

30-025-40260

**COG OPERATING LLC**  
**MULTI-POINT SURFACE USE AND OPERATIONS PLAN**

**Lusk Deep Unit A #23H**  
**SHL: 330' FSL & 380' FEL**  
**BHL: 330' FNL & 380' FEL**  
**Section 19 T19S R32E**  
**Lea 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 Paved CR. 248 (Lusk Plant Rd.) and paved CR. L126 (Maljamar RD>) go south on L126 0.9 miles, turn right on caliche lease RD and go west 100' turn right on two-track caliche RD. and go north 1102' to a proposed road survey, follow flags west 187' to the SE. corner of the proposed pad for this location.

**PLANNED ACCESS ROAD:**

COG will be using a proposed access road of 187' coming in from the east side of the pad.

**2. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:**

- A. In the event the well is found productive, the Lusk Deep Unit A #23H 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.

**3. 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:**

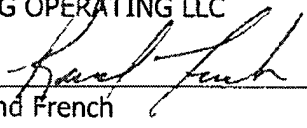
Sheryl Baker, Drilling Supervisor  
 COG Operating LLC  
 Artesia, NM 88210  
 Phone (575)748-6940  
 Cell (432)934-7873

**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.

7/5/11  
Date

COG OPERATING LLC

  
Rand French  
Regulatory Supervisor



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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q Q Q 64 16 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column	
CP 00640 EXPL	EXP	LE		2 2	19	19S	32E	612621	3613280*	260	102	158	
											Average Depth to Water:	102 feet	
											Minimum Depth:	102 feet	
											Maximum Depth:	102 feet	

Record Count: 1

PLSS Search:

Section(s): 19

Township: 19S

Range: 32E

\*UTM location was derived from PLSS - see Help

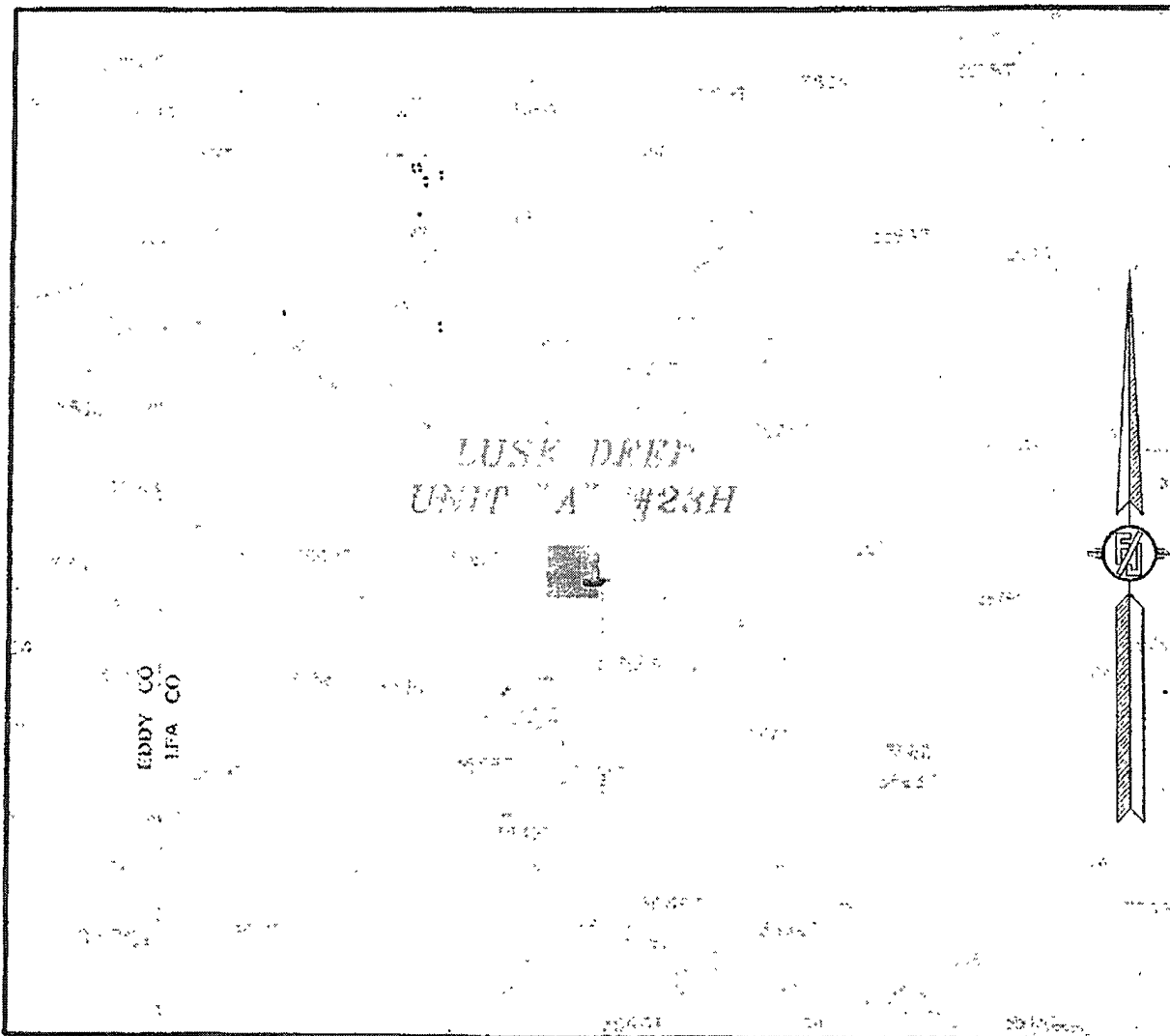
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/1/11 1:50 PM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

SECTION 19, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



CONTOUR INTERVAL:  
GREENWOOD LAKE

NOT TO SCALE

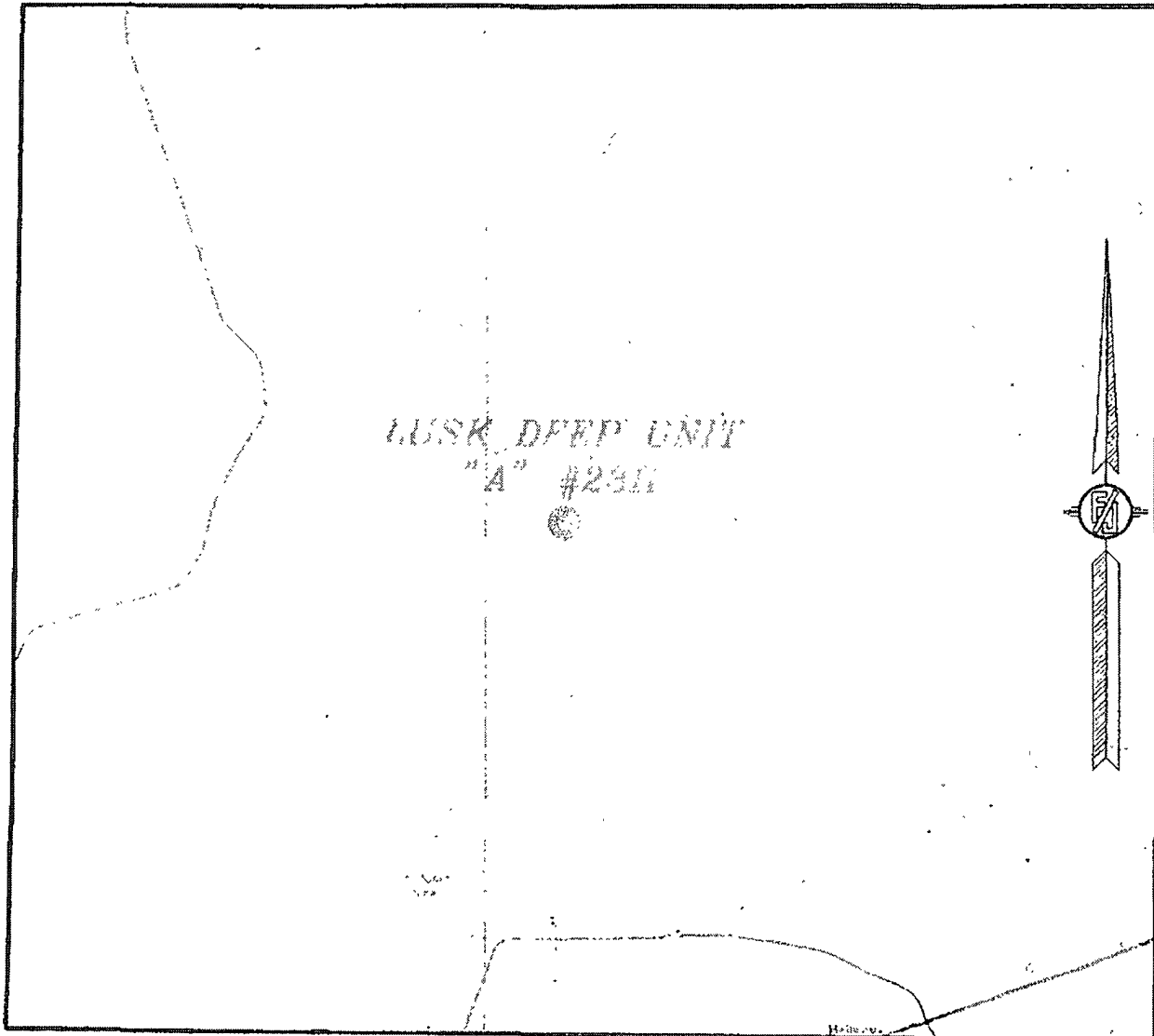
COG OPERATING, LLC  
LUSK DEEP UNIT "A" #23H  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 380 FT. FROM THE EAST LINE OF  
SECTION 19, TOWNSHIP 19 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

JUNE 18, 2011

SURVEY NO 488

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SECTION 19, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



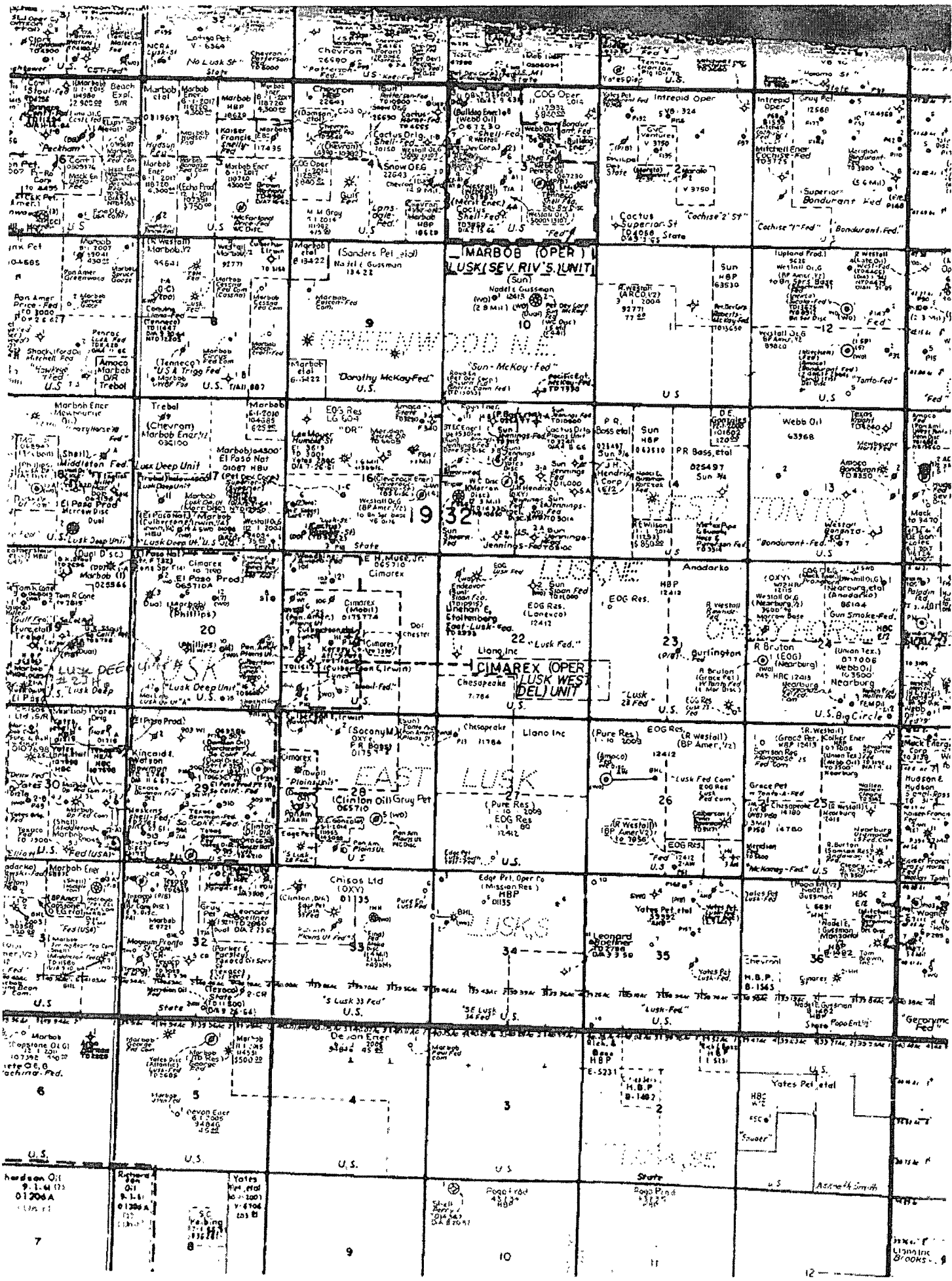
NOT TO SCALE

COG OPERATING, LLC  
LUSK DEEP UNIT "A" #23H  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 380 FT. FROM THE EAST LINE OF  
SECTION 19, TOWNSHIP 19 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

JUNE 18, 2011

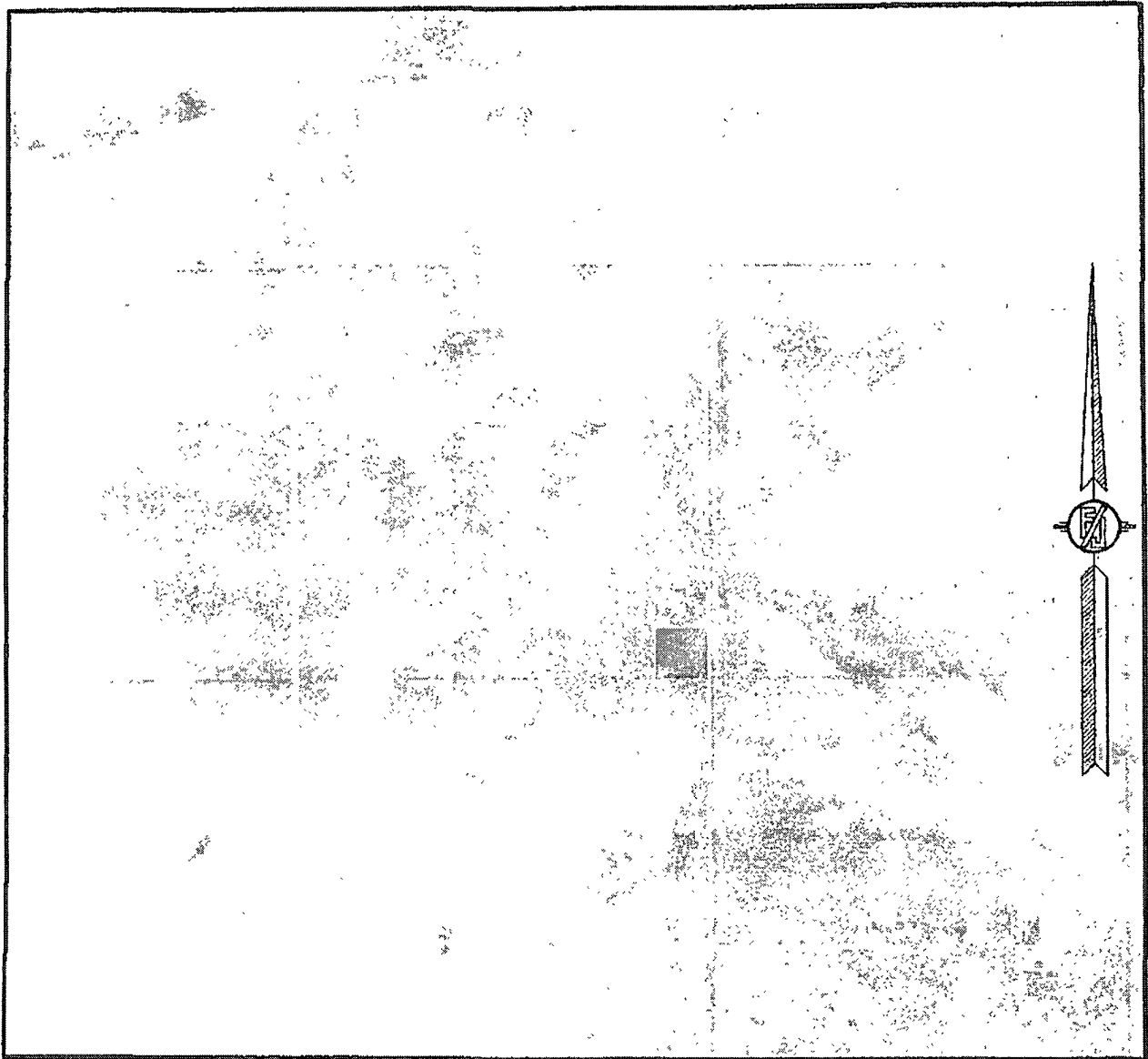
SURVEY NO. 488

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO





SECTION 19, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



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

COG OPERATING, LLC  
**LUSK DEEP UNIT "A" #23H**  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 380 FT. FROM THE EAST LINE OF  
SECTION 19, TOWNSHIP 19 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

SURVEY NO. 488

JUNE 18, 2011


MADRON SURVEYING, INC. 501 SOUTH CARLISLE  
LEWIS, CARLSBAD, NM 88502 CARLSBAD, NEW MEXICO

EL. 3565.0'                      600'                      EL. 3562.8'

ELEV.  $\approx$  3560.8'

150' EAST  
OFFSET  
EL. 3559.8'

LAT. = 32°38'22.646"N (NAD83)  
LONG = 103°47'53.427"W  
NMSP EAST (FT)  
N = 526841.02  
E = 706069.45

PROPOSED PAD  150' SOUTH  
OFFSET  
EL. 3560.6'

187' ACCESS RD.

EL. 3560.6' 600' EL. 3558.7'

SEC. 23  
SEC. 26

010 50 100 200

SCALE 1" = 100'

### DIRECTIONS TO LOCATION

FROM PAVED CR. 248 (LUSK PLANT RD.) AND PAVED CR. L126 (MALJAM RD.) GO SOUTH ON L126 0.9 MILES, TURN RIGHT ON CALICHE LEASE RD AND GO WEST 100', TURN RIGHT ON TWO-TRACK CALICHE RD. AND GO NORTH 1102' TO A PROPOSED ROAD SURVEY, FOLLOW FLAGS WEST 187' TO THE SE. CORNER OF THE PROPOSED PAD FOR THIS LOCATION.

COG OPERATING, LLC

LUSK DEEP UNIT "A" #23H

LOCATED 330 FT. FROM THE SOUTH LINE  
AND 380 FT. FROM THE EAST LINE OF  
SECTION 19, TOWNSHIP 19 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

SURVEY NO. 488

JUNE 18, 2011

MADRON SURVEYING, INC. 301 S.W. 4th St.  
P.O. Box 100-942 CARLSBAD, NEW MEXICO