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**west virginia** department of environmental protection

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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

October 19, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-4701084, 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 penalties 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: "A"

Farm Name: HATFIELD, B.

**API Well Number: 47-4701084**

**Permit Type: Plugging**

Date Issued: 10/19/2015

**Promoting a healthy environment.**

**10/23/2015**

## PERMIT CONDITIONS

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

### CONDITIONS

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

1) Date September 17, 2015  
2) Operator's  
Well No. Hatfield A-1  
3) API Well No. 47-047 - 01084

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  / Liquid injection  / Waste disposal  /  
(If "Gas, Production  or Underground storage  ) Deep  / Shallow

5) Location: Elevation 1,691.89' Watershed Coon Branch of Dry Fork  
District Sandy River County McDowell Quadrangle laeger

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Phillip Hill - Cabot Oil & Gas Corporation  
Address 2000 Park Lane, Suite 300 Address 500 Lee Street E., Huntington Sq.  
Pittsburgh, PA 15275 Charleston, WV 25301

8) Oil and Gas Inspector to be notified Name Gary Kennedy 9) Plugging Contractor  
Address P.O. Box 268 Name Contractor Services, Inc.  
Nimitz, WV 25978 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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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 9/21/15



**BILLY HATFIELD A-1**  
**API # 47 - 047 - 01084**  
**PLUGGING PROCEDURE**

**Current Configuration**

DTD @ 4450'

11 3/4" conductor pulled

8 5/8" - 20# &amp; 23# casing @ 884', cemented to surface

4 1/2" - 10.5# casing @ 4330' w/ TOC estimated @ 2203'

Berea perms: 4234' - 4236'

Weir perms: 3796' - 3800'

Lower Big Lime perms: 3542' - 3549'

Upper Big Lime perms: 3349' - 3381'

Maxton perms: 2544' - 2558'

Coal reported @ 333' - 338'

No fresh water reported

**PROCEDURE**

1. Contact Pineville District Office a minimum of 48 hours prior to starting work.
2. Contact state inspector a minimum of 24 hours prior to starting work.
3. Lay 2" line from wellhead to pit/tank and stake down securely. Vent 4-1/2" x 7" annulus.
4. Unpack wellhead.
5. Run rig tools to determine well TD and note any fluid level.
6. MIRU service rig and blow down well.
7. RIH w/ 2 3/8" work string to 4240'.
8. MIRU Cementing Company.
9. Pump 10 barrels of 6% Gel followed by 10 sacks of Class A cement for cement plug 1 from 4240' to 4110'.
10. Displace with 16 bbls of 6% Gel.
11. Pull work string up to 3820' and pump 47 sacks of Class A cement for cement plug 2 from 3820' to 3200'.
12. Displace with 12 bbls of 6% Gel.
13. Pull work string up to 2580' and pump 15 sacks of Class A cement for cement plug 3 from 2580' to 2380'.
14. Displace with 9 bbls of 6% Gel.
15. POOH with work string and let cement plug set for a minimum of four hours.
16. Run freepoint and cut 4 1/2" casing where free. Estimate ±1800'.
17. Pick up casing and pump 20 bbls of 6% Gel followed by 60 sacks of Class A cement for cement plug 4 from 1800' to 1600'.
18. Displace with 25 1/2 bbls of 6% Gel.
19. Pull casing up to 920' and pump 30 sacks of Class A cement for cement plug 5 from 920' to 820'.
20. Displace with 13 bbls of 6% Gel.
21. Pull casing up to 380' and pump 37 cubic feet of expanding cement for cement plug 6 from 380' to 280'.
22. Displace with 4 1/2 bbls of 6% Gel.
23. Pull casing up to 100' and pump 31 sacks of Class A cement for cement plug 7 from 100' to surface.
24. TOOH with casing and lay down.
25. RDMO Cement company
26. Erect Monument according to Law.
27. RDMO.

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10/23/2015

4701084A

WR-35

17-Nov-89

API # 47- 47-01084



State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: SCOTT OIL COMPANY Operator Well No.: HATFIELD 2-S803

LOCATION: Elevation: 1688.00 Quadrangle: IAEGER

District: SANDY RIVER County: MCDOWELL  
Latitude: 3370 Feet South of 37 Deg. 27Min. 30 Sec.  
Longitude 10590 Feet West of 81 Deg. 47 Min. 30 Sec.

Company: SCOTT OIL COMPANY  
P.O. BOX 112  
SALEM, WV 26462-0112

Agent: JOHN T. HASKINS

Inspector: TIM BENNETT  
Permit Issued: 11/15/89  
Well work Commenced: 9/12/90  
Well work Completed: 9/21/90  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary x Cable \_\_\_\_\_ Rig  
Total Depth (feet) 4450  
Fresh water depths (ft) \_\_\_\_\_

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N)? \_\_\_\_\_  
Coal Depths (ft): 333-338

| Casing & Tubing Size | Used in Drilling | Left in Well | Cement Fill Up Cu. Ft. |
|----------------------|------------------|--------------|------------------------|
| 11 3/4               | 30               |              |                        |
| 8 5/8                |                  | 884          | to surface             |
| 4 1/2                |                  | 4330         | 375 sks                |

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OPEN FLOW DATA

Producing formation Berea, Weir, L. Big Lime Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow 146 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Static rock Pressure 632 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: SCOTT OIL COMPANY

By: [Signature]  
Date: 10/22/90

10/23/2015

|                |           |                     |               |
|----------------|-----------|---------------------|---------------|
| Berea          | 4234-4246 | Sand 40,000#        | 100 bbl water |
| Weir           | 3796-3800 | Sand 20,000#        | 50 bbl water  |
| Lower Big Lime | 3542-3549 | 6000 gallon 28% HCL |               |
| Upper Big Lime | 3349-3381 | 3000 gallon 28% HCL |               |

|              |      |         |
|--------------|------|---------|
| Sand & Shale | 0    | 333     |
| Coal         | 333  | 338     |
| Sand & Shale | 338  | 2142    |
| Ravencliff   | 2142 | 2302    |
| Avis         | 2302 | 2316    |
| Sand & shale | 2316 | 2504    |
| U. Maxton    | 2504 | 2625    |
| Sand & Shale | 2625 | 2662    |
| Maxton       | 2662 | 2794    |
| Sand & Shale | 2794 | 3050    |
| Little Lime  | 3050 | 3114    |
| Big Lime     | 3114 | 3570    |
| Sand & Shale | 3570 | 3784    |
| Weir         | 3784 | 3814    |
| Sand & Shale | 3814 | 4210    |
| Berea        | 4210 | 4259    |
| Sand & Shale | 4259 | 4450 TD |

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9534

10/23/2015

WW-4A  
Revised 6-07

1) Date: September 16, 2015  
2) Operator's Well Number  
Hatfield A-1  
3) API Well No.: 47 - 047 - 01084

**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>Cabot Oil &amp; Gas Corporation</u>                         | Name <u>See Attached Sheet</u>  |
| Address <u>2000 Park Lane, Suite 300</u><br><u>Pittsburgh, PA 15275</u> | Address _____   |
| (b) Name <u>See Attached Sheet</u>                                      | (b) Coal Owner(s) with Declaration                                      |
| Address _____   | Name <u>Cabot Oil &amp; Gas Corporation</u>                             |
| (c) Name _____  | Address <u>2000 Park Lane, Suite 300</u><br><u>Pittsburgh, PA 15275</u> |
| Address _____   | Name <u>Alawest, Inc.</u>   |
| 6) Inspector <u>Gary Kennedy</u>  | Address <u>P.O. Box 920</u><br><u>Welch, WV 24801</u>                   |
| Address <u>P.O. Box 268</u><br><u>Nimitz, WV 25978</u>                  | (c) Coal Lessee with Declaration  |
| Telephone <u>304-382-8402</u>   | Name <u>None of Record</u>  |
|   | Address _____   |

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

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

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

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

Well Operator Cabot Oil & Gas Corporation  
 By: Kenneth L. Marcum  
 Its: Regulatory Supervisor  
 Address 2000 Park Lane, Suite 300  
Pittsburgh, PA 15275  
 Telephone 412-249-3850

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

Subscribed and sworn before me this 17th day of September, 2015  
Constance C. Carden Notary Public  
 My Commission Expires November 16, 2017

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 SEP 23 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 [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

WV Department of Environmental Protection



4701084P

SURFACE OWNERS  
HATFIELD A-1  
47-047-01084

Alawest, Inc. ✓  
P.O. Box 920  
Welch, WV 24801

Philip Auvil and Judy A. Stephenson ✓  
192 Sinking Cave Road  
Tellico Plains, TN 37385

Anita Brant ✓  
P.O. Box 780  
laeger, WV 24844

Kathleen Bowles ✓  
P.O. Box 596  
laeger, WV 24844

COAL OPERATORS

Darty Leasing, Inc. ✓  
P.O. Box 480  
laeger, WV 24844

Brooks Run Mining Company, LLC ✓  
208 Business Street  
Beckley, WV 25801

Blue Ridge Mining, LLC ✓  
P.O. Box 214  
laeger, WV 24844

Fools Gold Energy Corporation ✓  
P.O. Box 2037  
Pikeville, KY 41502

JJ & E Coal Corporation ✓  
Rt. 1 Box 137  
Bluefield, WV 24701

Riverside Energy Company, LLC ✓  
208 Business Street  
Beckley, WV 25801

ERUN Coal Sales ✓  
2087 Tabor Road  
Bluefield, WV 24701

MCCM, LLC ✓  
P.O. Box 120  
Ikes Fork, WV 24845

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10/23/2015

4701084P

WW-9  
(2/15)

API Number 47 - 047 - 01084  
Operator's Well No. Hatfield A-1

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) Coon Branch of Dry Fork Quadrangle laeger

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No   
Will a pit be used? Yes  No

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

Proposed Disposal Method For Treated Pit Wastes:  
\_\_\_\_ Land Application  
\_\_\_\_ Underground Injection ( UIC Permit Number \_\_\_\_\_)  
\_\_\_\_ Reuse (at API Number \_\_\_\_\_)  
\_\_\_\_ Off Site Disposal (Supply form WW-9 for disposal location)  
■ Other (Explain No treated pit wastes will be produced work tank)

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WV Department of  
Environmental Protection  
*JJK*

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 17th day of September, 2015  
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

10/23/2015

4701084A

**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 |
|--|----------|
| (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: \_\_\_\_\_

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WV Department of  
Environmental Protection

Title: Inspector

Date: 9/21/15

Field Reviewed? ( ) 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]

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**DRIVING DIRECTIONS FOR HATFIELD A-1**

- 1.) FROM THE INTERSECTION OF STATE ROUTE 10 WITH STATE ROUTE 97 IN PINEVILLE, DRIVE WEST ON STATE ROUTE 97 FOR 22.2 MILES± TO U.S. ROUTE 52.
- 2.) TURN LEFT ONTO U.S. ROUTE 52 AND GO SOUTH FOR 10.4 MILES± TO STATE ROUTE 80, IN IAEGER.
- 3.) TURN RIGHT ONTO STATE ROUTE 80 AND GO SOUTH FOR 0.8 MILE± TO SECONDARY ROUTE 5/1, COON BRANCH ROAD.
- 4.) TURN RIGHT ONTO SECONDARY ROUTE 5/1 AND GO SOUTH FOR 0.5 MILE± TO THE BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD.
- 5.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 0.7 MILE± TO THE EXISTING WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

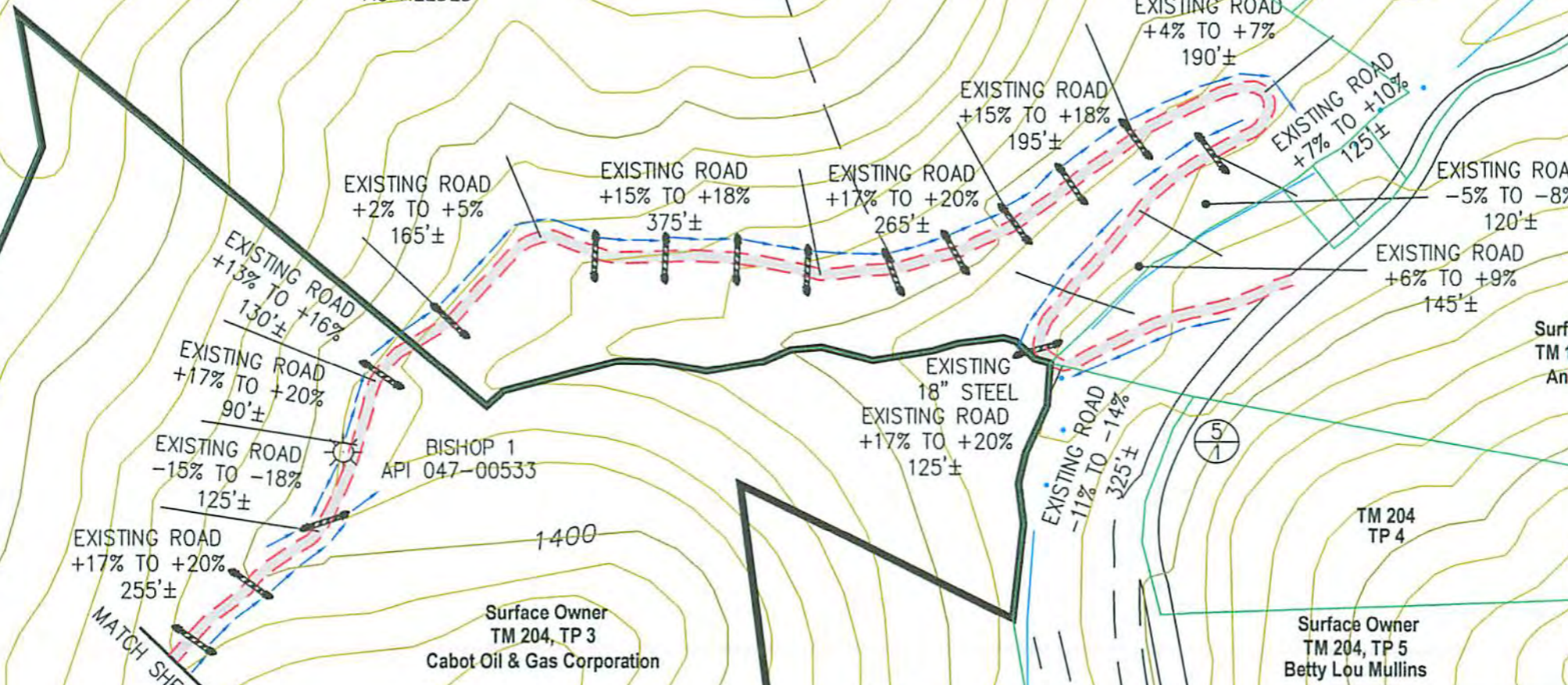
10/23/2015

4701084P

ALL CULVERTS SHOWN HEREON ARE PROPOSED  
15" C.P.P. UNLESS OTHERWISE NOTED

Surface Owner  
TM 184, TP 3  
Alawest, Inc.

APPLY CULVERTS  
AS NEEDED



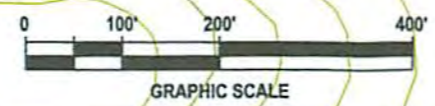
BISHOP 1  
API 047-00533


Surface Owner  
TM 204, TP 3  
Cabot Oil & Gas Corporation

Surface Owner  
TM 184, TP 40  
Anita Brant

Surface Owner  
TM 204, TP 5  
Betty Lou Mullins

| 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**

**HATFIELD A-1**  
**CONSTRUCTION & RECLAMATION SITE PLAN**

SITUATED ON THE WATERS OF COON BRANCH OF DRY FORK  
SANDY RIVER DISTRICT, McDOWELL COUNTY, WV  
IAEGER QUADRANGLE

|                        |                   |                         |                   |                   |
|------------------------|-------------------|-------------------------|-------------------|-------------------|
| SHEET NUMBER<br>1 OF 2 | SCALE:<br>1"=200' | DRAWN BY:<br>G. PERKINS | DATE:<br>05-21-15 | CHK'D. BY:<br>DKC |
|------------------------|-------------------|-------------------------|-------------------|-------------------|

4701084P

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 184, TP 3  
Alawest, Inc.

Surface Owner  
TM 204, TP 3  
Cabot Oil & Gas Corporation

ALL CULVERTS SHOWN HEREON ARE PROPOSED  
15" C.P.P. UNLESS OTHERWISE NOTED

APPLY CULVERTS  
AS NEEDED

EXISTING ROAD  
+17% TO +20%  
335'±

EXISTING ROAD  
+13% TO +16%  
150'±

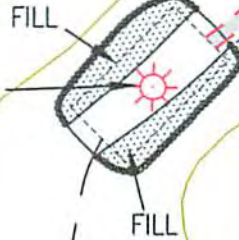
EXISTING ROAD  
+17% TO +20%  
160'±

EXISTING ROAD  
+15% TO +18%  
300'±

EXISTING ROAD  
+13% TO +16%  
105'±

EXISTING ROAD  
0% TO +2%  
180'±

HATFIELD A-1  
API 047-01084



TM 204  
TP 29



| 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 |  |

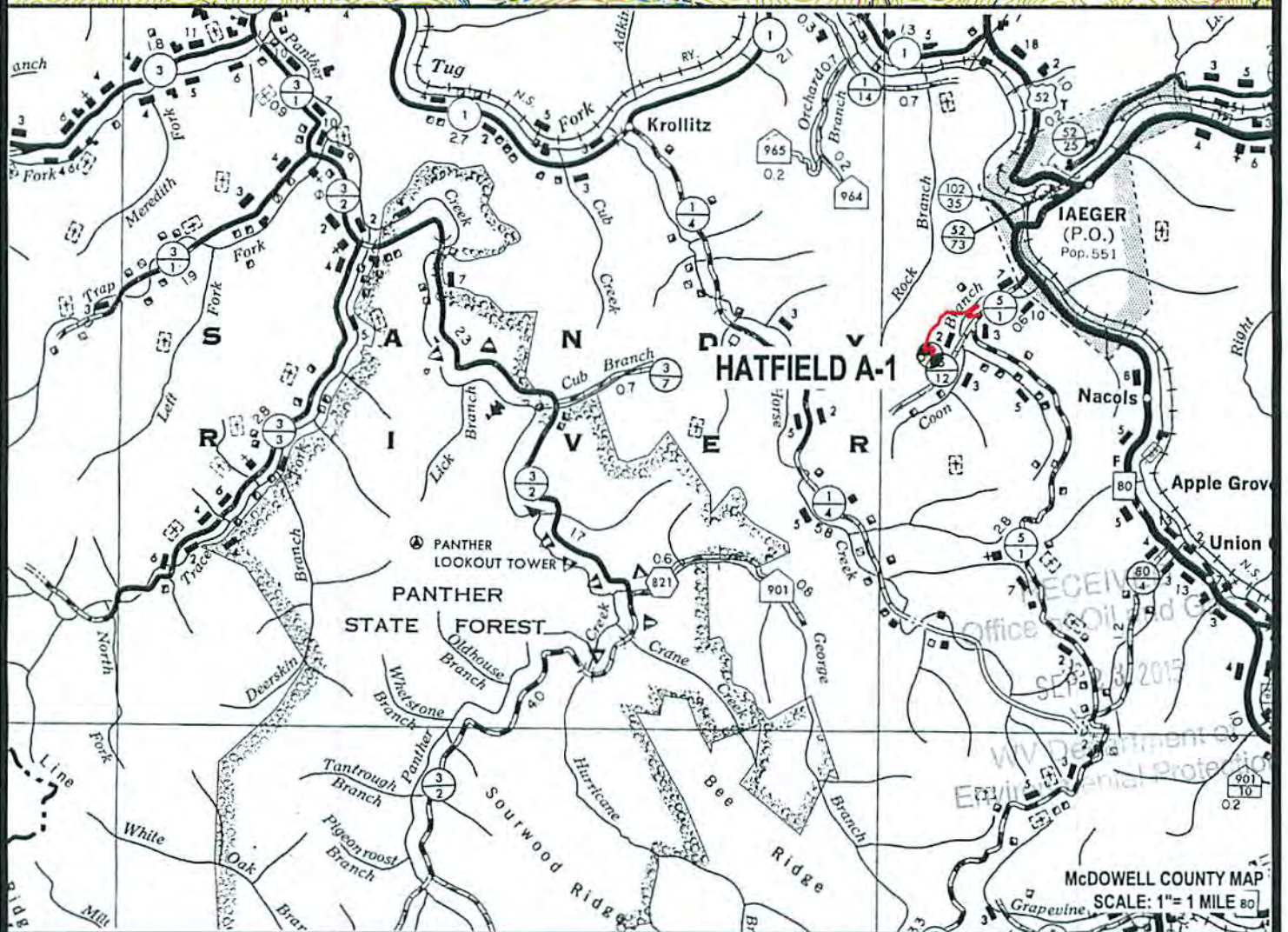
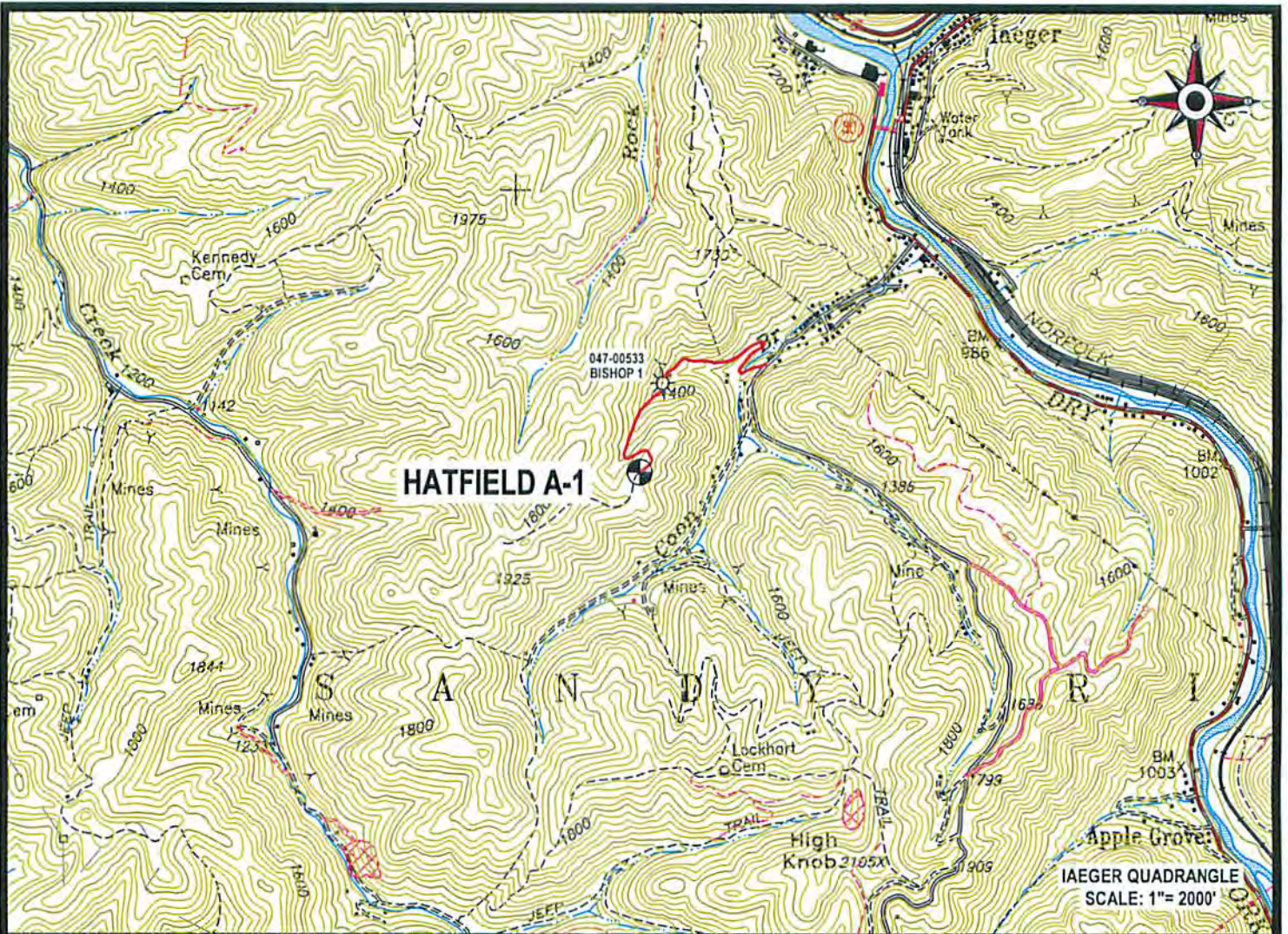


 Cabot Oil & Gas Corporation

### HATFIELD A-1 CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF COON BRANCH OF DRY FORK  
SANDY RIVER DISTRICT, McDOWELL COUNTY, WV  
IAEGER QUADRANGLE

|                        |                   |                         |                   |                   |
|------------------------|-------------------|-------------------------|-------------------|-------------------|
| SHEET NUMBER<br>2 OF 2 | SCALE:<br>1"=200' | DRAWN BY:<br>G. PERKINS | DATE:<br>05-21-15 | CHK'D. BY:<br>DKC |
|------------------------|-------------------|-------------------------|-------------------|-------------------|



 Cabot Oil & Gas Corporation

**HATFIELD A-1**  
LOCATION MAP

10/23/2015



**CUNNINGHAM**

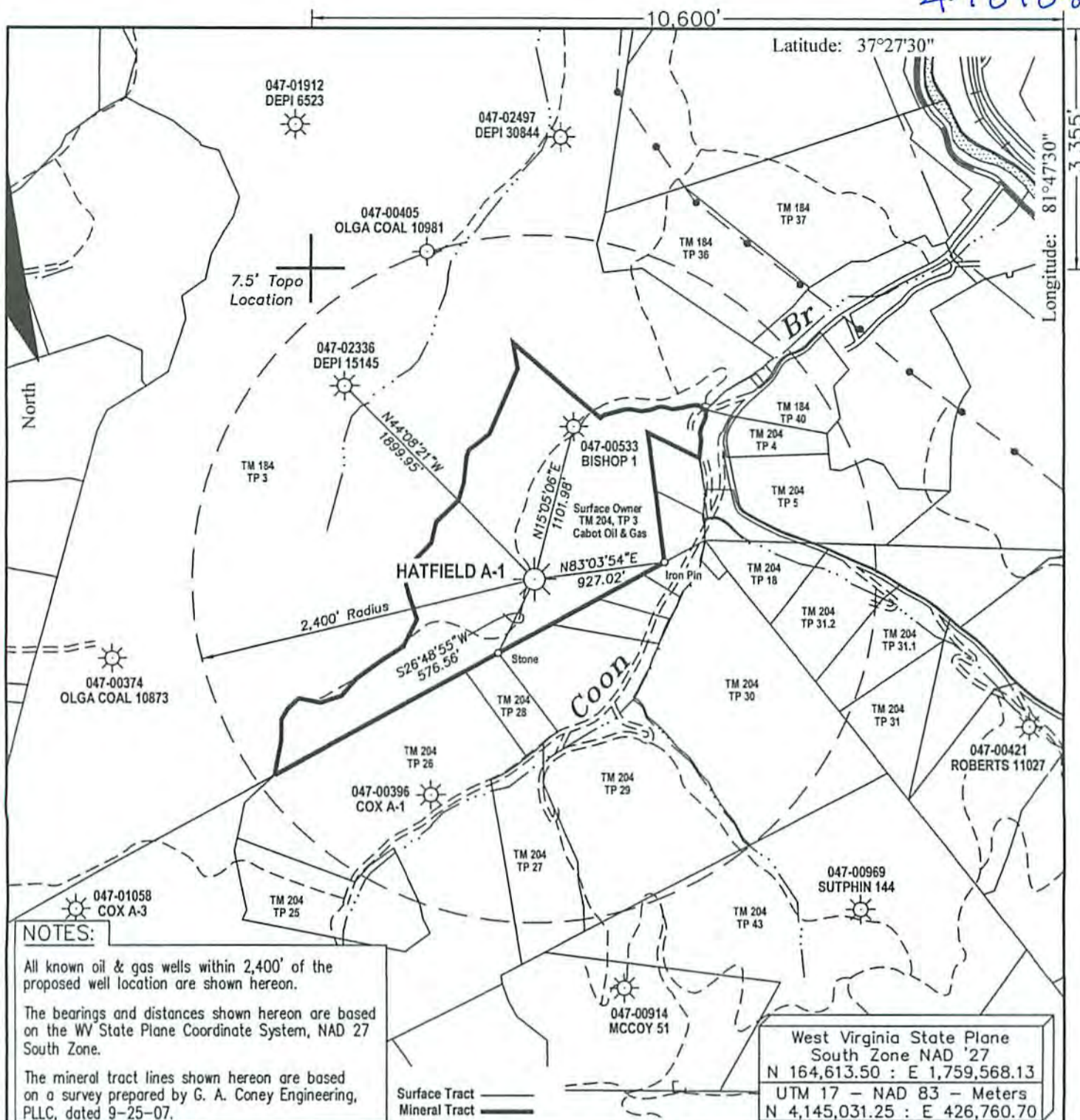
LAND SURVEYING & MAPPING SERVICES, LLC

• 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 COON BRANCH  
OF DRY FORK  
SANDY RIVER DISTRICT, McDOWELL COUNTY, WV  
IAEGER QUADRANGLE

|                      |                               |
|----------------------|-------------------------------|
| PROJECT NO. CABOT    | DWG. NO. HATFIELD A-1 LOC.DWG |
| DATE: 05-21-15       | SCALE: AS NOTED               |
| DRAWN BY: G. PERKINS | CHK'D BY: D.K.C.              |
|                      | FILE: C:\PROJECT FOLDER\CABOT |

4701084P



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

The mineral tract lines shown hereon are based on a survey prepared by G. A. Coney Engineering, PLLC, dated 9-25-07.

West Virginia State Plane  
South Zone NAD '27  
N 164,613.50 : E 1,759,568.13  
UTM 17 - NAD 83 - Meters  
N 4,145,031.25 : E 426,760.70

FILE #:

DRAWING #: Hatfield A-1 ww6

SCALE: 1" = 1000'

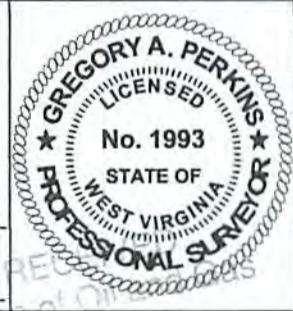
MINIMUM DEGREE OF ACCURACY: 1 : 12,729

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: May 26, 2015

OPERATOR'S WELL #: Hatfield A-1

API WELL #: 47 047 01084

STATE COUNTY PERMIT

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

WATERSHED: Coon Branch of Dry Fork ELEVATION: 1,691.89'

COUNTY/DISTRICT: McDowell / Sandy River QUADRANGLE: Iaeger

SURFACE OWNER: Cabot Oil & Gas Corporation ACREAGE: 67.51

OIL & GAS ROYALTY OWNER: Cabot Oil & Gas Corporation ACREAGE: 67.51

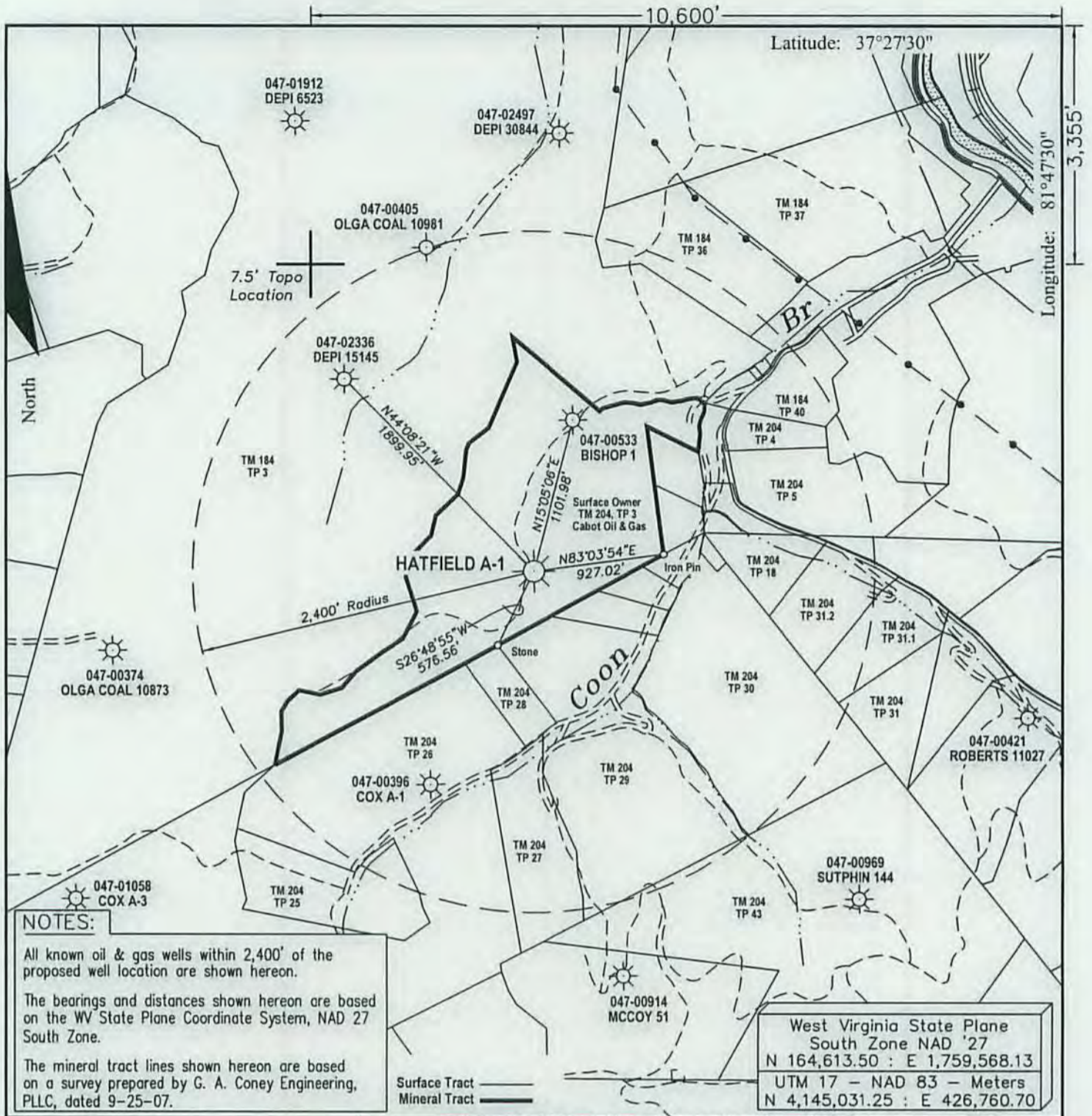
LEASE #: 47-9906 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

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

10/23/2015





**NOTES:**

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

The mineral tract lines shown hereon are based on a survey prepared by G. A. Coney Engineering, PLLC, dated 9-25-07.

Surface Tract Mineral Tract

West Virginia State Plane  
South Zone NAD '27  
N 164,613.50 : E 1,759,568.13  
UTM 17 - NAD 83 - Meters  
N 4,145,031.25 : E 426,760.70

FILE #: \_\_\_\_\_  
DRAWING #: Hatfield A-1 ww6  
SCALE: 1" = 1000'  
MINIMUM DEGREE OF ACCURACY: 1 : 12,729  
PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

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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

10/23/2015