

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

October 20, 2014

WELL WORK PERMIT

Horizontal Well

This permit, API Well Number: 47-4105696, issued to WACO OIL & GAS CO INC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

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

James Martin

Chief

Operator's Well No: RAMSBURG #1H 2045

Farm Name: WILSON, BRAD, ET AL

API Well Number: 47-4105696

Permit Type: Horizontal Well

Date Issued: 10/20/2014

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

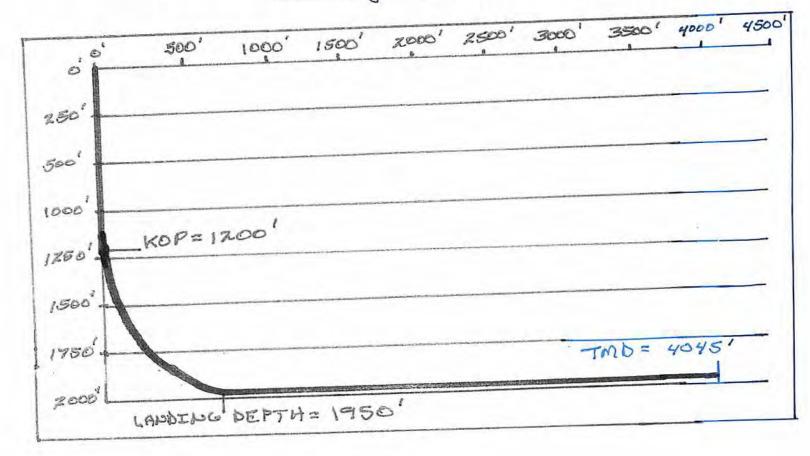
CONDITIONS

- 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.
- 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.

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

1) Well Opera	tor: Wac	o Oil & G	as Co., Inc.	306294	Lewis 041	Freemans Creek	Vadis
				Operator ID	County	District	Quadrangle
2) Operator's	Well Num	ber: Ram	sburg #1H 2045		3) Elevation	1,073'	
4) Well Type:	(a) Oil_X	or G	as X				
	(b) If Gas:	Produ	uctionX_ / Ur	nderground Sto	orage	_	
		Dee	p/	Shallow X			
5) Proposed T6) Proposed T7) Approximat8) Approximat	otal Depti e fresh wa	h: 1,950 - ater strat	4085 no Feet a depths: 150	Formation at I	Proposed Ta Proposed To	rget Depth: \(\)tal Depth: Big In	950 ¹
9) Approximat	e coal sea	am depth	s: None.				
				0.27			
10) Approxima	ite void de	eptns,(co	al, Karst, other)	None.	_		
11) Does land	contain c	oal seam	is tributary to ac	tive mine? N	0.		
12) Describe pr	oposed we	ell work ar	nd fracturing met	hods in detail (a	ttach addition	al sheets if nee	eded)
Evaluate well. Ru	n productio	n casing.	and pits). Mobilize o Demobilize drilling	ria. Mobilize cor	noletion equina	ent Complete	casing program
fracture or stimula	ate, clean-o	ut, run tubi	ing, unload & test	well. Reclaim site	9.	ient. Complete	well.
13)		CA	ASING AND TU	BING PROGR	AM A	R.S. 9-	
TYPE :	SPECIFIC	ATIONS	I .	FOOTAGE	INTERVALS	S CEMEN	IT
	Size	<u>Grade</u>	Weight per ft	For Drilling	Left in Well	Fill -up (Cu.	Ft.)
Conductor	13"	API	54.5#	20'		N/A	
Fresh Water	9 5/8"	API	40#	300'	300'	CTS	
Coal							
Intermediate	7"	API	17#	1500'	1500'	CTS	
Production	4 1/2"	API	11.6#	4045'	4045	Packers and S	Sleeves
Tubing							
Liners					Ro	ceiver	J
Packers: Kind	1				110	ocive(1
Size Dep	ths Set				00	T 2 2014	

WHEO O'lla GOS CO., I.R. Ramaburg 14 2045



4105696H Waco Ollegas

Completion Method

Ramsburg 1H 2045

The proposed wellbore will be drilled on air. Once at TMD, we will blow the hole for 1 hour. With a packer set on the bottom of the 7" for safety and isolation, we will run the production string with packers and sliding sleeve. We will set a packer and sliding sleeve every 200' starting at the toe of the well bore back to the heel. We will only be stimulating the horizontal part of the well bore, using 30,000 pounds of sand, 240,000 cubic feet of nitrogen and 90 barrel of water per stage. We estimate there will be 11 total stages.



Department of Environmental Protection

Office of Oil & Gas

601 57th St, SE

Charleston, WV 25304-2345

October 17, 2014

Re: Ramsburg 1H 2045

Jeff McLaughlin:

As per your request, following, please find the measures Waco Oil & Gas Co., Inc. will undertake to protect the offset wells to our proposed horizontal well referenced above.

Firstly, please know that all the offset wells, 47-041-00916, 47-041-01516, 47-041-00991 and 47-041-01009 are all owned and operated by Waco Oil & Gas Co., Inc. The surface equipment will all be inspected for assurance of proper rating and condition. All wells have earthen containments for any liquid spills. All wells will be continuously monitored during the fracturing process by Waco employees for any changes in pressure, etc., from a safe distance to protect employees from any physical harm. During the completion process, any and all stages that could potentially communicate to offset wells will be adjusted accordingly.

We do not feel that communication to offset wells will occur, but in the unlikely event that it does occur, we are fully prepared to safely handle the situation.

Sincerely,

Stephen E. Holloway

Waco Oil & Gas Co., Inc.

Land Manager

WW-	2A
(Rev.	6-14)

1). Date: 9-9-14

2.) Operator's Well Number

Ramsburg #1H 2045

State

County

041

Permit

3.) API Well No .:

47-

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

4) 5	Surface Ow	mer(s) to be served;		5) (a) Coal Op	erator		
	a) Name	Brad & Cvnthia V	Vilson W	Name	N/A		
	Address	8128 U.S. Hwv. 3		Address	1473		
		Camden. WV 26					
(b) Name	Jason Wilson	W	(b) Coal (wner(s) with Decl	aration	
	Address	8148 U.S. Hwv. 3	33 W	Name	N/A	aration	
		Camden, WV 26		Address	MIA		
		Odinacii, VVV 20	000		-	Doo	DIVIDO
1	c) Name			Name	-	1150	CIVUU
	Address	-		Address			
	iddi C55	-		_ Address	_	OCT	2 2014
6) In	spector			- (c) Coal I	essee with Declara		150 500
	ddress			Name			
0	duicos	-		Address	N/A	Office c	Oll and Gas
T	elephone			_ Address	-	WV Dept, of En	vironmental Protection
11	elephone	TO THE D	EDCONC NA	MED ADOVE T	ALCE MOTION TH	. =	
3.	الاجا المحاميات	10 THE P	ERSONS NA	MED ABOVE I	AKE NOTICE TH	A1:	and the second
- I	nciuded is ti	ne lease or leases or o	mer continuing	contract or contr	acts by which I hold	the right to extract	oil and gas
OR × Ir	actuded is th	ne information required	hy Chanter 25	Article & Contin	a O(d) of the Code	-£\A/+\/:t-t-/-	0)
^ "	L cortify	hat as required under	Chapter 22	of the Most Miss	in o(a) of the Code (or vvest virginia (se	e page 2)
annlin	ration a loc	ation plat, and accomp	anving docum	ents pages 1 thro	und Code I have se	erved copies of this	s notice and
applic	ation, a loc	Personal Service			ugn on the abo	ve named parties by	y:
	-	X Certified Mail (Po			ed)		
	-	Publication (Notice			,		
	I have re	ad and understand Ch	apter 22-6 and	35 CSR 4 and	I agree to the term	s and conditions o	f any nermit
issue	d under this	application.		200 01101 010	, agree to the term	io and conditions o	any permit
	I certify t	inder penalty of law th	at I have pers	onally examined	and am familiar wit	th the information s	ubmitted on
this a	pplication for	orm and all attachmen	ts, and that ba	sed on my inqui	ry of those individua	als immediately res	ponsible for
obtair	ning the info	rmation, I believe that	the information	is true, accurate	and complete.		
- Almania	-lamawa	re that there are signif	icant penalties	for submitting fa	lse information, incl	uding the possibility	of fine and
mpas	OMMENT PU	blic, State of West Virginia Lynn Lowther		101 0110			1 -
引机	Wall Wa	on Oil & Gas Co Inc.	Well Operator	Waco Oil & C	as Co., Inc.	3 b	
STATE OF	G	PO Box 397 lenville, WV 26351	By:	5 phen E.	Holloway o		O
Sales and	My commis	sion expires March 31, 2023		Land Manag			
			Address:	P.O. Box 397			
			Talankassa	Glenville, W\			
				(304) 462-53			
Subse	ribed and s	worn before me this	the day of	steve.nollowa	av@wacowv.com		
Subst	niceu anu s	North perote title titls	uay of	Septe	MOET -	2014	
-	1	2-110.			Notary Put	olic	
My Co	ommission E	xpires 7	31,2023		Notary Put	JIIC .	
377.000	Gas Privacy		2010043				

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

SURFACE OWNER WAIVER

	410569617
0	K 832/5
(1500
nc.	650

County	Lewis	Operator	Waco Oil & Gas Co., Inc.	000
		Operator well number	Ramsburg #1H 2045	

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A 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 a dequate 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.

<u>List of Water Testing Laboratories</u>. 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, and attachments consisting of pages 1 through _____ including a work order on F orm WW2-B, a s urvey plat, and a s oil 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	FOR	REXECUTION	BY A CORP	ORATI	ON, ETC.
Bul Minature Date	9-25-14 Company Name By		Rec	ei	
Bund Wilson Jason Wilson	.01		OCT	2	Date 4
Print Name	9	Signature	of	Oil and	Date

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 –

- 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.	Royalty	Book/Page
Α.	Camden Ramsburg	James Hall	1/8	274/70
В,	Leo P. Caulfield	A.G. Hill	1/8	269/326
A.	James Hall	w. H. Mosso ~	118	280/106
B.	n - Hell	Le. H. Mossor	118	281/210
A,	- 11 M	TERM Energy Corp.	NB	410/308
A		. Triad Energy Con	1. 118	607/112
	B Triad Energy Corp		inc. Ug	680/340

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

Receive

OCT 2 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas 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 appropriate authority before the affected activity is initiated.

Well Operator:

By: Its:

Waco Oil & Gas Co., Inc.

Stephen E. Holloway/Land Manager

WW-2B	
(5-12)	

Well	No.	Ramsburg #1H 2045

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 well. 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 Labora	atory Name	Reliance Laboratories- Bridgeport, WV	
Sampling Contractor		Hupp Surveying & Mapping	
Well Operator	Waco Oil & Ga	is Co., Inc.	
Address	P.O. Box 397		
•	Glenville, WV	26351	
	Gienville, WV		

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.

Received

DC- 14

... eq. cul Environmental Protection

HUPP Surveying & Mapping

P.O. BOX 647

GRANTSVILLE, WV 26147

(304) 354-7035 hupp@frontiernet.net FAX: (304) 354-6548

September 9, 2014

RE: Water Samples for Ramsburg #1H 2045

There appears to be one (1) potable water source within 1,500' of Ramsburg #1H 2045, therefore tests should be offered and samples taken as required.

1. Brad & Cynthia Wilson 8128 US HWY. 33 W Camden, WV 26338 Tax Map 1F Parcels 3 & 4 MUST SAMPLE BEFORE SPUDDING WELL,

Received

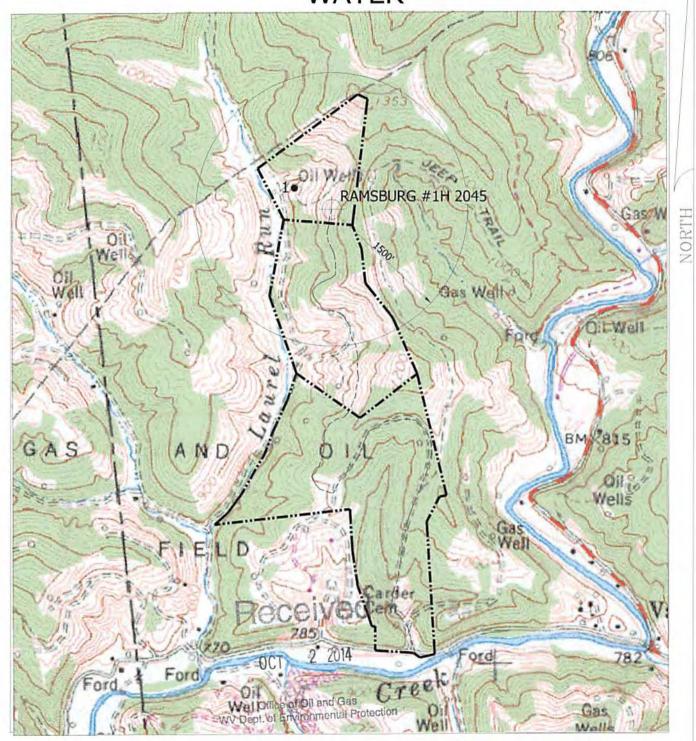
OCT 2 2014

Office of Others Past

Form W-9

Waco Oil & Gas Co. Inc. RAMSBURG #1H 2045 WATER

Page 1 of 1



HUPP Surveying & Mapping

P.O. BOX 647 GRANTSVILLE, WV 26147 PH:(304)354-7035 E-MAIL: hupp@frontiernet.net 1" = 1000° VADIS 7.5° B.S. 9-19-14
Waco Oil & Gas Co., Inc.
P.O. Box 397
Glenville, WV 26351

	Pa	ige of	
API Number 47 -	041		
Operator's	Well No.	Ramsburg #1H 2045	

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

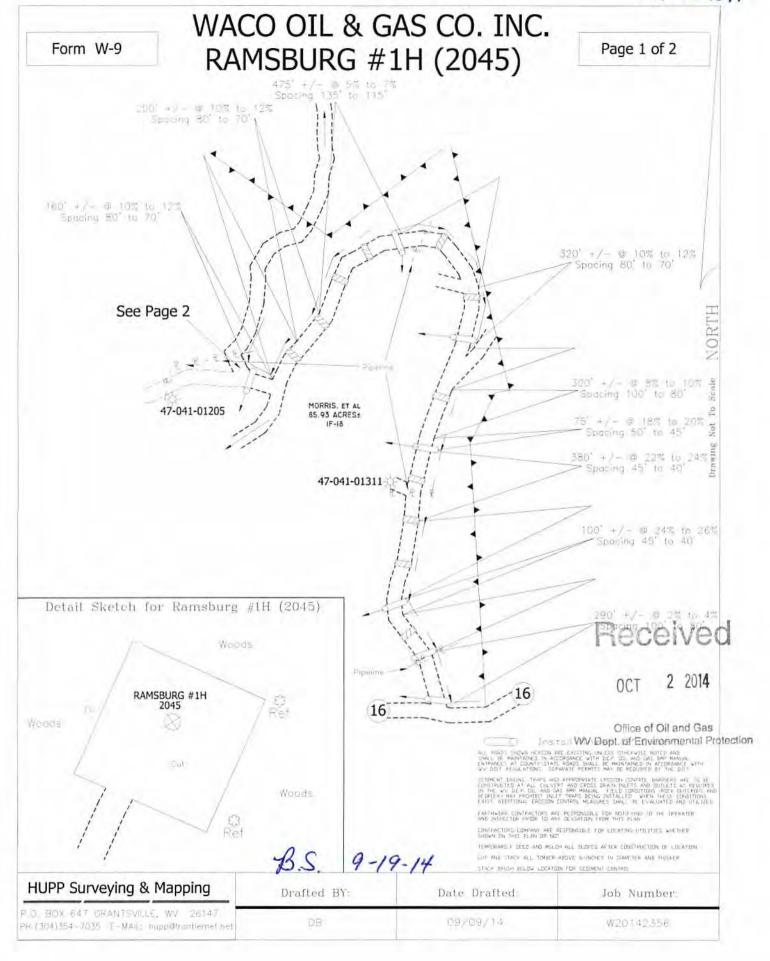
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

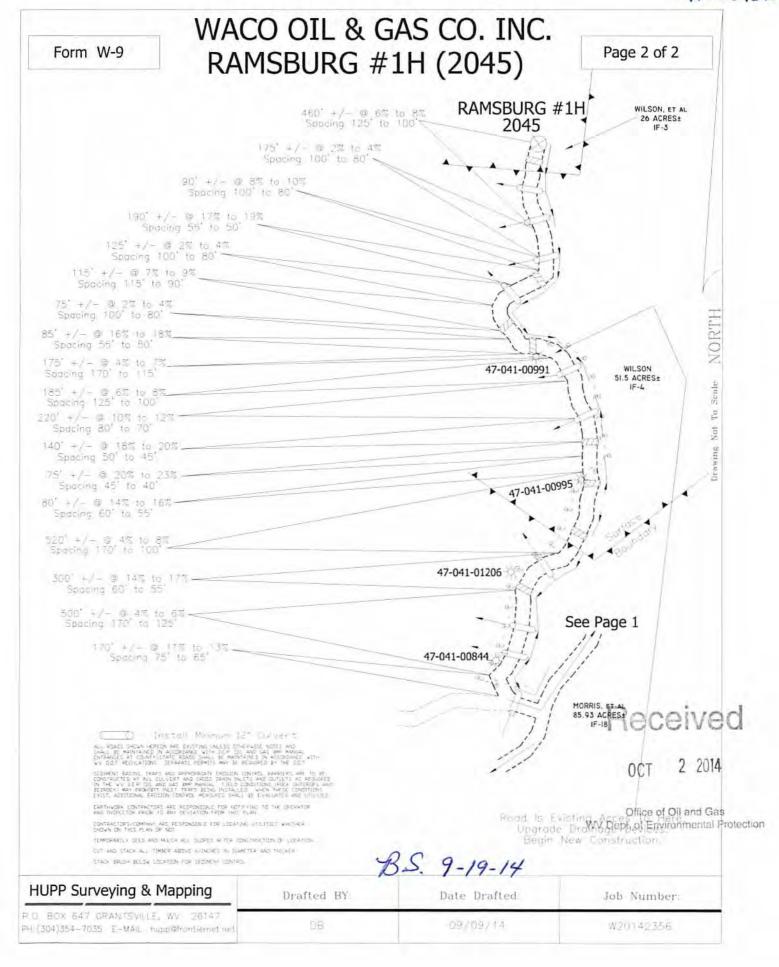
Operator Name_ Waco Oil & C	Sas Co., Inc.	OP Code 306294	
Watershed (HUC 10) Laure	I Run	QuadrangleVadis	
Elevation 1,073'	County	District_ Freemans Creek	
Will a pit be used for drill cu If so, please describ	nttings? Yes X No No eanticipated pit waste:	encountered uses for distance. No If so, what ml.?	
	Method For Treated Pit Wastes:		
L: U R O	and Application		i I
Will closed loop system be u	ised? No		
Drilling medium anticipated	for this well? Air, freshwater, oil ba	ased, etc. Air/Freshwater	
-If oil based, what t	ype? Synthetic, petroleum, etc		
Additives to be used in drilli			
		offsite, etc. removed to Fit (ww 9 Att	ache S)*
		used? (cement, lime, sawdust) Cement	
I certify that I under on August 1, 2005, by the Oprovisions of the permit are law or regulation can lead to I certify under pen application form and all at obtaining the information, I penalties for submitting false. Company Official Signature	erstand and agree to the terms and conffice of Oil and Gas of the West Virginian enforceable by law. Violations of enforcement action. I talty of law that I have personally etachments thereto and that, based I believe that the information is the information, including the possibility.	onditions of the GENERAL WATER POLLUTION PERMIT reginia Department of Environmental Protection. I understand any term or condition of the general permit and/or other approximate and am familiar with the information submitted on my inquiry of those individuals immediately responsing accurate, and complete. I am aware that there are significantly of fine or imprisonment.	r issued that the plicable on this ible for
Company Official (Typed N	lame) Stephen E. Holloway	OCT 2	2014
Company Official Title Lar			
Subscribed and sworn before	m Ladle	Office of Oil an WV Dept. of Environme 20 14 OFFICIAL SEAL Notary, Ribbliotary Public, State of West Vir Lynn Lowther Waco Oil & Gas Co Inc.	Protection
My commission expires	march 31, 2023	PO Box 397 Glenville, WV 26351 My commission expires March 31	1, 2023

Proposed Revegetation	Treatment: Acres Disturbed _ Tons/acre or to corn	2.0		Prevegetation pH		
			6.5	_		
	20-20 or equivalent) 1/3 7	the second secon		nimum)		
Mulch_	Hay 2	Tons/acre				
		Seed M	ixtures			
	Area I			a reliance	Area II	
Seed Type	lbs/acre 40		Orchard	Seed Type		lbs/acre
KY-31						5
Alsike Clover		-	Alsike C	lover		3
Annual Rye	15					
Photocopied section of	cation,pit and proposed area for involved 7.5' topographic sheet		tion.			
Drawing(s) of road, loc	involved 7.5' topographic shee					
Drawing(s) of road, loc Photocopied section of Plan Approved by:	involved 7.5' topographic shee					
Drawing(s) of road, loo Photocopied section of Plan Approved by:	involved 7.5' topographic shee					
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Drawing(s) of road, loc Photocopied section of Plan Approved by:	involved 7.5' topographic shee					
Drawing(s) of road, loc Photocopied section of Plan Approved by: Comments:	Barry Sal					
Drawing(s) of road, loc Photocopied section of Plan Approved by:	Barry Sal			7-19-1		

Office of Oil and Gas
WV Dept, of Environmental Protection

OCT 2 2014

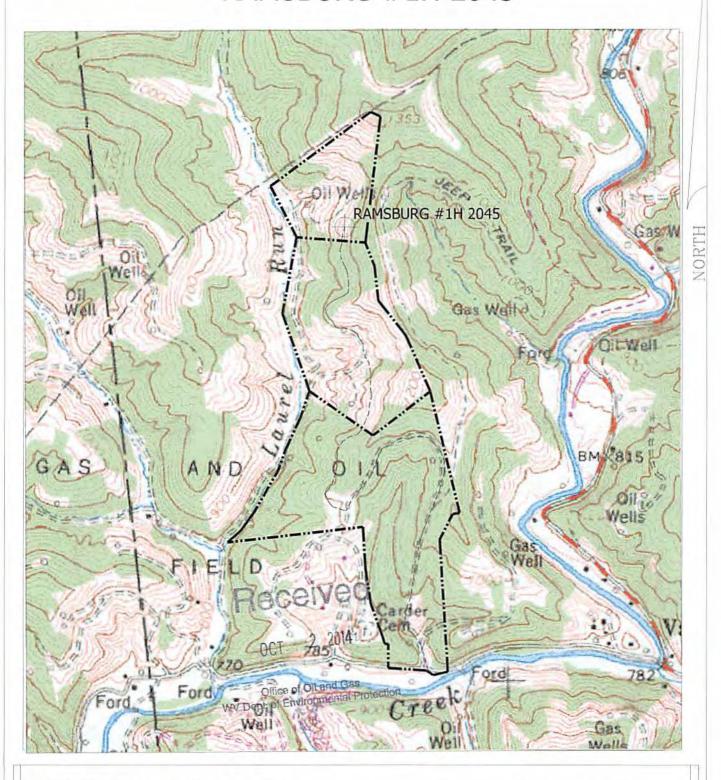




Form W-9

Waco Oil & Gas Co. Inc. RAMSBURG #1H 2045

Page 1 of 1



HUPP Surveying & Mapping

P.O. BOX 647 GRANTSVILLE, WV 26147 PH:(304)354-7035 E-MAIL: hupp@frontiernet.net 1" = 1000' VADIS 7.5' Waco Oil & Gas Co., Inc. P.O. Box 397 Glenville, WV 26351

