

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

February 27, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-6101698, issued to NORTHEAST NATURAL ENERGY 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin

Chie

Operator's Well No: STATLER 10H

Farm Name: MOORE, REBECCA & STATLER,

API Well Number: 47-6101698

Permit Type: Horizontal 6A Well

Date Issued: 02/27/2015

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

CONDITIONS

- This proposed activity may require permit coverage from the United States Army Corps of Engineers
 (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed
 activity.
- 2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
- 9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

Received Date:11/17/2014	API:6101698
Operator: NORTHEAST NATURAL ENERGY LLC	WELL: STATLER 10H
Pad Name: STATLER	End Comment Period: 72/17/14
Pad Built: YesNo	Date Reviewed: 211/15 INT.

CHECKLIST FOR FILING A PERMIT Horizontal 6A Well

Please include these required elements in the Horizontal Well 6A applications, in order listed below. Do not use staples.

	First Well		Subsequent Well	ı	
	10,150.00		5,150.00	X	Check#: 7/473
Fees Paid					
Checklist / Cover lette	er				
WW-6B Notice of Ap	plication 35 a	differe	nce	Field A	Approved
Cement Additives		AL S			
Well Bore Schematic	(not required)			~~	
WW-9 Fluids/Cutting	gs Disposal and R	eclamation	Plan / /////	Field A	Approved
WW-9 Fluids/Cutting Site Safety Plan	Opino Au	olden	meres of	Field A	Approved
Water Management	Plan	Diceiu	algebre	Dww	M Approval
Topographic map she	owing access road				
Mylar Plat (Signed a	and sealed) (Surfac	e Owner	matches WW-6A)	Plat S	potted
WW-6A1 Lease Inform	mation Reb	ecca	Moore in	Stat	ler?
Road Crossing Letter					
WW-PN Application	Notice by Publicati	on		-	No.
Public Notice (dated c	opy of advertiseme	ent or affid	avit of publication)		Disk
WW-6AC Notice Cert	tifications and Waiv	vers .			
WW-6A Notice of Ap	plication notarized	w/ any att	achments		
Topographic Map with	h labeled surroundi	ng water v	vells (not required)	numb	ers shows but
Certified Mail receipts	s for WW-6A			100 00	The state of the s
WW-6A3 Notice of E	Entry for Plat Surve	y (if one w	as conducted)		

izontal 6A Well Permit App. Checklist:	API:	6101698	
Certified Mail receipts for WW-6A3	28 50:		
WW-6A4 Notice of Intent to Drill (if no WW-0	6A3)		
Certified Mail receipts for WW-6A4			
WW-6A5 Notice of Planned Operation			
Certified Mail receipts for WW-6A5			
WW-6RW Well Location Restriction Waiver (i	f applicable)		
WW-6RW Voluntary Statement of No Objection	on (if applicable)		
Waiver for Surface Owner at Wellhead			
Waiver for Surface Owner for Roads of	r other Disturbances		
Waiver for Coal Owner, Operator or Le	essee		
Waiver for surface owner for Impound	ment or Pit		
Waiver for Surface Owner or Water Pu	rveyor within 1500 i	feet of Center of Pad	
Waiver for Natural gas Storage Field O	perator		
DOH Road Bonding Letter			
Frac Additives List of Chemical Names & CAS	S#s		
Site Construction, Reclamation, Erosion & Sed	liment Control Plans	DEP Engineer Approv	ed
MSDS Sheets			
Reviewer outside checks:			
Comments - Public, Surface Owner, Water Wel	Il Purveryor		
Bond (\$250,000)			
Operator is registered with the SOS			
Workers Compensation / Unemployment Insura	ance account is OK		
Professional Engineer/Company has COA			
Check for mine data at proposed coordinates			
Check for floodplain data at proposed coordina	ates		

Horizontal 6A Well Permit App. Checklist:

DEP Variance and Permit Conditions

DEP Variance and Permit Conditions

the Center of the Pad

At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to

Surface Owner Waiver and Recorded with County Clerk, OR

NOV 1 7 2014

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

				3	256
1) Well Operator: Northeast Na	tural Energy LLC	494498281	Monongalia	Clay	Blacksville
		Operator ID	County	District	Quadrangle
2) Operator's Well Number: Sta	tler 10H	Well Pad	Name: Statle		
3) Farm Name/Surface Owner:	Moore R. & Sam, Ben, Danie	Public Road	d Access: Mas	on Dixon H	wy (State Rt 7)
4) Elevation, current ground:	1,061 Ele	vation, proposed p	oost-construction	on: 1,061	
5) Well Type (a) Gas Other	Oil	Unde	rground Storag		
(b)If Gas Sha	llow _	Deep			
	izontal		MAK	11222	
6) Existing Pad: Yes or No Yes					
7) Proposed Target Formation(s) Marcellus; 7,898'; 105', 3,430 p		pated Thickness ar	nd Associated I	Pressure(s)	
8) Proposed Total Vertical Depth	n: _7,898'				
9) Formation at Total Vertical D	epth: Marcellus				
10) Proposed Total Measured De	epth: 14,581'				
11) Proposed Horizontal Leg Lei	ngth: 5,507'				
12) Approximate Fresh Water St	rata Depths:	50', 912'			
13) Method to Determine Fresh	Water Depths: D	riller's Log from Offs	et Wells		
14) Approximate Saltwater Dept	hs: 1,600', 1,951	['			
15) Approximate Coal Seam Dep	oths: 650'				
16) Approximate Depth to Possi	ble Void (coal mir	ne, karst, other): _	N/A		
17) Does Proposed well location directly overlying or adjacent to		Yes	No	√	
(a) If Yes, provide Mine Info:	Name:				
N.C. on a role of many and a second s	Depth:				
	Seam:				
Received	Owner:				
Office of Oil & Gas					

WW-6B (9/13)

18)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	STD	78.67	40'	40'	GTS
Fresh Water	13 3/8"	New	J-55	54.5	1,030'	1,000'	CTS
Coal							
Intermediate	9 5/8"	New	J-55	40	2,280'	2,250'	CTS
Production	5 1/2"	New	P-110	20	14,581'	14,550'	3,470 cu. ft.
Tubing	2 3/8"	New	J-55	4.7		8,750'	NA
Liners							

MJK 11/3/2014

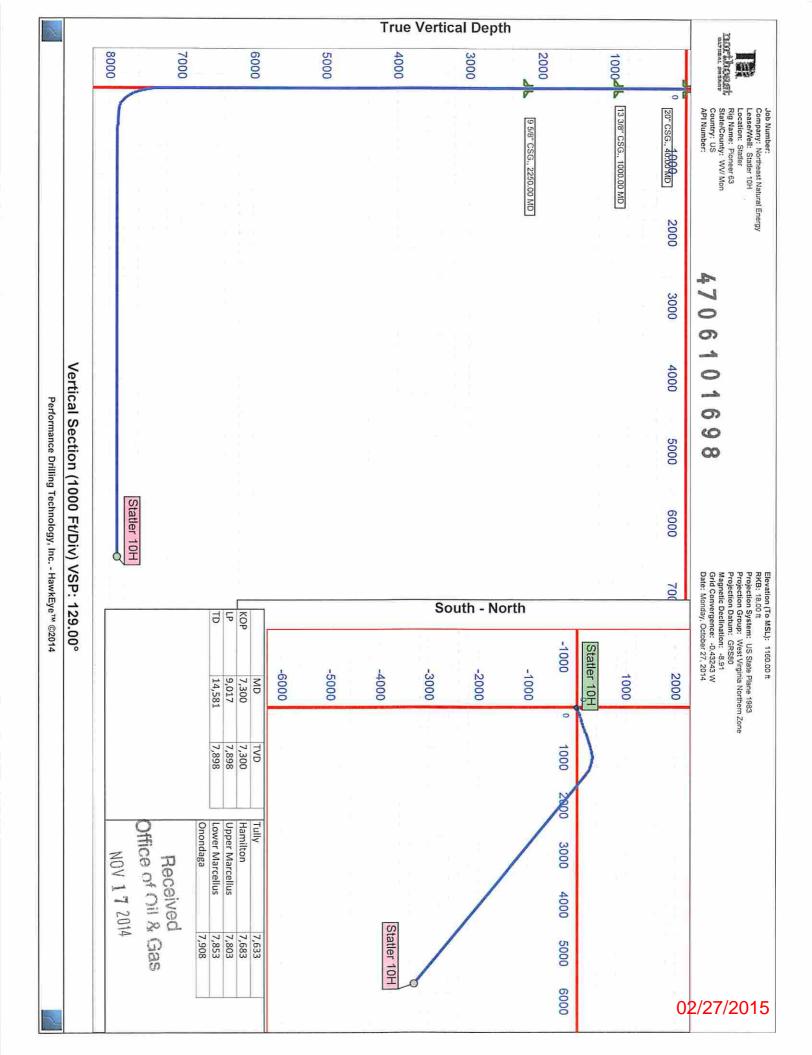
TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	.375	499	Grout	NA
Fresh Water	13 3/8"	17 1/2"	.38"	2,760	Class A	1.23
Coal						
Intermediate	9 5/8"	12 1/4"	.395"	3,950	Class A	1.3
Production	5 1/2"	8 3/4"	.361"	12,530	50:50 Poz	1.21
Tubing	2 3/8"	NA	.190"	7,700	NA	NA
Liners						

PACKERS

Kind:		
Sizes:		
Depths Set:		

Received Office of Oil & Gas NOV 1 7 2014

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:	
Drilling and completion of a horizontal Marcellus well. The well will be drilled on air to an approximate depth of 7,300' TVD/MD. Well will be horizontally drilled on fluid from KOP to approximately 7,898' TVD / 14,581' MD along a 129 degree azimuth.	
20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:	
Multi-stage / high-rate slickwater fracture treatment using various size sands as proppant. First stage will be initiated via pressurization against a burst disc ran in the production casing string or perforated with coiled tubing. Subsequent stages will be perforated with pumped down guns ran on wireline. Individual stages will be isolated with composite frac plugs. Maximum pump rate during any stage will be 110 BPM with a maximum allowable surface pressure of 9,500 PSI. Composite bridge plugs will be set at the end of the last stage to isolate the treated formation.	
21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): N/A - Existing Pad	
22) Area to be disturbed for well pad only, less access road (acres): N/A - Existing Pad	
23) Describe centralizer placement for each casing string:	
Surface and intermediate casing strings will have bow spring centralizers placed every third joint (~120') from shoe joint to surface. Production casing will have rigid body centralizers placed at a minimum every fourth joint (~160') from TD to surface.	
24) Describe all cement additives associated with each cement type:	
Surface string cement will be a Class A + Max 3% bwoc Calcium Chloride Fresh Water blend. Intermediate string cement will be a Class A Cement + Max 3% bwoc Calcium Chloride + Fresh Water. Production string cement will be (50:50) Poz (Fly Ash):Type I Cement with a gas migration additive.	
25) Proposed borehole conditioning procedures:	
Surface string will use a 25.0 bbls Gel Pill + LCM + 25 lbs Cello Flake + 20 lbs/bbl Bentonite @ 8.4 ppg & 10 bbls fresh water spacer prior to cement. Intermediate string will use a 25.0 bbls Gel Pill + LCM + 25 lbs Cello Flake + 20 lbs/bbl Bentonite @ 8.4 ppg & 10 bbls fresh water spacer prior to cement. Production string will use a 50.0 bbls SealBond 25 + 1 gal/bbl US-40 + 275 lbs/bbl Barite + 1 gal/bbl SS-2 Spacer @ 13.5 ppg prior to cement.	
Received	
*Note: Attach additional sheets as needed. Office of Oil & Gas	_
NOV 1 7 2014 Page 3 of 3	



API Number 47 -		-	
Operator's	Well No.	Statler 10H	-

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

erator Name_Northeast Natural Energy LLC OP Code	
atershed (HUC 10)Dunkard Creek QuadrangleBlacksville, WV	
evation 1061' County Monongalia District Clay	
you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No III a pit be used? Yes No III	
If so, please describe anticipated pit waste: N/A	
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 unknown at this time, TBD) Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain	
Il closed loop system be used? If so, describe: Yes - See Attachment A	
illing medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air-Vertical/Oil Based-Curve & Horizontal	
-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Based Mud	
ditives to be used in drilling medium? Organophilic Clay Viscosifiers, Lime, Unsaturated Fatty Acids, CaCl, Barite, Emulsifiers, Mica LCM, Water Loss Agents	
ill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed Offsite - See Attachment A	
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)	
-Landfill or offsite name/permit number?See Attachment A	
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the existence of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable or 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 polication form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for taining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant malties for submitting false information, including the possibility of fine or imprisonment. Office of Oil & Office Office Oil & Oil	Gas
mpany Official (Typed Name) Hollie Medley NOV 1 7 2014	
mpany Official Title Regulatory Coordinator	
mpuny official fine	
bscribed and sworn before me this 3rd day of November, 20 OFFICIAL SEAL Andrew J. Trav. Notary Public State of West Virging My Commission Exp. April 11, 2017	inia pires

Attachment A to WW-9

Northeast Natural Energy LLC ("NNE") plans to utilize a closed loop process for its drilling of the Statler 10H well. Return flow from the well will be separated into its liquid and solid form. Liquids will be held in steel tanks and reused in the drilling and completion process or disposed of at an approved facility listed below. Solids removed from the stream will be diverted to steel half-round tanks where they will be solidified on site and taken to disposal as they are accumulated.

Statler 10H Drill Cuttings will be taken to disposal at one or more of the following disposal/approved waste facilities, unless listed facilities are no longer approved to accept waste at time of disposal:

- Westmoreland Landfill (Tervita) Belle Vernon, PA (Permit # 100277)
- Meadowfill Landfill (Waste Management) Bridgeport, WV (Permit # SWF 103298)
- Max Environmental Yukon, PA (PAD004835146 and 301071)
- Max Environmental Bulger, PA (PAD059087072 and 301359)
- Chestnut Valley Landfill (Advanced Disposal) Export, PA (Permit # 101421)

NNE plans to reuse and recycle all flowback fluid and/or reach out to other operators in the area who may be able to reuse and recycle such fluid. However, in the event that reuse is not obtainable the fluid will be disposed of at one, or multiple, of the following disposal/approved waste facilities unless listed facilities are no longer approved to accept waste at time of disposal:

- Fairmont Brine Processing (WV NPDES #0116408)
- Green Hunter M. E. Elder 1 Disposal Well (Permit # 47-085-05151)
- Green Hunter Mason 1 Disposal Well (Permit #47-085-09721)
- Green Hunter Warren Disposal Well (Permit #34-121-2-3995)
- Green Hunter Travis Unit Disposal Well (Permit #34-121-2-4086)
- Viking Energy Corporation 20320 Disposal Well (Permit#47-039-02210)
- Ohio Oil Gathering Killbuck Disposal Well (Permit #34-075-24527)
- Ohio Oil Gathering Moran Disposal Well (Permit #34-089-24792)
- Ohio Oil Gathering Bells Run Disposal Well (Permit #34-167-29395)
- Ohio Oil Gathering Long Run Disposal Well (Permit #34-167-29658)
- Ohio Oil Gathering Newell Run Disposal Well (Permit #34-167-29685)
- Appalachian Oil Purchaser Greens Run Disposal Well (Permit #2D0732540)
- Appalachian Oil Purchaser BW#4 Disposal Well (Permit # 2D0732523)

470 GECEVED 6 9 8 Office of Oil and Gas

FEB 27 2015

WV Department of Environmental Protection Form WW-9

Operator's Well No Statler 10H

Proposed Revegetation Treatment: Acres Disturbed 12.7 Lime 2.0 Tons/acre or to correct to p	Prevegetation pH	6.0
10% Nitrogen, 20% Phosphate, 20% Potash	H 6.5	
Fertilizer type		
Fertilizer amount 500	lbs/acre	
Hay/Straw	s/acre	
Se	ed Mixtures	
Temporary	Permaner	nt
Seed Type lbs/acre	Seed Type	lbs/acre
Kentucky Blugrass 20	Kentucky Bluegrass	20
Red Top 15	Red Top	15
White Clover 15	White Clover	15
Photocopied section of involved 7.5' topographic sheet. Plan Approved by:		
Comments:		
Title: This feature (>) Yes (Date: 11 3 2014	Received Office of Oil & Gas

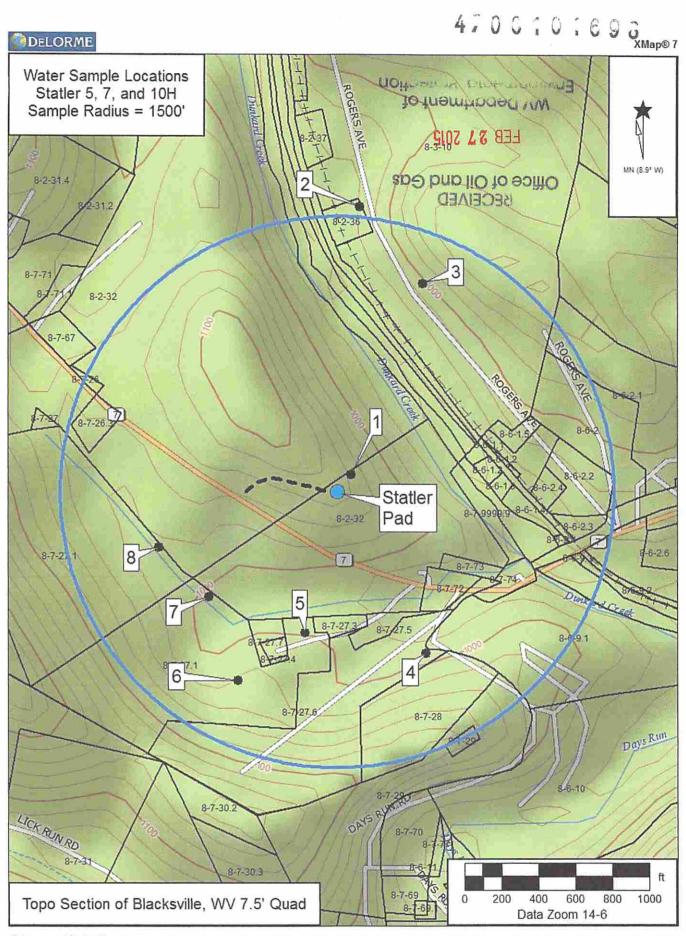


B Statler 10H SITE SAFETY PLAN

October 28, 2014

MJK 2014

Received Office of Oil & Gas NOV 1 7 2014



Data use subject to license.

© DeLorme. XMap® 7.

www.delorme.com

4706101698

Water Sample Locations (1500' radius)

Map Label #	Surface Water Owner
1	Benjamin M. Statler, Daniel C. Statler, Samuel O. Statler and Rebecca S. Moore
2	Dennis Snyder
3	David Frazier
4	Allen C. Hixenbaugh
5	Robert Statler
6	Robert Statler
7	Robert Statler
8	Robert Statler

RECEIVED
Office of Oil and Gas

FEB 27 2015

WV Department of Environmental Protection

