

HG Energy, LLC

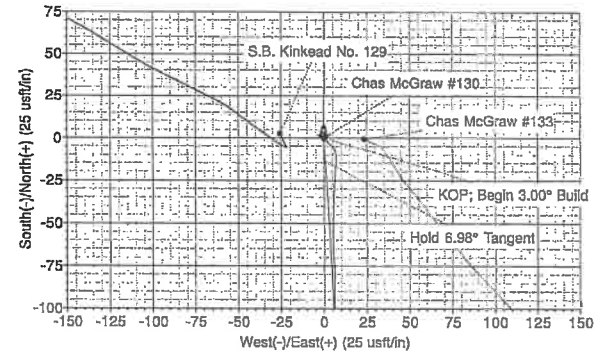
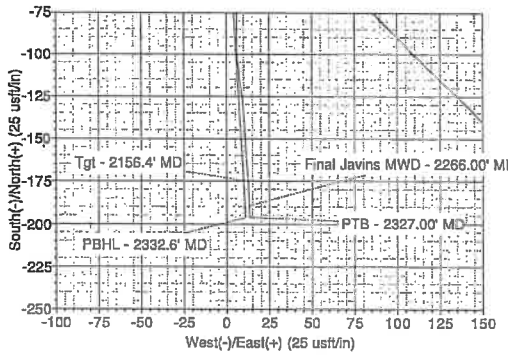
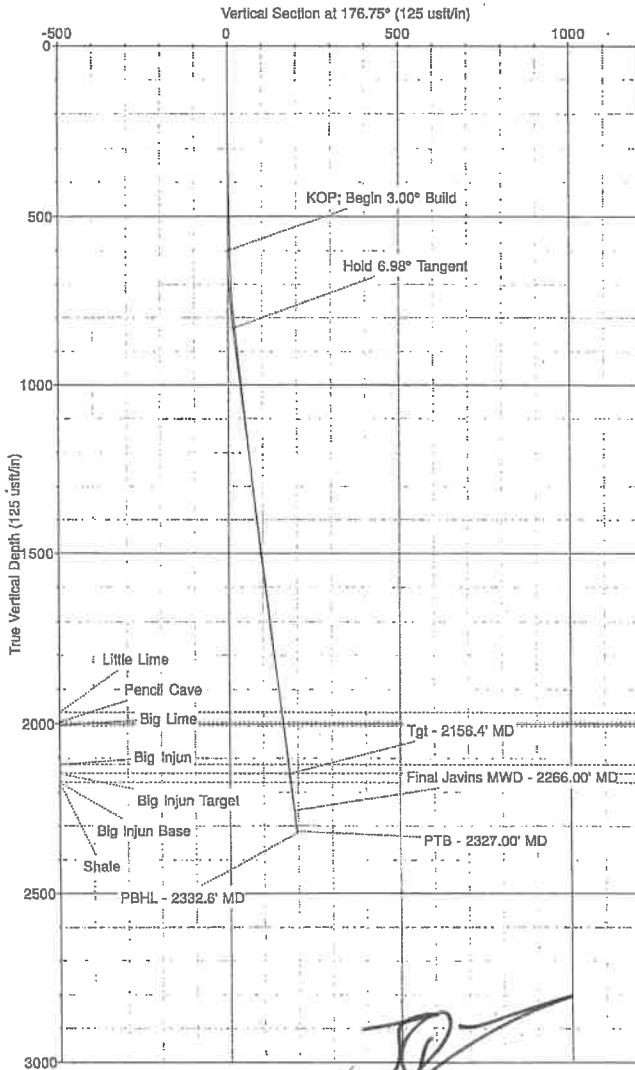
Project: Roane County, WV (UTM 17N - GRID)
 Site: Chas McGraw/Kinhead
 Well: Chas McGraw #130
 Wellbore: Wellbore #1
 Design: Design #1

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SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	KOP; Begin 3.00° Build
3	832.6	6.98	176.75	832.1	-14.1	0.8	3.00	176.75	14.2	Hold 6.98° Tangent
4	2156.4	6.98	176.75	2146.0	-174.7	9.9	0.00	0.00	175.0	Tgt - 2156.4' MD
5	2332.6	6.98	176.75	2320.9	-198.1	11.1	0.00	0.00	196.4	PBHL - 2332.6' MD

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	Point
Tgt - Chas McGraw #130	2146.0	-174.7	9.9	4285123.93	475462.83	38° 42' 51.909 N	81° 18' 56.046 W		

Chas McGraw #130

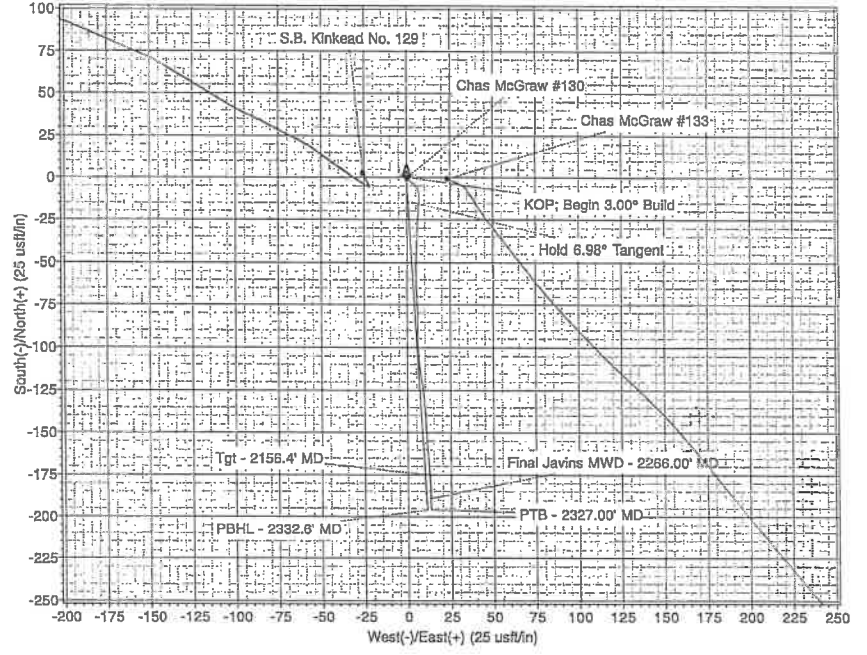


Azimuths to Grid North
 True North: 0.18°
 Magnetic North: -8.12°

Magnetic Field
 Strength: 51095.5snT
 Dip Angle: 65.76°
 Date: 7/16/2022
 Model: IGRF2015

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1968.0	1977.1	Little Lime
1996.0	2005.3	Pencil Cave
2008.0	2015.3	Big Lime
2120.0	2130.2	Big Injun
2146.0	2156.4	Big Injun Target
2172.0	2182.6	Big Injun Base
2172.0	2182.6	Shale

CASING DETAILS			
TVD	MD	Name	Size
505.0	505.0	7"	7"



HG Energy, LLC

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Roane County, WV (UTM 17N - GRID)

Chas McGraw/Kinhead

Chas McGraw #130

Wellbore #1

Design: Surveys

Survey Report - Geographic

29 August, 2022

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Local Co-ordinate Reference: Well Chas McGraw #130
TVD Reference: WELL @ 1125.0usft (8' RKB)
MD Reference: WELL @ 1125.0usft (8' RKB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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Project	Roane County, WV (UTM 17N - GRID)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 West Virginia - HARN		
Map Zone:	Zone 17N (84 W to 78 W)		

Site Chas McGraw/Kinkead
Site Position: Northing: 4,285,178.00 m Latitude: 38° 42' 53.662 N
 From: Map Easting: 475,452.00 m Longitude: 81° 16' 56.501 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16" Grid Convergence: -0.18°

Well Chas McGraw #130
Well Position +N/-S 0.0 usft Northing: 4,285,177.18 m Latitude: 38° 42' 53.636 N
 +E/-W 0.0 usft Easting: 475,459.80 m Longitude: 81° 16' 56.178 W
Position Uncertainty 0.0 usft Wellhead Elevation: usft Ground Level: 1,117.0 usft

Wellbore	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
Wellbore #1	IGRF2015	7/16/2022	-8.29	65.76	51,097

Design Surveys
Audit Notes:
Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.0
Vertical Section: Depth From (TVD) (usft) +N/-S (usft) +E/-W (usft) Direction (°)
 0.0 0.0 0.0 175.82

Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	7/21/2022	556.0	2,327.0	Javins MWD (Wellbore #1)	MWD	OWSG MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (m)	Map Easting (m)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	4,285,177.18	475,459.80	38° 42' 53.636 N	81° 16' 56.178 W
556.0	1.41	134.42	555.9	-4.8	4.9	4,285,175.72	475,461.29	38° 42' 53.589 N	81° 16' 56.116 W
586.0	1.30	112.35	585.9	-5.2	5.5	4,285,175.60	475,461.47	38° 42' 53.585 N	81° 16' 56.108 W
616.0	1.51	152.91	615.9	-5.7	6.0	4,285,175.46	475,461.62	38° 42' 53.580 N	81° 16' 56.102 W
646.0	2.69	161.40	645.9	-6.7	6.4	4,285,175.15	475,461.74	38° 42' 53.570 N	81° 16' 56.097 W
676.0	2.64	168.26	675.9	-8.0	6.7	4,285,174.74	475,461.85	38° 42' 53.557 N	81° 16' 56.092 W
706.0	2.58	163.83	705.8	-9.3	7.1	4,285,174.33	475,461.95	38° 42' 53.544 N	81° 16' 56.088 W
736.0	3.19	176.09	735.8	-10.8	7.3	4,285,173.88	475,462.03	38° 42' 53.529 N	81° 16' 56.085 W
766.0	5.19	183.10	765.7	-13.0	7.3	4,285,173.21	475,462.02	38° 42' 53.507 N	81° 16' 56.085 W
796.0	6.14	182.56	795.6	-16.0	7.1	4,285,172.31	475,461.98	38° 42' 53.478 N	81° 16' 56.087 W
826.0	6.07	185.60	825.4	-19.2	6.9	4,285,171.34	475,461.91	38° 42' 53.447 N	81° 16' 56.090 W
856.0	6.51	185.90	855.2	-22.4	6.6	4,285,170.35	475,461.81	38° 42' 53.414 N	81° 16' 56.094 W

10/14/2022



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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (m)	Map Easting (m)	Latitude	Longitude
886.0	6.26	182.78	885.0	-25.7	6.3	4,285,169.33	475,461.73	38° 42' 53.381 N	81° 16' 56.097 W
916.0	6.22	184.08	914.9	-29.0	6.1	4,285,168.34	475,461.67	38° 42' 53.349 N	81° 16' 56.099 W
946.0	6.23	182.85	944.7	-32.3	5.9	4,285,167.35	475,461.61	38° 42' 53.317 N	81° 16' 56.101 W
976.0	6.09	181.54	974.5	-35.5	5.8	4,285,166.37	475,461.58	38° 42' 53.285 N	81° 16' 56.103 W
1,006.0	6.35	181.76	1,004.3	-38.7	5.7	4,285,165.38	475,461.55	38° 42' 53.253 N	81° 16' 56.104 W
1,036.0	6.35	182.44	1,034.2	-42.0	5.6	4,285,164.37	475,461.51	38° 42' 53.220 N	81° 16' 56.105 W
1,066.0	6.10	179.56	1,064.0	-45.3	5.5	4,285,163.38	475,461.49	38° 42' 53.188 N	81° 16' 56.106 W
1,096.0	6.31	182.22	1,093.8	-48.5	5.5	4,285,162.39	475,461.48	38° 42' 53.156 N	81° 16' 56.106 W
1,126.0	5.83	180.77	1,123.6	-51.7	5.4	4,285,161.42	475,461.45	38° 42' 53.125 N	81° 16' 56.107 W
1,156.0	6.07	181.48	1,153.5	-54.8	5.3	4,285,160.48	475,461.43	38° 42' 53.094 N	81° 16' 56.108 W
1,186.0	5.95	176.80	1,183.3	-57.9	5.4	4,285,159.52	475,461.45	38° 42' 53.063 N	81° 16' 56.107 W
1,216.0	5.74	180.08	1,213.1	-61.0	5.5	4,285,158.59	475,461.47	38° 42' 53.033 N	81° 16' 56.106 W
1,246.0	5.71	178.23	1,243.0	-64.0	5.5	4,285,157.68	475,461.49	38° 42' 53.003 N	81° 16' 56.105 W
1,276.0	6.08	179.41	1,272.8	-67.1	5.6	4,285,156.74	475,461.50	38° 42' 52.973 N	81° 16' 56.103 W
1,306.0	6.66	176.55	1,302.7	-70.4	5.7	4,285,155.73	475,461.54	38° 42' 52.940 N	81° 16' 56.099 W
1,336.0	6.34	174.42	1,332.5	-73.8	6.0	4,285,154.69	475,461.62	38° 42' 52.907 N	81° 16' 56.096 W
1,366.0	6.54	177.70	1,362.3	-77.1	6.2	4,285,153.67	475,461.69	38° 42' 52.873 N	81° 16' 56.096 W
1,396.0	7.06	181.17	1,392.1	-80.7	6.2	4,285,152.59	475,461.70	38° 42' 52.838 N	81° 16' 56.097 W
1,426.0	6.69	181.08	1,421.8	-84.3	6.2	4,285,151.49	475,461.68	38° 42' 52.803 N	81° 16' 56.096 W
1,456.0	6.91	178.74	1,451.6	-87.8	6.2	4,285,150.41	475,461.68	38° 42' 52.768 N	81° 16' 56.097 W
1,486.0	6.63	182.05	1,481.4	-91.4	6.1	4,285,149.33	475,461.68	38° 42' 52.733 N	81° 16' 56.097 W
1,516.0	7.32	179.85	1,511.2	-95.0	6.1	4,285,148.22	475,461.66	38° 42' 52.697 N	81° 16' 56.095 W
1,546.0	7.85	175.98	1,540.9	-99.0	6.2	4,285,147.02	475,461.70	38° 42' 52.658 N	81° 16' 56.091 W
1,576.0	7.72	175.09	1,570.7	-103.0	6.6	4,285,145.78	475,461.80	38° 42' 52.617 N	81° 16' 56.086 W
1,606.0	7.39	172.70	1,600.4	-106.9	7.0	4,285,144.59	475,461.93	38° 42' 52.579 N	81° 16' 56.081 W
1,636.0	7.20	176.02	1,630.2	-110.7	7.3	4,285,143.43	475,462.04	38° 42' 52.541 N	81° 16' 56.076 W
1,666.0	6.70	173.54	1,659.9	-114.3	7.7	4,285,142.33	475,462.14	38° 42' 52.506 N	81° 16' 56.071 W
1,696.0	6.51	173.13	1,689.7	-117.8	8.1	4,285,141.29	475,462.26	38° 42' 52.472 N	81° 16' 56.065 W
1,726.0	6.36	169.84	1,719.6	-121.1	8.6	4,285,140.27	475,462.42	38° 42' 52.439 N	81° 16' 56.058 W
1,756.0	7.28	172.68	1,749.3	-124.6	9.1	4,285,139.20	475,462.58	38° 42' 52.404 N	81° 16' 56.052 W
1,786.0	7.96	174.41	1,779.1	-128.6	9.5	4,285,138.00	475,462.71	38° 42' 52.365 N	81° 16' 56.047 W
1,816.0	7.69	175.58	1,808.8	-132.6	9.9	4,285,136.76	475,462.82	38° 42' 52.325 N	81° 16' 56.043 W
1,846.0	7.75	174.12	1,838.5	-136.6	10.3	4,285,135.53	475,462.93	38° 42' 52.285 N	81° 16' 56.038 W
1,876.0	7.77	175.84	1,868.3	-140.7	10.6	4,285,134.30	475,463.04	38° 42' 52.245 N	81° 16' 56.032 W
1,906.0	7.63	177.12	1,898.0	-144.7	10.9	4,285,133.08	475,463.12	38° 42' 52.205 N	81° 16' 56.027 W
1,936.0	7.42	177.25	1,927.7	-148.6	11.1	4,285,131.88	475,463.17	38° 42' 52.167 N	81° 16' 56.022 W
1,966.0	7.26	176.99	1,957.5	-152.4	11.3	4,285,130.72	475,463.23	38° 42' 52.129 N	81° 16' 56.018 W
1,996.0	7.50	177.66	1,987.2	-156.3	11.4	4,285,129.54	475,463.29	38° 42' 52.091 N	81° 16' 56.014 W
2,026.0	7.18	176.84	2,017.0	-160.1	11.6	4,285,128.38	475,463.34	38° 42' 52.053 N	81° 16' 56.010 W
2,056.0	7.30	176.04	2,046.7	-163.9	11.9	4,285,127.23	475,463.42	38° 42' 52.016 N	81° 16' 56.007 W
2,086.0	7.37	175.22	2,076.5	-167.7	12.1	4,285,126.06	475,463.50	38° 42' 51.978 N	81° 16' 56.004 W
2,116.0	7.09	175.74	2,106.3	-171.5	12.4	4,285,124.92	475,463.60	38° 42' 51.941 N	81° 16' 56.001 W
2,146.0	7.03	175.41	2,136.0	-175.1	12.7	4,285,123.80	475,463.68	38° 42' 51.904 N	81° 16' 56.000 W
2,176.0	7.14	176.71	2,165.8	-178.8	13.0	4,285,122.67	475,463.76	38° 42' 51.868 N	81° 16' 56.000 W
2,206.0	6.74	177.01	2,195.6	-182.5	13.2	4,285,121.57	475,463.82	38° 42' 51.832 N	81° 16' 56.000 W
2,236.0	6.62	179.50	2,225.4	-185.9	13.3	4,285,120.50	475,463.85	38° 42' 51.798 N	81° 16' 56.000 W
2,266.0	6.33	179.14	2,255.2	-189.3	13.3	4,285,119.47	475,463.87	38° 42' 51.764 N	81° 16' 56.000 W
2,327.0	6.33	179.14	2,315.8	-196.1	13.4	4,285,117.42	475,463.90	38° 42' 51.698 N	81° 16' 56.000 W



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MD Reference: WELL @ 1125.0usft (8' RKB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
2,266.0	2,255.2	-189.3	13.3	Final Javins MWD - 2266.00' MD
2,327.0	2,315.8	-196.1	13.4	PTB - 2327.00' MD

Checked By: Chris Thompson Approved By: Chris Thompson Date: 8/30/2022

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Roane County, WV (UTM 17N - GRID)
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Chas McGraw #130
Wellbore #1

Design: Surveys

Javins Survey Report

29 August, 2022

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Javins Corporation Javins Survey Report



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Site	Chas McGraw/Kinhead		
Site Position:		Northing:	4,285,178.00 m
From:	Map	Easting:	475,452.00 m
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	38° 42' 53.662 N
		Longitude:	81° 16' 56.501 W
		Grid Convergence:	-0.18 °

Well	Chas McGraw #130			
Well Position	+N/-S	0.0 usft	Northing:	4,285,177.19 m
	+E/-W	0.0 usft	Easting:	475,459.80 m
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft
			Latitude:	38° 42' 53.636 N
			Longitude:	81° 16' 56.178 W
			Ground Level:	1,117.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	7/16/2022	(°)	(°)	(nT)
			-8.29	65.76	51,097

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD)	+N/-S	+E/-W	Direction
		(usft)	(usft)	(usft)	(°)
		0.0	0.0	0.0	175.82

Survey Program	Date 7/21/2022				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
556.0	2,327.0	Javins MWD (Wellbore #1)	MWD	OWSG MWD - Standard	

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Javins Corporation Javins Survey Report



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.00	0.00
556.0	1.41	134.42	555.9	-4.8	4.9	5.1	6.8	134.42	0.25
586.0	1.30	112.35	585.9	-5.2	5.5	5.6	7.5	133.45	1.77
616.0	1.51	152.91	615.9	-5.7	6.0	6.1	8.2	133.51	3.31
646.0	2.69	161.40	645.9	-6.7	6.4	7.1	9.2	136.37	4.06
676.0	2.64	168.26	675.9	-8.0	6.7	8.5	10.5	140.00	1.08
706.0	2.58	163.83	705.8	-9.3	7.1	9.8	11.7	142.94	0.70
736.0	3.19	176.09	735.8	-10.8	7.3	11.3	13.1	146.00	2.88
766.0	5.19	183.10	765.7	-13.0	7.3	13.5	14.9	150.76	6.87
796.0	6.14	182.56	795.6	-16.0	7.1	16.5	17.5	155.91	3.17
826.0	6.07	185.60	825.4	-19.2	6.9	19.6	20.4	160.15	1.10
856.0	6.51	185.90	855.2	-22.4	6.6	22.8	23.4	163.63	1.47
886.0	6.26	182.78	885.0	-25.7	6.3	26.1	26.5	166.19	1.43
916.0	6.22	184.08	914.9	-29.0	6.1	29.4	29.6	168.06	0.49
946.0	6.23	182.85	944.7	-32.3	5.9	32.6	32.8	169.57	0.45
976.0	6.09	181.54	974.5	-35.5	5.8	35.8	35.9	170.69	0.66
1,006.0	6.35	181.76	1,004.3	-38.7	5.7	39.0	39.1	171.59	0.87
1,036.0	6.35	182.44	1,034.2	-42.0	5.6	42.3	42.4	172.41	0.25
1,066.0	6.10	179.56	1,064.0	-45.3	5.5	45.6	45.6	173.02	1.33
1,096.0	6.31	182.22	1,093.8	-48.6	5.5	48.8	48.8	173.54	1.19
1,126.0	5.83	180.77	1,123.6	-51.7	5.4	52.0	52.0	174.03	1.68
1,156.0	6.07	181.48	1,153.5	-54.8	5.3	55.0	55.1	174.43	0.84
1,186.0	5.95	176.80	1,183.3	-57.9	5.4	58.2	58.2	174.69	1.68
1,216.0	5.74	180.08	1,213.1	-61.0	5.5	61.2	61.2	174.87	1.31
1,246.0	5.71	178.23	1,243.0	-64.0	5.5	64.2	64.2	175.07	0.62
1,276.0	6.08	179.41	1,272.8	-67.1	5.6	67.3	67.3	175.24	1.30
1,306.0	6.66	176.55	1,302.7	-70.4	5.7	70.6	70.6	175.37	2.20

HG Energy, LLC

Javins Corporation Javins Survey Report



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Company: HG Energy, LLC
Project: Roane County, WV (UTM 17N - GRID)
Site: Chas McGraw/Kinhead
Well: Chas McGraw #130
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well Chas McGraw #130
TVD Reference: WELL @ 1125.0usft (8' RKB)
MD Reference: WELL @ 1125.0usft (8' RKB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azl (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100usft)
1,336.0	6.34	174.42	1,332.5	-73.8	6.0	74.0	74.0	175.38	1.34
1,366.0	6.54	177.70	1,362.3	-77.1	6.2	77.4	77.4	175.41	1.40
1,396.0	7.06	181.17	1,392.1	-80.7	6.2	80.9	80.9	175.59	2.21
1,426.0	6.69	181.08	1,421.8	-84.3	6.2	84.5	84.5	175.82	1.23
1,456.0	6.91	178.74	1,451.6	-87.8	6.2	88.0	88.0	175.98	1.18
1,486.0	6.63	182.05	1,481.4	-91.4	6.1	91.6	91.6	176.15	1.60
1,516.0	7.32	179.85	1,511.2	-95.0	6.1	95.2	95.2	176.33	2.47
1,546.0	7.85	175.98	1,540.9	-99.0	6.2	99.1	99.2	176.40	2.45
1,576.0	7.72	175.09	1,570.7	-103.0	6.6	103.2	103.2	176.36	0.59
1,606.0	7.39	172.70	1,600.4	-106.9	7.0	107.2	107.2	176.27	1.52
1,636.0	7.20	176.02	1,630.2	-110.7	7.3	111.0	111.0	176.21	1.54
1,666.0	6.70	173.54	1,659.9	-114.3	7.7	114.6	114.6	176.16	1.94
1,696.0	6.51	173.13	1,689.7	-117.8	8.1	118.0	118.0	176.08	0.65
1,726.0	6.36	169.84	1,719.6	-121.1	8.6	121.4	121.4	175.95	1.33
1,756.0	7.28	172.68	1,749.3	-124.6	9.1	124.9	124.9	175.82	3.27
1,786.0	7.96	174.41	1,779.1	-128.6	9.5	128.9	128.9	175.75	2.39
1,816.0	7.69	175.58	1,808.8	-132.6	9.9	133.0	133.0	175.73	1.04
1,846.0	7.75	174.12	1,838.5	-136.6	10.3	137.0	137.0	175.70	0.68
1,876.0	7.77	175.84	1,868.3	-140.7	10.6	141.1	141.1	175.68	0.78
1,906.0	7.63	177.12	1,898.0	-144.7	10.9	145.1	145.1	175.70	0.74
1,936.0	7.42	177.25	1,927.7	-148.6	11.1	149.0	149.0	175.74	0.70
1,966.0	7.26	176.99	1,957.5	-152.4	11.3	152.9	152.9	175.78	0.54
1,996.0	7.50	177.66	1,987.2	-156.3	11.4	156.7	156.7	175.82	0.85
2,026.0	7.18	176.84	2,017.0	-160.1	11.6	160.5	160.5	175.85	1.12
2,056.0	7.30	176.04	2,046.7	-163.9	11.9	164.3	164.3	175.86	0.52
2,086.0	7.37	175.22	2,076.5	-167.7	12.1	168.1	168.1	175.86	0.42
2,116.0	7.09	175.74	2,106.3	-171.5	12.4	171.9	171.9	175.85	0.96

HG Energy, LLC

Javins Corporation Javins Survey Report



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 Environmental Protection

Company: HG Energy, LLC
Project: Roane County, WV (UTM 17N - GRID)
Site: Chas McGraw/Kinkead
Well: Chas McGraw #130
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well Chas McGraw #130
TVD Reference: WELL @ 1125.0usft (8' RKB)
MD Reference: WELL @ 1125.0usft (8' RKB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100usft)
2,146.0	7.03	175.41	2,136.0	-175.1	12.7	175.6	175.6	175.84	0.24
2,176.0	7.14	176.71	2,165.8	-178.8	13.0	179.3	<u>179.3</u>	<u>175.85</u>	0.65
2,206.0	6.74	177.01	2,195.6	-182.5	13.2	182.9	182.9	175.87	1.34
2,236.0	6.62	179.50	2,225.4	-185.9	13.3	186.4	186.4	175.91	1.04
2,266.0	6.33	179.14	2,255.2	-189.3	13.3	189.8	189.8	175.97	0.98
2,327.0	6.33	179.14	2,315.8	-196.1	13.4	196.5	196.5	176.08	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,266.0	2,255.2	-189.3	13.3	Final Javins MWD - 2266.00' MD
2,327.0	2,315.8	-196.1	13.4	PTB - 2327.00' MD

Checked By: Chris Thompson Approved By: Chris Thompson Date: 8/30/2022

10-12-22



Reliance

Well Services, LLC

15 BPM X-Link Frac

HG Energy, LLC

Treater: Tony Lewellen

Date: 8/4/2022

Lease: C.H. McGraw

Well #: 130

Roane County, WV

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Reliance

Well Services

Table of Contents

Cover Sheet	1
Table of Contents	2
Job Summary	3
Job Summary Moment-by-Moment Comments Stage 1	4
Physical Chemical Inventory	6
<u>SDSs</u>	
4 N 1 SDS	7
Pro Gel 4.0L SDS	27
GB-LEB SDS	32
BXL-10C SDS	38
BXL-A SDS	47
AP 1 Breaker SDS	54
Pro CLA Firm LP SDS	65
Pro NE-1 SDS	73

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Reliance

WELL SERVICES LLC

510 Crumhery Street
Suite 200
Erie, PA 16507
Phone 814.454.1644
Fax 814.454.1644
24 hours 412.966.0760

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Operator: HG Energy, LLC
Lease: C.H. McGraw
Well #: 130
Location: Roane County, WV

Supervisor: Tony Lewellen
Pump Time: 11:14 AM
Flush Time: 11:32 AM
Date: 8/4/2022

Stage	Depth	Breakdown (psi)	Clean Vol H2O (bbls)	Slurry Discharge (bbls)	Acid 15% HCL (gals)	(In Acid) 4 AND 1 Acid Inhibitor (gals)	API 20/40 Sand (sacks)	Ave. Treating (psi)	Pro Gel 4.0L Guar Gel (lbs)	GB-LEB Gel Breaker (gals)	BXL-10C X-Linker (gals)	BXL-A Breaker Activator (gals)	AP-1 Breaker (lbs)	Pro CLA Firm LP Clay Control (gals)	Pro NE-1 Biocide/Surfactant (gals)
1	2317	1,649	149	158	<u>250.00</u>	<u>1.25</u>	<u>30.00</u>	817	<u>25.00</u>	<u>0.25</u>	<u>5.00</u>	<u>5.00</u>	5.00	<u>5.00</u>	<u>5.00</u>
Total					250.00	1.25	30.00		25.00	0.25	5.00	5.00	5.00	5.00	5.00

Comments:

Stage 1 8/4/2022: Treated per design.