



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Friday, October 21, 2022
WELL WORK PERMIT
Horizontal / New Drill

MOUNTAIN V OIL & GAS, INC.
POST OFFICE BOX 470

BRIDGEPORT, WV 263300000


Re: Permit approval for Ellyson 1H WV0476
47-021-05798-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: Ellyson 1H WV0476
Farm Name: S and R Gas Ventures LTD ET 
U.S. WELL NUMBER: 47-021-05798-00-00
Horizontal New Drill
Date Issued: 10/21/2022

Promoting a healthy environment.

10/21/2022

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

9. WILL CONSULT THE WATER WITHDRAWAL GUIDANCE TOOL BEFORE WITHDRAWING WATERS OF THE STATE.

JMM

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

1) Well Operator: Mountain V Oil & Gas Inc. 310020 Gilmer DeKalb Tanner
Operator ID County District Quadrangle

2) Operator's Well Number: Ellyson 1H WV0476 3) Elevation: 833.00' Proposed

4) Well Type: (a) Oil or Gas
 (b) If Gas: Production / Underground Storage _____
 Deep _____ / Shallow

5) Proposed Target Formation(s): Weir Proposed Target Depth: 2000'

6) Proposed Total Depth: _____ Feet Formation at Proposed Total Depth: weir

7) Approximate fresh water strata depths: 57', 200' gwn

8) Approximate salt water depths: N/A

9) Approximate coal seam depths: N/A *SDW*
9/20/2022

10) Approximate void depths, (coal, Karst, other): N/A

11) Does land contain coal seams tributary to active mine? N/A

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

See addendum

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13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor	13.625"	K-55	88#	42'	42'	CTS
Fresh Water	9.625"	A-500	26#	250'	250'	CTS
Coal						
Intermediate	7"	J-55	20#	1970'	1970'	CTS
Production	4.5"	N-80	11.6#		6060'	
Tubing						
Liners						

Packers: Kind: _____
 Sizes: _____
 Depths Set _____

10/21/2022

Addendum to WW-2B Ellyson #1H WV0476 47-021-0****

- 1, Construct Drilling Location
2. Drill 15" hole to 50' Run approx. 42' of 13.625' casing and cement to surface
3. Drill 12.75" hole to 300', Run approx. 250' of 9.625" casing and cement to surface
4. Drill 9.5" hole building curve to 2000', Run approx. 1970' of 7" casing and cement to surface
5. Drill 6.5" hole to landing point. Continue horizontally 3887' to bottom hole point.
6138' MD
6. Run approximately 6138" of 4.5" casing and cement to surface.
7. Well will be stimulated utilizing completion plugs and perforated at specific intervals as warranted by mud log. Twenty stages of 500 gal HCl, 45,000# of sand and 750 bbl of water is expected. Water to be used includes 5000 bbls of waters of WV and 10,000 bbls of produced water from existing Mountain V wells in Upshur, Lewis, and Gilmer Counties. Produced water will come from any and all formations between the Big Injun and Devonian Shale. No water from the Marcellus or deeper will be used. A list of wells by permit number will be provided to WV DEP when all water is utilized. Approximately 15,000 bbl of water total will be used in the stimulation of this well.
8. Reclaim the drilling location

g
10/21

4702105798H

ck# 66490
Date: 9/19/22
Amt: \$650.00

Mountain V Oil & Gas, Inc.

Gilmer County, WV (NAD 83)

Ellyson

Ellyson 1H

OH

Plan: Prelim B - Ellyson 1H

Standard Planning Report

16 September, 2022

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SEP 22 2022
WV Department of
Environmental Protection

10/21/2022

Pro Directional
Planning Report

4702105798H

Database:	WellPlanner1	Local Co-ordinate Reference:	Well Ellyson 1H
Company:	Mountain V Oil & Gas, Inc.	TVD Reference:	GL @ 833.00usft
Project:	Gilmer County, WV (NAD 83)	MD Reference:	GL @ 833.00usft
Site:	Ellyson	North Reference:	Grid
Well:	Ellyson 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim B - Ellyson 1H		

Project	Gilmer County, WV (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	West Virginia Southern Zone		

Site	Ellyson				
Site Position:		Northing:	723,996.10 usft	Latitude:	38.988127
From:	Map	Easting:	1,993,707.20 usft	Longitude:	-80.911324
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.05 °

Well	Ellyson 1H					
Well Position	+N/-S	0.00 usft	Northing:	723,996.10 usft	Latitude:	38.988127
	+E/-W	0.00 usft	Easting:	1,993,707.20 usft	Longitude:	-80.911324
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	833.00 usft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/12/2022	-7.77	65.75	51,054.40

Design	Prelim B - Ellyson 1H
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Audit Notes:	
Version:	Phase: PLAN Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	

Plan Survey Tool Program	Date 9/16/2022
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Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	6,137.59 Prelim B - Ellyson 1H (OH)	MWD+HDGM OWSG MWD + HRGM	

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Well:	Ellyson 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim B - Ellyson 1H		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,181.17	0.00	0.00	1,181.17	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 8.00									
1,200.00	1.51	170.00	1,200.00	-0.24	0.04	0.17	8.00	8.00	0.00
1,250.00	5.51	170.00	1,249.89	-3.25	0.57	2.32	8.00	8.00	0.00
1,300.00	9.51	170.00	1,299.46	-9.69	1.71	6.90	8.00	8.00	0.00
1,350.00	13.51	170.00	1,348.44	-19.51	3.44	13.90	8.00	8.00	0.00
1,400.00	17.51	170.00	1,396.61	-32.67	5.76	23.28	8.00	8.00	0.00
1,450.00	21.51	170.00	1,443.73	-49.11	8.66	34.99	8.00	8.00	0.00
1,500.00	25.51	170.00	1,489.57	-68.74	12.12	48.99	8.00	8.00	0.00
1,525.06	27.51	170.00	1,512.00	-79.76	14.06	56.84	8.00	8.00	0.00
Little Lime									
1,550.00	29.51	170.00	1,533.91	-91.48	16.13	65.19	8.00	8.00	0.00
1,574.47	31.46	170.00	1,555.00	-103.70	18.29	73.90	8.00	8.00	0.00
Big Lime -									
1,600.00	33.51	170.00	1,576.53	-117.21	20.67	83.52	8.00	8.00	0.00
1,631.00	35.99	170.00	1,602.00	-134.60	23.73	95.92	8.00	8.00	0.00
Big Injun -									
1,650.00	37.51	170.00	1,617.23	-145.80	25.71	103.90	8.00	8.00	0.00
1,700.00	41.51	170.00	1,655.80	-177.12	31.23	126.22	8.00	8.00	0.00
1,743.67	45.00	170.00	1,687.60	-206.58	36.43	147.21	8.00	8.00	0.00
Start DLS 8.00 TFO -38.70									
1,750.00	45.40	169.56	1,692.06	-211.00	37.22	150.38	8.00	6.26	-7.03
1,771.54	46.76	168.09	1,707.00	-226.22	40.23	161.49	8.00	6.31	-6.82
Base Big Injun									
1,800.00	48.58	166.24	1,726.17	-246.73	44.91	176.98	8.00	6.41	-6.44
1,850.00	51.85	163.25	1,758.16	-283.78	55.04	206.34	8.00	6.54	-6.00
1,900.00	55.19	160.51	1,787.89	-321.97	67.56	238.32	8.00	6.68	-5.48
1,950.00	58.59	157.98	1,815.20	-361.12	82.42	272.77	8.00	6.86	-5.05
1,970.58	60.00	157.00	1,825.71	-377.46	89.19	287.62	8.00	6.86	-4.78
60° - 7"									
1,975.00	60.48	156.75	1,827.90	-380.99	90.70	290.86	12.01	10.93	-5.75
2,000.00	63.22	155.35	1,839.69	-401.13	99.65	309.66	12.00	10.95	-5.57
2,016.75	65.06	154.46	1,847.00	-414.78	106.04	322.67	12.00	10.99	-5.34
Weir									
2,025.00	65.97	154.03	1,850.42	-421.55	109.30	329.19	12.00	11.02	-5.22
2,050.00	68.73	152.76	1,860.04	-442.17	119.64	349.41	12.00	11.05	-5.08
2,075.00	71.50	151.53	1,868.55	-462.95	130.62	370.24	12.00	11.08	-4.89
2,100.00	74.28	150.35	1,875.90	-483.84	142.23	391.65	12.00	11.11	-4.74
2,125.00	77.07	149.20	1,882.09	-504.76	154.42	413.57	12.00	11.14	-4.61

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Planning Report

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Site:	Ellyson	North Reference:	Grid
Well:	Ellyson 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim B - Ellyson 1H		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,150.00	79.86	148.07	1,887.09	-525.67	167.17	435.93	12.00	11.16	-4.51
2,175.00	82.65	146.96	1,890.89	-546.51	180.44	458.68	12.00	11.17	-4.43
2,200.00	85.44	145.87	1,893.48	-567.23	194.20	481.76	12.00	11.18	-4.37
2,225.00	88.24	144.78	1,894.86	-587.75	208.40	505.10	12.00	11.19	-4.34
2,250.72	91.12	143.67	1,895.00	-608.61	223.43	529.31	12.00	11.19	-4.33
Land									
2,250.80	91.13	143.67	1,895.00	-608.68	223.48	529.39	11.29	10.53	-4.07
Weir Target									
2,300.00	91.13	142.01	1,894.04	-647.88	253.19	576.10	3.36	-0.01	-3.36
2,400.00	91.13	138.65	1,892.06	-724.83	317.00	672.31	3.36	0.01	-3.36
2,500.00	91.14	135.29	1,890.08	-797.91	385.21	769.94	3.36	0.01	-3.36
2,600.00	91.14	131.93	1,888.09	-866.86	457.59	868.66	3.36	0.00	-3.36
2,700.00	91.14	128.57	1,886.10	-931.45	533.89	968.14	3.36	0.00	-3.36
2,800.00	91.13	125.21	1,884.11	-991.46	613.84	1,068.02	3.36	-0.01	-3.36
2,818.90	91.13	124.57	1,883.74	-1,002.27	629.34	1,086.92	3.36	-0.01	-3.36
Start 291.05 hold at 2818.90 MD									
2,900.00	91.13	124.57	1,882.14	-1,048.28	696.10	1,168.00	0.00	0.00	0.00
3,000.00	91.13	124.57	1,880.17	-1,105.02	778.43	1,267.98	0.00	0.00	0.00
3,109.94	91.13	124.57	1,878.00	-1,167.39	868.94	1,377.91	0.00	0.00	0.00
Start DLS 2.00 TFO 179.95									
3,155.28	90.22	124.57	1,877.46	-1,193.11	906.26	1,423.24	2.00	-2.00	0.00
Start 1144.21 hold at 3155.28 MD									
3,200.00	90.22	124.57	1,877.29	-1,218.49	943.09	1,467.96	0.00	0.00	0.00
3,300.00	90.22	124.57	1,876.90	-1,275.24	1,025.43	1,567.96	0.00	0.00	0.00
3,400.00	90.22	124.57	1,876.51	-1,331.99	1,107.76	1,667.96	0.00	0.00	0.00
3,500.00	90.22	124.57	1,876.12	-1,388.73	1,190.10	1,767.96	0.00	0.00	0.00
3,600.00	90.22	124.57	1,875.73	-1,445.48	1,272.44	1,867.96	0.00	0.00	0.00
3,700.00	90.22	124.57	1,875.34	-1,502.23	1,354.78	1,967.95	0.00	0.00	0.00
3,800.00	90.22	124.57	1,874.95	-1,558.98	1,437.12	2,067.95	0.00	0.00	0.00
3,900.00	90.22	124.57	1,874.56	-1,615.72	1,519.46	2,167.95	0.00	0.00	0.00
4,000.00	90.22	124.57	1,874.17	-1,672.47	1,601.80	2,267.95	0.00	0.00	0.00
4,100.00	90.22	124.57	1,873.78	-1,729.22	1,684.13	2,367.95	0.00	0.00	0.00
4,200.00	90.22	124.57	1,873.39	-1,785.96	1,766.47	2,467.95	0.00	0.00	0.00
4,299.49	90.22	124.57	1,873.00	-1,842.42	1,848.39	2,567.44	0.00	0.00	0.00
Start DLS 2.00 TFO 6.95									
4,304.27	90.32	124.59	1,872.98	-1,845.13	1,852.32	2,572.22	2.00	1.99	0.24
Start 895.40 hold at 4304.27 MD									
4,400.00	90.32	124.59	1,872.45	-1,899.47	1,931.14	2,667.95	0.00	0.00	0.00
4,500.00	90.32	124.59	1,871.89	-1,956.24	2,013.46	2,767.95	0.00	0.00	0.00
4,600.00	90.32	124.59	1,871.33	-2,013.00	2,095.79	2,867.95	0.00	0.00	0.00
4,700.00	90.32	124.59	1,870.78	-2,069.76	2,178.12	2,967.94	0.00	0.00	0.00
4,800.00	90.32	124.59	1,870.22	-2,126.52	2,260.44	3,067.94	0.00	0.00	0.00
4,900.00	90.32	124.59	1,869.67	-2,183.29	2,342.77	3,167.94	0.00	0.00	0.00
5,000.00	90.32	124.59	1,869.11	-2,240.05	2,425.10	3,267.94	0.00	0.00	0.00
5,100.00	90.32	124.59	1,868.55	-2,296.81	2,507.42	3,367.94	0.00	0.00	0.00
5,199.67	90.32	124.59	1,868.00	-2,353.39	2,589.48	3,467.61	0.00	0.00	0.00
Start DLS 2.00 TFO -3.08									
5,206.07	90.45	124.58	1,867.96	-2,357.02	2,594.75	3,474.01	2.00	2.00	-0.11
Start 636.32 hold at 5206.07 MD									
5,300.00	90.45	124.58	1,867.23	-2,410.33	2,672.08	3,567.93	0.00	0.00	0.00
5,400.00	90.45	124.58	1,866.45	-2,467.08	2,754.41	3,667.93	0.00	0.00	0.00
5,500.00	90.45	124.58	1,865.67	-2,523.83	2,836.75	3,767.93	0.00	0.00	0.00
5,600.00	90.45	124.58	1,864.89	-2,580.59	2,919.08	3,867.92	0.00	0.00	0.00

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,700.00	90.45	124.58	1,864.11	-2,637.34	3,001.41	3,967.92	0.00	0.00	0.00
5,800.00	90.45	124.58	1,863.33	-2,694.09	3,083.74	4,067.92	0.00	0.00	0.00
5,842.39	90.45	124.58	1,863.00	-2,718.15	3,118.64	4,110.31	0.00	0.00	0.00
Start DLS 2.00 TFO 13.69									
5,848.21	90.56	124.61	1,862.95	-2,721.45	3,123.44	4,116.13	2.00	1.94	0.47
Start 199.58 hold at 5848.21 MD									
5,900.00	90.56	124.61	1,862.44	-2,750.86	3,166.06	4,167.91	0.00	0.00	0.00
6,000.00	90.56	124.61	1,861.47	-2,807.66	3,248.36	4,267.91	0.00	0.00	0.00
6,047.80	90.56	124.61	1,861.00	-2,834.80	3,287.70	4,315.70	0.00	0.00	0.00
Start DLS 2.00 TFO -179.90									
6,082.46	89.87	124.61	1,860.87	-2,854.49	3,316.23	4,350.37	2.00	-2.00	0.00
Start 55.13 hold at 6082.46 MD									
6,100.00	89.87	124.61	1,860.91	-2,864.45	3,330.67	4,367.91	0.00	0.00	0.00
6,137.59	89.87	124.61	1,861.00	-2,885.80	3,361.61	4,405.50	0.00	0.00	0.00
TD at 6137.59									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
ext BHL (Ellyson 1H) - hit/miss target - Shape - Point	0.00	0.00	1,861.00	-2,885.80	3,361.61	721,110.30	1,997,068.81	38.980195	-80.899509
BHL (Ellyson 1H) - plan hits target center - Point	0.00	0.00	1,861.00	-2,834.80	3,287.70	721,161.30	1,996,994.90	38.980335	-80.899769
Target 6 (Ellyson 1H) - plan hits target center - Point	0.00	0.00	1,863.00	-2,718.15	3,118.64	721,277.95	1,996,825.85	38.980656	-80.900363
Target 5 (Ellyson 1H) - plan hits target center - Point	0.00	0.00	1,868.00	-2,353.39	2,589.48	721,642.71	1,996,296.68	38.981659	-80.902223
Target 4 (Ellyson 1H) - plan hits target center - Point	0.00	0.00	1,873.00	-1,842.42	1,848.39	722,153.68	1,995,555.59	38.983064	-80.904828
Target 3 (Ellyson 1H) - plan hits target center - Point	0.00	0.00	1,878.00	-1,167.39	868.94	722,828.70	1,994,576.00	38.984920	-80.908271
Target 2 (Ellyson 1H) - plan misses target center by 17.43usft at 2581.35usft MD (1888.46 TVD, -854.33 N, 443.79 E) - Point	0.00	0.00	1,883.00	-866.24	432.29	723,129.86	1,994,139.49	38.985748	-80.909806
Target 1 (Ellyson 1H) - plan misses target center by 117.03usft at 2204.20usft MD (1893.80 TVD, -570.69 N, 196.55 E) - Point	0.00	0.00	1,888.00	-637.46	100.61	723,358.64	1,993,807.81	38.986377	-80.910972
LP (Ellyson 1H) - plan misses target center by 258.77usft at 1993.34usft MD (1836.66 TVD, -395.74 N, 97.19 E) - Point	0.00	0.00	1,895.00	-468.80	-144.10	723,527.30	1,993,563.10	38.986841	-80.911832

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SEP 22 2022
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Pro Directional
Planning Report

4702105798H

Database:	WellPlanner1	Local Co-ordinate Reference:	Well Ellyson 1H
Company:	Mountain V Oil & Gas, Inc.	TVD Reference:	GL @ 833.00usft
Project:	Gilmer County, WV (NAD 83)	MD Reference:	GL @ 833.00usft
Site:	Ellyson	North Reference:	Grid
Well:	Ellyson 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim B - Ellyson 1H		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)		Name	Casing Diameter (")	Hole Diameter (")
250.00	250.00	9 5/8"		9-5/8	12-1/4
1,970.58	1,825.71	7"		7	8-3/4

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,525.06	1,512.00	Little Lime		0.00	
1,574.47	1,555.00	Big Lime -		0.00	
1,631.00	1,602.00	Big Injun -		0.00	
1,771.54	1,707.00	Base Big Injun		0.00	
2,016.75	1,847.00	Weir		0.00	
2,250.80	1,895.00	Weir Target		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,181.17	1,181.17	0.00	0.00	Start Build 8.00	
1,743.67	1,687.60	-206.58	36.43	Start DLS 8.00 TFO -38.70	
1,970.58	1,825.71	-377.46	89.19	60°	
2,250.72	1,895.00	-608.61	223.43	Land	
2,818.90	1,883.74	-1,002.27	629.34	Start 291.05 hold at 2818.90 MD	
3,109.94	1,878.00	-1,167.39	868.94	Start DLS 2.00 TFO 179.95	
3,155.28	1,877.46	-1,193.11	906.26	Start 1144.21 hold at 3155.28 MD	
4,299.49	1,873.00	-1,842.42	1,848.39	Start DLS 2.00 TFO 6.95	
4,304.27	1,872.98	-1,845.13	1,852.32	Start 895.40 hold at 4304.27 MD	
5,199.67	1,868.00	-2,353.39	2,589.48	Start DLS 2.00 TFO -3.08	
5,206.07	1,867.96	-2,357.02	2,594.75	Start 636.32 hold at 5206.07 MD	
5,842.39	1,863.00	-2,718.15	3,118.64	Start DLS 2.00 TFO 13.69	
5,848.21	1,862.95	-2,721.45	3,123.44	Start 199.58 hold at 5848.21 MD	
6,047.80	1,861.00	-2,834.80	3,287.70	Start DLS 2.00 TFO -179.90	
6,082.46	1,860.87	-2,854.49	3,316.23	Start 55.13 hold at 6082.46 MD	
6,137.59	1,861.00	-2,885.80	3,361.61	TD at 6137.59	

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SEP 22 2022
WV Department of Environmental Protection

WW-2A
(Rev. 6-14)

1.) Date: 09-19-2022
2.) Operator's Well Number Ellyson 1H WV0476
State County Permit
3.) API Well No.: 47- Gilmer

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

4) Surface Owner(s) to be served:
(a) Name S&R Gas Ventures
Address P.O. Box 172
Sand Fork, WV 26430
(b) Name James H. Stout
Address 273 Beechwood Acres
Glennville, WV 26351
(c) Name _____
Address _____
5) (a) Coal Operator
Name _____
Address _____
(b) Coal Owner(s) with Declaration
Name none
Address _____
(c) Coal Lessee with Declaration
Name none
Address _____
6) Inspector Derek Haught
Address P.O. Box 85
Smithville, WV 26178
Telephone 304-206-7613

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas
OR

 x Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through on the above named parties by:

- Personal Service (Affidavit attached)
- x Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

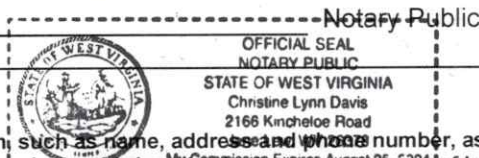
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Mountain V Oil & Gas Inc.
By: Mike Shaver
Its: President
Address: P.O. Box 470
Bridgeport, WV 26330
Telephone: 304-842-6320
Email: smshaver@earthlink.net

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Office of Oil and Gas
SEP 22 2022
WV Department of Environmental Protection

Subscribed and sworn before me this 19th day of Sept 2022, Mountain V Oil & Gas Inc.

Christine Lynn Davis
My Commission Expires Aug 25 2024
Oil and Gas Privacy Notice



10/21/2022

SURFACE OWNER WAIVER

County Gilmer

Operator Mountain V Oil & Gas Inc.

Operator well number Ellyson 1H WV0476

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Office of Oil and Gas
SEP 22 2022
WV Department of
Environmental Protection

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature

Date

Company Name
By
Its

STR Gas Ventures Ltd
Robert L. Radabaugh
Robert Radabaugh 9-20-22

Date

Print Name

President
Robert Radabaugh 9-20-22

Signature Date

10/21/2022

SURFACE OWNER WAIVER

County Gilmer

Operator Mountain V Oil & Gas Inc.
Operator well number Ellyson 1H WV0476

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WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Office of Oil and Gas
SEP 22 2022
WV Department of
Environmental Protection

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I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

James H. Stout
Signature

Date 9-2022

Company Name _____
By _____
Its _____ Date _____

James H. Stout
Print Name

Signature _____ Date _____

10/21/2022

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
-----------------------	-----------------------	---------	-----------

SEE ADDENDUM (10/20/2022)

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Office of Oil and Gas

SEP 22 2022

WV Department of
Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Mountain View Oil & Gas Inc.
 By: Its: Mike Shaver
President

10/21/2022

4702105798H

ADDENDUM TO WW-2A-1 (10/20/2022)

ELLYSON 1H WV0476

LESSOR/GRANTOR	LESSEE/GRANTEE	ROYALTY	LEASE BOOK/PAGE	DATE
DIVERSIFIED PRODUCTION, LLC	MOUNTAIN V OIL & GAS INC.	1/8 TH	LB 591/653	3-12-2021

10/21/2022

4702105798H

Ellyson 1H Well Original Leases

LESSOR	LESSEE	ACREAGE	DATE	DEED BOOK/PAGE
Jacie Goff and Arthur Goff, her husband	H.E. Davisson	160	5/26/1960	DB 203/160
Jemima Ward	C.S. Connolly	260	3/30/1908	DB 66/171
I.N. Hardman and Brtnice Hardman, his wife	Hope Natural Gas Company	120	4/29/1918	DB 89/205

WW-2B1
(5-12)

Well No. Ellyson 1H WV0476

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contractor chosen to collect sample.

Certified Laboratory Name Fairway Labs
Sampling Contractor SLS Land & Energy Development

Well Operator Mountain V Oil & Gas Inc.
Address P.O. Box 470
Bridgeport, WV 26330
Telephone 304-842-6320

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

SEE ATTACHED

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Office of Oil and Gas
SEP 22 2022
WV Department of
Environmental Protection



4702105798

info@sllswv.com
www.sllswv.com

Possible Water Purveyors within 1500'

- ★ TM 12 P 21, 20, & 26 - ½ Surface (Dwelling & Water Sources Apparent)
James H. Stout
273 Beechwood Acres
Glenville, WV 26351

- ★ TM 12 P 21, 20, & 26 - ½ Surface (Dwelling & Water Sources Apparent)
S&R Gas Ventures
P.O. Box 172
Sand Fork, WV 26430

- TM 12 P 27.3
N. Eugene & Judith A. Snyder
C/O Marshall Snyder
8446 Tusings Way
Boonsboro, MD 21713

- TM 12 P 27.4 & 27.5
Dennis R. & Lucy L. Parton
P.O. Box 705
Man, WV 25635

- TM 12 P 27.8
Alan Brent Smith
C/O Jeff Smith
889 Crooked FK. RD.
Rosedale, WV 26636

- TM 12 P 27.9
Emmett Estep
P.O. Box 34
Comfort, WV 25049

- TM 12 P 27.10
Arthur Heyman
P.O. Box 2875
East Setauket, NY 11733

- TM 12 P 27.23
Bryant L. & Susan M. Schoolcraft
1260 Hurd Rd.
Ortonville, MI 48462

- TM 17 P 2
Brian J. Lang & James C. Pycraft, DBA P&L Properties
40100 Jones Rd.
Wellington, OH 44090

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SEP 22 2022
WV Department of
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10/21/2022

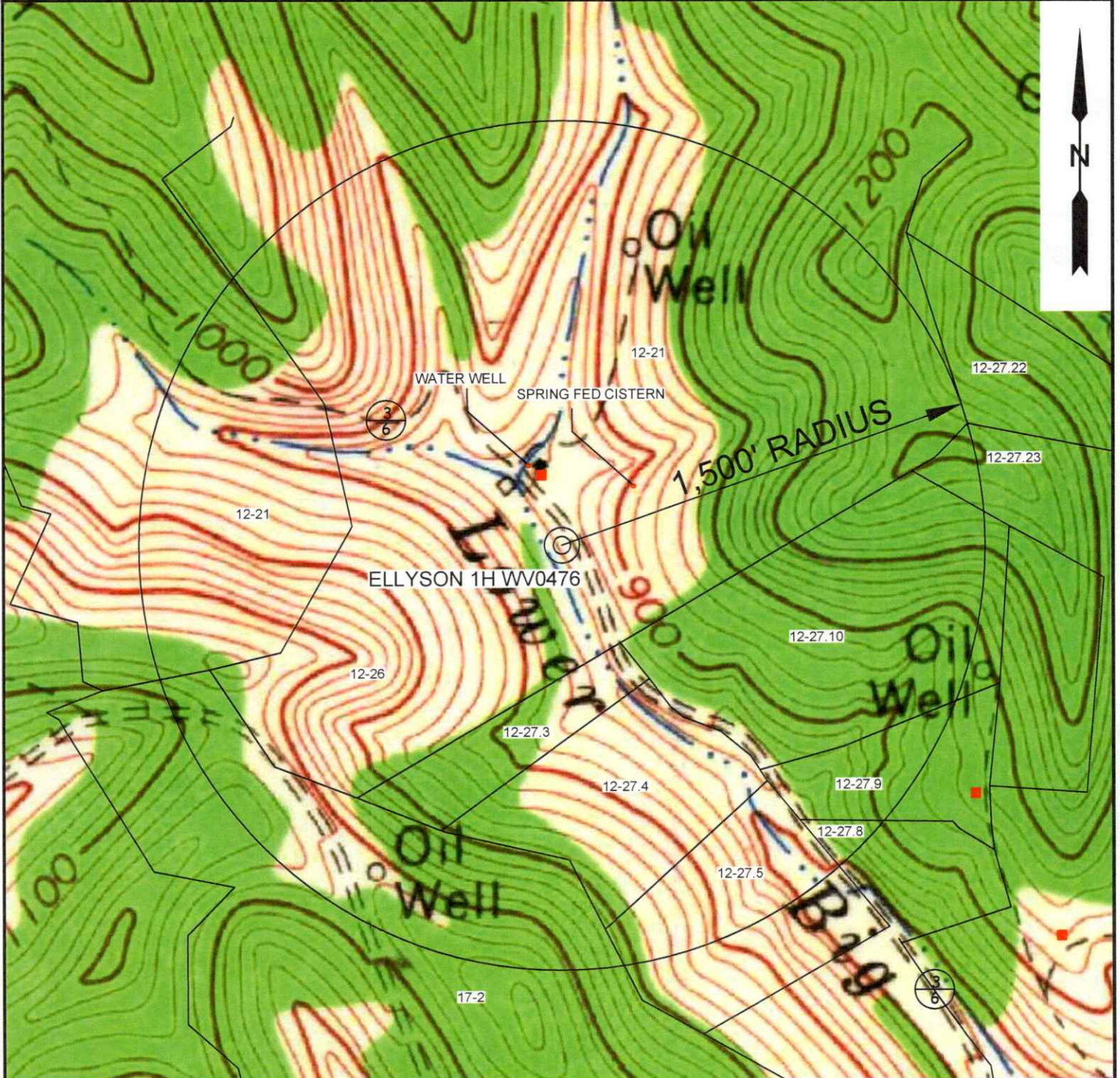
4702105798H

**PROPOSED ELLYSON 1H
WV0476
POSSIBLE WATER SAMPLES**

RECEIVED
Office of Oil and Gas

SEP 22 2022

WV Department of
Environmental Protection



■ = APPARENT RESIDENCES FROM MAPPING



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsvv.com

TOPO SECTION:

TANNER 7.5'

COUNTY DISTRICT

GILMER DEKALB

DRAWN BY JOB NO.

C.P.M. 9245

OPERATOR:

PREPARED FOR:
MOUNTAIN V OIL & GAS, INC.
P.O. BOX 470
BRIDGEPORT, WV 26330

DATE SCALE

09-15-2022 1" - 500'



10/21/2022

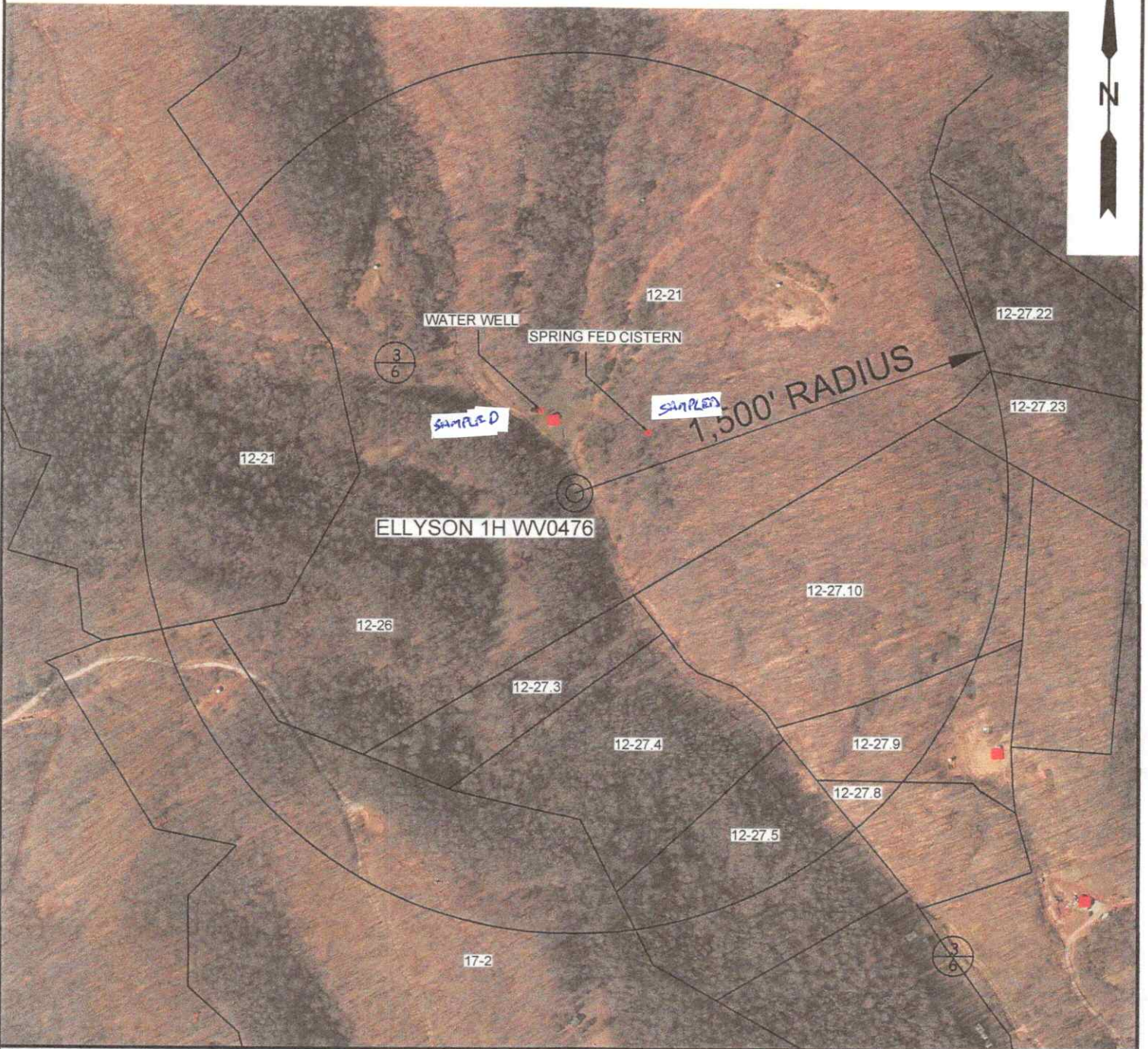
4702105798H

PROPOSED ELLYSON 1H WV0476 POSSIBLE WATER SAMPLES

RECEIVED
Office of Oil and Gas

SEP 22 2022

WV Department of
Environmental Protection



■ = APPARENT RESIDENCES FROM MAPPING

0 500 1000 1500



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296

sllwv.com

AERIAL SECTION:

TANNER 7.5'

COUNTY

DISTRICT

GILMER

DEKALB

DRAWN BY

JOB NO.

C.P.M.

9245

OPERATOR:

PREPARED FOR:
 MOUNTAIN V OIL & GAS, INC.
 P.O. BOX 470
 BRIDGEPORT, WV 26330



10/21/2022

DRAWN BY

JOB NO.

DATE

SCALE

C.P.M.

9245

09-15-2022

1" - 500'

4702105798H

WW-9
(5/16)

API Number 47 -
Operator's Well No. Ellyson 1H WV0476

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Mountain V Oil & Gas, Inc. OP Code 310020

Watershed (HUC 10) Lower Big Run Quadrangle Tanner

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Waste and drill cuttings

Will a synthetic liner be used in the pit? Yes No If so, what ml.?

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number)
- Reuse (at API Number)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain)

SPW
9/20/2022

Will closed loop system be used? If so, describe: n/a

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Synthetic oil base/brinewater

-If oil based, what type? Synthetic, petroleum, etc. synthetic

Additives to be used in drilling medium? n/a

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. leave in pit

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust, cement)

-Landfill or offsite name/permit number?

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Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated wastes rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *[Signature]*

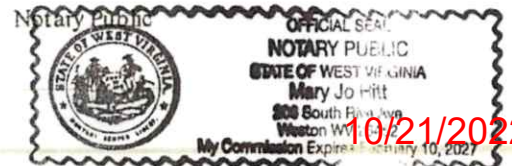
Company Official (Typed Name) Mike Shaver

Company Official Title President

Subscribed and sworn before me this 29th day of September, 2022

Mary Jo Hitt

My commission expires February 10, 2027



Proposed Revegetation Treatment: Acres Disturbed 1.67 Prevegetation pH 6.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 700 lbs/acre

Mulch Hay 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: Pre-Seed & mulch as soon as reasonably possible per WV DEP E&S manual - Upgrade E&S as necessary

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Title: OOG Inspector

Date: 9/20/2022

Field Reviewed? Yes No

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: Mountain V Oil & Gas, Inc.
Watershed (HUC 10): Lower Big Run Quad: Tanner 7.5'
Farm Name: Ellyson

- 1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

No fluid from drilling operations will be discharged. All surface water will be ran through proper E & S controls prior to leaving the site.

- 2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

Pad and pit will be lined to prevent any releases.

- 3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Closest Water Body-Lower Big Run 5'
No Discharges, No Nearby Wellhead Protection Area

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- 4. Summarize all activities at your facility that are already regulated for groundwater protection.

None

- 5. Discuss any existing groundwater quality data for your facility or an adjacent property.

[Empty rectangular box]

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on the property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

All employees will be trained in the content and application of the GPP prior to working on site. All employees will understand the importance of Groundwater Protection and how to ensure it is done. GPP will be kept on site to review at any time.

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8. Provide provisions and frequency for inspections of all GPP elements and equipment.

GPP Elements and Equipment will be inspected and documented weekly or after a significant rain event.

Signature: _____

Date: _____

GROUNDWATER PROTECTION PLAN FOR
(Mountain V Oil and Gas, Ellyson Pad)

Section A. GENERAL INFORMATION

1. Mountain V Oil and Gas, Lower Big Run, Coxs Mills, WV 26342

- a. Mountain V Oil and gas, Ellyson Pad
- b. Lower Big Run Coxs Mills, WV 26342
- c. Gilmer
- d. 39.988128, -80.911324
- e. Mailing Address, PO Box 470, Bridgeport, WV 26330

2. Person Developing GPP

- a. Chris Moyers
- b. P.O. Box 150, Glenville, WV 26351
- c. 304-462-5634
- d. cmoyers@slswv.com

3. Person Responsible for Implementing GPP

- a. Mike Shaver
- b. PO Box 470, Bridgeport, WV 26330
- c. 304-203-9550
- d. smshaver@earthlink.net

4. Brief Description of Facility Operation

The facility will operate a shallow horizontal gas well (see formation).

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Section B. ACTIVITIES THAT HAVE THE POTENTIAL TO POLLUTE GROUNDWATER

- Grading
 - Fuel Storage
 - Water Storage
-
- Give complete details about aboveground and underground tanks, including
 1. (4)-250 barrel above ground water tanks

2. 3,800 gallon above ground fuel tank
3. (3) 150 gallon above ground oil tanks

Section C. PRACTICES SELECTED TO PROTECT GROUNDWATER FROM POLLUTION

- Grading – Inspection of all equipment, use of compost filter sock, spill kits.
- Fueling will be done over duck pond or spill bucket.

Section D. IMPLEMENTATION SCHEDULE

- The GPP must be implemented upon approval.
- GPP will be kept on site and in main office. Copies available to all employees.

The GPP will be retained and implemented at the site for which it was developed.

- When designing or adding new equipment or operations, GPP will be modified and all employees will be trained on the new scope and/or additions. Adequate design of these operations will be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, areas determined by the Bureau for Public Health to be delineated wellhead protection areas, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.
- The permittee will revise the GPP within 30 calendar days to address any newly delineated areas or other vulnerable areas upon notification by the Director or the Bureau for Public Health.

Section E. EMPLOYEE TRAINING

- You are developing a Groundwater Protection Plan; therefore, training must focus on groundwater protection.
- Training must include educating the employees about the importance of groundwater protection and include all aspects of the GPP. Training will also include spill prevention, spill containment and cleanup, proper inspection of BMP's and equipment.
- Frequency of training – Training will be conducted with any new hires or employees new to the site prior to beginning work at site.

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Refresher training will be completed annually or within 30 days of a change to the GPP.

Section F. INSPECTION SCHEDULE

Inspections are conducted to insure that the practices selected to prevent groundwater pollution are being used and are properly functioning.

- Equipment will be inspected daily for leaks or faulty operation/areas with the potential for leaks.
- AST's will be inspected every 14 days. A more comprehensive inspection on the AST will be completed annually. A walk around of the AST for any major changes will take place daily.
- BMP's such as silt sock or silt fence will be inspected once every 7 days or after a major rain event.
- Include an Inspection Checklist. The checklist is documentation that you are implementing the GPP. The checklist must include date, name of inspector, what is to be inspected, observations, actions taken, if any.

Section G. WASTE MATERIAL

- Waste material will not be used for deicing, fill, or any other use, unless that use is allowed by regulation or permit.

Section H. SAFETY DATA SHEETS

- Material Safety Data Sheets or Safety Data Sheets shall be provided for all chemicals, or substances, used or stored on site.

Section I. GROUNDWATER DATA

- No groundwater data was immediately available for the site. No known wells or springs were found on site.

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Section J. KARST MITIGATION PLAN

(a) The preliminary and detailed site investigation(s) shall be completed as noted in the latest version of the Chesapeake Stormwater Network Technical Bulletin No. 1, "Stormwater Design Guidelines for Karst Terrain in the Chesapeake Bay Watershed". **This should be considered the minimum requirement and applicable to all Karst areas in West Virginia.**

(b) All necessary site investigations as noted in the above-referenced bulletin shall be completed by a qualified professional engineer or geologist, licensed by the State of West Virginia and experienced in working in Karst Terrain.

(c) Sinkhole Mitigation **shall be** carried out according to the WVDEP Sinkhole Mitigation Guidance Document (August 2005, revised 2018), or other applicable standards as recommended by the G or PE and approved by the West Virginia Department of Environmental Protection (WVDEP).

Design Requirements

1. The location of all sinkholes shall be shown on the existing conditions scale drawing, included with the preliminary plan submission. The edge of the sinkhole is to be considered the last closed contour based on five foot (5') contour mapping.

2. All sinkholes identified prior to construction shall be either remediated or separated from construction by a minimum one hundred-feet (100').

3. Remediation shall be carried out under the direction of a qualified Geologist or Geotechnical Engineer. Mitigation shall be carried out according to the WVDEP Sinkhole Management Guidance Document (August 2005 et. seq.), or other applicable standards as recommended by the G or PE and approved by the WVDEP.

4. Any improvements planned to fall within one hundred feet (100') of any sinkhole (remediated or not), shall require a thorough subsurface investigation conducted by a qualified G or PE to ensure that the planned improvements do not present a threat to human health, safety, or the environment. Should these investigations detect previously unknown sinkhole features, paragraph 2 applies.

5. For any subsurface investigations requiring boreholes, such as air track drilling or rock coring, the boreholes must be grouted upon completion. All air track drilling operations used to determine the depth of overburden and continuity of bedrock shall be monitored full-time by a G or PE or other qualified individual.

6. Underground utilities located within one-hundred feet (100') of a karst feature shall be located and then a dike of clay or other suitable material shall be placed across the trench at twenty-foot (20') intervals or less along the entire length which passes through the one hundred foot (100') radius, or as directed by a G or PE.

7. Do not apply any fertilizer, pesticides, or other chemicals within at least one-hundred feet (100') of a sinkhole.

8. Immediately (within 24 hours) after disturbing any soil, lightly fertilize, seed, and mulch the area to control erosion. A geotextile may be needed on steep slopes.

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9. At least one subsurface cross section should be submitted with the storm water plan, showing confining layers, depth to bedrock, and water table, if encountered. It should extend through the centerline of any proposed impounding storm water facility.
10. Natural karst swales should be protected whenever possible as an effective element in storm water design in karst regions.

Section K. CERTIFICATION STATEMENT

- The person who can make the managerial and/or financial decisions that are required to implement your plan should be the one signing the certification statement.
- Use the following certification statement verbatim.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

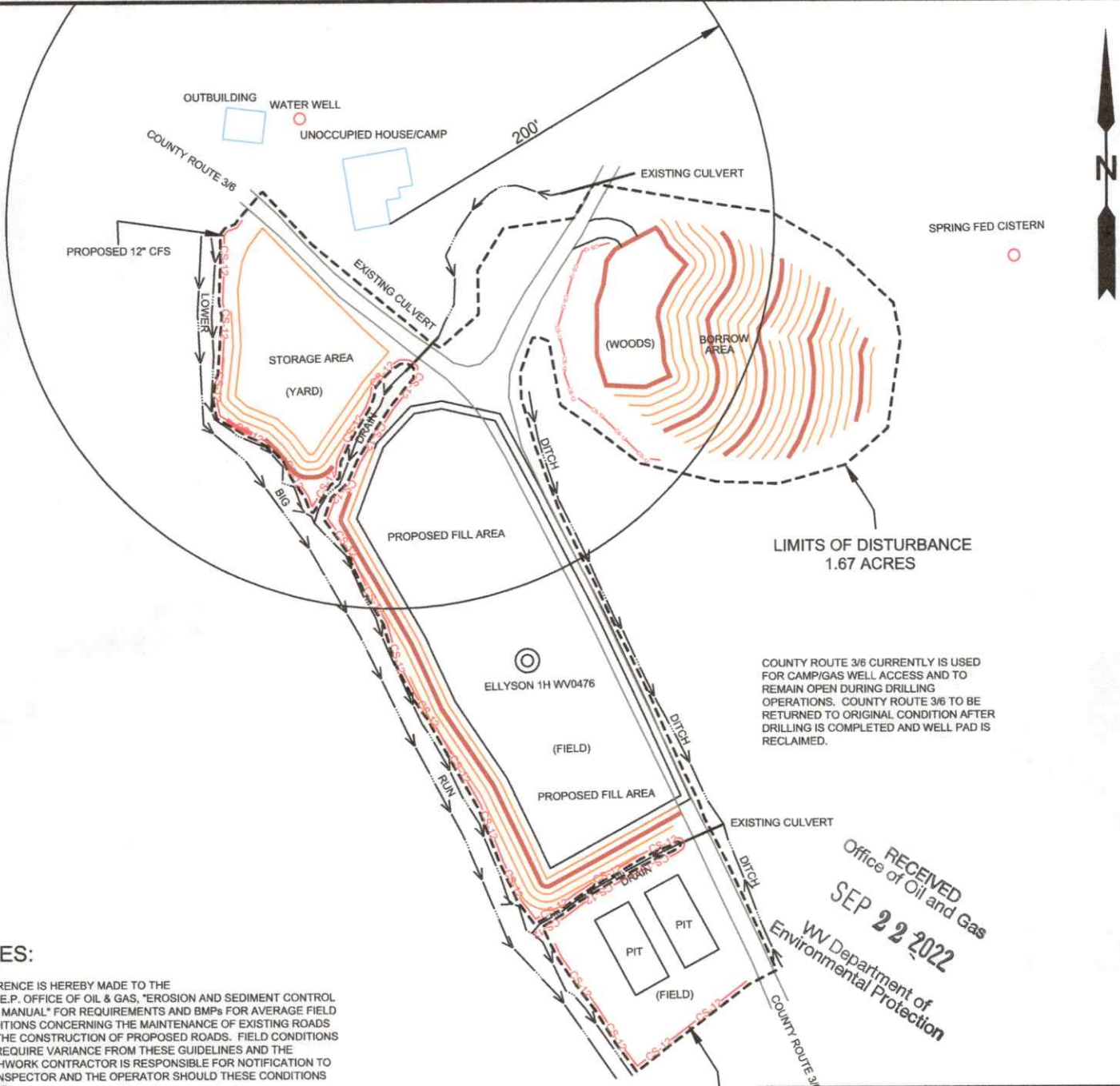
Signature:

Date:

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SEP 22 2022
WV Department of
Environmental Protection

PROPOSED ELLYSON 1H WV0476

4702105798H



COUNTY ROUTE 3/6 CURRENTLY IS USED FOR CAMP/GAS WELL ACCESS AND TO REMAIN OPEN DURING DRILLING OPERATIONS. COUNTY ROUTE 3/6 TO BE RETURNED TO ORIGINAL CONDITION AFTER DRILLING IS COMPLETED AND WELL PAD IS RECLAIMED.

NOTES:

1. REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
2. ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.

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SEP 22 2022
WV Department of
Environmental Protection

Samuel D. Ward II
Digitally signed by Samuel D. Ward II
Date: 2022.09.20 16:19:52 -04'00'



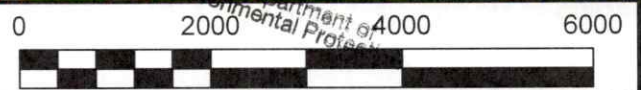
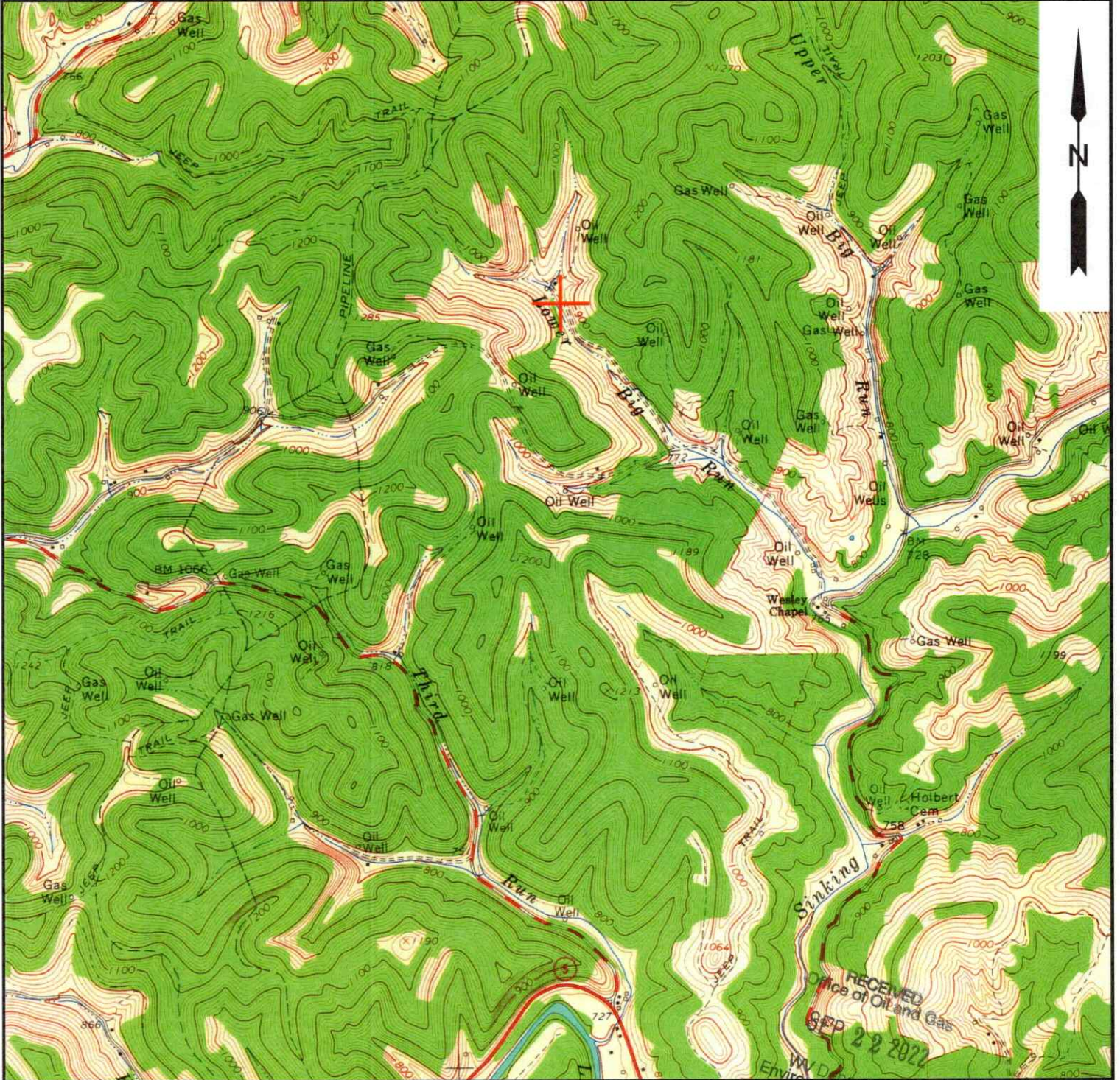
12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slswv.com

WW-9		OPERATOR:	
		PREPARED FOR: MOUNTAIN V OIL & GAS, INC. P.O. BOX 470 BRIDGEPORT, WV 26330	
COUNTY	DISTRICT	DATE	SCALE
GILMER	DEKALB	09-15-2022	1" - 80'
DRAWN BY	JOB NO.		
C.P.M.	9245		

10/21/2022

PROPOSED
 ELLYSON 1H
 WV0476

4702105798H



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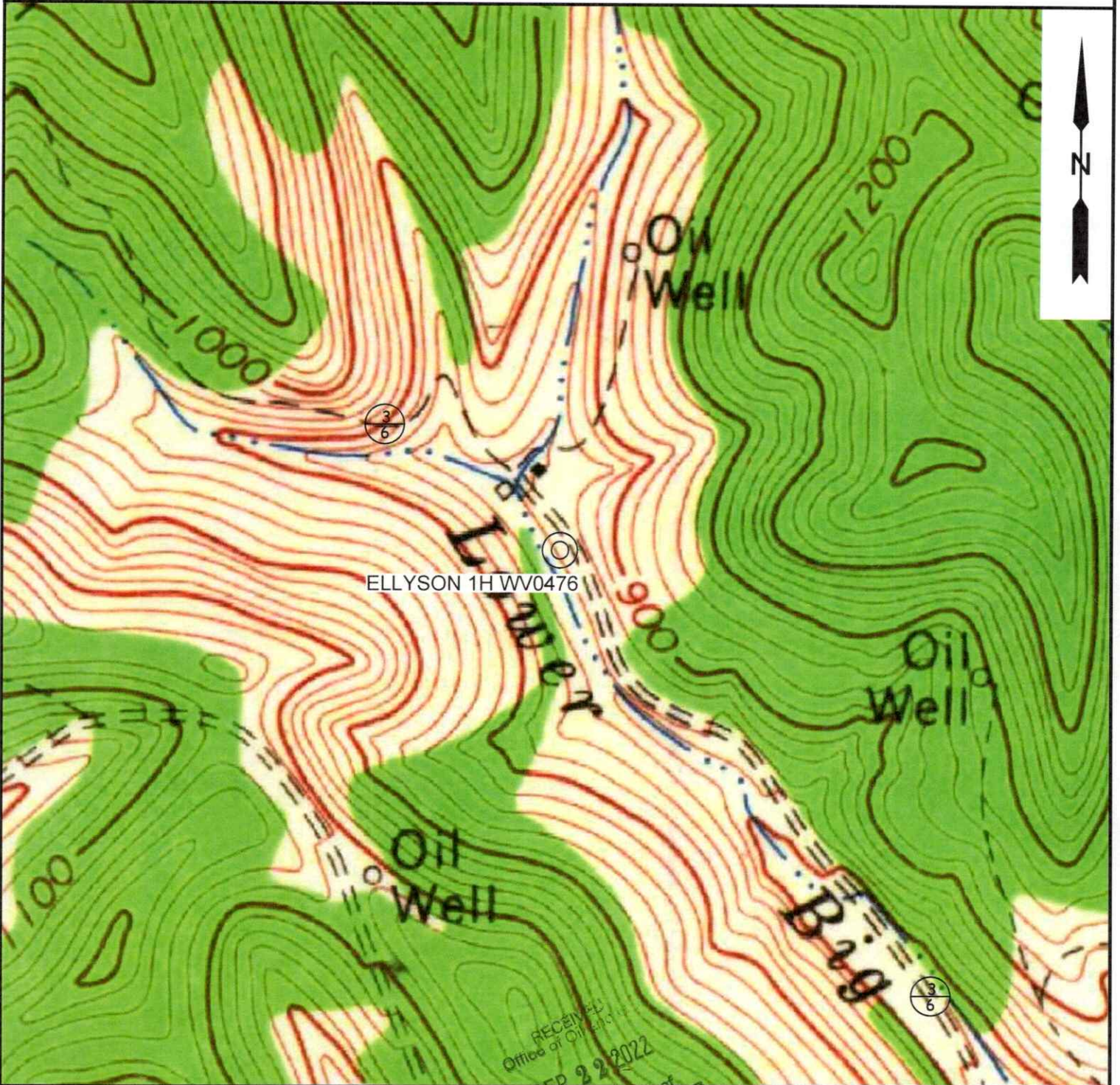
12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
 slswv.com

TOPO SECTION:		OPERATOR:	
TANNER 7.5'		PREPARED FOR: MOUNTAIN V OIL & GAS, INC. P.O. BOX 470 BRIDGEPORT, WV 26330	
COUNTY	DISTRICT	DATE	SCALE
GILMER	DEKALB	09-15-2022	1" = 2000'
DRAWN BY	JOB NO.		
C.P.M.	9245		





10/21/2022

PROPOSED ELLYSON 1H WV0476 COAL MAP

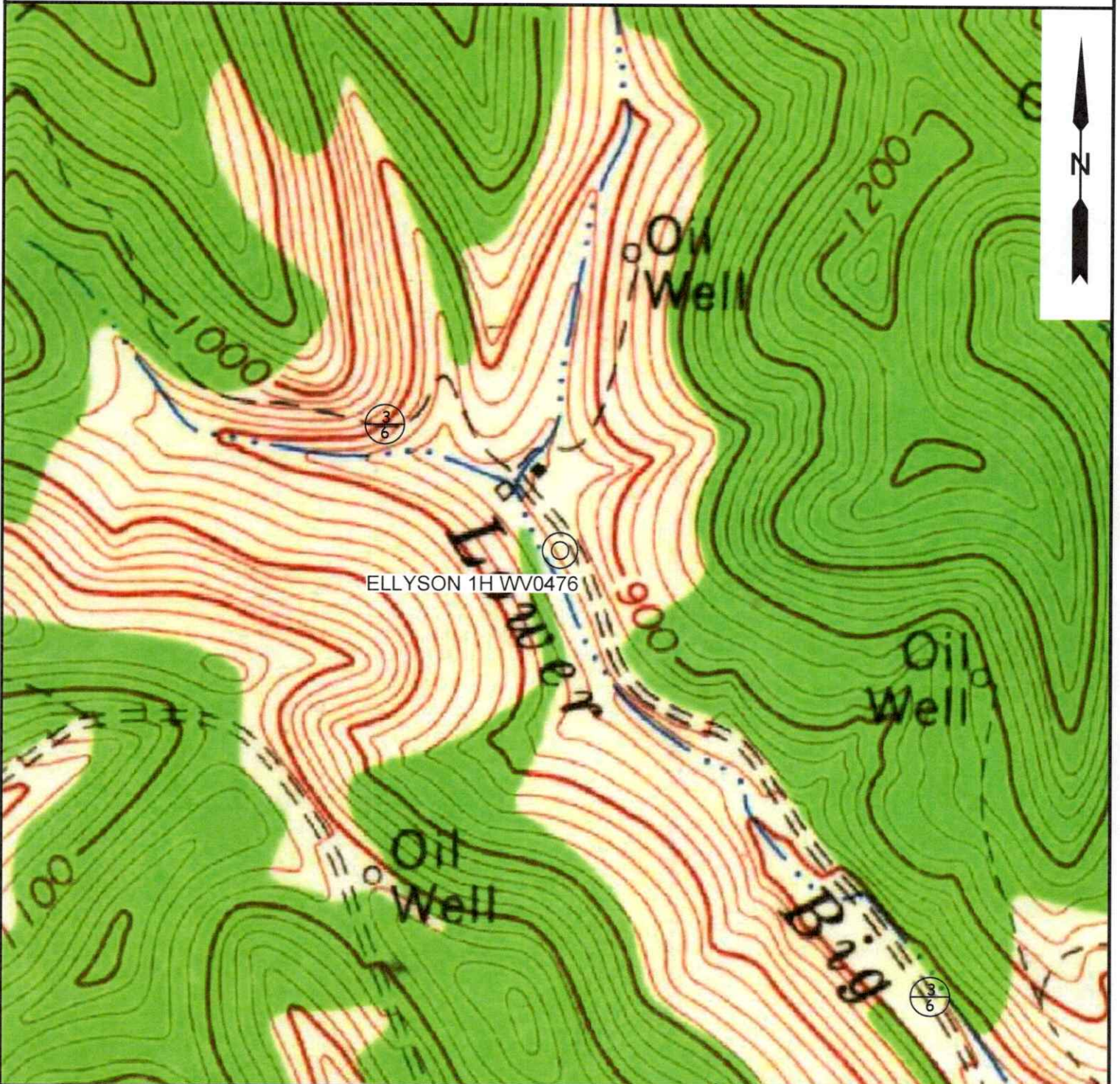


THIS SITE IS NOT LOCATED WITHIN ANY ACTIVE COAL MINING AREA.





 <p>12 Vanhorn Drive P.O. Box 150 Glenville, WV 26351 304.462.5634 1412 Kanawha Boulevard, East Charleston, WV 25301 304.346.3952 254 East Beckley Bypass Beckley, WV 25801 304.255.5296 slswv.com</p>	TOPO SECTION:		OPERATOR:	
	TANNER 7.5'		PREPARED FOR:	
	COUNTY	DISTRICT	MOUNTAIN V OIL & GAS, INC. P.O. BOX 470 BRIDGEPORT, WV 26330	
	GILMER	DEKALB		
DRAWN BY	JOB NO.	DATE	SCALE	 <p>10/21/2022</p>
C.P.M.	9245	09-15-2022	1" - 500'	

PROPOSED ELLYSON 1H WV0476 FLOOD MAP



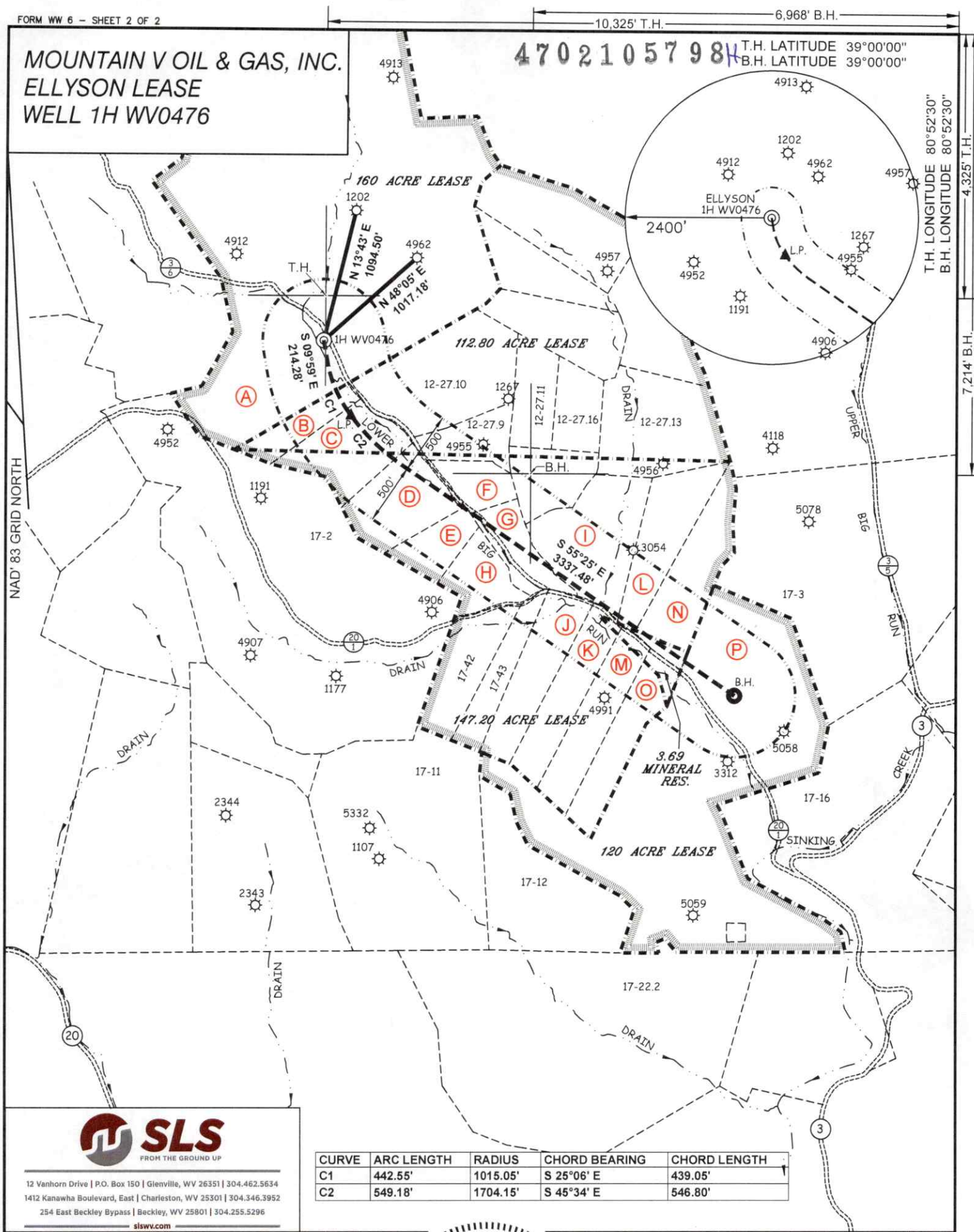
**THIS SITE IS NOT LOCATED WITHIN ANY KNOWN
FLOOD HAZARD ZONE PER FIRM MAP 5402C0135C.**



 <p>SLS FROM THE GROUND UP</p> <p>12 Vanhorn Drive P.O. Box 150 Glenville, WV 26351 304.462.5634 1412 Kanawha Boulevard, East Charleston, WV 25301 304.346.3952 254 East Beckley Bypass Beckley, WV 25801 304.255.5296 sllswv.com</p>	TOPO SECTION: TANNER 7.5'		OPERATOR: PREPARED FOR: WV Department of Environmental Protection MOUNTAIN V OIL & GAS, INC. P.O. BOX 470 BRIDGEPORT, WV 26330		 <p>MOUNTAIN V OIL & GAS, INC.</p> <p>10/21/2022</p>		
	COUNTY	DISTRICT	DRAWN BY	JOB NO.		DATE	SCALE
	GILMER	DEKALB	C.P.M.	9245		09-15-2022	1" = 500'

**MOUNTAIN V OIL & GAS, INC.
ELLYSON LEASE
WELL 1H WV0476**

4702105798H T.H. LATITUDE 39°00'00"
B.H. LATITUDE 39°00'00"



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CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	442.55'	1015.05'	S 25°06' E	439.05'
C2	549.18'	1704.15'	S 45°34' E	546.80'

(S.P.C. SOUTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'83 S.P.C.(FT) N. 723,996.1 E. 1,993,707.2
 NAD'83 GEO. LAT-(N) 38.988128 LONG-(W) 80.911324
 NAD'83 UTM (M) N. 4,315,462.8 E. 507,679.9
LANDING POINT
 NAD'83 S.P.C.(FT) N. 723,387.5 E. 1,993,930.6
 NAD'83 GEO. LAT-(N) 38.986456 LONG-(W) 80.910540
 NAD'83 UTM (M) N. 4,315,277.4 E. 507,748.0
BOTTOM HOLE
 NAD'83 S.P.C.(FT) N. 721,110.3 E. 1,997,068.8
 NAD'83 GEO. LAT-(N) 38.980195 LONG-(W) 80.899509
 NAD'83 UTM (M) N. 4,314,583.6 E. 508,704.1



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

P.S. 677 *Gregory A. Smith*

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- TAX MAP-PARCEL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE WW-6A1)

SCALE 1" = 1000' FILE NO. 9245-MTV-SURV-PLAT-R01-220916-CPM.dwg

DATE SEPTEMBER 16, 20 22
 REVISED _____, 20 ____
 OPERATORS WELL NO. 1H WV0476
 API WELL NO. 47 — 021 — 0579814
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS



WELL OPERATOR MOUNTAIN V OIL AND GAS INC.
 ADDRESS P.O. BOX 470
 BRIDGEPORT, WV 26330

DESIGNATED AGENT MIKE SHAVER
 ADDRESS P.O. BOX 470
 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

10/21/2022

**MOUNTAIN V OIL & GAS, INC.
ELLYSON LEASE
WELL 1H WV0476**

4702105798H

T.H. LATITUDE 39°00'00"
B.H. LATITUDE 39°00'00"

(S.P.C. SOUTH ZONE) (UTM(M) ZONE 17 NORTH)
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 NAD'83 GEO. LAT-(N) 38.980195 LONG-(W) 80.899509
 NAD'83 UTM (M) N. 4,314,583.6 E. 508,704.1

T.H. LONGITUDE 80°52'30"
B.H. LONGITUDE 80°52'30"

4,325' T.H.

7,214' B.H.

T.H.

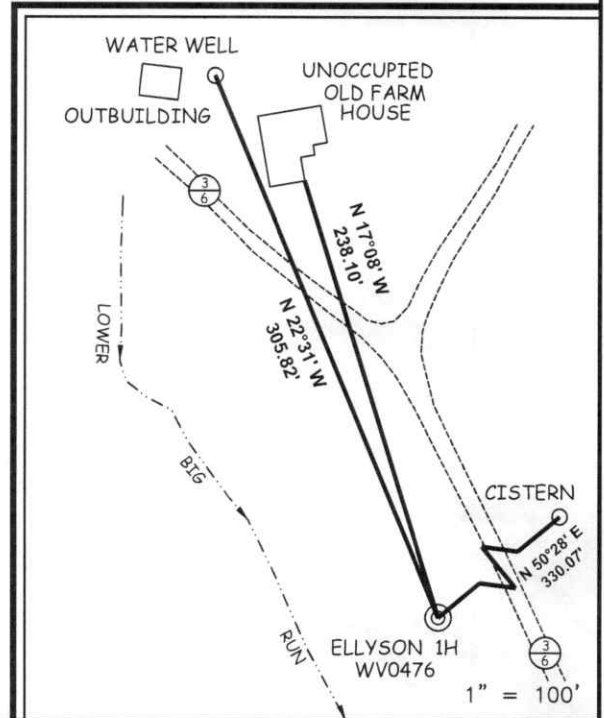
B.H.

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TAG	SURFACE OWNER	PARCEL	ACRES
A	S & R GAS VENTURES LTD ET AL	12-21	160
B	EUGENE & JUDITH SNYDER	12-27.3	5.10
C	DENNIS & LUCY PARTON	12-27.4	10.02
D	DENNIS & LUCY PARTON	12-27.5	10.89
E	DENNIS & LUCY PARTON	12-27.1	5.02
F	ALAN SMITH	12-27.8	4.45
G	ANNALEA GREENLIEF	12-27.7	6.58
H	ANNALEA GREENLIEF	12-27.6	6.27
I	LEONARD PERSINGER ET AL	12-27.2	15.61
J	ROBERT WOODFORD II	17-44	10.79
K	LEONARD PERSINGER ET AL	17-47	10.05
L	LEONARD PERSINGER ET AL	12-27.15	11.85
M	BRYANT SCHOOLCRAFT	17-46	10.10
N	LEONARD PERSINGER ET AL	12-27.14	12.89
O	ARTHUR HEYMAN	17-45	10.23
P	ROBERT CAYTON ET AL	17-13	91.38

PARCEL	SURFACE ADJOINER	ACRES
12-27.10	ARTHUR HEYMAN	20.14
12-27.9	EMMETT ESTEP	6.87
12-27.11	EMMETT ESTEP	9.13
12-27.16	BRYANT SCHOOLCRAFT	7.69
12-27.13	LEONARD PERSINGER ET AL	19.61
17-3	ROBERT CAYTON ET AL	119.4
17-16	ROBERT CAYTON ET AL	32.47
17-22.2	AKINS FAMILY TRUST	84.75
17-12	FRANK & CARRIE FLOYD	22.00
17-43	THOMAS CONLEY ET AL	6.33
17-42	ANNALEA GREENLIEF	9.46
17-11	FRANK & CARRIE FLOYD	54.75
17-2	BRIAN LANG ET AL	94.08

REFERENCES



NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL ELLYSON 1H WV0476.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'



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 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
 slswv.com

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 DIVISION OF ENVIRONMENTAL PROTECTION.



P.S. 677 *Gregory A. Smith*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 DATE SEPTEMBER 16, 20 22
 REVISED _____, 20 _____
 OPERATORS WELL NO. ELLYSON 1H WV0476
 API WELL NO. 47 — 021 — 05798H
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9245-MTV-SURV-PLAT-R01-220916-CPM.dwg
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY: DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION GROUND = 827.80' PROPOSED = 833.00' WATERSHED LOWER BIG RUN
 DISTRICT DEKALB COUNTY GILMER QUADRANGLE TANNER 7.5'

SURFACE OWNER S & R GAS VENTURES LTD ET AL ACREAGE 160.00±
 ROYALTY OWNER AVON ELLYSON ET AL ACREAGE 160.00±

PROPOSED WORK: LEASE NO. SEE WW-6A1

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION WEIR
 ESTIMATED DEPTH TVD: 2,000' / TMD: 6,138'

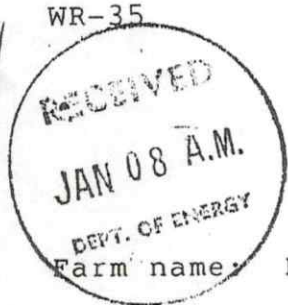
WELL OPERATOR MOUNTAIN V OIL AND GAS INC. DESIGNATED AGENT MIKE SHAVER
 ADDRESS P.O. BOX 470 ADDRESS P.O. BOX 470
BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

10/21/2022

OFFSET WELL

4702105798



API # 47- 21-04962

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Reviewed TM6
Recorded _____

Well Operator's Report of Well Work

Farm name: ELLYSON, DOYLE ETAL. Operator Well No.: ELLYSON#3A-W640

LOCATION: Elevation: 1080.00 Quadrangle: TANNER

District: DEKALB County: GILMER
Latitude: 3710 Feet South of 39 Deg. 0 Min. 0 Sec.
Longitude 9680 Feet West of 80 Deg. 52 Min. 30 Sec.

Company: WACO OIL & GAS CO., INC.
1297 N. LEWIS ST.
GLENVILLE, WV 26351-0000

Agent: STEPHEN E. HOLLOWAY

Inspector: CRAIG DUCKWORTH
Permit Issued: 06/21/91
Well work Commenced: 07/24/91
Well work Completed: 07/29/91
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 6338'
Fresh water depths (ft) _____
112'
Salt water depths (ft) _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8"	1127	01127	C.T.S.
4-1/2"			670 Skts.

Is coal being mined in area (Y/N)? X
Coal Depths (ft): None

OPEN FLOW DATA

Producing formation Shale, Alexander, Benson Pay zone depth (ft) see treatment
 Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
 Final open flow 1958 MCF/d Final open flow SHOW Bbl/d
 Time of open flow between initial and final tests 4 Hours
 Static rock Pressure 1530 psig (surface pressure) after 48 Hours

Second producing formation Riley, Balltown, Speechly Pay zone depth (ft) see treatment
 Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
 Final open flow 1958 MCF/d Final open flow SHOW Bbl/d
 Time of open flow between initial and final tests 4 Hours
 Static rock Pressure 1530 psig (surface pressure) after 48 Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLS.

For: WACO OIL & GAS CO., INC.
By: Daniel R. Chapman, Geologist
Date: October 24, 1991

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Oil and Gas Section

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DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 1st stage: Devonian Shale (6222-5712) 1000 gal 15% HCL, 40 ton CO₂, 561 MCF N₂
- 2nd stage: Alexander; Benson, Riley (4931-4497) 715 gal 15% HCL, 40 ton CO₂
922 MCF N₂
- 3rd stage: Riley, Balltown (4297-3618) 675 gal 15% HCL, 40 ton CO₂, 921 MCF N₂
- 4th stage: Balltown, Speechly (3540-3175) 675 gal 15% HCL, 40 ton CO₂, 738 MCF N₂

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand, Shale			0	93	
Sand, Shale, Red Rock			93	887	1/4" Stream @ 112'
Sand, Shale			887	1784	
Little Lime			1784	1803	
Blue Monday			1803	1833	
Big Lime			1833	1880	
Big Injun			1880	1980	
Sand, Shale			1980	3161	
Speechly Section			3161	3466	
Shale			3466	3537	
Balltown Section			3537	4124	
Riley Section			4124	4587	
Shale			4587	4650	
Benson			4650	4655	
Shale			4655	4861	
Alexander			4861	4940	
Shale			4940	5086	
Elk Section			5086	5304	
Shlae			5304	6338	T. D.

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WV Department of Environmental Protection
47-21-04912

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State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: ELLYSON, DOYLE, ETAL Operator Well No.: ELLYSON 1A 619

LOCATION: Elevation: 1026.00 Quadrangle: TANNER

District: DEKALB County: GILMER
Latitude: 3680 Feet South of 39 Deg. 0 Min. 0 Sec.
Longitude 11220 Feet West of 80 Deg. 52 Min. 30 Sec.

Company: WACO OIL & GAS CO., INC.
1297 N. LEWIS ST.
GLENVILLE, WV 26351-0000

Agent: STEPHEN E. HOLLOWAY

Inspector: CRAIG DUCKWORTH
Permit Issued: 11/07/90
Well work Commenced: 11/27/90
Well work Completed: 12/02/90
Verbal Plugging
Permission granted on: _____
Rotary x Cable _____ Rig
Total Depth (feet) 6210
Fresh water depths (ft) _____
97'
Salt water depths (ft) _____
None
Is coal being mined in area (Y/N)? N
Coal Depths (ft): None

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
8-5/8"	1067	1067	C. T. S.
4-1/2"		6128	640 Sk.

OPEN FLOW DATA

Producing formation Shale, Elk, Alexander, Benson Pay zone depth (ft) sec treatment

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow 1858 MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests 4 Hours
 Static rock Pressure 1560 psig (surface pressure) after 48 Hours

Second producing formation Riley, Balltown Pay zone depth (ft) sec treatment

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: WACO OIL & GAS CO., INC.

By: Danile R. Chapman, Geologist
Date: January 15, 1991

GIL 4912

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 1st. stage: Devonian Shale (6097-5314) 1000 gal 15% HCL, 40 ton CO₂, 857 McF N₂
- 2nd. stage: Elk, Alexander, Benson, Riley (4927-4435) 750 gal 15% HCL, 40 ton CO₂, 1052 McF N₂
- 3rd. stage: Riely, Balltown (4188-3608) 750 gal 15% HCL, 40 ton CO₂, 1090 McF N₂

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand, Shale			0	283	1" stream @ 97'
Sand, Shale, Red Rock			283	875	
Sand, Shale			875	1659	
Little Lime			1659	1676	
Blue Monday			1676	1701	
Big Lime			1701	1750	
Big Injun			1750	1852	
Sand, Shale			1852	3033	
Speechly Section			3033	3339	
Shale			3339	3410	
Balltown Section			3410	4009	
Riley Section			4009	4470	
Shale			4470	4520	
Benson			4520	4525	
Shale			4525	4727	
Alexander			4727	4808	
Shale			4808	4926	
Elk Section			4926	5236	
Shale			5236	6210	T. D.

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Formation	Color	Hard or Soft	Top 7	Bottom	Oil, Gas or Water	Depth Found	Remarks
Injun Sand			1755	1794			
Slate & Shells			1794	1940			
Weir Sand			1940	1975			
Shale & Lime			1975	2001	Oil	1954	Show
Slate			2001	2034	Oil & Gas	1965-1985	"
		TOTAL DEPTH		2034			

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Date November 10, 1960

APPROVED Superior Oil and Gas, Inc., Owner

By *[Signature]* (Title) President

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OFFSET WELL

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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

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DEC 5 1960

C. E. M.

Quadrangle Glenville

Permit No. GIL-1202

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Superior Oil and Gas, Inc.
 Address Jane Lew, W. Va.
 Farm Jacie Goff Acres 160
 Location (waters) Lower Big Run of Sinking Creek
 Well No. 3, Lease No. 131 Elev. 964'
 District DeKalb County Gilmer
 The surface of tract is owned in fee by Jacie Goff
 Address Glenville, W. Va.
 Mineral rights are owned by Zack Ellyson Heirs
 Address _____
 Drilling commenced September 30, 1960
 Drilling completed October 29, 1960
 Date Shot 11-4-60 From 1774' To 1795'
 With Riverfrac

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16 Conductor	10'	10'	Kind of Packer
13			
10	203'		Size of
8 1/4	873'		
6 3/8			Depth set
5 3/16	2,050'	2,050'	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Open Flow 10ths Water in _____ Inch
30 /10ths Merc. in _____ 2 Inch
 Volume 852,000 Cu. Ft.
 Rock Pressure 450 lbs. 14 hrs.
 Oil Undetermined bbls., 1st 24 hrs.
 Fresh water 170 feet 340 feet
 Salt water _____ feet _____ feet

CASING CEMENTED 5 1/2" SIZE 2050' No. Ft. 10-31-60 Date
80 Bags Cement and Aquagel to surface
Garaton Service
 COAL WAS ENCOUNTERED AT 620 FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Clay			0	10			
Red Rock			10	40			
Slate			40	100			
Red Rock			100	165			
Slate & Lime			165	300			
Red Rock			300	310			
Slate & Lime			310	340			
Sand			340	385			
Red Rock			385	565			
Slate & Shells			565	620			
Coal			620	623			
Slate & Shells			623	640			
Sand			640	690			
Black Slate & Sand			690	715			
Sand			715	731			
Slate & Shells			731	815			
Sand			815	842			
Slate & Shells			842	860			
Sand			860	875			
Slate & Lime			875	935			
Sand			935	1070			
B. Slate & Shells			1070	1150			
Sand			1150	1185			
Slate & Shells			1185	1210			
Gritty Lime			1210	1230			
Black Slate			1230	1275			
Sand			1275	1345			
Slate & Lime			1345	1360			
Sand			1360	1425	Gas	1390	Show
Slate & Shells			1425	1485			
Red Rock & Shells			1485	1550			
Slate & Shells			1550	1565			
Red Rock			1565	1575			
Slate			1575	1598			
Lime (Little)			1598	1630			
Maxon Sand			1630	1645	Gas	1757-1786	50,000 Cu.Ft.
Big Lime			1645	1725			
Keener Sand			1725	1755			

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 STATE OF WEST VIRGINIA

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Kennedy, James P <james.p.kennedy@wv.gov>

New Drill issued 4702105798

1 message

Kennedy, James P <james.p.kennedy@wv.gov>

Fri, Oct 21, 2022 at 3:33 PM

To: smshaver@earthlink.net, Jeffrey W McLaughlin <jeffrey.w.mclaughlin@wv.gov>, Melissa Jedamski <mjedamski@wvassessor.com>, Douglas C Newlon <Douglas.C.Newlon@wv.gov>

To whom it may concern, A new drill permit has been issued for 4702105798.

James Kennedy

WVDEP OOG

 **Ellyson1H.pdf**
9385K

10/21/2022