

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-001-03312H6A County Barbour District Pleasant
Quad Philippi Pad Name PHL29HS Field/Pool Name Philippi
Farm Name PHILIPPI DEVELOPMENT, INC. Well Number PHL29DHS
Operator (as registered with the OOG) CNX Gas Company LLC
Address P.O. Box 1248 City Jane Lew State WV Zip 26378

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top Hole Northing 4,339,557.56 m Easting 581,627.54 m
Landing Point of Curve Northing 4,339,413.37 m Easting 581,843.15 m
Bottom Hole Northing 4,337,552.68 m Easting 583,857.74 m

Elevation (ft) 1406' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilled Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)

Mineral Oil based Mud, Bactericide, Polymers and Weighting Agents.

Date Permit Issued 10/08/2013 Date drilling commenced 01/15/2014 Date drilling ceased 07/03/2014
Date completion activities began 10/15/2014 Date completion activities ceased 11/27/2014
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plu

Freshwater depth(s) ft 474' Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N
Coal depth(s) ft 474', 595' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) Y

Received
Office of Oil & Gas

JUN 01 2015

Reviewed by:

Batton, Daniel

6/24/15

WS 6/25/15

API 47-001-03312H6A Farm name PHILIPPI DEVELOPMENT, INC. Well number PHL29DHS

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement Circulate (Y/N) * Provide details to the right *
Conductor	26"	20"	80'	N	J-55 94# / 80'	N/A	Y
Surface	17 1/2"	13 3/8"	690.4'	N	J-55 54.5# / 690.4'	N/A	Y
Coal	-	-	-	-	-	-	-
Intermediate 1	12 1/4"	9 5/8"	2013.1'	N	J-55 36# / 2013.1'	N/A	Y
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	8 3/4"	5 1/2"	16699.6'	N	P-110 20# / 16699.6'	N/A	N
Tubing	5 1/2"	2 3/8"	7814'	N	L-80 4.7# / 7814'	N/A	N
Packer Type and Depth Set		None					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft 3/sks)	Volume (ft 3)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	77	15.6	1.18	90.5	Surface	24
Surface	Class A	566	15.6	1.18	668	Surface	8
Coal	-	-	-	-	-	-	-
Intermediate 1	Class A	674	15.6	1.18	795	Surface	8
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	Class A (Lead) / Class A (Tail)	1261 / 2436	15.1 / 15.6	1.26	4658	1600'	8
Tubing	-	-	-	-	-	-	-

Drillers TD (ft) 7890' Loggers TD (ft) 7816'

Deepest formation penetrated: Marcellus Plug back to (ft) 7890'-6600'

Plug back procedure: Solid Plug From 7890' to 6600'

Kick Off Depth (ft) 6620'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well Cored Yes No Conventional Sidewall Were Cuttings Collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING
Conductor - No centralizers used.. Fresh Water - Bow spring centralizers on first joint then every fourth joint to 100 feet from surface.. Coal - Bow spring centralizers on first joint then every fourth joint to 100 feet from surface.. Intermediate - Bow spring centralizers one on the first two joints and every fourth joint until inside surface casing.. Production - Rigid bow spring centralizer on first joint then every 2 casing joints (free floating) through the lateral and the curve. (Note: cementing the 5 1/2" casing completely in open hole lateral and curve.).

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS Plug and Perforation Shot Hole

WAS WELL COMPLETED OPEN HOLE Yes No DETAILS Office of Oil & Gas

JUN 01 2015

WERE TRACERS USE Yes No TYPES OF TRACER(S) USED _____

API 47-001-03312H6A Farm name PHILIPPI DEVELOPMENT, INC. Well number PHL29DHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number Of Perforations	Formation(s)
1.0	10/15/2014	16672	16602	32	Marcellus
2.0	10/17/2014	16578	16456	40	Marcellus
3.0	10/17/2014	16428	16306	40	Marcellus
4.0	10/18/2014	16278	16156	40	Marcellus
5.0	10/27/2014	16128	16006	40	Marcellus
6.0	10/28/2014	15978	15856	64	Marcellus
7.0	10/29/2014	15819	15706	40	Marcellus
8.0	10/29/2014	15678	15556	40	Marcellus
9.0	10/31/2014	15524	15408	40	Marcellus
10.0	11/6/2014	15378	15256	40	Marcellus
11.0	11/7/2014	15228	15114	40	Marcellus
12.0	11/7/2014	15078	14956	40	Marcellus
13.0	11/7/2014	14928	14806	40	Marcellus
14.0	11/8/2014	14778	14656	40	Marcellus
15.0	11/9/2014	14628	14500	40	Marcellus
16.0	11/10/2014	14478	14356	40	Marcellus
17.0	11/11/2014	14328	14206	40	Marcellus
18.0	11/11/2014	14178	14056	40	Marcellus
19.0	11/12/2014	14028	13906	40	Marcellus
20.0	11/12/2014	13878	13756	40	Marcellus
21.0	11/12/2014	13728	13606	40	Marcellus
22.0	11/12/2014	13578	13452	40	Marcellus
23.0	11/12/2014	13428	13306	40	Marcellus
24.0	11/13/2014	13278	13156	40	Marcellus
25.0	11/18/2014	13128	13008	40	Marcellus
26.0	11/19/2014	12978	12856	40	Marcellus
27.0	11/20/2014	12828	12706	40	Marcellus
28.0	11/20/2014	12678	12556	40	Marcellus
29.0	11/20/2014	12534	12106	40	Marcellus
30.0	11/21/2014	12378	12256	40	Marcellus
31.0	11/21/2014	12224	12114	40	Marcellus
32.0	11/21/2014	12078	11956	40	Marcellus
33.0	11/22/2014	11928	11816	40	Marcellus
34.0	11/22/2014	11778	11656	40	Marcellus
35.0	11/23/2014	11628	11500	40	Marcellus
36.0	11/23/2014	11478	11356	40	Marcellus
37.0	11/23/2014	11328	11200	40	Marcellus
38.0	11/23/2014	11178	11056	40	Marcellus

Received
Office of Oil & Gas
JUN 01 2015

API 47-001-03312H6A Farm name PHILIPPI Well number PHL29DHS
DEVELOPMENT, INC.

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number Of Perforations	Formation(s)
39.0	11/23/2014	11028	10906	40	Marcellus
40.0	11/24/2014	10878	10756	40	Marcellus
41.0	11/24/2014	10730	10606	40	Marcellus
42.0	11/24/2014	10578	10456	40	Marcellus
43.0	11/24/2014	10428	10306	40	Marcellus
44.0	11/24/2014	10278	10156	40	Marcellus
45.0	11/25/2014	10128	10006	40	Marcellus
46.0	11/25/2014	9978	9856	40	Marcellus
47.0	11/25/2014	9828	9706	40	Marcellus
48.0	11/25/2014	9678	9556	40	Marcellus
49.0	11/25/2014	9514	9406	40	Marcellus
50.0	11/25/2014	9378	9256	40	Marcellus
51.0	11/26/2014	9220	9106	40	Marcellus
52.0	11/26/2014	9078	8956	40	Marcellus
53.0	11/26/2014	8928	8802	40	Marcellus
54.0	11/26/2014	8778	8565	40	Marcellus
55.0	11/26/2014	8628	8502	40	Marcellus
56.0	11/27/2014	8478	8357	40	Marcellus
57.0	11/27/2014	8329	8206	40	Marcellus
58.0	11/27/2014	8180	8059	40	Marcellus
59.0	11/27/2014	8031	7910	40	Marcellus

API 47-001-03312H6A Farm name PHILIPPI DEVELOPMENT, INC. Well number PHL29DHS

STIMULATION INFORMATION PER STAGE

Stage No.	Stimulations Date	Avg Pump Rate (BPM)	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen / other (gals)
1.0	10/15/2014	76.8	8201	8340	4588	226841	6859	3835
2.0	10/17/2014	76.3	8293	8654	4784	323364	9862	4234
3.0	10/17/2014	70.4	8248	8849	5427	326809	15438	5042
4.0	10/18/2014	72.27	8116	8711	5322	325920	14456	5128
5.0	10/27/2014	78.4	7850	8454	5340	201265	5952	3522
6.0	10/28/2014	55	7990	8658	5534	199022	10418	6901
7.0	10/29/2014	58.73	8487	9009	5396	199360	10397	4324
8.0	10/29/2014	54.75	8405	9023	5500	158555	10328	3712
9.0	10/31/2014	62.96	8693	8693	5402	198605	6710	3601
10.0	11/6/2014	65.8	8016	8235	5134	203112	6452	3572
11.0	11/7/2014	70.5	8178	8553	5264	199889	7164	3698
12.0	11/7/2014	58.29	8268	8711	5327	200432	7240	3804
13.0	11/7/2014	54.4	7764	8376	5285	200256	8004	3838
14.0	11/8/2014	58.17	8187	8559	5652	200780	6301	3632
15.0	11/9/2014	54.5	8327	8870	5199	200560	5961	3589
16.0	11/10/2014	57.5	8490	8908	5545	201831	5808	3635
17.0	11/11/2014	62.4	8295	8657	5611	233946	6322	3725
18.0	11/11/2014	80.6	8058	8390	5915	202743	5236	3545
19.0	11/12/2014	78.65	8283	8608	5857	202877	4849	3505
20.0	11/12/2014	77.9	8107	8532	5360	201289	5436	3576
21.0	11/12/2014	80.9	8230	8680	5396	201230	5409	3565
22.0	11/12/2014	82.35	8252	8603	5207	201271	5834	3592
23.0	11/12/2014	85.79	8278	8589	5521	202900	4977	3510
24.0	11/13/2014	88.96	8156	8587	5537	203295	4862	3500
25.0	11/18/2014	86.03	8300	8605	5667	199025	4676	3434
26.0	11/19/2014	87.02	8239	8662	5546	204364	4655	3451
27.0	11/20/2014	89.7	8120	8445	5346	200010	5125	3527
28.0	11/20/2014	93.4	8239	8678	5272	203005	5152	3519
29.0	11/20/2014	89.9	8241	8694	5545	198943	5119	3495
30.0	11/21/2014	88.21	8390	8894	5558	200704	4896	3482
31.0	11/21/2014	98.6	8339	8753	5291	203371	4991	3501
32.0	11/21/2014	91.9	8245	8641	5209	202868	4929	3402
33.0	11/22/2014	91.7	8221	8730	5558	202053	5223	3520
34.0	11/22/2014	87.5	8222	8373	5529	202053	5975	3448
35.0	11/23/2014	87.74	8377	8940	5775	202645	5975	3575
36.0	11/23/2014	86.93	8282	8692	5276	201986	4647	3397
37.0	11/23/2014	87.34	8320	8886	5290	200718	4517	3372
38.0	11/23/2014	87.4	8140	8672	5143	203969	4701	3443

Received
Office of Oil & Gas
JUN 0 14 2015

API 47-001-03312H6AFarm name PHILIPPI
DEVELOPMENT, INC.Well number PHL29DHS

STIMULATION INFORMATION PER STAGE

Stage No.	Stimulations Date	Avg Pump Rate (BPM)	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen / other (gals)
39.0	11/23/2014	79.9	8023	8504	5421	200884	5092	3495
40.0	11/24/2014	85.45	8284	8989	4980	202683	4679	3390
41.0	11/24/2014	87.62	8287	8589	5032	201197	4546	3389
42.0	11/24/2014	88.04	8230	8523	5108	201867	4574	3389
43.0	11/24/2014	87.2	8235	8837	5220	200850	5072	3305
44.0	11/24/2014	87	8198	8372	5543	202089	4620	3413
45.0	11/25/2014	82.6	8286	8492	5162	203223	4608	3451
46.0	11/25/2014	82.98	8541	8816	5391	203322	4650	3207
47.0	11/25/2014	91.48	8572	8691	5482	198673	4563	3329
48.0	11/25/2014	77.98	8478	8928	5632	202527	4766	3374
49.0	11/25/2014	74.8	8209	8537	5079	201145	4696	3406
50.0	11/25/2014	67.9	8142	8649	5362	202145	4607	3412
51.0	11/26/2014	74.32	8536	8975	5279	202221	4726	3380
52.0	11/26/2014	72.55	8421	8792	4971	205993	4964	3388
53.0	11/26/2014	75.3	8466	9099	4761	200178	4628	3345
54.0	11/26/2014	81.5	8260	8907	4955	201499	4586	3377
55.0	11/26/2014	93.5	8311	8778	5205	198768	4659	3386
56.0	11/27/2014	93.5	8217	8746	4980	201125	4627	3381
57.0	11/27/2014	97.96	8339	8780	5034	199210	4576	3327
58.0	11/27/2014	97.66	8405	8856	5345	203491	4293	3320
59.0	11/27/2014	98.36	8313	8679	4927	201021	4215	3317

Received
Office of Oil & Gas
JUN 01 2015

API 47-001-03312H6A Farm name PHILIPPI DEVELOPMENT, INC. Well number PHL29DHS

PRODUCING FORMATION(S)	DEPTHS	TVD	MD
MARCELLUS	7729'- 7816'		

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 881 psi Bottom Hole 4728 psi DURATION OF TEST 166 hrs
 OPEN FLOW Gas 9454 mcfpd Oil 0 bpd NGL 0 bpd Water 1663 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY / FORMATION	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER,BRINE,GAS,H2S, ETC)
					SEE ATTACHED

Please insert additional pages as applicable.

Drilling Contractor Patterson UTI
 Address 207 Carlton Dr City Eighty Four State PA Zip 15330
 Logging Company Horizon
 Address 7136 South Yale, Suite 414 City Tulsa State OK Zip 74136-6378
 Cementing Company CalFrac
 Address 2001 Summit View Rd City Smithfield State PA Zip 15478
 Stimulating Company Halliburton
 Address 121 Champion Way, Suite 110 City Canonsburg State PA Zip 15317-5817

Please insert additional pages as applicable.

Completed by CNX Gas WV Operations Company, LLC - Drilling and Completions Telephone 888-400-0000
 Signature Steve Spitzer Title Steve Spitzer - Completions Manager-Gas WV Date 5/28/15

Received
Office of Oil & Gas
JUN 04 2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

API 47-001-03312H6A Farm name PHILIPPI DEVELOPMENT, INC. Well number PHL29DHS

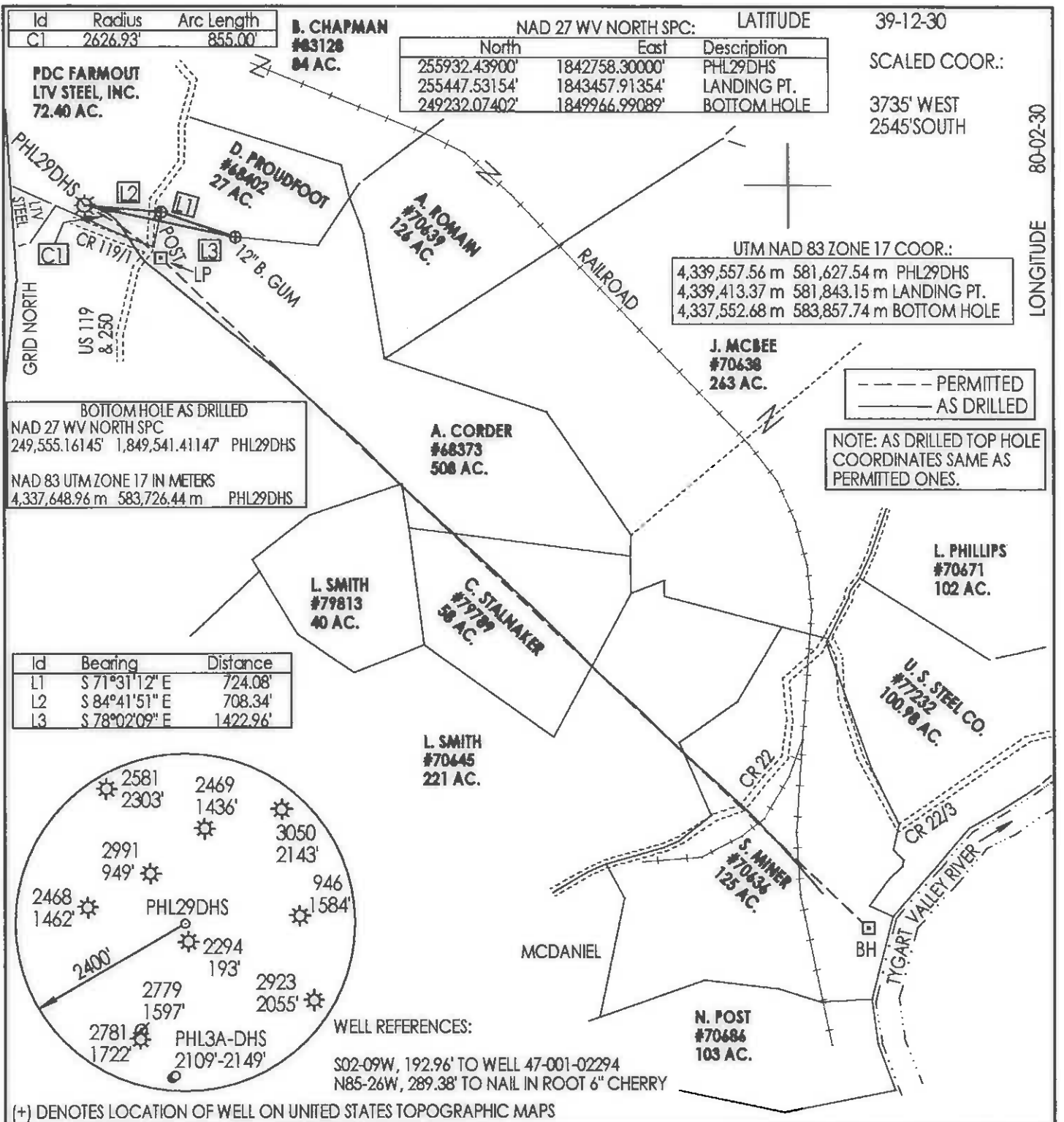
LITHOLOGY / FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER, BRINE, GAS, H2S, ETC)
	DEPTH IN FT TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
FILL	0	103			
SAND/SHALE	103	120			
SILTSTONE/SHALE	120	160			
SAND/SHALE	160	200			
SHALE	200	220			
SILTSTONE/SAND/SHALE	220	240			
SAND/SHALE	240	360			
SAND/SHALE	360	380			
SAND/SHALE	380	440			
SAND/SHALE/COAL	440	460			
SAND/SHALE	460	520			
SAND/SHALE	520	800			
SAND/SHALE	800	840			
SILTSTONE	840	860			
SAND/SHALE	860	1020			
SILTSTONE	1020	1040			
SAND/SHALE	1040	1120			
SILTSTONE	1120	1140			
SAND/SHALE/SILTSTONE	1140	1160			
SILTSTONE	1160	1180			
SAND/SHALE	1180	1220			
SILTSTONE	1220	1240			
SAND/SHALE	1240	1280			
SILTSTONE	1280	1300			
LIMESTONE	1300	1400			
SILTSTONE	1400	1426			
LIMESTONE	1426	1520			
BASE BIG INJUN	1520	2182			
FOURTH SAND	2182	2275			
FIFTH SAND	2275	2714			
WARREN MARKER	2714	2737			
WARREN	2737	2982			
SPEECHLEY	2982	3198			
BALLTOWN	3198	3896			
RILEY	3896	4012			
FAULT	4012	4257			
BENSON	4257	4491			
FIRST ELK	4491	4632			

Received
Office of Oil & Gas
JUN 01 2015

API 47-001-03312H6A Farm name PHILIPPI DEVELOPMENT, INC. Well number PHL29DHS

LITHOLOGY / FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER,BRINE,GAS,H2S, ETC)
	DEPTH IN FT TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
SECOND ELK	4632	4880			
THIRD ELK	4880	5018			
FAULT	5018	5044			
THIRD ELK	5044	5264			
FOURTH ELK	5264	5606			
RHINESTREET	5606	5741			
HAVERTY	5741	6161			
FOX	6161	6620			
SYCAMORE GRIT	6620	6821			
CASHAQUA	6821	7025			
"FRIB"	7025	7152			
MIDDLESEX	7152	7279			
WEST RIVER	7279	7482			
BURKETT	7482	7515			
TULLY	7515	7568			
HAMILTON	7568	7729			
MARCELLUS	7729	7816			

Received
Office of Oil & Gas
JUN 01 2015



FILE NUMBER: _____ DRAWING NUMBER: CNXPHL29DHSR1AD.PCS SCALE: 1" = 1300' MINIMUM DEGREE OF ACCURACY: SUBMETER PROVEN SOURCE OF ELEVATION: DGPS SURVEY RTK SYSTEM	I THE UNDERSIGNED, HEREBY STATE THAT THIS PLAT 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 DEPARTMENT OF ENERGY. (SIGNED) _____ STEPHEN D. LOSH, P.S. #674	
STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS #10 McJUNKIN ROAD NITRO, WV 25143-2506 FORM WW-6	LAND SURVEYING SERVICES 21 CEDAR LANE, BRIDGEPORT, WV 26330 PHONE: 304-842-2018 OR 842-5762	DATE: JUN 01 2015 OPERATORS WELL NO.: PHL29DHS API WELL NO.: 47-001-03312 STATE COUNTY PERMIT
WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION <input checked="" type="checkbox"/> WASTE DISPOSAL ___ CBM ___ (IF "GAS") PRODUCTION ___ STORAGE <input checked="" type="checkbox"/> DEEP ___ SHALLOW <input checked="" type="checkbox"/>	LOCATION: ELEVATION 1406.00' WATERSHED FOXGRAPE RUN DISTRICT PLEASANT COUNTY BARBOUR QUADRANGLE PHILIPPI LEASE NUMBER SEE ABOVE	SURFACE OWNER PHILIPPI DEVELOPMENT, INC. ACREAGE 2385.55 (20-23) OIL & GAS ROYALTY OWNER A. CORDER, ET. AL. LEASE ACREAGE 1728.38
PROPOSED WORK: DRILL <input checked="" type="checkbox"/> CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) HORIZONTAL	TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD = 7727.24' TMD = 16737' WELL OPERATOR CNX GAS COMPANY LLC DESIGNATED AGENT MATTHEW IMRICH ADDRESS P. O. BOX 1248 JANE LEW, WV 26378 ADDRESS P. O. BOX 1248 JANE LEW, WV 26378	COUNTY NAME BARBOUR PERMIT

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/15/2014
Job End Date:	11/27/2014
State:	West Virginia
County:	Barbour
API Number:	47-001-03312-00-00
Operator Name:	CONSOL Energy Inc.
Well Name and Number:	PHL 29D
Longitude:	-80.05465100
Latitude:	39.20144800
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,730
Total Base Water Volume (gal):	15,101,488
Total Base Non Water Volume:	0



Received
Office of Oil & Gas
JUN 01 2015



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid	Fresh Water	7732-18-5	100.00000	93.26104	Density = 8.330
CALCIUM CHLORIDE LIQUID, HYDROCHLORIC ACID 5-10%, HYDROCHLORIC ACID 10-30%, LCA-1, LP-65 MC, MC MX 437-5, MC MX 8-2544, Premium White 100 Mesh Sand, Premium White 40/70 Mesh Sand, PermVis VFR-10	Halliburton / Multi-Chem	Additive, Brine, Live Culture- Nitrate Reducing Bacteria, Proppant, Scale Inhibitor, Solvent	Crystalline silica, quartz	14808-60-7	100.00000	5.16153	
			Water	7732-18-5	100.00000	1.75656	
			Polyacrylate	Confidential	30.00000	0.39410	
			Inorganic salt	Confidential	30.00000	0.39410	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.39410	
			Hydrochloric acid	7647-01-0	30.00000	0.15058	
			Calcium nitrate	10124-37-5	60.00000	0.04979	

47-001-03312

		Ammonium chloride	12125-02-8	10.00000	0.01484
		Alcohols, C12-16, ethoxylated	88551-12-2	10.00000	0.01314
		Fatty acid ester	Confidential	5.00000	0.00657
		9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-, (Z)	93-83-4	5.00000	0.00657
		Calcium chloride	10043-52-4	50.00000	0.00417
		Organic phosphonate	Confidential	60.00000	0.00102
		Nutrient Mixture	NA	5.00000	0.00099
		Paraffinic solvent	Confidential	100.00000	0.00061

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

Reservoir & Gas
 Office
 JUN 10 10:15