

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 Jim Justice , Governor Austin Caperton , Cabinet Secretary www.dep.wv.gov

Thursday, August 17, 2017 WELL WORK PERMIT Not Available / Plugging

CUNNINGHAM ENERGY, LLC 3230 PENNSYLVANIA AVENUE

CHARLESTON, WV 25302

Re: Permit approval for CROMWELL 2

47-039-04907-00-00

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: CROMWELL 2

Farm Name: MIKE ROSS, INC

U.S. WELL NUMBER: 47-039-04907-00-00

Not Available / Plugging

Date Issued: 8/17/2017

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.

08/18/2017

WW-4B Rev. 2/01

1) Date AUGUST 22 ,	20 16
2)Operator's	
Well No. CROMWELL 2	
3) API Well No. 47-39	- 049078X

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

	APPLICATION FOR A PERI	MIT TO PLUG AND ABANDON
4)	Well Type: Oil X / Gas / Liquid (If "Gas, Production X or Und	d injection/ Waste disposal/ derground storage) Deep/ Shallow X
5)	Location: Elevation 1132'	Watershed TRIBUTARY OF BIG SANDY CREEK
•,	District BIG SANDY	County KANAWHA Quadrangle CLIO 7.5'
	OLININIA SALEBOY	
6)	Well Operator CUNNINGHAM ENERGY, LLC Address 3230 PENNSYLVANIA AVE	7) Designated Agent RYAN CUNNINGHAM
	Address 3230 PENNSYLVANIA AVE CHARLESTON, WV 25302	Address 1212 STAUNTON ROAD
	010442201014, 444 20002	CHARLESTON, WV 25314
8)	Oil and Gas Inspector to be notified	9)Plugging Contractor
	Name TERRY URBAN	Name CUNNINGHAM ENERGY, LLC
	Address P.O. BOX 1207	Address 3230 PENNSYLVANIA AVE.
	CLENDENIN, WV 25045	CHARLESTON, WV 25302
	CASING. TRIP TUBING TO TD, FILL H FROM TD TO SURFACE. SET MONUM	
		Office of Cities Cha
		AUG 3 2017
		WV Dapartic of Environmental Protection
wor	can commence.	Office Of
Worl	c order approved by inspector	Date Notion Date of Protection

WR-35

29-Jun-93 API # 47- 39-04907 N

State of West Virginia
Division of Environmental Protection Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: CROMWELL HEIRS

Operator Well No.: CRONWELL HRS.#2

LOCATION:

Quadrangle:

District: BIG SANDY

County: KANAWHA

Casing | Used in

Latitude: Longitude

Elevation:

Feet South of Peet West of

Deg. Min. Min.

Deg.

Sec. Sec.

Cement

Left

Company: THOMAS, MICHAEL DBA THOMA

P. O. BOX 537

ELKVIEW, WV 25071-0000

Agent: MICHAEL L. THOMAS

Inspector: CARLOS HIVELY Permit Issued: 0 06/25/93 Well work Commenced: Well work Completed: Verbal Plugging Permission granted on: Rotary Cable Total Depth (feet)

& Tubing	Drilling	in Well	Fill Up Cu. Ft.
Size			

COLUMBIA GAS TRANSMISSION CORPORATION

	PERMIT
Big Sandy	DISTRICT
Kanawha	COUNTY
Vest Virgi	STATE

Fresh water depths (ft)

FOREIGN WELL COMPLETION

WELL NO. F 37966 MAP SQ. 76-69 1251' ELEV. . DIVISION Clendenin 6-22-20 COMP, DRLG. -

OPERATOR -John Cromwell FARM _

GAS PURCHASE CONTRACT NO.

FINAL OPEN FLOW MEF	Est. 15 bhis. oil	HORIZON	Weir	ROCA
				PR ESSURE
		Salt Sand	1323 - 1740	
		Maxon	1740 - 1814	
		Big Lime	1844 - 1982	
		Injun	1982 - 2007	
		Veir	2190 -	Show oil 2190-21961
		Total Depth	22171	

Shot with 15 qts. from 2200-22061. final open flow Est. 15 bbls. oil.

FORMERLY U-1140

Ralph Dye B-17-71 DATE

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08/18/2017

WW-4A	
Revised	6-07

 Operator's Well Num CROMWELL 2 	ber

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

NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

	urface Ow) Name	ner(s) to be served: MIKE ROSS, INC.	5) (a) Coal Operator Name
A	ddress	P.O. BOX 219	Address
		COALTON, WV 26257-0219	
(b) Name	WACO OIL AND GAS	(b) Coal Owner(s) with Declaration
A	ddress	1595 US HWY 33E	Name
		GLENVILLE, WV 26351-1098	Address
(c)) Name		Name
A	ddress		Address
6) Ins	spector	TERRY URBAN	(c) Coal Lessee with Declaration
Ad	ldress	P.O. BOX 1207	Name
		CLENDENIN, WV 25045	Address
Te	lephone	304-549-5915	
mo n	DITTE DE	DCONG MARKET	

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

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

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

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

Paramananananananananan da manananan da manananan da mananananan da manananan da mananan da mana	Well Operator By:	CUNNINGHAM ENERGY, LLO RYAN CUNNINGHAM	c (-)	\rightarrow
Official Seal Notary Public, State of West Virginia	Its:	MEMBER		Office of Oliv
Joseph M Menas	Address	3230 PENNSYLVANIA AVENI	UE	Direct Ci Citt
220 1/2 Walnut St Ravenswood, WV 26164		CHARLESTON, WV 25302		AUG 37
My commission expires January 23, 2022	Telephone	304-344-9291		
Subscribed and sworn before me the	is 23'd da	ay of AUGUST, 2016	RECEIVED Office of Oil and Ga	Environmente ES
N. G.	ary 23, 20	82	Notary Publice 5 715	
Oil and Gas Privacy Notice			WV Department of	

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.





Office of Oil and Gas

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WV Department of Environmental Protection

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WW Department of Environmental Protection 08/18/2017

SURFACE OWNER WAIVER

Operator's Well Number

CROMWELL 2A

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (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

Office of Oil and Gas

AUG 3 2017

WV Department of Environmental Protection

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 FIVE (5) 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;
- 3) 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.

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 Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

objection to a permit being issued FOR EXECUTION BY A NATUR ETC.	on those materials.	planned wor		ese materials, and I have no RECEIVED TON, BY A CORPORATION,
G:	Date	Name		AUG : 5 2016
Signature		Ву		SA. C.
		Its		And Department Date
			Signature	vironmental Protection 7

API No.	47-3904907	
Farm Name	MIKE ROSS, INC.	-
Well No.	CROMWELL 2	-

INSTRUCTIONS TO COAL OPERATORS OWNERS AND LESSEE

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less then five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

WAIVER

WAIVER

WAIVER

WAIVER

WY Department of Environmental Protection

The undersigned coal operator ____/ owner ____/ lessee ____/ of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: ______

By: ______

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Office of Oil and Gas

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WW-9 (5/16)

API Number 47 -	039	_04097	
Operator's Well No	. CRO	/IWELL 2	

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CUNNINGHAM ENERGY, LLC OP Code 494485865
Watershed (HUC 10) TRIBUTARY OF BIG SANDY CREEK Quadrangle CLIO 7.5'
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: PRODUCED WATER / OIL / CEMENT
Will a synthetic liner be used in the pit? Yes No If so what ml.?
Proposed Disposal Method For Treated Pit Wastes:
Land Application (if selected provide a completed form WW-9-GPP)
Underground Injection (UIC Permit Number 39-2210 UIC Reuse (at API Number
Off Site Disposal (Supply form WW-9 for disposal location)
Other (Explain
Will closed loop systembe used? If so, describe: NO PIT WILL BE USED - ALL FLUIDS WILL BE PUT INTO A FLOWBACK TANK
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
Additives to be used in drilling medium? N/A
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number? N/A
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 April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.
All C P sour
Company Official (Typed Name) RYAN E. M. CUNNINGHAM AUG 3 2017
Company Official Title MEMBER W/V Department of Environment of Protection
Subscribed and sworn before the this 23rd. day of AUGUST, 2016
Notar Public, State of West Virgini Notar Public State of West Virgini Joseph M Menas
My commission expires January 13, 2022 My commission expires My commission expires

Form WW-9			
		Operato	or's Well No. CROMWELL 2
Proposed Revegetation Trea		Prevegetation	on pH
Lime 3	Tons/acre or to correct	to pH 6.5	
Fertilizer (10-20-20	or equivalent) 1/3 TOI	lbs/acre (500 lbs minimum)	
Mulch_HAY - 2		los/acre (500 los minimum)	
	•	Seed Mixtures	
Ar	ea I	3333	
Seed Type	lbs/acre	Seed Type	Area II lbs/acre
KY- 31	40	ORCHARD RYE	15
ALSIKE CLOVER	5	ALSIKE CLOVER	5
ANNUAL RYE	15		
Photocopied section of involved an Approved by:	yw the		
			Office of State
			AUG 30
			Environment of
tle: FICIA INSPECT	te Oil ECHS	Date: 8.24/6	
ield Reviewed?	Yes) No	RECEIVED Office Colored Gas

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VMV Exception of Environmental Protection 08/18/2017

WW-9- GPP Rev. 5/16

Page	1 of 2
API Number 47 - 039	- 04907
Operator's Well No. CF	ROMWELL 2

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

Operator Name: CUNNINGHAM ENERGY, LLC	
Watershed (HUC 10): TRIBUTARY OF BIG SANDY CREEK	Quad: CLIO 7.5©
Farm Name: MIKE ROSS, INC.	Quad: OLIO 1.39
List the procedures used for the treatment and discharge of fluids. Include a groundwater. N/A - NO PIT	a list of all operations that could contaminate the
2. Describe procedures and equipment used to protect groundwater quality from	m the list of potential contaminant sources above.
3. List the closest water body, distance to closest water body, and distance discharge area.	from closest Well Head Protection Area to the Office of One 20 7
	WW Dam.
4. Summarize all activities at your facility that are already regulated for ground	
 Discuss any existing groundwater quality data for your facility or an adjacen 	Office of Oil and Gas Aud : 2 203
o. Duodoo any choming groundwater quanty data for your facility or an adjacen	Environmenta 8/48/2007

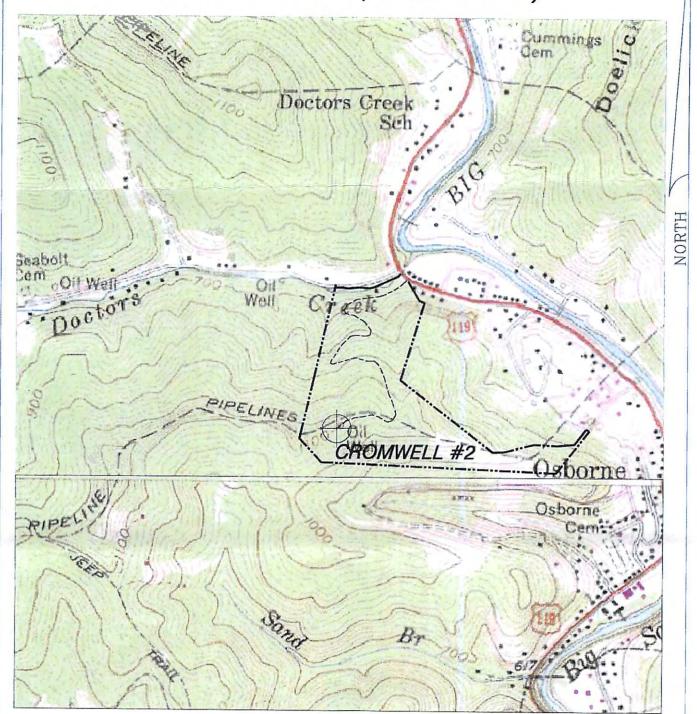
Rev. 5/16	Page of API Number 47 -
	API Number 47 - Operator's Well No. CROMWELL 2
Provide a statement that no waste material w	
Provide a statement that no waste material w	vill be used for deicing or fill material on the property.
Describe the groundwater protection instruc	ction and training to be provided to the employees. Job procedures shall
provide direction on how to prevent grounds	water contamination.
Provide provisions and frequency for inspect	ions of all GPP elements and equipment.
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AUG 3 2017

Form W-9

RAVEN RIDGE ENERGY, LLC. CROMWELL #2 (47-039-04907)

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HUPP Surveying & Mapping

P.O. BOX 647 GRANTSVILLE, WV 26147 PH: (304)354-7035 E-MAIL: hupp@frontiernet.net

1" = 1000" CLIO Quad RAVEN RIDGE ENERGY, LLC. 3230 PENNSYLVANIA AVE. EIVED CHARLESTON, WORTHERSON Oil and Gas

SEP 21 2016

WV Department of **Environmental Protection**



West Virginia Department of Environmental Protection Office of Oil and Gas

WELL LUCATION :	VURIVI: GPS
_{API:} 47-3904907	_ WELL NO.: CROMWELL #2
FARM NAME: MIKE ROSS, INC	·-
RESPONSIBLE PARTY NAME:	ERGY, LLC/CUNNINGHAM ENERGY, LLC
COUNTY: KANAWHA	DISTRICT: BIG SANDY
QUADRANGLE: CLIO 7.5'	
	WACO OIL & GAS CO.
ROYALTY OWNER: MIKE ROSS, INC. &	WACO OIL & GAS CO.
·	
UTM GPS NORTHING: 4261527 UTM GPS EASTING: 468456	GPS ELEVATION: 1132' Office of Old and Gas
The Responsible Party named above has chosen to s preparing a new well location plat for a plugging per above well. The Office of Oil and Gas will not accept the following requirements: 1. Datum: NAD 1983, Zone: 17 North, Coon height above mean sea level (MSL) — med 2. Accuracy to Datum — 3.05 meters 3. Data Collection Method: Survey grade GPS: Post Processed Differential	price on the pt GPS coordinates that do not meet ordinate Units: meters, Altitude: eters. Set of the pt GPS coordinates that do not meet ordinate Units: meters, Altitude: eters. Set of the pt GPS coordinates that do not meet ordinate Units: meters, Altitude: eters.
Mapping Grade GPS X: Post Processed Different	erential X Sign Sylvarial Sign Sylvarial Sign Sylvarian Sign Sylvarian Sylva
4. Letter size copy of the topography map I the undersigned, hereby certify this data is correct to belief and shows all the information required by law prescribed by the Office of Oil and Gas.	to the best of my knowledge and
MEMBE MEMBE	
Signature Tit	le Date