COYOTE BIG ROSE COLONY 1-34

25-101-24287

TOOLE COUNTY, MONTANA

DOCKET NUMBER:_____

UNDERGROUND INJECTION CONTROL APPLICATION - CLASS II

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Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

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TBD Field

Introduction

The Proposed Class II injection well will be injecting CO_2, H_2S, Nitrogen, and other gases/fluids into the Middle Duperow 2nd Lobe Reservoir. (as seen on the Type Log Below). This report and data support the Coyote Resources Class II UIC application for the Coyote Big Rose Colony 1-34 well for the purposes of injection of produced natural gas fluids into the Middle Duperow 2nd Lobe within the XXXX Field, as required by Rule 36.22.1403 of the Rules and Regulations of the Montana Board of Oil and Gas Conservation.

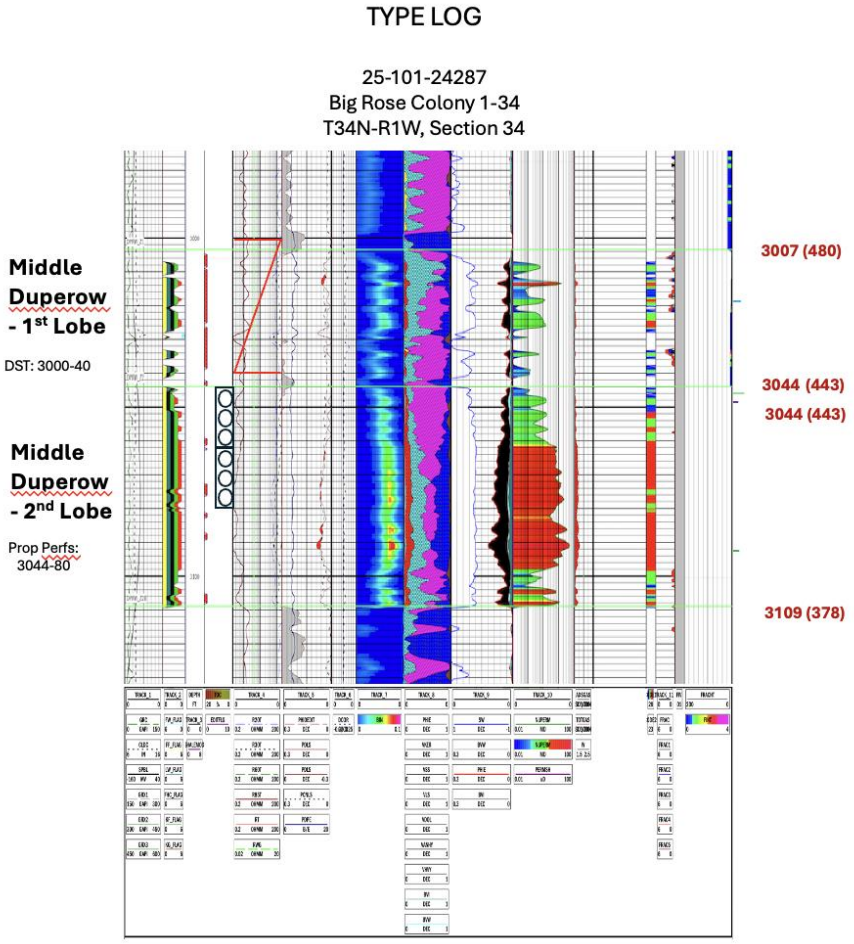

Figure 1: Type Log

1(a) Well Location

The Big Rose Colony 1-34 was drilled to 4650’, cased to 4643’ and tested the CO_2 gas zone of the Middle Duperow 2nd Lobe and is proposed to be converted to an injection well for produced oil and gas waste within the XXXX Field in Toole County, MT Section 34 of T34N - R1W as described below. Attachment 1 illustrates the surface location and a ¼ mile radius representing the Area Of Review (“AOR”) for this well.

1(b) Wells Located within the ¼ mile AOR:

There are three wells in the AOR (Black Circle on Figure 1 below). Two shallow P&A’d wells and the Big Rose Colony 1-34 of which only the Big Rose Colony 1-34 transects the injection or confining zone. There are no wells within a 1-mile radius (Green Dashed Circle) of the Big Rose Colony 1-34 that transected the injection or confining zone. The table below lists all wells produced within ¼ mile of Section 34 and in Section 34.

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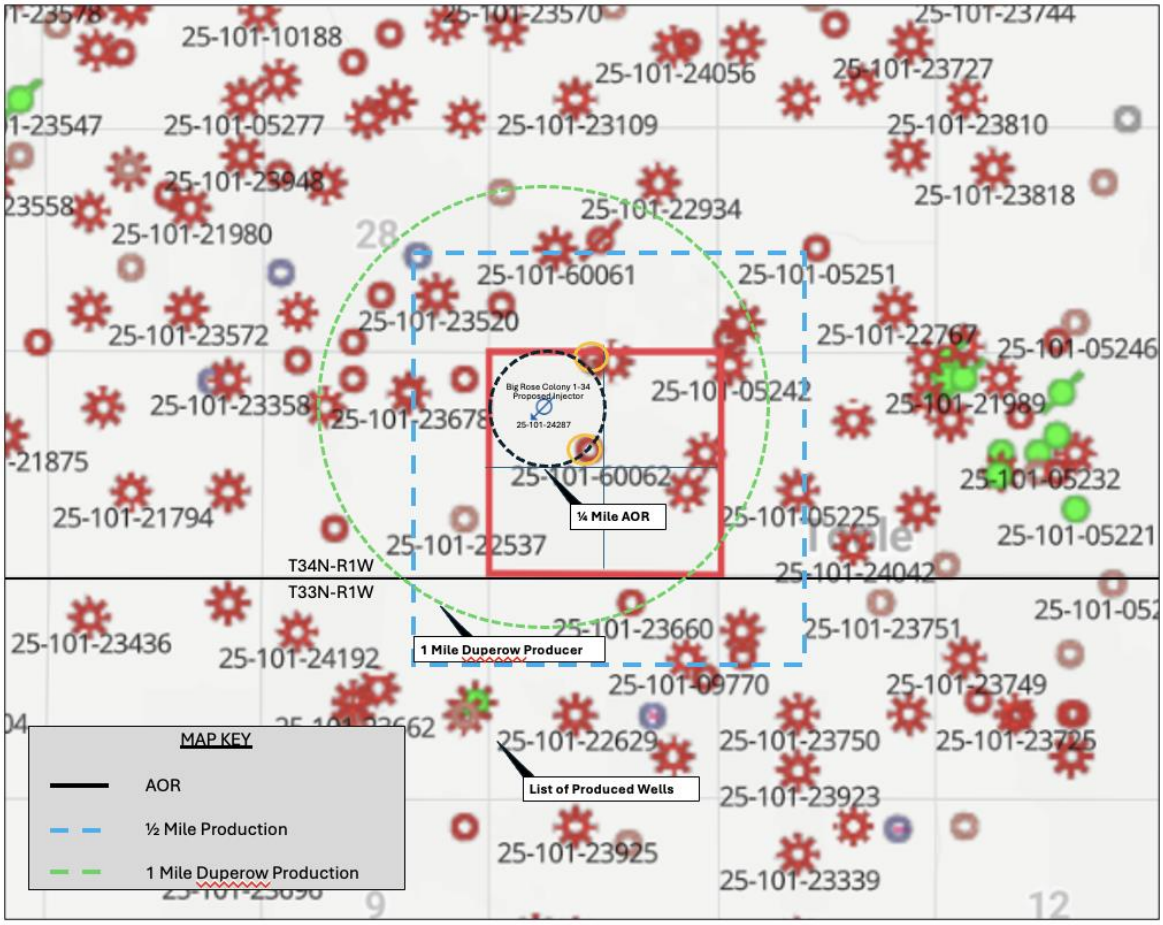

Figure 2: Base Map

Coyote Resources LLC - “WAVETECH”
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All wells within ¼ mile of Section 34 (Blue Dashed Square on Figure 1)

Township Range	Section	API	Well Name	Comp Date	Status	Formation	Interval
34N-1W	26	25-101-05251	KRUTZFELD 2	9/29/49	P&A	Sunburst	
34N-1W	26	25-101-11447	KRUTZFELD (MDU) 1	11/9/28	P&A	Sunburst	1142-70
34N-1W	26	25-101-23912	COLLIER 13-26	8/8/21	Producing	Bow Island/Sunburst	588 - 600, 1150 - 80
34N-1W	27	25-101-10536	JONES 2	7/1/29	P&A	Sunburst	1145
34N-1W	27	25-101-60061	HECTOR 1	9/30/39	Producing	Sunburst	1125
34N-1W	27	25-101-24057	CLATWORTHY 10-27		Expired Permit		
34N-1W	28	25-101-23520	JONES 28-34-1	3/27/92	Producing	Bow Island/Sunburst	1121-1300
34N-1W	28	25-101-05250	GOVT 7		UNK		
34N-1W	28	25-101-11386	T.C. JONES 1	7/15/27	P&A	Sunburst	1125-31
34N-1W	33	25-101-22537	ZIEGLER 1-33	2/15/84	P&A	Sunburst	
34N-1W	33	25-101-23678	ZIEGLER 2-33	6/10/94	Producing	Sunburst-Swift	1156-1298
34N-1W	33	25-101-05239	MUELLERQ 313	12/10/40	P&A	Sunburst	1135
34N-1W	34	25-101-05223	SEWARD (1-0751-1) 3-311	8/15/40	Producing	Sunburst	1150 - ?
34N-1W	34	25-101-05231	CLATHWORTHY (1-0745-1) 2	8/22/41	Producing	Sunburst	1148 - 55
34N-1W	34	25-101-09766	CLATHWORTHY (1-0743) 1	10/9/30	Producing	Unknown	
34N-1W	34	25-101-24287	BIG ROSE COLONY1-34			NA	
34N-1W	34	25-101-60060	HECTOR 2	8/20/27	P&A	Sunburst	1110 - 30
34N-1W	34	25-101-60062	HECTOR 3	10/20/28	P&A	Sunburst	1128 - 52
34N-1W	35	25-101-05242	JOHNSON (1-0756-1) 323	1/0/00	T&A		
34N-1W	35	25-101-05225	GRIFFIN (1-0741-1) 1	1/0/00	Producing	Stray	1295-1325
33N-1W	2	25-101-23459	ADASKOVITCH 1-2	4/10/91	Producing	Sunburst-Swift	1123-1324
33N-1W	2	25-101-10353	GRIFFIN #1	1/0/00	P&A		
33N-1W	3	25-101-23660	SEWARD 2-3	10/14/94	P&A	None	

33N-1W	3	25-101-09770	SEWARD (1-0772-1) 2	8/23/29	Producing	Sunburst	1172
33N-1W	3	25-101-10354	SEWARD 1		P&A	Sunburst	1205
33N-1W	4	25-101-24192	THOR KEVIN 04-04-33N-1W	7/3/05	P&A	None	
33N-1W	4	25-101-25893	STATE 36-1	no data	UNK		
33N-1W	4	25-101-00243	FLESCH NW NW 4-14	8/23/29	UNK		

Table 1: Wells within ¼ Mile of Section 34

1(c) Location of All Pipelines:

The proposed Wolf Helium Processing Plant will be located at a nearby location in Section TBD, T34N - R1W and connected to the proposed waste gas or Acid Gas Injection “AGI” pipeline. The pipeline will connect to Big Rose Colony 1-34 injection well and follow the route illustrated below.

Injection fluids are expected to initially come from the Keifer Farms 1-20, the proposed Road Runner 1-31, and the proposed Wile E. Coyote 1-34 wells all in T34N-R1W. Injection fluids are expected to consist of CO_2, H_2S, Nitrogen, and other gases/fluids from the Middle Duperow CO_2 reservoir.

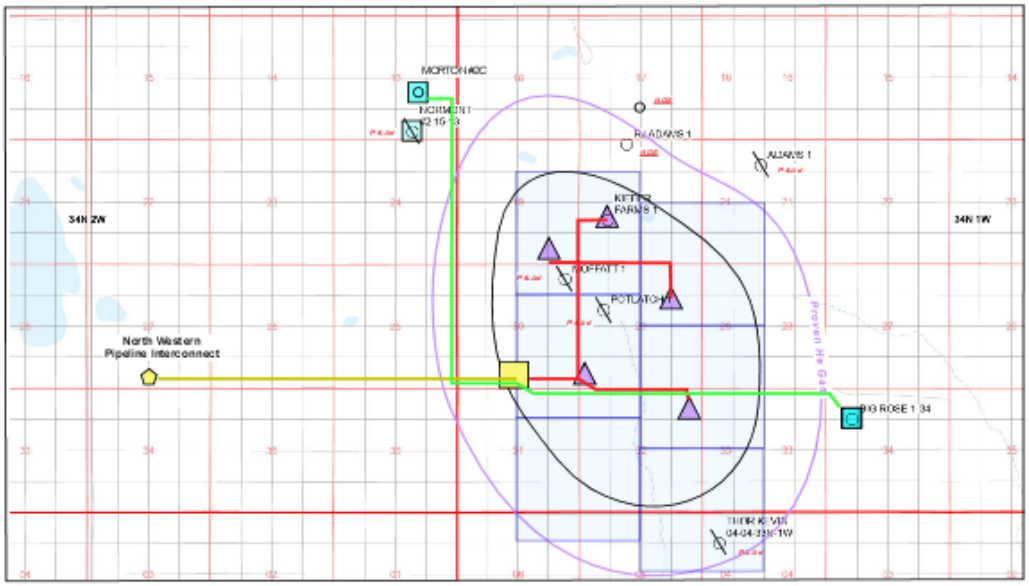


Figure 3: Pipeline and processing Plant Location Map

1(d) Area Produced and Producing Formations, USDW’s, & Water Well Information

In Section 34 and surrounding sections of T34N R1W, Toole County, Montana, the Sunburst Formation (~1150’ MD), Bow Island Formation (~575-600), Swift Formation (~1200’), Swift-Stray Formation (~1295’) are the only oil or gas producing intervals (please refer to the Table 2 and Table 3 below and the Red Square outlined on Figure 1 above). The proposed Middle Duperow 2nd Member injection zone is 3044’ MD (440’ SS) through 3109’ MD (375’ SS).

Producing or Produced Wells in Section 34

Township - Range	Sec	API	Well Name	Comp Date	Logs	Status	TD	MD	Prod Interval
34N-1W	34	25-101-05223	SEWARD (1-0751-1) 3-311	8/15/40	NO	Producing	1250	Sunburst	1150 - ?
34N-1W	34	25-101-05231	CLATHWORTHY (1-0745-1) 2	8/22/41	NO	Producing		Sunburst	1148 - 55
34N-1W	34	25-101-09766	CLATHWORTHY (1-0743) 1	10/9/30	NO	Producing	1300	Unknown	
34N-1W	34	25-101-24287	BIG ROSE 1-34	Proposed	YES			NA	
34N-1W	34	25-101-60060	HECTOR 2	8/20/27	NO	P&A	1168	Sunburst	1110 - 30
34N-1W	34	25-101-60062	HECTOR 3	10/20/28	NO	P&A	1403	Sunburst	1128 - 52

Table 2: Section 34 – All Wells

Two Produced Wells within the ¼ Mile AOR of Sec 34 (Black Circle)*

Township/Range	Section	API 25-101-	Well Name	Comp Date	P&A Date	Produced Depth	TD
34N - 1W	34	60060	HECTOR 2	8-20-1927	9-6-2011	1110-11130	1168
34N - 1W	34	60062	HECTOR 3	10-20-1928	12-26-2012	1128-1132	1403

*State Well files for plugging verification are in Attachment 2. These two wells have no well logs.

Table 3: AOR Produced Wells

Fresh Water Well Information

Fresh water well data was obtained from the Montana Department of Natural Resources and Conservation, Water Resources Division.

There is one fresh water well located within the ¼ mile AOR of the proposed injection site, the Hector well is producing water from a shallower zone. Attachment 4 lists the Hector’s location details within the AOR. The deepest USDW within the AOR is the XXX formation, located between xxx – xxxx. Attachment 3 Annotate.

Any potential USDWs are protected by two strings of casing: 9 5/8” surface casing set at 1,430’ MD to protect USDWs and cemented in two stages with 516 sacks of ASTM Type III cement, and 7” production casing was run to 4,643’ MD and cemented in two stages with 638 sacks of ASTM Type III cement.

1(e) Name and Geological Description of Injection Zone

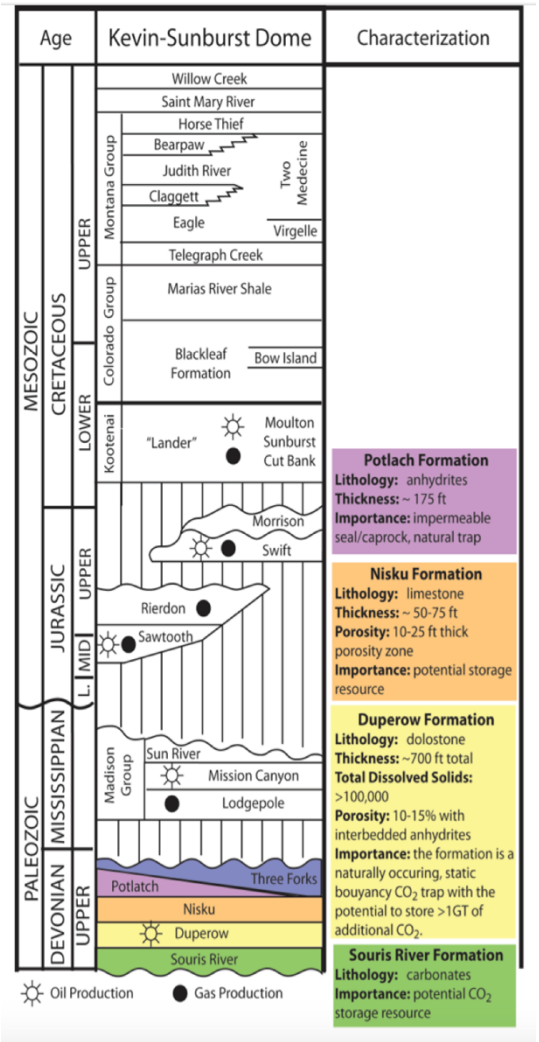
Injection Zone Formation

Middle Duperow 2nd Lobe injection zone is encountered in the subject well as follows:

Top:	3044’ MD, (440’ SS)
Base:	3109’, (375’ SS)
Gross Interval:	65’
Logs:	Big Rose Colony 1-34 injection petrophysics injection interval analysis is below

Structural Position and Caprock[1]:
The Kevin Dome structure is located in the Sweetgrass Arch region in north-central Montana and covers more than 750 square miles. The Middle Duperow Formation and gas reservoir covers 150 square miles and is filled with CO_2, Hydrocarbons, Nitrogen, Helium and H_2S natural gases. A brine aquifer exists at the lowest level of Middle Duperow gas reservoir and the brine aquifer extends beyond the limits of the Kevin Dome complex. The proposed AGI well does not have any producible formation water.

Relevant caprocks present include the Potlach Anhydrite over the Nisku, and a layer of tight carbonates with interbedded evaporites that comprise the Upper Duperow section which seals the Middle Duperow injection zone. As seen in the Kiefer Farms 1-20 well (as provided to the MDOGC), the Potlach thickness is 160 feet, and the Upper Duperow thickness is 253 feet. Thus, making the Middle Duperow a suitable contained oil and gas waste fluid injection zone.



[1] https://netl.doe.gov/coal/carbon-storage/atlas/bscsp/phase-III/kevin-dome#geoDetails

Middle Duperow rock properties:
The Middle Duperow is a heterogeneous carbonate reservoir. Core analysis and petrophysics shows changes in porosity and permeability at the < 1ft scale that are interpreted to reflect a combination of processes including high-order cyclicity and diagenesis. These small-scale changes may greatly impact fluid flow.

The most common types of porosity present in Middle Duperow core samples are moldic and intergranular/intercrystalline. Fracture porosity is most conducive to higher permeabilities.[2]

Petrophysics:

Petrophysical analysis was performed on the Big Rose Colony1-34 well by NuTech[3].
The Average Porosity through the interval is 14.3% and the average permeability through the section is 89 MD. The detailed petrophysical analysis of the Middle Duperow 2nd Member Section is as follows:

[2] https://netl.doe.gov/sites/default/files/event-proceedings/2015/carbon%20storage/proceedings/Fairweather-poster.pdf
[3] https://www.nutechenergy.com/

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Petrophysical Log – Injection Zone Perforations: 3044-3096

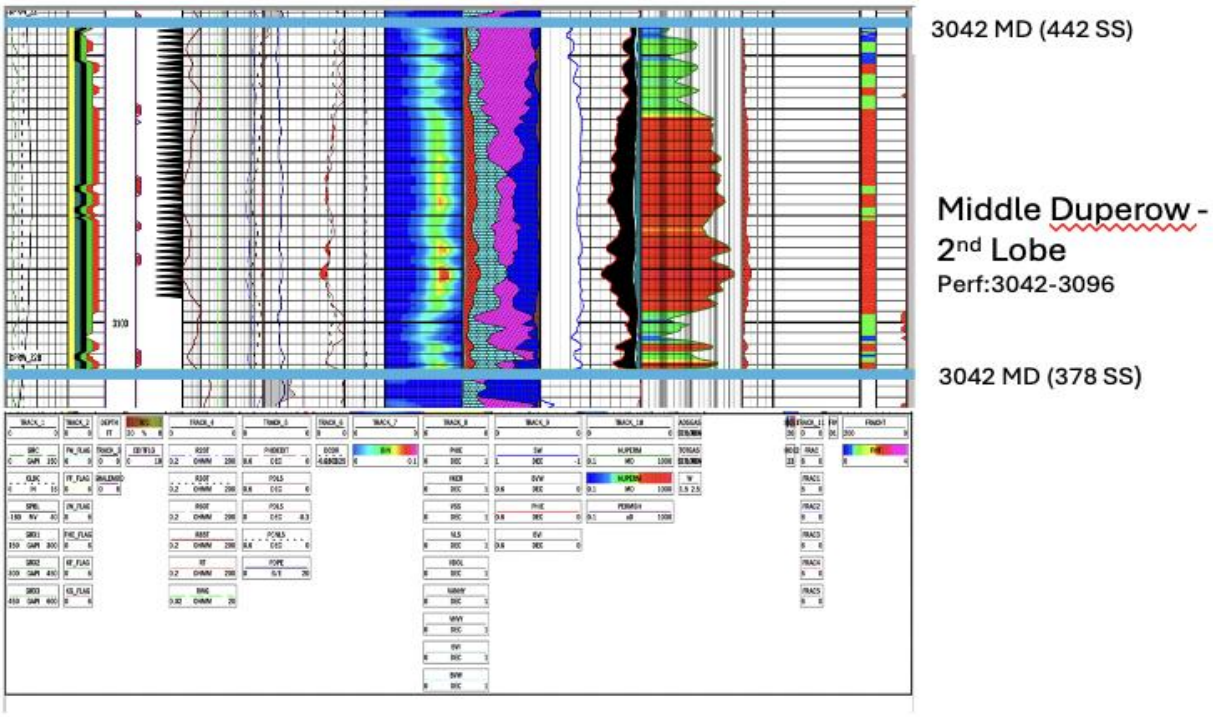

Figure 4: Big Rose Colony 1-34 Petrophysical Log

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Petrophysical Data (1’ Intervals)

DPRW_Z2		:	3044	to	3109							
Discriminator		:	PAYFT									
DEPTH	PAYFT	RANK	CLAY	PHIE	SW	NUPERM	BVtot	BVhyd	BVwtr	BVbnd	BVfree	HydPorFT	NUPERMFT
[FT]			[DEC]	[DEC]	[DEC]	[MD]	[DEC]	[DEC]	[DEC]	[DEC]	[DEC]	[Por-FT]	[MD-FT]
3045	1	3	0.00	0.048	0.45	0.3070	0.048	0.026	0.022	0.012	0.010	0.026	0.3070
3046	1	3	0.00	0.062	0.39	1.0780	0.062	0.037	0.024	0.014	0.010	0.063	1.3850
3047	1	3	0.00	0.084	0.39	4.8817	0.084	0.052	0.033	0.018	0.015	0.115	6.2667
3048	1	2	0.01	0.112	0.33	16.9533	0.112	0.075	0.037	0.022	0.015	0.190	23.2200
3049	1	2	0.05	0.105	0.35	10.7392	0.105	0.069	0.036	0.023	0.013	0.259	33.9591
3050	1	3	0.06	0.071	0.45	1.5717	0.071	0.039	0.032	0.018	0.014	0.298	35.5308
3051	1	3	0.03	0.084	0.35	3.9785	0.084	0.054	0.030	0.019	0.011	0.352	39.5094
3052	1	1	0.03	0.115	0.26	17.8833	0.115	0.085	0.029	0.023	0.006	0.437	57.3927
3053	1	1	0.06	0.109	0.28	11.8547	0.109	0.078	0.031	0.024	0.007	0.515	69.2474
3054	1	2	0.08	0.093	0.32	5.0443	0.093	0.063	0.030	0.022	0.008	0.578	74.2917
3055	1	2	0.07	0.077	0.34	2.2298	0.077	0.051	0.026	0.019	0.007	0.629	76.5215
3056	1	1	0.05	0.104	0.22	10.4578	0.104	0.081	0.022	0.022	0.000	0.710	86.9794
3057	1	1	0.01	0.106	0.19	14.8029	0.106	0.085	0.021	0.021	0.000	0.796	101.7823
3058	1	2	0.00	0.076	0.27	2.9658	0.076	0.055	0.021	0.016	0.004	0.851	104.7480
3059	1	2	0.01	0.089	0.24	5.8028	0.089	0.068	0.021	0.019	0.002	0.918	110.5508
3060	1	1	0.02	0.106	0.21	12.7216	0.106	0.083	0.023	0.022	0.001	1.002	123.2724
3061	1	1	0.02	0.121	0.20	23.9902	0.121	0.097	0.024	0.024	0.000	1.099	147.2626
3062	1	1	0.02	0.148	0.17	77.2327	0.148	0.123	0.025	0.025	0.000	1.221	224.4954
3063	1	1	0.04	0.145	0.16	77.7186	0.145	0.121	0.024	0.024	0.000	1.343	302.2141
3064	1	1	0.05	0.140	0.17	59.7047	0.140	0.116	0.024	0.024	0.000	1.459	361.9187
3065	1	1	0.04	0.149	0.18	67.4047	0.149	0.122	0.027	0.027	0.000	1.580	429.3234
3066	1	1	0.02	0.157	0.19	74.6120	0.157	0.127	0.030	0.030	0.000	1.707	503.9354
3067	1	1	0.01	0.150	0.21	66.1147	0.150	0.119	0.031	0.028	0.003	1.826	570.0500
3068	1	1	0.01	0.149	0.21	65.1927	0.149	0.119	0.031	0.028	0.003	1.945	635.2428
3069	1	1	0.00	0.176	0.18	138.4203	0.176	0.144	0.032	0.031	0.000	2.089	773.6631
3070	1	1	0.01	0.170	0.19	114.2392	0.170	0.138	0.032	0.031	0.001	2.227	887.9023
3071	1	1	0.03	0.150	0.22	58.4470	0.150	0.117	0.033	0.029	0.004	2.344	946.3494
3072	1	1	0.04	0.172	0.21	101.7762	0.172	0.136	0.035	0.033	0.002	2.480	1048.1256
3073	1	1	0.03	0.180	0.21	130.8625	0.180	0.142	0.038	0.034	0.004	2.622	1178.9882
3074	1	1	0.03	0.176	0.23	117.7702	0.176	0.135	0.041	0.033	0.007	2.757	1296.7584
3075	1	2	0.02	0.162	0.27	86.1269	0.162	0.119	0.043	0.031	0.013	2.876	1382.8854
3076	1	1	0.03	0.177	0.24	121.1855	0.177	0.134	0.043	0.034	0.010	3.010	1504.0709
3077	1	1	0.03	0.200	0.22	210.0805	0.200	0.156	0.044	0.037	0.007	3.166	1714.1514
3078	1	1	0.02	0.189	0.23	174.5999	0.189	0.144	0.044	0.034	0.010	3.310	1888.7512
3079	1	2	0.03	0.161	0.27	81.5122	0.161	0.118	0.043	0.031	0.012	3.428	1970.2634
3080	1	1	0.03	0.153	0.26	64.3391	0.153	0.114	0.040	0.030	0.010	3.542	2034.6025
3081	1	1	0.02	0.141	0.26	47.7451	0.141	0.105	0.036	0.027	0.009	3.646	2082.3477
3082	1	1	0.02	0.127	0.25	30.1610	0.127	0.095	0.032	0.025	0.007	3.741	2112.5088
3083	1	1	0.02	0.132	0.23	34.7626	0.132	0.102	0.030	0.026	0.004	3.844	2147.2715
3084	1	1	0.03	0.145	0.21	52.3439	0.145	0.115	0.030	0.028	0.002	3.959	2199.6155
3085	1	1	0.00	0.180	0.18	148.8794	0.180	0.146	0.033	0.032	0.001	4.105	2348.4949
3086	1	1	0.00	0.207	0.16	340.5305	0.207	0.174	0.033	0.033	0.000	4.279	2689.0254
3087	1	1	0.01	0.192	0.17	210.0427	0.192	0.159	0.033	0.033	0.000	4.438	2899.0681
3088	1	1	0.01	0.147	0.24	58.3650	0.147	0.112	0.035	0.028	0.008	4.549	2957.4331
3089	1	1	0.02	0.174	0.23	123.1306	0.174	0.134	0.040	0.032	0.008	4.683	3080.5637
3090	1	1	0.01	0.220	0.21	350.3100	0.220	0.175	0.045	0.039	0.007	4.858	3430.8738
3091	1	1	0.00	0.239	0.20	524.4830	0.239	0.192	0.047	0.041	0.006	5.050	3955.3569
3092	1	1	0.01	0.210	0.20	287.5226	0.210	0.167	0.043	0.037	0.006	5.217	4242.8794
3093	1	1	0.01	0.175	0.21	126.4684	0.175	0.138	0.037	0.032	0.005	5.355	4369.3477
3094	1	1	0.01	0.186	0.17	183.0058	0.186	0.153	0.032	0.032	0.000	5.509	4552.3535
3095	1	1	0.04	0.145	0.20	49.6504	0.145	0.116	0.029	0.029	0.000	5.625	4602.0039
3096	1	1	0.05	0.142	0.17	68.9765	0.142	0.118	0.024	0.024	0.000	5.743	4670.9805
	52	1.35	0.024	0.143	0.242	89.827	0.143	0.110	0.032	0.027	0.005	2.469	
	[TOT]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[AVGX]	[CUM]	[CUM]

Table 4: Big Rose Colony petrophysical Measurements

Formation Pressure Data

Test data can be found in Attachment 10.

Well	Location	Test Type	Middle Duperow Reservoir Pressure (PSI)
Big Rose Colony 1-34	T34N-R1W, Sec 34	DST 2980 - 3040	1012 BHP
Kiefer Farms #1	T34N-R1W, Sec 20	Well Test - Perfs: 3046'-3066	1162.9 BHP

Table 5: Formation Pressure Data

Rock Pressure Analysis – Frac Gradients

The estimated Frac Gradient of the confining zone is estimate at 0.75 psi/ft. This estimate derived from the Keifer Farms 1-20 Middle Duperow Frac Gradient of 0.75 psi/ft (CoreLabs Core Report as provided to the MBOGC).

Relevant caprocks present include the Potlach Anhydrite over the Nisku, and a layer of tight carbonates with interbedded evaporites that comprise the Upper Duperow section which seals the Middle Duperow 1st and 2nd porosity lobes as seen in the Kiefer Farms 1-20 well, the Potlach thickness is 160 feet (2501- 2660) and the Upper Duperow thickness is 253 feet (2730 - 2990).

Water Analysis

The Middle Duperow injection zone is a gas reservoir, and the injection fluid is native to the producing gas from the same reservoir. There is no producible formation water in the AOR or in the surrounding Middle Duperow formation. Tests indicate that the Middle Duperow is 100% natural gas consisting of CO_2, H_2S, Nitrogen, Helium, and gases hydrocarbons.

The gas from the Middle Duperow contains Hydrogen Sulfide (“H_2S”(, a known neurotoxin, and is **NEVER** suitable for human or agricultural consumption or exposure. Thus, making the Middle Duperow a suitable Acid Gas Injection zone. The Middle Duperow H_2S in the Big Rose Colony 1-34 is 0.036 Mole % (Attachment 6),),

3.6x greater than the Immediately Dangerous to Life or Health (IDLH) value of 100 ppm for H_2S.

Any potential USDWs are protected by two strings of casing: 9 5/8” surface casing set at 1,430’ MD to protect USDWs and cemented in two stages with 516 sacks of ASTM Type III cement, and 7” production casing was run to 4,643’ MD and cemented in two stages with 638 sacks of ASTM Type III cement.

Furthermore, there are no fresh water supply wells producing from the Middle Duperow or any fresh water wells that penetrated the Duperow formation in the entire Kevin Dome complex. The approximate depth and poor water quality of the Middle Duperow formation at 3100’ makes the recovery of water for drinking purposes economically or technologically impractical and unhealthy.

1(f) Additional Information on Producing Wells within the AOR

No wells are currently producing the Middle Duperow formation or any formation within the ¼ mile AOR. The only well transecting the Middle Duperow within the AOR is the Big Rose Colony 1-34 which is to be converted to a acid gas injection well.

1(g) Open Hole Logs

Previously provided to the MBOGC.

1(h) Description of Wellbore Construction

The Big Rose Colony 1-34 is a vertical well that was drilled in September and October of 2024 to a total depth of 4,650’ MD. 9 5/8” surface casing was set at 1,430’ MD to protect freshwater and USDW’s and cemented in two stages with 516 sacks of ASTM Type III cement. 7” production casing was run to 4,643’ MD and cemented in two stages with 638 sacks of ASTM Type III cement. A CBL log was previously provided to the MBOGC.

To convert the Big Rose Colony well to an acid gas injection well, the Middle Duperow 2nd Lobe formation is planned to be perforated between 3,043’ – 3,096’MD. 3 ½” CRA tubing and a nickel-coated AS-1X packer will be run to isolate the injection fluids from the casing string as to provide another physical protection of groundwater and USDW’s. Attachment 4 outlines the completion procedure to convert the Big Rose Colony 1-34 into an injection well, and Attachment 5 details the wellbore after completion.

1(i) Description of Injection Fluid

Injected fluids generated or produced from the tailgate of the proposed Wolf Helium Processing Plant are part of the natural gases initially separated from the Keifer Farms 1-20, the proposed Birch Creek 1-29, and the proposed Glacier Ridge 1-29 wells all in T34N-R1W which will all produce from the same formation used for injection and thus injected fluids would be native to the Middle Duperow injection zone. These fluids are expected to include CO_2, nitrogen, H_2S, and other produced gases/fluids. The plant is expected to process other future wells as the field continues to be developed.

The anticipated composition of the injection stream as per the plant processing models is listed in the table below. Estimated injection rates include up to 20 million cubic feet per day (20 MMCFD) with an anticipated average injection pressure of 1500 PSI and a maximum injection pressure of 1750 PSI.

Constituent Fluids	Mole Percent
N_2	0.099022
O_2	0.000242
CO_2	0.849929
C1	0.040709
C2	0.006993
H_2S	0.002452
He	0.000653
	1.00
As per processing model	

Table 6: Injection Fluid Composition

1(j) Names of Owners for Record

Surface and mineral owners within the AOR are detailed in the table below. Surface and mineral owners were notified on Date TBD in accordance with 36.22.1410 notification requirements Attachment 8 is an affidavit attesting to the fact that notices have been mailed. Attachment 9 is a copy of the Notification Letter, and Attachment 12 are the Publication Verifications.

TRS	Tract Number	Quarter /Quarter	Acreage	Ownership Percent	Lessor
34N-1W, 34	Tract 1	NW1/4	160	4.817708	D&H Energy, LLC
34N-1W, 34	Tract 1	NW1/4	160	79.687500	Excalibur Energy Company
34N-1W, 34	Tract 1	NW1/4	160	13.281250 & 2.213542 individually	Sandra L. Brown, Trustee of the Sandra L. Brown Trust 1 and Sandra L. Brown, individually
34N-1W, 34	Tract 2	N1/2S1/2, SW1/4SW1/4	200	100	Cary W. Seward
34N-1W, 34	Tract 3	NE1/4	160	100	Mabel H. Clatworthy and Frank M. Willcox et ux
34N-1W, 34	Tract 4	SE1/4SW1/4, S1/2SE1/4	120	100	Big Rose Colony, Inc.

Table 7: AOR Owners of Record

List of Attachments

1. Surface location of the Big Rose Colony 1-34
2. O&G wells located within the ¼ mile AOR
3. Location of Hector water well within the ¼ mile AOR
4. Big Rose Colony 1-34 completion procedure
5. Big Rose Colony 1-34 post-completion wellbore diagram
6. Injection fluid analysis
7. AOR Listing of surface, mineral, and leasehold owners
8. Affidavit of mailing
9. Notification letter
10. Duperow BHP Data
11. Publication
12. Application

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

DATE

Montana Board of Oil & Gas Conservation
2535 St. Johns Avenue
Billings, MT 59101

Attn. John Gizicki
UIC Program Director

Re: Request for Injection Permit
Middle Duperow Formation
Big Rose Colony 1-34
Section 34, T34N R1W
Toole County, Montana

Dear Mr. Gizicki

Please find the enclosed Underground Injection Control (UIC) Class II application by Coyote Resources LLC which requests the granting of authority to inject produced oil and gas waste into the Duperow Formation at the Big Rose Colony 1-34. Coyote Resources requests that the application be placed on the default docket for the Montana Board of Oil and Gas Conservation hearing scheduled for TBD DATE.

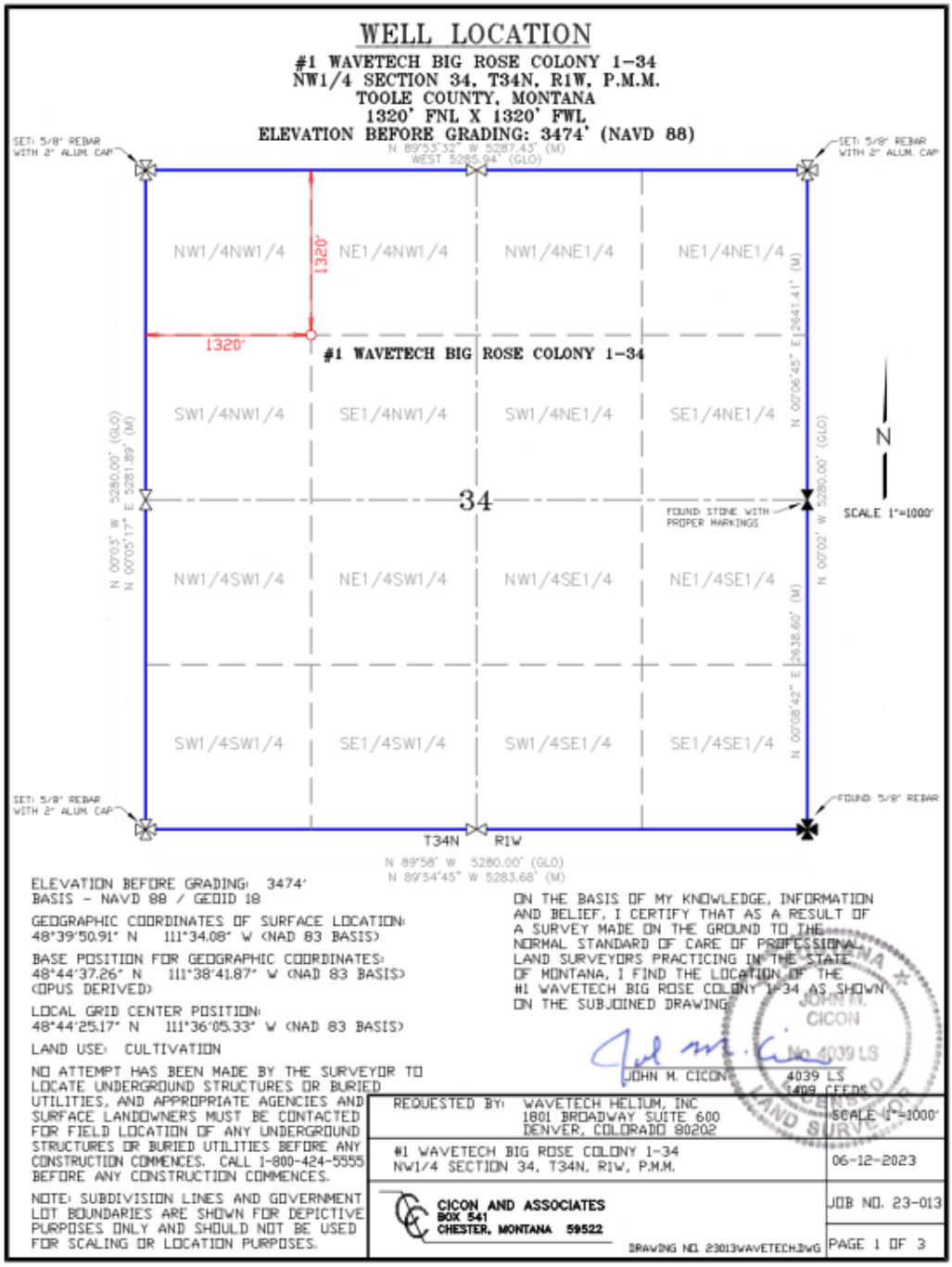
Sincerely,

Tug Eiden
VP – Production and Commercial Development

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 1: WELL LOCATION

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application



Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 2: WELLS IN AOR

Plugging Reports (1 OF 2)

FORM NO. 2 R7/99

ARM 36.22.307, 601, 605 1003, 1004, 1011, 1013, 1103, 1222, 1240, 1301, 1306, 1309, and 1417

Submit In Quadruplicate To:

MONTANA BOARD OF OIL AND GAS CONSERVATION
2535 ST. JOHNS AVENUE
BILLINGS, MONTANA 59102

RECEIVED
JUL 2 6 2012
MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS

SUNDRY NOTICES AND REPORT OF WELLS

Operator: Board of Oil & Gas Conservation
Address: 2535 St. Johns Avenue
City: Billings State: MT Zip Code: 59102
Telephone Number: (406) 656-0040 Fax Number: (406) 655-6015

Location of well (1/4-1/4 section and footage measurements):
NENENW 226' FNL & 2410' FWL
48.66713 degN & 111.72162 degW, NAD 83, Field

If directionally or horizontally drilled, show both surface and bottom hole locations

API Number: 25 101 60060
State County Well

Well Type (oil, gas, injection, other): Gas

Lease Name: Hector
Lease Type (Private/State/Federal): Private
Well Number: 2
Unit Agreement Name: NA
Field Name or Wildcat: K-S
Section, Township, and Range: S34 34N 1W
County: Toole

Indicate below with an X the nature of this notice, report, or other data:

Notice of Intention to Change plans	☐	Subsequent Report of Mechanical Integrity Test	☐
Notice of Intention to Run Mechanical Integrity Test	☐	Subsequent Report of Stimulation or Chemical Treatment	☐
Notice of Intention to Stimulate or to Chemically Treat	☐	Subsequent Report of Perforation or Cementing	☐
Notice of Intention to Perforate or to Cement	☐	Subsequent Report of Well Abandonment	☒
Notice of Intention to Abandon Well	☐	Subsequent Report of Pulled or Altered Casing	☐
Notice of Intention to Pull or Alter Casing	☐	Subsequent Report of Drilling Waste Disposal	☐
Notice of Intention to Change Well Status	☐	Subsequent Report of Production Waste Disposal	☐
Supplemental Well History	☐	Subsequent Report of Change in Well Status	☐
Other (specify)	☐	Subsequent Report of Gas Analysis (ARM 36.22.1222)	☐
	☐		☐

Describe Proposed or Completed Operations:

Describe planned or completed work in detail. Attach maps, well-bore configuration diagrams, analyses, or other information as necessary. Indicate the intended starting date for proposed operations or the completion date for completed operations.

This orphaned well was plugged on 2009 N.District Grant. Moved LGWS rig4 on 9-1-11, LGWS is contractor.Bled off well, removed a 25ft long 1 1/4" tubing pup from well. Has 8 5/8" production casing. Well is watered out, fluid level about 40ft down from surface. Ran in with 2 3/8" workstring to plug, hung up at 210ft, worked tubing thru apparent parted csg spot. Set 35sx balanced G cmt plug from (949-1049). Pulled workstring up and set poly water pill at 120ft. Set 46sx cmt plug from (0-90), cement circulated but fell back - utubed out csg part up into annular space(8 5/8 x 10 3/4). Let balance out, topped off with 35sx more cement and it filled up and was static 6ft down. Work witnessed by Bill Halvorson. Rechecked 9-2-11 by Gary Klotz, top plugs stable and set up - ok, well dead. Cut and capped casings 4ft below sfc and restored location. Existing gas line risers on site are live and tied to Croft & Omimex systems - left in place per Lester Alford & Eli Wipf requests. Work completed 9-6-11.

BOARD USE ONLY

Approved MAR 0 6 2013
Date

Steven P. Sasaki CHIEF FIELD INSPECTOR
Name Title

The undersigned hereby certifies that the information contained on this application is true and correct:

7-24-12 Gary K
Date Signed (Agent)

Gary Klotz - Field Supervisor, Northern District
Print Name & Title

LOCATION INSPECTED & APPROVED

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 2: PLUGGING REPORTS CONTINUED (2 OF 2)

FORM NO. 2 R7/99

ARM 36.22.307, 601, 605, 1003, 1004, 1011, 1013, 1103, 1222, 1240, 1301, 1306, 1309, and [illegible]

RECEIVED
DEC 28 2012
MONTANA BOARD OF OIL & GAS CONSERVATION - BILLINGS

Submit In Quadruplicate To:
MONTANA BOARD OF OIL AND GAS CONSERVATION
2535 ST. JOHNS AVENUE
BILLINGS, MONTANA 59102

SUNDRY NOTICES AND REPORT OF WELLS

Operator: **Board of Oil & Gas Conservation**
Address: **2535 St. Johns Avenue**
City **Billings** State **MT** Zip Code **59102**
Telephone Number (**406**) **656-0040** Fax Number (**406**) **655-6015**

Location of well (1/4-1/4 section and footage measurements):
SE SE NW 2330'FNL & 2312'FWL
@ 48.66139degN 111.72202degW, NAD83 Field.

If directionally or horizontally drilled, show both surface and bottom hole locations

API Number: **25 101 60062**
State County Well

Well Type (oil, gas, injection, other): **Gas**

Lease Name: **Hector**
Lease Type (Private/State/Federal): **Private**
Well Number: **3**
Unit Agreement Name: **NA**
Field Name or Wildcat: **Kevin-Sunburst**
Section, Township, and Range: **S34 34N 1W**
County: **Toole**

Indicate below with an X the nature of this notice, report, or other data:

Notice of Intention to Change plans	☐	Subsequent Report of Mechanical Integrity Test	☐
Notice of Intention to Run Mechanical Integrity Test	☐	Subsequent Report of Stimulation or Chemical Treatment	☐
Notice of Intention to Stimulate or to Chemically Treat	☐	Subsequent Report of Perforation or Cementing	☐
Notice of Intention to Perforate or to Cement	☐	Subsequent Report of Well Abandonment	☒
Notice of Intention to Abandon Well	☐	Subsequent Report of Pulled or Altered Casing	☐
Notice of Intention to Pull or Alter Casing	☐	Subsequent Report of Drilling Waste Disposal	☐
Notice of Intention to Change Well Status	☐	Subsequent Report of Production Waste Disposal	☐
Supplemental Well History	☐	Subsequent Report of Change in Well Status	☐
Other (specify) _____	☐	Subsequent Report of Gas Analysis (ARM 36.22.1222)	☐
_____	☐	_____	☐

Describe Proposed or Completed Operations:

Describe planned or completed work in detail. Attach maps, well-bore configuration diagrams, analyses, or other information as necessary. Indicate the intended starting date for proposed operations or the completion date for completed operations.

This orphaned well work was completed on the 2009 N.District Grant using Liquid Gold Well Service as contractor. On 9-2-11 moved on LGWS rig4, well was gassing/drilled to Madison. Ran sinker bar to 1295ft, was dry. Filled well with 95 bbls water to kill so could cut off old orange peel wellhead. Existing 1 1/4" tbg railroad union hanger only had a 2ft pup on it. RIH with 2 3/8" tubing + notched collar, worked thru liner top at 1080ft and set 75sx G cmt balanced plug + 2%CaCl2 at 1300ft at top of Rierdon and up across Sb/Sw to isolate Madison. Well slowly taking fluid, SDFN. On 9-6-11 tagged top of plug at 1060ft-ok. Filled the 8 5/8" csg with 5 bbls water, dug down 12ft and found the 10 3/4" had been pulled. Set 46sx cmt top plug + 2%CaCl2 from (0-120ft). Cut/capped csg 4ft below sfc, removed dead gathering line riser(ok per Lester Alford-Omimex) and deadman anchors. Restored and reseeded location.

BOARD USE ONLY

Approved MAR 06 2013
Date

Steve P. Sasaki CHIEF FIELD INSPECTOR
Name Title

The undersigned hereby certifies that the information contained on this application is true and correct:

12/26/12 Gary Klotz
Date Signed (Agent)

Gary Klotz - Field Supervisor, Northern District
Print Name & Title

LOCATION INSPECTED & APPROVED

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 3: PLANT LOCATION & PIPELINES

ATTACHMENT 3: Fresh Water Well

ATTACHMENT 4

Big Rose Colony 1-34

Completion Procedure

API: 25-101-24287

Location: T34N-R1W-S34

GLE / KB: 3,474’ / 10’

String	Depth Ft.	Size In.	Weight lbs/ft	ID In.	Grade	Conn	Burst psi	Collapse psi	Tensile klbs
Surf. Csg	1,400’	9.625”	36	8.921	J55	LTC	3,520	2,020	453
Prod. Csg	4,643’	7.0”	26	6.276	L80	LTC	7,240	5,410	511
Tubing	3,000’	3.5”	Xxx	Xxx	xxx	xxx	xxx	xxx	xxx

1. Contact MBOGC 24 hours prior to beginning completion operations.
2. Inspect the location prior to conducting completion operations.
3. Stab pressure gauge in ½” needle valve and check pressure on casing strings.
4. MIRU WOR and completion equipment.

5. Install test plug or hanger with two-way check valve in the tubing head profile. NU and test 5,000# BOPE.

6. MIRU ELU. RIH with GR/JB/CCL/temp survey to 3,200’ MD.

7. RIH with CCL and perforating guns. Correlate and perforate the Duperow:

Interval	**SPF**	**Phasing**	**Dia.**
3,043’ – 3,096’	6	60	0.42”

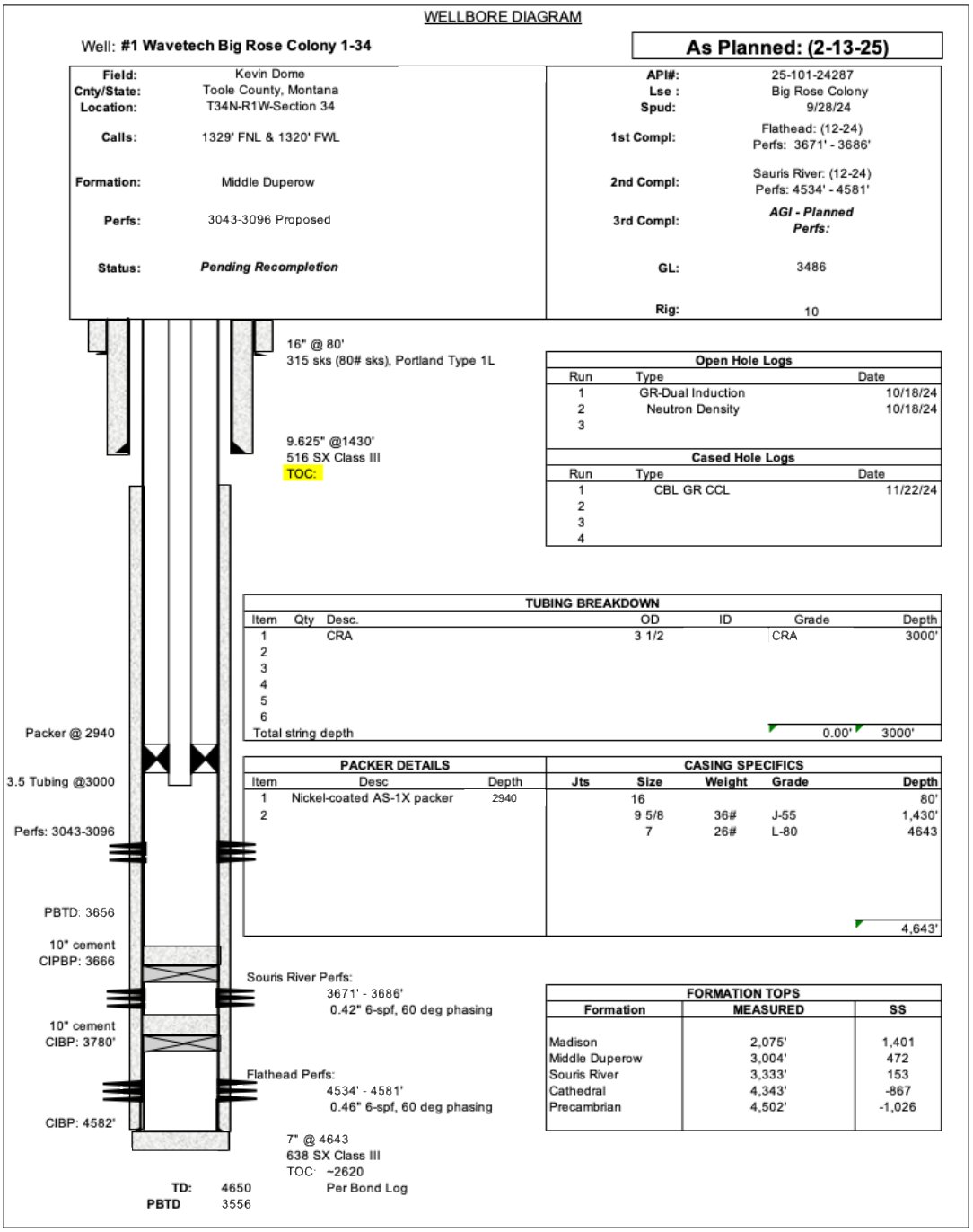
8. PU 3 ½” tubing and packer. RIH and space out to +/- 2,043’. Displace annular volume with packer fluid. Set packer and land tubing. Test annulus.

9. ND BOPE. NU injection head. Test annulus with MBOGC inspector to witness.

10. RDMO WOR and equipment.

ATTACHMENT 5: PROPOSED WBD

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application



Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 6: INJECTION FLUID ANALYSIS

Constituent Fluids	**Mole Percent**
N_2	0.099022
O_2	0.000242
CO_2	0.849929
C1	0.040709
C2	0.006993
H_2S	0.002452
He	0.000653
	1.00

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 7: LEASEHOLD & SURFACE OWNERS

Surface

Big Rose Colony, Inc.,
P.O. Box 905,
Shelby, MT 59474-0905

Vera Belle Stewart,
336 6th Avenue South,
Shelby, MT 59474

Oil & Gas Minerals

D & H Energy, LLC,
P.O. Box 186,
Shelby, MT 59474

Excalibur Energy Company,
P.O. Box 25045,
Albuquerque, NM 87125-00453

Sandra L. Brown,
Trustee of the Sandra L. Brown Trust 1,
P.O. Box 420,
Havre, MT 59501-0420

Sandra L. Brown, individually,
P.O. Box 420,
Havre, MT 59501-0420

Big Rose Colony, Inc.,
P.O. Box 905,
Shelby, MT 59474-0905

Kringen Oil, LLC,

8540 E. McDowell Rd.,
Unit 59,
Mesa, AZ 85207

JasminLLC,
111 9th Avenue S.E.,
Cut Bank, MT 59427

AEBLLC,
441 7th Avenue S.,
CutBank,MT59427

Richard D. Schafer,
276 Halls Village Road,
Chester, NH 03036

William F. Boedeker,
11812 92nd Avenue, Court E,
Puyallup, WA 98373

Sheldon John Alden Watts,
1814 East Ninth Street,
Duluth, MN 55812

Dr. Charles E. Fleming,
1485 Belford Rd.,
Reno, NV 89509

James A. Boedeker,
a/k/a James Boedeker,
304 Falls Harvest Ct.,
Louisville, KY 40223

Dorothea Hirsbrunner,
a/k/a Dorothy Hirsbrunner,
415 4th Street N.W.,
Aitkin, MN

Eleanor Alden Watts Montgomery,
111 Warwick Street,
Minneapolis, MN

Ronald R. Christenson,
6806 Avalon Avenue,
Yucca Valley, CA 92284

Don L. Stone,
6806 Avalon Avenue,
Yucca Valley, CA 92284

James Clark,
Beach, CA 92406

Hugh Matherson,
Beach, CA 92406

Leasehold Ownership

Tom E. Swanson,
P.O. Box 3215,
Casper, WY 82602

Wavetech Helium, Inc.,
1801 Broadway, Suite 600,
Denver, CO 80202

ATTACHMENT 8: NOTIFICATION AFFIDAVIT (PLACEHOLDER)

STATE OF MONTANA §
§
COUNTY OF TOOLE §

AFFIDAVIT OF MAILING

Zachary Blake Aldmon, of lawful age, and being first duly sworn upon his oath, states, and declares:

That he is employed by Coyote Resources LLC and that the individuals, firms and corporations set forth on the attached list are current operators, lease owners, and surface owners within the area of review for the proposed Acid Gas Injection well, located in the Center of the NE 1/4, Section 34, Township 34 North, Range 01 West.

Pursuant to A.R.M. 36.22141 of the Administrative Rules of the State of Montana, that notification of the application for permit to drill a Acid Gas Injection Disposal Well and Facility for the Big Rose Colony 24-1 well was made by mailing each such owner a copy of the notification of application and hearing by postage prepaid certified mail, return receipt requested, at the address set forth on said list, by duly depositing same in the United States mail on the _____ day of February, 2025.

_____

Zachary Blake Aldmon

Subscribed and sworn to by Zachary Blake Aldmon before me, the undersigned authority, this _____ day of February 2025 by _____.

_____

Notary Public – Name

My Commission Expires:

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 9: NOTIFICATION REQUIREMENTS (PLACEHOLDER)

New Horizon Resources LLC
a Wholly Owned Subsidiary of
U.S. ENERGY CORP.

NOTICE

March 20, 2025

To: Working Interest Owners & Surface Owners

From: Coyote Resources, LLC
Attn: Land Department
1616 S. Voss Road, Suite 725
Houston, TX 77057

RE: Proposed Private Saltwater Disposal Well

Location of proposed Disposal Well and Facility Big Rose Colony 1-34
Legal description Sec. 34, T34N, R01W
Toole County, MT

Greetings,

Please be advised that Coyote Resources, LLC has applied to the Montana Board of Oil and Gas Conservation (MBOGC) to complete an Acid Gas Injection disposal well and construct the associated facility at the above desired location. Coyote Resources will be seeking a final approval from the MBOGC on TBD, 2025 at a hearing in Billings MT at the MBOGC Hearing Room at 2535 St. John’s Avenue, Billings Montana 59102, beginning at 9:00 am.

Pursuant to the requirements of project application and regulations of the MBOGC, you are hereby notified of this project.

Respectfully,

_____
Name:
Coyote Resources, LLC
Number:

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 11a: Affidavit of Publication (PLACEHOLDER)

AFFIDAVIT OF PUBLICATION

Laurie Nentwig, being first duly sworn, deposes and says that she is the agent to the Publisher of The Roundup newspaper printed and published one day a week in the City of Sidney, County of Richland, State of Montana. That the notice, a copy of which is hereby attached and submitted by:

Coyote Resources, LLC
1616 S. Voss Road, Suite 725
Houston, TX 77057

Was printed and published in the regular and entire issue of said The Roundup, 111 West Main, Sidney, MT 59270, 406-433-3306 for
_____ issue(s), that said publication was made on each of the following dates to with:

_____, 2023
It was also published in said paper

_____, 2023
It was also published in said paper

_____, 2023
It was also published in said paper

_____, 2023
It was also published in said paper

_____
Name Laurie Nentwig

State of Montana §
SS
County of Richland §

Subscribed and sworn to before me this
_____ day of _____ 2025.

_____
Notary Public for the State of Montana

Coyote Resources LLC - “WAVETECH”
Big Rose Colony 1-34
25-101-24287
T34N-R1W, Section 34
Underground Injection Control (UIC) Class II Application

ATTACHMENT 11b: Proof of Publication (PLACEHOLDER)

Proof of Publication

HELENA INDEPENDENT RECORD
2222 Washington St
Helena, MT 59602
Ph: (406) 447-4000

Coyote Resources, LLC
1616 S. Voss Road, Suite 725
Houston, TX 77057

ORDER NUMBER 143025

The undersigned, being duly sworn, deposed and says. That she/he is the principal clerk of The Helena Independent Record, a newspaper of general circulation published daily in the City of Helena, in the County of Lewis & Clark, State of Montana, and has charge of the Advertisements thereof.

Mark below if certification for the State of Montana
_____ I hereby certify that I have read sec. 18-7-204 and 18-7-205, MCA, and subsequent revisions, and declare that the price or rate charged the State of Montana for the publication for which claim is made in printed copy in the amount of $_____ is not in excess of the minimum rate charged any other advertiser for publication of advertisement, set in the same size type and publication for the same number of insertions, further certify that this claim is correct and just in all respects, and that payment or credit has not been received.

_____
STATE OF MONTANA
County of Lewis & Clark

On this day of _____, _____ before me, the undersigned, a Notary Public for the State of Montana, personally appeared _____ known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed same. IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above written.

Section: Legal
Category: 0701 Legals Helena
PUBLISHED ON: 02/08/2023

TOTAL AD COST: 215.22
FILED ON: 2/8/2023

_____
Notary Public for the State of Montana
Residing at Billings, MT

My commission expires: _____

ATTACHMENT 12: Permit Application (PLACEHOLDER)

Notice of Intention to Apply For a Class II Injection Well Permit

Before the Board of Oil and Gas Conservation Of the State of Montana

In the matter of the application of

Coyote Resources, LLC

For a Class II Injection well permit

1. Name and address of applicant
   Coyote Resources, LLC
   1616 S. Voss Road, Suite 725
   Houston, Texas 77057

2. Well name, county, location
   Big Rose Colony 1, located 250’ FNL, 2,116’ FWL Section 34, T34N, R01W Sec 3 NW4

3. Source of fluids to be injected
   Produced Water and gases from nearby wells

4. Zone or formation into which injection will occur, including depth
   Middle Duperow 2Nd Member from approximately 3042 MD – 3109 MD

Pursuant to Rule 36.22.1409, Administrative Rules of Montana, the Montana Board of Oil and Gas Conservation will hold a public hearing upon the application of Coyote Resources, LLC for a Class II underground injection permit for the well or project set forth above. Said hearing will be held at the Montana Board of Oil and Gas Hearing Room at 2535 St. Johns Avenue, Billings Montana beginning at 9:00 AM on date Thursday, 13 May April March 2025.