west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, October 16, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WV 26101

Re: Permit Modification Approval for 1209 S-8H
47-033-05944-00-00

Updating landing point and bottom hole location.

HG ENERGY II APPALACHIA, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before 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: 1209 S-8H
Farm Name: HG ENERGY II APPALACHIA, LLC
U.S. WELL NUMBER: 47-033-05944-00-00
Horizontal 6A New Drill
Date Modification Issued: 10/16/2019

HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
(304) 420-1100 - Office
(304) 863-3172 - Fax

October 8, 2019

Ms. Laura Adkins
WVDEP
Division of Oil & Gas
601 57th Street
Charleston, West Virginia 25304

RE: Nays 1209 S-7H and S-8H - Permit Revision Request – (47-033-05943, 05944)
Grant District, Harrison County
West Virginia

Dear Ms. Adkins:

Monday evening, while drilling the Nays 1209 S-7H well, during the vertical drilling, at approximately 1161 feet, the hammer drill bit broke off. After review it was determined the drill bit couldn't be retrieved and the 1209 S-7H well will be abandoned and later plugged.

HG is requesting a modification to the well plans for the 1209 S-8H. The surface position will remain the same but the well path will vary slightly to redirect to the S-7H landing point and bottom hole coordinates. Attached are the WW-6B, the Casing Schematic and Survey Plat for the modified 1209 S-8H lateral. A revised WW-A1 and lease chain aren't needed as they haven't changed from the original approved permit.

Plans will be made to abandon and plug the 1209 S-7H well in a timely fashion as coordinated with the drilling and frac operations for the 1209 well pad. The paperwork will be submitted shortly.

Sam Ward, Harrison County DEP Inspector, was contacted as soon as the drilling problem was identified. He's reviewed and approved the attached paperwork. We'll remain in continuous contact with him through this process.

Please let me know if you have any questions or require additional information. I can be reached at (304) 420-1119 or dwhite@hgenergyllc.com.

Very truly yours,
Diane White

Diane C. White

Enclosures

cc: Sam Ward – Inspector

HG Energy, LLC
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Parkersburg, WV 26101
(304) 420-1100 - Office
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Very truly yours,
Diane White

Diane C. White

Enclosures

cc: Sam Ward – Inspector

DCW
10/10/2019

WW-6B
(04/15)

API NO. 47-_____-_____
OPERATOR WELL NO. Nays 1209 S-8H
Well Pad Name: Nays 1209

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

1) Well Operator: HG Energy II Appalachia, L	494519932	Harrison	Union	West Milford 7.5'
	Operator ID	County	District	Quadrangle

2) Operator's Well Number: Nays 1209 S-8H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

5) Well Type (a) Gas x Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow x Deep _____
Horizontal x

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17,250'

11) Proposed Horizontal Leg Length: 9,631'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No X

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

RECEIVED
Office of Oil and Gas
OCT 15 2019
WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47-_____-_____
OPERATOR WELL NO. Nays 1209 S-8H
Well Pad Name: Nays 1209

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

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	Operator ID	County	District	Quadrangle

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3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

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5) Well Type (a) Gas x Oil _____ Underground Storage _____
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Horizontal x

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SDW 10/10/19

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Seam: _____
Owner: _____

API NO. 47-_____-_____
OPERATOR WELL NO. Nays 1209 S-8H
Well Pad Name: Nays 1209

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	100'	100'	Drilled In
Fresh Water	20"	NEW	J-55	94	750'	750'	40% excess,yield =1.20,CTS
Coal	13 3/8"	NEW	J-55	68	1735'	1735'	40% excess yield = 1.20,CTS
Intermediate	9 5/8"	NEW	J-55	40	2500'	2500'	40% excess yield Lead/ 0% Excess T
Production	5 1/2"	NEW	P-110	23	17250'	17250'	20% excess yield = 1.19, tail yield = 1.
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				CTS
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	30 % excess yield = 1.20, CTS
Coal	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess yield = 0% Excess Lead, 40
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/ClassA	20% excess yield = 1.19, tail yield 1.94
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

RECEIVED
Office of Oil and Gas

OCT 15 2019

WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47-_____-_____
OPERATOR WELL NO. Nays 1209 S-8H
Well Pad Name: Nays 1209

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	100'	100'	Drilled In
Fresh Water	20"	NEW	J-55	94	750'	750'	40% excess,yield =1.20,CTS
Coal	13 3/8"	NEW	J-55	68	1735'	1735'	40% excess yield = 1.20,CTS
Intermediate	9 5/8"	NEW	J-55	40	2500'	2500'	40% excess yield Lead/0% Excess T
Production	5 1/2"	NEW	P-110	23	17250'	17250'	20% excess yield = 1.13, tail yield = 1
Tubing							
Liners							

5 Dec
10/10/2019

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Conductor	30"	30"	.500				CTS
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	30 % excess yield = 1.20, CTS
Coal	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess yield = 0% Excess Lead
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/ClassA	20% excess yield = 1.13, tail yield 1.27
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

WW-6B
(10/14)

RECEIVED
Office of Oil and Gas
OCT 15 2019
WV Department of
Environmental Protection

API NO. 47-_____-_____
OPERATOR WELL NO. Nays 1209 S-8H
Well Pad Name: Nays 1209

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6900 feet. Drill horizontal leg to estimated 9,631' TMD, stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

The stimulation will be completed with multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. See attached list. Maximum pressure not to exceed 12,500 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.148 acres

22) Area to be disturbed for well pad only, less access road (acres): 10.834 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.
Freshwater - centralized every 3 joints to surface.
Coal - Bow Spring on every joint
Intermediate - Bow Spring on first 2 joints then every third joint to 100' from surface.
Production - Run 1 spiral centralizer every 5 joints from the top of the curve to surface. Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.

24) Describe all cement additives associated with each cement type:

Conductor -N/A, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water - 15.6 ppg PNE-1 + 3% bwoc CaCl, 40% Excess Yield = 1.20, CTS
Coal - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl, 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS
Intermediate - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl, 40% Excess, Tail: 15.9 ppg, PNE-1 + 2.5% bwoc CaCl, zero% Excess, CTS
Production - Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020% ExcessLead Yield=1.19Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

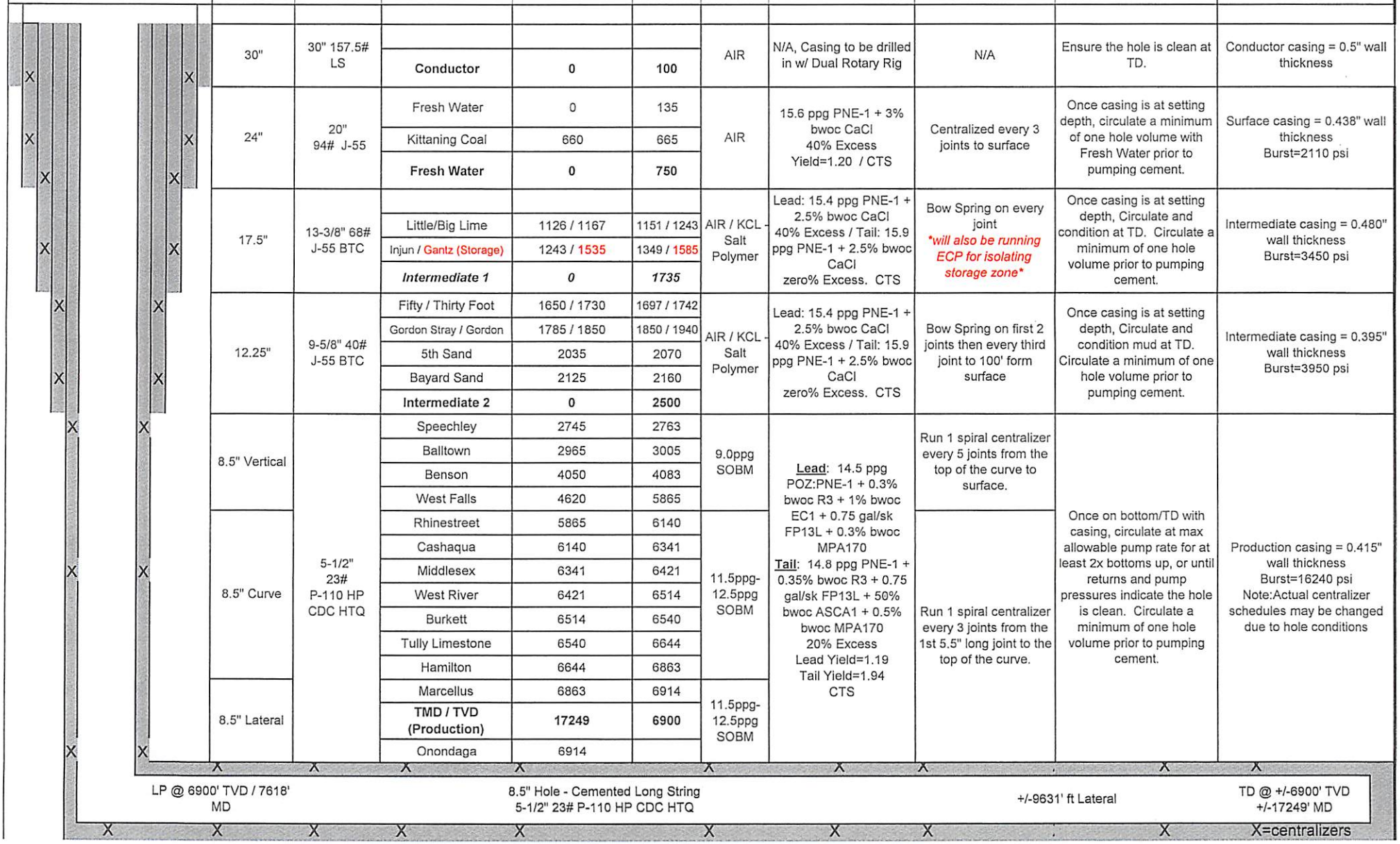
Conductor - Ensure the hole is clean at TD.
Fresh Water - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.
Coal - Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.
Intermediate - Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.
Production - Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.

*Note: Attach additional sheets as needed.

1209 S-8H
Marcellus Shale Horizontal
Harrison County, WV

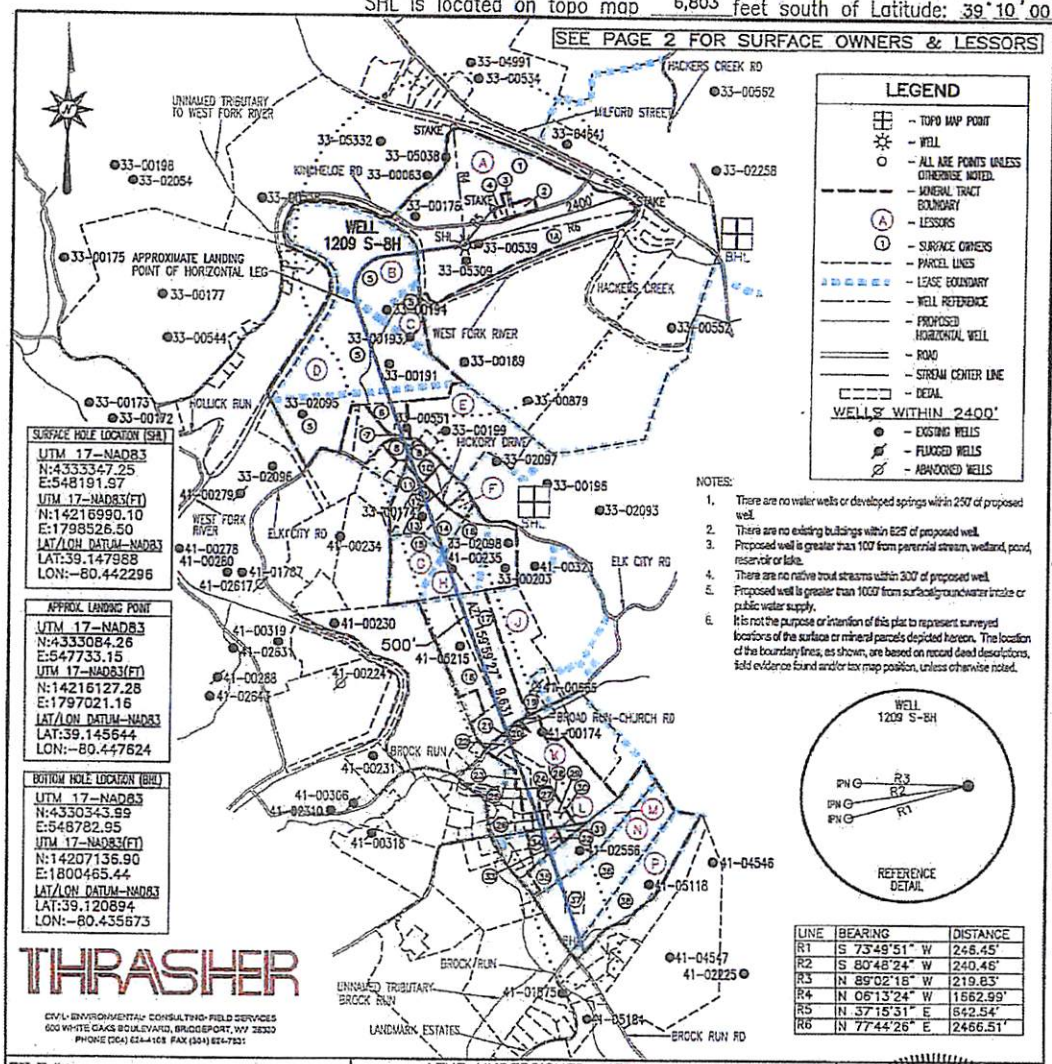
		1209 S-8H SHL	237379.28N 1732703.34E
Ground Elevation	1007'	1209 S-8H LP	236541.35N 1731183.32E
Azm	159.992°	1209 S-8H BHL	227491.7N 1734478.59E

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	30"	30" 157.5# LS	**Conductor**	**0**	**100**	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness
	24"	20" 94# J-55	Fresh Water	0	135	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS	Centralized every 3 joints to surface	Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2110 psi
			Kittaning Coal	660	665					
			Fresh Water	**0**	**750**					
	17.5"	13-3/8" 68# J-55 BTC	Little/Big Lime	1126 / 1167	1151 / 1243	AIR / KCL - Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on every joint *will also be running ECP for isolating storage zone*	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi
			Injun / Gantz (Storage)	1243 / 1535	1349 / 1585					
			Intermediate 1	***0***	***1735***					
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1650 / 1730	1697 / 1742	AIR / KCL - Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi
			Gordon Stray / Gordon	1785 / 1850	1850 / 1940					
			5th Sand	2035	2070					
			Bayard Sand	2125	2160					
			Intermediate 2	**0**	**2500**					
	8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speechley	2745	2763	9.0ppg SOBM	<u>Lead</u>: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 <u>Tail</u>: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16240 psi Note:Actual centralizer schedules may be changed due to hole conditions
			Balltown	2965	3005					
			Benson	4050	4083					
			West Falls	4620	5865					
	8.5" Curve		Rhinestreet	5865	6140	11.5ppg-12.5ppg SOBM		Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.		
			Cashaqua	6140	6341					
			Middlesex	6341	6421					
			West River	6421	6514					
			Burkett	6514	6540					
			Tully Limestone	6540	6644					
			Hamilton	6644	6863					
	8.5" Lateral		Marcellus	6863	6914	11.5ppg-12.5ppg SOBM				
			TMD / TVD (Production)	**17249**	**6900**					
			Onondaga	6914						



BHL is located on topo map 3,011 feet south of Latitude: 39°07'30"
SHL is located on topo map 6,803 feet south of Latitude: 39°10'00"

BHL is located on topo map 4,450 feet west of Longitude: 80°25'00"
SHL is located on topo map 7,269 feet west of Longitude: 80°25'00"



SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4333347.25
E:548191.97
UTM 17-NAD83(FT)
N:14216990.10
E:1798526.50
LAT/LON DATUM-NAD83
LAT:39.147988
LON:-80.442296

APPROX. LANDING POINT
UTM 17-NAD83
N:4333084.26
E:547733.15
UTM 17-NAD83(FT)
N:14216127.28
E:1797021.16
LAT/LON DATUM-NAD83
LAT:39.145644
LON:-80.447624

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4330343.99
E:548782.95
UTM 17-NAD83(FT)
N:14207136.90
E:1800465.44
LAT/LON DATUM-NAD83
LAT:39.120894
LON:-80.435673

LINE	BEARING	DISTANCE
R1	S 73°49'51" W	246.45'
R2	S 80°48'24" W	240.46'
R3	N 89°02'18" W	219.83'
R4	N 06°13'24" W	1562.99'
R5	N 37°15'31" E	642.54'
R6	N 77°44'26" E	2466.51'

THRASHER
CIVIL-ENVIRONMENTAL CONSULTING-FIELD SERVICES
600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
PHONE (304) 624-4108 FAX (304) 624-7831

SDW
10/10/19

FILE #: 1209 S-8H
DRAWING #: 1209 S-8H
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

GEORGE D. SIX LICENSED No. 2000 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR
PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: OCTOBER 9, 2019
OPERATOR'S WELL #: 1209 S-8H
API WELL #: 47 (STATE) 33 (COUNTY) 05944 (PERMIT)

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

WATERSHED: MIDDLE WEST FORK CREEK ELEVATION: 1,007'±
COUNTY/DISTRICT: HARRISON / UNION QUADRANGLE: WEST MILFORD, WV 7.5'
SURFACE OWNER: HG ENERGY II APPALACHIA, LLC ACREAGE: 95.06±
OIL & GAS ROYALTY OWNER: ANN COVINGTON, ET AL ACREAGE: 437.875±

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: 6,900'± TMD: 17,250'±

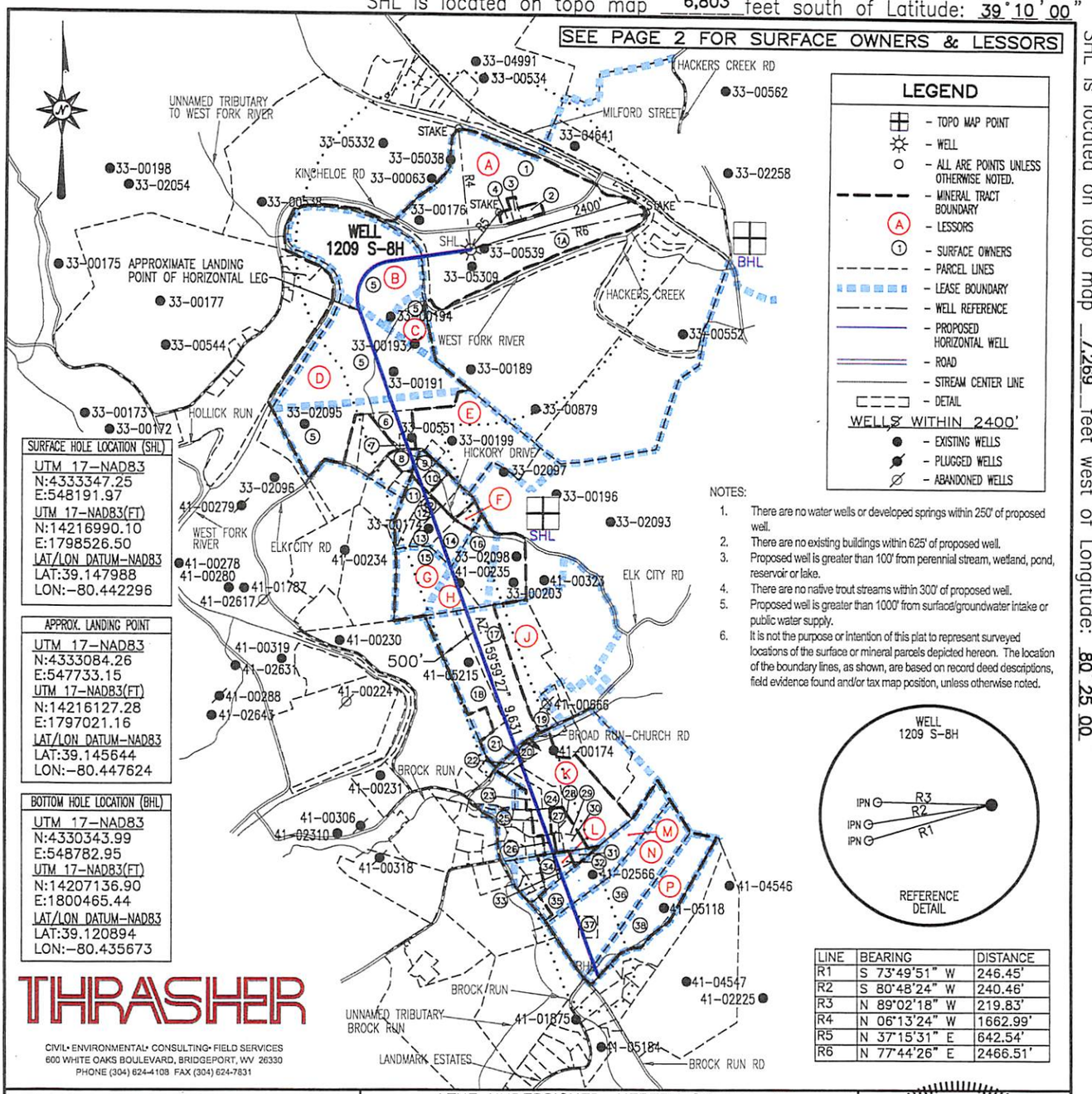
WELL OPERATOR HG ENERGY II APPALACHIA, LLC
Address 5260 DUPONT ROAD
City PARKERSBURG State WV Zip Code 26101

DESIGNATED AGENT DIANE C. WHITE
Address 5260 DUPONT ROAD
City PARKERSBURG State WV Zip Code 26101

BHL is located on topo map 3,011 feet south of Latitude: 39°07'30"
SHL is located on topo map 6,803 feet south of Latitude: 39°10'00"

BHL is located on topo map 4,450 feet west of Longitude: 80°25'00"
SHL is located on topo map 7,269 feet west of Longitude: 80°25'00"

SEE PAGE 2 FOR SURFACE OWNERS & LESSORS



LEGEND

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

WELLS WITHIN 2400'

- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4333347.25
E:548191.97
UTM 17-NAD83(FT)
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UTM 17-NAD83
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UTM 17-NAD83(FT)
N:14207136.90
E:1800465.44
LAT/LON DATUM-NAD83
LAT:39.120894
LON:-80.435673

NOTES:
1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. 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.

LINE	BEARING	DISTANCE
R1	S 73°49'51" W	246.45'
R2	S 80°48'24" W	240.46'
R3	N 89°02'18" W	219.83'
R4	N 06°13'24" W	1662.99'
R5	N 37°15'31" E	642.54'
R6	N 77°44'26" E	2466.51'

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FILE #: 1209 S-8H
DRAWING #: 1209 S-8H
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

GEORGE D. SIX LICENSED No. 2000 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

PLACE SEAL HERE

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

DATE: OCTOBER 9, 2019
OPERATOR'S WELL #: 1209 S-8H
API WELL #: 47 (STATE) 33 (COUNTY) 05944 (PERMIT)

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

WATERSHED: MIDDLE WEST FORK CREEK ELEVATION: 1,007'±
COUNTY/DISTRICT: HARRISON / UNION QUADRANGLE: WEST MILFORD, WV 7.5'
SURFACE OWNER: HG ENERGY II APPALACHIA, LLC ACREAGE: 95.06±
OIL & GAS ROYALTY OWNER: ANN COVINGTON, ET AL ACREAGE: 437.875±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,900'± TMD: 17,250'±

WELL OPERATOR: HG ENERGY II APPALACHIA, LLC
Address: 5260 DUPONT ROAD
City: PARKERSBURG State: WV Zip Code: 26101

DESIGNATED AGENT: DIANE C. WHITE
Address: 5260 DUPONT ROAD
City: PARKERSBURG State: WV Zip Code: 26101

1209 S-8H

PAGE 2 OF 2

	SURFACE OWNER	DIST-TM/PAR
1	DANNY LEE & ALICIA A. STICKEL	P/O 20-444/11.2
1A	HG ENERGY II APPALACHIA, LLC	P/O 20-444/11.2
2	HG ENERGY II APPALACHIA, LLC	20-444/11.3
3	AARON C. & CHRISTINA P. MEDINA	20-444/11
4	HG ENERGY II APPALACHIA, LLC	20-444/11.1
5	ROCK GARTON	12-444/26
6	NORMAN W. & MARGARET A. LOHR	12-444/27.2
7	NORMAN W. & MARGARET A. LOHR	12-444/27.1
8	TRAVIS W. & LOGAN M. SWIGER	12-444/28.1
9	BRYAN D. & KIMBERLY J. SMITH	12-444/37.9
10	BRYAN D. & KIMBERLY J. SMITH	12-444/37.8
11	DAKOTA M. DAVIS	12-444/37.1
12	KAREN L. CRISLIP	12-444/37.2
13	KEVIN MARION	12-444/37.3
14	DONALD EARL HONAKER	12-444/37.4
15	ROBERT SCOTT STARKEY	4-7B/59
16	ROBERT SCOTT STARKEY	4-7B/60
17	LEE ARCH & SUSAN B. STALNAKER	4-7B/5.1
18	MARK D. & MARY ELIZABETH REASER	4-7B/5.7
19	HERBERT & VELMA SIAS	4-7B/29.17
20	HERBERT & VELMA SIAS	4-7B/28.1
21	HERBERT & VELMA SIAS	4-7B/28.2
22	DANIEL R. & SARITA M. PRINCE	4-7B/28
23	CEMETERY BROAD RUN	4-7B/25
24	CEMETERY BROAD RUN	4-7B/26
25	ARQUILLA JANE RAINES	4-7B/29.13
26	CARMEN V. BUTCHER	4-7C/74
27	STEPHANIE KIRKPATRICK	4-7C/75
28	VIRGIL B. & MELODY K. WHITE	4-7B/29.10
29	CHARLES E. BYRNE	4-7C/86
30	ALLEN C. & LILLY M. JACKSON	4-7C/73
31	FRANK L. & MARY ELLEN BRAGG	4-7C/68
32	FRANK L. & MARY ELLEN BRAGG	4-7C/64
33	FRANK L. & MARY ELLEN BRAGG	4-7C/59
34	RALPH L. COLE	4-7C/62
35	ROBERT G. & ALISA G. GUM	4-7C/30.2
36	ROBERT G. & ALISA G. GUM	4-7C/31
37	ROBERT G. & ALISA G. GUM	4-7C/31.1
38	KEVIN B. & SHERI K. JERDEN	4-8C/1.1

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4333347.25
E:548191.97
UTM 17-NAD83(FT)
N:14216990.10
E:1798526.50
LAT/LON DATUM-NAD83
LAT:39.147988
LON:-80.442296

APPROX. LANDING POINT
UTM 17-NAD83
N:4333084.26
E:547733.15
UTM 17-NAD83(FT)
N:14216127.28
E:1797021.16
LAT/LON DATUM-NAD83
LAT:39.145644
LON:-80.447624

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4330343.99
E:548782.95
UTM 17-NAD83(FT)
N:14207136.90
E:1800465.44
LAT/LON DATUM-NAD83
LAT:39.120894
LON:-80.435673

	LESSOR	LEASE NO.	DIST-TM/PAR
A	J. B. GUSMAN ET AL	FK020606	20-444/11.2
B	J. A. HARDWAY ET AL	FK004424	12-444/26
C	J. Q. MUSSER	FK061781	
D	W. W. BRANNON ET UX	FK032708	
E	J. K. MUSSER ET UX	FK002243	12-444/26
			12-444/27.2
			12-444/27.1
			12-444/28.1
F	KENNETH R. SIMONS ET AL	FK064201	12-444/37.1
	O.B. FRASHUER ET UX	FK064206	12-444/37.2
			12-444/37.9
			12-444/37.8
			12-444/37.3
			12-444/37.4
G	ETHEL B. PAINE ET AL	FK064249	4-7B/59
H	J. Q. MUSSER ET UX	FK002249	4-7B/59
			4-7B/60
J	S. G. HALL ET UX	FK014031	4-7B/5.1
			4-7B/5.7
K	ALDA V. HITT	FK077958	4-7B/28.1
			4-7B/28.2
			4-7B/28
			4-7B/25
			4-7B/26
			4-7B/29.13
			4-7C/74
L	C. A. BAILY	CNX26831600	4-7C/64
			4-7C/59
			4-7C/62
M	J. H. BAILEY ET AL	Q102176000	4-7C/30.2
N	ALISA G. GUM	Q102118000	4-7C/31
	LORI LEE CALDWELL	Q102123000	4-7C/31.1
	GERALD W. RAMSBURG	Q098757000	
	KARRIE DIANE SIMS	Q102112000	
	DENISE C. CARSON	Q102117000	
	KAREN K. HOBBS	Q102122000	
	KATRINA L. WEST	Q102121000	
	DAVID C. GARVIN	Q102119000	
P	KEVIN B. JERDEN ET UX	Q102115000	4-8C/1.1

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

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