west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

July 30, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4700105, issued to CABOT OIL & GAS CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: 60
Farm Name: POCAHONTAS LAND
API Well Number: 47-4700105
Permit Type: Plugging
Date Issued: 07/30/2015

4700105P

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.

4700105P

WW-4B
Rev. 2/01

1) Date June 15, 2015
2) Operator's
Well No. Pocahontas Land #60
3) API Well No. 47-047 - 00105

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 2,419.98' Watershed Mountain Fk of Big Creek of Dry Fork of Tug Fork
District Big Creek County McDowell Quadrangle Gary

6) Well Operator Cabot Oil & Gas Corporation
Address Five Penn Center West, Ste. 401
Pittsburgh, PA 15276

7) Designated Agent Whitney Johnson
Address P.O. Box 454
Glasgow, WV 25086

8) Oil and Gas Inspector to be notified
Name Gary Kennedy
Address P.O. Box 268
Nimitz, WV 25978

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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JUN 22 2015
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 6/21/15

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Pocahontas Land #60
API # 47 - 047 - 00105
PLUGGING PROCEDURE

Current Configuration

TD @ 5166'
13-3/8" – 54.5# casing @ 201' on shoe
10-3/4" – 32.75# casing @ 150' on shoe
8-5/8" – 24# casing @ 1020' on shoe
7" – 23# casing @ 3893' on lead packer
Coal @ 25' – 27', 457' – 461', & 1406' – 1409'
Berea @ 5133' – 5158' & shot from 5133' – 5159'
Big Lime@ 3787' – 4479' with gas show @ 3793' – 3798'
Gas show @ 1530'

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 pit/tank and stake down securely.
5. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
6. Unpack wellhead.
7. TIH with 2-3/8" work string to 5160'.
8. MIRU Cementing Company.
9. Pump 40 bbls 6% gel followed by 35 sks of Class A cement for plug 1 from ~~5600'~~ 5160 to 5000'.
10. Displace w/ 19 bbls of 6% Gel.
11. TOOH with work string. Let cement plug set for a minimum of eight hours.
12. Attempt to pull 7" casing.
13. If unable to pull 7", run freepoint, cut above freepoint, and POOH.
14. TIH with 2-3/8" work string to 3900'.
15. Pump 100 bbls 6% gel followed by 60 sks of Class A cement for cement plug 2 from 3900' to 3700'. Cement must cover the 7" casing cut.
16. Displace w/ 14 bbls of 6% Gel.
17. TOOH with work string.
18. Pull 8-5/8", 10-3/4", & 13-3/8" casing strings. If unable to pull, run freepoint on casing strings, cut casing above freepoint, and POOH with casing.
19. If 8-5/8" casing was completely pulled, TIH w/ work string to 1600', pump 20 bbls 6% gel, and go to step 24.
20. If 8-5/8" casing needed to be cut and pulled, TIH with 2-3/8" work string to 2150'.
21. Pump 100 sks of Class A cement for cement plug 3. Cement must cover the 8-5/8" casing cut.
22. Displace w/ 7 bbls of 6% Gel.
23. Pull work string up to 1600'.
24. Pump 100 bbls 6% gel followed by 140 sks of Class A cement for cement plug from 1600' to 1300'.
25. Displace w/ 5 bbls of 6% Gel.
26. If 10-3/4" casing was completely pulled, pull work string up to 500', pump 20 bbls 6% gel, and go to step 31.
27. If 10-3/4" casing needed to be cut and pulled, pull work string to up 1120'.
28. Pump 170 sks of Class A cement for cement plug. Cement must cover the 10-3/4" casing cut.
29. Displace w/ 3 bbls of 6% Gel.

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30. Pull work string up to 500'.
31. Pump 70 sks of Class A cement for plug from 500' to 400'.
32. Displace w/ 1 ½ bbls of 6% Gel.
33. Pull work string up to 100' and pump 120 sks of Class A cement for plug 3 from 100' to surface.
34. TOOH with work string and lay down.
35. RDMO Cementing Company.
36. Place monument as required by law on top of well bore.
37. Reclaim well site.

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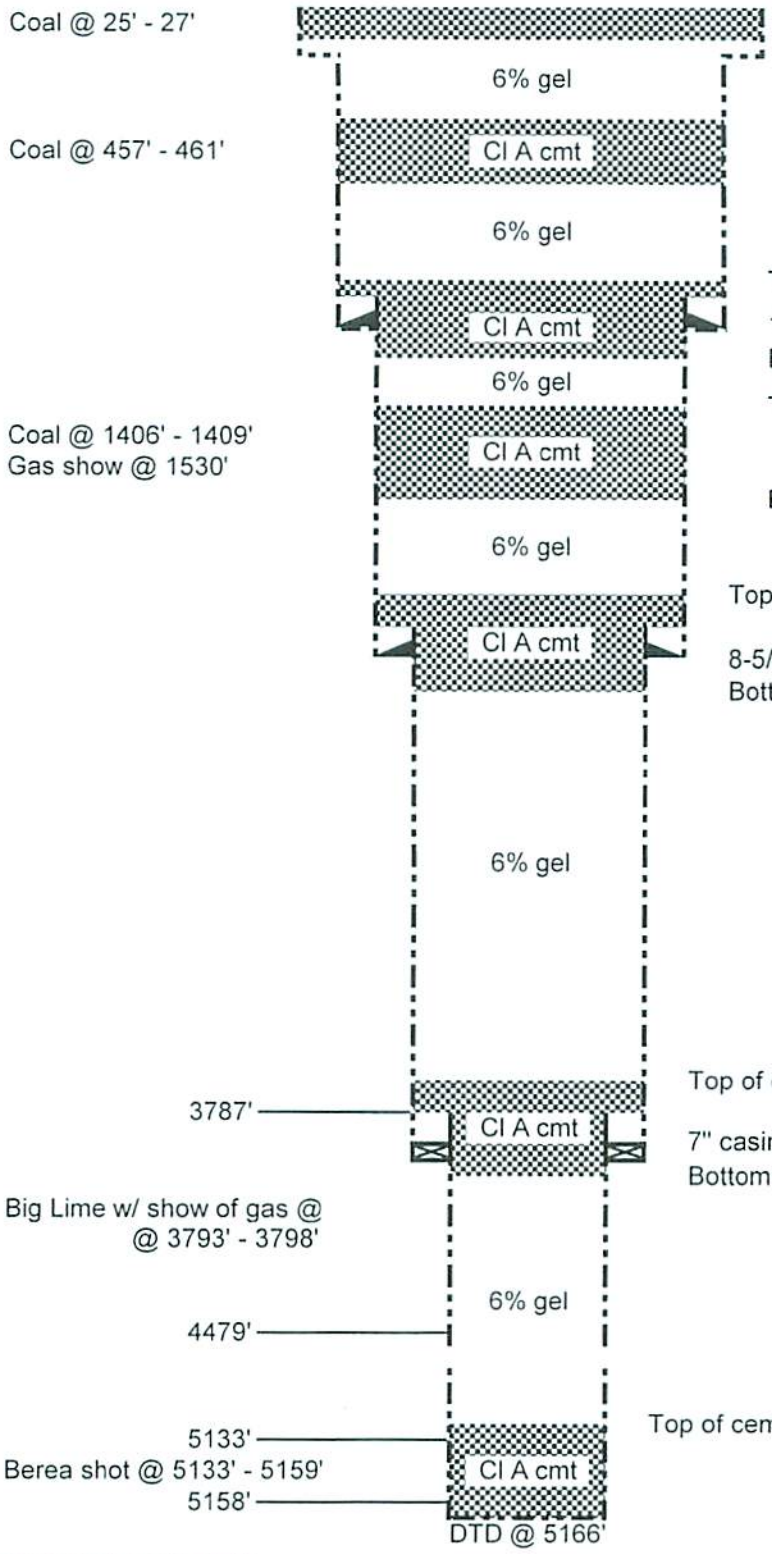
POCAHONTAS LAND #60

API 47-047-00105

PROPOSED CONFIGURATION



Schematic is not to scale

T. Ott 09/16/14

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FORM W-3-EM-4-52 Well Rec
McD-105

GODFREY L. CABOT, INC.

WELL RECORD

SERIAL NO. 1367 OPERATING DISTRICT Southern Map Square Lot No. Warrant No. -6-36

FARM Pocahontas Land Corporation NO. 60 LEASE NO.

COUNTY McDowell TAX DISTRICT TOWNSHIP Big Creek STATE W. Va.

DRILLING COMMENCED March 19, 1952 DRILLING COMPLETED October 1, 1952

CONTRACTOR Company tools ADDRESS

ROCK PRESSURE RECORD

NOT TAKEN Sand lbs., in hrs.
Sand lbs., in hrs.
Sand lbs., in hrs.

PRODUCING SAND RECORD

Berea Sand, from 5133 to 5159 Init. Prod. 61 M. C. F.
Sand, from to Init. Prod. M. C. F.
Sand, from to Init. Prod. M. C. F.

OPEN FLOW
Time, Condition: When cleaned out:
10ths Water Mercury in inch opening
Volume 174 M. C. F.

24 HOUR PRODUCTION TEST AFTER TUBING
M. C. F. Line Pressure
Bbls. Oil in 24 Hours

TUBED AND SHUT IN Date
Packer, Size Kind
Set, Depth Size Anchor
Perf. Top Bottom
Perf. Top Bottom

ELEVATION: 2426

CASING RECORD

SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL	HOW CASING SET
13"	54.5	201	201	
10"	32.75	1096	1096	
8"	24	2130	2130	Shoe.
7"	23	3893	3893	Lead packer

SHOOTING RECORD

Shot with 120 qts. from 5133 to 5159 Date 10-2-52
Gauge Before Shot 61 Mcf Gauge 45 Min. After Shot 391

FORMATION	COLOR	TOP	BOTTOM	STEEL LINE MEASUREMENTS	HARD OR SOFT	OIL, GAS OR WATER	DEPTH FOUND	REMARKS
Soil		0	10					
Sand		10	25					
Coal		25	27					
Lime		27	50					
Sand		50	67					
Slate & Shell		67	191					
Lime		191	202					
Sand		202	234					
Lime		234	290					
Sand		290	308					
Slate		308	420					
Sand		420	450					
Lime		450	457					
Coal		457	461					
Lime		461	470					
Sand		470	610					
Slate & Shell		610	805					
Lime		805	847					
Sand		847	930					
Slate & Shell		930	1012					
Sand		1012	1090					
Lime		1090	1113					
Sand		1113	1176					
Slate		1176	1206					
Sand		1206	1324					
Slate & Shell		1324	1406					
Coal		1406	1409					
Sand		1409	1468					
Slate & Shell		1468	1502					
Sand		1502	1550			Gas	1530	Smell.
Slate & Shell		1550	1637					
Sand		1637	1696					
Lime		1696	1765					
Sand		1765	1788					
Shale		1788	1809					
Red Rock		1809	1921					

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NOV 1952
WEST VIRGINIA
DEPARTMENT OF MINES

SERIAL NO. 1367 FARM Pocahontas Land NO. 60 OPERATING DIST. TOWNSHIP Southern MAP SQUARE LOT NO. WARRANT NO.

4700105P

MCD

SERIAL NO. 1367 FARM Pocahontas Land Corp. NO. OPERATING DIST Southern MAP SQUARE -6
TOWNSHIP LOT NO.
WARRANT NO.

FORMATION	COLOR	TOP	BOTTOM	STEEL LINE MEASUREMENTS	HARD OR SOFT	OIL, GAS OR WATER	DEPTH FOUND	REMARKS
Slate & Shell		1921	1958					
Red Rock		1958	1978					
Slate & Shell		1978	2118					
Sand		2118	2180					
Slate & Shell		2180	2282					
Sand		2282	2416					
Lime		2416	2536					
Red Rock		2536	2675					
Slate & Shell		2675	2738					
Red Rock		2738	2756					
Slate & Shell		2756	2797					
Red Rock		2797	2854					
Slate & Shell		2854	3065					
Red Rock		3065	3210					
Lime		3210	3270					
Red Rock		3270	3289					
Lime		3289	3478					
Sand		3478	3537					
Slate & Shell		3537	3649					
Lime		3649	3787					
Big Lime		3787	4479			Gas	3793-3798;	Show.
Injun	Red	4479	4522					
Shale		4522	4536					
Weir		4536	4765					
Slate & Shell		4765	5029					
Black Lime		5029	5052					
Slate & Shells		5052	5103					
Brown Shale		5103	5118					
Black Lime		5118	5133	5122				
Berea		5133	5158					
Slate		5158						
Total Depth			5166					

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TOTAL DEPTH

DATE

APPROVED

FOREM

4700105P

WW-4A
Revised 6-07

1) Date: June 15, 2015
2) Operator's Well Number
Pocahontas Land #60

3) API Well No.: 47 - 047 - 00105

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Pocahontas Land Corporation
Address: P.O. Box 1517
Bluefield, WV 24701

(b) Name:
Address:

(c) Name:
Address:

6) Inspector: Gary Kennedy
Address: P.O. Box 268
Nimitz, WV 25978
Telephone: (304) 382-8402

5) (a) Coal Operator
Name: See Attached Sheet
Address:

(b) Coal Owner(s) with Declaration
Name: Pocahontas Land Corporation
Address: P.O. Box 1517
Bluefield, WV 24701

Name:
Address:

(c) Coal Lessee with Declaration
Name: National Resources, Inc. / Consolidation Coal Co.
Address: P.O. Box 1085, Beckley, WV 25801 / 1000 Consol Energy Dr., Canonsburg, PA 15317

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: Five Penn Center West, Suite 401
Pittsburgh, PA 15276
Telephone: (412) 249-3850

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

Subscribed and sworn before me this 15th day of June, 2015
Constance C. Carden Notary Public
My Commission Expires November 16, 2017

Received
Office of Oil & Gas
JUN 22 2015

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.

4700105P

COAL OPERATORS
POCAHONTAS LAND #60
47-047-00105

Timco Energy, Inc.
P.O. Box 1030
Bluefield, VA 24605

Black Arrow Coal Corporation
P.O. Box 1247
Wise, VA 24293

C & A Coal Co.
P.O. Box 1030
Bluefield, VA 24605

Baystar Coal Co.
P.O. Box 1084
Bluefield, VA 24605

Black Wolf Mining Company
640 Clover Dew Dairy Road
Princeton, WV 24740

Bluestone Coal Corporation
100 Cranberry Creek Drive
P.O. Box 1085
Beckley, WV 25801

GMAX, Inc.
3324 Pennsylvania Avenue
Suite 222
Charleston, WV 25302

Regal Rock, Inc.
Rt. 123 Mercer Mall Road
Bluefield, WV 24701

Riverside Energy Company, LLC
P.O. Box 16429
Bristol, VA 24209

Westwood Mining Company, Inc.
P.O. Box 1030
Bluefield, VA 24605

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Office of Oil & Gas
JUN 22 2015

4700105P

WW-9
(5/13)

API Number 47 - 047 - 00105
Operator's Well No. Pocahontas Land 60

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) 0507020101 Mountain Fork of Big Creek Quadrangle 359 - Gary

Elevation 2419.98 County 047- McDowell District 02 - Big Creek

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

Will a pit be used for drill cuttings? Yes _____ No X

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

ANY WELL EFFLUENT MUST BE CONTAINED AND DISPOSED OF PROPERLY. gwm

_____ Land Application
_____ Underground Injection (UIC Permit Number _____)
_____ Reuse (at API Number _____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
■ Other (Explain No treated pit wastes will be produced

Will closed loop system be used? N/A

Drilling medium anticipated for this well? 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

Received
Office of Oil & Gas
JUN 22 2015

Subscribed and sworn before me this 15th day of June, 20 15

Constance C. Carden 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

My commission expires 11/16/2017

Form WW-9

Operator's Well No. Pocahontas Land 60

Proposed Revegetation Treatment: Acres Disturbed 6.00 Prevegetation pH 6.6

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch Pulp Fiber at 1/2 to 3/4 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Attach:
Drawing(s) of road, location,pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

Comments:

Title: Inspector Date: 6/21/15

Field Reviewed? (_____) Yes (_____) No

4700105P

GENERAL NOTES:

1.) THESE DRAWINGS ARE 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 UNFORSEEN CIRCUMSTANCES, THE AS-BUILT LOCATION OF THESE STRUCTURES MAY VARY SLIGHTLY FROM THE LOCATION SHOWN ON THE ATTACHED DRAWINGS.

2.) ALL ROADS SHOWN THEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE GUIDELINES AND REQUIREMENTS OF THE WV DEP OIL & GAS EROSION AND SEDIMENT CONTROL MANUAL.

3.) ALL CULVERTS SHOWN ON THESE DRAWINGS ARE PROPOSED AND WILL BE A MINIMUM OF 15" IN DIAMETER UNLESS OTHERWISE NOTED.

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

5.) SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL STRUCTURES/MEASURES IN ADDITION TO THOSE SHOWN ON THE ATTACHED DRAWINGS WILL BE INSTALLED WHERE AND WHEN DEEMED NECESSARY. SUCH ADDITIONAL MEASURES MAY CONSIST OF SILT FENCES OR OTHER MEASURES AS OUTLINED IN THE EROSION AND SEDIMENT CONTROL MANUAL.

6.) SEDIMENT BASINS (TRAPS) WILL BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAIN INLETS AS REQUIRED IN THE WV-DEP OIL & 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.

7.) SEDIMENT BARRIERS OF EITHER WINDROWED BRUSH, FILTER FENCE ET CETERA WILL BE INSTALLED AND MAINTAINED BELOW THE OUTFALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DISCHARGE POINTS FROM EITHER THE ROADWAY OR SITE LOCATIONS.

8.) ALL NECESSARY TIMBER AND BRUSH WILL BE REMOVED FROM THE PROPOSED ROADWAY AND SITE LOCATIONS BY CLEARING AND GRUBBING ACTIVITIES. ANY MARKETABLE TIMBER WILL BE CUT AND STACKED TO THE SIDE OF THE ROADWAY OR REMOVED TO A STOCKPILE AREA. THE REMAINING TIMBER AND BRUSH WILL BE CUT AND WINDROWED BELOW THE OUTSLOPE OF THE CONSTRUCTION AREAS, TO BE UTILIZED AS A SEDIMENT BARRIER.

9.) SEPARATE PERMITS WILL BE OBTAINED FROM THE WV-DOT FOR ALL POINTS OF INGRESS-EGRESS FROM COUNTY/STATE ROADS. THESE INGRESS-EGRESS POINTS WILL BE MAINTAINED INACCORDANCE WITH CURRENT WV-DOT REGULATIONS. A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF 8" OF CRUSHED STONE WILL BE CONSTRUCTED FOR A MINIMUM DISTANCE OF 50' FROM THE INGRESS-EGRESS POINTS OF ALL PUBLIC ROADWAYS INACCORDANCE WITH CURRENT WV-DOT REGULATIONS.

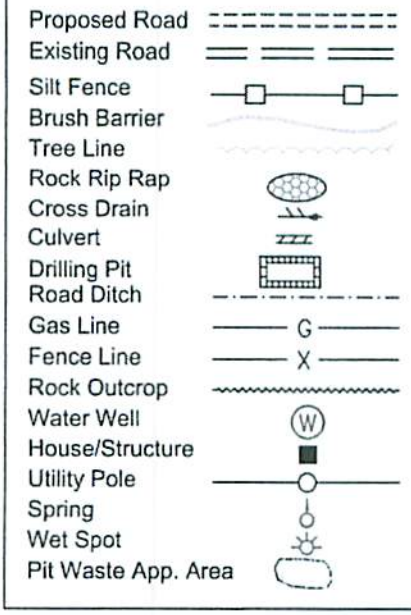
10.) ALL CULVERTS SHOWN ON THESE DRAWINGS ARE TO BE CONSIDERED PERMANENT AND WILL REMAIN IN PLACE AFTER THE COMPLETION OF CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE. A STABILIZED OUTLET CONTROL DEVICE SUCH AS RIPRAP, NATURAL STONE, BRUSH, ETC. WILL BE INSTALLED BELOW THE OUTFALL OF ANY ROADWAY CULVERT(S)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

11.) PERMANENT CROSS DRAINS OR WATERBARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED INACCORDANCE WITH THE AS-BUILT ROADWAY GRADES AND TABLE II-4 OF THE SEDIMENT AND EROSION CONTROL FIELD MANUAL.

12.) TEMPORARY SEEDING AND MULCHING WILL BE UTILIZED TO PROVIDE A VEGETATIVE COVER ON ALL DISTURBED AREAS I.E. ROADWAYS, STIE LOCATIONS, ROAD OR SITE OUTSLOPES AND ANY OTHER AREAS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES RESULTING FROM THE PROPOSED WELL.

13.) THE LOCATION OF DRILLING PIT(S) MAY BE ADJUSTED TO MINIMIZE ENVIRONMENTAL IMPACTS AND MEET THE REQUIREMENTS OF THE WV-DEP.

DRAWING LEGEND



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

SPACING OF CROSS DRAINS BY GRADE	
ROAD GRADE (%)	DISTANCE
1	400
2	250
5	135
10	80
15	60
20	45

CONTRACTOR NOTE:

IT IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR TO FIELD VERIFY THE SIZE/CONDITION OF ALL UNDERGROUND UTILITIES, SANITARY SEWERS, STORM SEWERS, ETC. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND/OR EXCAVATION ACTIVITIES

WEST VIRGINIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE IN DESIGN STAGE.

CALL 1-800-245-4848

Cabot Oil & Gas Corporation

Well: Pocahontas Land 60

August 6, 2014

Located near Gary in Big Creek District of McDowell County, West Virginia

Cabot Oil & Gas Corporation

WW-9
Construction and Reclamation Plan pg.1

August 7, 2014

Cabot Oil & Gas Corporation
Pocahontas Land 60

TOPO SECTION OF:
United States Department of the Interior
Geological Survey - Gary, WV/VA - 7½' Quadrangle

PROPOSED CULVERT INVENTORY
(For Bid Purposes Only)

15" (Minimum) Culverts	none proposed

Additional Culverts and/or other drainage structures and sediment control devices may be required by the WVDEP Oil & Gas Inspector.

Operator is responsible for coordination with contractor and True Line regarding any changes or additions the State may require.

PROJECTED EARTHEN DISTURBANCE

Well Location Site	0.30 Acres
Access Road	5.70 Acres
Approximate Total Disturbance	6.00 Acres

LEGEND

- Proposed Road
- Existing Road
- Existing Culvert
- Proposed Culvert (12" Min. unless noted)
- Proposed Stream Crossing
- Cross Drain
- Straw Bales
- Silt Fence
- Brush Barrier
- Tree Line
- Road Ditch
- Gas Line
- Fence Line
- Water Well
- House/Structure
- Spring
- Wet Spot

All roads shown hereon are existing unless otherwise noted and shall be maintained in accordance with the WVDEP best management practices contained in the Erosion and Sediment Control Field Manual.

Entrances at County/State roads shall be maintained in accordance with WVDOT regulations. Separate permits may be required by the WVDOT.

Sediment basins (sumps) and appropriate erosion control barriers are to be constructed at all culvert and cross drain inlets and outlets as required in the WVDEP Oil & Gas Erosion and Sediment Control Field Manual. Field conditions (rock outcrops or bedrock) may prohibit inlet sumps (traps) being installed. When these conditions exist, additional erosion control measures shall be evaluated and employed as needed.

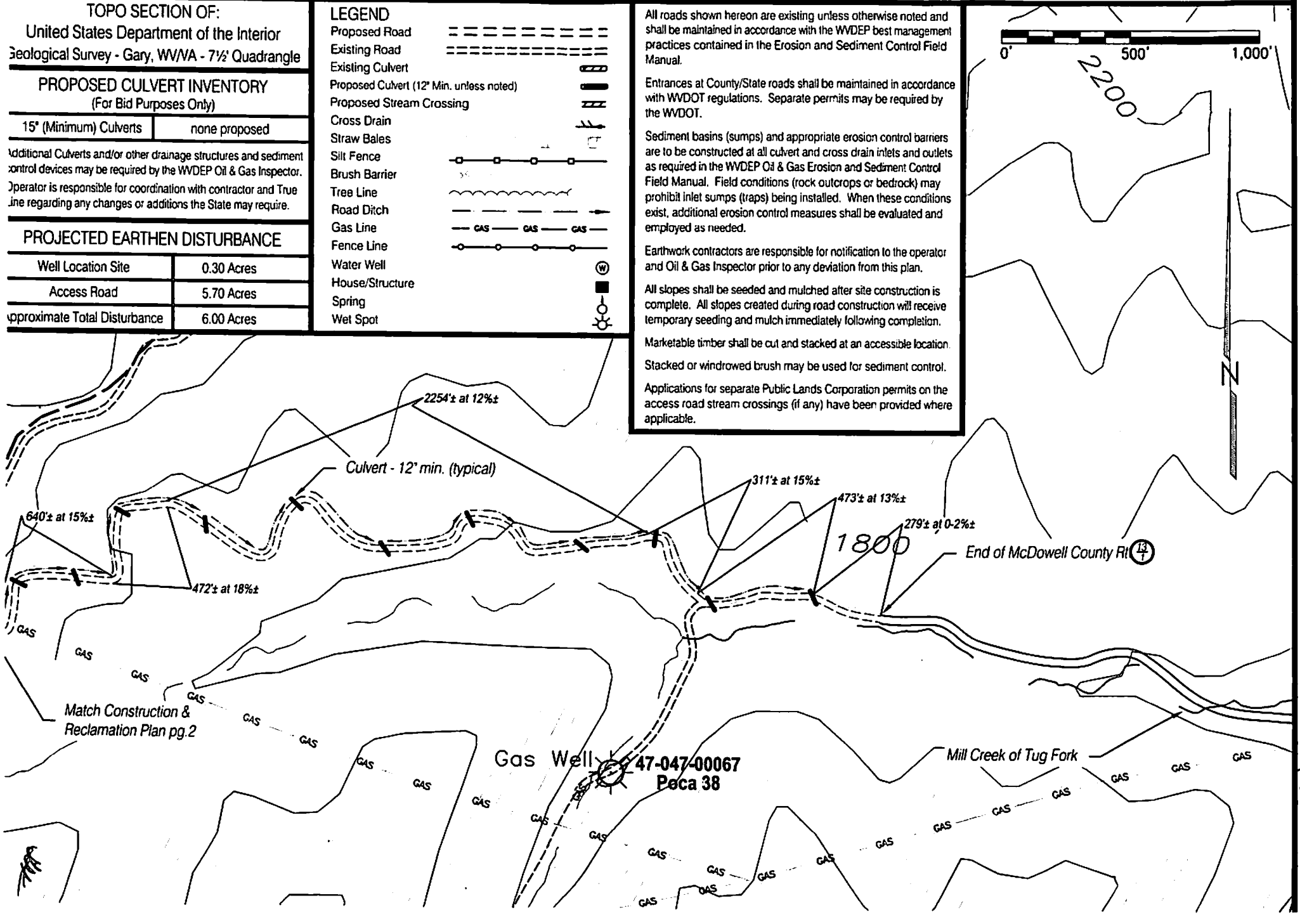
Earthwork contractors are responsible for notification to the operator and Oil & Gas Inspector prior to any deviation from this plan.

All slopes shall be seeded and mulched after site construction is complete. All slopes created during road construction will receive temporary seeding and mulch immediately following completion.

Marketable timber shall be cut and stacked at an accessible location.

Stacked or windrowed brush may be used for sediment control.

Applications for separate Public Lands Corporation permits on the access road stream crossings (if any) have been provided where applicable.



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Cabot Oil & Gas Corporation
Pocahontas Land 60

TOPO SECTION OF:
United States Department of the Interior
Geological Survey - Gary, WV/VA - 7½' Quadrangle

PROPOSED CULVERT INVENTORY
(For Bid Purposes Only)

15" (Minimum) Culverts	none proposed

Additional Culverts and/or other drainage structures and sediment control devices may be required by the WVDEP Oil & Gas Inspector.

Operator is responsible for coordination with contractor and True Line regarding any changes or additions the State may require.

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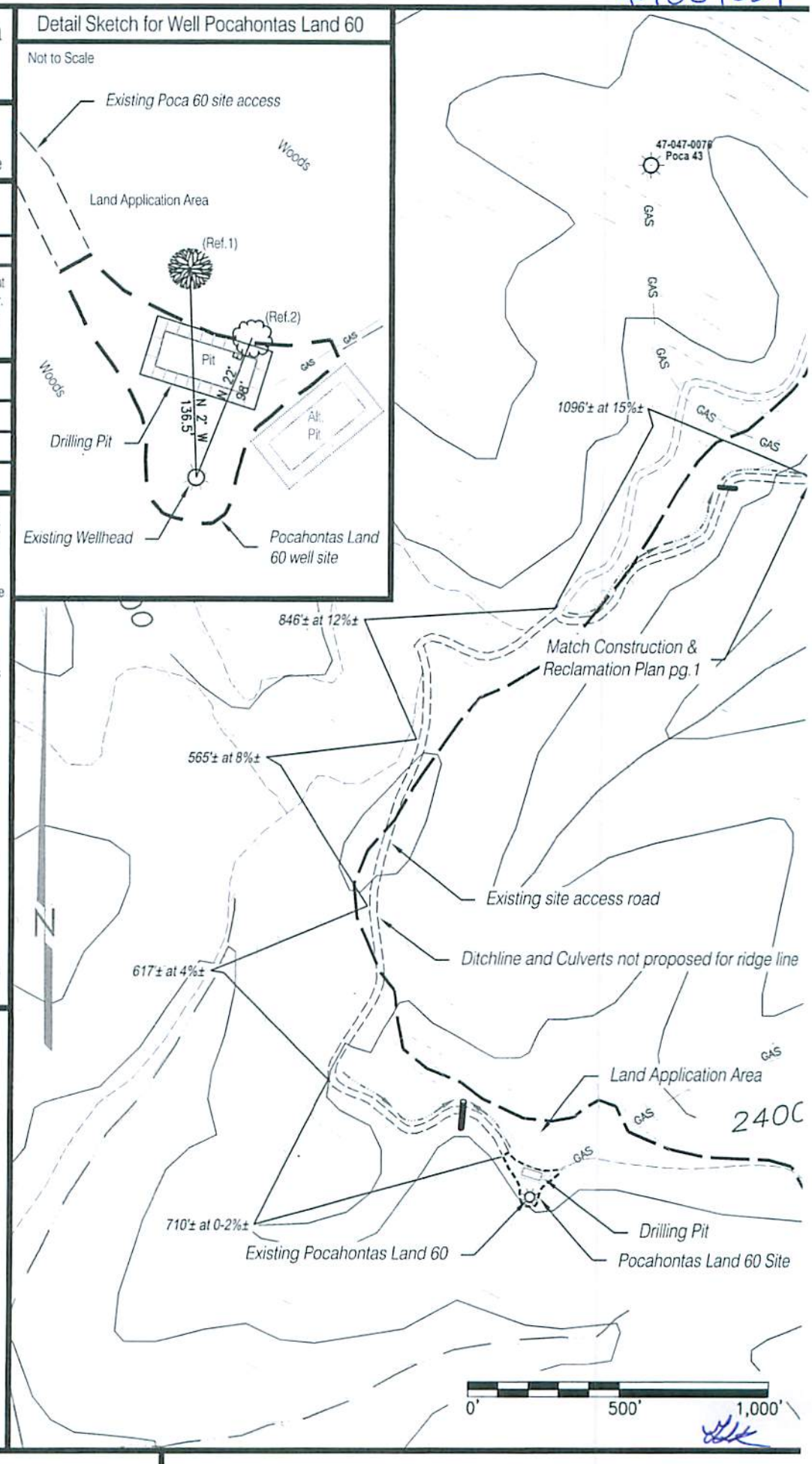
- House/Structure
- Spring
- Wet Spot

Detail Sketch for Well Pocahontas Land 60

Not to Scale



Cabot Oil & Gas Corporation

WW-9
Construction and Reclamation Plan - pg.2

August 7, 2014

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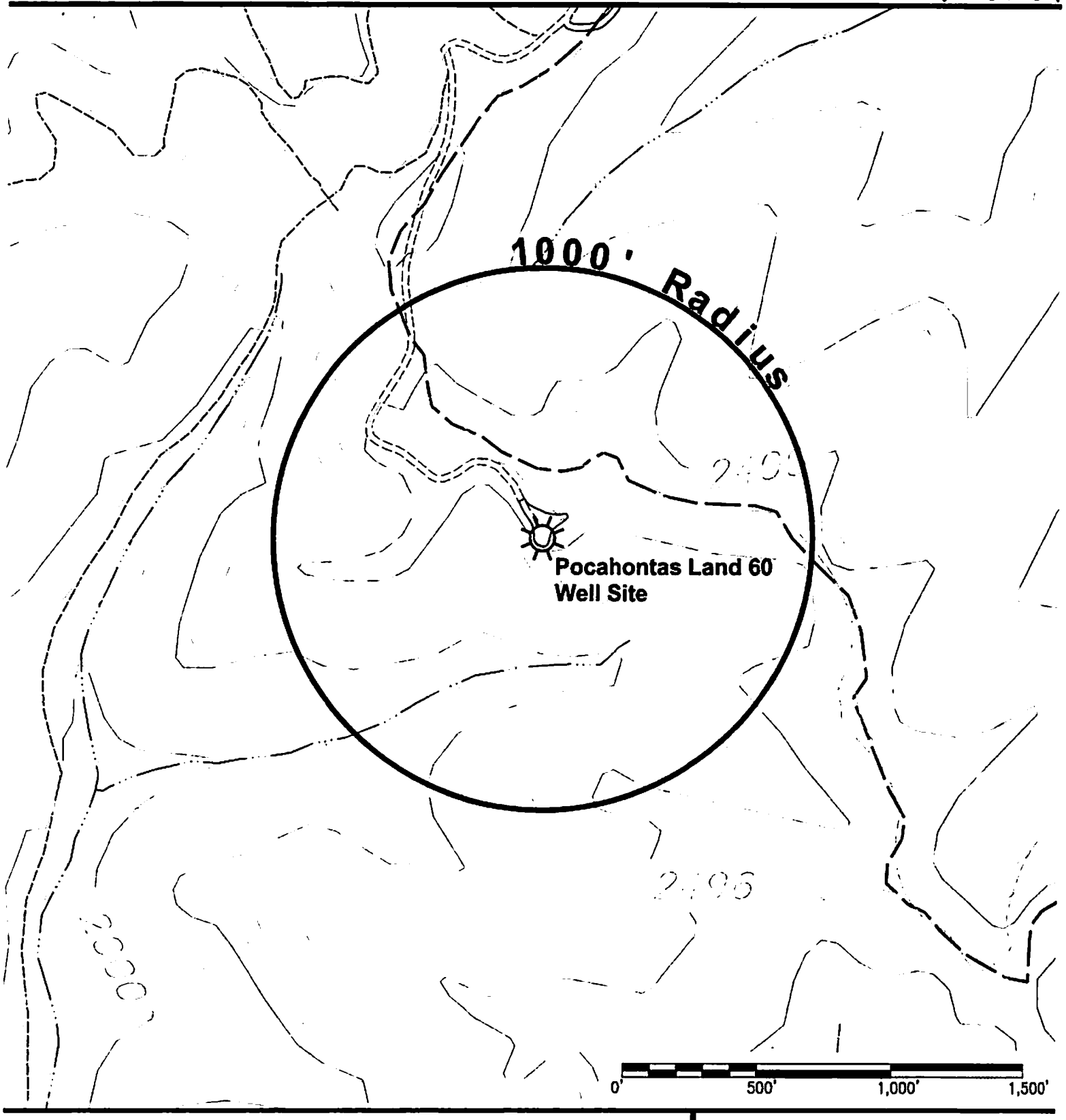


Gary WV 7½' Quadrangle

Notes:
No water wells or other sources of groundwater currently being used for human consumption, domestic animals or other general uses were identified within 1000' of the proposed well site.

Legend:

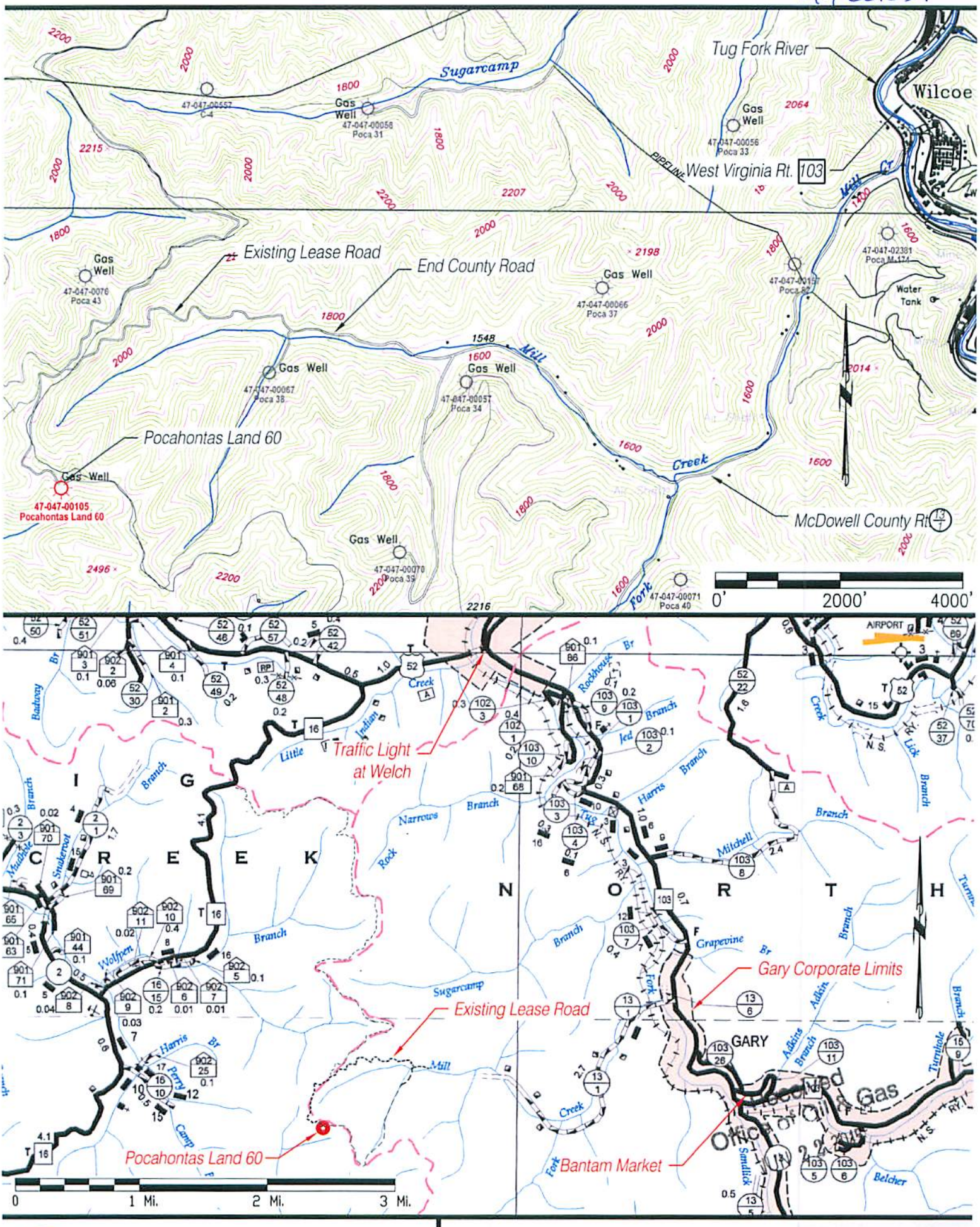
Water Well	Ⓦ
Spring	
Wet Spot	
House/Structure	■

Cabot Oil & Gas Corporation

Pocahontas Land 60

Located near Gary in Big Creek District of McDowell County, West Virginia

47 00105P



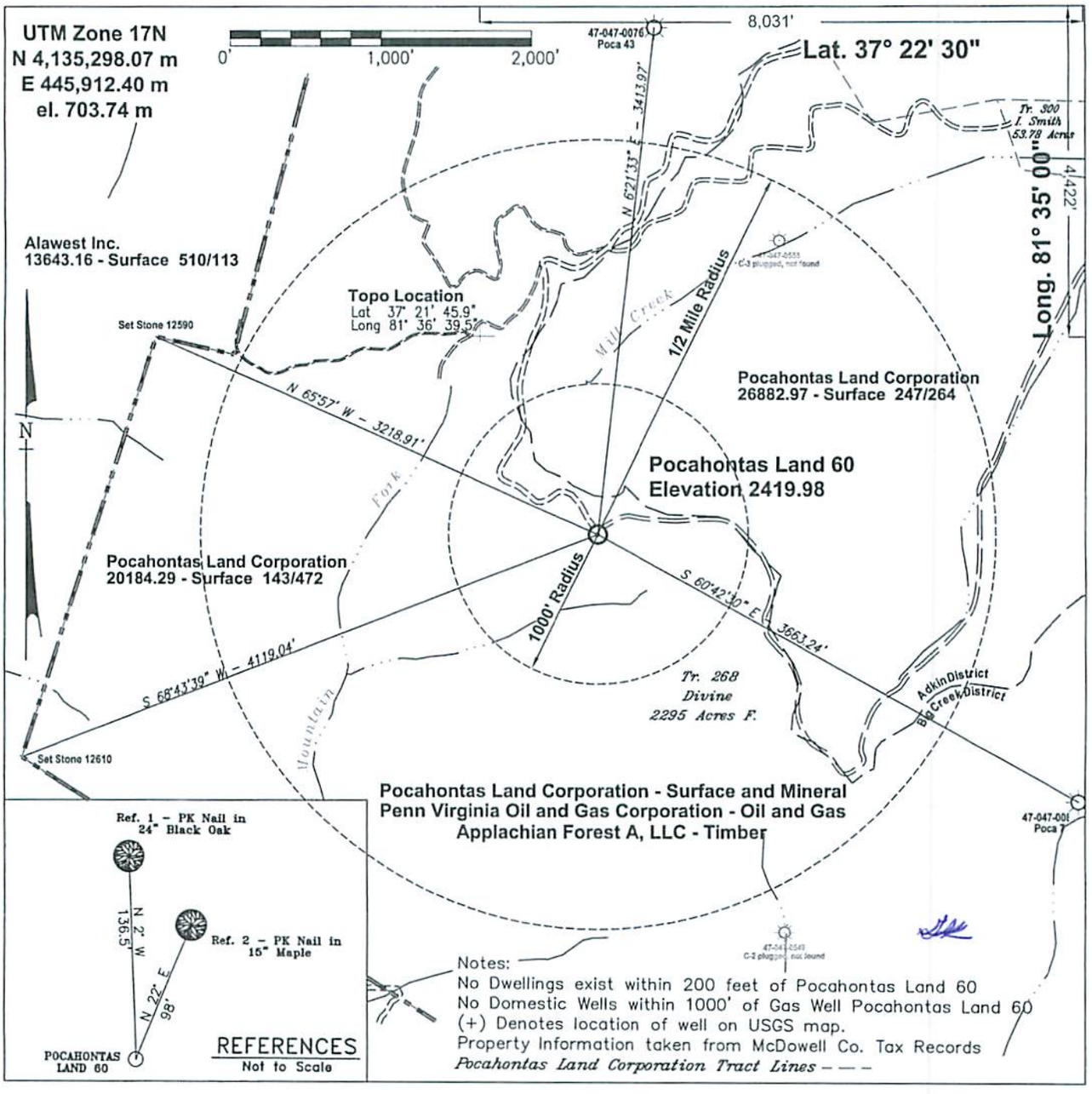
Cabot Oil & Gas Corporation

Pocahontas Land 60

Location Map - August 6, 2014
McDowell Cnty General Highway Map & USGS Gary Quad.

Located near Gary in Big Creek District of McDowell County, West Virginia

4700105P



FILE #: \\filestation1\station4d\work\

DRAWING #: Cabot2014\WW-6_Poca60.pdf

SCALE: see bar scale above

MINIMUM DEGREE OF ACCURACY: 1 part in 2500

PROVEN SOURCE OF ELEVATION: sub meter GPS location

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 ENVIRONMENTAL PROTECTION.

Signed: John E. Caffrey

R.P.E.: _____ L.L.S.: 1065

JOHN E. CAFFREY LICENSED No. 1065 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

PLACE SEAL HERE

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

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

DATE: August 6, 2014

OPERATOR'S WELL #: Pocahontas Land 60

API WELL #: 47 (STATE) 047 (COUNTY) 00105P (PERMIT)

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

WATERSHED: Mountain Fk of Big Creek of Dry Fork of Tug Fork ELEVATION: 2419.98

COUNTY/DISTRICT: 047-McDowell / 2-Big Creek QUADRANGLE: 359 - GARY

SURFACE OWNER: Pocahontas Land Corporation ACREAGE: 20184.29

OIL & GAS ROYALTY OWNER: Penn Virginia Oil & Gas Corporation ACREAGE: 47,520

DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☐

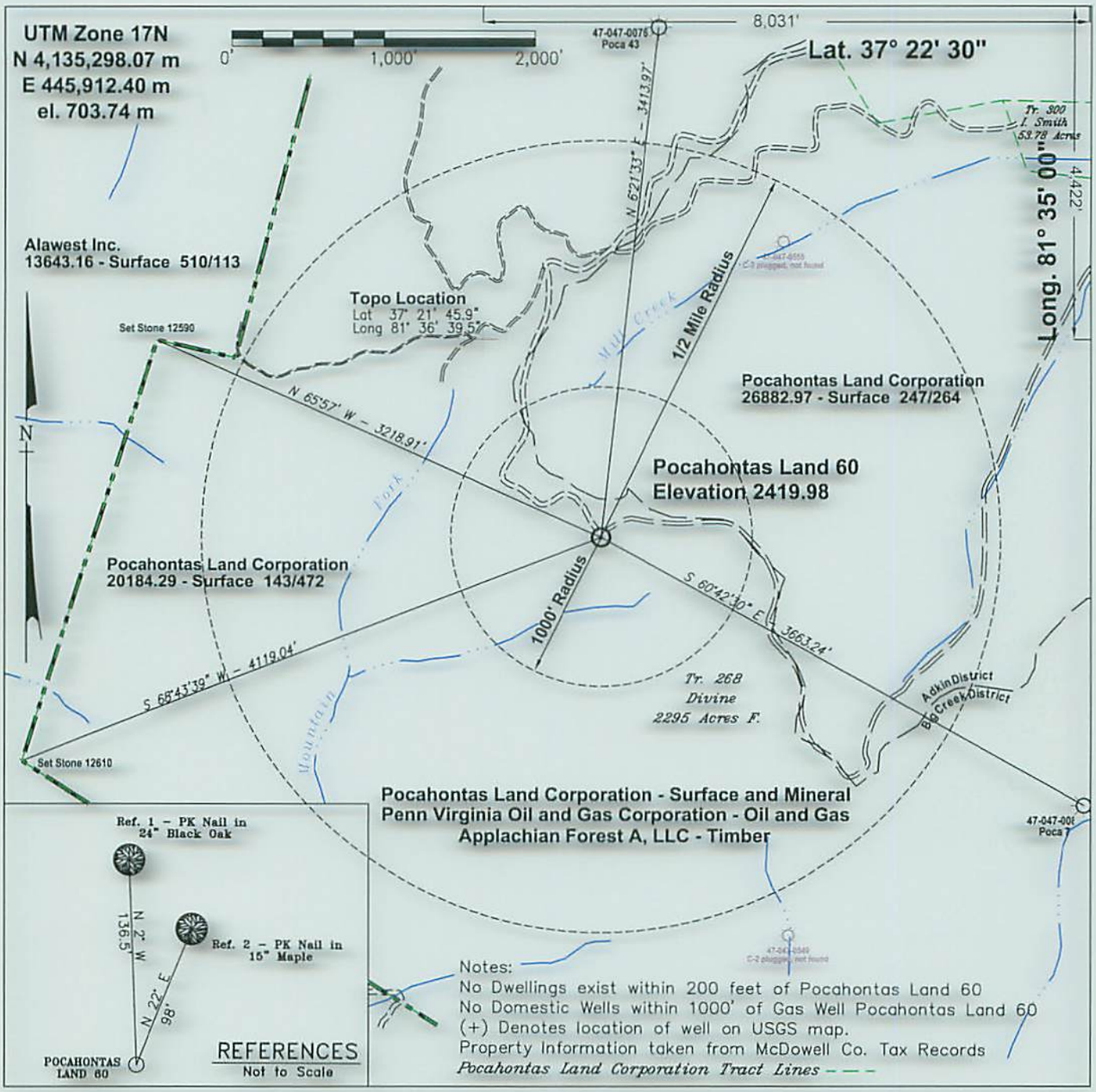
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☒

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

TARGET FORMATION: Berea Sandstone ESTIMATED DEPTH: 5166

WELL OPERATOR Cabot Oil & Gas Corporation
Address Five Penn Center West, Suite 401
City Pittsburgh State PA Zip Code 15276

DESIGNATED AGENT Whitney Johnson
Address P.O. Box 450
City Glasgow State WV Zip Code 25086



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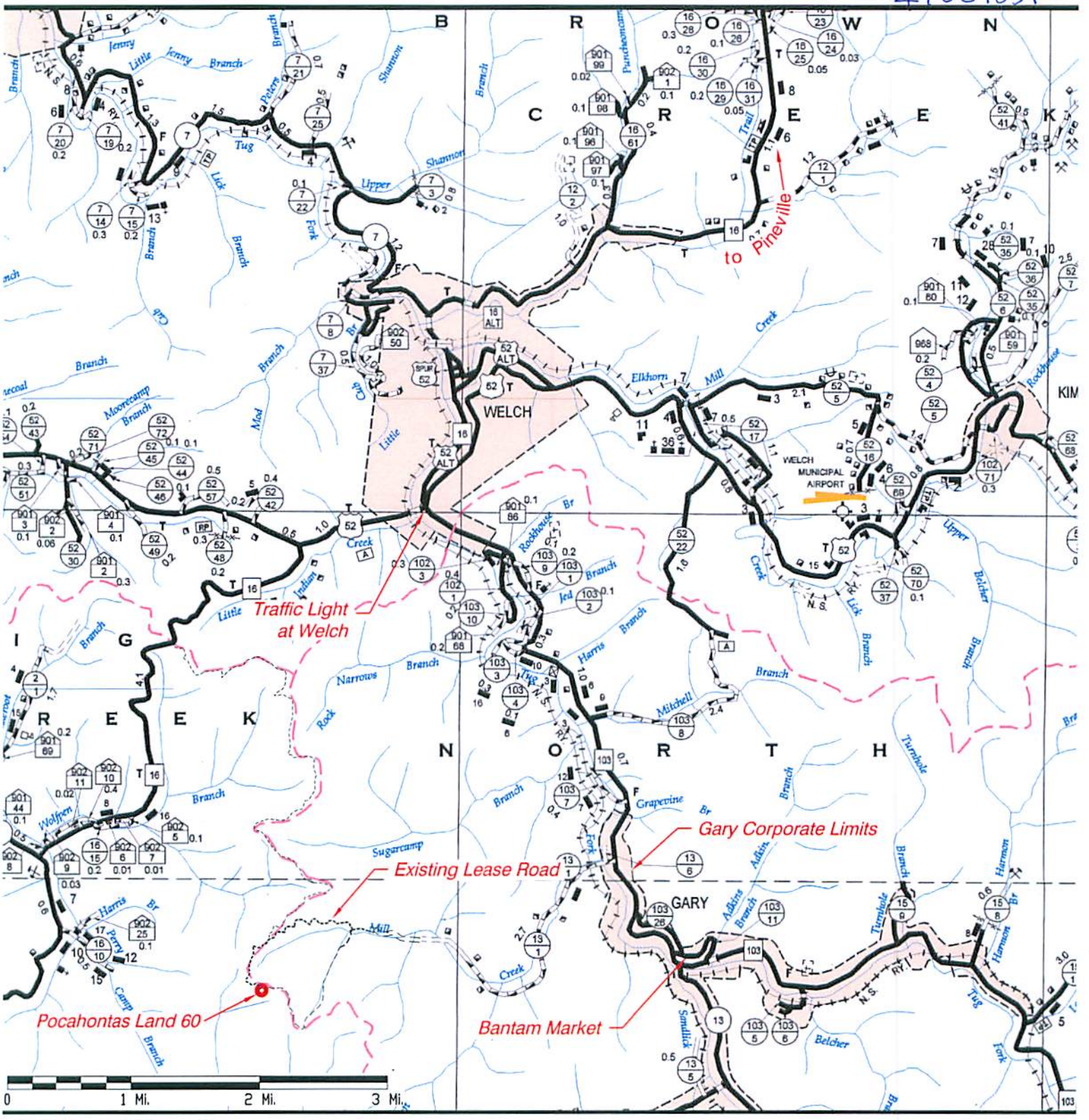
TARGET FORMATION: Berea Sandstone ESTIMATED DEPTH: 5166

WELL OPERATOR Cabot Oil & Gas Corporation
Address Five Penn Center West, Suite 401
City Pittsburgh State PA Zip Code 15276

DESIGNATED AGENT Whitney Johnson
Address P.O. Box 450
City Glasgow State WV Zip Code 25086

4700105P



Driving Directions:

1. From Cabot's Pineville, WV office, take WV Rt.10 South 0.2 miles to junction with WV Rt.16 South at the bridge over the Guyandotte River.
2. Turn right at the bridge onto Rt.16 South (Welch-Pineville Road) for ±19 miles to the junction of US Rt.52 in Welch, WV at the traffic light. At the intersection with the traffic light, proceed straight ahead on West Virginia Rt.103.
3. Follow West Virginia Rt.103 for ±3.9 miles to the community of Gary; observe a newly refurbished bridge at the first right turn in Gary.
4. Turn right across the new bridge onto McDowell County Rt.13/1 and proceed 2.8± miles up Mill Creek to a fork. County maintenance ends @ 2.7 miles. Take the right hand fork and proceed 0.9 miles more or less up the Right Fork of Mill Creek to the top of the ridge and an intersection.
5. Turn left at the intersection at the top of the ridge and proceed ±½ mile to the existing Pocahontas Land 60 well site.

Cabot Oil & Gas Corporation

Pocahontas Land 60

Driving Directions - August 6, 2014
McDowell County General Highway Map Sheets 2 & 4

Located near Gary in Big Creek District of McDowell County, West Virginia