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

December 02, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4500993, issued to CABOT OIL & GAS CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

James Martin
Chief

Operator's Well No: B-5 1183
Farm Name: LAWSON HEIRS
API Well Number: 47-4500993
Permit Type: Plugging
Date Issued: 12/02/2014

Promoting a healthy environment.

4500993P

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.

4500993P

WW-4B
Rev. 2/01

1) Date October 22, 2014
2) Operator's Well No. Lawson Heirs B-5
3) API Well No. 47-045-00993

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 675.63' Watershed Crawley Creek of the Guyandotte River
District Guyan County Logan Quadrangle Chapmanville

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

7) Designated Agent Whitney Johnson
Address P.O. Box 450
Glasgow, WV 25086

8) Oil and Gas Inspector to be notified
Name Ralph Triplett
Address 5539 McClellan Hwy
Branchland, WV 25506

9) Plugging Contractor
Name Shreve's Well Service
Address 3473 Triplett Road
Spencer, WV 25275

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

See attached sheets:

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

Work order approved by inspector Ralph D. Triplett Date October 27, 2014

4500993P

Lawson Heirs B-5
API # 47 – 045 - 00993
PLUGGING PROCEDURE

Current Configuration
TD @ 1842'
10-3/4" casing – depth unknown
8-5/8" casing not mentioned in well record – depth unknown
7" casing – depth unknown
3-1/2" tubing (possibly set on packer) – depth unknown
2" tubing (possibly set on packer) – depth unknown
No fresh water reported
No coal reported
Berea @ 1897' – 1909'
Big Lime with gas show @ 1260' – 1283'

ok RDT

PROCEDURE

1. Contact Danville 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.
4. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
5. Unpack wellhead.
6. Pull 2" tubing and determine depth of 3-1/2" tubing. If deeper than 1500' go to step 13.
7. If depth of 3-1/2" tubing is less than 1500', TIH with 2 $^3/_8$" work string to 1810'.
8. Pump 20 bbls 6% gel followed by 45 sks of Class A cement for plug 1 from 1810' to 1600'.
9. Displace w/ 6 bbls of 6% gel.
10. TOOH with work string. Let cement plug set for a minimum of eight hours.
11. Pull 3-1/2" tubing. If unable to pull, run freepoint on tubing, cut tubing above freepoint, and POOH with tubing.
12. Go to step 18.
13. Pull 3-1/2" tubing. If unable to pull, run freepoint on tubing, cut tubing above freepoint, and POOH with tubing.
14. TIH with 2 $^3/_8$" work string to 1810'.
15. Pump 50 bbls 6% gel followed by a minimum of 45 sks of Class A cement for plug 1 from 1810' to 1600'. The amount of cement required must cover the top of 3-1/2" tubing cut by 50'.
16. Displace w/ 6 bbls of 6% gel.
17. TOOH with work string. Let cement plug set for a minimum of eight hours.
18. Pull 7" casing. If unable to pull, run freepoint, cut casing above freepoint, and POOH with casing.
19. TIH with 2 $^3/_8$" work string to 1300'.
20. MIRU Cement Company and pump 20 bbls 6% gel followed by 80 sks of Class A cement for plug 2 from 1300' to 1000'. Recalculate cement requirement if TOC doesn't cover the 7" casing cut by 50'.
21. Displace w/ 3 ½ bbls of 6% gel.
22. TOOH with work string.
23. Pull 8-5/8" casing. If able to pull, go to step 29. If unable to pull, go to next step.
24. Run freepoint on 8-5/8" casing, cut casing above freepoint, and POOH with casing.
25. TIH with 2 $^3/_8$" work string to 50' below 8-5/8" casing.

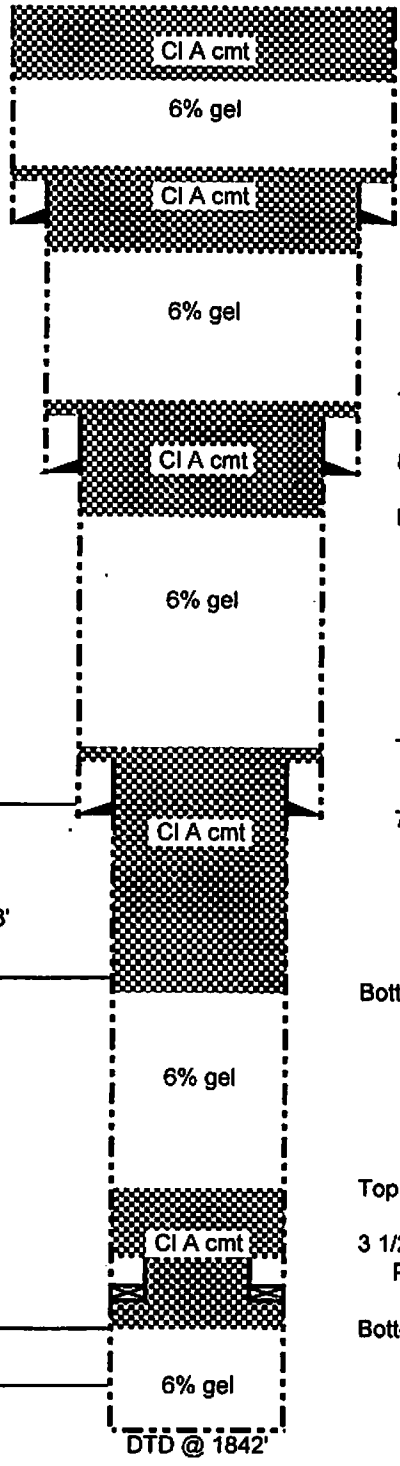
4500993P

26. Pump a minimum of 45 sks of Class A cement for plug from 50' below the 8-5/8" casing to 50' above casing cut. The amount of cement required must cover the top of 8-5/8" casing cut by 50'.
27. Displace w/ 2 bbls of 6% gel.
28. TOOH with work string.
29. Pull 10-3/4" casing. If able to pull, go to next step. If unable to pull, go to step 31.
30. TIH with 2 $^{3}/_{8}$" work string to 800' and pump 50 bbls 6% gel. Go to step 35.
31. Run freepoint on 10-3/4" casing, cut casing above freepoint, and POOH with casing.
32. TIH with 2 $^{3}/_{8}$" work string to 50' below 10-3/4" casing.
33. Pump 30 bbls 6% gel followed by a minimum of 70 sks of Class A cement for plug from 50' below 10-3/4" casing to 50' above casing cut. The amount of cement required must cover the top of 10-3/4" casing cut by 50'.
34. Displace w/ 1 bbl of 6% gel.
35. Pull work string up to 200' and pump 130 sks of Class A cement for cement plug to surface.
36. TOOH with work string and lay down.
37. RDMO Cementing Company.
38. Place monument as required by law on top of well bore.
39. Reclaim well site.

4500993P

Lawson Heirs B-5
API 47-045-00993
PROPOSED CONFIGURATION

No water reported
No coal reported



13-3/8" installed over exposed 8-5/8"
13-3/8" grouted w/ 20 sx cement
Bottom of plug 5 @ 200'

Top of plug 4 @ 50' above 10-3/4" cut

10-3/4" Casing cut & pulled
Bottom of plug 4 @ 50' below 10-3/4" cut

Top of plug 3 @ 50' above 8-5/8" cut

8-5/8" Casing cut & pulled
(not mentioned in well record)
Bottom of plug 3 @ 50' below 8-5/8" cut

RDT

Top of plug 2 @ 1000'

7" Casing cut & pulled

Big Lime
w/ gas @ 1260' - 1283'

Bottom of plug 2 @ 1300'

Top of plug 1 @ 1600'

3 1/2" Tubing cut & pulled
Possibly set on packer

Bottom of plug 1 @ 1810'

Berea

Schematic is not to scale

T. Ott 08/13/14

4500993P

OLD. 39-800-(1-8)

OWENS, LIBBEY-OWENS
GAS DEPARTMENT

RECORD OF: New Drilling -- Deepening -- Repairing. LOG-993

well purchased from Cumberland Petroleum 1-30-63

Lease No. 3039 Well No. 5 Tract Lawson Heirs, Inc. "B" (Omness #1) Serial Well No. 1183

Map Square 8-144 Acres 3,656.85 District Chapmanville County Logan State WVa

Permit No. ----- Elevation Work done by: Drilled for Wiedman Oil & Gas

Driller's Names:

Commenced Rigging Up Commenced Drilling Completed Drilling

Well Completed Commenced Producing Abandoned

CONDUCTOR, CASING AND TUBING					PACKERS. Kind	CLOSED IN PRESSURE		
SIZE	WEIGHT	NO. OF JOINTS	USED IN DRILLING	LEFT IN WELL	Size		CASING HEAD	CASING
10 3/4					Set	Size		196
7					Kind	1 Min.		43
3					Size	2 Min.		50
2					Set	3 Min.		-
					Perforations	4 Min.		-
						5 Min.		52
						10 Min.		[illegible]
						72 Hours		[illegible]
						Hours		

Shot 19 , from to with tamped with

Open flow before: MCF; 15 Min. after: MCF; hours after: MCF

Shot 19 , from to with tamped with

Open flow before: MCF; 15 Min. after: MCF; hours after: MCF

Acid or other treatment:

OIL WELL Initial test: barrels per flowing. barrels per pumping.

GAS WELL Open flow: Big Lime + Total 33/ MCF

DRILLERS' RECORD +1 hr. test made in 1962

FORMATION	COLOR	HARDNESS	TOP	BOTTOM	THICKNESS	REMARKS
Gravel			0	300	300	
Sand			300	400	100	
Salt Sand			400	660	260	
Red Rock			660	715	55	
Sand			715	775	60	
Slate & Shell			775	960	185	
Maxon Sand			960	995	35	
Little Lime			1036	1041	5	
Pencil cave			1041	1050	7	
Big Lime			1050	1283	233	Gas 1260 to 1283'
Injun Sand			1283	1295	12	
Red Lime			1295	1310	15	
Slate & Shells			1310	1375	65	
Grey sand			1375	1475	100	
Slate			1475	1675	200	
Slate & Shell			1675	1757	82	
Brown shale			1757	1807	50	
Berea Sand grit			1807	1820	13	
Slate			1820	1842	22	
			TO	1842'		

Tests made in 1947.
Open flow 521 mcf.

Tests made in August 1962:
This well called the Crawley [illegible] company at the United Fuel [illegible] line pressure at well 82#
Open well.
½ hr test [illegible]
1 hr test [illegible]
well shut in
1 min [illegible]

72 hour rock pressure: 82#
This well feeds through 3" line to the United Fuel meter house station 127 on Crawley Ck.

This well has 2" and 3" tubing and 7" and 10 3/4" casing strings.

4500993P

B-1 045-0993

#1183 Lawson Heirs "B" #5

DINGESS #1

GRAVEL		37	
GRAVEL	37	300	
SAND	300	400	
SALT SAND	400	660	open flow 1947
RED ROCK	660	715	
SAND	715	775	521,250 MCF
SLATE & SHELL	775	960	
MAXON SAND	960	995	
LITTLE LIME	1036	1041	
PENCIL CANE	1041	1050	
BIG LIME	1050	1283	
GAS AT 1260 to 1283			
INJUN SAND	1283	1295	
RED ROCK	1295	1310	
SLATE & SHELLS	1310	1375	
GREY SAND	1375	1475	
SLATE, BLACK	1475	1675	
SLATE & SHELL	1675	1757	
BROWN SHALE	1757	1807	
BEREA GRIT SAND	1807	1820	
SLATE	1820	1842	
TOTAL DEPTH		1842	

4500993P

WW-4A
Revised 6-07

1) Date: October 22, 2014
2) Operator's Well Number
Lawson Heirs B-5

3) API Well No.: 47 - 045 - 00993

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

4) Surface Owner(s) to be served:
(a) Name: John I. Carter, et al
Address: HC 74 Box 3251
Chapmanville, WV 25508
(b) Name: John A. Belcher
Address: HC 74 Box 3194
Chapmanville, WV 25508
(c) Name:
Address:

5) (a) Coal Operator
Name: Not Operated
Address:
(b) Coal Owner(s) with Declaration
Name: Lawson Heirs, Inc. c/o Hodges, Jones & Mabry PC
Address: P.O. Box 648
Wytheville, VA 24382
Name:
Address:

6) Inspector: Ralph Triplett
Address: 5539 McClellan Hwy
Branchland, WV 25506
Telephone: (304) 389-0350

(c) Coal Lessee with Declaration
Name: Hica Corporation
Address: P.O. Box 800
Wise, VA 24293

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

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

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

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

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

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

RECEIVED
Office of Oil and Gas
OCT 23 2014
WV Department of
Environmental Protection

Subscribed and sworn before me this 22nd day of October
Constance C. Carden Notary Public
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 depprivacyoffier@wv.gov.

4500993P

7013 3020 0001 0841 5438

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Total
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Sent To Lawson Heirs, Inc., c/o Hodges, Jones & Mabry PC
Street, or PO P.O. Box 648
City, S Wytheville, VA 24382

Lawson Heirs B-5

PS Form 3800, August 2006

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Sent Hica Corporation
Stre P.O. Box 800
or P Wise, VA 24293
City,

Lawson Heirs B-5

7013 3020 0001 0841 5452

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Total P
Postmark Here

Sent To John I. Carter, et al
Street, A HC 74 Box 3251
or PO B Chapmanville, WV 25508
City, Sta

Lawson Heirs B-5

PS Form 3800, August 2006

7013 3020 0001 0841 5445

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Restricted Delivery Fee (Endorsement Required)
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Postmark Here

Sent John A. Belcher
Stree HC 74 Box 3194
or PC
City, Chapmanville, WV 25508

Lawson Heirs B-5

7013 3020 0001 0841 5469

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Restricted Delivery Fee (Endorsement Required)
Total P
Postmark Here

Sent To Ralph Triplett
Street, A 5539 McClellan Hwy
or PO B Branchland, WV 25506
City, Sta

Lawson Heirs B-5

PS Form 3800, August 2006

RECEIVED
Office of Oil and Gas
OCT 23 2014
WV Department of
Environmental Protection

45 00993P

WW-9
(5/13)

API Number 47 - 045 - 00993
Operator's Well No. Lawson Heirs B-5

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 _____

Watershed (HUC 10) Crawley Creek of the Guyandotte River Quadrangle Chapmanville

Elevation 675.63' County Logan District Guyan

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

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

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? N/A

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. no drilling proposed

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

Additives to be used in drilling medium? N/A

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

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

-Landfill or offsite name/permit number? _____

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

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

Company Official Signature Kenneth L Marcum

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

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 22nd day of October, 20 13

Constance C. Carden Notary Public

My commission expires 11/16/2013

4500993P

Form WW-9

Operator's Well No. Lawson Heirs B-5

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

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	Birdsfool Trefoo

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: Difficult location between stream & OOH Guardrail. No room for pit. Fluids? to be placed in tank.

Title: District Inspector Date: October 27, 2014

Field Reviewed? (✓) Yes ( ) No

4500993P

Surface Owner
TM 133, TP 41
John A. Belcher

TM 133
TP 41

Surface Owner
TM 133, TP 42.1
John I. Carter, et al

EXISTING ROAD
+2% TO +5%
40'±

STREAM
CROSSING

EXISTING ROAD
0% TO +2%
210'±

EXISTING
CULVERT

EXISTING ROAD
-3% TO -6%
75'±

TM 133
TP 43

Surface Owner
TM 133, TP 42.2
John I. Carter, et al

TM 133
TP 40

EXISTING ROAD
0% TO +2%
265'±

FILL

NEW ROAD
0% TO -3%
55'±

CUT

STREAM
CROSSING

LAWSON HEIRS B-5
API 045-00993

NEW ROAD
+4% TO +7%
80'±

TM 133
TP 53.1

1038

APPLY CULVERT
AS NEEDED

3/2

3/8

3/2

TYPICAL
STREAM CROSSING
DETAIL

GRAVEL

(3) 15" C.P.P.

N.T.S.

0 100' 200' 400'

GRAPHIC SCALE

DRAWING LEGEND

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

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
Office of Oil and Gas
OCT 28 2014
WV Department of
Environmental Protection

Cabot Oil & Gas Corporation

LAWSON HEIRS B-5

CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF CRAWLEY CREEK OF THE GUYANDOTTE RIVER
GUYAN DISTRICT, LOGAN COUNTY, W.VA
CHAPMANVILLE QUADRANGLE

SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
1 OF 1	1"=200'	G. PERKINS	01-06-14	DKC

4500993P

Surface Owner
TM 133, TP 41
John A. Belcher

TM 133
TP 41

Surface Owner
TM 133, TP 42.1
John I. Carter, et al

Surface Owner
TM 133, TP 42.2
John I. Carter, et al

TM 133
TP 40

1038

EXISTING ROAD
+2% TO +5%
40'±

STREAM
CROSSING

EXISTING ROAD
0% TO +2%
210'±

EXISTING
CULVERT

EXISTING ROAD
0% TO +2%
265'±

FILL

CUT

NEW ROAD
0% TO −3%
55'±

STREAM
CROSSING

NEW ROAD
+4% TO +7%
80'±

RDT
10/27/14

LAWSON HEIRS B-5
API 045-00993

TM 133
TP 53.1

TM 133
TP 43

EXISTING ROAD
−3% TO −6%
75'±

APPLY CULVERTS
AS NEEDED

3/2

3/8

3/2

TYPICAL
STREAM CROSSING
DETAIL

GRAVEL

(3) 15" C.P.P.

N.T.S.

0 100' 200' 400'

GRAPHIC SCALE

DRAWING LEGEND

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

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.

Cabot Oil & Gas Corporation

LAWSON HEIRS B-5

CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF CRAWLEY CREEK OF THE GUYANDOTTE RIVER
GUYAN DISTRICT, LOGAN COUNTY, W.VA
CHAPMANVILLE QUADRANGLE

SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
1 OF 1	1"=200'	G. PERKINS	01-06-14	DKC

4500993P

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.

TABLE 11-4 SPACING OF CROSS DRAINS	
ROAD GRADE (%)	DISTANCE (FT)
1	400
2	250
5	135
10	80
15	60
20	45

TABLE 11-7 SPACING OF CULVERTS	
ROAD GRADE (%)	DISTANCE (FT)
2-5	500-300
6-10	300-200
11-15	200-100
16-20	100

DIG WITH C.A.R.E. CALL MISS UTILITY KEEP WEST VIRGINIA SAFE

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 LAWSON HEIRS B-5

1.) FROM DANVILLE, W.VA DRIVE SOUTH ON U.S. ROUTE 119 FOR 15 MILES± TO CHAPMANVILLE AND EXIT THE HIGHWAY.
2.) AT THE BOTTOM OF THE RAMP GO STRAIGHT (SOUTH) ON SECONDARY ROUTE 3 FOR 4.2 MILES± TO THE INTERSECTION OF SECONDARY ROUTE 3/2.
3.) TURN LEFT AT THE INTERSECTION AND CONTINUE IN A SOUTHERLY DIRECTION ON SECONDARY ROUTE 3/2 FOR 0.4 MILES± TO BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD.
4.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 800 FEET± TO THE EXISTING WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

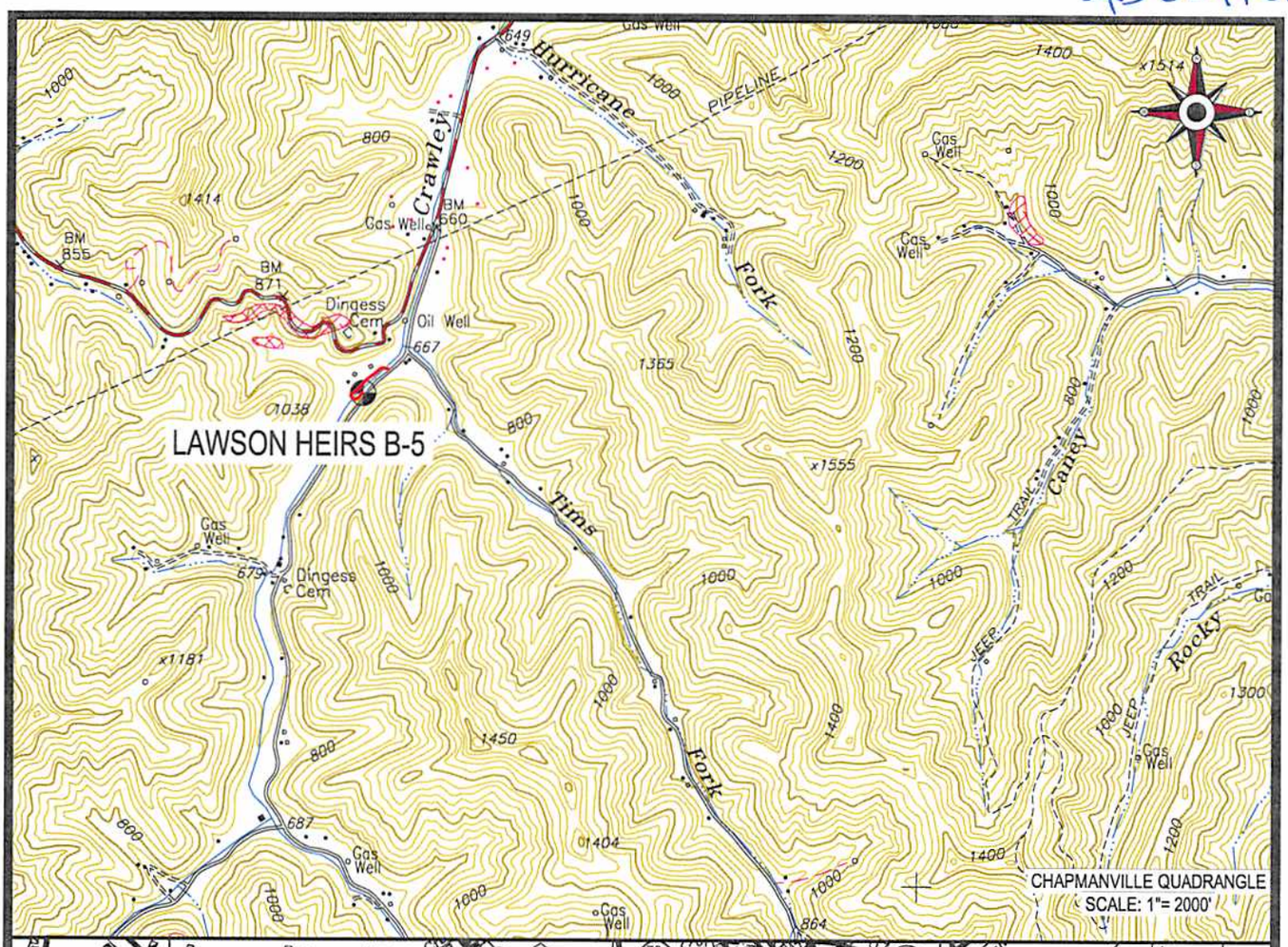
RECEIVED
Office of Oil and Gas
OCT 23 2014
WV Department of
Environmental Protection

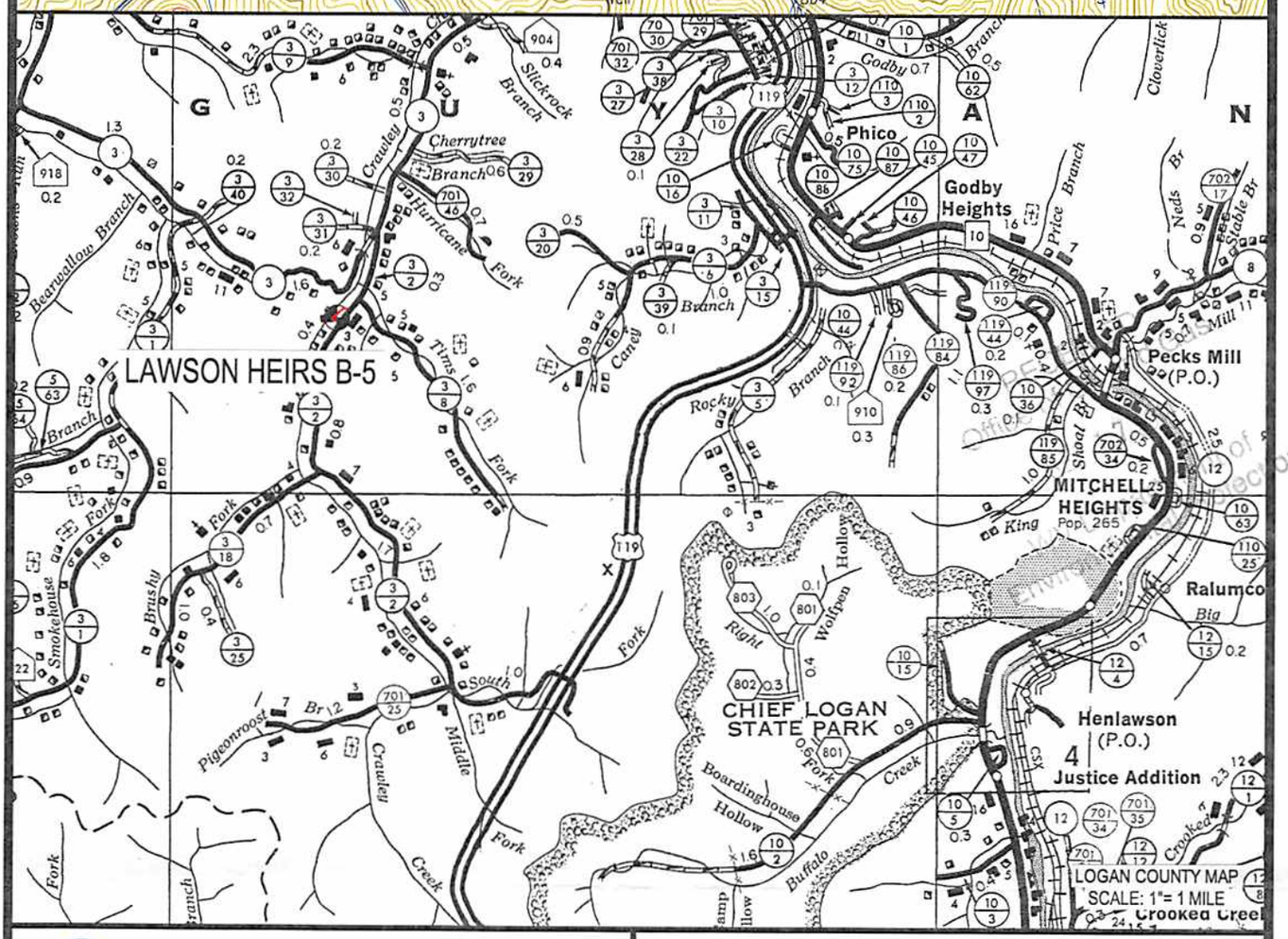
Cabot Oil & Gas Corporation

LAWSON HEIRS B-5

GUYAN DISTRICT, LOGAN COUNTY, W.VA
CHAPMANVILLE 7.5' QUADRANGLE

4500993P





Cabot Oil & Gas Corporation

LAWSON HEIRS B-5

LOCATION MAP

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 CRAWLEY CREEK
OF THE GUYANDOTTE RIVER
GUYAN DISTRICT, LOGAN COUNTY, W.VA
CHAPMANVILLE QUADRANGLE

PROJECT NO. CABOT	DWG. NO. LAWSON B-5 LOC.DWG	
DATE: 01-06-14	SCALE: AS NOTED	CHK'D BY: D.K.C.
DRAWN BY: G. PERKINS	FILE: C:\PROJECT FOLDER\CABOT	

4500993P

WW-7
8-30-06

West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-045-00993 WELL NO.: B-5

FARM NAME: Lawson Heirs

RESPONSIBLE PARTY NAME: Cabot Oil & Gas Corporation

COUNTY: Logan DISTRICT: Guyan

QUADRANGLE: Chapmanville

SURFACE OWNER: John I. Carter, et al

ROYALTY OWNER: Lawson Heirs, Inc.

UTM GPS NORTHING: 4,198,905.23

UTM GPS EASTING: 406,431.54 GPS ELEVATION: 675.63'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS X : Post Processed Differential X

Real-Time Differential ____

Mapping Grade GPS ____: Post Processed Differential ____

Real-Time Differential ____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

Signature	Title	Date
	Regulatory Supervisor	9/30/2014

45 00993P

Cabot Oil & Gas Corporation

North Region

October 22, 2014

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

RE: Lawson Heirs B-5
Guyan District, Logan County, WV
API # 47-045-00993
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,

Kenneth L. Marcum
Regulatory Supervisor

RECEIVED
Office of Oil and Gas

OCT 23 2014

WV Department of
Environmental Protection