District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Month - Year
MAY 8 2007
OCD - ARTESIA, NM

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: COG Operating LLC Telephone: 432-685-4340 e-mail address: pedwards@conchoresources.com
Address: Fasken Center Tower II, 550 W. Texas Ave., Suite 1300, Midland, TX 79701
Facility or well name: Blue Thunder 5 Federal Com. #1 API #: 30-015-34991 U/L or Qtr/Qtr: H Sec: 5 T: 19S R: 31E
County: Eddy Latitude: N 32° 41' 28" Longitude: W 103° 53' 05" NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

Pit	Below-grade tank	
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness: 12 mil Clay ☐ Pit Volume: 35,000 bbl	Volume: ____bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ If not, explain why not.	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) greater than 100'	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more - X	(20 points) (10 points) (0 points) 0
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No - X	(20 points) (0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more - X	(20 points) (10 points) (0 points) 0
	Ranking Score (Total Points)	0 points

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite ☒ offsite ☐ If offsite, name of facility_____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface_____ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Pit Closure Plan attached

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Date: 4/10/07
Printed Name/Title Tim Reed (Agent for COG) VP Highlander Signature Tim Reed

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:
Printed Name/Title _____ Signature Mike Bratcher Date: 5/9/07

Notify OCD 24 hours prior to beginning pit closure.

Samples are to be obtained from pit area and analysis submitted to NMOCD prior to back-filling

Pit Closure Plan – Drilling Pit

Operator: **COG Operating LLC**
Well Name: **Blue Thunder 5 Federal Com. #1**
Location: **Unit H, Section 5, Township 19 S, Range 31 E, Eddy County, NM**

The drilling pit associated with this well will be closed as per New Mexico OCD "Pit and Below-Grade Tank Guidelines" dated November 1, 2004. The visual inspection of the pit indicated that the pit liner has maintained its integrity.

1. Any remaining liquids will be removed from the pit.

2. Remaining solid wastes (i.e. buckets, cans, miscellaneous trash, debris, contaminated solids, etc.) will be removed from the pit, except for dried mud and cuttings, cement, and frac materials in drilling and reserve pits which have been approved by the OCD for encapsulation.

3. **This well did penetrate a salt section, and 9.5 lb/gal brine or greater was used during drilling. Therefore, the pit will be closed by encapsulation:**

   Trench burial and capping will be performed for the drilling mud and cuttings. Up to two trenches (approximately 5 feet wide x 10 feet deep x 125 feet length) will be dug next to the pit and the cuttings buried and capped. The trenching and capping will be accomplished by lining the trench with an impervious, reinforced, synthetic or fabricated liner at least 12 mils in thickness; mixing earthen materials with the pit contents, as necessary to stiffen the pit contents sufficiently to provide stability and support for the trench cap; emplacing the stiffened mud and cuttings into the lined trench; capping the trench with a 20 mil minimum thickness impervious, fiber reinforced, synthetic or fabricated liner (the synthetic liner will overlap the trench area by at least 3 feet in all directions); and covering the trench with a minimum of 3 feet of clean soil that is capable of supporting native plant growth.

4. Upon closure of the pit, the surface where the pit was located will be contoured to prevent erosion and ponding of rainwater over the site.

5. Since this is a federal well, the Bureau of Land Management (BLM) will be contacted for site reclamation requirements.

Water Well Data
Average Depth to Groundwater (ft)
COG - Blue Thunder 5 Federal Com. #1, Eddy County, New Mexico

18 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

19 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31 115	32	33	34	35	36

20 South 30 East

6	5 3.5	4	3 6	2	1
7	8	9	10	11	12
18	17	16 29	15	14	13
19	20 29	21 150	22	23	24
30	29	28	27	26	25
31	32 170	33 191	34	35	36

18 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

19 South 31 East

6	5 SITE	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 180	27	26	25
31	32	33 101	34	35	36 130

20 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36 80

18 South 32 East

6	5	4 65	3	2	1
7 460	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

19 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 102	20 345	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

20 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports
105 USGS Well Reports
90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

TABLE 1. RECORDS OF WELLS IN EDDY COUNTY, NEW MEXICO. (Continued)

LOCATION NUMBER	OWNER OR NAME	DATE COMPLETED	TOPOGRAPHIC SITUATION	ALTITUDE ABOVE SEA LEVEL (feet)	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	PRINCIPAL WATER-BEARING BED	
							CHARACTER OF MATERIAL	GEOLOGIC UNIT
19.28.2.122	Herman Lindley	–	Base of Fade-Away ridge	3,460	160	6	Redbeds, gypsum	Rustler (?)
13.210	West well	–	Shallow draw	3,370	–	8 (?)	do.	do.
18.120	–	–	Small depression	3,502	–	7	Redbeds, gypsum, limestone (?)	Chalk Bluff (?)
33.210	–	–	Shallow draw	3,345	170	5	Redbeds, gypsum (?)	Rustler (?)
19.29.13.410	–	–	Large closed depression	3,310	250	6	Redbeds (?)	Rustler or Dockum
13.410a	North Lake well	–	do.	3,310	250+	6	do.	do.
20.220	Rattlesnake well	–	Small closed depression	3,305	–	6	Redbeds, gypsum, limestone	Rustler (?)
19.31.28.330	John Lusk	–	South slope	3,480	–	8	Redbeds	Dockum
33.110	do.	–	Small depression	3,450	160	5	do.	do.
33.110a	do.	–	do.	3,450	–	6	do.	do.
33.110b	do.	–	do.	3,450	–	6	do.	do.

See explanation at beginning of table.

LOCATION NUMBER	WATER LEVEL: BELOW LAND SURFACE (feet)	WATER LEVEL: DATE OF MEASUREMENT	YIELD (g.p.m.)	METHOD OF LIFT	USE OF WATER	REMARKS
19.28.2.122	128.3	Dec. 13, 1948	1 E.	W & G	S	Depth to water measured while pumping. See analysis, Table 3.
13.210	154.5	Dec. 3, 1948	3	W	S	See analysis, Table 3.
18.120	82.8	Sept. 3, 1948	–	W	S	See analysis, Table 3.
33.210	123.1	Dec. 21, 1948	–	N	N	Abandoned stock well.
19.29.13.410	123.2	do.	–	N	N	West well of two. Abandoned stock well.
13.410a	123.2	do.	1 E.	W	S	East well of two. See analysis, Table 3.
20.220	62.9	Dec. 13, 1948	2 E.	W	S	Depth to water measured while pumping. See analysis, Table 3.
19.31.28.330	180	Nov. 29, 1948	–	W & G	D	See analysis, Table 3.
33.110	100.7	do.	–	N	N	Abandoned. North well of three.
33.110a	103.0	do.	–	G	S	Southwest well of three.
33.110b	–	–	3 E.	W	S	Southeast well of three. See analysis, Table 3.

See explanation at beginning of table.

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 19S Range: 31E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 03/15/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	19S	31E	36				1	130	130	130

Record Count: 1

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 19S Range: 32E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 03/15/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	19S	32E	19				1	102	102	102
CP	19S	32E	20				1	345	345	345

Record Count: 2