30-025-41191

COG Operating LLC

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards an characteristics of hydrogen sulfide (H2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H2S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. **Well Control Equipment:**

   A. Flare line.

   B. Choke manifold.

   C. Closed Loop Blow Down Tank

   D. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   E. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. **Protective equipment for essential personnel:**

   A. SCBA (Self contained breathing apparatus) 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. **H2S detection and monitoring equipment:**

   A. Portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. **Visual warning systems:**

   A. Wind direction indicators as shown on well site diagram.

   B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. **Mud program:**

   A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

   B. All elastomers used for packing and seals shall be H2S trim.

7. **Communication:**

   A. Radio communications in company vehicles including cellular telephone and 2-way radio.

   B. Land line (telephone) communication at Office.

8. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

EXHIBIT #7

WARNING

YOU ARE ENTERING AN H2S

AUTHORIZED PERSONNEL ONLY

1. BEARDS OR CONTACT LENSES NOT ALLOWED
2. HARD HATS REQUIRED
3. SMOKING IN DESIGNATED AREAS ONLY
4. BE WIND CONSCIOUS AT ALL TIMES
5. CHECK WITH COG OPERATING FOREMAN AT

COG OPERATING LLC
1-432-683-7443
1-575-746-2010

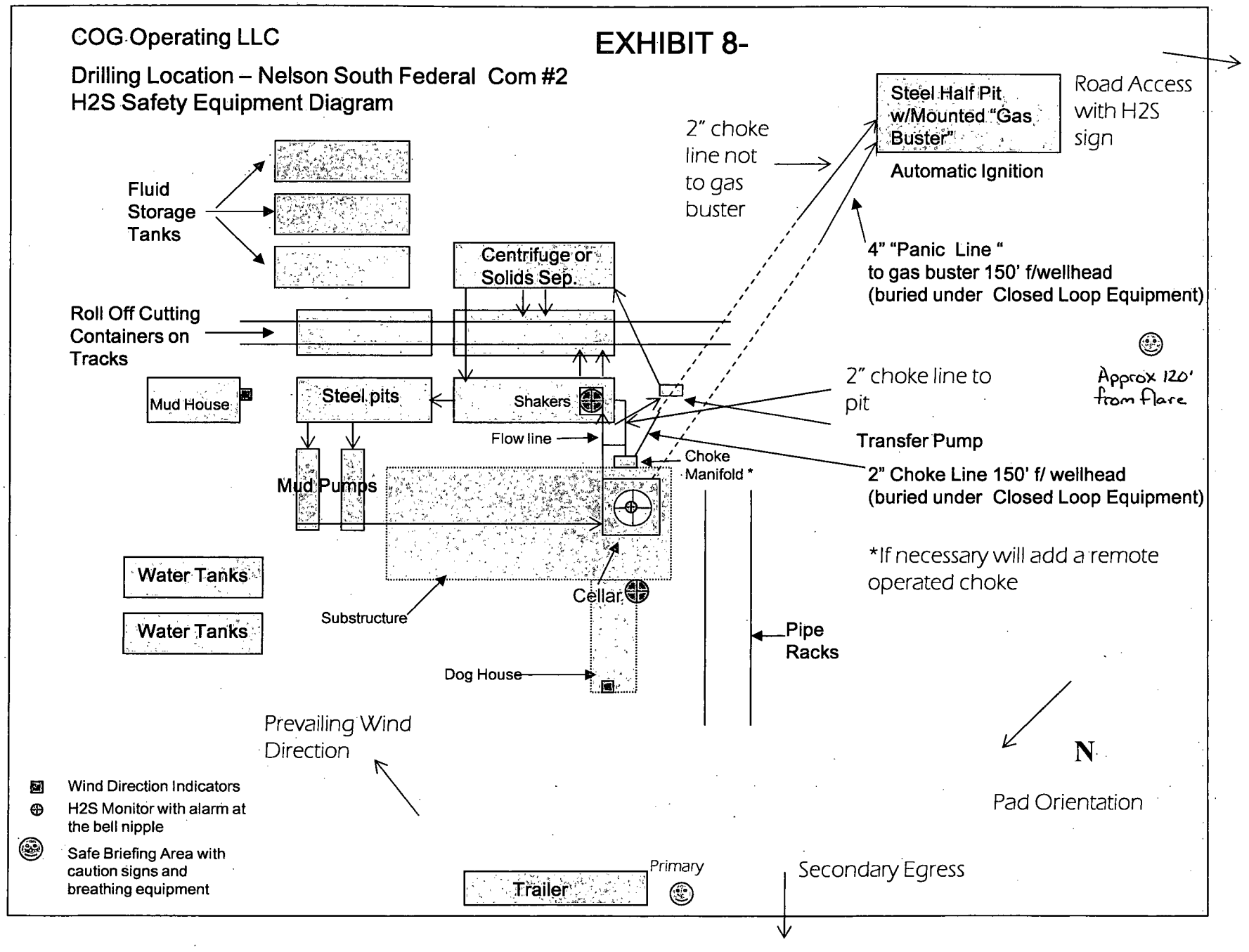
EDDY COUNTY EMERGENCY NUMBERS
ARTESIA FIRE DEPT. 575-746-5050
ARTESIA POLICE DEPT. 575-746-5000
EDDY CO. SHERIFF DEPT. 575-746-9888

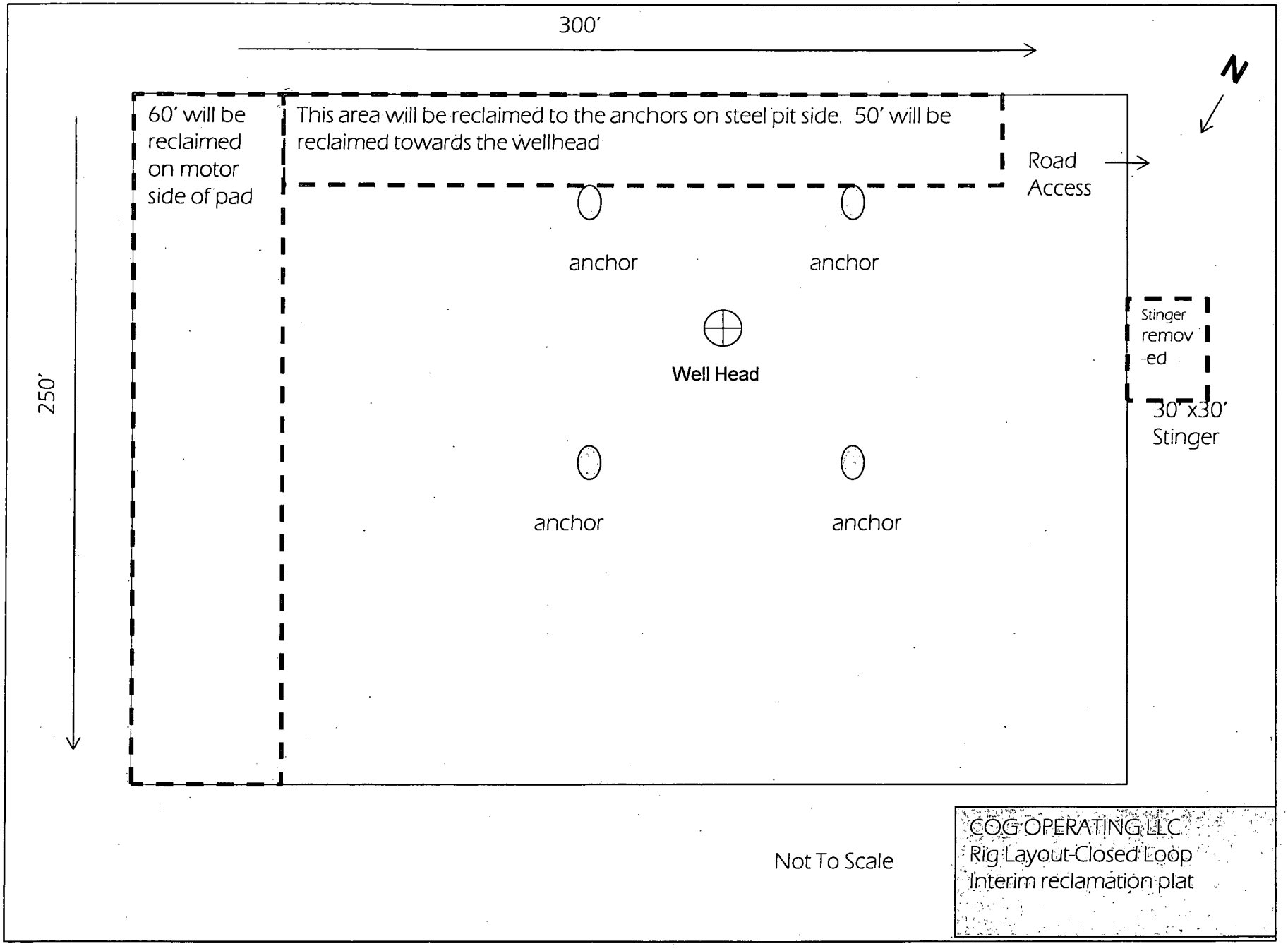
LEA COUNTY EMERGENCY NUMBERS
HOBBS FIRE DEPT. 575-397-9308
HOBBS POLICE DEPT. 575-397-9285
LEA CO. SHERIFF DEPT. 575-396-1196

COG Operating LLC

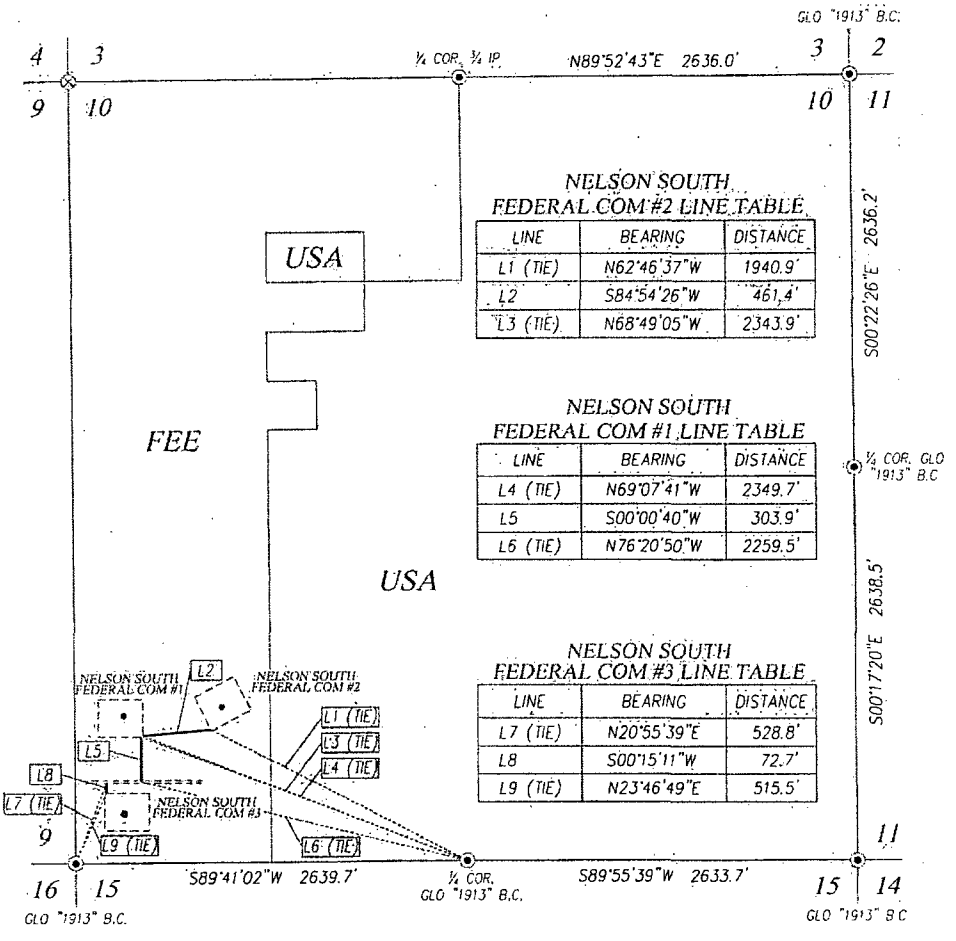
EXHIBIT 8-

Drilling Location – Nelson South Federal Com #2
H2S Safety Equipment Diagram




300'
N
60' will be reclaimed on motor side of pad
This area will be reclaimed to the anchors on steel pit side. 50' will be reclaimed towards the wellhead
Road Access
anchor
anchor
Stinger remov -ed
Well Head
30' x30' Stinger
250'
anchor
anchor
Not To Scale
COG OPERATING LLC
Rig Layout-Closed Loop
Interim reclamation plat

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY NEW MEXICO



NELSON SOUTH FEDERAL COM #2 LINE TABLE

LINE	BEARING	DISTANCE
L1 (TIE)	N62°46'37"W	1940.9'
L2	S84°54'26"W	461.4'
L3 (TIE)	N68°49'05"W	2343.9'

NELSON SOUTH FEDERAL COM #1 LINE TABLE

LINE	BEARING	DISTANCE
L4 (TIE)	N69°07'41"W	2349.7'
L5	S00°00'40"W	303.9'
L6 (TIE)	N76°20'50"W	2259.5'

NELSON SOUTH FEDERAL COM #3 LINE TABLE

LINE	BEARING	DISTANCE
L7 (TIE)	N20°55'39"E	528.8'
L8	S00°15'11"W	72.7'
L9 (TIE)	N23°46'49"E	515.5'

NOTE

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT THIS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON: Ronald J. Eidson

DATE: 09/17/2012

LEGEND

- ◉ DENOTES FOUND CORNER AS NOTED
- ⊗ DENOTES CALCULATED CORNER

1000 0 1000 2000 FEET

Scale: 1"=1000'

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz

COG OPERATING, LLC

SURVEY OF PROPOSED ROADS CROSSING SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M. LEA COUNTY, NEW MEXICO

Survey Date: 9/12/12	CAD Date: 9/12/12	Drawn By: AF	
W.O. No.: 12111515	Rev:	Rel. W.O.:	Sheet 1 of 2

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY NEW MEXICO

DESCRIPTION TO THE NELSON SOUTH FEDERAL COM #2

SURVEY OF A PROPOSED ROAD CROSSING SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 10, WHICH LIES N62°46'37"W 1940.9 FEET FROM THE SOUTH QUARTER CORNER OF SAID SECTION 10; THEN S84°54'26"W 461.4 FEET TO A POINT IN SAID SOUTHWEST QUARTER OF THE SOUTH QUARTER OF SAID SECTION 10, WHICH LIES N68°49'05"W 2343.9 FEET FROM SAID SOUTH QUARTER CORNER OF SAID SECTION 10.

TOTAL LENGTH EQUALS 461.4 FEET OR 27.96 RODS.

DESCRIPTION TO THE NELSON SOUTH FEDERAL COM #1

SURVEY OF A PROPOSED ROAD CROSSING SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 10, WHICH LIES N69°07'41"W 2349.7 FEET FROM THE SOUTH QUARTER CORNER OF SAID SECTION 10; THEN S00°00'40"W 303.9 FEET TO A POINT IN SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 10, WHICH LIES N76°20'50"W 2259.5 FEET FROM THE SOUTH QUARTER CORNER OF SAID SECTION 10.

TOTAL LENGTH EQUALS 303.9 FEET OR 18.42 RODS.

DESCRIPTION TO THE NELSON SOUTH FEDERAL COM #3

SURVEY OF A PROPOSED ROAD CROSSING SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 10, WHICH LIES N20°55'39"E 582.8 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 10; THEN S00°15'11"W 72.7 FEET TO A POINT IN SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 10, WHICH LIES N23°46'49"E 515.5 FEET FROM SAID SOUTHWEST CORNER OF SAID SECTION 10.

TOTAL LENGTH EQUALS 72.7 FEET OR 4.41 RODS.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J. Eidson

DATE: 9/11/2012

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SURVEY OF PROPOSED ROADS CROSSING SECTION 10, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M. LEA COUNTY, NEW MEXICO

Survey Date: 9/12/12	CAD Date: 9/12/12	Drawn By: AF	
W.O. No.: 12111515	Rev:	Rel. W.O.:	Sheet 2 of 2

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