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

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 ☒

OCT 09 2007
OCD-ARTESIA

Operator: COG Operating LLC Telephone: 432-685-4340 e-mail address: KCarrillo@conchoresources.com
Address: Fasken Center Tower II, 550 W. Texas Ave., Suite 1300, Midland, TX 79701
Facility or well name: Moose 23 Federal #1Y API #: 30-015-35755 U/L or Qtr/Qtr: L Sec: 23 T: 16S R: 28E
County: Eddy Latitude: N 32° 54' 22" Longitude: W 104° 09' 07" 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: 30,000 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: On April 26, 2007, Highlander Environmental drilled a test water well (temporary well) at COG – Reindeer Federal #1 located in Section 21, T16S, R28E. After 72 hours, the water level was measured at 61 feet below surface. The site elevation is 2602 feet (see attached topographic map extract). The site elevation for the Moose 23 Federal #1Y location is 3753 feet, approximately 1151 feet above the Reindeer Federal #1 location. Therefore, the water level depth at Moose 23 Federal #1Y is assumed to be greater than 100 feet below surface. (Pit closure procedure is attached).

TRENCH/BURY

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: 10-5-2007
Printed Name/Title Robert McNeill Agent for - COG Signature Robert McNeill

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:

Signature Signed By Mike Bratcher Date OCT 12 2007

Samples are to be obtained from Pit area and analysis submitted to NMOCD prior to back-filling.
NOTIFY NM0CD 24 HOURS PRIOR TO OBTAINING SAMPLES.

If burial trench is to be constructed in pit area, samples are to be obtained and analyses submitted to OCD PRIOR to lining trench.

Pit Closure Plan – Drilling Pit

Operator: **COG Operating LLC**
Well Name: **Moose 23 Federal #1Y**
Location: **Unit L, Section 23, Township 16 S, Range 28 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.

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.

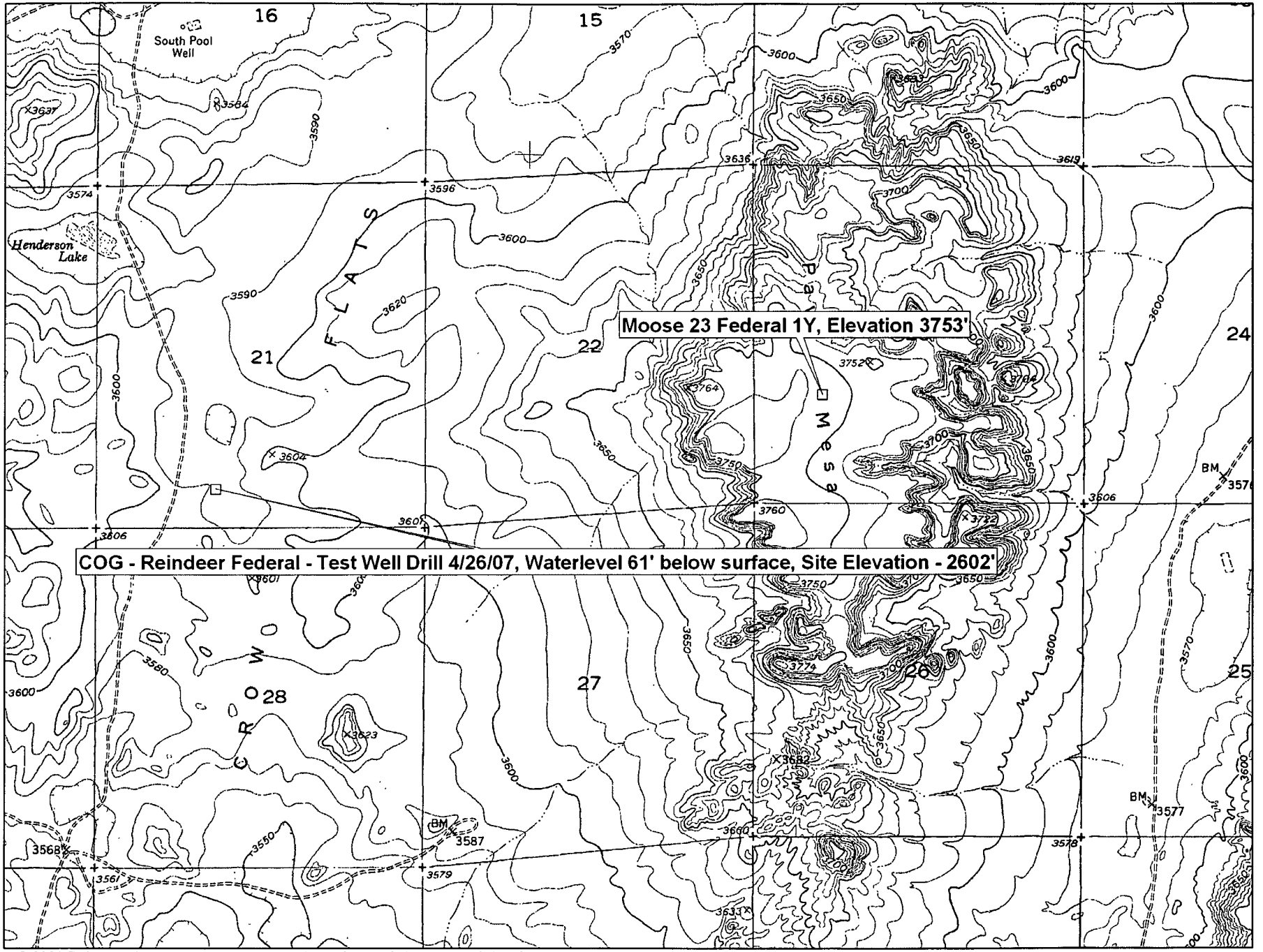
3. **The pit will be closed by <u>encapsulation and capping.</u>**

   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. Soil sampling will be performed at the excavated pit area for delineation of chlorides in soils to 250 ppm. Soil samples will be taken from each of the (4) corners and (1) from the center of the pit until the chlorides are vertically delineated to 250 ppm. These samples will be screened using field chloride test kits. The final confirmation samples (5 total samples) will be submitted for laboratory analysis. The laboratory results will be submitted to the OCD District office. Upon approval from the OCD District office, the excavated pit area will be backfilled with clean material and top 3 feet of soil that is capable of supporting native plant growth.

5. 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.

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



Scale: 1 : 25,000 Map Rotation: 0° Magnetic Declination: 9.1°E

Water Well Data
Average Depth to Groundwater (ft)
COG - Moose "23" Federal, Eddy County, New Mexico

15 South 27 East

6 **18**	5	4	3	2	1 **23**
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 **40**	22	23	24
30	29	28	27	26	25
31 **62**	32	33	34 **85**	35	36

15 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18 **35**	17 **43**	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

15 South 29 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

16 South 27 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 **70**	26	25
31	32	33	34	35	36

16 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 **61**	22	23 SITE	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 **110**	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

17 South 27 East

6	5 **30**	4	3	2	1
7 **14**	8	9	10	11 **54** **50**	12
18 **86**	17 **283**	16 **194**	15	14	13
19	20	21	22	23 **40**	24
30	29	28	27	26	25
31	32 **120**	33	34	35	36

17 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 **79**	23	24
30	29	28	27	26	25
31	32	33	34 **53**	35	36

17 South 29 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*

78 On April 26, 2007, Highlander Environmental drilled a test waterwell (temporary well) onsite to determine depth to water for a pit closure. The test well was drilled to a total depth of 80.0' below surface. Highlander measured a water level of 61.0' below surface after 72 hours. Section 21, Township16 South, Range 28 East

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 16S Range: 29E 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 10/03/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
RA	16S	29E	19				1	110	110	110

Record Count: 1