

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

API 47 - 051 - 01754 County Marshall District Washington
Quad Moundsville Pad Name Hart Field/Pool Name _____
Farm name John Hart Well Number Hart 8H
Operator (as registered with the OOG) Chevron Appalachia, LLC
Address 700 Cherrington Parkway City Coraopolis State PA Zip 15108

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 516922.76 Easting 1644546.93
Landing Point of Curve Northing 516649.16 Easting 1643043.13
Bottom Hole Northing 522282.54 Easting 1638183.80

Elevation (ft) 1329' 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

Drilling 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)
Synthetic - fluid loss control, emulsifiers, shale stabilizer

Date permit issued 6/16/2014 Date drilling commenced 10/4/2014 Date drilling ceased 9/22/2015
Date completion activities began 6/7/18 Date completion activities ceased 11/13/18
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 254' MD from GL Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1997' MD from GL Void(s) encountered (Y/N) depths N
Coal depth(s) ft 859' MD from GL Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed Reviewed by:
Justin Anderson
3/25/19

WR-35
Rev. 8/23/13

API 47-051 - 01754 Farm name John Hart Well number Hart 8H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	36"	30"	40'	New			Y
Surface	26"	20"	307'	New	J-55; 94		Y
Coal	17 1/2"	13 3/8"	896'	New	J-55; 54.50	740'	Y
Intermediate 1	12 1/4"	9 5/8"	2219'	New	L-80;40		Y
Intermediate 2							
Intermediate 3							
Production	8 1/2"	5 1/2"	14978'	New	P-110; 20		Y
Tubing							
Packer type and depth set							

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	Bulk Cement	Bulk Cement				Surface	8
Surface	Class A	600	15.6	1.2	720	Surface	8
Coal	Class A	843	15.6	1.2	1012	Surface	8
Intermediate 1	Class A	820	15.6	1.18	967	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead: 1291; Tail: 1653	Lead & Tail: 15.20	Lead & Tail: 1.26	Lead: 1627; Tail: 2083	500' below 8 5/8" shoe, as planned	8
Tubing							

Drillers TD (ft) 15039' Loggers TD (ft) 15039'
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

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Kick off depth (ft) 5368'
 WV Department of Environmental Protection

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 One bow spring centralizer every two joints on the Water, Coal, and Intermediate strings. Production String has two centralizers every joint in the lateral and curve, then one every two joints from KOP to surface.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS SEE ATTACHED PERFORATION / STIMULATION REPORT

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API: 47-051-01754	Farm Name: John Hart	Well Number: Hart 8H
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PERFORATION RECORD					
Stage No.	Perforation Date	Perforated From TMD Ft.	Perforated To TMD Ft.	Number of Perforations	Formation(s)
1	6/26/18	14786	14946	47	Marcellus
2	6/26/18	14586	14746	47	Marcellus
3	6/27/18	14386	14546	47	Marcellus
4	6/28/18	14186	14346	47	Marcellus
5	6/28/18	13986	14146	47	Marcellus
6	6/29/18	13786	13946	47	Marcellus
7	6/29/18	13586	13746	47	Marcellus
8	6/30/18	13386	13546	47	Marcellus
9	7/1/18	13186	13346	47	Marcellus
10	7/1/18	12986	13146	47	Marcellus
11	7/2/18	12786	12946	47	Marcellus
12	7/2/18	12586	12746	47	Marcellus
13	7/3/18	12386	12546	47	Marcellus
14	7/3/18	12186	12346	47	Marcellus
15	7/4/18	11986	12146	47	Marcellus
16	7/4/18	11786	11946	47	Marcellus
17	7/5/18	11586	11746	47	Marcellus
18	7/6/18	11386	11546	47	Marcellus
19	7/6/18	11186	11346	47	Marcellus
20	7/7/18	10986	11146	47	Marcellus
21	7/7/18	10786	10946	47	Marcellus
22	7/8/18	10586	10746	47	Marcellus
23	7/8/18	10386	10546	47	Marcellus
24	7/9/18	10186	10346	47	Marcellus
25	7/9/18	9986	10146	47	Marcellus
26	7/10/18	9786	9946	47	Marcellus
27	7/10/18	9586	9746	47	Marcellus
28	7/11/18	9386	9546	47	Marcellus
29	7/11/18	9186	9346	47	Marcellus
30	7/12/18	8986	9146	47	Marcellus
31	7/12/18	8786	8946	47	Marcellus
32	7/13/18	8586	8746	47	Marcellus
33	7/13/18	8386	8546	47	Marcellus
34	7/13/18	8186	8346	47	Marcellus
35	7/14/18	7986	8146	47	Marcellus
36	7/14/18	7798	7946	47	Marcellus
37	7/15/18	7610	7758	47	Marcellus
38	7/15/18	7422	7570	47	Marcellus
39					
40					

Please insert additional copies of this page if additional rows are needed.

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API: 47-051-01754	Well Name: John Hart	Well Number: Hart 8H
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STIMULATION INFORMATION / STAGE								
Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable).								
Stg No.	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	6/26/18	99.1	8856	4450	3931	400070	9420	n/a
2	6/26/18	96.2	8825	4820	4129	401353	9830	n/a
3	6/27/18	95.1	9000	6104	4813	398954	9573	n/a
4	6/28/18	96.7	8825	5943	4742	400358	9771	n/a
5	6/28/18	99.9	8921	n/a	4798	399063	9720	n/a
6	6/29/18	99.3	8736	6035	4582	400946	9750	n/a
7	6/29/18	99.7	8963	6592	4639	400836	9660	n/a
8	6/30/18	99.9	8655	6012	4750	399383	9646	n/a
9	7/1/18	96.7	9013	6806	4667	400664	9627	n/a
10	7/1/18	95	8863	6048	4601	400814	9394	n/a
11	7/2/18	98.6	8618	6552	4429	399505	9481	n/a
12	7/2/18	99.1	8958	6535	4760	400176	9517	n/a
13	7/3/18	98.2	8535	6548	4658	399445	9493	n/a
14	7/3/18	100	8662	6440	4722	400083	9563	n/a
15	7/4/18	99.6	8444	6122	4544	399275	9444	n/a
16	7/4/18	99.9	8327	6646	4701	399615	9449	n/a
17	7/5/18	99	8466	6101	4535	400237	9376	n/a
18	7/6/18	100.5	8303	5736	4784	399633	9458	n/a
19	7/6/18	100	8137	n/a	4801	400717	9548	n/a
20	7/7/18	100	8467	6363	4909	399616	9498	n/a
21	7/7/18	100.2	7650	5569	4575	399519	9337	n/a
22	7/8/18	99.9	8150	5577	4812	400344	9460	n/a
23	7/8/18	100	7963	6238	4826	399961	9019	n/a
24	7/9/18	99.7	8451	5850	4798	399611	9336	n/a
25	7/9/18	98.9	8256	6646	4735	399535	9299	n/a
26	7/10/18	100.2	8248	6179	4718	399426	9322	n/a
27	7/10/18	99.5	7641	6802	4822	400999	9385	n/a
28	7/11/18	100.6	8109	6977	4813	399197	9332	n/a
29	7/11/18	99.6	7843	6530	4871	401177	9193	n/a
30	7/12/18	100.6	7723	5782	4793	400313	9209	n/a
31	7/12/18	100.7	7909	6700	5091	399899	9180	n/a
32	7/13/18	99.7	7943	6418	4722	399439	9300	n/a
33	7/13/18	100.2	7784	6775	4891	399871	9076	n/a
34	7/13/18	99.7	7520	6385	4816	400152	9110	n/a
35	7/14/18	100.3	7187	6280	4902	399735	9147	n/a
36	7/14/18	99	7358	6066	4841	399950	9018	n/a
37	7/15/18	99.7	7105	6878	4810	400573	9003	n/a
38	7/15/18	100	7280	7218	5020	399905	8887	n/a
39								
40								

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API: 47-051-01754	Farm Name: John Hart			Well Number: Hart 8H
	TVD	Base TVD	MD	Base MD
Pittsburgh Coal			503	
Greenbrier			1793.56	1842.56
Burgoon			1842.56	2273.56
Weir			2273.56	2487.56
Berea			2487.56	2797.56
Int. String (9 5/8")			2797.56	2797.56
Gordon			2797.56	3078.32
U. Bayard			3078.32	6226.32
Sycamore Grit			6226.32	6318.32
Middlesex			6318.32	6,947
BRKT	6,425	6,438	6,947	6,974
TLLY	6,438	6,467	6,974	7,040
S5	6,467	6,558	7,040	7,336
S3	6,558	6,573	7,336	7,409
STFD*	6,573	6,575	7,409	7,418
S2.B	6,575	6,586	7,418	7,499
S2.A	6,586		7,499	

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API: 47-051-01754	Farm Name: John Hart	Well Number: Hart 8H
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DRILLING CONTRACTORS		
Driller	Driller	Driller
Name Rocky Mountain Drilling	Name Highlands Drilling LLC	Name Nabors Drilling USA
Address 185 North Vernal Avenue, Suite 2	Address 900 Virginia Street East	Address 10100 NW 10th Street
City - State - Zip Vernal, UT 84078	City - State - Zip Charlestown, WV 25301	City - State - Zip Oklahoma City, OK 73127

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/26/2018
Job End Date:	7/14/2018
State:	West Virginia
County:	Marshall
API Number:	47-051-01754-00-00
Operator Name:	Chevron USA Inc.
Well Name and Number:	Hart 8H
Latitude:	39.91348900
Longitude:	-80.65493100
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,589
Total Base Water Volume (gal):	14,986,902
Total Base Non Water Volume:	



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
Scale Inhibitor E	Universal Pressure Pumping	Scale Inhibitor					
				Listed Below			
Water	Chevron Appalachia, LLC	Carrier/Base Fluid					
				Listed Below			

Submitted 8/7/18

Unislick ST50	Universal Pressure Pumping	Friction Reducer				
				Listed Below		
K-Bac 1020	Universal Pressure Pumping	Biocide				
				Listed Below		
Hydrochloric Acid (7.5%)	Universal Pressure Pumping	Acidizing				
				Listed Below		
Unihib G	Universal Pressure Pumping	Acid Inhibitor				
				Listed Below		
Iron Control A	Universal Pressure Pumping	Iron Control Agent				
				Listed Below		
Sand (Proppant)	Universal Pressure Pumping	Proppant				
				Listed Below		

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Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

			Water	7732-18-5	100.00000	88.11046
			Silica	14808-60-7	99.90000	10.69814
			Hydrogen Chloride	7647-01-0	7.50000	0.08013
			Petroleum Distillates, Hydrotreated Light	64742-47-8	30.00000	0.01994
			Ammonium Acetate	631-61-8	13.00000	0.00864
			Polyethylene Glycol	25322-68-3	50.00000	0.00631

			Ethylene Glycol	107-21-1	30.00000	0.00551	
			Water	7732-18-5	30.00000	0.00379	
			Alcohols, ethoxylated	68439-50-9	5.00000	0.00332	
			Alcohols, ethoxylated	68002-97-1	5.00000	0.00332	
			Alcohols, ethoxylated	68551-12-2	5.00000	0.00332	
			Copolymer of Maleic and Acrylic Acid	52255-49-9	20.00000	0.00279	
			2,2-Dibromo-3-nitrilopropionamide	10222-01-2	21.00000	0.00265	
			DETA phosphonate	15827-60-8	5.00000	0.00070	
			Hexamethylene Triamine Penta(Methylene Phosphonic Acid)	34690-00-1	5.00000	0.00070	
			Butyl diglycol	112-34-5	75.00000	0.00062	
			Alcohols, C10-16, ethoxylated	68002-97-1	50.00000	0.00041	
			Methanol	67-56-1	5.00000	0.00004	
			Formaldehyde	50-00-0	1.00000	0.00001	
			Thiourea	62-56-6	1.00000	0.00001	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

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

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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)

Well is located on topo map 1,163 feet south of Latitude: 39° 55' 00"

AS DRILLED PLAT

PARCEL	LESSOR
A	JOHN J. & RENEE HART
B	JOHN J. & RENEE HART
C	JOHN J. & RENEE HART
D	JOHN J. & RENEE HART
E	JAMES E. CURRY
F	HAROLD F. & BETTY A. BLAKE
G	HAROLD F. & BETTY A. BLAKE
H	DENNIS & MICHELLE S. BLAKE
J	RONN R. & LOIS W. DOWLER
K	WILDA H. MILLER, BY A/F JOHN W. MILLER

AS DRILLED
BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4419812.95
 E:527526.24
 NAD83, WV NORTH
 N:522282.54
 E:1638183.80

BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4419813.08
 E:527526.07
 NAD83, WV NORTH
 N:522282.98
 E:1638183.26

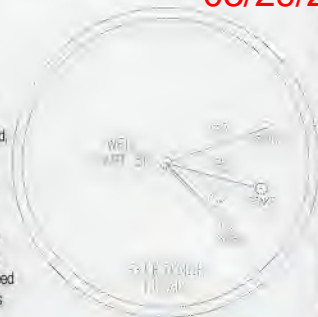
LINE	BEARING	DISTANCE
1	N 34° 49' 53" E	25.18
2	S 74° 57' 16" E	208.60
3	S 19° 09' 22" E	182.20
4	N 17° 53' 08" E	111.00
5	N 84° 05' 37" W	1540.00
6	N 57° 58' 33" W	1467.88

SEE PAGE 2 FOR SURFACE OWNERS



NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
3. There are no native trout streams within 300' of proposed well.
4. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
5. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.



03/29/2019

Well is located on topo map 8,391 feet west of Longitude: 80° 37' 30"

LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- AS-DRILLED LATERAL
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- LESSORS
- SURFACE OWNERS

GAS WELLS

- EXISTING WELLS
- PLUGGED WELLS

Blue Mountain Inc.
 11023 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

APPROX. LANDING POINT
 UTM 17-NAD83
 N:4418001.31
 E:529149.12
 NAD83, WV NORTH
 N:516248.59
 E:1643409.89

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:4418121.48
 E:529035.35
 NAD83, WV NORTH
 N:516649.16
 E:1643043.13

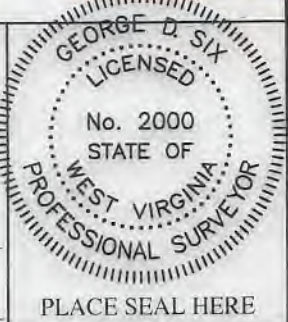
SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4418212.49
 E:529492.09
 NAD83, WV NORTH
 N:516922.76
 E:1644546.93

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4418212.49
 E:529492.09
 NAD83, WV NORTH
 N:516922.76
 E:1644546.93

FILE #: HART 8H AS-DRILLED
 DRAWING #: HART 8H AS-DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY 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 ENVIRONMENTAL PROTECTION.

Signed: *George D. Six*
 R.P.E.: L.L.S.: P.S. No. 2000



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: APRIL 28, 2016
 OPERATOR'S WELL #: HART 8H AS-DRILLED
 API WELL #: 47 51 01754
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: MIDDLE GRAVE CREEK - GRAVE CREEK ELEVATION: 1329.03'
 COUNTY/DISTRICT: MARSHALL / WASHINGTON QUADRANGLE: MOUNDSVILLE, WV 7.5'
 SURFACE OWNER: JOHN J. & RENEE HART ACREAGE: 108.550±
 OIL & GAS ROYALTY OWNER: JOHN J. & RENEE HART ACREAGE: 745.056±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,588.77'± TMD: 15,039'±
 WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY
 Address 800 MOUNTAIN VIEW DRIVE Address 500 LEE STREET, EAST SUITE 1600
 City SMITHFIELD State PA Zip Code 15478 City CHARLESTON State WV Zip Code 25301-3202

HART 8H

03/29/2019

	SURFACE OWNER	DIST-TM/PAR
1	WILLIAM H. III & LINDA BARDALL	14-7/42
2	WILLIAM H. III & LINDA BARDALL	14-7/41
3	JOHN W. & MARY A. MILLER	14-10/3
4	JOHN W. & MARY A. MILLER	14-6/41
5	JEFFREY L. & JANET L. ALLEN	14-6/40
6	JEFFREY L. & JANET L. ALLEN	14-6/38
7	JEFFREY L. & JANET L. ALLEN	14-6/39
8	MARY L. RUBINI	14-6/41.1
9	JEFFREY L. & JANET L. ALLEN	14-6/37
10	BERRIDGE L. ALLEN ET UX	14-6/38.1
11	BERRIDGE L. ALLEN ET UX	14-6/38.2
12	DENNIS BLAKE ET UX	14-10/10
13	CARL W. & BRIDGETT L. YOHO	14-6/35
14	JOHN J. II & JENNA E. HART	14-10/11
15	DENNIS & MICHELLE S. BLAKE	14-10/11.3
16	DENNIS BLAKE ET UX	14-10/12
17	JAMES E. CURRY	14-10/13
18	JAMES E. BLAKE	14-10/11.1
19	JOHN J. HART ET UX	14-6/36
20	CARL W. YOHO ET AL	14-6/35.1
21	CARL W. & BRIDGETT L. YOHO	14-6/28.1
22	CARL W. & BRIDGETT L. YOHO	14-6/28
23	JOSEPH M. CROW ET UX	14-10/17
24	JAMES E. CURRY	14-10/15
25	JOHN J. HART ET UX	14-10/14
26	JEFFREY D. & DENISE A. CRAMER	14-6/27
27	JOHN J. HART ET UX	14-10/18
28	JOHN J. & RENEE HART	14-10/19
29	JOHN J. & RENEE HART	14-10/19.1
30	JEFFREY D. & DENISE A. CRAMER	14-10/20
31	HEIKKI & TRISHA YEAGER	15-15/8.6
32	VERNON KNOX JR. ET UX	15-15/1
33	VERNON KNOX JR. ET UX	15-15/2
34	KANDY J. & ANTHONY E. BLATT	15-15/9.1
35	HONUS A. STOLLAR	15-15/9
36	JOHN A. BIERCE II ET UX	15-15/3
37	JOHN A. BIERCE II ET UX	15-15/4
38	JOHN B. KESTNER ET UX	15-15/5
39	JOHN A. BIERCE II ET UX	15-15/6
40	JOHN A. BIERCE II ET UX	15-15/7

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4418212.49
E:529492.09
NAD83_WV NORTH
N:516922.76
E:1644546.93

AS DRILLED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4418212.49
E:529492.09
NAD83_WV NORTH
N:516922.76
E:1644546.93

APPROX. LANDING POINT
UTM 17-NAD83
N:4418001.31
E:529149.12
NAD83_WV NORTH
N:516248.59
E:1643409.89

AS DRILLED
APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4418121.48
E:529035.35
NAD83_WV NORTH
N:516649.16
E:1643043.13

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4419813.08
E:527526.07
NAD83_WV NORTH
N:522282.98
E:1638183.26

AS DRILLED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4419812.95
E:527526.24
NAD83_WV NORTH
N:522282.54
E:1638183.80

APRIL 28, 2016