



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

January 09, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5101391, issued to CHEVRON APPALACHIA, LLC, 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: STARCOVIC 2H
Farm Name: STARCOVIC, STEPHEN M. & KIN
API Well Number: 47-5101391
Permit Type: Plugging
Date Issued: 01/09/2015

Promoting a healthy environment.

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.

WW-4B
Rev. 2/01

DEC 31 2014

1) Date December 22, 2014
2) Operator's
Well No. Starovic 2H
3) API Well No. 47-051 - 01301

WV Department of
Environmental Protection

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 ___

5) Location: Elevation 1190' Watershed Grave Creek
District Cameron County Marshall Quadrangle Cameron 7.5'

6) Well Operator Chevron Appalachia, LLC 7) Designated Agent N/A
Address 800 Mountain View Drive Address _____
Smithfield, PA 15478

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name James Nicholson Name See work order
Address P.O. Box 44 Address _____
Mounsville, WV 26041

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

See attached work order

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

Work order approved by inspector James Nicholson Date 12/31/2014



5101391A

Site Prep

Notify WV DEP Oil and Gas Inspector 48hrs prior to MIRU rig

1. Hold Tailgate Safety Meeting and review JSA
2. MIRU containment (per site layout and needs) and surface rental equipment
3. MIRU mud tanks and auxiliary equipment
4. RU flowback lines.

Procedure

5. Mobilize work-over rig and pumping equipment to location
6. Spot rig and equipment in place
7. Check pressure on all casing and tubing strings. Note pressures on report.
Bleed off pressure and kill well with kill weight fluid if needed.
8. MIRU E-line with 5k lubricator and test to 250 psi low for 5 minutes and 5,000 psi high.
9. RIH with a tbg plug and set in profile nipple at 6769'.
10. Test the tbg plug to 1000psi and record.
11. Set BPV inside the tubing hanger and ND tree.
12. NU the class III BOP and equipment (rams, manifold, lines etc). Ensure that 5k tbg safety valve is in the open position on the floor when handling tbg.
13. Test all breaks and BOP to 250 psi low for 5 minutes and 5,000 psi high (if pressure is higher, test to 500psi above known SITP) for 10 minutes, chart and record data with barton chart recorder and keep on file on location.
14. Retrieve BPV
15. R/U rig floor and tubing handling equipment.
16. *Fill the 5-1/2" csg lateral with fresh water to 6500'*
17. TOOH with 2-3/8", 4.7#, N-80 tubing and BHA.
18. R/U W/L and RIH with 4.5" gauge ring to 6500'.
19. POOH with gauge ring. Make note if any tight spots.
20. RIH with 5-1/2" CIBP and set at 6500'.
21. RIH with 2-3/8" tbg and tag top of CIBP at 6500'. Break circulation with 140bbls of fresh water. Test 5-1/2" CIBP to 1000psi.
22. *Spot a 700' plug with 75 sxs, 88.5 cuft of 15.6ppg, 1.18 yield, class "A" cmt. from*

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6500' – 5800' TOC @ 5800'.

23. Spot a 200' plug from 2400' – 2200' with 25 sxs, 29.5 cuft of 15.6ppg, 1.18 yield, class "A" cmt. TOC @ 2000'.
24. Spot a 200' plug from 1200' – 1000' with 25 sxs, 29.5 cuft of 15.6ppg, 1.18 yield, class "A" cmt. TOC @ 1000'.
25. Spot a 200' plug from 200' to surface' with 25 sxs, 29.5 cuft of 15.6ppg, 1.18 yield, class "A" cmt. TOC surface.
26. NOTE: 6% Bentonite Gel will be run between all plugs
27. ND the BOP and NU the tree. Test the tree to 3000psi and record.
28. RD work-over rig and equipment and mobilize rig to yard.

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CHIEF OIL & GAS LLC

WELLBORE DATA AND SKETCH

Well: Starcovic 2H	Quad: Cameron 7.5', Cameron District	Updated: 12/17/14
County: Marshall	State: West Virginia	Status: SI - WOPL (AB Res.)
Directions: See Prognosis	Location: Lat: 39° 49' 56.64" N	Survey:
Well Type: Horizontal Well	Long: 80° 35' 02.35" W	API # 47-510-1288
Elevation: GL: 1170'	Note: All depths MD unless noted	
DF: 1189'		Build Location: Start: 7/6/09 End: 7/21/09
KB: 1190'		Spud: 10/31/10
24" Conductor Csg @ 80'		Release Rig: 12/1/10
22 3/4" Hole @ 420'		Completed: 4/10/11
20" 94# J-55 Surface Csg @ 395'		First Production: Turned Over to AB Resources
Cmt'd w/ 305 sxs - Circ - TOC @ Surface		AB will assume flowback ops.
17 1/2" Hole @ 1210'		
13 3/8" 54.5# J-55 Surface Csg @ 1182'		
Cemented w/ 900 sxs - Circ TOC @ Surface		
12 1/4" Hole @ 2430'		
9 5/8" 36# J-55 Intermediate Csg @ 2368'		
Cmt'd w/ 750 sxs - Circ - TOC @ Surface		
DV Tool Set @ 4818' - Cmt'd w/ 984 sx		
Drilled thru DV Tool		
8 1/2" Hole @ 10427' MD (6839' TVD)		
TOC @ 1100' by CBL		
KOP: 6120'		
Target Centerline - 6890' TVD		
Pen. Marcellus - 7429' MD (6876' TVD) VS 720'		
Maximum Deflection - 17.9 degree @ 6744'		
Maximum Angle - 93.1 degree @ 10380'		
Displacement - 3689' N 20.9 W		
Landing Point - 7877 MD (6890' TVD) VS 1164'		
MWD Gamma run. No OH logs run.		
4/6/11: Pumpco Frac w/ 11,012 BFW (Treated) & 241,800# 100 Mesh & 404,100# 40/70 Sand. TLTR: 82,161 bbbls - 7th Stg		<div style="border: 1px solid red; padding: 2px; display: inline-block;">Set a 200', 25sxs cmt bal. plug at 2400', 1200', and 200'</div>
4/6/11: Pumpco Frac w/ 10,713 BFW (Treated) & 241,600# 100 Mesh & 362,400# 40/70 Sand. LTR: 71,149 bbbls - 6th Stg		<div style="border: 1px solid red; padding: 2px; display: inline-block;">5% Bentonite gel between all</div>
4/5/11: Pumpco Frac w/ 11,092 BFW (Treated) & 241,590# 100 Mesh & 367,710# 40/70 Sand. LTR: 60,436 bbbls - 5th Stg		<div style="border: 1px solid red; padding: 2px; display: inline-block;">Set a 5-1/2" CIBP at 6500'. Spot 75sxs of 15.6ppg, 1.18 yield, class "A" 700' cmt plug on top of CIBP. TOC @ 5800'</div>
4/4/11: Pumpco Frac w/ 10,731 BFW (Treated) & 241,600# 100 Mesh & 364,410# 40/70 Sand. LTR: 49,344 bbbls - 4th Stg		
4/3/11: Pumpco Frac w/ 12,195 BFW (Treated) & 241,400# 100 Mesh & 363,300# 40/70 Sand. LTR: 38,613 bbbls - 3rd Stg		
4/2/11: Pumpco Frac w/ 13,177 BFW (Treated) & 288,800# 100 Mesh & 423,200# 40/70 Sand. LTR: 26,418 bbbls - 2nd Stg		
4/1/11: Pumpco Frac w/ 13,241 BFW (Treated) & 287,500# 100 Mesh & 433,462# 40/70 Sand. LTR: 13,241 bbbls - 1st Stg		
	Frac done from Starcovic Water Impoundment	5 1/2" 20# P-110 Csg @ 10415' Cemented w/ 762 sxs

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PBTD:10367
TD: 10427



5101391P

Starcovic 2H

“Temporary Abandonment Procedure”

MUST BE PLUGGED
AS IF PERMANENT.
JMM

Expected Start Date: January 12, 2015

	2H
AFE Number	
API Number	47-051-01391

Service Rig Company	Nabors	County	Marshall
Wellhead	Weatherford	Township	Cameron, WV
Downhole Tools	Baker Hughes	Latitude	39° 49' 56.10" North
		Longitude	80° 35' 05.50" West

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Objective:

Temporary abandonment of Starcovic 2H in accordance West Virginia's DEP requirements.

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Completion Design Review:

Listed below are the members of the well team who were in attendance and agreement with the completion procedure as discussed.

Revised by:	Tony Raphael – Well Abandonment Engineer	12/30/14
Review by:	Garland Bledsoe – Project Manger	12/30/14
Revised by:	David Beasley – Completion Engineer	
Reviewed by:	Lisa Branden– Petroleum Engineer	
Reviewed by:	Pam Gellek – Production Engineer	
Reviewed by:	Matt Bower - Petroleum Engineer	



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IFO: Incident Free Operations

Chevron is committed to providing a safe working environment for all personnel through the tenets we live by such as **Do it safely or not at all. Stop Work Authority** means all personnel not only have the right but the responsibility to stop any potentially unsafe job.

Report all injuries, no matter how minor, 24/7 to Axiom Medical at 1-877-502-9466

Directions to Location

From Pittsburgh: Merge onto I-79 S via EXIT 64A toward Washington (20.9m), Merge onto I-70 W via EXIT 38 toward Wheeling (6.6m), Take EXIT 11 toward PA-221/Taylorstown. Turn right onto Prosperity Pike/PA-18/PA-221. Continue to follow PA-18. Once in Graysville turn right onto W Roy Furman Hwy/PA-21 (Crossing into West Virginia) W Roy Furman Hwy/PA-21 becomes WV-891. WV-891 becomes US-250 S (Waynesburg Ave). continue until you get in Camerom. Turn right onto Loudenville Rd/County Hwy-25. Turn left onto Main St/County Hwy-25. Continue to follow County Hwy-25. .3 miles past summit street, Turn right onto unmaked gravel road which will lead to the site location.

From Waynesburg PA, go West on SR 21 (26.1 mi) into West Virginia, continue on SR 891 (2.0 mi) to SR 250, follow Rt. 250 south towards Cameron for (3.7 mi), make a right on Loudenville Rd, follow for (0.5 mi) to the stop sign, make a right, then a left to stay on Loudenville Rd, follow for (0.8 Mi) to the location lease entrance on the Right.

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Well Information

Well #	Top Perf		RKB	Marker Joint	PBTD
	MD	TVD	MD	MD	MD
2H	7,283		20'		10,367

Dimensions and Pressure Data					
Size	Depth	Weight	Grade	Burst	Collapse
24"	80'				
20	395'	94	J-55		
13 3/8"	1182'	54.5 lbs/ft	J-55		
9 5/8"	2368'	36 lbs/ft	K-55		
5 1/2"	10,415'	20 lbs/ft	P-110	12,640 psi	11,080 psi

Capacity	
5 1/2"# 20 P-110 CSG	0.02210 bbl/ft

Current Status

Well is currently on line and flowing approximately 1.1 MMCFD of gas a day at 750 psi on the tubing. Less than 1 bbl of condensate produced per day.

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Starcovic 2H Wellbore Schematic (Current)

CHIEF OIL & GAS LLC

WELLBORE DATA AND SKETCH

Well: Starcovic 2H	Quad: Cameron 7.5', Cameron District	Updated: 4/22/11
County: Marshall	State: West Virginia	Status: SI - WOPL (AB Res.)
Directions: See Prognosis	Location: Lat: 36° 49' 56.64" N	Survey:
Well Type: Horizontal Well	Long: 80° 35' 02.35" W	API #: 47-510-1258
Elevation: GL: 1170'	Note: All depths MD unless noted	
DF: 1189'	Build Location: Start: 7/6/09 End: 7/21/09	
KB: 1190'	Spud: 10/31/10	
ibg hanger at 27'	Release Rig: 12/1/10	
24" Conductor Csg @ 80'	Completed: 4/10/11	
22 3/4" Hole @ 420'	First Production: Turned Over to AB Resources	
20" 94# J-55 Surface Csg @ 395'	AB will assume flowback ops.	
Cmfd w/ 305 sxs - Circ - TOC @ Surface	AirFoam Drilling Method - Rotary	
17 1/2" Hole @ 1210'	Rig - Union Drilling, LP #60 (KB: 20)	
13 3/8" 54.5# J-55 Surface Csg @ 1182'	Ziegenfuss Drild Conductor 10/17/10	
Cemented w/ 900 sxs - Circ	Bottom Hole Location	
TOC @ Surface	DOC Survey: True Lat: 36° 50' 31.653" N	
12 1/4" Hole @ 2430'	True Long: 80° 35' 14.981" W	
9 5/8" 36# J-55 Intermediate Csg @ 2368'	(207) Jts Tbg, 2-3/8" 4.7#, J-55	
Cmfd w/ 750 sxs - Circ - TOC @ Surface		
DV Tool Set @ 4818' - Cmfd w/ 984 sx		
Drilled thru DV Tool		
8 1/2" Hole @ 10427' MD (6839' TVD)		
TOC @ 1100' by CBL		
KOP: 6120'		
Target Centerline - 6890' TVD		
Pen. Marcellus - 7429' MD (6676' TVD) VS 720'		
Maximum Deflection - 17.9 degree @ 6744'		
Maximum Angle - 93.1 degree @ 10360'		
Displacement - 3689' N 20.9 W		
Landing Point - 7877' MD (6850' TVD) VS 1164'		
MWD Gamma run. No OH logs run.		
4/5/11: Pumpco Frac w/ 11,012 BFW (Treated) & 241,800# 100 Mesh & 404,100# 40/70 Sand. LTR: 82,161 bbis - 7th Stg	EOT @ 7233'	
4/5/11: Pumpco Frac w/ 10,713 BFW (Treated) & 241,600# 100 Mesh & 362,400# 40/70 Sand. LTR: 71,149 bbis - 6th Stg		
4/5/11: Pumpco Frac w/ 11,092 BFW (Treated) & 241,590# 100 Mesh & 367,710# 40/70 Sand. LTR: 60,436 bbis - 5th Stg		
4/4/11: Pumpco Frac w/ 10,731 BFW (Treated) & 241,600# 100 Mesh & 364,410# 40/70 Sand. LTR: 49,344 bbis - 4th Stg	Perfs: 7283' - 10345' 630 Holes	
4/3/11: Pumpco Frac w/ 12,195 BFW (Treated) & 241,400# 100 Mesh & 363,300# 40/70 Sand. LTR: 38,613 bbis - 3rd Stg		
4/2/11: Pumpco Frac w/ 13,177 BFW (Treated) & 268,800# 100 Mesh & 423,200# 40/70 Sand. LTR: 26,418 bbis - 2nd Stg		
4/1/11: Pumpco Frac w/ 13,241 BFW (Treated) & 267,500# 100 Mesh & 433,462# 40/70 Sand. LTR: 13,241 bbis - 1st Stg	Frac done from Starcovic Water Impoundment	
	5 1/2" 20# P-110 Csg @ 10415' Cemented w/ 762 sxs	

DEC 31 2014

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WW-4A
Revised 6-07

1) Date: December 22, 2014
2) Operator's Well Number
Starcovic 2H

3) API Well No.: 47 - 051 - 01391

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>Stephen M. & Kimberly A. Starcovic</u>	Name _____
Address <u>RD 4 Box 152, 152 Loudenville Rd.</u>	Address _____
<u>Cameron, WV 26033</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Consolidated Coal Company</u> ✓
	Address <u>1000 Consol Energy Drive</u>
	<u>Canonsburg, PA 15317</u>
(c) Name _____	Name <u>Stephen M. & Kimberly A. Starcovic</u> ✓
Address _____	Address <u>RD 4 Box 152, 152 Loudenville Rd.</u>
	<u>Cameron, WV 26033</u>
6) Inspector <u>James Nicholson</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 44</u>	Name _____
<u>Moundsville, WV 26041</u>	Address _____
Telephone <u>304-552-3874</u>	

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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 Chevron Appalachia, LLC
 By: [Signature]
 Its: Construction Permitting Team Lead
 Address 800 Mountain View Drive
Smithfield, PA 15478
 Telephone 724-564-3700

Commonwealth of Pennsylvania
County of Fayette

Subscribed and sworn before me this 23 day of December, 2014
[Signature] Notary Public
My Commission Expires September 17, 2018

COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 Laura Savage, Notary Public
 Georges Twp., Fayette County
 My Commission Expires Sept. 17, 2018
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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.

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Consolidated Coal Company
 Engineering & Operations
 Support/Coal
 Attn: Analyst
 1000 Consol Energy Drive
 Canonsburg, PA 15317

PS Form 3800, June 2013

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 Street & Apt or PO Box #
 City, State, ZIP+4®

Stephen M. & Kimberly A. Starcovic
 RD 4 Box 152
 152 Loudenville Rd
 Cameron, WV 26033

PS Form 3800, June 2013

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WW-9
(9/13)

API Number 47 - 051 - 01391
Operator's Well No. Starovic 2H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Chevron Appalachia, LLC OP Code 49449935

Watershed (HUC 10) Grave Creek Quadrangle Cameron 7.5'

Elevation 1170' County Marshall District Cameron

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

ANY WELL EFFLUENT MUST BE CONTAINED IN TANKS AND DISPOSED OF PROPERLY. *gmm*

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. NA Plugging well

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

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Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

-Landfill or offsite name/permit number? _____

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WV Department of Environmental Protection

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 *Branden Weimer*

Company Official (Typed Name) Branden Weimer

Company Official Title Permitting Team Lead

Subscribed and sworn before me this 9th day of January, 20 15

Kristen Brooks

Notary Public

My commission expires September 2, 2018

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Kristen Brooks, Notary Public
Smithfield Boro, Fayette County
My Commission Expires Sept. 2, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Form WW-9

Operator's Well No. Starovic 2H

Chevron Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime _____ Tons/acre or to correct to pH _____

Fertilizer type _____

Fertilizer amount _____ lbs/acre

Mulch _____ Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

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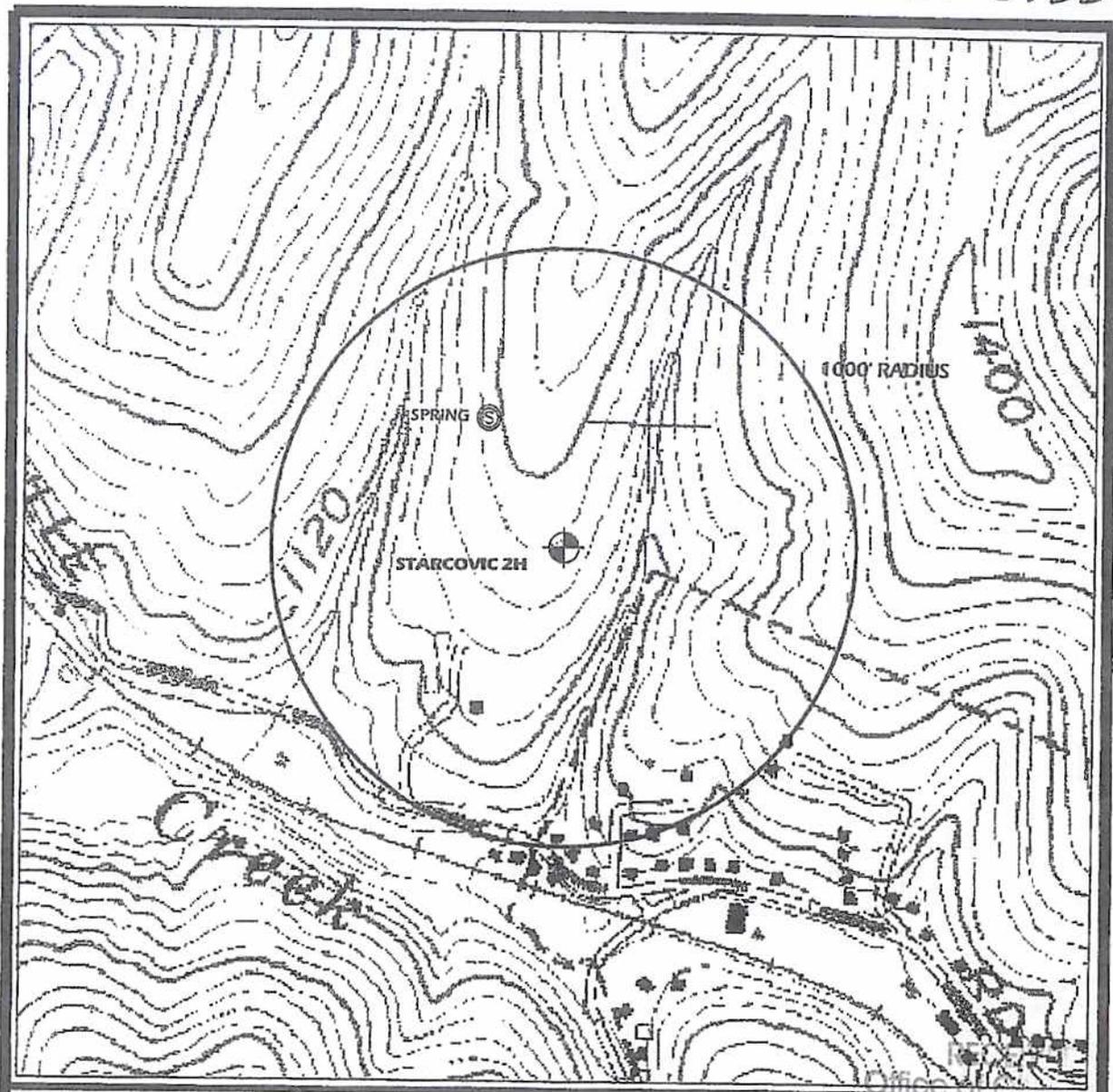
WV Dept.
Environmental Protection

Title: _____ Date: _____

Field Reviewed? () Yes () No

51.01391P

~~51-01354H~~



LEGEND	
⊙	WELL
⊕	CISTERN
⊙	SPRING

CAMERON QUADRANGLE
NOT TO SCALE

DEC 8 1 2014

NOTES: OTHER THAN AS SHOWN
NO WATER WELLS OR OTHER SOURCES OF
GROUNDWATER CURRENTLY BEING UTILIZED
FOR HUMAN CONSUMPTION, DOMESTIC ANIMALS
OR OTHER GENERAL USE WERE IDENTIFIED
WITHIN 1000' OF THE PROPOSED WELL SITE.

WV Dept.
Environmental

AB RESOURCES PA LLC

PREPARED BY:
EAGLE SURVEYING INC.

STARCOVIC 2H
TOPOGRAPHIC LOCATION MAP

5101391P

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-051-01391 WELL NO.: 2H
FARM NAME: Starcovic
RESPONSIBLE PARTY NAME: Chevron Appalachia, LLC
COUNTY: Marshall DISTRICT: Cameron
QUADRANGLE: Cameron 7.5'
SURFACE OWNER: Stephen M & Kimberly A Starcovic
ROYALTY OWNER: Stepehn M & Kimberly A Starcovic
UTM GPS NORTHING: 4409218.28
UTM GPS EASTING: 535534.65 GPS ELEVATION: 1170'

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 ____ : Post Processed Differential ____
Real-Time Differential ____
Mapping Grade GPS ____ : Post Processed Differential ____
Real-Time Differential ____

RECEIVED
Office of Oil and Gas

DEC 31 2014

WV Department of
Environmental Protection

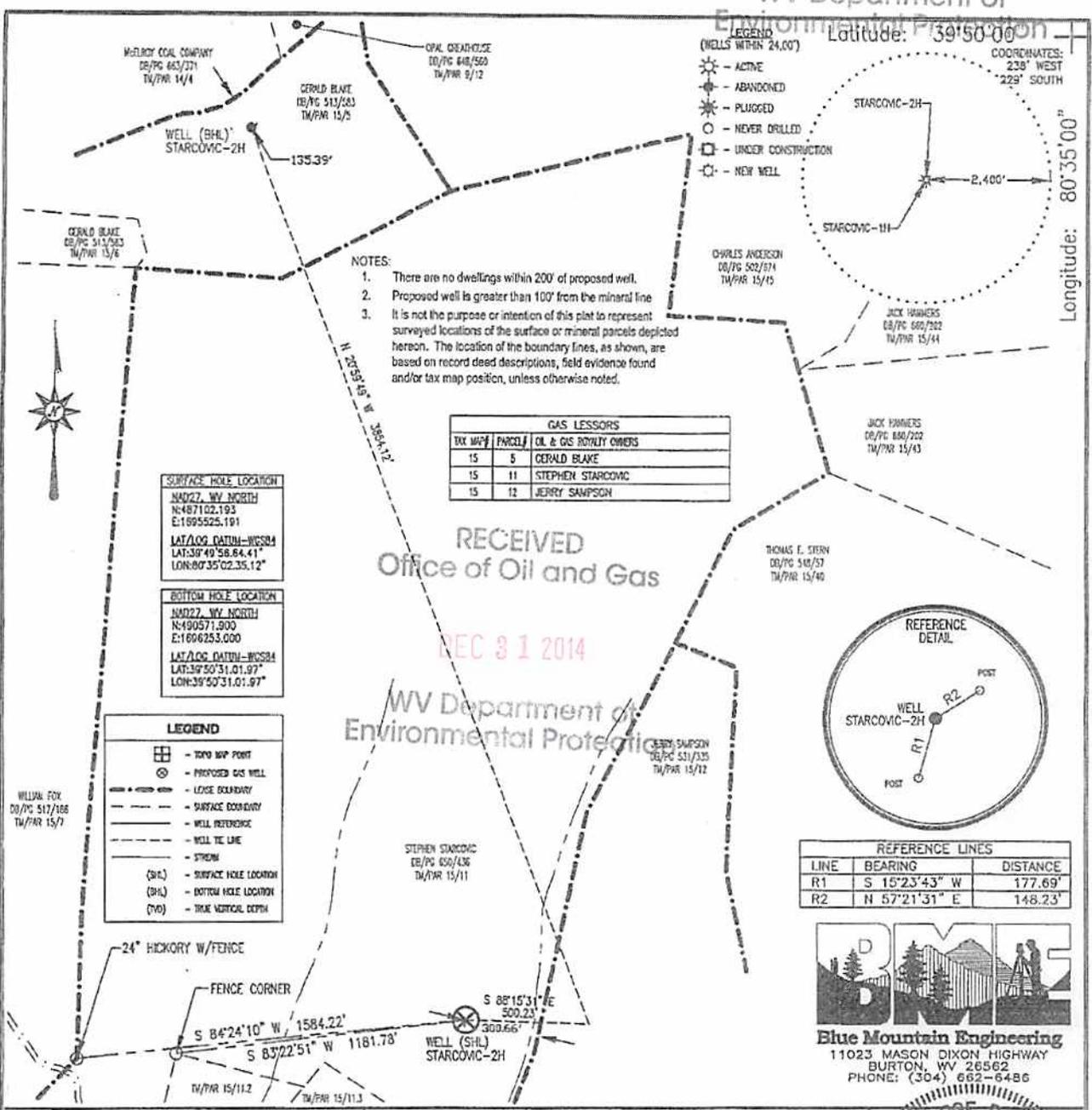
4. Letter size copy of the topography map showing the well location.

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] Construction Permitting Lead 1-9-15
Signature Title Date

DEC 31 2011

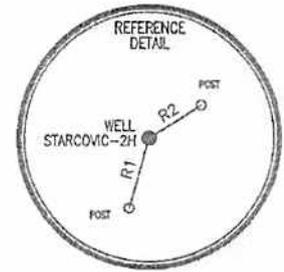
WV Department of Environmental Protection



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WV Department of Environmental Protection



REFERENCE LINES

LINE	BEARING	DISTANCE
R1	S 15°23'43" W	177.69'
R2	N 57°21'31" E	148.23'

Blue Mountain Engineering
11023 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 682-6486

FILE #: STARCOVIC 2H
DRAWING #: STARCOVIC 2H
SCALE: 1" = 600'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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: *George D. Six*
R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
LICENSED
No. 2000
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: JANUARY 13, 2010
OPERATOR'S WELL #: STARCOVIC 2H
API WELL #: 47 51 01391 HGA P
STATE COUNTY PERMIT

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

WATERSHED: UNNAMED TRIBUTARY TO GRAVE CREEK ELEVATION: 1170.07'

COUNTY/DISTRICT: MARSHALL/CAMERON QUADRANGLE: CAMERON, WV 7.5'

SURFACE OWNER: STEPHEN STARCOVIC ACREAGE: 168.0±
OIL & GAS ROYALTY OWNER: STEPHEN STARCOVIC ACREAGE: 168.0±

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: MARCELLUS ESTIMATED DEPTH: TVD: 6,832'± TMD: 10,612'±

WELL OPERATOR CHIEF OIL & GAS LLC DESIGNATED AGENT CHAD S. LOVEJOY
Address 5956 SHERRY LANE, SUITE 1500 Address 522 NINTH STREET
City DALLAS State TX Zip Code 75225 City HUNTINGTON State WV Zip Code 25701