

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, July 22, 2020 WELL WORK PERMIT Vertical / Re-Work

CHEETAH EXPLORATION & PRODUCTION LLC PO BOX 2722

BUCKHANNON, WV 26201

Permit approval for TW-46 REVISED Re: 47-085-07367-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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:

TW-46 REVISED Farm Name: WYATT, DANIEL E.

U.S. WELL NUMBER: 47-085-07367-00-00

Vertical Re-Work

Date Issued: 7/22/2020

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. 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 §22-6-20, 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.
- 2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
- 3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
- 4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 5. 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.
- 6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
- 7. Well work activities shall not constitute a hazard to the safety of persons.
- 8. 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.

CK 1018 47-085-07367

FORM WW-3 (B) 1/12



1) Date:	06/17/202	0				
2) Operato	tor's Well No.		Carder/Wyatt TW-46			
3) API We	ll No.:	47	-	Ritchie	•	07367
		State	_	County		Permit
UIC Per	mit No.	UIC2D	0850	7367		

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

5) WELL 6) LOCA		Liqu Elevati	id Injection	on	/		ction (not stor	age)	_ / v	Vaste Disposal
			: Grant				minute	Commence of the second of the second	0 1	1 0 1
7) WELL				nestion & Pr	nduction	110			Quadra	ngle Cairo
,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Addre	miles	O Box 2722		OGGGGGGT,		o) DESIGN	ATED AGE		A. Brake
	1 KOOLY		uckhannon.					Addre	SS Same	
9) OIL & Name	GAS INS Mike Got	PECTO			ED	PRODUCE AND STREET	2.7	ING CONTE		Abilit of a standard
Address	1723 Pul		mal					erkins Oil and C	as, inc	
Address							Address P	O Box 547		
	Pullman,	VVV 204	21				P	ennsboror, WV	26415	3
13) Estima 14) Appro 15) Appro 16) Is coal 17) Virgin 18) Estima 19) MAXI 20) DETA other Clas 21) FILTE	OGIC TA ated Depth eximate was eximate coal being min reservoir ated reserving ated reserving IMUM PR AILED IDI ss il fluids ERS (IF A IFICATIO per 1000.	ARGET n of Con ater stra al seam ned in to pressur voir frac ROPOSI ENTIFI NY) 5- DNS FO	FORMA mpleted V ta depths depths: he area? re in targe cture pres ED INJEC CATION	TION OF Vell, (or a 580, 1 Yes ext formati sure 294 CTION OF MA	ohysical niskany / actual d esh 230 140, 140 on 1400 on 1400 pperan	nation	well (specify) Deptiting well): 75 Feet Source Volume per bo	See rework proceeds 5819 500 Salt 1 10142 our 200 bbls NCLUDING	Feet (top Feet (top Feet 1800 Bottom 1 ADDITIVE	/ Stimulate Convert / Conv
CASING				ECIFICATI	OMO		70071 77			
TUBING '		Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well	CEMENT FILL -UP OR SACKS (CU. FT.)	PACKERS
Conductor		16			x		319	319	CTS	Kinds
Fresh Water	r									Baker Hughes Homet
Coal										Sizes
Intermediat	e	8 5/8			х		1979	1979	CTS	
Production		4 1/2			х		7500	7500	CTS	2 7/8" X 4 1/2"
Tubing		2 7/8	N-80	7.9	х		5800	5800	010	Depths set
Liners							3000	3000		5730
								-		Perforations
			19				1			Top Bottom
			The Device of Congress of Conference of Conf				-		DEC	N 6034
24) APPLI by dee	ICANT'S	OPERA	ATING R	IGHTS w	vere acq other co	uired from	Daniel E. Wya	ti d 04/03/2020	Olive	Top Bottom No. 100 Bottom No. 100 Bottom On 200
Ritchie			C	ounty Cle	rk's ofi	ice in Her	risville, WV	E030 1	Book 327	at dage 180
						(Page)		W childs the Manifelian	EUAL	of record in the

Rework/Conversion Procedure 47-085-07367 Carder-Wyatt TW-46

Scope of work and Goal:

Plans are to convert the referenced well to a commercial Class II disposal well and therefore will need to complete needed well work to prepare it. The well was drilled in 1985 and logged but was not perforated and/or completed. It was drilled to a total depth of 7500 feet through the Rose Hill formation and all 3 strings of casing ran in this well are cemented to surface, according to the WR-35. No other well work permits are on file with the WVDEP. While preparing the paperwork for this work an additional suite of logs was located indicating a bridge plug had been set at 4657 feet and the Lower Huron was perforated with 26 holes on April 13, 2005. Plans are to submit a well work permit application to the WVDEP-Office of Oil and Gas to prep the site, rework the access road, squeeze the perforated Lower Huron interval, remove the bridge plug, pressure test the 4 ½ casing, perforate the Oriskany (5818 - 5911 feet) and the Bass Island (5990 – 6034 feet) and run tubing/packer. Plans are then to acidize the perforated intervals, through the 4.5" casing, with 1500 gallons of 20%- 28% HCL and then conduct an injectivity test. Should the test be successful a complete UIC Permit Application will be filed for review and approval. Once the UIC Permit is issued then 2 7/8" tubing will be ran in well with packer set within 100 feet of the top of the Oriskany which is 5818 feet. Do not plan to stimulate the well at this time.

Participating

Allstate Disposal, LLC
Brad Blair
PO Box 668
Cambridge, Ohio 43725
740-837-0229

bradleybblair@yahoo.com

Cheetah Exploration and Production, LLC
Pat Brake
PO Box 2722
Buckhannon, WV 26201
304-677-0214

P.brake@Cheetahenergyllc.com

GCS Consulting, LLC Gene Smith PO Box 4282 Amma Road Amma, WV 25005 304-444-0085 Genecsmith17@gmail.com ALL Consulting
Tom Tomastik
10811 Keller Pines Court
Galena, Ohio 43201
614-940-3521
ttomastik@all-llc.com

Lone Wolf Construction Dan Webb PO Box 25 Crawley, WV 24931 304-890-4546

Dwebb1953@gmail.com

Producers Service Corporation Jason Stansbery 109 South Graham Street Zanesville, Ohio 43701 740-319-2829

Jstanbery@producersservicecorp.com

Nine Energy Service
Jeff Hyre
6500 West Freeway, Suite 600
Fort Worth, TX 76116
724-967-5111

Jeff.hyre@nineenergyservice.com

Stalnaker Energy Corp.
Ron Stalnaker
PO Box 178
Glenville, WV 26351
304-462-5701
Rstalnaker@stalnakerenergy.com

Formation Cementing Brian Jasper PO Box 2667 Zanesville, Ohio 43702 740-453-6926

Formationcementing@outlook.com

BBU Services of WV, LLC Troy Boster/Gerald Butcher 986 Kentuck Road Kenna, WV 25248 304-531-9398/304-415-8068 troyboster@bbuservicesofwv.com

This well and access are off of WV Rt. 50 onto Cty Rt. 18 Goose Creek Road in Ritchie County. The speed limit for this road is 45 MPH. This well site is not visible from Goose Creek Road and is approximately 2400 feet off of it. For 911 and contractors the access to this well is approximately 4 miles down Goose Creek Road and ¼ mile below an established address of 3524 Goose Creek Road. The access off of Goose Creek will be flagged and the Lat/Long is 39 12' 18"/81 14' 25". Due to the grade of the access someone will meet you for assistance getting to and from the well site.

The supervisor for each phase will be Pat Brake and/or Gene Smith. Tailgate safety meetings will be conducted at the beginning of each day and prior to the initiation of each separate operation. A representative of the operation to be conducted will lead the meeting.

The emergency spill coordinator will be Pat Brake and/or Gene Smith and the clean up crew on stand by is BBU Services of

Wyatt Rework-Conversion Procedure

Day 1

- 1. Obtain necessary well work permit and Injectivity Test approval
- 2. Contact Oil and Gas Inspector Mike Goff 304-549-9823 24 hrs. prior to any work including dirt work
- 3. Webb upgrades well site to a minimum of 50 X 100' and access road to well, applies culverts and stone as necessary
- 4. Webb to provide mud scrapping and washing of state road as required
- 5. MI Webb RU 4 210 bbl. tanks on 85-7367 well site for work over and testing
- 6. Webb fills two tanks with fresh water for cementing and pressure testing the pipe
- 7. At the conclusion to the remediation work Webb will fill all 4 tanks with salt water @ ___ # per gallon or a specific gravity of ____ for injection test.
- 8. MI RU Stalnaker check pressure on well and record on DAR releases if any.
- 9. Stalnaker RIH with sand line and lubricator and check TD using a dioptometer
- 10. Stalnaker will TD, top of CIBP that should be at 4657 feet. If CIBP is not found continue to PBTD of 7500' and record on DAR
- 11. MI RU Nine Energy Services Inc and RIH with Gamma Ray CCL log and confirm location of CIBP or PBTD and look for perforation throughout the well and the reported perfs from 4525 4530 feet (10 holes) and 4545 4555 (16 holes)
- 12. IF no CIBP or perforation are found then proceed to number 15/16 then 28+
- 13. If perforations are present at 4600 set cement retainer 10 foot +/- above top perforation
- 14. Webb moved in a portable circulation tank of digs and lines a DEP approved pit able to contain 200 BBL of water

Day 2

- 15. Stalnaker to RIH with 2 3/8 EUE tubing, stinger and one centralizer within 50' of the Nine Energy Services cement retainer. A 2500# tubing head and pack off rubbers will be used. Do not sting into the retainer at this time.
- 16. MIRU Formation Cementing (use Class A cement with 2% gel) to test casing from top of cement retainer to TOH
- 17. Formation will pressure test for integrity the 4 ½" casing (freshwater will be loaded in casing and pressured up to _____? ___ psi and hold for 20 minutes with no more than a 5% bleed off (pressure test be done with tubing in the hole)
- 18. Should it fail need to pressure up two more times and hold for 20 minutes each)
- 19. Pressure test fails after third attempt then need to stop and reevaluate whether to continue or remediate
- 20. Pressure test passes then proceed by lowering the tubing into the formation pack and Formation will then test the tubing string and record same
- 21. After test passes lower tubing completely into the cement retainer and have Formation establish an injection rate of _____ BPM at not more than ____ PSI.
- 22. If injection test is acceptable unsting from retainer and have formation pump cement to top of retainer then sting into retainer and displace up to 75 sacks of cement

- 23. After completion of squeeze, sting out of cement retainer and reverse circulate the cement out of the tubing, POOH the tubing, stinger and centralizer
- 24. Shut down for the day and let cement setup (decision to be made on how many hours between 8 and 48 to allow cement to cure and reach compressive strength)

Day 3

- 25. MIRU Stalnaker power swivel and pumps and fluid control head and use a 3 7/8 tri cone bit and drill out retainer and cement, do not drill out the CIBP and do not exceed 8000# pounds of weight on the bit during drilling. Maintain 20 minutes circulation time between connections (bottoms up)
- 26. Upon reaching the top of the CIBP, pull tubing up a joint
- 27. MIRU Formation and pressure the 4.5" to ______psi and hold for 20 minutes with no more than a 5% bleed off (pressure test be done with tubing in the hole). Should it fail need to pressure up two more times and hold for 20 minutes.
- 28. Pressure test fails after third attempt then need to stop and reevaluate whether to continue or remediate
- 29. IF test is successful then Stainaker is to drill out the bridge plug and chase same to the well depth of 6200 feet with the tubing and bit circulating bottoms up every 500 foot to TD. Circulate the PBDT for one hour

Day 4

- 30. POOH Tubing
- 31. MIRU Formation and pressure test casing to ______psi and hold for 20 minutes with no more than a 5% bleed off. Should it fail need to pressure up two more times and hold for 20 minutes.
- 32. MIRU Nine Energy Services to run, gauge ring, and cement bond log from TD to top of cement
- 33. Nine Energy Services to set a permanent CIBP 100-120 feet below bottom of the Bass Island to isolate the zone from TD and remain in the hole

Day 5

- 34. Nine Energy Services perforates the Bass Island interval from 5990' to 6034' using recommend shots and pattern as suggested by Nine Energy Services (perfs around 4 per foot and size around 5")
- 35. Nine Energy Services perforates the Oriskany from 5818' to 5911' using recommend shots and pattern as suggested by Nine Energy Services
- 36. Stalnaker RIH tubing to spot acid across perforated areas
- 37. MIRU Producers Services to conduct Acid job on both formations not to exceed 2200 psi
- 38. Stalnaker POOH tubing
- 39. Producers Services conducts injectivity test through the 4.5 casing following the attached procedure provided by ALL Consulting
- 40. All well work and testing completed for now and client to evaluate the injectivity testing

GCS Consulting, LLC 4282 Amma Road, Amma West Virginia 25005 304-444-0085 genecsmith17@gmail.com

June 24, 2020

Mr. Taylor Brewer, Assistant Chief of Permitting West Virginia Department of Environmental Protection Office of Oil and Gas 601 57th Street Charleston, WV 25304

Re: Injectivity Test Request

Taylor,

Plans are to convert 47-085-07367 to a commercial Class II disposal well and therefore will need to complete needed well work to prepare it. The well was drilled in 1985 and logged but was not perforated and/or completed at that time. It was drilled to a total depth of 7500 feet through the Rose Hill formation and all 3 strings of casing ran in this well are cemented to surface according to the WR-35 Well Operators Report. No other well work permits are on file with the WVDEP. While preparing the paperwork for this work an additional suite of logs was located indicating a bridge plug had been set at 4657 feet and the Lower Huron was perforated with 26 holes on April 13, 2005. Plans are to submit a well work permit application to the WVDEP-Office of Oil and Gas to prep the site, rework the access road, squeeze the perforated Lower Huron interval, remove the bridge plug, pressure test the 4 ½"casing and perforate the Oriskany (5818 - 5911 feet) and the Bass Island (5990 – 6034 feet). Plans are then to acidize the perforated intervals through the 4½"casing with 1500 gallons of 20%-28% HCL and then conduct an injectivity test. If the test is successful a complete UIC Permit application will be submitted for review. Upon issuance 2 7/8" tubing and packer will be ran this well. The packer will be set within 100 feet of the top of the Oriskany. Do not plan to stimulate the well at this time.

The fluid to be used for the injectivity test will be provided by R and R Oil and Gas, LLC and has a specific gravity of 1.12. Plan to inject 400-500 bbls into each zone at a rate of 2-8 barrels per minute and try to average 4 bbls per minute. The maximum injection pressure will be established by the Office of Oil and Gas based upon the information that has been provided. The duration of the test will be up to 8 hours.

On behalf of Cheetah Exploration and Production, LLC I am hereby asking for written and Product the injectivity test if it cannot be approved as part of the procedure submitted with the well

JUN 2 3 2020

WV Department of Environmental Protection

work application and hopeful subsequent permit issuance. Enclosed please find the rework well work application, rework procedure, well schematic, topo map section, and a WR-35 Well Operators Report. Should you need additional information or wish to discuss feel free to contact me. Thanks for the consideration.

Sincerely,

Gene Smith

GCS Consulting, LLC

Cc: Pat Brake/Cheetah Exploration and Production

Office of Oil and Gas

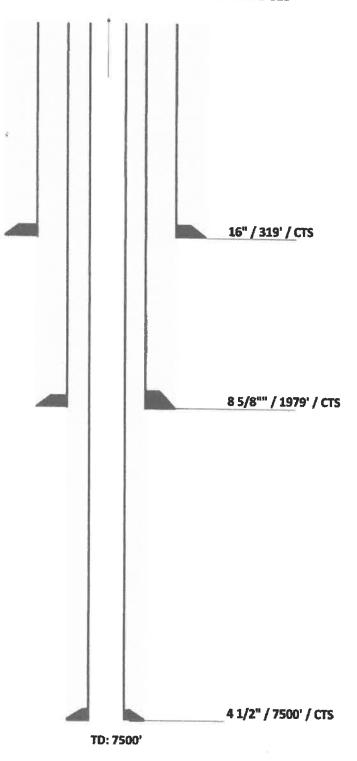
JUN 2 3 2020

WV Department of Environmental Protection

Carder/Wyatt TW-45-1 API 47-085-07367

RITCHIE CO. GRANT DISTRICT





RECEIVED
Office of Oil and Gas

JUN 23 2020

WV Department of Environmental Protection IV-35 (Rev 8+81)

MAR 2 5 1965

Department of Mours Bil und Cas Division

Date March 1, 1986
Operator's
Operator's
Well No. Carder/Wyatt TW-45-1 Farm Daniel Wyatt API No.47 - 85 - 7367

WELL OPERATOR'S REPORT

			OF			
DRILLING,	FRACTURING	AD/OR	STUMBLATUS,	OR	PHYSICAL	CHANGE

LOCATION: Elevation: 920	Watershed	Goose		p×/Sha	
District: Grant				e Cairo	
			_		
COPANY technell, inc.					
ADDRESS P.O. Box 79e Mungantown,		Canina	Man 2 da		Coment
DESIGNATED AGENT Datus H Zenti		Caging	Used in		fill up
ADDRESS same			Drilling	in Well	Cu. ft.
SURFACE CASER Daniel Wyatt		Size 20-16	319	319	cts
ADDRESS 6852 Highland Flace worth	ing. 04 4:085	Card.			013
MINERAL RIGHTS CHOOK SAME		13-10"			
ADDRESS.		9 5/8	1070	Linzo	Are
oil and gas disposited for their i	WOFK	8 2/g	1979	1979	CIS
Sam Heraman ADDRESS Smithville.		7	-		
PERMIT ISSUED 5/29/85		5 1/2			
DRELLING COMMINICAN 5/22/85		4 1/2	75(0)	7500	CTS
PPILLING COMPLETED 6/5/85		3			
IF APPLICABLE: PLAGGING OF DRY		2			
CONTINUOUS PROGRESSION FROM DRIE	Ling or	Liners			
R'&CRKING. VERBAL PERMISSION OF	ಶಾಸಬಹ <u>ು</u>	uzod			-
CR					1
CN					
CENTOGICAL TARGET FORWATION ::			Dap	th_ 8500	fee
CN	7500 feet	Rotary_ <	/ Caisle	700ls	fee
COMMODICAL TARGET FORWATION	7500 feet feet:	Rotary «	/ Caiple feet	Tools	
CN	7500 feet feet:	Rotary «	/ Caiple feet	Tools	
COMPAGE STATES SERVATION COMPAGE STATES SERVED SERV	7500 feet feet:	Rotary «	/ Caiple feet	Tools	
CEDIOGICAL TARGET FORWATTON: 1 Depth of completed well Water strata depth: Presh Call seam depths: 500, 11	7500 feet feet; 40, 5400	Rotary < Salt Is call	/ Cablefeet	o Tools	area?×
CENTOGICAL TARGET FORWATION: Depth of completed well Water strata depth: Fresh Cash seem depths: 500, 11 CPEN FLOW DATA Producing formation NG1 Cas: Initial open flow	Then feet feet; 40, 1400 FRACED	Rotary < Salt Is coal Page Oil: Inc	/ Cable feet being mine y zone dep	o Tools	fce
CN	Then feet feet; 40, 1400 FRACED	Rotary < Salt Is coal Page Oil: Inc	/ Cable feet being mine y zone dep	o Tools	fce
CN	Then feet feet; 40, 1400 FRACED	Rotary < Salt Is coal Page Oil: Inc	/ Cable feet being mine y zone dep	o Tools	foe
CENTOGICAL TARGET FORWATION: Depth of completed well Water strata depth: Fresh Cash seem depths: 500, 11 CPEN FLOW DATA Producing formation NG1 Cas: Initial open flow	Then feet feet; 40, 1400 FRACED	Rotary < Salt Is coal Page Oil: Inc	/ Cable feet being mine y zone dep	o Tools	fce
Depth of completed well Water strata depth: Fresh Chil serm depths: 500, 11 OPEN FLOW DATA Producing formation NOT Cas: Initial open flow Final open flow Tire of open flo	7500 feet feet; 40. 5400 FRACED MCF/d MCF/d Ow between init psig(surfac	Rotary * Salt Is coal Pa Oil: In Fin tial and fi	/ Cable feet being mine y zone dep	o Tools	foe
Depth of completed well Water strata depth: Fresh Carl seam depths: 500, 11 OPEN FLOW DATA Producing formation NG1 Cas: Initial open flow Final open flow Tire of open flo Static rock pressure (If applicable due to male:	Then feet feet; 40. 9400 FRACED Mof/d Mof/d Ow between init psig(surfaction)	Rotary Salt Is coal Pay Oil: In: Fin	feet feet being mine y zone dep itial open nal open f inal tests ment) after	ed in the	foe
Depth of completed well Water strata depth: Fresh Chil seam depths: 500, 11 OPEN FLOW DATA Producing formation NG1 Gas: Initial open flow Final open flow Tiru of open flow Static rock pressure (If applicable due to male: Second producing formation	THOO feet feet; 40. 1400 FRACED MOS/d MOS/d Mos/d Ow between init psig(surfac iple damplesion	Rotary Salt Is coal Particle Inches	feet feet being mine y zone depritial open and open final tests ment) after	e Tools and in the	fce Phl/
Depth of completed well Water strata depth: Fresh Carl seam depths: 500, 11 OPEN FLOW DATA Producing formation NG: Cas: Initial open flow Final open flow Tire of open flow Static rock pressure (If applicable due to male: Second producing formation Gas: Initial open flow	Then feet feet; 40. 9400 FRACED Mof/d Mof/d Ow between init psig(surfaction fple dempletion Nof/d	Partary Salt Is coal Partary Oil: Inc First ial and from measure Fartary Oil: Inc	/ Cable feet being mine / zone dep itial cpun hal cpun f inal tests ment) after / zone depr itial cpen	th flow	fce Bbl/
CN	Then feet feet; a0. 1400 FRACED Mof/d Mof/d Ow between init psig(surfaction fple damplector Mof/d Mof/d	Rotary * Salt Is coal Pay Oil: In: Fin Fin Cial and f: For measure Fay Oil: In: Oil: Fin	feet feet being mine y zone depritial open inal tests ment) after y zone depritial open itial open	th flow how	fce Pbl/c
CENTOGICAL TARGET FORWATTON: Depth of completed well Water strata depth: Fresh Canl seam depths: 500, 11 CPEN FLOW DATA Producing formation NG1 Cas: Initial open flow Final open flow Time of open flow Static rock pressure (If applicable due to male: Second producing formation Gos: Initial open flow	Theo feet feet; 40. 1400 FRACED MCF/d MCF/d Ow between init psig (surfaction fple damplesion MCF/d MCF/d MCF/d MCF/d Ow between init	Partary Salt Is coal Partary Oil: Introduction and from measurer Partary Oil: Introduction of the sale and from the sale and	feet feet being mine y zone depr itial open f inal tests ment) after y zone depr itial open f itial open f inal tests	th flow how the flow how how how	fce Bbl/c

47-085-07367W

FORM 1V-35

PERFORATION AND FRACTURING DETAILS

NONE AT THIS TIME

WELL LOG

SOIL	FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS INCLUDING INDICATION OF ALL FRESH AND SALT WATER, COAL, OIL, GAS
SHALE SILTSTONE & SHALE SILTSTONE & SANDSTONE SHALE & SILTSTONE SHALE & SILTSTONE SHALE & SILTSTONE SHALE SHANDSTONE SHALE SHALE SHALE SHANDSTONE SHALE SHANDSTONE SHALE SHALE SHANDSTONE SHANDSTONE SHANDSTONE SHANDSTONE SHANDSTONE SHANDSTONE SHANDSTONE SHANDSTONE SHANDSTONE SHANDST	SOIL	a	20	
SILTSTONE & SHALE		-		
SILTSTONE & SANDSTONE				
SHALE & SILTSTONE 388 418 SANDSTONE 388 418 SANDSTONE 480 508 COAL 308 518 SILTSTONE 510 536 SALE 538 568 SALE 538 568 SALE 6 SANDSTONE 538 638 SHALE 728 738 SHALE 728 738 SHALE 8 SANDSTONE 888 898 NO SAMPLE 800 858 SANDSTONE 888 898 NO SAMPLE 890 918 SANDSTONE 8 SHALE 918 928 SANDSTONE 8 SHALE 918 928 SANDSTONE 8 SHALE 918 938 SANDSTONE 8 SHALE 918 938 SHALE 1888 898 NO SAMPLE 800 918 SHALE 8 SANDSTONE 880 1820 SHALE 1888 1898 SHALE 1888 1820 SHALE 1888 1838 SHALE 1888 1888 SHALE 1888 188				
SANDSTONE 380 410 SHALE 410 488 SANDSTONE 480 500 COAL 580 510 SILTSTONE 510 530 SANDSTONE 520 568 SANDSTONE 520 568 SHALE & SANDSTONE 568 636 SHALE 630 728 LIMESTONE & SHALE 720 730 SHALE 730 790 LIMESTONE & SHALE 790 808 NO SAMPLE 800 850 SHALE 850 680 SANDSTONE 880 898 NO SAMPLE 800 908 SANDSTONE 880 898 NO SAMPLE 800 910 SANDSTONE 890 910 SANDSTONE 930 1000 SHALE 2 SANDSTONE 930 1000 SHALE 1800 1020 LIMESTONE & SHALE 1800 1020 LIMESTONE & SHALE 900 910 SANDSTONE 930 1000 SHALE 1030 1040 SHALE 1040 1050 SHALE 1050 1040 SHALE 1050 1040 SHALE 1050 1040 SHALE 1050 1050 SHALE 1050 1040 SHALE 1050 1040 SHALE 1100 1120 SHALE 1100 1120 SHALE 1100 1120 SHALE 1120 1440 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1200 SHALE 1150 1200				
SHALE 410 488 SAVDSTONE 480 506 COAL 506 518 SILTSTONE 510 530 SAVDSTONE 530 568 SAVDSTONE 530 568 SAVDSTONE 530 728 LIMESTONE 4 SAVDSTONE 720 730 SHALE 720 730 SHALE 730 790 LIMESTONE 4 SHALE 720 730 SHALE 800 859 SHALE 800 859 SANDSTONE 884 890 998 NO SAMPLE 890 998 NO SAMPLE 890 998 NO SAMPLE 890 998 NO SAMPLE 890 908 SANDSTONE 8HALE 910 930 SHALE 4 SAVDSTONE 930 1000 SHALE 1000 SHALE 1000 1000 SHA				
SANDSTONE				
COAL 500 510 530 SILE SILE 510 530 SANDSTONE 530 SANDSTONE 540 630 720 LIMESTONE & SHALE 630 720 LIMESTONE & SHALE 730 790 SHALE 730 790 SHALE 730 790 SHALE 850 SANDSTONE 880 890 850 SHALE 850 680 SANDSTONE 880 890 900 SAMPLE 890 900 SAMPLE 890 910 SANDSTONE 890 910 SHALE 910 930 SHALE 910 930 SHALE 910 930 SHALE 850 SANDSTONE 890 910 SHALE 850 SANDSTONE 850 SHALE 910 930 SHALE 910 930 SHALE 850 SHALE 910 930 SHALE 850 SHALE 800 1020 LIMESTONE & SHALE 1030 1049 SHALE 1030 1049 SHALE 1030 1049 SHALE 1030 1049 SHALE 1050 1050 1050 1050 SHALE 1100 SHALE 1120 1140 SHALE 1120 SHALE 1120 1140 SHALE 1120 SHALE 1120 1140 SHALE 1150 1200 SHALE SANDSTONE 1200 SANDSTONE 1440 1590 SHALE & SANDSTONE 1440 1450 1420 SHALE & SANDSTONE 1440 1590 SHALE & SANDSTONE 1500 1560 SANDSTONE 1				
SILTSTONE 510 530 SANDSTONE 538 568 SHALE & SANDSTONE 568 636 SHALE 630 720 LIMESTONE & SHALE 720 730 SHALE 770 808 NO SAMPLE 800 850 SHALE 850 880 NO SAMPLE 880 898 NO SAMPLE 890 908 SANDSTONE 8HALE 900 910 SHALE \$4 SANDSTONE 938 1000 SHALE 1800 1820 LIMESTONE & SHALE 1800 1820 SHALE 1800 1820 LIMESTONE & SHALE 1800 1820 SHALE 1800 1800 SHALE 8 SANDSTONE 1800 1840 SHALE 8 SANDSTONE 1840 1850 SHALE 8 SANDSTONE 1850 1860				
SANDSTONE 538 568 SANLE & SANDSTONE 568 636 SANDSTONE 568 636 SANDSTONE 568 636 SANDSTONE 568 636 SANDSTONE 568 630 728 CLIMESTONE & SHALE 728 730 758 CLIMESTONE & SHALE 759 888 NO SAMPLE 800 859 SANDSTONE 880 898 NO SAMPLE 898 988 NO SAMPLE 898 988 SANDSTONE & SHALE 798 798 5ANDSTONE & SHALE 798 1880 1820 SHALE 54NDSTONE 738 1880 1820 SHALE 1820 1830 SHALE 1830 1849 SHALE 1830 1849 SHALE 1830 1849 SHALE 1830 1848 SANDSTONE 1848 1859 SANDSTONE 1848 1859 SHALE 1850 1850 SHALE SANDSTONE 1850 1850 SHALE & SANDSTONE 1850 1850 SANDSTONE				
SHALE & SANDSTONE 568 638 728 1185TUNE & SHALE 728 738				
SHALE				
LIMESTONE & SHALE 720 730 SHALE 730 790 LIMESTONE & SHALE 790 800 ND SAMPLE 800 850 SHALE 850 880 SANDSTONE 880 998 NO SAMPLE 890 908 SANDSTONE 8 SHALE 900 910 SHALE 910 930 SHALE 8 910 930 SHALE 8 910 930 SHALE 1800 1020 LIMESTONE & SHALE 1800 1020 LIMESTONE & SHALE 1800 1049 SHALE 1030 1049 SHALE 1030 1049 SHALE 1050 1068 SANDSTONE 1068 1100 SHALE 1100 1120 SHALE 1100 1120 SHALE 1140 1150 SHALE 1150 1200 SANDSTONE 1208 1400 SANDSTONE 1409 1420 SHALE 8 SANDSTONE 1420 1440 SHALE 8 SANDSTONE 1420 1440 SHALE 8 SANDSTONE 1420 1440 SHALE 8 SANDSTONE 1440 1590 SHALE 8 SANDSTONE 1560 1660				
SHALE LIMESTONE & SHALE				
LIMESTONE & SHALE 770 888 ND SAMPLE 800 859 SHALE 850 880 859 SANDSTONE 850 978 NO SAMPLE 870 978 978 978 978 978 978 978 978 978 978				
ND SAMPLE 800 650 SHALE 850 680 SANDSTONE 880 870 NO SAMPLE 890 960 SANDSTONE SHALE 900 910 SHALE 5ANDSTONE 930 1000 SHALE 1000 1020 LIMESTONE 5HALE 1000 1030 SHALE 1030 1049 SHALE 1030 1049 SHALE 1050 1069 SHALE 1120 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1400 SANDSTONE 1500 1566				
SHALE SANDSTONE SANDSTONE SAMPLE SANDSTONE SAMPLE SANDSTONE SHALE SHADSTONE SHALE SHALE SHALE SHALE SHALE SHALE SHALE SHALE SHALE SHADSTONE SHALE SHALE SHALE SHADSTONE SHALE SHALE SHADSTONE SHALE SHALE SHADSTONE SH				
SANDSTONE 890 908 SANDSTONE & SHALE 900 910 SHALE 910 930 SHALE \$SANDSTONE 938 1000 SHALE \$SANDSTONE 938 1000 SHALE 1800 1020 LIMESTONE & SHALE 1030 1040 SHALE 891DSTONE 1040 1059 NO SAMPLE 1050 1068 SANDSTONE 1040 1120 SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1208 1400 SANDSTONE 1420 1440 SHALE & SANDSTONE 1420 SHALE & SANDSTONE 1440 1590 SHALE & SANDSTONE 1560 1566 SANDSTONE 1560 1566				
NO SAMPLE 890 908 SANDSTONE & SHALE 900 910 SHALE 5ANDSTONE 938 1000 SHALE 1800 1020 LIMESTONE & SHALE 1030 1030 SHALE 1030 1049 SHALE 1030 1049 SHALE & SANDSTONE 1040 1059 NO SAMPLE 1050 1060 SANDSTORIE 1046 1100 SHALE 1100 1120 SHALE 1100 1120 SHALE 1100 1120 SHALE 1100 1150 SHALE 1100 1200 SANDSTONE 1200 1400 SANDSTONE 1200 1400 SANDSTONE 1200 1400 SHALE & SANDSTONE 1420 1440 SHALE & SANDSTONE 1420 1440 SHALE & SANDSTONE 1420 1440 SHALE & SANDSTONE 1440 1590 SHALE & SANDSTONE 1500 1566 SANDSTONE 1500 1566 SANDSTONE 1500 1566				
SANDSTONE & SHALE 900 910 SHALE 918 930 SHALE & SANDSTONE 938 1000 SHALE 1600 1620 LIMESTONE & SHALE 1620 1636 SHALE 1930 1649 SHALE & SAIDSTONE 1046 1059 NO SAIPLE 1050 1668 SANDSTORE 1100 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1280 SANDSTONE 1620 1660 SHALE & SANDSTONE 1640 SHALE & SANDSTONE 1640 SHALE & SANDSTONE 1640 SHALE & SANDSTONE 1560 1566 SANDSTONE 1560 1660				
SHALE & SANDSTONE 938 1000 SHALE & SANDSTONE 938 1000 SHALE 1880 1020 LIMESTONE & SHALE 1020 1030 SHALE 1030 1049 SHALE & SANDSTONE 1040 1058 NO SAMPLE 1050 1068 SANDSTORE 1060 1120 SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1158 SHALE 1150 1200 SANDSTONE 1200 1400 SANDSTONE 1200 1440 SANDSTONE 1500 1560				
SHALE & SANDSTONE 938 1800 SHALE 1800 1820 LIMESTONE & SHALE 1820 1838 SHALE 1830 1848 SHALE \$ SANDSTONE 1848 1859 NO SAMPLE 1050 1868 SANDSTONE 1806 1100 SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1158 SHALE 1150 1200 SHALE 1400 1420 SHALE & SANDSTONE 1400 1420 SHALE & SANDSTONE 1400 1500 SHALE & SANDSTONE 1500 1560 SANDSTONE 1500 1560				
LIMESTONE & SHALE 1820 1838 SHALE 1830 1848 SHALE & SAIDSTONE 1848 1858 NO SAMPLE 1058 1868 SANDSTORE 1068 1188 SHALE 1108 1129 SHALE 1120 1140 COAL 1140 1158 SHALE 1150 1288 SHALE 1150 1288 SHALE 1168 1400 SANDSTONE 1288 1400 SANDSTONE 1489 1420 SHALE & SANDSTONE 1420 1440 SHALE & SANDSTONE 1420 1440 SANDSTONE 1440 1590 SHALE & SANDSTONE 1568 SANDSTONE 1568 1628 NO SAMPLE 1620 1669	SHALE & SANDSTONE	938	1000	
SHALE & SAIDSTONE 1040 1050 NO SAIPLE 1050 1060 SANDSTORE 1060 1100 SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1200 1400 SANDSTONE 1400 1420 SHALE & SANDSTONE 1400 1420 SHALE & SANDSTONE 1400 1500 SHALE & SANDSTONE 1400 1500 SHALE & SANDSTONE 1500 1560 SANDSTONE 1500 1560 SANDSTONE 1500 1600	SHALE	1888	1820	
SHALE & SAIDSTONE 1040 1050 NO SAIPLE 1050 1060 SANDSTORE 1060 1100 SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1200 1400 SANDSTONE 1400 1420 SHALE & SANDSTONE 1400 1420 SHALE & SANDSTONE 1400 1500 SHALE & SANDSTONE 1400 1500 SHALE & SANDSTONE 1500 1560 SANDSTONE 1500 1560 SANDSTONE 1500 1600	LIMESTONE & SHALE	1020	1030	
NO SAMPLE 1050 1068 SANDSTONE 1046 1100 SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1200 1400 SANDSTONE 1200 1400 SANDSTONE 1400 1420 SHALE & SANDSTONE 1420 1420 SHALE & SANDSTONE 1420 1440 SANDSTONE 1420 1566 SANDSTONE 1560 1566 SANDSTONE 1560 1660	SHALE		1849	
SANDSTONE 1046 1166 SHALE 1109 1120 SHALE 1120 1140 COAL 1140 1158 SHALE 1150 1200 SANDSTONE 1208 1400 SANDSTONE 1208 1400 SANDSTONE 1420 1420 SHALE & SANDSTONE 1420 1420 SHALE & SANDSTONE 1420 1500 SHALE & SANDSTONE 1500 1566 SANDSTONE 1500 1566 SANDSTONE 1500 1560	SHALE & SANDSTONE	1046	1959	
SHALE 1100 1120 SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1200 1400 SANDSTONE 1200 1420 SHALE & SANDSTONE 1420 1440 EANDSTONE 1440 1590 SHALE & SANDSTONE 1560 SANDSTONE 1560 1560 NO SAMPLE 1620 1660	NO SAMPLE	1050	1069	
SHALE 1120 1140 COAL 1140 1150 SHALE 1150 1200 SANDSTONE 1208 1400 SANDSTONE 1400 1420 SHALE & SANDSTONE 1420 1440 EANDSTONE 1440 1500 SHALE & SANDSTONE 1560 SANDSTONE 1560 1566 SANDSTONE 1560 1660	SANDSTONE	1048	1100	
COAL 1140 1158 SHALE 1150 1200 SANDSTONE 1208 1400 SANDSTONE & COAL 1400 1420 SHALE & SANDSTONE 1420 1440 EANDSTONE 1440 1500 SHALE & SANDSTONE 1560 1566 SANDSTONE 1560 1620 NO SAMPLE 1620 1660	SHALE	1100	1128	
SHALE 1150 1200 SANDSTONE 1208 1400 SANDSTONE & COAL 1400 1420 SHALE & SANDSTONE 1420 1440 SANDSTONE 1440 1500 SHALE & SANDSTONE 1500 1560 SANDSTONE 1560 1620 NO SAMPLE 1620 1660	SHALE	1120	1140	
SANDSTONE 1288 1480 SANDSTONE & COAL 1480 1420 SHALE & SANDSTONE 1420 1440 SANDSTONE 1440 1580 SHALE & SANDSTONE 1560 1560 SANDSTONE 1560 1620 NO SAMPLE 1620 1660	COAL	1140	1150	
SANDSTONE & COAL 1400 1420 SHALE & SANDSTONE 1420 1440 SANDSTONE 1440 1500 SHALE & SANDSTONE 1500 1560 SANDSTONE 1560 1620 NO SAMPLE 1620 1660	SHALE	1150	1200	
SHALE & SANDSTONE 1420 1440 EANDSTONE 1440 1580 SHALE & SANDSTONE 1560 1560 SANDSTONE 1560 1620 NO SAMPLE 1620 1660		1288	1400	
SHALE & SANDSTONE 1420 1440 EANDSTONE 1440 1580 SHALE & SANDSTONE 1560 1560 SANDSTONE 1560 1620 NO SAMPLE 1620 1660	SANDSTONE & COAL	1489	1420	
SHALE & SANDSTONE 1500 1560 SANDSTONE 1560 1620 NO SAMPLE 1620 1660		1428	1440	
SANDSTONE 1560 1620 NO SAMPLE 1620 1660		1440	1500	
NO SAMPLE 1620 1669	SHALE & SANDSTONE	1500	1568	
1 or among the his	SANDSTONE	1560	1620	
LIMESTONE 1660 1810 BIG LIME	NO SAMPLE	1620	1 669	
	LIMESTONE	1660	1816	BIG LIME

AECENED

Office of Oil and Gas

JUN 3 3 2020

Environmental Protection

Environmental Protection

SANDSTONE	1818	1948	BIG INJUN
SHALE `	1948	2000	1110011
SHALE & SILTSTONE	2998	2268	
SHALE & SANDSTONE	2260	2279	
SHALE	2278	2388	
SILTSTONE	2300	2310	
SILTSTONE & SANDSTONE	2310	2336	BEREA
SHALE & SILTSTONE	2330	3800	
SILTSTONE & SANDSTONE	3886	3818	
SILTSTONE	3819	3860	
SHALE & SILTSTONE	3860	5555	
SHALE	5555	5627	MARCELLUS
LIMESTONE	5627	5810	ONONDAGA
SANDSTONE	5818	5911	ORISKANY
LIMESTONE	5911	6215	HELDEBERG
LIMESTONE	6215	6261	BASS ISLAND
LIMESTONE	6261	6488	
LIMESTONE & DOLOMITE	6488	6518	
DOLOMITE & SALT	6510	6629	
DOLOMITE	6628	6890	
LIMESTONE & DOLOMITE	6800	6886	•
DOLOMITE	6860	7408	
LIMESTONE & DOLOMITE	7400	7500	
GAMMA RAY TOPS AND BOTTOMS			
MARCELLUS	5555	5627	
ONONDAGA	5627	5819	
DRI SKANY	5819	5911	
HELDEBERG	5911	6215	
BASS ISLAND	6215	6261	
SALINA G	4241	6471	
SALINA F	6471	6784	
SALINA E	3784	6941	
SALINA D	6941	6982	
SALINA C	6782	7056	
SALINA B	7856	7148	
NEWBERG (WILLIAMSPORT)	6965	6982	
LOCKPORT	7148	7430	
ROSE HILL	7430	7500	

TECHWELL, INC.
WELL OPERATOR

BY: E. RAY GARTON-GEOLOGIST NAMMOTH GEO. INC.

DATE: March 21, 1986

Office of Oil and Gass

JUN 2 3 2020

WV Department of Environmental Provection

FORM WW-3 (A) 1/12



1) Date: 6-17-20					
2) Operator's Well	No.	Carde	/ Wyatt T\	V-46	
3) API Well No.:	47	_	085	-	07367
	State		Count	y	Permit
A) I IIC Dormit Mo					

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OF WASTE DISPOSAL WELL WORK PERMIT APPLICATION FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

5) Surface Ow	vner(S) To Be Served	7) (a) Coal Operator	
(a) Name	Daniel E. Wyatt	Name	
Address	7032 Fieldstone Place	Address	
	Columbus, Ohio 43235		
(b) Name Address		7) (b) Coal Owner(S) With Declar Name Address	ration Of Record
(c) Name		Name	
Address		Address	
6) Inspector Address		7) (c) Coal Lessee with Declaratio Name Address	n Of Record
Telephone		Address	
parties in (2) The plat (3) The Cons	ucation For A Liquid Injection or Was volved in the drilling or other work; (surveyor's map) showing the well locat	n WW-9 (unless the well work is only to	m WW-3(B), which sets out the
	proposed for the first injection or w		20 20 .
APPLICATION	n which are summarized in T ATION [(FORM WW-3(B)] DESIGNA	DOCUMENTS IS THAT YOU HAVING THE "INSTRUCTIONS" ON THE REVATED TO YOU. HOWEVER YOU A	VERSE SIDE OF THE CODY OF

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 Well Work Permit with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to a well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan 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 the mailing or delivery to the Chief.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments 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 and imprisonment.

Well Operator Cheetah Exploration & Production, LLC Address PO Box 2722 RECEIVED Buckh , wv 26201 By: A. Br. ke Its: MA Debarracut of Euntrouweurst blosserrou Signature:

SURFACE OWNER WAIVER

County Ritchie Operator Operator Well number Carder/Wyatt TW-46

Cheetah Exploration & Product
Carder/Wyatt TW-46

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A / 3A

The well operator named on page WW-2A / 3A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have FIFTEEN (15) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

1) The proposed well work will constitute a hazard to the safety of persons.

2) The soil erosion and sediment control plan is not adequate or effective;

Damage would occur to publicly owned lands or resources;

4) The proposed well work fails to protect fresh water sources or supplies;

5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A / 3A, and attachments consisting of pages 1 through _____ including a work order on Form WW-2B / 3A, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON		FO	R EXECUTION	N BY A CORPORATIO	N, ETC.
Date Signature	6/19/20	Company Name By			
DANIEL E. WYATT		Its		RECEIVED Gas	Date
Print Name				Othos of 3050	
			Signature	JUN 2 3 months of	Date lon
				Euritouwalial blogged An Debainway of 1014	

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County_ Ritchie				
Operator Cheetah Exploration & I	Prode Operato	or's Well Number	Carder/Wyatt TV	V-46
INSTRUCTIONS	TO COAL OPE	RATOR, OWNE	R, OR LESSEE	
To the coal operator, owner that any objection you wish to make filed with the Chief of the Office application by the Office. Mail objection	e or are required of Oil and Gas	to make by WW	Code 22-6-15 16	or 17 must be
Chief, Office of Oil and Gas Department of Environmental Prote 601 57 th St. SE Charleston, WV 25304 (304) 926-0499 extension 1654	ection			
	WAI	VER		
The undersigned coal opera location has examined this propose location, the well location has been work proposed to be done at this location requirements of the West Virginia (ed well location. I added to the mocation, provided Code and the government	If a mine map ex ine map. The un , the well operato reming regulation	tists which covers the dersigned has no one of the description of the	ne area of well bjection to the all applicable
FOR EXECUTION BY A MATURAL PERS	SON		CUTION BY A CORPOR	RATION, ETC.
Cignahan	Date	Company Name		
Signature		By Its		Date
		-		
		Sign	ature	Date
			RECEIVED Office of Oil and G	

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6, Section 8(d) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and A pplication, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc. Grantee, Lessee, etc. Book/Page Royalty Daniel E. Wyatt Cheetah Exploration & Production, LLC .15 327/180

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application he reby a cknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WW Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Cas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be ac quired from the appr opriate aut hority before the affected activity is initiated.

> Well Operator: By: Its:

Cheetan Exploration & Production, LRECENED Director of Operations

aleson

Office of Oil and Case JUN 8 3 3050

MA Deburneur of Eunicotationing beorgapou WW-2B1 (5-12)

Well No. Carder/Wyatt TW-46	Well	No	Carder/Wvatt	TW-46
-----------------------------	------	----	--------------	-------

West Virginia Department of Environmental Protection Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name

Sturm Environmental Services

Sampling Contractor

GCS Consulting, LLC

Well Operator Cheetah Exploration & Production, LLC

Address

PO Box 2722

Buckhannon, WV 26201

Telephone

304-677-0214

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

No Nater Wells Within 2000!

Office of Oil and Gas RECENED JUN 8 3 2020 M Debaumeur or EMMONWEURI Protection WW-9 (2/15)

API Number 47 - 085

- 07367

Operator's Well No. Carder/Wyatt TW-48

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

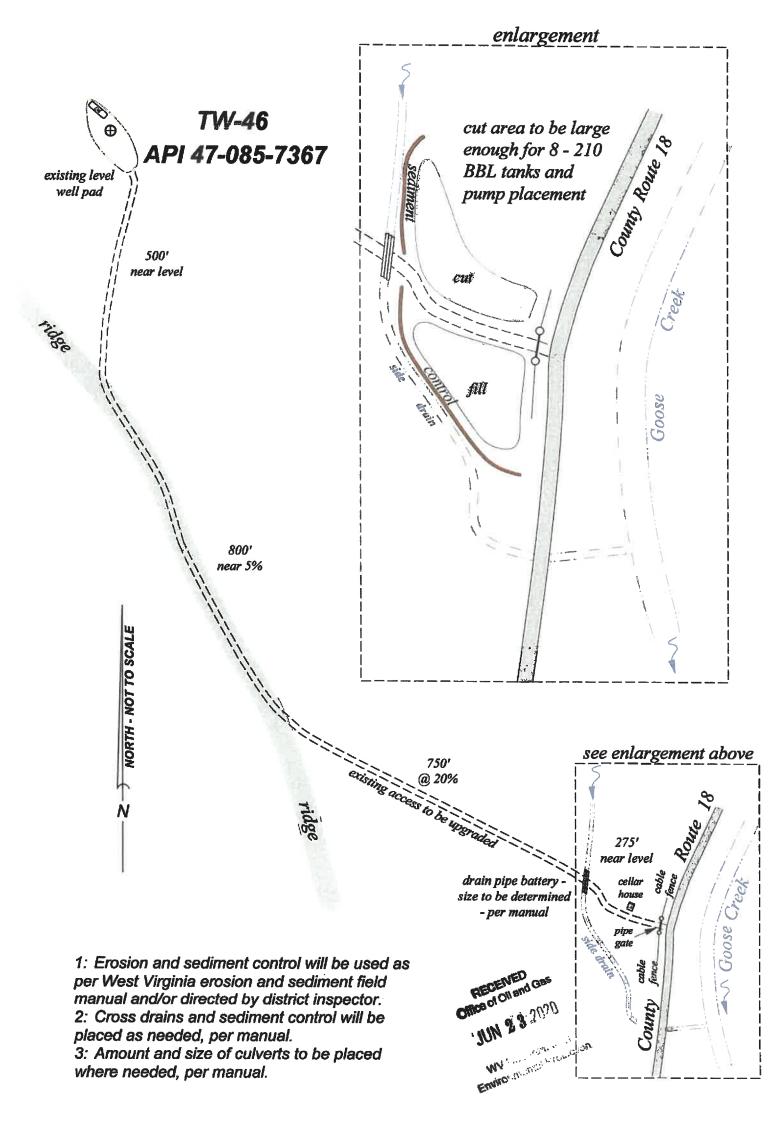
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

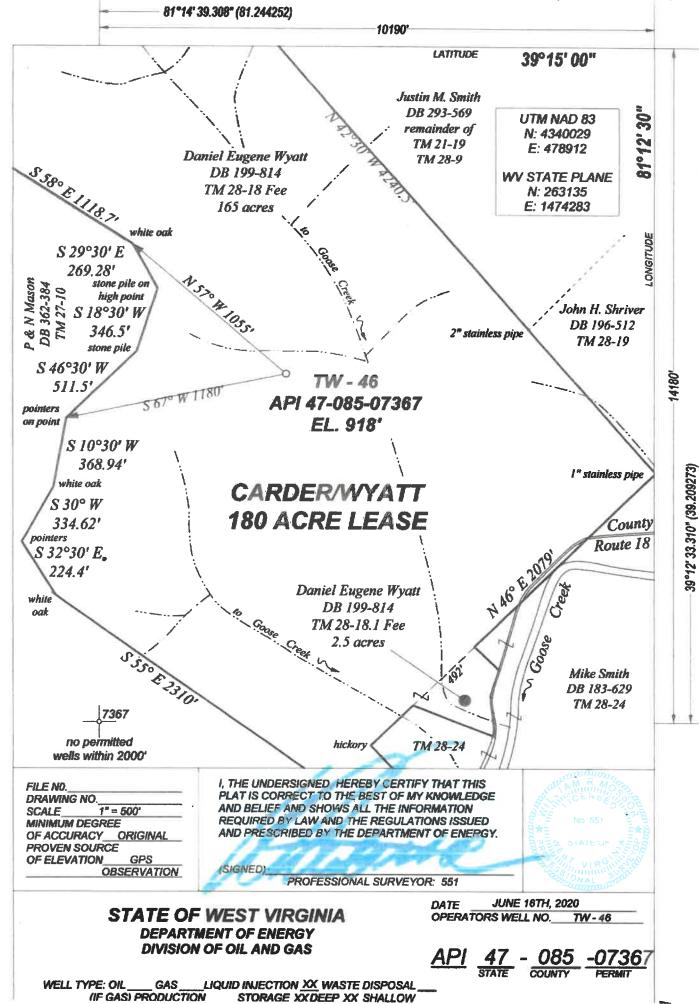
Operator Name Cheetah Exploration & Production, LLC OP Code
Watershed (HUC 10) Goose Creek Quadrangle Cairo
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No
Will a pit be used? Yes ✓ No
If so, please describe anticipated pit waste: Cementing fluids and cuttings
Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20
Proposed Disposal Method For Treated Pit Wastes:
Land Application
Underground Injection (UIC Permit Number 47-085-10142 Reuse (at API Number
Off Site Disposal (Supply form WW-9 for disposal location)
Other (Explain
Will closed loop system be used? If so, describe: Drilling out cement and bridge plug only
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.
-If oil based, what type? Synthetic, petroleum, etc.
Additives to be used in drilling medium?
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)
-Landfill or offsite name/permit number?
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.
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 hereto 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 immediately the possibility of fine or imprisonment. Company Official Signature Company Official Title Proceed & Breeze & Processor
Company Official (Typed Name) Forest A. Beater. RECENTRAL COMPANY
Company Official Title Discusse of Opening 2 2020
JUN 8 and a
and a state of the
Subscribed and sworn before me this 23 day of 7022 OFFICIAL BUTTON OFFICIAL BU
My commission expires TV24 AC JOTA William R. FRIEND 148 LOST AVENUE BUCKHARION, VICE 28201 My commission expires BUCKHARION, VICE 28201 My commission expires BUCKHARION, VICE 28201

Operator's Well No. Carder/Wyatt TW-46

	nent: Acres Disturbed 2	Prevegetation pH	5.5
Lime 2	Tons/acre or to correct t	to pH 6.5	
Fertilizer type 10-20	-20 or equivalent		
Fertilizer amount 500		lbs/acre	
Mulch Hay or Stra	w T	Cons/acre	
		Seed Mixtures	
Tem	porary	Perma	nent
Seed Type	lbs/acre	Seed Type	lbs/acre
Contractors Mix	100	Contractors Mix	100
Attach: Drawing(s) of road, location, provided) Photocopied section of involved lan Approved by:	ed 7.5' topographic sheet.	nd application (unless engineered plans inc	

Cheetah Exploration & Production, LLC Well: TW-46 API 47-085-7367 Carder/Wyatt 180 Acre Lease Grant District Ritchie County West Virginia





Office of Oil and Ges

JUN 23 2020

WW Department of
Environmental Protection

CAIRO QUADRANGLE

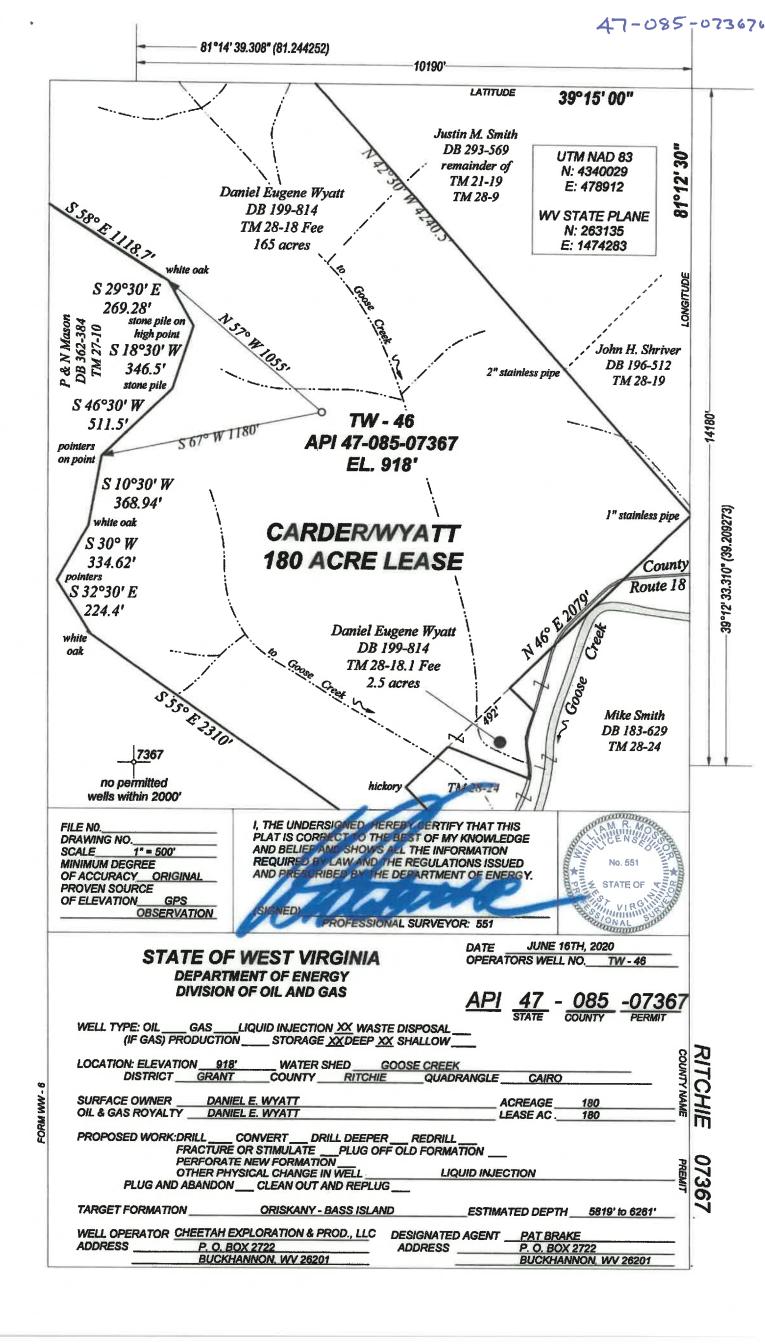
SCALE 1' = 1000'

CHEETAH EXPLORATION & PRODUCTION, LLGD Office of Oil and Gas

WELL: TW-46 API 47-085-07367 CARDER / WYATT 180 ACRE LEASE

GRANT DISTRICT RITCHIE COUNTY **WEST VIRGINIA** JUN 2 3 2020

WV Department of Environmental Protection.



FORM WW-3 (A) (Instructions to Applicant) 1/12

INSTRUCTIONS TO APPLICANT

CONCERNING THE LINE ITEMS:

- 1) Date of Notice;
- 2) Your Well Name and Number;
- To be filled out by the Office of Oil & Gas unless this well is covered by an existing permit;
- 4) To be filled out by the Office of Oil & Gas unless this well is covered by an existing permit;
- Use separate sheet, if necessary;
 Surface Owner(s) of record to be served with the Notice of Application. However, see also Code 22-6-9(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands."
- 6) Inspector;
- 7) Use separate sheet, if necessary;
 - a) "Coal Operator" means a person, firm, partnership, partnership association or corporation that proposes to or does operator a coal operator;
 - b) See Code 22-6-36;
 - c) See Code 22-6-36;

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code 22-6-6 and Regulation 7.02 provide that the original and two copies of the Notice and Application must be filed with the Chief, accompanied by (1) a plat in the form prescribed by Regulation 11; (2) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by code 22-6-26; and (3) the "Construction and Reclamation Plan" for Form WW-9, applicable to the plan required by Code 22-1-G(d) and the reclamation required by Code 22-6-30 and Regulation 23; unless if applicable, the consent required by code 22-6-21 from the owner of any water well or dwelling within 200 feet of the proposed well.

Service. In addition, service must be made on the surface owner(s) and the person(s) with interest in the coal. See Code 22-6-9, 22-6-13 and 22-6-14.

Office of Oil and Case

JUN 9 3 2020

WW Department of
Environmental Protection

FORM WW-3(B) (Office of Oil & Gas Use Only) 1/12

		And the state of t	7/1	MITTON OF	E ONLY			
			D	RILLING	PERMIT			
Permit Number		The plane product a state of the state of th		The second section is a second section of the	D	ate:		
District Oil & Gas	Inspector.	(Refer to No	. 9) prior to the	s contained i	erein and on the	reverse he	reof. Noti	o drill in accordance with fication must be given to the mitted work. In addition, the permitted work has
The permitted wor	k is as desc and conditi	cribed in the l	Notice of App l below.	olication, plat	and (if required	l) Construc	tion and R	eclamation Plan, subject to
Permit Expires	no addente anno Merione na Lugo y consequen	in revolution of public to different and to different imaging purply groups		unless wel	I work is com	nenced pr	ior to that	date and prosecuted
with due diligen	ce.							mid prodocator
Bond	Agent	Plat	Casing	Fee				
2								
Note: Keep One	Conv of ti	hie nermit n	ostad at the	deilling lage	CF	HEF, OF	FICE O	FOIL & GAS
I LIXIVI	II MODIF	FICATIONS	S AND CON	DITIONS (IF ANY) TO	THE PRO	POSED W	ELL WORK
I LIXIVI	II MODIF	FICATIONS	S AND CON	DITIONS (IF ANY) TO	THE PRO	POSED V	VELL WORK
I LIXIVI	II MODIF	TICATIONS				THE PRO	POSED W	ÆLL WORK
			0	FFICE USI	E ONLY			ELL WORK
		record the d	0	FFICE USI	E ONLY			
This part of Form	V-3(b) is to		0	FFICE USI	E ONLY s and any follow		tions.	Date
This part of Form Application Received Well Work Started	V-3(b) is to	record the d	0	FFICE USI	E ONLY s and any follow	v-up inspec	tions.	
This part of Form Application Received Work Started Total Depth Reach Vell Record Received	V-3(b) is to red ed ved	record the d	0	FFICE USI	E ONLY s and any follow Foll	v-up inspec	tions.	
This part of Form Application Receive Well Work Started Fotal Depth Reach Well Record Receive Reclamation Comp	V-3(b) is to red ed ved ileted	record the d	0	FFICE USI	CONLY s and any follow Foll	ow-up Insp	tions.	
Application Received Well Work Started Fotal Depth Reach Well Record Received Reclamation Components of the Received Reclamation Components of the Received	V-3(b) is to red ed ved ileted	record the d	0	FFICE USI	CONLY s and any follow Foll	ow-up Insp	tions. pection(s) " " " "	Date
This part of Form Application Received Well Work Started Fotal Depth Reach Well Record Received Reclamation Components OTHER INSPECT	V-3(b) is to red ed ved ileted	record the d	0	FFICE USI	CONLY s and any follow Foll	ow-up Insp	tions.	Date
This part of Form Application Received Well Work Started Fotal Depth Reach Well Record Received Received Recomposition Composition Composition Reason:	V-3(b) is to red ed ved ileted	record the d	0	FFICE USI	CONLY s and any follow Foll	ow-up Insp	tions.	Date
This part of Form Application Received Well Work Started Fotal Depth Reach Well Record Received Received Recomposition Composition Composition Reason:	V-3(b) is to red ed ved ileted	record the d	0	FFICE USI	CONLY s and any follow Foll	ow-up Insp	rions.	Date Ond Case 1 2020
Application Received Well Work Started Total Depth Reach Well Record Received Reclamation Comportion There in Spectage (Control of the Control of the Contro	V-3(b) is to red ed ved ileted	record the d	0	FFICE USI	CONLY s and any follow Foll	ow-up Insp	rions.	Date

Completion Information:

Apr. CIMP_DT SPUD_DT ELEV DATUM FIELD DEEPEST_FM DEEPEST_FMT INITIAL_CLASS FINAL_CLASS TYPE
4703301674 241221 1281920 Unnamed Hampshire Grp Fourth unclassified unclassified Gas w/ Oil Show
4703301674 242 244 API CMP_DT SUFFIX STATUS SURFACE_OWNER WELL_NUM CO_NUM LEASE LEASE_NUM MINERAL_OWN OPERATOR_AT_COMPLETION PROP_VD PROP_TRGT_FM TFM_EST_PR 4703301674 2/81921 Original Loc Completed G. Loavisson 4789 Equitable Gas Co.
Philadejpha Cil Co.
Philadejpha Cil Co. Location Information: View Map
APP COUNTY PERMIT TAX_DISTRICT QUAD_75 QUAD_15 LAT_DD LON_DD UTME UTMN
4703301674 Hamson 1674 Sardis Wellace Clarkburg 39,362646 40,496494 543564,6 4395361,5
Comment: Coordinates from reassigned well 70970 Well Reassignment Information: Reassigned From OLD_COUNTY OLD_PERMIT NEW_COUNTY NEW_PERMIT 33 70970 33 GEOLOGY UNDERLIES IT There is no Bottom Hole Location data for this well WV Geological & Economic Survey \(\text{VSDowN/Nater Information:}\) \(\text{VSD Get Data Enter Permit #: 01674 Select County: 033 Harrison Reset < Select datatypes: [] (Check All)

Clocation
Completion
Stratigraphy
Pay/Show/Water
Clogs G_BEF G_AFT O_BEF O_AFT WATER_GNTY Well: County = 33 Permit = 01674 ☑ Plugging
y ☑ Sample
☑ Bim Hole Loc RIG unknown CMP_MTND TVD TWD NEW_F16 KOD G_BEF G_AFT O_BEF G_AFT NGL_BEF NGL_AFT P_BEF T_BEF P_AFT TLAFT BH_P_BEF BI , unknown 3115 3115 0 0 0 0 128 18 0 0

Report Time: Wednesday, July 15, 2020 12:05:00 PM

4703301674 4703301674 4703301674

Production Oil Information: (Volumes API PRODUCING_OPERATOR 4703301674 Equitable Gas Co. 4703301674 Equitable Gas Co.

2 P 0 0 0

OCT NOV

MO O O

46A wells only.

Other wells are incomplete at this time

Volumes in Bbl

The	The	The	The	470	API	Pro	470	470	470	470	API	Pro	470	470	470	470	470	470	470	470	470	470	470	470	4/0	470	470	470	470	470	470	470	470	470	470	470
There is no Sample data for this well	There is no Plugging data for this well	There is no Wireline (E-Log) data for this well	There is no Stratigraphy data for this wel	4703301674 EQT Production Company	2901674	Production Water Information: (Volumes in Gallons	4703301674	4703301674	4703301674	4703301674		Production	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4/033016/4	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674	4703301674
Samp	Plugg	Wire	Strati	EQTP	PROD	Water	EQTP		m 0	EQT P	PROD	NGL	EGTP	EQTP				EOI	E	m i	601	TOTAL TOTAL	E Lyona	nquia	Equia						Equitana					
ole dat	jing da	ine (E	graphy	EQT Production Company	PRODUCING_OPERATOR PRD_YEAR ANN_WTR	Infor	EQT Production Compan	EQT Production Company	EQT Production Company	EQT Production Company	PRODUCING OPERATOR	NGL Information: (Volumes in Bbl)	EGT Production Compan	EQT Production Company	EQT Production Company	Equitable Production Company	Equitable Production Company	Equitable Production Company	Equitable Production Company	Equitrans, L. P.	Equitrans, L. P.	ans, L. I	Equitrans, L. P.	ene	Equitrans, L. P.	Equitrans, L. P.	Equitrans, L. P.	Equitans, L. P.	Equitrans, L. P.							
a for t	ita for	·Log) (/ data	in Com	OPER	nation	n Com	Com	n Comp	In Com	OPER	ation:	on Com	on Comp	on Com	on Com	Com	Com	Com	Com	Com	TO COLOU		TO CHOIL	uction	duction	.0	.0	.0	υ.	υ.	0 ,0	.0	.0	,0 ,	υ,υ
nis wel	this we	lata fo	for this	Dany	TOR	: (Volu	ony	Dany	bany		NOR F	Volun	any	pany	pany	pany	Dany	Dany	Vale	Dany	Dany	Compan	Company	Compa	Compar	Compar										
	₩.	r this v	well	N	A Ok	mes in	2	N V	Ŋ	N.	PRD YEAR	ni sa										Ÿ		{ ·	¥	¥										
		vell.		2018	AR AN	Gallo	038	2010	12		AR A	8년) **	2018	2017	2016	2015	2014	2013	2011	2010	2009	2007	2004	200	2002	2001	2000	1999	1998	1997	1000	1994	1993	1992	1981	1989
					TWIN	Ϊ,		.		0	ANN NGE	" som																								
				0	JAN	2019	0	c		٥	À	some operators may	0			0																0			0 0	00
				0	FEB	data f	0	c	0	a	FEB N	ators	0	0		0	0	0	0	0 0															000	
				0	MAR APR	for H6A	0	c	0		MAR APR	may h	0			0	0 0	0 0	۰ د	0 0												00				
				0	PR MAY	wells	0	c	0		NAW SK	ave re	0			0	Þ	0 (0 (0 0	> 0	o c	,	o c	0	0	0	0	0	0 0	٥ د	0	0	0	> c	0
				0 0	NOF A	VIDO 8	0	0	0	٥	Ž	ported	0			0	0 (0 0	3 (0 0	3 0	9 0	• •	0 0	٥	0	a	٥	0	0 0	o c	0	0	0	> c	0
				0	JUL	Other	0	c	0	0		를 N	0																			0	_	0	00	0
				0	AUG 8	er wells	0	c	0		AUG S	have reported NGL under Oil	0																			0			00	
				0	SEP OCT	e sie	0		0	0	SEP OCT		0			0	Þ	0 0	> (0 0	٥ د) C	o c	o c	0	0	٥	0	0	0 0	0 0	0	0	0 6	٥ د	
				0 0	YOU T	incon	0		0		YON T	2019	0			a (> 0	0	-	0 0	5	0	-		0	0	0	0	0	0 0	> <	0	0	0 (٥ د	0
				0	DCM	incomplete	٥	c	0	0		data fi	0																			•				
						at thi					7	FO HO	0	_	_	0	0 0	0 0	0 0	00	2 0	00	0 0	0 0	0	0	0	0	0	2 0	0 0	0	0	0 0	0 0	0.0
						at this time						H6A wells only.																								
												s only.																								
												0																								
												ir Well																								
												s are																								
												incom																								
												plete																								
												Other wells are incomplete at this time.																								
												-																								