

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

API 47-051-01899 County Marshall District Clay
Quad Glen Easton Pad Name Hicks Field/Pool Name _____
Farm name Thomas E. Hicks Well Number Hicks M03H
Operator (as registered with the OOG) Chevron Appalachia, LLC (49449935)
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 501961.190 Easting 1626574.570
Landing Point of Curve Northing 504359.740 Easting 1628587.710
Bottom Hole Northing 512150.760 Easting 1623203.830

Elevation (ft) 1177' 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
Barite, fluid loss, emulsifiers, rheological controls

Date permit issued 2/23/2017 Date drilling commenced 10/17/2017 Date drilling ceased 6/13/2019
Date completion activities began 10/18/2019 Date completion activities ceased 2/24/2020
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 n/a Open mine(s) (Y/N) depths N
Salt water depth(s) ft n/a Void(s) encountered (Y/N) depths N
Coal depth(s) ft 698' and 1290' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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Reviewed by:
Jim [Signature]
4/15/2020

API 47-051 - 01899 Farm name Thomas E. Hicks Well number Hicks M03H

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	26"	20"	60'	N	X-52 / 78.67		Y
Surface	17-1/2"	13-3/8"	478'	N	J-55 / 54.50		Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2006'	N	L-80 / 40		Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	17132	N	P-110EC / 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					8
Surface	Class A	394	15.6	1.20	473	Surface	8
Coal							
Intermediate 1	Class A	675	15.6	1.19	804	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	2860	14.5	1.17	3358	Surface	8
Tubing							

Drillers TD (ft) 17154' Loggers TD (ft) 17154'

Deepest formation penetrated Marcellus Plug back to (ft) _____

Plug back procedure _____

Kick off depth (ft) 5710'

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 Surface: (1) on shoe track with stop collar and (1) per joint over coupling to surface. Intermediate: (1) on shoe track with stop collar and (1) per 3 joints over coupling. Production: (1) centralizer every joint in the lateral and curve and (1) every other joint from KOP to surface.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS See attached Perforation and Stimulation reports.

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

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PERFORATION RECORD					
Stage No.	Perforation Date	Perforated From TMD Ft.	Perforated To TMD Ft.	Number of Perforations	Formation(s)
1	11/21/2019	16895	16999	47	Marcellus
2	11/22/2019	16694	16854	47	Marcellus
3	11/22/2019	16494	16654	47	Marcellus
4	11/22/2019	16294	16454	47	Marcellus
5	11/22/2019	16094	16254	47	Marcellus
6	11/23/2019	15894	16054	47	Marcellus
7	11/23/2019	15694	15854	47	Marcellus
8	11/23/2019	15494	15654	47	Marcellus
9	11/24/2019	15294	15454	47	Marcellus
10	11/24/2019	15094	15254	47	Marcellus
11	11/24/2019	14894	15054	47	Marcellus
12	11/24/2019	14694	14854	47	Marcellus
13	11/25/2019	14494	14654	47	Marcellus
14	11/25/2019	14294	14454	47	Marcellus
15	11/25/2019	14094	14254	47	Marcellus
16	11/25/2019	13894	14054	47	Marcellus
17	11/25/2019	13694	13854	47	Marcellus
18	11/26/2019	13494	13654	47	Marcellus
19	11/26/2019	13294	13454	47	Marcellus
20	11/26/2019	13094	13254	47	Marcellus
21	11/26/2019	12894	13054	47	Marcellus
22	11/26/2019	12694	12854	47	Marcellus
23	11/27/2019	12494	12654	47	Marcellus
24	11/27/2019	12294	12454	47	Marcellus
25	11/27/2019	12094	12254	47	Marcellus
26	11/28/2019	11894	12054	47	Marcellus
27	11/28/2019	11694	11854	47	Marcellus
28	11/28/2019	11494	11654	47	Marcellus
29	11/28/2019	11294	11454	47	Marcellus
30	11/29/2019	11094	11254	47	Marcellus
31	11/29/2019	10894	11054	47	Marcellus
32	11/29/2019	10694	10854	47	Marcellus
33	11/29/2019	10494	10654	47	Marcellus
34	11/29/2019	10294	10454	47	Marcellus
35	11/30/2019	10094	10254	47	Marcellus
36	11/30/2019	9894	10054	47	Marcellus
37	11/30/2019	9694	9854	47	Marcellus
38	11/30/2019	9494	9654	47	Marcellus
39	12/1/2019	9294	9454	47	Marcellus
40	12/1/2019	9094	9254	47	Marcellus
41	12/1/2019	8894	9054	47	Marcellus
42	12/1/2019	8694	8854	47	Marcellus
43	12/2/2019	8494	8654	47	Marcellus
44	12/2/2019	8294	8454	47	Marcellus
45	12/2/2019	8094	8254	47	Marcellus

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

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API: 47-051-01899	Farm Name: Thomas E. Hicks	Well Number: Hicks M03H
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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	11/21/2019	99.3	7844	5616	3117	400229	9352	n/a
2	11/22/2019	99.6	8182	4538	4150	400174	9786	n/a
3	11/22/2019	100.4	8226	5211	3932	405089	9811	n/a
4	11/22/2019	100.1	8321	4202	3989	400114	9746	n/a
5	11/22/2019	99.5	8229	4175	4063	400343	9779	n/a
6	11/23/2019	100.4	8091	5462	4410	400669	9725	n/a
7	11/23/2019	100.1	8128	5437	4252	400428	9694	n/a
8	11/23/2019	99.6	8265	5995	4739	398551	9492	n/a
9	11/24/2019	92	7832	6034	4149	400046	14954	n/a
10	11/24/2019	98.9	8458	6083	4160	400288	9802	n/a
11	11/24/2019	100.2	8436	5456	4237	400528	9736	n/a
12	11/24/2019	99.7	8364	4972	4388	400248	9628	n/a
13	11/25/2019	99.9	8512	5593	4674	400201	9644	n/a
14	11/25/2019	100.2	8394	5890	4514	400037	9643	n/a
15	11/25/2019	100.4	8422	5023	4525	403733	9635	n/a
16	11/25/2019	100	8109	4984	4371	400839	9577	n/a
17	11/25/2019	100.3	7998	4849	4278	399886	9539	n/a
18	11/26/2019	99.7	7847	4482	4321	400357	9522	n/a
19	11/26/2019	100.3	8099	4292	4047	401338	9619	n/a
20	11/26/2019	99.4	7826	5053	4071	401133	9611	n/a
21	11/26/2019	99.8	7980	4780	4176	404897	9508	n/a
22	11/26/2019	99.5	7718	4182	4062	400119	9502	n/a
23	11/27/2019	99.9	7785	5053	3987	401046	9462	n/a
24	11/27/2019	100.6	8241	4620	4350	400993	9570	n/a
25	11/27/2019	100.3	7933	4975	4064	400903	9614	n/a
26	11/28/2019	100.1	7917	5547	4012	400550	9489	n/a
27	11/28/2019	100.1	8379	4362	4321	400820	9446	n/a
28	11/28/2019	100.5	8173	4299	4458	400860	9453	n/a
29	11/28/2019	99.7	7866	2478	4359	400482	9502	n/a
30	11/29/2019	100.3	7979	3891	4269	400516	10278	n/a
31	11/29/2019	100.5	8139	4431	4293	401256	9419	n/a
32	11/29/2019	100.2	7890	4649	4447	400911	9164	n/a
33	11/29/2019	99.7	7913	5424	4153	401445	9467	n/a
34	11/29/2019	99.7	7831	4740	4338	400893	9606	n/a
35	11/30/2019	100.2	7816	4255	4471	400874	9508	n/a
36	11/30/2019	100.3	7914	5365	4416	401129	9319	n/a
37	11/30/2019	100.1	7789	5131	4280	401088	9324	n/a
38	11/30/2019	100.1	7724	4555	4369	402685	9295	n/a
39	12/1/2019	100.2	7661	4547	4455	401326	9255	n/a
40	12/1/2019	100.9	7611	5428	4592	400742	9264	n/a
41	12/1/2019	100.6	7843	5849	4637	402196	9308	n/a
42	12/1/2019	100.9	7706	5222	4536	401060	9421	n/a
43	12/2/2019	100	7289	4590	4578	401714	9239	n/a
44	12/2/2019	100.7	7514	5081	4556	401397	9239	n/a
45	12/2/2019	100.3	7305	4500	4687	401535	9215	n/a

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API: 47-051-01899

Farm Name: Thomas E. Hicks

Well Number: Hicks M03H

Lithology/Tops	MD Top	MD Base	TVD Top	TVD Base	Describe rock type and record quantity and type of fluid (Freshwater, Brine, Oil, Gas, H2S, Etc.)
Pittsburgh Coal	698	704	676	682	coal
Conemaugh	704	1096	704	1096	shale & siltstone transitioning to shale & limestone at base; gas shows
Allegheny	1096	1,304	1096	1304	limey siltstones and shales; oil show
Clairion Coal	1,290	1,297	1290	1297	coal
Salt Sands	1,304	1,545	1304	1544	interbedded sands and shales; gas shows
Mauch Chunk	1,545	1,666	1544	1665	sandy/silty shales
Big Lime	1,666	1,733	1665	1731	siltstone transitioning to limestone base
Burgoon	1,733	1,952	1731	1947	sandstone
Weir Shale	1,952	2,070	1947	2070	shale; brine
CHQA	7,291	7,414	6063.00266	6138.37788	siltstone/shale, gas shows
MDLX	7,414	7454.95674	6138.37788	6162.0653	shale
PYAN	7,455	7,512	6,162	6,193	siltstone/shale, gas show
BRKT	7,512	7,560	6,193	6,216	shale
BRKT.a	7,560	7,592	6,216	6,231	shale
TLLY	7,592	7,677	6,231	6,266	limestone, gas shows
S5	7,677	7,897	6,266	6,339	shale, gas shows
S3	7,897	7,971	6,339	6,356	shale, gas shows
STFD	7,971	7,976	6,356	6,357	limestone
S2.B	7,976	8,010	6,357	6,362	shale, gas shows
S2.A	8,010		6,362		shale, gas shows
PRCL					limestone, gas shows
S1.B					shale, gas shows
Alpha					shale, gas shows
TD	17,154				

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API: 47-051-01899	Farm Name: Thomas E. Hicks	Well Number: Hicks M03H
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DRILLING CONTRACTORS		
Driller	Driller	Driller
Name Rocky Mountain Drilling	Name Highlands Drilling LLC	Name Precision Drilling Holdings Company
Address 185 North Vernal Avenue, Suite 2	Address 900 Virginia Street East	Address 10350 Richmond Avenue, Suite 700
City - State - Zip Vernal, UT 84078	City - State - Zip Charlestown, WV 25301	City - State - Zip Houston, TX 77042

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/21/2019
Job End Date:	12/2/2019
State:	West Virginia
County:	Marshall
API Number:	47-051-01899-00-00
Operator Name:	Chevron USA Inc.
Well Name and Number:	Hicks M03H
Latitude:	39.87176800
Longitude:	-80.75160800
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,371
Total Base Water Volume (gal):	18,234,804
Total Base Non Water Volume:	0

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
Water	Chevron	Carrier/Base Fluid	Water	7732-18-5	100.00000	88.35679None	
Sand	Upp	Proppant	Crystalline Silica in the form of Quartz	14808-60-7	99.90000	10.46769None	
HCL Acid (7.5%)	Upp	Acidizing	Hydrochloric Acid	7647-01-0	7.50000	0.07834None	
FR-11	Upp	Friction reducer	Water	7732-18-5	55.00000	0.03326None	
			Hydrotreated Petroleum Distillate	54742-47-8	25.00000	0.01512None	
			CHEMPLEX-Polymer_00019	Trade Secret	25.00000	0.01512None	
			Sodium Chloride	7647-14-5	15.00000	0.00907None	
			Oleic Acid Diethanolamide	93-83-4	3.00000	0.00181None	
			Alcohol Ethoxylate Surfactants	68551-12-2	3.00000	0.00181None	
			Ammonium Chloride	12125-02-9	2.00000	0.00121None	
			Polyoxyethylene Sorbitan Monoleate	9005-65-6	1.00000	0.00060None	
K-BAC 1020	Upp	Biocide					



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Submitted 1/27/20

Other Chemical(s)	Listed Above	See Trade Name(s)	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.	Ingredients shown below are Non-MSDS.	Ingredients shown below are Non-MSDS.	Ingredients shown below are Non-MSDS.	Ingredients shown below are Non-MSDS.	Ingredients shown below are Non-MSDS.	Ingredients shown below are Non-MSDS.
			Polyethylene glycol	25322-68-3	50.00000	0.01043	None		
			Water	7732-18-5	30.00000	0.00626	None		
			2,2-Dibromo-3-nitriopropanamide	10222-01-2	21.00000	0.00438	None		
Scale Hib PE-18	UPP	Scale Inhibitor	Ethylene glycol	107-21-1	40.00000	0.00707	None		
			Proprietary Scale Inhibitor	Proprietary	30.00000	0.00531	None		
7L	UPP	Iron Control Agent	Ammonium glycolate	35249-89-9	20.00000	0.00414	None		
			Ethylene Glycol	107-21-1	20.00000	0.00414	None		
			Hydroxyacetic acid	79-14-1	5.00000	0.00103	None		
Unhib G	UPP	Acid Inhibitor	Butyl diglycol	112-34-5	75.00000	0.00061	None		
			Alcohols, C10-16, ethoxylated	68002-97-1	50.00000	0.00041	None		
			Methanol	67-56-1	5.00000	0.00004	None		
			Thiourea	62-56-6	1.00000	0.00001	None		
			Formaldehyde	50-00-0	1.00000	0.00001	None		
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.									
		List	Water	7732-18-5	55.00000	0.03326			
			Hydrotreated Petroleum Distillate	64742-47-8	25.00000	0.01512			
			Polyethylene glycol	25322-68-3	50.00000	0.01043			
			Sodium Chloride	7647-14-5	15.00000	0.00907			
			Ethylene glycol	107-21-1	40.00000	0.00707			
			Water	7732-18-5	30.00000	0.00626			
			Ammonium glycolate	35249-89-9	20.00000	0.00414			
			Alcohol Ethoxylate Surfactants	68551-12-2	3.00000	0.00181			
			Oleic Acid Diethanolamide	93-83-4	3.00000	0.00181			
			Ammonium Chloride	12125-02-9	2.00000	0.00121			
			Hydroxyacetic acid	79-14-1	5.00000	0.00103			
			Polyoxyethylene Sorbitan Monoleate	9005-65-6	1.00000	0.00060			
			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 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)

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Production



Jackie M. Scholar
Regulatory Reporting Coordinator

February 24, 2020

CERTIFIED MAIL: 7018 0830 0000 6083 3615

WV DEP
Office of Oil and Gas
601 – 57th Street
Charleston, WV 25304

RE: Well Operator's Report of Well Work WR-35
Hicks M03H

Dear Sir/Madam,

Enclosed here within please find one (1) Well Operator's Report of Well Work WR-35, one (1) copy of the Plat on Mylar, one (1) copy of the FracFocus report, and one (1) copy of the Directional Survey for **Hicks M03H, (API 47-051-01899)**.

If you have any questions, please contact me at (412) 865-3422. Thank you.

Sincerely,
Chevron Appalachia, LLC

Jackie M. Scholar

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REFERENCE WELLPATH IDENTIFICATION

Operator CHEVRON APPALACHIA, LLC
 Area Marshall County, WV
 Field Marshall County
 Facility Hicks Pad
 Slot Slot #03
 Well Hicks M03H
 Wellbore Hicks M03H AWB
 Wellpath Hicks M031164'
 Sidetrack (none)

REPORT SETUP INFORMATION

Projection NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
 North Refe TRUE
 Scale 0.99995
 Convergen 0.78° West
 Software S WellArchitect® 5.1
 User Mccerib
 Report Ger 6/26/2019 at 9:01:29 AM
 Database:\WA_MPL_EASTERNU5_Defn\ev190.xml

WELLPATH Local North Local East Easting Northing Latitude Longitude

[ft]	[ft]	[US ft]	[US ft]		
Slot Locatic	-29.25	6.31	1626575	501961.2	39°52'18.3 80°43'05.788"W
Facility Ref			1626569	501990.5	39°52'18.6 80°43'05.869"W
Field Refer			1644569	516963.8	39°54'48.9 80°39'17.476"W

WELLPATH DATUM

Calculation Minimum curvature
 Horizontal Slot
 Vertical Re Precision 560 (RKB)
 MD Refere Precision 560 (RKB)
 Field Vertic Mean Sea Level
 Precision 5.25.00ft
 Precision 5.1165.00ft
 Precision 5.25.00ft
 Section Ori N 0.00, E 0.00 ft
 Section Azi 324.35°

WELLPATH DATA + = interpolated/extrapolated station

MD	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure [ft]	Dis Closure [°]	Dir DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
+	0	0	65.57	0	0	0	1626575	501961.2	39°52'18.3	80°43'05.7	0	0	0	0	0	
	25	0	65.57	25	0	0	1626575	501961.2	39°52'18.3	80°43'05.7	0	0	0	0	0	
	108	0.44	65.57	108	-0.06	0.13	1626575	501961.3	39°52'18.3	80°43'05.7	0.32	65.57	0.53	0.53	79	SDI Gyro <17-1/2"> (100'-450')
	133	0.45	88.02	133	-0.14	0.17	1626575	501961.4	39°52'18.3	80°43'05.7	0.51	69.812	0.69	0.04	89.8	

Vertical Curve
 MD
 Vertical Curve
 MD
 Vertical Curve
 MD

158	0.42	96.24	158	-0.25	0.17	0.66	1626575	501961.4	39°52'18.3	80°43'05.7	0.69	75.793	0.28	-0.12	32.88
183	0.26	88.27	183	-0.34	0.16	0.81	1626575	501961.3	39°52'18.3	80°43'05.7	0.83	78.856	0.67	-0.64	-31.88
208	0.17	90.76	208	-0.4	0.16	0.91	1626575	501961.3	39°52'18.3	80°43'05.7	0.92	79.91	0.36	-0.36	9.96
233	0.28	84.21	233	-0.45	0.17	1	1626576	501961.4	39°52'18.3	80°43'05.7	1.02	80.56	0.45	0.44	-26.2
258	0.49	75.02	258	-0.52	0.2	1.17	1626576	501961.4	39°52'18.3	80°43'05.7	1.19	80.249	0.87	0.84	-36.76
283	0.76	80.02	283	-0.63	0.26	1.43	1626576	501961.4	39°52'18.3	80°43'05.7	1.46	79.84	1.1	1.08	20
308	0.5	68.72	308	-0.73	0.33	1.7	1626576	501961.5	39°52'18.3	80°43'05.7	1.73	79.161	1.15	-1.04	-45.2
333	0.29	87.21	333	-0.79	0.37	1.86	1626576	501961.5	39°52'18.3	80°43'05.7	1.9	78.832	0.97	-0.84	73.96
358	0.46	79.83	358	-0.87	0.39	2.03	1626577	501961.6	39°52'18.3	80°43'05.7	2.06	79.137	0.71	0.68	-29.52
383	0.5	80.93	383	-0.96	0.42	2.23	1626577	501961.6	39°52'18.3	80°43'05.7	2.27	79.253	0.16	0.16	4.4
408	0.32	70.93	408	-1.03	0.46	2.41	1626577	501961.6	39°52'18.3	80°43'05.7	2.45	79.092	0.77	-0.72	-40
433	0.43	82.92	433	-1.09	0.5	2.57	1626577	501961.7	39°52'18.3	80°43'05.7	2.61	79.012	0.54	0.44	47.96
458	0.58	73.58	458	-1.18	0.55	2.78	1626577	501961.7	39°52'18.3	80°43'05.7	2.83	78.899	0.68	0.6	-37.36
560	0.97	70.03	560	-1.58	0.99	4.09	1626579	501962.1	39°52'18.3	80°43'05.7	4.2	76.432	0.39	0.38	-3.48
591	1	66.23	591	-1.71	1.19	4.58	1626579	501962.3	39°52'18.3	80°43'05.7	4.73	75.498	0.23	0.1	-12.26
610	0.99	53.33	610	-1.74	1.35	4.86	1626579	501962.5	39°52'18.3	80°43'05.7	5.05	74.492	1.18	-0.05	-67.89
623	1.05	55.21	623	-1.74	1.48	5.05	1626580	501962.6	39°52'18.3	80°43'05.7	5.27	73.622	0.53	0.46	14.46
654	0.86	62.17	654	-1.77	1.76	5.49	1626580	501962.9	39°52'18.3	80°43'05.7	5.77	72.272	0.72	-0.61	22.45
685	0.55	52.27	685	-1.8	1.96	5.81	1626580	501963.1	39°52'18.3	80°43'05.7	6.13	71.415	1.07	-1	-31.94
716	0.3	50.75	716	-1.79	2.1	6	1626581	501963.2	39°52'18.3	80°43'05.7	6.35	70.717	0.81	-0.81	-4.9
747	0.21	42.64	747	-1.77	2.19	6.1	1626581	501963.3	39°52'18.3	80°43'05.7	6.48	70.235	0.31	-0.29	-26.16
778	0	351.69	778	-1.76	2.23	6.14	1626581	501963.3	39°52'18.3	80°43'05.7	6.53	70.004	0.68	-0.68	-137.55
810	0.37	245.15	810	-1.74	2.19	6.04	1626581	501963.3	39°52'18.3	80°43'05.7	6.43	70.082	1.16	1.16	-26.16
841	0.44	245.92	841	-1.7	2.1	5.84	1626580	501963.2	39°52'18.3	80°43'05.7	6.21	70.241	0.23	0.23	2.48
872	0.67	246.39	872	-1.64	1.98	5.57	1626580	501963.1	39°52'18.3	80°43'05.7	5.91	70.446	0.74	0.74	1.52
903	0.81	242.25	903	-1.57	1.8	5.21	1626580	501962.9	39°52'18.3	80°43'05.7	5.51	70.905	0.48	0.45	-13.35
934	0.85	231.18	934	-1.55	1.56	4.83	1626579	501962.7	39°52'18.3	80°43'05.7	5.08	72.152	0.53	0.13	-35.71
966	0.84	228.45	966	-1.59	1.25	4.47	1626579	501962.4	39°52'18.3	80°43'05.7	4.65	74.363	0.13	-0.03	-8.53
997	0.69	233.86	997	-1.61	0.99	4.15	1626579	501961.9	39°52'18.3	80°43'05.7	4.27	76.574	0.54	-0.48	17.45
1028	0.73	228.14	1028	-1.64	0.75	3.86	1626578	501962.1	39°52'18.3	80°43'05.7	3.93	78.998	0.26	0.13	-18.45
1059	0.71	225.75	1059	-1.69	0.48	3.57	1626578	501961.6	39°52'18.3	80°43'05.7	3.6	82.285	0.12	-0.06	-7.71
1091	0.71	215.34	1091	-1.78	0.18	3.31	1626578	501961.3	39°52'18.3	80°43'05.7	3.32	86.828	0.4	0	-32.53
1122	0.58	207.45	1122	-1.92	-0.11	3.13	1626578	501961.3	39°52'18.3	80°43'05.7	3.13	92.054	0.51	-0.42	-25.45
1153	0.64	187.41	1153	-2.11	-0.42	3.04	1626578	501960.7	39°52'18.3	80°43'05.7	3.07	97.936	0.71	0.19	-64.65
1184	0.45	186.33	1184	-2.33	-0.72	3	1626578	501960.4	39°52'18.3	80°43'05.7	3.08	103.422	0.61	-0.61	-3.48
1215	0.24	122.26	1215	-2.48	-0.87	3.04	1626578	501960.3	39°52'18.3	80°43'05.7	3.16	105.99	1.31	-0.68	-206.68
1247	0.37	48.9	1247	-2.53	-0.84	3.18	1626578	501960.3	39°52'18.3	80°43'05.7	3.29	104.804	1.18	0.41	-229.25
1278	0.77	41.73	1278	-2.48	-0.62	3.39	1626578	501960.5	39°52'18.3	80°43'05.7	3.45	100.334	1.31	1.29	-23.13
1309	0.97	45.46	1309	-2.39	-0.28	3.72	1626578	501960.9	39°52'18.3	80°43'05.7	3.73	94.288	0.67	0.65	12.03
1340	1.1	32.22	1340	-2.24	0.16	4.06	1626579	501961.3	39°52'18.3	80°43'05.7	4.06	87.784	0.88	0.42	-42.71
1371	1.19	31.26	1371	-2	0.68	4.39	1626579	501961.8	39°52'18.3	80°43'05.7	4.44	81.137	0.3	0.29	-3.1
1403	1.03	33.65	1403	-1.77	1.21	4.72	1626579	501962.3	39°52'18.3	80°43'05.7	4.87	75.646	0.52	-0.5	7.47
1434	0.71	34.35	1434	-1.6	1.6	4.98	1626580	501962.3	39°52'18.3	80°43'05.7	5.23	72.215	1.03	-1.03	2.26
1465	0.47	23.71	1465	-1.47	1.87	5.14	1626580	501963.3	39°52'18.3	80°43'05.7	5.47	69.982	0.85	-0.77	-34.32
1496	0.35	23.81	1496	-1.36	2.08	5.23	1626580	501963.2	39°52'18.3	80°43'05.7	5.63	68.351	0.39	-0.39	0.32
1527	0.34	257.8	1527	-1.28	2.14	5.18	1626580	501963.3	39°52'18.3	80°43'05.7	5.6	67.518	1.98	-0.03	-406.48
1559	0.95	230.74	1559	-1.26	1.96	4.88	1626579	501963.1	39°52'18.3	80°43'05.7	5.26	68.168	2.08	1.91	-84.56
1589	1.15	248.46	1589	-1.2	1.69	4.41	1626579	501962.8	39°52'18.3	80°43'05.7	4.72	69.053	1.26	0.67	59.07
1621	1.26	250.66	1621	-1.02	1.45	3.78	1626578	501962.6	39°52'18.3	80°43'05.7	4.05	68.961	0.37	0.34	6.88
1652	1.31	240.33	1652	-0.89	1.16	3.15	1626578	501962.3	39°52'18.3	80°43'05.7	3.36	69.696	0.76	0.16	-33.32
1683	1.62	248.44	1683	-0.74	0.83	2.43	1626577	501962.3	39°52'18.3	80°43'05.7	2.57	71.196	1.2	1	26.16

APS EM + MagVAR MSA <12-1/4"> (458)(560--1995)

DATE: 11/11/03
 TIME: 10:00
 BY: J. J. J.

1714	1.69	242.51	1713.86	-0.57	0.46	1.62	1626576	501961.6	39°52'18.3	80°43'05.7	1.68	74.266	0.6	0.23	-19.13
1746	1.44	239	1745.85	-0.47	0.03	0.86	1626575	501961.2	39°52'18.3	80°43'05.7	0.86	87.904	0.84	-0.78	-10.97
1777	1.47	237.55	1776.84	-0.42	-0.38	0.19	1626575	501960.8	39°52'18.3	80°43'05.7	0.43	153.989	0.15	0.1	-4.68
1808	1.5	235.23	1807.83	-0.39	-0.83	-0.48	1626574	501960.4	39°52'18.3	80°43'05.7	0.96	210.23	0.22	0.1	-7.48
1839	1.53	231.74	1838.82	-0.4	-1.32	-1.14	1626573	501959.9	39°52'18.3	80°43'05.8	1.74	220.931	0.31	0.1	-11.26
1870	1.46	220.7	1869.81	-0.52	-1.87	-1.72	1626573	501959.4	39°52'18.3	80°43'05.8	2.54	222.644	0.95	-0.23	-35.61
1901	1.28	205.84	1900.8	-0.77	-2.48	-2.13	1626572	501958.7	39°52'18.3	80°43'05.8	3.27	220.656	1.28	-0.58	-47.94
1933	1.46	199.19	1932.79	-1.18	-3.19	-2.42	1626572	501958.39	52'18.3	80°43'05.8	4	217.211	0.75	0.56	-20.78
1964	1.05	183.66	1963.78	-1.63	-3.84	-2.57	1626572	501957.4	39°52'18.3	80°43'05.8	4.62	213.75	1.71	-1.32	-50.1
1995	0.83	161.21	1994.78	-2.06	-4.34	-2.51	1626572	501956.9	39°52'18.3	80°43'05.8	5.02	210.085	1.37	-0.71	-72.42
2099	1.64	125.62	2098.75	-4.19	-5.92	-1.06	1626573	501955.3	39°52'18.3	80°43'05.8	6.02	190.173	1.04	0.78	-34.22
2188	0.11	45.75	2187.74	-5.39	-6.6	0.03	1626575	501954.6	39°52'18.3	80°43'05.7	6.6	179.704	1.83	-1.72	-89.74
2278	0.28	226.92	2277.74	-5.4	-6.69	-0.06	1626574	501954.5	39°52'18.2	80°43'05.7	6.69	180.553	0.43	0.19	-198.7
2368	0.69	214.38	2367.74	-5.61	-7.29	-0.53	1626574	501953.9	39°52'18.2	80°43'05.7	7.31	184.168	0.47	0.46	-13.93
2457	0.88	205.63	2456.73	-6.13	-8.35	-1.13	1626573	501952.9	39°52'18.2	80°43'05.8	8.42	187.705	0.25	0.21	-9.83
2547	1.35	75.07	2546.72	-6.83	-8.7	-0.4	1626574	501952.5	39°52'18.2	80°43'05.7	8.71	182.659	2.26	0.52	-145.07
2636	4.47	58.32	2635.6	-7.44	-6.61	3.56	1626578	501954.5	39°52'18.3	80°43'05.7	7.51	151.672	3.6	3.51	-18.82
2726	8.64	63.22	2724.99	-8.73	-1.72	12.59	1626587	501959.3	39°52'18.3	80°43'05.6	12.7	97.768	4.67	4.63	5.44
2815	15.17	60.29	2812.03	-10.97	7.08	28.68	1626603	501967.9	39°52'18.4	80°43'05.4	29.54	76.143	7.37	7.34	-3.29
2905	20.87	53.58	2897.59	-11.97	22.44	51.83	1626627	501982.9	39°52'18.5	80°43'05.1	56.49	66.587	6.73	6.33	-7.46
2994	25.06	52.92	2979.52	-11.29	43.23	79.64	1626655	502003.3	39°52'18.7	80°43'04.3	90.62	61.506	4.72	4.71	-0.74
3084	31.96	53.69	3058.55	-10.54	68.86	114.08	1626690	502028.5	39°52'19.0	80°43'04.3	133.25	58.886	7.68	7.67	0.86
3173	40.09	53.85	3130.47	-10.02	99.76	156.28	1626732	502058.8	39°52'19.3	80°43'03.7	185.4	57.447	9.14	9.13	0.18
3262	44.33	53.44	3196.38	-9.27	135.21	204.42	1626781	502093.6	39°52'19.7	80°43'03.1	245.09	56.518	4.77	4.76	-0.46
3352	43.29	53.11	3261.33	-8.1	172.46	254.35	1626831	502130.2	39°52'20.0	80°43'02.5	307.31	55.861	1.18	-1.16	-0.37
3441	44.68	54.24	3325.36	-7.38	209.07	304.15	1626882	502166.1	39°52'20.4	80°43'01.8	369.08	55.496	1.79	1.56	1.27
3531	44.75	53.14	3389.32	-6.65	246.56	355.18	1626933	502202.9	39°52'20.8	80°43'01.2	432.37	55.232	0.86	0.08	-1.22
3621	44.19	52.02	3453.55	-4.71	284.87	405.25	1626984	502240.5	39°52'21.1	80°43'00.5	495.36	54.895	1.07	-0.62	-1.24
3710	44.19	51.97	3517.36	-2.16	323.07	454.13	1627033	502278.1	39°52'21.5	80°42'59.9	557.32	54.572	0.04	0	-0.06
3800	44.19	52.13	3581.89	0.36	361.65	503.6	1627083	502316	39°52'21.9	80°42'59.3	620	54.317	0.12	0	0.18
3890	45.85	52.92	3645.51	2.38	400.37	554.13	1627134	502354	39°52'22.3	80°42'58.6	683.63	54.151	1.95	1.84	0.88
3979	45.71	53.1	3707.58	3.87	438.75	605.07	1627186	502391.7	39°52'22.7	80°42'58.0	747.4	54.053	0.21	0.21	0.2
4069	45.82	54.22	3770.37	4.65	476.96	657.01	1627238	502429.2	39°52'23.0	80°42'57.3	811.88	54.022	0.9	0.12	1.24
4158	45.85	54.75	3832.37	4.5	514.05	708.98	1627290	502465.6	39°52'23.4	80°42'56.6	875.72	54.056	0.43	0.03	0.6
4248	45.59	55.12	3895.21	3.84	551.06	761.72	1627344	502501.9	39°52'23.8	80°42'56.0	940.15	54.116	0.41	-0.29	0.41
4338	45.67	55.01	3958.15	3.03	587.91	814.46	1627397	502538	39°52'24.1	80°42'55.3	1004.48	54.177	1.53	-1.51	-0.35
4427	44.33	54.7	4021.08	2.48	624.13	865.92	1627449	502573.5	39°52'24.5	80°42'54.6	1067.41	54.217	1.53	-1.3	4.53
4517	43.16	58.78	4086.11	-0.09	658.26	917.92	1627501	502606.9	39°52'24.8	80°42'54.0	1129.55	54.355	3.39	-1.3	4.53
4606	43.88	64.76	4150.67	-8.02	687.21	971.88	1627556	502635.1	39°52'25.1	80°42'53.3	1190.29	54.736	4.7	0.81	6.72
4696	42.27	63.54	4216.41	-18.49	714	1027.19	1627611	502661.2	39°52'25.4	80°42'52.6	1250.97	55.197	2.01	-1.79	-1.36
4785	42.59	63.33	4282.1	-27.97	740.85	1080.9	1627665	502687.3	39°52'25.6	80°42'51.9	1310.42	55.573	0.39	0.36	-0.24
4875	43.67	62.65	4347.78	-37.21	768.8	1135.71	1627721	502714.5	39°52'25.9	80°42'51.2	1371.46	55.905	1.31	1.2	-0.76
4964	44.34	61.89	4411.8	-45.73	797.57	1190.44	1627776	502742.5	39°52'26.2	80°42'50.5	1432.92	56.179	0.96	0.75	-0.85
5054	45.16	59.89	4475.72	-52.94	828.4	1245.79	1627831	502772.6	39°52'26.5	80°42'49.8	1496.07	56.378	1.81	0.91	-2.22
5144	45.15	56.76	4539.2	-57.36	861.9	1300.08	1627886	502805.3	39°52'26.8	80°42'49.1	1559.83	56.457	2.47	-0.01	-3.48
5233	44.84	51.82	4602.15	-57.3	898.6	1351.15	1627938	502841.3	39°52'27.2	80°42'48.4	1622.68	56.374	3.94	-0.35	-5.55
5323	43.76	42.14	4666.64	-49.31	941.34	1397.03	1627984	502883.5	39°52'27.6	80°42'47.8	1684.58	56.027	7.6	-1.2	-10.76
5412	42.35	34.1	4731.72	-32.41	989.02	1434.52	1628022	502930.6	39°52'28.1	80°42'47.3	1742.41	55.416	6.36	-1.58	-9.03
5501	44.3	33.53	4796.46	-10.98	1039.76	1468.49	1628057	502980.9	39°52'28.6	80°42'46.9	1799.33	54.7	2.23	2.19	-0.64
5591	45.12	32.1	4860.42	12.26	1092.97	1502.8	1628092	503033.6	39°52'29.1	80°42'46.5	1858.22	53.972	1.44	0.91	-1.59
5680	44.89	31.25	4923.35	36.52	1146.53	1535.85	1628126	503086.7	39°52'29.6	80°42'46.0	1916.6	53.258	0.72	-0.26	-0.96

BH AT Curve+MagVar MSA <8-1/2"> (1995)(2099-17139)

Exported from SkyTools

5770	44.14	30.55	4987.53	61.63	1200.67	1568.25	1628159	503140.4	39°52'30.2	80°42'45.6	1975.11	52.562	1	-0.83	-0.78
5859	42.61	30.35	5052.22	86.39	1253.36	1599.23	1628191	503192.7	39°52'30.7	80°42'45.2	2031.86	51.913	1.73	-1.72	-0.22
5949	42.22	33.82	5118.67	109.39	1304.78	1631.46	1628223	503243.7	39°52'31.2	80°42'44.8	2089.05	51.348	2.64	-0.43	3.86
6039	44.02	34.03	5184.36	130.86	1355.83	1665.79	1628259	503294.2	39°52'31.7	80°42'44.4	2147.82	50.857	2.01	2	0.23
6127	45.29	33.29	5246.96	152.71	1407.31	1700.07	1628293	503345.3	39°52'32.2	80°42'43.9	2206.98	50.382	1.56	1.44	-0.84
6217	45.29	32.25	5310.28	176.24	1461.09	1734.69	1628329	503398.6	39°52'32.8	80°42'43.5	2268.02	49.893	0.82	0	-1.16
6306	45.2	32.11	5372.94	200.09	1514.58	1768.35	1628363	503451.6	39°52'33.3	80°42'43.1	2328.3	49.42	0.15	-0.1	-0.16
6396	45.33	32.25	5436.28	224.21	1568.69	1802.4	1628398	503505.2	39°52'33.8	80°42'42.6	2389.44	48.966	0.18	0.14	0.16
6485	45.28	32	5498.88	248.14	1622.27	1836.04	1628432	503558.3	39°52'34.3	80°42'42.2	2450.06	48.537	0.21	-0.06	-0.28
6575	44.76	32.17	5562.5	272.26	1676.21	1869.86	1628467	503611.8	39°52'34.9	80°42'41.8	2511.18	48.126	0.59	-0.58	0.19
6664	44.72	33.04	5625.72	295.47	1728.98	1903.61	1628501	503664.1	39°52'35.4	80°42'41.3	2571.6	47.752	0.69	-0.04	0.98
6753	44.85	34.52	5688.89	317.5	1781.09	1938.47	1628537	503715.7	39°52'35.9	80°42'40.9	2632.48	47.423	1.18	0.15	1.66
6843	44.73	34.78	5752.76	338.87	1833.25	1974.52	1628574	503767.4	39°52'36.4	80°42'40.4	2694.35	47.125	0.24	-0.13	0.29
6932	44.72	34.14	5815.99	360.18	1884.89	2009.96	1628610	503818.6	39°52'36.9	80°42'40.0	2755.49	46.839	0.51	-0.01	-0.72
7021	46.17	22.91	5878.53	387.79	1940.47	2040.08	1628641	503873.7	39°52'37.5	80°42'39.6	2815.55	46.433	9.13	1.63	-12.62
7111	46.87	7.9	5940.65	428.64	2003.09	2057.28	1628659	503936.1	39°52'38.1	80°42'39.4	2871.37	45.765	12.11	0.78	-16.68
7200	46.33	355.37	6001.93	479.88	2067.48	2059.15	1628661	504000.5	39°52'38.7	80°42'39.3	2917.97	44.884	10.24	-0.61	-14.08
7290	49.57	347.94	6062.25	539.22	2133.49	2049.36	1628653	504066.6	39°52'39.4	80°42'39.5	2958.31	43.848	7.11	3.6	-8.26
7379	53.14	345.89	6117.82	603.41	2201.17	2033.59	1628638	504134.5	39°52'40.1	80°42'39.7	2996.77	42.734	4.4	4.01	-2.3
7469	56.06	346.45	6169.95	671.5	2272.4	2016.06	1628621	504205.9	39°52'40.8	80°42'39.9	3037.81	41.579	3.28	3.24	0.62
7558	62.2	347.22	6215.6	742.05	2346.75	1998.69	1628605	504280.5	39°52'41.5	80°42'40.1	3082.53	40.421	6.94	6.9	0.87
7648	66.36	346.9	6254.65	816.83	2425.75	1980.53	1628588	504359.7	39°52'42.3	80°42'40.3	3131.58	39.23	4.63	4.62	-0.36
7737	68.3	339.58	6288.99	894.47	2504.3	1956.84	1628565	504438.6	39°52'43.1	80°42'40.6	3178.17	38.004	7.89	2.18	-8.22
7826	72.81	325.8	6318.73	977.26	2578.57	1918.33	1628528	504513.4	39°52'43.8	80°42'41.1	3213.88	36.647	15.45	5.07	-15.48
7916	75.28	322.68	6343.48	1063.77	2648.77	1867.76	1628478	504584.3	39°52'44.5	80°42'41.8	3241.06	35.189	4.32	2.74	-3.47
8005	81.13	326.06	6361.67	1150.84	2719.55	1817.06	1628428	504655.7	39°52'45.2	80°42'42.4	3270.73	33.749	7.55	6.57	3.8
8095	88.15	327.48	6370.07	1240.31	2794.46	1768	1628380	504731.3	39°52'45.9	80°42'43.7	3306.78	32.321	7.96	7.8	1.58
8184	90.52	328	6371.1	1329.14	2869.71	1720.5	1628334	504807.2	39°52'46.7	80°42'44.3	3345.94	30.944	2.73	2.66	0.58
8274	90.65	327.38	6370.18	1418.99	2945.77	1672.39	1628287	504883.9	39°52'47.4	80°42'44.9	3387.4	29.585	0.7	0.14	-0.69
8363	90.59	324.67	6369.22	1507.93	3019.57	1622.67	1628238	504958.8	39°52'48.2	80°42'44.9	3427.95	28.253	3.05	-0.07	-3.04
8452	90.55	320.77	6368.33	1596.88	3090.36	1568.77	1628185	505029.8	39°52'48.9	80°42'45.6	3465.75	26.914	4.38	-0.04	-4.38
8542	90.62	320.99	6367.42	1686.71	3160.19	1511.99	1628129	505100.4	39°52'49.5	80°42'46.3	3503.27	25.569	0.26	0.08	0.24
8631	90.55	323.82	6366.51	1775.64	3230.69	1457.7	1628076	505171.7	39°52'50.2	80°42'47.0	3544.33	24.285	3.18	-0.08	3.18
8721	90.49	325.86	6365.69	1865.63	3304.27	1405.88	1628025	505245.9	39°52'51.0	80°42'47.7	3590.91	23.048	2.27	-0.07	2.27
8810	90.59	323.93	6364.85	1954.62	3377.07	1354.7	1627975	505319.4	39°52'51.7	80°42'48.4	3638.66	21.858	2.17	0.11	-2.17
8900	90.49	320.07	6364	2044.52	3447.97	1299.3	1627920	505391.1	39°52'52.4	80°42'49.1	3684.66	20.648	4.29	-0.11	-4.29
8989	90.58	319.5	6363.17	2133.23	3515.93	1241.84	1627864	505459.8	39°52'53.1	80°42'49.8	3728.8	19.453	0.65	0.1	-0.64
9079	90.58	317.36	6362.26	2222.74	3583.26	1182.13	1627805	505527.9	39°52'53.7	80°42'50.6	3773.22	18.258	2.38	0	-2.38
9168	90.49	315.5	6361.43	2310.89	3647.74	1120.79	1627745	505593.2	39°52'54.4	80°42'51.4	3816.04	17.08	2.09	-0.1	-2.09
9258	90.65	315.73	6360.53	2399.84	3712.05	1057.85	1627683	505658.4	39°52'55.0	80°42'52.2	3859.84	15.906	0.31	0.18	0.26
9347	90.59	316.07	6359.57	2487.87	3775.96	995.91	1627622	505723.1	39°52'55.6	80°42'53.0	3905.09	14.775	0.39	-0.07	0.38
9436	90.55	318.56	6358.69	2576.19	3841.38	935.58	1627562	505789.3	39°52'56.3	80°42'53.7	3953.67	13.688	2.8	-0.04	2.8
9526	90.4	322.81	6357.94	2665.98	3910.99	878.57	1627506	505859.7	39°52'57.0	80°42'54.5	4008.46	12.661	4.72	-0.17	4.72
9615	90.65	326.98	6357.12	2754.95	3983.78	827.41	1627456	505933.2	39°52'57.7	80°42'55.1	4068.8	11.733	4.69	0.28	4.69
9704	90.71	330.44	6356.07	2843.67	4059.82	781.19	1627411	506009.8	39°52'58.4	80°42'55.7	4134.29	10.892	3.89	0.07	3.89
9794	90.65	325.84	6355	2933.45	4136.23	733.7	1627364	506086.9	39°52'59.2	80°42'56.3	4200.8	10.059	5.11	-0.07	-5.11
9883	90.52	326.28	6354.09	3022.4	4210.07	684.01	1627316	506161.4	39°52'59.9	80°42'57.0	4265.27	9.228	0.52	-0.15	0.49
9973	90.52	324.56	6353.27	3112.38	4284.16	632.94	1627266	506236.2	39°53'00.7	80°42'57.6	4330.66	8.404	1.91	0	-1.91
10062	90.46	325.26	6352.51	3201.37	4356.98	581.78	1627215	506309.7	39°53'01.4	80°42'58.3	4395.65	7.606	0.79	-0.07	0.79
10152	90.62	327.21	6351.66	3291.31	4431.79	531.76	1627166	506385.1	39°53'02.1	80°42'58.9	4463.58	6.842	2.17	0.18	2.17
10241	90.49	328.54	6350.8	3380.14	4507.16	484.44	1627120	506461.1	39°53'02.9	80°42'59.5	4533.12	6.135	1.5	-0.15	1.49

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10330	90.62	330.42	6349.94	3468.78	4583.82	439.24	1627076	506538.4	39°53'03.6	80°43'00.1	4604.82	5.474	2.12	0.15	2.11
10420	90.62	335.38	6348.96	3557.74	4663.91	398.26	1627036	506619	39°53'04.4	80°43'00.6	4680.89	4.881	5.51	0	5.51
10509	90.65	332.18	6347.98	3645.52	4743.74	358.95	1626998	506699.4	39°53'05.2	80°43'01.1	4757.3	4.327	3.6	0.03	-3.6
10599	90.65	330.61	6346.96	3734.83	4822.75	315.86	1626956	506779	39°53'06.0	80°43'01.7	4833.08	3.747	1.74	0	-1.74
10688	90.68	325.65	6345.92	3823.61	4898.3	268.89	1626910	506855.1	39°53'06.7	80°43'02.3	4905.68	3.142	5.57	0.03	-5.57
10777	90.55	321.67	6344.97	3912.58	4969.97	216.16	1626858	506927.5	39°53'07.4	80°43'03.0	4974.67	2.49	4.47	-0.15	-4.47
10867	90.65	318.79	6344.02	4002.33	5039.14	158.6	1626801	506997.5	39°53'08.1	80°43'03.7	5041.63	1.803	3.2	0.11	-3.2
10956	90.59	317.8	6343.06	4090.83	5105.58	99.39	1626743	507064.7	39°53'08.8	80°43'04.5	5106.55	1.115	1.11	-0.07	-1.11
11046	90.52	318.61	6342.19	4180.31	5172.67	39.41	1626684	507132.6	39°53'09.4	80°43'05.2	5172.82	0.437	0.9	-0.08	0.9
11135	90.55	323.59	6341.36	4269.13	5241.91	-16.46	1626629	507202.6	39°53'10.1	80°43'05.9	5241.94	359.82	5.6	0.03	5.6
11225	90.55	326.19	6340.49	4359.12	5315.53	-68.21	1626578	507276.9	39°53'10.8	80°43'06.6	5315.97	359.265	2.89	0	2.89
11314	90.65	326.22	6339.56	4448.06	5389.49	-117.72	1626530	507351.5	39°53'11.6	80°43'07.2	5390.77	358.749	0.12	0.11	0.03
11403	90.55	329.76	6338.63	4536.87	5464.94	-164.88	1626484	507427.6	39°53'12.3	80°43'07.9	5467.42	358.272	3.98	-0.11	3.98
11492	90.49	330.63	6337.82	4625.4	5542.16	-209.12	1626441	507505.4	39°53'13.1	80°43'08.4	5546.1	357.839	0.98	-0.07	0.98
11582	90.68	329.9	6336.9	4714.91	5620.31	-253.75	1626397	507584.1	39°53'13.9	80°43'09.0	5626.03	357.415	0.84	0.21	-0.81
11671	90.68	327.26	6335.85	4803.66	5696.24	-300.14	1626352	507660.7	39°53'14.6	80°43'09.6	5704.15	356.984	2.97	0	-2.97
11760	90.65	327.3	6334.81	4892.53	5771.12	-348.25	1626305	507736.2	39°53'15.3	80°43'10.2	5781.61	356.547	0.06	-0.03	0.04
11850	90.62	325.8	6333.82	4982.46	5846.2	-397.85	1626256	507812	39°53'16.1	80°43'10.8	5859.72	356.107	1.67	-0.03	-1.67
11939	90.55	324.98	6332.91	5071.44	5919.45	-448.4	1626207	507885.9	39°53'16.8	80°43'11.5	5936.41	355.668	0.92	-0.08	-0.92
12029	90.58	321.47	6332.02	5161.4	5991.52	-502.27	1626154	507958.7	39°53'17.5	80°43'12.2	6012.54	355.208	3.9	0.03	-3.9
12118	90.68	316.8	6331.04	5250.01	6058.81	-560.48	1626096	508026.7	39°53'18.2	80°43'12.9	6084.68	354.715	5.25	0.11	-5.25
12207	90.68	316.91	6329.98	5338.24	6123.74	-621.34	1626036	508092.5	39°53'18.8	80°43'13.7	6155.18	354.206	0.12	0	0.12
12297	90.68	318.64	6328.92	5427.64	6190.38	-681.81	1625977	508159.9	39°53'19.5	80°43'14.5	6227.81	353.715	1.92	0	1.92
12386	90.71	320.4	6327.84	5516.31	6258.07	-739.59	1625920	508228.4	39°53'20.2	80°43'15.2	6301.62	353.26	1.98	0.03	1.98
12476	90.8	321.88	6326.65	5606.16	6328.14	-796.05	1625864	508299.2	39°53'20.9	80°43'16.0	6378.01	352.83	1.65	0.1	1.64
12565	90.8	322.98	6325.41	5695.1	6398.67	-850.31	1625811	508370.5	39°53'21.6	80°43'16.6	6454.92	352.43	1.24	0	1.24
12655	90.92	323.36	6324.06	5785.07	6470.7	-904.25	1625758	508443.2	39°53'22.3	80°43'17.3	6533.58	352.045	0.44	0.13	0.42
12744	90.77	324.62	6322.74	5874.06	6542.69	-956.57	1625707	508515.9	39°53'23.0	80°43'18.0	6612.24	351.682	1.43	-0.17	1.42
12833	90.83	324.91	6321.5	5963.05	6615.37	-1007.91	1625657	508589.3	39°53'23.7	80°43'18.7	6691.72	351.337	0.33	0.07	0.33
12922	90.83	326.72	6320.21	6052	6688.99	-1057.91	1625608	508663.6	39°53'24.4	80°43'19.3	6772.13	351.013	2.03	0	2.03
13012	90.86	330.44	6318.88	6141.73	6765.77	-1104.81	1625552	508741	39°53'25.2	80°43'19.9	6855.38	350.726	4.13	0.03	4.13
13101	90.89	330.26	6317.53	6230.24	6843.11	-1148.84	1625519	508818.9	39°53'25.9	80°43'20.5	6938.87	350.47	0.21	0.03	-0.2
13191	90.86	323.64	6316.15	6320.08	6918.49	-1197.89	1625471	508894.9	39°53'26.7	80°43'21.1	7021.43	350.177	7.35	-0.03	-7.36
13280	90.74	325.62	6314.91	6409.07	6991.06	-1249.4	1625420	508968.2	39°53'27.4	80°43'21.8	7101.82	349.867	2.23	-0.13	2.22
13370	90.89	326.73	6313.63	6499.01	7065.81	-1299.49	1625371	509043.6	39°53'28.1	80°43'22.4	7184.32	349.579	1.24	0.17	1.23
13459	90.8	325.73	6312.31	6587.95	7139.79	-1348.96	1625323	509118.2	39°53'28.9	80°43'23.0	7266.1	349.301	1.13	-0.1	-1.12
13548	90.65	325.68	6311.19	6676.92	7213.31	-1399.1	1625273	509192.4	39°53'29.6	80°43'23.7	7347.74	349.023	0.18	-0.17	-0.06
13638	90.74	324.25	6310.1	6766.91	7286.99	-1450.76	1625223	509266.8	39°53'30.3	80°43'24.4	7430.01	348.74	1.59	0.1	-1.59
13727	90.74	324.17	6308.95	6855.9	7359.18	-1502.81	1625172	509339.7	39°53'31.0	80°43'25.0	7511.06	348.458	0.09	0	-0.09
13817	90.65	324.98	6307.85	6945.89	7432.51	-1554.97	1625121	509413.7	39°53'31.8	80°43'25.7	7593.43	348.183	0.91	-0.1	-0.64
13906	90.74	324.41	6306.78	7034.88	7505.14	-1606.4	1625070	509487	39°53'32.5	80°43'26.3	7675.13	347.919	0.65	0.1	-0.64
13996	90.74	323.94	6305.61	7124.87	7578.11	-1659.07	1625019	509560.7	39°53'33.2	80°43'27.0	7757.59	347.651	0.52	0	-0.52
14085	90.77	323.99	6304.44	7213.86	7650.07	-1711.43	1624967	509633.4	39°53'33.9	80°43'27.7	7839.17	347.39	0.07	0.03	0.06
14175	90.86	323.07	6303.16	7303.85	7722.44	-1764.92	1624915	509706.5	39°53'34.6	80°43'28.4	7921.55	347.126	1.03	0.1	-1.02
14264	90.71	320.64	6301.94	7392.75	7792.42	-1819.88	1624861	509777.2	39°53'35.3	80°43'29.1	8002.11	346.854	2.74	-0.17	-2.73
14354	90.62	319.67	6300.9	7482.5	7861.52	-1877.54	1624804	509847	39°53'36.0	80°43'29.8	8082.61	346.568	1.08	-0.1	-1.08
14443	90.52	319.95	6300.01	7571.21	7929.5	-1934.97	1624747	509915.8	39°53'36.7	80°43'30.6	8162.17	346.287	0.33	-0.11	0.31
14533	90.68	320.26	6299.07	7660.96	7998.55	-1992.69	1624691	509985.6	39°53'37.4	80°43'31.3	8243.03	346.011	0.39	0.18	0.34
14623	90.55	323.17	6298.1	7750.85	8069.18	-2048.44	1624636	510057	39°53'38.1	80°43'32.0	8325.13	345.756	3.24	-0.14	3.23
14712	90.55	324.89	6297.25	7839.84	8141.2	-2100.71	1624585	510129.7	39°53'38.8	80°43'32.7	8407.86	345.531	1.93	0	1.93
14801	90.65	324.69	6296.32	7928.84	8213.92	-2152.03	1624534	510203.1	39°53'39.5	80°43'33.3	8491.15	345.319	0.25	0.11	-0.22

String/Diar	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	Start E/W	End N/S	End E/W						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)						
14891	90.49	324.53	6295.42	8018.83	8287.28	-2204.15	1624483	510277.2	39°53'40.2	80°43'34.0	8575.39	345.106	0.25	-0.18	-0.18
14980	90.34	321.52	6294.78	8107.79	8358.37	-2257.67	1624431	510349.9	39°53'40.9	80°43'34.7	8657.91	344.885	3.39	-0.17	-3.38
15069	90.28	321.98	6294.29	8196.7	8428.27	-2312.77	1624376	510419.6	39°53'41.6	80°43'35.4	8739.83	344.655	0.52	-0.07	0.52
15159	90.37	323.64	6293.78	8286.66	8499.96	-2367.17	1624323	510492.3	39°53'42.3	80°43'36.1	8823.42	344.438	1.85	0.1	1.84
15249	90.25	326.34	6293.3	8376.65	8573.67	-2418.8	1624272	510566.4	39°53'43.0	80°43'36.8	8908.33	344.245	3	-0.13	3
15338	90.34	329.91	6292.84	8465.44	8649.23	-2465.79	1624226	510642.6	39°53'43.8	80°43'37.4	8993.85	344.088	4.01	0.1	4.01
15427	90.25	329.81	6292.38	8554.03	8726.2	-2510.47	1624183	510720.2	39°53'44.6	80°43'37.9	9080.14	343.95	0.15	-0.1	-0.11
15516	90.37	330.75	6291.9	8642.55	8803.49	-2554.59	1624140	510798.1	39°53'45.3	80°43'38.5	9166.64	343.818	1.06	0.13	1.06
15606	90.4	330.6	6291.29	8732	8881.95	-2598.67	1624097	510877.1	39°53'46.1	80°43'39.1	9254.31	343.692	0.17	0.03	-0.17
15695	90.34	329.62	6290.72	8820.55	8959.11	-2643.02	1624053	510954.9	39°53'46.9	80°43'39.6	9340.84	343.563	1.1	-0.07	-1.1
15785	90.31	329.02	6290.21	8910.21	9036.51	-2688.94	1624009	511032.9	39°53'47.6	80°43'40.2	9428.1	343.429	0.67	-0.03	-0.67
15874	90.37	328.19	6289.68	8998.96	9112.48	-2735.31	1623963	511109.5	39°53'48.4	80°43'40.8	9514.16	343.292	0.94	0.07	-0.93
15964	90.43	326.6	6289.05	9088.83	9188.29	-2783.8	1623916	511185.9	39°53'49.1	80°43'41.5	9600.74	343.145	1.77	0.07	-1.77
16053	90.34	326.9	6288.45	9177.75	9262.72	-2832.6	1623868	511261.3	39°53'49.9	80°43'42.1	9686.16	342.996	0.35	-0.1	0.34
16142	90.34	326.88	6287.93	9266.66	9337.27	-2881.21	1623820	511336.2	39°53'50.6	80°43'42.7	9771.69	342.851	0.02	0	-0.02
16232	90.37	324.62	6287.37	9356.62	9411.66	-2931.86	1623771	511411.3	39°53'51.3	80°43'43.4	9857.74	342.697	2.51	0.03	-2.51
16321	90.34	320.62	6286.82	9445.56	9482.36	-2985.88	1623718	511482.7	39°53'52.0	80°43'44.0	9941.36	342.521	4.49	-0.03	-4.49
16411	90.31	319.83	6286.31	9535.33	9551.53	-3043.46	1623661	511552.6	39°53'52.7	80°43'44.8	10024.69	342.326	0.88	-0.03	-0.88
16500	90.34	320.77	6285.8	9624.1	9620.01	-3100.31	1623605	511621.9	39°53'53.4	80°43'45.5	10107.25	342.137	1.06	0.03	1.06
16589	90.25	322.13	6285.34	9712.99	9689.61	-3155.77	1623551	511692.2	39°53'54.1	80°43'46.2	10190.55	341.96	1.53	-0.1	1.53
16679	90.37	322.69	6284.86	9802.93	9760.92	-3210.67	1623497	511764.3	39°53'54.8	80°43'46.9	10275.41	341.792	0.64	0.13	0.62
16768	90.28	322.24	6284.35	9891.88	9831.5	-3264.89	1623443	511835.5	39°53'55.5	80°43'47.6	10359.43	341.629	0.52	-0.1	-0.51
16858	90.34	322.48	6283.86	9981.83	9902.76	-3319.85	1623389	511907.6	39°53'56.2	80°43'48.3	10444.43	341.467	0.27	0.07	0.27
16947	90.31	321.64	6283.36	10070.75	9972.95	-3374.57	1623336	511978.5	39°53'56.9	80°43'49.0	10528.41	341.306	0.94	-0.03	-0.94
17036	90.52	321.68	6282.71	10159.65	10042.76	-3429.78	1623281	512049.9	39°53'57.6	80°43'49.7	10612.27	341.144	0.24	0.24	0.04
17139	90.4	322.01	6281.89	10262.55	10123.75	-3493.41	1623219	512130.9	39°53'58.4	80°43'50.6	10709.53	340.962	0.34	-0.12	0.32
17164	90.4	322.01	6281.71	10287.53	10143.45	-3508.8	1623204	512150.8	39°53'58.6	80°43'50.8	10733.18	340.919	0	0	0

Projected MD at TD: 17164'

T A R G E T S

Name	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)		
Hicks M031	6344	10142.91	-3508.19	1623204	512150.2	39°53'58.6	80°43'50.8	point	
Hicks M031	6344	2377.31	2062.39	1628669	504310.2	39°52'41.8	80°42'39.3	point	
Hicks M031	6365.34	2729.78	1809.55	1628421	504666	39°52'45.3	80°42'42.5	point	
Taylor C 3+	6371.85	-26.75	740.52	1627315	501924.4	39°52'18.1	80°42'56.2	point	
Taylor C 5+	6377.55	449.87	1456.41	1628037	502391.3	39°52'22.8	80°42'47.1	point	
Taylor B 2+	6390.06	1664.35	2332.56	1628929	503593.7	39°52'34.8	80°42'35.8	point	
Taylor B 4+	6390.99	1263.29	1903.54	1628495	503198.5	39°52'30.8	80°42'41.3	point	
Taylor B 3+	6395.21	2172	2829.49	1629433	504094.5	39°52'39.8	80°42'29.4	point	

Hicks Pad - 6400 1666.36 612.92 1627210 503619 39°52'34.8 80°42'57.9 polygon

WELLPATH 164'

Log Name/	Start MD	End MD	Pos Unc	Model
01_SDI Gyr	25	458		SDI Keeper v1.04
03_APS EN	458	1995		OWSG MWD rev2 + IFR1 + Multi-Station Correction
04_BH AT (1995	17139		OWSG MWD rev2 + IFR1 + Multi-Station Correction
Projection	17139	17164		Blind Drilling (std)

COMMENTS

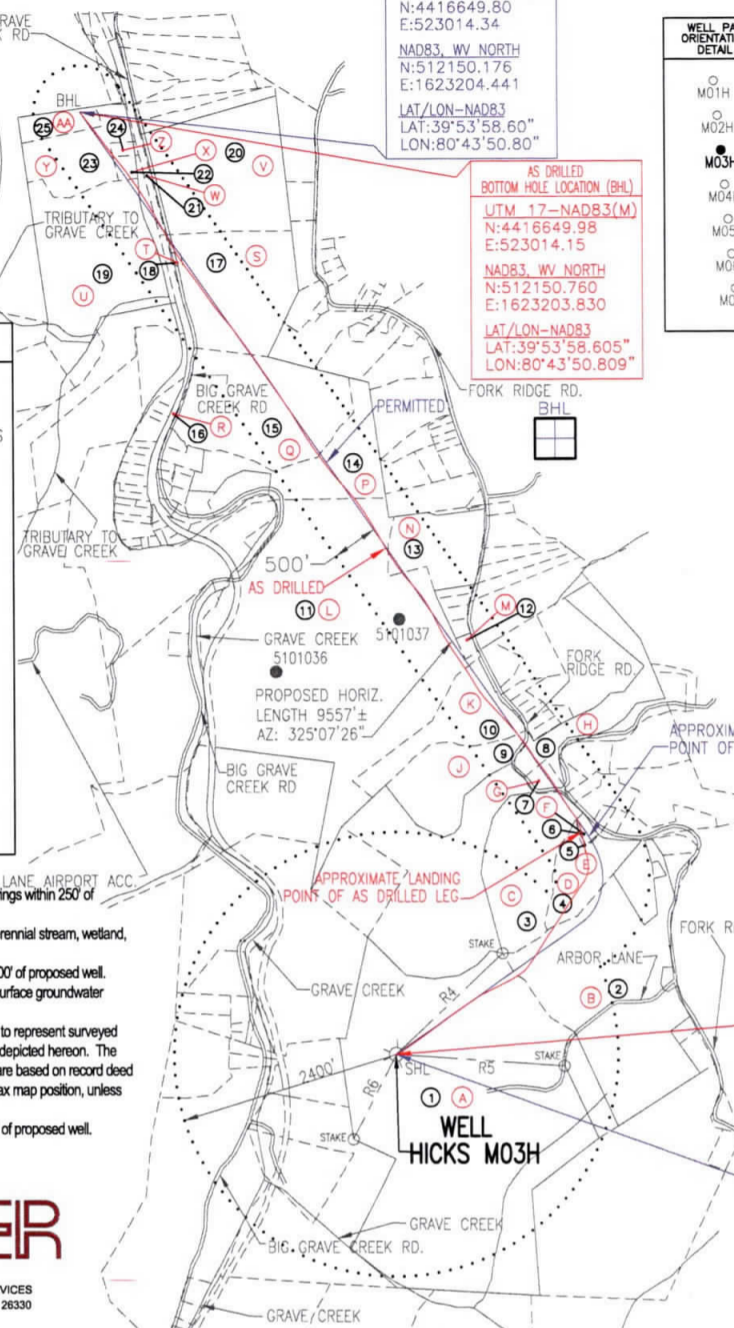
Wellpath general comments

API: 47-051-01899-0000
BH Job #: 109831078
Duration: 06/02/2019-06/15/2019
Rig: Precision 560
SDI Gyro <17-1/2> (100'-450')"
APS EM + MagVAR MSA <12-1/4> (458')(560'-1995')"
BH AT Curve+MagVar MSA <8-1/2> (1995')(2099'-17139')"
Projected MD at TD: 17164'

AS DRILLED PLAT

BHL is located on topo map 6,213 feet south of Latitude: 39° 55' 00"
 SHL is located on topo map 1,177 feet south of Latitude: 39° 52' 30"

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS



PERMITTED
 BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4416649.80
 E:523014.34
 NAD83, WV NORTH
 N:512150.176
 E:1623204.441
 LAT/LON-NAD83
 LAT:39°53'58.60"
 LON:80°43'50.80"

AS DRILLED
 BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4416649.98
 E:523014.15
 NAD83, WV NORTH
 N:512150.760
 E:1623203.830
 LAT/LON-NAD83
 LAT:39°53'58.605"
 LON:80°43'50.809"

WELL PAD ORIENTATION DETAIL

M01H	M14H	M15H	U28H	U29H
M02H	M13H	M16H	U27H	U30H
M03H	M12H	M17H	U26H	U31H
M04H	M11H	U18H	U25H	U32H
M05H	M10H	U19H	U24H	U33H
M06H	M09H	U20H	U23H	U34H
M07H	M08H	U21H	U22H	U35H

N.T.S.

LINE	BEARING	DISTANCE
R1	N 53°04'45" E	178.72'
R2	N 31°22'59" E	124.58'
R3	N 09°53'43" W	117.10'
R4	N 46°32'27" E	1587.14'
R5	S 86°07'04" E	1822.62'
R6	S 26°47'35" W	1028.27'

PERMITTED
 APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:4414289.14
 E:524719.04
 NAD83, WV NORTH
 N:504310.235
 E:1628668.931
 LAT/LON-NAD83
 LAT:39°52'41.86"
 LON:80°42'39.33"

AS DRILLED
 APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:4414303.83
 E:524694.04
 NAD83, WV NORTH
 N:504359.740
 E:1628587.710
 LAT/LON-NAD83
 LAT:39°52'42.337"
 LON:80°42'40.384"

AS DRILLED
 SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4413562.86
 E:524092.95
 NAD83, WV NORTH
 N:501961.190
 E:1626574.570
 LAT/LON-NAD83
 LAT:39°52'18.365"
 LON:80°43'05.788"

PERMITTED
 SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4413562.844
 E:524092.961
 NAD83, WV NORTH
 N:501961.148
 E:1626574.611
 LAT/LON-NAD83
 LAT:39°52'18.365"
 LON:80°43'05.788"

- 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
 - LOCATE & AVOID
 - GAS WELLS
 - EXISTING WELLS
 - PLUGGED WELLS

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

THRASHER

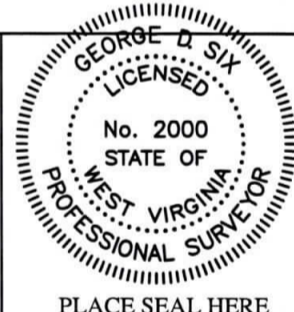
CIVIL- ENVIRONMENTAL- CONSULTING- FIELD SERVICES
 600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 FAX (304) 624-7831

FILE #: HICKS M03H-AS DRILLED
 DRAWING #: HICKS M03H-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

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

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1169.97'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: GLEN EASTON, WV 7.5'

SURFACE OWNER: THOMAS E. HICKS ACREAGE: 172.100±

OIL & GAS ROYALTY OWNER: CHRISTA DAWN HICKS, ET AL ACREAGE: 740.947±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE

(SPECIFY): AS DRILLED

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,600'± TMD: 18,226.72'±

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

DATE: JANUARY 31, 2020

OPERATOR'S WELL #: HICKS M03H-AS DRILLED

API WELL #: 47 51

STATE COUNTY PERMIT



AS DRILLED PLAT

HICKS HICKS M03H PAGE 2 OF 2

	LESSOR	DIST-TM/PAR
A	CHRISTA DAWN HICKS, ET AL.	4-8/37
B	JEFFERY LOWELL RYAN	4-9/2.5
C	MONTE J. CHAMBERS, ET UX.	4-8/38.1
D	MONTE J. CHAMBERS, ET UX.	4-4/58.11
E	DONALD T. CARPENTER	4-4/58.20
F	DONALD T. CARPENTER	4-4/58.12
G	ROBERT L. RICHEY, ET UX.	4-4/58.13
H	JOHN H. OCH III, ET UX.	4-4/58.10
J	MARGARET E. HOSTUTLER, TRUSTEE	4-4/75
K	JOSEPH GONCHOFF	4-4/57
L	CNX GAS COMPANY LLC.	4-4/30
M	*GREGORY N. WHIPKEY, ET UX.	4-4/53.1
N	GREGORY L. SCHWING, ET UX.	4-4-53.10
P	HARRY KEITH HYDE, ET UX.	4-4/31.1
Q	ROGER N. HEMPHILL, ET UX.	4-4/32
R	*CNX GAS COMPANY LLC.	4-4/74
S	SHARON D. TUCKER, ET VIR.	4-4/33
T	REGINA GONCHOFF	4-4/33.1
U	MARY VIRGINIA GONCHOFF, ET AL	4-3/13
V	BEN KINGREE III, ET UX.	4-3/14
W	CNX GAS COMPANY LLC.	4-3/53
X	JOHN FREDERICK GUMP SR., ET UX.	4-3/11.1
Y	JOHNNIE LYNN WAYT	4-3/10
Z	*JOHN FREDERICK GUMP SR., ET UX.	4-3/11
AA	BRIAN K. CONNER	4-3/10.1

RECEIVED
Office of Oil and Gas

MAR 02 2020

WV Department of
Environmental Protection

	SURFACE OWNER	DIST-TM/PAR
1	THOMAS E. HICKS	4-8/37
2	JEFFREY L. RYAN	4-9/2.5
3	MONTE J. CHAMBERS ET UX	4-8/38.1
4	JELINDA & MONTE CHAMBERS	4-4/58.11
5	DONALD T. CARPENTER ET UX	4-4/58.20
6	DONALD T. CARPENTER, JR.	4-4/58.12
7	JARED NATHANIEL MULLINS	4-4/58.13
8	JOHN H. OCH III ET UX	4-4/58.10
9	JASON B. & DAWN R. ADKINS	4-4/75
10	JOSEPH GONCHOFF	4-4/57
11	MOUNTAINEER ENTERPRISES LLC	4-4/30
12	*CHAD A. & SARAH J. PETRY	4-4/53.1
13	GREGORY L. SCHWING ET UX	4-4/53.10
14	HARRY K. HYDE ET UX	4-4/31.1
15	ROGER N. HEMPHILL ET UX	4-4/32
16	*CONSOLIDATION COAL COMPANY/MURRY ENERGY C/O LAND DEPT	4-4/74
17	ROBERT L. CLARK, JR.	4-4/33
18	REGINA GONCHOFF	4-4/33.1
19	FRANK GONCHOFF ET AL	4-3/13
20	FRANK CLARK	4-3/14
21	CONSOLIDATION COAL COMPANY/MURRY ENERGY C/O LAND DEPT.	4-3/53
22	JOHN FREDERICK GUMP, SR.	4-3/11.1
23	ELSIE GUMP-LIFE	4-3/10
24	*JOHN F., SR. & ALICE M. GUMP	4-3/11
25	DAVID SHAWN CONNER	4-3/10.1

PERMITTED SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4413562.844
E:524092.961
NAD83, WV NORTH
N:501961.148
E:1626574.611
LAT/LON-NAD83
LAT:39°52'18.365"
LON:80°43'05.788"

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UTM 17-NAD83(M)
N:4414289.14
E:524719.04
NAD83, WV NORTH
N:504310.235
E:1628668.931
LAT/LON-NAD83
LAT:39°52'41.86"
LON:80°42'39.33"

PERMITTED BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4416649.80
E:523014.34
NAD83, WV NORTH
N:512150.176
E:1623204.441
LAT/LON-NAD83
LAT:39°53'58.60"
LON:80°43'50.80"

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NAD83, WV NORTH
N:501961.190
E:1626574.570
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LAT/LON-NAD83
LAT:39°52'42.337"
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AS DRILLED BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4416649.98
E:523014.15
NAD83, WV NORTH
N:512150.760
E:1623203.830
LAT/LON-NAD83
LAT:39°53'58.605"
LON:80°43'50.809"

JANUARY 31, 2020

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

THRASHER

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