

west virginia department of environmental protection

Office of Oil and Gas 601 57<sup>th</sup> Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452 Jim Justice , Governor Austin Caperton , Cabinet Secretary www.dep.wv.gov

Tuesday, August 29, 2017 WELL WORK PERMIT Vertical / Re-Work

EQUITRANS, L. P. 625 LIBERTY AVENUE SUITE 1700

PITTSBURGH, PA 152220000

Re: Permit approval for 8216 47-041-04091-00-00

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: 8216 Farm Name: U.S BUREAU OF LAND MGMT U.S. WELL NUMBER: 47-041-04091-00-00 Vertical / Re-Work Date Issued: 8/29/2017

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. <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.
- 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, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B (Rev. 8/10)

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

1) Well Operator:	Eoutrane, LP 825 Loseny Ave. Petaburgh, PA 13222		5547235	Lewis	Court House Rural	Roanoke/Crawford NW
			Operator ID	County	District	Quadrangle
2) Operator's Well	Number: 608216			3) Elevation:	1133 ft	
4) Well Type: (a) C	)il or Gas X					
(b) lf	Gas: Production	/ Unde	rground Stor	age X		
	Deep	/ Sha	allow	_		
<ol> <li>6) Proposed Total</li> <li>7) Approximate free</li> </ol>	et Formation(s): <u>Gordon</u> Depth: <u>2608</u> sh water strata depths It water depths: <u>None</u>	Feet Fo		Proposed Tar Proposed Tota		
9) Approximate co	al seam depths: 240				1332 -1	337'
10) Approximate v	oid depths,(coal, Kars	t, other): <u>N</u>	I/A			
11) Does land con	tain coal seams tributa	ary to activ	e mine? <u>No</u>	D		1.1
12) Describe propos	ed well work and fractu	iring method	ds in detail (at	ttach additiona	I sheets if nee	eded)

Remove 2-7/8" tubing and packer and replace with 2500 feet of 3-1/2" NUE 9.2# tubing and cementing packer shoe set at 2500'. Cement from 2500' to surface, cementing across the Gantz Sand at 2266'-2316'.

	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	11-3/4"	H-40	42#	43	43	NOUL
Fresh Water						
Coal		·				
Intermediate	8-5/8"	K-55	24#	1850'	1850'	To surface 580
Production	5-1/2"	K-55	15.5#	2608'	2608'	165 CU. FT. 2608' - 1620'
Tubing	2-7/8"	K-55	6.4#	2504'	2504'	ON PACKER @ 2434'
Liners						
Packers: Kind	d: Wall	ulla sutoria			Office	ECEIVED of Oil and Gas

WV Department of 09/01/2017 Environmental Protection WW-2B1 (5-12)

Well No. 608216

410 4091W

#### 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 Laboratory Name	N/A
Sampling Contractor	N/A

Well Operator	Equitrans, L.P
Address	625 Liberty Ave.
	Pittsburgh, PA 15222
Telephone	412-395-5554 Justin Macken-VP Gas Systems Planning

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 Office of Oil and Gas

### AUG 17 (C.

WV Department

### 09/01/2017

CREEK STORAGE	_
2017	
Tubing Replacement Procedure	
SITE PREPARATION	
Field reconnaissance	
Upgrade existing well sites to accommodate service rig and ancillary equipment in necessary	Į.
	-
Install all necessary erosion control measures spelled out in approved E&S Plan	
	_
	_
Check wellhead pressure	
Kill well and annulus with weighted fluid	
Move in and rig up service rig and ancillary equipment	
Dis-assemble wellhead	
Install BOP on 5.5" casing	
Install lifting sub on 2-7/8" tubing	
Use service rig to release slips in casing head	
Release 2-7/8" X 5.5" packer	
Pull 2-7/8" tubing and packer	
Trip in hole with 3.5" tubing and 3.5" X 5.5" packer shoe to approximately 2500'	
Remove BOP	
Install 3.5" tubing hanger and master gate	
Move in and rig up cementers	
Cement 3.5" tubing with Class A type cement from 2500' to surface	
Wait on cement 12 hours	
Rig down and move off service rig	
Move in and rig up wireline unit	
Run cement bond log	
Run flux leakage surveillance logging tool	
Rig down and move off wireline unit	
Move in and rig up coiled tubing unit	
Remove fluid with nitrogen	
Rig down and move off coiled tubing unit	
Place well into service	
PROCEDURE WILL COMPLY WITH THE WVDEP CODE REQUIREMENTS	
SITE RECLAMATION	
Reclaim access road and well site	
PERMITTING	
Submit final completion report	

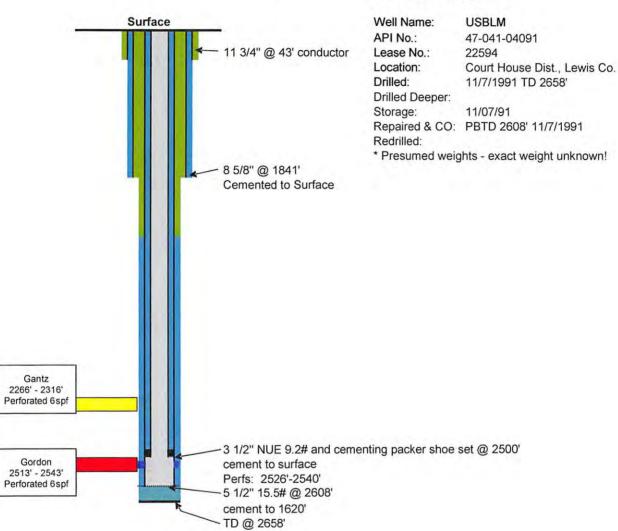
RECEIVED Office of Oil and Gas

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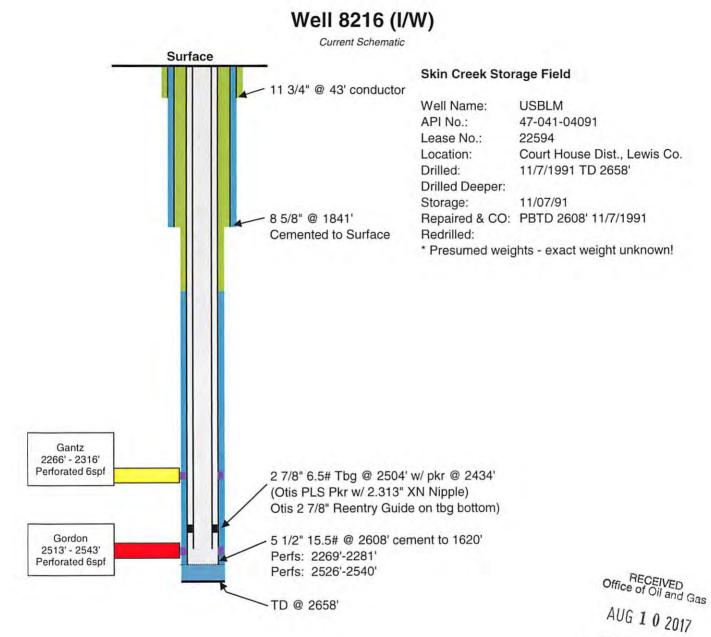
WV Departi**09/01/2017** Environmental Protection



Final Schematic



#### Skin Creek Storage Field



WV Department of Environmental Protection

09/01/2017

Recorded       Well Operator's Report of Well Work       FB 1 0 92         Parm name:       U.S BUREAU OF LAND MGMT       Operator Well No.: 8216 W and Gas Socks.         LOCATION:       Elevation: 1133.00       Quadrangle: ROANOKE         District:       COURT HOUSE       County: LEWIS         Latitude:       3850       Feet South of 39       Deg. 0 Min. 0 Sec.         Company: EQUITRANS, INC.       Solo Park LANE       Fill U       Fill U         JS00 PARK LANE       Fill U       Fill U       Fill U         Agent:       JOHN KALAFAT       Casing       Used in       Left       Cement         Inspector:       TIM BENNETT       Size       11-3/4"/42#       43'       Nre         Well work Commenced:       10/10/91       11-3/4"/42#       43'       Nre         Well work Commenced:       10/10/91       Hadi'       1841'       ID SURROD         Yethal Plugging       Permission granted on:       Rig       5-1/2"/15.5#       2608'	WR-35						)7-Aug-9	
Well Operator's Report of Well Work HB 10 92 Parm name: U.S BUREAU OF LAND MGMT Operator Well No.: 8216, Wend Gas Socker LOCATION: Elevation: 1133.00 Quadrangle: ROANCE District: COURT HOUSE County: LEWIS Latitude: 3850 Freet South of 39 Deg. 27 Min. 0 Sec. Longitude 5370 Freet West of 80 Deg. 27 Min. 30 Sec. Company: EQUITRANS, INC. 3500 PARK LANE PITTSBURGH, PA 15275-0000 Agent: JOHN KALAFAT Inspector: TIN BENNETT Permission Commence: 10/10/91 Weil work Commence: 10/10/91 Fotary X Cable on: Fotary X Cable on: Fotal Dept (feet): 2655' Fresh water depths (ft): 132-1337 OPEN FLOW DATA Note: Well not tested during drilling operations will be testeed office of Oll and Producing formation: Oracing formation: Gas: Initial open flow MA MCF/d Oll: Initial open flow MA BB1 d Static rock Pressure: 985 psig (surface pressure) aftercommental Prov Static rock Pressure: 995 psig (surface pressure) aftercommental Prov Static rock Pressure: 995 psig (surface pressure) aftercommental Prov Static rock Pressure: 995 psig (surface pressure) aftercommental Prov Static rock Pressure: 990 psig (surface pressure) aftercomment		6	DEPARTMEN	<b>I</b> OF ENERG	ia Y	REC	EIVEC	•
LUCATION: Elevation: 1133.00 Quadrangle: ROANOKE District: COURT HOUSE Latitude: 3850 Feet South of 39 Deg. 0 Min. 0 Sec. Longitude: 3850 Feet South of 39 Deg. 27 Min. 30 Sec. Company: EQUITRANS, INC. 3500 PARK LANE FITTSBURCH, PA 15275-0000 Agent: JOHN KALAFAT Inspector: TIM BENNETT Weil work Completed: 10/10/91 Weil work Completed: 11/10/791 Fresh water depths (ft) 2655' Fresh water depths (ft) Mone S127/15.59 2020' 2001 105 on ft. Coal Depths (ft): 1122-11337 OPEN FLOW DATA Note: Weil not tested during drilling operations will be tested office of ON and Froducing formation Gordon Pay sone depth (ft): 2650' Fresh water depths (ft): Mone Static rock Pressure 985 psig (surface pressure) aftergrowtheff to 2513 - 2543 Gas: Initial open flow M/A MCF/d Oil: Initial open flow M/A Bbl d Static rock Pressure 985 psig (surface pressure) aftergrowtheff to us Environmental Prot Static rock Pressure 985 psig (surface pressure) aftergrowtheff to us Environmental Prot Static rock Pressure 985 psig (surface pressure) aftergrowtheff bous Service MONE flow M/A MCF/d Oil: Thitial open flow N/A Bbl d Time of open flow M/A MCF/d Oil: Thitial open flow N/A Bbl d Static rock Pressure 985 psig (surface pressure) aftergrowtheff Bbl d Time of open flow M/A MCF/d Oil: Thitial open flow N/A Bbl d Static rock Pressure 985 psig (surface pressure) aftergrowtheff Bbl d Time of open flow M/A MCF/d Oil: Thitial open flow N/A Bbl d Static rock Pressure 985 psig (surface pressure) aftergrowtheff Bbl d Time of open flow M/A MCF/d Oil: Thitial open flow N/A Bbl d Static rock Pressure 500 psit MLATING, PHESICAL PROMONE, BCC. 2). THE WE L LOG WHICH IS A SYSTEMATIC DESCLOGICAL RECORD OF ALL FORMATION , MK 18 92 Womedmand Womedmand Mark MCF/d Oil: Thitial open flow All FDI d MK 18 92 Womedmand Mark MCF/d Oil: Thitial open flow All FDI d MK 18 92 Womedmand Mark MCF/d Oil: Thitial open flow		W نرب	ell Operator's I '	Report of 1	Well Work	•		
District: COURT HOUSE Latitude: 3850 Feet South of 39 Deg. 0 Min. 0 Sec. Longitude 5370 Feet West of 80 Deg. 27 Min. 30 Sec. Company: EQUITENNS, INC. 3500 PARK LANE PITTSBURGR, PA 15275-0000 Agent: JOHN KALAPAT Inspector: TIM BENNETT Permit Issued: 08/07/91 Well work Commenced: 10/10/91 Well work Commenced: 11/07/91 Well work Commenced: 11/07/91 Well work Completed: 11/07/91 Well work Completed: 11/07/91 Permission granted on: Fresh water depths (ft) 12050' Total Depth (ft): 1332-1337 Coal Depths (ft): 1332-1337 OPEN FLOW DATA Note: Well not tested during drilling operations will be tested Mice of 01 and Gas: Initial open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d Oli: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/A MCF/d II: Initial open flow M/A BDI d Final open flow M/	Farm name:	U.S BUREA	U OF LAND MGMT	Operator	Well No.:	8216 <b>(1) 8</b> 216	Gas Section	
Latitude: 3850 Feet South of 39 Deg. 27 Min. 0 Sec. Longitude 5370 Feet West of 80 Deg. 27 Min. 30 Sec. Company: EQUITRANS, INC. 3500 PARK LANE PITTSBURGH, PA 15275-0000 Agent: JOHN KALARAT Inspector: TIM BENNETT Permit Issued: 06/07/91 Well work Commenced: 10/10/91 Well work Commenced: 11/07/91 Well work Commenced: 11/07/91 Well work Commenced: 11/07/91 Well work Completed: 10/10/91 Well work Completed: 11/07/91 Well work Completed: 11/07/91 Well work Completed: 11/07/91 Well work Completed: 10/10/91 Wereal Flow of Gaster Getter (11/07/91 Well work Completed: 10/07/91 Well work Getter Getter (11/07/91 Well work Completed: 10/07/91 Well work Getter Getter (11/07/91 Well work Getter Getter (11/07/91 Well work Getter Getter (11/07/91 Salt water depths (ft) 11/0 Salt water depths (ft) 11/0 Sold formation Gotter Gotter Face Gotter (11/07/91 Final open flow M/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow W/A MCF/d Oll: Initial open flow M/A Bb1 d Static rock Pressure 985 psig (surface pressure) ATTERCOMPACE SECOND SECOND Scand producing formation Gantz Pay zone depth (ft) 2266-2316 Gas: Initial open flow M/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow M/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow W/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow W/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow M/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow M/A MCF/d Oll: Initial open flow M/A Bb1 d Final open flow M/A MCF/d Oll: Initial open flo	LOCATION:	Elevation	: 1133.00 Quad	drangle: Ro	OANOKE	•		•
3500 PARK LANE       PITTSBURCH, PA 15275-0000       6       Inspector: TIM BENNETT         Agent: JOHN KALAPAT       Tubing Drilling in Well Cu. Ft       Fubing Drilling in Well Cu. Ft         Inspector: TIM BENNETT       08/07/91       11-3/4"/A28       43'       43'         Well work Commenced: 10/10/91       11-3/4"/A28       43'       43'       Ncme         Well work Completed: 11/07/91       11-3/4"/A28       43'       43'       Ncme         Well work Completed: 11/07/91       2658'       5-/8'/244       1841'       1841'       TOSURACE         Permission granted on:       Rig       5-/8'/244       1841'       1841'       TOSURACE         Salt water depths (ft)       2658'       2608'       2608'       2608'       2608'         Salt water depths (ft)       1332-1337'       2-1/8"/6.44       2504'       2304'       2434         Ts coal being mined in area (Y/N)?N       2-1/8"/6.44       2504'       2504'       244'       2434         Time of open flow       M/A       MCE/d OII: Initial open flow       M/A BDI d'       AUG I 0 20'         Gas: Initial open flow       M/A       MCE/d OII: Initial open flow       M/A BDI d'       AUG I 0 20'         Second producing formation       Gantz       Pay zone depth (ft)		Latitude:	3850 Feet Sou	1th of 39	Deg 0 Min	0 6	•	
Agent: JOHN KALAPAT       Tubing Drilling in Well[Cu. Ft         Inspector: TIN BENNETT       Fisuadi       08/07/91         Well work Commenced: 10/10/91       11-3/4"/428       43'       Mrm         Well work Completed:       11/07/91       11-3/4"/428       43'       Mrm         Werbal Purging       Permission granted on:       Big       548 cu.ft.       548 cu.ft.         Total Depth (feet)       2658'       5-1/2"/15.58       2608'       2609'       1260-160'         Salt water depths (ft)       114' 478'       2-7/8"/6.44       2504'       2604' <td>350</td> <td>O PARK LAN</td> <td>5</td> <td>6</td> <td>i</td> <td>Left</td> <td></td> <td>-</td>	350	O PARK LAN	5	6	i	Left		-
Inspector: TIN BENNETT       08/07/91         Well work Commenced:       00/07/91         Well work Completed:       11/10/91         Werbal Flugging       11/07/91         Presh water depths (ft)       2658'         Salt water depths (ft)       2658'         Salt water depths (ft):       1332-1337         OPEN FLOW DATA Note: Well not tested during drilling operations will be testeed of lige of 01 and 100 m/A MCF/d 011: Initial open flow       N/A BDI d         Mine placed in service.       985 psig (surface pressure) aftercompletion Hous s       W/D Open flow N/A BDI d         Static rock Pressure       985 psig (surface pressure) aftercompletion Hous s       W/D Open flow N/A BDI d         Scond producing formation       Gantz       Pay zone depth (ft) 2266-2316         Gas: Initial open flow N/A MCF/d 011: Tritial open flow N/A BDI d       W/D Open flow N/A BDI d         Static rock Pressure       Sig psig (surface pressure) aftercompletion Hou s         Static rock Pressure       Sig psig (surface pressure) aftercompletion Hou s         Static rock Pressure       Sig psig (surface pressure) afterc	Agent: JOH	N KALAFAT		Tubing	Drilling	in Well		
Permit Issued: 08/07/91 Well work Completed: 10/10/91 Well work Completed: 11/07/91 Werbal Plugging			r	Size				
Well work Completed:       11/07/91         Werbal Plugging       11/07/91         Pernission granted on:       Rig         Rotary X Cable       Rig         Total Depth (feet)       2655'         Fresh water depths (ft)       540 c.ft.         Salt water depths (ft)       144' 478'         Salt water depths (ft)       100 Pgder         Salt water depths (ft)       132-1337         Coal Depth (feet)       1332-1337         OPEN FLOW DATA Note:       Well not tested during drilling operations will be tested mice of Oil and when placed in service.         Froad one flow N/A MCF/d Oil:       Final open flow N/A MCF/d Oil:         When placed in grantian of the placet in service.       950 psig (surface pressure) aftercompletion Hou service         Static rock Pressure       950 psig (surface pressure) aftercompletion Hou service         Static rock Pressure       950 psig (surface pressure) aftercompletion Hou service         Scond producing formation       Gantz       Pay zone depth (ft) 2266-2316         Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl d       Final open flow N/A MCF/d Final open flow N/A Bbl d         Static rock Pressure       530' psig (surface pressure) aftercompletion Hou s       N/A Bbl d         Static rock Pressure       530' psig (surface pressure) aftercompletion Hou s       N/A Bbl d <td>Permit Issue</td> <td>ed:</td> <td>08/07/91</td> <td>11-3/4"/42#</td> <td>43'</td> <td>43'</td> <td>None</td> <td></td>	Permit Issue	ed:	08/07/91	11-3/4"/42#	43'	43'	None	
Rotary X cable Rig Total Depth (feet) 2658' Fresh water depths (ft) Salt water depths (ft) None 114' 478' Salt water depths (ft) None 2-7/8'/6.44 2504' 2608	Well work Co Verbal Plugo	ompleted: ging	11/07/91	8-5/8"/24#	1841'	     1841'		
Salt water depths (if) None       [2-7/6"/6.4#]       2504'       204'       2434         Is coal being mined in area (Y/N)?N       [2-7/6"/6.4#]       2504'       2434         Goal Depths (ft):       1332-1337       [2-7/6"/6.4#]       2504'       2434         OPEN FLOW DATA Note:       Well not tested during drilling operations will be tested of Oil and when placed in service.       Producing formation       Gordon       Pay zone depth (ft)2513 - 2543         Producing formation       Gordon       Pay zone depth (ft)2513 - 2543       AUG I 0 201         Final open flow       N/A       MCF/d       Final open flow       N/A Bbl d         Time of open flow between initial and final tests       N/A       BUG MORE/d       BUG MORE/d         Static rock Pressure       985 psig (surface pressure) aftercompletion Hou s       Environmental Prot         Gas: Initial open flow N/A       MCF/d Oil: Initial open flow       N/A Bbl d         Time of open flow between initial and final tests       N/A       Bud more         Second producing formation       Gantz       Pay zone depth (ft)2266-2316         Gas: Initial open flow N/A       MCF/d Oil: Initial open flow       N/A Bbl d         Time of open flow between initial and final tests       N/A       Hou s         Static rock Pressure       530       psig (surface	Rotary <u>X</u> Total Depth	Cable (feet)	Rig 2658'	5-1/2"/15.5#	2608'	2608'	165 cu. ft. 2508-1620'	
Is coal being mined in area (Y/N)?N       RECEIVED         Coal Depths (ft):       1332-1337         OPEN FLOW DATA Note:       Well not tested during drilling operations will be tested office of Oil and when placed in service.         Producing formation       Gordon       Pay zone depth (ft)2513 - 2543         Gas:       Initial open flow       N/A       MCF/d Oil:       Initial open flow       N/A         Final open flow       N/A       MCF/d Final open flow       N/A       Bbl d       WV Department         Static rock Pressure       985 psig (surface pressure) aftercompletion Hou s       Environmental Protein Static rock Pressure       985 psig (surface pressure) aftercompletion Hou s       Environmental Protein Static rock Pressure         Static rock Pressure       985 psig (surface pressure) aftercompletion Hou s       M/A Bbl d         Final open flow       N/A       MCF/d Oil:       Thial open flow       N/A Bbl d         Time of open flow       N/A       MCF/d Oil:       Thial open flow       N/A Bbl d         Time of open flow       N/A       MCF/d Oil:       Thial open flow       N/A Bbl d         Time of open flow       N/A       MCF/d Oil:       Thial open flow       N/A Bbl d         Time of open flow       N/A       MCF/d Oil:       Thial open flow       N/A Bbl d <td< td=""><td>Salt water o</td><td>lepths (ft)</td><td>114' 478' None</td><td>27/8"/6.4#</td><td>2504'</td><td>2504'</td><td></td><td></td></td<>	Salt water o	lepths (ft)	114' 478' None	27/8"/6.4#	2504'	2504'		
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl d Final open flow N/A MCF/d Final open flow N/A Bbl d Time of open flow between initial and final tests N/A Hous WV Department Static rock Pressure 985 psig (surface pressure) aftercompletion Hou s Environmental Prot Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl d Final open flow N/A MCF/d Oil: Initial open flow N/A Bbl d Final open flow N/A MCF/d Oil: Initial open flow N/A Bbl d Final open flow N/A MCF/d Oil: Initial open flow N/A Bbl d Time of open flow WA MCF/d Final open flow N/A Bbl d Time of open flow between initial and final tests N/A Hou s Static rock Pressure 530 psig (surface pressure) after ompletion Hou s Static rock Pressure 530 psig (surface pressure) after ompletion Hou s NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORAT D INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WE L LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATION , INCLUDING COAL ENCOUNTERED BY THE WELLBORE. For: EQUITRANS, INC. By: Date: 3100/931	Is coal bein Coal Depths	ng mined ir (ft): 13	n area (Y/N)? <u>N</u> 332-1337					
Second producing formation <u>Gantz</u> Pay zone depth (ft)2266-2316 Gas: Initial open flow <u>N/A</u> <u>MCF/d</u> Oil: Initial open flow <u>N/A</u> Bbl d Final open flow <u>N/A</u> <u>MCF/d</u> Final open flow <u>N/A</u> Bbl d Time of open flow between initial and final tests <u>N/A</u> Hou s Static rock Pressure <u>530</u> psig (surface pressure) after <u>completion</u> Hou s NOTE: ON BACK OF THIS FORM FUT THE FOLLOWING: 1). DETAILS OF PERFORAT D INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WE L LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATION , INCLUDING COAL ENCOUNTERED BY THE WELLBORE. For: EQUITRANS, INC. BY: <u>outed</u> <u>Haff</u> Date1 <u>310/931</u> W Division of <u>01/2017</u>	Gas: Ir Fi	itial open f	flow <u>N/A</u> MCF	rdon /d Oil: In /d Fi	Pay zone o litial open nal open fi	depth (ft) flow <u>N</u> / low N/	) <u>2513 - 2</u> <u>A Bbl</u> d A Bbld	543. AUG <b>1 0 201</b> 7
NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORAT D INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WE L LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATION, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.	Second Gas: In Fi Ti	producing itial open nal open f me of open	formation G flow N/A MCF low N/A MCF flow between i	g (Sufface Santz /d Oil: In /d Fi Nitial and	Pressure) Pay zone c itial open nal open f] final test	aftercomple lepth (ft) flow 1 low N/	<u>etian</u> Hou s 2266-231 V/A Bbl d A Bbl d	6
Office of Oil & Gas     By:     Journal / Apple       MAR     1     8     92       WV Division of     Date 1     3//0/931	LOG WHICH I	S A SYSTE	FORM PUT THE OR STIMULATING MATIC DETAILED	FOLLOWING	: 1). DETA	AILS OF PE	RFORAT D	
W Division of 09/01/2017	Office of Oil	& Gas		s, inc.	Λ			
Environmental Protection			- 12 10 -	4. Kapp 10/92 11	er			
	U WV Divisio Environmental P	n of rotection						09/01/2017

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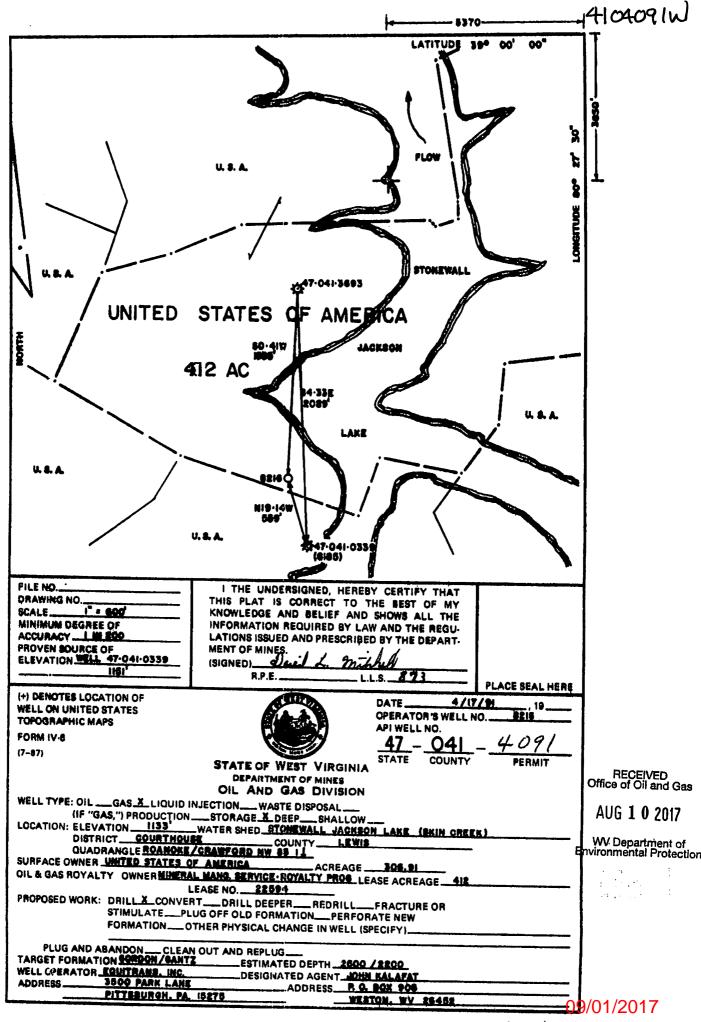
- Gordon Perforation Interval = 2526.5 - 2540.5 @ 6 shots - Gantz Perforation Interval = 2269.5 - 2281.5 + 2291 - 2303 @ 6 shots Acid Clean up performed on both formations Gordon - total displacement = 21 bbls FE acid 15% Gantz - total displacement = 21 bbls FE acid 15% Sand & shale 0 - 105(Wet @ 114'-1/4" H<sub>2</sub>0) 105 - 115Shale Sand & Shale 115-175 Red Rock & Shale 175 - 211 Sand & Shale 211 - 320 320 - 349Red Rock & Shale 349 - 379 Sand & Shale 379 - 439 Red Rock Red Rock & Sand (Wet @ 478' - 1/2" H<sub>2</sub>0) Sand & Shale 439 - 510 510 - 1260 1260 - 1275 Red Rock Sand & Shale 1275 - 1332 1332 - 1337 Coal 1337 - 1590 Sand & Shale 1590 - 1624 Red Rock 1624 - 1831 Sand & Shale Little Lime 1831 - 1857 1857 - 1876 Shale Big Lime/Dolomite 1876 - 1967 1967 - 2004 Big Injun Sand & Shale 2004 - 21662166 - 2204 Berea & Shale 2204 - 22662266 - 2316Sand & Shale (Gas @ 2275) Gantz Sand & Shale 2318 - 2513 Sand & Shale 2316 - 2513 2513 - 2543 2543 - 2568 Gordon Sand & Shale

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WV Department of Environmental Protection



Roanches 1

WW-4A Revised 6-07 Date: JULY 21 ZOIN
 Operator's Well Number

608216

3) API Well No.: 47 - 041 - 04091

#### STATE OF WEST VIRGINIA

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

4) Surface Ow	ner(s) to be served:	5) (a) Coal Operator		
(a) Name	US Army Corps of Engineers	Name	N/A	
Address	ATTN: Jeffrey H. Toler, Resource Manage	er Address		
	1012 Skin Creek Road			
(b) Name	Weston, WV 26452-7435	(b) Coal Own	ner(s) with Declaration	
Address	(304) 269-4588	Name	U.S. Bureau of Land Management	
		Address	Division of Natural Resources	
			Minerals Management Service	
(c) Name		Name	PO Box 25627	
Address		Address	Denver, CO 80255-0627	
6) Inspector	Barry Stollings	(c) Coal Less	see with Declaration	
Address	28 Conifer Drive	Name	N/A	
	Bridgeport, WV 26330	Address		
Telephone	(304) 552-4194			

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
- (2) 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.

Well Operate	pr Equitrans, L.P.	RECEIVED
By:	Justin Macken Un A. Merlin	Office of Oil and Gas
Its:	VP Gas Systems Planning	AUG 1 0 2017
Address	625 Liberty Avenue V	AUU 1 0 2017
	Pittsburgh, PA 15222	WV Department of
Telephone	412-395-5554; Email: jmacken@eqt.com	Environmental Protection
Subscribed and sworn before me this <u>3rd</u> <u>Juca J. Spanie</u> My Commission Expires	day of Notary Public	MONWEALTH OF PENNSYLVANI, NOTARIAL SEAL Lisa J. Spaniel, Notary Public City of Pittsburgh, Allegh ny County Gommission Expires A. dl 29, 2018

Oil and Gas Privacy Notice

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 <u>depprivacyoffier<sup>a</sup> wy.gov</u>.

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

WW-2A1 (Rev. 1/11)

Operator's Well Number 6108216

#### 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 Application, 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.	Royalty	Book/Page
Will E. Morris and Camella Morris, his wife ETAL	Pittsburgh & West Virginia Gas Company	Flat Rate-Gas; 1/8-Oil	148/71
Pittsburgh and West Virginia Gas Company	Equitable Gas Company	W.I.	215/185
Equitable Gas Company	Equitrans, Inc.	W.I.	468/325
Equitable Gas Company	Equitrans, Inc.	W.I.	455/432
Equitrans, Inc. ETAL (Confirmatory Assignment of Leases)	Equitrans, LP	W.I.	673/29

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

The permit applicant for the proposed well work add ressed 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
- WV 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 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 appr opriate aut hority before the affected activity is initiated.

RECEIVED Office of Oil and Gas Well Operator: By:Its: Equitrans, LP

Justin Macken: VP Gas Systems Planning

AUG 2 1 201/

WV Department of Environmental Protection

WW-9	
(5/16)	A PI Number $47 - 041 - 04091$
	Operator's Well No608216
STATE OF WEST VIE	GINIA
DEPARTMENT OF ENVIRONMEN	
OFFICE OF OIL AND FLUIDS/ CUTTINGS DISPOSAL & R	
Operator Name_Equitrans, L.P.	OP Code 5547235
Watershed (HUC 10) Stonewall Jackson Lake (Skin Creek) Quade	angle Roanoke/Crawford NW
Do you anticipate using more than 5,000 bbls of water to complete the prop Will a pit be used? Yes No	oosed well work? Yes No V
If so, please describe anticipated pit waste: N/A	
Will a synthetic liner be used in the pit? Yes No 🗸	If so, what ml.?
Proposed Disposal Method For Treated Pit Wastes:	ANY WELL EFFLUENT MUST BE CONTAINED IN TANKS UNTIL
Land Application (if selected provide a complete	d form WW. O. CPP) DISPOSING OF OFFFITE .
Underground Injection (UIC Permit Number	) <b>**</b>
Reuse (at API Number	)
Off Site Disposal (Supply form WW-9 for disp Other (Explain	isal location)
Will closed loop systembe used? If so, describe: <u>N/A</u>	
Drilling medium anticipated for this well (vertical and horizontal)? Air, free	shwater, oil based, etc. N/A
-If oil based, what type? Synthetic, petroleum, etc	
Additives to be used in drilling medium? N/A	
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.	Removed Offsite
-If left in pit and plan to solidify what medium will be used? (cen	ent, lime, sawdust) N/A
-Landfill or offsite name/permit number? (See Attachment)	
Permittee shall provide written notice to the Office of Oil and Gas of any lo West Virginia solid waste facility. The notice shall be provided within 24 h where it was properly disposed.	
I certify that I understand and agree to the terms and conditions of on April 1, 2016, by the Office of Oil and Cas of the West Virginia Depar provisions of the permit are enforceable by law. Violations of any term or or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined application form and all attachments thereto and that, based on my inquiry the information, I believe that the information is true, accurate, and com submitting false information, including the possibility of fine or imprisonm	tment of Environmental Protection. I understand that the condition of the general permit and/or other applicable law and am familiar with the information submitted on this of those individuals immediately responsible for obtaining olete. I am aware that there are significant penalties for

Company Official Signature fust A- Mach.	AUG-1 0 2017
Company Official (Typed Name) Justin Macken	
Company Official Title VP Gas Systems Planning	WV Department of Environmental Protection

Subscribed and sworn before me this 3rd	day of July , 2017	
Bisa J. Spaniel	COMMONWEALTH OF PENNSYLVANIA Public	
My commission expires	NOTARIAL SEAL Lisa J. Spaniel, Notary Public	
	City of Pittsburgh, Allegheny County My Commission Expires April 29, 2018	09/01/2017
	MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES	

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Form W	W-9
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#### 608216 Operator's Well No Proposed Revegetation Treatment: Acres Disturbed less than one (1) acre Preveg etation pH N/A Lime 3 Tons/acre or to correct to pH 6 1/2 10-20-20 or equivalent Fertilizer type Fertilizer amount\_600 lbs/acre Mulch\_ Hay or Straw Tons/acre Seed Mixtures Temporary Permanent Seed Type lbs/acre Seed Type lbs/acre N/A Meadow Mix 40 lbs per acre

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Comments:		
		RECEIVED Office of Oil and Gas
		AUG 1 0 2017
		WV Department of Environmental Protecti
Fitle: Inspector	Date: 7-3/-/7	Environmental Protect

## Attachment WW-9 Landfill or Offsite Disposal Name/Permit Number

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Region	Eacility Type	Facility Location Name	Sucet	City	State	Zip Code
		Nichols (SWIW #13) 1 • A	10555 Veto Road	Belpre	OH	45714
1	Disposal Well	D - 1 (SWIW #7)	3549 Warner Road	Fowler	ÓH Í	44418
i a	Disposal Well	Goff (SWTW #27) 1	9350 East Pike Road	Norwich	OH	43767
1	Disposal Well	Eva Jean Root Wolf 1 and 4. Wolf 2.	5480 State Route 5	Newton Fails	OH	44444
1	Disposal Well	Pander R&P (SWIW # 15 & #16) 1 & 2	5310 State Route 5	Newton Falls	OH	44144
12	Disposal Well	John G. Delores Blazek 2	5700 Allyn Road	Hiram	OH	44234
N N	Disposal Well	Belden & Blake Corporation 2 - 1050	8000 Edison Street	Louisville	OH	44641
	Disposal Well	Plum Creek I	4285 Karg Industrial Parkway	Kent	OH	44240
		Ed Lyons (Genet) 1	7700 Lincoln Street	East Canton	OH	44730

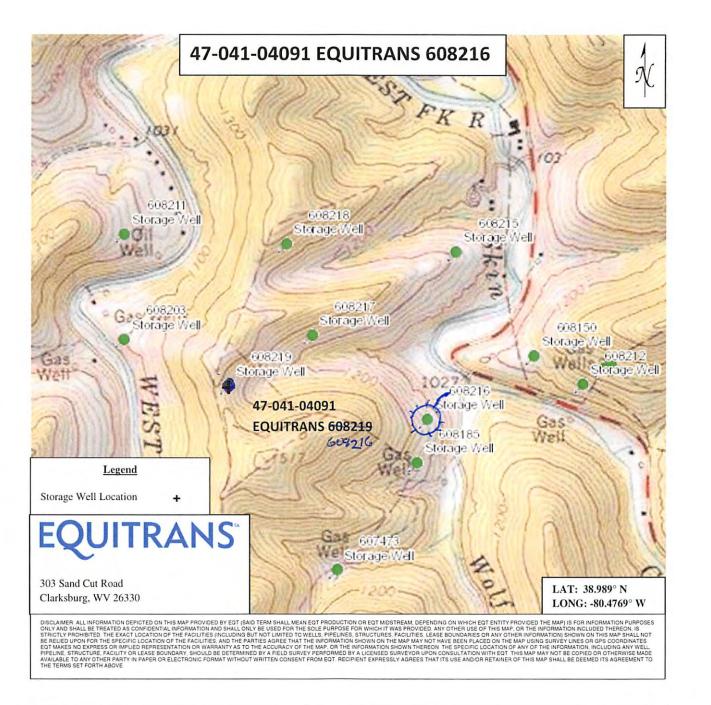
#### List of Ohio SWDs 6.13.2013

Wells	County	Township	State	Permit #s	Entity
Belden & Blake #2	Stark	Marlboro	Ohio	34-151-2-3420	Heckmann Water Resources (CVR), Inc.
Blazek #2	Portage	Hiram	Ohio	34-133-2-0525	Heckmann Water Resources (CVR), Inc.
Lyons #1	Stark	Osnaburg	Ohio	34-151-2-1198	Heckmann Water Resources (CVR), Inc.
Pander R & P #1	Trumbull	Newton	Ohio	34-155-2-3795	Heckmann Water Resources (CVR), Inc.
Pander R & P #2	Trumbull	Newton	Ohio	34-155-2-3794	Heckmann Water Resources (CVR), Inc.
Plum Creek #1	Portage	Brimfield	Ohio	34-133-2-3614	Heckmann Water Resources (CVR), Inc.
Eva Jean Root Wolf #1	Trumbull	Newton	Ohio	34-155-2-1893	Heckmann Water Resources (CVR), Inc.
Wolf #2	Trumbull	Newton	Ohio	34-155-2-1894	Heckmann Water Resources (CVR), Inc.
Eva Jean Root Wolf #4	Trumbull	Newton	Ohio	34-155-2-3203	Heckmann Water Resources (CVR), Inc.
D-1 (AnnaRock)	Trumbull	Fowler	Ohio	34-155-2-2403	Heckmann Water Resources (CVR), Inc.
<sup>#</sup> ∿√w <sup>#</sup>	<sup>13</sup> Washington	Dunham	Ohio	34-167-2-3862	Heckmann Water Resources (CVR), Inc.
Goff #1 Applalachian Water (APP or AW	Muskingum (S) Connelsville	Union	Ohio PA	34-119-2-8776 2609201	Heckmann Water Resources (CVR), Inc.

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AUG 1 0 2017

WV Department of Environmental Protection



AUG 1 0 2017
WV Department of Environmental Protection

## 09/01/2017

104091W

of Environmental Protection Dil and Gas
ON FORM: GPS
WELL NO.: 608216
America
rans, L.P.
DISTRICT: Court House Rural
ford NW
rps of Engineers
Management, Division of Natural Resources
202780
631 GPS ELEVATION:

named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: 1. height above mean sea level (MSL) - meters.
- 2. Accuracy to Datum - 3.05 meters
- Data Collection Method: 3.

Survey grade GPS \_\_\_\_\_: Post Processed Differential \_\_\_\_\_

 $\begin{array}{c} \text{Real-Time Differential} \\ \text{Mapping Grade GPS } \underline{X} : \text{Post Processed Differential} \end{array} \underline{X}$ 

Real-Time Differential

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AUG 1 0 2017

WV Department of Environmental Protection

#### 4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Land Man Signature Date

09/01/2017