



west virginia department of environmental protection

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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Thursday, January 26, 2017
WELL WORK PERMIT
Vertical / Plugging

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

PITTSBURGH, PA 15275

Re: Permit approval for E-3
47-081-00311-00-00

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: E-3
Farm Name: POCAHONTAS LAND CORP.
U.S. WELL NUMBER: 47-081-00311-00-00
Vertical / Plugging
Date Issued: 1/26/2017

Promoting a healthy environment.

01/27/2017

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

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.

ISSUE
11/24/17

1) Date December 20, 2016
2) Operator's
Well No. Pocahontas Land E-3
3) API Well No. 47-081 - 00311

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 2,626.75' Watershed Richland Hollow of Wiley Spring Branch
District Slab Fork County Raleigh Quadrangle Odd

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

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Gary Kennedy Name Contractor Services, Inc.
Address P.O. Box 268 Address 929 Charleston, Road
Nimitz, WV 25978 Spencer, WV 25276

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

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

Work order approved by inspector  Date ~~1/27/17~~ 1/27/17

01/27/2017

Pocahontas Land E-3 API # 47 - 081 - 00311 PLUGGING PROCEDURE

Current Configuration

TD @ 1304'
 8-5/8", 20#/ft, H-40 casing @ 152' (CTS, 50 sx)
 4 1/2", 9.5 #/ft, K-55 casing @ 1304' (50 sx, TOC @ 804')
 2 3/8", 4.6 #/ft, J-55 tubing @ 1222'
 Fresh water @ 80'
 Coal @ 154' - 155' & 304' - 306'
 Ravencliff @ 1168' - 1284'
 Perforations @ 1230' - 1272' (frac'd w/ 250 sx sand)
 Elevation - 2649'

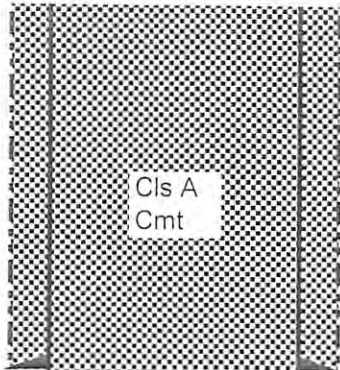
PROCEDURE

1. Contact Pineville Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work.
3. MIRU service rig and blow down well.
4. Lay 2" line from wellhead to tank and stake down securely. *Put Gauge and well for Rock Pressure*
5. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
6. Unpack wellhead.
7. Latch on to 2-3/8" tubing, add 1 jt, lower to 1250'.
8. MIRU Cementing Company.
9. Pump 4 bbls 6% gel followed by 20 sks (4 bbls) of Class A cement for plug 1 from 1250' to 1000'.
10. Displace w/ 4 bbls of 6% Gel.
11. Pull tubing to +/- 800', safely above cement top. WOC for a minimum of eight hours.
12. RIH w/ work string - tag TOC to confirm.
13. TOOH with tubing.
14. Run freepoint on 4 1/2" casing, cut above freepoint, and POOH. (NOTE: cement top is estimated @ 804')
15. TIH with 2-3/8" work string to 750'.
16. Pump 10 bbls 6% gel followed by 42 sks (9 bbls) of Class A cement for cement plug 2 from 750' to 550'. Cement must cover the 4 1/2" casing cut.
17. Displace w/ 2 bbls of 6% Gel.
18. Pull tubing to +/- 350', safely above cement top. WOC for a minimum of eight hours.
19. RIH w/ work string - tag TOC to confirm.
20. PU tubing to 350'.
21. Pump 92 sks (19 bbls) of Class A cement for cement plug 3 from 350' to surface.
22. TOOH with work string and lay down.
23. RDMO Cementing Company.
24. Place monument as required by law on top of well bore.
25. Reclaim well site.

Pocahontas Land E-3
API 47-081-00311
PROPOSED CONFIGURATION
Elevation 2649'

Fresh water @ 80'

Top of Cmt Plug #3 @ Surface

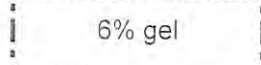


Coal @ 154'-155'

8 5/8", 20 #/ft, H-40 Casing @ 152' KB
Cemented w/ 50 sx Class A to surface

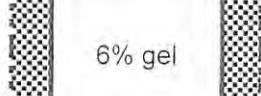
Coal @ 304'-306'

Bottom of Cmt Plug #3 @ 350'



Top of Cmt Plug #2 @ 550'

4 1/2" cut & pulled from 750' +/-
Bottom of Cmt Plug #2 @ 750'
TOC @ 804' KB



Top of Cmt Plug #1 @ 1000'

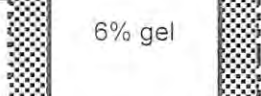


1168'

Ravencliff (frac'd 250 sx sand)

Perforations @ 1230'- 1272'
Bottom of Cmt Plug #1 @ 1250'

1284'



4-1/2" , 9.5 #/ft, K-55 Casing @ 1304' KB
(50 sx Class A cmt)

DTD @ 1304' KB

Schematic is not to scale

J.A. Shirey 12/19/2016

01/27/2017

OX-10
Rev. - 9-71



RECEIVED

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORD

OIL & GAS DIV
DEPT OF MI

Rotary Oil
Cable Gas
Recycling County
Water Flood Storage
Disposal (Kind)

Quadrangle Flattop
Permit No. RAL-311

Company Appalachian Exploration & Dev., Inc.
Address Box 628, Charleston, W. Va.
Farm Pocahontas Land E Acres 297
Location (waters) Richland Frk./Wiley Spr. Br.
Well No. 3 Elev. 2649 Devils Fork
District Slab Fork County Raleigh
The surface of tract is owned in fee by Pocahontas Land Corp.
Address Box 1517, Bluefield, W. Va. 25701
Mineral rights are owned by same as above

Casing and Tubing	Used in Drilling	Left in Well	Cement Job up Cu. Ft. (Sks.)
Size 20 1/8			
Cond. 13 10"			
9 5/8			
8 5/8	152	152	
7			
5 1/2			
4 1/2	1304	1304	
3			
2 - 3/8"	1222	1222	
Liners Used			

Drilling Commenced 1/29/74
Drilling Completed 2/3/74
Initial open flow _____ cu. ft. _____ bbls.
Final production 146 Mcu. ft. per day _____ bbls.
Well open 4.5 hrs. before test 150 RP.
Well treatment details:

Attach copy of cementing record.

Fraced with 500 gals. acid, 420 bbla. gelled water, 25,000# sand. Average 2230 psi. @ 24 BPM, ISIP 1800 15 min. 1200 psi.

Coal was encountered at 154'-16" Feet 304 - 18" Inches
Fresh water 80 Feet _____ Salt Water _____ Feet
Producing Sand Ravencliff 1230-1272 Depth _____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Rock			0	30		
Sand and shale			30	92		
Rock			92	152		
Shale with sand			152	208		
Shale and sand			208	656		
Sandy shale			656	900		
Sand with shale			900	1168		
Sand Ravencliff			1168	1208		
Sand Ravencliff			1208	1284		
Shale			1284	1304		

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Office of Oil and Gas
JAN 04 2017
WV Department of
Environmental Protection

01/27/2017

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
<u>Cement Record</u>						
8-5/8"	50 sks.	Dowell	Circulated to surface			
4-1/2"	50 sks.	Dowell	Top 804'			

01/27/2017

Date March 26 1974
 Great Basins Petr., oper. by Appalachian Explor. & Development, Inc.
 APPROVED:
 By District Production Superintendent
 (Title)

1) Date: December 20, 2016
2) Operator's Well Number
Pocahontas Land E-3

3) API Well No.: 47 - 081 - 00311

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

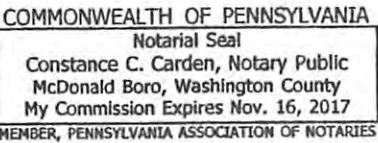
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Pocahontas Land Corporation</u>	Name <u>See Attached Sheet</u>
Address <u>P.O. Box 1517</u>	Address _____
<u>Bluefield, WV 24701</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Pocahontas Land Corporation</u>
_____	Address <u>P.O. Box 1517</u>
_____	<u>Bluefield, WV 24701</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 268 252 Circle Ave</u>	Name <u>None of Record</u>
<u>Nimitz, WV 25978</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 *Kenneth Marcum*
 Its: Regulatory Supervisor
 Address 2000 Park Lane, Suite 300
Pittsburgh, PA 15275
 Telephone (412) 249-3850

Subscribed and sworn before me this 20th day of December 2016
Constance C. Carden Notary Public
 My Commission Expires November 16, 2017

RECEIVED
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 our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

JAN 05 2017
 WV Department of
 Environmental Protection
 01/27/2017

8100311P

COAL OPERATOR(S)
POCAHONTAS LAND E-3
47-081-00311

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

North Star One, LLC
P.O. Box 189
Rhodell, WV 25915

Brooks Run South Mining
2691 Little Birch Road
Sutton, WV 26601

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Office of Oil and Gas

JAN 05 2017

WV Department of
Environmental Protection 01/27/2017

81003117

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Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **\$0.00**

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ **\$1.780**

Adult Signature Restricted Delivery \$ _____

Postage \$ **\$6.430**

Total Postage and Fees \$ _____

Sent To Gary Kennedy
 P.O. Box 268
 Nimitz, WV 25978

Street, Apt. No., or PO Box No. _____
 City, State, Zip+4 _____

12/21/2016 8:34:40 AM

PS Form 3800, April 2015 See Reverse for Instructions

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Extra Services & Fees (check box, add fee as appropriate)

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Return Receipt (electronic) \$ **\$0.00**

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ **\$1.780**

Total Postage and Fees \$ **\$6.430**

Sent To Brooks Run South Mining
 2691 Little Birch Road
 Sutton, WV 26601

Street, Apt. No., or PO Box No. _____
 City, State, Zip+4 _____

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Return Receipt (hardcopy) \$ _____

Return Receipt (electronic) \$ **\$1.35**

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ **\$0.00**

Adult Signature Restricted Delivery \$ _____

Postage \$ **\$1.780**

Total Postage and Fees \$ **\$6.430**

Sent To North Star One LLC
 P.O. Box 189
 Rhodell, WV 25915

Street, Apt. No., or PO Box No. _____
 City, State, Zip+4 _____

12/21/2016 8:34:40 AM

PS Form 3800, April 2015 See Reverse for Instructions

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Return Receipt (hardcopy) \$ **\$0.00**

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ **\$1.780**

Adult Signature Restricted Delivery \$ _____

Postage \$ **\$6.430**

Total Postage and Fees \$ **\$6.430**

Sent To Pocahontas Coal Company LLC
 109 Appalachian Drive
 Beckley, WV 25801

Street, Apt. No., or PO Box No. _____
 City, State, Zip+4 _____

12/21/2016 8:34:40 AM

PS Form 3800, April 2015 See Reverse for Instructions

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Certified Mail Fee \$ **\$3.30**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **\$1.35**

Return Receipt (electronic) \$ **\$0.00**

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ **\$1.780**

Total Postage and Fees \$ **\$6.430**

Sent To Pocahontas Land Corporation
 P.O. Box 1517
 Bluefield, WV 24701

Street, Apt. No., or PO Box No. _____
 City, State, Zip+4 _____

12/21/2016 8:34:40 AM

PS Form 3800, April 2015 See Reverse for Instructions

81 00311 P

WW-9
(2/15)

API Number 47 - 081 - 00311
Operator's Well No. Pocahontas Land E-3

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) Richland Hollow of Wiley Spring Branch Quadrangle Odd

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 *JK*

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*)

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

Subscribed and sworn before me this 20th day of December, 2016

Constance C. Carden

My commission expires 11/16/2017

Notary Public
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

01/27/2017

Cabot Oil & Gas Corporation

Proposed Revegetation Treatment: Acres Disturbed 2.0 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.

Plan Approved by: 

Comments: _____

Title: Inspector Date: 1/3/17

Field Reviewed? (X) Yes () No

GENERAL NOTES:

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

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

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

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

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

SEDIMENT BASINS (TRAPS) WILL BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAINS INLETS AS REQUIRED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL. FIELD CONDITIONS SUCH AS ROCK OUTCROPS AND BEDROCK MAY PROHIBIT INLET TRAPS BEING INSTALLED WHEN THESE CONDITIONS EXIST. ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

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

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

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

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

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

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

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

CONTRACTORS NOTE:

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

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

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



1-800-245-4848

DRAWING LEGEND

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

DRIVING DIRECTIONS FOR POCA E-3

- 1.) FROM THE INTERSECTION OF INTERSTATE 64 WITH INTERSTATE 77 SOUTH OF BECKLEY, DRIVE SOUTHERLY ON INTERSTATE 77 FOR 10.5 MILES± TO THE GHENT EXIT AND EXIT THE HIGHWAY TO SECONDARY ROUTE 48.
- 2.) TURN RIGHT ONTO SECONDARY ROUTE 48 AND GO WESTERLY FOR 5.0 MILES± TO SECONDARY ROUTE 33, IN ODD, WV.
- 3.) TURN LEFT ONTO SECONDARY ROUTE 33 AND GO SOUTHERLY FOR 1.5 MILES± TO SECONDARY ROUTE 33/8.
- 4.) TURN RIGHT ONTO SECONDARY ROUTE 33/8 AND GO SOUTHERLY FOR 2.8 MILES± TO THE BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE LEFT-HAND SIDE OF THE ROAD.
- 5.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 2.8 MILES± TO THE EXISTING WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

01/27/2017

810031P

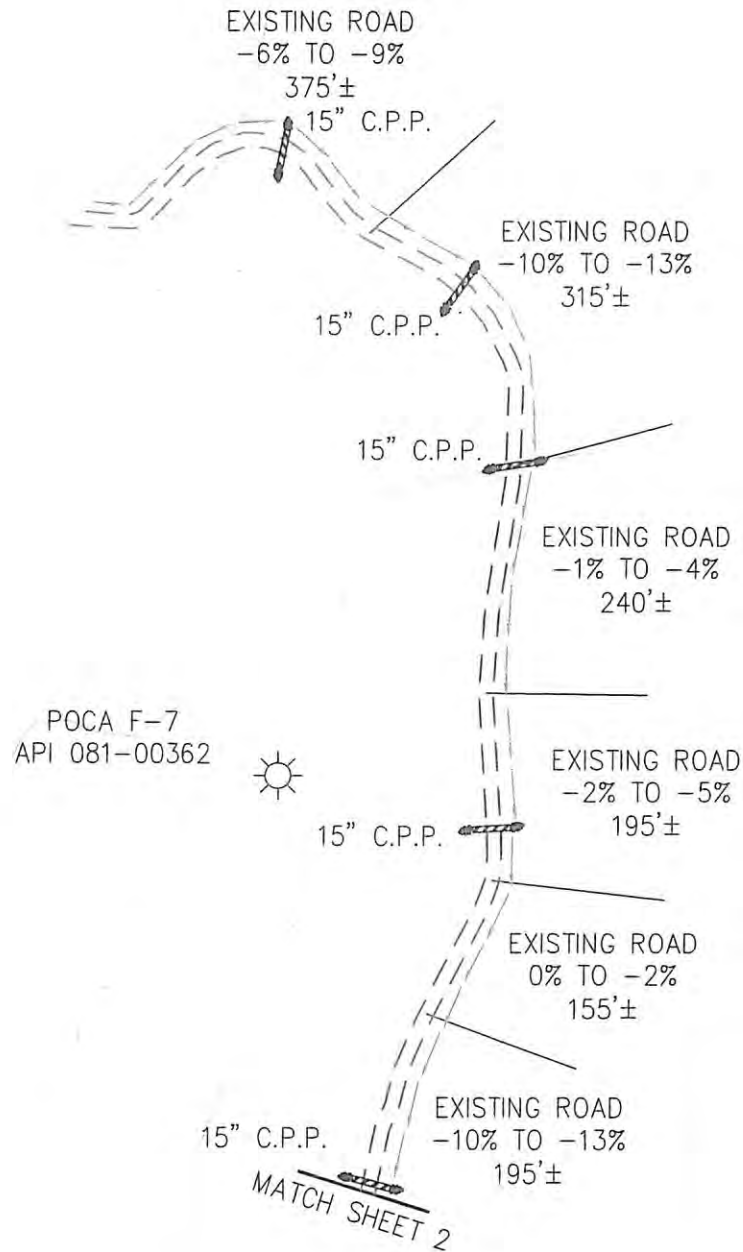
TM 19
TP 1

33
8



[Handwritten signature]

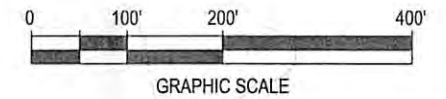
TM 19
TP 2



APPLY CULVERTS
AS NEEDED

Surface Owner
TM 21, TP 9
Pocahontas Land Corporation

33
8



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

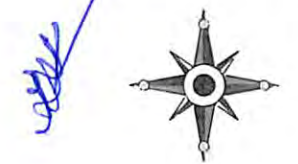
Cabot Oil & Gas Corporation

POCA E-3
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF RICHLAND HOLLOW OF WILEY SPRING BRANCH
SLAB FORK DISTRICT, RALEIGH COUNTY, WV
ODD QUADRANGLE

SHEET NUMBER 1 OF 4	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 07-01-15	CHK'D. BY: DKC
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8100311A

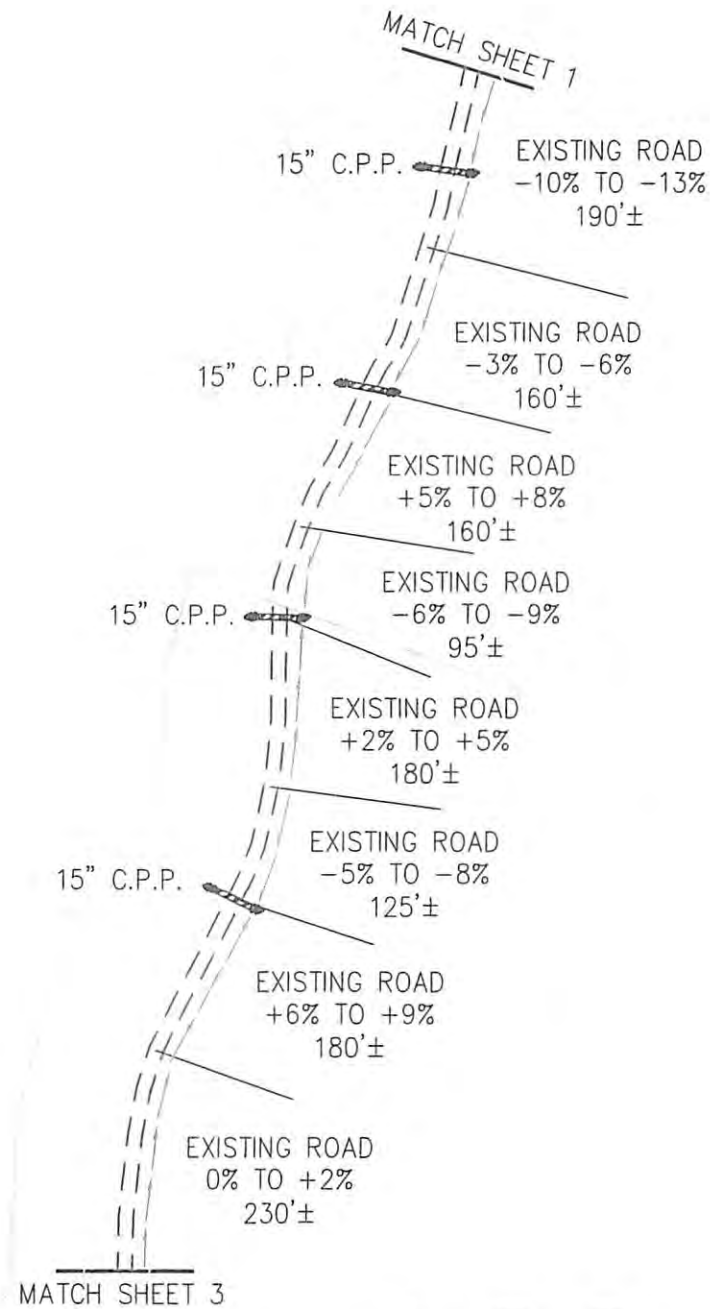


TM 19
TP 2

Surface Owner
TM 21, TP 9
Pocahontas Land Corporation

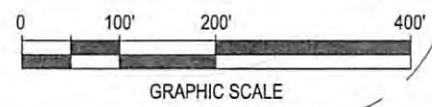
APPLY CULVERTS
AS NEEDED

Surface Owner
TM 21, TP 8
Pocahontas Land Corporation



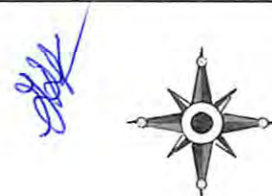
3000

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



POCA E-3				
CONSTRUCTION & RECLAMATION SITE PLAN				
SITUATED ON THE WATERS OF RICHLAND HOLLOW OF WILEY SPRING BRANCH SLAB FORK DISTRICT, RALEIGH COUNTY, WV ODD QUADRANGLE				
SHEET NUMBER 2 OF 4	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 07-01-15	CHK'D. BY: DKC

810031P



MATCH SHEET 2

EXISTING ROAD
0% TO +2%
125'±

EXISTING ROAD
-12% TO -15%
430'±

EXISTING ROAD
-15% TO -18%
300'±

EXISTING ROAD
-8% TO -11%
110'±

EXISTING ROAD
-15% TO -18%
225'±

EXISTING ROAD
-5% TO -8%
190'±

EXISTING ROAD
-15% TO -18%
165'±

EXISTING ROAD
+12% TO +15%
90'±

EXISTING ROAD
-13% TO -16%
460'±

EXISTING ROAD
+5% TO +8%
110'±

EXISTING ROAD
-4% TO -7%
90'±

EXISTING ROAD
+11% TO +14%
110'±

EXISTING ROAD
+4% TO +7%
140'±

EXISTING ROAD
-5% TO -8%
105'±

MATCH SHEET 4
EXISTING ROAD
0% TO -2%
135'±

EXISTING ROAD
+11% TO +14%
120'±

EXISTING ROAD
-3% TO -6%
115'±

Surface Owner
TM 21, TP 9
Pocahontas Land Corporation

APPLY CULVERTS
AS NEEDED

Surface Owner
TM 21, TP 8
Pocahontas Land Corporation

POCA E-2
API 081-00310

 Cabot Oil & Gas Corporation

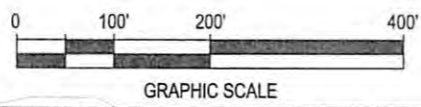
POCA E-3
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF RICHLAND HOLLOW OF WILEY SPRING BRANCH
SLAB FORK DISTRICT, RALEIGH COUNTY, WV
ODD QUADRANGLE

SHEET NUMBER 3 OF 4	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 07-01-15	CHK'D. BY: DKC
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DRAWING LEGEND

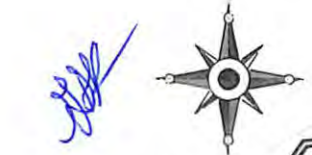
PROPOSED ROAD	ROAD DITCH	
EXISTING ROAD	GAS LINE	
STRAW BALES	FENCE LINE	
SILT FENCE	ROCK OUTCROP	
BRUSH BARRIER	WATER WELL	
TREE LINE	HOUSE/STRUCTURE	
ROCK RIP RAP	UTILITY POLE	
CROSS DRAIN	SPRING	
CULVERT	WET SPOT	
DRILLING PIT	PIT WASTE APP. AREA	



8100311P

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 21, TP 9
Pocahontas Land Corporation



Richland

TM 20
TP 5

POCA E-3
API 081-00311



EXISTING ROAD
-15% TO -18%
130'±

15" C.P.P.

EXISTING ROAD
+3% TO +6%
285'±

EXISTING ROAD
+15% TO +18%
130'±

15" C.P.P.

EXISTING ROAD
-7% TO -10%
135'±

15" C.P.P.

EXISTING ROAD
+6% TO +9%
240'±

EXISTING ROAD
-3% TO -6%
75'±

15" C.P.P.

EXISTING ROAD
+5% TO +8%
115'±

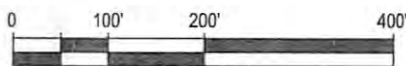
EXISTING ROAD
-7% TO -10%
140'±

MATCH SHEET 3

TM 20
TP 1

APPLY CULVERTS
AS NEEDED

TM 20
TP 2



GRAPHIC SCALE

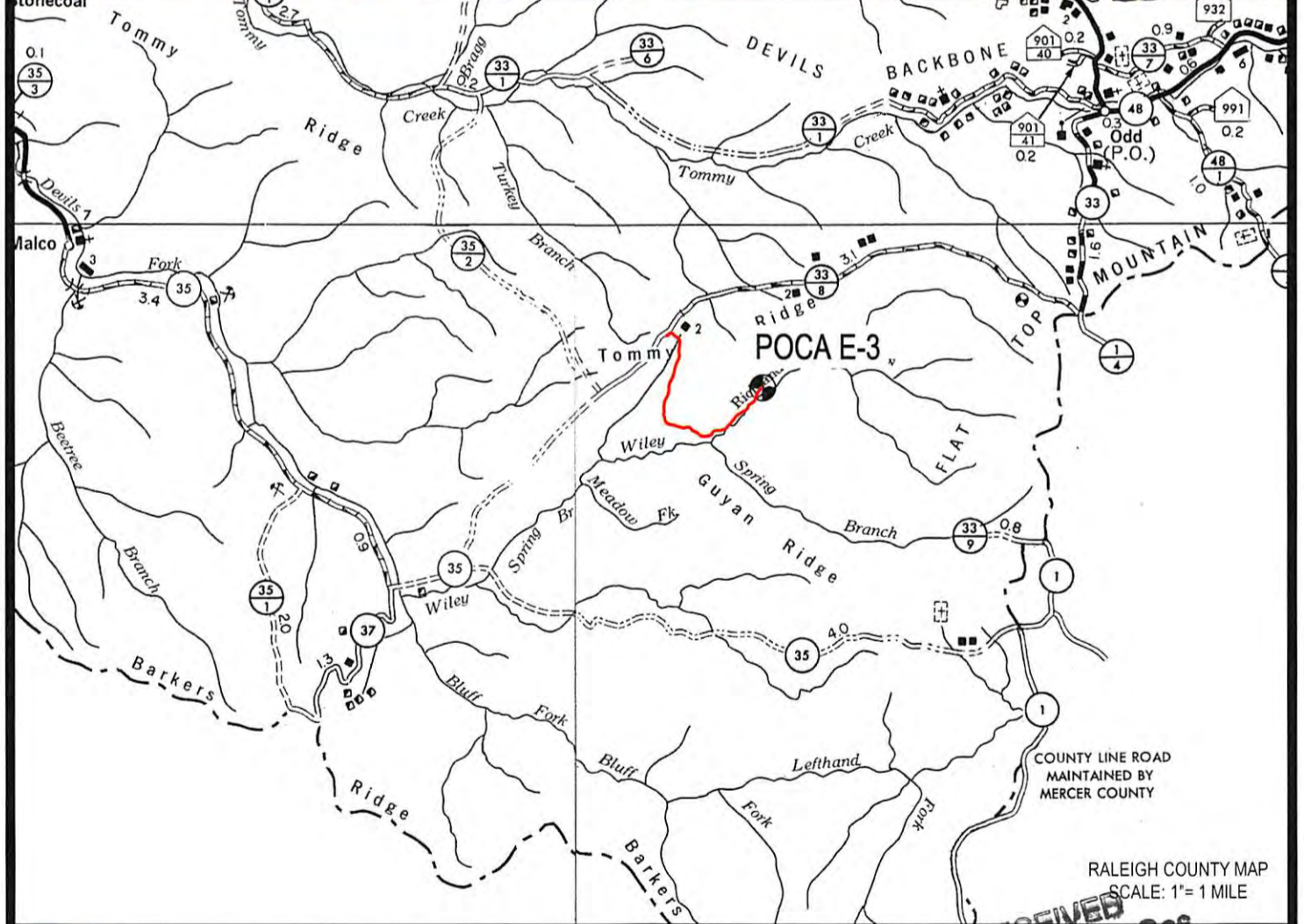
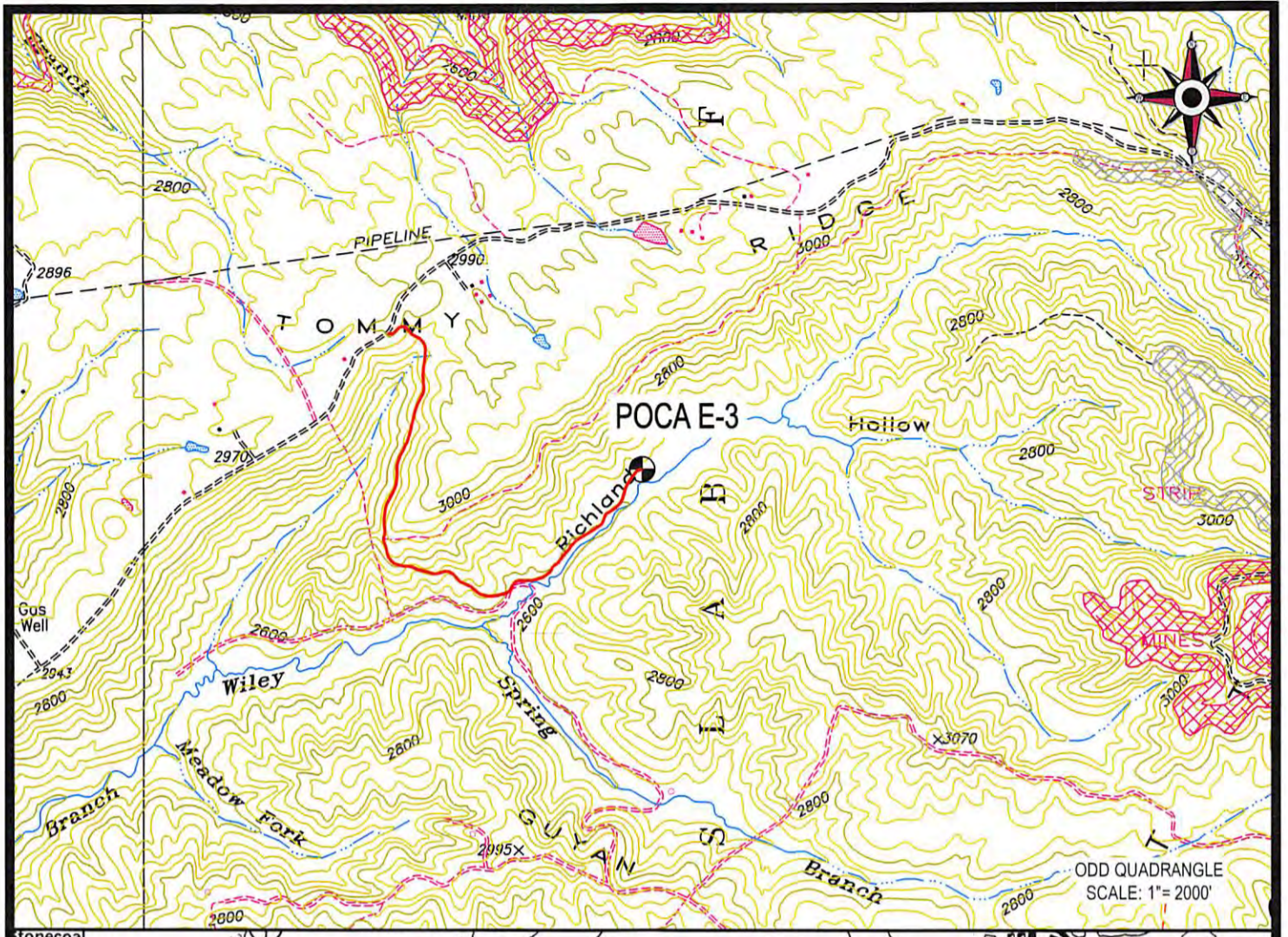
DRAWING LEGEND		
PROPOSED ROAD	ROAD DITCH	
EXISTING ROAD	GAS LINE	
STRAW BALES	FENCE LINE	
SILT FENCE	ROCK OUTCROP	
BRUSH BARRIER	WATER WELL	
TREE LINE	HOUSE/STRUCTURE	
ROCK RIP RAP	UTILITY POLE	
CROSS DRAIN	SPRING	
CULVERT	WET SPOT	
DRILLING PIT	PIT WASTE APP. AREA	

Cabot Oil & Gas Corporation

POCA E-3
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF RICHLAND HOLLOW OF WILEY SPRING BRANCH
SLAB FORK DISTRICT, RALEIGH COUNTY, WV
ODD QUADRANGLE

SHEET NUMBER 4 OF 4	SCALE: 1"=200'	DRAWN BY: G. PERKINS	DATE: 07-01-15	CHK'D. BY: DKC
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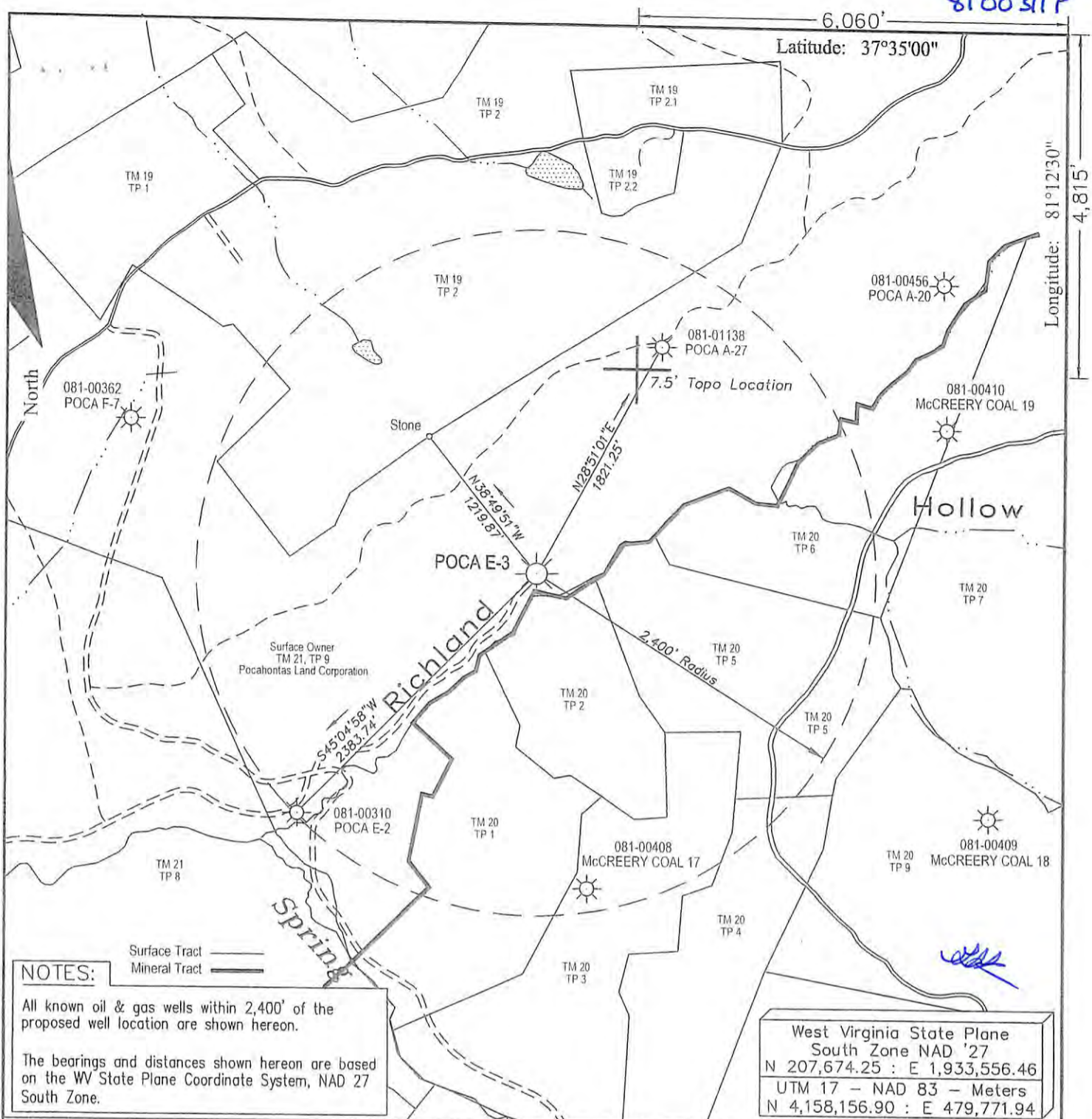
 Cabot Oil & Gas Corporation

 **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 •

POCA E-3
 RECEIVED
 Office of Oil and Gas
 LOCATION MAP
 JAN 05 2017 01/27/2017
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 LOCATED ON THE WATERS OF RICHLAND HOLLOW
 OF WILEY SPRING BRANCH
 SLAB FORK DISTRICT, RALEIGH COUNTY, WV
 ODD QUADRANGLE

PROJECT NO. CABOT	DWG. NO. POCA E-3 LOC.DWG
DATE: 07-01-15	SCALE: AS NOTED
DRAWN BY: G. PERKINS	CHK'D BY: D.K.C.
FILE: C:\PROJECT FOLDER\CABOT	

810031P



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 207,674.25 : E 1,933,556.46
UTM 17 - NAD 83 - Meters
N 4,158,156.90 : E 479,771.94

FILE #:

DRAWING #: Poca E-3 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: _____

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: July 1, 2015

OPERATOR'S WELL #: Poca E-3

API WELL #: 47 081 00311P
STATE COUNTY PERMIT

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

WATERSHED: Richland Hollow of Wilely Spring Branch ELEVATION: 2,626.75'

COUNTY/DISTRICT: Raleigh / Slab Fork QUADRANGLE: Odd

SURFACE OWNER: Pocahontas Land Corporation ACREAGE: 788.49

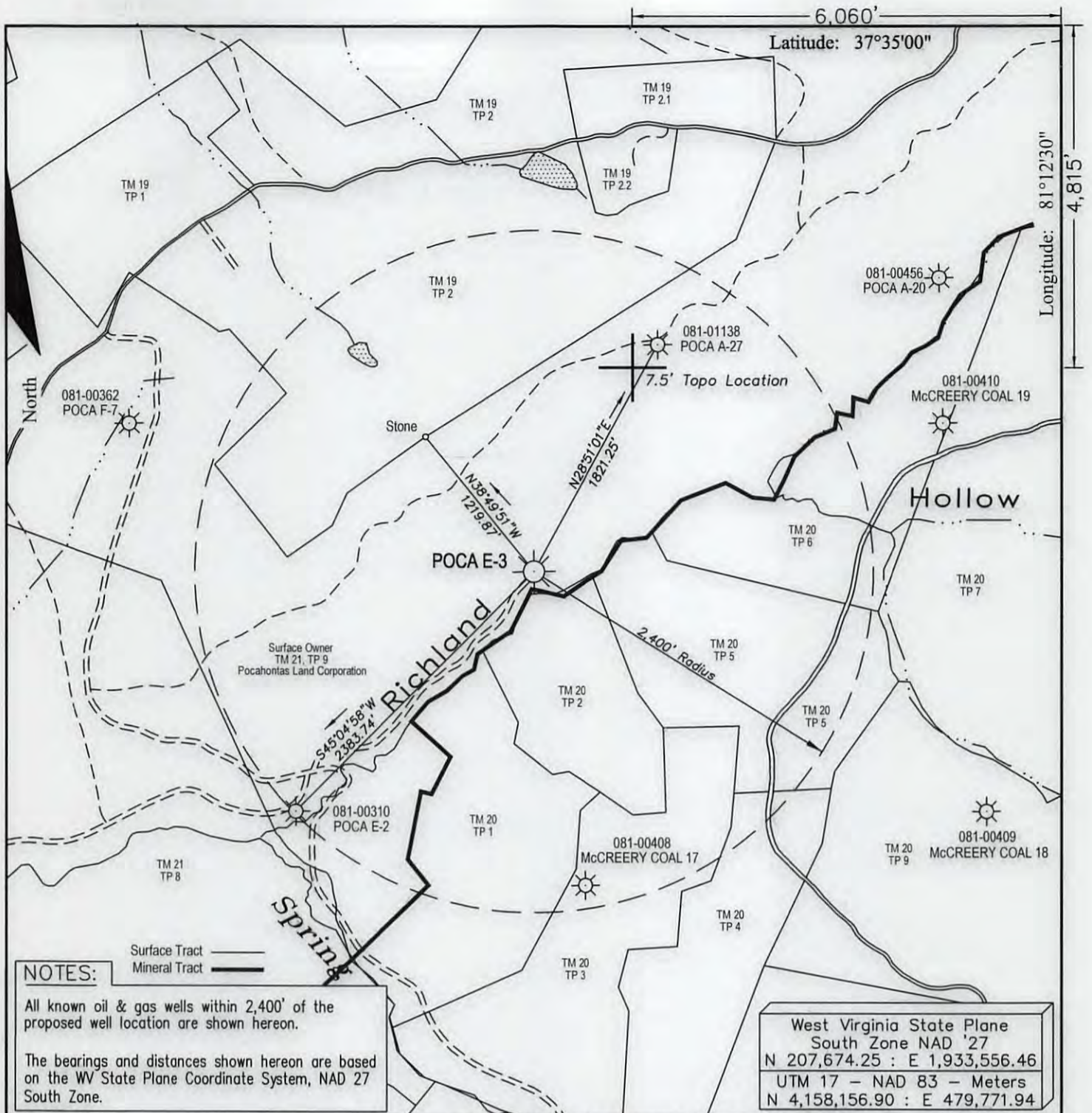
OIL & GAS ROYALTY OWNER: Pocahontas Land Corporation ACREAGE: 6,632

01/27/2017

LEASE #: 47-0501 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



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.

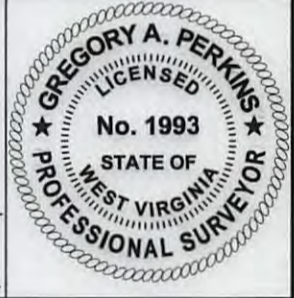
West Virginia State Plane
South Zone NAD '27
N 207,674.25 : E 1,933,556.46
UTM 17 - NAD 83 - Meters
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OPERATOR'S WELL #: Poca E-3
API WELL #: 47 081 00311 P
STATE COUNTY PERMIT

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

WATERSHED: Richland Hollow of Wiley Spring Branch ELEVATION: 2,626.75'

COUNTY/DISTRICT: Raleigh / Slab Fork QUADRANGLE: Odd

SURFACE OWNER: Pocahontas Land Corporation ACREAGE: 788.49

OIL & GAS ROYALTY OWNER: Pocahontas Land Corporation ACREAGE: 6,632

LEASE #: 47-0501 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



North Region
December 20, 2016

Chief
West Virginia Division of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Pocahontas Land E-3
Slab Fork District, Raleigh County, WV
API # 47-081-00311
Written Application to plug and abandon wellbore

Dear Chief:

In accordance with Article 22-6-23 of the Code of State Regulations regarding oil and gas operations, please find attached a formal application for the plug and abandonment of the subject well.

Notices of our intention to plug this wellbore have been sent to surface owner, coal owner, and coal operators associated with this well. Copies of the certified mail receipts are attached for your records.

If you have any questions or need additional information, I can be reached at 412-249-3850.

Sincerely,

A handwritten signature in blue ink that reads "Kenneth L. Marcum".

Kenneth L. Marcum
Regulatory Supervisor

RECEIVED
Office of Oil and Gas
JAN 05 2017
WV Department of
Environmental Protection