

COG OPERATING LLC
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MAY 20 2013

Gunner 8 Federal Com #4H
SHL: 190' FSL & 380' FEL of Section 8 T26S R34E
BHL: 330' FNL & 420' FEL of Section 5 T26S R34E
Lea County, New Mexico

RECEIVED

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. Location Verification Map - Exhibit 2 is a portion of a topo map showing the well site and existing roads to be utilized for access. Existing roads are marked in green and indicate access from NM Hwy 128. 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:

See 600' x 600' plat for directions.

PLANNED ACCESS ROAD:

- a. COG Operating LLC plans to drill the Gunner 8 Federal #5H well first, followed by the Gunner 8 Federal #4H, #6H and #7H. 1,310' of existing two track road (from the existing caliche road to the P&A Zysk Federal #1 well pad) is planned to be upgraded. This two track road is indicated in yellow on the attached Access Road Survey Plat - Exhibit 2A. Proposed new access road of 2,990' is indicated in red on Exhibit 2A and is planned from the P&A Zysk Federal #1 well pad to the #6H well pad and continuing on to the #5H and then to the #4H well pad.
- b. Width of road is 14' wide, crown design, the road is crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches are 3 feet wide with 3:1 slopes.

2. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, a Gunner 8 Federal Com #4H tank battery will be constructed and the necessary production equipment will be installed at the well site. See Exhibit #3.

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- C. If electricity is needed, power will be obtained from Xcel Energy. Xcel Energy 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 EAST 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:

Melanie Parker, Regulatory Coordinator
COG Operating LLC
Artesia, NM 88210
Phone (575)748-6940
Cell (432) 553-9834

B. Through Drilling Operations

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

COG Production LLC
Gunner 8 Federal Com #4H
Section 8-T26S-R34E

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 1st day of October, 2012

Signed: Melanie Parker

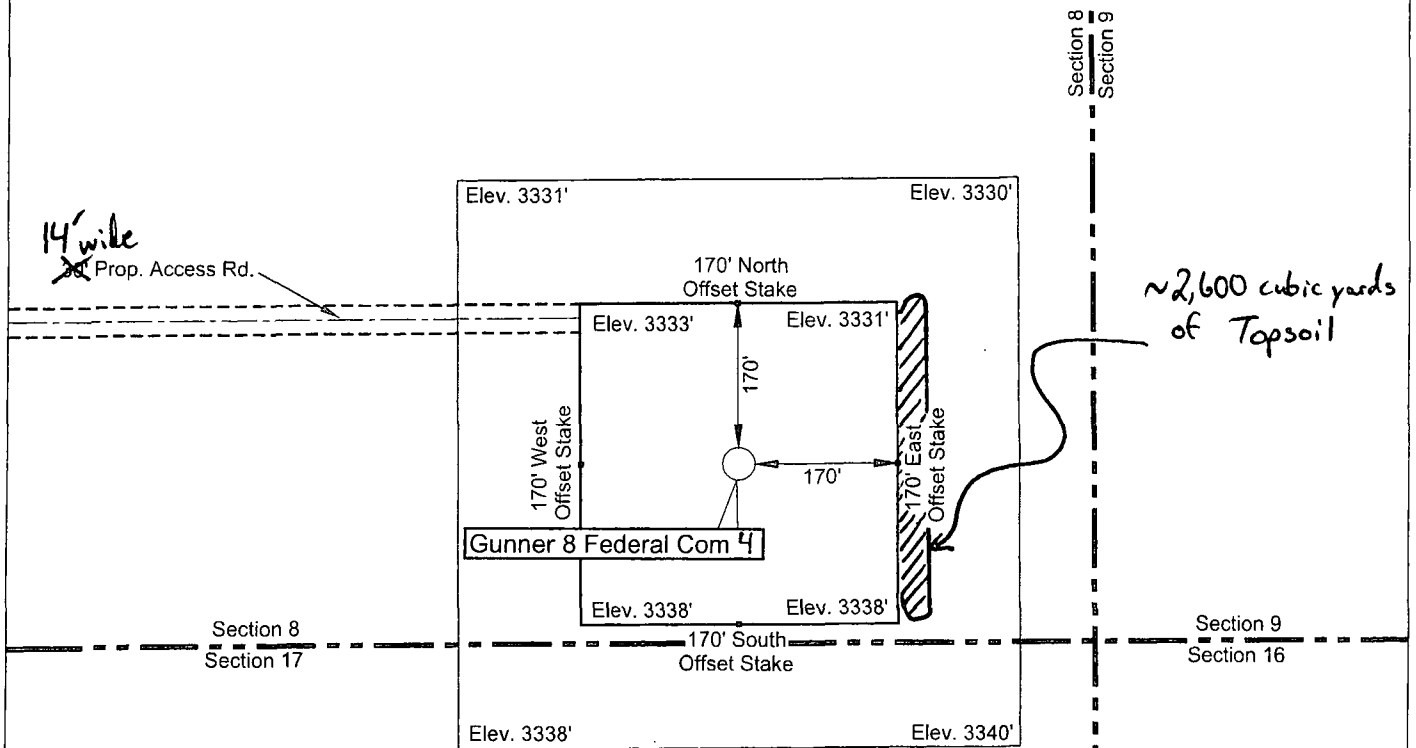
Name: Melanie Parker

Position Title: Regulatory Coordinator

Address: 2208 West Main Street, Artesia, NM 88210

Telephone: 575-748-6940

SECTION 8, T26S, R34E



DIRECTIONS TO LOCATION

FROM JAL, NEW MEXICO, GO SOUTH ON S 3RD ST FOR APPROXIMATELY 1.1 MILES, S 3RD ST. BECOMES FRYING PAN RD. AND GO APPROXIMATELY 2.6 MILES, TURN RIGHT ONTO ANTHONY RD. GO APPROXIMATELY 7.4 MILES, ANTHONY ROAD BECOMES UNNAMED ROAD, GO APPROXIMATELY 9.6 MILES, TURN LEFT ON EXISTING LEASE ROAD AND GO APPROXIMATELY 0.8 MILES, TURN LEFT ON ANOTHER EXISTING LEASE ROAD AND GO APPROXIMATELY 0.3 MILES, LOCATION IS 4072 FEET TO THE EAST.

Well Name	NAD 27 Coordinates		NAD 83 Coordinates		Elevation
	Latitude	Longitude	Latitude	Longitude	
Gunner 8 Federal Com #4H	32.051093°N	103.484136°W	32.051218°N	103.484601°W	3335'

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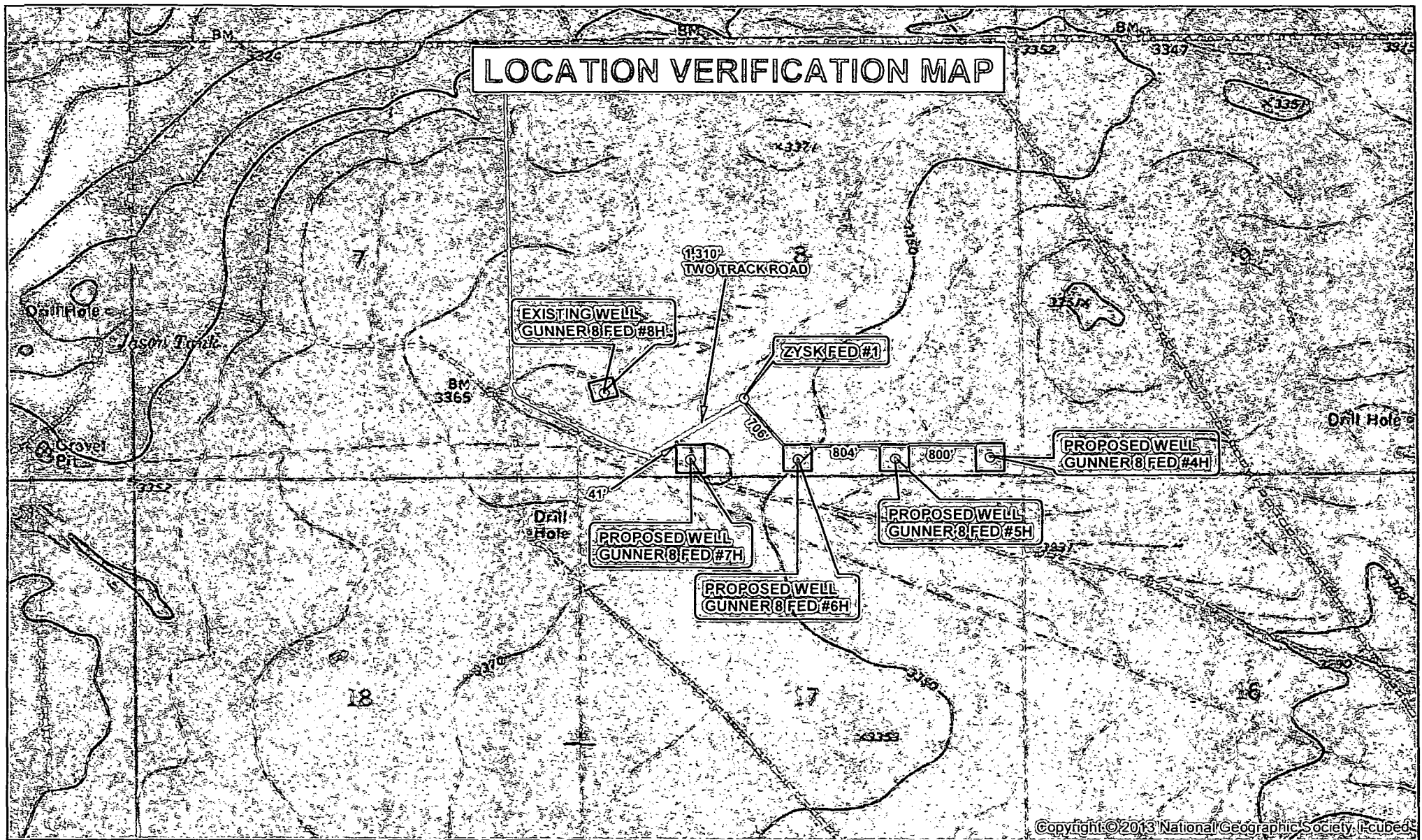
140 E. Tyler St., Suite 600 Longview, Texas 75601
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COG OPERATING, LLC.
Gunner 8 Federal Com #4H

7/12/12

Gunner 8 Federal Com #4H
Located 190' From South Line
and 380' From East Line
SEC 8, T26S, R34E
Lea County, New Mexico

TN
3/4/13

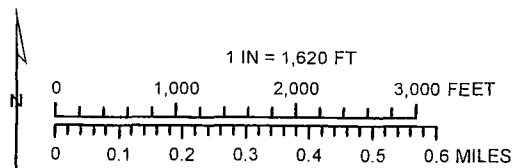


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SEC. 8, TWP. 26S, RGE. 34E
 SURVEY: N.M.P.M
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: GUNER 8 FED #7H
 190' FSL, 1350' FWL

ELEVATION: 3354.9'
 OPERATOR: COG OPERATING LLC
 LEASE: GUNER 8 FED

W.O. # 13-248

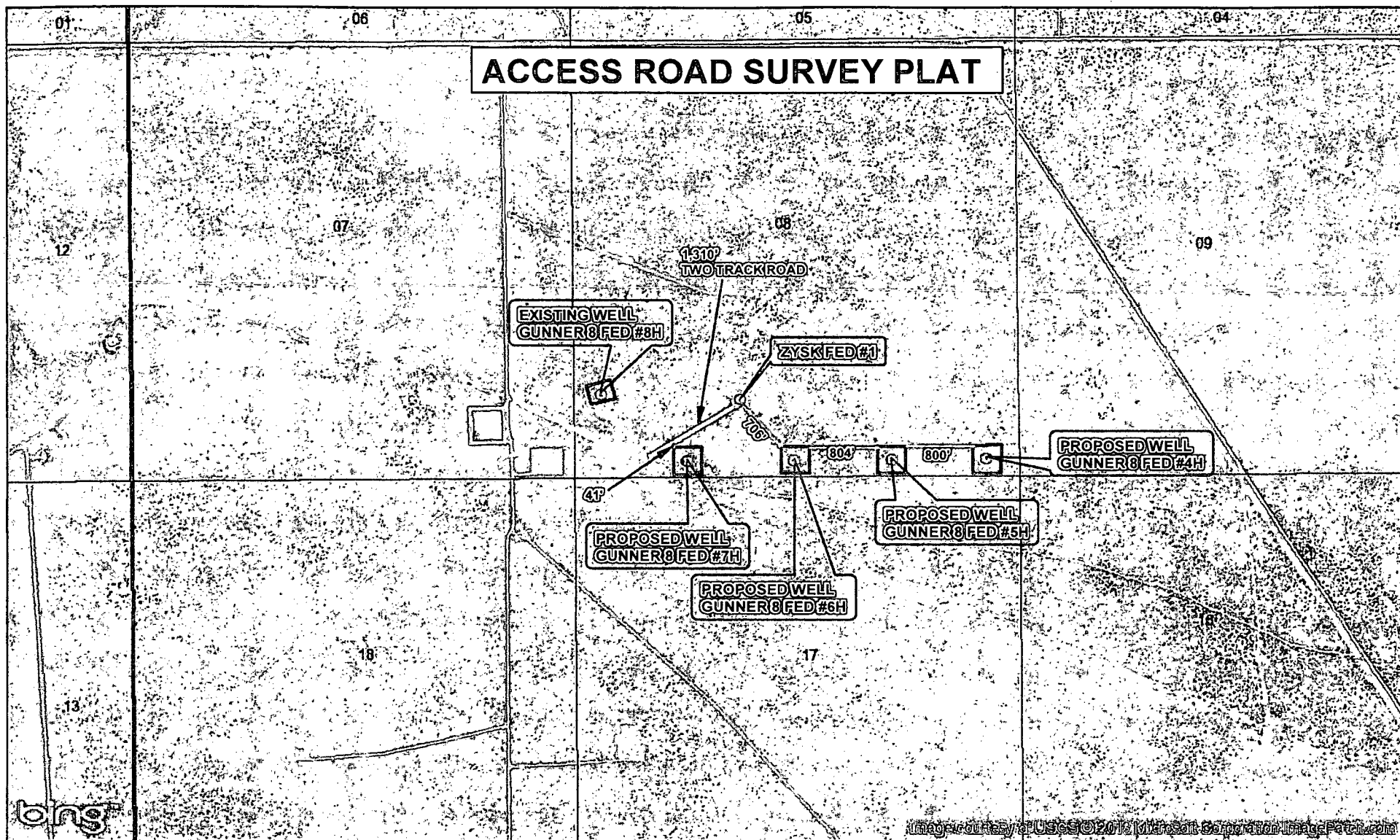


- WELL
- WELL PAD
- PROPOSED ROAD
- TWO-TRACK TO BE UPGRADED
- MAIN ROAD

HARCROW SURVEYING, LLC
 1107 WATSON, ARTESIA N.M. 88210
 PH: (575) 513-2570 FAX: (575) 746-2158
 chad_harcrow77@yahoo.com



MAP DATE: 4/29/2013

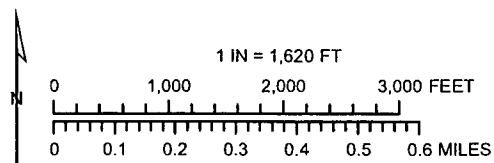


SEC. 8, TWP. 26S, RGE. 34E
 SURVEY: N.M.P.M
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: GUNER 8 FED #7H
 190' FSL, 1350' FWL

ELEVATION: 3354.9'
 OPERATOR: COG OPERATING LLC
 LEASE: GUNER 8 FED

W.O. # 13-248

Exhibit 2A



- WELL
- WELL PAD
- PROPOSED ROAD
- TWO-TRACK TO BE UPGRADED
- MAIN ROAD

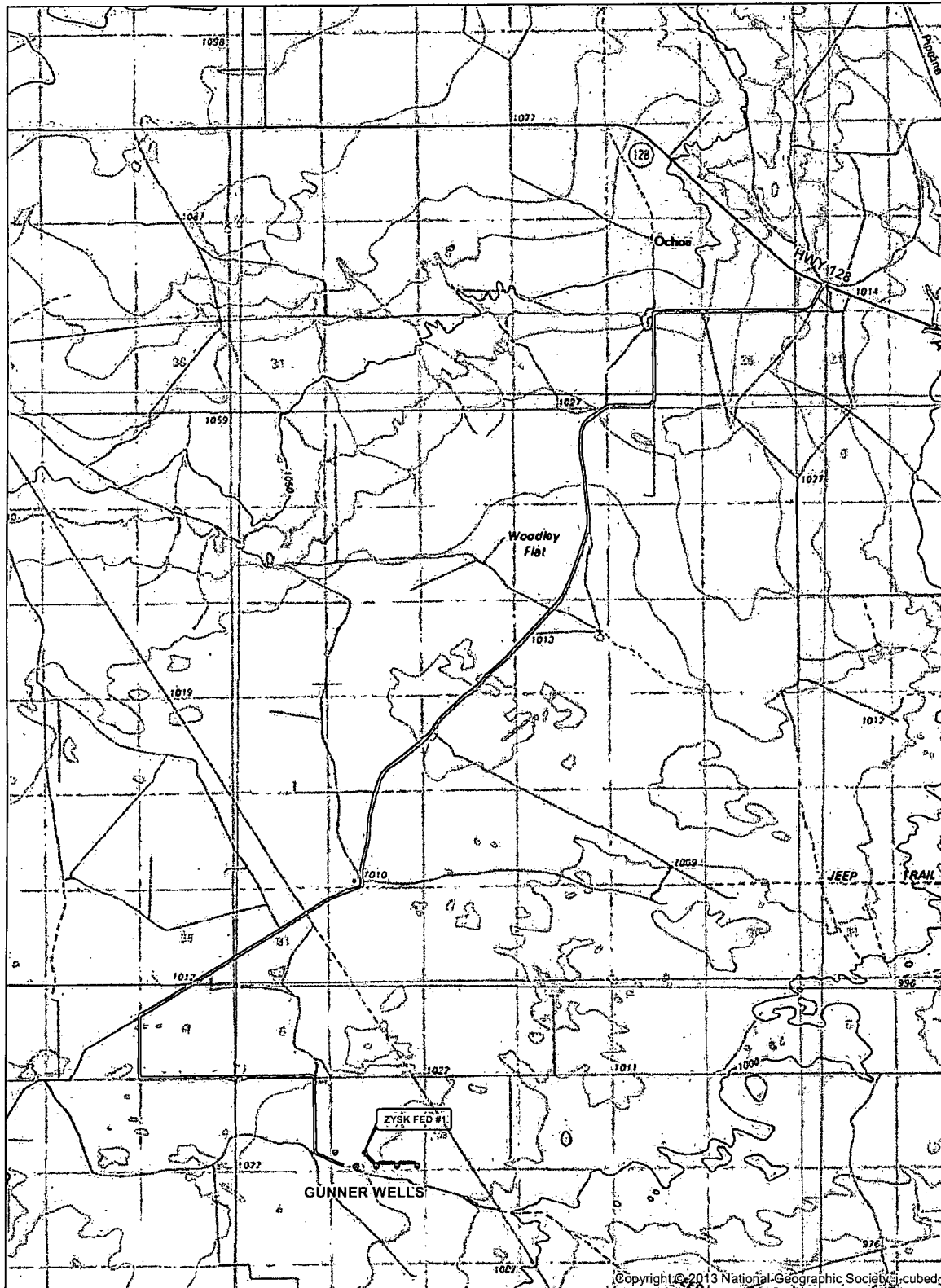
HARCROW SURVEYING, LLC
 1107 WATSON, ARTESIA N.M. 88210
 PH: (575) 513-2570 FAX: (575) 746-2158
 chad_harcrow77@yahoo.com

MAP DATE: 4/29/2013



MAY 23 2013

LOCATION VERIFICATION MAP



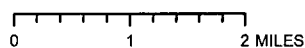
SEC. 8, TWP. 26S, RGE. 34E
 SURVEY: N.M.P.M.
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: GUNNER 8 FED #4H-7H

OPERATOR: COG OPERATING
 LEASE: GUNNER 8 FED

W.O. # 13-77



1 IN = 6,667 FT



- PROPOSED WELL
- EXISTING WELL
- MAIN ROAD
- PROPOSED ROAD
- TWO TRACK ROAD

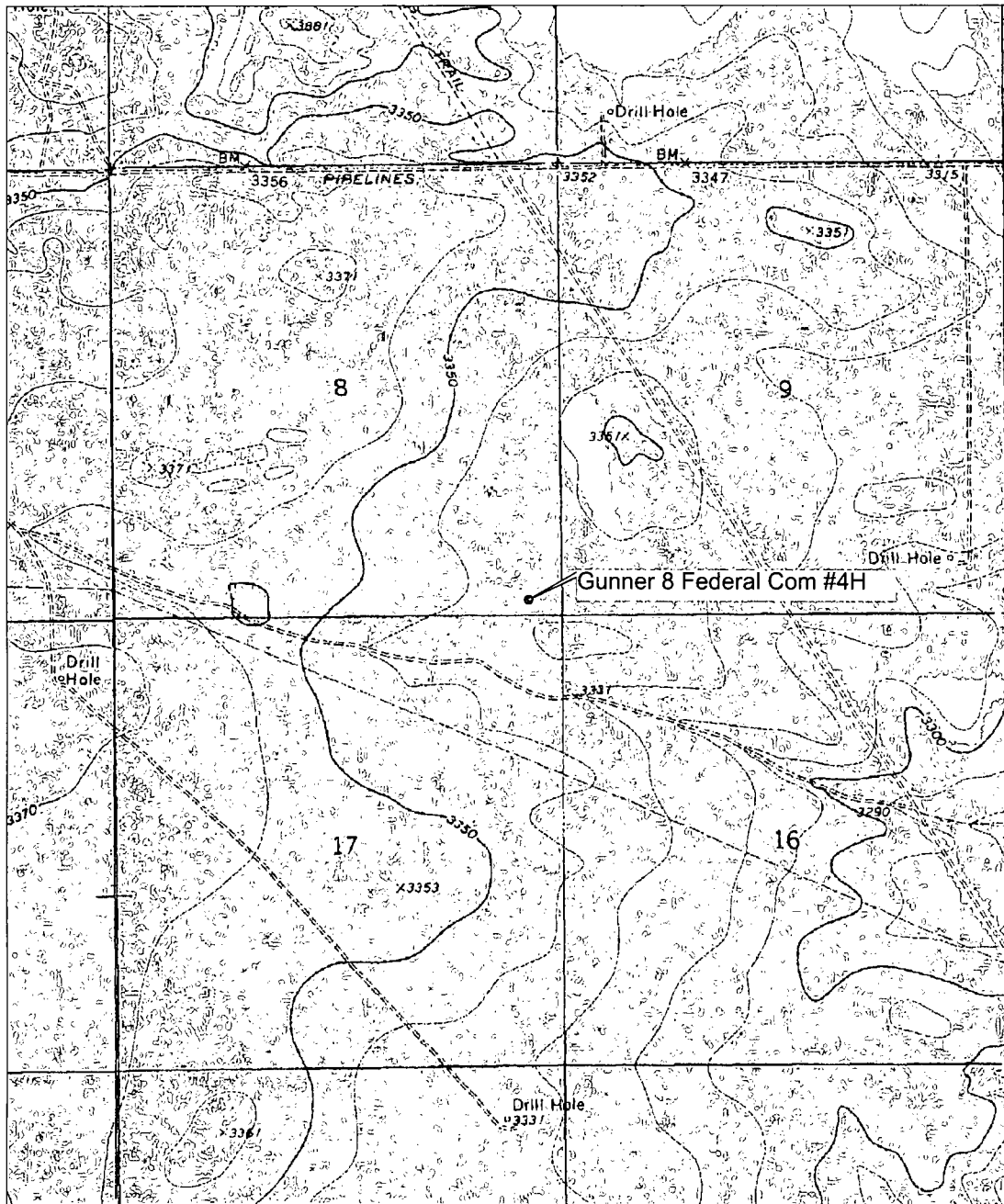
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 chad_harcrow77@yahoo.com



MAP DATE: 4/17/2013

Exhibit 2

LOCATION VERIFICATION MAP



SCALE: 1"=2000'

CONTOUR INTERVAL: 10'

Well Name	NAD 27 Coordinates		NAD 83 Coordinates		Elevation
	Latitude	Longitude	Latitude	Longitude	
Gunner 8 Federal Com #4H	32.051093°N	103.484136°W	32.051218°N	103.484601°W	3335'

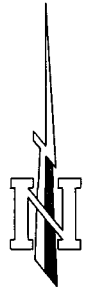
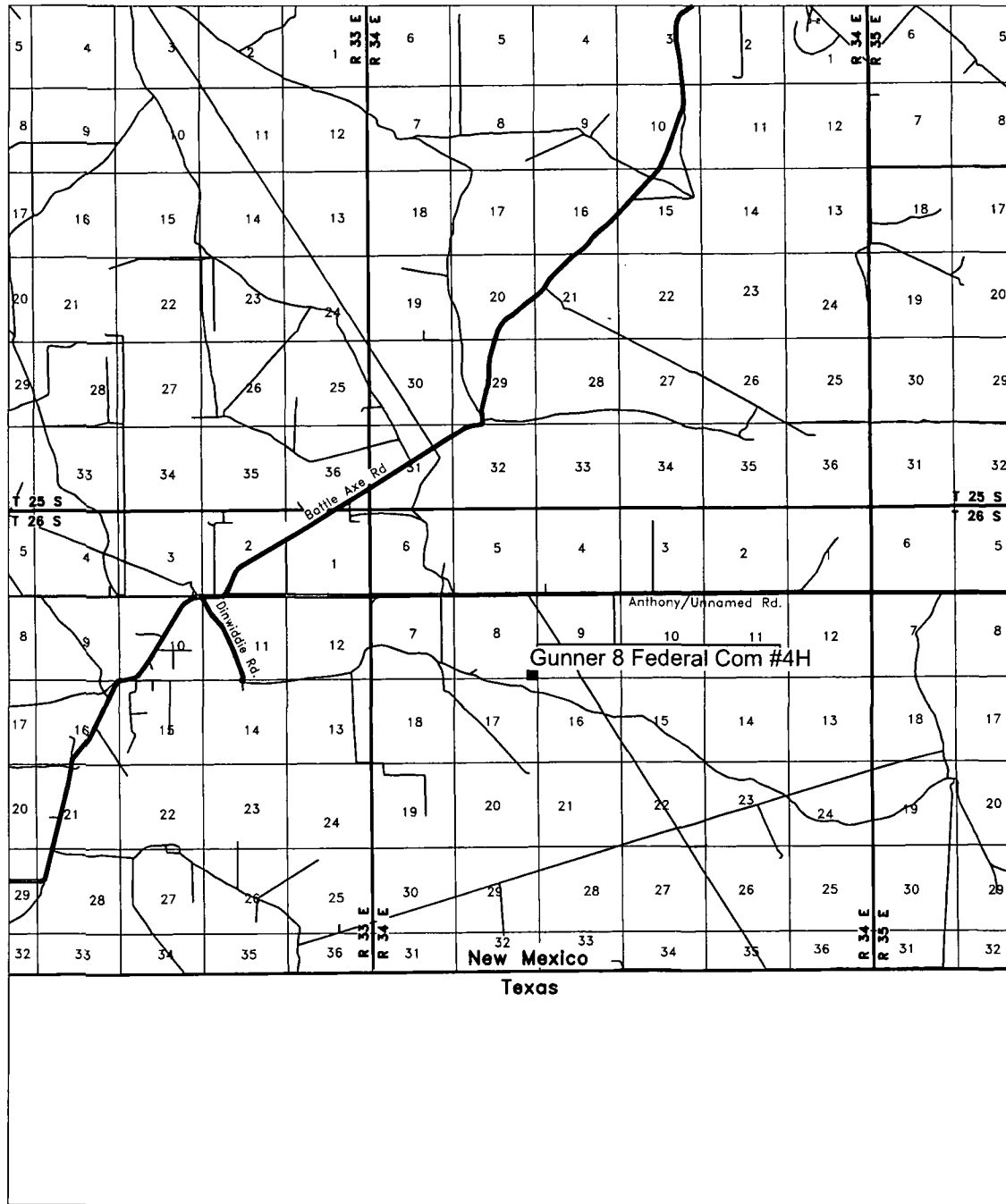
KSA
ENGINEERS

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COG OPERATING, LLC.
Location Verification Map
Gunner 8 Federal Com #4H

Gunner 8 Federal Com #4H
Located 190' From South Line
and 380' From East Line
SEC 8, T26S, R34E
Lea County, New Mexico

VICINITY MAP



SCALE: 1" = 2 MILES

Well Name	NAD 27 Coordinates		NAD 83 Coordinates		Elevation
	Latitude	Longitude	Latitude	Longitude	
Gunner 8 Federal Com #4H	32.051093°N	103.484136°W	32.051218°N	103.484601°W	3335'

KSA
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COG OPERATING, LLC.
Vicinity Map
Gunner 8 Federal Com #4H

Gunner 8 Federal Com #4H
Located 190' From South Line
and 380' From East Line
SEC 8 T26S, R34E
Lea County, New Mexico

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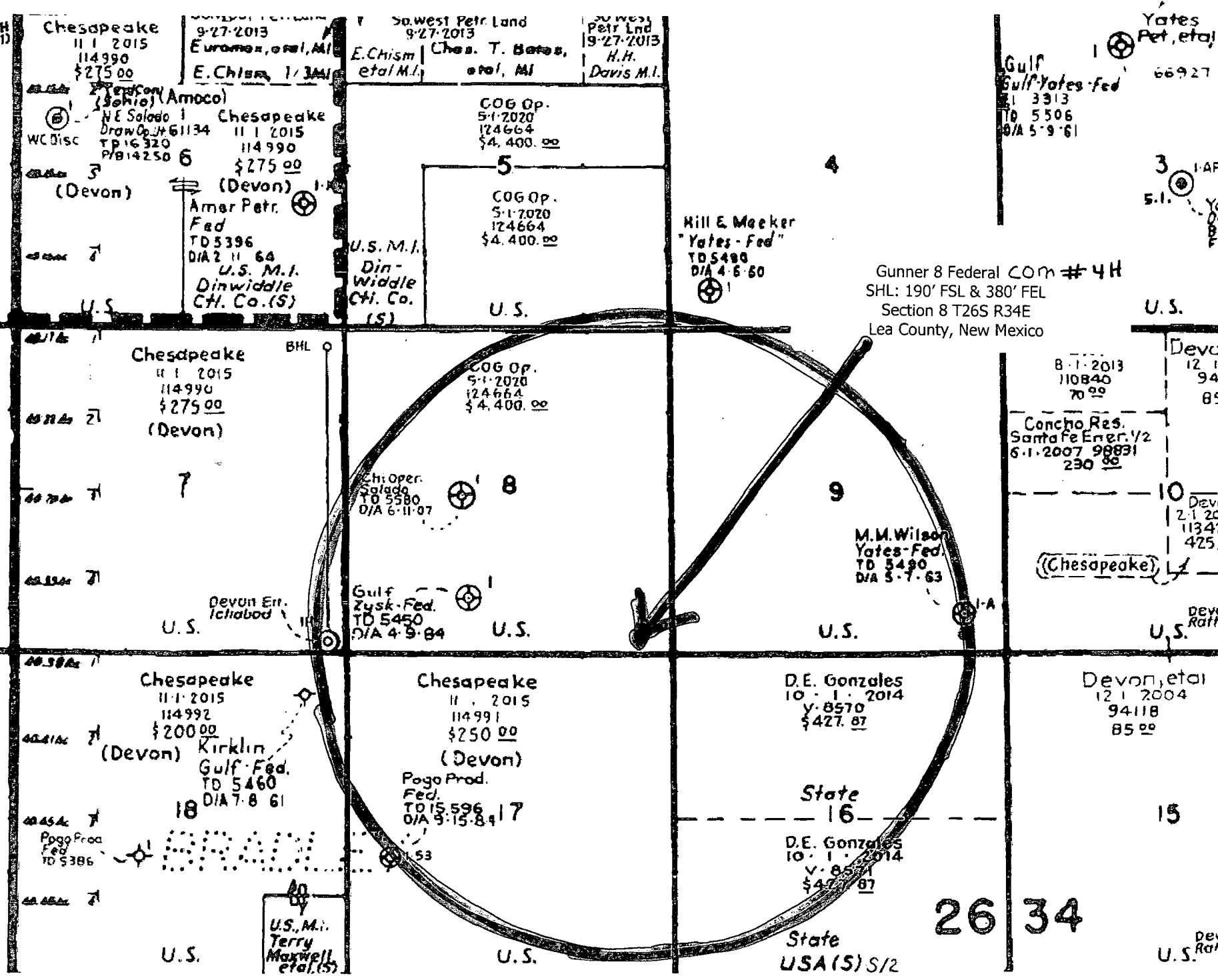
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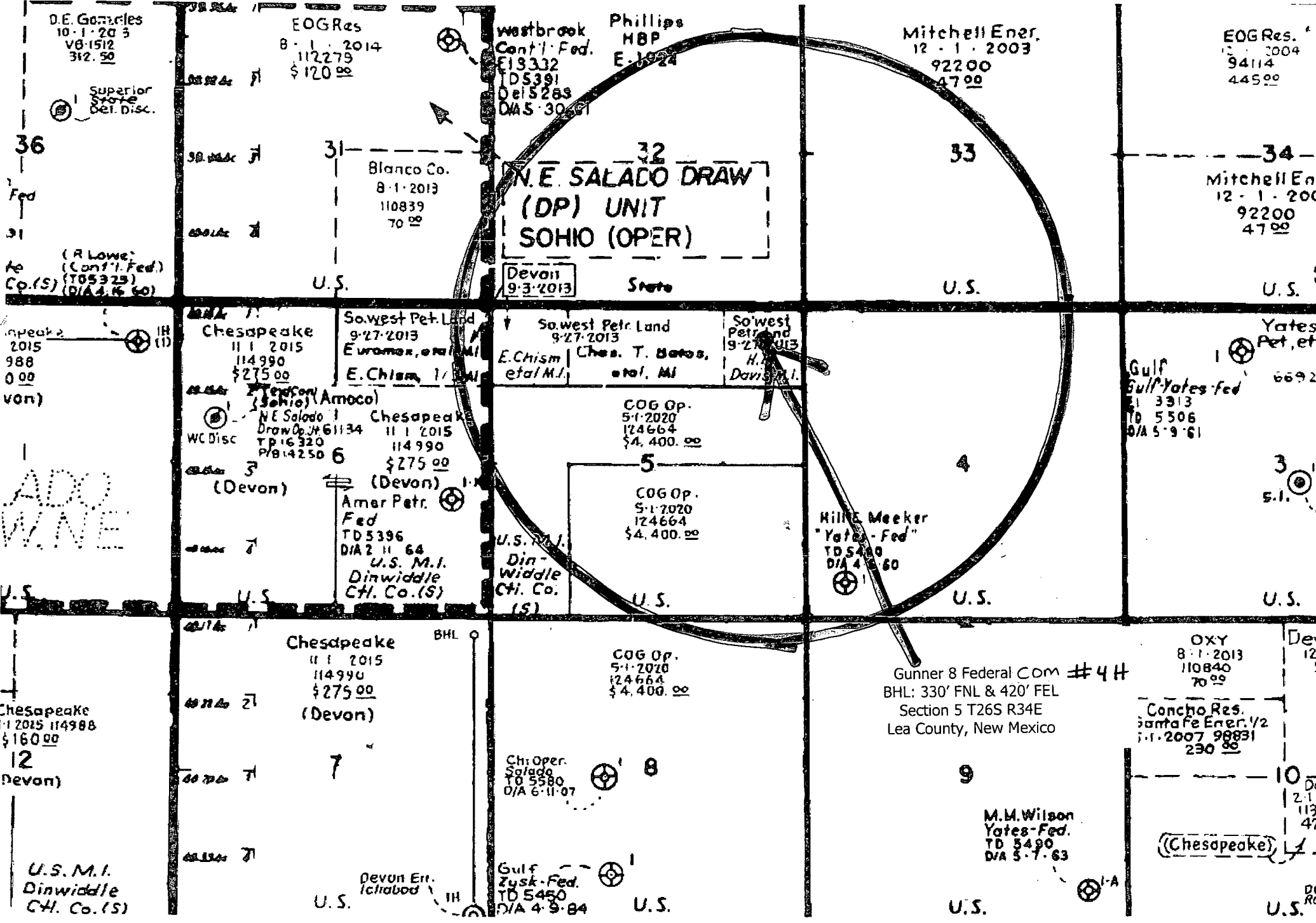
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Continental
Bradley
TD 5375
D/A 1-29-61

S.





ADO
WINE

U.S. M.I.
Dinwiddle
Ctl. Co. (S)

Gunner 8 Federal Com #4H
BHL: 330' FNL & 420' FEL
Section 5 T26S R34E
Lea County, New Mexico

((Chesapeake))