

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Wednesday, October 16, 2019 WELL WORK PLUGGING PERMIT Vertical Plugging

BRC OPERATING COMPANY, LLC 200 CRESCENT COURT, SUITE 1900

DALLAS, TX 75201

Re:

Permit approval for TIOGA LUMBER 6

47-067-00896-00-00

This well work permit 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 any additional specific 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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of 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.

Per 35 CSR 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) 926-0450.

James A. Martin

Chief

Operator's Well Number: TIOGA LUMBER 6

Farm Name: PARDEE & CURTIN REALTY

U.S. WELL NUMBER: 47-067-00896-00-00

Vertical Plugging

Date Issued: 10/16/2019

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

1) Date August 5	, 20 19
2)Operator's	
Well No. Tioga #6	
3) API Well No. 47-0	67 - 00896

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

	APPLICATION FOR A PERM	IIT TO PLUG AND ABANDON
4)	Well Type: Oil / Gas X / Liquid	injection / Waste disposal /
		derground storage) Deep/ Shallow X
5)	Location: Elevation 1,554'	Watershed Anthony Creek
	District Hamilton	County Nicholas Quadrangle Tioga 7.5'
6)	Well Operator BRC Operating Company, LLC	7) Designated Agent Charles Brightman
	Address 200 Crescent Court, Suite 1900	Address 286 Sunday Rd.
	Dallas, TX 75201	Hico, WV 25854
8)	Oil and Gas Inspector to be notified	9) Plugging Contractor
	Name Jeremy James	Name Halliburton
	Address P.O. Box 36	Address 4999 East Pointe Dr.
	Clendenin, WV 25045	Zanesville, OH 43701
		RECEIVED Office of Oil and Gas
		AUG 28 2019
Noti work	fication must be given to the district of can commence.	il and gas inspector 24 hours before the Environmental Protection
Work	c order approved by inspector	Date 8-28-19

BRC Operating Company, LLC

Tioga Lumber Well No. 6 API No. 47-067-00896 Nicholas County, WV

Plug and Abandonment Procedure

TD:

1,836'

PBTD:

1,836'

Conductor Casing:

13-3/8" @ 28'

Surface Casing:

9-5/8" @ 630'. Cmt'd to surface

Intermediate Casing: 7", 17#, set @ 1108'. Cmt'd to surface

Production Casing:

4-1/2" set @ 1,815'. Top of cement @ 1000' (Est)

Hole size: 6-1/4"

Tubing:

Undetermined. Records unavailable

Packer:

Undetermined

Perforations:

No perforations. Operations were suspended on 9/11/2008

Elevation:

1,409

Location:

Lat: 38.442140° Long: -80.703650°

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Office of Oil and Gas

OCT 15 2019

WV Department of Environmental Protection

Tubular Data and Hole Capacities

	Dimensions, Strengths, and Depths									
Casing	Grade	Weight	Conn.	ID	Drift	Collaps	e	Burst	Jt.	Depth
Liner		lb/ft		in.	in.	psi		psi	Strength	feet
Tubing									(K#)	
13-3/8"										28'
9-5/8"										630'
7"		17#		6.538	6.413	1,100		10,970	121,000	1,108'
4-1/2"	J-55	11.6		4.00	3.875	4,960		5,350	162,000	1,815'
2-3/8"		4.7#	EUE	1.995	1.901	9980		9840	60,300	Workstring
	Capaciti	es	bbls/	ft.			C	u.ft./ft.		
2-3/8" w	orkstring		0.00387 bbls/ft		0.02171 cu.ft./ft.					
4-1/2" ca	asing		0.01625 bbls/ft		0.0912 cu.ft./ft.					
7" casing	J		0.0167 bbls/ft			0.0937 cu.ft./ft.				
2-3/8"x 4	2-3/8"x 4-1/2" annulus (0.0101	0.0101 bbls/ft			0.0565 cu. ft/ft.			
2-3/8" x 6-1/4" annulus		0.0325	bbls/ft			0.1823 cu. ft./ft.				
2-3/8" x	7" annulus		0.0360 bbls/ft		0.2	024 cu. ft,	/ft.			
Well cap	acity to plu	ıg depth								
(w/tbg)	= ~30 bbls									

Plug Data

Plug	Sacks	Mix Water BBLS	Plug Depth	Displ BBLS 2-3/8" Tbg	Tag
#1	60	~7.4	1800'- 1024' (inside 4-1/2")	~3.4	
			Recover ~ 1000' of 4-1/2" casing To be based on CBL or Free Point		
#2	25	~3.0	1000'- 874' (Inside 7")	~3.0	Yes
#3	25	~3.0	680'- 554'	~2.0	
#4	25	~3.0	120'- surface. (7" casing) Circ hole clean at 10' to accommodate well monument		

^{*}Cement to be Class "A" and Mixed to 15.6#, 5.2 gal/sk



^{* 6%} Gel water to be positioned between plugs

Procedure

- 1. MIRU. Conduct pre-job safety meeting and discuss JSA with everyone on location. JSA should cover: heavy lifts, pinch points, location hazards, pressure hazards, and proper PPE. Make sure everyone knows they have the right to stop the job. Notify DEP (304-951-2596) 24 hours prior to plugging operations.
- 2. Check tubing and casing strings for pressure and record. Test lines to 250 psi low and HASP (Highest Anticipated Surface Pressure plus 250 psi). Prior to the start of any pumping operation, P&A supervisor and pump operator shall verify that the valves and lines involved in the operation, are aligned properly, and are rated to the maximum pressure to be applied.
- 3. Bleed off any existing pressure. Fill tubing & casing as needed. NU BOPs. Function test same.
- 4. POOH with exiting tubing.
- 5. RIH with 2-3/8" tubing to \sim 1800' and circulate well with FW. POOH.
- 6. RU E-line & RIH to ~1800'. Run CBL from 1800'- surface. POOH. Remaining procedure is based on 1000' casing recovery.
- 7. RIH with 2-3/8" tubing to \sim 1800'. Prepare to cement.
- 8. Mix/Pump 60 sx (12.6 bbl. slurry) Class "A", 15.6# Cement. Displace plug with \sim 3.4 bbls to position 776' cement plug @ 1800'- 1024'.

Note: 6% gel water to be positioned between all plugs.

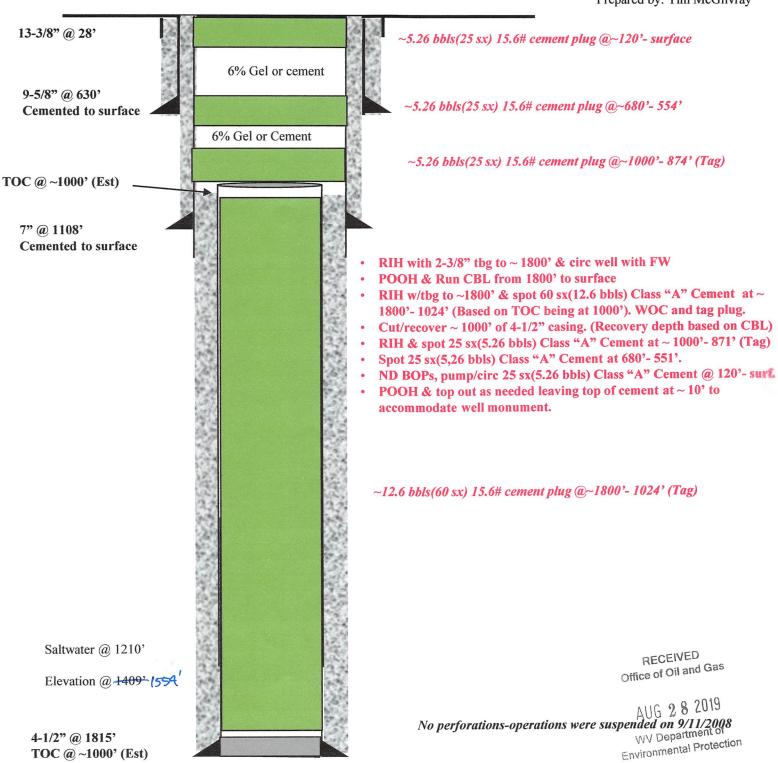
- 9. Pull to ~1000' and reverse out clean, "WOC", and tag plug.
- 10. POOH, ND BOPs, tubinghead, & B-section. Conduct casing recovery operations based on CBL and/or free point test.
- 11. NU BOPs. RIH with 2-3/8" workstring to \sim 1000'.and establish circulation. Prepare to cement.
- 12. Mix/Pump 25 sx (5.3- bbl. slurry) Class "A", 15.6# Cement. Displace plug with \sim 3 bbls to position 126' cement plug @ 1000'- 874'.
- 13. Pull clear of cement, reverse out clean, "WOC", and tag plug.
- 14. LD tubing to 680' and prepare to cement.
- 15. Mix/Pump 25 sx (~5.3- bbl. slurry) Class "A", 15.6# Cement. Displace plug with ~2 bbls to position 126' cement plug @ 680'- 554'.
- 16. LD tubing to ~120'. Prepare to cement.
- 17. Mix/Pump 25 sx (5.3- bbl. slurry) Class "A", 15.6# Cement from ~120' to surface.
- 18. POOH, ND, and top out as needed leaving top of cement at 10' to accommodate well monument.
- 19. RDMO.

Prepared by: Tim McGilvray

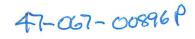
RECEIVED
Date: 10/11/2-2/0difend Gas

BRC Operating Company, LLC Tioga Lumber #6 API No. 47-067-00896 Proposed Wellbore Schematic

Prepared by: Tim McGilvray

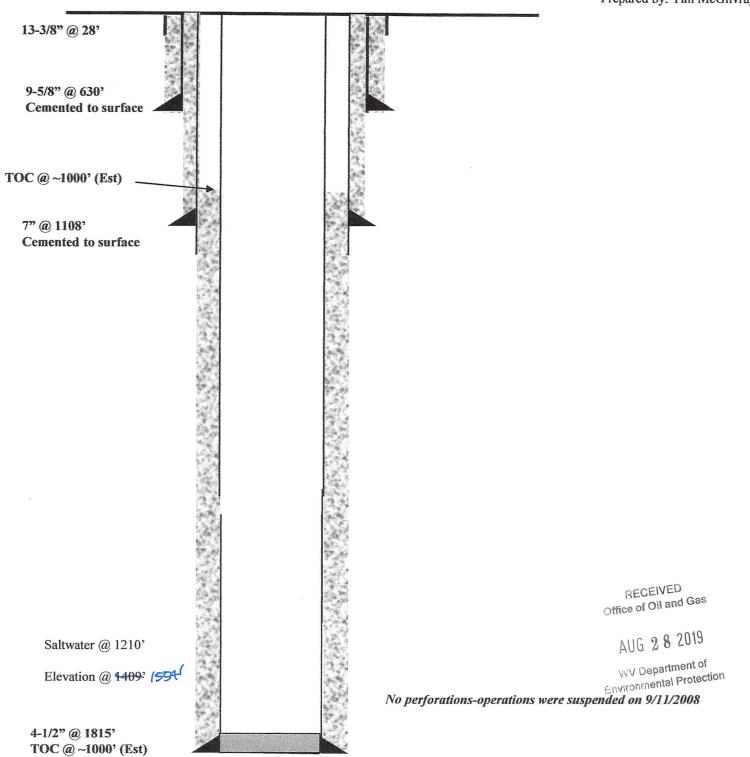


TD: 1836'



BRC Operating Company, LLC Tioga Lumber #6 API No. 47-067-00896 Present Wellbore Schematic

Prepared by: Tim McGilvray



TD: 1836'

WR-35

Date API#

March 19, 2010 47- 067 - 00896

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

		Well	Operator's Rep	ort of Well Wo	rk		
Farm Name:	Par	dee Curtin Realt		Operator Well		Lumber #6	
LOCATION:	Elevation: District: Latitude: Longitude	Hami 5970'	Iton feet South of feet West of	Quadrangle: County: 38° DEG. 80° DEG.	Tiog Nicho 27' MIN. 42' MIN.	ja	
Company:	Cahot Oil & G	as Corporation		Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
Jonipany.	5 Penn Cente	er West, Suite 40	1	13-3/8"	28'	28'	NA
	Pillsburgh, PA	A 15276-0120		9-5/8"	630,	630'	471 cu. ft.
Agent: Inspector: Permit Issued		Brian D Barry Sto 10/22/2	ollings	7"	1108'	1108'	310 cu. ft.
Well Work Co Well Work Co	mmenced:	August 29	9, 2008	4-1/2"		1815'	104 cu. ft.
Verbal Pluggir Permission gra	ng:	September	11, 2008	Suspe	nded operations (09/11/08	
Rotary X Total Depth (fe Fresh Water De Salt Water De Is coal being n Coal Depths (f	eet) Depths (ft) pths (ft) nined in area (1836 90' 1210 Y / N) ? YES PORTED					
OPEN FLOW		The second secon					and the second s
Producing Fo	-	NOT TREA	ATED	Pay Zo Depth (NA	
Gas: Initial Op Final Ope Time of ope Static rock pres	en Flow en flow betwee	NA NA n initial and final NA psig		Fir NA	tial Open Flow nal Open Flow Hours NA Hours	NA NA	Bbl/d Bbl/d
Second Produ	icing Formatio	on	NA	Pay Zor Depth (ne	NA	
Gas: Initial Op Final Ope Time of ope Static rock pres	en Flow en flow between	NA NA n initial and final NA psig	MCF/d MCF/d tests surface pressi	Fin NA	ial Open Flow al Open Flow Hours NA Hours	NA NA	Bbl/d Bbl/d
	TIONS, INCLUD	M PUT THE FOLI NGE, ETC. 2.) TI ING COAL ENCO	OWING: 1.) DE HE WELL LOG V UNTERED BY T	ETAILS OF PERI WHICH IS SYST HE WELLBORE	FORATED INTERVENE EMATIC DETAILER	'ALS, FRACTURI D GEOLOGI CÁE	RECEIVED NG OR and Gas RECORD
	RECE Office of	EIVED Oil & Gas	For: By:	CABOT OIL & GA	S CORPORATION	Jason R. Cla	NG 28 2019
	MAR 2		Date:	March	19, 2010	Drilling Mana	ASP epartment of ronmental Protection
_	WV Depai		\mathcal{L}				

WV Department of Environmental Protection

WELL - TIOGA 6

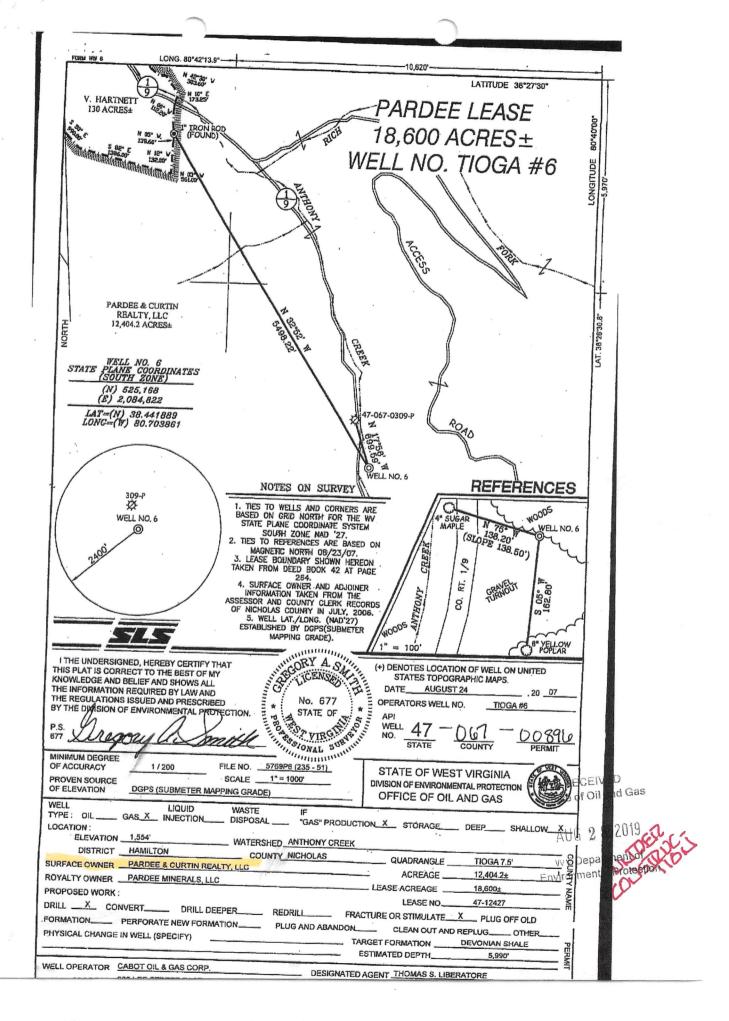
FORMATION	TOP	BOTTOM
Silt / Shale	0'	920'
Sandstone	920'	974'
Silt / Shale	974'	1030'
Sandstone	1030'	1050'
Silt / Shale	1050'	1140'
Maxton	1140'	1205'
Silt / Shale	1205'	1370'
Little Lime	1370'	1440'
Blue Monday	1440'	1450'
Shale	1450'	1488'
Big Lime	1488'	1766'
Pacono	1766'	1836'
TD	1836'	

REMARKS

RECEIVED
Office of Oil and Gas

AUG 28 2019

WV Department of Environmental Protection



WW-4A Revised 6-07

1)	Date:	August 5, 2019	
2)	Operator's	Well Number	
Tioga	a #6		

3) API Well No.: 47 -

067

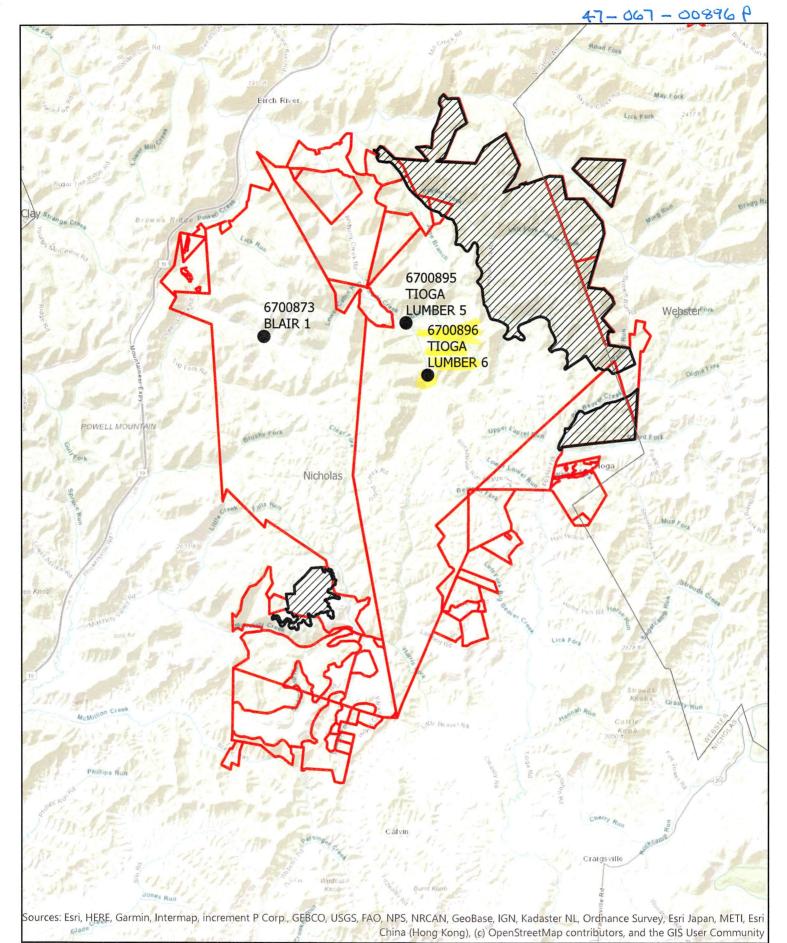
00896

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

		5) (() NT
		0.:1- 1010	Tioga Timberlands LLC	(a) Name
		, Suite 104S	702 Professional Park Dr.	Address
	(1) 11 D - 1		Summersville, WV 26651	(1)))
iration	wner(s) with Declarat			(b) Name
D- 0 540	Tioga Minerals LLC	and the second s		Address
	135 Corporate Center Dr.			
30	Scott Depot, WV 25560			
		Y		(c) Name
	1			Address
tion	ssee with Declaration		Jeremy James	6) Inspector
			P.O Box 36	Address
		Arayan Aray	Clendenin, WV 25045	
			304-951-2596	Telephone
				_
or has filed this Notice and Application and West Virginia Department of Environmental attached Form WW-6. Copies of this Notice, person(s) named above (or by publication in	he Office of Oil and Gas, West tion and depicted on the attach	o plug and abandon a w e location described on n mailed by registered	ing documents for a permit t	accompanyi Protection, the Applica
			umstances) on or before the o	certain circu
	pany, LLC	Well Operator	umstances) on or before the o	
	pany, LLC	By:	umstances) on or before the o	NOTARY P
	pany, LLC	By: Its:	UBLIC OFFICIAL SEAL	NOTARY P Gle
	pany, LLC	By:	UBLIC OFFICIAL SEAL Inna L. Pugh of West Virginia mmission Expires nuary 25, 2024	NOTARY P Gle State My Co
	pany, LLC	By: Its: Address	UBLIC OFFICIAL SEAL Inna L. Pugh of West Virginia mmission Expires nuary 25, 2024 ESTNUT KNOB RD.	NOTARY P Gle State My Co
	pany, LLC	By: Its:	UBLIC OFFICIAL SEAL Inna L. Pugh of West Virginia mmission Expires nuary 25, 2024	NOTARY P Gle State My Co Jar 740 CH
RECEIVED Office of Oil and Gas	pany, LLC	By: Its: Address Telephone	UBLIC OFFICIAL SEAL Inna L. Pugh of West Virginia mmission Expires nuary 25, 2024 ESTNUT KNOB RD. PO BOX 18 AND, WV 25864 sworn before me thi	NOTARY P Gle State My Co Jar 740 CH
RECEIVED Office of Oil and Gas	mas Ba	By: Its: Address Telephone	UBLIC OFFICIAL SEAL Inna L. Pugh of West Virginia mmission Expires nuary 25, 2024 ESTNUT KNOB RD. PO BOX 16 AND, WV 25864 sworn before me thi	NOTARY P Gle State My Co 740 CH LAYL
2	That I	By: Its: Address Telephone	UBLIC OFFICIAL SEAL Inna L. Pugh of West Virginia mmission Expires nuary 25, 2024 ESTNUT KNOB RD. PO BOX 18 AND, WV 25864 sworn before me thi	NOTARY P Gle State My Co Jar 740 CH LAYL

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



1 inch equals 8,000 Feet

Map Showing Bluescape Wells with Adjacent Coal Leases on Tioga Minerals and Berthy Blair Minerals Properties

WW-9 (5/16)

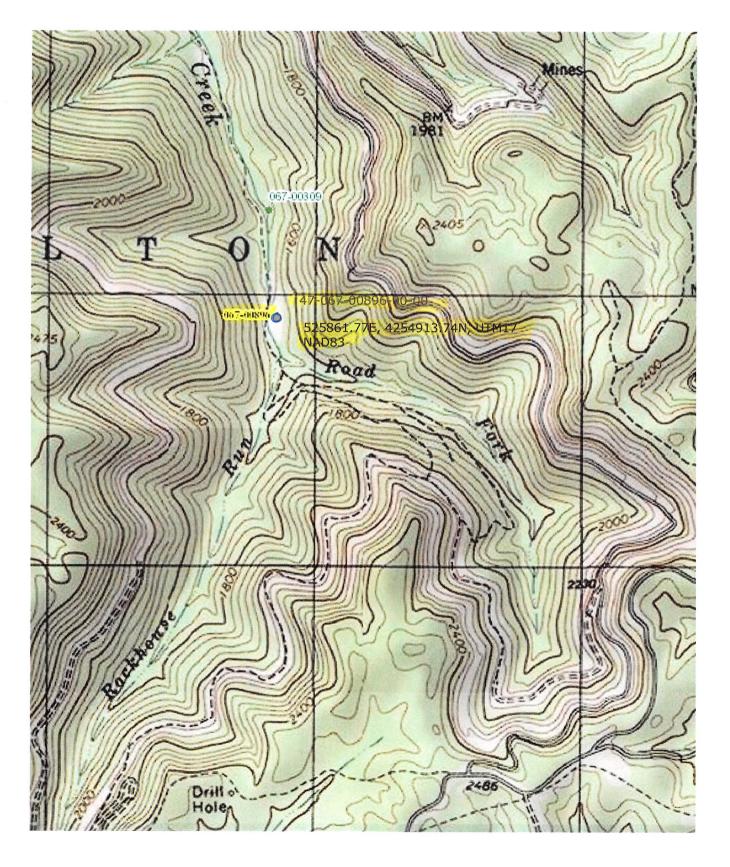
API Number 47 - 06	00896
Operator's Well No.	Tioga #6

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name BRC Operating Company, LLC	OP Code
Watershed (HUC 10) Anthony Creek	Quadrangle Tioga 7.5'
Do you anticipate using more than 5,000 bbls of water to complete	e 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:	AN WELL REFLUENT MU BE CONTAINED IN TANK
Underground Injection (UIC Permit N Reuse (at API Number Off Site Disposal (Supply form WW-9	umber
Will closed loop systembe used? If so, describe: n/a	
Drilling medium anticipated for this well (vertical and horizontal)	? Air, freshwater, oil based, etc. n/a
-If oil based, what type? Synthetic, petroleum, etc. n/a	
Drill cuttings disposal method? Leave in pit, landfill, removed of	fsite, etc. n/a
-If left in pit and plan to solidify what medium will be us	
Permittee shall provide written notice to the Office of Oil and Gas West Virginia solid waste facility. The notice shall be provided where it was properly disposed.	of any load of drill cuttings or associated waste rejected at any ithin 24 hours of rejection and the permittee shall also disclose
on April 1, 2016, by the Office of Oil and Gas of the West Virgin provisions of the permit are enforceable by law. Violations of any or regulation can lead to enforcement action. I certify under penalty of law that I have personally eapplication form and all attachments thereto and that, based on my	
Company Official Signature	Office of Oil and Gas
Company Official (Typed Name) Charles Brightman	AUG 2 8 2019
Company Official Title Designated agent	- Capartment of
	Wy Department
Subscribed and sworn before me this day of day of	Tugust, 20 19
Mdornad Pugl	Public TARY PUBLIC OFFICIAL SEAL
My commission expires amusing 25, 6	Glenna L. Pugh State of West Virginia My Commission Expires January 25, 2024 740 CHESTNUT KNOB RD. PO BOX 16 LAYLAND, WV 25864

Will WW 3		Operator's Well	No. Tioga #6
			-
Proposed Revegetation Treatment: Acres Disturbed	d .5	Preveg etation pH	
Lime 5gals Tons/acre or to co	orrect to pH 6.5		
Fertilizer type			
Fertilizer amount 500	lbs/acre		
Mulch_500lbs	Tons/acre		
	Seed Mixture	<u>s</u>	
Temporary		Permane	nt
Seed Type lbs/acre		Seed Type	lbs/acre
n/a	Tal	I fescue blend	250
Attach: Maps(s) of road, location, pit and proposed area for rovided). If water from the pit will be land applied L, W), and area in acres, of the land application are hotocopied section of involved 7.5' topographic shall approved by:	l, provide water volun ea.	ess engineered plans includin ne, include dimensions (L, W	(, D) of the pit, and dimensio
comments:			
			RECEIVED Office of Oil and Gas
			AUG 28 2019
Title: inspector OOG	Date:	8-28-19	WV Department of Environmental Protecti
Field Reviewed? () Yes	()No		FUAIIOULIA



 $http://deparcgis1/ooggis/index.html?x = 525861.77 \&y = 4254913.74 \&datum = NAD83 \&pntl... \quad 10/15/2019 \\$

WW-7 8-30-06



West Virginia Department of Environmental Protection Office of Oil and Gas

WELL LOCATION FORM: GPS

_{API:} 47-067-00896	well no.: Ti	oga #6	
FARM NAME:			
RESPONSIBLE PARTY NAME: BRC C	perating Com	npany, LL	C
COUNTY: Nicholas	_ _{DISTRICT:} Har	nilton	
QUADRANGLE: Tioga 7.5'			
SURFACE OWNER: TIOGA TIMBER	-		
ROYALTY OWNER: Pardee Minera			
UTM GPS NORTHING: 4254913.74			
UTM GPS EASTING: 525861.77	GPS ELEVATION	_{ON:} 1554	
preparing a new well location plat for a plugging above well. The Office of Oil and Gas will not a the following requirements: 1. Datum: NAD 1983, Zone: 17 North, height above mean sea level (MSL)- 2. Accuracy to Datum – 3.05 meters 3. Data Collection Method: Survey grade GPS: Post Processed Diff	Coordinate Units: met - meters.	s that do not me	
Real-Time Differe	ntial		
Mapping Grade GPS: Post Processed			
Real-Time Diff		Il location	
4. Letter size copy of the topography I the undersigned, hereby certify this data is conbelief and shows all the information required by prescribed by the Office of Oil and Gas.	rect to the best of my k law and the regulation	nowledge and	RECEIVED Office of Oil and Gas SEP 0 9 2019
Signature Dyushin	ED <u>ACSAT</u> Title	9/5/19 Date	 WV Department of