



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

June 11, 2013

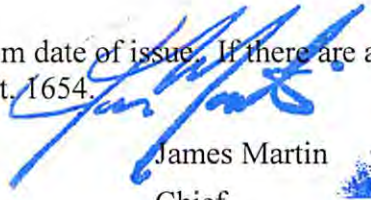
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3901645, 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: SHONK LAND 18
Farm Name: SHONK LAND CO.
API Well Number: 47-3901645
Permit Type: Plugging
Date Issued: 06/11/2013

39 01645 P

WW-4B
Rev. 2/01

1) Date May 22, 2013
2) Operator's
Well No. Shonk Land #18
3) API Well No. 47-039 - 01645 P

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 ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1,793.86' Watershed Unnamed Tributary of Tenmile Fork
District Cabin Creek County Kanawha Quadrangle Eskdale

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Brian D. Hall
Address Five Penn Center West, Ste. 401 Address 6804 Lick Creek Road
Pittsburgh, PA 15276 Danville, WV 25053

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Terry Urban Name Petty Oilfield Services, Inc.
Address P.O. Box 1207 Address P.O. Box 437
Clendenin, WV 25045 Hamlin, WV 25523

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


See Attached Procedure

RECEIVED
Office of Oil & Gas

MAY 30 2013

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  Date 5-28-13

06/14/2013

Shonk Land Co. #18
API # 47 – 039 - 01645 P
PLUGGING PROCEDURE

Current Configuration

TD @ 3398'
PBSD @ 2764'
13-3/8" – conductor @ 24'
10-3/4" – 32.75# casing @ 1027' on shoe
7" – 26# casing @ 2611' on shoe
Top of 2-3/8" tubing @ 2579' left in hole following workover attempt
3" liner from 2703' – 2764' hung on 2" x 3" anchor packer
7' of 4-1/2" washover pipe around tubing left in hole
Water @ 315', 1528', & 1600'
Coal @ 439' – 444'
Big Lime acidized @ 2696' – 2764'
Maxton formation: 2361' -2449'
Maxton gas show @ 2414' & 2450'
Oil show @ 1780'

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PROCEDURE

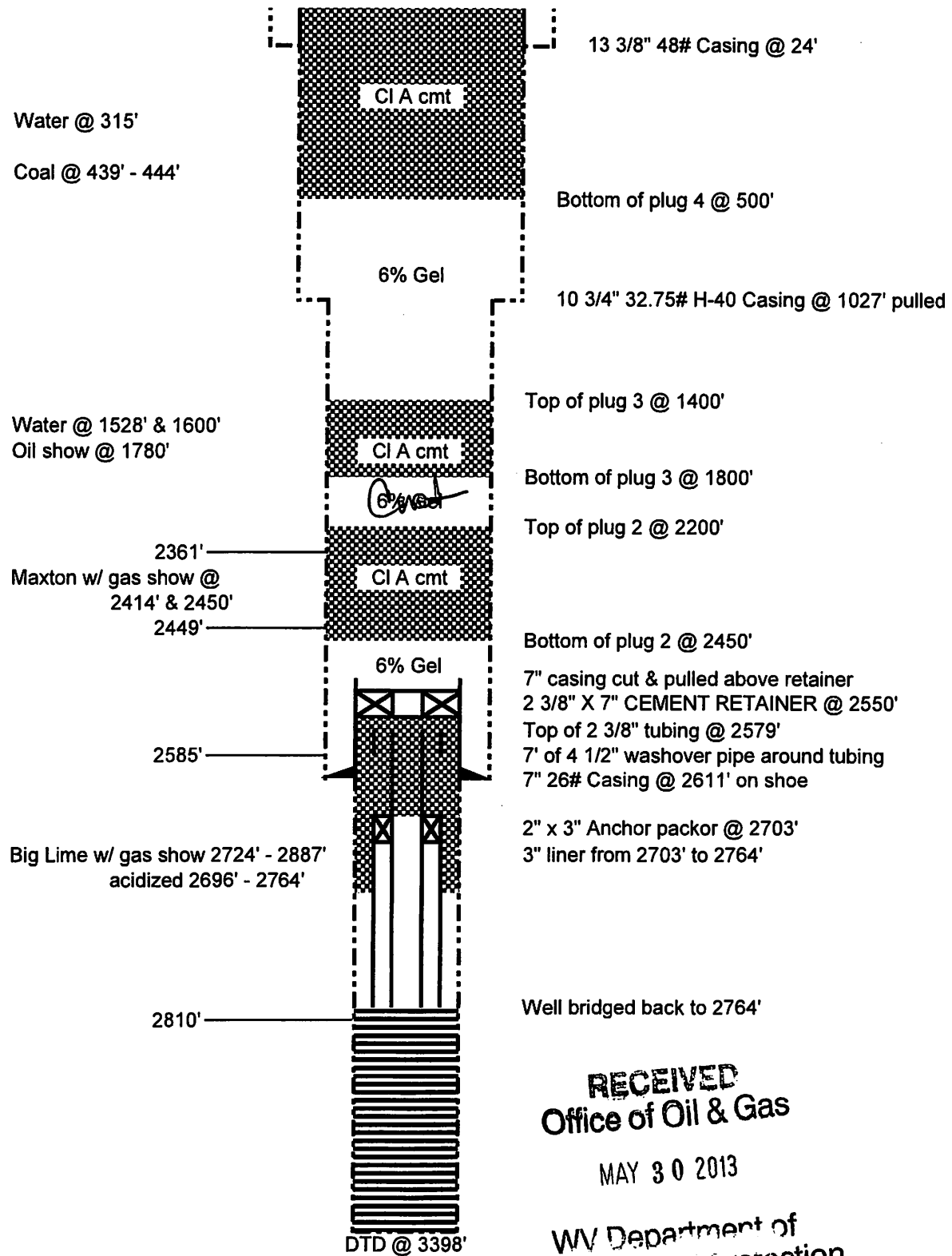
1. Contact Glasgow Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work.
3. MIRU service rig and blow down well.
4. Lay 2" line from wellhead to pit/tank and stake down securely.
5. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
6. Unpack wellhead.
7. TIH with cement retainer on 2 3/8" work string and set @ 2550'.
8. MIRU Cement Company and pump 25 sks of Class A cement. If water was encountered while running in hole, unseat from retainer and spot cement to 2550'. Sting back into retainer before bull heading cement.
9. Displace w/ 9 3/4 bbls of 6% Gel.
10. Sting out of retainer and TOOH with work string.
11. Cut 7" casing above retainer and pull out of hole.
12. TIH with work string to 2450'.
13. Pump 40 bbls 6% Gel.
14. Pump 72 sks of Class A cement for plug 2 from 2450' to 2200'.
15. Displace with 8 1/2 bbls 6% Gel.
16. Pull work string up to 1800' and pump 185 sks of Class A cement for plug 3 from 1800' to 1400'.
17. Displace with 5 1/2 bbls 6% Gel.
18. TOOH with work string.
19. Pull 10-3/4" casing.
20. TIH with work string to 1400' and pump 110 bbls 6% Gel.
21. Pull work string up to 500' and pump 335 sks of Class A cement for plug 4 from 500' to surface.
22. TOOH with work string and lay down.
23. RDMO Cementing Company.
24. Place monument as required by law on top of well bore.
25. Reclaim well site.

*Operator
will pull all Free
Pipe & adjust cement
Accordingly
Hung & Mike
5-28-13*

06/14/2013

39016457A

Shonk Land Co. #18
API 47-039-01645
PROPOSED CONFIGURATION



Schematic is not to scale

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MAY 30 2013

WV Department of
Environmental Protection

T. Ou 07/09/12

06/14/2013

3901645A

WW-4A
Revised 6-07

1) Date: May 22, 2013
2) Operator's Well Number
Shonk Land #18
3) API Well No.: 47 - 039 - 01645

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

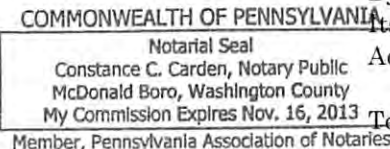
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Shonk Land Company</u> ✓	Name <u>Catenary Coal Co., LLC JMAG</u> ✓
Address <u>194 Summers Street</u>	Address <u>5914 Cabin Creek Rd. P.O. Box 726</u>
<u>Charleston, WV 25301</u>	<u>Eskdale, WV 25075 Ceredo, WV 25501</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Shonk Land Company</u> ✓
	Address <u>194 Summers Street</u>
	<u>Charleston, WV 25301</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Terry Urban</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 1207</u>	Name <u>Robin Land Company</u> ✓
<u>Clendenin, WV 25045</u>	Address <u>106 Lockheed Drive</u>
Telephone <u>(304) 549-5915</u>	<u>Beckley, WV 25813</u>

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

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

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

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

	Well Operator	<u>Cabot Oil & Gas Corporation</u>
	By:	<u>Kenneth L. Marcum</u> <i>Kenneth L. Marcum</i>
	Address	<u>Regulatory Supervisor</u>
	Telephone	<u>Five Penn Center West, Ste. 401</u>
		<u>Pittsburgh, PA 15276</u>
		<u>(412) 249-3850</u>

Subscribed and sworn before me this 22nd day of May
Constance C. Carden Notary Public
My Commission Expires November 16, 2013 *RECEIVED*
MAY 23 2013

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.

06/14/2013

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 **Unnamed Tributary of Tenmile Fork** Quadrangle **Eskdale**

Elevation **1,793.86'** County **Kanawha** District **Cabin Creek**

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 **X**

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 **no treated pit wastes will be produced**)

Handwritten: TU 5'2" B

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? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. **No cuttings produced during plugging operation**

-If left in pit and plan to solidify what medium will be used? Cement, lime, sawdust _____

-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Kenneth L. Marcum*

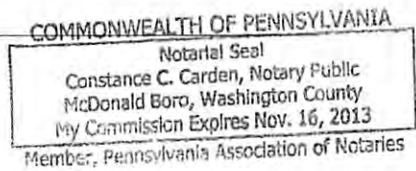
Company Official (Typed Name) **Kenneth L. Marcum**

Company Official Title **Regulatory Supervisor**

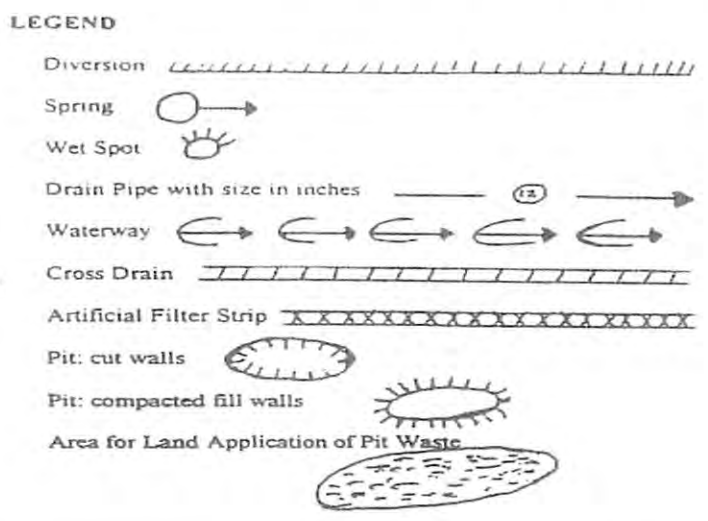
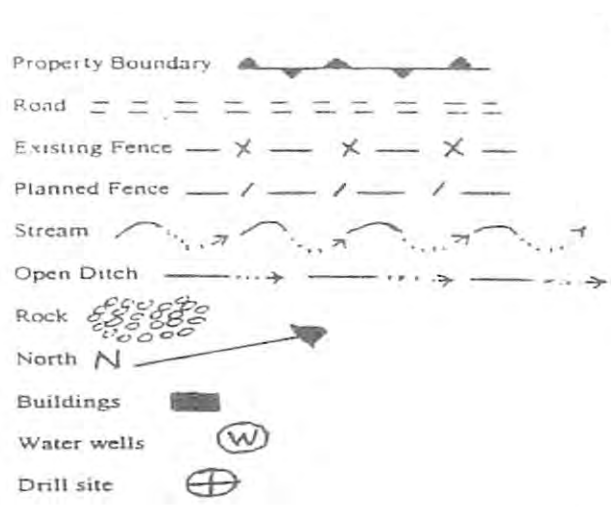
Subscribed and sworn before me this 22nd day of May, 2013

Constance C. Carden Notary Public

My commission expires **November 16, 2013**



06/14/2013



Proposed Revegetation Treatment: Acres Disturbed _____ 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

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MAY 30 2013

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Seed Type	Area I	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	Area II	lbs/acre
Grain Rye -	100	Red Clover - 5 Fescue - 40
Annual Rye -	20	White Clover - 5
Perennial Rye -	1	Alta Sweet Clover - 5
Yellow Clover -	5	Birdsfool 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: [Signature]
Comments: _____

Title: Inspector Oil & Gas Date: 5-28-13

Field Reviewed? () Yes () No



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 4

Quadrangle Montgomery

Permit No. KAN-1645

WELL RECORD

Revised Record

Oil or Gas Well GAS
(KIND)

Company Godfrey L. Cabot, Inc.
Address 900 Union Bldg., Charleston, W. Va.
Farm Shonk Land Co. Acres 16,000
Location (waters) _____
Well No. 18, Serial 1451 Elev. 1821.92
District Cabin Creek County Kanawha
The surface of tract is owned in fee by Shonk Land Co.
Address Charleston, W. Va.

Mineral rights are owned by _____
Address _____

Drilling commenced April 11, 1956

Drilling completed July 7, 1956

Date Shot _____ From _____ To _____

With _____

Open Flow /10ths Water in _____ Inch

/10ths Merc. in _____ Inch

Volume 949,000 Cu. Ft.

Rock Pressure 540 lbs. 24 hrs.

Oil _____ bbls., 1st 24 hrs.

Fresh water 315, 1528, feet 1600 feet

Salt water _____ feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13	24	24	
10	1027	1027	Size of
8 1/2	1895	Pulled	
6 3/4	2611	2611	Depth set
5 3/16			
3	2764	2764	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____

COAL WAS ENCOUNTERED AT 439 FEET 60 INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Soil			0	5			
Gravel			5	20			
Sand			20	150			
Slate & Shells			150	200			
Sand			200	265			
Slate & Shells			265	386	Water	315	1/2 blr./hr.
Sand			386	406			
Slate & Shells			406	439			
Coal			439	444			
Slate & Shells			444	517			
Lime, Dark			517	536			
Sand			536	555			
Slate & Shells			555	560			
Sand			560	580			
Slate & Shells			580	588			
Sand			588	653			
Slate & Shells			653	698			
Sand			698	745			
Slate & Shells			745	865			
Sand			865	950			
Slate & Shells			950	1016			
Lime, Gritty			1016	1028			
Sand			1028	1115			
Slate & Shells			1115	1125			
Sand			1125	1150			
Slate & Shells			1150	1158			
Sand			1158	1328			
Slate & Shells			1328	1340			
Sand			1340	1680	Water	1528	1/2 blr. (10")
Slate & Shells			1680	1745			
Slate, White			1745	1755	Water	1600	06/14/2013
Slate & Shells			1755	1775	Oil	1780	1 blr./hr (total Show)
Sand			1775	1829			
Slate & Shells			1829	1860			
Slate, Black			1860	1882			
Slate & Shells			1882	1888			



Received

MAY 23 2013

(Over)

1645

Formation	Color	Hard or Soft	Top 4	Bottom	Oil, Gas or Water	Depth Found	Remarks
Sand			1888	1910			
Slate & Shells			1910	1918			
Lime, Red			1918	1928			
Slate & Shells			1928	1956			
Lime			1956	2017			
Slate & Shells			2017	2025			
Lime, Red			2025	2037			
Sand			2037	2055			
Lime, Red			2055	2059			
Sand			2059	2127			
Lime, Red			2127	2152			
Red Rock, Shells			2152	2173			
Slate & Shells			2173	2214			
Lime			2214	2247			
Red Rock			2247	2305			
Slate & Shells			2305	2345			
Lime, Red			2345	2361			
MAXTON			2361	2449	Gas	2414	Show.
Lime, Dark			2449	2516	Gas	2450	Show.
Slate & Shells			2516	2537			
Lime, Dark			2537	2585			
BIG LIME			2585	2810	Gas	2724-2887	53 Mcf decreased to 15 Mcf.
Slate & Shells			2810	2814			
Gray Lime			2814	2822			
INJUN SAND			2822	2865			
Lime Shells			2865	2894			
VEIR			2894	3019			
Slate & Shells			3010	3237			
Lime, Gray			3237	3262			
Slate & Shells			3262	3292			
BROWN SHALE			3292	3300			
Slate & Shells			3300	3370			
Lime			3370				
TOTAL DEPTH				3398			

Well bridged back to 2764 and acidized 7/16/56 with 2250 gallons from 2696 to 2764 with no result.

Reacidized 8/27/56 with 3000 gallons from 2697 to 2764; open flow before acidized 49 Mcf, open flow secondary after acidized and three hours after blowing open, 949 Mcf.

Packer set at 2697; cave catcher used on top of packer and cemented in with 30 sacks.

Received

06/14/2013

MAY 23 2013

Date 9/10/56, 19

APPROVED GODFREY L. CABOT, INC., Owner

Office of Oil and Gas
WV Dept. of Environmental Protection

By _____ (Title)

Received

MAY 23 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

Date July 7, 2013
API # 47- 039 - 01645C

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

Name: Shonk Land Company LLC Operator Well No.: Shonk Land Co. #18 Deepeni

Location: Elevation: 1822' Quadrangle: Eskdale
District: Cabin Creek County: Kanawha
Latitude: 14750' feet South of 38° DEG. 05' MIN. 00" SEC.
Longitude: 7200' feet West of 81° DEG. 25' MIN. 00" SEC.

Company: Cabot Oil & Gas Corporation
900 Lee Street East, Suite 500
Charleston, WV 25301

Operator: Thomas S. Liberatore
Carlos Hively
Issued: 12/22/2003
Work Commenced: April 1, 2004
Work Completed: April 22, 2004
Plugging: _____
Permit granted on: _____
 Cable _____
Casing Depth (feet) 3398'
Water Depths (ft) 325'
Water Depths (ft) 1528', 1600'
Is being mined in area (Y/N)? Y
Casing Depths (ft) 439'-444'

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Up C
13"	24'	24'	Exis'
10"	1027'	1027'	Exis'
8"	1895'	1895'	Exis'
7"	2611'	2611'	Exis'
Fish In Hole Making Unable to Drill Deeper			

FLOW DATA

Producing Formation Big Lime Pay Zone _____
Depth (ft) 2764'-2697'
Initial Open Flow TSTM MCF/d Oil: Initial Open Flow _____ Bbl
Final Open Flow TSTM MCF/d Oil: Final Open Flow _____ Bbl
Time of open flow between initial and final tests N/A Hours
Suck pressure N/A psig surface pressure after N/A Hours

06/14/2013

Producing Formation _____ Pay Zone _____
Depth (ft) _____
Initial Open Flow _____ MCF/d Oil: Initial Open Flow _____ Bbl
Final Open Flow _____ MCF/d Oil: Final Open Flow _____ Bbl
Time of open flow between initial and final tests _____ Hours
Suck pressure _____ psig surface pressure after _____ Hours

ON BACK OF THIS FORM PUT THE FOLLOWING: 1.) DETAILS OF PERFORATED INTERVALS, FRACTURING OR
PLUGGING, PHYSICAL CHANGE, ETC. 2.) THE WELL LOG WHICH IS SYSTEMATIC DETAILED GEOLOGICAL REPORT

KAN-1645.

FORMATION FROM DRILLER'S LOG	TOP	BOTTOM	REMARKS
Overburden	0	5	
Sand	5	150	
Sandy Shale	150	439	
Coal	439	444	
Sandy Shale	444	2361	
Maxton	2361	2449	
Silt/Shale	2449	2585	
Big Lime	2585	2810	
Silt/Shale	2810	2822	
ljun	2822	2865	
Lime	2865	2894	
Veir	2894	3292	
Brown Shale	3292	3300	
Silt/Shale	3300	3370	
Lime	3370	3398	TD

REC-100

MAY 23 2013

MATCH LINE SHEET 1



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	

EXISTING ROAD
+9% TO +12%
350'±

EXISTING ROAD
+6% TO +9%
465'±

EXISTING ROAD
+6% TO +9%
220'±

EXISTING ROAD
+9% TO +12%
465'±

EXISTING ROAD
+9% TO +12%
355'±

EXISTING ROAD
+9% TO +12%
260'±

EXISTING ROAD
+6% TO +9%
330'±

EXISTING ROAD
+6% TO +9%
400'±

EXISTING ROAD
+6% TO +9%
415'±

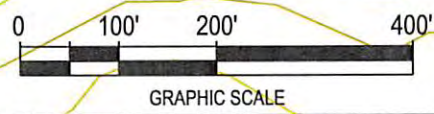
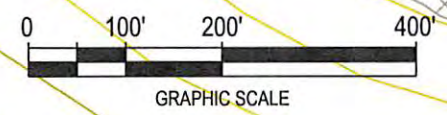
EXISTING ROAD
+6% TO +9%
410'±

NOTE:
ADD CULVERTS AS NEEDED.

Surface Owner
TM 80, TP 1
Shonk Land Co. LLC
2,805 Ac.

Howell

Hollow

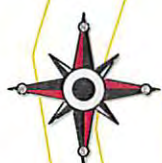


Cabot Oil & Gas Corporation

SHONK LAND 18
CONSTRUCTION & RECLAMATION SITE PLAN

WATERS OF UNNAMED TRIBUTARY OF TENMILE FORK
CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA
ESKDALE QUADRANGLE

SHEET NUMBER 1 OF 6	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 04/12/13	CHK'D. BY: DKC
------------------------	-------------------	------------------------	-------------------	-------------------



MATCH LINE SHEET 2 15" C.P.P.

EXISTING ROAD
+9% TO +12%
400'±

EXISTING ROAD
+1% TO +3%
330'±

EXISTING ROAD
+1% TO +3%
335'±

EXISTING ROAD
-1% TO -3%
190'±

API #47-039-01633

EXISTING ROAD
+6% TO +9%
370'±

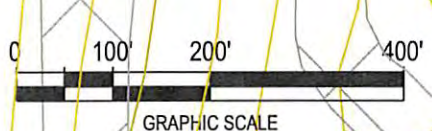
EXISTING ROAD
+5% TO +8%
270'±

EXISTING ROAD
+9% TO +12%
500'±

MATCH LINE SHEET 1 15" C.P.P.

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	

Surface Owner
TM 80, TP 1
Shonk Land Co. LLC
2,805 Ac.

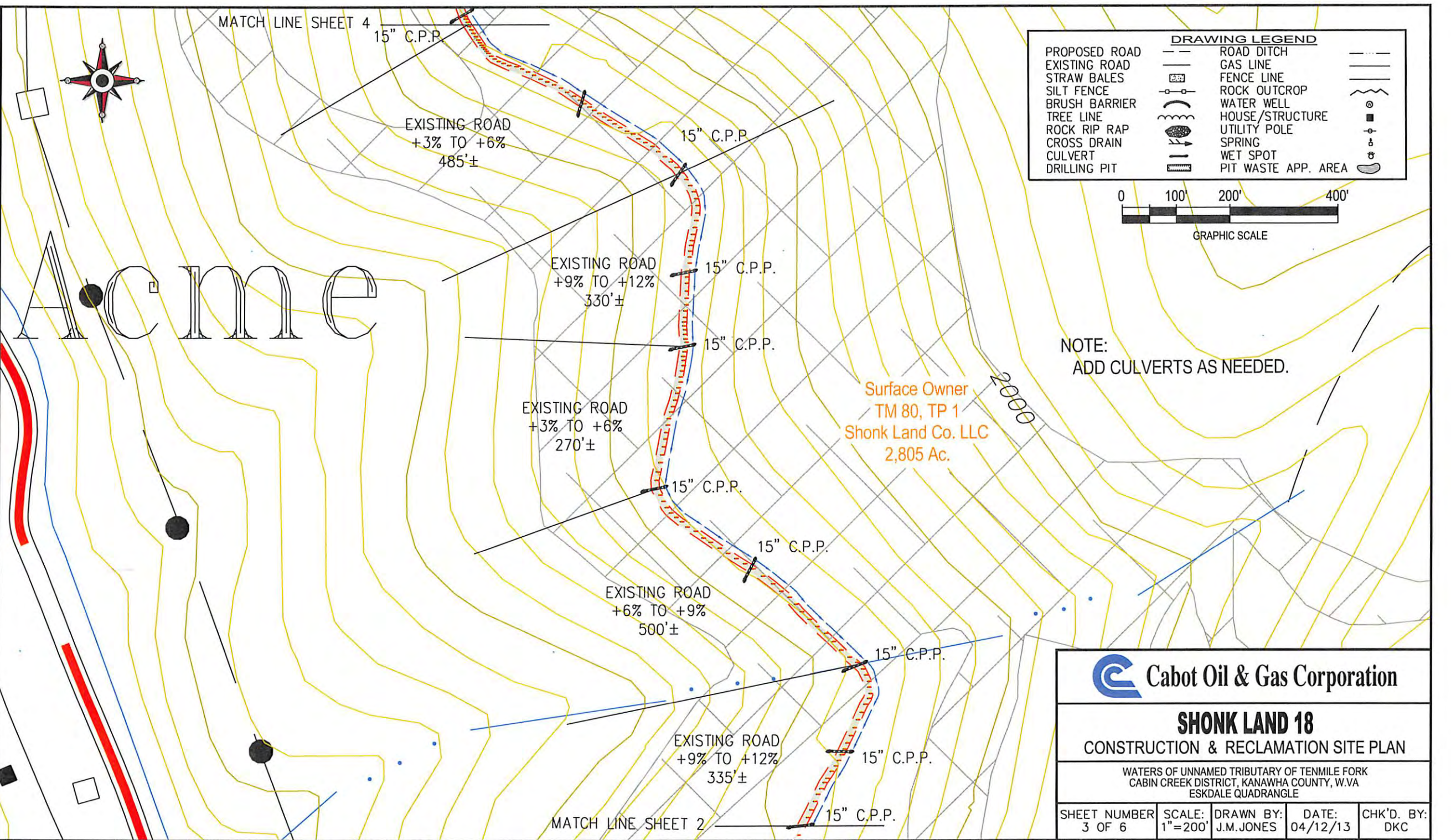


Cabot Oil & Gas Corporation

SHONK LAND 18 CONSTRUCTION & RECLAMATION SITE PLAN

WATERS OF UNNAMED TRIBUTARY OF TENMILE FORK
CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA
ESKDALE QUADRANGLE

SHEET NUMBER 2 OF 6	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 04/12/13	CHK'D. BY: DKC
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MATCH LINE SHEET 4

15" C.P.P.

EXISTING ROAD
+3% TO +6%
485'±

15" C.P.P.

EXISTING ROAD
+9% TO +12%
330'±

15" C.P.P.

15" C.P.P.

EXISTING ROAD
+3% TO +6%
270'±

15" C.P.P.

EXISTING ROAD
+6% TO +9%
500'±

15" C.P.P.

Surface Owner
TM 80, TP 1
Shonk Land Co. LLC
2,805 Ac.

15" C.P.P.

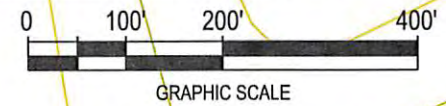
EXISTING ROAD
+9% TO +12%
335'±

15" C.P.P.

MATCH LINE SHEET 2

15" C.P.P.

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:
ADD CULVERTS AS NEEDED.

Cabot Oil & Gas Corporation

SHONK LAND 18
CONSTRUCTION & RECLAMATION SITE PLAN

WATERS OF UNNAMED TRIBUTARY OF TENMILE FORK
CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA
ESKDALE QUADRANGLE

SHEET NUMBER 3 OF 6	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 04/12/13	CHK'D. BY: DKC
------------------------	-------------------	------------------------	-------------------	-------------------



MATCH LINE SHEET 5

1600

15" C.P.P.

EXISTING ROAD
-1% TO -3%
265'±

15" C.P.P.

EXISTING ROAD
-3% TO -6%
250'±

EXISTING ROAD
-3% TO -6%
270'±

15" C.P.P.

NOTE:
ADD CULVERTS AS NEEDED.

15" C.P.P.

EXISTING ROAD
+3% TO +6%
310'±

EXISTING ROAD
+3% TO +6%
460'±

EXISTING ROAD
-3% TO -6%
385'±

15" C.P.P.

EXISTING ROAD
+9% TO +12%
80'±

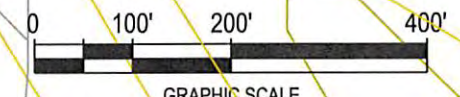
15" C.P.P.

MATCH LINE SHEET 3

2000

Surface Owner
TM 80, TP 1
Shonk Land Co. LLC
2,805 Ac.

2200



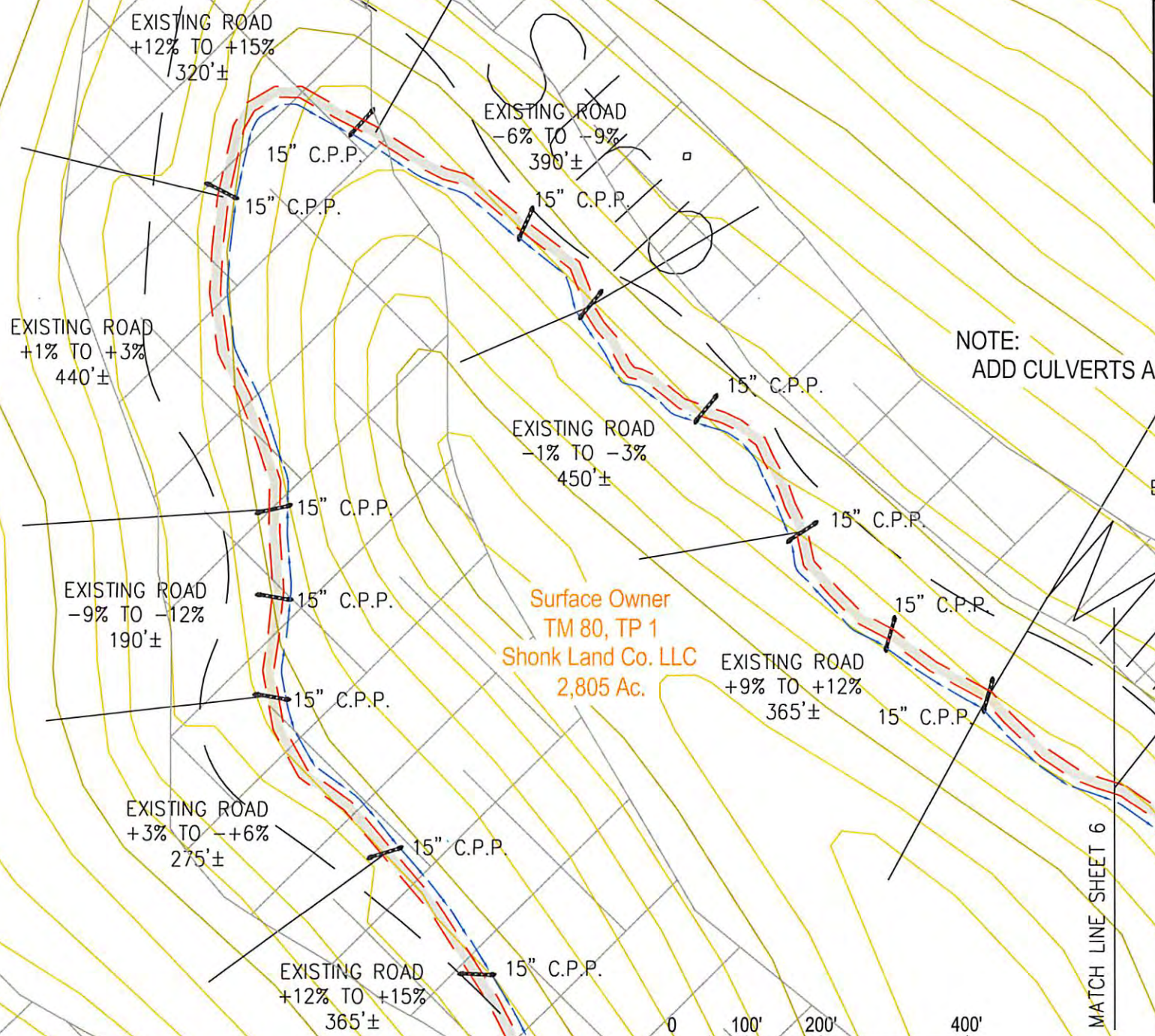
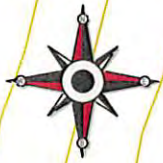
DRAWING LEGEND			
PROPOSED ROAD		ROAD DITCH	
EXISTING ROAD		GAS LINE	
STRAW BALES		FENCE LINE	
SILT FENCE		ROCK OUTCROP	
BRUSH BARRIER		WATER WELL	
TREE LINE		HOUSE/STRUCTURE	
ROCK RIP RAP		UTILITY POLE	
CROSS DRAIN		SPRING	
CULVERT		WET SPOT	
DRILLING PIT		PIT WASTE APP. AREA	

Cabot Oil & Gas Corporation

SHONK LAND 18
CONSTRUCTION & RECLAMATION SITE PLAN

WATERS OF UNNAMED TRIBUTARY OF TENMILE FORK
CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA
ESKDALE QUADRANGLE

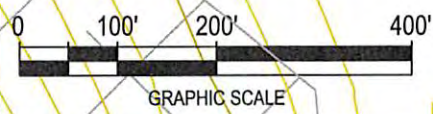
SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
4 OF 6	1"=200'	J.M.JONES	04/12/13	DKC



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:
ADD CULVERTS AS NEEDED.

Surface Owner
TM 80, TP 1
Shonk Land Co. LLC
2,805 Ac.



MATCH LINE SHEET 4

MATCH LINE SHEET 6



Cabot Oil & Gas Corporation

SHONK LAND 18

CONSTRUCTION & RECLAMATION SITE PLAN

WATERS OF UNNAMED TRIBUTARY OF TENMILE FORK
CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA
ESKDALE QUADRANGLE

SHEET NUMBER 5 OF 6	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 04/11/13	CHK'D. BY: DKC
------------------------	-------------------	------------------------	-------------------	-------------------



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	

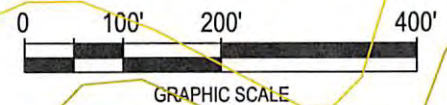
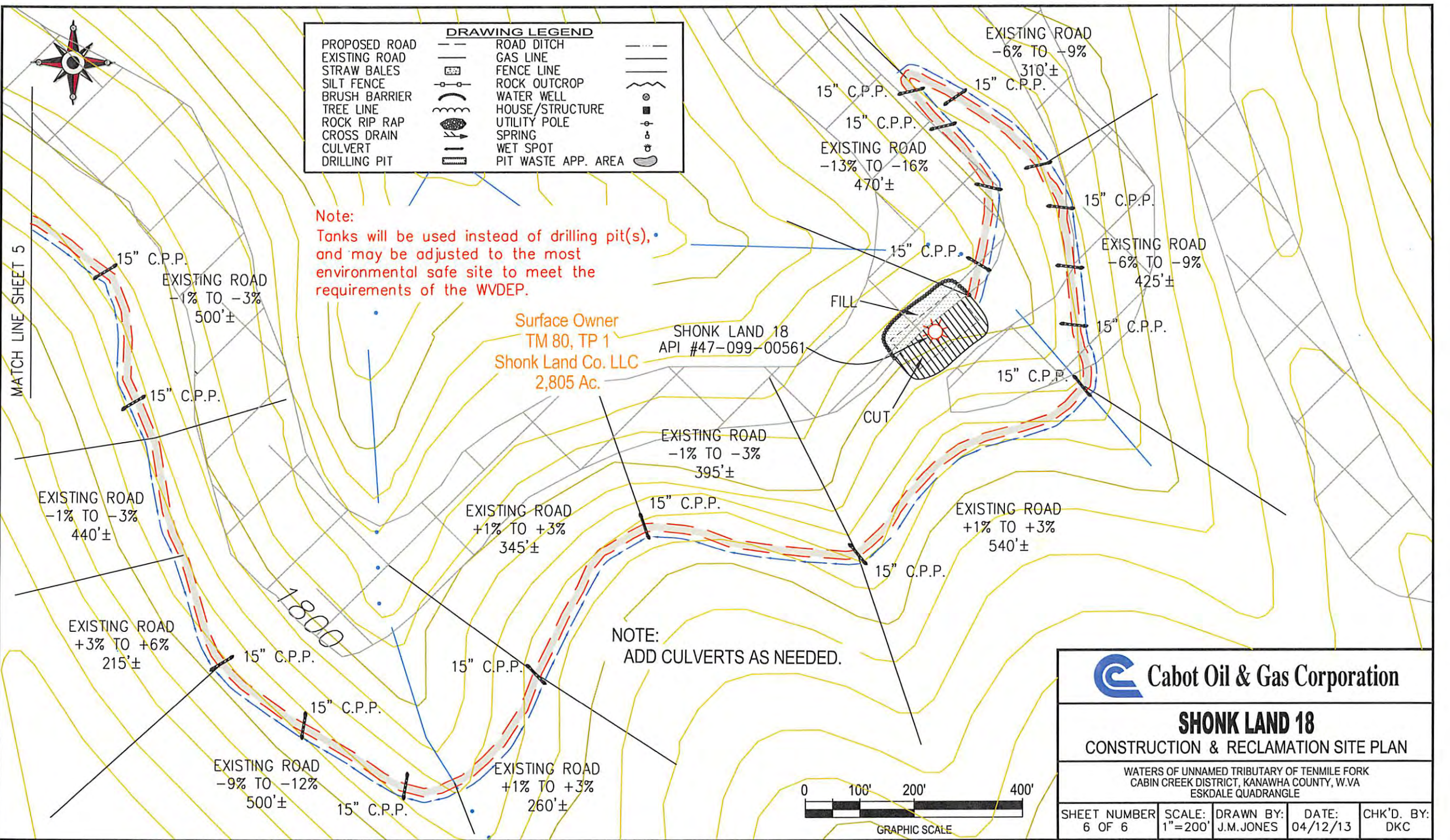
Note:
Tanks will be used instead of drilling pit(s), and may be adjusted to the most environmental safe site to meet the requirements of the WVDEP.

Surface Owner
TM 80, TP 1
Shonk Land Co. LLC
2,805 Ac.

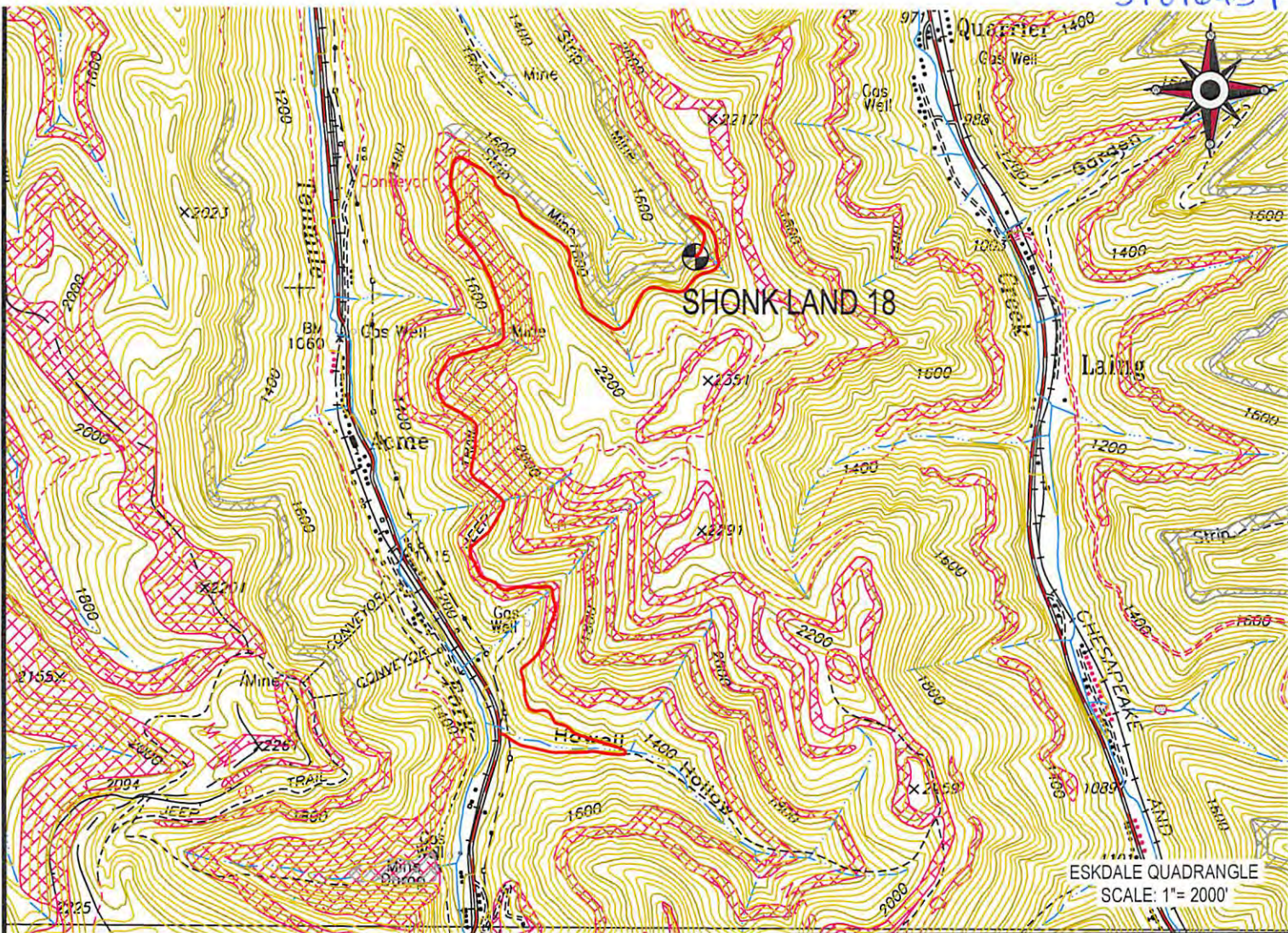
SHONK LAND 18
API #47-099-00561

NOTE:
ADD CULVERTS AS NEEDED.

MATCH LINE SHEET 5



 Cabot Oil & Gas Corporation				
SHONK LAND 18 CONSTRUCTION & RECLAMATION SITE PLAN				
<small>WATERS OF UNNAMED TRIBUTARY OF TENMILE FORK CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA ESKDALE QUADRANGLE</small>				
SHEET NUMBER 6 OF 6	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 04/12/13	CHK'D. BY: DKC



C:\Users\John\Documents\WEST VIRGINIA\WV WELLS\Shonk Land 18\Shonk Land

Received

MAY 23 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

KANAWHA COUNTY MAP
SCALE: 1"= 1 MILE

 Cabot Oil & Gas Corporation

SHONK LAND 18
LOCATION MAP 06/14/2013

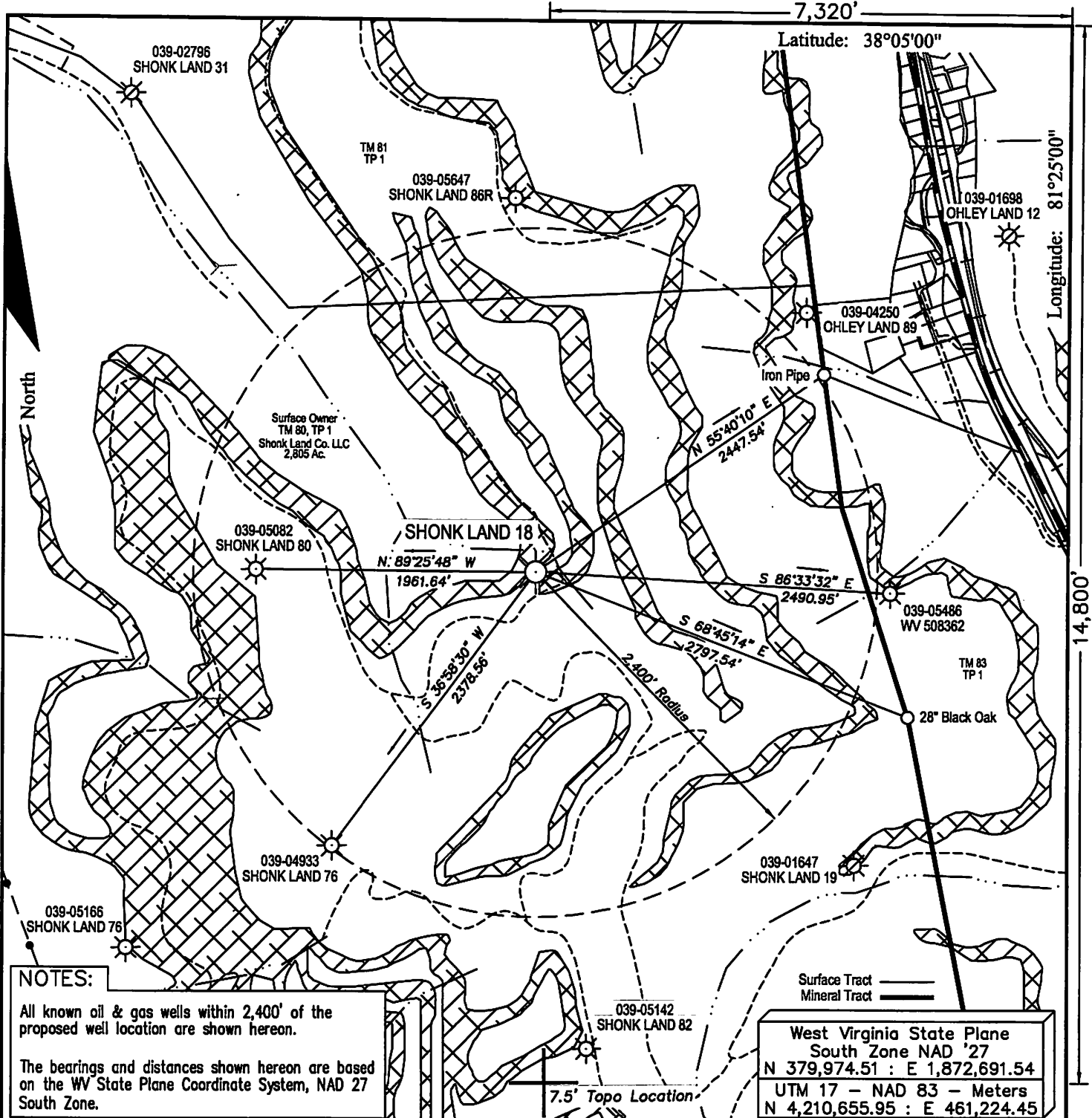


CUNNINGHAM

LAND SURVEYING & MAPPING SERVICES, LLC
• 5213 STEPHEN WAY •
• CROSS LANES, WEST VIRGINIA 25313 •
• VOICE (304) 561-4129 • FAX (304) 776-0703 •
• E-MAIL ADDRESS • DKCUNNINGHAM@SUDDENLINK.NET •

LOCATED ON THE WATERS OF AN UNNAMED TRIBUTARY
OF TENMILE FORK
CABIN CREEK DISTRICT, KANAWHA COUNTY, W.VA
ESKDALE QUADRANGLE

PROJECT NO. CABOT	DWG. NO. SHONK LAND 18 LOC.DWG
DATE: 04-08-13	SCALE: AS NOTED
DRAWN BY: G. PERKINS	CHK'D BY: D.K.C.
FILE: C:\PROJECT FOLDER\CABOT	



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.

FILE #:

DRAWING #: Shonk Land 18

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 ENVIRONMENTAL PROTECTION.

Signed: Don K. Cunningham

R.P.E.: _____ L.L.S.: 701

DON K. CUNNINGHAM
LICENSED
No. 701
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: April 7, 2013

OPERATOR'S WELL #: Shonk Land 18

API WELL #: 47 039 01645
STATE COUNTY PERMIT

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

WATERSHED: Unnamed Tributary of Tenmile Fork ELEVATION: 1,793.86'

COUNTY/DISTRICT: Kanawha / Cabin Creek QUADRANGLE: Eskdale

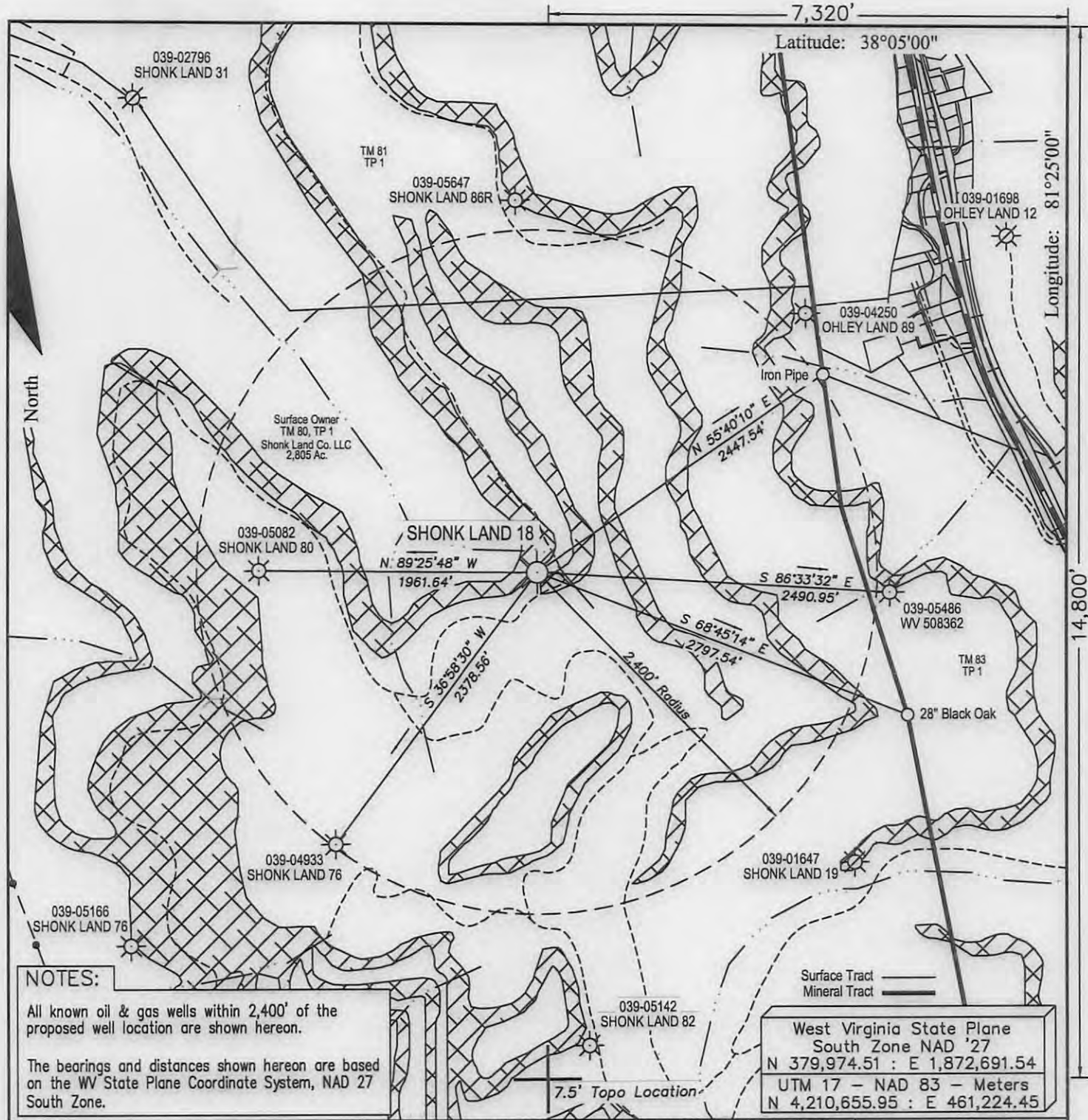
SURFACE OWNER: Shonk Land Co. LLC ACREAGE: 2,805

OIL & GAS ROYALTY OWNER: Shonk Land Co. LLC. ACREAGE: 16,000

LEASE #: 47-0641 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 Brian Hall
Address Five Penn Center West, Suite 401 Address P.O. Box 260
City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053



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.

FILE #: _____
 DRAWING #: Shonk Land 18
 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

Professional Surveyor Seal for Don K. Cunningham, No. 701, State of West Virginia. Includes the instruction "PLACE SEAL HERE".

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



DATE: April 7, 2013
 OPERATOR'S WELL #: Shonk Land 18
 API WELL #: 47 039 01645P
 STATE COUNTY PERMIT

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

WATERSHED: Unnamed Tributary of Tenmile Fork ELEVATION: 1,793.86'
 COUNTY/DISTRICT: Kanawha / Cabin Creek QUADRANGLE: Eskdale
 SURFACE OWNER: Shonk Land Co. LLC ACREAGE: 2,805
 OIL & GAS ROYALTY OWNER: Shonk Land Co. LLC. ACREAGE: 16,006 **06/14/2013**
 LEASE #: 47-0641 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 Brian Hall
 Address Five Penn Center West, Suite 401 Address P.O. Box 260
 City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053