



**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

August 25, 2014

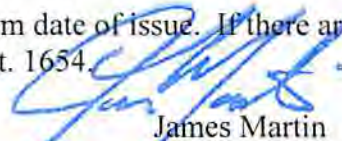
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-9902003, 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: THOMPSON 1  
Farm Name: HOLLAND, GEORGE  
**API Well Number: 47-9902003**  
**Permit Type: Plugging**  
Date Issued: 08/25/2014

# PERMIT CONDITIONS

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

## CONDITIONS

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

WW-4B  
Rev. 2/01

1) Date June 26, 2014  
2) Operator's  
Well No. Bruce Thompson #1  
3) API Well No. 47-099 - 02003

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil \_\_\_ / Gas X / Liquid injection \_\_\_ / Waste disposal \_\_\_ /  
(If "Gas, Production X or Underground storage \_\_\_ ) Deep \_\_\_ / Shallow X
- 5) Location: Elevation 1,035.79' Watershed Sycamore Branch of West Fork of Twelvepole Creek  
District Butler County Wayne Quadrangle Wayne
- 6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Whitney Johnson  
Address Five Penn Center West, Ste. 401 Address P.O. Box 450  
Pittsburgh, PA 15276 Glasgow, WV 25086
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Jeremy James Name Shreve's Well Service  
Address P.O. Box 147 Address 3473 Triplett Road  
Ona, WV 25545 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

7-11-14

**BRUCE THOMPSON #1**  
**API # 47 - 099 - 02003**  
**PLUGGING PROCEDURE**

**Current Configuration**

DTD @ 4549'

LTD @ 4560'

16" 65# conductor @ 30'

9 5/8" - 36# LS casing @ 712' KB, cemented to surface

7" - 17# LS casing @ 1865' KB, cemented to surface

4 1/2" - 10.5# - J55 casing @ 4473' KB w/ TOC @ 3420'

Big Six perforations: 4383' - 4396' @ 4395'

No coal reported

Salt water @ 1176', 1198', &amp; 1291'.

Fresh water @ 229'

100' latex cement across 4425-4325 Tag plug  
 Cast iron bridge plug to be set Higher  
 @ 4300

**PROCEDURE**

Add 100 cement plug 3600-3500 CLine

1. Contact Danville 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. MIRU company certified in H2S safety. All personnel on location must be trained in the proper use of respirators and other safety devices. Respiratory equipment is to be worn in areas with H2S concentrations that exceed 10 ppm. **NOTE: Big Six in the area has tested 1,000 ppm H2S.**
4. MIRU service rig and blow down well.
5. Lay 2" line from wellhead to pit/tank and stake down securely. Vent 4 1/2" x 7" annulus.
6. Unpack wellhead.
7. RU Wireline and set cast iron bridge plug at 4370' KB.
8. RIH with 2 3/8" tubing to top of bridge plug.
9. MIRU Cementing Company.
10. Pump 10 barrels of 6% Gel.
11. Pump 22 sacks of latex cement for cement plug 1 from 4370' to 4070'.
12. Displace with 15 bbls of 6% Gel.
13. POOH with tubing.
14. Run freepoint and cut 4 1/2" casing where free. Estimate ±3050'. Pick up casing and pump 40 bbls 6% gel.
15. Pump 50 sacks Class A cement for Cement Plug 2 from 3050' to 2850'.
16. Displace with 48 bbls of 6% Gel.
17. Pull casing up to 1900' and pump 50 sacks of Class A cement for Cement Plug 3 from 1900' to 1700'.
18. Displace with 27 bbls of 6% Gel
19. Pull casing up to 200' and pump 40 sacks of Class A cement for Cement Plug 4 from 200' to surface.
20. TOOH with casing and lay down.
21. RDMO Cement company
22. Erect Monument according to Law.
23. RDMO.

Add cement plugs 2350-2250 (base)  
 1600-1500 (B.Lime) 1050-950 (elevation)  
 + 250 - surface

WR-35

Office of Oil and Gas  
Permitting  
JAN 24 2000  
West Virginia  
Department of Environmental Protection

Date: 17-Jan-00  
API # 47-099-02003

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Reviewed K

Farm name: Holland, George

Operator Well No.: Thompson #1

LOCATION: Elevation: 1,041'      Quadrangle: Wayne  
District: Butler      County: Wayne  
Latitude: 14,335 feet South of 38 DEG. 10 MIN. 0 SEC.  
Longitude: 10,250 feet West of 82 DEG. 25 MIN. 0 SEC.

Company: Cabot Oil & Gas Corporation  
400 Fairway Drive: Suite 400  
Coraopolis, PA 15108-4308

Agent: John Abshire  
Inspector: David Belcher  
Permit Issued: 8/24/99  
Well Work Commenced: 10/6/99  
Well Work Completed: 1/15/99  
Verbal Plugging  
Permission granted on:  
Rotary X Cable \_\_\_\_\_  
Total Depth (feet) 4560'  
Fresh Water Depths (ft) 229'  
Salt Water Depths (ft) 1176', 1198', 1291'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
16"	30'	30'	
9-5/8"	702.55'	702.55'	290 sks Class "A"
7"	1857.10'	1857.10'	325 sks Class "A"
4-1/2"	4466.55'	4466.55'	120 sks latex

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

OPEN FLOW DATA

Producing formation Lockport      Pay zone depth (ft) 4383' - 4395'  
Gas: Initial open flow 84 MCF/d      Oil: Initial open flow N/A Bbl/d  
Final open flow 103 MCF/d      Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock pressure 1000 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: CABOT OIL & GAS CORPORATION

By: Ray Prudnick Jr.  
Date: 1/17/00      08/29/2014

Received

JUN 30 2014

Office of Oil and Gas  
Dept. of Environmental Protection

Wayne 8

WAY-2003

**OPEN FLOW DATA**

Perf'd Lockport from 4383'-4395'. Broke down with 250 gals 15% HCl acid @ 2830 psi. ISIP 2460 psi. Treated with 60 bbl 15% HCl, 24 bbl gel water, 60 bbl 15% HCl, 24 bbl gel water, and 60 bbl 15% HCl. Flushed with 70 bbl water. Ran 600 scf N<sub>2</sub> per minute. MTP: 2500 psi. ATP: 2140 psi. ATR: 4 bpm. ISIP: 1870 psi.

FORMATION	TOP	BOTTOM	REMARKS
Salt Sand	0	730	
Silt/Shale	730	1078	
Salt Sand	1078	1422	
Silt/Shale	1422	1530	
Big Lime	1530	1690	
Shale	1690	1775	
Injun	1775	1802	
Shale	1802	2300	
Berea	2300	2316	
Devonian Shale	2316	3538	
Limestone	3538	3775	
Dolomite	3775	4380	
Lockport	4380	4398	
Big Six	4398	4452	
Shale	4452	4560 - TD	

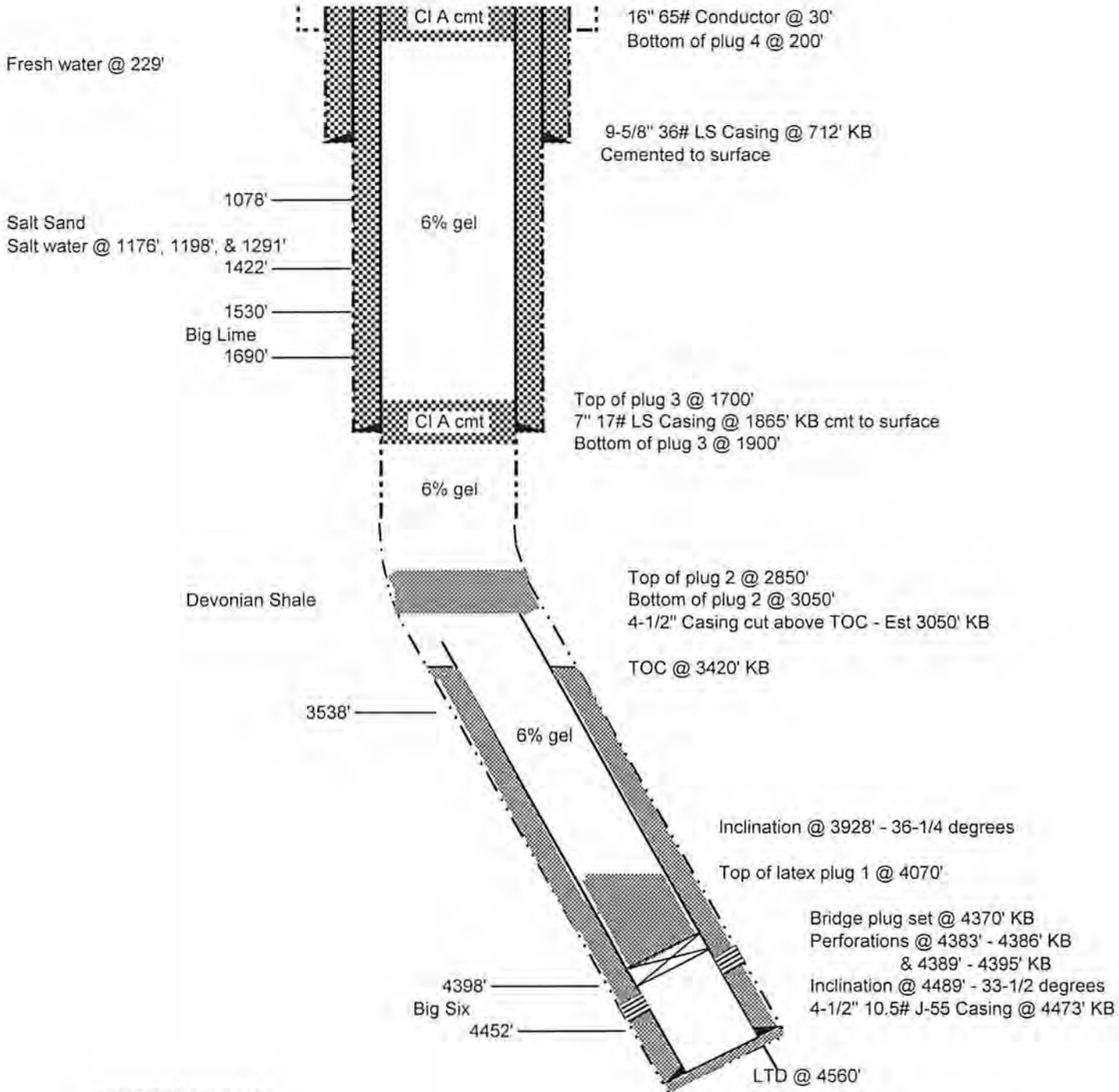
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JUN 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

08/29/2014

**B. Thompson #1**  
API 47-099-02003  
PROPOSED CONFIGURATION



Schematic is not to scale

06/19/14  
**Received**

JUN 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

08/29/2014

WW-4A  
Revised 6-07

1) Date: June 26, 2014  
2) Operator's Well Number  
Bruce Thompson #1  
3) API Well No.: 47 - 099 - 02003

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

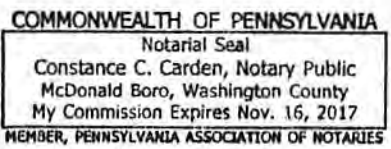
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Laura Holland Estate</u> ✓	Name <u>Rockspring Development, Inc.</u> ✓
Address <u>c/o Helen Holland</u>	Address <u>P.O. Box 390</u>
<u>254 Midland Ave., Columbus, OH 43223</u>	<u>East Lynn, WV 25512</u>
(b) Name <u>Winford L. Berry</u> ✓	(b) Coal Owner(s) with Declaration
Address <u>4720 Queen Chapel Road</u>	Name <u>Southern Region Industrial Realty, Inc.</u> ✓
<u>Dalzell, South Carolina 29040</u>	Address <u>c/o Pocahontas Land Corporation</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Jeremy James</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 147</u> ✓	Name <u>Neweagle Mining Corp.</u> ✓
<u>Ona, WV 25545</u>	Address <u>400 Patterson Lane</u>
Telephone <u>(304) 951-2596</u>	<u>Charleston, WV 25311</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 *[Signature]*  
 Its: Regulatory Supervisor  
 Address Five Penn Center West, Ste. 401  
Pittsburgh, PA 15276  
 Telephone (412) 249-

Received

Subscribed and sworn before me this 26 day of June, 2014  
Constance C. Carden Notary Public JUN 30 2014  
 My Commission Expires November 16, 2017

**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).



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 JUN 27 2014  
*B. Thompson #1 A1A*

Sent To: Jeremy James  
 P.O. Box 147  
 Ona, WV 25545

PS Form 3800

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Total Postage & Fees	\$

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 JUN 27 2014  
*B. Thompson #1 A1A*

Sent To: Rockspring Development, Inc.  
 P.O. Box 390  
 East Lynn, WV 25512

PS Form 3800

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*B. Thompson #1 A1A*

Sent To: Southern Region Industrial Realty, Inc.  
 c/o Pocahontas Land Corporation  
 P.O. Box 1517  
 Bluefield, WV 24701

PS Form 3800

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Sent To: Neweagle Mining Corp.  
 400 Patterson Land  
 Charleston, WV 25311

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Sent To: Laura Holland Estate  
 c/o Helen Holland  
 254 Midland Ave.  
 Columbus, Ohio 43223

PS Form 3800

**Received**  
 JUN 30 2014

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Total Postage & Fees	\$

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*B. Thompson #1 A1A*

Sent To: Winford L. Berry  
 4740 Queen Chapel Road  
 Dalzell, South Carolina 29040

PS Form 3800

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM  
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Cabot Oil & Gas Corporation OP Code \_\_\_\_\_

Watershed Sycamore Branch Quadrangle Wayne

Elevation 1,036' County Wayne District Butler

Description of anticipated Pit Waste: None - no cuttings produced during plugging operation

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

Will a synthetic liner be used in the pit? N/A. If so, what mil.? \_\_\_\_\_

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 \_\_\_\_\_ )

*WILL USE TANKS FOR ANY EFFLUENT & DISPOSE OF PROPERLY.*

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. \_\_\_\_\_

-If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used? \_\_\_\_\_

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

JUN 30 2014

Subscribed and sworn before me this 26th day of June, 2014 Office of Oil and Gas  
WV Dept. of Environmental Protection

*Constance C. Carden* Notary Public

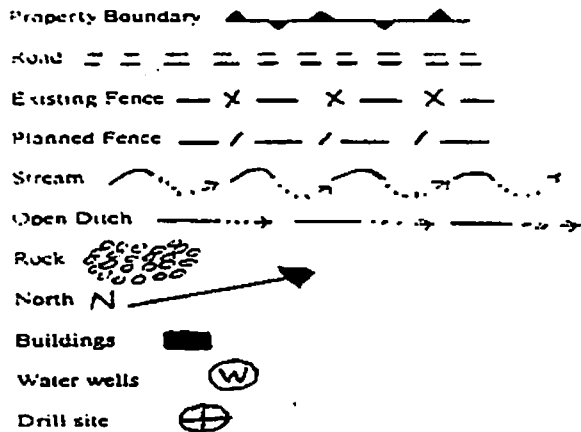
My commission expires November 16, 2017

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

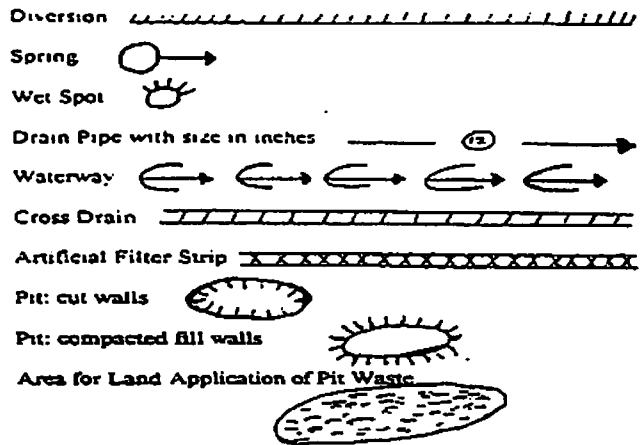
08/29/2014

Form WW-9

Operator's Well No. Bruce Thompson 1



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 2.5 Prevegetation pH 6.5

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 1000 to 1500 Tons/acre

Seed Mixtures

Area I			Area II		
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 - 1	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.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments:

Title: inspector 006

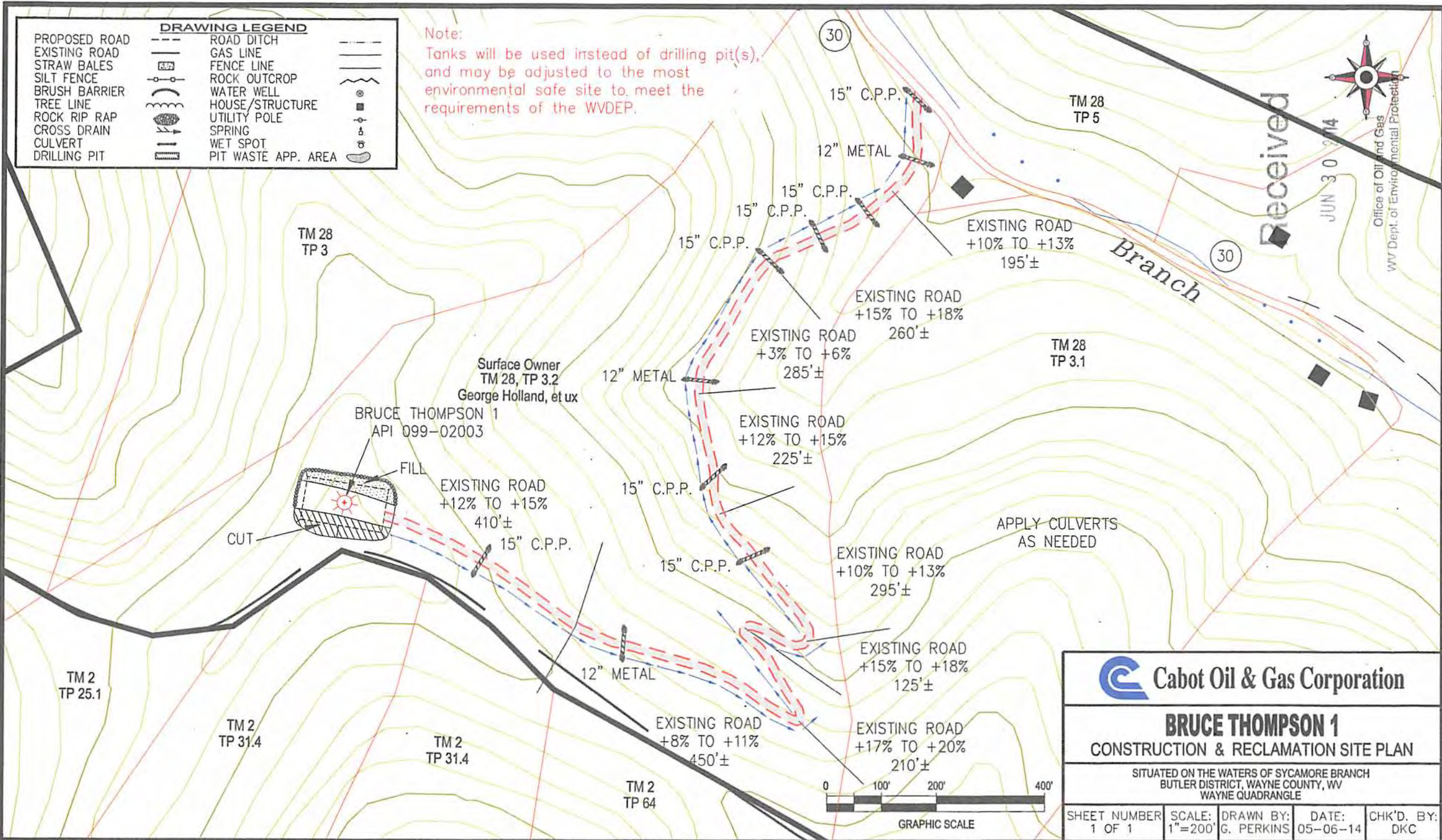
Date: 7-14-14

Field Reviewed?  Yes  No

99 02003P

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	

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.

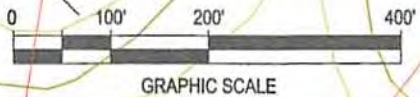


Received

JUN 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

<b>BRUCE THOMPSON 1</b>				
<b>CONSTRUCTION &amp; RECLAMATION SITE PLAN</b>				
SITUATED ON THE WATERS OF SYCAMORE BRANCH BUTLER DISTRICT, WAYNE COUNTY, WV WAYNE QUADRANGLE				
SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
1 OF 1	1"=200'	G. PERKINS	05-06-14	DKC



**GENERAL NOTES:**

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

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

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

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

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

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

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

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

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

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

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

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

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

**CONTRACTORS NOTE:**

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

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

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



1-800-245-4848

**DRAWING LEGEND**

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

**DRIVING DIRECTIONS FOR BRUCE THOMPSON 1**

- 1.) FROM WAYNE, WV DRIVE SOUTH ON STATE ROUTE 152 FOR APPROXIMATELY 8.3± MILES TO SECONDARY ROUTE 30.
- 2.) TURN LEFT AND ONTO SECONDARY ROUTE 30 AND GO APPROXIMATELY 0.9± MILE TO THE BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD.
- 3.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 0.5± MILES TO THE WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN",

Received

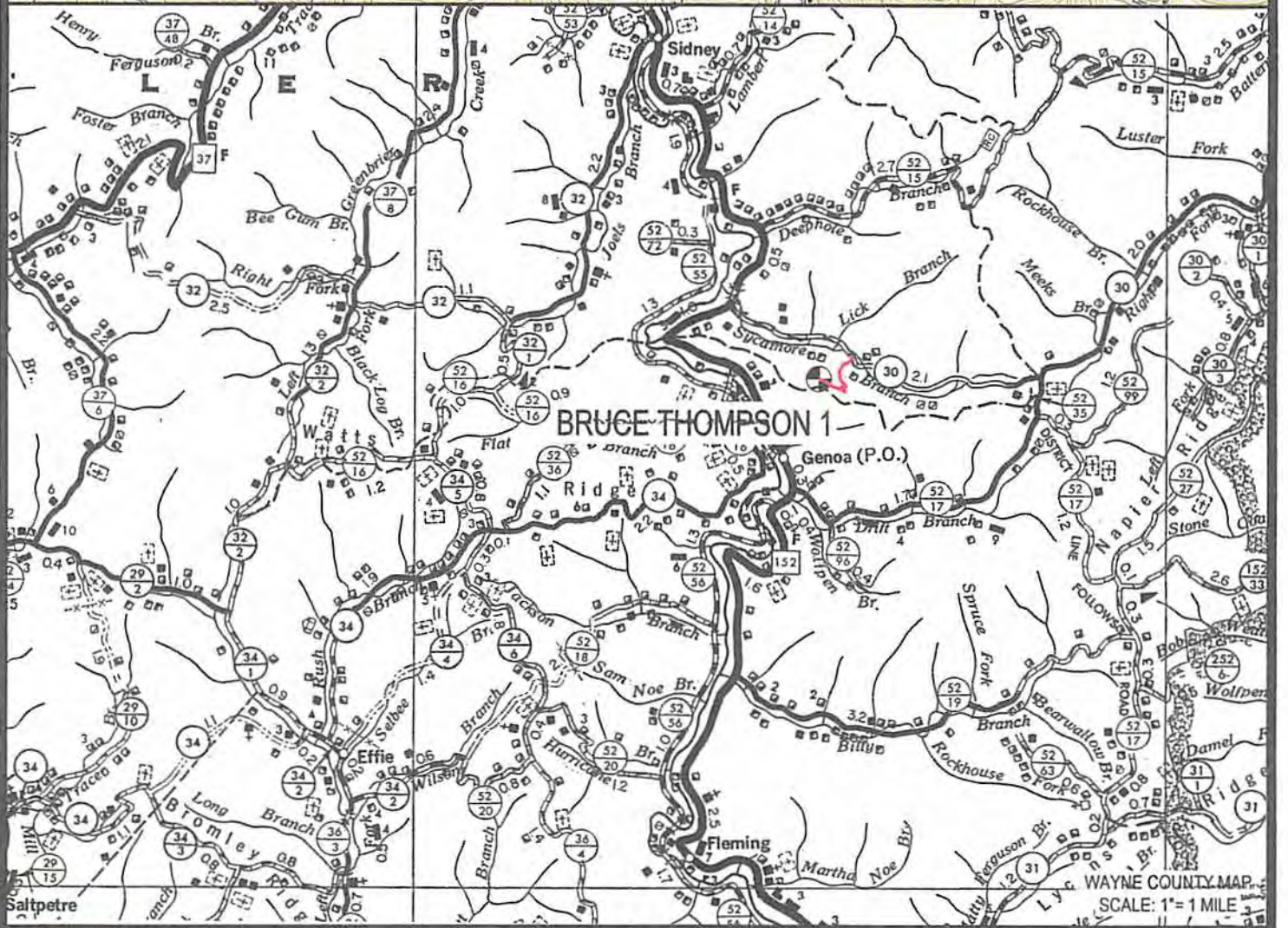
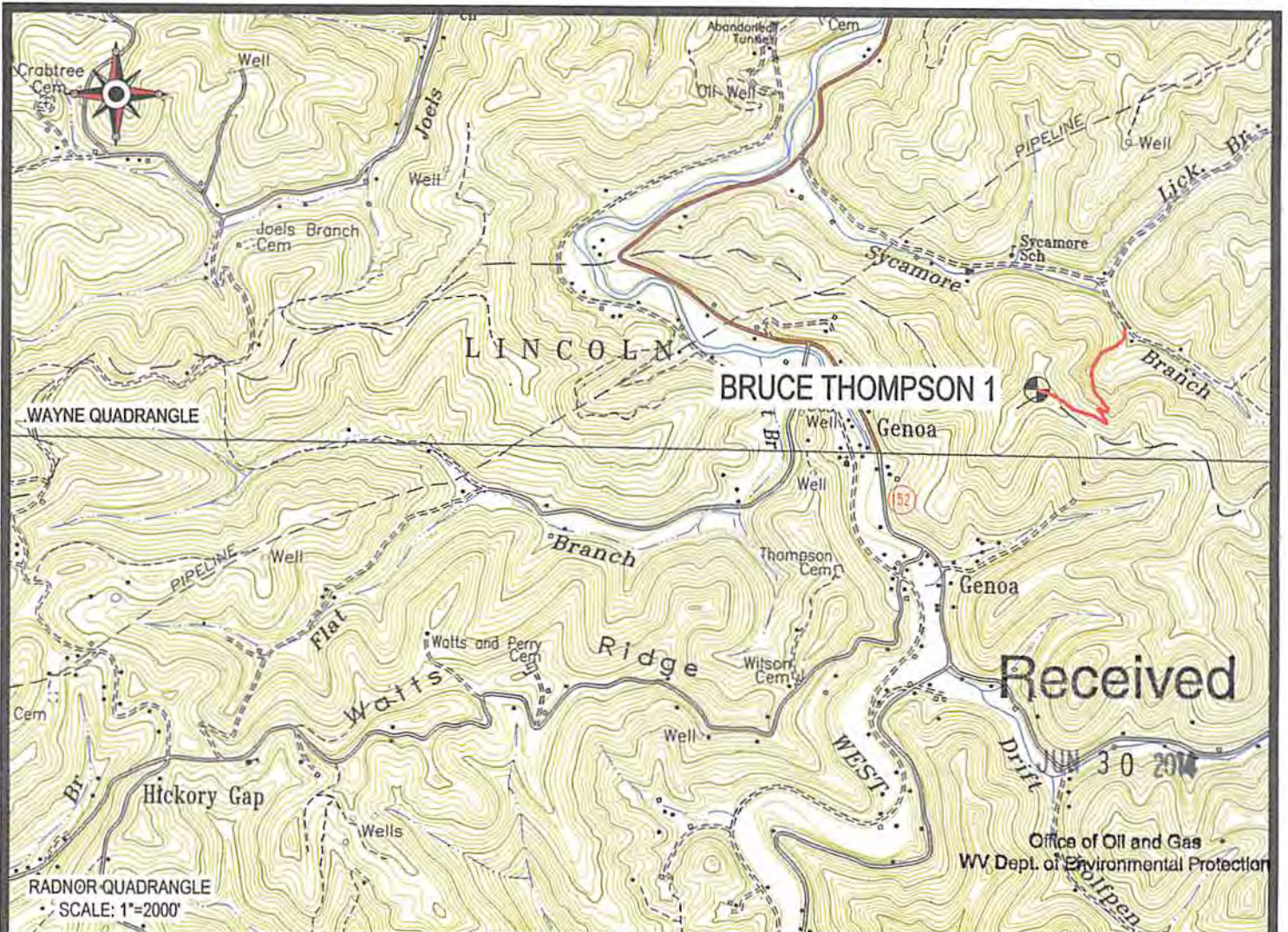
08/29/2014

JUN 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection



**BRUCE THOMPSON 1**  
BUTLER DISTRICT, WAYNE COUNTY, WV  
WAYNE 7.5' QUADRANGLE



 Cabot Oil & Gas Corporation

**BRUCE THOMPSON 1**  
LOCATION MAP

08/29/2014

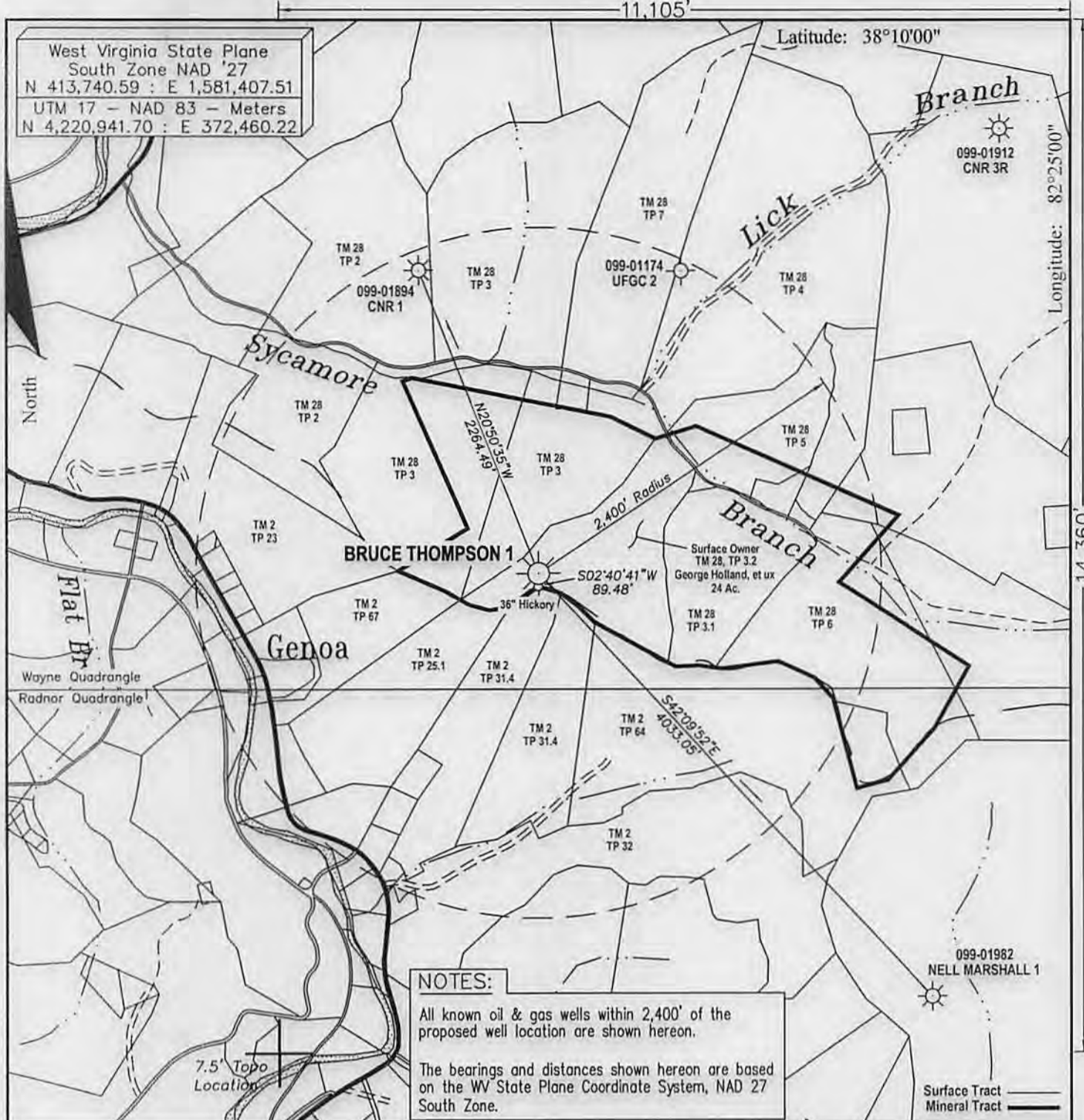


**CUNNINGHAM**

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 SYCAMORE BRANCH  
OF THE WEST FORK OF TWELVEPOLE CREEK  
BUTLER DISTRICT, WAYNE COUNTY, WV  
WAYNE 7.5' QUADRANGLE

PROJECT NO. CABOT	DWG. BRUCE THOMPSON 1 LOC
DATE: 05-06-14	SCALE: AS NOTED
DRAWN BY: J. JONES	CHK'D BY: D.K.C.
FILE: C:\PROJECT FOLDER\CABOT	



FILE #:  
DRAWING #: Bruce Thompson 1  
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: *Don K. Cunningham*  
R.P.E.: \_\_\_\_\_ L.L.S.: 701

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25304



DATE: May 5, 2014  
OPERATOR'S WELL #: Bruce Thompson 1  
API WELL #: 47 099 02003P  
STATE COUNTY PERMIT

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

WATERSHED: Sycamore Branch of West Fork of Twelvepole Creek ELEVATION: 1,035.79'  
COUNTY/DISTRICT: Wayne / Butler QUADRANGLE: Wayne

SURFACE OWNER: George Holland, et ux ACREAGE: 24  
OIL & GAS ROYALTY OWNER: Bruce Conley Thompson, Jr., et al ACREAGE: 105

08/29/2014

LEASE #: 47-10357 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  
June 26, 2014

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

RE: Bruce Thompson #1  
Butler District, Wayne County, WV  
API # 47-099-02003  
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

JUN 30 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection