with workstring, tag TOC to confirm.
24. PU workstring to 500'.
25. Pump 20 bbls 6% gel followed by 90 sks (19 bbls) of Class A cement for cement plug #3 @ 500' - 300'.
26. PU workstring to 100'.
27. Pump 45 sks (9.5 bbls) of Class A cement for cement plug #4 @ 100' - surface.
28. TOOH with work string and lay down.
29. RDMO Cementing Company.
30. Place monument as required by law on top of well bore.
31. Reclaim well site.

RECEIVED  
Office of Oil and Gas

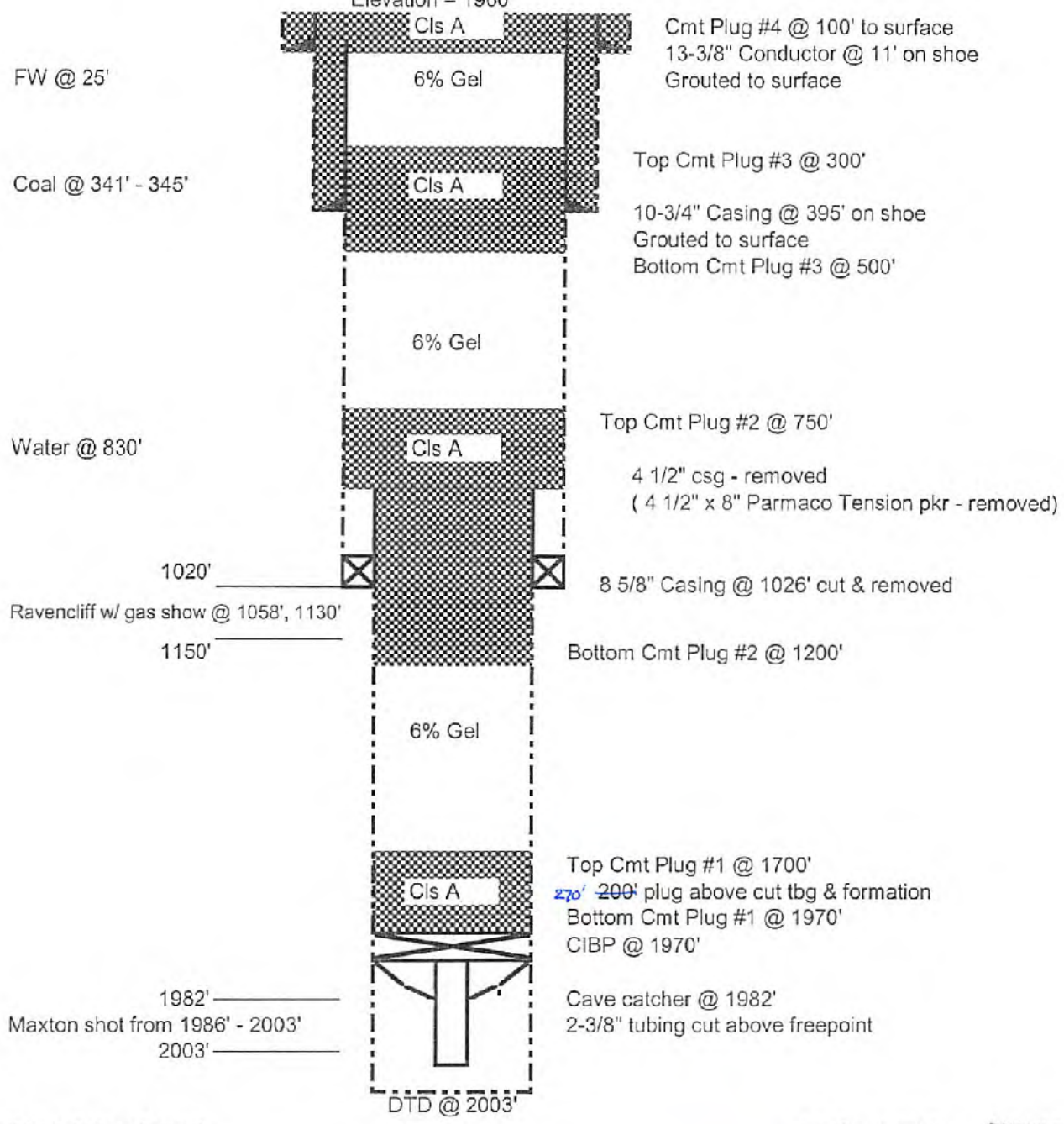
JAN 23 2018

WV Department of  
Environmental Protection



03/02/2018

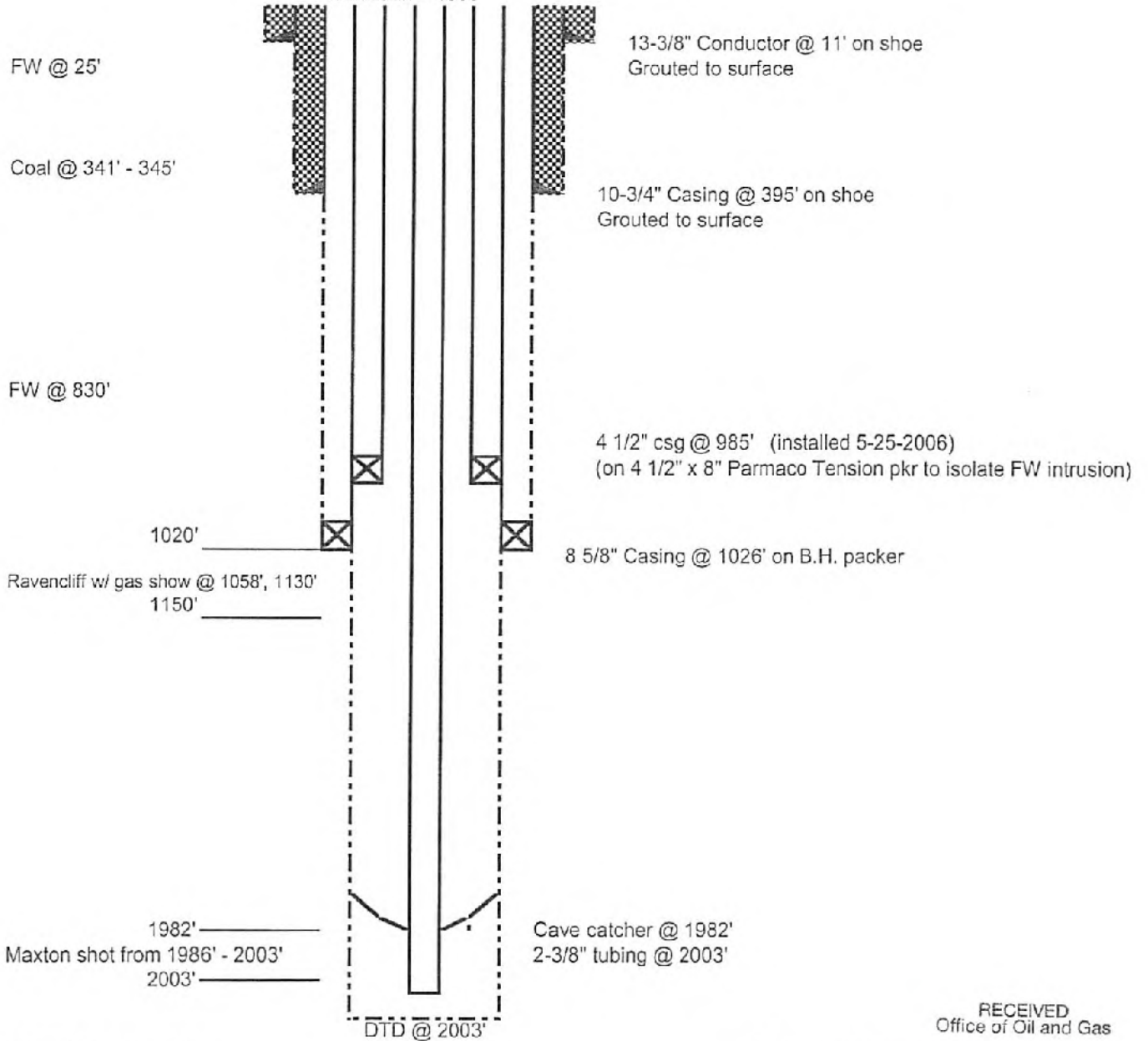
**Beaver Coal #28**  
API 47-081-00212  
**PROPOSED P&A CONFIGURATION**  
Elevation = 1960'



Schematic is not to scale

g. A. Shirey, 11-6-2017  
 RECEIVED  
 Office of Oil and Gas  
 JAN 23 2018  
 WV Department of  
 Environmental Protection

Beaver Coal #28  
API 47-081-00212  
CURRENT CONFIGURATION  
Elevation = 1960'



Schematic is not to scale

G.A. Shirley, 11-6-2017

RECEIVED  
Office of Oil and Gas

JAN 23 2018

WV Department of  
Environmental Protection



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Mullens

WELL RECORD

Permit No. RAL-212

Oil or Gas Well GAS  
(KIND)

Company Godfrey L. Cabot, Inc.  
 Address Charleston, W. Va.  
 Farm Beaver Coal Corp. Acres 9400  
 Location (waters) \_\_\_\_\_  
 Well No. 28, Serial 1474 Elev. 1900  
 District Slab Fork County Raleigh  
 The surface of tract is owned in fee by \_\_\_\_\_  
 Address \_\_\_\_\_  
 Mineral rights are owned by Beaver Coal Corp.  
Beckley, W. Va. Address \_\_\_\_\_  
 Drilling commenced March 21, 1957  
 Drilling completed May 20, 1957  
 Date Shot 5-21-57 From 1986 To 2003  
 With 60 cts. nitroglycerin  
 Open Flow /10ths Water in \_\_\_\_\_ Inch  
 /10ths Merc. in \_\_\_\_\_ Inch  
 Volume 2,211,000 Cu. Ft.  
 Rock Pressure 420 lbs. 66 hrs.  
 Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
 WELL ACIDIZED \_\_\_\_\_  
 WELL FRACTURED \_\_\_\_\_

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			Bottom Hole
18	11	11	Size of 7"
10	395	395	
8 1/4	1026	1026	Depth set
6 3/4			Perf. top
5 3/16			Perf. bottom
3	2013	2013	Perf. top
2			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
 COAL WAS ENCOUNTERED AT 311 FEET 48 INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

RESULT AFTER TREATMENT

ROCK PRESSURE AFTER TREATMENT

Fresh Water 25', 830' Feet Salt Water \_\_\_\_\_ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Top Soil			0	12			
Sand & Gravel			12	52	Water	25	6 blrs./hr.
Lime			52	64			RECEIVED Office of Oil and Gas
Slate & Shells			64	80			JAN 23 2018
Sand			80	162			WV Department of Environmental Protection
Slate, black			162	168			
Sand			168	200			
Slate & Shells			200	227			
Lime			227	250			
Slate & Shells			250	280			
Lime			280	341			
Coal			341	345			
Slate & Shells			345	363			
Lime, gritty			363	460			
Slate & Shells			460	502			
Lime			502	552			
Sand			552	575			
Red Lime			575	605			
Slate & Shells			605	627			
Red Lime			627	650			
Sand			650	678			
Red Rock			678	696			
Lime			696	720			
Slate & Shells			720	736			
Lime			736	762			
Slate & Shells			762	782	Water	830	200' in hole.
Sand			782	832			



03/02/2018

(over)

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate & Shells			832	1020			
Ravencliff			1020	1150	Gas	1058	Smell
					Gas	1130	Show; not enough to test.
Slate & Shells			1150	1179			
Lime			1179	1206			
Red Rock			1206	1323			
Lime			1323	1349			
Red Lime			1349	1441			
Slate & Shells			1441	1455			
Lime			1455	1507			
Slate & Shells			1507	1518			
Lime			1518	1579			
Sand			1579	1612			
Slate & Shells			1612	1625			
Lime			1625	1634			
Slate & Shells			1634	1653			
Red Rock			1653	1670			
Slate & Shells			1670	1685			
Red Rock			1685	1730			
Lime			1730	1738			
Slate & Shells			1738	1751			
Red Rock			1751	1822			
Lime, Broken			1822	1840			
Slate & Shells			1840	1859			
Sand			1859	1868			
Lime			1868	1964			
Slate			1964	1980			
Maxton			1980				
TOTAL DEPTH				2003			

NOTE: REDUCED HOLE TO 7" @ 2001.

RECEIVED  
Office of Oil and Gas

JAN 23 2018

WV Department of  
Environmental Protection

Date... June 13

03/02/2018

APPROVED... GODFREY L. CABOT, INC. ... Owner

By... H.J. Simmons, Jr. ...  
(Title)



WW-4A  
Revised 6-07

1) Date: January 9, 2018  
2) Operator's Well Number  
Beaver Coal 28

3) API Well No.: 47 - 081 - 00212

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

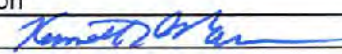
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Beaver Coal Company Limited</u>	Name <u>See Addendum "A"</u>
Address <u>115 1/2 S. Kanawha Street</u>	Address _____
<u>Beckley, WV 25801</u>	_____
(b) Name <u>Penny Powell</u>	(b) Coal Owner(s) with Declaration
Address <u>P.O. Box 165</u>	Name <u>Beaver Coal Company Limited</u>
<u>Helen, WV 25853</u>	Address <u>115 1/2 S. Kanawha Street</u>
(c) Name <u>Coal Fillers, Inc.</u>	Name _____
Address <u>4099 Tams Highway</u>	Address _____
<u>Sophia, WV 25921</u>	_____
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>252 Circle Avenue</u>	Name <u>See Addendum "A"</u>
<u>Rainelle, WV 25962</u>	Address _____
Telephone <u>304-382-8402</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

Commonwealth of Pennsylvania - Notary Seal  
 Constance C. Carden, Notary Public  
 Washington County  
 My commission expires November 16, 2021  
 Commission number 1252953  
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

RECEIVED  
 Office of Oil and Gas  
 JAN 16 2018

Subscribed and sworn before me this 10th day of January, 2018  
Constance C. Carden Notary Public  
 My Commission Expires November 16, 2021

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

JAN 23 2018

**SURFACE OWNER WAIVER**

WV Department of  
Environmental Protection

Operator's Well  
Number

Beaver Coal 28

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.  
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

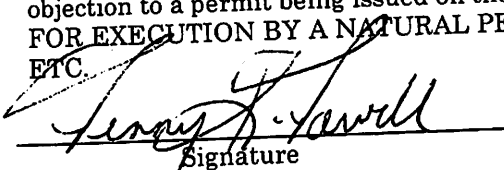
**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON  
ETC

FOR EXECUTION BY A CORPORATION,

  
Signature

Date 01-22-18 Name \_\_\_\_\_  
By \_\_\_\_\_  
Its \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
Date

Signature Date

03/02/2018

ADDENDUM "A"  
Coal Operator/Lessee with Declaration

BEAVER COAL 28

47-081-00212

Newgate Development of Beckley, LLC /  
302 South Jefferson Street  
Roanoke, Virginia 24011

Newgate Development of Beckley, LLC /  
818 North Eisenhower Drive  
Beckley, WV 25801

Kentucky Fuel Corporation /  
818 North Eisenhower Drive  
Beckley, WV 25801

Pocahontas Coal Company, LLC /  
109 Appalachian Drive  
Beckley, WV 25801

ICG Beckley, LLC /  
P.O. Box 49  
Eccles, WV 25836

Baylor Mining, Inc. /  
P.O. Box 577  
Mabscott, WV 25871

RECEIVED  
Office of Oil and Gas

JAN 16 2018

WV Department of  
Environmental Protection

WW-9  
(2/15)

API Number 47 - 081 - 00212  
Operator's Well No. Beaver Coal 28

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) Mill Branch of Winding Gulf Quadrangle Lester

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

If so, please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No treated pit wastes will be produced work Tank? YES HLK)

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? 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? \_\_\_\_\_

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.

Company Official Signature Kenneth L. Marcum  
Company Official (Typed Name) Kenneth L. Marcum  
Company Official Title Regulatory Supervisor

RECEIVED  
Office of Oil and Gas

JAN 23 2018

WV Department of Environmental Protection

Subscribed and sworn before me this 10th day of January, 2018

Constance C. Carden

My commission expires 11/16/2021

Notary Public  
Commonwealth of Pennsylvania - Notary Seal  
Constance C. Carden, Notary Public  
Washington County  
My commission expires November 16, 2021  
Commission number 270057  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES  
**03/02/2018**

**Cabot Oil & Gas Corporation**

Proposed Revegetation Treatment: Acres Disturbed 1.00 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: *Henry Kennedy*

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

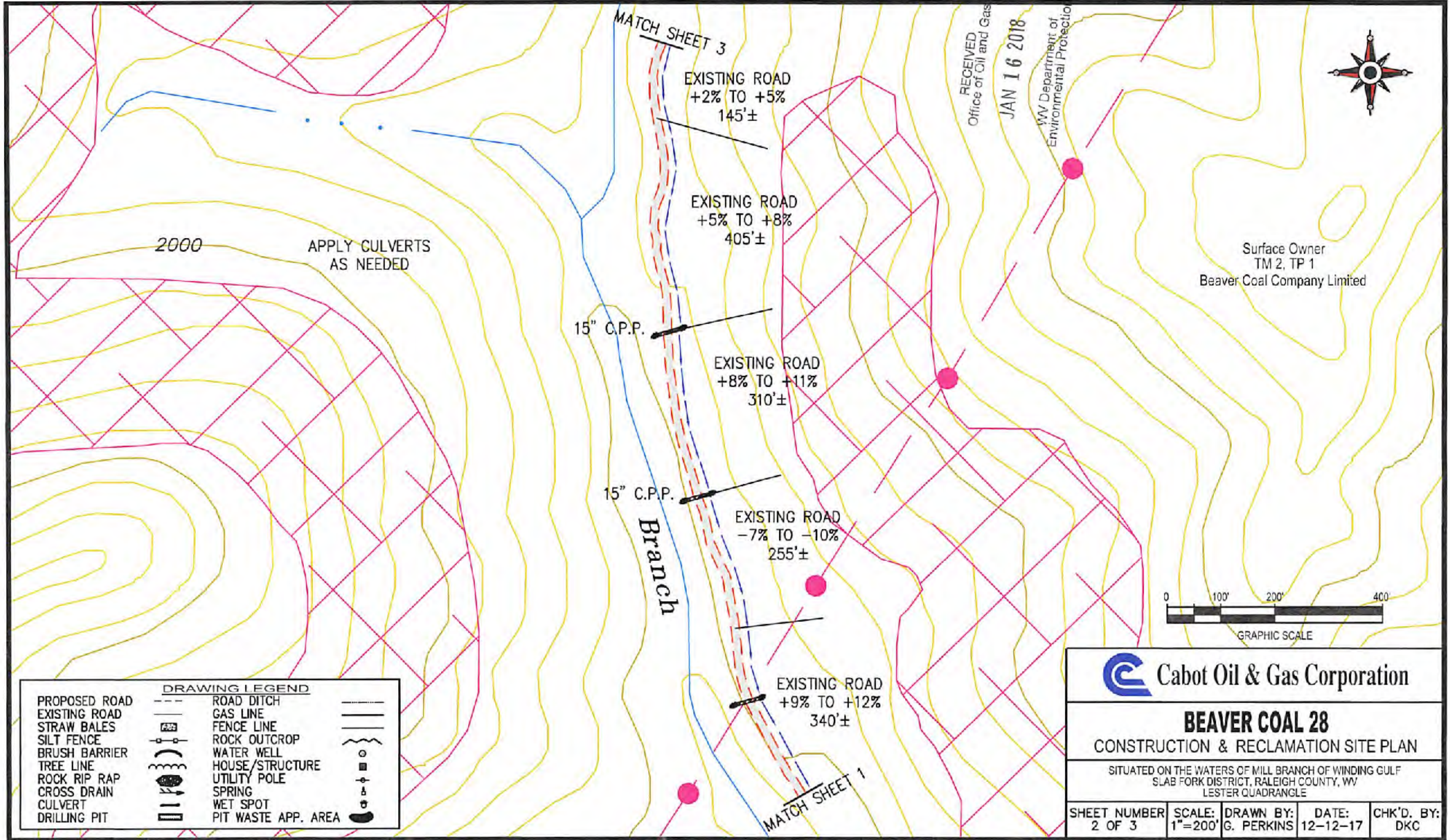
Title: *Inspector*

Date: *1/22/18*

Field Reviewed? ( ) Yes ( ) No

RECEIVED  
Office of Oil and Gas  
JAN 23 2018  
WV Department of  
Environmental Protection

81-00212P



2000  
APPLY CULVERTS  
AS NEEDED

MATCH SHEET 3

EXISTING ROAD  
+2% TO +5%  
145'±

EXISTING ROAD  
+5% TO +8%  
405'±

15" C.P.P.

EXISTING ROAD  
+8% TO +11%  
310'±

15" C.P.P.

EXISTING ROAD  
-7% TO -10%  
255'±

Branch

EXISTING ROAD  
+9% TO +12%  
340'±

MATCH SHEET 1

RECEIVED  
Office of Oil and Gas  
JAN 16 2018  
WV Department of  
Environmental Protection



Surface Owner  
TM 2, TP 1  
Beaver Coal Company Limited



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	

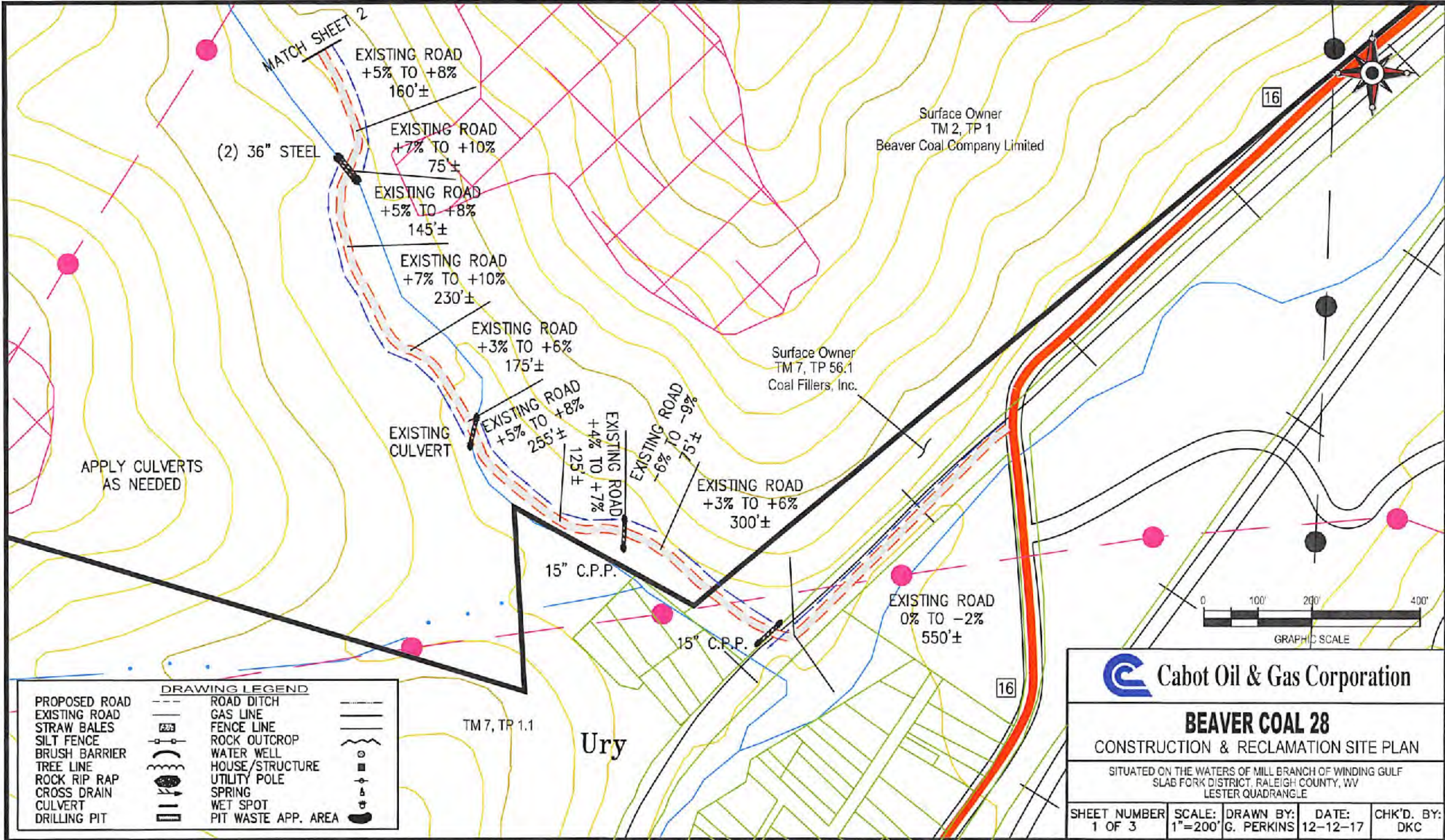
Cabot Oil & Gas Corporation

**BEAVER COAL 28**  
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF MILL BRANCH OF WINDING GULF  
SLAB FORK DISTRICT, RALEIGH COUNTY, WV  
LESTER QUADRANGLE

SHEET NUMBER 2 OF 3	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 12-12-17	CHK'D. BY: DKC
------------------------	-------------------	-------------------------	-------------------	-------------------

81-00212 P



APPLY CULVERTS AS NEEDED

Surface Owner  
TM 2, TP 1  
Beaver Coal Company Limited

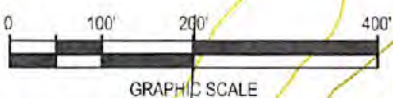
Surface Owner  
TM 7, TP 56.1  
Coal Fillers, Inc.

TM 7, TP 1.1

Ury

16

16



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**

**BEAVER COAL 28**  
CONSTRUCTION & RECLAMATION SITE PLAN

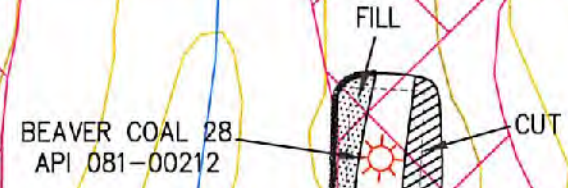
SITUATED ON THE WATERS OF MILL BRANCH OF WINDING GULF  
SLAB FORK DISTRICT, RALEIGH COUNTY, WV  
LESTER QUADRANGLE

SHEET NUMBER 1 OF 3	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 12-12-17	CHK'D. BY: DKC
------------------------	-------------------	-------------------------	-------------------	-------------------

81-00212P

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



BEAVER COAL 28  
API 081-00212

EXISTING ROAD  
+4% TO +7%  
140'±

EXISTING ROAD  
+2% TO +5%  
210'±

EXISTING ROAD  
+12% TO +15%  
215'±

EXISTING ROAD  
+7% TO +10%  
250'±

EXISTING ROAD  
+5% TO +8%  
435'±

15" C.P.P.

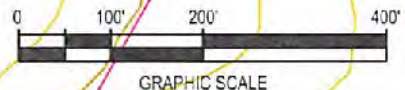
15" C.P.P.

15" C.P.P.

15" C.P.P.

MATCH SHEET 2

Surface Owner  
TM 2, TP 1  
Beaver Coal Company Limited



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

### BEAVER COAL 28

#### CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF MILL BRANCH OF WINDING GULF  
SLAB FORK DISTRICT, RALEIGH COUNTY, WV  
LESTER QUADRANGLE

SHEET NUMBER 3 OF 3	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 12-12-17	CHK'D. BY: DKC
------------------------	-------------------	-------------------------	-------------------	-------------------



**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

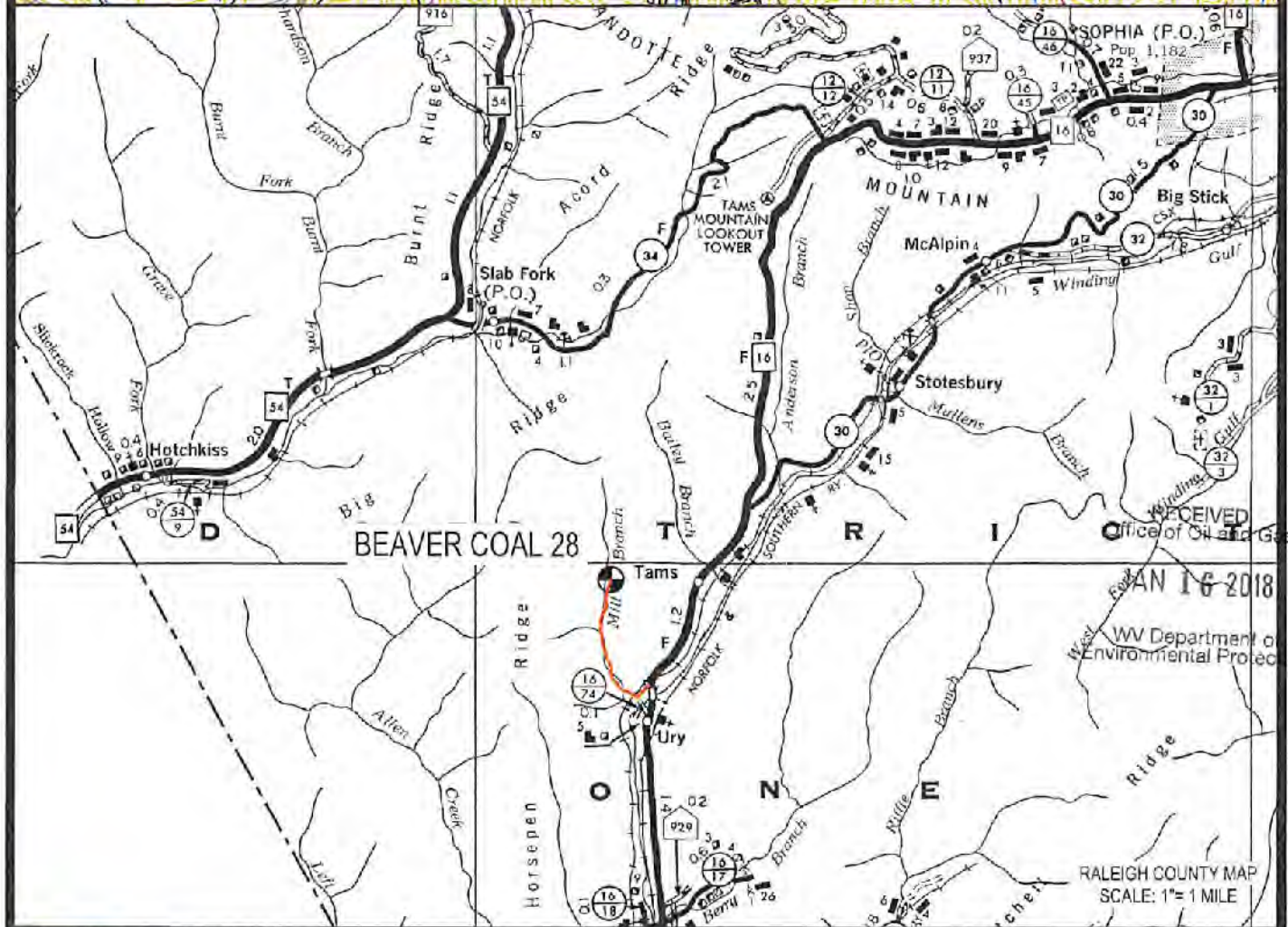
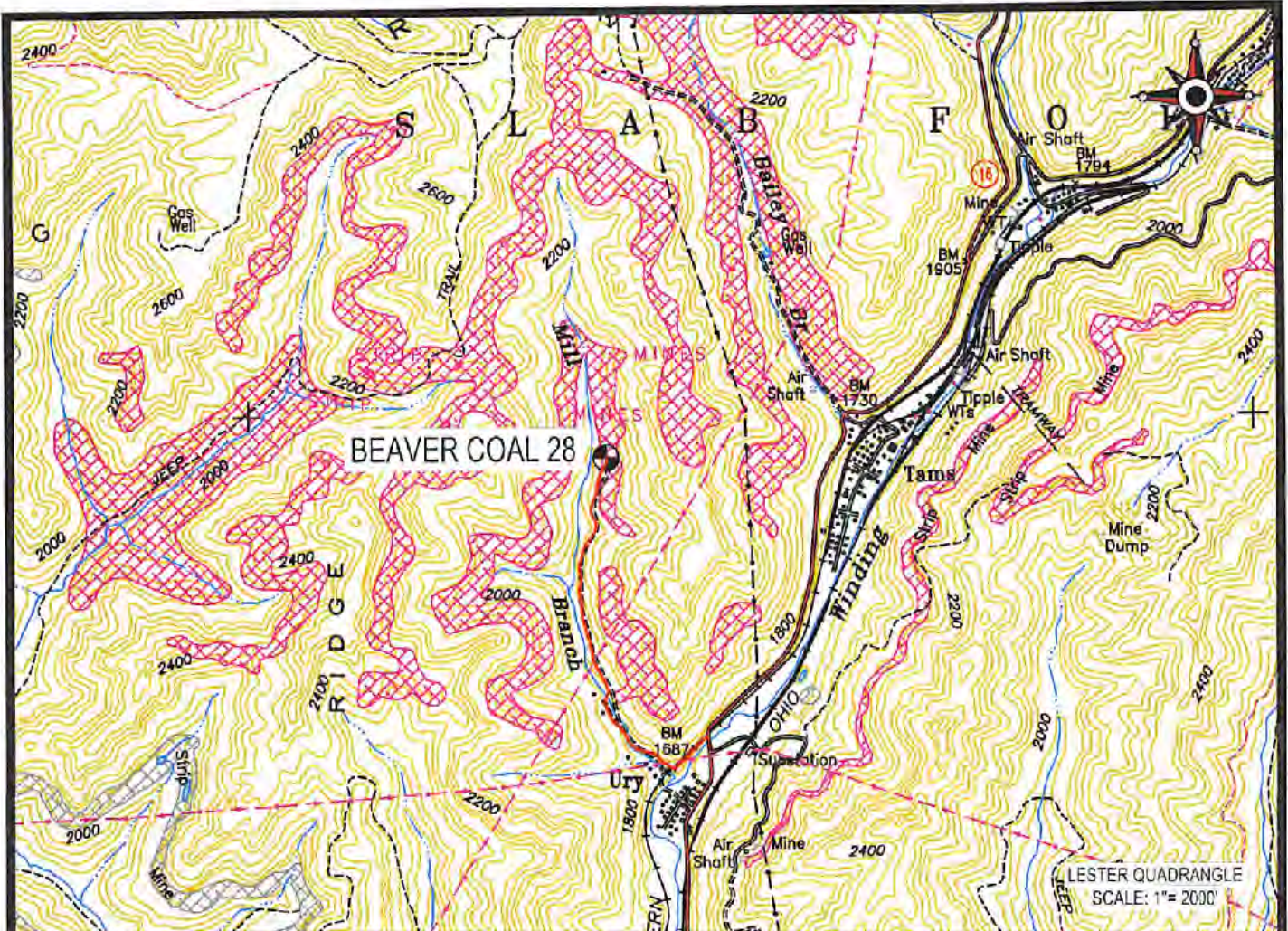
**DRAWING LEGEND**

PROPOSED ROAD	----
EXISTING ROAD	—
STRAW BALES	
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 BEAVER COAL 28**

- 1.) FROM INTERSTATE 64/77, EXIT 42, IN BECKLEY, WV, DRIVE SOUTHWEST ON STATE ROUTE 16 AND 97 FOR 3.5 MILES± TO SOPHIA, WV.
- 2.) TURN RIGHT AND CONTINUE WEST ON STATE ROUTE 16 AND 54 FOR 7.4 MILES± TO THE BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD, WHICH IS NEXT TO THE RAILROAD TRACKS.
- 3.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 0.9 MILE± TO THE EXISTING WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

03/02/2018



 Cabot Oil & Gas Corporation

**BEAVER COAL 28**  
LOCATION MAP

 **CUNNINGHAM**

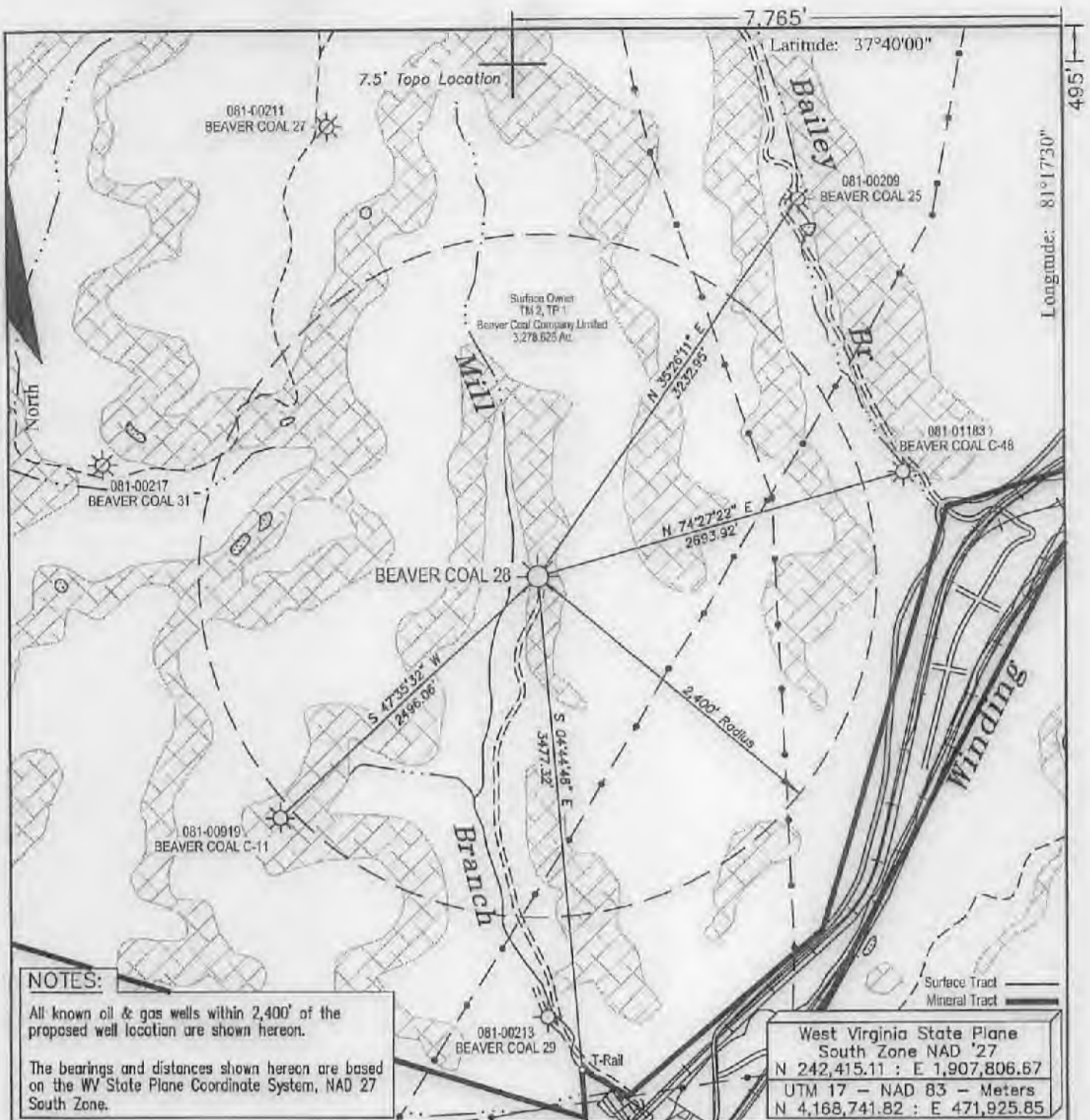
LOCATED ON THE WATERS OF MILL BRANCH  
OF WINDING GULF  
SLAB FORK DISTRICT, RALEIGH COUNTY, WV  
LESTER QUADRANGLE

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. BEAVER COAL 28 LOC.DWG
DATE: 12-12-17	SCALE: AS NOTED
	CHK'D BY: D.K.C.
DRAWN BY: G. PERKINS   FILE: C:\PROJECT FOLDER\CABOT	

03/02/2018

RECEIVED  
Office of Oil and Gas  
JAN 16 2018  
WV Department of Environmental Protection



**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 242,415.11 : E 1,907,806.67  
UTM 17 - NAD 83 - Meters  
N 4,168,741.82 : E 471,925.85

FILE #:  
DRAWING #: Beaver Coal 28  
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: December 11, 2017  
OPERATOR'S WELL #: Beaver Coal 28  
API WELL #: 47 081 00212 P  
STATE COUNTY PERMIT

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

WATERSHED: Mill Branch of Winding Gulf ELEVATION: 1,974.17'

COUNTY/DISTRICT: Raleigh / Slab Fork QUADRANGLE: Lester

SURFACE OWNER: Beaver Coal Company, Limited ACREAGE: 3,278.626

OIL & GAS ROYALTY OWNER: Beaver Coal Company, Limited ACREAGE: 9,400.00

LEASE #: 47-0815 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 29 Starbuck Lane  
City Pittsburgh State PA Zip Code 15275 City Saulsville State WV Zip Code 25876

03/02/2018