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west virginia department of environmental protection

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

Jim Justice , Governor  
Austin Caperton , Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, March 15, 2017  
WELL WORK PERMIT  
Vertical / Plugging

CABOT OIL & GAS CORPORATION (A)  
2000 PARK LANE, SUITE 300

PITTSBURGH, PA 15275

Re: Permit approval for 58-831  
47-099-00793-00-00

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: 58-831  
Farm Name: WILSON COAL LAND CO.  
U.S. WELL NUMBER: 47-099-00793-00-00  
Vertical / Plugging  
Date Issued: 3/15/2017

Promoting a healthy environment.

03/17/2017

## 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.

Updated w/ Inspector  
Sign-offs  
9900793P

Wilson Coal #58  
API # 47 – 099 – 00793  
**PLUGGING PROCEDURE**

**Current Configuration**

DTD @ 3451'

8-5/8" 24# casing @ 430' set on packer

7" – 20# casing @ 1728' set on shoe

No coal reported

Fresh water @ 227', 580' – 600'

Elevation 1279'

Gas shows @ 1845', 2496', 2507', 2520', 2731', 2843'-2888', 3152', 3425'

Devonian Shale shot from 2720' to 3451'

Big Lime formation @ 1712' – 1918'

Injun formation @ 1949' – 2022'

Berea formation @ 2496' – 2520'

Devonian Shale @ 2720' - TD

COAL @ 182 - 185

COAL @ 480 - 483

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JAN 18 2017

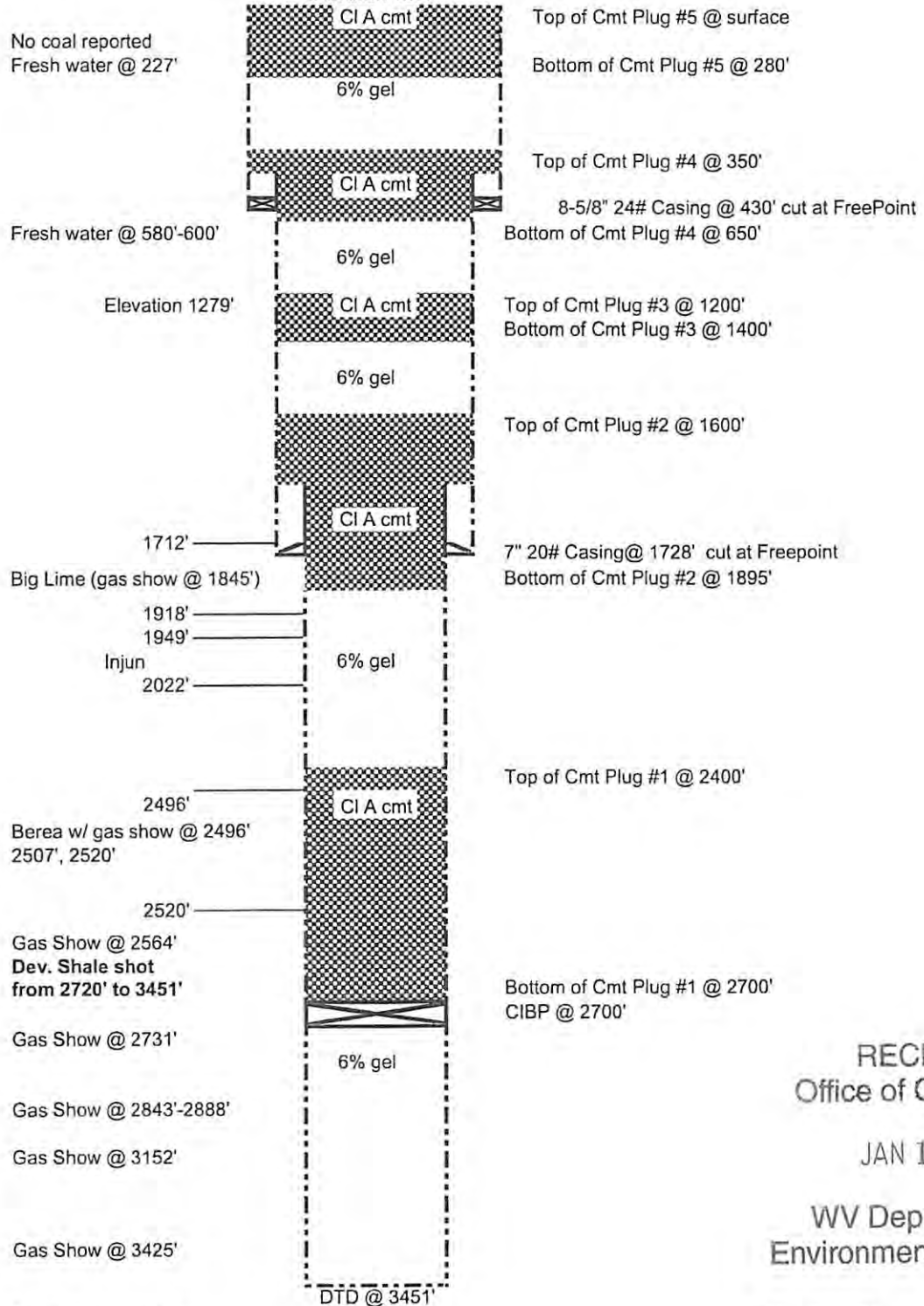
WV Department of  
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**PROCEDURE**

1. Contact Danville 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 to tank.
5. Unpack wellhead.
6. RIH with sand line to check TD.
7. RIH and set CIBP @ 2700'.
8. TIH with 2 3/8" work string to TD.
9. MIRU Cement Company and pump 50 bbls 6% Gel followed by 62 sks (13 bbls) of Class A cement for cement plug #1 from 2700' to 2400'
10. Pull tubing to +/- 2200', safely above cement top. WOC for a minimum of eight hours.
11. RIH w/ work string – tag TOC to confirm.
12. TOOH with tubing.
13. Run freepoint on 7" casing.
14. Cut 7" casing above freepoint and POOH.
15. TIH with work string to 1895' and pump 50 bbls of 6% Gel.
16. Pump 64 sks (14 bbls) of Class A cement for cement plug #2 from 1895' to 1600'. Cement must cover the 7" casing cut
17. Displace w/ 6 bbls of 6% Gel.
18. Pull tubing to +/- 1400', safely above cement top. WOC for a minimum of eight hours.
19. RIH w/ work string – tag TOC to confirm.
20. Pull work string up to 1400' and pump 57 sks (12 bbls) of Class A cement for plug #3 from 1400' to 1200'.
21. Displace w/ 4 1/2 bbls of 6% Gel.
22. TOOH with tubing.
23. Run freepoint on 8 5/8" casing.
24. Cut 8 5/8" casing above freepoint and POOH.
25. TIH with work string to 550' and pump 25 bbls of 6% Gel.
26. Pump 100 sks (21 bbls) of Class A cement for cement plug #4 from 650' to 350'. Cement must cover the 8 5/8" casing cut.
27. Displace w/ 1 1/2 bbls of 6% Gel.
28. Pull tubing to +/- 150', safely above cement top. WOC for a minimum of eight hours.
29. RIH w/ work string – tag TOC to confirm.

03/17/2017  
AF

**Wilson Coal Land #58**  
API 47-099-00793  
PROPOSED P&A CONFIGURATION  
Elevation 1279'



Schematic is not to scale

g.a. survey, 12/20/2016

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1-18-17  
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990073P

30. Pull work string up to 280' and pump 156 sks (33 bbls) of Class A cement for plug #5 from 280' to surface.
31. TOOH with work string and lay down.
32. RDMO Cementing Company.
33. Place monument as required by law on top of well bore.
34. Reclaim well site.

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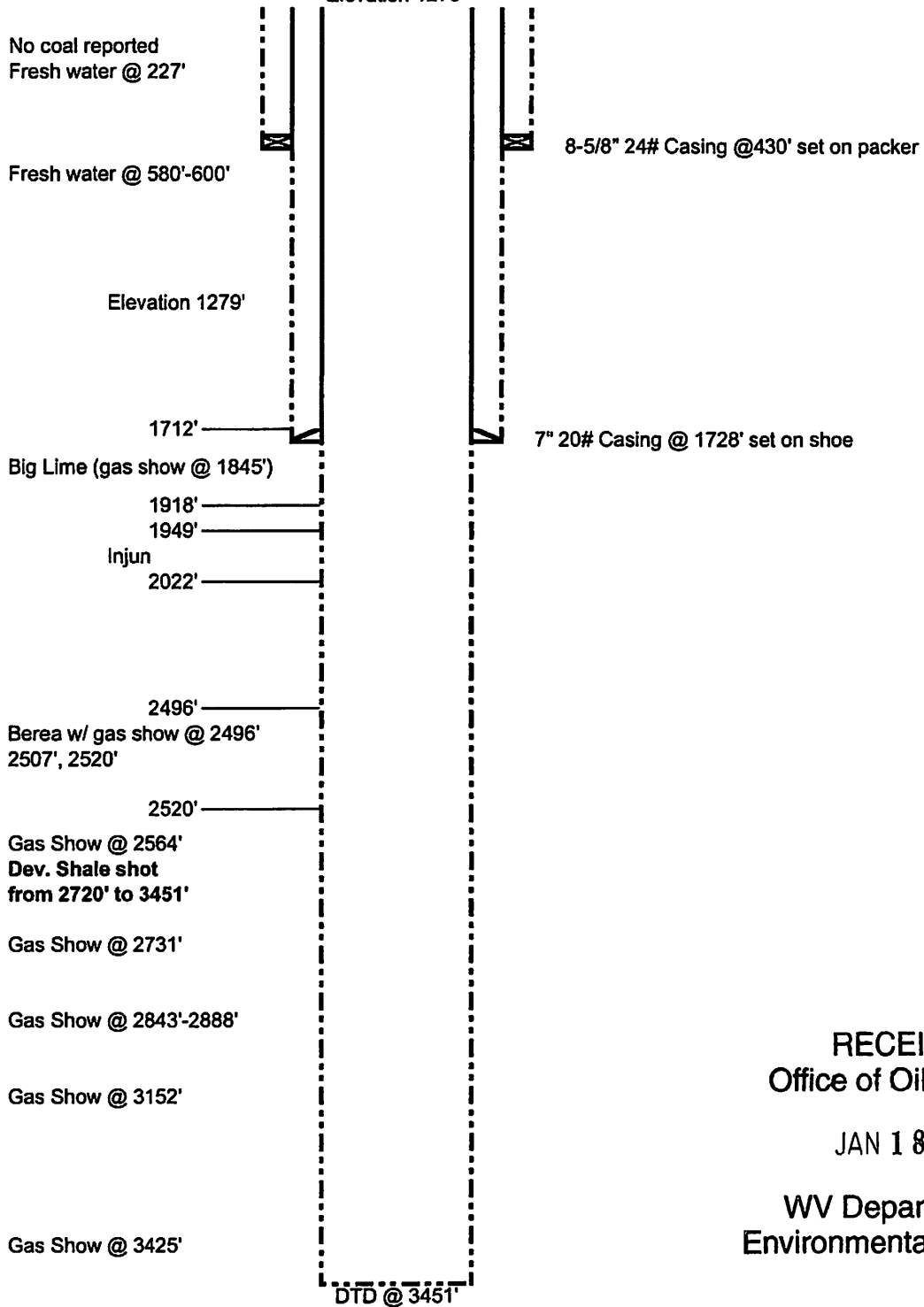
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103/18/2017

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**Wilson Coal Land #58**  
API 47-099-00793  
CURRENT CONFIGURATION  
Elevation 1279'



Schematic is not to scale

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*g.a. sfurey, 12/20/2016*

APC-1-18-17  
03/17/2017

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

Permit No. Wayne-793  
Wayne Quad.

Gas Well

Company	Owens, Libbey Owens Gas Dept.	Casing & Tubing
Address	P.O. Box 4158, Chas. 4, W. Va.	8-5/8 430' 430'
Farm	Wilson Coal Land Co. Acres 9937	7" 1728' 1728'
Well No.	58 (OLC Serial No. 831) Elev. 1279.29	
District	Lincoln County Wayne	
Coal Rights	W.Va. Conservation Commission, Charleston 5, W. Va.	
Commenced	8/21/51	
Completed	10/21/51	
Date Shot	10/22/51 from 3451 to 2720 With 7,050# detonite	
Volume	Berea & Shale 120M C F	
Rock Pressure	263 lbs. 48 hrs.	

Surface	0	14	
Slate	black	14	49
Sand	white	49	67
Coal		67	70
Slate		70	175
Sand	gray	175	182
Coal	"	182	185
Sand & Slate	wh.	185	480 water 227' 2 BPH
Coal	black	480	483
Slate	gray	483	490
Sand	white	490	540
Slate	black	540	570
Sand	wh.	570	625 water 580-600 1 BPH
Slate	gray	625	635
Sand,			
Sl. & shs.	dark	635	797
sand	white	797	817
Slate	dark	817	834
Lime shell		834	854
Slate	black	854	902
Sand	white	902	950
Slate & shs.	black	950	1049
Unrecorded		1049	1068
Sl. & shs.	black	1068	1112
Slate & sand	white	1112	1193
Salt sand	white	1193	1621 water 1194 filling up hole
Slate & shs.	black	1621	1684
Little Lime	black	1684	1709
Pencil cave		1709	1712
Big Lime	yel.	1712	1775
Slate break		1775	1776
Big Lime		1776	1918 gas 1845 show
McCradys	red	1918	1949
Injun sand	whg gr	1949	2022
Slate	black	2022	2036
Slate & sh.	gray	2036	2361
Shells	dark	2361	2390
Slate & shs.	dark	2390	2461
Brown shale	brown	2461	2496
Berea sand	gray	2496	2499 gas 2496 show
Berea sand	light	2499	2520 gas 2507-20 show
Slate & shs.	white	2520	2532
Berea shells	white	2532	2548
Slate & shs.	white	2548	2590
Brown shale	brown	2590	2660 gas show 2731
Slate & shell	white	2660	2875 gas show 2843-88
Brown shale	brown	2875	3075
Shale	white	3075	3113
Brown shale	brown	3113	3428 gas 3152 show
Slate	white	3428	3451 gas 3425 show
Total Depth		3451	Test before shot 5M 1 Hr. after shot 275 M

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JAN 11 2017

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Environmental Protection

1) Date January 6, 2017  
2) Operator's  
Well No. Wilson Coal #58  
3) API Well No. 47-099 - 00793

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 1050.48' Watershed Unnamed tributary of Missouri Branch  
District Lincoln County Wayne Quadrangle Radnor

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

8) Oil and Gas Inspector to be notified Name Allen Flowers  
Address 165 Grassey Lick Lane  
Liberty, WV 25124  
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

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JAN 18 2017  
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 Allen Flowers Date 1-18-2017  


03/17/2017



1) Date: January 6, 2017  
2) Operator's Well Number  
Wilson Coal #58  
3) API Well No.: 47 - 099 - 00793

**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>State of West Virginia, Cabwaylingo State Forest</u> /	Name <u>Not Operated</u>
Address <u>Office of Land &amp; Streams,</u>	Address _____
<u>324 Fourth Ave., Room 200, South Charleston, WV 25303</u>	_____
(b) Name <u>Harvey &amp; Ruby Marcum &amp; Ernest Marcum Estate</u> /	(b) Coal Owner(s) with Declaration
Address <u>Rt. 1 Box 19-B</u>	Name <u>State of WV, Office of Land &amp; Streams</u>
<u>Dunlow, WV 25511</u>	Address <u>324 Fourth Ave., Room 200</u> /
	<u>South Charleston, WV 25303</u>
(c) Name <u>Argus Energy, LLC</u> /	Name _____
Address <u>P.O. Box 416</u>	Address _____
<u>Kenova, WV 25530</u>	_____
6) Inspector <u>Allen Flowers</u> /	(c) Coal Lessee with Declaration /
Address <u>165 Grassy Lick Lane,</u>	Name <u>Rum Creek Coal Sales, Inc. Argus Energy, LLC</u>
<u>Liberty, WV 25124</u>	Address <u>One Alpha Place P.O. Box 416</u>
Telephone <u>(304) 552-8308</u>	<u>Bristol, VA 24209 Kenova, WV 25530</u>

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

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

	Well Operator	<u>Cabot Oil &amp; Gas Corporation</u>
	By:	<u>Kenneth L. Marcum</u> <i>Kenneth L. Marcum</i>
	Its:	<u>Regulatory Supervisor</u>
	Address	<u>2000 Park Lane, Suite 300</u> <u>Pittsburgh, PA 15275</u>
	Telephone	<u>(412) 249-3850</u>

Subscribed and sworn before me this 6th day of January 2017  
Constance C. Carden Notary Public  
 My Commission Expires November 16, 2017

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**Office of Oil and Gas**

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 the use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyoffier@wv.gov](mailto:depprivacyoffier@wv.gov).

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 WV Department of Environmental Protection  
 03/17/2017

WW-9  
(9/13)

9900793P

API Number 47 - 099 - 00793  
Operator's Well No. Wilson Coal 58

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) Unnamed Tributary of Missouri Branch Quadrangle Radnor

Elevation 1,050' County Wayne District Lincoln

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  WILL USE TANKS.

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)

ANY WELL EFFLUENT WILL BE DISPOSED OF OFFSITE, PROPERLY.

gwn

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? \_\_\_\_\_

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

Subscribed and sworn before me this 6th day of January, 2017

Constance C. Carden

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

My commission expires 11/16/2017

Cabot Oil & Gas Corporation

Proposed Revegetation Treatment: Acres Disturbed 1.5 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: Order brush needs cut back along service road.

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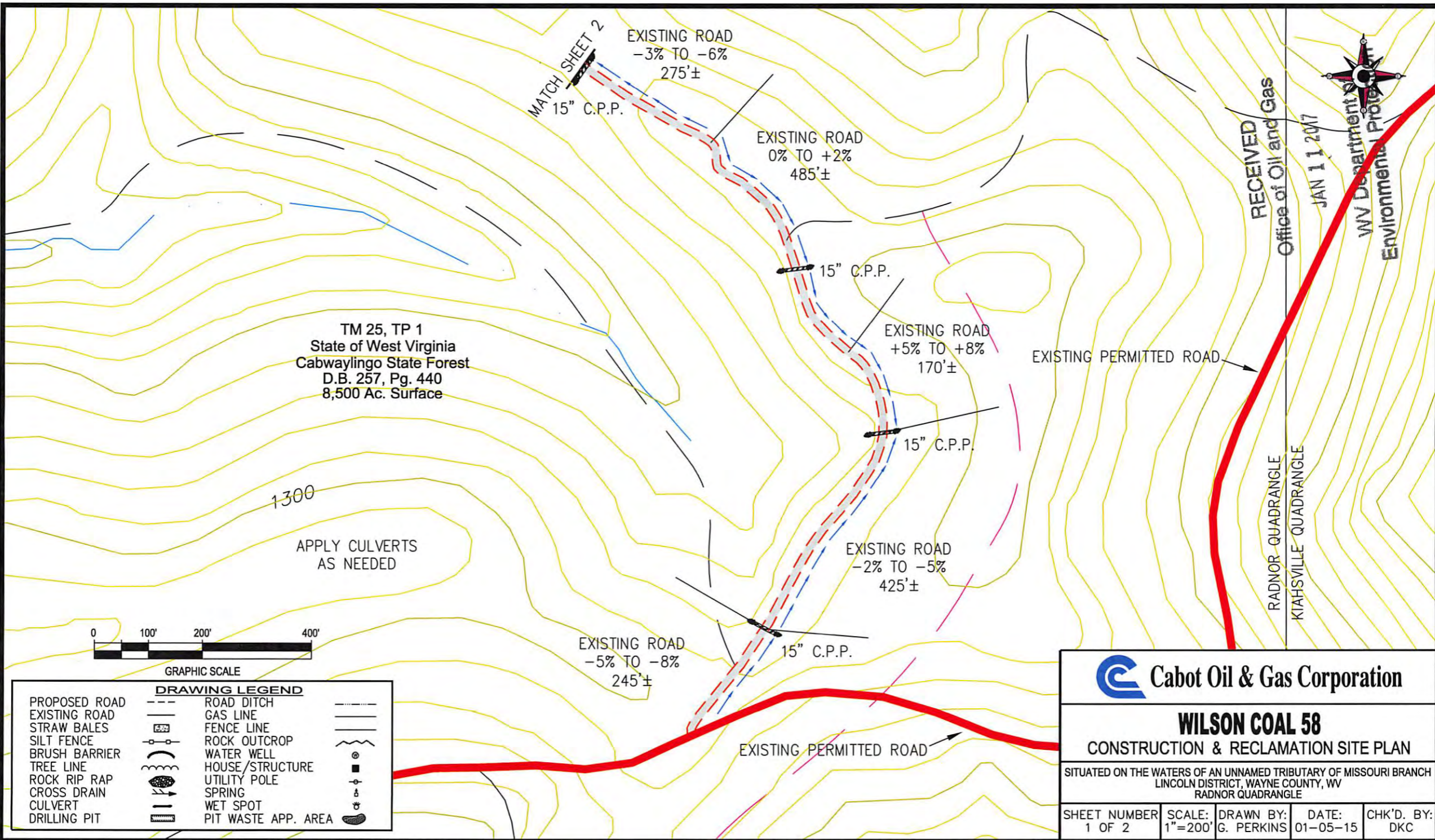
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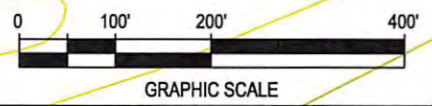
Title: COG Inspection Date: 01-18-2017

Field Reviewed? (  ) Yes (  ) No

9900793P



TM 25, TP 1  
 State of West Virginia  
 Cabwayingo State Forest  
 D.B. 257, Pg. 440  
 8,500 Ac. Surface



DRAWING LEGEND		
PROPOSED ROAD	--- (dashed red)	ROAD DITCH
EXISTING ROAD	--- (dashed blue)	GAS LINE
STRAW BALES	--- (dashed black)	FENCE LINE
SILT FENCE	--- (dashed black with cross-hatch)	ROCK OUTCROP
BRUSH BARRIER	--- (dashed black with wavy lines)	WATER WELL
TREE LINE	--- (dashed black with vertical lines)	HOUSE/STRUCTURE
ROCK RIP RAP	--- (dashed black with diagonal lines)	UTILITY POLE
CROSS DRAIN	--- (dashed black with horizontal lines)	SPRING
CULVERT	--- (dashed black with vertical lines and dots)	WET SPOT
DRILLING PIT	--- (dashed black with vertical lines and dots)	PIT WASTE APP. AREA

**Cabot Oil & Gas Corporation**

**WILSON COAL 58**  
 CONSTRUCTION & RECLAMATION SITE PLAN

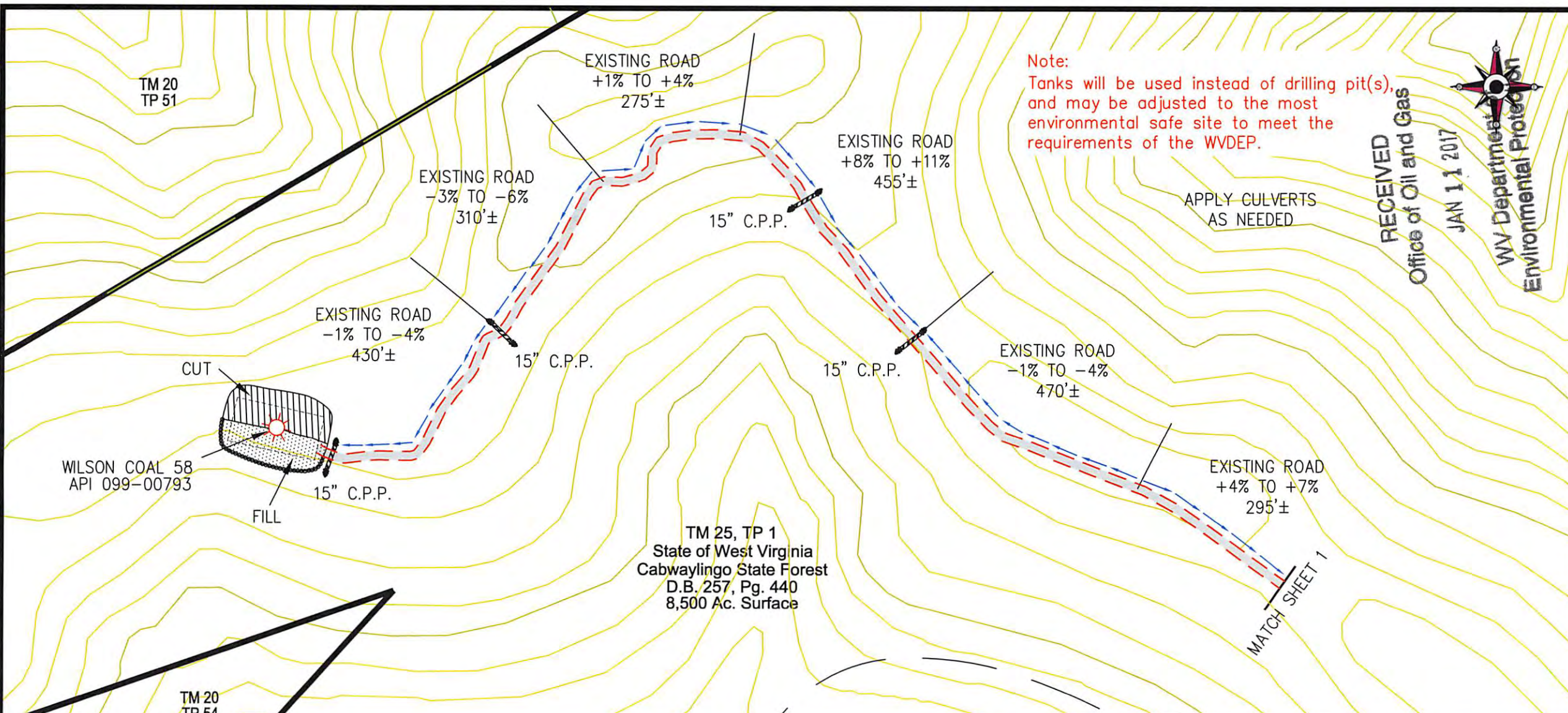
SITUATED ON THE WATERS OF AN UNNAMED TRIBUTARY OF MISSOURI BRANCH  
 LINCOLN DISTRICT, WAYNE COUNTY, WV  
 RADNOR QUADRANGLE

SHEET NUMBER 1 OF 2	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 01-05-15	CHK'D. BY: DKC
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9900793P

TM 20  
TP 51

TM 20  
TP 54



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

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WV Department of  
Environmental Protection

TM 25, TP 1  
State of West Virginia  
Cabwaylingo State Forest  
D.B. 257, Pg. 440  
8,500 Ac. Surface

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**

**WILSON COAL 58**  
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF AN UNNAMED TRIBUTARY OF MISSOURI BRANCH  
LINCOLN DISTRICT, WAYNE COUNTY, WV  
RADNOR QUADRANGLE

SHEET NUMBER 2 OF 2	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 01-05-15	CHK'D. BY: DKC
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**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 WILSON COAL 58**

- 1.) FROM WAYNE, WV DRIVE SOUTH ON STATE ROUTE 152 FOR 24 MILES± TO SECONDARY ROUTE 35.
- 2.) TURN LEFT AND CONTINUE SOUTH ON SECONDARY ROUTE 35 FOR 0.8 MILES± TO AN EXISTING COAL HAUL ROAD.
- 3.) TURN LEFT ONTO THE COAL HAUL ROAD AND CONTINUE IN AN EASTERLY DIRECTION FOR 1.2 MILES± TO AN EXISTING GRAVEL ROAD ON THE LEFT.
- 4.) TURN LEFT ONTO THE EXISTING GRAVEL ROAD AND CONTINUE IN A WESTERLY DIRECTION FOR 0.8 MILE± TO THE EXISTING WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

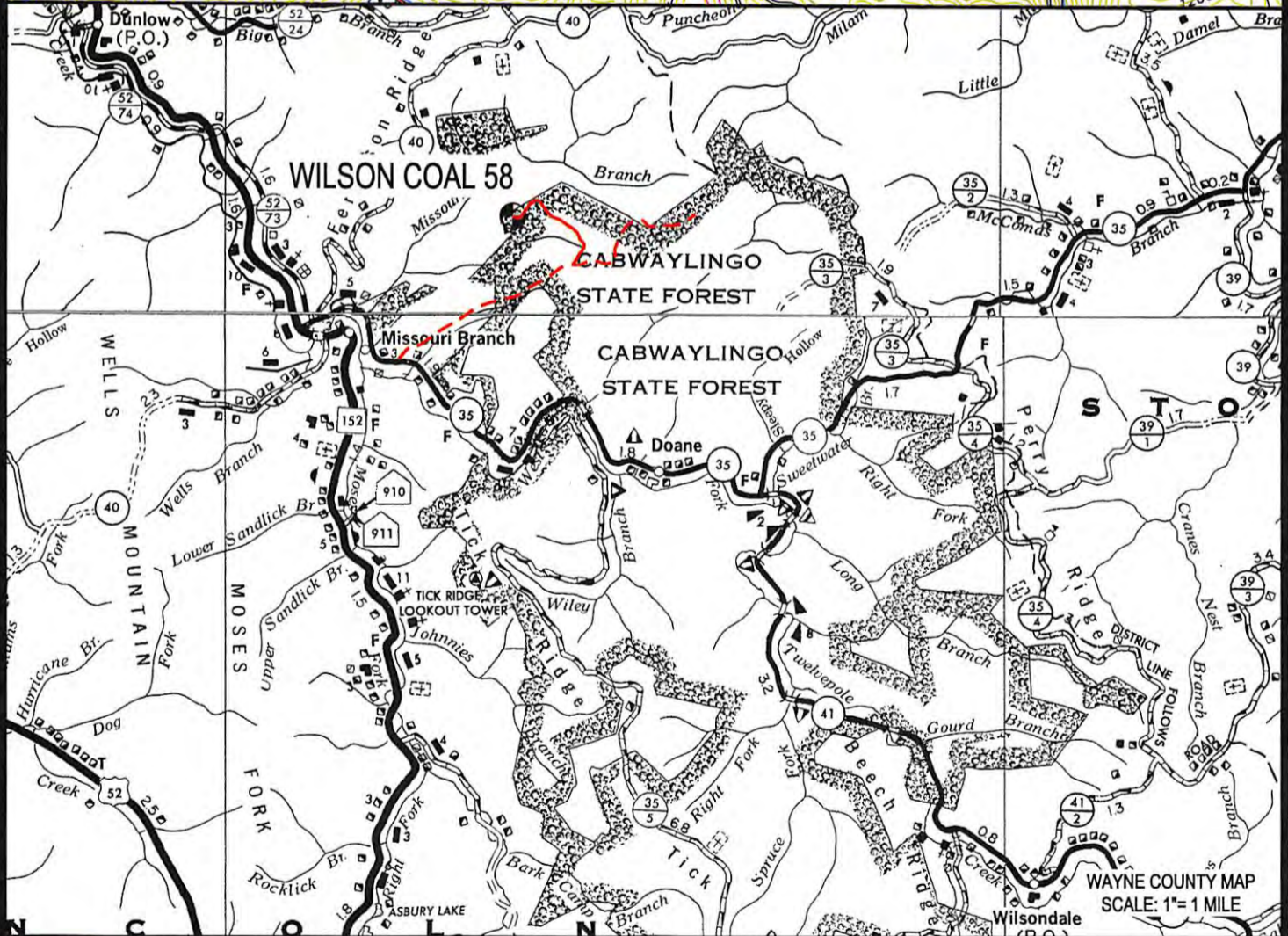
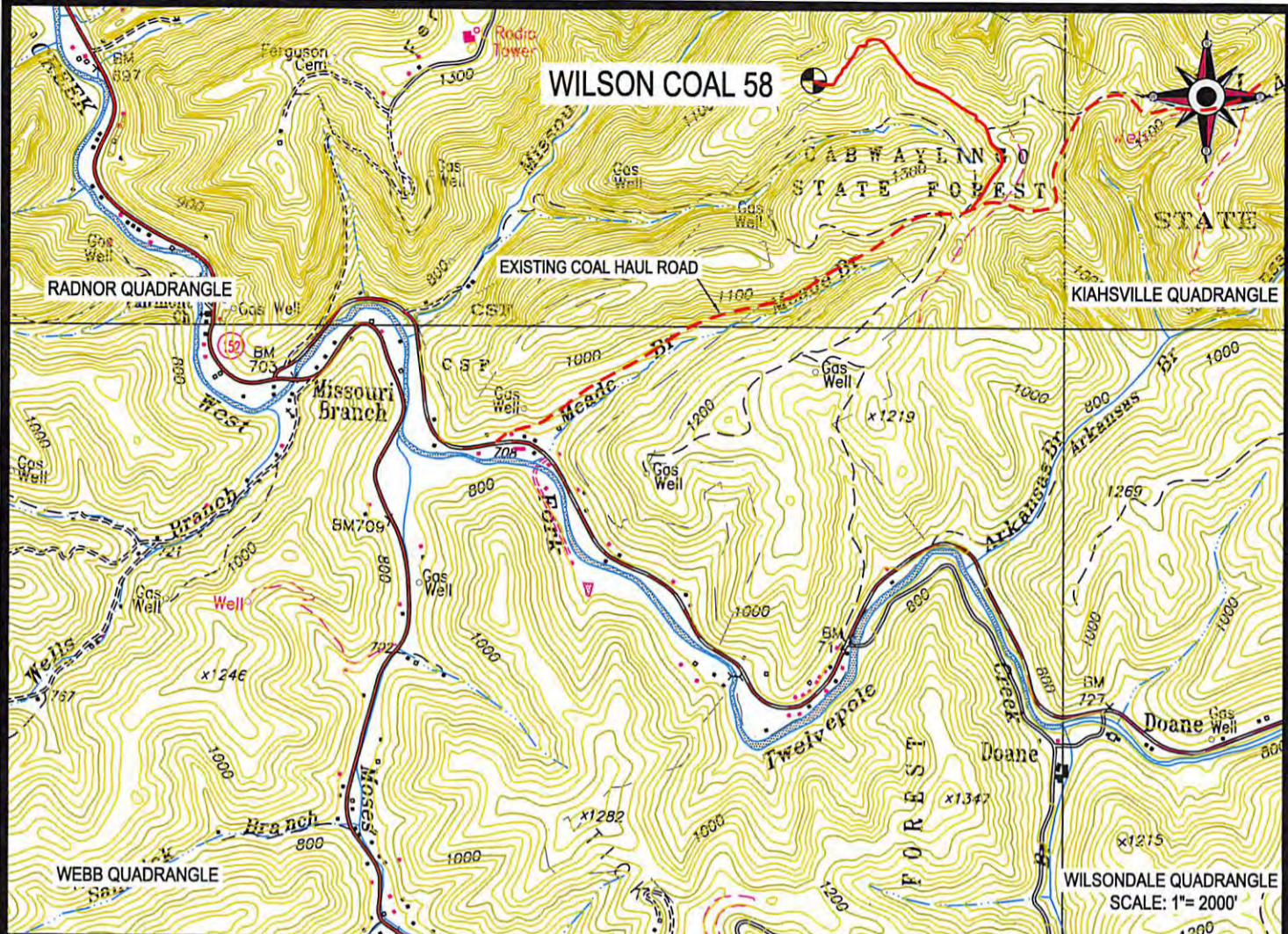
RECEIVED 03/17/2017  
Office of Oil and Gas

JAN 11 2017

WV Department of Environmental Protection



**WILSON COAL 58**  
LINCOLN DISTRICT, WAYNE COUNTY, W.VA  
RADNOR 7.5' QUADRANGLE



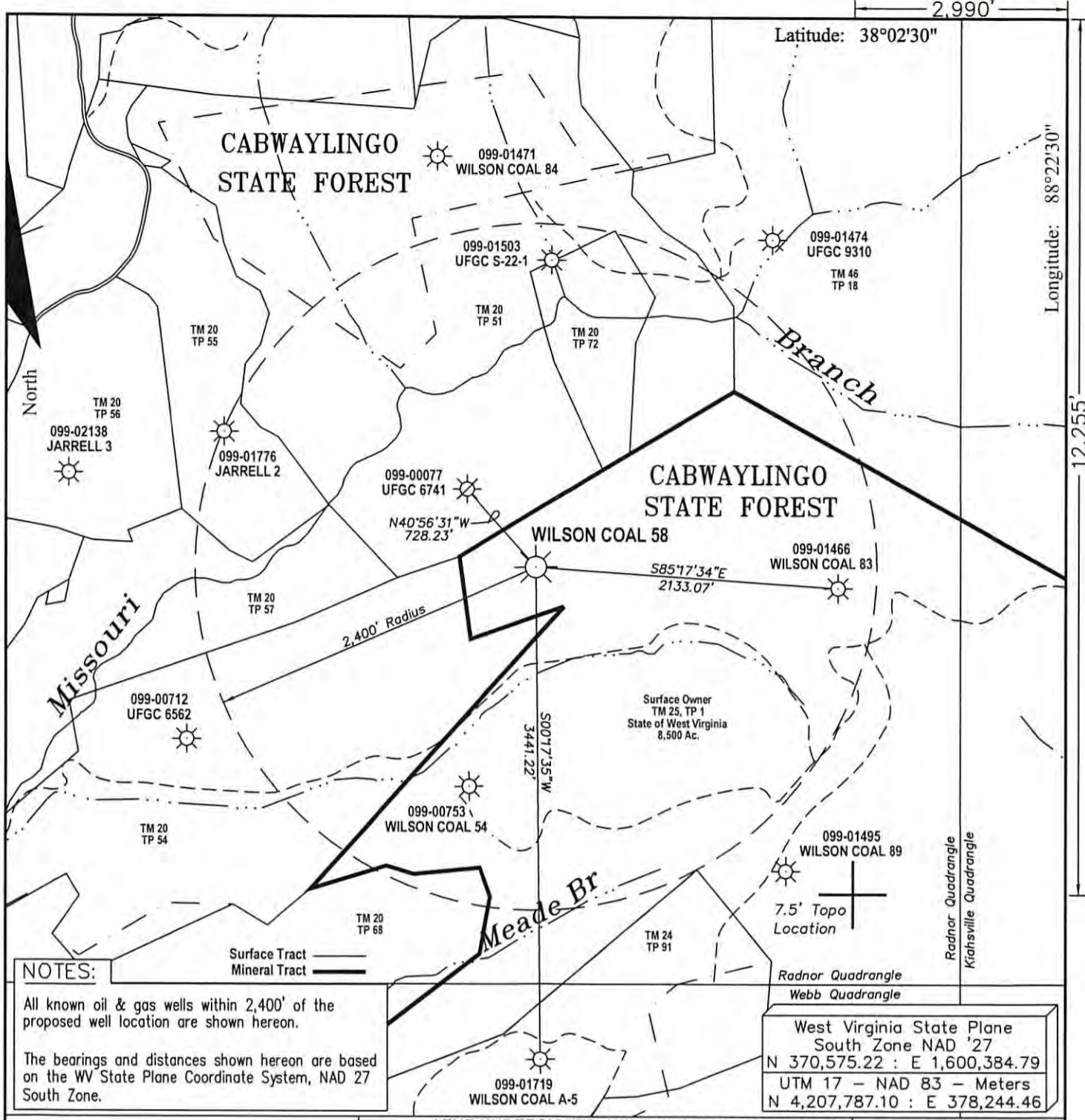
 **Cabot Oil & Gas Corporation**

**WILSON COAL 58**  
LOCATION MAP **03/17/2017**

 **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 AN UNNAMED TRIBUTARY OF MISSOURI BRANCH  
LINCOLN DISTRICT, WAYNE COUNTY, W.VA  
RADNOR QUADRANGLE

PROJECT NO. CABOT	DWG. NO. WILSON COAL 58 LOC
DATE: 01-05-15	SCALE: AS NOTED
CHK'D BY: D.K.C.	
DRAWN BY: G. PERKINS	FILE: C:\PROJECT FOLDER\CABOT



FILE #:


DRAWING #: Wilson Coal 58 ww6

SCALE: 1" = 1000'

MINIMUM DEGREE OF ACCURACY: 1 : 12,729

PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIORNENTAL PROTECTION.

Signed: 

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: January 5, 2015

OPERATOR'S WELL #: Wilson Coal 58

API WELL #: 47 099 00793P  
STATE COUNTY PERMIT

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

WATERSHED: Unnamed Tributary of Missouri Branch ELEVATION: 1,050.48'

COUNTY/DISTRICT: Wayne / Lincoln QUADRANGLE: Radnor

SURFACE OWNER: State of West Virginia ACREAGE: 8.500

OIL & GAS ROYALTY OWNER: Cabot Oil & Gas Corp. ACREAGE: 8.749

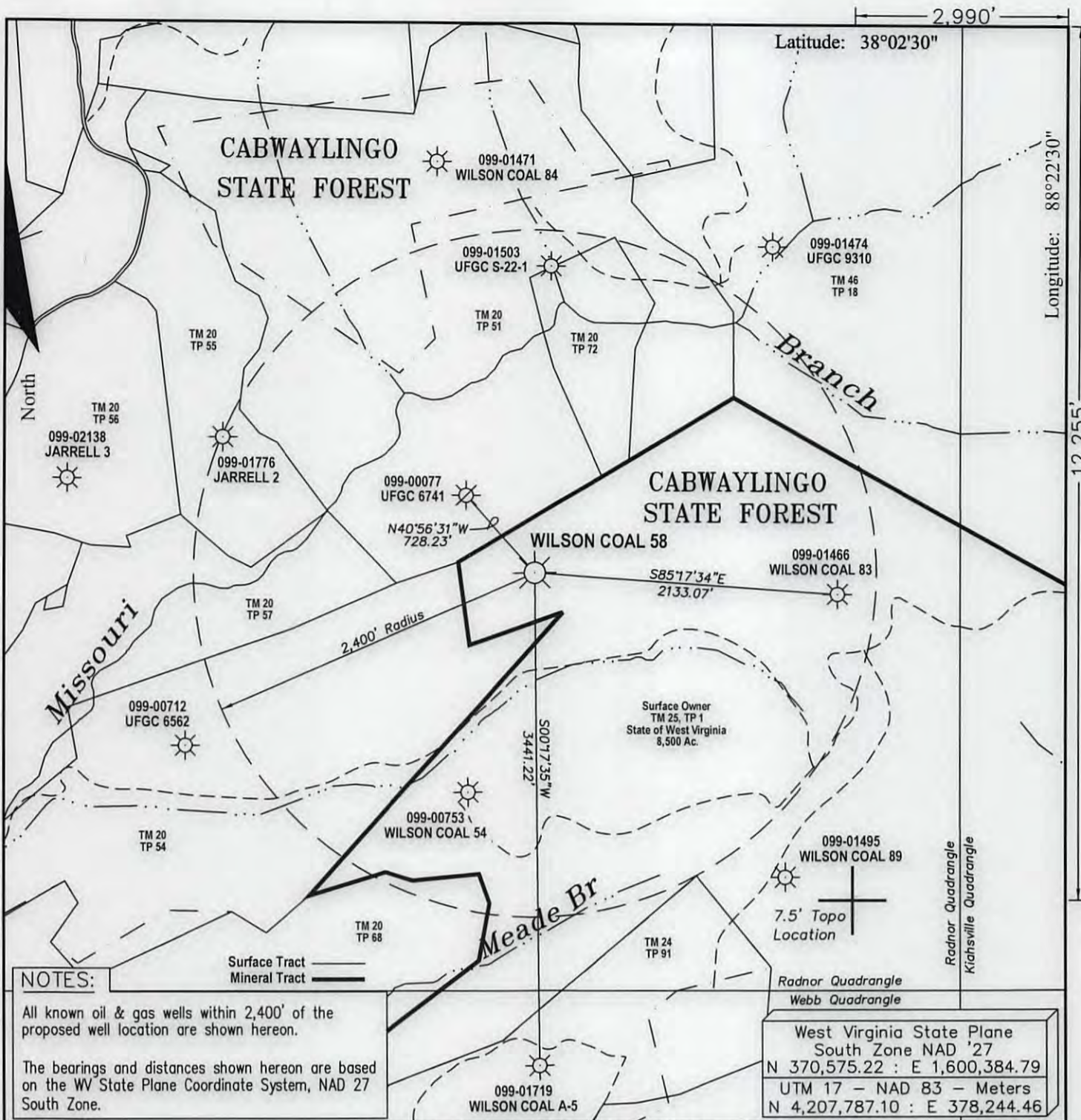
LEASE #: 47-1460M DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY) \_\_\_\_\_

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

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Whitney Johnson  
Address Five Penn Center West, Suite 401 Address P.O. Box 450  
City Pittsburgh State PA Zip Code 15276 City Glasgow State WV Zip Code 25086

RECEIVED  
Office of Oil and Gas  
03/17/2017  
JAN 11 2017  
WV Department of Environmental Protection





**NOTES:**

Surface Tract  
Mineral Tract

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 370,575.22 : E 1,600,384.79  
UTM 17 - NAD 83 - Meters  
N 4,207,787.10 : E 378,244.46

FILE #:  
DRAWING #: Wilson Coal 58 ww6  
SCALE: 1" = 1000'  
MINIMUM DEGREE OF ACCURACY: 1 : 12,729  
PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIROMENTAL PROTECTION.

Signed: \_\_\_\_\_  
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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 Whitney Johnson  
Address Five Penn Center West, Suite 401 Address P.O. Box 450  
City Pittsburgh State PA Zip Code 15276 City Glasgow State WV Zip Code 25086

DATE: January 5, 2015  
OPERATOR'S WELL #: Wilson Coal 58  
API WELL #: 47 099 00793  
STATE COUNTY PERMIT

03/17/2017