WR-35
Rev. 8/23/13

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

RECEIVED
Office of Oil and Gas
APR 02 2020
WV Department of
Environmental Protection

API 47 - 051 - 01997 County Marshall District Clay
Quad Glen Easton Pad Name Hicks Pad A Field/Pool Name
Farm name Thomas E. Hicks Well Number Hicks M21H
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 501914.290 Easting 1626645.670
Landing Point of Curve Northing 500665.340 Easting 1626413.730
Bottom Hole Northing 494113.860 Easting 1631675.410

Elevation (ft) 1161 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 control

Date permit issued 4/4/2018 Date drilling commenced 8/7/2018 Date drilling ceased 9/21/2019
Date completion activities began 10/18/2019 Date completion activities ceased 3/23/2020
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' & 1290' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
4/15/2020

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API 47- 051 - 01997 Farm name Thomas E. Hicks Well number Hicks M21H

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"	515'	N	J-55 / 54.50		Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2075'	N	L-80 / 40		Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	15319'	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					Surface	8
Surface	Class A	419	15.6	1.20	503	Surface	8
Coal							
Intermediate 1	Class A	689	15.6	1.19	820	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	2393	15.0	1.22	2937	Surface	8
Tubing							

Drillers TD (ft) 15343' Loggers TD (ft) 15343'

Deepest formation penetrated Marcellus Plug back to (ft)

Plug back procedure

Kick off depth (ft) 5710'

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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

API 47- 051 - 01997 Farm name Thomas E. Hicks Well number Hicks M21H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHED			

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations 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)
		SEE	ATTACHED					

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
S2.A	6377 TVD	6933 MD	

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Please insert additional pages as applicable.

GAS TEST □ Build up □ Drawdown □ Open Flow OIL TEST □ Flow □ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY □ Estimated □ Orifice □ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H_2S, ETC)
	0		0		
SEE	ATTACHED				

Please insert additional pages as applicable.

Drilling Contractor See Attached
Address _____ City _____ State _____ Zip _____

Logging Company Stratagraph NE Inc
Address 116 Ellsworth Avenue City Marietta State OH Zip 45750

Cementing Company BJ Services
Address 3415 Millennium Boulevard SE City Massillon State OH Zip 44646

Stimulating Company Universal Pressure Pumping
Address 18360 Technology Drive City Meadville State PA Zip 16335
Please insert additional pages as applicable.

Completed by Jackie M. Scholar Telephone 412-865-3422
Signature _____ Title Regulatory Compliance Team Lead Date 3/26/2020

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

API: 47-051-01997	Farm Name: Thomas E. Hicks	Well Number: Hicks M21H

PERFORATION RECORD

Stage No.	Perforation Date	Perforated From TMD Ft.	Perforated To TMD Ft.	Number of Perforations	Formation(s)
1	12/8/2019	15073	15175	47	Marcellus
2	12/8/2019	14870	15030	47	Marcellus
3	12/9/2019	14670	14830	47	Marcellus
4	12/9/2019	14470	14630	47	Marcellus
5	12/10/2019	14270	14430	47	Marcellus
6	12/10/2019	14070	14230	47	Marcellus
7	12/10/2019	13870	14030	47	Marcellus
8	12/11/2019	13670	13830	47	Marcellus
9	12/11/2019	13470	13630	47	Marcellus
10	12/11/2019	13270	13430	47	Marcellus
11	12/12/2019	13070	13230	47	Marcellus
12	12/12/2019	12870	13030	47	Marcellus
13	12/12/2019	12670	12830	47	Marcellus
14	12/13/2019	12470	12630	47	Marcellus
15	12/13/2019	12270	12430	47	Marcellus
16	12/13/2019	12070	12230	47	Marcellus
17	12/14/2019	11870	12030	47	Marcellus
18	12/14/2019	11670	11830	47	Marcellus
19	12/15/2019	11470	11630	47	Marcellus
20	12/15/2019	11270	1430	47	Marcellus
21	12/15/2019	11070	11230	47	Marcellus
22	12/16/2019	10870	11030	47	Marcellus
23	12/17/2019	10670	10830	47	Marcellus
24	12/17/2019	10470	10630	47	Marcellus
25	12/17/2019	10270	10430	47	Marcellus
26	12/17/2019	10070	10230	47	Marcellus
27	12/18/2019	9870	10030	47	Marcellus
28	12/27/2019	9670	9830	47	Marcellus
29	12/27/2019	9470	9630	47	Marcellus
30	12/28/2019	9270	9430	47	Marcellus
31	12/28/2019	9070	9230	47	Marcellus
32	12/28/2019	8870	9030	47	Marcellus
33	12/28/2019	8670	8830	47	Marcellus
34	12/28/2019	8470	8630	47	Marcellus
35	12/29/2019	8270	8430	47	Marcellus
36	12/29/2019	8070	8230	47	Marcellus
37	12/29/2019	7870	8030	47	Marcellus
38	12/29/2019	7670	7830	47	Marcellus
39	12/29/2019	7470	7630	47	Marcellus
40	12/30/2019	7270	7430	47	Marcellus
41	12/30/2019	7070	7230	47	Marcellus
42	12/30/2019	6870	7030	47	Marcellus

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

API: 47-051-01997	Farm Name: Thomas E. Hicks	Well Number: Hicks M21H

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	12/8/2019	98.6	8592	6247	3747	400410	9348	n/a
2	12/8/2019	100.3	8878	5990	4648	401421	9735	n/a
3	12/9/2019	99.7	8379	4654	4609	400327	9800	n/a
4	12/9/2019	100.7	8336	4505	4705	401260	9684	n/a
5	12/10/2019	100.2	8552	4814	4988	401266	9729	n/a
6	12/10/2019	100.4	8634	4547	5067	400176	9612	n/a
7	12/10/2019	99.1	8263	6117	5069	402399	10406	n/a
8	12/11/2019	100	8362	4721	4918	400742	9597	n/a
9	12/11/2019	99.9	8592	5102	4833	402019	9638	n/a
10	12/11/2019	100.3	8694	4521	4877	400863	9626	n/a
11	12/12/2019	100	8695	5578	5122	401286	9693	n/a
12	12/12/2019	100.2	8040	5520	4928	400975	9570	n/a
13	12/12/2019	100.4	8406	5307	5023	405609	9558	n/a
14	12/13/2019	101.4	8430	4843	4807	400858	9648	n/a
15	12/13/2019	99.9	8307	5321	4950	401022	9681	n/a
16	12/13/2019	100.2	8166	5170	4925	400799	9507	n/a
17	12/14/2019	99.8	8170	4780	4927	403619	9492	n/a
18	12/14/2019	100.1	8079	4907	5144	400752	9445	n/a
19	12/15/2019	100	8116	5170	4930	401004	9536	n/a
20	12/15/2019	99.8	7692	5826	4953	400539	9593	n/a
21	12/15/2019	99.7	7705	4923	4914	400109	9405	n/a
22	12/16/2019	99.5	7795	4779	4662	400180	9389	n/a
23	12/17/2019	99.8	7895	5579	4806	400195	9395	n/a
24	12/17/2019	99.9	7929	4916	4865	400552	9514	n/a
25	12/17/2019	98.8	7713	5960	5014	400539	9476	n/a
26	12/17/2019	99.6	7717	4553	5401	400243	9363	n/a
27	12/18/2019	99.6	7905	4749	4963	399204	10595	n/a
28	12/27/2019	100.1	7970	5450	5001	400398	9294	n/a
29	12/27/2019	100	8396	5146	4602	400057	9290	n/a
30	12/28/2019	99.6	8076	4737	834	400284	9584	n/a
31	12/28/2019	100.5	8383	4982	4805	400116	9287	n/a
32	12/28/2019	100.2	8044	4181	4659	400292	9288	n/a
33	12/28/2019	100	7974	5754	4926	396719	9197	n/a
34	12/28/2019	100.1	8146	5383	4834	402811	9245	n/a
35	12/29/2019	99.7	7842	5016	4889	401131	9239	n/a
36	12/29/2019	100.4	7859	5716	5214	400245	9234	n/a
37	12/29/2019	100	7865	5401	4721	400428	9218	n/a
38	12/29/2019	99.8	7489	5528	4964	400554	9261	n/a
39	12/29/2019	101	364	5401	4838	400556	9251	n/a
40	12/30/2019	99.9	7414	5182	4630	400308	9189	n/a
41	12/30/2019	99.9	7418	4982	5063	400265	9169	n/a
42	12/30/2019	99.7	7187	3851	4832	400749	9165	n/a

API: 47-051-01997 **Farm Name:** Thomas E. Hicks **Well Number:** Hicks M21H

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	1304	1096	1304	limey siltstones and shales; oil show
Clairion Coal	1290	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	6230	6329	6067	6142	siltstone/shale, gas shows
MDLX	6329	6365	6142	6167	shale
PYAN	6365	6413	6167	6198	siltstone/shale, gas show
BRKT	6413	6456	6198	6223	shale
BRKT.a	6456	6484	6223	6238	shale
TLLY	6484	6573	6238	6278	limestone, gas shows
S5	6573	6792	6278	6348	shale, gas shows
S3	6792	6881	6348	6370	shale, gas shows
STFD	6881	6888	6370	6371	limestone
S2.B	6888	6933	6371	6377	shale, gas shows
S2.A	6933		6377		shale, gas shows
TD	15,343				

API: 47-051-01997	Farm Name: Thomas E. Hicks	Well Number: Hicks M21H

DRILLING CONTRACTORS		
Driller	**Driller**	**Driller**
Name Rocky Mountain Drilling	Name Highlands Drilling LLC	Name Precision Drilling Holdings Company
Address 185 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

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/8/2019
Job End Date:	12/30/2019
State:	West Virginia
County:	Marshall
API Number:	47-051-01997-00-00
Operator Name:	Chevron USA Inc.
Well Name and Number:	Hicks M21H
Latitude:	39.87164200
Longitude:	-80.86801900
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,469
Total Base Water Volume (gal):	16,755,732
Total Base Non Water Volume:	0

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

INTERSTATE Oil & Gas COMPACT COMMISSION

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	88.20803	None
Sand	UPP	Proppant					
			Crystalline Silica in the form of Quartz	14808-60-7	99.90000	10.60847	None
HCL Acid (7.5%)	UPP	Acidizing					
			Hydrochloric Acid	7647-01-0	7.50000	0.07920	None
FR-11	UPP	Friction reducer					
			Water	7732-18-5	55.00000	0.03099	None
			Hydrotreated Petroleum Distillate	64742-47-8	25.00000	0.01409	None
			CHEMPLEX-Polymer_00019	Trade Secret	25.00000	0.01409	None
			Sodium Chloride	7647-14-5	15.00000	0.00845	None
			Alcohol Ethoxylate Surfactants	68551-12-2	3.00000	0.00169	None
			Oleic Acid Diethanolamide	93-83-4	3.00000	0.00169	None
			Ammonium Chloride	12125-02-9	2.00000	0.00113	None
			Polyoxyethylene Sorbitan Monoleate	9005-65-6	1.00000	0.00056	None
K-BAC 1020	UPP	Biocide					

Submitted 1/27/20

			Polyethylene glycol	25322-68-3	50.00000	0.01048	None
			Water	7732-18-5	30.00000	0.00629	None
			2,2-Dibromo-3-nitrilopropionamide	10222-01-2	21.00000	0.00440	None
Scale Hib PE-18	UPP	Scale Inhibitor					
			Ethylene glycol	107-21-1	40.00000	0.00715	None
			Proprietary Scale Inhibitor	Proprietary	30.00000	0.00536	None
I7L	UPP	Iron Control Agent					
			Ammonium glycolate	35249-89-9	20.00000	0.00418	None
			Ethylene Glycol	107-21-1	20.00000	0.00418	None
			Hydroxyacetic acid	79-14-1	5.00000	0.00105	None
Unihib G	UPP	Acid inhibitor					
			Butyl diglycol	112-34-5	75.00000	0.00062	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.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	55.00000	0.03099	
			Hydrotreated Petroleum Distillate	64742-47-8	25.00000	0.01409	
			Polyethylene glycol	25322-68-3	50.00000	0.01048	
			Sodium Chloride	7647-14-5	15.00000	0.00845	
			Ethylene glycol	107-21-1	40.00000	0.00715	
			Water	7732-18-5	30.00000	0.00629	
			Ammonium glycolate	35249-89-9	20.00000	0.00418	
			Alcohol Ethoxylate Surfactants	68551-12-2	3.00000	0.00169	
			Oleic Acid Diethanolamide	93-83-4	3.00000	0.00169	
			Ammonium Chloride	12125-02-9	2.00000	0.00113	
			Hydroxyacetic acid	79-14-1	5.00000	0.00105	
			Polyoxyethylene Sorbitan Monoleate	9005-65-6	1.00000	0.00056	
			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)

ACTUAL WELLPATH REPORT (CSV version)
Prepared by Baker Hughes
Software System: WellArchitect® 5.1

REFERENCE WELLPATH IDENTIFICATION

Operator	CHEVRON APPALACHIA, LLC
Area	Marshall County, WV
Field	Marshall County
Facility	Hicks Pad
Slot	Slot #21
Well	Hicks M21H
Wellbore	Hicks M21H AWB
Wellpath	Hicks M21H 343'
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	Hilpthop
Report Ger	25/Sep/2019 at 14:02
DataBase/S	WA_MPL_EASTERNUS_Defn/ev170.xml

WELLPATH	Local North [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Locatic	-75.18	78.04	1626646	501914.3	39°52'17.9	80°43'04.868"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	140.53°

WELLPATH DATA † = interpolated/extrapolated station

	MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dis [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
†	0	0	176.88	0	0	0	0	1626646	501914.3	39°52'17.9	80°43'04.8	0	0	0	0	0

25	0	176.88	25	0	0	0	1626646	501914.3	39°52'17.9	80°43'04.8	0	0	0	0	0
101	0.2	176.88	101	0.11	-0.13	0.01	1626646	501914.2	39°52'17.9	80°43'04.8	0.13	176.88	0.26	0.26	232.74
126	0.15	181.62	126	0.17	-0.21	0.01	1626646	501914.1	39°52'17.9	80°43'04.8	0.21	177.622	0.21	-0.2	18.96
151	0.1	157.58	151	0.21	-0.26	0.02	1626646	501914	39°52'17.9	80°43'04.8	0.26	176.486	0.29	-0.2	-96.16
176	0.21	136.95	176	0.28	-0.32	0.06	1626646	501914	39°52'17.9	80°43'04.8	0.32	169.987	0.49	0.44	-82.52
201	0.23	143.45	201	0.37	-0.39	0.12	1626646	501913.9	39°52'17.9	80°43'04.8	0.41	163.287	0.13	0.08	26
226	0.29	148.32	226	0.49	-0.48	0.18	1626646	501913.8	39°52'17.9	80°43'04.8	0.52	159.576	0.26	0.24	19.48
251	0.35	166.94	251	0.62	-0.61	0.23	1626646	501913.7	39°52'17.9	80°43'04.8	0.65	159.352	0.48	0.24	74.48
276	0.36	162.37	276	0.76	-0.76	0.27	1626646	501913.5	39°52'17.9	80°43'04.8	0.81	160.36	0.12	0.04	-18.28
301	0.41	167.27	301	0.91	-0.92	0.31	1626646	501913.4	39°52'17.9	80°43'04.8	0.98	161.155	0.24	0.2	19.6
326	0.35	167.18	326	1.06	-1.08	0.35	1626646	501913.2	39°52'17.9	80°43'04.8	1.14	162.036	0.24	-0.24	-0.36
351	0.18	175.77	351	1.16	-1.2	0.37	1626646	501913.1	39°52'17.8	80°43'04.8	1.25	162.775	0.7	-0.68	34.36
376	0.23	179.53	376	1.23	-1.29	0.37	1626646	501913	39°52'17.8	80°43'04.8	1.34	163.77	0.21	0.2	15.04
401	0.34	193.02	401	1.32	-1.41	0.36	1626646	501912.9	39°52'17.8	80°43'04.8	1.45	165.735	0.51	0.44	53.96
426	0.43	205.5	426	1.4	-1.57	0.3	1626646	501912.7	39°52'17.8	80°43'04.8	1.6	169.113	0.49	0.36	49.92
443	0.49	198.45	443	1.47	-1.69	0.25	1626646	501912.6	39°52'17.8	80°43'04.8	1.71	171.572	0.48	0.35	-41.47
570	0.79	174.12	569.99	2.48	-3.08	0.17	1626646	501911.2	39°52'17.8	80°43'04.8	3.08	176.864	0.31	0.24	-19.16
601	0.64	184.17	600.99	2.79	-3.46	0.18	1626646	501910.8	39°52'17.8	80°43'04.8	3.47	177.059	0.63	-0.48	32.42
663	0.99	190.1	662.98	3.39	-4.34	0.06	1626646	501910	39°52'17.8	80°43'04.8	4.34	179.222	0.58	0.56	9.56
757	1.54	156.86	756.96	5.12	-6.3	0.41	1626646	501908	39°52'17.8	80°43'04.8	6.31	176.249	0.95	0.59	-35.36
850	2.76	156.13	849.89	8.48	-9.5	1.81	1626647	501904.8	39°52'17.8	80°43'04.8	9.67	169.207	1.31	1.31	-0.78
944	4.17	158.92	943.72	13.9	-14.75	3.96	1626649	501899.5	39°52'17.7	80°43'04.8	15.27	164.993	1.51	1.5	2.97
1038	4.03	154.25	1037.47	20.36	-20.92	6.62	1626652	501893.3	39°52'17.7	80°43'04.7	21.94	162.44	0.39	-0.15	-4.97
1131	4.63	142.69	1130.21	27.28	-26.85	10.31	1626656	501887.3	39°52'17.6	80°43'04.7	28.76	158.983	1.14	0.65	-12.43
1225	5.25	145.64	1223.86	35.36	-33.41	15.04	1626660	501880.7	39°52'17.5	80°43'04.6	36.64	155.766	0.71	0.66	3.14
1319	5.09	159.97	1317.48	43.57	-40.88	18.9	1626664	501873.2	39°52'17.5	80°43'04.6	45.04	155.193	1.38	-0.17	15.24
1412	5.09	166.05	1410.12	51.19	-48.76	21.3	1626666	501865.2	39°52'17.4	80°43'04.5	53.21	156.399	0.58	0	6.54
1506	6.5	158.06	1503.64	60.02	-57.75	24.3	1626669	501856.2	39°52'17.3	80°43'04.5	62.65	157.18	1.72	1.5	-8.5
1600	7.26	153.5	1596.96	70.88	-68	28.94	1626674	501845.9	39°52'17.2	80°43'04.4	73.9	156.948	1	0.81	-4.85
1693	7	159.36	1689.24	81.97	-78.56	33.56	1626678	501835.3	39°52'17.1	80°43'04.4	85.43	156.871	0.83	-0.28	6.3
1787	6.94	166.19	1782.55	92.51	-89.43	36.93	1626681	501824.4	39°52'17.0	80°43'04.3	96.76	157.562	0.88	-0.06	7.27
1849	6.9	163.01	1844.1	99.33	-96.63	38.91	1626683	501817.1	39°52'16.9	80°43'04.3	104.17	158.066	0.62	-0.06	-5.13
1974	6.93	157.67	1968.19	113.48	-110.79	43.97	1626688	501802.9	39°52'16.8	80°43'04.3	119.2	158.352	0.51	0.02	-4.27
2036	6.01	158.39	2029.79	120.14	-117.27	46.59	1626691	501796.4	39°52'16.7	80°43'04.2	126.18	158.333	1.49	-1.48	1.16
2107	5.56	152.68	2100.43	127.04	-123.78	49.54	1626694	501789.9	39°52'16.6	80°43'04.2	133.32	158.189	1.03	-0.63	-8.04
2197	3.63	141.62	2190.14	134.15	-129.89	53.31	1626697	501783.7	39°52'16.6	80°43'04.1	140.4	157.686	2.35	-2.14	-12.29
2286	1.61	159.37	2279.04	138.15	-133.27	55.5	1626699	501780.3	39°52'16.5	80°43'04.1	144.36	157.391	2.42	-2.27	19.94
2375	0.61	229.12	2368.03	139.35	-134.75	55.58	1626699	501778.8	39°52'16.5	80°43'04.1	145.76	157.585	1.7	-1.12	78.37
2465	0.63	223.86	2458.02	139.42	-135.42	54.87	1626699	501778.2	39°52'16.5	80°43'04.1	146.11	157.941	0.07	0.02	-5.84
2554	0.47	229.81	2547.02	139.48	-136	54.26	1626698	501777.6	39°52'16.5	80°43'04.1	146.43	158.252	0.19	-0.18	6.69
2644	0.22	229.99	2637.02	139.49	-136.35	53.84	1626698	501777.2	39°52'16.5	80°43'04.1	146.6	158.453	0.28	-0.28	0.2
2733	0.44	308	2726.02	139.15	-136.25	53.44	1626697	501777.3	39°52'16.5	80°43'04.1	146.36	158.584	0.5	0.25	87.65
2823	0.58	318.62	2816.01	138.36	-135.7	52.87	1626697	501777.9	39°52'16.5	80°43'04.1	145.63	158.714	0.19	0.16	11.8
2912	0.62	301.44	2905.01	137.46	-135.11	52.16	1626696	501778.5	39°52'16.5	80°43'04.1	144.83	158.891	0.21	0.04	-19.3
3002	0.54	295.56	2995	136.61	-134.67	51.36	1626695	501778.9	39°52'16.5	80°43'04.2	144.13	159.124	0.11	-0.09	-6.53
3091	0.4	308.43	3084	135.93	-134.3	50.74	1626695	501779.3	39°52'16.5	80°43'04.2	143.56	159.303	0.2	-0.16	14.46
3181	0.36	316.85	3174	135.34	-133.9	50.3	1626694	501779.7	39°52'16.5	80°43'04.2	143.03	159.411	0.08	-0.04	9.36
3271	0.33	289.67	3264	134.83	-133.6	49.86	1626694	501780	39°52'16.5	80°43'04.2	142.61	159.534	0.18	-0.03	-30.2

3360	0.48	293.76	3352.99	134.28	-133.37	49.28	1626693	501780.3	39°52'16.5	80°43'04.2	142.18	159.72	0.17	0.17	4.6
3449	0.72	299.58	3441.99	133.42	-132.94	48.45	1626692	501780.7	39°52'16.5	80°43'04.2	141.5	159.975	0.28	0.27	6.54
3539	0.8	301.01	3531.98	132.3	-132.34	47.42	1626691	501781.3	39°52'16.6	80°43'04.2	140.58	160.285	0.09	0.09	1.59
3628	2.16	261.26	3620.95	130.86	-132.27	45.23	1626689	501781.4	39°52'16.6	80°43'04.2	139.79	161.121	1.83	1.53	-44.66
3718	5.43	230.31	3710.75	130.01	-135.25	40.28	1626684	501778.5	39°52'16.5	80°43'04.3	141.12	163.417	4.16	3.63	-34.39
3807	8.26	222.38	3799.11	130.93	-142.66	32.73	1626676	501771.2	39°52'16.5	80°43'04.4	146.37	167.08	3.34	3.18	-8.91
3897	9.83	215.78	3887.99	133.81	-153.67	23.88	1626667	501760.3	39°52'16.3	80°43'04.5	155.52	171.169	2.09	1.74	-7.33
3986	12.19	212.48	3975.35	138.65	-167.77	14.39	1626658	501746.4	39°52'16.2	80°43'04.6	168.38	175.099	2.74	2.65	-3.71
4076	15.86	220.07	4062.65	143.83	-185.2	1.36	1626645	501729.1	39°52'16.0	80°43'04.8	185.21	179.579	4.55	4.08	8.43
4165	16.97	220.2	4148.03	148.37	-204.43	-14.85	1626628	501710.1	39°52'15.8	80°43'05.0	204.97	184.155	1.25	1.25	0.15
4255	19.2	227.07	4233.58	151.62	-224.54	-34.17	1626608	501690.2	39°52'15.6	80°43'05.3	227.13	188.652	3.42	2.48	7.63
4345	20.15	231.44	4318.33	152.27	-244.29	-57.13	1626585	501670.8	39°52'15.4	80°43'05.6	250.88	193.162	1.95	1.06	4.86
4435	19.91	234.43	4402.89	150.98	-262.87	-81.71	1626560	501652.6	39°52'15.3	80°43'05.9	275.27	197.268	1.17	-0.27	3.32
4524	17.68	238.96	4487.15	147.96	-278.65	-105.63	1626536	501637.1	39°52'15.1	80°43'06.2	298	200.76	2.99	-2.51	5.09
4607	16.9	236.08	4566.4	144.95	-291.88	-126.44	1626515	501624.2	39°52'15.0	80°43'06.4	318.09	203.421	1.39	-0.94	-3.47
4697	21.7	243.52	4651.33	139.94	-306.61	-152.2	1626489	501609.8	39°52'14.8	80°43'06.8	342.31	206.4	5.98	5.33	8.27
4787	22.84	246	4734.61	131.54	-321.14	-183.05	1626458	501595.7	39°52'14.7	80°43'07.2	369.65	209.684	1.64	1.27	2.76
4876	22.76	246.6	4816.66	122.17	-335	-214.63	1626427	501582.3	39°52'14.6	80°43'07.6	397.86	212.648	0.28	-0.09	0.67
4966	22.72	246.53	4899.66	112.56	-348.84	-246.55	1626394	501568.8	39°52'14.4	80°43'08.0	427.17	215.252	0.05	-0.04	-0.08
5055	21.36	241.3	4982.17	104.79	-363.47	-276.54	1626364	501554.6	39°52'14.3	80°43'08.4	456.71	217.265	2.68	-1.53	-5.88
5145	21.04	235.48	5066.08	100.33	-380.5	-304.23	1626336	501538	39°52'14.1	80°43'08.7	487.17	218.645	2.36	-0.36	-6.47
5234	21	229.71	5149.17	99.18	-399.86	-329.56	1626311	501519	39°52'13.9	80°43'09.0	518.17	219.495	2.33	-0.04	-6.48
5324	21.31	232.12	5233.11	98.96	-420.33	-354.77	1626285	501498.8	39°52'13.7	80°43'09.4	550.04	220.165	1.03	0.34	2.68
5413	21.25	233.47	5316.04	97.68	-439.86	-380.5	1626259	501479.7	39°52'13.5	80°43'09.7	581.6	220.861	0.55	-0.07	1.52
5503	21.23	230.81	5399.93	96.77	-459.87	-406.23	1626233	501460	39°52'13.3	80°43'10.0	613.6	221.456	1.07	-0.02	-2.96
5592	21.21	227.87	5482.89	97.44	-480.85	-430.66	1626209	501439.3	39°52'13.1	80°43'10.3	645.51	221.848	1.2	-0.02	-3.3
5682	21.21	232.03	5566.8	97.77	-501.79	-455.57	1626183	501418.8	39°52'12.9	80°43'10.7	677.75	222.236	1.67	0	4.62
5771	17.84	216.45	5650.73	100.66	-522.68	-476.38	1626162	501398.1	39°52'12.7	80°43'10.9	707.2	222.347	6.94	-3.79	-17.51
5860	18.15	189.65	5735.52	113.07	-547.36	-486.82	1626152	501373.6	39°52'12.5	80°43'11.1	732.53	221.65	9.23	0.35	-30.11
5950	20.72	181.61	5820.4	134.26	-577.1	-489.62	1626148	501343.9	39°52'12.2	80°43'11.1	756.82	220.312	4.12	2.86	-8.93
6040	25.06	180.91	5903.29	160.79	-612.09	-490.37	1626147	501308.9	39°52'11.8	80°43'11.1	784.3	218.7	4.83	4.82	-0.78
6129	29.22	179.94	5982.48	191.95	-652.68	-490.65	1626146	501268.4	39°52'11.4	80°43'11.1	816.53	216.934	4.7	4.67	-1.09
6219	36.25	169.48	6058.2	232.29	-700.91	-485.76	1626150	501220.1	39°52'10.9	80°43'11.0	852.78	214.724	10	7.81	-11.62
6308	42.49	159.36	6127.04	283.87	-755.02	-470.33	1626165	501165.8	39°52'10.4	80°43'10.9	889.53	211.92	10.04	7.01	-11.37
6397	50.87	157.69	6188.05	345.41	-815.19	-446.58	1626188	501105.3	39°52'09.8	80°43'10.5	929.5	208.715	9.51	9.42	-1.88
6487	59.2	159.1	6239.58	415.53	-883.72	-419.5	1626214	501036.4	39°52'09.1	80°43'10.2	978.23	205.393	9.34	9.26	1.57
6576	67.82	157.74	6279.24	491.27	-957.7	-390.19	1626243	500962	39°52'08.4	80°43'09.8	1034.14	202.167	9.78	9.69	-1.53
6666	72.06	153.21	6310.12	572.92	-1034.56	-355.08	1626277	500884.7	39°52'07.6	80°43'09.4	1093.8	198.943	6.67	4.71	-5.03
6755	72.09	146.46	6337.54	656.43	-1107.72	-312.56	1626318	500811	39°52'06.9	80°43'08.8	1150.97	195.757	7.22	0.03	-7.58
6845	76.39	145.24	6361.98	742.65	-1179.38	-263.94	1626366	500738.7	39°52'06.2	80°43'08.2	1208.55	192.615	4.95	4.78	-1.36
6934	83.85	146.82	6377.24	829.86	-1252.05	-215	1626414	500665.3	39°52'05.5	80°43'07.6	1270.37	189.744	8.56	8.38	1.78
7023	89.63	146.87	6382.3	918.14	-1326.4	-166.42	1626461	500590.3	39°52'04.8	80°43'07.0	1336.8	187.151	6.49	6.49	0.06
7113	91.3	143.84	6381.57	1007.8	-1400.43	-115.27	1626511	500515.6	39°52'04.0	80°43'06.3	1405.17	184.705	3.84	1.86	-3.37
7202	91.48	138.62	6379.41	1096.74	-1469.78	-59.57	1626566	500445.5	39°52'03.3	80°43'05.6	1470.99	182.321	5.87	0.2	-5.87
7292	88.27	131.76	6379.61	1186.28	-1533.58	3.81	1626629	500380.9	39°52'02.7	80°43'04.8	1533.59	179.858	8.41	-3.57	-7.62
7381	88.27	134.72	6382.29	1274.51	-1594.52	68.61	1626693	500319.1	39°52'02.1	80°43'03.9	1595.99	177.536	3.32	0	3.33
7471	87.87	138.54	6385.33	1364.24	-1659.89	130.37	1626754	500252.9	39°52'01.5	80°43'03.1	1665	175.509	4.27	-0.44	4.24
7560	88.49	145.31	6388.15	1453.11	-1729.88	185.19	1626807	500182.2	39°52'00.8	80°43'02.4	1739.76	173.889	7.63	0.7	7.61

7649	90.28	143.75	6389.11	1541.89	-1802.35	236.83	1626858	500109	39°52'00.0	80°43'01.8	1817.84	172.514	2.67	2.01	-1.75
7739	91.88	139.51	6387.41	1631.83	-1872.88	292.67	1626913	500037.7	39°51'59.4	80°43'01.1	1895.61	171.118	5.03	1.78	-4.71
7828	90.4	133.79	6385.64	1720.57	-1937.56	353.73	1626973	499972.2	39°51'58.7	80°43'00.3	1969.58	169.654	6.64	-1.66	-6.43
7918	88.83	136.54	6386.25	1810.16	-2001.37	417.17	1627036	499907.6	39°51'58.1	80°42'59.5	2044.39	168.226	3.52	-1.74	3.06
8007	87.56	138.56	6389.05	1898.99	-2067	477.21	1627095	499841.1	39°51'57.4	80°42'58.7	2121.38	167	2.68	-1.43	2.27
8097	87.84	145.62	6392.67	1988.83	-2137.91	532.43	1627149	499769.5	39°51'56.7	80°42'58.0	2203.21	166.015	7.84	0.31	7.84
8186	89.48	144.34	6394.75	2077.53	-2210.77	583.49	1627199	499695.9	39°51'56.0	80°42'57.3	2286.48	165.215	2.34	1.84	-1.44
8275	89.88	137.74	6395.24	2166.48	-2279.94	639.42	1627254	499626	39°51'55.3	80°42'56.6	2367.9	164.334	7.43	0.45	-7.42
8365	89.41	138.64	6395.8	2256.4	-2347.02	699.41	1627313	499558.1	39°51'54.7	80°42'55.8	2449.02	163.406	1.13	-0.52	1
8454	89.23	139.99	6396.86	2345.37	-2414.5	757.43	1627370	499489.9	39°51'54.0	80°42'55.1	2530.52	162.583	1.53	-0.2	1.52
8544	90.77	141.1	6396.86	2435.37	-2483.99	814.62	1627427	499419.6	39°51'53.3	80°42'54.4	2614.15	161.843	2.11	1.71	1.23
8633	89.26	141.18	6396.84	2524.36	-2553.29	870.46	1627481	499349.6	39°51'52.6	80°42'53.7	2697.59	161.175	1.7	-1.7	0.09
8722	89.26	140.27	6397.98	2613.35	-2622.18	926.79	1627537	499279.9	39°51'51.9	80°42'52.9	2781.15	160.534	1.02	0	-1.02
8812	89.04	140.28	6399.32	2703.34	-2691.39	984.3	1627593	499209.9	39°51'51.3	80°42'52.2	2865.74	159.911	0.24	-0.24	0.01
8901	88.7	140.41	6401.08	2792.32	-2759.9	1041.09	1627649	499140.7	39°51'50.6	80°42'51.5	2949.73	159.333	0.41	-0.38	0.15
8991	89.07	140.47	6402.83	2882.3	-2829.27	1098.4	1627706	499070.5	39°51'49.9	80°42'50.7	3035.01	158.782	0.42	0.41	0.07
9081	88.7	140.02	6404.58	2972.28	-2898.45	1155.94	1627762	499000.6	39°51'49.2	80°42'50.0	3120.45	158.257	0.65	-0.41	-0.5
9170	88.89	140.38	6406.45	3061.26	-2966.81	1212.9	1627818	498931.5	39°51'48.5	80°42'49.3	3205.17	157.764	0.46	0.21	0.4
9260	89.17	141.14	6407.97	3151.25	-3036.51	1269.82	1627874	498861	39°51'47.9	80°42'48.5	3291.33	157.306	0.9	0.31	0.84
9349	88.52	138.62	6409.77	3240.22	-3104.55	1327.16	1627931	498792.2	39°51'47.2	80°42'47.8	3376.32	156.854	2.92	-0.73	-2.83
9438	87.9	140.78	6412.55	3329.16	-3172.39	1384.69	1627987	498723.6	39°51'46.5	80°42'47.1	3461.42	156.42	2.52	-0.7	2.43
9527	89.29	141.63	6414.73	3418.12	-3241.73	1440.43	1628042	498653.5	39°51'45.8	80°42'46.3	3547.34	156.042	1.83	1.56	0.96
9617	89.69	138.14	6415.53	3508.1	-3310.54	1498.41	1628099	498583.9	39°51'45.1	80°42'45.6	3633.86	155.648	3.9	0.44	-3.88
9706	87.66	139.94	6417.59	3597.04	-3377.73	1556.73	1628156	498515.9	39°51'44.5	80°42'44.9	3719.2	155.256	3.05	-2.28	2.02
9796	89.87	141.18	6419.53	3687.01	-3447.21	1613.89	1628213	498445.7	39°51'43.8	80°42'44.1	3806.3	154.912	2.82	2.46	1.38
9885	88.64	140.88	6420.69	3776	-3516.4	1669.86	1628268	498375.8	39°51'43.1	80°42'43.4	3892.75	154.598	1.42	-1.38	-0.34
9974	89.63	138.61	6422.03	3864.97	-3584.31	1727.36	1628324	498307.1	39°51'42.4	80°42'42.7	3978.82	154.27	2.78	1.11	-2.55
10064	88.03	140.79	6423.87	3954.93	-3652.93	1785.55	1628381	498237.7	39°51'41.8	80°42'41.9	4065.97	153.951	3	-1.78	2.42
10153	90.71	143.29	6424.85	4043.88	-3723.08	1840.28	1628435	498166.8	39°51'41.1	80°42'41.2	4153.07	153.697	4.12	3.01	2.81
10243	89.57	139.98	6424.63	4133.85	-3793.64	1896.13	1628490	498095.5	39°51'40.4	80°42'40.5	4241.11	153.443	3.89	-1.27	-3.68
10332	89.2	140.7	6425.58	4222.85	-3862.15	1952.93	1628546	498026.2	39°51'39.7	80°42'39.8	4327.84	153.176	0.91	-0.42	0.81
10422	89.29	139.63	6426.77	4312.83	-3931.26	2010.58	1628603	497956.3	39°51'39.0	80°42'39.0	4415.56	152.913	1.19	0.1	-1.19
10511	89.97	140.24	6427.34	4401.83	-3999.37	2067.86	1628659	497887.5	39°51'38.3	80°42'38.3	4502.33	152.659	1.03	0.76	0.69
10601	90.03	143.42	6427.34	4491.79	-4070.11	2123.47	1628714	497816	39°51'37.6	80°42'37.6	4590.75	152.448	3.53	0.07	3.53
10690	90.95	139.97	6426.58	4580.76	-4139.94	2178.63	1628768	497745.4	39°51'36.9	80°42'36.9	4678.2	152.245	4.01	1.03	-3.88
10779	88.64	140.5	6426.9	4669.75	-4208.35	2235.55	1628824	497676.2	39°51'36.3	80°42'36.2	4765.28	152.022	2.66	-2.6	0.6
10868	88.98	140.6	6428.75	4758.73	-4277.06	2292.09	1628879	497606.8	39°51'35.6	80°42'35.4	4852.51	151.813	0.4	0.38	0.11
10958	88.86	140.33	6430.44	4848.71	-4346.45	2349.37	1628936	497536.6	39°51'34.9	80°42'34.7	4940.77	151.608	0.33	-0.13	-0.3
11047	88.58	140.38	6432.43	4937.69	-4414.97	2406.14	1628992	497467.3	39°51'34.2	80°42'34.0	5028.07	151.41	0.32	-0.31	0.06
11137	89.38	140.51	6434.03	5027.67	-4484.35	2463.45	1629048	497397.2	39°51'33.5	80°42'33.2	5116.44	151.218	0.9	0.89	0.14
11226	89.35	141.25	6435.02	5116.67	-4553.39	2519.6	1629103	497327.4	39°51'32.9	80°42'32.5	5204.01	151.042	0.83	-0.03	0.83
11316	89.88	140.5	6435.63	5206.66	-4623.21	2576.38	1629159	497256.8	39°51'32.2	80°42'31.8	5292.62	150.87	1.02	0.59	-0.83
11405	89.94	139.86	6435.77	5295.66	-4691.57	2633.38	1629215	497187.7	39°51'31.5	80°42'31.0	5380.1	150.694	0.72	0.07	-0.72
11494	90.98	140.96	6435.05	5384.65	-4760.15	2690.09	1629271	497118.4	39°51'30.8	80°42'30.3	5467.69	150.528	1.7	1.17	1.24
11583	90.06	139.28	6434.24	5473.64	-4828.44	2747.15	1629327	497049.3	39°51'30.1	80°42'29.6	5555.24	150.362	2.15	-1.03	-1.89
11673	90.89	140.95	6433.5	5563.63	-4897.49	2804.86	1629384	496979.5	39°51'29.5	80°42'28.9	5643.82	150.2	2.07	0.92	1.86
11762	90.55	140.44	6432.38	5652.63	-4966.35	2861.23	1629439	496909.9	39°51'28.8	80°42'28.1	5731.61	150.053	0.69	-0.38	-0.57
11852	89.69	140.61	6432.19	5742.63	-5035.82	2918.45	1629495	496839.6	39°51'28.1	80°42'27.4	5820.38	149.906	0.97	-0.96	0.19

11941	90.06	140.82	6432.38	5831.62	-5104.71	2974.8	1629551	496770	39°51'27.4	80°42'26.7	5908.26	149.768	0.48	0.42	0.24
12030	90.06	140.56	6432.29	5920.62	-5173.57	3031.19	1629606	496700.4	39°51'26.7	80°42'25.9	5996.16	149.634	0.29	0	-0.29
12120	89.63	141.03	6432.53	6010.62	-5243.31	3088.07	1629662	496629.9	39°51'26.0	80°42'25.2	6085.11	149.504	0.71	-0.48	0.52
12209	88.95	139.8	6433.64	6099.61	-5311.9	3144.78	1629718	496560.5	39°51'25.4	80°42'24.5	6173	149.373	1.58	-0.76	-1.38
12298	89.14	140.73	6435.12	6188.6	-5380.33	3201.66	1629774	496491.3	39°51'24.7	80°42'23.8	6260.88	149.244	1.07	0.21	1.04
12388	89.32	141.47	6436.33	6278.59	-5450.36	3258.18	1629829	496420.5	39°51'24.0	80°42'23.0	6349.97	149.129	0.85	0.2	0.82
12477	90.46	141.45	6436.5	6367.57	-5519.97	3313.63	1629884	496350.2	39°51'23.3	80°42'22.3	6438.19	149.024	1.28	1.28	-0.02
12567	89.97	140.05	6436.16	6457.57	-5589.67	3370.57	1629940	496279.7	39°51'22.6	80°42'21.6	6527.26	148.91	1.65	-0.54	-1.56
12656	89.51	140.74	6436.57	6546.57	-5658.24	3427.3	1629996	496210.4	39°51'21.9	80°42'20.9	6615.29	148.796	0.93	-0.52	0.78
12745	88.43	139.89	6438.17	6635.55	-5726.72	3484.13	1630052	496141.2	39°51'21.3	80°42'20.1	6703.31	148.684	1.54	-1.21	-0.96
12835	89.26	141.14	6439.98	6725.53	-5796.16	3541.34	1630108	496071	39°51'20.6	80°42'19.4	6792.39	148.576	1.67	0.92	1.39
12924	87.85	139.9	6442.23	6814.5	-5864.83	3597.91	1630164	496001.5	39°51'19.9	80°42'18.7	6880.49	148.472	2.11	-1.58	-1.39
13014	88.37	140.28	6445.19	6904.44	-5933.83	3655.62	1630220	495931.8	39°51'19.2	80°42'17.9	6969.49	148.364	0.72	0.58	0.42
13103	89.05	141.09	6447.2	6993.42	-6002.67	3711.99	1630276	495862.2	39°51'18.5	80°42'17.2	7057.68	148.268	1.19	0.76	0.91
13193	88.99	140.15	6448.74	7083.41	-6072.22	3769.08	1630332	495791.8	39°51'17.8	80°42'16.5	7146.88	148.172	1.05	-0.07	-1.04
13282	88.31	140.72	6450.83	7172.38	-6140.81	3825.76	1630388	495722.5	39°51'17.2	80°42'15.8	7235.05	148.077	1	-0.76	0.64
13371	88.25	140.54	6453.51	7261.34	-6209.58	3882.19	1630443	495653	39°51'16.5	80°42'15.0	7323.27	147.987	0.21	-0.07	-0.2
13461	88.86	140.87	6455.77	7351.31	-6279.21	3939.17	1630499	495582.6	39°51'15.8	80°42'14.3	7412.52	147.899	0.77	0.68	0.37
13550	89.45	140.78	6457.09	7440.3	-6348.2	3995.38	1630554	495512.8	39°51'15.1	80°42'13.6	7500.85	147.815	0.67	0.66	-0.1
13640	88.95	142.08	6458.34	7530.28	-6418.56	4051.49	1630610	495441.7	39°51'14.4	80°42'12.9	7590.28	147.739	1.55	-0.56	1.44
13729	91.26	139.76	6458.18	7619.26	-6487.63	4107.58	1630665	495371.9	39°51'13.7	80°42'12.1	7678.65	147.66	3.68	2.6	-2.61
13818	88.52	141.28	6458.35	7708.25	-6556.32	4164.16	1630720	495302.5	39°51'13.1	80°42'11.4	7766.95	147.579	3.52	-3.08	1.71
13908	89.66	139.35	6459.78	7798.23	-6625.57	4221.62	1630777	495232.4	39°51'12.4	80°42'10.7	7856.22	147.496	2.49	1.27	-2.14
13998	89.32	140.68	6460.58	7888.22	-6694.52	4279.45	1630834	495162.7	39°51'11.7	80°42'09.9	7945.46	147.411	1.53	-0.38	1.48
14087	89.32	140.93	6461.64	7977.22	-6763.49	4335.69	1630889	495093	39°51'11.0	80°42'09.2	8033.87	147.338	0.28	0	0.28
14177	89.54	140.13	6462.53	8067.21	-6832.96	4392.9	1630945	495022.8	39°51'10.3	80°42'08.5	8123.24	147.263	0.92	0.24	-0.89
14266	89.51	139.65	6463.27	8156.2	-6901.03	4450.24	1631002	494953.9	39°51'09.7	80°42'07.8	8211.51	147.183	0.54	-0.03	-0.54
14355	90.31	141.09	6463.41	8245.2	-6969.57	4507	1631058	494884.6	39°51'09.0	80°42'07.0	8299.88	147.111	1.85	0.9	1.62
14445	89.11	140.7	6463.87	8335.19	-7039.41	4563.77	1631113	494814	39°51'08.3	80°42'06.3	8389.35	147.044	1.4	-1.33	-0.43
14535	90.19	140.43	6464.42	8425.19	-7108.92	4620.93	1631170	494743.8	39°51'07.6	80°42'05.6	8478.78	146.975	1.24	1.2	-0.3
14624	89.14	140.21	6464.94	8514.19	-7177.41	4677.76	1631225	494674.5	39°51'06.9	80°42'04.8	8567.19	146.906	1.21	-1.18	-0.25
14714	89.88	139.6	6465.71	8604.18	-7246.26	4735.72	1631282	494604.9	39°51'06.2	80°42'04.1	8656.52	146.834	1.07	0.82	-0.68
14803	89.39	141.73	6466.27	8693.17	-7315.09	4792.13	1631338	494535.3	39°51'05.6	80°42'03.4	8745	146.771	2.46	-0.55	2.39
14892	89.45	140.04	6467.17	8782.16	-7384.14	4848.27	1631393	494465.5	39°51'04.9	80°42'02.7	8833.53	146.712	1.9	0.07	-1.9
14982	89.36	142.14	6468.11	8872.15	-7454.16	4904.8	1631449	494394.7	39°51'04.2	80°42'01.9	8923.09	146.655	2.34	-0.1	2.33
15071	89.6	139.09	6468.92	8961.13	-7522.94	4961.26	1631504	494325.2	39°51'03.5	80°42'01.2	9011.59	146.596	3.44	0.27	-3.43
15161	89.6	141.79	6469.55	9051.12	-7592.32	5018.57	1631561	494255	39°51'02.8	80°42'00.5	9101.06	146.535	3	0	3
15251	89.79	138.53	6470.03	9141.11	-7661.41	5076.22	1631617	494185.2	39°51'02.1	80°41'59.7	9190.5	146.473	3.63	0.21	-3.62
15318	89.02	140.91	6470.72	9208.09	-7712.52	5119.53	1631660	494133.5	39°51'01.6	80°41'59.2	9257.03	146.424	3.73	-1.15	3.55
15343	89.02	140.91	6471.15	9233.09	-7731.92	5135.29	1631675	494113.9	39°51'01.4	80°41'59.0	9281.91	146.409	0	0	0

HOLE AND 343'

String/Dian	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
26in Open	25	85	60	25	85	0	0	-0.08	0
20in Condu	25	85	60	25	85	0	0	-0.08	0
17.5in Ope	85	546	461	85	545.99	-0.08	0	-2.76	0.14
13.375in Ca	25	516	491	25	515.99	0	0	-2.4	0.14

12.25in Op	546	2113	1567	545.99	2106.4	-2.76	0.14	-124.29	49.8
9.625in Cas	25	2080	2055	25	2073.56	0	0	-121.4	48.37
8.5in Open	2113	15343	13230	2106.4	6471.15	-124.29	49.8	-7731.92	5135.29
5.5in Casin	25	15343	15318	25	6471.15	0	0	-7731.92	5135.29

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [US ft]	Latitude [US ft]	Longitude	Shape	Comment
Hicks M21H	6370.95	-1239.05	-236.02	1626393	500678.6	39°52'05.6	80°43'07.8	point	
Hicks Pad -	6385	-106.34	-224.26	1626420	501811	39°52'16.8	80°43'07.7	polygon	
Hicks Pad -	6385	195.86	374.86	1627023	502105	39°52'19.8	80°43'00.0	polygon	
Hicks Pad -	6385	9399.77	-11762.3	1615012	511472.2	39°53'50.7	80°45'35.7	polygon	
Hicks Pad -	6385	273.47	30.63	1626680	502187.3	39°52'20.6	80°43'04.4	polygon	
Hicks Pad L	6385	9347.41	-8118.23	1618655	511370.4	39°53'50.2	80°44'49.0	polygon	
Hicks Pad L	6385	-7592.59	6646.32	1633188	494232.7	39°51'02.8	80°41'39.6	polygon	
Hicks Pad L	6385	-2746.36	1417.77	1628026	499149.1	39°51'50.7	80°42'46.6	polygon	
Hicks Pad L	6385	9782.39	-8325.08	1618454	511808.1	39°53'54.5	80°44'51.6	polygon	
Hicks Pad L	6385	5571.27	-2550.02	1624172	507519.3	39°53'12.9	80°43'37.5	polygon	
Hicks Pad L	6385	5706.81	-2470.98	1624252	507653.8	39°53'14.3	80°43'36.5	polygon	
Hicks Pad L	6385	6102.2	-3111.17	1623618	508057.8	39°53'18.2	80°43'44.7	polygon	
Hicks Pad L	6385	9540.11	-8135.8	1618640	511563.3	39°53'52.1	80°44'49.2	polygon	
Hicks Pad -	6400	1712.3	541.19	1627210	503619	39°52'34.8	80°42'57.9	polygon	
Hicks M21H	6458.57	-7744.77	5121.13	1631661	494101.2	39°51'01.3	80°41'59.2	point	
Hicks M21H	6461.72	-7978.24	5313.38	1631850	493865.2	39°50'59.0	80°41'56.7	point	
Hicks Pad -	6500	-11058.2	5875.09	1632370	490778	39°50'28.6	80°41'49.5	polygon	

WELLPATH 343'

Log Name/	Start MD [ft]	End MD [ft]	Pos Unc Model
01_SDI Gyr	25	443	SDI Keeper v1.04
03_APS EM	443	2036	OWSG MWD rev2 + IFR1 + Multi-Station Correction
04_BH Nav	2036	4524	OWSG MWD rev2 + IFR1 + Multi-Station Correction
05_BH AT (	4524	15318	OWSG MWD rev2 + IFR1 + Multi-Station Correction
Projection	15318	15343	Blind Drilling (std)

COMMENTS

Wellpath general comments
API: 47-051-01997-0000
BH Job #: 109945675A
Rig: Precision 560
Duration: 9/13/2019 - 9/19/2019

Jackie M. Scholar
Regulatory Reporting Coordinator

March 27, 2020

CERTIFIED MAIL: 7018 1830 0000 6083 3578

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

RE: Well Operator's Report of Well Work WR-35
Hicks M21H

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 M21H, (API 47-051-01997).**

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

Sincerely,
Chevron Appalachia, LLC

Jackie M. Scholar

Jackie M. Scholar

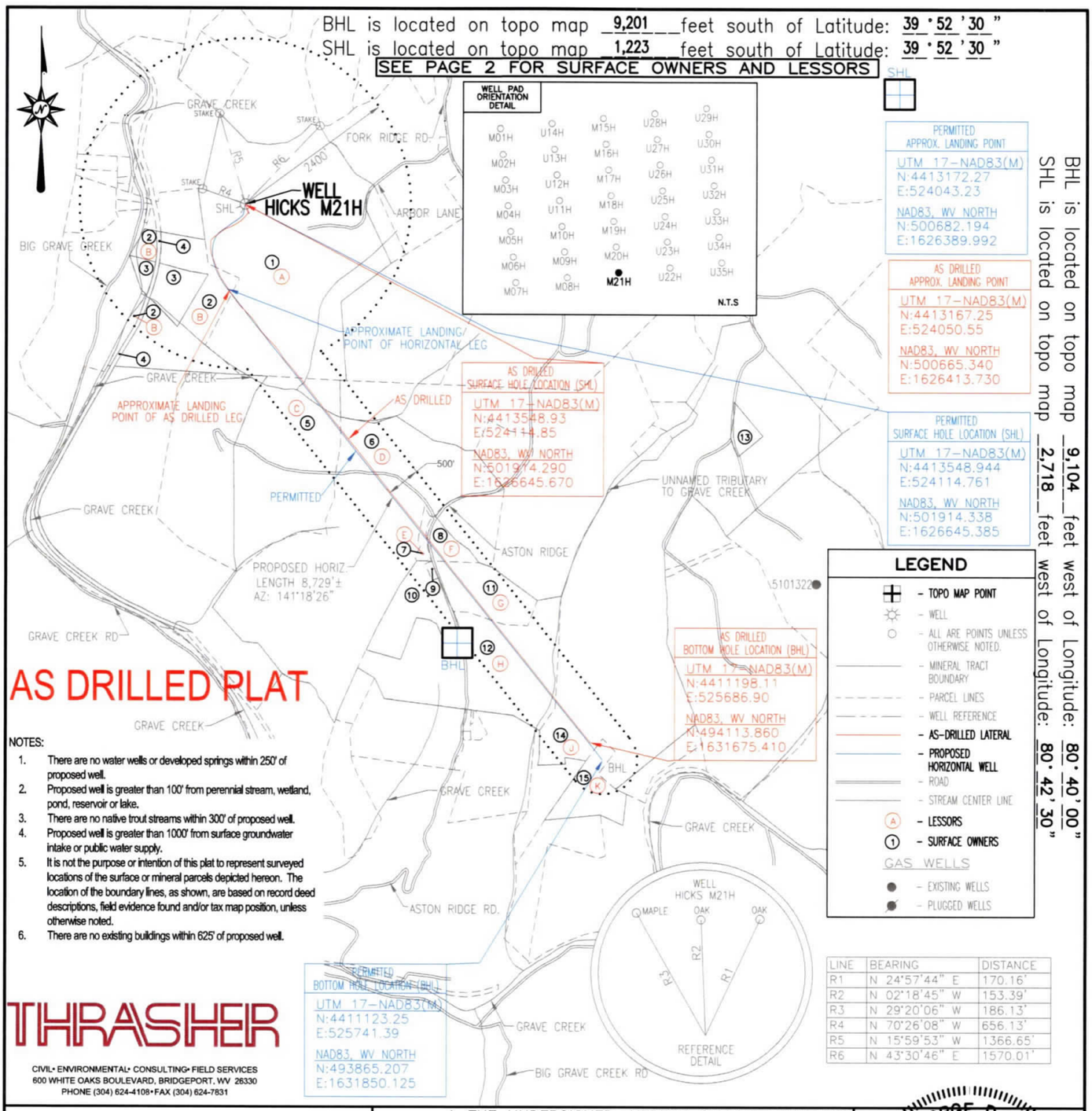
Enclosures

Appalachian/Mountain Business Unit
Chevron North America Exploration & Production Company (a division of Chevron U.S.A. Inc.)
700 Cherrington Parkway, Coraopolis, PA 15108
Tel 412-865-3422
jscholar@chevron.com

BHL is located on topo map 9,201 feet south of Latitude: 39 ° 52 ' 30 "
SHL is located on topo map 1,223 feet south of Latitude: 39 ° 52 ' 30 "

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

BHL is located on topo map 9,104 feet west of Longitude: 80 ° 40 ' 00 "
SHL is located on topo map 2,718 feet west of Longitude: 80 ° 42 ' 30 "



AS DRILLED PLAT

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.
6. There are no existing buildings within 625' of proposed well.

LINE	BEARING	DISTANCE
R1	N 24°57'44" E	170.16'
R2	N 02°18'45" W	153.39'
R3	N 29°20'06" W	186.13'
R4	N 70°26'08" W	656.13'
R5	N 15°59'53" W	1366.65'
R6	N 43°30'46" E	1570.01'

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

FILE #: HICKS M21H–AS DRILLED
DRAWING #: HICKS M21H–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

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

RECEIVED
Office of Oil and Gas
APR 02 2020
WV Department of Environmental Protection

DATE: JANUARY 31, 2020
OPERATOR'S WELL #: HICKS M21H–AS DRILLED
API WELL #: 47 (STATE) 51 (COUNTY) 01997 (PERMIT)

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

WATERSHED: MIDDLE GRAVE CREEK–GRAVE CREEK ELEVATION: 1161.57'
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: 824.991±

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: 6,320'± TMD: 15,734.08'±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY
Address 700 CHERRINGTON PARKWAY Address 500 LEE STREET, EAST SUITE 1600
City CORAOPOLIS State PA Zip Code 15108 City CHARLESTON State WV Zip Code 25301–3202

HICKS
M21H
PAGE 2 OF 2

AS DRILLED PLAT

	LESSOR	DIST-TM/PAR
A	CHRISTA DAWN HICKS ET AL	4-8/37
B	LILLIE LAVERN GAREY	4-8/36
C	JAMES L. COSTER ET AL	4-10/3
	FLOYD G. GREATHOUSE ET UX	
	PAUL R. BLAZER ET UX	
	ROBERT A. HOWARD EDGE JR. ET UX	
	THOMAS A. MONTI ET UX	
	G. JEANETTE SOUTH	
	RONALD L. LANCH ET UX	
	MICHAEL E. RHODEHAMEL ET UX	
	EDWARD D. YEATER	
	ROBERT A. EDGE ET UX	
	KENNETH R. RUNYAN ET UX	
	KENNETH R. RUNYAN ET UX	
	DANIEL G. MAY ET UX	
	KEVIN R. DURBIN ET UX	
	GARY D. HINERMAN ET UX	
D	ELAIN A. FONTES	4-10/4
	THE DAKAN FAMILY REVOCABLE LIVING TRUST	
	RONALD W. DAKAN	
	DAVID H. DAKAN	
	SUZANNE SWIFT	
	BARBARA D. FURFARI	
	DIANE WILLIS ET VIR	
	LESLIE MARIE BUTTS	
E	ELAIN A. FONTES	4-10/4.3
	THE DAKAN FAMILY REVOCABLE LIVING TRUST	
	RONALD W. DAKAN	
	DAVID H. DAKAN	
	SUZANNE SWIFT	
	BARBARA D. FURFARI	
	DIANE WILLIS ET VIR	
	LESLIE MARIE BUTTS	
F	ELAIN A. FONTES	4-10/4.1
	THE DAKAN FAMILY REVOCABLE LIVING TRUST	
	RONALD W. DAKAN	
	DAVID H. DAKAN	
	SUZANNE SWIFT	
	BARBARA D. FURFARI	
	DIANE WILLIS ET VIR	
	LESLIE MARIE BUTTS	
G	CHARLES EMERY ET UX	4-10/7.2
H	JOSEPH W. GOULDSBERRY ET UX	4-10/7
J	LEE TAYLOR ET UX	4-10/21
K	ROBERT M. SULLIVAN	4-10/15

	SURFACE OWNER	DIST-TM/PAR
1	THOMAS E. HICKS	4-8/37
2	LILLEY LAVERN GAREY	4-8/36
3	SIDNEY P. POND ET UX	4-8/36.2
4	CONSOLIDATION COAL COMPANY/MURRAY ENERGY C/O LAND DEPT	4-12/25
5	JAMES L. COSTER	4-10/3
6	DENNIS D. WINGROVE ET UX	4-10/4
7	DENNIS D. WINGROVE ET UX	4-10/4.3
8	RONALD K. LILLEY SR. ET UX	4-10/4.1
9	CHARLES E. & DEBBY R. EMERY - TOD	4-10/7.1
10	CHARLES E. & DEBBY R. EMERY - TOD	4-10/7.3
11	CHARLES EDWARD EMERY - TOD	4-10/7.2
12	JOSEPH W. GOULDSBERRY ET UX	4-10/7
13	LEE R. TAYLOR ET UX	4-9/27
14	LEE R. TAYLOR ET UX	4-10/21
15	ROBERT MORRIS SULLIVAN - ROBERT W. SULLIVAN	4-10/15

PERMITTED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4413548.944
E:524114.761
NAD83, WV NORTH
N:501914.338
E:1626645.385

PERMITTED
APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4413172.27
E:524043.23
NAD83, WV NORTH
N:500682.194
E:1626389.992

PERMITTED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4411123.25
E:525741.39
NAD83, WV NORTH
N:493865.207
E:1631850.125

AS DRILLED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4413548.93
E:524114.85
NAD83, WV NORTH
N:501914.290
E:1626645.670

AS DRILLED
APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4413167.25
E:524050.55
NAD83, WV NORTH
N:500665.340
E:1626413.730

AS DRILLED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4411198.11
E:525686.90
NAD83, WV NORTH
N:494113.860
E:1631675.410

JANUARY 31, 2020

THRASHER
CIVIL• ENVIRONMENTAL• CONSULTING• FIELD SERVICES
600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
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