

30-015-39388

COG OPERATING LLC
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Cali Roll 24 Federal #2H
SHL: 330' FNL & 430' FEL
BHL: 330' FSL & 380' FEL
Section 24 T26S R25E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

- a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by John West Surveying Company.
- b. Exhibit 2 is a portion of a topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location are indicated in red on Exhibit 2. Right of way using this proposed route is being requested if necessary.
- c. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

DIRECTIONS:

From mile marker 6 on U.S. Highway 62/180 go south 0.8 miles then turn left (east) onto caliche road drive 1.8 miles to fork in road take ease fork go 3.3 miles to fork take right (south) go 2.4 miles site 900ft to left.

2. PLANNED ACCESS ROAD:

COG will be using a proposed access road of 759' coming in from the south side of the pad.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, the Cali Roll 24 Federal #2H tank battery would be utilized and the necessary production equipment will be installed at the well site. See Exhibit 4.
- B. All flowlines will adhere to API standards
- C. If electricity is needed, power will be obtained from Central Valley Electric. Central Valley Electric will apply for ROW for their power lines.

D. If the well is productive, rehabilitation plans are as follows:

- i. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. LOCATION AND TYPES OF WATER SUPPLY:

This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in Exhibit #2. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, the existing and proposed road shown in Exhibit "2" will be utilized.

5. CONSTRUCTION MATERIALS:

All Caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

6. METHODS OF HANDLING WASTE MATERIAL:

- a. All trash, junk and other waste material will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.
- b. The supplier, including broken sacks, will pick up slats remaining after completion of well.
- c. A porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- d. Disposal of fluids to be transported by an approved disposal company.

6. ANCILLARY FACILITIES:

No campsite or other facilities will be constructed as a result of this well.

7. WELLSITE LAYOUT:

- a. Exhibit 1 shows the proposed well site layout with dimensions of the pad layout.
- b. This exhibit indicates proposed location of reserve and sump pits if utilized and living facilities.
- c. Mud pits in the active circulating system will be steel pits and a closed loop system will be utilized.

8. PLANS FOR SURFACE RECLAMATION:

- a. After finishing drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original state.
- b. The location and road will be rehabilitated as recommended by the BLM.
- c. Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

9. SURFACE OWNERSHIP:

The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas. The proposed road routes and the surface location will be restored as directed by the BLM.

10. OTHER INFORMATION:

- a. The area surrounding the well site is grassland. The vegetation is moderately sparse with native prairie grass and mesquite bushes. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- b. There is no permanent or live water in the general proximity of the location.
- c. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography. Reserve pit will not be used on this location therefore no reclamation is needed.
- d. Topsoil will be stockpiled on the WEST SIDE of the location until it is needed for interim reclamation described in paragraph above.

12. OPERATOR'S REPRESENTATIVE:

A. Through A.P.D. Approval:

Rand French, Regulatory Supervisor
COG Operating LLC
Artesia, NM 88210
Phone (575)748-6940
Cell (432) 254-5556

B. Through Drilling Operations

Sheryl Baker, Drilling Supervisor
COG Operating LLC
Artesia, NM 88210
Phone (575)748-6940
Cell (432)934-7873

CERTIFICATION:

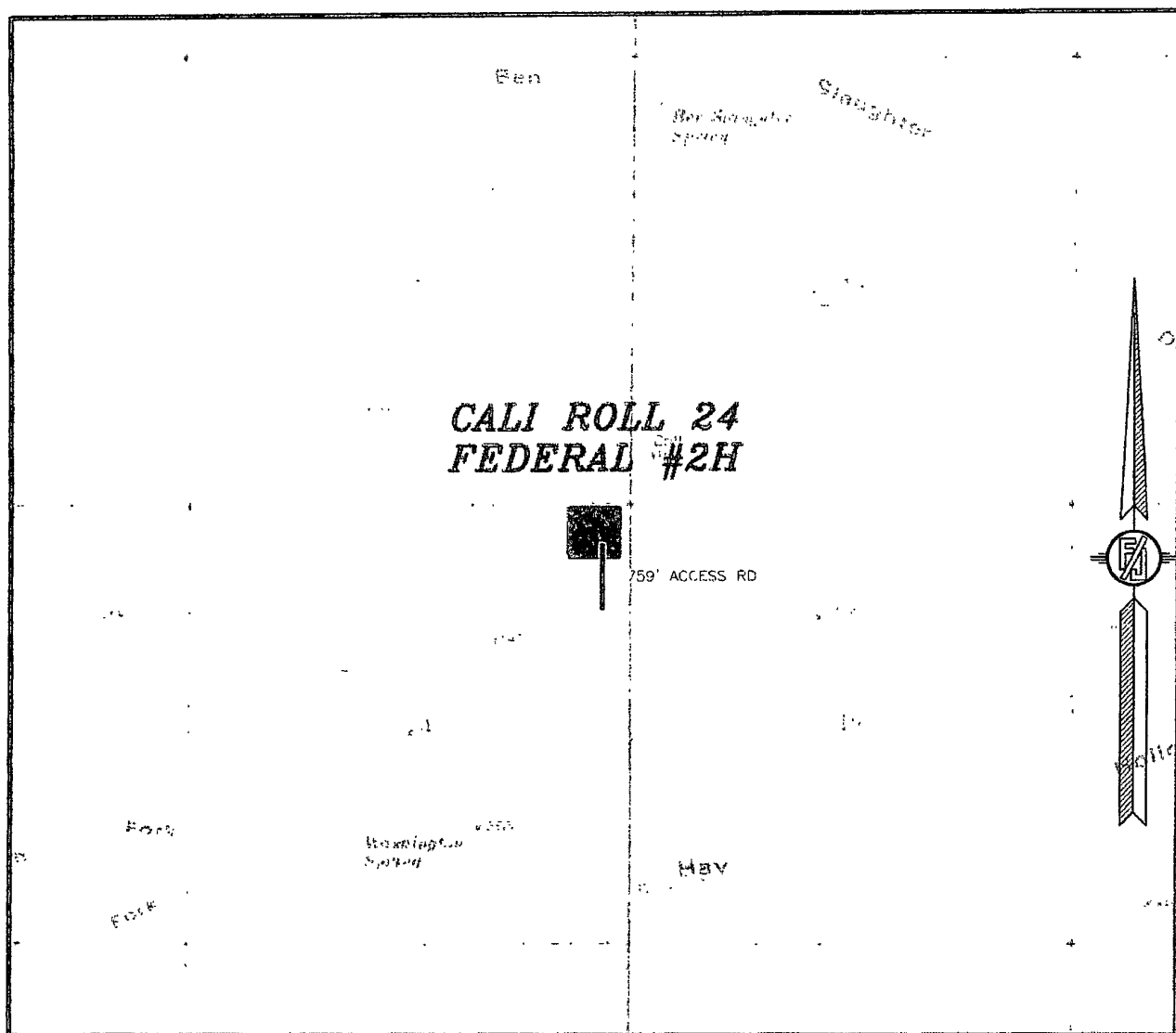
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by COG Operating LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

6-2-2011
Date

COG OPERATING LLC

M. Rees for Rand French
Rand French
Regulatory Supervisor

24, TOWNSHIP 26 SOUTH, RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



**CONTOUR INTERVAL:
JUMPING SPRING**

NOT TO SCALE

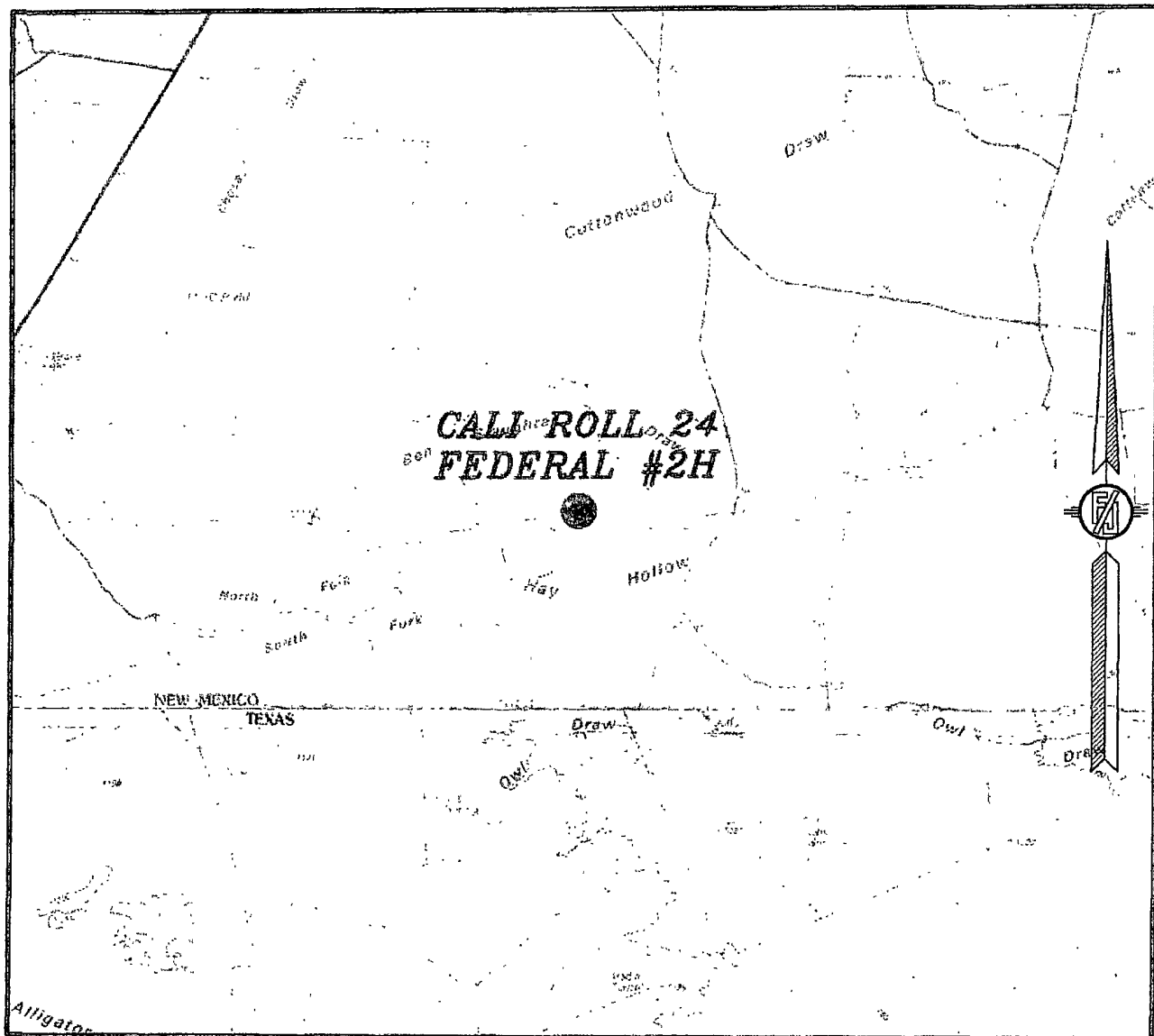
COG OPERATING, LLC
CALI ROLL 24 FEDERAL #2H
LOCATED 330 FT. FROM THE NORTH LINE
AND 430 FT. FROM THE EAST LINE OF
SECTION 24, TOWNSHIP 26 SOUTH,
RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 18, 2011

SURVEY NO. 359B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 706-9672 CARLSBAD, NEW MEXICO

SECTION 24, TOWNSHIP 26 SOUTH, RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

COG OPERATING, LLC
CALI ROLL 24 FEDERAL #2H
LOCATED 330 FT. FROM THE NORTH LINE
AND 430 FT. FROM THE EAST LINE OF
SECTION 24, TOWNSHIP 26 SOUTH,
RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

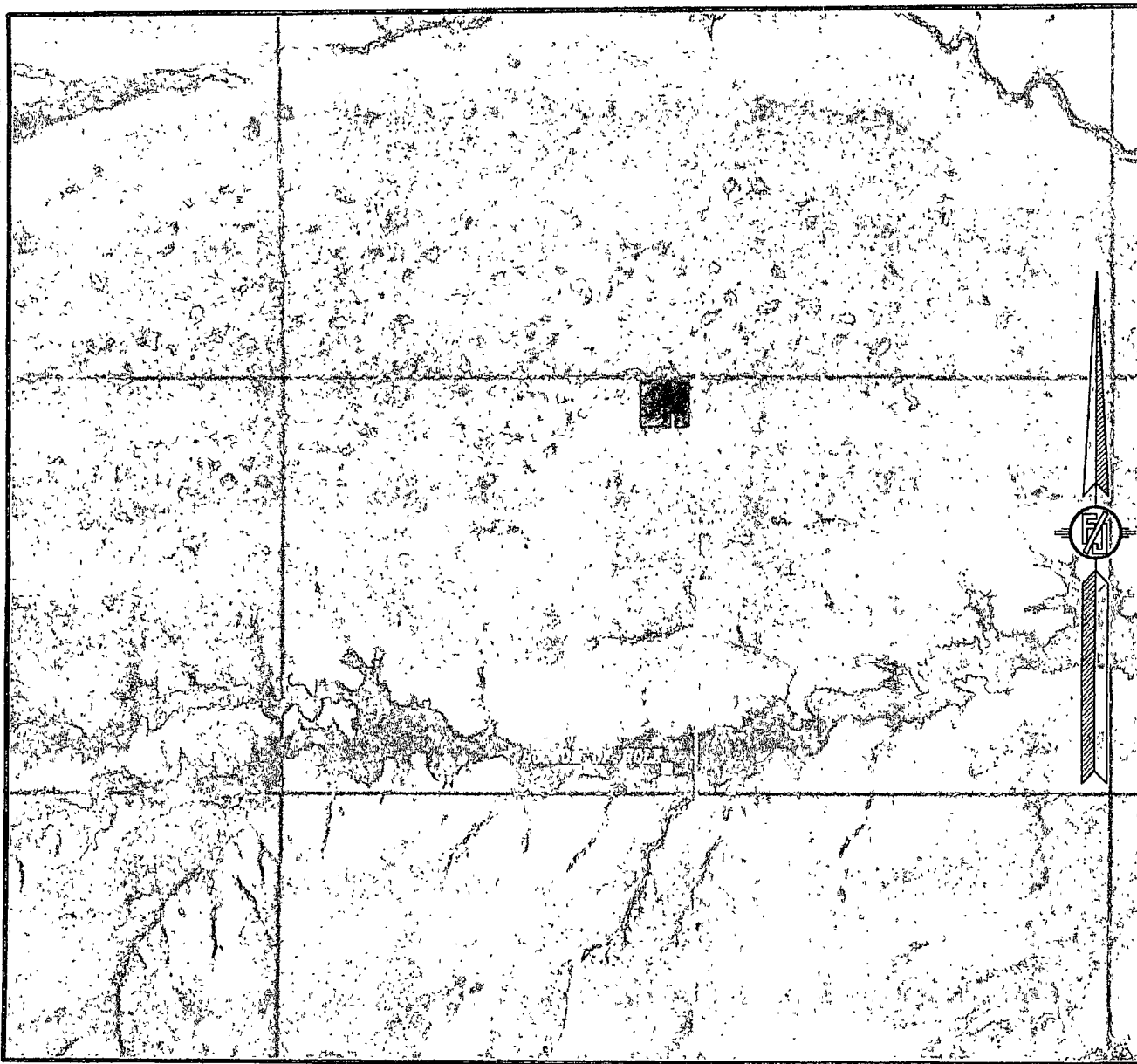
MAY 18, 2011

SURVEY NO. 359B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 706-9672 CARLSBAD, NEW MEXICO

<div>4900</div> <div>33</div> <div>U.S.</div> <div>Yates Drig etal 11.1.2015 114962 50000</div>	<div>128 00</div> <div>34</div> <div>U.S.</div> <div>Echo Prod 3.1.2012 108027 7500</div>	<div>35</div> <div>U.S.</div> <div>Echo Prod 2.1.2007 100837 6200 J Bruce 2.1.2007 100837 6200 Samson Res (Echo Prod) Pine Springs S12</div>	<div>404 76</div> <div>36</div> <div>State</div> <div>J Bar Cane 6.1.2003 100840 2900 Doalin Fed-Milner 10.1870 DIA 7-26-57</div>	<div>7000 7</div> <div>31</div> <div>U.S.</div> <div>J Bar Cane 6.1.2008 100840 2900</div>	<div>3400 3</div> <div>32</div> <div>State</div> <div>Yates Pet etal 2.1.2010 V 7312 27722</div>	<div>3400 3</div> <div>33</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>19423</div> <div>34</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>19423</div> <div>34</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>19423</div> <div>34</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>
<div>4</div> <div>U.S.</div> <div>L. A. Madges Tr Marathon-Fed TO 1675 DIA 4-27-77</div>	<div>3</div> <div>U.S.</div> <div>Doalin Fed-Erickson EI 3888 TO 1870 DIA 8-28-57</div>	<div>2</div> <div>State</div> <div>Samson Res (Echo Prod) Pine Springs S12 H.E. Lee Chelsi (Midwest) (Coe) TO 1870 DIA 11-11-73</div>	<div>1</div> <div>U.S.</div> <div>Samson Res 2.1.2015 113397 \$90000 (Allor Co - 21.5%) Midwest Fed TO 1870 DIA 11-11-73</div>	<div>6</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>5</div> <div>U.S.</div> <div>Doalin Fed-Hodges TO 1836 DIA 8-5-87</div>	<div>4</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>3</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>2</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>1</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>
<div>9</div> <div>U.S.</div> <div>Yates Pet etal 11.1.2014 114962 50000</div>	<div>10</div> <div>U.S.</div> <div>Chesapeake 2.1.2015 113397 \$82500</div>	<div>11</div> <div>U.S.</div> <div>Samson Res 2.1.2015 113397 \$90000 (Allor Co - 21.5%) Midwest Fed TO 1870 DIA 11-11-73</div>	<div>12</div> <div>U.S.</div> <div>Samson Res 2.1.2015 113397 \$90000 (Allor Co - 21.5%)</div>	<div>7</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>8</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>9</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>10</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>11</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>	<div>12</div> <div>U.S.</div> <div>Yates Drig etal 5.1.2015 113938 28000 (Marbob Ener)</div>
<div>16</div> <div>U.S.</div> <div>Yates Pet etal 2.1.2010 V 7293 \$ 20137</div>	<div>15</div> <div>U.S.</div> <div>Yates Pet etal 5.1.2016 116021 55000</div>	<div>14</div> <div>U.S.</div> <div>(Allor Co) Samson Res 11.2014 112899 50000</div>	<div>13</div> <div>U.S.</div> <div>Samson Res 8.1.2014 112259 40000</div>	<div>18</div> <div>U.S.</div> <div>Samson Res 8.1.2014 112259 30000</div>	<div>17</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>16</div> <div>U.S.</div> <div>Samson Res 2.1.2010 V 7293 18235 (Allor Co)</div>	<div>15</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>14</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>13</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>
<div>21</div> <div>U.S.</div> <div>Yates Pet etal 5.1.2015 113930 15000</div>	<div>22</div> <div>U.S.</div> <div>Yates Pet etal 5.1.2015 113930 15000</div>	<div>23</div> <div>U.S.</div> <div>Yates Pet etal 5.1.2015 113930 15000</div>	<div>24</div> <div>U.S.</div> <div>Yates Pet etal 5.1.2015 113930 15000</div>	<div>19</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>20</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>21</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>22</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>23</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>24</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>
<div>28</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>27</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>26</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>25</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>30</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>29</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>28</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>27</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>26</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>25</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>
<div>33</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>32</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>31</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>30</div> <div>U.S.</div> <div>The Allor Co etal 6.1.2010 104667 4000</div>	<div>30</div> <div>U.S.</div> <div>The Allor Co. 12.1.2009 103597 17700</div>	<div>31</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>32</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>33</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>34</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>	<div>35</div> <div>U.S.</div> <div>Chesapeake 5.1.2015 113942 35000</div>

SECTION 24, TOWNSHIP 26 SOUTH, RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
USDA - AUG, 2009

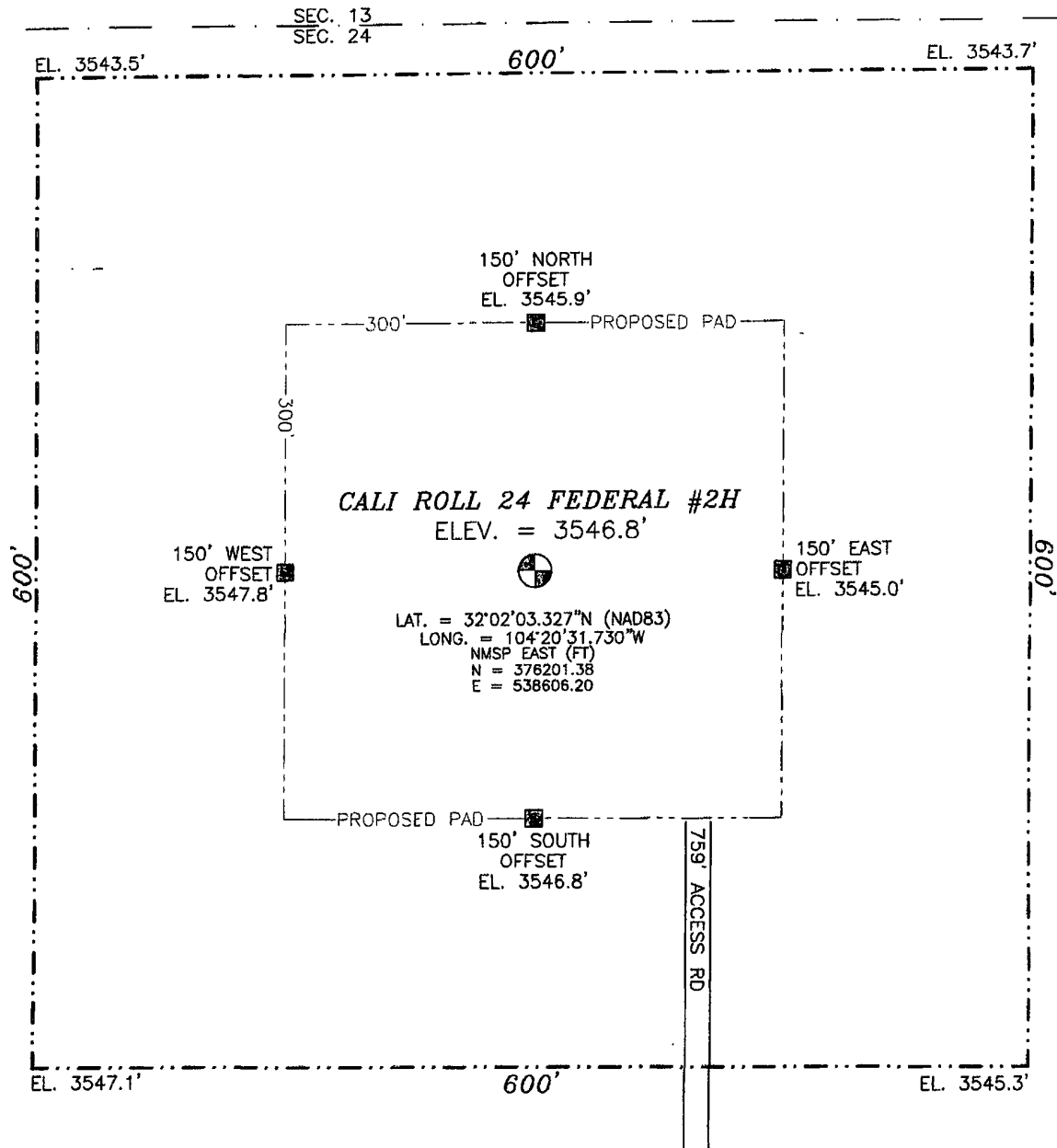
COG OPERATING, LLC
CALI ROLL 24 FEDERAL #2H
LOCATED 330 FT. FROM THE NORTH LINE
AND 430 FT. FROM THE EAST LINE OF
SECTION 24, TOWNSHIP 26 SOUTH,
RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SURVEY NO. 359B

MAY 18, 2011

MADRON SURVEYING, INC. 301 SOUTH CANAL
(575) 706-9672 CARLSBAD, NEW MEXICO

SECTION 24, TOWNSHIP 26 SOUTH, RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM MILE MARKER 6 ON US HWY 62/180 GO SOUTH 0.8 MILES
THEN TURN LEFT (EAST) ON TO CALICHE ROAD DRIVE 1.8 MILES TO
FORK IN ROAD TAKE EAST FORK GO 3.3 MILES TO FORK TAKE RIGHT
(SOUTH) GO 2.4 MILES SITE 900± TO LEFT

COG OPERATING, LLC
CALI ROLL 24 FEDERAL #2H
LOCATED 330 FT. FROM THE NORTH LINE
AND 430 FT. FROM THE EAST LINE OF
SECTION 24, TOWNSHIP 26 SOUTH,
RANGE 25 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SURVEY NO. 359B

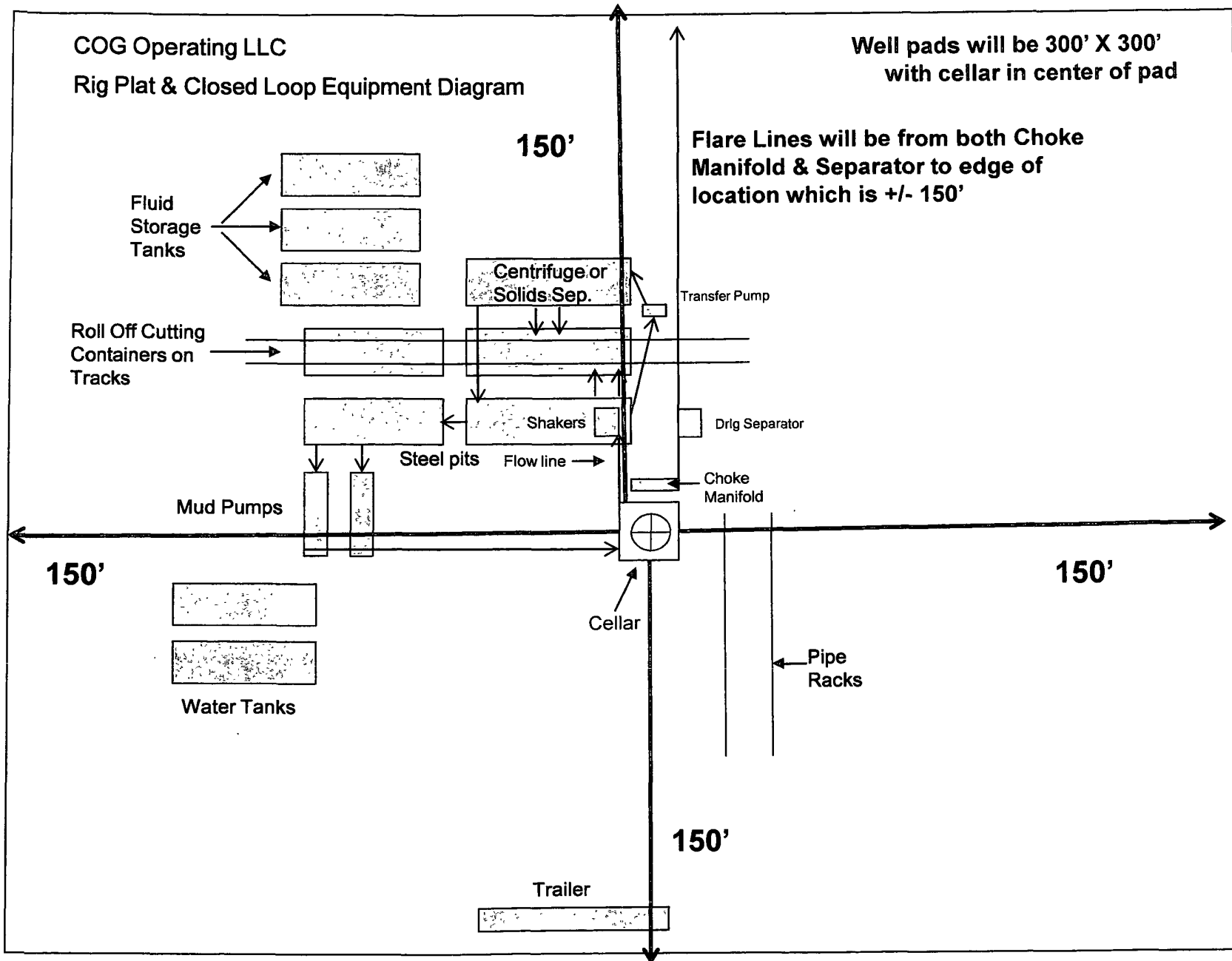
MAY 18, 2011

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 706-9672 CARLSBAD, NEW MEXICO

COG Operating LLC

Rig Plat & Closed Loop Equipment Diagram

Well pads will be 300' X 300'
with cellar in center of pad



Oil and Gas	Sec 368 Energy Corridors				Energy Potential Areas			Stipulations	OG Density	Coal	Geothermal	Fast Track
Rangeland	ROW	Wind	Solar	Cases	PLSS	Regulated Uses	Surface Management		Subsurface		Boundaries	
Land Status	Plats											

Identify Source: Selected Sketch ☒

Oil and Gas Leases Non Producing : 1 result ☐

Map	Reports	More Info	Lease Name	Stored Acreage	Serial No. (Full)	Geometry	Case Typ
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	LR2000 CR Report	More Info	*	600.000	NMNM 103595		O&G LSE COMP PD -

Oil and Gas Leases (Closed) : 2 results ☐

Map	Reports	More Info	Lease Name	Stored Acreage	Serial No. (Full)	Geometry	Case 1
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	LR2000 CR Report	More Info	*	520.000	NMNM 063721		O&G LSE SIMO PUB
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	LR2000 CR Report	More Info	*	1,080.000	NMNM 021761A		O&G LSE NONCOMP

The following tables returned no data and were not displayed:

O&G Lease Sale Parcels
Oil and Gas Agreements
Oil and Gas Agreements (Closed)
Oil and Gas Leases Producing
Oil and Gas Hydrocarbon Leases
Oil Shale Leases
Oil Shale Leases (Closed)

DISCLAIMER: Information presented on this website is considered public information and may be distributed or copied. Use of appropriate byline/photo/image credit is requested. We strongly recommend that USDO I data be acquired directly from a USDO I server and not through other sources that may change the data in some way. While USDO I makes every effort to provide accurate and complete information, various data such as names, telephone numbers, etc. may change prior to updating. USDO I welcomes suggestions on how to improve our home page and correct errors. USDO I provides no warranty, expressed or implied, as to the accuracy, reliability or completeness of furnished data. Some of the documents on this server may contain live references (or pointers) to information created and maintained by other organizations. Please note that USDO I does not control and cannot guarantee the relevance, timeliness, or accuracy of these outside materials.





New Mexico Office of the State Engineer **Water Column/Average Depth to Water**

No records found.

PLSS Search:

Section(s): 24

Township: 26S

Range: 25E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

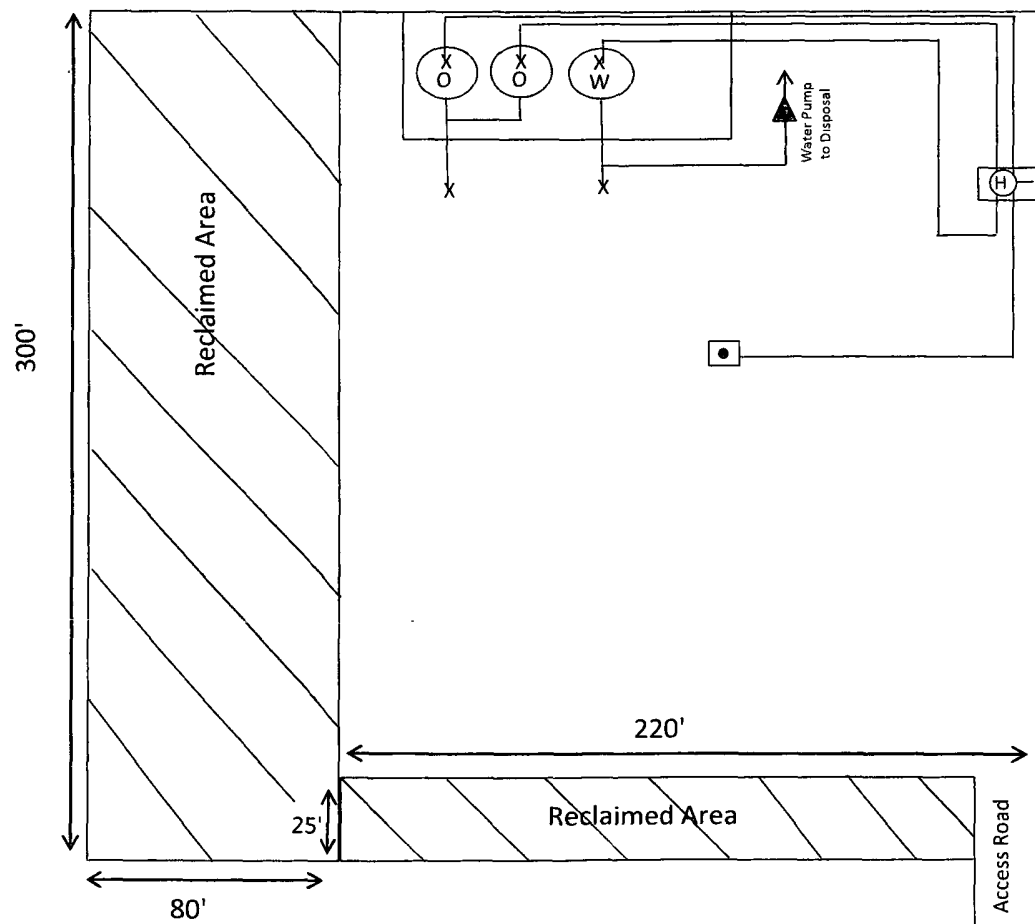
6/2/11 9:34 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Production Facility Layout

Cali Roll 24 Federal #2H



North



Scale

■ = 5' x 5'

Legend

⊙ = 500 BBL Steel Oil Tank

⊙ = 500 BBL Steel Water Tank

⊕ = 6' x 20' Heater

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Date: June 2, 2011

Lease #: NMNM103595
Cali Roll 24 Federal #2H

Legal Description: Sec. 24 – T26S – R25E
Eddy County, New Mexico

Formation(s): Bone Springs

Bond Coverage: Statewide

BLM Bond File #: NMB000740

COG OPERATING LLC

Mayte Reyes
Mayte Reyes
Regulatory Analyst