



# COG OPERATING LLC

Boo Radley Com # 701H- 703H  
Section 16-T26S-28E  
Eddy County, New Mexico

Case No. 21410  
BEFORE THE OIL CONSERVATION DIVISION,  
EXAMINER HEARING July 23, 2020



**STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION**

**APPLICATION OF COG OPERATING LLC  
FOR COMPULSORY POOLING,  
EDDY COUNTY, NEW MEXICO.**

**CASE NO. 21410**

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# COMPULSORY POOLING APPLICATION CHECKLIST


ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS

<b>Case: 21410</b>	<b>APPLICANT'S RESPONSE</b>
<b>Date: September 8, 2020</b>	
<b>Applicant</b>	<b>COG Operating LLC</b>
<b>Designated Operator &amp; OGRID (affiliation if applicable)</b>	<b>229137</b>
<b>Applicant's Counsel:</b>	Holland & Hart
<b>Case Title:</b>	APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.
<b>Entries of Appearance/Intervenors:</b>	None
<b>Well Family</b>	Boo Radley Com wells
<b>Formation/Pool</b>	
<b>Formation Name(s) or Vertical Extent:</b>	Wolfcamp
<b>Primary Product (Oil or Gas):</b>	Oil
<b>Pooling this vertical extent:</b>	N/A
<b>Pool Name and Pool Code:</b>	Purple Sage; Wolfcamp (Gas) Pool (98220)
<b>Well Location Setback Rules:</b>	Standard
<b>Spacing Unit Size:</b>	1538.88-acres, more or less
<b>Spacing Unit</b>	
<b>Type (Horizontal/Vertical)</b>	Horizontal
<b>Size (Acres)</b>	1538.88-acres, more or less
<b>Building Blocks:</b>	half sections
<b>Orientation:</b>	north-south
<b>Description: TRS/County</b>	All of Sections 21, 28, and 33, Township 26 South, Range 28 East, Eddy County, New Mexico
<b>Standard Horizontal Well Spacing Unit (Y/N), If No, describe</b>	No, FTPs for 701H-706H wells will be nonstandard.
<b>Other Situations</b>	
<b>Depth Severance: Y/N. If yes, description</b>	Yes, at 9,500'
<b>Proximity Tracts: If yes, description</b>	Yes, E/2 of Sections 21, 28, and 33
<b>Proximity Defining Well: if yes, description</b>	<b>Boo Radley Com 704H well</b> will be within 330' of the quarter-quarter line separating the W/2 and the E/2 of Sections 21, 28, and 33 to allow inclusion of the E/2 of Sections 21, 28, and 33 into a standard horizontal well spacing unit
<b>Applicant's Ownership in Each Tract</b>	Exhibit C-2, C-3
<b>Well(s)</b>	

**BEFORE THE OIL CONSERVATION DIVISION**  
 Santa Fe, New Mexico  
**Exhibit No. A**  
 Submitted by: **COG OPERATING LLC**  
 Hearing Date: September 10, 2020  
 Case No. 21410

Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	
Well #1	<b>Boo Radley Com 701H well (API pending)</b> SHL: 200' FSL and 1490' FEL (Unit O) of Section 16 BHL: 200' FSL and 330' FEL (Lot 4) of Section 33, Township 26 South, Range 28 East Completion Target: Wolfcamp formation Well Orientation: north-south Completion Location expected to be: nonstandard
Well #2	<b>Boo Radley Com 702H well (API pending)</b> SHL: 200' FSL and 1520' FEL (Unit O) of Section 16 BHL: 200' FSL and 1210' FEL (Lot 4) of Section 33, Township 26 South, Range 28 East Completion Target: Wolfcamp formation Well Orientation: north-south Completion Location expected to be: nonstandard
Well #3	<b>Boo Radley Com 703H well (API pending)</b> SHL: 200' FSL and 1550' FEL (Unit O) of Section 16 BHL: 200' FSL and 2090' FEL (Lot 3) of Section 33, Township 26 South, Range 28 East Completion Target: Wolfcamp formation Well Orientation: north-south Completion Location expected to be: nonstandard
Well #4	<b>Boo Radley Com 704H well (API pending)</b> SHL: 220' FSL and 1460' FWL (Unit N) of Section 16 BHL: 200' FSL and 2325' FWL (Lot 2) of Section 33, Township 26 South, Range 28 East Completion Target: Wolfcamp formation Well Orientation: north-south Completion Location expected to be: nonstandard
Well #5	<b>Boo Radley Com 705H well (API pending)</b> SHL: 220' FSL and 1430' FWL (Unit N) of Section 16 BHL: 200' FSL and 1430' FWL (Lot 2) of Section 33, Township 26 South, Range 28 East Completion Target: Wolfcamp formation Well Orientation: north-south Completion Location expected to be: nonstandard
Well #6	<b>Boo Radley Com 706H well (API pending)</b> SHL: 220' FSL and 1400' FWL (Unit N) of Section 16 BHL: 200' FSL and 550' FWL (Lot 5) of Section 33, Township 26 South, Range 28 East Completion Target: Wolfcamp formation Well Orientation: north-south Completion Location expected to be: nonstandard
Horizontal Well First and Last Take Points	Exhibit C-1

Completion Target (Formation, TVD and MD)	Exhibit C-4
<b>AFE Capex and Operating Costs</b>	
Drilling Supervision/Month \$	\$8,000
Production Supervision/Month \$	\$800
Justification for Supervision Costs	Exhibit C, Exhibit C-4
Requested Risk Charge	200%
<b>Notice of Hearing</b>	
Proposed Notice of Hearing	Exhibit B
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit E
Proof of Published Notice of Hearing (10 days before hearing)	Exhibit F
<b>Ownership Determination</b>	
Land Ownership Schematic of the Spacing Unit	Exhibit C-2
Tract List (including lease numbers and owners)	Exhibit C-2
Pooled Parties (including ownership type)	Exhibit C-2
Unlocatable Parties to be Pooled	N/A
Ownership Depth Severance (including percentage above & below)	Yes; Exhibit C-3
<b>Joinder</b>	
Sample Copy of Proposal Letter	Exhibit C-4
List of Interest Owners (ie Exhibit A of JOA)	Exhibit C-2
Chronology of Contact with Non-Joined Working Interests	Exhibit C-5
Overhead Rates In Proposal Letter	Exhibit C-4
Cost Estimate to Drill and Complete	Exhibit C-4
Cost Estimate to Equip Well	Exhibit C-4
Cost Estimate for Production Facilities	Exhibit C-4
<b>Geology</b>	
Summary (including special considerations)	Exhibit D
Spacing Unit Schematic	Exhibit D-1
Gunbarrel/Lateral Trajectory Schematic	Exhibit D-1
Well Orientation (with rationale)	Exhibit D-1
Target Formation	Exhibit D-2
HSU Cross Section	Exhibit D-3, D-4
Depth Severance Discussion	N/A
<b>Forms, Figures and Tables</b>	
C-102	Exhibit C-1
Tracts	Exhibit C-2
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit C-2
General Location Map (including basin)	Exhibit D-1
Well Bore Location Map	Exhibit D-2

Structure Contour Map - Subsea Depth	Exhibit D-2
Cross Section Location Map (including wells)	Exhibit D-3, D-4
Cross Section (including Landing Zone)	Exhibit D-3, D-4
<b>Additional Information</b>	
Special Provisions/Stipulations	None
<b>CERTIFICATION: I hereby certify that the information provided in this checklist is complete and accurate.</b>	
<b>Printed Name</b> (Attorney or Party Representative):	Kaitlyn A. Luck
<b>Signed Name</b> (Attorney or Party Representative):	
<b>Date:</b>	8-Sep-20

**STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION**

**APPLICATION OF COG OPERATING LLC  
FOR COMPULSORY POOLING,  
EDDY COUNTY, NEW MEXICO.**

**CASE NO. 21410**

**APPLICATION**

COG Operating LLC ("Applicant") (OGRID No. 229137), through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of NMSA 1978, § 70-2-17, for an order pooling all uncommitted interests in the Wolfcamp formation [Purple Sage Wolfcamp Gas Pool (98220)] underlying a standard 1,538.88-acre, more or less, horizontal spacing unit comprised of all of Sections 21, 28, and 33, Township 26 South, Range 28 East, Eddy County, New Mexico. In support of its application, COG states:

1. Applicant is a working interest owner in the proposed horizontal spacing unit and has the right to drill thereon.

2. Applicant seeks to dedicate the above-referenced horizontal spacing unit to the following proposed wells:

- The **Boo Radley Com 701H well**, and the **Boo Radley Com 702H well** to be drilled from a common surface hole location in SW/4 SE/4 (Unit O) of Section 16 to bottom hole locations in the SE/4 NE/4 (Lot 4) of Section 33;
- The **Boo Radley Com 703H well** to be drilled from a surface hole location in SW/4 SE/4 (Unit O) of Section 16 to a bottom hole location in the SW/4 NE/4 (Lot 3) of Section 33;

**BEFORE THE OIL CONSERVATION DIVISION**  
Santa Fe, New Mexico  
**Exhibit No. B**  
Submitted by: **COG OPERATING LLC**  
Hearing Date: September 10, 2020  
Case No. 21410

- The **Boo Radley Com 704H well** and the **Boo Radley Com 705H well** to be drilled from a common surface hole location in SE/4 SW/4 (Unit N) of Section 16 to bottom hole locations in the SE/4 NW/4 (Lot 2) of Section 33; and
- The **Boo Radley Com 706H well** to be drilled from a surface hole location in SE/4 SW/4 (Unit N) of Section 16 to a bottom hole location in the SW/4 NW/4 (Lot 1) of Section 33.

3. The completed interval for the proposed **Boo Radley Com 704H well** will be within 330' of the quarter-quarter line separating the W/2 and the E/2 of Sections 21, 28, and 33 to allow inclusion of the E/2 of Sections 21, 28, and 33 into a standard horizontal well spacing unit.

4. Applicant has sought and been unable to obtain voluntary agreement for the development of these lands from all the interest owners in the subject spacing unit.

5. The pooling of interests will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

6. In order to permit Applicant to obtain it's just and fair share of the oil and gas underlying the subject lands, all uncommitted interests in this horizontal spacing unit should be pooled and Applicant should be designated the operator of the proposed horizontal well spacing unit.

WHEREFORE, Applicant requests that this application be set for hearing before an Examiner of the Oil Conservation Division on September 10, 2020, and, after notice and hearing as required by law, the Division enter an order:

- A. Pooling all uncommitted interests in the horizontal spacing unit;

- B. Approving the initial wells in the horizontal spacing unit;
- C. Designating Applicant as the operator of this spacing unit and the horizontal wells to be drilled thereon;
- D. Authorizing Applicant to recover its costs of drilling, equipping, and completing the wells;
- E. Approving the actual operating charges and costs of supervision, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and
- F. Imposing a 200% charge for the risk assumed by Applicant in drilling and completing the wells against any working interest owner who does not voluntarily participate in the drilling of the wells.

Respectfully submitted,

HOLLAND & HART LLP



By: \_\_\_\_\_  
Michael H. Feldewert  
Adam G. Rankin  
Julia Broggi  
Kaitlyn A. Luck  
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Santa Fe, New Mexico 87504-2208  
(505) 988-4421  
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mfeldewert@hollandhart.com  
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jbroggi@hollandhart.com  
kaluck@hollandhart.com

**ATTORNEYS FOR COG OPERATING LLC**

**STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION**

**APPLICATION OF COG OPERATING LLC  
FOR COMPULSORY POOLING,  
EDDY COUNTY, NEW MEXICO.**

**CASE NO. 21410**

**AFFIDAVIT OF LIZZY LAUFER, LANDMAN**

Lizzy Laufer, being of lawful age and duly sworn, states the following:

1. My name is Lizzy Laufer, and I am employed by COG Operating LLC ("COG") as a Landman.
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum land matters and my credentials have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by COG this case and the status of the lands in the subject area.
4. None of the mineral owners to be pooled have expressed opposition to this case proceeding by affidavit, so I do not expect any opposition at the hearing.
5. In this case, COG seeks an order pooling all uncommitted interests in the Wolfcamp formation (Purple Sage; Wolfcamp (Gas) Pool [98220]) underlying standard 1,538.88-acre, more or less, horizontal spacing unit comprised of all of Sections 21, 28, and 33, Township 26 South, Range 28 East, Eddy County, New Mexico.
6. COG seeks to form and initially dedicate the horizontal spacing unit to the following proposed initial wells:

- The **Boo Radley Com 701H well** (API No. 30-015-pending), and the **Boo Radley Com 702H well** (API No. 30-015-pending), both of which are to be drilled from a common surface hole location in SW/4 SE/4 (Unit O) of Section 16 to bottom hole locations in the SE/4 NE/4 (Lot 4) of Section 33;
- The **Boo Radley Com 703H well** (API No. 30-015-pending) to be drilled from a surface hole location in SW/4 SE/4 (Unit O) of Section 16 to a bottom hole location in the SW/4 NE/4 (Lot 3) of Section 33;
- The **Boo Radley Com 704H well** (API No. 30-015-pending) and the **Boo Radley Com 705H well** (API No. 30-015-pending) to be drilled from a common surface hole location in SE/4 SW/4 (Unit N) of Section 16 to bottom hole locations in the SE/4 NW/4 (Lot 2) of Section 33; and
- The **Boo Radley Com 706H well** (API No. 30-015-pending) to be drilled from a surface hole location in SE/4 SW/4 (Unit N) of Section 16 to a bottom hole location in the SW/4 NW/4 (Lot 5) of Section 33.

7. The completed interval for the proposed **Boo Radley Com 704H well** will be within 330' of the quarter-quarter line separating the W/2 and the E/2 of Sections 21, 28, and 33 to allow inclusion of the E/2 of Sections 21, 28, and 33 into a standard horizontal well spacing unit.

8. **COG Exhibit C-1** contains Form C-102s for the proposed initial wells for each spacing unit in numerical order and reflecting that these wells are located in the Purple Sage; Wolfcamp (Gas) Pool (98220).

9. **COG Exhibit C-2** identifies the tracts of land comprising the proposed spacing unit, the working interest ownership in each tract and their respective interest in the horizontal

spacing unit. COG has highlighted on Exhibit C-2 the mineral owners that remain to be pooled for the proposed spacing unit. COG has also listed the overriding royalty interest owners that require pooling. The acreage is comprised of fee, state, and federal lands.

10. An ownership depth severance exists within in the Wolfcamp formation underlying the subject acreage at 9500' and COG is currently working with the affected parties on an Operating Agreement for the entire subject horizontal spacing unit. The percentage of each interest above and below the depth severance is provided on COG Exhibit C-3.

11. COG has conducted a diligent search of company records, county records, telephone directories and conducted computer searches to locate contact information for each of the mineral owners that it seeks to pool. All of the pooled mineral owners have been located.

12. **COG Exhibit C-4** contains a sample of the letters and AFE's for the proposed wells sent to the working interest owners that COG has been able to locate. The costs reflected on these AFE's are consistent with what COG and other operators have incurred for drilling similar horizontal wells in the area in these formations.

13. **COG Exhibit C-5** contains a chronology of the contacts with the uncommitted mineral owners COG was able to locate. COG has made a good faith effort to obtain voluntary joinder of these owners in the proposed wells.

14. COG requests overhead and administrative rates of \$8,000 per month for drilling and \$800 per month for a producing well. These rates are consistent with the rates charged by COG and other operators for similar wells in this area.

15. I have provided the law firm of Holland and Hart, LLP, with the names and addresses of the mineral owners that COG seeks to pool and instructed that they be notified of this hearing.

16. COG Exhibits C-1 through C-5 were prepared by me or compiled under my direction from company business records.

FURTHER AFFIANT SAYETH NAUGHT.

E. Laufer

LIZZY LAUFER

STATE OF TEXAS )

COUNTY OF MIDLAND )

SUBSCRIBED and SWORN to before me this 8 day of Sept 2020 by  
Lizzy Laufer.

Mickie J Allen

NOTARY PUBLIC

My Commission Expires:

2-26-2023



DISTRICT I  
 1625 N. FRENCH DR., HOBBS, NM 88240  
 Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II  
 811 S. FIRST ST., ARTESIA, NM 88210  
 Phone: (505) 748-1283 Fax: (505) 748-0720

DISTRICT III  
 1000 RIO BRAZOS RD., AZTEC, NM 87410  
 Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
 1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
 Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
 Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
 1220 SOUTH ST. FRANCIS DR.  
 Santa Fe, New Mexico 87505

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>701H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>2993.9'</b>

**Surface Location**

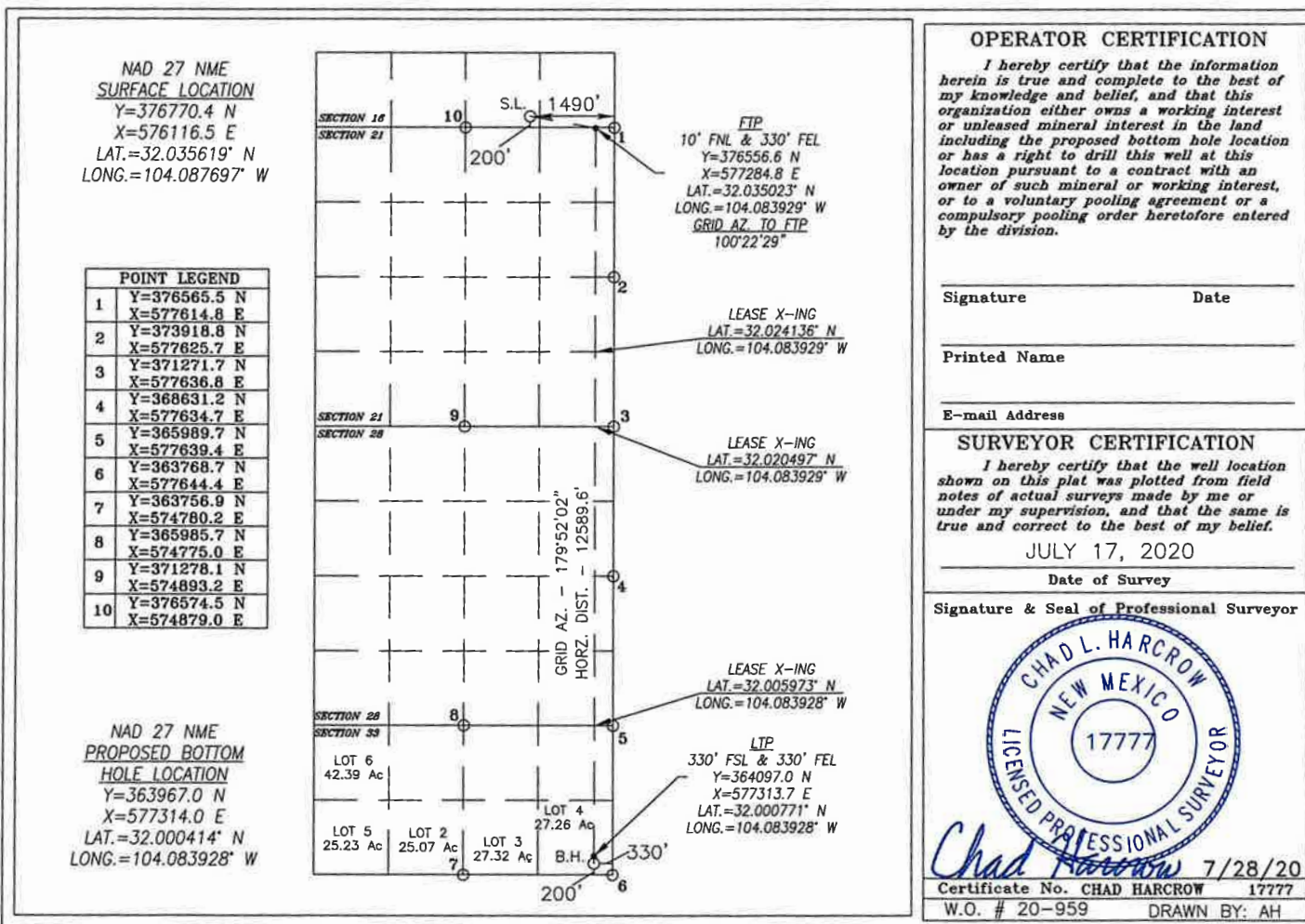
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1490	EAST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	33	26-S	28-E		200	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
 OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>701H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>2993.9'</b>

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1490	EAST	EDDY

**Bottom Hole Location If Different From Surface**

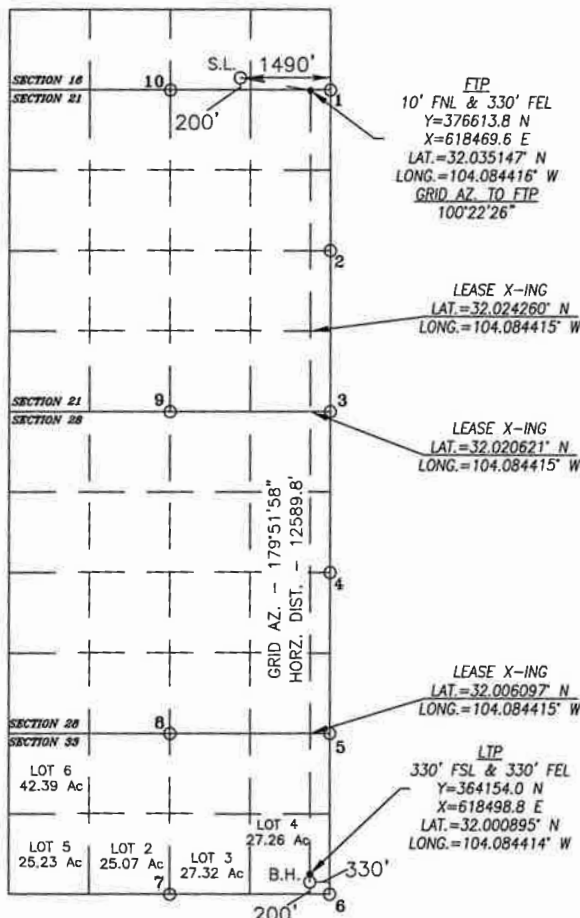
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	33	26-S	28-E		200	SOUTH	330	EAST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 83 NME  
SURFACE LOCATION  
Y=376827.7 N  
X=617301.3 E  
LAT.=32.035742° N  
LONG.=104.088185° W

POINT LEGEND	
1	Y=376622.7 N X=618799.6 E
2	Y=373976.1 N X=618810.7 E
3	Y=371328.9 N X=618821.8 E
4	Y=368688.3 N X=618819.8 E
5	Y=366046.7 N X=618824.5 E
6	Y=363825.7 N X=618829.5 E
7	Y=363813.8 N X=615965.2 E
8	Y=366042.7 N X=615960.0 E
9	Y=371335.2 N X=616078.1 E
10	Y=376631.8 N X=616063.7 E

NAD 83 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=364024.0 N  
X=618499.1 E  
LAT.=32.000538° N  
LONG.=104.084414° W



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

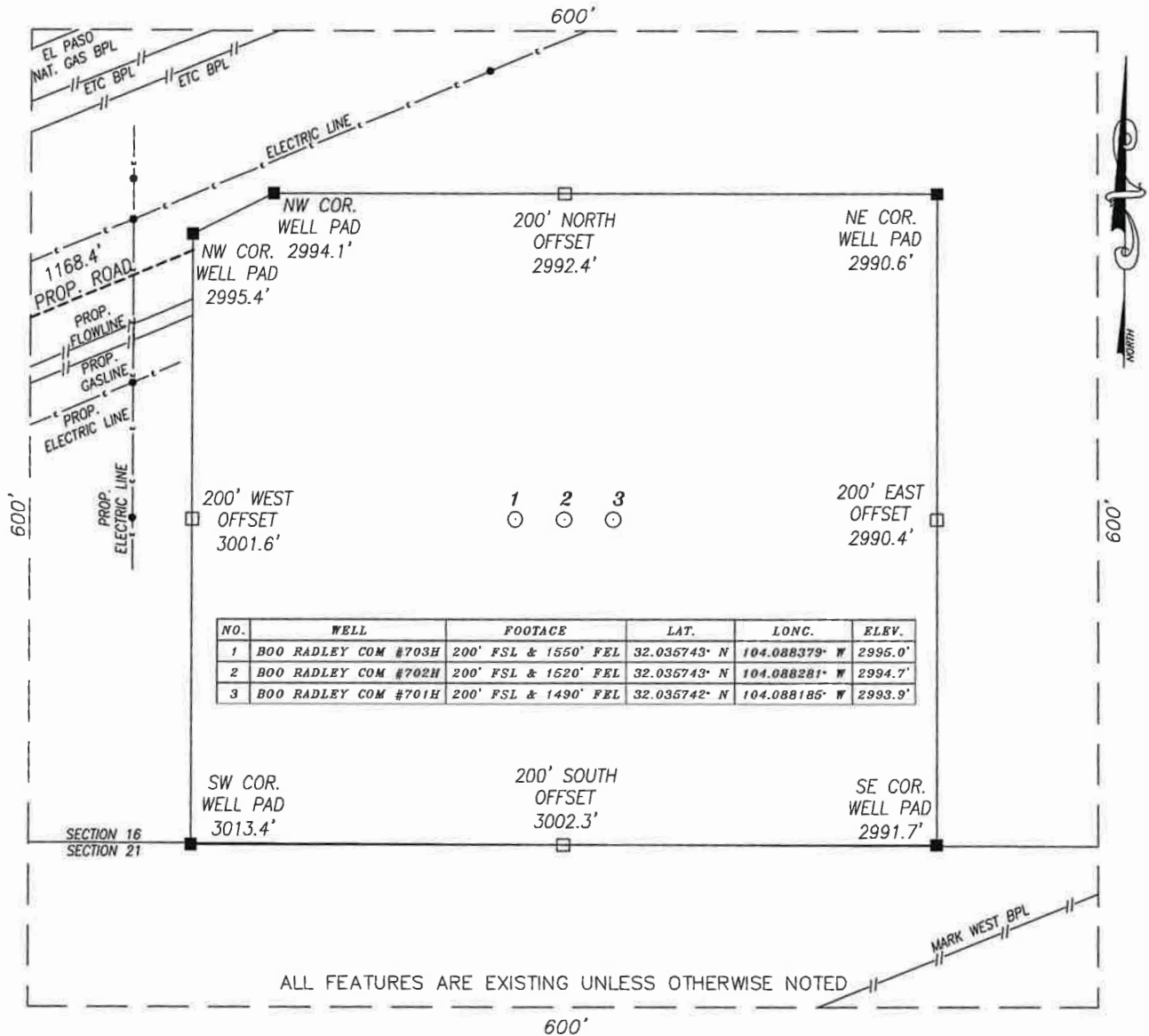
Date of Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-959 DRAWN BY: AH

SECTION 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY) ONTO CALICHE ROAD; THEN GO APPROX. 0.8 MILES TO THE PROPOSED ROAD; PROPOSED WELLS LIES APPROX. 1342 FEET TO THE NORTHEAST.

COORDINATES ARE NAD 83 NME AND ELEVATIONS ARE NAVD 88

CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Chad Harcrow

CHAD HARCROW N.M.P.S. NO. 17777

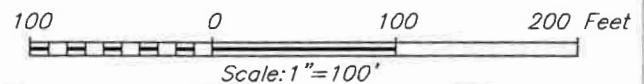
7/30/20  
DATE

HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

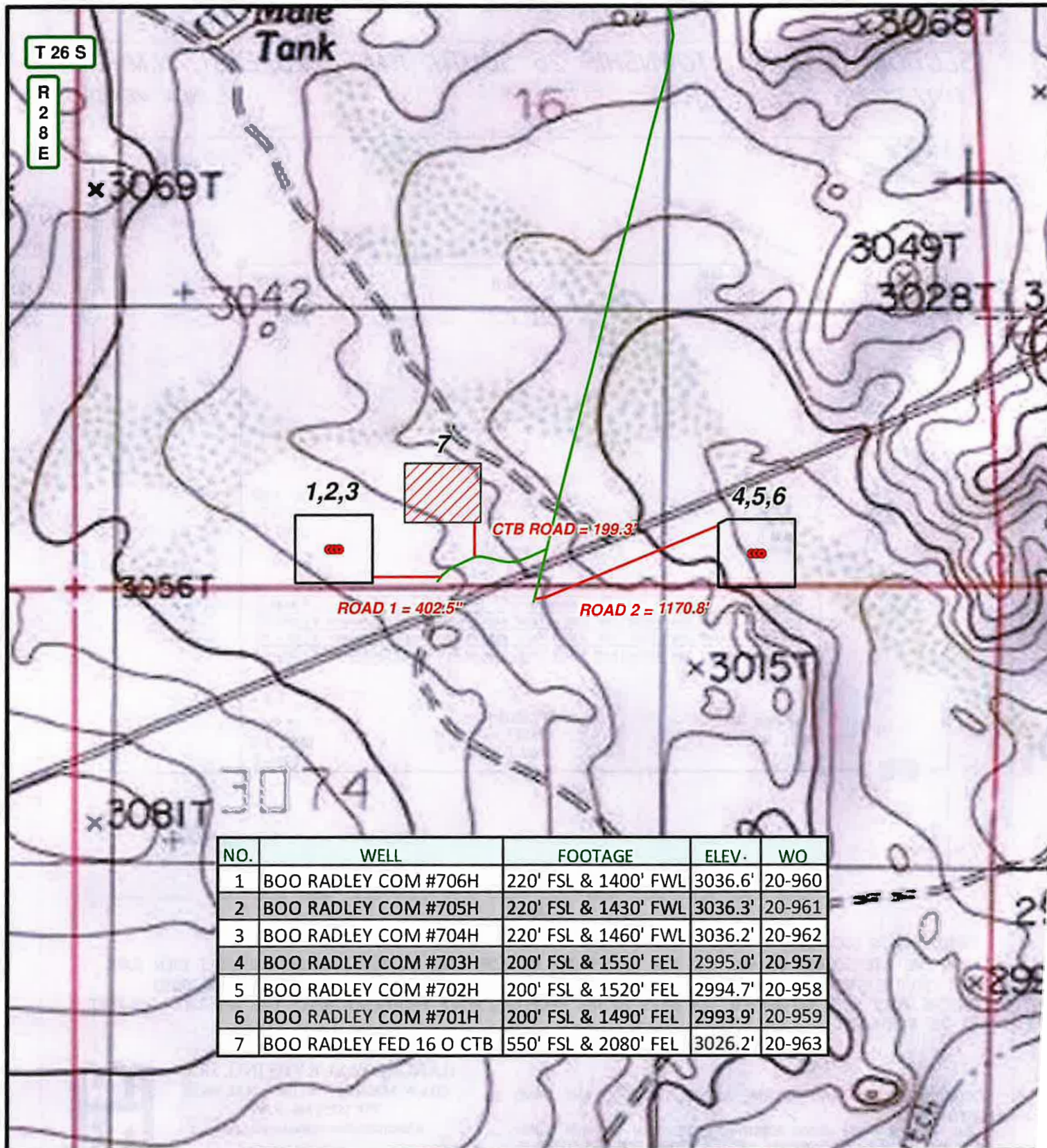
PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



COG OPERATING, LLC

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH
	FILE: 20-957



NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles 1 IN = 750 FT

LOCATION MAP

TOPO

7/22/2020

W.N.

**CONCHO**

COG OPERATING, LLC



HARCROW SURVEYING, LL  
 2316 W. MAIN ST, ARTESIA, NM 882  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

17

16

15

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5"

ROAD 2 = 1170.8'

20

22

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND



WELL



WELLPAD



EXISTING ROAD



PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

IMAGERY

7/22/2020

W.N.



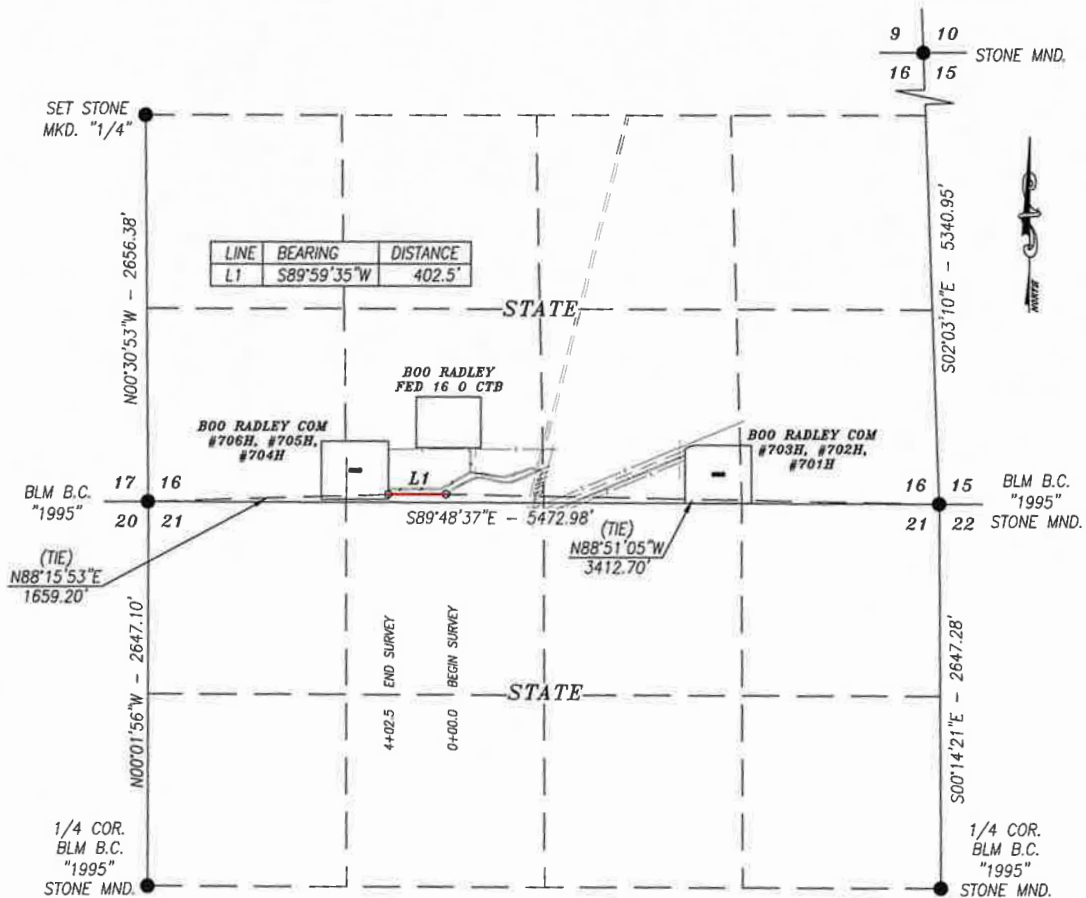
COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
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# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°51'05"W 3412.70 FEET FROM THE SOUTHEAST CORNER; THEN S89°59'35"W 402.5 FEET; TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°15'53"E 1659.20 FEET FROM THE SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 402.5 FEET OR 24.39 RODS IN LENGTH, CONTAINING 0.277 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

## BASIS OF BEARING:

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.

## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

## HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #1

DRAFTING DATE: JULY 23, 2020

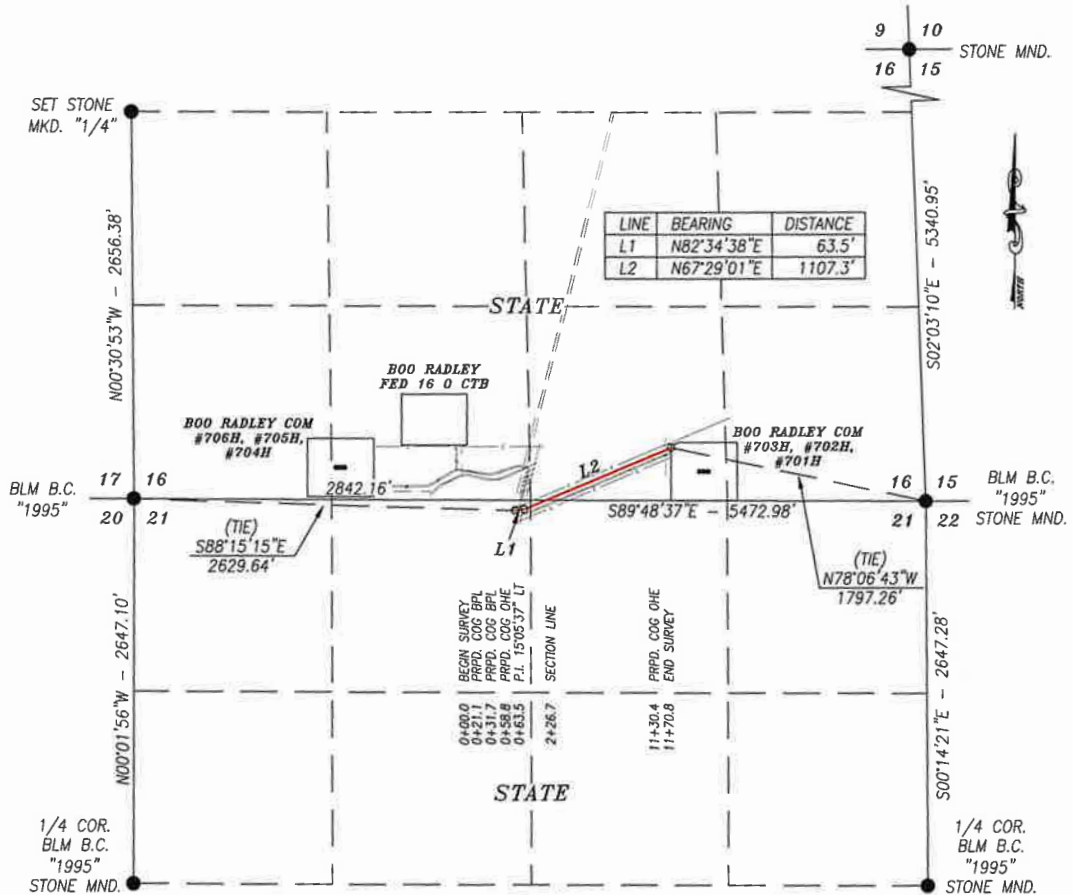
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NE/4 NW/4 OF SECTION 21, WHICH LIES S88°15'15"E 2629.64 FEET FROM THE NORTHWEST CORNER OF SECTION 21; THEN N82°34'38"E 63.5 FEET; THEN N67°29'01"E 1107.3 FEET; TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N78°06'43"W 1797.26 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1170.8 FEET OR 70.96 RODS IN LENGTH, CONTAINING 0.806 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

### SECTION 16

SW/4 SE/4 57.22 RODS OR 0.650 ACRES

### SECTION 21

NE/4 NW/4 6.81 RODS OR 0.077 ACRES

NW/4 NE/4 6.93 RODS OR 0.079 ACRES

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

### HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET



SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #2

DRAFTING DATE: JULY 23, 2020

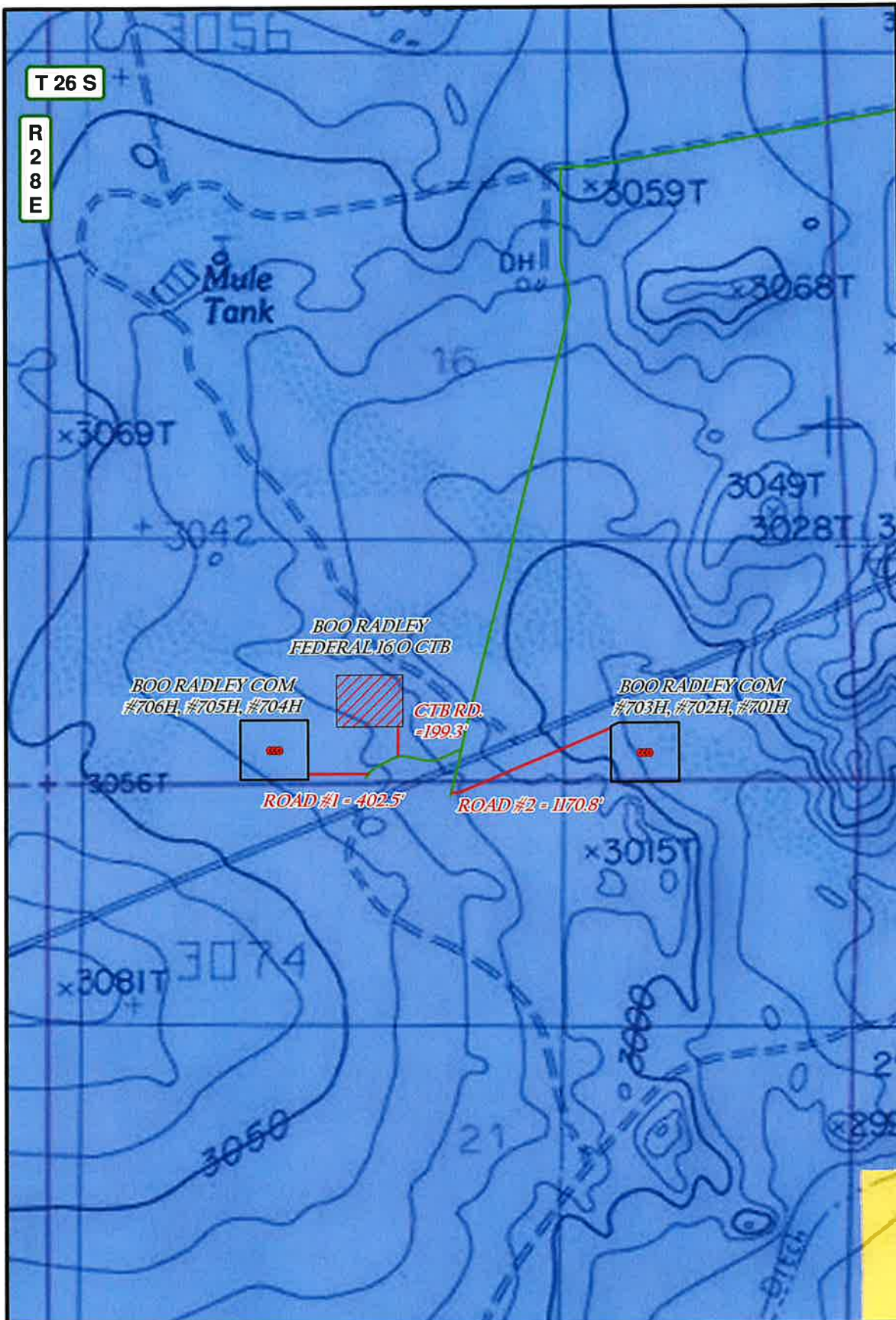
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995



<b>LEGEND</b> • WELL □ WELLPAD — EXIST. ROAD — ACCESS ROAD	<b>BOO RADLEY COM ACCESS ROADS</b>			 <b>CONCHO</b> COG OPERATING, LLC   <b>HARCROW SURVEYING, LLC.</b> 2316 W. MAIN ST, ARTESIA, NM 88210 PH: (575) 746-2158 c.harcrow@harcrowsurveying.com
	SECTION: 16, 21      TOWNSHIP: 26 S.      RANGE: 28 E.			
	STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M			
	W.O. # 20-995      LEASE: BOO RADLEY			
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> </div> <div style="flex: 1;"> </div> <div style="flex: 1;">           1 IN = 750 FT         </div> </div>				
LOCATION MAP      IMAGERY      7/23/2020      W.N.				



<b>LEGEND</b> WELL WELLPAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM	<b>BOO RADLEY COM ACCESS ROADS</b>		
	SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.
	STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
	W.O. # 20-995	LEASE: BOO RADLEY	
	  1 IN = 750 FT		
	LOCATION MAP	LAND STATUS	7/23/2020 W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

## NEW MEXICO



FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY); THEN GO APPROX. 0.7 MILES; TURN RIGHT AND GO APPROX. 0.1 MILES TO THE PROPOSED ROAD. PROPOSED PAD LIES APPROX. 420 FEET TO THE NORTHWEST.

CERTIFICATION  
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY  
THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS  
TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



c.harcrow@harcrowsurveying.com



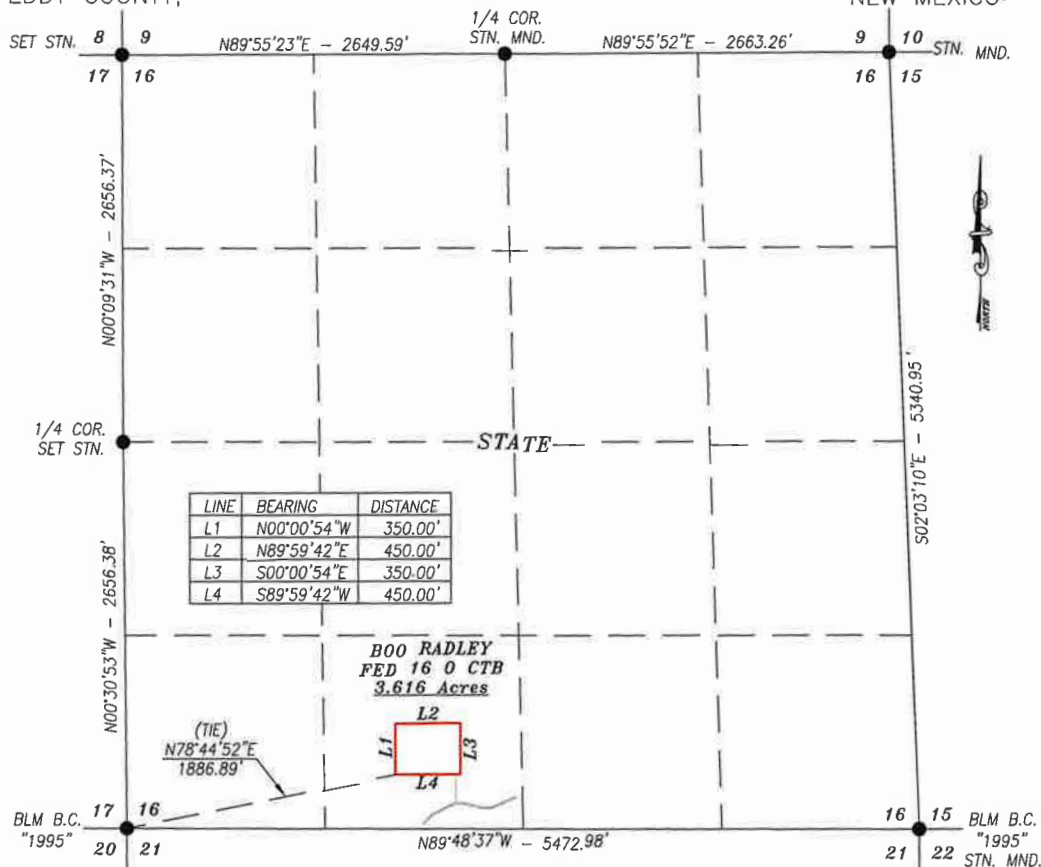
SURVEY DATE: JULY 17, 2020		600S
DRAFTING DATE: JULY 22, 2020		PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN	FILE: 20-963

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

# **EXHIBIT A** **STATE BUSINESS LEASE** **COG OPERATING, LLC.**

A STATE BUSINESS LEASE FOR THE "BOO RADLEY FED 16 0 CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A PROPOSED PAD LOCATED WITHIN STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N78°44'52"E 1886.89 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'54"W 350.00 FEET; THEN N89°59'42"E 450.00 FEET; THEN S00°00'54"W 350.00 FEET; THEN S89°59'42"W 450.00 FEET TO THE POINT OF BEGINNING.

SAID PAD CONTAINS 3.616 ACRES AND IS LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**  
 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.

**HARCROW SURVEYING, LLC**  
 2316 W. MAIN ST., ARTESIA, N.M. 88210  
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 c.harcrow@harcrowsurveying.com

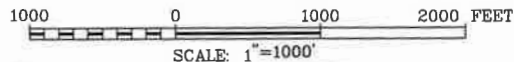


**CERTIFICATION**  
 I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
 DATE



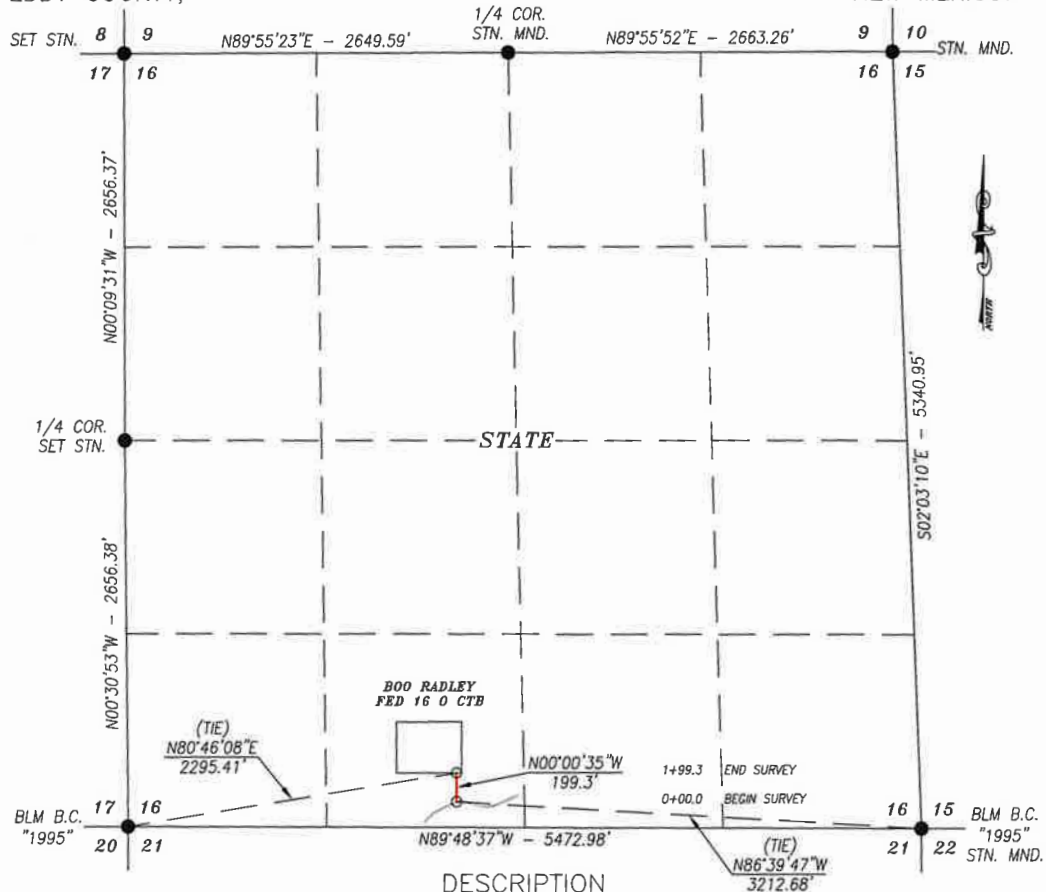
## **COG OPERATING, LLC**

SURVEY OF A PROPOSED PAD LOCATED IN  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
 NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT A
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

**EXHIBIT B**  
**ACCESS ROAD PLAT**  
**COG OPERATING, LLC.**

AN ACCESS ROAD FOR THE "BOO RADLEY FED 16 O CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°39'47\"W 3212.68 FEET FROM THE SOUTHEAST CORNER; THEN N00°00'35\"W 199.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N80°46'08\"E 2295.41 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 199.3 FEET OR 12.08 RODS IN LENGTH, CONTAINING 0.137 ACRES MORE OR LESS AND BEING LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**CERTIFICATION**

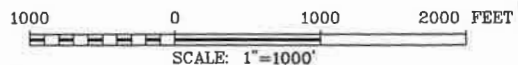
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
 DATE

**HARCROW SURVEYING, LLC**  
 2316 W. MAIN ST., ARTESIA, N.M. 88210  
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 c.harcrow@harcrowsurveying.com



**COG OPERATING, LLC**

SURVEY OF A PROPOSED ROAD LOCATED IN  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
 NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT B
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

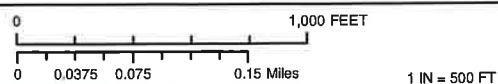


**LEGEND**

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD

**BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD**

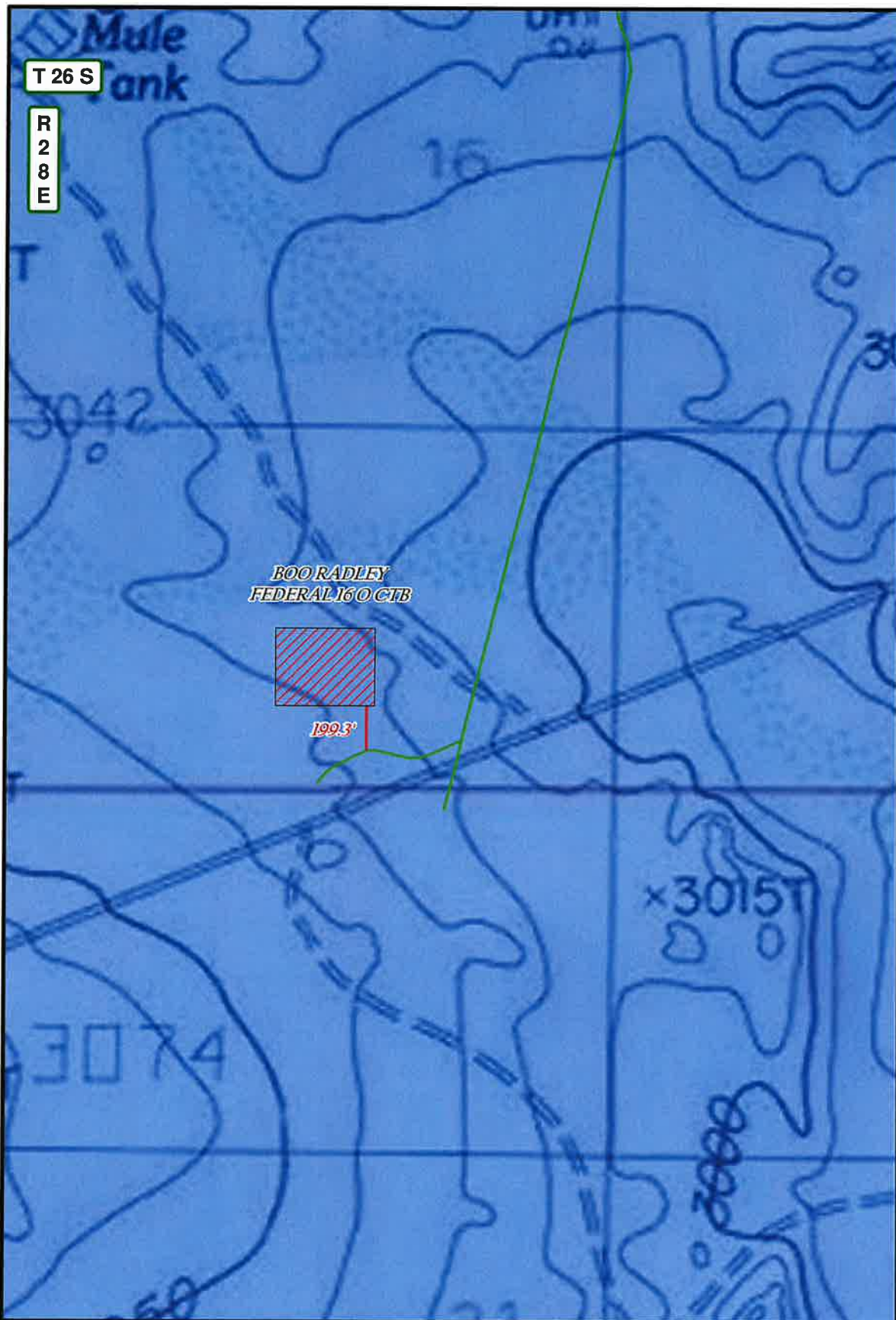
SECTION: 16	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-963		LEASE: BOO RADLEY



LOCATION MAP	IMAGERY	7/22/2020	W.N.
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 **CONCHO**  
COG OPERATING, LLC

 **HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

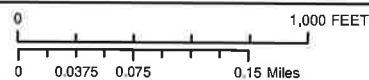


# LEGEND

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD
-  PRIVATE
-  STATE OF NM
-  US BLM

## BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-963 LEASE: BOO RADLEY



1 IN = 500 FT

LOCATION MAP

LAND STATUS

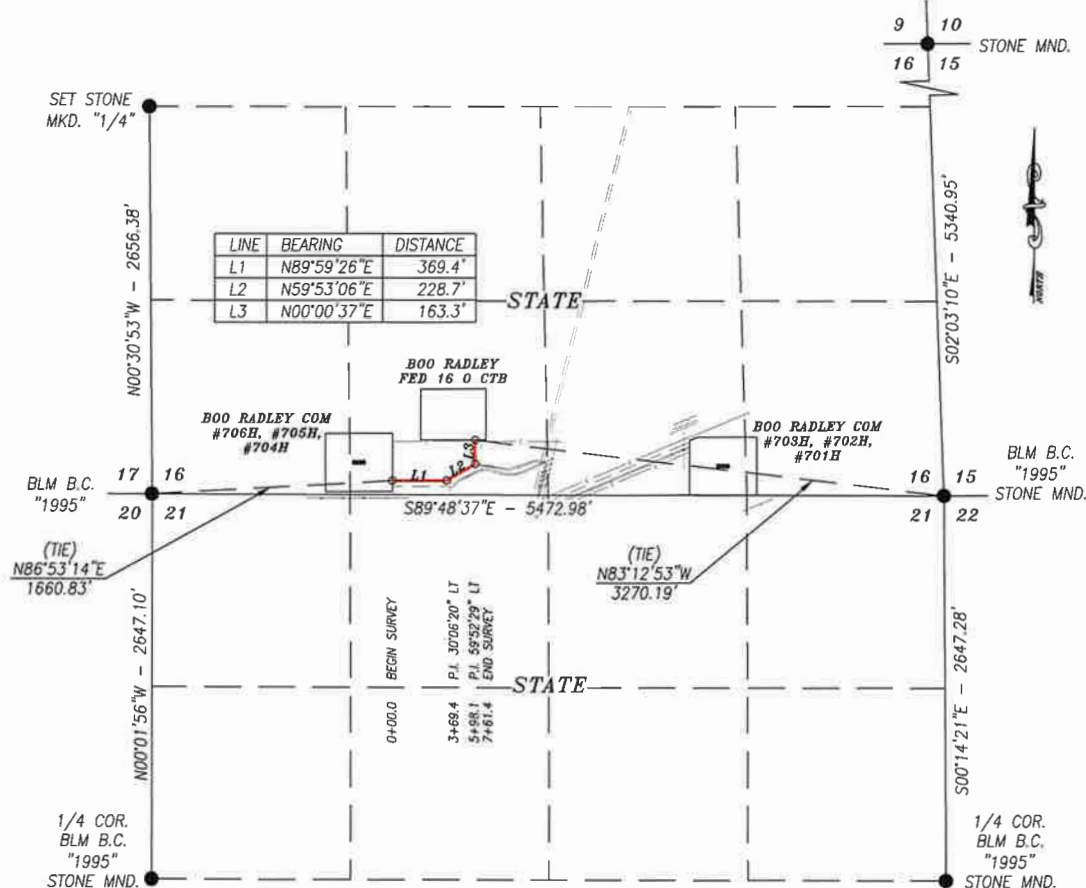
7/22/2020

W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°53'14"E 1660.83 FEET FROM THE SOUTHWEST CORNER; THEN N89°59'26"E 369.4 FEET; THEN N59°53'06"E 228.7; THEN N00°00'37"E 163.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°12'53"W 3270.19 FEET FROM SOUTHEAST CORNER.

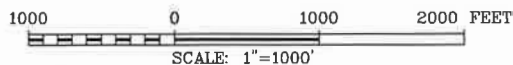
SAID STRIP OF LAND BEING 761.4 FEET OR 46.15 RODS IN LENGTH, CONTAINING 0.524 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

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.

c.harcrow@harcrowsurveying.com



I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

FLOWLINE #1

PAGE 1 OF 1

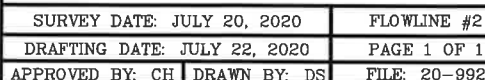
FILE: 20-992

Chad Harrow



07/28/20  
DATE

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

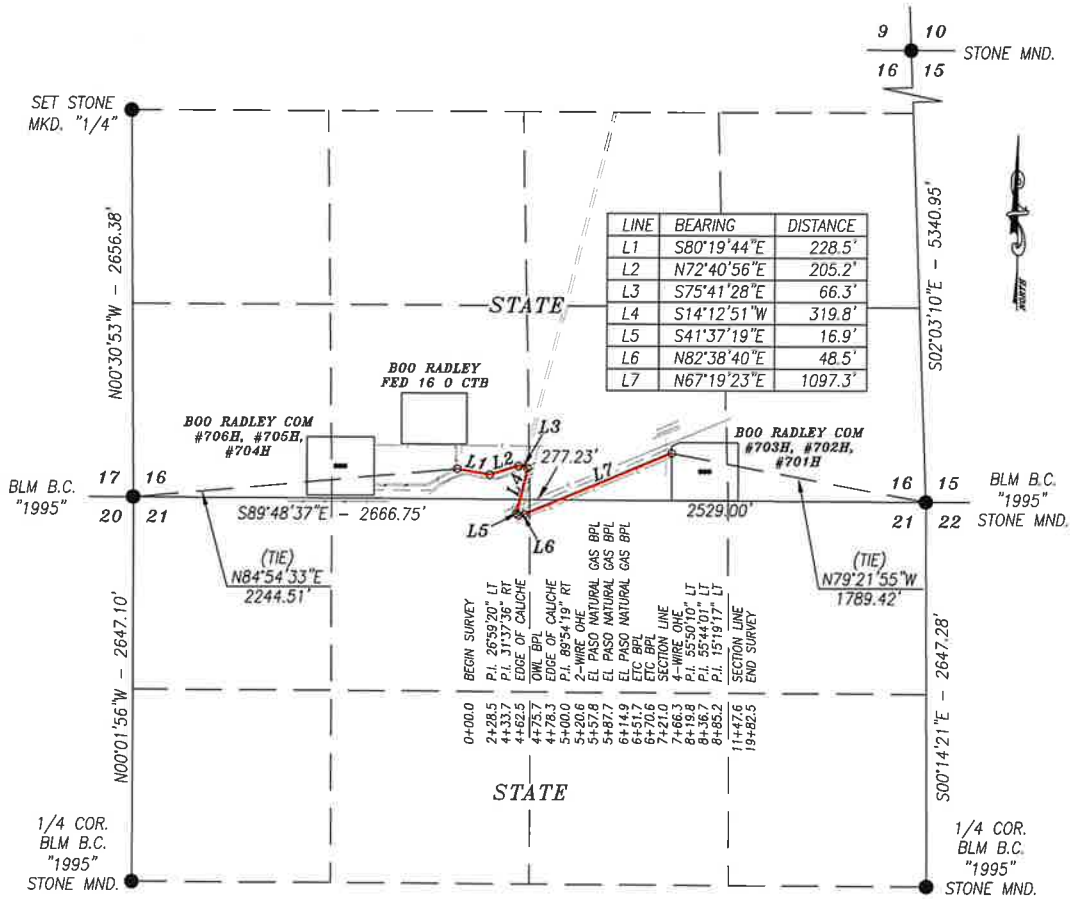


CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



T 26 S

R  
2  
8  
E

16

7

**FLOWLINE #1**  
761.4'

1,2,3





**FLOWLINE #2**  
1982.6'

4,5,6

**GAS LINE #1**  
778.2'**GAS LINE #2**  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

**LEGEND**

-  WELL  
 WELLPAD  
 FLOWLINE  
 GAS LINE

**BOO RADLEY COM FLOWLINES & GAS LINES**

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993

LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

IMAGERY

7/23/2020

D.S.

**CONCHO**  
COG OPERATING, LLC

**H** HARCROW SURVEYING, LLC.  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
EFLOWLINE #1  
761.4'

7

1,2,3

FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- FLOWLINE
- GAS LINE
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21      TOWNSHIP: 26 S.      RANGE: 28 E.

STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M

W.O. # 20-992, 993      LEASE: BOO RADLEY

0      500      1,000 FEET

0      0.03      0.06      0.12 Miles      1 IN = 500 FT

PIPELINE OVERVIEW

LAND STATUS

7/23/2020

D.S.

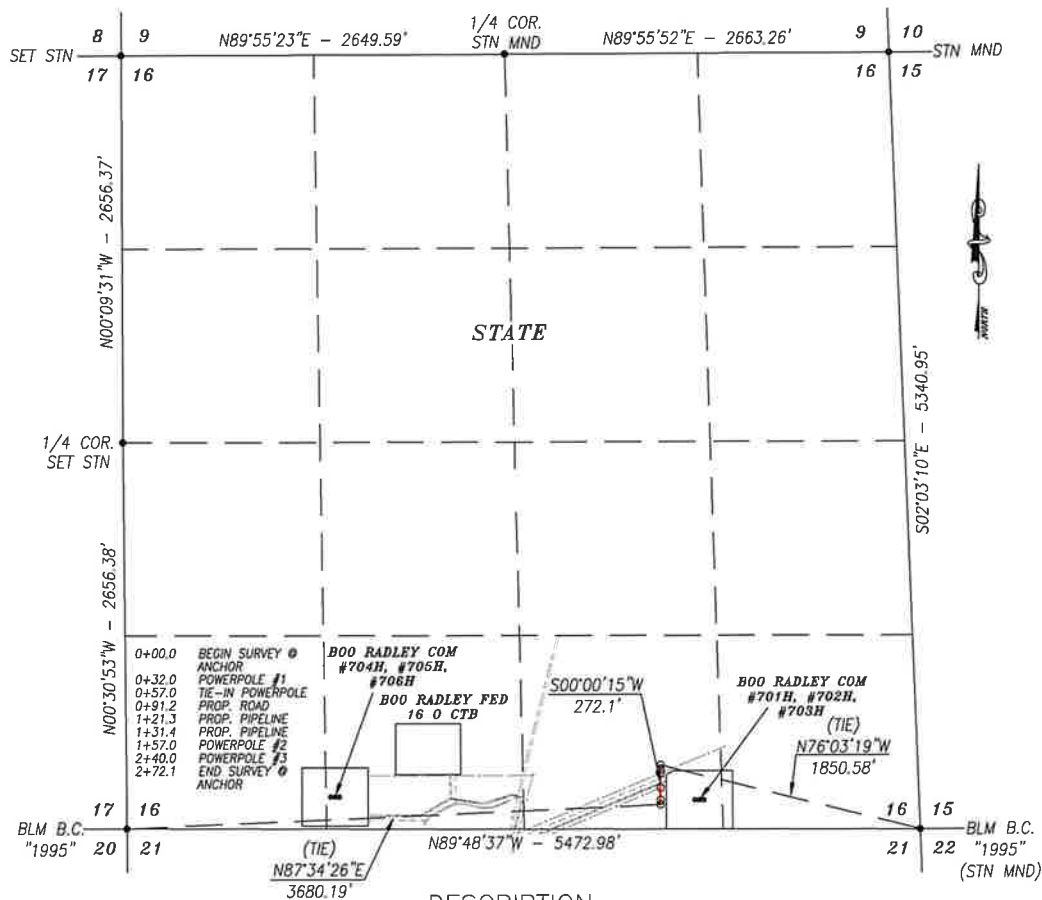
**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

# POWERLINE PLAT: LINE #1

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY;

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N76°03'19\"W 1850.58 FEET FROM THE SOUTHEAST CORNER; THEN S00°00'15\"W 272.1 FEET, TO A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N87°34'26\"E 3680.19 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 272.1 FEET OR 16.49 RODS IN LENGTH, CONTAINING 0.187 ACRES MORE OR LESS AND BEING LOCATED ENTIRELY IN THE SW/4 SE/4 OF SAID SECTION.

### BASIS OF BEARING:

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.

HARCROW SURVEYING, LLC

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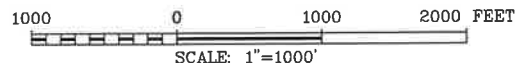
### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE



## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

POWERLINE #1

DRAFTING DATE: JULY 23, 2020

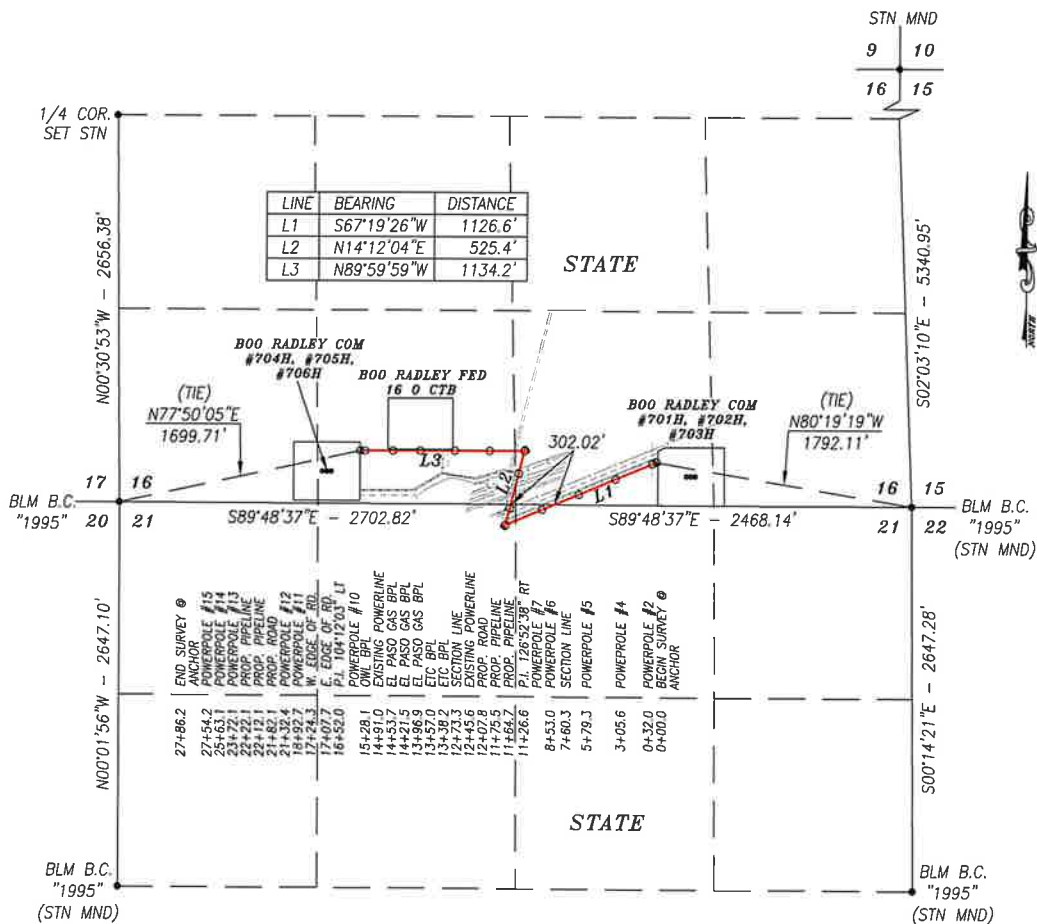
PAGE 1 OF 1

APPROVED BY: CH

DRAWN BY: JH

FILE: 20-994

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
*SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,*  
EDDY COUNTY, NEW MEXICO.



A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY; WITH ANCHORS EXTENDING OUTSIDE THE CENTERLINE SURVEY 14 FEET SOUTHERLY AND WESTERLY AT POLE 7 AND 17.0 FEET NORTHERLY AND EASTERLY AT POLE 10; WHICH HAVE BEEN ACCOUNTED FOR IN FOOTAGES, RODS, AND ACRES:

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N80°19'19"W 1792.11 FEET FROM THE SOUTHEAST CORNER OF SECTION 16; THEN S67°19'26"W 1126.6 FEET; THEN N14°12'04"E 525.4 FEET; THEN N89°59'59"W 1134.2 FEET, TO A POINT IN THE SE/4 SW/4 OF SECTION 16, WHICH LIES N77°50'05"E 1699.71 FEET FROM THE SOUTHWEST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 2848.2 FEET OR 172.62 RODS IN LENGTH, CONTAINING 1.962 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

<u>SECTION 16</u>		<u>SECTION 21</u>	
SW/4 SE/4	67.53 RODS OR 0.767 ACRES	NW/4 NE/4	17.61 RODS OR 0.200 ACRES
SE/4 SW/4	72.30 RODS OR 0.822 ACRES	NE/4 NW/4	15.18 RODS OR 0.173 ACRES

BASIS OF BEARING:

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.

**HARCROW SURVEYING, LLC**  
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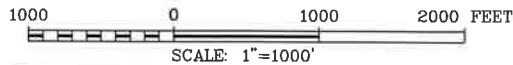
## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE







**COG OPERATING, LLC.**

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020		POWERLINE #2
DRAFTING DATE: JULY 23, 2020		PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: JH	FILE: 20-994

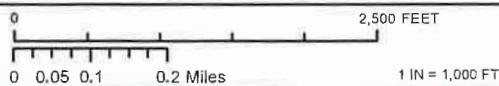


# **LEGEND**

-  ANCHOR
-  POWERPOLE
-  EXISTING LINE
-  PROP. POWERLINE
-  WELL
-  WELLPAD

## **BOO RADLEY COM POWERLINE**

SECTIONS: 16 & 21    TOWNSHIP: 26 S.    RANGE: 28 E.  
 STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M.  
 W.O. # 20-994    LEASE: BOO RADLEY COM



POWERLINE OVERVIEW

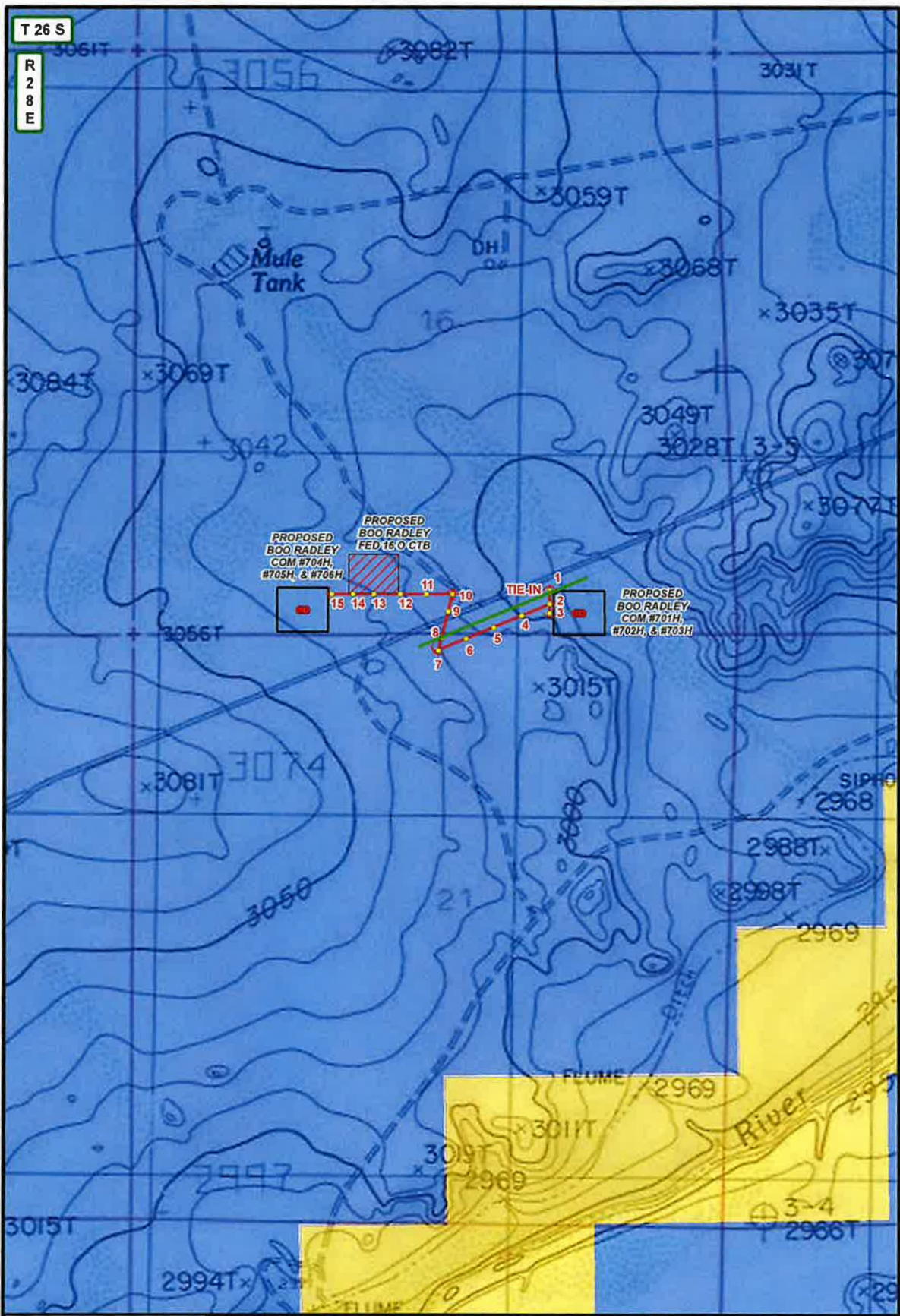
IMAGERY

7/22/2020

J.H.

**CONCHO**  
 COG OPERATING, LLC

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[c.harcrow@harcrowsurveying.com](mailto:c.harcrow@harcrowsurveying.com)



<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li>ANCHOR</li> <li>POWERPOLE</li> <li>EXISTING LINE</li> <li>PROP. POWERLINE</li> <li>WELL</li> <li>WELLPAD</li> <li>PRIVATE</li> <li>STATE OF NM</li> <li>US BLM</li> </ul>	<p><b>BOO RADLEY COM POWERLINE</b></p> <p>SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E</p> <p>STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M</p> <p>W.O. # 20-994    LEASE: BOO RADLEY COM</p> <p>0 0.05 0.1 0.2 Miles    2,500 FEET</p> <p>1 IN = 1,000 FT</p> <p>POWERLINE OVERVIEW    LAND STATUS    7/22/2020    J.H.</p>	<p><b>CONCHO</b></p> <p>COG OPERATING, LLC</p> <p><b>HARCROW SURVEYING, LLC.</b></p> <p>2314 W. MAIN ST. ARTESIA, NM 88210</p> <p>PH: (575) 746-2158 FAX: (575) 746-2158</p> <p>c.harcrow@harcrowsurveying.com</p>
---	--	--

T 26 S

R  
2  
8  
EMale  
Tank

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5'

ROAD 2 = 1170.8'

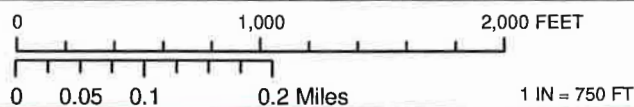
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
 W.O. # 20-957 LEASE: BOO RADLEY

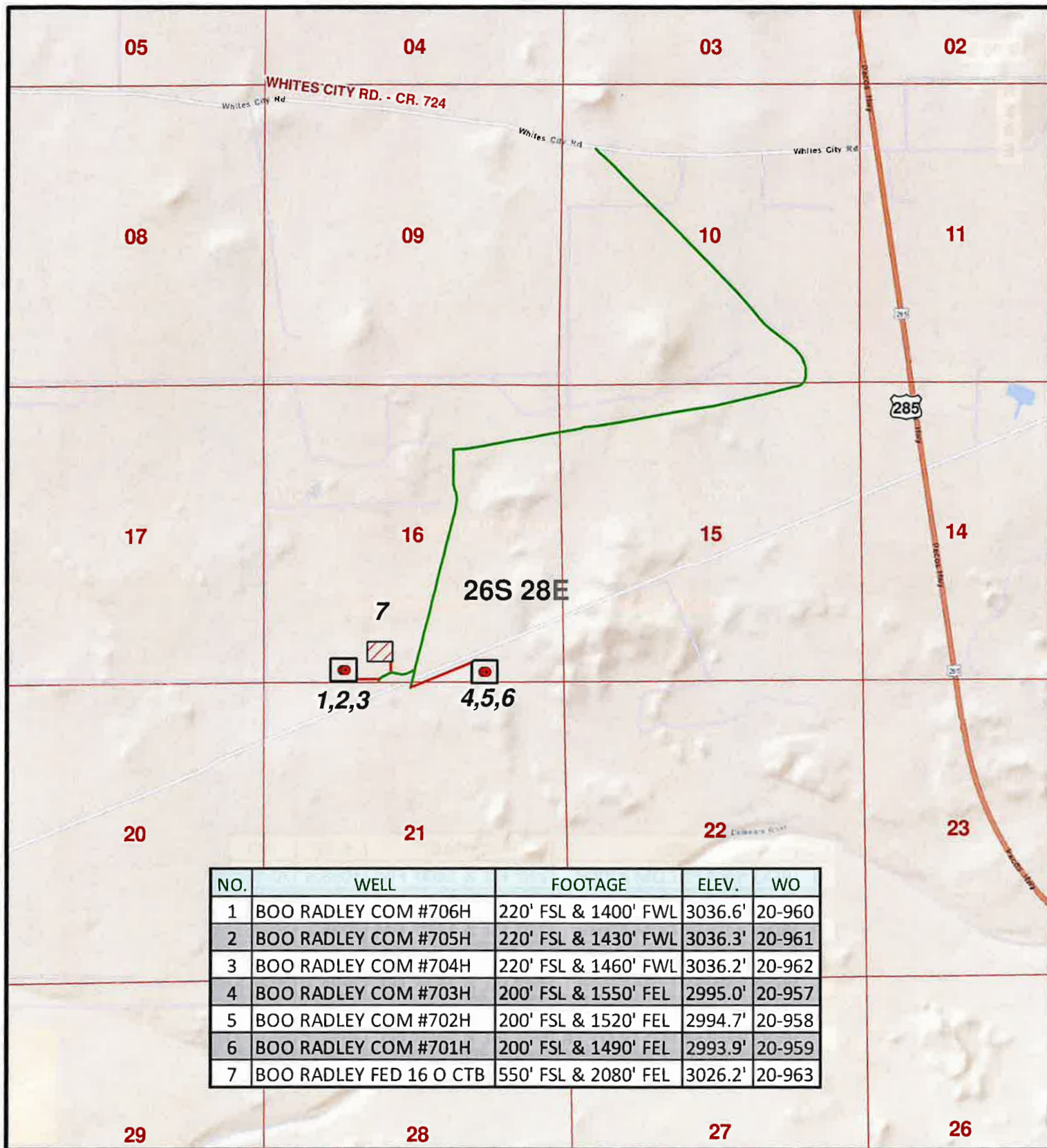


LOCATION MAP LAND STATUS 7/22/2020 W.N.

COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST, ARTESIA, NM 88210  
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 c.harcrow@harcrowsurveying.com



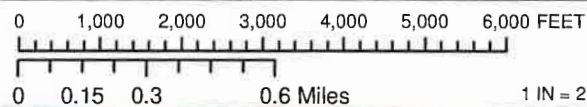
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

### LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

### BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY



LOCATION MAP

VICINITY

7/22/2020

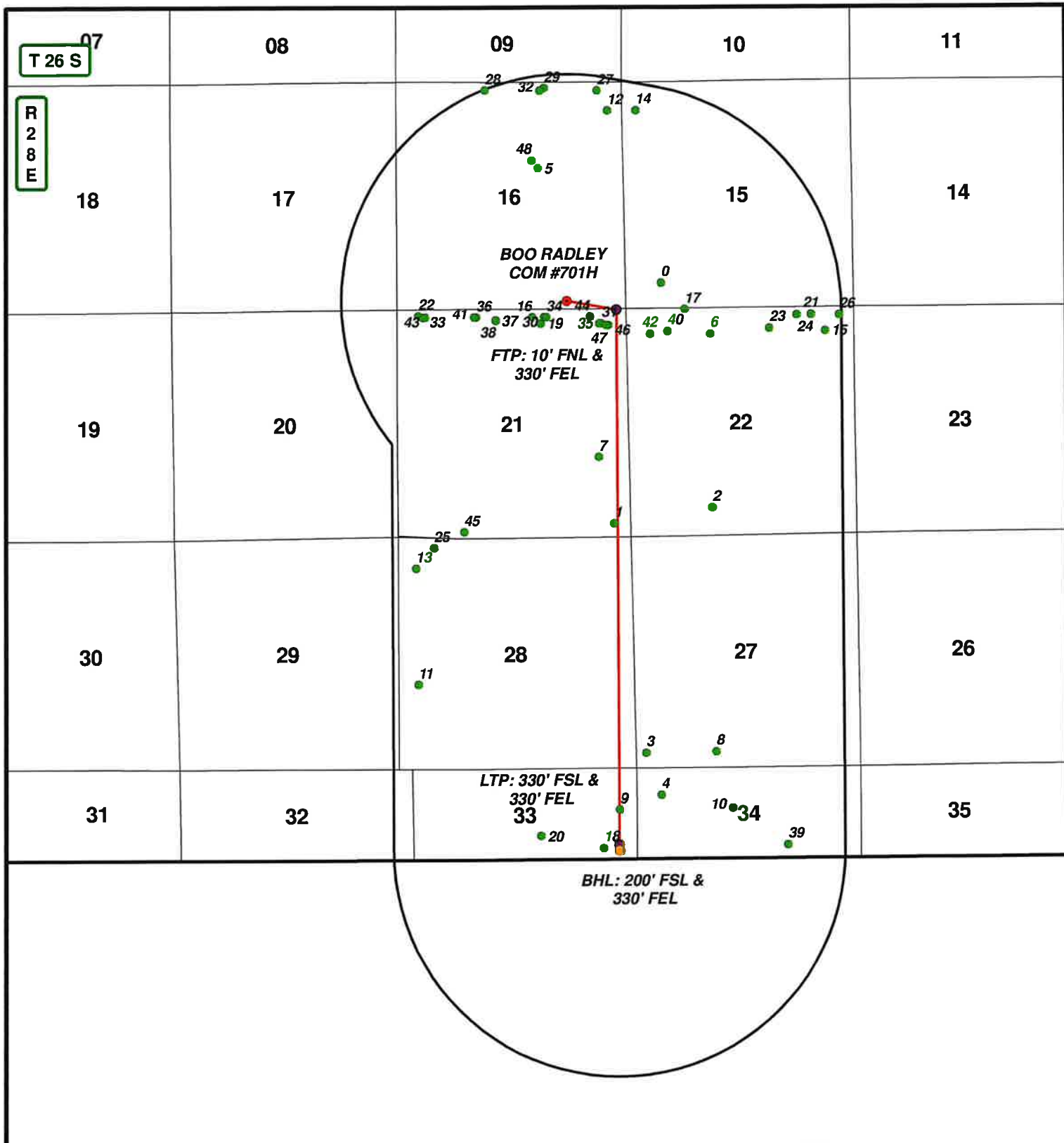
W.N.



COG OPERATING, LLC



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 2316 W. MAIN ST, ARTESIA, NM 88210  
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 c.harcrow@harcrowsurveying.com



DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

## LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER
- DRILL PATH

## BOO RADLEY COM #701H

SEC: 16 TWP: 26 S. RGE: 28 E. ELEVATION: 2993.9'

STATE: NEW MEXICO COUNTY: EDDY 200' FSL & 1490' FEL

W.O. # 20-959 LEASE: BOO RADLEY SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.25 0.5 1 Miles

1 IN = 3,000 FT

1 MILE MAP

7/22/2020

W.N.



COG OPERATING, LLC



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## BOO RADLEY COM #701H - 1 MILE DATA (20-959)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	INS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	STATE OF NM "B" 001	SUN OIL CO	3001502527	15 26.05	28E	28E	600 S		860 W		32.036889	-104.080989	Plugged
1	HUMBLE STATE 001	GLENN BENNETT	3001502530	21 26.05	28E	28E	330 S		330 E		32.021524	-104.084662	Plugged
2	HUMBLE FOWLKES 001	BENNETT J	3001502531	22 26.05	28E	28E	660 S		1980 W		32.022515	-104.077183	Plugged
3	SUN ST 27 001	CHAPMAN FORD	3001502534	27 26.05	28E	28E	330 S		330 W		32.006824	-104.082376	Plugged
4	STATE 34 001	CHAPMAN FORD	3001502536	34 26.05	28E	28E	660 N		660 W		32.004115	-104.081203	Plugged
5	STATE LG 1175 001	JAKE L HAMON	3001521398	16 26.05	28E	28E	1980 N		1980 E		32.044302	-104.090314	Plugged
6	AMINOIL ST 001	HARWICK OIL CO	3001524358	22 26.05	28E	28E	590 N		1980 W		32.033636	-104.077313	Plugged
7	GETTY STATE 001	RAY H HASKINS	3001524474	21 26.05	28E	28E	1880 S		660 E		32.025777	-104.085782	Plugged
8	STATE 001	CHAPMAN FORD	3001510269	27 26.05	28E	28E	330 S		1980 W		32.006879	-104.077027	Plugged
9	POGO ST 001	SLEDGE OIL & GAS INC	3001523607	33 26.05	28E	28E	990 N		330 E		32.003178	-104.084369	Plugged
10	AMINOIL ST 001	CALLAWAY OIL ; GAS	3001524042	34 26.05	28E	28E	990 N		2310 W		32.003263	-104.075804	Plugged
11	ALL STATE COM 002H	MARBOB ENERGY CORP	3001537499	28 26.05	28E	28E	1980 S		330 W		32.011235	-104.095544	Unknown
12	SRO STATE UNIT COM 105H	MARBOB ENERGY CORP	3001537424	16 26.05	28E	28E	660 N		330 E		32.047903	-104.085018	Plugged
13	ALL STATE COM 001H	MARBOB ENERGY CORP	3001537498	28 26.05	28E	28E	660 N		330 W		32.018698	-104.099698	Unknown
14	SRO STATE UNIT COM 107H	MARBOB ENERGY CORP	3001537427	15 26.05	28E	28E	660 N		330 W		32.047906	-104.082878	Unknown
15	DIAMONDBACK 22 STATE COM 003H	COG PRODUCTION, LLC	3001539861	22 26.05	28E	28E	550 N		660 E		32.033791	-104.068594	Unknown
16	SKEEN 21 B2BO STATE COM 001H	MEWBOURNE OIL CO	3001543247	21 26.05	28E	28E	185 N		2180 E		32.034723	-104.090816	Unknown
17	DIAMONDBACK 22 STATE COM 004H	COG PRODUCTION, LLC	3001540816	22 26.05	28E	28E	20 N		1393 W		32.035193	-104.079235	Unknown
18	GRAHAM NASH STATE COM 005H	COG OPERATING LLC	3001542453	33 26.05	28E	28E	280 S		760 E		32.000751	-104.085613	Unknown
19	SKEEN 21 STATE COM 002H	MEWBOURNE OIL CO	3001539773	21 26.05	28E	28E	330 N		1980 E		32.034324	-104.090162	Unknown
20	GRAHAM NASH STATE COM 006H	COG OPERATING LLC	3001542464	33 26.05	28E	28E	560 S		2200 E		32.001511	-104.090348	Unknown
21	DIAMONDBACK 22 STATE COM 005H	COG PRODUCTION, LLC	3001542432	22 26.05	28E	28E	170 N		990 E		32.03483	-104.069675	Unknown
22	SKEEN 21 DM STATE 001	MEWBOURNE OIL CO	3001540863	21 26.05	28E	28E	150 N		500 W		32.034828	-104.099418	Unknown
23	DIAMONDBACK 22 STATE COM 001H	OGX RESOURCES, LLC	3001538528	22 26.05	28E	28E	480 N		1960 E		32.033962	-104.072811	Unknown
24	DIAMONDBACK 22 STATE COM 011H	COG PRODUCTION, LLC	3001543465	22 26.05	28E	28E	125 N		1365 E		32.034811	-104.070726	Unknown
25	GRAHAM NASH STATE COM 008H	COG OPERATING LLC	3001542203	28 26.05	28E	28E	190 N		760 W		32.019999	-104.098833	Unknown
26	COTTONMOUTH 23 FEDERAL COM 002H	COG PRODUCTION, LLC	3001543015	22 26.05	28E	28E	190 N		330 E		32.034786	-104.067535	Unknown
27	SRO STATE UNIT 053H	COG OPERATING LLC	3001541532	16 26.05	28E	28E	190 N		560 E		32.049199	-104.085784	Unknown
28	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001541533	16 26.05	28E	28E	190 N		2080 W		32.049243	-104.094295	Unknown
29	GRAHAM CRACKER 16 STATE 007H	COG OPERATING LLC	3001542332	16 26.05	28E	28E	135 N		1810 E		32.049371	-104.089841	Unknown
30	SKEEN 21 D3BO STATE COM 003H	MEWBOURNE OIL CO	3001542811	21 26.05	28E	28E	185 N		1900 E		32.034722	-104.089908	Unknown
31	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001542810	21 26.05	28E	28E	330 N		560 E		32.03432	-104.085558	Unknown
32	GRAHAM CRACKER 16 STATE 003H	COG OPERATING LLC	3001541633	16 26.05	28E	28E	190 N		1910 E		32.049222	-104.090163	Unknown
33	SKEEN 21 B3DM STATE COM 002H	MEWBOURNE OIL CO	3001542855	21 26.05	28E	28E	185 N		610 W		32.034731	-104.09906	Unknown
34	SKEEN 21 D3BO STATE COM 002H	MEWBOURNE OIL CO	3001542853	21 26.05	28E	28E	185 N		1850 E		32.034722	-104.089746	Unknown
35	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542856	21 26.05	28E	28E	330 N		610 E		32.03432	-104.08572	Unknown
36	SKEEN 21 B3CN STATE COM 001H	MEWBOURNE OIL CO	3001542854	21 26.05	28E	28E	185 N		1850 W		32.034727	-104.095039	Unknown
37	SKEEN 21 B2CN STATE 001H	MEWBOURNE OIL CO	3001542934	21 26.05	28E	28E	266 N		2310 W		32.034503	-104.093543	Unknown
38	SKEEN 21 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537802	34 26.05	28E	28E	250 N		2310 W		32.034547	-104.093544	Unknown
39	SKEEN 34 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537805	34 26.05	28E	28E	315 S		1670 E		32.000874	-104.071681	Unknown
40	DIAMONDBACK 22 STATE COM 006H	COG PRODUCTION, LLC	3001543195	22 26.05	28E	28E	520 N		990 W		32.033812	-104.080526	Unknown
41	SKEEN 21 D3CN STATE COM 002H	MEWBOURNE OIL CO	3001542857	21 26.05	28E	28E	185 N		1800 W		32.034727	-104.095201	Unknown
42	DIAMONDBACK 22 STATE COM 002H	OGX RESOURCES, LLC	3001539105	22 26.05	28E	28E	580 N		580 W		32.03364	-104.081853	Unknown
43	SKEEN 21 D3DM STATE COM 003H	MEWBOURNE OIL CO	3001542812	21 26.05	28E	28E	185 N		660 W		32.034731	-104.098898	Unknown
44	SKEEN 21 B2AP STATE COM 001H	MEWBOURNE OIL CO	3001543246	21 26.05	28E	28E	820 E		820 E		32.034719	-104.086406	Unknown
45	GRAHAM NASH FEDERAL COM 013H	COG OPERATING LLC	3001543811	21 26.05	28E	28E	200 S		1550 W		32.021012	-104.096034	Unknown
46	SKEEN 21 W0AP STATE COM 002H	MEWBOURNE OIL CO	3001544553	21 26.05	28E	28E	330 N		550 E		32.034186	-104.085036	Unknown
47	SKEEN 21 W2AP STATE COM 001H	MEWBOURNE OIL CO	3001544552	21 26.05	28E	28E	330 N		600 E		32.034186	-104.085198	Unknown
48	SALT CEDAR 16 STATE SWD #001 001	COG OPERATING LLC	3001545826	16 26.05	28E	28E	1850 N		2185 E		32.044761	-104.090784	New (Not drilled or compl)

Intent ☐ As Drilled ☐

API #									
Operator Name:						Property Name:			Well Number

**Kick Off Point (KOP)**

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

**First Take Point (FTP)**

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

**Last Take Point (LTP)**

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #									
Operator Name:						Property Name:			Well Number

KZ 06/29/2018

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-8161 Fax: (575) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-8720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 478-3480 Fax: (505) 478-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>702H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>2994.7'</b>

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1520	EAST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	33	26-S	28-E		200	SOUTH	1210	EAST	EDDY

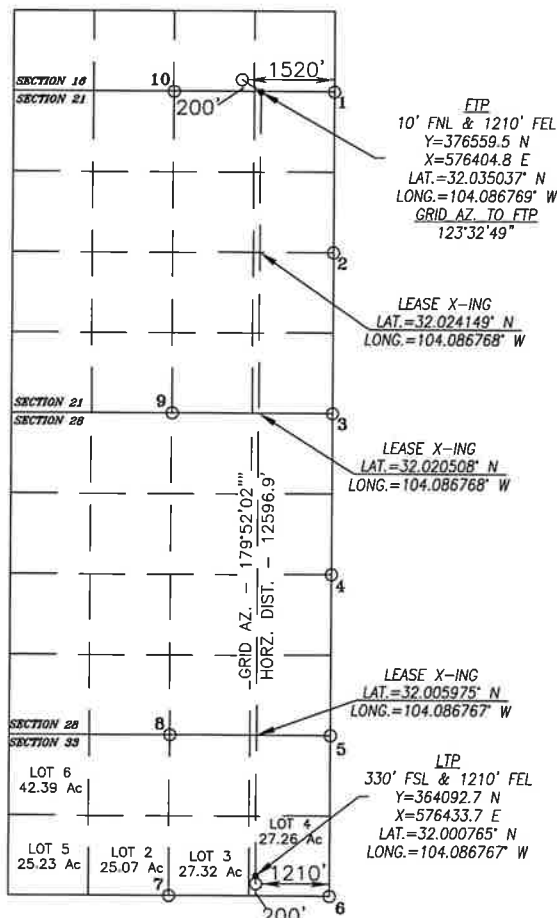
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 27 NME  
SURFACE LOCATION  
Y=376770.5 N  
X=576086.5 E  
LAT.=32.035619° N  
LONG.=104.087794° W

POINT LEGEND	
1	Y=376565.5 N X=577614.8 E
2	Y=373918.8 N X=577625.7 E
3	Y=371271.7 N X=577636.8 E
4	Y=368631.2 N X=577634.7 E
5	Y=365989.7 N X=577639.4 E
6	Y=363788.7 N X=577644.4 E
7	Y=363756.9 N X=574780.2 E
8	Y=365985.7 N X=574775.0 E
9	Y=371278.1 N X=574893.2 E
10	Y=376574.5 N X=574879.0 E

NAD 27 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=363962.7 N  
X=576434.0 E  
LAT.=32.000407° N  
LONG.=104.086767° W



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

Date of Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 7/28/20

Certificate No. CHAD HARCROW 17777

W.O. # 20-958 DRAWN BY: AH

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (505) 748-1263 Fax: (505) 748-9720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>702H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>2994.7'</b>

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1520	EAST	EDDY

**Bottom Hole Location If Different From Surface**

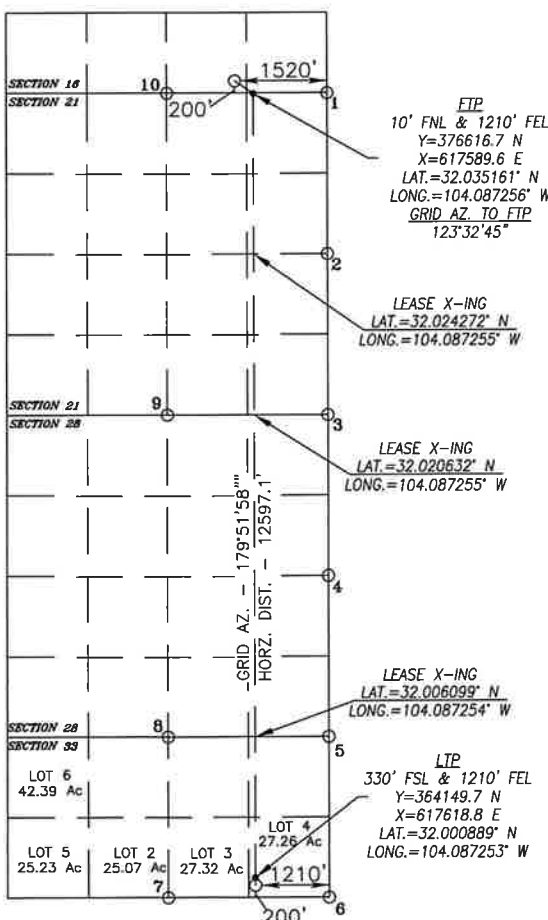
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	33	26-S	28-E		200	SOUTH	1210	EAST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 83 NME  
SURFACE LOCATION  
Y=376827.8 N  
X=617271.3 E  
LAT.=32.035743° N  
LONG.=104.088281° W

POINT	LEGEND
1	Y=376622.7 N X=618799.6 E
2	Y=373976.1 N X=618810.7 E
3	Y=371328.9 N X=618821.8 E
4	Y=368688.3 N X=618819.8 E
5	Y=366046.7 N X=618824.5 E
6	Y=363825.7 N X=618829.5 E
7	Y=363813.8 N X=615965.2 E
8	Y=366042.7 N X=615960.0 E
9	Y=371335.2 N X=616078.1 E
10	Y=376631.8 N X=616063.7 E

NAD 83 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=364019.7 N  
X=617619.1 E  
LAT.=32.000531° N  
LONG.=104.087253° W



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

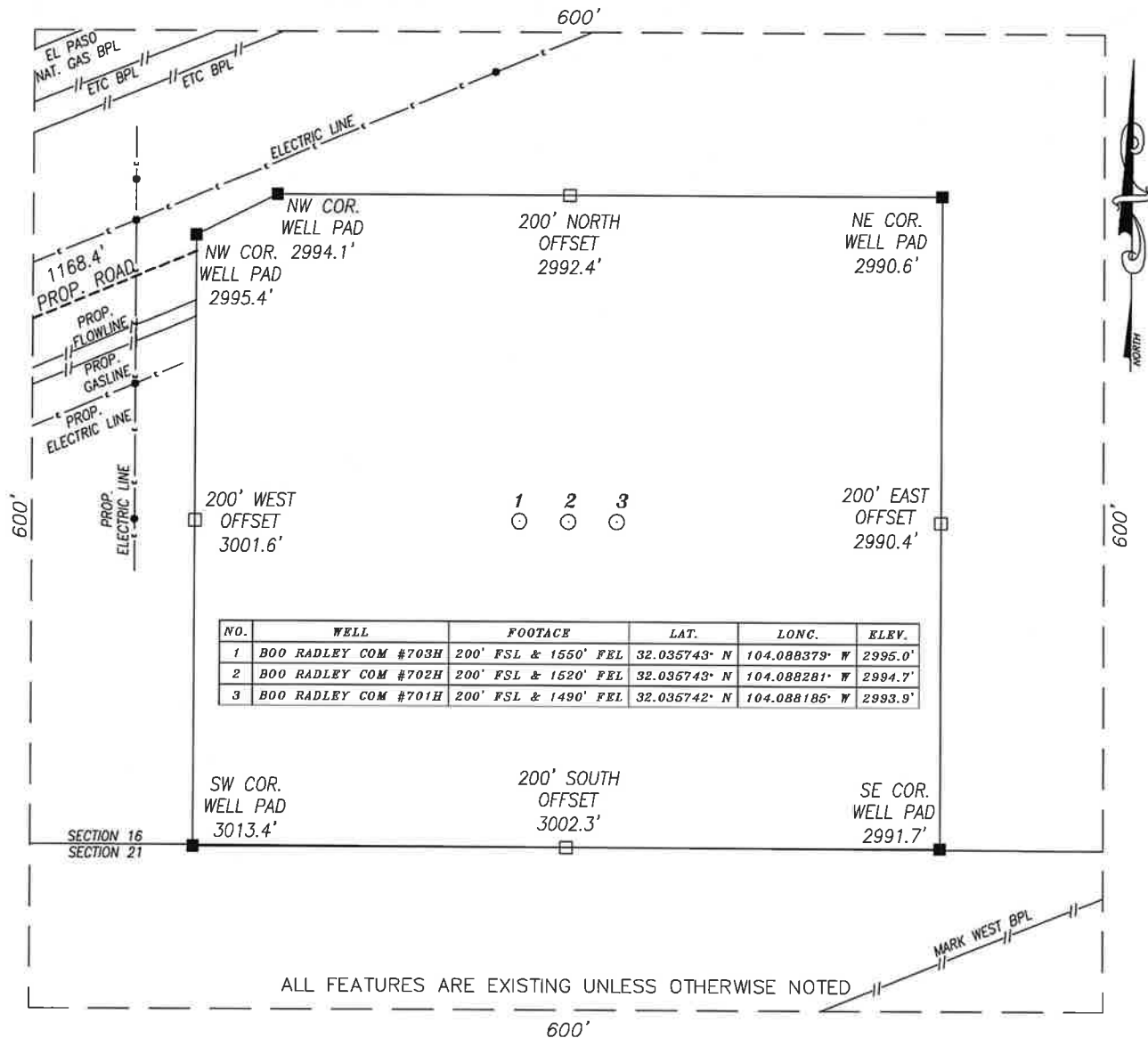
Date of Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-958 DRAWN BY: AH

SECTION 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY) ONTO CALICHE ROAD; THEN GO APPROX. 0.8 MILES TO THE PROPOSED ROAD; PROPOSED WELLS LIES APPROX. 1342 FEET TO THE NORTHEAST.

COORDINATES ARE NAD 83 NME AND ELEVATIONS ARE NAVD 88  
CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

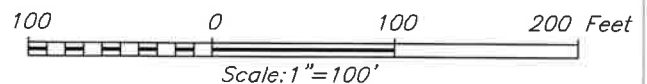
7/30/20  
DATE

HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

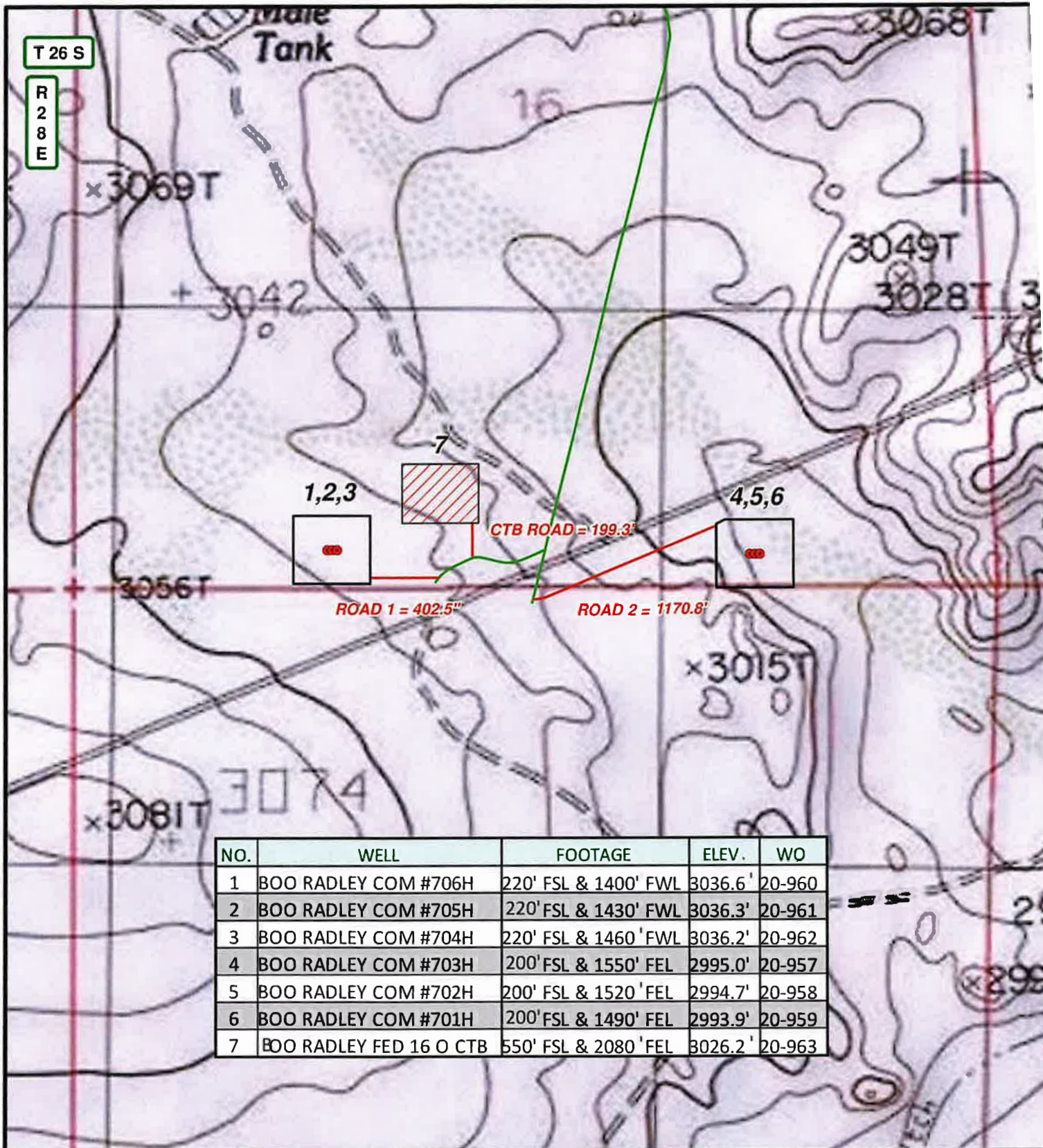
PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



COG OPERATING, LLC

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH
FILE: 20-957	



### LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

### BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
 WO. # 20-957 LEASE: BOO RADLEY

0 0.05 0.1 0.2 Miles 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles 1 IN = 750 FT

LOCATION MAP TOPO 7/22/2020 W.N.



COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

17

16

15

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5"

ROAD 2 = 1170.8'

20

22

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-957      LEASE: BOO RADLEY

0      1,000      2,000 FEET

0      0.05      0.1      0.2 Miles      1 IN = 750 FT

LOCATION MAP

IMAGERY

7/22/2020

W.N.



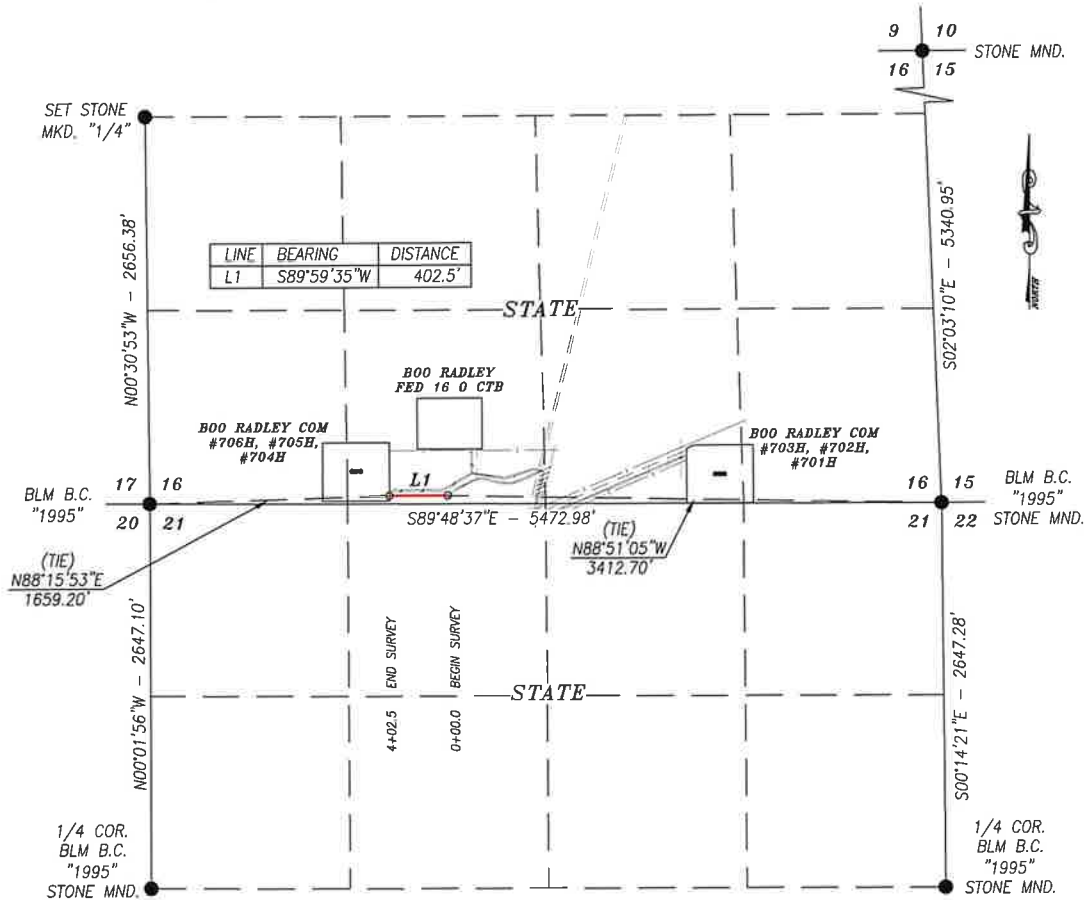
COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

**ROAD PLAT**  
**COG OPERATING, LLC.**

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
**EDDY COUNTY, NEW MEXICO.**



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°51'05"W 3412.70 FEET FROM THE SOUTHEAST CORNER; THEN S89°59'35"W 402.5 FEET; TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°15'53"E 1659.20 FEET FROM THE SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 402.5 FEET OR 24.39 RODS IN LENGTH, CONTAINING 0.277 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



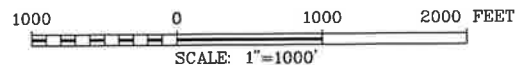
**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE



**COG OPERATING, LLC.**

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #1

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

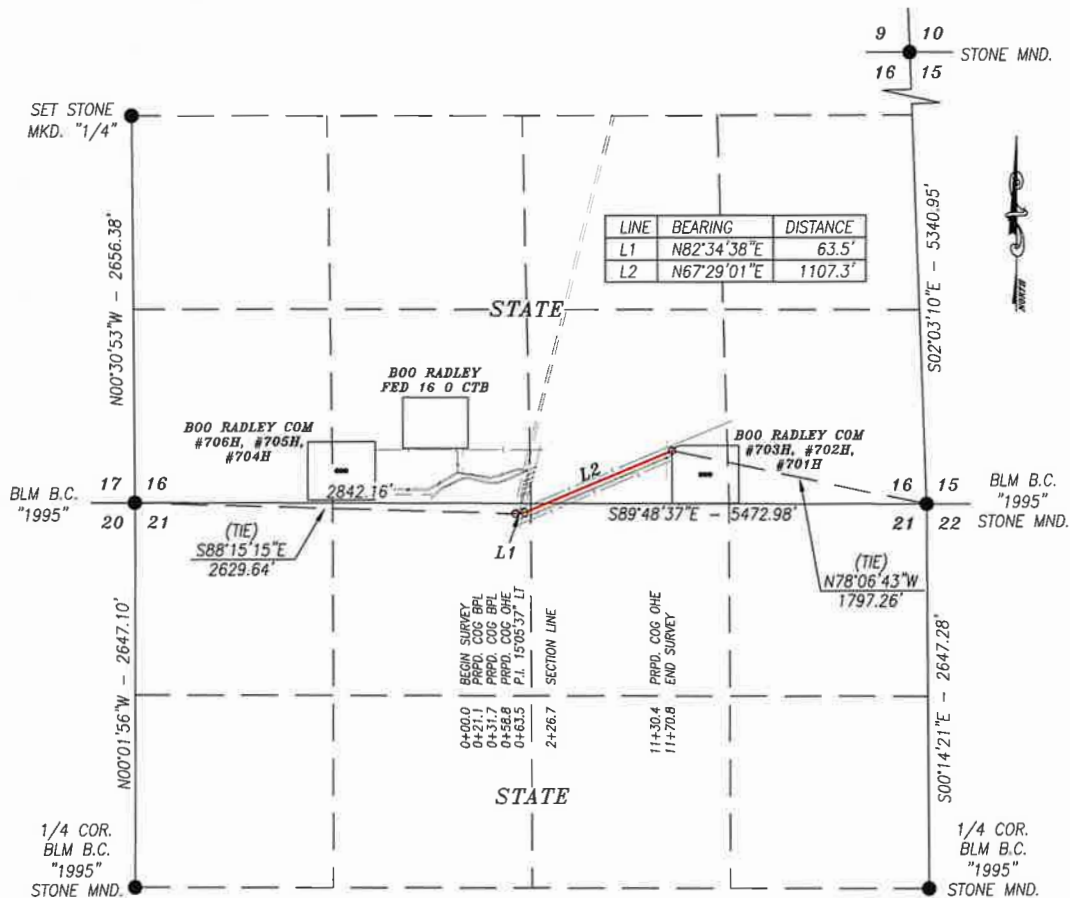
APPROVED BY: CH

DRAWN BY: WN

FILE: 20-995

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NE/4 NW/4 OF SECTION 21, WHICH LIES S88°15'15"E 2629.64 FEET FROM THE NORTHWEST CORNER OF SECTION 21; THEN N82°34'38"E 63.5 FEET; THEN N67°29'01"E 1107.3 FEET; TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N78°06'43"W 1797.26 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1170.8 FEET OR 70.96 RODS IN LENGTH, CONTAINING 0.806 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

**SECTION 16**  
SW/4 SE/4 57.22 RODS OR 0.650 ACRES

**SECTION 21**  
NE/4 NW/4 6.81 RODS OR 0.077 ACRES  
NW/4 NE/4 6.93 RODS OR 0.079 ACRES

## BASIS OF BEARING:

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.

## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

## HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

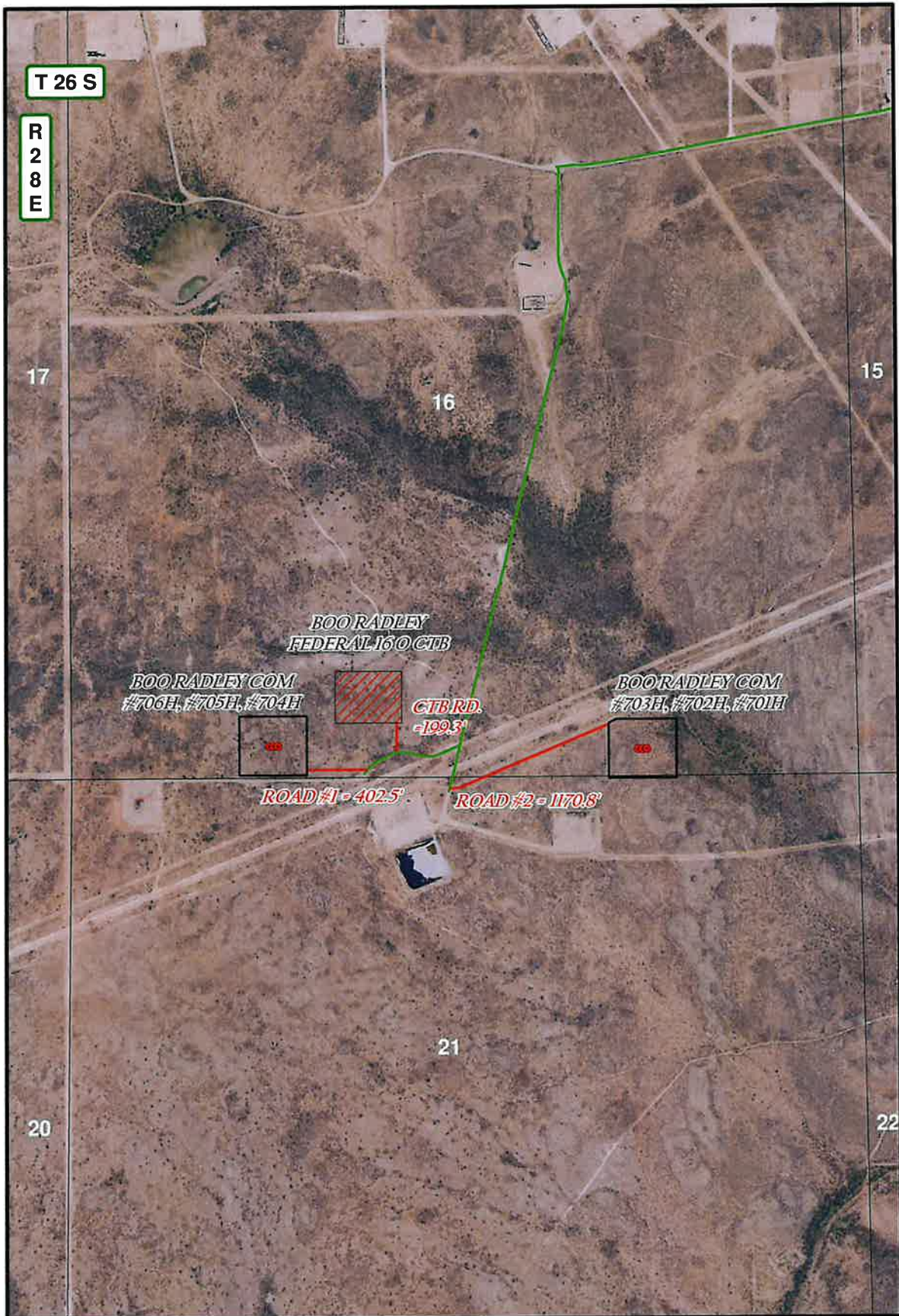
ROAD #2

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995

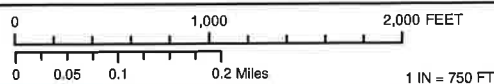


**LEGEND**

- WELL
- WELLPAD
- EXIST. ROAD
- ACCESS ROAD

**BOO RADLEY COM ACCESS ROADS**

SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-995		LEASE: BOO RADLEY



LOCATION MAP

IMAGERY

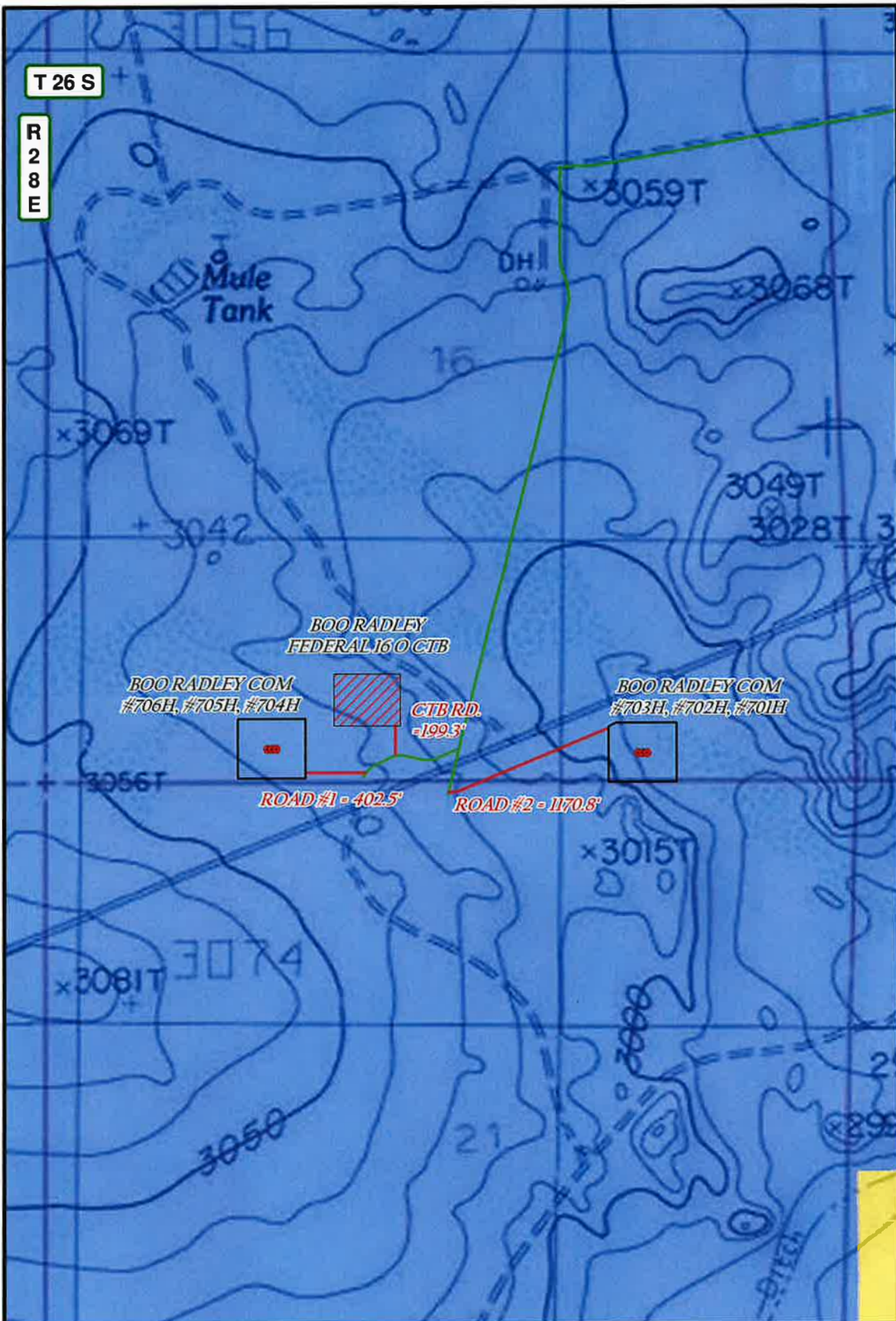
7/23/2020

W.N.

**CONCHO**  
COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
2315 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



<b>LEGEND</b> WELL WELLPAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM	<b>BOO RADLEY COM ACCESS ROADS</b>		
	SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.
	STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
	W.O. # 20-995		LEASE: BOO RADLEY
	 1 IN = 750 FT		
	LOCATION MAP	LAND STATUS	7/23/2020 W.N.

**CONCHO**  
 COG OPERATING, LLC

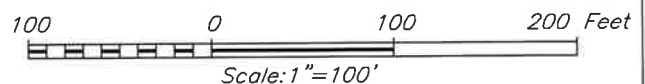
**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

## NEW MEXICO



DIRECTIONS TO LOCATION:  
FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY); THEN GO APPROX. 0.7 MILES; TURN RIGHT AND GO APPROX. 0.1 MILES TO THE PROPOSED ROAD. PROPOSED PAD LIES APPROX. 420 FEET TO THE NORTHWEST.

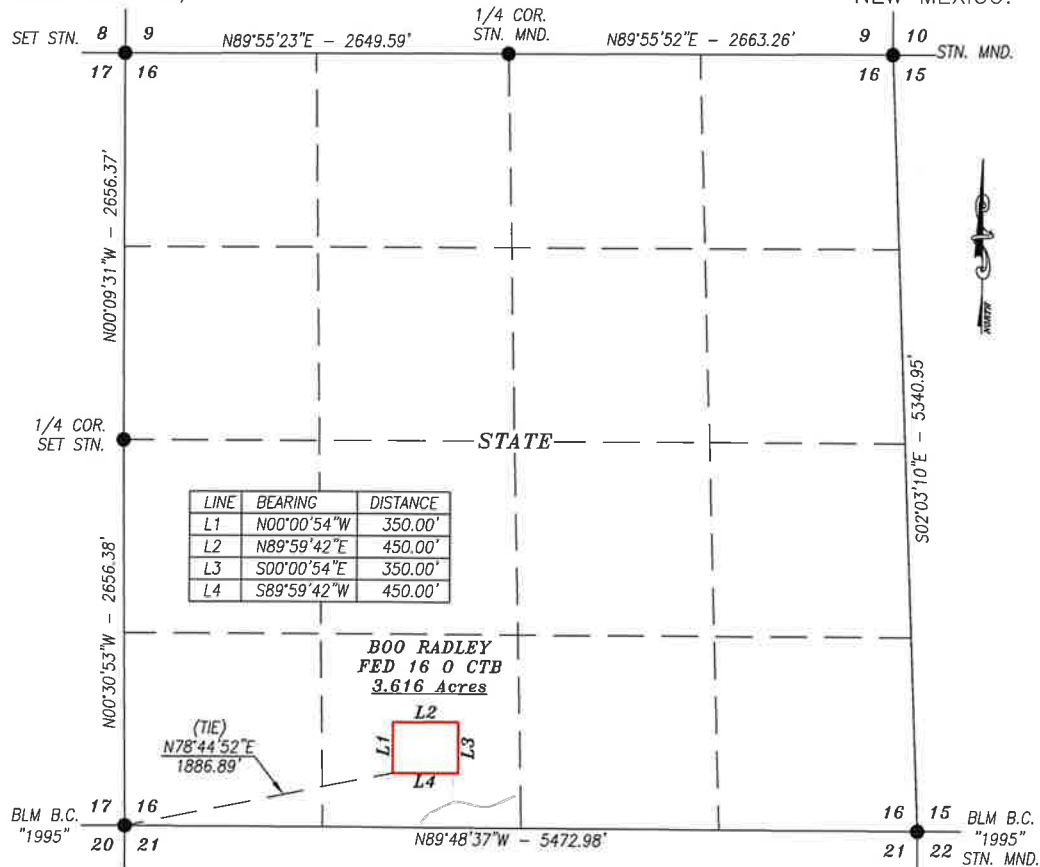
7/27/20  
DATE



COG OPERATING, LLC		
SURVEY DATE: JULY 17, 2020		600S
DRAFTING DATE: JULY 22, 2020		PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN	FILE: 20-963

EXHIBIT A  
**STATE BUSINESS LEASE**  
**COG OPERATING, LLC.**

A STATE BUSINESS LEASE FOR THE "BOO RADLEY FED 16 0 CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A PROPOSED PAD LOCATED WITHIN STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N78°44'52"E 1886.89 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'54"W 350.00 FEET; THEN N89°59'42"E 450.00 FEET; THEN S00°00'54"W 350.00 FEET; THEN S89°59'42"W 450.00 FEET TO THE POINT OF BEGINNING.

SAID PAD CONTAINS 3.616 ACRES AND IS LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

**HARCROW SURVEYING, LLC**  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

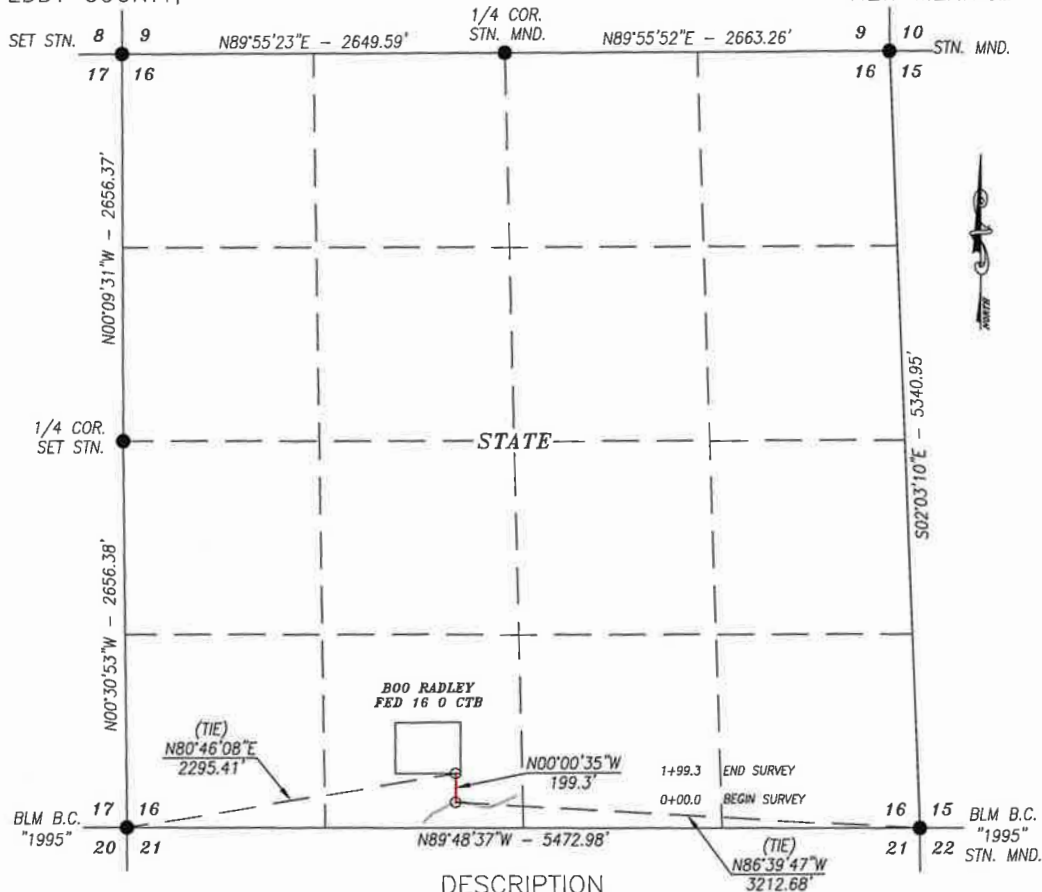
**COG OPERATING, LLC**

SURVEY OF A PROPOSED PAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT A
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

**EXHIBIT B**  
**ACCESS ROAD PLAT**  
**COG OPERATING, LLC.**

AN ACCESS ROAD FOR THE "BOO RADLEY FED 16 O CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°39'47"W 3212.68 FEET FROM THE SOUTHEAST CORNER; THEN N00°00'35"W 199.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N80°46'08"E 2295.41 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 199.3 FEET OR 12.08 RODS IN LENGTH, CONTAINING 0.137 ACRES MORE OR LESS AND BEING LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**  
 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.

**HARCROW SURVEYING, LLC**  
 2316 W. MAIN ST., ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



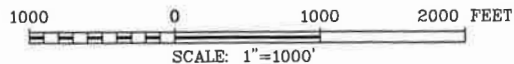
**CERTIFICATION**  
 I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

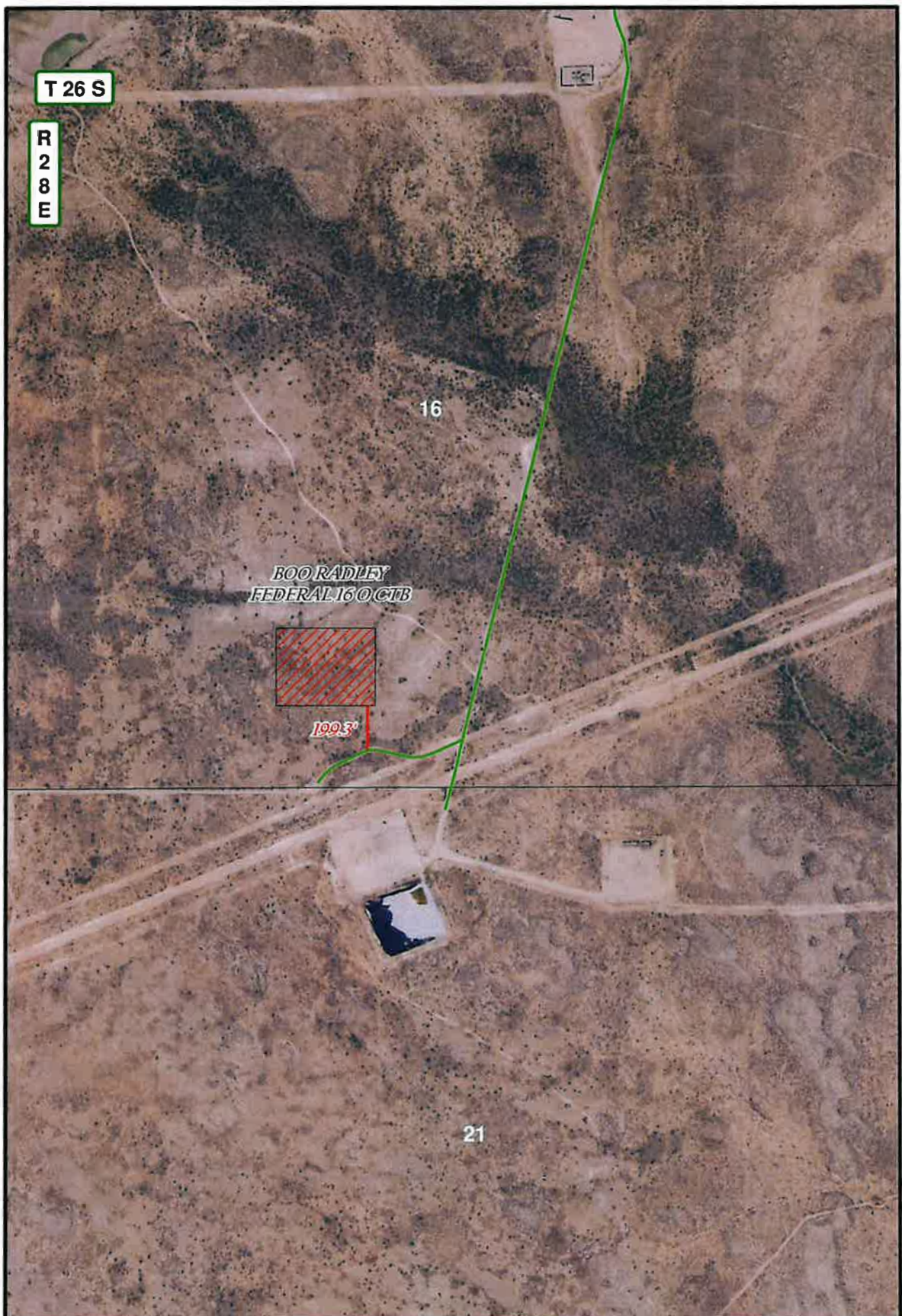
7/27/20  
 DATE



**COG OPERATING, LLC**

SURVEY OF A PROPOSED ROAD LOCATED IN  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
 NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT B
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

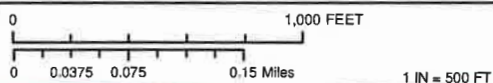


# **LEGEND**

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD

## **BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD**

SECTION: 16	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-963	LEASE: BOO RADLEY	



LOCATION MAP	IMAGERY	7/22/2020	W.N.
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**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
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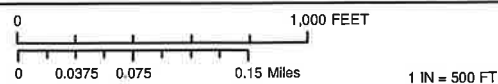


# LEGEND

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD
-  PRIVATE
-  STATE OF NM
-  US BLM

## BOO RADLEY FEDERAL 160 CTB & ACCESS ROAD

SECTION: 16      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-963      LEASE: BOO RADLEY



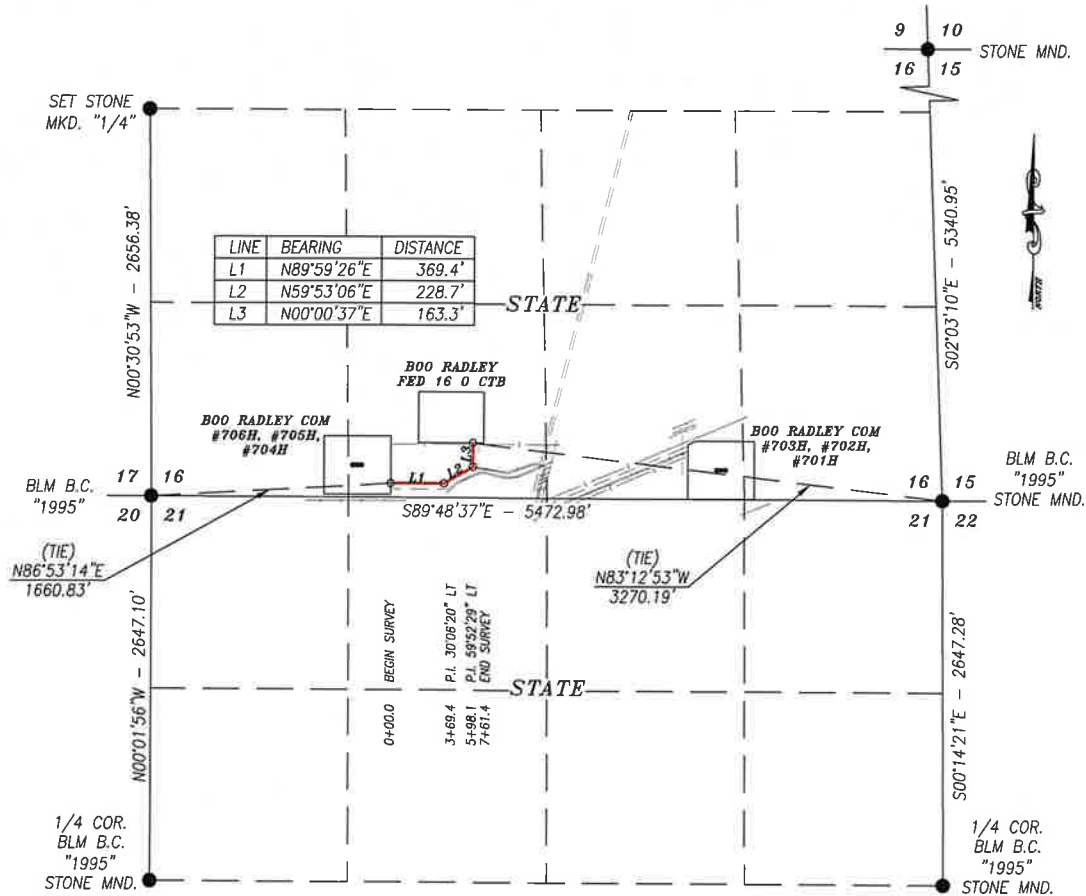
LOCATION MAP      LAND STATUS      7/22/2020      W.N.

**CONCHO**  
 COG OPERATING, LLC

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 c.harcrow@harcrowsurveying.com

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°53'14\"E 1660.83 FEET FROM THE SOUTHWEST CORNER; THEN N89°59'26\"E 369.4 FEET; THEN N59°53'06\"E 228.7; THEN N00°00'37\"E 163.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°12'53\"W 3270.19 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 761.4 FEET OR 46.15 RODS IN LENGTH, CONTAINING 0.524 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

### HARCROW SURVEYING, LLC

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SCALE: 1\"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

FLOWLINE #1

DRAFTING DATE: JULY 22, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: DS

FILE: 20-992

*Chad Harcrow*

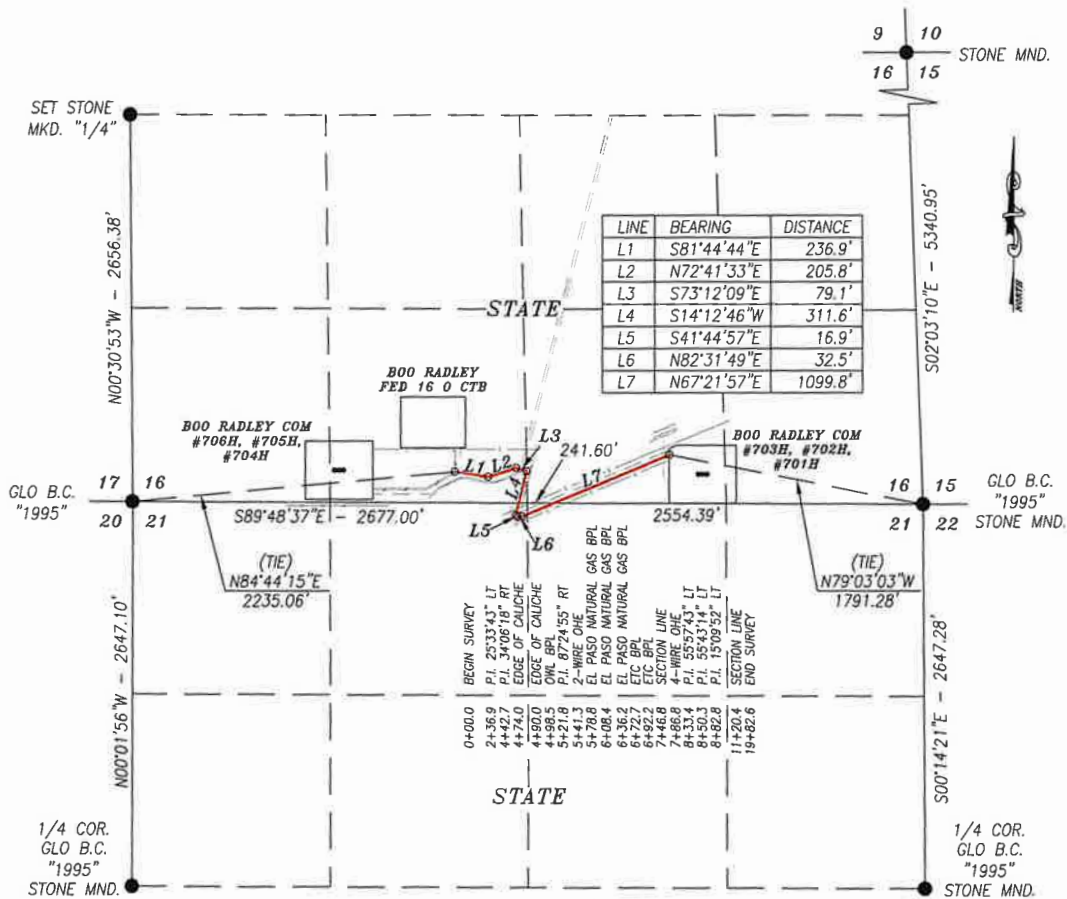
CHAD HARCROW N.M.P.S. NO. 17777



07/28/20  
DATE

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SECTION 16, WHICH LIES N84°44'15"E 2235.06 FEET FROM THE SOUTHWEST CORNER OF SECTION 16; THEN S81°44'44"E 236.9 FEET; THEN N72°41'33"E 205.8; THEN S73°12'09"E 79.1 FEET; THEN S14°12'46"W 311.6; THEN S41°44'57"E 16.9; THEN N82°31'49"E 32.5 FEET; THEN N67°21'57"E 1099.8 FEET TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N79°03'03"W 1791.28 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1982.6 FEET OR 120.16 RODS IN LENGTH, CONTAINING 1.365 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

### SECTION 16

SE/4 SW/4 45.08 RODS OR 0.512 ACRES  
SW/4 SE/4 52.42 RODS OR 0.595 ACRES

### SECTION 21

NE/4 NW/4 10.71 RODS OR 0.122 ACRES  
NW/4 NE/4 11.95 RODS OR 0.136 ACRES

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

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2316 W. MAIN ST, ARTESIA, N.M. 88210  
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c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020	FLOWLINE #2
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: DS
FILE: 20-992	

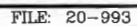
A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



CHAD HARCROW N M P.S. NO 17777

07/28/20  
DATE

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

T 26 S

R  
2  
8  
E

16

FLOWLINE #1  
761.4'

1,2,3

7





FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7	20-958
6	BOORAD LEYCO M#701H	200' FSL & 1490' FEL	2993.9	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2	20-963

## LEGEND

-  WELL  
 WELLPAD  
 FLOWLINE  
 GAS LINE

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21 TOWNSHIP: 26 S. RANGE: 28 E

STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.

W.O. # 20-992, 993

LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

IMAGERY

7/23/2020

D.S.

**CONCHO**  
COG OPERATING, LLC



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T 26 S

R  
2  
8  
EFLOWLINE #1  
761.4'

1,2,3

7

FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- FLOWLINE
- GAS LINE
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993    LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

LAND STATUS

7/23/2020

D.S.

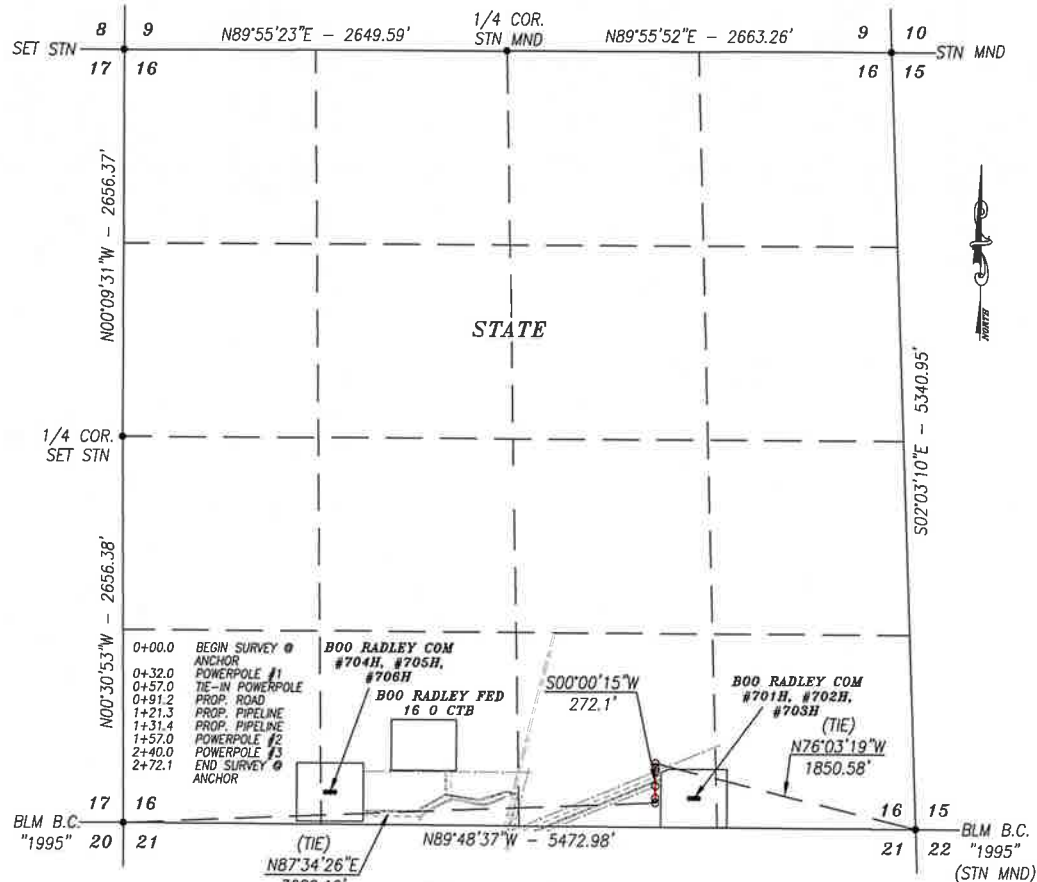

  
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 c.harcrow@harcrowsurveying.com

# POWERLINE PLAT: LINE #1

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 0 CENTRAL TANKBATTERY IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY;

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N76°03'19"W 1850.58 FEET FROM THE SOUTHEAST CORNER; THEN S00°00'15"W 272.1 FEET, TO A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N87°34'26"E 3680.19 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 272.1 FEET OR 16.49 RODS IN LENGTH, CONTAINING 0.187 ACRES MORE OR LESS AND BEING LOCATED ENTIRELY IN THE SW/4 SE/4 OF SAID SECTION.

## BASIS OF BEARING:

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.

## HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

DATE

7/27/20

1000 0 1000 2000 FEET

SCALE: 1"=1000'

## COG OPERATING, LLC.

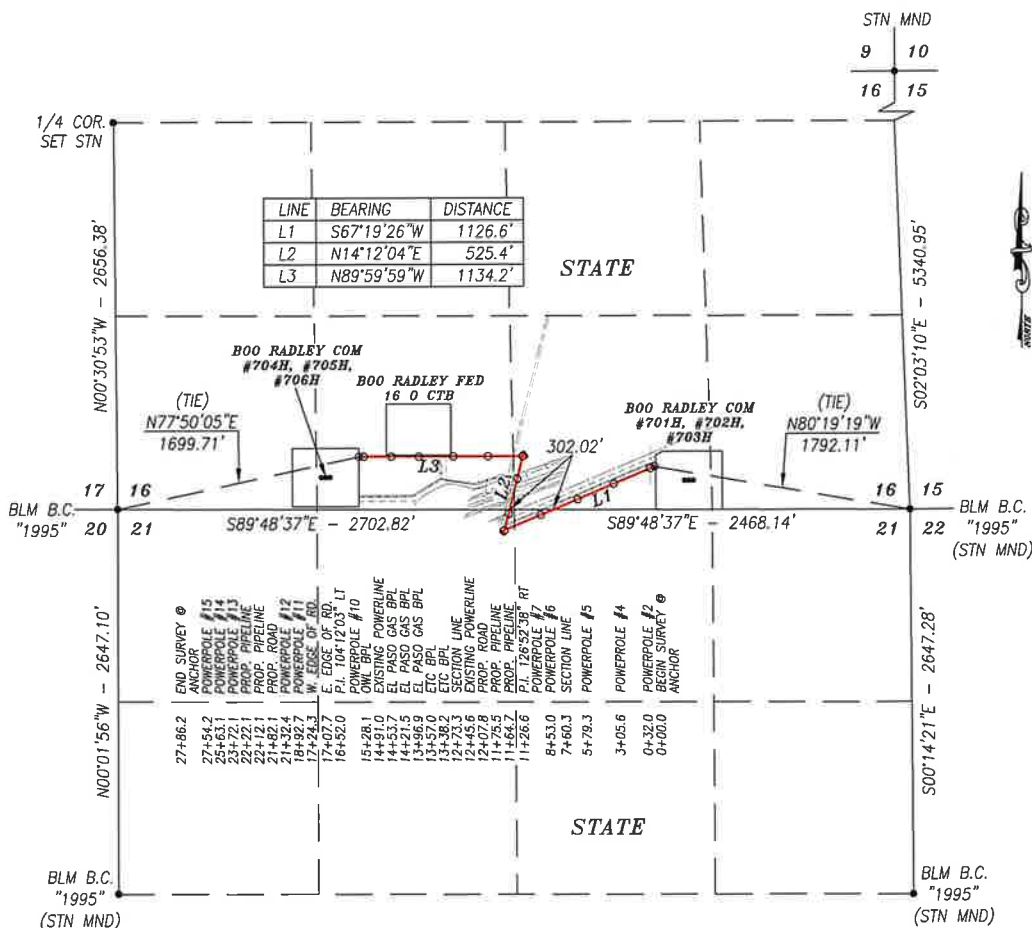
SURVEY OF A PROPOSED POWERLINE LOCATED IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	POWERLINE #1
DRAFTING DATE: JULY 23, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: JH
FILE: 20-994	

# POWERLINE PLAT: LINE #2

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY; WITH ANCHORS EXTENDING OUTSIDE THE CENTERLINE SURVEY 14 FEET SOUTHERLY AND WESTERLY AT POLE 7 AND 17.0 FEET NORTHERLY AND EASTERLY AT POLE 10; WHICH HAVE BEEN ACCOUNTED FOR IN FOOTAGES, RODS, AND ACRES:

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N80°19'19"W 1792.11 FEET FROM THE SOUTHEAST CORNER OF SECTION 16; THEN S67°19'26"W 1126.6 FEET; THEN N14°12'04"E 525.4 FEET; THEN N89°59'59"W 1134.2 FEET, TO A POINT IN THE SE/4 SW/4 OF SECTION 16, WHICH LIES N77°50'05"E 1699.71 FEET FROM THE SOUTHWEST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 2848.2 FEET OR 172.62 RODS IN LENGTH, CONTAINING 1.962 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SECTION 16		SECTION 21	
SW/4 SE/4	67.53 RODS OR 0.767 ACRES	NW/4 NE/4	17.61 RODS OR 0.200 ACRES
SE/4 SW/4	72.30 RODS OR 0.822 ACRES	NE/4 NW/4	15.18 RODS OR 0.173 ACRES

**BASIS OF BEARING:**  
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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

**HARCROW SURVEYING, LLC**  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

POWERLINE #2

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH

DRAWN BY: JH

FILE: 20-994

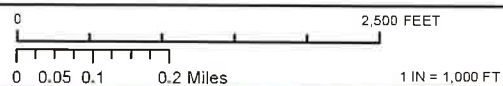


#### LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD

#### BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-994      LEASE: BOO RADLEY COM



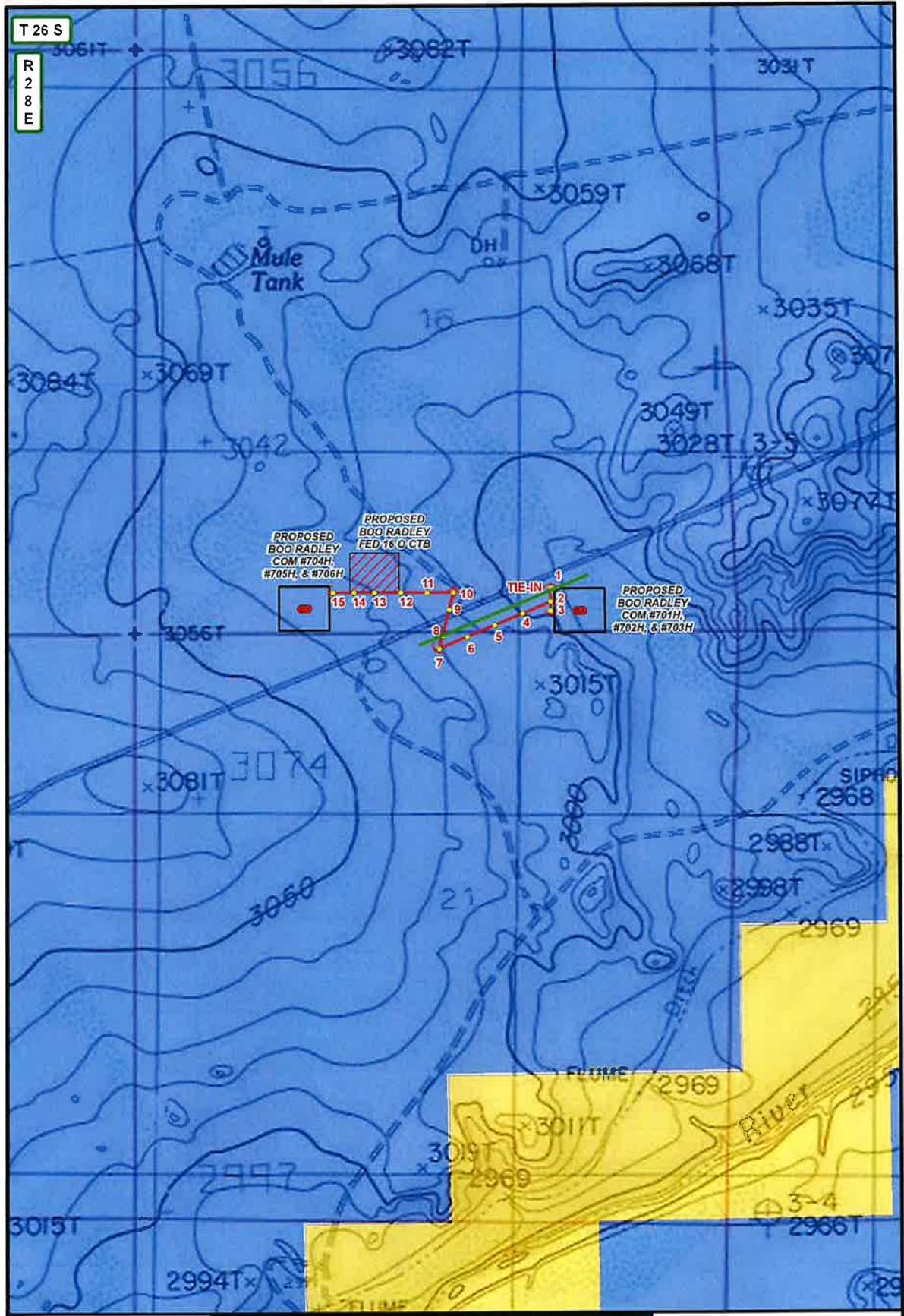
POWERLINE OVERVIEW      IMAGERY      7/22/2020      J.H.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
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T 26 S

R 28 E



**LEGEND**

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD
- PRIVATE
- STATE OF NM
- US BLM

**BOO RADLEY COM POWERLINE**

SECTIONS: 16 & 21		TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO		COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-994		LEASE: BOO RADLEY COM	
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**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
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PH: (575) 746-2158 FAX: (575) 746-2158  
c.harcrow@harcrowsurveying.com

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NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

LAND STATUS

7/22/2020

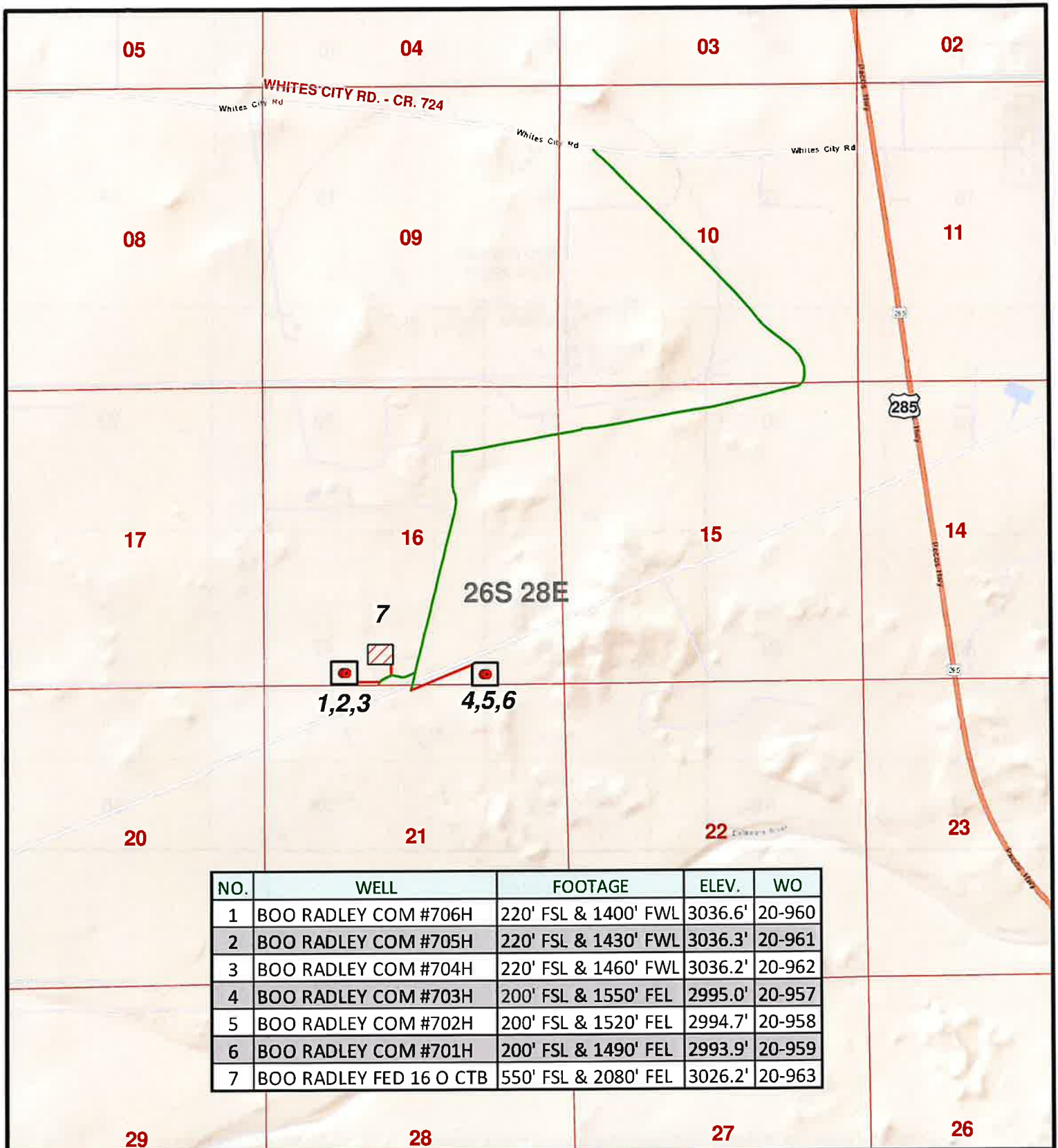
W.N.



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NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY

0 1,000 2,000 3,000 4,000 5,000 6,000 FEET

0 0.15 0.3 0.6 Miles 1 IN = 2,250 FT

LOCATION MAP

VICINITY

7/22/2020

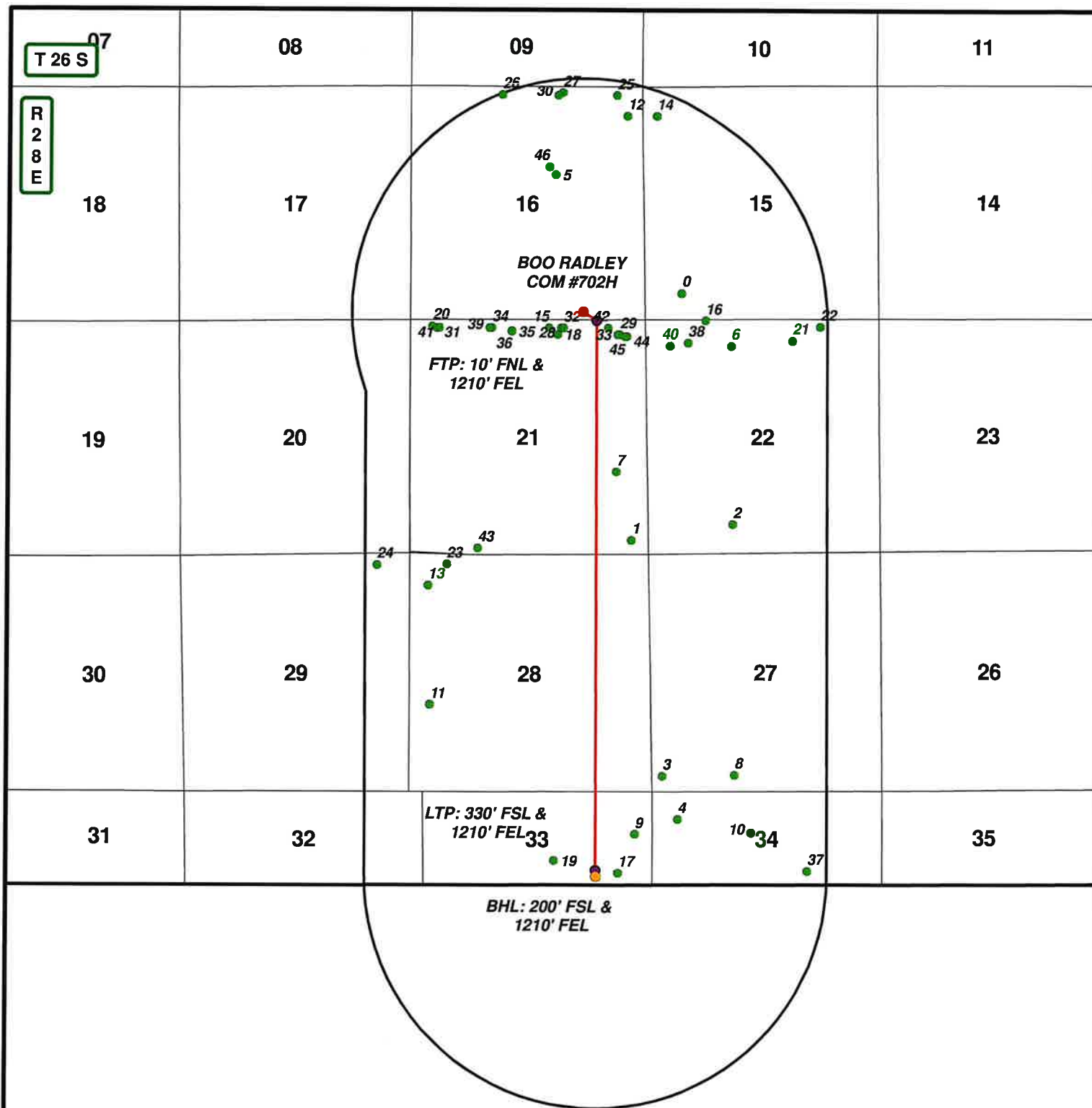
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DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

# LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER
- DRILL PATH

## BOO RADLEY COM #702H

SEC: 16 TWP: 26 S. RGE: 28 E. ELEVATION: 2994.7'

STATE: NEW MEXICO COUNTY: EDDY 200' FSL & 1520' FEL

W.O. # 20-958 LEASE: BOO RADLEY SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.25 0.5 1 Miles

1 IN = 3,000 FT

1 MILE MAP

7/22/2020

W.N.



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## BOO RADLEY COM #702H - 1 MILE DATA (20-958)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	STATE OF NM "B" 001	SUN OIL CO	3001502527	15	26.05	28E	600 S		860 W		32.036889	-104.080989	Plugged
1	HUMBLE STATE 001	GLENN BENNETT	3001502530	21	26.05	28E	330 S		330 E		32.021524	-104.084662	Plugged
2	HUMBLE FOWLKES 001	BENNETT J	3001502531	22	26.05	28E	660 S		1980 W		32.022515	-104.077183	Plugged
3	SUN ST 27 001	CHAPMAN FORD	3001502534	27	26.05	28E	330 S		330 W		32.006824	-104.082376	Plugged
4	STATE 34 001	CHAPMAN FORD	3001502536	34	26.05	28E	660 N		660 W		32.004115	-104.081203	Plugged
5	STATE LG 1175 001	JAKE L HAMON	3001521398	16	26.05	28E	1980 N		1980 E		32.044302	-104.090314	Plugged
6	AMINOIL ST 001	HARWICK OIL CO	3001524358	22	26.05	28E	590 N		1980 W		32.033636	-104.077313	Plugged
7	GETTY STATE 001	RAY H HASKINS	3001524474	21	26.05	28E	1880 S		660 E		32.025777	-104.085782	Plugged
8	STATE 001	CHAPMAN FORD	3001510269	27	26.05	28E	330 S		1980 W		32.006879	-104.077027	Plugged
9	POGO ST 001	SLEDGE OIL & GAS INC	3001523607	33	26.05	28E	990 N		330 E		32.003178	-104.084369	Plugged
10	AMINOIL ST 001	CALLAWAY OIL ; GAS	3001524042	34	26.05	28E	990 N		2310 W		32.003263	-104.075804	Plugged
11	ALL STATE COM 002H	MARBOB ENERGY CORP	3001537499	28	26.05	28E	1980 S		330 W		32.011235	-104.099544	Unknown
12	SRO STATE UNIT COM 105H	MARBOB ENERGY CORP	3001537424	16	26.05	28E	660 N		330 E		32.047903	-104.085018	Plugged
13	ALL STATE COM 001H	MARBOB ENERGY CORP	3001537498	28	26.05	28E	660 N		330 W		32.018698	-104.099698	Unknown
14	SRO STATE UNIT COM 107H	MARBOB ENERGY CORP	3001537427	15	26.05	28E	660 N		330 W		32.047906	-104.082878	Unknown
15	SKEEN 21 B2BO STATE COM 001H	MEWBOURNE OIL CO	3001543247	21	26.05	28E	185 N		2180 E		32.034723	-104.090816	Unknown
16	DIAMONDBACK 22 STATE COM 004H	COG PRODUCTION, LLC	3001540816	22	26.05	28E	20 N		1393 W		32.035193	-104.079235	Unknown
17	DIAMONDBACK 22 STATE COM 005H	COG OPERATING LLC	3001542453	33	26.05	28E	280 S		760 E		32.000751	-104.085613	Unknown
18	SKEEN 21 STATE COM 002H	MEWBOURNE OIL CO	3001539773	21	26.05	28E	330 N		1980 E		32.034324	-104.090162	Unknown
19	GRAHAM NASH STATE COM 006H	COG OPERATING LLC	3001542464	33	26.05	28E	560 S		2200 E		32.001511	-104.090348	Unknown
20	SKEEN 21 DM STATE 001	MEWBOURNE OIL CO	3001540863	21	26.05	28E	150 N		500 W		32.034828	-104.099418	Unknown
21	DIAMONDBACK 22 STATE COM 001H	OGX RESOURCES, LLC	3001538528	22	26.05	28E	480 N		1960 E		32.033962	-104.072811	Unknown
22	DIAMONDBACK 22 STATE COM 011H	COG PRODUCTION, LLC	3001543465	22	26.05	28E	125 N		1365 E		32.034811	-104.070726	Unknown
23	GRAHAM NASH STATE COM 008H	COG OPERATING LLC	3001542203	28	26.05	28E	190 N		760 W		32.019999	-104.09833	Unknown
24	HONEY GRAHAM STATE COM 005H	COG OPERATING LLC	3001541608	29	26.05	28E	190 N		820 E		32.019969	-104.103453	Unknown
25	SRO STATE UNIT 053H	COG OPERATING LLC	3001541532	16	26.05	28E	190 N		560 E		32.049199	-104.085784	Unknown
26	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001541533	16	26.05	28E	190 N		2080 W		32.049243	-104.094295	Unknown
27	GRAHAM CRACKER 16 STATE 007H	COG OPERATING LLC	3001542332	16	26.05	28E	135 N		1810 E		32.049371	-104.089841	Unknown
28	SKEEN 21 D3BO STATE COM 003H	MEWBOURNE OIL CO	3001542811	21	26.05	28E	185 N		1900 E		32.034722	-104.089908	Unknown
29	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001542810	21	26.05	28E	330 N		560 E		32.03432	-104.085558	Unknown
30	GRAHAM CRACKER 16 STATE 003H	COG OPERATING LLC	3001541633	16	26.05	28E	190 N		1910 E		32.049222	-104.090163	Unknown
31	SKEEN 21 B3DM STATE COM 002H	MEWBOURNE OIL CO	3001542855	21	26.05	28E	185 N		610 W		32.034731	-104.09906	Unknown
32	SKEEN 21 D3BO STATE COM 002H	MEWBOURNE OIL CO	3001542853	21	26.05	28E	185 N		1850 E		32.034722	-104.089746	Unknown
33	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542856	21	26.05	28E	330 N		610 E		32.03432	-104.08572	Unknown
34	SKEEN 21 B3CN STATE COM 001H	MEWBOURNE OIL CO	3001542854	21	26.05	28E	185 N		1850 W		32.034727	-104.095039	Unknown
35	SKEEN 21 B2CN STATE 001H	MEWBOURNE OIL CO	3001542934	21	26.05	28E	266 N		2310 W		32.034503	-104.093543	Unknown
36	SKEEN 21 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537802	21	26.05	28E	250 N		2310 W		32.034547	-104.093544	Unknown
37	SKEEN 34 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537805	34	26.05	28E	315 S		1670 E		32.000874	-104.071681	Unknown
38	DIAMONDBACK 22 STATE COM 006H	COG PRODUCTION, LLC	3001543195	22	26.05	28E	520 N		990 W		32.033812	-104.080526	Unknown
39	SKEEN 21 D3CN STATE COM 002H	MEWBOURNE OIL CO	3001542857	21	26.05	28E	185 N		1800 W		32.034727	-104.095201	Unknown
40	DIAMONDBACK 22 STATE COM 002H	OGX RESOURCES, LLC	3001539105	22	26.05	28E	580 N		580 W		32.03364	-104.081853	Unknown
41	SKEEN 21 D3DM STATE COM 003H	MEWBOURNE OIL CO	3001542812	21	26.05	28E	185 N		660 W		32.034731	-104.098898	Unknown
42	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001543246	21	26.05	28E	185 N		820 E		32.034719	-104.086406	Unknown
43	GRAHAM NASH FEDERAL COM 013H	COG OPERATING LLC	3001543811	21	26.05	28E	200 S		1550 W		32.021012	-104.096034	Unknown
44	SKEEN 21 W0AP STATE COM 002H	MEWBOURNE OIL CO	3001544553	21	26.05	28E	330 N		550 E		32.034186	-104.085036	Unknown
45	SKEEN 21 W2AP STATE COM 001H	MEWBOURNE OIL CO	3001544552	21	26.05	28E	330 N		600 E		32.034186	-104.085198	Unknown
46	SALT CEDAR 16 STATE SWD #001 001	COG OPERATING LLC	3001545826	16	26.5	28E	1850 N		2185 E		32.044761	-104.090784	New (Not drilled or compl)

Intent ☐ As Drilled ☐

API #

Operator Name:  
COG OPERATING, LLC.

Property Name:  
BOO RADLEY COM

Well Number  
702H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude			NAD	

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	21	26-S	28-E		10	NORTH	1210	EAST	EDDY
Latitude 32.035161					Longitude -104.087256			NAD 83	

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	33	26-S	28-E	4	330	SOUTH	1210	EAST	EDDY
Latitude 32.000889					Longitude -104.087253			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:

Property Name:

Well Number

KZ 06/29/2018

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number 703H
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation 2995.0'

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1550	EAST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	33	26-S	28-E		200	SOUTH	2090	EAST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 27 NME  
SURFACE LOCATION  
Y=376770.6 N  
X=576056.4 E  
LAT.=32.035619° N  
LONG.=104.087891° W

POINT LEGEND	
1	Y=376565.5 N X=577614.8 E
2	Y=373918.8 N X=577625.7 E
3	Y=371271.7 N X=577636.8 E
4	Y=368631.2 N X=577634.7 E
5	Y=365989.7 N X=577639.4 E
6	Y=363768.7 N X=577644.4 E
7	Y=363756.9 N X=574780.2 E
8	Y=365985.7 N X=574775.0 E
9	Y=371278.1 N X=574893.2 E
10	Y=376574.5 N X=574879.0 E

NAD 27 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=363958.3 N  
X=575554.0 E  
LAT.=32.000401° N  
LONG.=104.089606° W

SECTION 16  
SECTION 21  
SECTION 28  
SECTION 33

LOT 6  
42.39 Ac

LOT 5  
25.23 Ac

LOT 2  
25.07 Ac

LOT 3  
27.32 Ac

LOT 4  
27.26 Ac

GRID AZ. - 179°52'02"  
HORZ. DIST. - 12604.1'

LEASE X-ING  
LAT.=32.024161° N  
LONG.=104.089608° W

LEASE X-ING  
LAT.=32.016862° N  
LONG.=104.089607° W

LEASE X-ING  
LAT.=32.005977° N  
LONG.=104.089606° W

LTP  
330' FSL & 2090' FEL  
Y=364088.3 N  
X=575553.7 E  
LAT.=32.000758° N  
LONG.=104.089606° W

**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

Date of Survey \_\_\_\_\_

Signature & Seal of Professional Surveyor

CHAD L. HARCROW

NEW MEXICO

17777

LICENSED PROFESSIONAL SURVEYOR

Chad L. Harcrow 7/27/20

Certificate No. CHAD HARCROW 17777

W.O. # 20-957 DRAWN BY: AH

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-6181 Fax: (575) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
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DISTRICT III  
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DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>703H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>2995.0'</b>

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1550	EAST	EDDY

**Bottom Hole Location If Different From Surface**

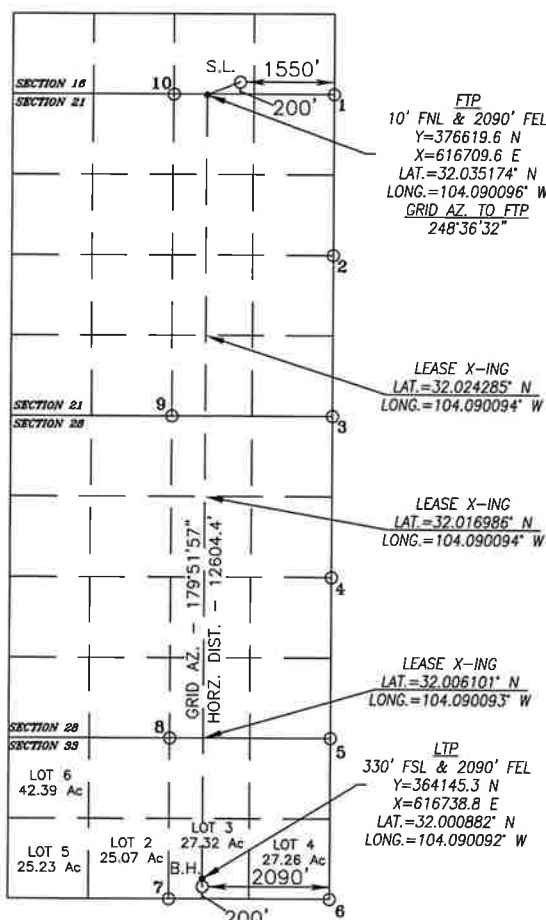
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	33	26-S	28-E		200	SOUTH	2090	EAST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 83 NME  
SURFACE LOCATION  
Y=376627.9 N  
X=617241.2 E  
LAT.=32.035743° N  
LONG.=104.088379° W

POINT LEGEND	
1	Y=376622.7 N X=618799.6 E
2	Y=373976.1 N X=618810.7 E
3	Y=371328.9 N X=618821.8 E
4	Y=368688.3 N X=618819.8 E
5	Y=366046.7 N X=618824.5 E
6	Y=363825.7 N X=618829.5 E
7	Y=363813.8 N X=615965.2 E
8	Y=366042.7 N X=615960.0 E
9	Y=371335.2 N X=616078.1 E
10	Y=376631.8 N X=616063.7 E

NAD 83 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=364015.3 N  
X=616739.1 E  
LAT.=32.000525° N  
LONG.=104.090092° W



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

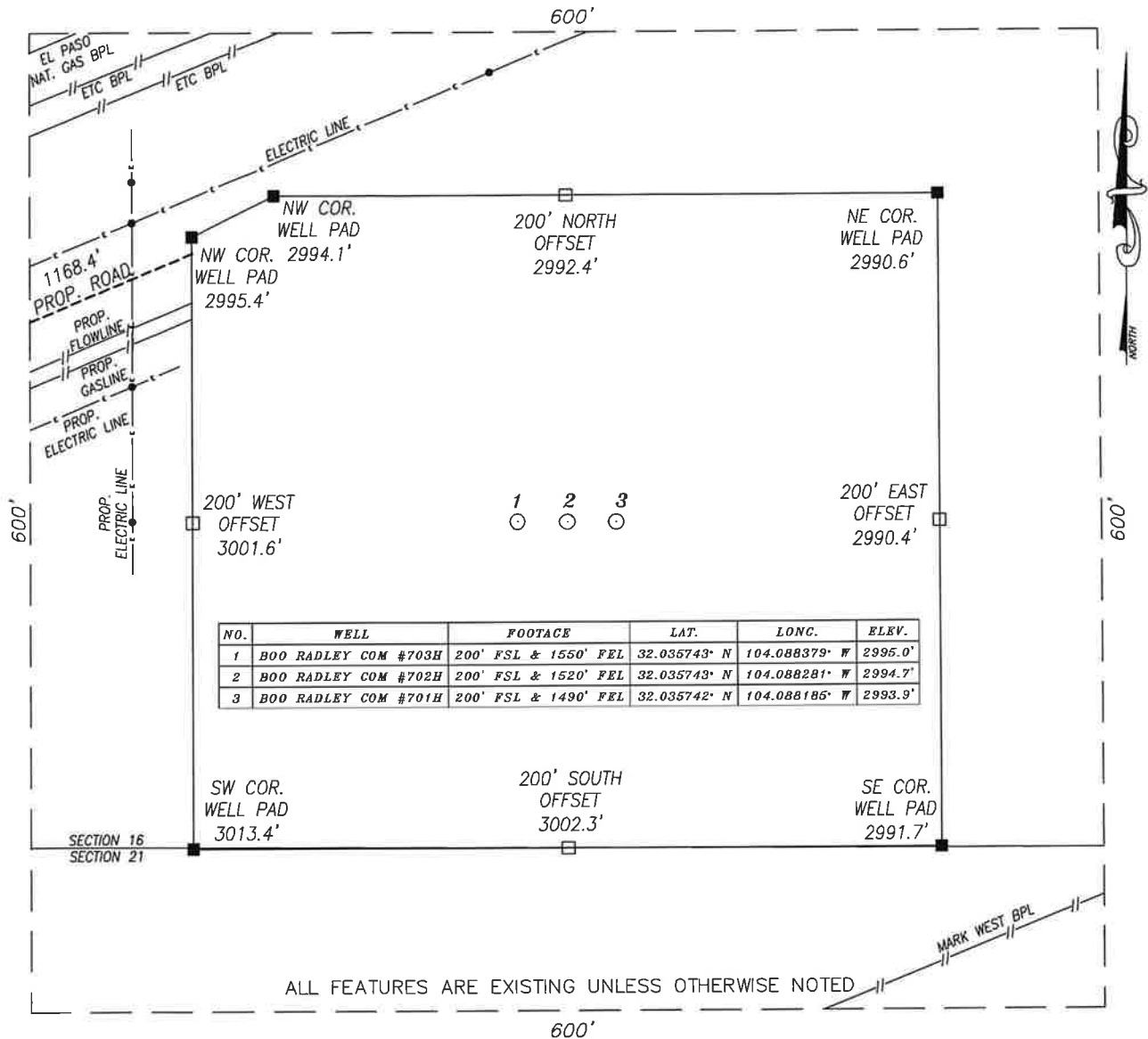
Date of Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 7/27/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-957 DRAWN BY: AH

SECTION 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY) ONTO CALICHE ROAD; THEN GO APPROX. 0.8 MILES TO THE PROPOSED ROAD; PROPOSED WELLS LIES APPROX. 1342 FEET TO THE NORTHEAST.

COORDINATES ARE NAD 83 NME AND ELEVATIONS ARE NAVD 88

CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/30/20  
DATE

HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

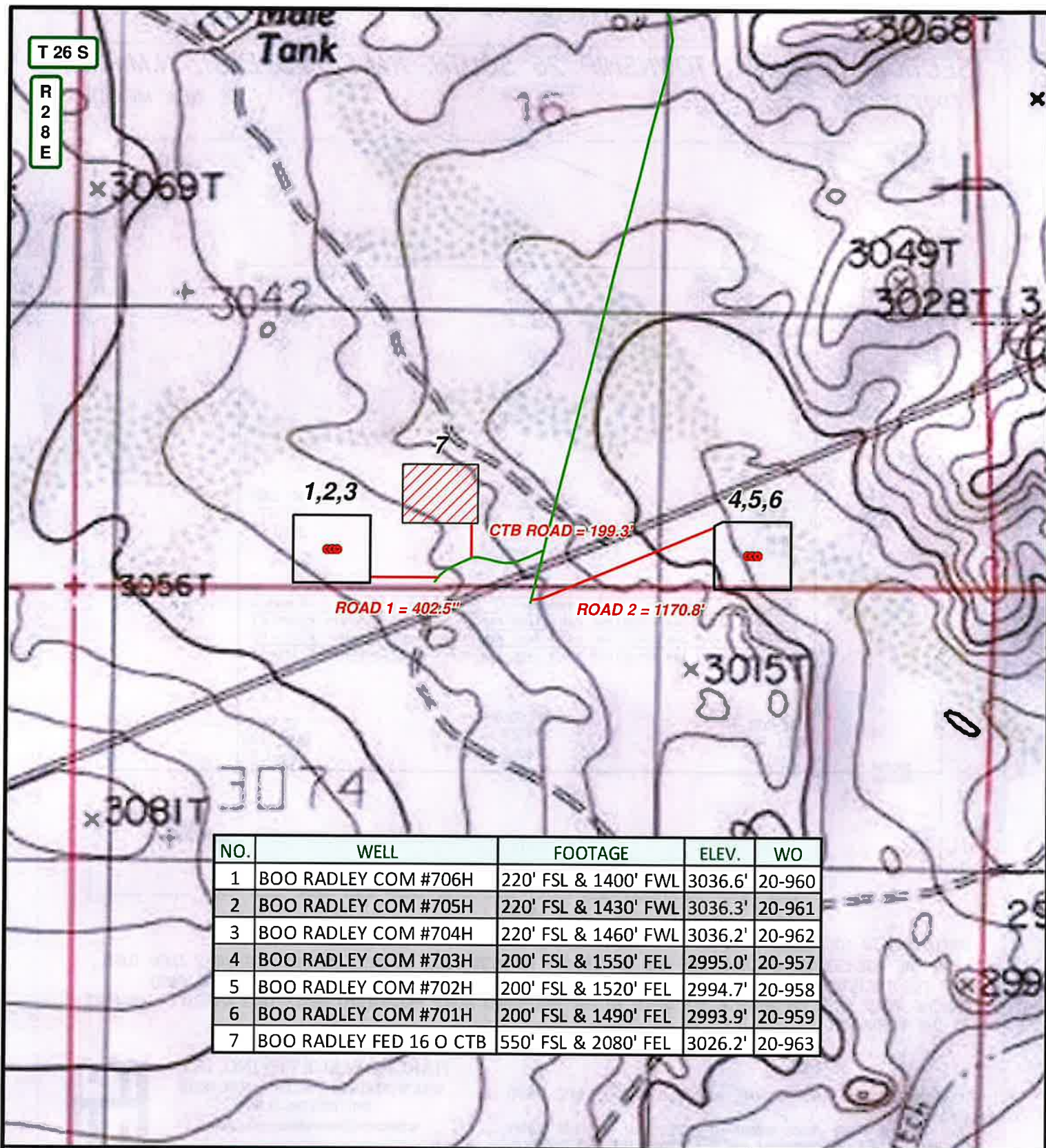
c.harcrow@harcrowsurveying.com



100 0 100 200 Feet  
Scale: 1"=100'

COG OPERATING, LLC

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH
FILE: 20-957	



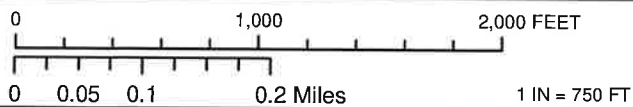
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
 W.O. # 20-957 LEASE: BOO RADLEY



LOCATION MAP

TOPO

7/22/2020

W.N.



COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

17

16

15

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5'

ROAD 2 = 1170.8'

20

22

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND



WELL



WELLPAD

EXISTING ROAD

PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

IMAGERY

7/22/2020

W.N.



COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

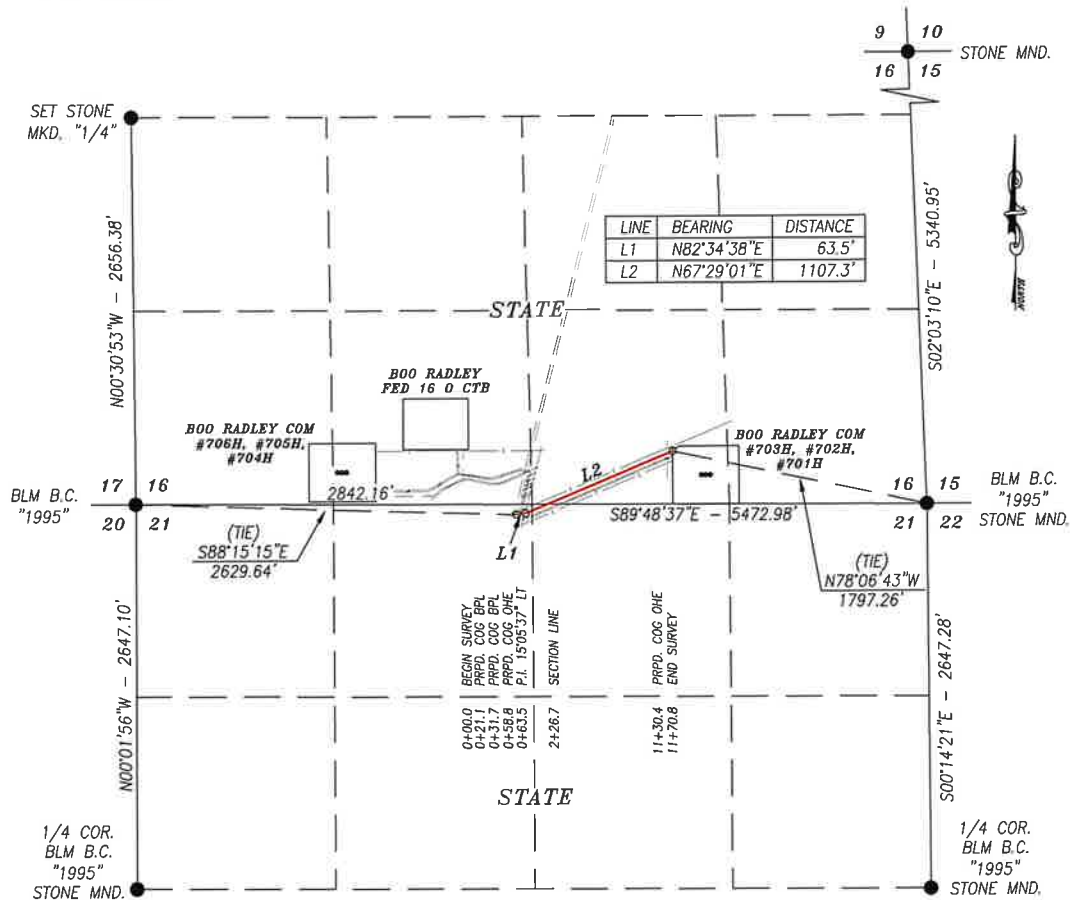


FILE: 20-995

7/27/20  
DATE

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NE/4 NW/4 OF SECTION 21, WHICH LIES S88°15'15"E 2629.64 FEET FROM THE NORTHWEST CORNER OF SECTION 21; THEN N82°34'38"E 63.5 FEET; THEN N67°29'01"E 1107.3 FEET; TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N78°06'43"W 1797.26 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1170.8 FEET OR 70.96 RODS IN LENGTH, CONTAINING 0.806 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

### SECTION 16

SW/4 SE/4 57.22 RODS OR 0.650 ACRES

### SECTION 21

NE/4 NW/4 6.81 RODS OR 0.077 ACRES

NW/4 NE/4 6.93 RODS OR 0.079 ACRES

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

HARCROW SURVEYING, LLC  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #2

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995



# **LEGEND**

- WELL
- WELLPAD
- EXIST. ROAD
- ACCESS ROAD

## **BOO RADLEY COM ACCESS ROADS**

SECTION: 16, 21      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-995      LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles      1 IN = 750 FT

LOCATION MAP

IMAGERY

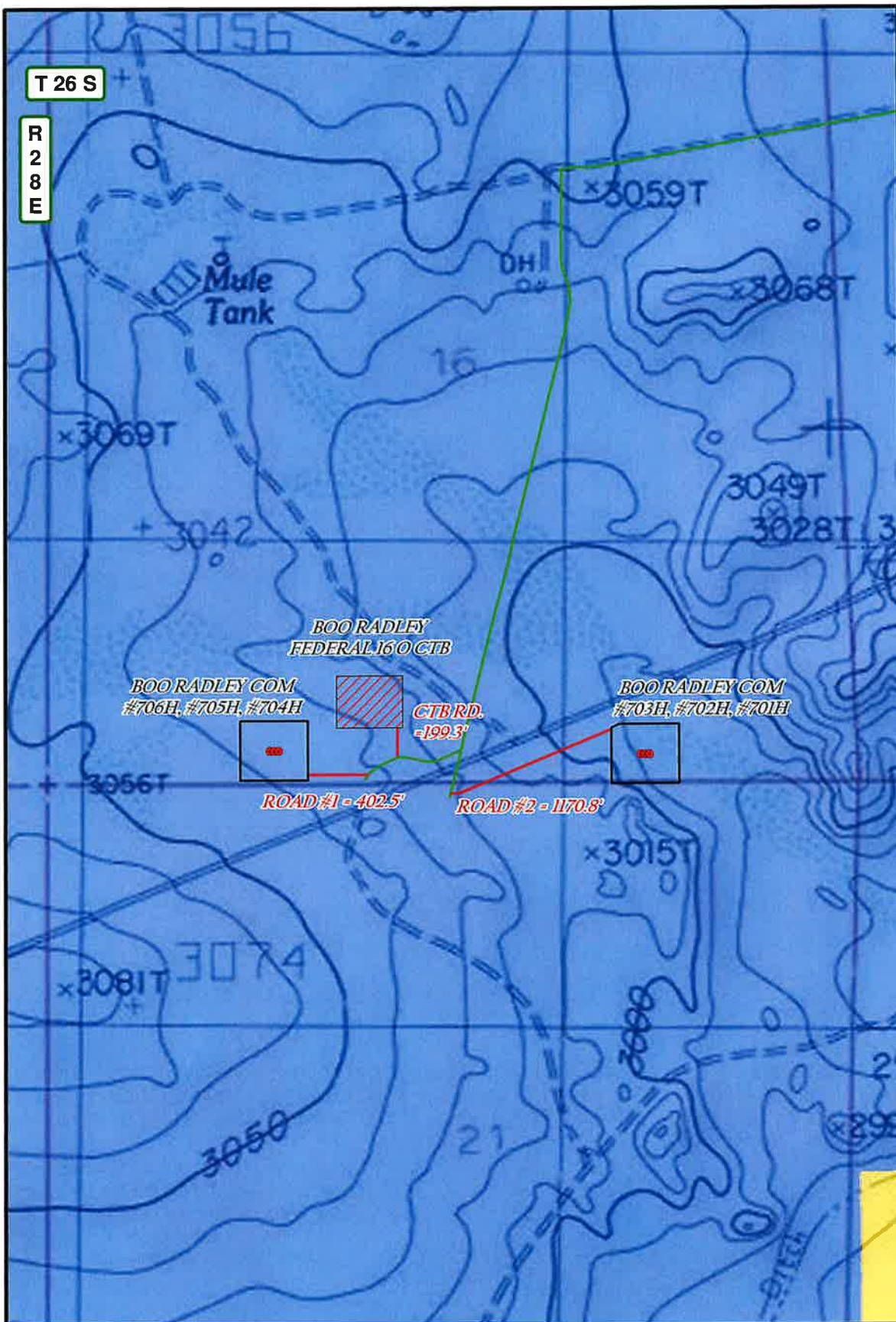
7/23/2020

W.N.

**CONCHO**  
 COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST., ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

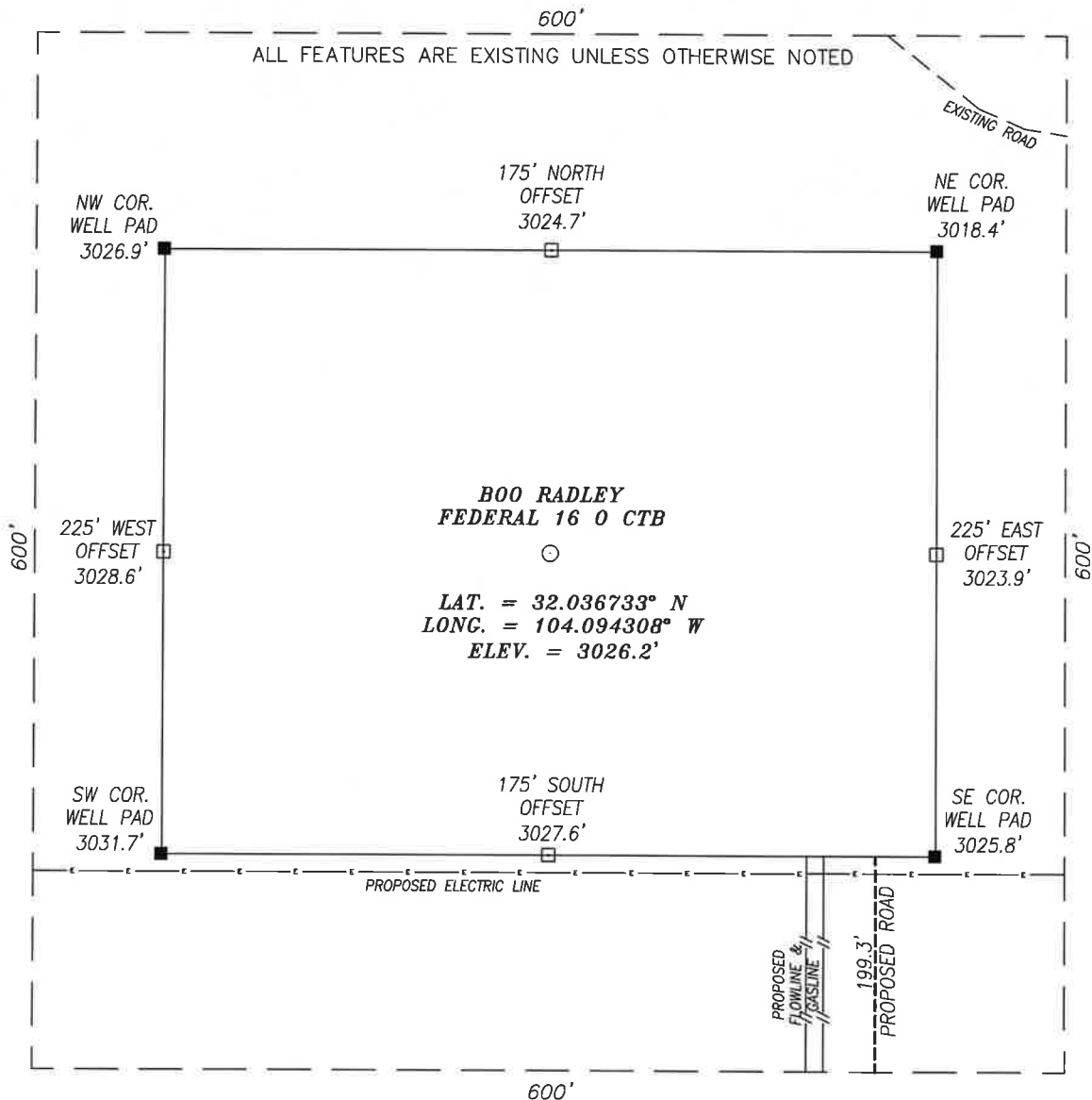


<b>LEGEND</b> WELL WELLPAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM	<b>BOO RADLEY COM ACCESS ROADS</b>		
	SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.
	STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
	W.O. # 20-995		LEASE: BOO RADLEY
	  1 IN = 750 FT		
LOCATION MAP	LAND STATUS	7/23/2020	W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY); THEN GO APPROX. 0.7 MILES; TURN RIGHT AND GO APPROX. 0.1 MILES TO THE PROPOSED ROAD. PROPOSED PAD LIES APPROX. 420 FEET TO THE NORTHWEST.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY. THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

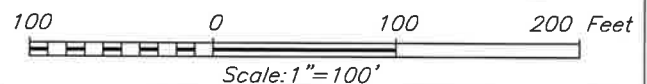
7/27/20  
DATE

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com

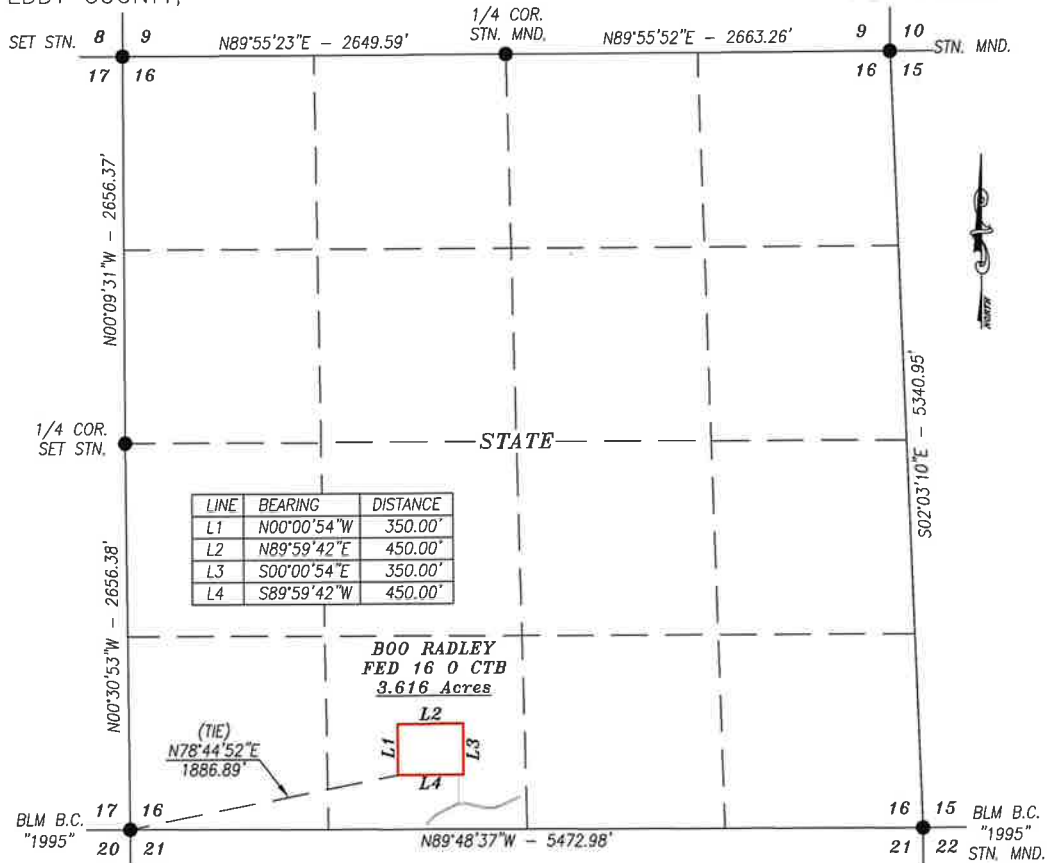


**COG OPERATING, LLC**

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

EXHIBIT A  
**STATE BUSINESS LEASE**  
**COG OPERATING, LLC.**

A STATE BUSINESS LEASE FOR THE "BOO RADLEY FED 16 O CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A PROPOSED PAD LOCATED WITHIN STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N78°44'52\"E 1886.89 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'54\"W 350.00 FEET; THEN N89°59'42\"E 450.00 FEET; THEN S00°00'54\"W 350.00 FEET; THEN S89°59'42\"W 450.00 FEET TO THE POINT OF BEGINNING.

SAID PAD CONTAINS 3.616 ACRES AND IS LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



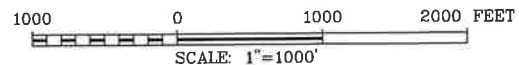
**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE



**COG OPERATING, LLC**

SURVEY OF A PROPOSED PAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

EXHIBIT A

DRAFTING DATE: JULY 22, 2020

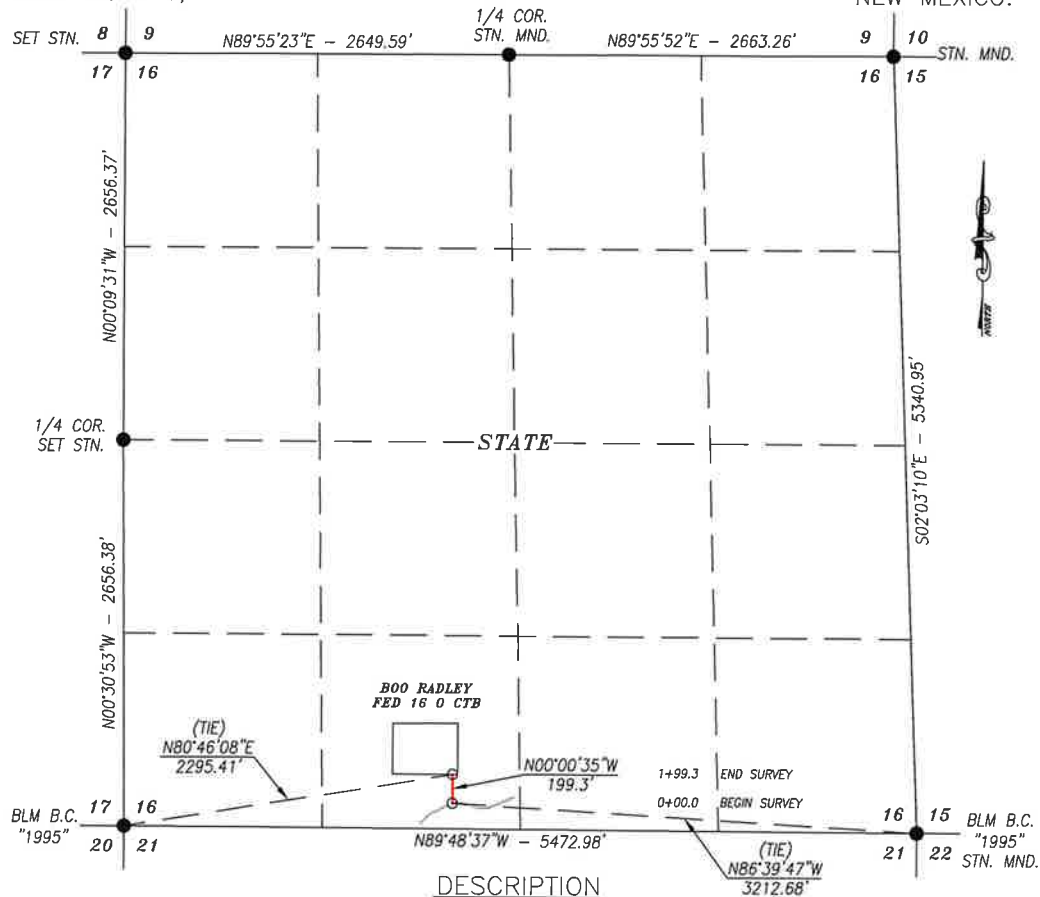
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-963

**EXHIBIT B**  
**ACCESS ROAD PLAT**  
**COG OPERATING, LLC.**

AN ACCESS ROAD FOR THE "BOO RADLEY FED 16 O CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°39'47"W 3212.68 FEET FROM THE SOUTHEAST CORNER; THEN N00°00'35"W 199.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N80°46'08"E 2295.41 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 199.3 FEET OR 12.08 RODS IN LENGTH, CONTAINING 0.137 ACRES MORE OR LESS AND BEING LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



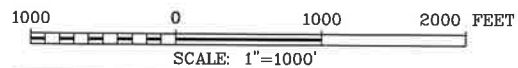
**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
 DATE



**COG OPERATING, LLC**

SURVEY OF A PROPOSED ROAD LOCATED IN  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
 NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT B
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN FILE: 20-963

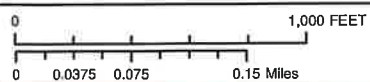


# **LEGEND**

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD

## **BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD**

SECTION: 16	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-963	LEASE: BOO RADLEY	



1 IN = 500 FT

LOCATION MAP

IMAGERY

7/22/2020

W.N.

**CONCHO**  
COG OPERATING, LLC

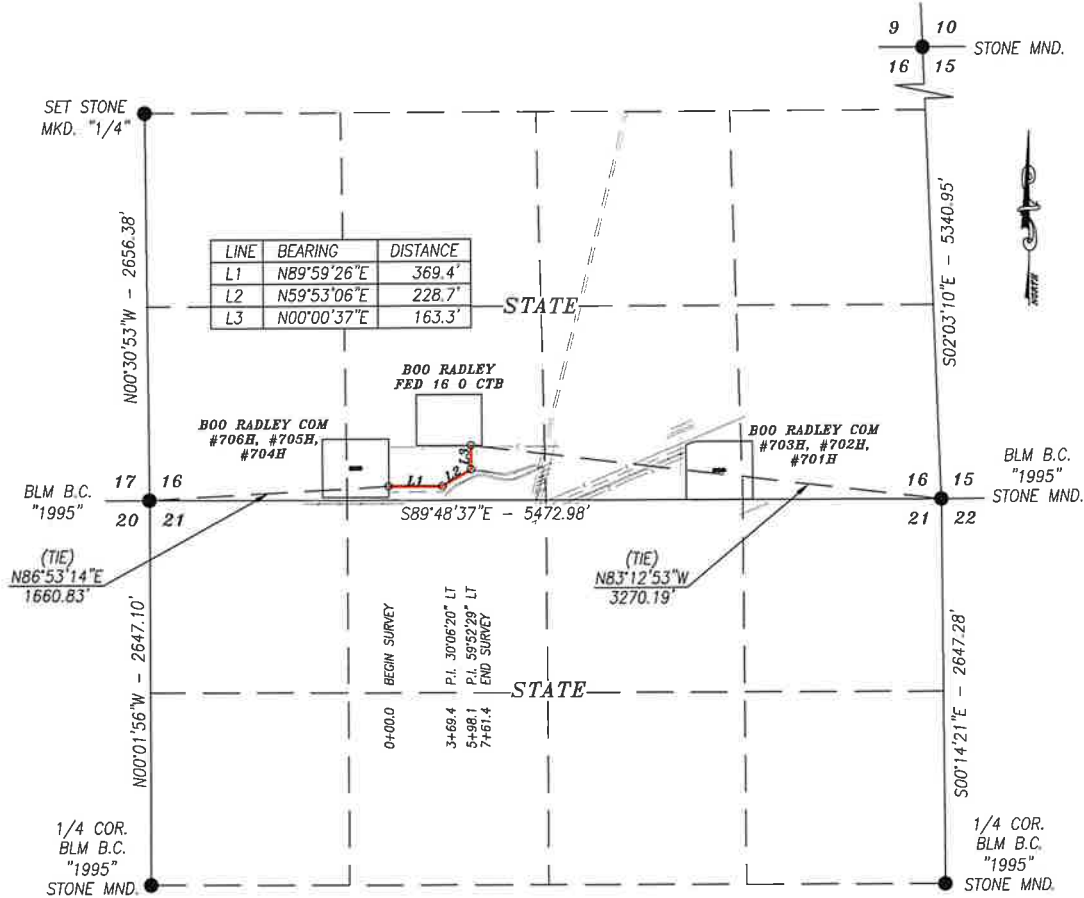
**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



<b>LEGEND</b> CTB PAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM		<b>BOO RADLEY FEDERAL 160 CTB &amp; ACCESS ROAD</b> SECTION: 16      TOWNSHIP: 26 S.      RANGE: 28 E. STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M W.O. # 20-963      LEASE: BOO RADLEY		   HARCROW SURVEYING, LLC. 2316 W. MAIN ST. ARTESIA, NM 88210 PH: (575) 746-2158 <a href="mailto:c.harcrow@harcrowsurveying.com">c.harcrow@harcrowsurveying.com</a>
  1 IN = 500 FT		LOCATION MAP      LAND STATUS      7/22/2020      W.N.		

# **PIPELINE PLAT** **COG OPERATING, LLC.**

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



## **DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°53'14"E 1660.83 FEET FROM THE SOUTHWEST CORNER; THEN N89°59'26"E 369.4 FEET; THEN N59°53'06"E 228.7; THEN N00°00'37"E 163.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°12'53"W 3270.19 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 761.4 FEET OR 46.15 RODS IN LENGTH, CONTAINING 0.524 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### **BASIS OF BEARING:**

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.

### **CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

### **HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## **COG OPERATING, LLC.**

SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

FLOWLINE #1

DRAFTING DATE: JULY 22, 2020

PAGE 1 OF 1

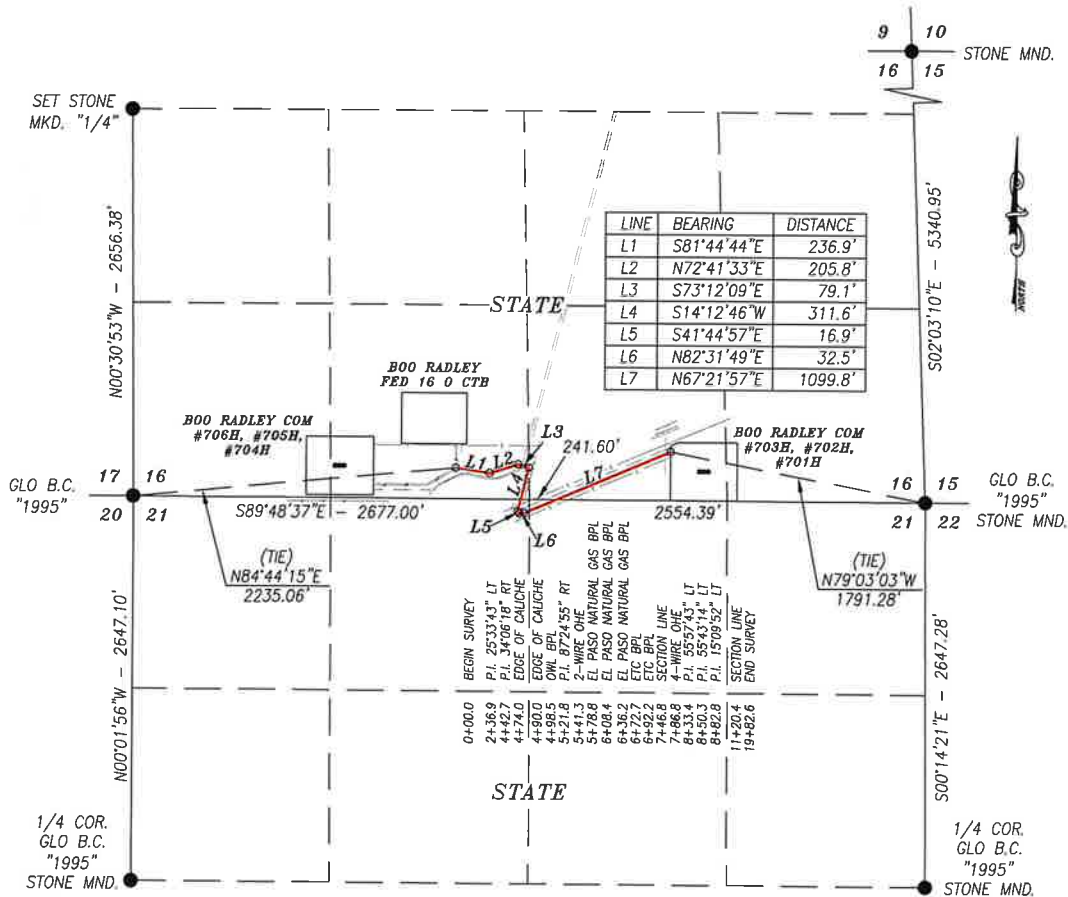
APPROVED BY: CH

DRAWN BY: DS

FILE: 20-992

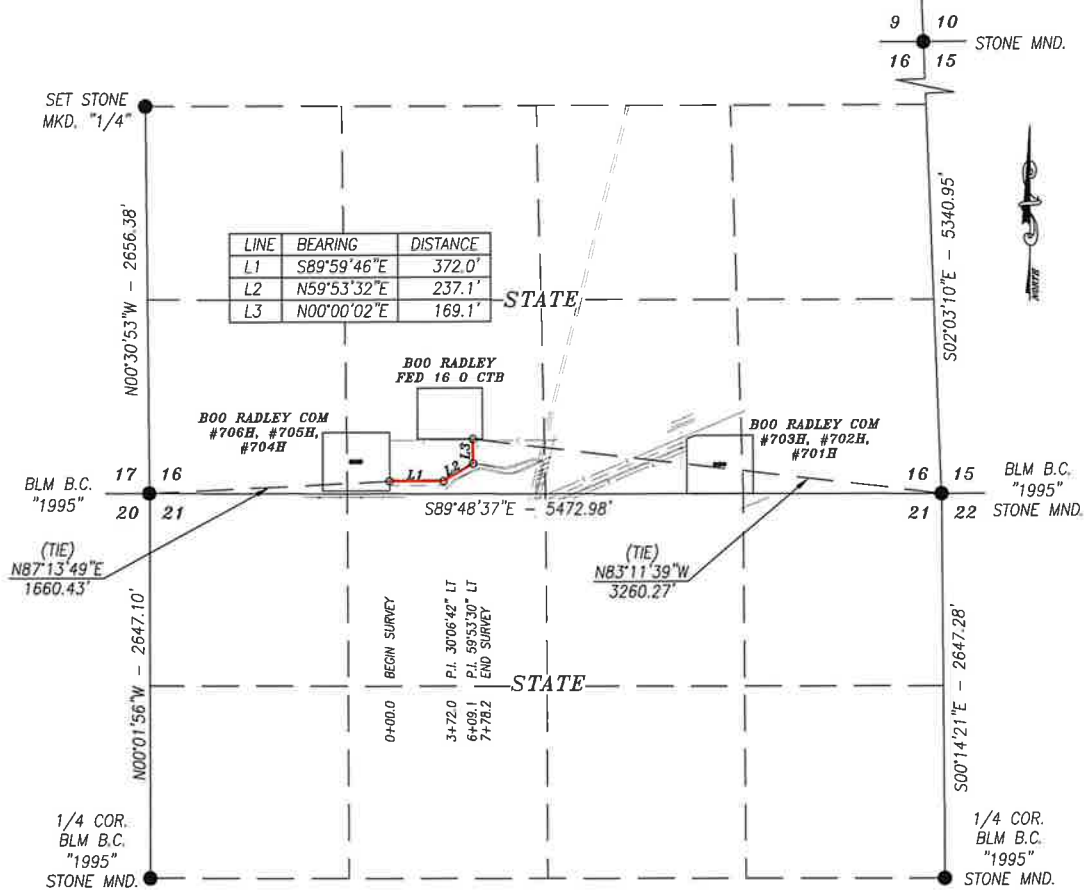
# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N87°13'49"E 1660.43 FEET FROM THE SOUTHWEST CORNER; THEN S89°59'46"E 372.0 FEET; THEN N59°53'32"E 237.1; THEN N00°00'02"E 169.1 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°11'39"W 3260.27 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 778.2 FEET OR 47.16 RODS IN LENGTH, CONTAINING 0.536 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

### HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED GAS LINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

GAS LINE #1

DRAFTING DATE: JULY 22, 2020

PAGE 1 OF 1

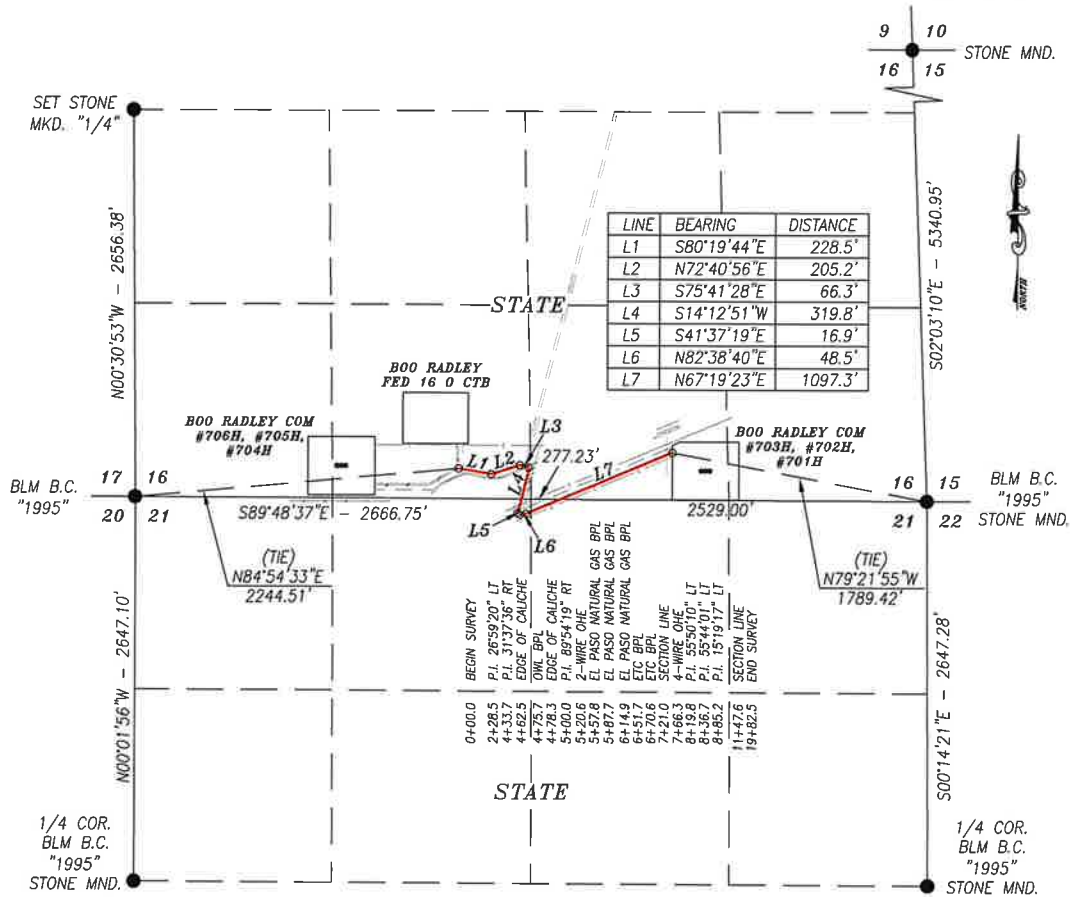
APPROVED BY: CH

DRAWN BY: DS

FILE: 20-993

**PIPELINE PLAT**  
**COG OPERATING, LLC.**

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
**SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
**EDDY COUNTY, NEW MEXICO.**



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SECTION 16, WHICH LIES N84°54'33"E 2244.51 FEET FROM THE SOUTHWEST CORNER OF SECTION 16; THEN S80°19'44"E 228.5 FEET; THEN N72°40'56"E 205.2; THEN S75°41'28"E 66.3 FEET; THEN S14°12'51"W 319.8; THEN S41°37'19"E 16.9; THEN N82°38'40"E 48.5 FEET; THEN N67°19'23"E 1097.3 FEET TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N79°21'55"W 1789.42 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1982.5 FEET OR 120.15 RODS IN LENGTH, CONTAINING 1.365 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

**SECTION 16**

SE/4 SW/4 43.70 RODS OR 0.497 ACRES  
SW/4 SE/4 50.59 RODS OR 0.574 ACRES

**SECTION 21**

NE/4 NW/4 12.25 RODS OR 0.139 ACRES  
NW/4 NE/4 13.61 RODS OR 0.155 ACRES

**BASIS OF BEARING:**

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.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

**COG OPERATING, LLC.**

SURVEY OF A PROPOSED GAS LINE LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

GAS LINE #2

DRAFTING DATE: JULY 22, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: DS

FILE: 20-993

T 26 S

R  
2  
8  
E

16

7

FLOWLINE #1  
761.4'

1,2,3





FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

-  WELL  
 WELLPAD  
 FLOWLINE  
 GAS LINE

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21 TOWNSHIP: 26 S. RANGE: 28 E.

STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M

W.O. # 20-992, 993 LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

IMAGERY

7/23/2020

D.S.

 **CONCHO**  
 COG OPERATING, LLC

 **HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
EFLOWLINE #1  
761.4'

7

1,2,3

FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- FLOWLINE
- GAS LINE
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993

LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

LAND STATUS

7/23/2020

D.S.

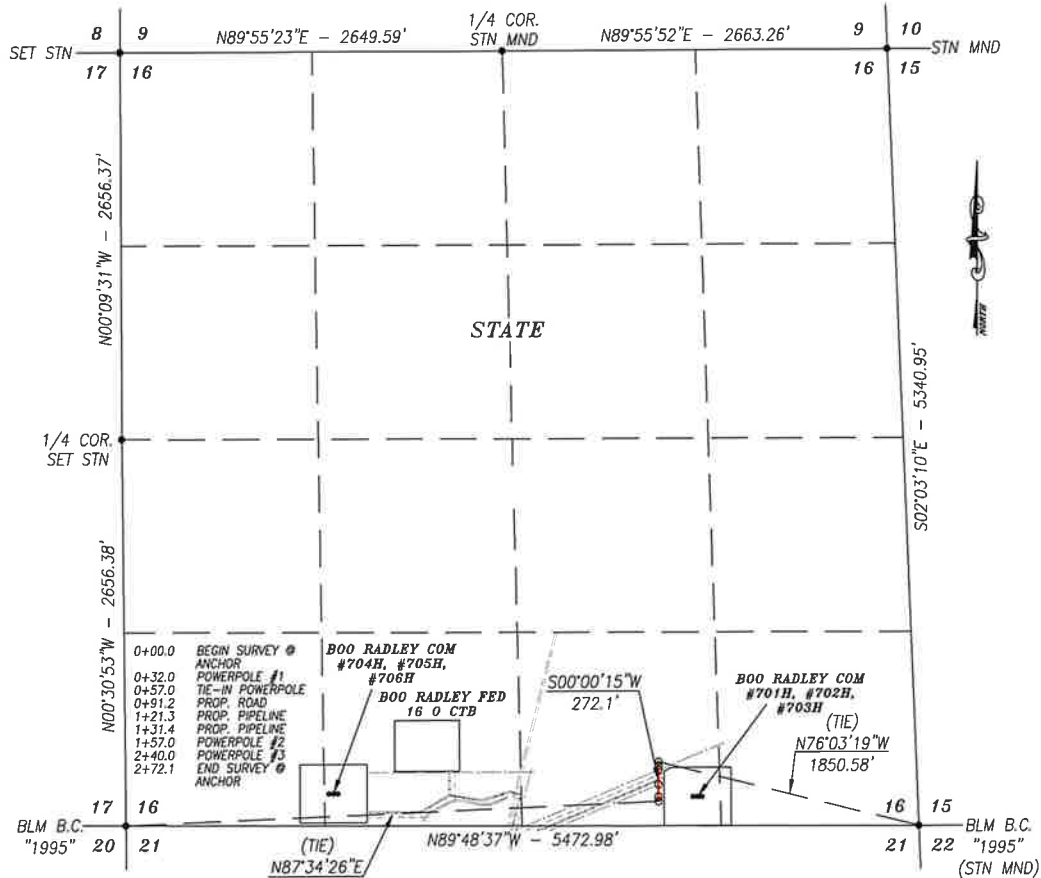
**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

# POWERLINE PLAT: LINE #1

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 0 CENTRAL TANKBATTERY IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY;

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N76°03'19"W 1850.58 FEET FROM THE SOUTHEAST CORNER; THEN S00°00'15"W 272.1 FEET, TO A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N87°34'26"E 3680.19 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 272.1 FEET OR 16.49 RODS IN LENGTH, CONTAINING 0.187 ACRES MORE OR LESS AND BEING LOCATED ENTIRELY IN THE SW/4 SE/4 OF SAID SECTION.

### BASIS OF BEARING:

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.

HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE



SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

POWERLINE #1

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH

DRAWN BY: JH

FILE: 20-994

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
*SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,*  
EDDY COUNTY, NEW MEXICO.



SURVEY DATE: JULY 17, 2020		POWERLINE #2
DRAFTING DATE: JULY 23, 2020		PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: JH	FILE: 20-994

Chad Harrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE



#### LEGEND

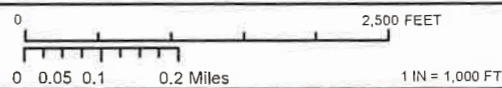
- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD

#### BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21 TOWNSHIP: 26 S. RANGE: 28 E.

STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M

W.O.# 20-994 LEASE: BOO RADLEY COM



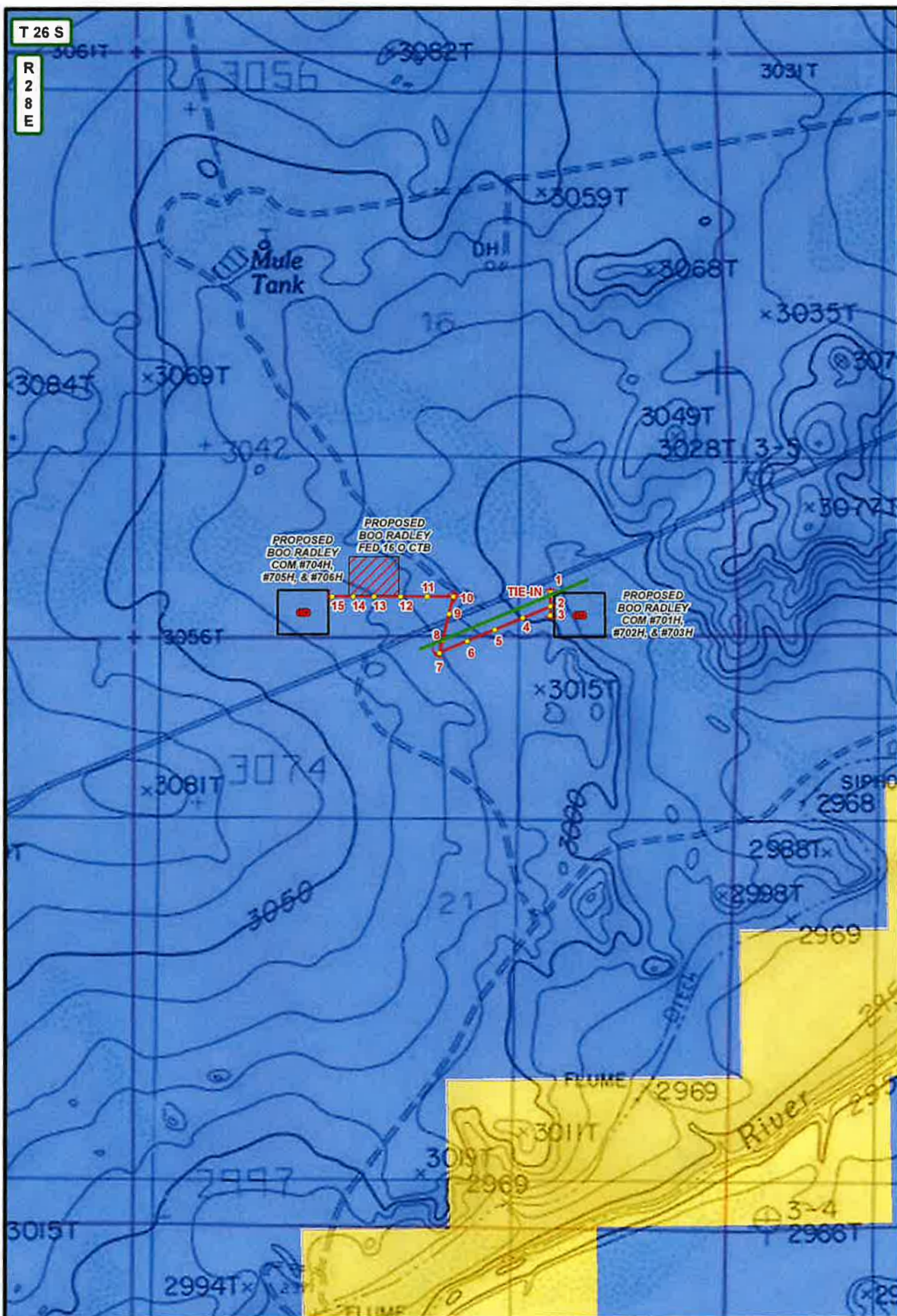
POWERLINE OVERVIEW IMAGERY 7/22/2020 J.H.

**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2314 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158 FAX: (575) 746-2158  
c.harcrow@harcrowsurveying.com

T 26 S

R 28 E

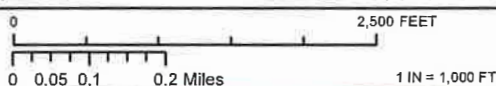


**LEGEND**

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD
- PRIVATE
- STATE OF NM
- US BLM

**BOO RADLEY COM POWERLINE**

SECTIONS: 16 & 21 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-994 LEASE: BOO RADLEY COM



POWERLINE OVERVIEW LAND STATUS 7/22/2020 J.H.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
 2314 W. MAIN ST., ARTESIA, NM 88210  
 PH: (575) 746-2158 FAX: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles 1 IN = 750 FT

LOCATION MAP

LAND STATUS

7/22/2020

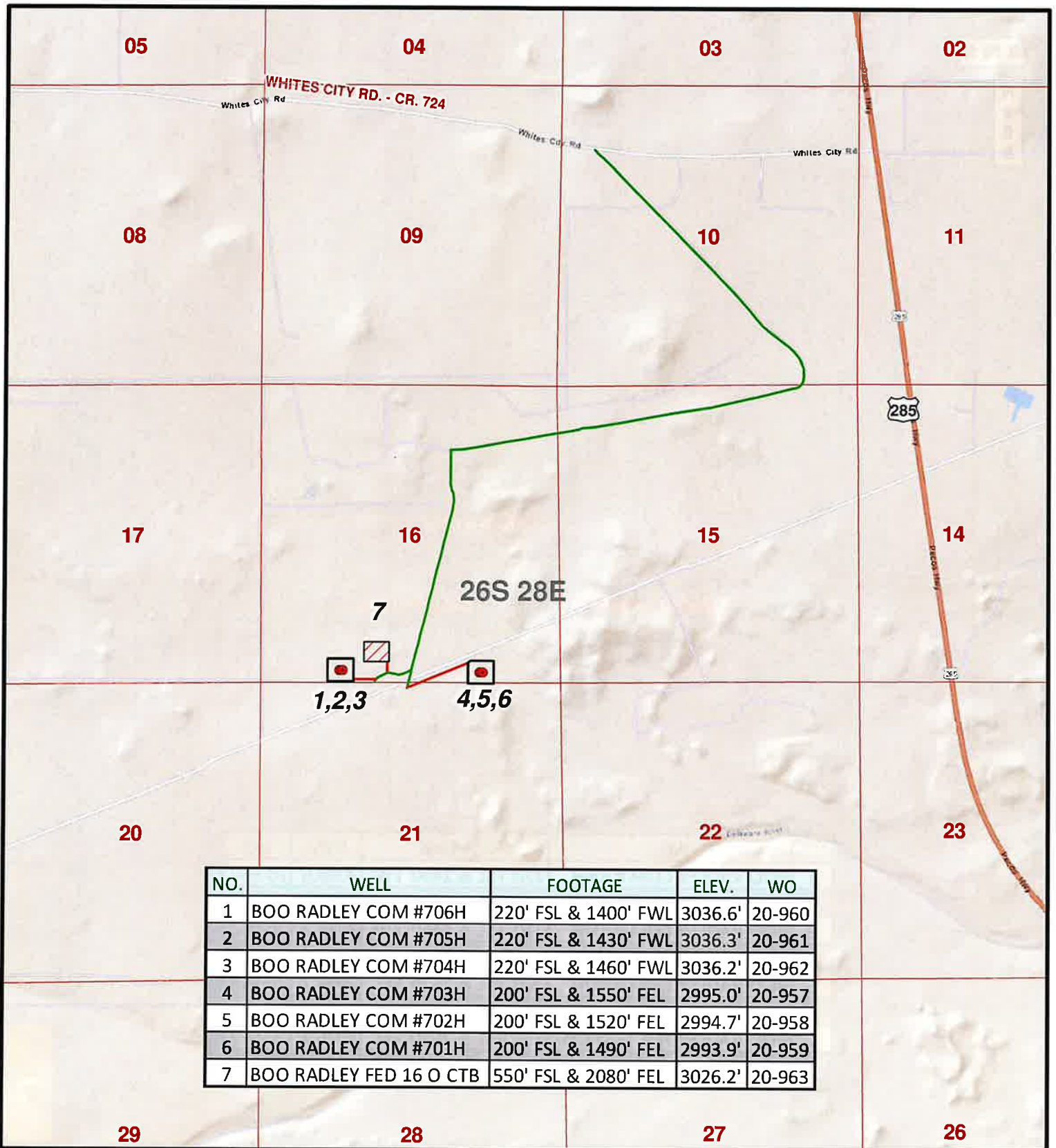
W.N.



COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
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## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
 W.O. # 20-957 LEASE: BOO RADLEY

0 1,000 2,000 3,000 4,000 5,000 6,000 FEET

0 0.15 0.3 0.6 Miles

1 IN = 2,250 FT

LOCATION MAP

VICINITY

7/22/2020

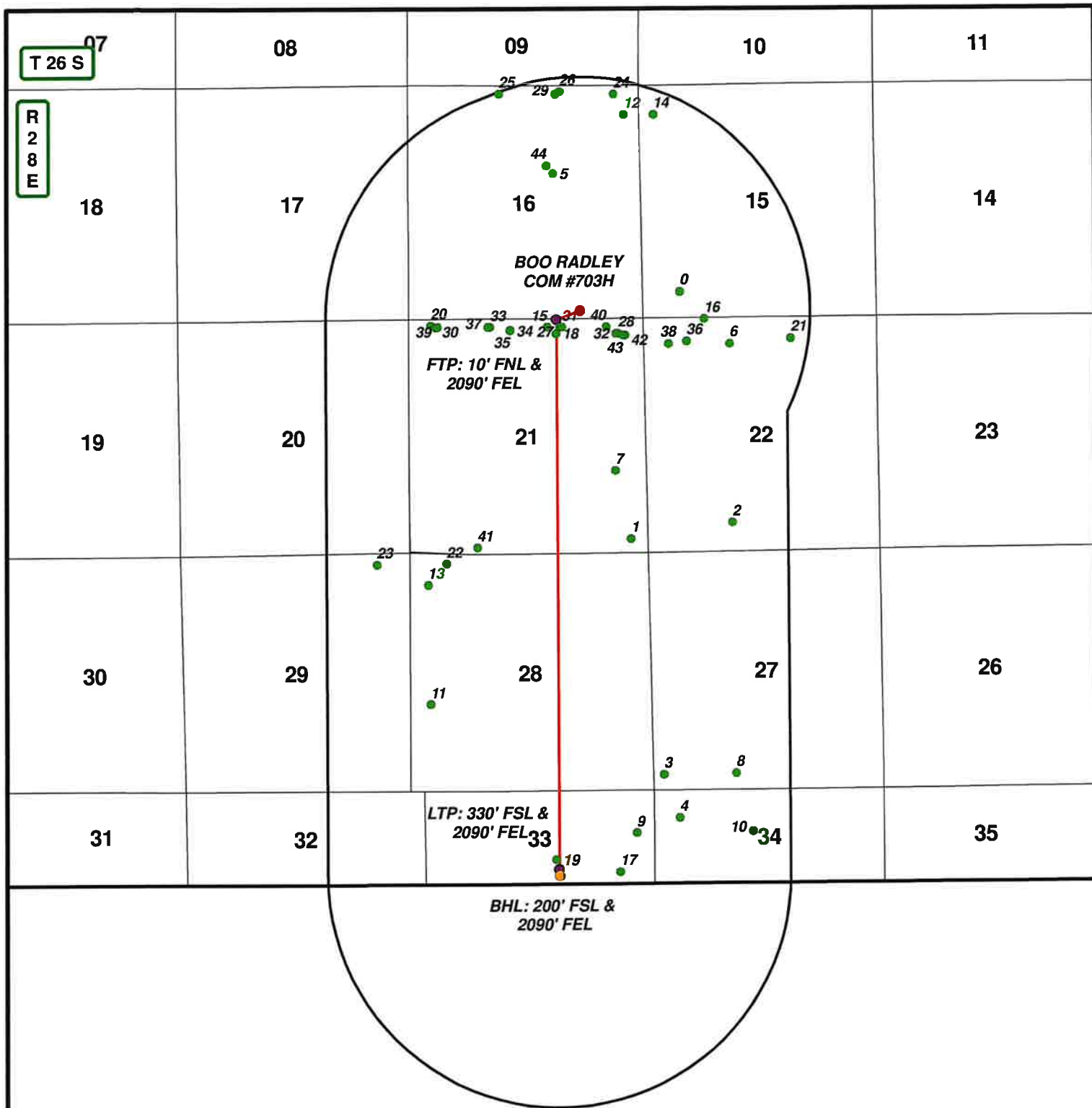
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DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

## LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER
- DRILL PATH

## BOO RADLEY COM #703H

SEC: 16	TWP: 26 S.	RGE: 28 E.	ELEVATION: 2995.0'
STATE: NEW MEXICO		COUNTY: EDDY	200' FSL & 1550' FEL
W.O. # 20-957	LEASE: BOO RADLEY		SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.25 0.5 1 Miles

1 IN = 3,000 FT

1 MILE MAP

7/22/2020

W.N.



COG OPERATING, LLC



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PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

## BOO RADLEY COM #703H - 1 MILE DATA (20-957)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	STATE OF NM "B" 001	SUN OIL CO	3001502527	15	26.0S	28E	600 S		860 W		32.036889	-104.080989	Plugged
1	HUMBLE STATE 001	GLENN BENNETT	3001502530	21	26.0S	28E	330 S		330 E		32.021524	-104.084662	Plugged
2	HUMBLE FOWLKES 001	BENNETT J	3001502531	22	26.0S	28E	660 S		1980 W		32.022515	-104.077183	Plugged
3	SUN ST 27 001	CHAPMAN FORD	3001502534	27	26.0S	28E	330 S		330 W		32.006824	-104.082376	Plugged
4	STATE 34 001	CHAPMAN FORD	3001502536	34	26.0S	28E	660 N		660 W		32.004115	-104.081203	Plugged
5	STATE LG 1175 001	JAKE L HAMON	3001521398	16	26.0S	28E	1980 N		1980 E		32.044302	-104.090314	Plugged
6	AMINOIL ST 001	HARWICK OIL CO	3001524358	22	26.0S	28E	590 N		1980 W		32.033636	-104.077313	Plugged
7	GETTY STATE 001	RAY H HASKINS	3001524474	21	26.0S	28E	1880 S		660 E		32.025777	-104.085782	Plugged
8	STATE 001	CHAPMAN FORD	3001510269	27	26.0S	28E	330 S		1980 W		32.006879	-104.077027	Plugged
9	POGO ST 001	SLEDGE OIL & GAS INC	3001523607	33	26.0S	28E	990 N		330 E		32.003178	-104.084369	Plugged
10	AMINOIL ST 001	CALLAWAY OIL ; GAS	3001524042	34	26.0S	28E	990 N		2310 W		32.003263	-104.075804	Plugged
11	ALL STATE COM 002H	MARBOB ENERGY CORP	3001537499	28	26.0S	28E	1980 S		330 W		32.011235	-104.099544	Unknown
12	SRO STATE UNIT COM 105H	MARBOB ENERGY CORP	3001537424	16	26.0S	28E	660 N		330 E		32.047903	-104.085018	Plugged
13	ALL STATE COM 001H	MARBOB ENERGY CORP	3001537498	28	26.0S	28E	660 N		330 W		32.018698	-104.099698	Unknown
14	SRO STATE UNIT COM 107H	MARBOB ENERGY CORP	3001537427	15	26.0S	28E	660 N		330 W		32.047906	-104.082878	Unknown
15	SKEEN 21 B2BO STATE COM 001H	MEWBOURNE OIL CO	3001543247	21	26.0S	28E	185 N		2180 E		32.034723	-104.090816	Unknown
16	DIAMONDBACK 22 STATE COM 004H	COG PRODUCTION, LLC	3001540816	22	26.0S	28E	20 N		1393 W		32.035193	-104.079235	Unknown
17	GRAHAM NASH STATE COM 005H	COG OPERATING LLC	3001542453	33	26.0S	28E	280 S		760 E		32.000751	-104.085613	Unknown
18	SKEEN 21 STATE COM 002H	MEWBOURNE OIL CO	3001539773	21	26.0S	28E	330 N		1980 E		32.034324	-104.090162	Unknown
19	GRAHAM NASH STATE COM 006H	COG OPERATING LLC	3001542464	33	26.0S	28E	560 S		2200 E		32.001511	-104.090348	Unknown
20	SKEEN 21 DM STATE 001	MEWBOURNE OIL CO	3001540863	21	26.0S	28E	150 N		500 W		32.034828	-104.099418	Unknown
21	DIAMONDBACK 22 STATE COM 001H	OGX RESOURCES, LLC	3001538528	22	26.0S	28E	480 N		1960 E		32.033962	-104.072811	Unknown
22	GRAHAM NASH STATE COM 008H	COG OPERATING LLC	3001542203	28	26.0S	28E	190 N		760 W		32.019999	-104.098333	Unknown
23	HONEY GRAHAM STATE COM 005H	COG OPERATING LLC	3001541608	29	26.0S	28E	190 N		820 E		32.019969	-104.103453	Unknown
24	SRO STATE UNIT 003H	COG OPERATING LLC	3001541532	16	26.0S	28E	190 N		560 E		32.049199	-104.085784	Unknown
25	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001541533	16	26.0S	28E	190 N		2080 W		32.049243	-104.094295	Unknown
26	GRAHAM CRACKER 16 STATE 007H	COG OPERATING LLC	3001542332	16	26.0S	28E	135 N		1810 E		32.049371	-104.089841	Unknown
27	SKEEN 21 D3BO STATE COM 003H	MEWBOURNE OIL CO	3001542811	21	26.0S	28E	185 N		1900 E		32.034722	-104.089908	Unknown
28	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001541633	21	26.0S	28E	330 N		560 E		32.03432	-104.085558	Unknown
29	GRAHAM CRACKER 16 STATE 003H	COG OPERATING LLC	3001542810	21	26.0S	28E	190 N		1910 E		32.049222	-104.090163	Unknown
30	SKEEN 21 B3DM STATE COM 002H	MEWBOURNE OIL CO	3001542855	21	26.0S	28E	185 N		610 W		32.034731	-104.09906	Unknown
31	SKEEN 21 D3BO STATE COM 002H	MEWBOURNE OIL CO	3001542853	21	26.0S	28E	185 N		1850 E		32.034722	-104.089746	Unknown
32	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542856	21	26.0S	28E	330 N		610 E		32.03432	-104.08572	Unknown
33	SKEEN 21 B3CN STATE COM 001H	MEWBOURNE OIL CO	3001542854	21	26.0S	28E	185 N		1850 W		32.034727	-104.095039	Unknown
34	SKEEN 21 B2CN STATE 001H	MEWBOURNE OIL CO	3001542934	21	26.0S	28E	266 N		2310 W		32.034503	-104.093543	Unknown
35	SKEEN 21 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537802	21	26.0S	28E	250 N		2310 W		32.034547	-104.093544	Unknown
36	DIAMONDBACK 22 STATE COM 006H	COG PRODUCTION, LLC	3001543195	22	26.0S	28E	520 N		990 W		32.033812	-104.080526	Unknown
37	SKEEN 21 D3CN STATE COM 002H	MEWBOURNE OIL CO	3001542857	21	26.0S	28E	185 N		1800 W		32.034727	-104.095201	Unknown
38	DIAMONDBACK 22 STATE COM 002H	OGX RESOURCES, LLC	3001539105	22	26.0S	28E	580 N		580 W		32.03364	-104.081853	Unknown
39	SKEEN 21 D3DM STATE COM 003H	MEWBOURNE OIL CO	3001542812	21	26.0S	28E	185 N		660 W		32.034731	-104.098898	Unknown
40	SKEEN 21 B2AP STATE COM 001H	MEWBOURNE OIL CO	3001543246	21	26.0S	28E	185 N		820 E		32.034719	-104.086406	Unknown
41	GRAHAM NASH FEDERAL COM 013H	COG OPERATING LLC	3001543811	21	26.0S	28E	200 S		1550 W		32.021012	-104.096034	Unknown
42	SKEEN 21 W2AP STATE COM 002H	MEWBOURNE OIL CO	3001544553	21	26.0S	28E	330 N		550 E		32.034186	-104.085036	Unknown
43	SKEEN 21 W2AP STATE COM 001H	MEWBOURNE OIL CO	3001544552	21	26.0S	28E	330 N		600 E		32.034186	-104.085198	Unknown
44	SALT CEDAR 16 STATE SWD #001 001	COG OPERATING LLC	3001545826	16	26S	28E	1850 N		2185 E		32.044761	-104.090784	New (Not drilled or compl)

Intent ☐ As Drilled ☐

API #			
Operator Name: COG OPERATING, LLC.		Property Name: BOO RADLEY COM	Well Number 702H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	21	26-S	28-E		10	NORTH	1210	EAST	EDDY
Latitude 32.035161					Longitude -104.087256				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	33	26-S	28-E	4	330	SOUTH	1210	EAST	EDDY
Latitude 32.000889					Longitude -104.087253				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #			
Operator Name:		Property Name:	Well Number

KZ 06/29/2018

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number 704H
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation 3036.2'

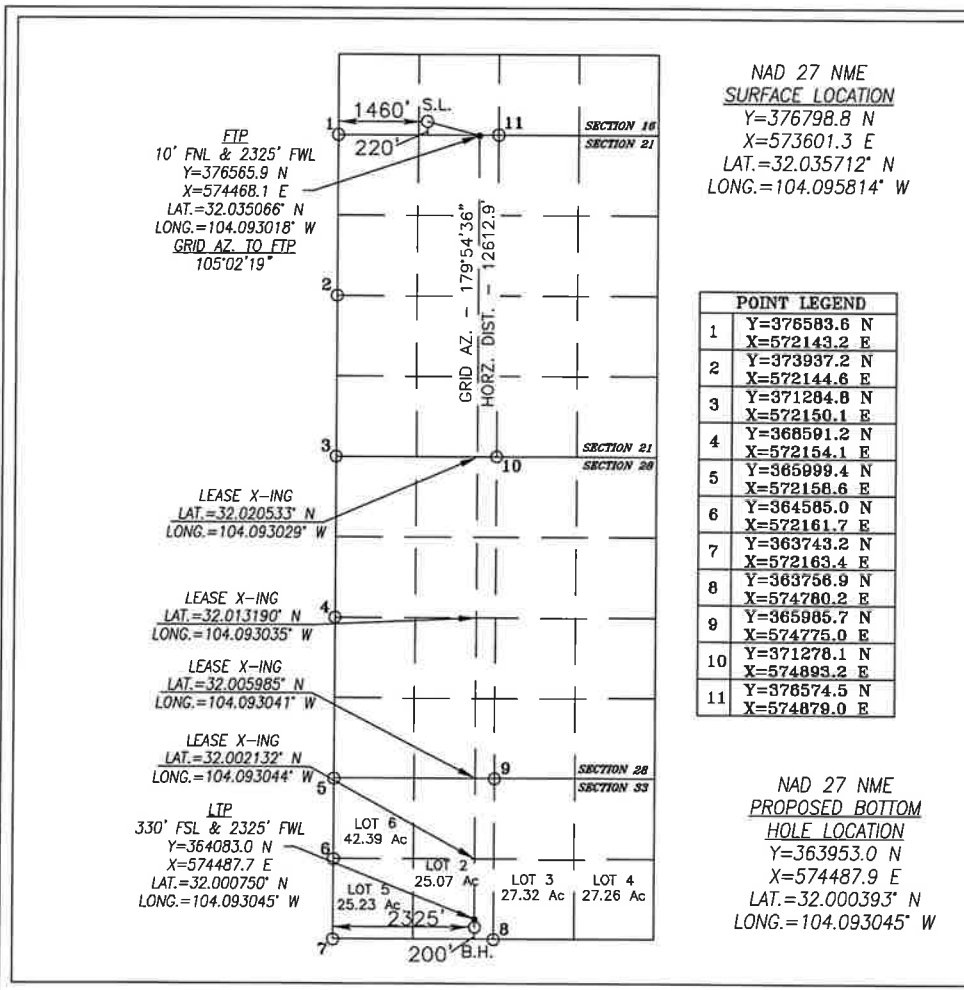
**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	26-S	28-E		220	SOUTH	1460	WEST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	33	26-S	28-E		200	SOUTH	2325	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

Date of Survey

Signature & Seal of Professional Surveyor

**CHAD L. HARCROW**  
NEW MEXICO  
17777  
LICENSED PROFESSIONAL SURVEYOR

*Chad L. Harcrow* 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-962 DRAWN BY: AH

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☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number 704H
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation 3036.2'

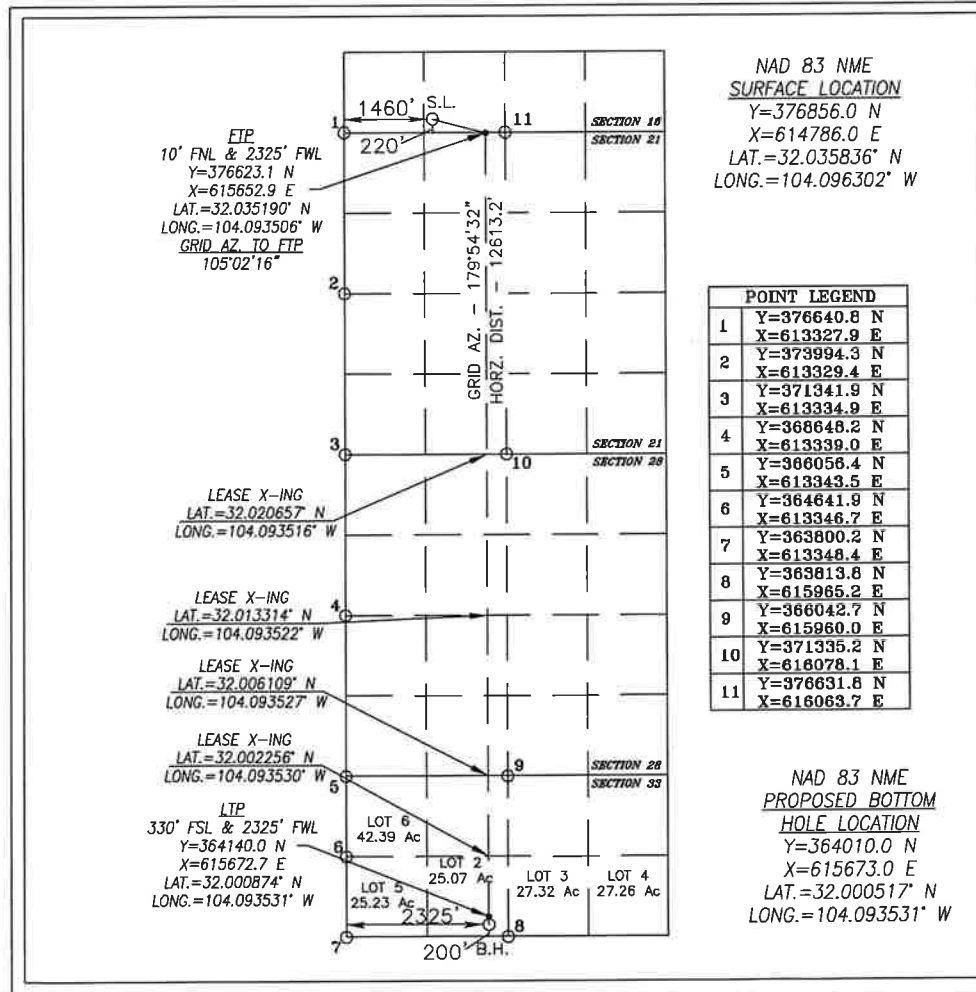
**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	26-S	28-E		220	SOUTH	1460	WEST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	33	26-S	28-E		200	SOUTH	2325	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

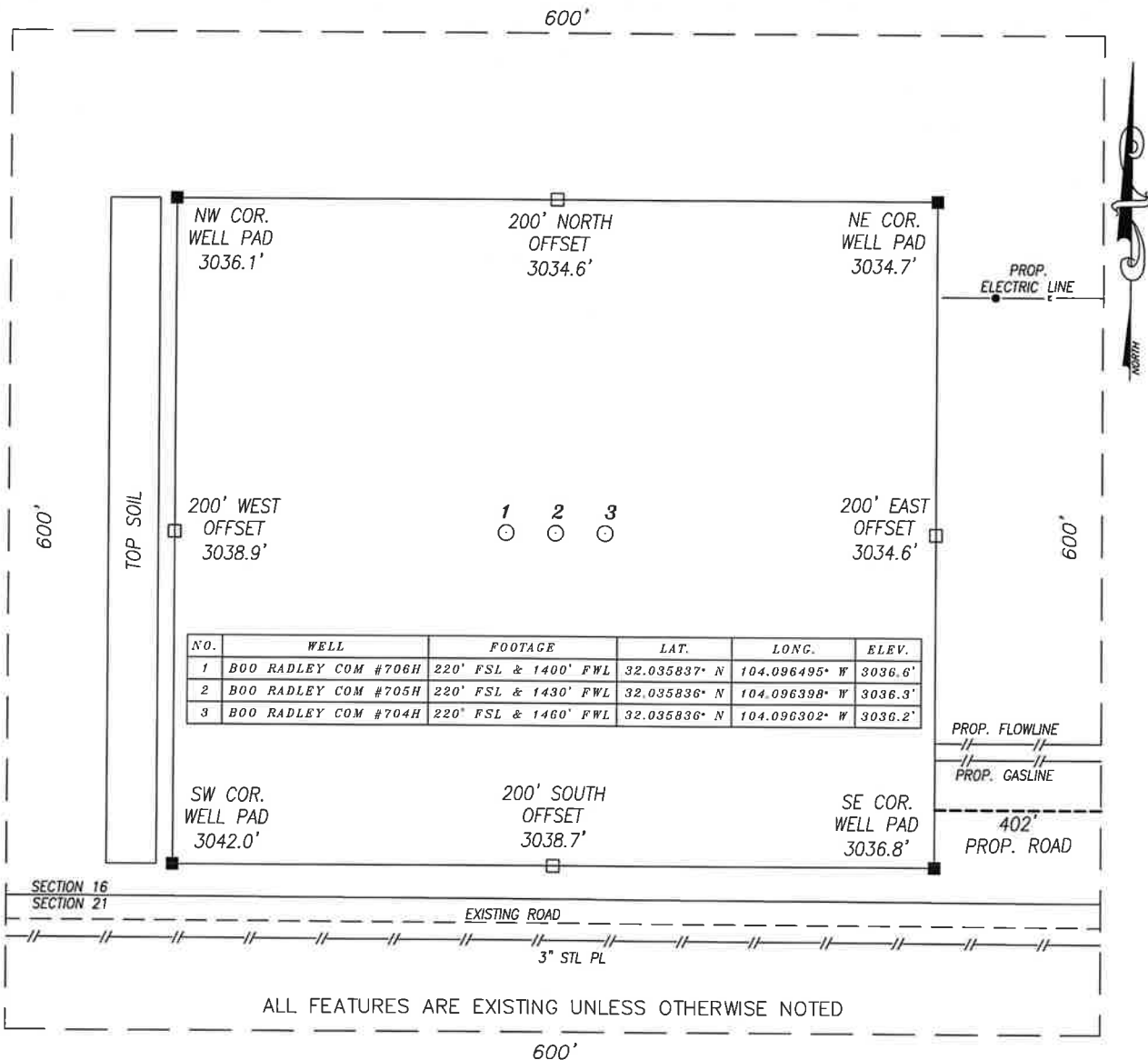
Date of Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-962 DRAWN BY: AH

SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY) ONTO CALICHE ROAD; THEN GO APPROX. 0.8 MILES AND TURN RIGHT (WEST) ONTO CALICHE RD.; THEN GO APPROX. 0.1 MILES TO THE PROPOSED ROAD; PROPOSED WELLS LIES APPROX. 653 FEET TO THE NORTHWEST.

COORDINATES ARE NAD 83 NME AND ELEVATIONS ARE NAVD 88  
CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

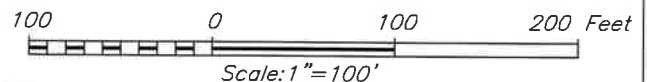
7/27/20  
DATE

HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

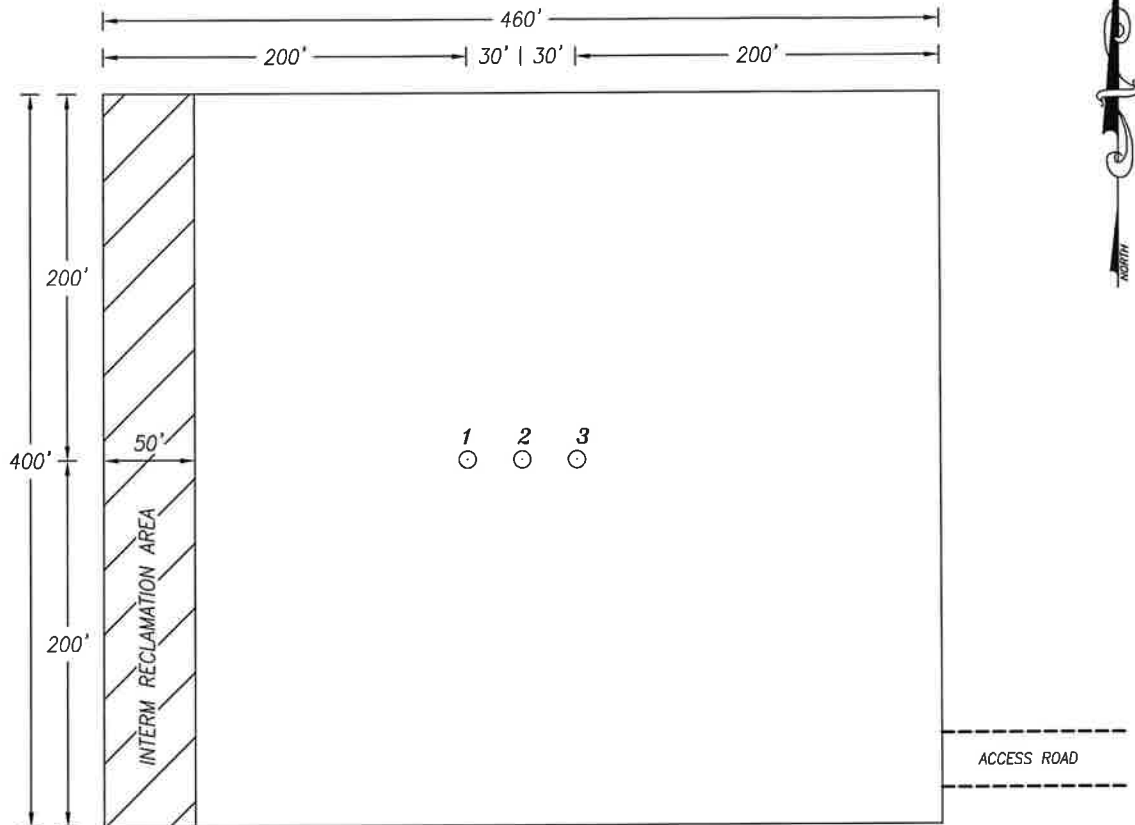
c.harcrow@harcrowsurveying.com



COG OPERATING, LLC

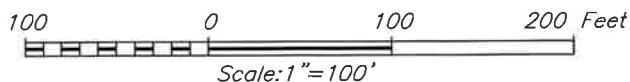
SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 23, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH
FILE: 20-960	

**RECLAMATION AND FACILITY DIAGRAM – PRODUCTION FACILITIES DIAGRAM**  
**COG OPERATING, LLC**  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
**EDDY COUNTY, NEW MEXICO.**

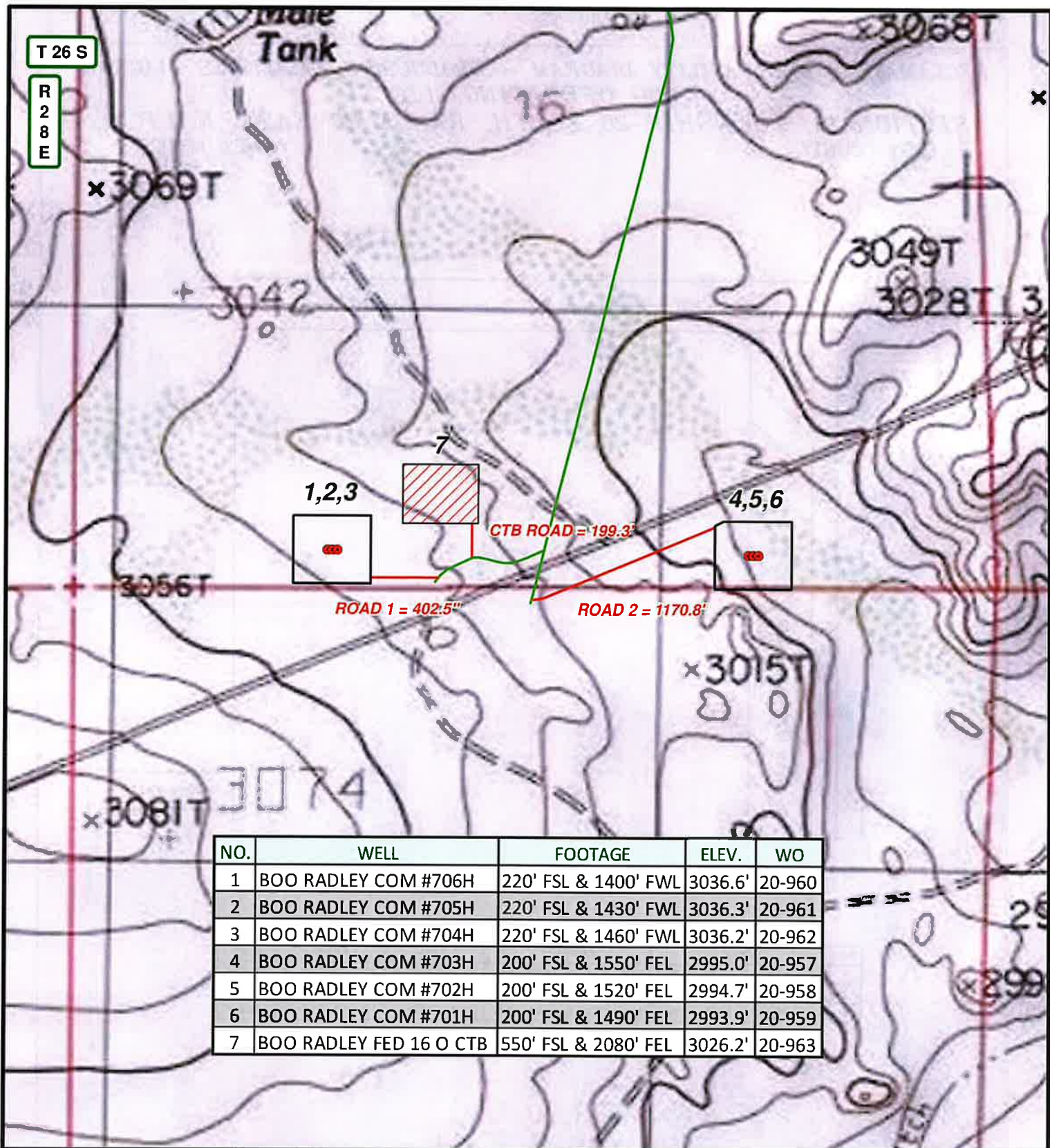


NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.
1	B00 RADLEY COM #706H	220' FSL & 1400' FWL	32.035837° N	104.096495° W	3036.6'
2	B00 RADLEY COM #705H	220' FSL & 1430' FWL	32.035836° N	104.096398° W	3036.3'
3	B00 RADLEY COM #704H	220' FSL & 1460' FWL	32.035836° N	104.096302° W	3036.2'

**HARCROW SURVEYING, LLC**  
 2316 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



COG OPERATING, LLC			
SURVEY DATE: JULY 17, 2020		RECLAMATION	
DRAFTING DATE: JULY 30, 2020		PAGE: 1 OF 1	
APPROVED BY: CH	DRAWN BY: WN	FILE: 20-960	



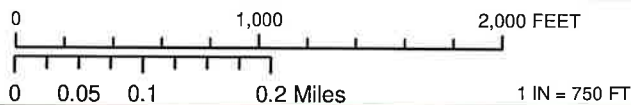
NO.	WELL	FOOTAGE	ELEV.	WO
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## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY



LOCATION MAP

TOPO

7/22/2020

W.N.



COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

17

16

15

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5'

ROAD 2 = 1170.8'

20

22

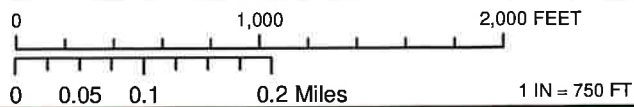
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-957      LEASE: BOO RADLEY



LOCATION MAP

IMAGERY

7/22/2020

W.N.

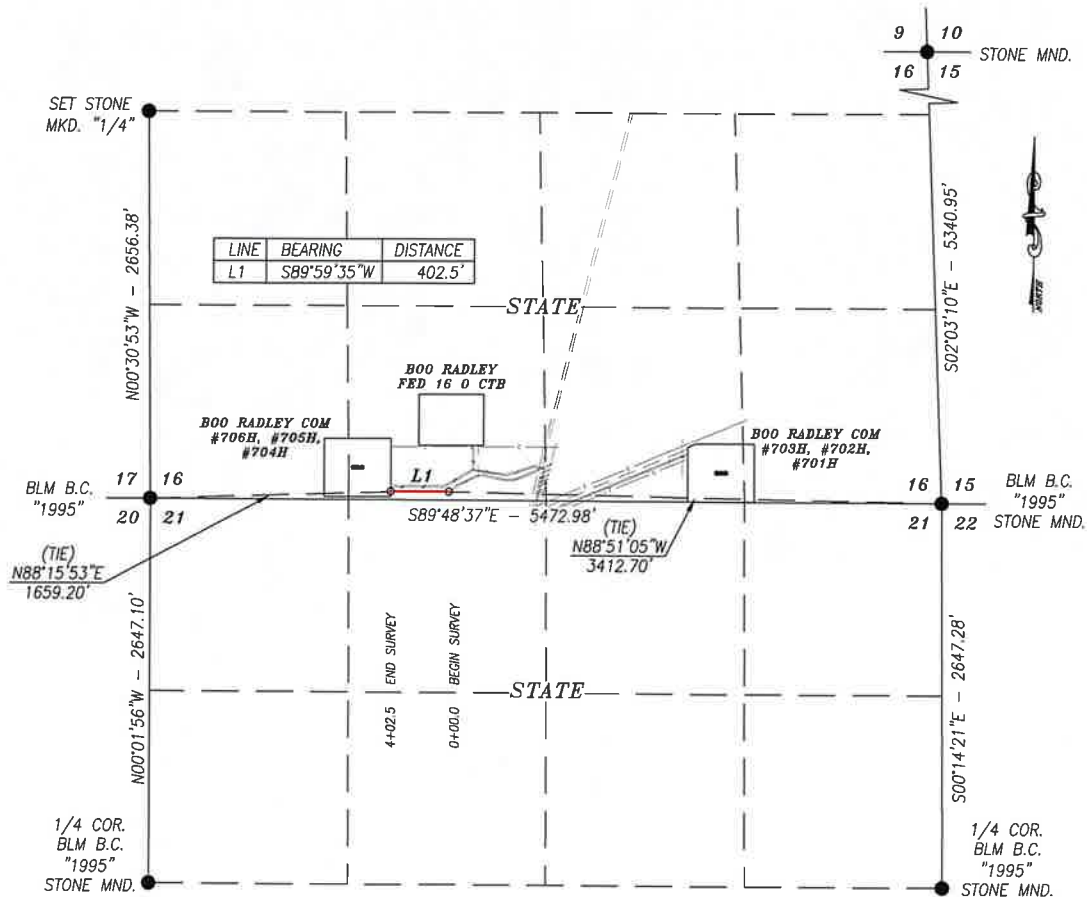
COG OPERATING, LLC



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**ROAD PLAT  
COG OPERATING, LLC.**

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.**



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°51'05\"W 3412.70 FEET FROM THE SOUTHEAST CORNER; THEN S89°59'35\"W 402.5 FEET; TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°15'53\"E 1659.20 FEET FROM THE SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 402.5 FEET OR 24.39 RODS IN LENGTH, CONTAINING 0.277 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

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c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

**COG OPERATING, LLC.**

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #1

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

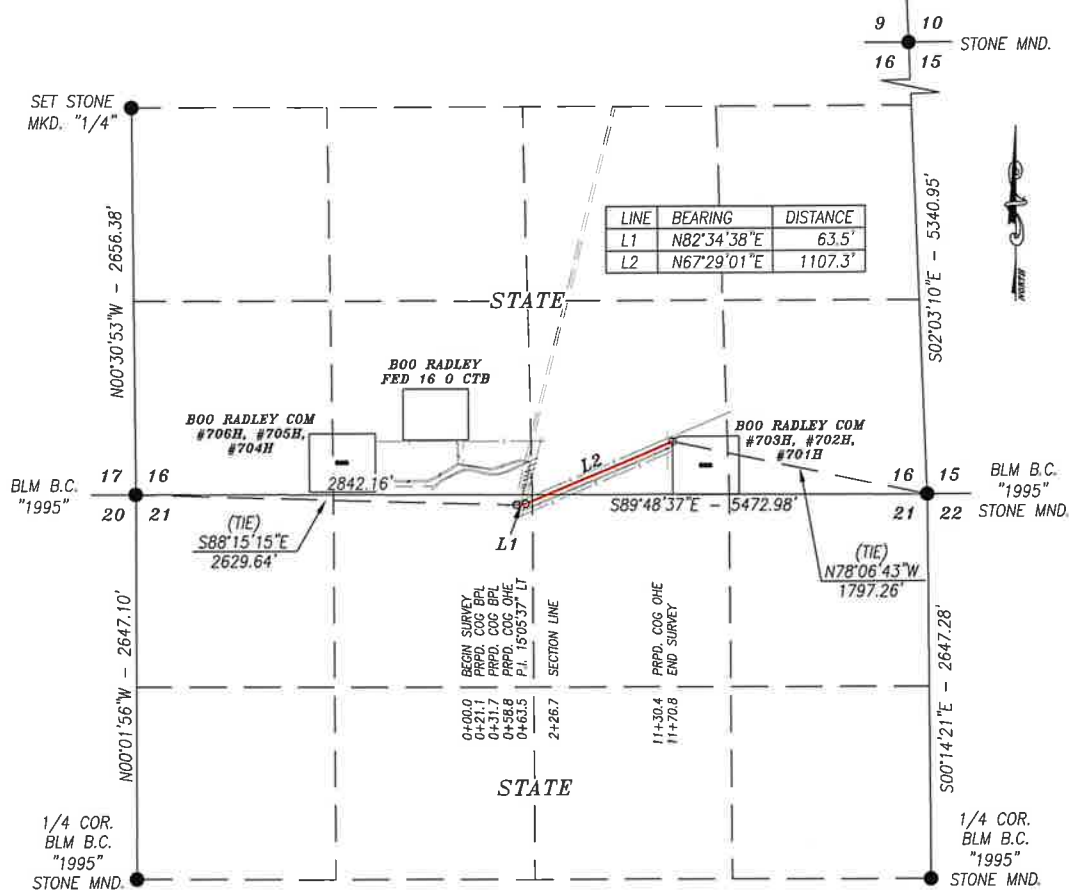
APPROVED BY: CH

DRAWN BY: WN

FILE: 20-995

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NE/4 NW/4 OF SECTION 21, WHICH LIES S88°15'15"E 2629.64 FEET FROM THE NORTHWEST CORNER OF SECTION 21; THEN N82°34'38"E 63.5 FEET; THEN N67°29'01"E 1107.3 FEET; TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N78°06'43"W 1797.26 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1170.8 FEET OR 70.96 RODS IN LENGTH, CONTAINING 0.806 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

### SECTION 16

SW/4 SE/4 57.22 RODS OR 0.650 ACRES

### SECTION 21

NE/4 NW/4 6.81 RODS OR 0.077 ACRES

NW/4 NE/4 6.93 RODS OR 0.079 ACRES

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

HARCROW SURVEYING, LLC  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #2

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995

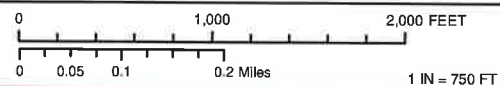


**LEGEND**

- WELL
- WELLPAD
- EXIST. ROAD
- ACCESS ROAD

**BOO RADLEY COM ACCESS ROADS**

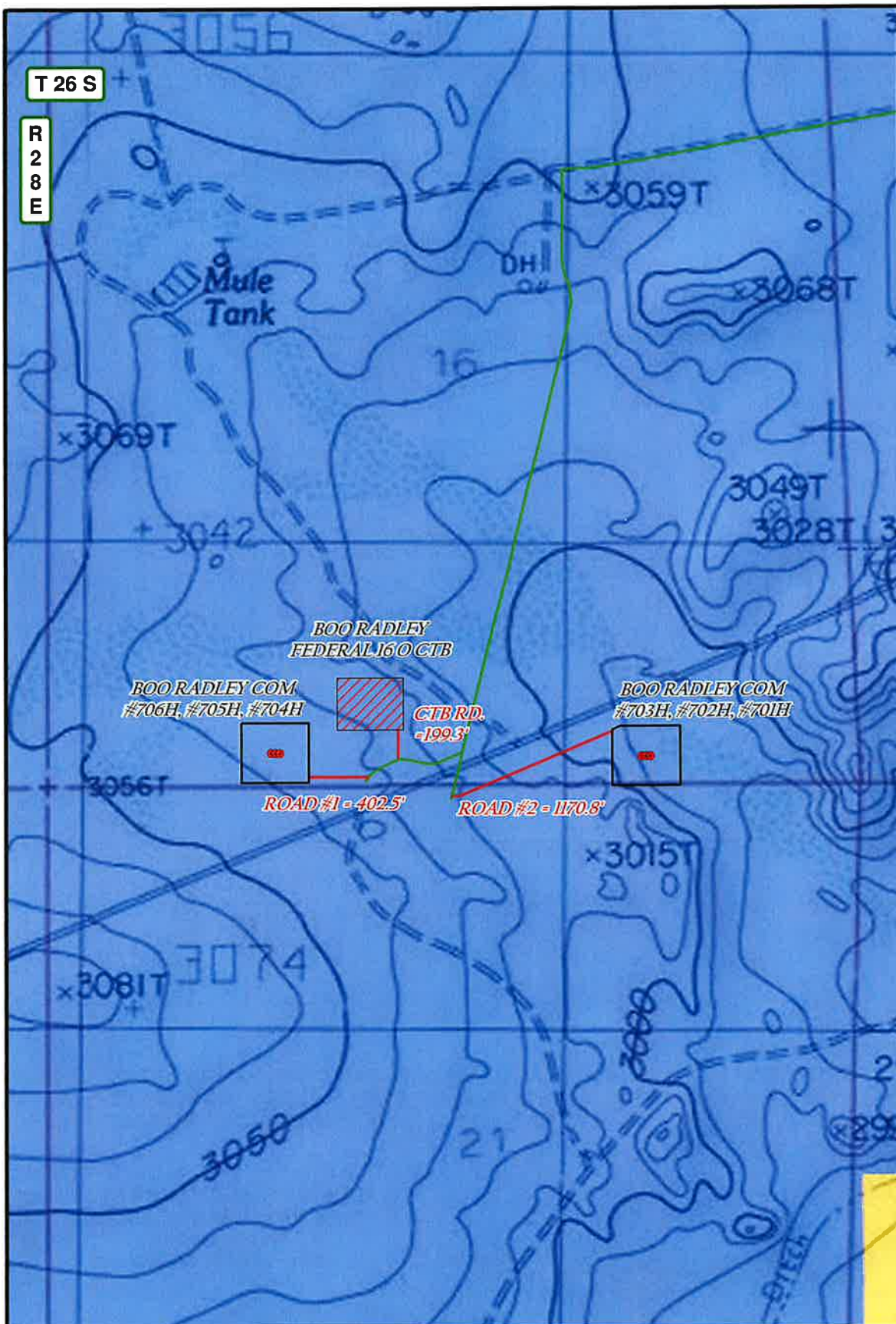
SECTION: 16, 21      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-995      LEASE: BOO RADLEY



LOCATION MAP      IMAGERY      7/23/2020      W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST, ARTESIA, NM 88210  
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 c.harcrow@harcrowsurveying.com

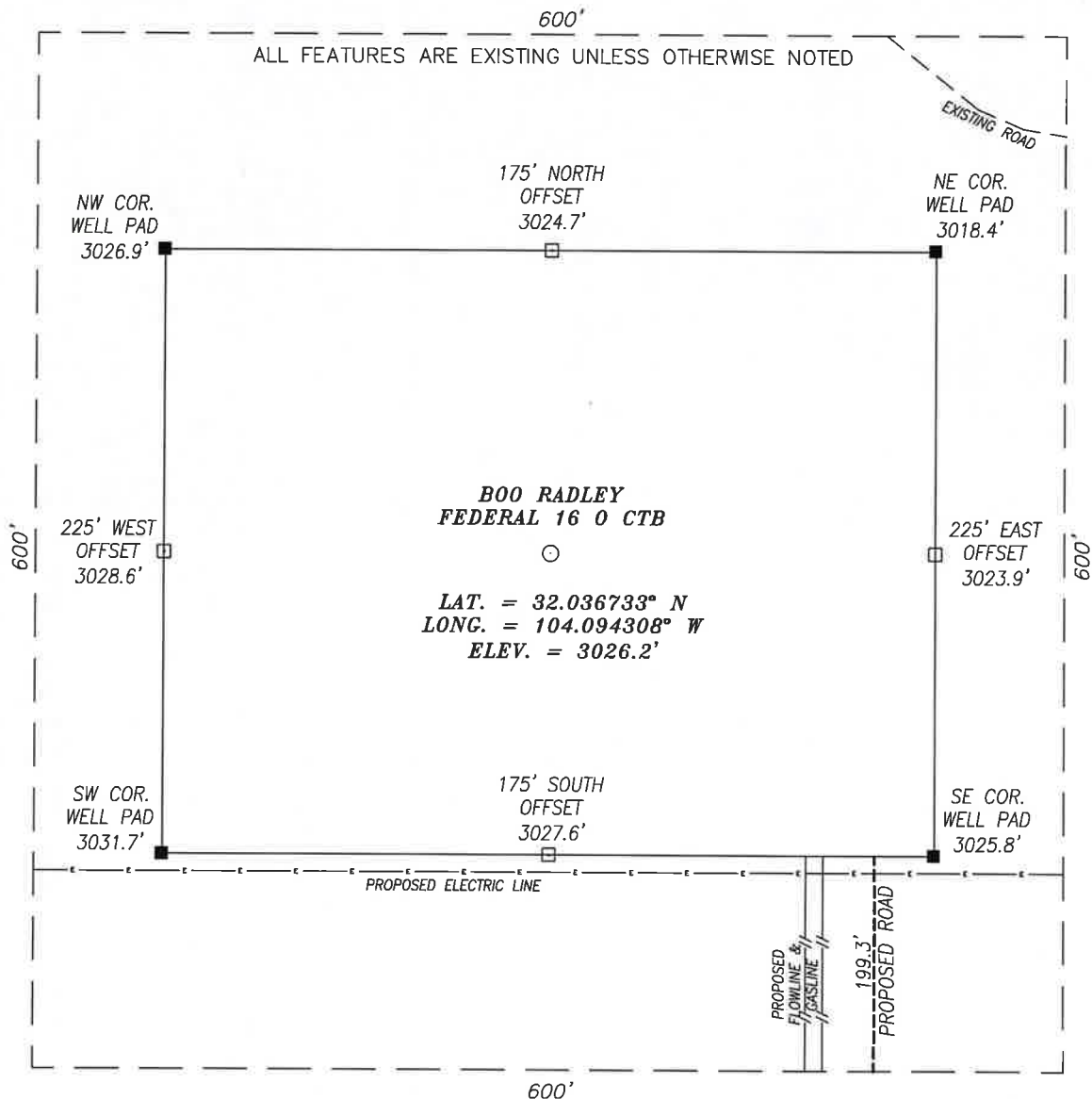


<b>LEGEND</b> WELL WELLPAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM	<b>BOO RADLEY COM ACCESS ROADS</b>		
	SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.
	STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
	W.O. # 20-995	LEASE: BOO RADLEY	
	 1 IN = 750 FT		
LOCATION MAP	LAND STATUS	7/23/2020	W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2336 W. MAIN ST, ARTESIA, NM 88210  
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 c.harcrow@harcrowsurveying.com

SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY); THEN GO APPROX. 0.7 MILES; TURN RIGHT AND GO APPROX. 0.1 MILES TO THE PROPOSED ROAD. PROPOSED PAD LIES APPROX. 420 FEET TO THE NORTHWEST.

CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY. THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

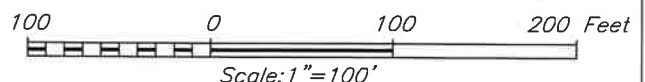
7/27/20  
DATE

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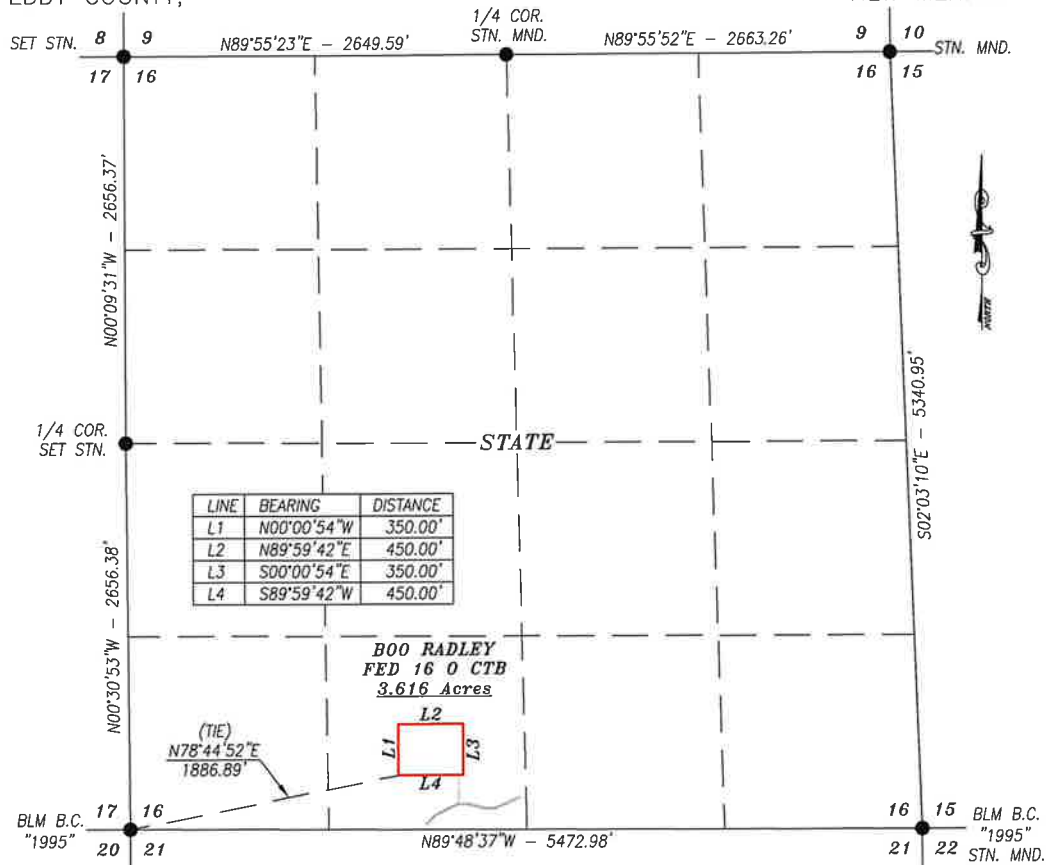


COG OPERATING, LLC

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

EXHIBIT A  
**STATE BUSINESS LEASE**  
**COG OPERATING, LLC.**

A STATE BUSINESS LEASE FOR THE "BOO RADLEY FED 16 0 CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A PROPOSED PAD LOCATED WITHIN STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N78°44'52"E 1886.89 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'54"W 350.00 FEET; THEN N89°59'42"E 450.00 FEET; THEN S00°00'54"W 350.00 FEET; THEN S89°59'42"W 450.00 FEET TO THE POINT OF BEGINNING.

SAID PAD CONTAINS 3.616 ACRES AND IS LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

1000 0 1000 2000 FEET

SCALE: 1"=1000'

**COG OPERATING, LLC**

SURVEY OF A PROPOSED PAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

EXHIBIT A

DRAFTING DATE: JULY 22, 2020

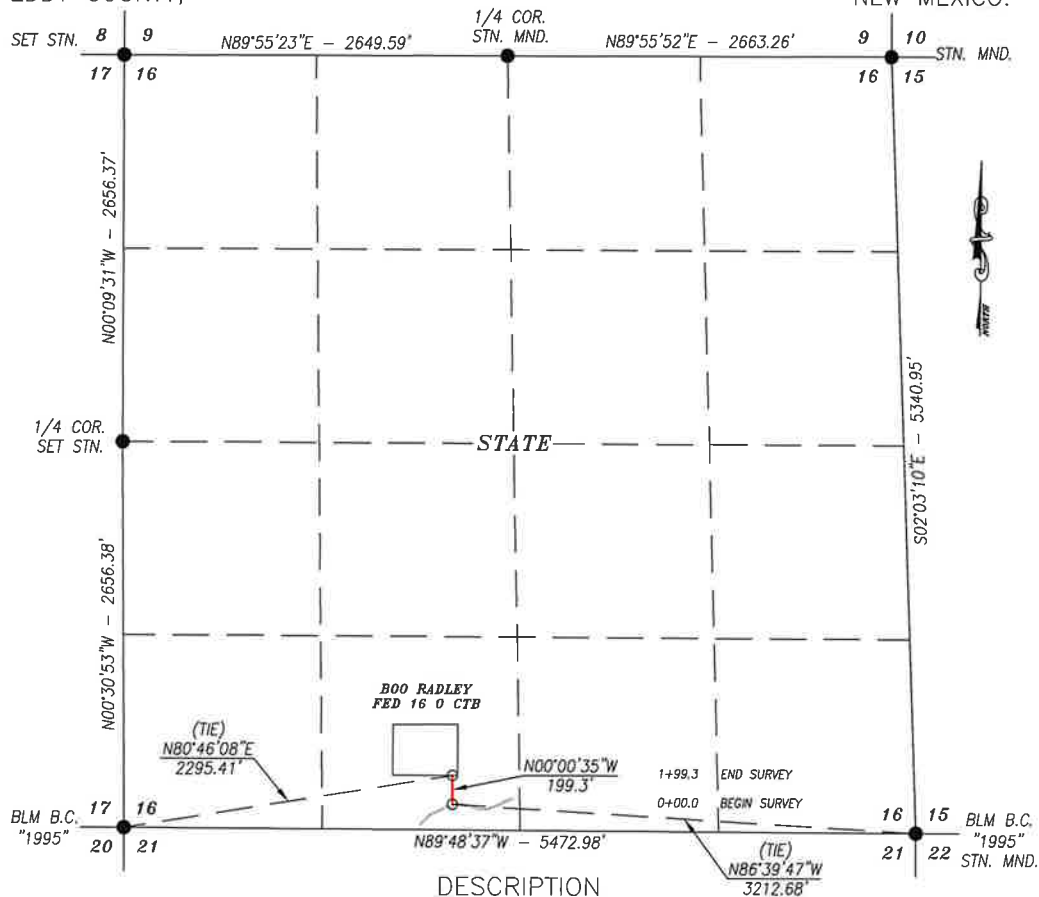
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-963

**EXHIBIT B**  
**ACCESS ROAD PLAT**  
**COG OPERATING, LLC.**

AN ACCESS ROAD FOR THE "BOO RADLEY FED 16 0 CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°39'47"W 3212.68 FEET FROM THE SOUTHEAST CORNER; THEN N00°00'35"W 199.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N80°46'08"E 2295.41 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 199.3 FEET OR 12.08 RODS IN LENGTH, CONTAINING 0.137 ACRES MORE OR LESS AND BEING LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**  
 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.

**HARCROW SURVEYING, LLC**  
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**CERTIFICATION**  
 I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

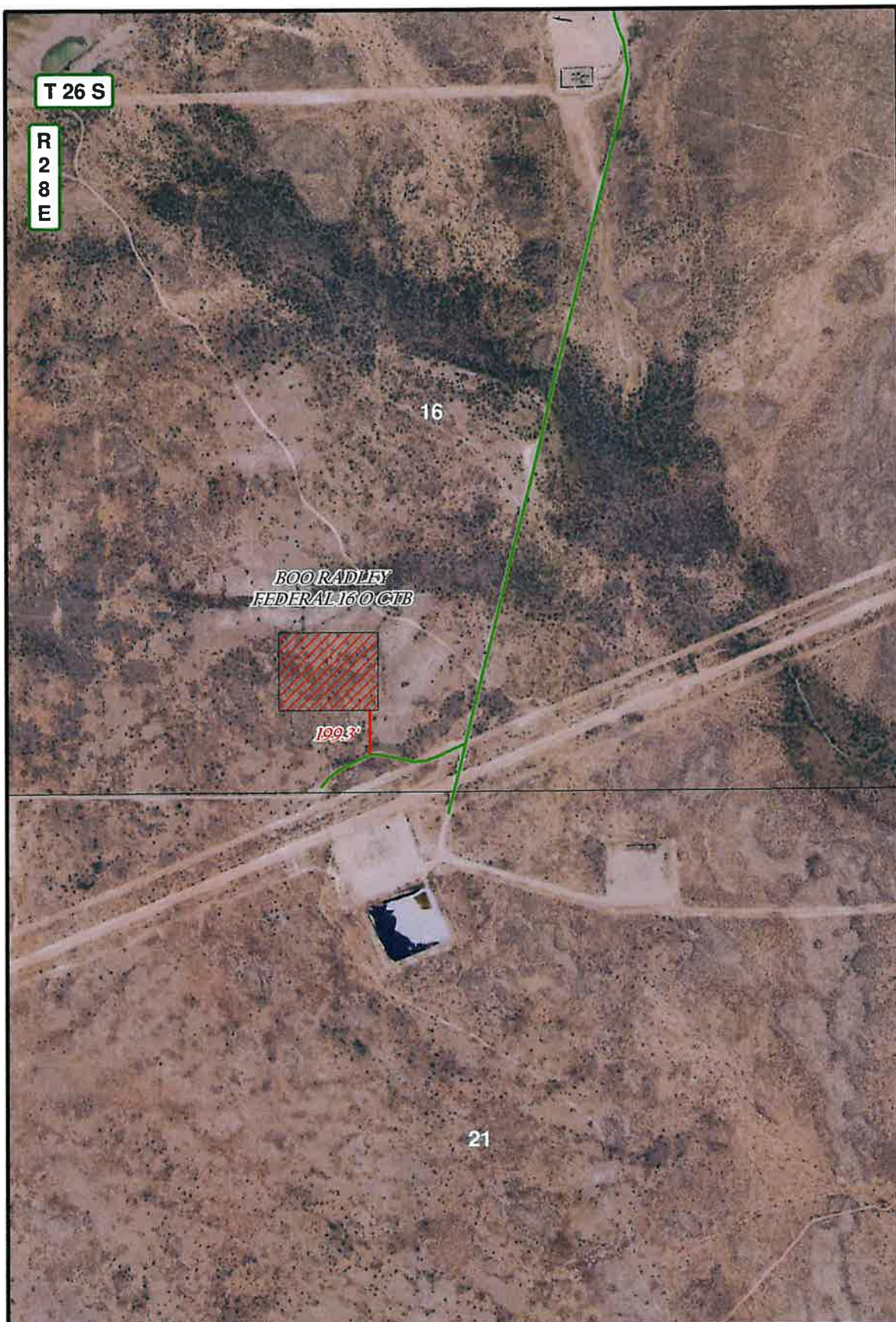
7/27/20  
 DATE

1000 0 1000 2000 FEET  
 SCALE: 1"=1000'

**COG OPERATING, LLC**

SURVEY OF A PROPOSED ROAD LOCATED IN  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
 NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT B
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN FILE: 20-963

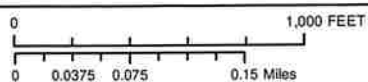


# **LEGEND**

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD

## **BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD**

SECTION: 16	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-963		LEASE: BOO RADLEY



1 IN = 500 FT

LOCATION MAP

IMAGERY

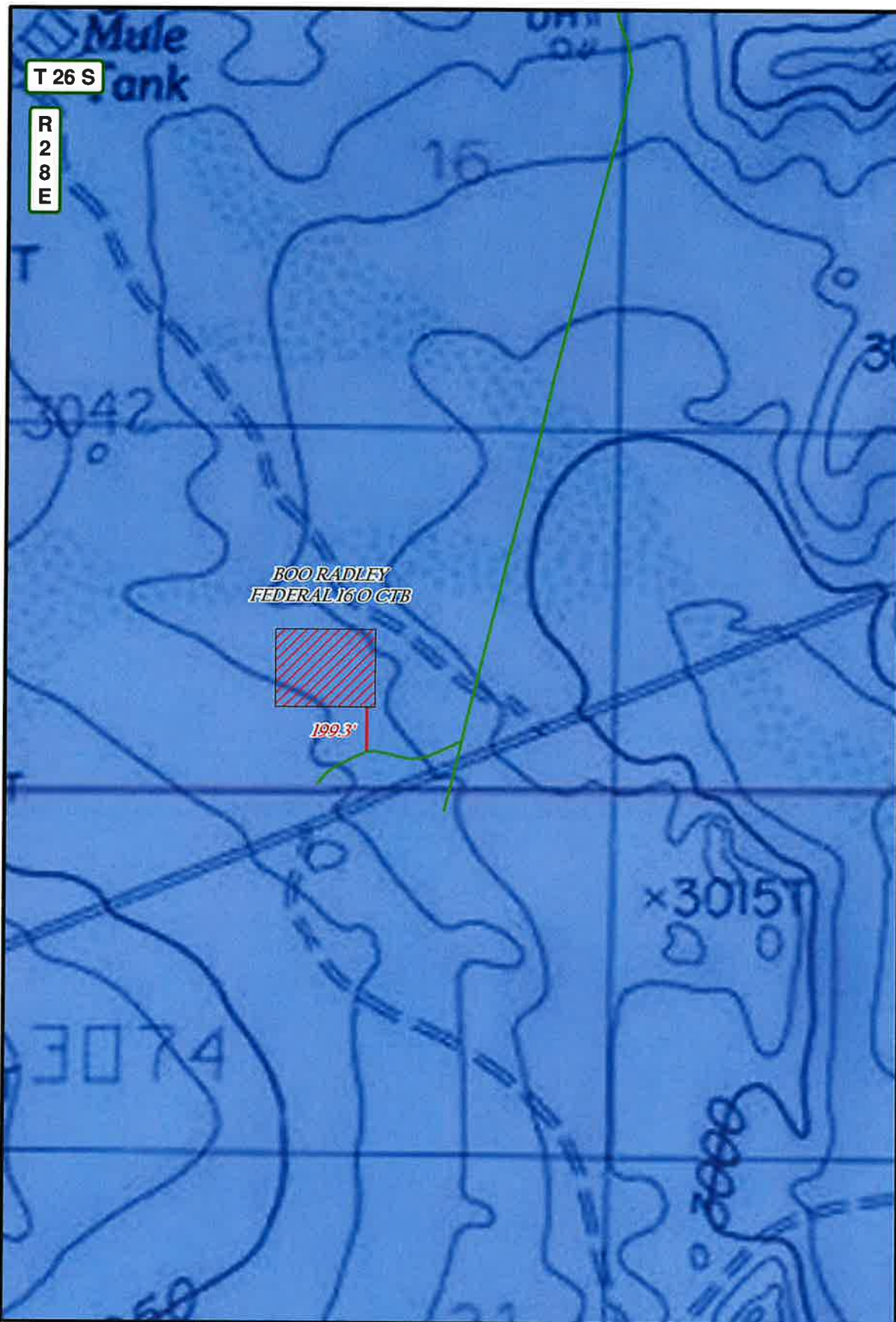
7/22/2020

W.N.

 **CONCHO**  
COG OPERATING, LLC



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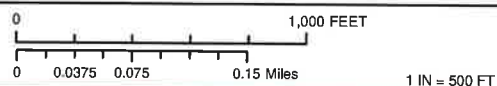


# LEGEND

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD
-  PRIVATE
-  STATE OF NM
-  US BLM

## BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-963 LEASE: BOO RADLEY



LOCATION MAP

LAND STATUS

7/22/2020

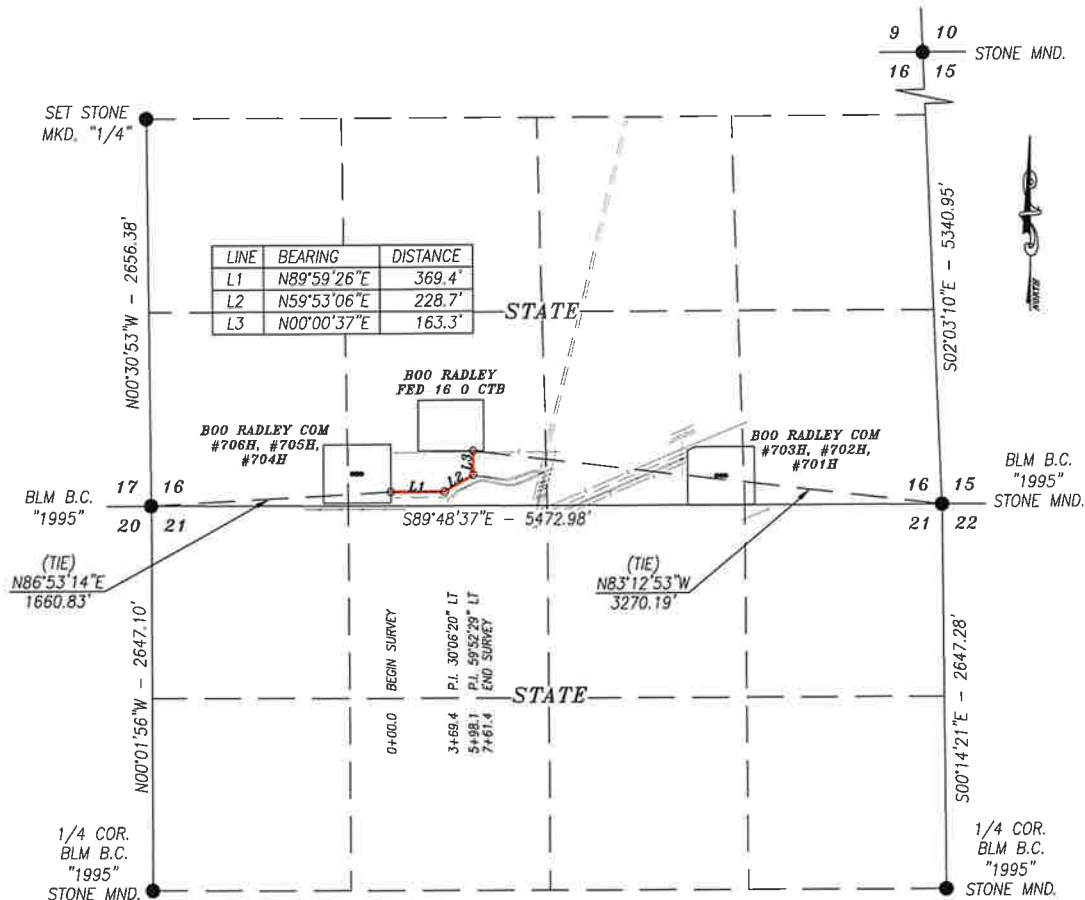
W.N.

 **CONCHO**  
 COG OPERATING, LLC

 **HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

# **PIPELINE PLAT** **COG OPERATING, LLC.**

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
**EDDY COUNTY, NEW MEXICO.**



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°53'14\"E 1660.83 FEET FROM THE SOUTHWEST CORNER; THEN N89°59'26\"E 369.4 FEET; THEN N59°53'06\"E 228.7; THEN N00°00'37\"E 163.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°12'53\"W 3270.19 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 761.4 FEET OR 46.15 RODS IN LENGTH, CONTAINING 0.524 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### **BASIS OF BEARING:**

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.

### **CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

**HARCROW SURVEYING, LLC**  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## **COG OPERATING, LLC.**

SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

FLOWLINE #1

DRAFTING DATE: JULY 22, 2020

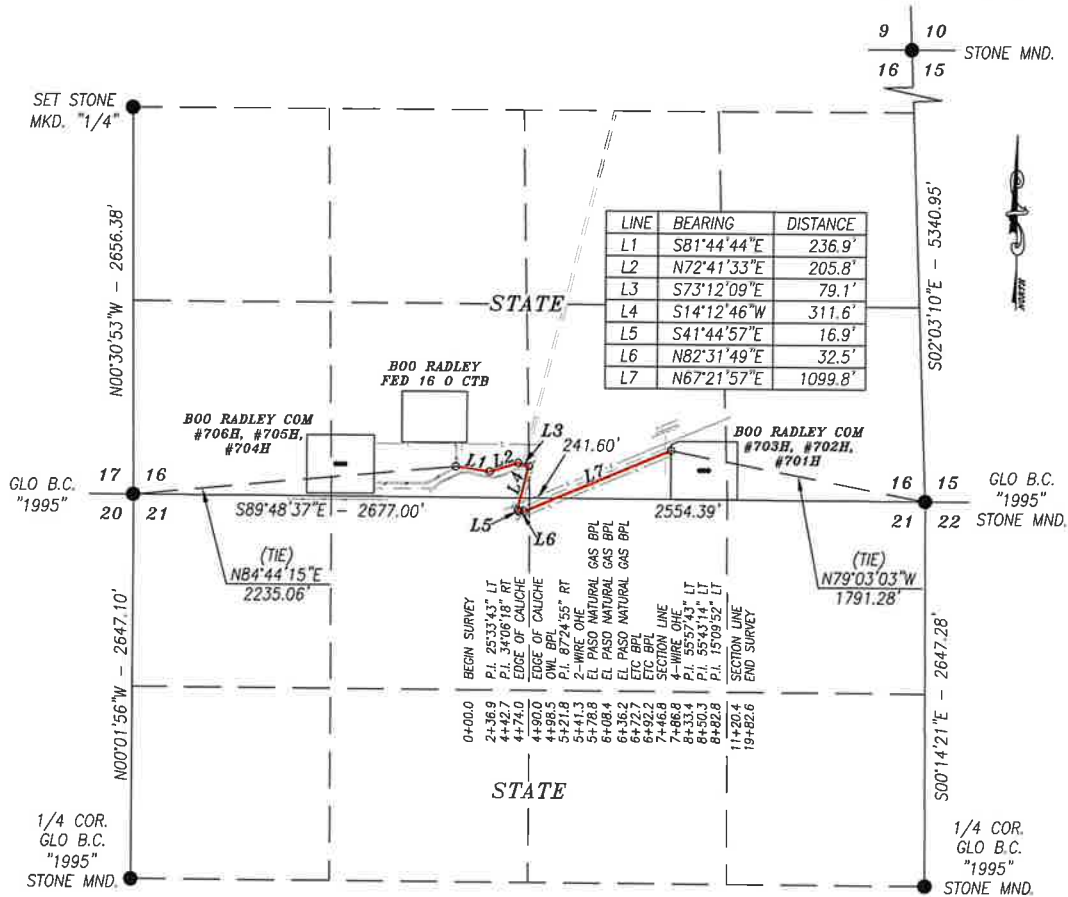
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: DS

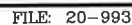
FILE: 20-992

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY,  
NEW MEXICO.



A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

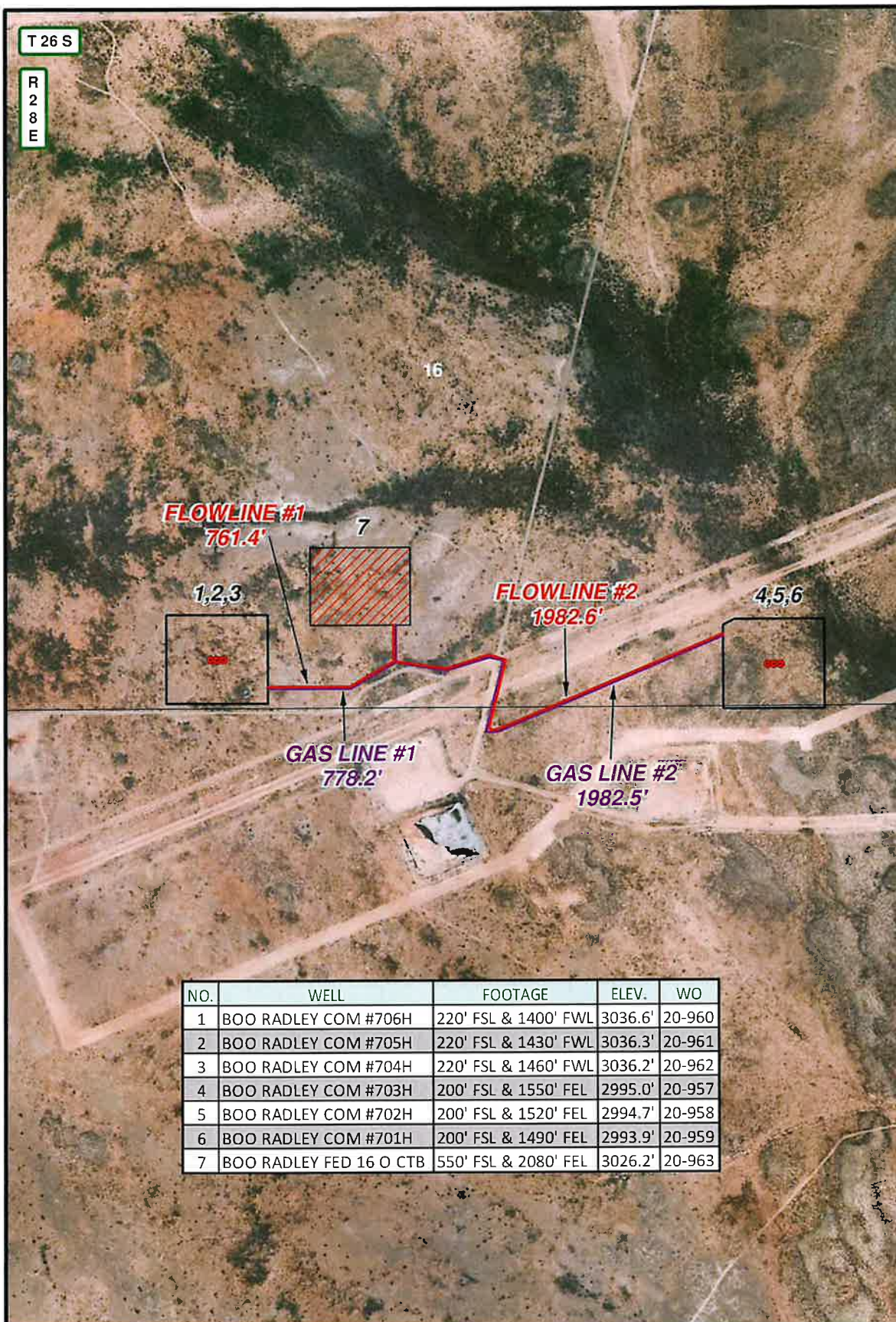


SURVEY DATE: JULY 20, 2020		GAS LINE #2
DRAFTING DATE: JULY 22, 2020		PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: DS	FILE: 20-993

Chad Harrow  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

T 26 S

R  
2  
8  
E

## LEGEND

- WELL  
 WELLPAD  
 FLOWLINE  
 GAS LINE

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993

LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

IMAGERY

7/23/2020

D.S.

**CONCHO**  
COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
EFLOWLINE #1  
761.4'

7

1,2,3

FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- FLOWLINE
- GAS LINE
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21 TOWNSHIP: 26 S. RANGE: 28 E.

STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M

W.O. # 20-992, 993 LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles 1 IN = 500 FT


PIPELINE OVERVIEW

LAND STATUS

7/23/2020

D.S.

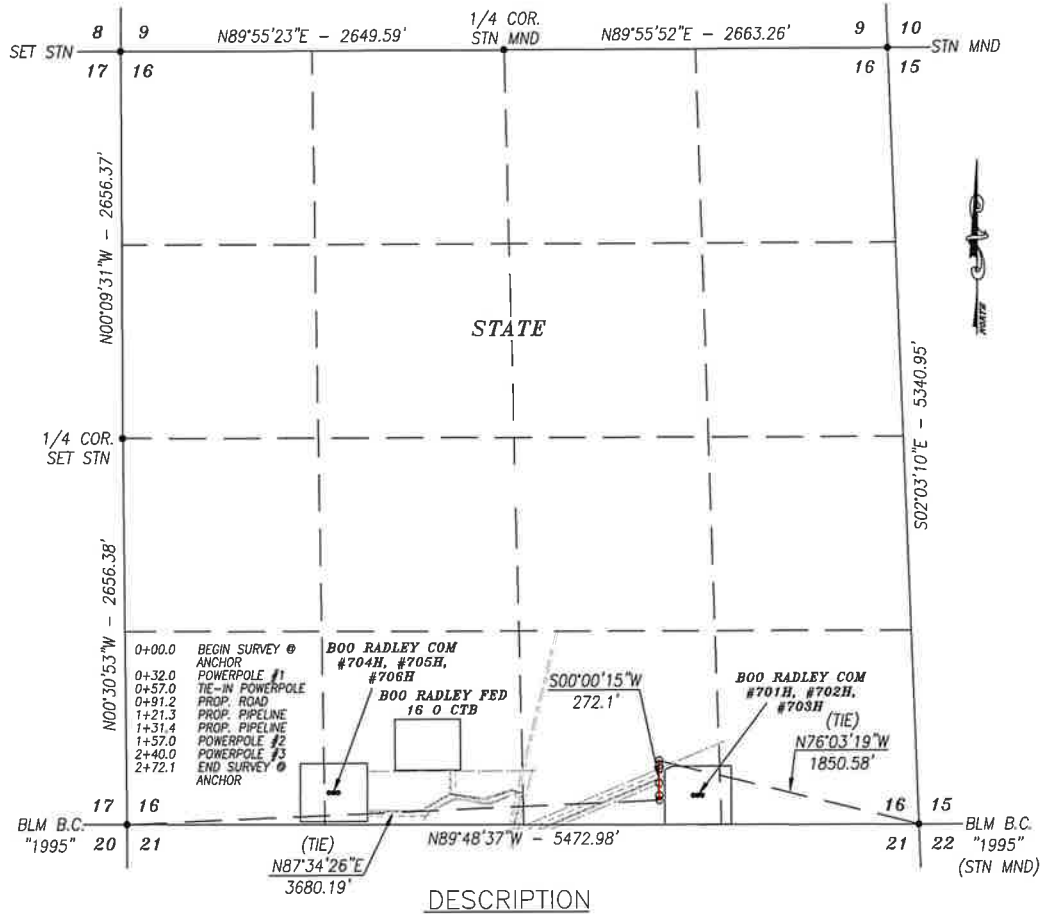

  
 COG OPERATING, LLC


 HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

# POWERLINE PLAT: LINE #1

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY;

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N76°03'19\"W 1850.58 FEET FROM THE SOUTHEAST CORNER; THEN S00°00'15\"W 272.1 FEET, TO A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N87°34'26\"E 3680.19 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 272.1 FEET OR 16.49 RODS IN LENGTH, CONTAINING 0.187 ACRES MORE OR LESS AND BEING LOCATED ENTIRELY IN THE SW/4 SE/4 OF SAID SECTION.

### BASIS OF BEARING:

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.

HARCROW SURVEYING, LLC

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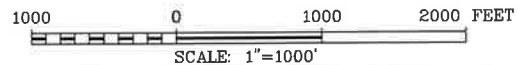
### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE



## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

POWERLINE #1

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

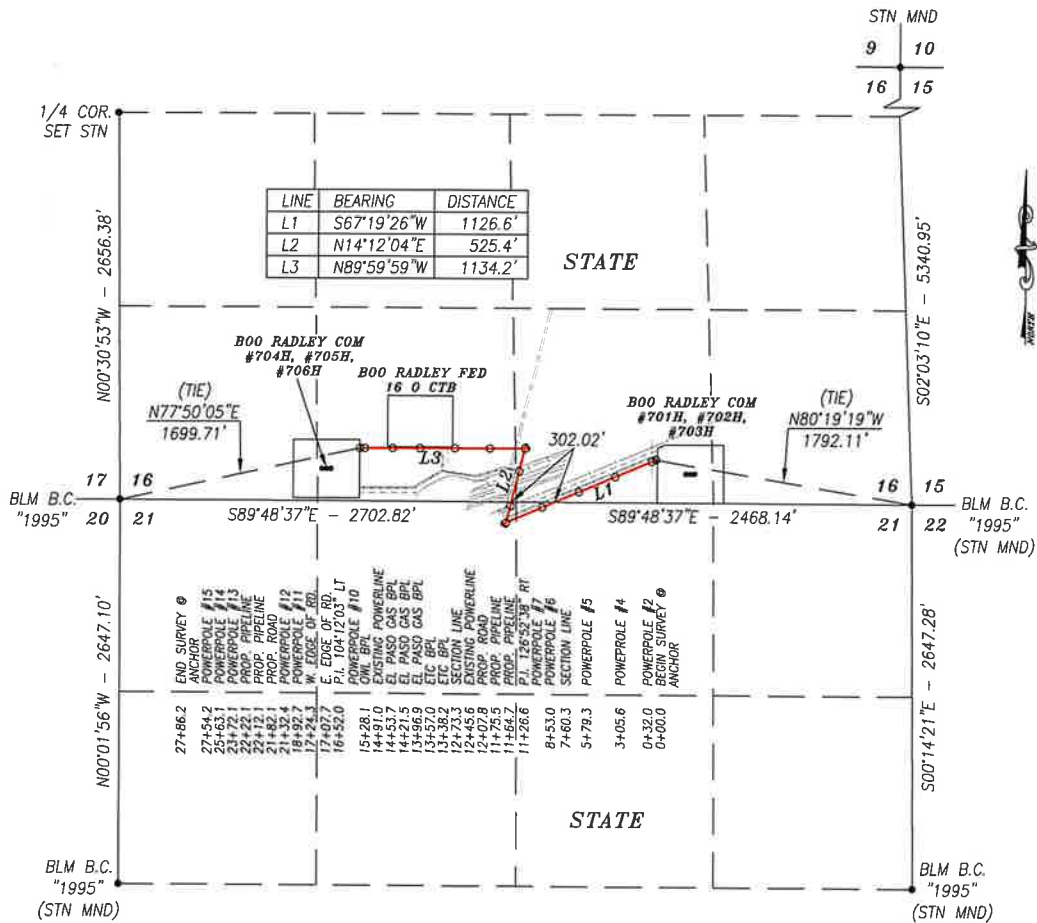
APPROVED BY: CH

DRAWN BY: JH

FILE: 20-994

**POWERLINE PLAT: LINE #2**  
**COG OPERATING, LLC.**

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
 FEDERAL 16 O CENTRAL TANKBATTERY IN  
**SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY; WITH ANCHORS EXTENDING OUTSIDE THE CENTERLINE SURVEY 14 FEET SOUTHERLY AND WESTERLY AT POLE 7 AND 17.0 FEET NORTHERLY AND EASTERLY AT POLE 10; WHICH HAVE BEEN ACCOUNTED FOR IN FOOTAGES, RODS, AND ACRES:

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N80°19'19\"W 1792.11 FEET FROM THE SOUTHEAST CORNER OF SECTION 16; THEN S67°19'26\"W 1126.6 FEET; THEN N14°12'04\"E 525.4 FEET; THEN N89°59'59\"W 1134.2 FEET, TO A POINT IN THE SE/4 SW/4 OF SECTION 16, WHICH LIES N77°50'05\"E 1699.71 FEET FROM THE SOUTHWEST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 2848.2 FEET OR 172.62 RODS IN LENGTH, CONTAINING 1.962 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SECTION 16		SECTION 21	
SW/4 SE/4	67.53 RODS OR 0.767 ACRES	NW/4 NE/4	17.61 RODS OR 0.200 ACRES
SE/4 SW/4	72.30 RODS OR 0.822 ACRES	NE/4 NW/4	15.18 RODS OR 0.173 ACRES

**BASIS OF BEARING:**  
 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.

**CERTIFICATION**

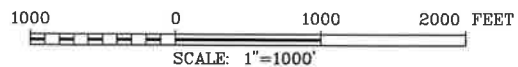
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
 DATE

**HARCROW SURVEYING, LLC**  
 2316 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



**COG OPERATING, LLC.**

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
 SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
 EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	POWERLINE #2
DRAFTING DATE: JULY 23, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: JH
FILE: 20-994	

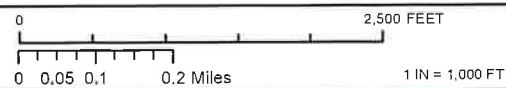


# **LEGEND**

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD

## **BOO RADLEY COM POWERLINE**

SECTIONS: 16 & 21      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-994      LEASE: BOO RADLEY COM



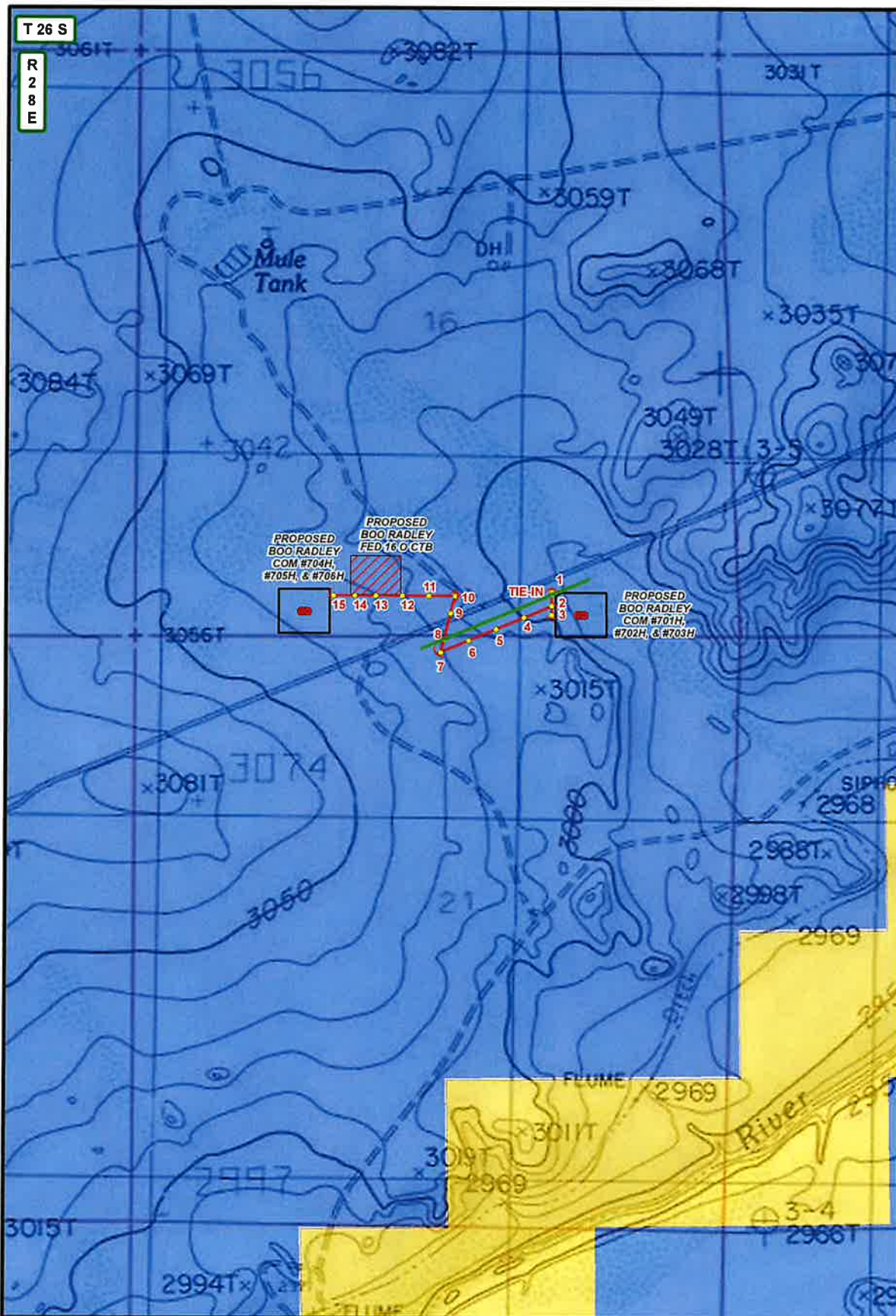
POWERLINE OVERVIEW      IMAGERY      7/22/2020      J.H.

**CONCHO**  
 COG OPERATING, LLC

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T 26 S

R 28 E

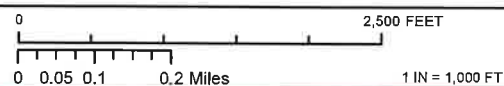


# LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-994 LEASE: BOO RADLEY COM

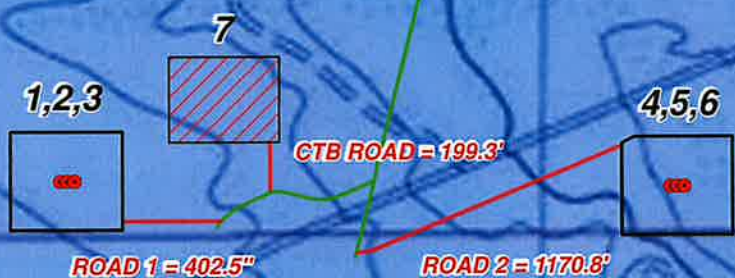


POWERLINE OVERVIEW LAND STATUS 7/22/2020 J.H.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
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 charcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

LAND STATUS

7/22/2020

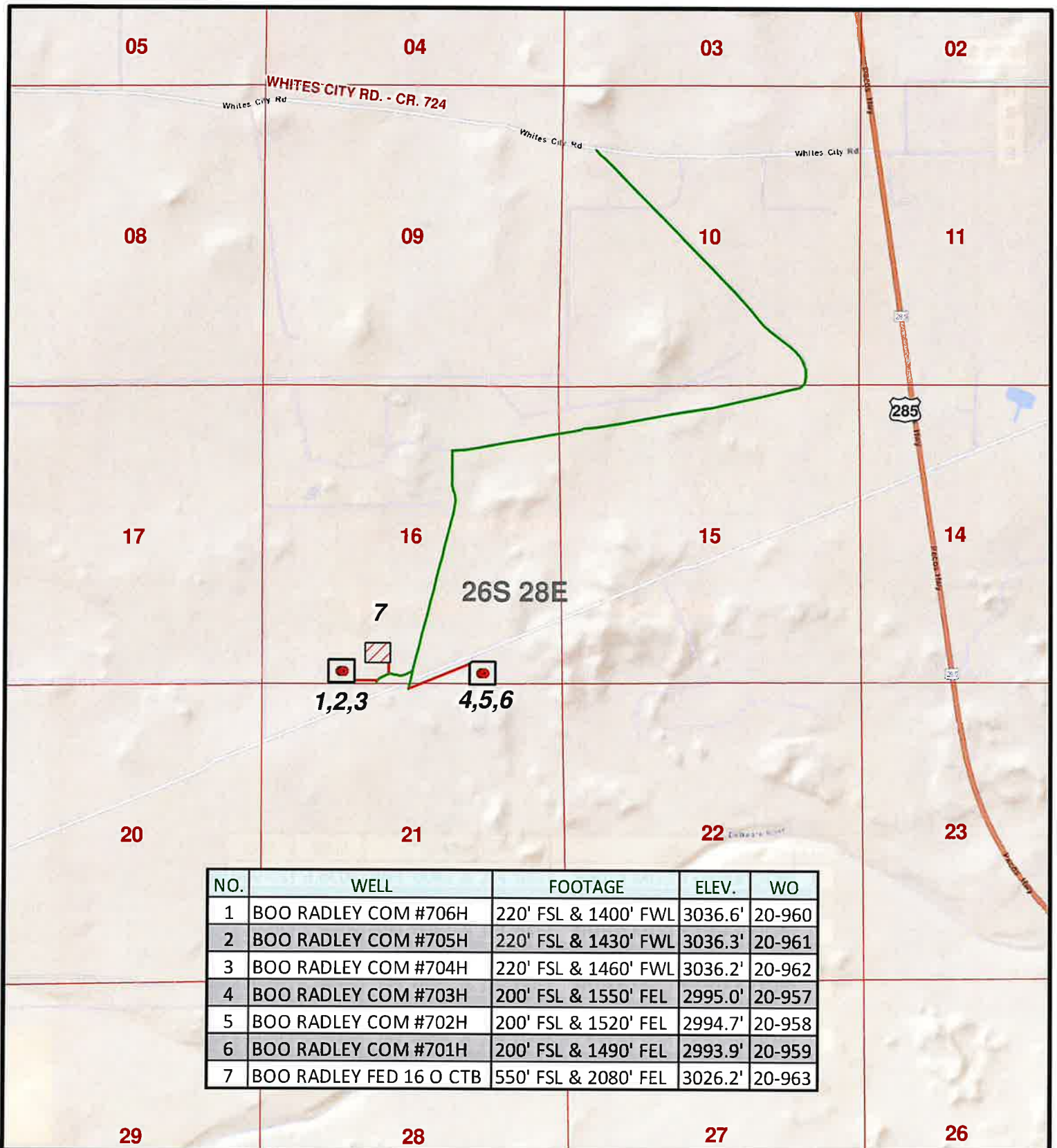
W.N.



COG OPERATING, LLC



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## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY

0 1,000 2,000 3,000 4,000 5,000 6,000 FEET

0 0.15 0.3 0.6 Miles

1 IN = 2,250 FT

LOCATION MAP

VICINITY

7/22/2020

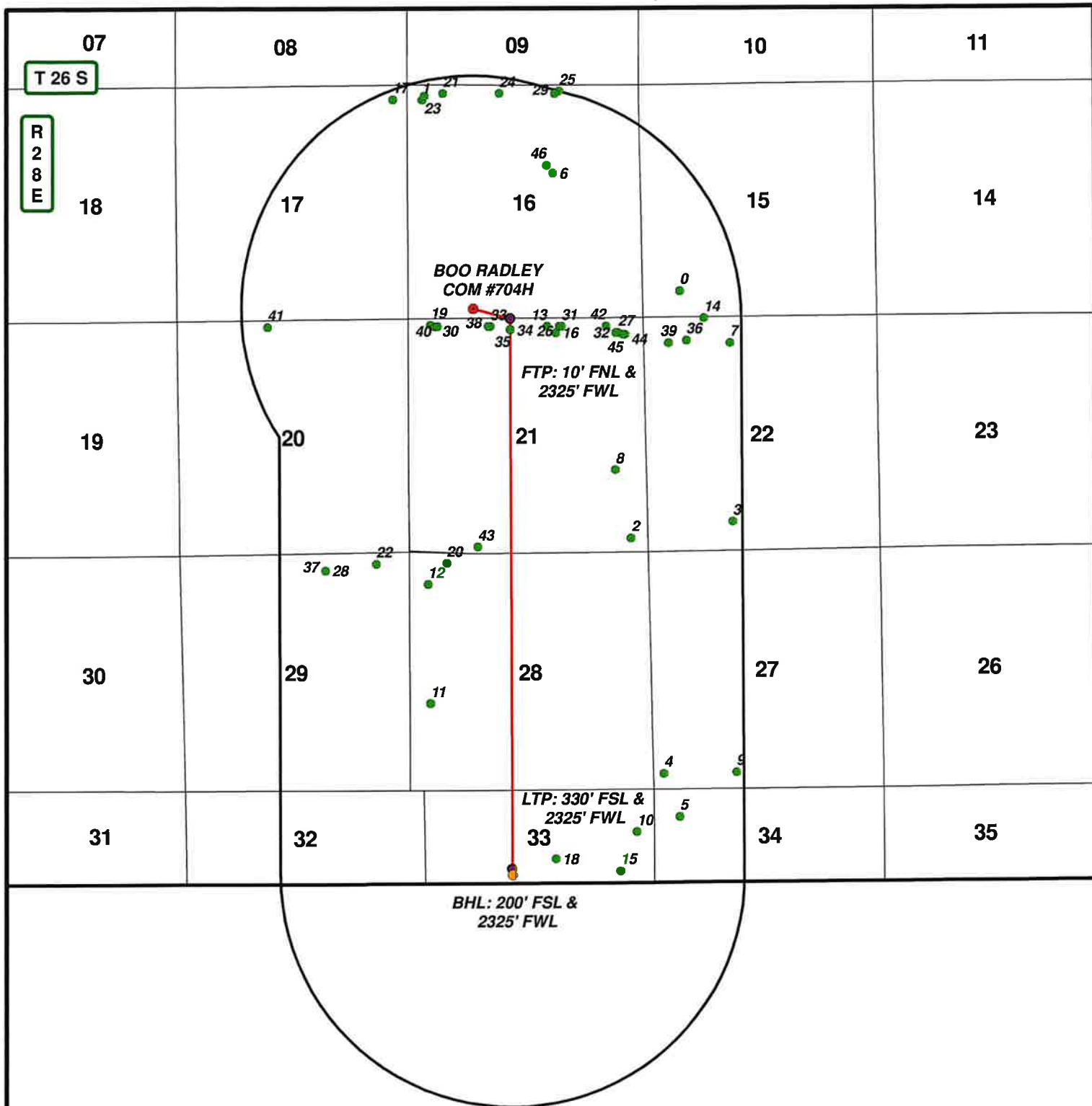
W.N.



COG OPERATING, LLC



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DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

## LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER
- DRILL PATH

## BOO RADLEY COM #704H

SEC: 16 TWP: 26 S. RGE: 28 E. ELEVATION: 3036.2"

STATE: NEW MEXICO COUNTY: EDDY 220' FSL & 1460' FWL

W.O. # 20-962

LEASE: BOO RADLEY

SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.25 0.5 1 Miles

1 IN = 3,000 FT

1 MILE MAP

7/23/2020

W.N.



COG OPERATING, LLC



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## BOO RADLEY COM #704H - 1 MILE DATA (20-962)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	STATE OF NM "B" 001	SUN OIL CO	3001502527	15	26.0S	28E	600 S	600 S	860 W	860 W	32.036889	-104.080989	Plugged
1	STATE OF NM 006	VANDERLAAN T	3001502528	16	26.0S	28E	340 N	340 N	330 W	330 W	32.04886	-104.09997	Plugged
2	HUMBLE STATE 001	GLENN BENNETT	3001502530	21	26.0S	28E	330 S	330 S	330 E	330 E	32.021524	-104.084662	Plugged
3	HUMBLE FOWLKES 001	BENNETT J	3001502531	22	26.0S	28E	660 S	660 S	1980 W	1980 W	32.022515	-104.077183	Plugged
4	SUN ST 27 001	CHAPMAN FORD	3001502534	27	26.0S	28E	330 S	330 S	330 W	330 W	32.006824	-104.082376	Plugged
5	STATE 34 001	CHAPMAN FORD	3001502536	34	26.0S	28E	660 N	660 N	660 W	660 W	32.004115	-104.081203	Plugged
6	STATE LG 1175 001	JAKE L HAMON	3001521398	16	26.0S	28E	1980 N	1980 N	1980 E	1980 E	32.044302	-104.090314	Plugged
7	AMINOIL ST 001	HARWICK OIL CO	3001524358	22	26.0S	28E	590 N	590 N	1980 W	1980 W	32.033636	-104.077313	Plugged
8	GETTY STATE 001	RAY H HASKINS	3001524474	21	26.0S	28E	1880 S	1880 S	660 E	660 E	32.025777	-104.085782	Plugged
9	STATE 001	CHAPMAN FORD	3001510269	27	26.0S	28E	330 S	330 S	1980 W	1980 W	32.006879	-104.077027	Plugged
10	POGO ST 001	SLEDGE OIL & GAS INC	3001523607	33	26.0S	28E	990 N	990 N	330 E	330 E	32.003178	-104.084369	Plugged
11	ALL STATE COM 002H	MARBOB ENERGY CORP	3001537499	28	26.0S	28E	1980 S	1980 S	330 W	330 W	32.011235	-104.099544	Unknown
12	ALL STATE COM 001H	MARBOB ENERGY CORP	3001537498	28	26.0S	28E	660 N	660 N	330 W	330 W	32.018698	-104.099698	Unknown
13	SKEEN 21 B2BO STATE COM 001H	MEWBOURNE OIL CO	3001543247	21	26.0S	28E	185 N	185 N	2180 E	2180 E	32.034723	-104.090816	Unknown
14	DIAMONDBACK 22 STATE COM 004H	COG PRODUCTION, LLC	3001540816	22	26.0S	28E	20 N	20 N	1393 W	1393 W	32.035193	-104.079235	Unknown
15	GRAHAM NASH STATE COM 005H	COG OPERATING LLC	3001542453	33	26.0S	28E	280 S	280 S	760 E	760 E	32.000751	-104.085613	Unknown
16	SKEEN 21 STATE COM 002H	MEWBOURNE OIL CO	3001539773	21	26.0S	28E	330 N	330 N	1980 E	1980 E	32.034324	-104.090162	Unknown
17	SRO STATE UNIT 018H	COG OPERATING LLC	3001539999	17	26.0S	28E	330 N	330 N	330 E	330 E	32.048888	-104.102111	Unknown
18	GRAHAM NASH STATE COM 006H	COG OPERATING LLC	3001542464	33	26.0S	28E	560 S	560 S	2200 E	2200 E	32.001511	-104.090348	Unknown
19	SKEEN 21 DM STATE 001	MEWBOURNE OIL CO	3001540863	21	26.0S	28E	150 N	150 N	500 W	500 W	32.034828	-104.099418	Unknown
20	GRAHAM NASH STATE COM 008H	COG OPERATING LLC	3001542203	28	26.0S	28E	190 N	190 N	760 W	760 W	32.019999	-104.09833	Unknown
21	GRAHAM CRACKER 16 STATE 001H	COG OPERATING LLC	3001541935	16	26.0S	28E	190 N	190 N	800 W	800 W	32.049264	-104.098446	Unknown
22	HONEY GRAHAM STATE COM 005H	COG OPERATING LLC	3001541608	29	26.0S	28E	190 N	190 N	820 E	820 E	32.019969	-104.103453	Unknown
23	GRAHAM CRACKER 16 STATE 009H	COG OPERATING LLC	3001543005	16	26.0S	28E	250 N	250 N	380 W	380 W	32.049107	-104.099808	Unknown
24	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001541533	16	26.0S	28E	190 N	190 N	2080 W	2080 W	32.049243	-104.094295	Unknown
25	GRAHAM CRACKER 16 STATE 007H	COG OPERATING LLC	3001542332	16	26.0S	28E	135 N	135 N	1810 E	1810 E	32.049371	-104.089841	Unknown
26	SKEEN 21 D3BO STATE COM 003H	MEWBOURNE OIL CO	3001542811	21	26.0S	28E	185 N	185 N	1900 E	1900 E	32.034722	-104.089908	Unknown
27	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001542810	21	26.0S	28E	330 N	330 N	560 E	560 E	32.03432	-104.085558	Unknown
28	HONEY GRAHAM 29 STATE 003H	COG OPERATING LLC	3001538274	29	26.0S	28E	330 N	330 N	1980 E	1980 E	32.019566	-104.107206	Unknown
29	GRAHAM CRACKER 16 STATE 003H	COG OPERATING LLC	3001541633	16	26.0S	28E	190 N	190 N	1910 E	1910 E	32.049222	-104.090163	Unknown
30	SKEEN 21 B3DM STATE COM 002H	MEWBOURNE OIL CO	3001542855	21	26.0S	28E	185 N	185 N	610 W	610 W	32.034731	-104.09906	Unknown
31	SKEEN 21 D3BO STATE COM 002H	MEWBOURNE OIL CO	3001542853	21	26.0S	28E	185 N	185 N	1850 E	1850 E	32.034722	-104.089746	Unknown
32	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542856	21	26.0S	28E	330 N	330 N	610 E	610 E	32.03432	-104.08572	Unknown
33	SKEEN 21 B3CN STATE COM 001H	MEWBOURNE OIL CO	3001542854	21	26.0S	28E	185 N	185 N	1850 W	1850 W	32.034727	-104.093543	Unknown
34	SKEEN 21 B2CN STATE 001H	MEWBOURNE OIL CO	3001542934	21	26.0S	28E	266 N	266 N	2310 W	2310 W	32.034503	-104.093543	Unknown
35	SKEEN 21 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537802	21	26.0S	28E	250 N	250 N	2310 W	2310 W	32.034547	-104.093544	Unknown
36	DIAMONDBACK 22 STATE COM 006H	COG PRODUCTION, LLC	3001543195	22	26.0S	28E	520 N	520 N	990 W	990 W	32.033812	-104.080526	Unknown
37	HONEY GRAHAM STATE COM 004H	COG OPERATING LLC	3001541379	29	26.0S	28E	330 N	330 N	1980 E	1980 E	32.019566	-104.107206	Unknown
38	SKEEN 21 D3CN STATE COM 002H	MEWBOURNE OIL CO	3001542857	21	26.0S	28E	185 N	185 N	1800 W	1800 W	32.034727	-104.095201	Unknown
39	DIAMONDBACK 22 STATE COM 002H	OGX RESOURCES, LLC	3001539105	22	26.0S	28E	580 N	580 N	580 W	580 W	32.03364	-104.081853	Unknown
40	SKEEN 21 D3DM STATE COM 003H	MEWBOURNE OIL CO	3001542812	21	26.0S	28E	185 N	185 N	660 W	660 W	32.034731	-104.098898	Unknown
41	COTTONWOOD NORTH 20 STATE 002H	NEARBURG PRODUCING CO	3001543263	20	26.0S	28E	150 N	150 N	2070 W	2070 W	32.034747	-104.111429	Unknown
42	SKEEN 21 B2AP STATE COM 001H	MEWBOURNE OIL CO	3001543246	21	26.0S	28E	185 N	185 N	820 E	820 E	32.034719	-104.086406	Unknown
43	GRAHAM NASH FEDERAL COM 013H	COG OPERATING LLC	3001543811	21	26.0S	28E	200 S	200 S	1550 W	1550 W	32.021012	-104.096034	Unknown
44	SKEEN 21 W2AP STATE COM 002H	MEWBOURNE OIL CO	3001544553	21	26.0S	28E	330 N	330 N	550 E	550 E	32.034186	-104.085036	Unknown
45	SKEEN 21 W2AP STATE COM 001H	MEWBOURNE OIL CO	3001544552	21	26.0S	28E	330 N	330 N	600 E	600 E	32.034186	-104.085198	Unknown
46	SALT CEDAR 16 STATE SWD #001 001	COG OPERATING LLC	3001545826	16	26S	28E	1850 N	1850 N	2185 E	2185 E	32.044761	-104.090784	New (Not drilled or compl)

Intent ☐ As Drilled ☐

API #								
Operator Name: COG OPERATING, LLC.			Property Name: BOO RADLEY COM			Well Number 702H		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	21	26-S	28-E		10	NORTH	1210	EAST	EDDY
Latitude 32.035161					Longitude -104.087256				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	33	26-S	28-E	4	330	SOUTH	1210	EAST	EDDY
Latitude 32.000889					Longitude -104.087253				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #								
Operator Name:			Property Name:			Well Number		

KZ 06/29/2018

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 478-3480 Fax: (505) 478-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>705H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>3036.3'</b>

**Surface Location**

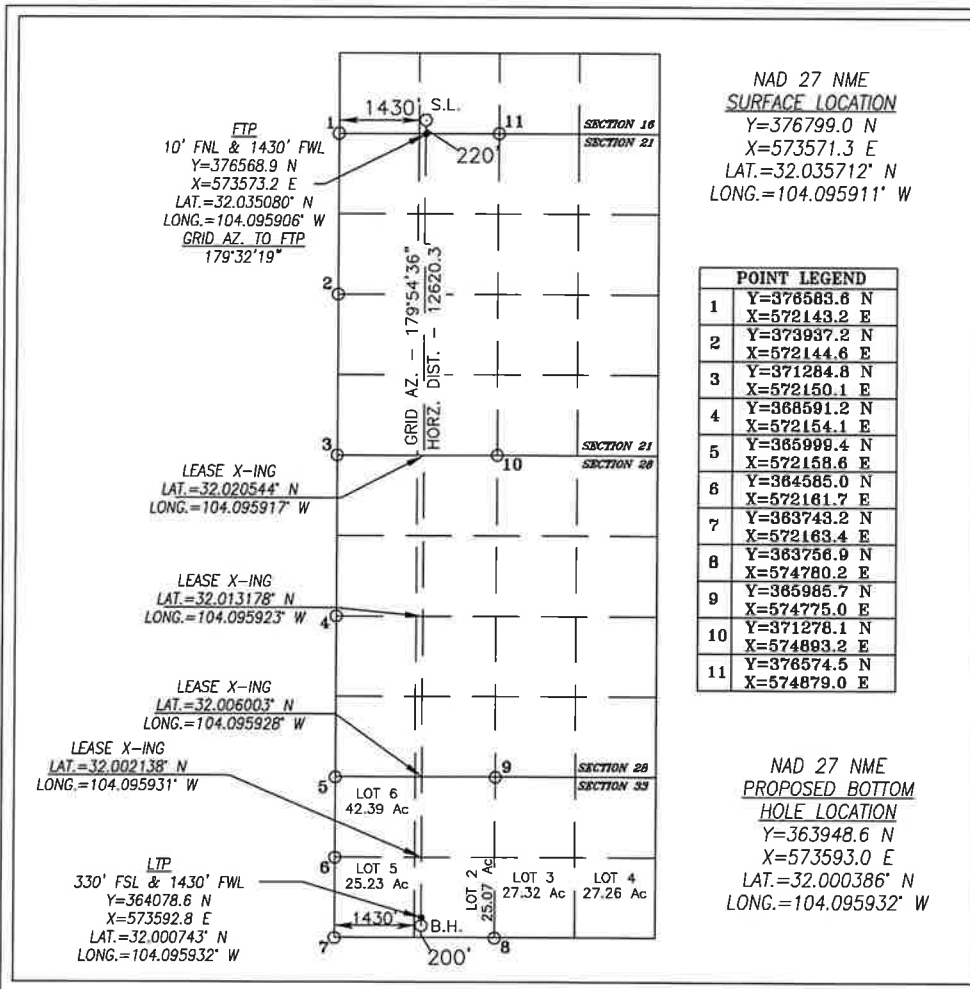
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	26-S	28-E		220	SOUTH	1430	WEST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	33	26-S	28-E		200	SOUTH	1430	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



NAD 27 NME  
SURFACE LOCATION  
Y=376799.0 N  
X=573571.3 E  
LAT.=32.035712° N  
LONG.=104.095911° W

POINT LEGEND	
1	Y=376583.6 N X=572143.2 E
2	Y=373937.2 N X=572144.6 E
3	Y=371284.8 N X=572150.1 E
4	Y=368591.2 N X=572154.1 E
5	Y=365999.4 N X=572158.6 E
6	Y=364585.0 N X=572161.7 E
7	Y=363743.2 N X=572163.4 E
8	Y=363756.9 N X=574780.2 E
9	Y=365985.7 N X=574775.0 E
10	Y=371278.1 N X=574893.2 E
11	Y=376574.5 N X=574879.0 E

NAD 27 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=363948.6 N  
X=573593.0 E  
LAT.=32.000386° N  
LONG.=104.095932° W

**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

Date of Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-961 DRAWN BY: AH

DISTRICT I  
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Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number <b>705H</b>
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>3036.3'</b>

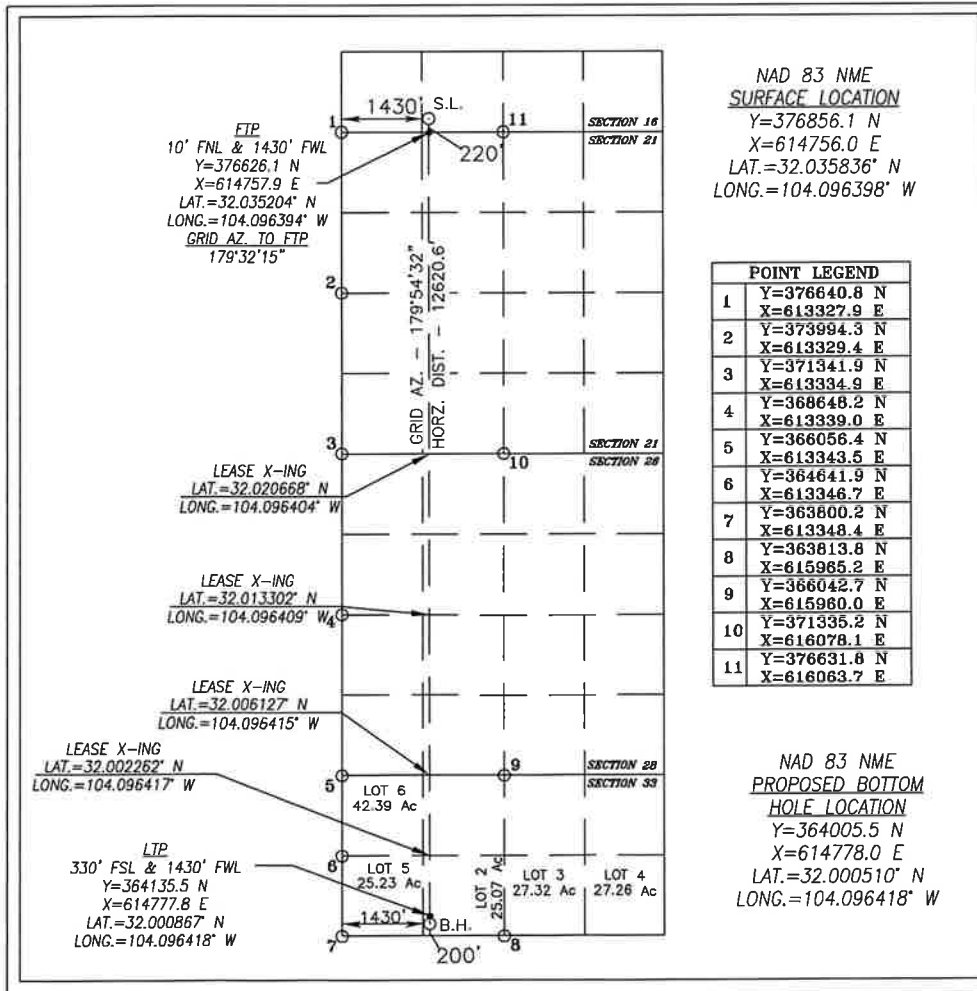
**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	26-S	28-E		220	SOUTH	1430	WEST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	33	26-S	28-E		200	SOUTH	1430	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

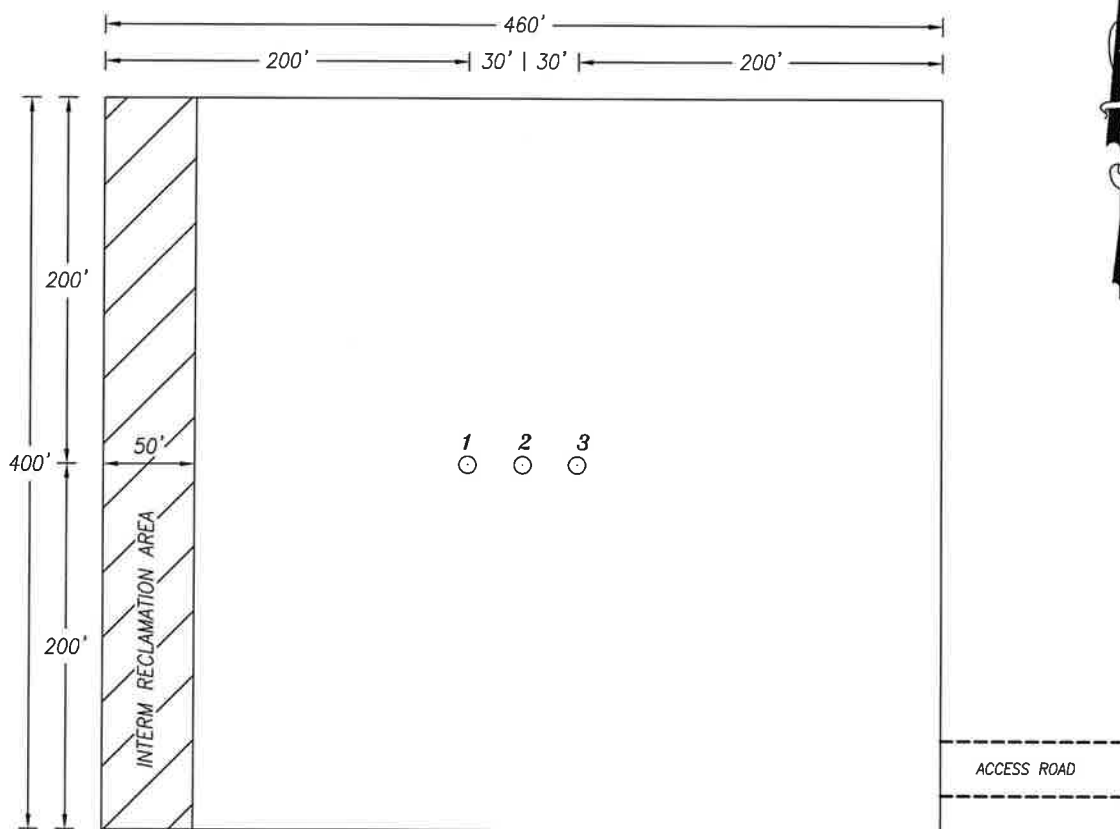
JULY 17, 2020

Date of Survey

Signature & Seal of Professional Surveyor

Chad L. Harcrow 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-961 DRAWN BY: AH

RECLAMATION AND FACILITY DIAGRAM – PRODUCTION FACILITIES DIAGRAM  
 COG OPERATING, LLC  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.



NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.
1	B00 RADLEY COM #706H	220' FSL & 1400' FWL	32.035837° N	104.096495° W	3036.6'
2	B00 RADLEY COM #705H	220' FSL & 1430' FWL	32.035836° N	104.096398° W	3036.3'
3	B00 RADLEY COM #704H	220' FSL & 1460' FWL	32.035836° N	104.096302° W	3036.2'

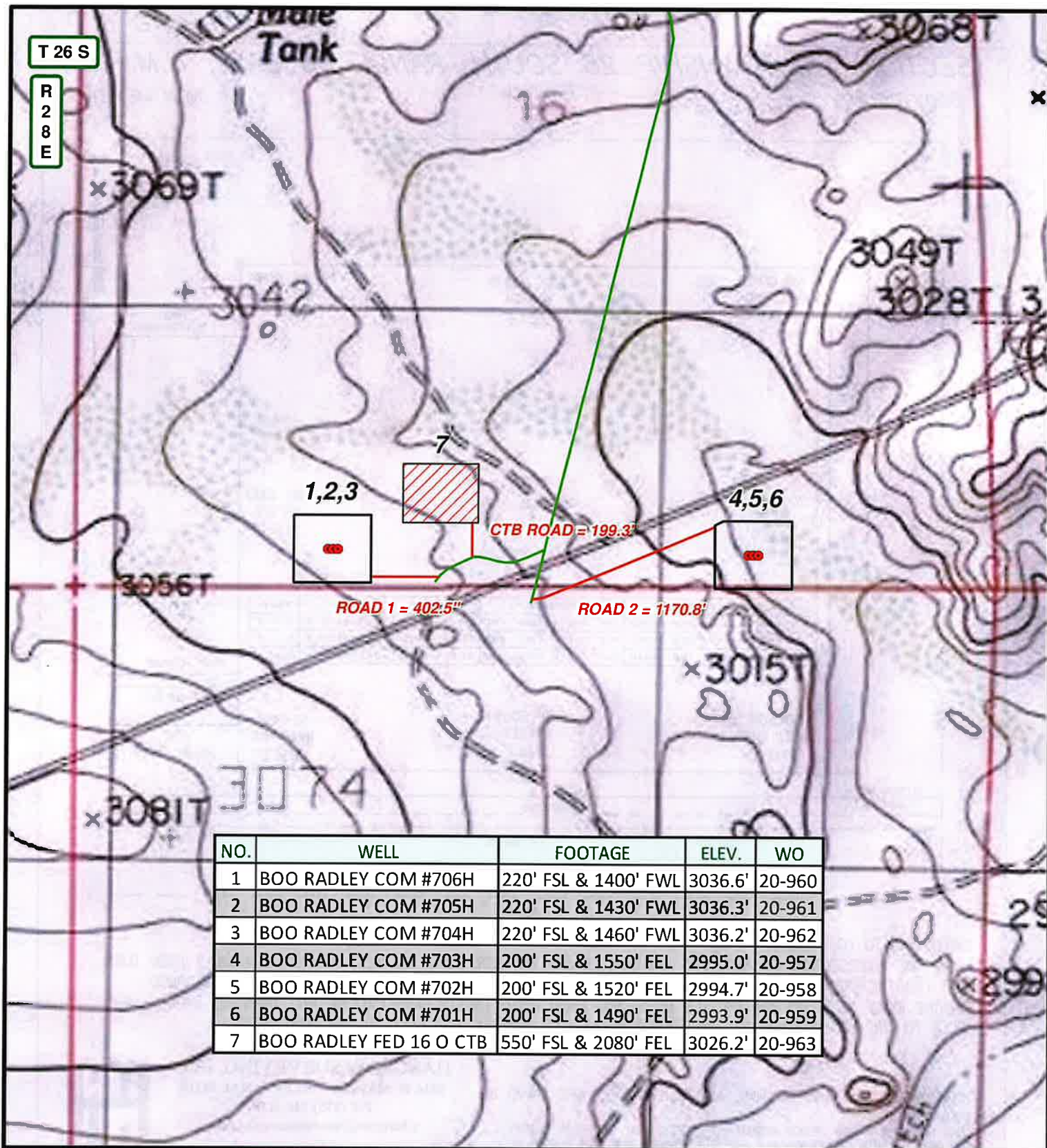
HARCROW SURVEYING, LLC  
 2316 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



100 0 100 200 Feet  
 Scale: 1"=100'

COG OPERATING, LLC		
SURVEY DATE: JULY 17, 2020	RECLAMATION	
DRAFTING DATE: JULY 30, 2020	PAGE: 1 OF 1	
APPROVED BY: CH	DRAWN BY: WN	FILE: 20-960

SURVEY DATE: JULY 17, 2020		600S
DRAFTING DATE: JULY 23, 2020		PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH	FILE: 20-960



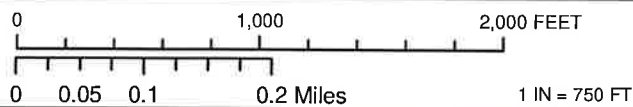
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
 W.O. # 20-957 LEASE: BOO RADLEY



LOCATION MAP

TOPO

7/22/2020

W.N.



COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

17

16

15

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5'

ROAD 2 = 1170.8'

20

22

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

IMAGERY

7/22/2020

W.N.



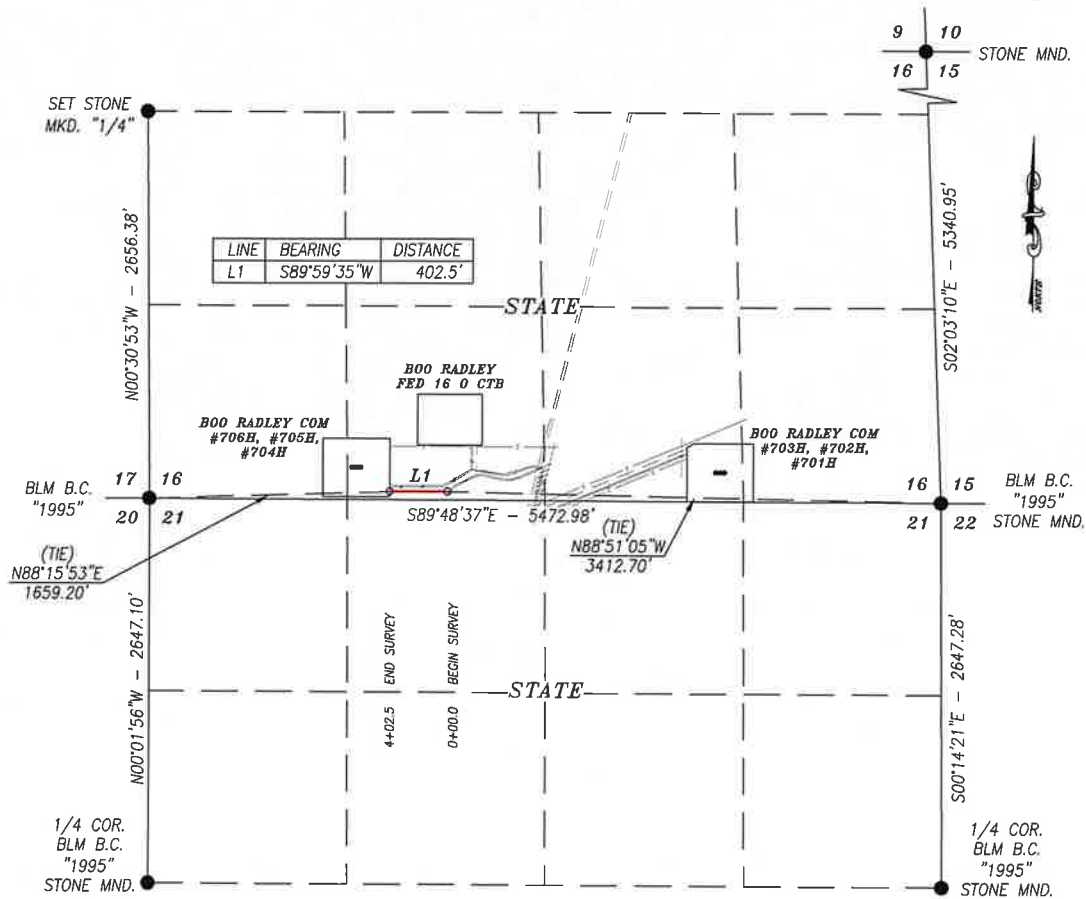
COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°51'05"W 3412.70 FEET FROM THE SOUTHEAST CORNER; THEN S89°59'35"W 402.5 FEET; TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°15'53"E 1659.20 FEET FROM THE SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 402.5 FEET OR 24.39 RODS IN LENGTH, CONTAINING 0.277 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

### HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #1

DRAFTING DATE: JULY 23, 2020

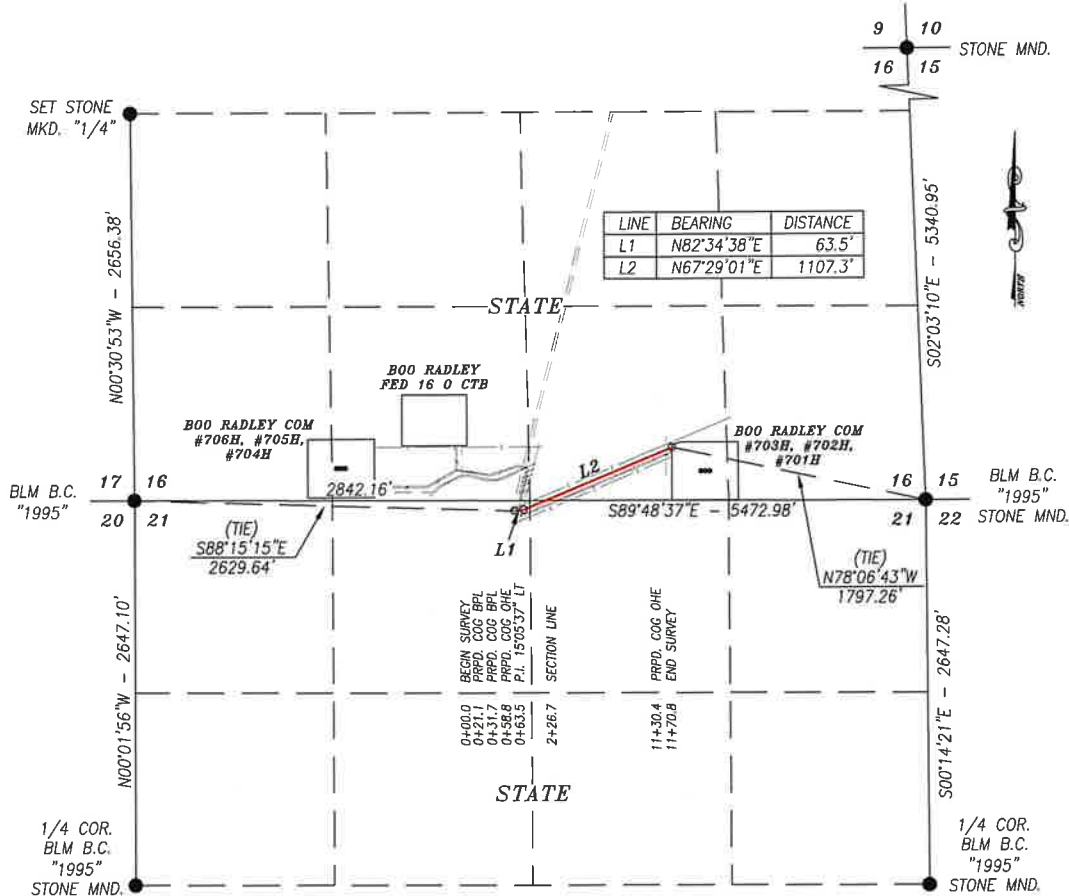
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NE/4 NW/4 OF SECTION 21, WHICH LIES S88°15'15"E 2629.64 FEET FROM THE NORTHWEST CORNER OF SECTION 21; THEN N82°34'38"E 63.5 FEET; THEN N67°29'01"E 1107.3 FEET; TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N78°06'43"W 1797.26 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1170.8 FEET OR 70.96 RODS IN LENGTH, CONTAINING 0.806 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

### SECTION 16

SW/4 SE/4 57.22 RODS OR 0.650 ACRES

### SECTION 21

NE/4 NW/4 6.81 RODS OR 0.077 ACRES

NW/4 NE/4 6.93 RODS OR 0.079 ACRES

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

HARCROW SURVEYING, LLC  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #2

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995

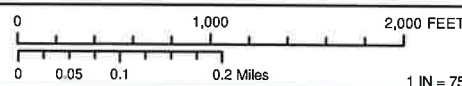


# **LEGEND**

- WELL
- WELLPAD
- EXIST. ROAD
- ACCESS ROAD

## **BOO RADLEY COM ACCESS ROADS**

SECTION: 16, 21      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-995      LEASE: BOO RADLEY



LOCATION MAP

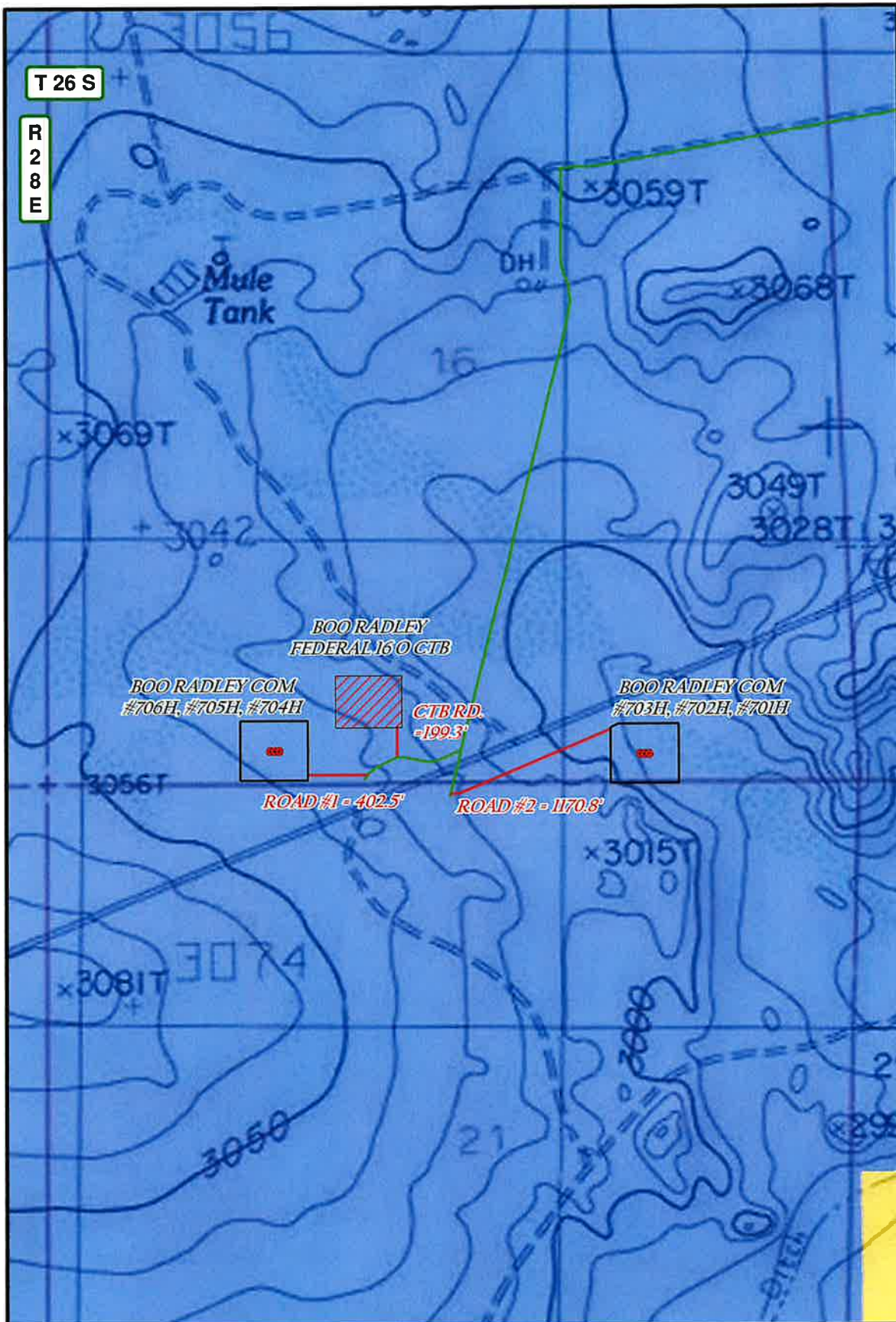
IMAGERY

7/23/2020

W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

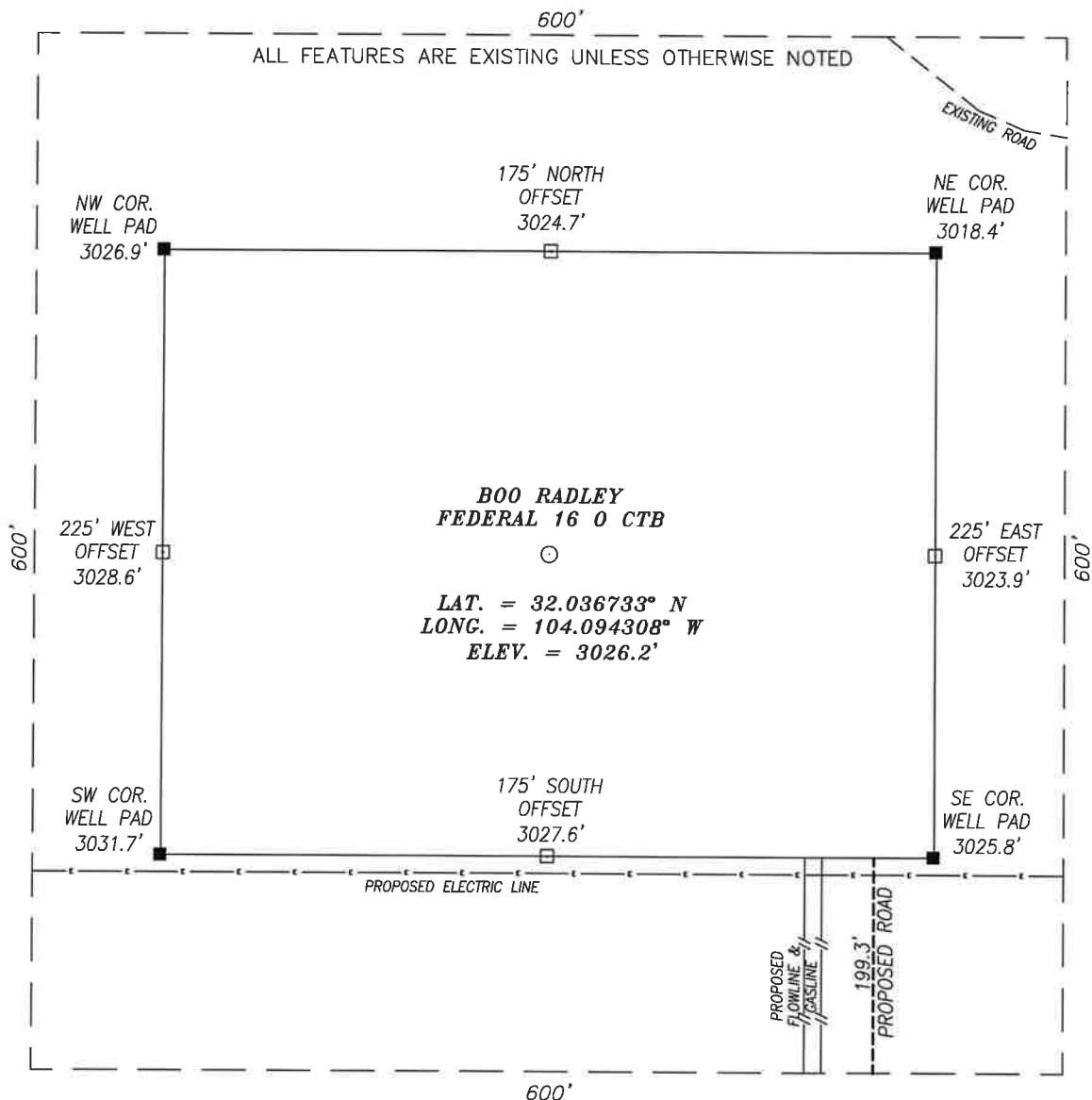


<b>LEGEND</b> WELL WELLPAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM	<b>BOO RADLEY COM ACCESS ROADS</b>			
	SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.	
	STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M	
	W.O. # 20-995		LEASE: BOO RADLEY	
	  1 IN = 750 FT			
	LOCATION MAP	LAND STATUS	7/23/2020	W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY); THEN GO APPROX. 0.7 MILES; TURN RIGHT AND GO APPROX. 0.1 MILES TO THE PROPOSED ROAD. PROPOSED PAD LIES APPROX. 420 FEET TO THE NORTHWEST.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

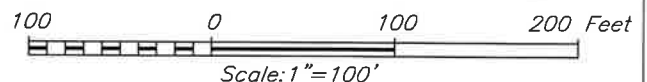
7/27/20  
DATE

**HARCROW SURVEYING, LLC**

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PH: (575) 746-2158

c.harcrow@harcrowsurveying.com

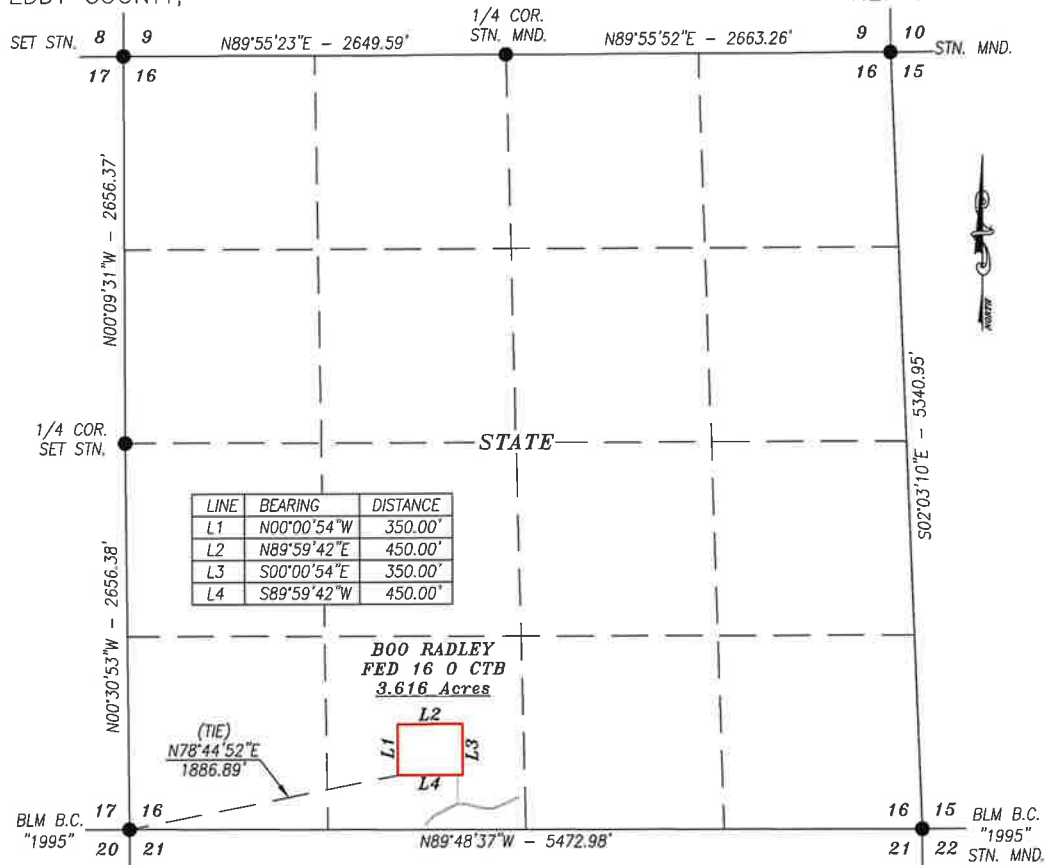


**COG OPERATING, LLC**

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

**EXHIBIT A**  
**STATE BUSINESS LEASE**  
**COG OPERATING, LLC.**

A STATE BUSINESS LEASE FOR THE "BOO RADLEY FED 16 0 CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A PROPOSED PAD LOCATED WITHIN STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N78°44'52"E 1886.89 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'54"W 350.00 FEET; THEN N89°59'42"E 450.00 FEET; THEN S00°00'54"W 350.00 FEET; THEN S89°59'42"W 450.00 FEET TO THE POINT OF BEGINNING.

SAID PAD CONTAINS 3.616 ACRES AND IS LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**  
 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.

**HARCROW SURVEYING, LLC**  
 2316 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

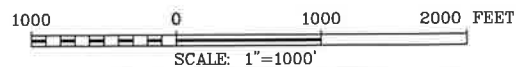


**CERTIFICATION**  
 I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
 DATE



**COG OPERATING, LLC**

SURVEY OF A PROPOSED PAD LOCATED IN  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
 NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

EXHIBIT A

DRAFTING DATE: JULY 22, 2020

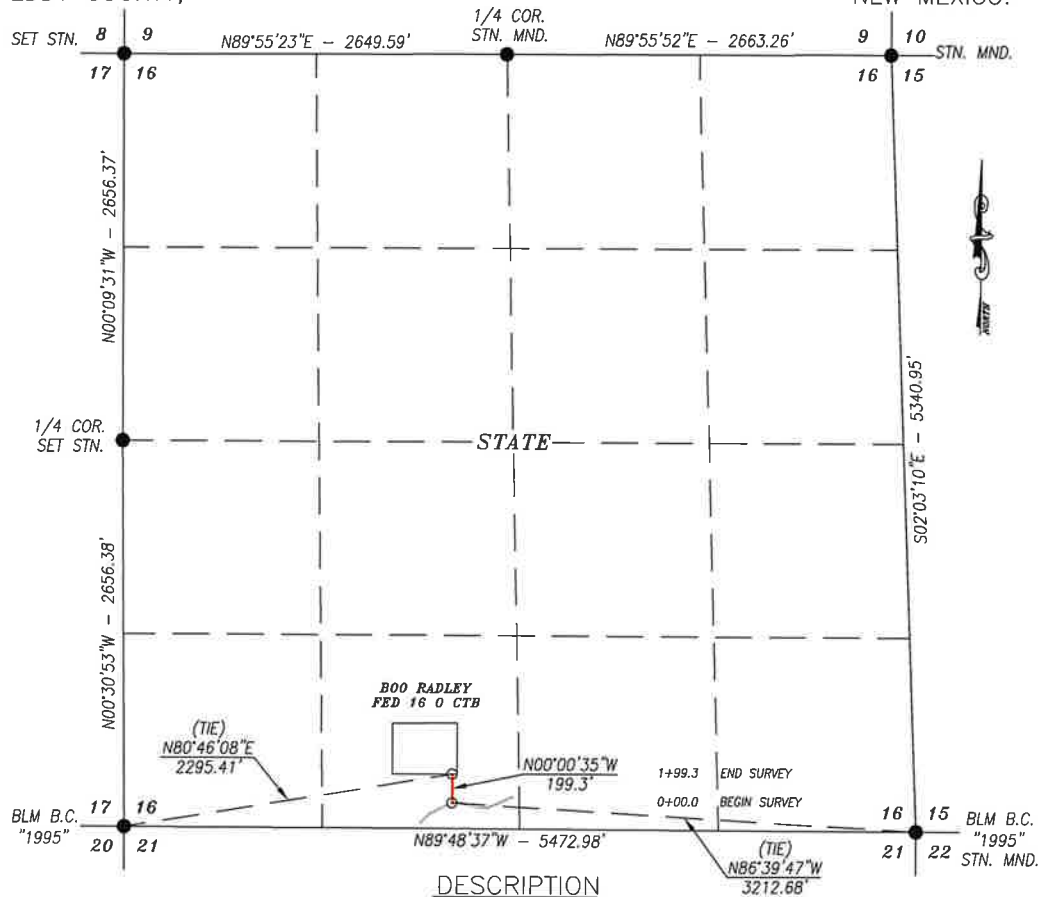
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-963

EXHIBIT B  
ACCESS ROAD PLAT  
COG OPERATING, LLC.

AN ACCESS ROAD FOR THE "BOO RADLEY FED 16 0 CTB" IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°39'47\"W 3212.68 FEET FROM THE SOUTHEAST CORNER; THEN N00°00'35\"W 199.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N80°46'08\"E 2295.41 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 199.3 FEET OR 12.08 RODS IN LENGTH, CONTAINING 0.137 ACRES MORE OR LESS AND BEING LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

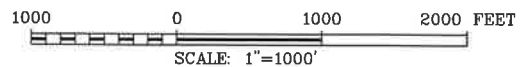
7/27/20  
DATE

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



**COG OPERATING, LLC**

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT B
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

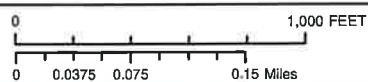


# LEGEND

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD

## BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD

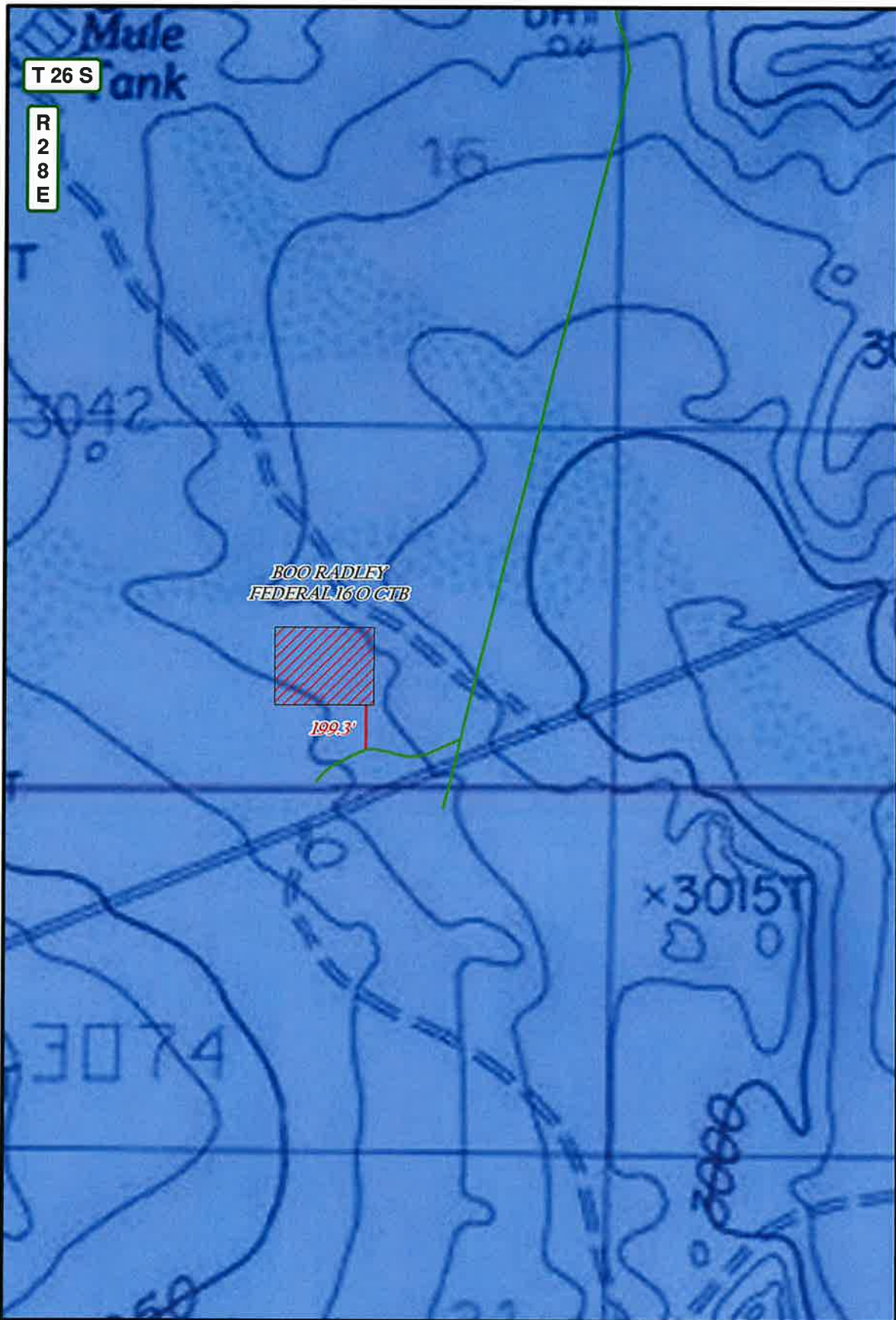
SECTION: 16	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-963	LEASE: BOO RADLEY	



LOCATION MAP	IMAGERY	7/22/2020	W.N.
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COG OPERATING, LLC

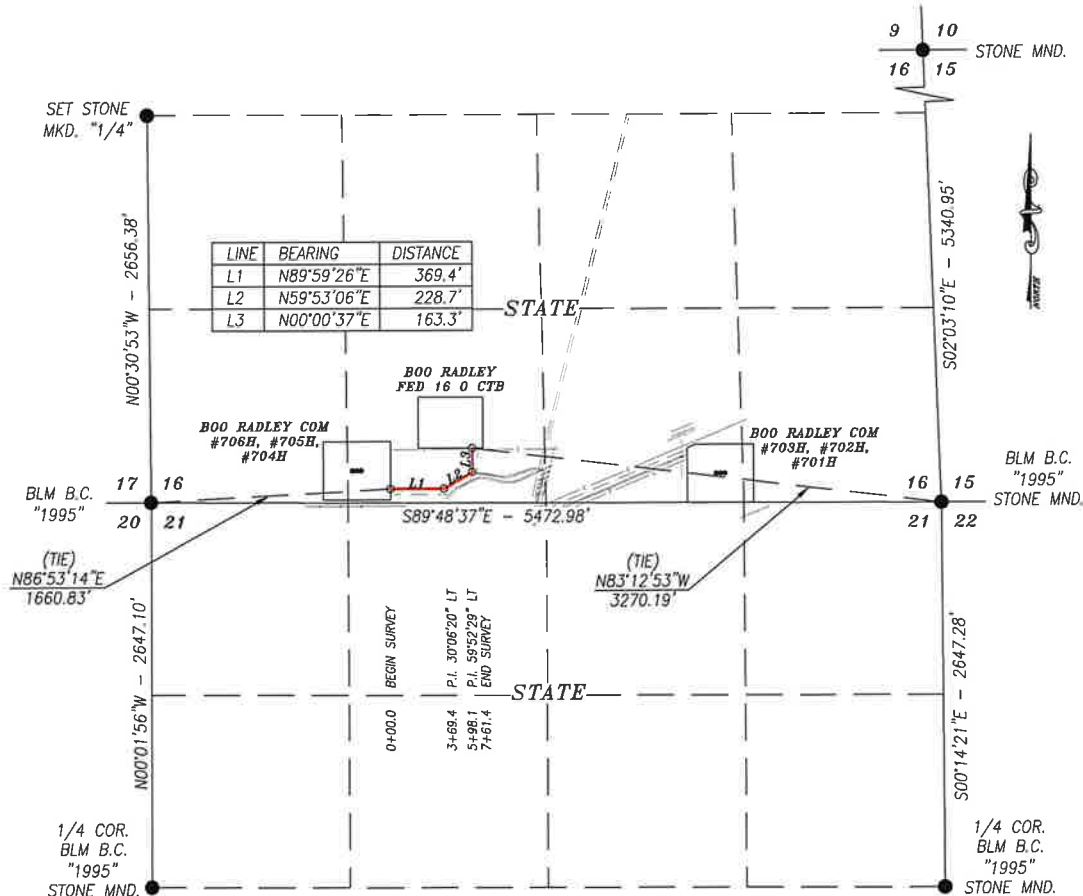
 **HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



<b>LEGEND</b> CTB PAD EXIST. ROAD ACCESS ROAD PRIVATE STATE OF NM US BLM		<b>BOO RADLEY FEDERAL 16 O CTB &amp; ACCESS ROAD</b> SECTION: 16      TOWNSHIP: 26 S.      RANGE: 28 E. STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M W.O. # 20-963      LEASE: BOO RADLEY		   HARCROW SURVEYING, LLC. 2316 W. MAIN ST., ARTESIA, NM 88210 PH: (575) 746-2158 c.harcrow@harcrowsurveying.com
 1 IN = 500 FT		LOCATION MAP      LAND STATUS      7/22/2020      W.N.		

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°53'14"E 1660.83 FEET FROM THE SOUTHWEST CORNER; THEN N89°59'26"E 369.4 FEET; THEN N59°53'06"E 228.7; THEN N00°00'37"E 163.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°12'53"W 3270.19 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 761.4 FEET OR 46.15 RODS IN LENGTH, CONTAINING 0.524 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

### HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

FLOWLINE #1

DRAFTING DATE: JULY 22, 2020

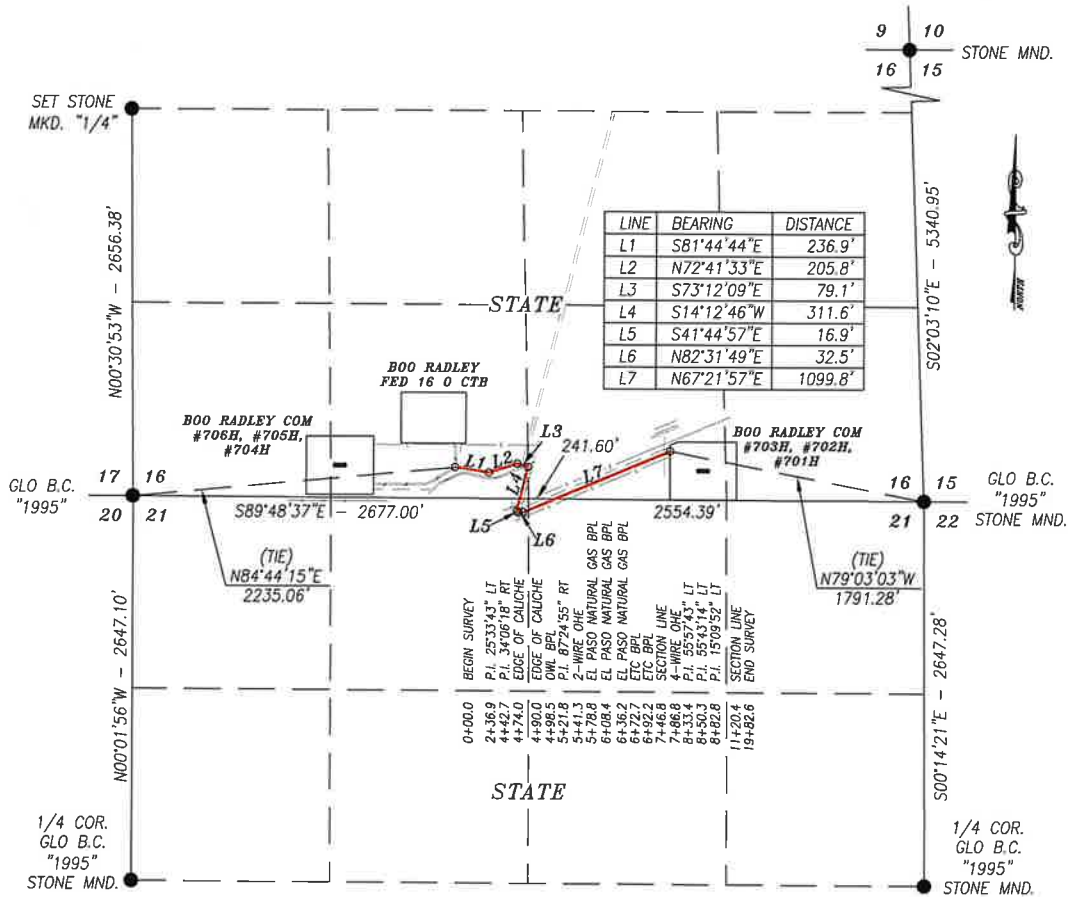
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: DS

FILE: 20-992

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



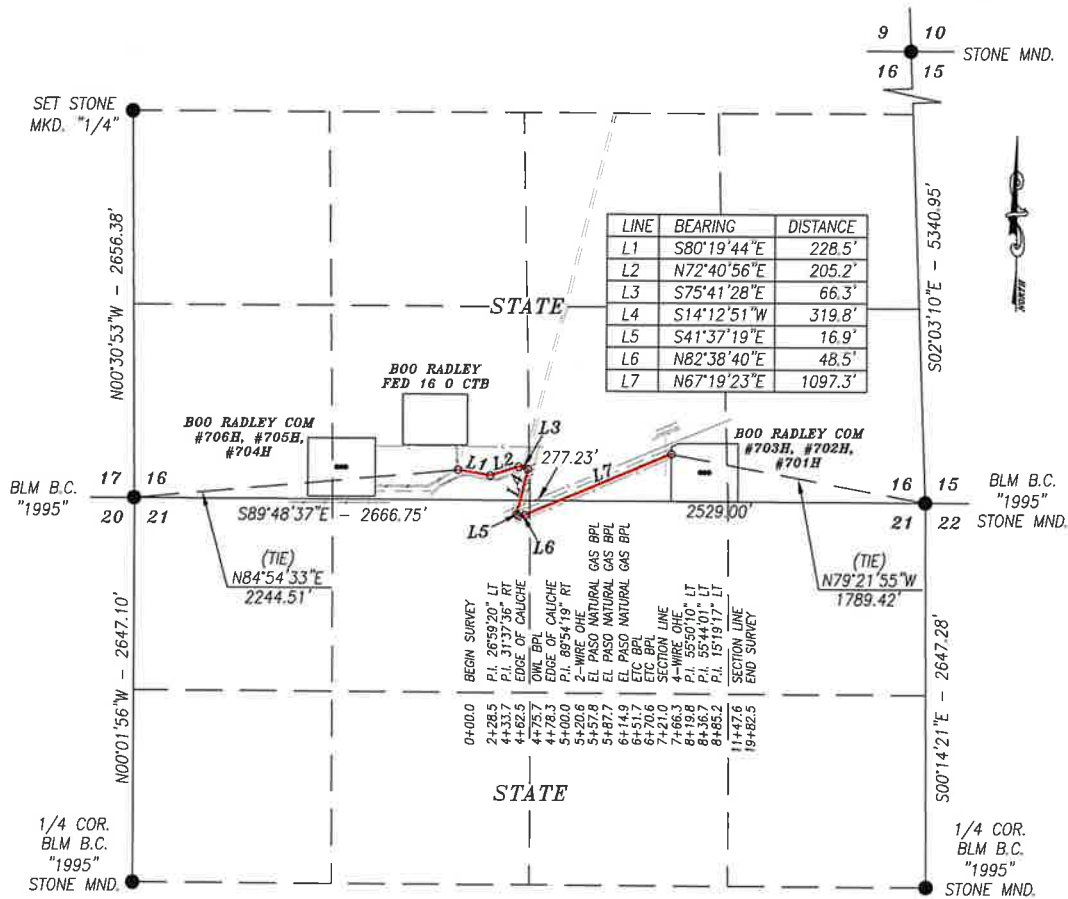
A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



FILE: 20-993

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



T 26 S

R  
2  
8  
E

16

FLOWLINE #1  
761.4'

1,2,3

7





FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

-  WELL  
 WELLPAD  
 FLOWLINE  
 GAS LINE

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993    LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles    1 IN = 500 FT

PIPELINE OVERVIEW

IMAGERY

7/23/2020

D.S.


  
 CONCHO  
 COG OPERATING, LLC


 HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST, ARTESIA, NM 88210  
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 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
EFLOWLINE #1  
761.4'

7

1,2,3

FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- FLOWLINE
- GAS LINE
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21      TOWNSHIP: 26 S.      RANGE: 28 E.

STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M

W.O. # 20-992, 993      LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles      1 IN = 500 FT

PIPELINE OVERVIEW

LAND STATUS

7/23/2020

D.S.

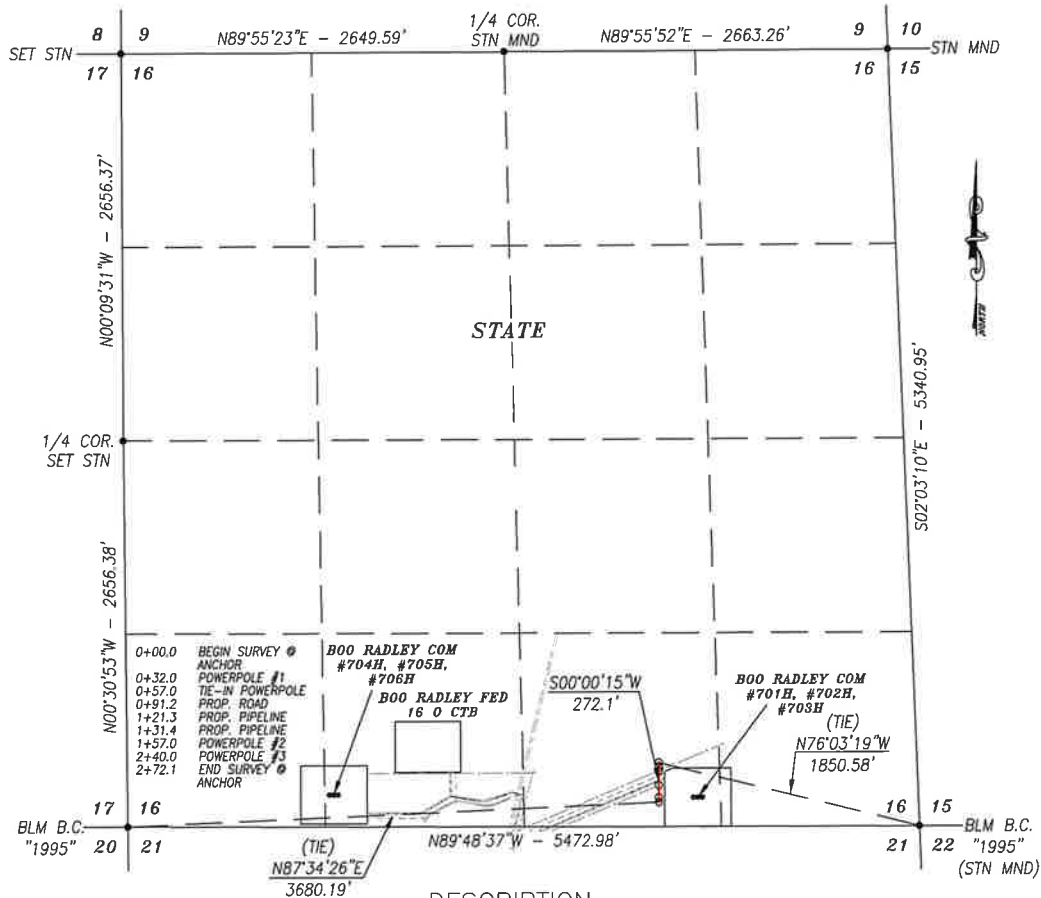

  
 COG OPERATING, LLC


 HARCROW SURVEYING, LLC.  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

# POWERLINE PLAT: LINE #1

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY;

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N76°03'19\"W 1850.58 FEET FROM THE SOUTHEAST CORNER; THEN S00°00'15\"W 272.1 FEET, TO A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N87°34'26\"E 3680.19 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 272.1 FEET OR 16.49 RODS IN LENGTH, CONTAINING 0.187 ACRES MORE OR LESS AND BEING LOCATED ENTIRELY IN THE SW/4 SE/4 OF SAID SECTION.

## BASIS OF BEARING:

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.

## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

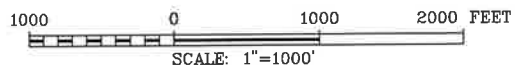
7/27/20  
DATE

## HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

POWERLINE #1

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

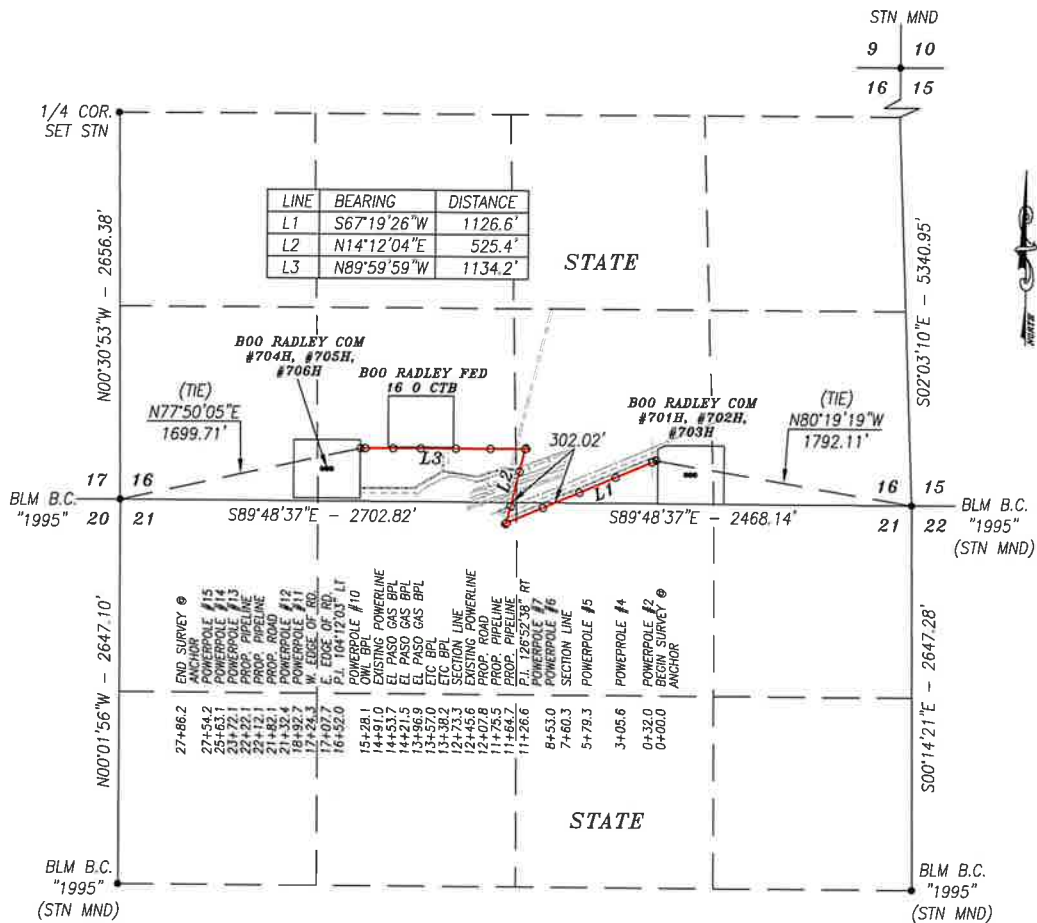
APPROVED BY: CH

DRAWN BY: JH

FILE: 20-994

# POWERLINE PLAT: LINE #2 COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 0 CENTRAL TANKBATTERY IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY; WITH ANCHORS EXTENDING OUTSIDE THE CENTERLINE SURVEY 14 FEET SOUTHERLY AND WESTERLY AT POLE 7 AND 17.0 FEET NORTHERLY AND EASTERLY AT POLE 10; WHICH HAVE BEEN ACCOUNTED FOR IN FOOTAGES, RODS, AND ACRES:

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N80°19'19"W 1792.11 FEET FROM THE SOUTHEAST CORNER OF SECTION 16; THEN S67°19'26"W 1126.6 FEET; THEN N14°12'04"E 525.4 FEET; THEN N89°59'59"W 1134.2 FEET, TO A POINT IN THE SE/4 SW/4 OF SECTION 16, WHICH LIES N77°50'05"E 1699.71 FEET FROM THE SOUTHWEST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 2848.2 FEET OR 172.62 RODS IN LENGTH, CONTAINING 1.962 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SECTION 16		SECTION 21	
SW/4 SE/4	67.53 RODS OR 0.767 ACRES	NW/4 NE/4	17.61 RODS OR 0.200 ACRES
SE/4 SW/4	72.30 RODS OR 0.822 ACRES	NE/4 NW/4	15.18 RODS OR 0.173 ACRES

**BASIS OF BEARING:**  
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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

**HARCROW SURVEYING, LLC**  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	POWERLINE #2
DRAFTING DATE: JULY 23, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: JH
FILE: 20-994	

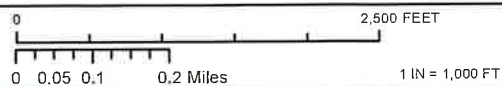


# LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD

## BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21      TOWNSHIP: 26 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 20-994      LEASE: BOO RADLEY COM

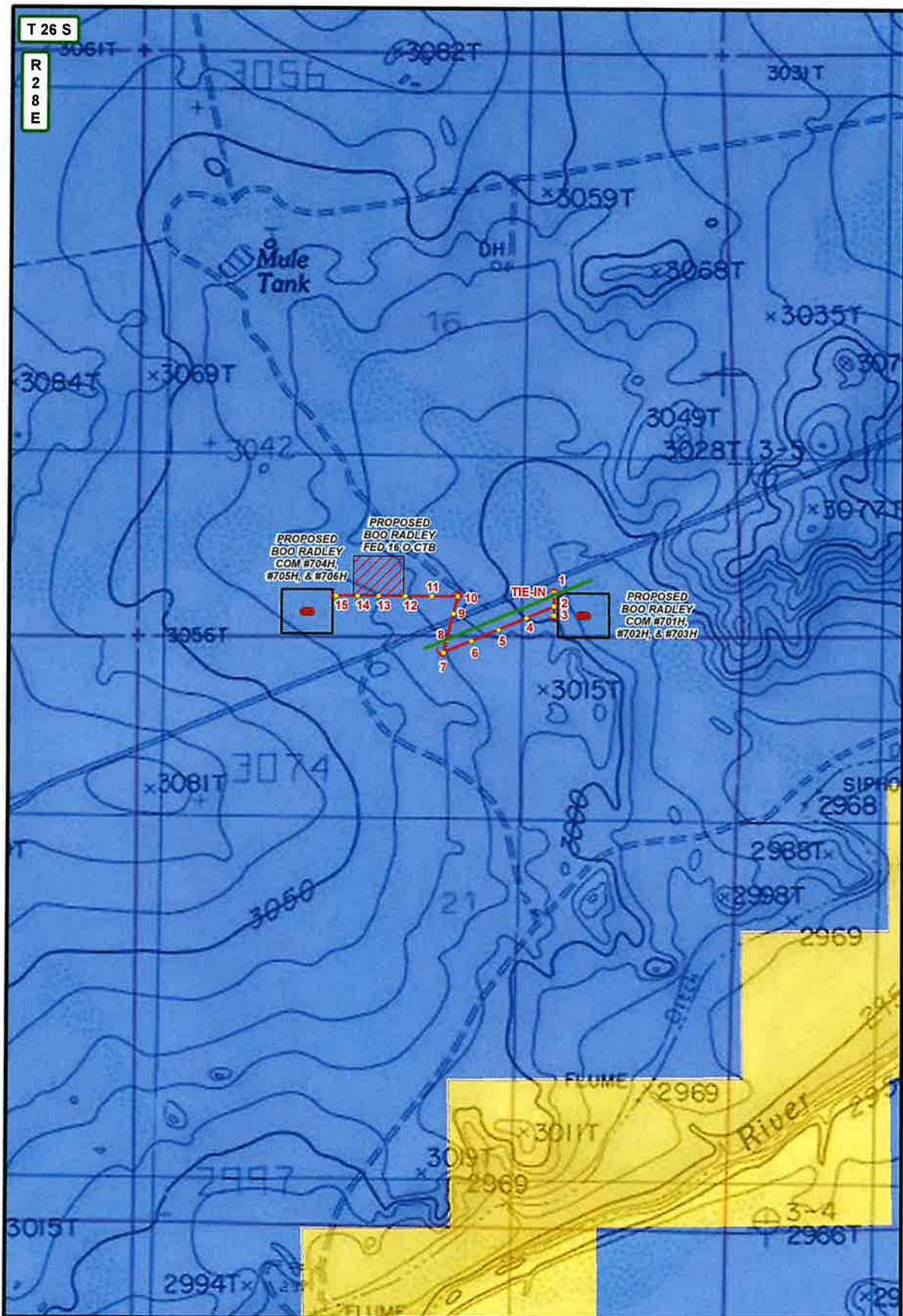


POWERLINE OVERVIEW      IMAGERY      7/22/2020      J.H.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
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[c.harcrow@harcrowsurveying.com](mailto:c.harcrow@harcrowsurveying.com)

T 26 S

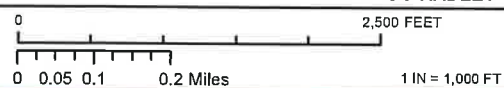
R  
2  
8  
E

## LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21    TOWNSHIP: 26 S.    RANGE: 28 E.  
 STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M  
 W.O. # 20-994    LEASE: BOO RADLEY COM



POWERLINE OVERVIEW    LAND STATUS    7/22/2020    J.H.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
 2314 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158 FAX: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

LAND STATUS

7/22/2020

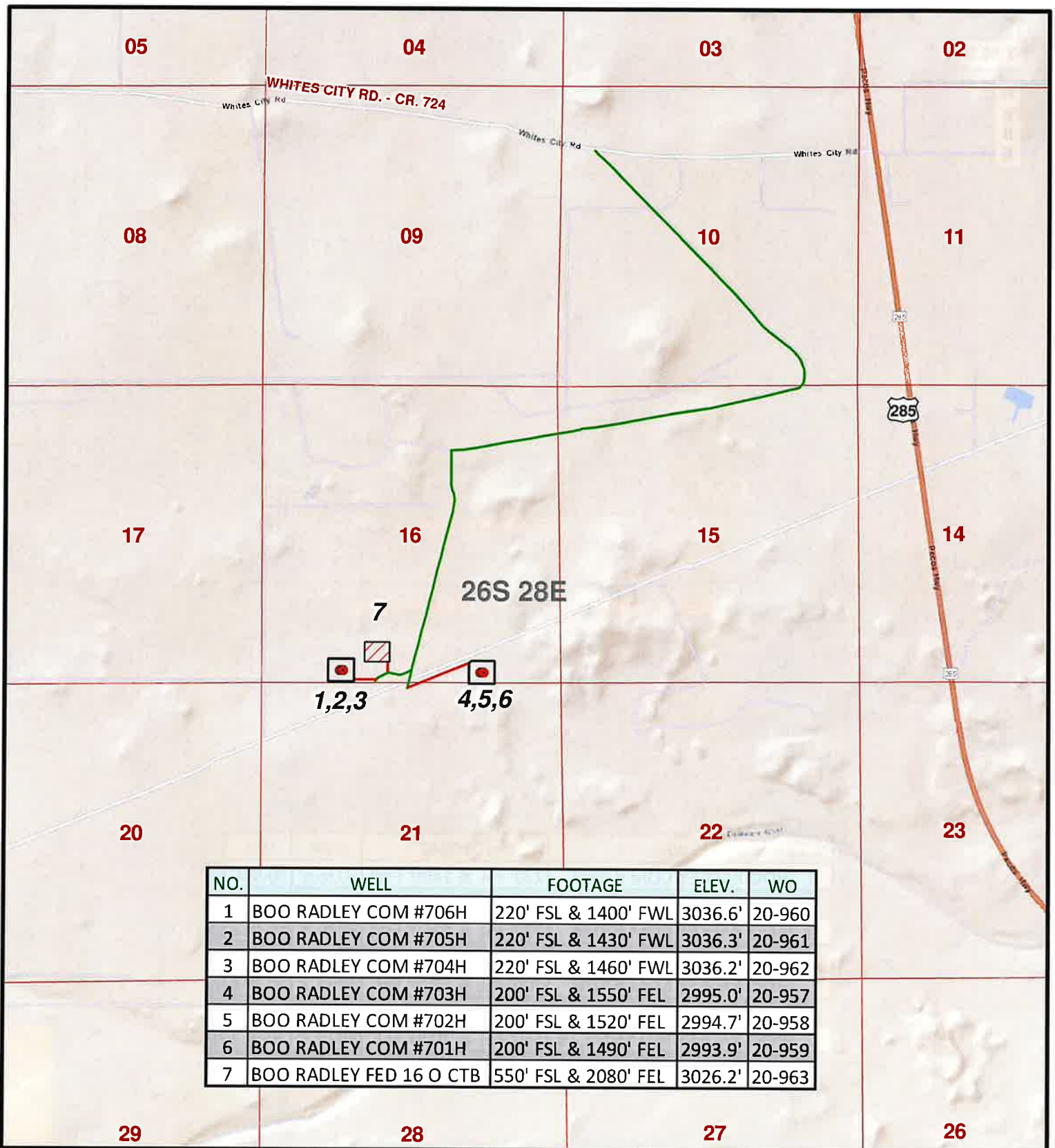
W.N.



COG OPERATING, LLC



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 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
[c.harcrow@harcrowsurveying.com](mailto:c.harcrow@harcrowsurveying.com)



NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY

0 1,000 2,000 3,000 4,000 5,000 6,000 FEET

0 0.15 0.3 0.6 Miles

1 IN = 2,250 FT

LOCATION MAP

VICINITY

7/22/2020

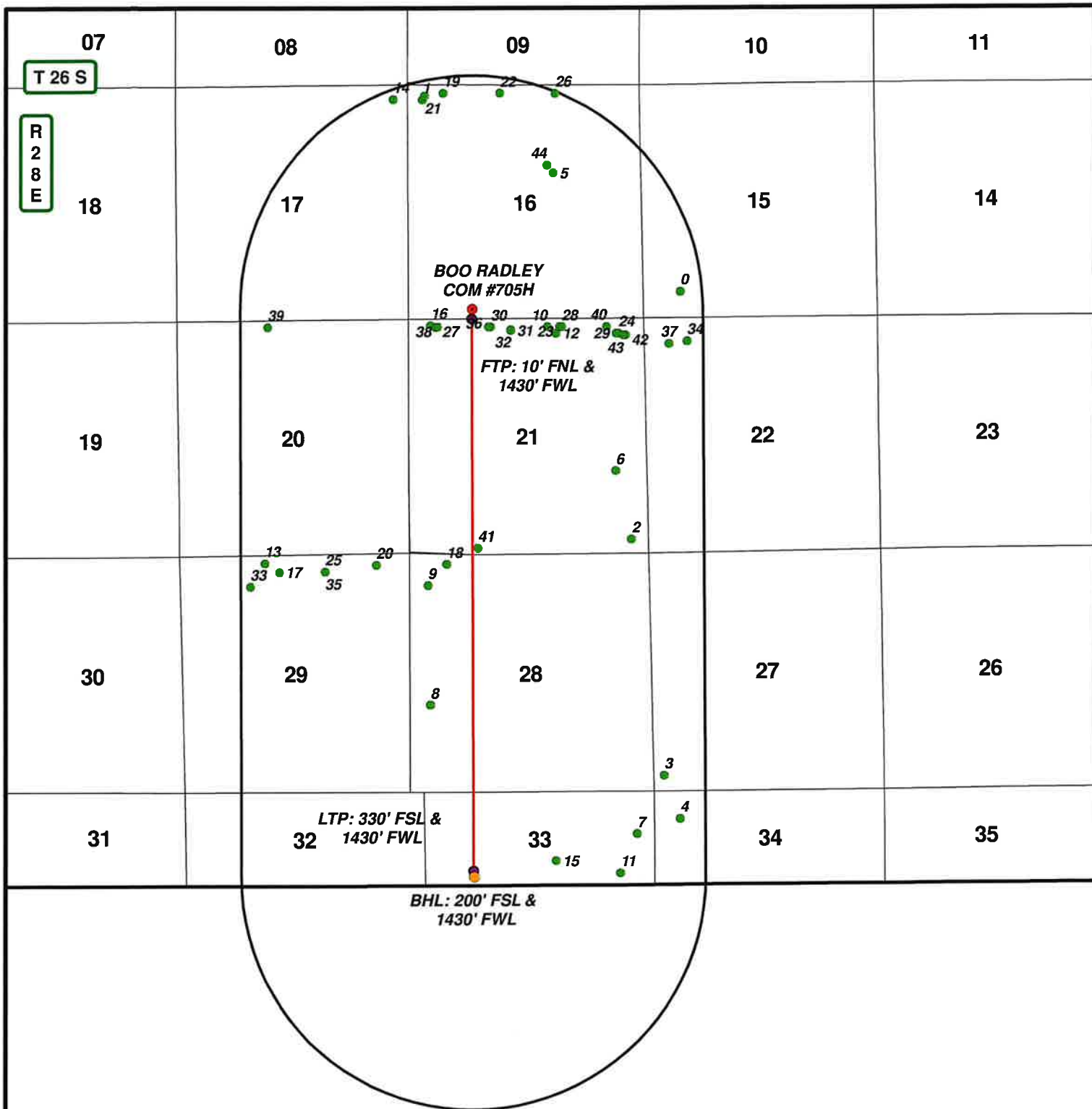
W.N.



COG OPERATING, LLC



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 PH: (575) 746-2158  
[c.harcrow@harcrowsurveying.com](mailto:c.harcrow@harcrowsurveying.com)



DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

## LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER
- DRILL PATH

## BOO RADLEY COM #705H

SEC: 16 TWP: 26 S. RGE: 28 E. ELEVATION: 3036.3"

STATE: NEW MEXICO COUNTY: EDDY 220' FSL & 1430' FWL

W.O. # 20-961 LEASE: BOO RADLEY SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.25 0.5 1 Miles

1 IN = 3,000 FT

1 MILE MAP

7/23/2020

W.N.



COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
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PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

## BOO RADLEY COM #705H - 1 MILE DATA (20-961)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	STATE OF NM "B" 001	SUN OIL CO	3001502527	15 26.05	28E	600 S	28E	600 S	860 W	330 W	32.036889	-104.080989	Plugged
1	STATE OF NM 006	VANDERLAAN T	3001502528	16 26.05	28E	340 N	28E	340 N	330 W	330 W	32.04886	-104.09997	Plugged
2	HUMBLE STATE 001	GLENN BENNETT	3001502530	21 26.05	28E	330 S	28E	330 S	330 E	330 E	32.021524	-104.084662	Plugged
3	SUN ST 27 001	CHAPMAN FORD	3001502534	27 26.05	28E	330 S	28E	330 S	330 W	330 W	32.006824	-104.082376	Plugged
4	STATE 34 001	CHAPMAN FORD	3001502536	34 26.05	28E	660 N	28E	660 N	660 W	660 W	32.004115	-104.081203	Plugged
5	STATE LG 1175 001	JAKE L HAMON	3001521398	16 26.05	28E	1980 N	28E	1980 N	1980 E	1980 E	32.044302	-104.090314	Plugged
6	GETTY STATE 001	RAY H HASKINS	3001524474	21 26.05	28E	1880 S	28E	1880 S	660 E	660 E	32.025777	-104.085782	Plugged
7	POGO ST 001	SLEDGE OIL & GAS INC	3001523607	33 26.05	28E	990 N	28E	990 N	330 E	330 E	32.011235	-104.099544	Unknown
8	ALL STATE COM 002H	MARBOB ENERGY CORP	3001537499	28 26.05	28E	1980 S	28E	1980 S	330 W	330 W	32.018698	-104.099698	Unknown
9	ALL STATE COM 001H	MARBOB ENERGY CORP	3001537498	28 26.05	28E	660 N	28E	660 N	2180 E	2180 E	32.034723	-104.090816	Unknown
10	SKEEN 21 B2BO STATE COM 001H	MEWBOURNE OIL CO	3001543247	21 26.05	28E	185 N	28E	185 N	760 E	760 E	32.000751	-104.085613	Unknown
11	GRAHAM NASH STATE COM 005H	COG OPERATING LLC	3001542453	33 26.05	28E	280 S	28E	280 S	1980 E	1980 E	32.034324	-104.090162	Unknown
12	GRAHAM NASH STATE COM 002H	MEWBOURNE OIL CO	3001539773	21 26.05	28E	330 N	28E	330 N	1980 W	1980 W	32.020094	-104.111677	Unknown
13	HONEY GRAHAM STATE COM 002H	COG OPERATING LLC	3001541234	29 26.05	28E	130 N	28E	130 N	330 E	330 E	32.048888	-104.102111	Unknown
14	SRO STATE UNIT 018H	COG OPERATING LLC	3001539999	17 26.05	28E	560 S	28E	560 S	2200 E	2200 E	32.001511	-104.090348	Unknown
15	GRAHAM NASH STATE COM 006H	COG OPERATING LLC	3001542464	33 26.05	28E	150 N	28E	150 N	500 W	500 W	32.034828	-104.099418	Unknown
16	SKEEN 21 DM STATE 001	MEWBOURNE OIL CO	3001540863	21 26.05	28E	330 N	28E	330 N	2310 W	2310 W	32.019549	-104.110608	Unknown
17	HONEYGRAHAM STATE 006H	COG OPERATING LLC	3001538488	29 26.05	28E	190 N	28E	190 N	760 W	760 W	32.019999	-104.09833	Unknown
18	GRAHAM NASH STATE COM 008H	COG OPERATING LLC	3001542203	28 26.05	28E	190 N	28E	190 N	800 W	800 W	32.049264	-104.098446	Unknown
19	GRAHAM CRACKER 16 STATE 001H	COG OPERATING LLC	3001541935	16 26.05	28E	190 N	28E	190 N	820 E	820 E	32.019969	-104.103453	Unknown
20	HONEY GRAHAM STATE COM 005H	COG OPERATING LLC	3001541608	29 26.05	28E	250 N	28E	250 N	380 W	380 W	32.049107	-104.099808	Unknown
21	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001543005	16 26.05	28E	190 N	28E	190 N	2080 W	2080 W	32.049243	-104.094295	Unknown
22	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001541533	16 26.05	28E	185 N	28E	185 N	1900 E	1900 E	32.034722	-104.089908	Unknown
23	SKEEN 21 D3BO STATE COM 003H	MEWBOURNE OIL CO	3001542811	21 26.05	28E	330 N	28E	330 N	560 E	560 E	32.03432	-104.085558	Unknown
24	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001542810	21 26.05	28E	330 N	28E	330 N	1980 E	1980 E	32.019566	-104.107206	Unknown
25	HONEY GRAHAM 29 STATE 003H	COG OPERATING LLC	3001538274	16 26.05	28E	190 N	28E	190 N	1910 E	1910 E	32.049222	-104.090163	Unknown
26	GRAHAM CRACKER 16 STATE 003H	COG OPERATING LLC	3001541633	16 26.05	28E	185 N	28E	185 N	610 W	610 W	32.034731	-104.09906	Unknown
27	SKEEN 21 B3DM STATE COM 002H	MEWBOURNE OIL CO	3001542855	21 26.05	28E	185 N	28E	185 N	1850 E	1850 E	32.034722	-104.089746	Unknown
28	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542853	21 26.05	28E	330 N	28E	330 N	610 E	610 E	32.03432	-104.08572	Unknown
29	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542856	21 26.05	28E	185 N	28E	185 N	1850 W	1850 W	32.034727	-104.095039	Unknown
30	SKEEN 21 B3CN STATE COM 001H	MEWBOURNE OIL CO	3001542834	21 26.05	28E	266 N	28E	266 N	2310 W	2310 W	32.034503	-104.093543	Unknown
31	SKEEN 21 B2CN STATE 001H	MEWBOURNE OIL CO	3001542934	21 26.05	28E	250 N	28E	250 N	1650 W	1650 W	32.034547	-104.093544	Unknown
32	SKEEN 21 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537802	21 26.05	28E	660 N	28E	660 N	990 W	990 W	32.018631	-104.11275	Unknown
33	HONEYGRAHAM STATE 007H	COG OPERATING LLC	3001538595	29 26.05	28E	520 N	28E	520 N	1800 W	1800 W	32.033812	-104.080526	Unknown
34	DIAMONDBACK 22 STATE COM 006H	COG PRODUCTION, LLC	3001543195	22 26.05	28E	330 N	28E	330 N	1980 E	1980 E	32.019566	-104.107206	Unknown
35	HONEY GRAHAM STATE COM 004H	COG OPERATING LLC	3001541379	29 26.05	28E	185 N	28E	185 N	1800 W	1800 W	32.034727	-104.095201	Unknown
36	SKEEN 21 D3CN STATE COM 002H	MEWBOURNE OIL CO	3001542857	21 26.05	28E	580 N	28E	580 N	580 W	580 W	32.03364	-104.081853	Unknown
37	DIAMONDBACK 22 STATE COM 002H	OGX RESOURCES, LLC	3001539105	22 26.05	28E	185 N	28E	185 N	660 W	660 W	32.034731	-104.098898	Unknown
38	SKEEN 21 D3DM STATE COM 003H	MEWBOURNE OIL CO	3001542812	21 26.05	28E	150 N	28E	150 N	2070 W	2070 W	32.034747	-104.111429	Unknown
39	COTTONWOOD NORTH 20 STATE 002H	NEARBURG PRODUCING CO	3001543263	20 26.05	28E	185 N	28E	185 N	820 E	820 E	32.034719	-104.086406	Unknown
40	SKEEN 21 B2AP STATE COM 001H	MEWBOURNE OIL CO	3001543246	21 26.05	28E	200 S	28E	200 S	1550 W	1550 W	32.021012	-104.096034	Unknown
41	GRAHAM NASH FEDERAL COM 013H	COG OPERATING LLC	3001543811	21 26.05	28E	330 N	28E	330 N	550 E	550 E	32.034186	-104.085036	Unknown
42	SKEEN 21 W2AP STATE COM 002H	MEWBOURNE OIL CO	3001544553	21 26.05	28E	330 N	28E	330 N	600 E	600 E	32.034186	-104.085198	Unknown
43	SKEEN 21 W2AP STATE COM 001H	MEWBOURNE OIL CO	3001544552	21 26.05	28E	1850 N	28E	1850 N	2185 E	2185 E	32.044761	-104.090784	New (Not drilled or compl)
44	SALT CEDAR 16 STATE SWD #001 001	COG OPERATING LLC	3001545826	16 26S	28E								

Intent ☐ As Drilled ☐

API #			
Operator Name: COG OPERATING, LLC.		Property Name: BOO RADLEY COM	Well Number 702H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	21	26-S	28-E		10	NORTH	1210	EAST	EDDY
Latitude 32.035161					Longitude -104.087256				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	33	26-S	28-E	4	330	SOUTH	1210	EAST	EDDY
Latitude 32.000889					Longitude -104.087253				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #			
Operator Name:		Property Name:	Well Number

KZ 06/29/2018

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (505) 334-1283 Fax: (505) 748-9720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number 706H
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation 3036.6'

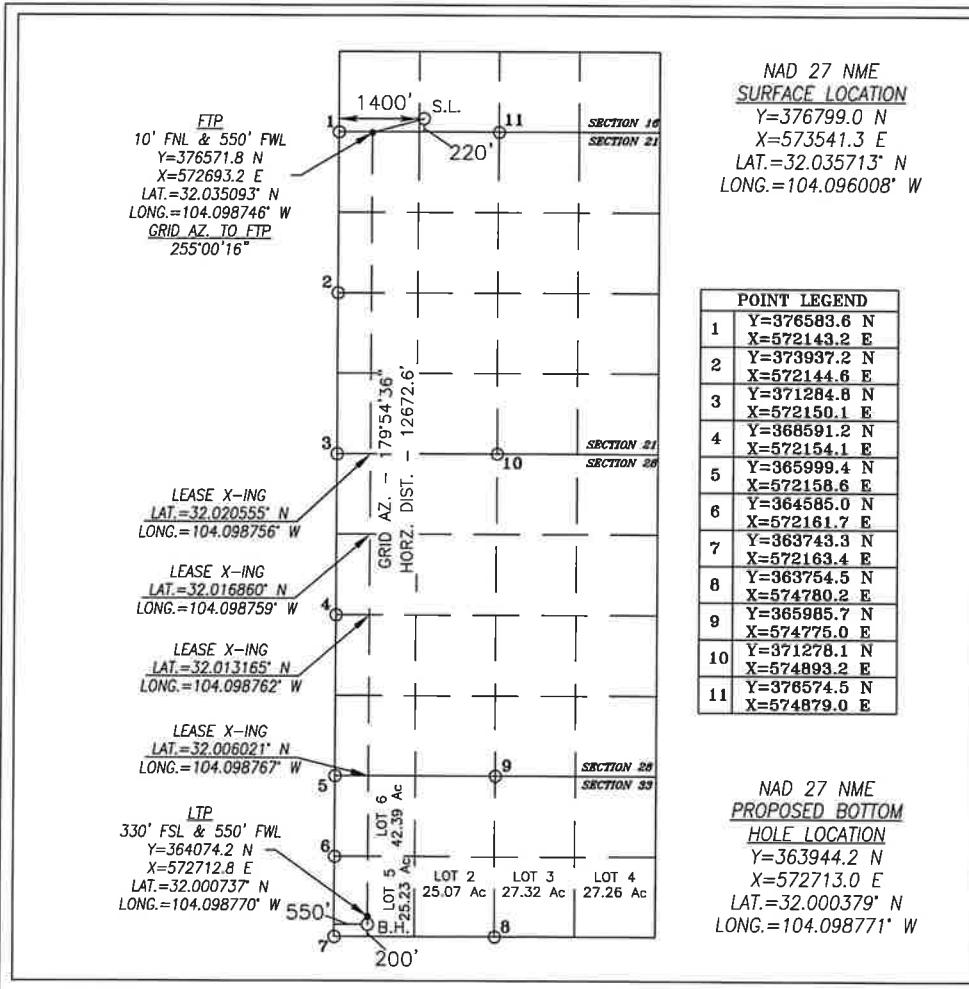
**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	26-S	28-E		220	SOUTH	1400	WEST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
5	33	26-S	28-E		200	SOUTH	550	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

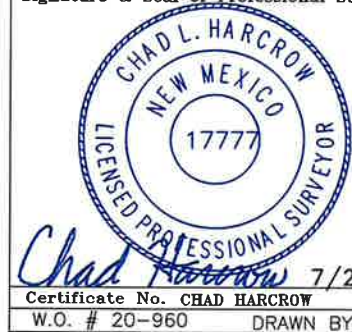
**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 17, 2020

Date of Survey

Signature & Seal of Professional Surveyor



Certificate No. CHAD HARCROW 17777  
W.O. # 20-960 DRAWN BY: AH

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-8101 Fax: (575) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
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State of New Mexico  
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Submit one copy to appropriate  
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☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
Property Code	Property Name <b>BOO RADLEY COM</b>	Well Number 706H
OGRID No.	Operator Name <b>COG OPERATING, LLC</b>	Elevation 3036.6'

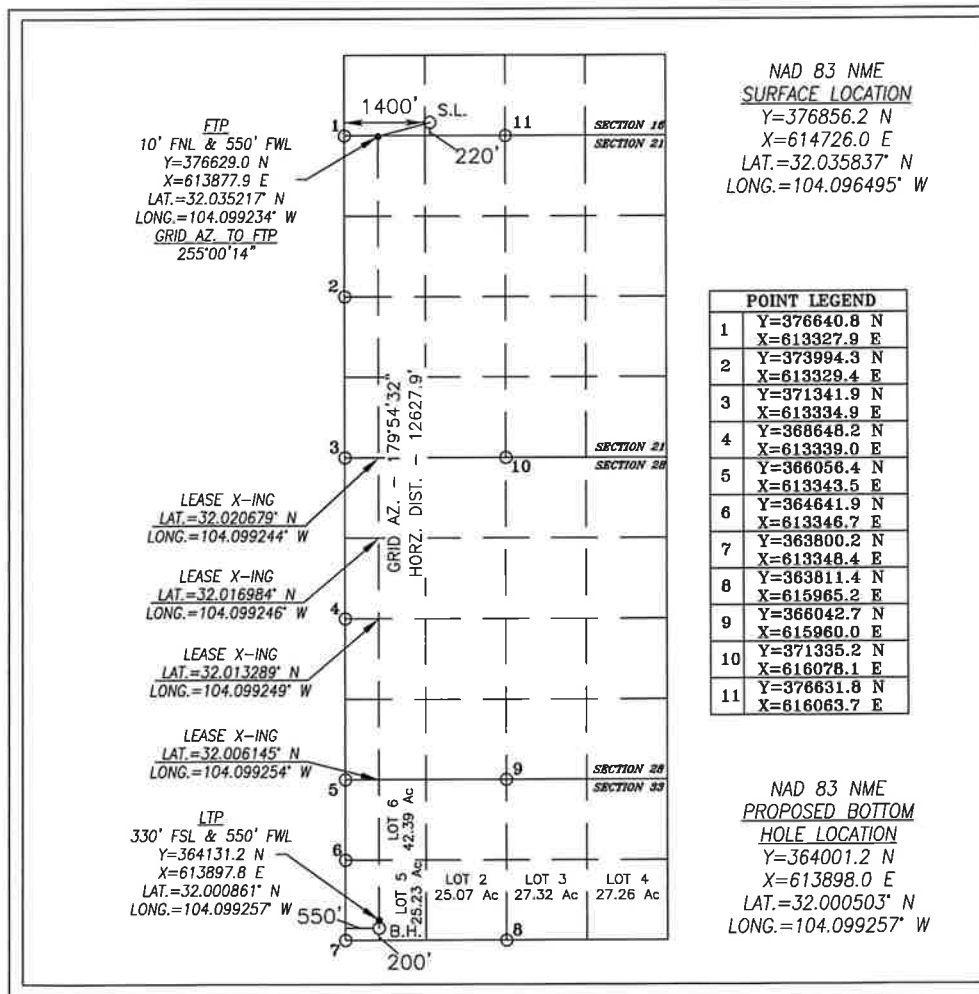
**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	26-S	28-E		220	SOUTH	1400	WEST	EDDY

**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
5	33	26-S	28-E		200	SOUTH	550	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



NAD 83 NME  
SURFACE LOCATION  
Y=376856.2 N  
X=614726.0 E  
LAT.=32.035837° N  
LONG.=104.096495° W

POINT LEGEND	
1	Y=376640.8 N X=613327.9 E
2	Y=373994.3 N X=613329.4 E
3	Y=371341.9 N X=613334.9 E
4	Y=368648.2 N X=613339.0 E
5	Y=366056.4 N X=613343.5 E
6	Y=364641.9 N X=613346.7 E
7	Y=363800.2 N X=613348.4 E
8	Y=363811.4 N X=615965.2 E
9	Y=366042.7 N X=615960.0 E
10	Y=371335.2 N X=616078.1 E
11	Y=376631.8 N X=616063.7 E

NAD 83 NME  
PROPOSED BOTTOM  
HOLE LOCATION  
Y=364001.2 N  
X=613898.0 E  
LAT.=32.000503° N  
LONG.=104.099257° W

**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

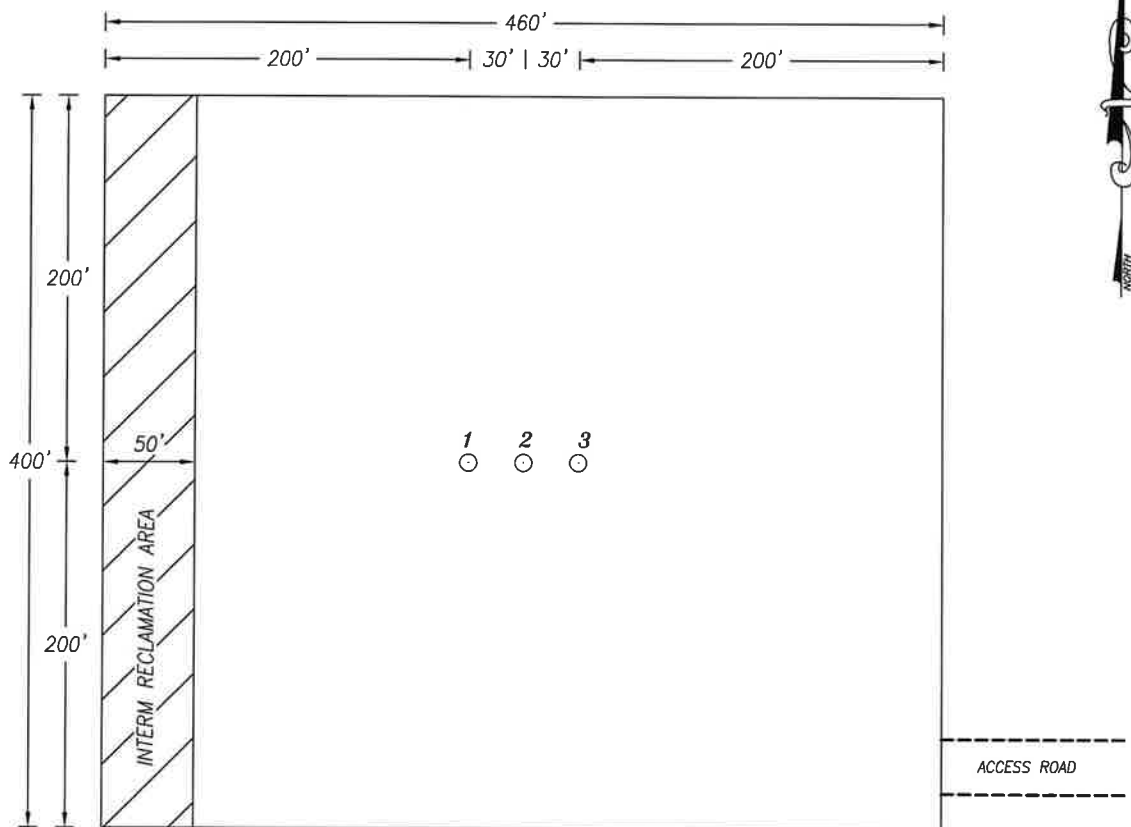
JULY 17, 2020

Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW  
NEW MEXICO  
17777  
LICENSED PROFESSIONAL SURVEYOR  
Chad Harcrow 7/28/20  
Certificate No. CHAD HARCROW 17777  
W.O. # 20-960 DRAWN BY: AH

RECLAMATION AND FACILITY DIAGRAM – PRODUCTION FACILITIES DIAGRAM  
 COG OPERATING, LLC  
 SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.



NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.
1	B00 RADLEY COM #706H	220' FSL & 1400' FWL	32.035837° N	104.096495° W	3036.6'
2	B00 RADLEY COM #705H	220' FSL & 1430' FWL	32.035836° N	104.096398° W	3036.3'
3	B00 RADLEY COM #704H	220' FSL & 1460' FWL	32.035836° N	104.096302° W	3036.2'

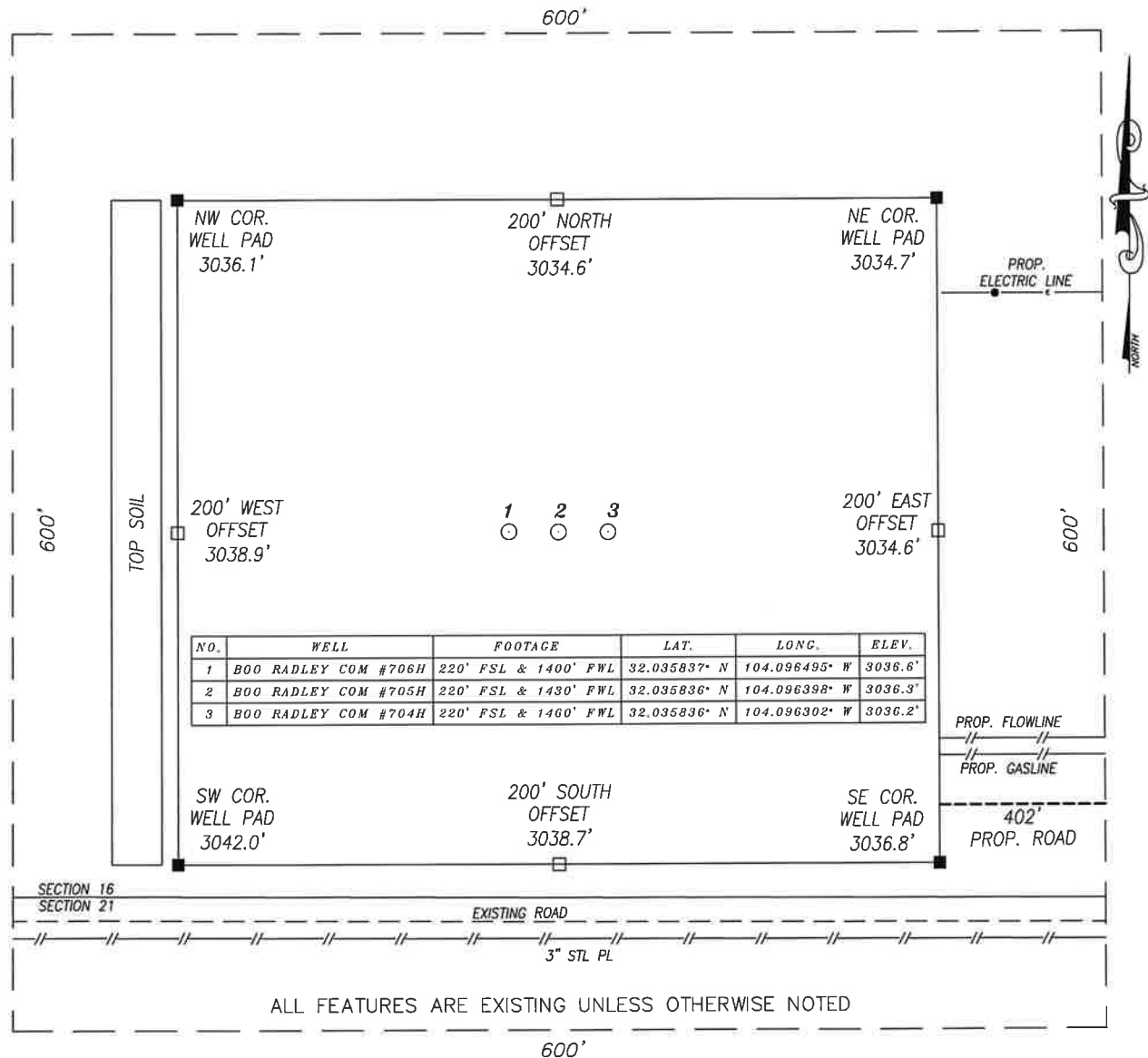
HARCROW SURVEYING, LLC  
 2316 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



100 0 100 200 Feet  
 Scale: 1"=100'

COG OPERATING, LLC			
SURVEY DATE: JULY 17, 2020		RECLAMATION	
DRAFTING DATE: JULY 30, 2020		PAGE: 1 OF 1	
APPROVED BY: CH	DRAWN BY: WN	FILE: 20-960	

SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY) ONTO CALICHE ROAD; THEN GO APPROX. 0.8 MILES AND TURN RIGHT (WEST) ONTO CALICHE RD.; THEN GO APPROX. 0.1 MILES TO THE PROPOSED ROAD; PROPOSED WELLS LIES APPROX. 653 FEET TO THE NORTHWEST.

COORDINATES ARE NAD 83 NME AND ELEVATIONS ARE NAVD 88  
CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY. THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

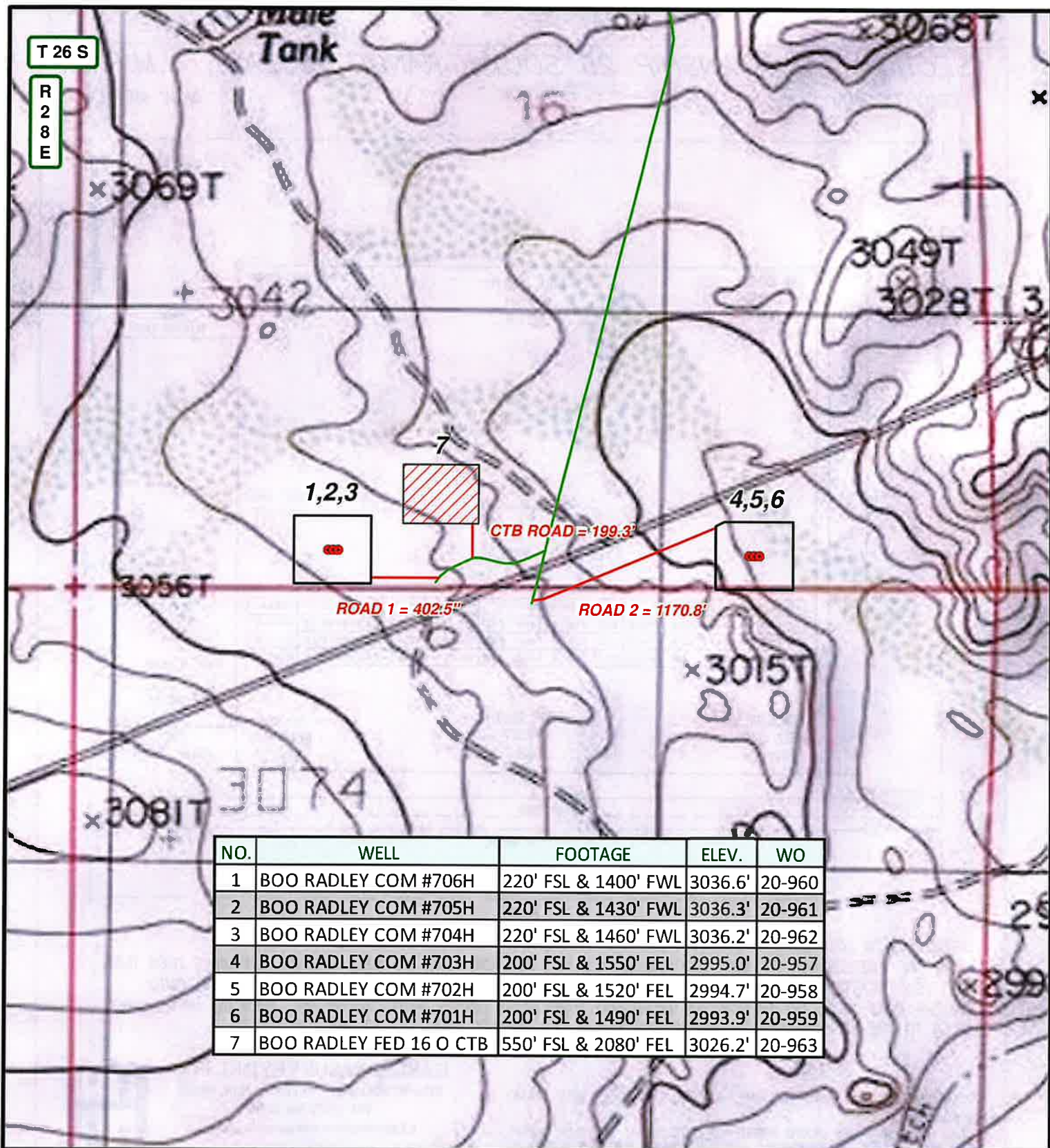
7/27/20  
DATE

HARCROW SURVEYING, LLC  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



100 0 100 200 Feet  
Scale: 1"=100'

COG OPERATING, LLC	
SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 23, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH
FILE: 20-960	



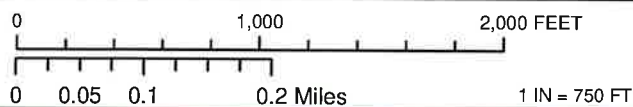
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY



LOCATION MAP

TOPO

7/22/2020

W.N.



COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

17

16

15

1,2,3

7

4,5,6

CTB ROAD = 199.3'

ROAD 1 = 402.5'

ROAD 2 = 1170.8'

20

22

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND



WELL



WELLPAD



EXISTING ROAD



PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16

TOWNSHIP: 26 S.

RANGE: 28 E.

STATE: NEW MEXICO

COUNTY: EDDY

SURVEY: N.M.P.M

W.O. # 20-957

LEASE: BOO RADLEY

0 1,000 2,000 FEET

0 0.05 0.1 0.2 Miles

1 IN = 750 FT

LOCATION MAP

IMAGERY

7/22/2020

W.N.



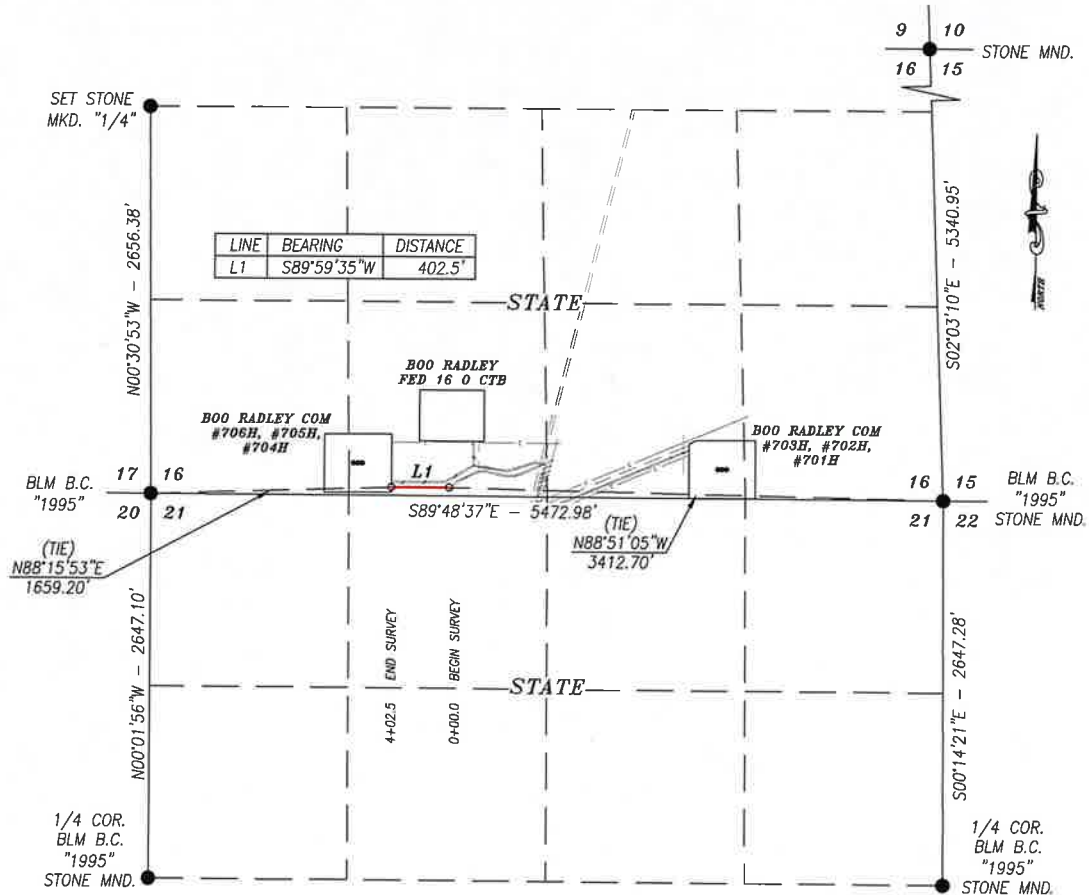
COG OPERATING, LLC



HARCROW SURVEYING, LLC.  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°51'05"W 3412.70 FEET FROM THE SOUTHEAST CORNER; THEN S89°59'35"W 402.5 FEET; TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N88°15'53"E 1659.20 FEET FROM THE SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 402.5 FEET OR 24.39 RODS IN LENGTH, CONTAINING 0.277 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

### HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

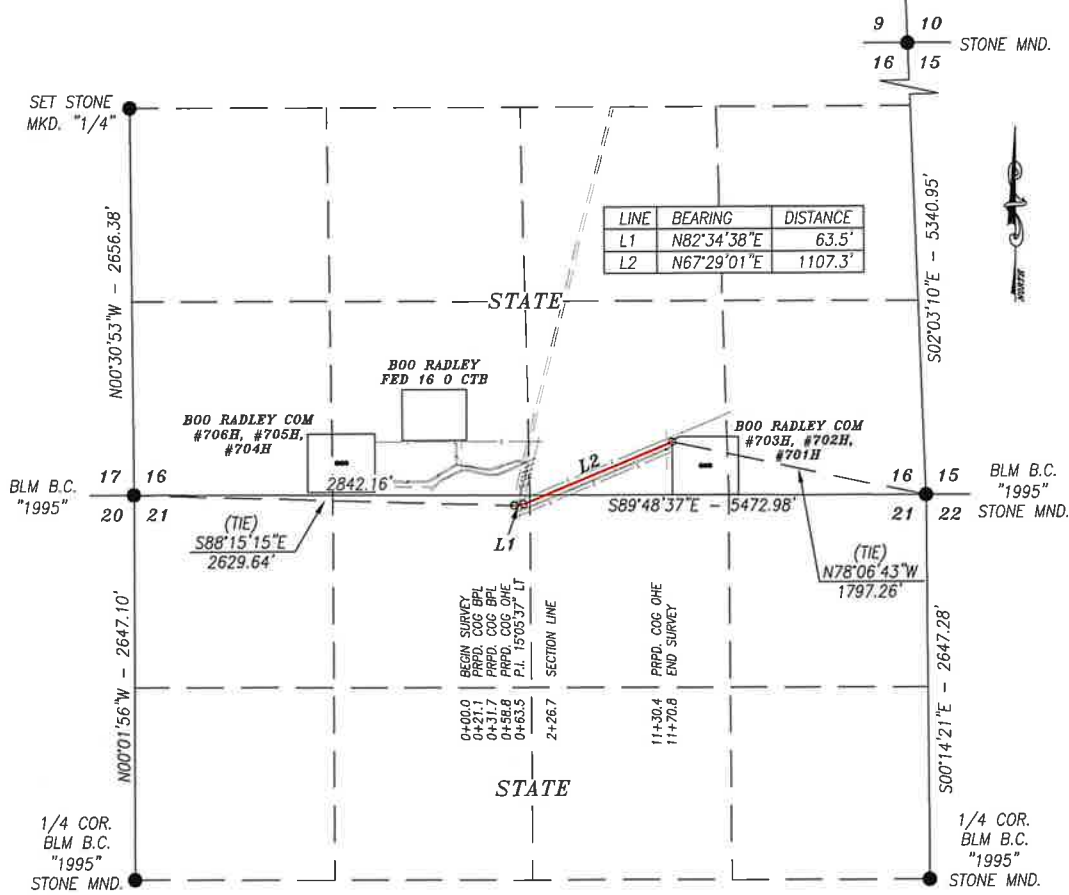
## COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	ROAD #1
DRAFTING DATE: JULY 23, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-995	

# ROAD PLAT COG OPERATING, LLC.

A PROPOSED ROAD FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NE/4 NW/4 OF SECTION 21, WHICH LIES S88°15'15"E 2629.64 FEET FROM THE NORTHWEST CORNER OF SECTION 21; THEN N82°34'38"E 63.5 FEET; THEN N67°29'01"E 1107.3 FEET; TO A POINT IN THE SW/4 SE/4 OF SECTION 16, WHICH LIES N78°06'43"W 1797.26 FEET FROM SOUTHEAST CORNER OF SECTION 16.

SAID STRIP OF LAND BEING 1170.8 FEET OR 70.96 RODS IN LENGTH, CONTAINING 0.806 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

### SECTION 16

SW/4 SE/4 57.22 RODS OR 0.650 ACRES

### SECTION 21

NE/4 NW/4 6.81 RODS OR 0.077 ACRES

NW/4 NE/4 6.93 RODS OR 0.079 ACRES

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

### HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

### COG OPERATING, LLC.

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28  
EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

ROAD #2

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-995

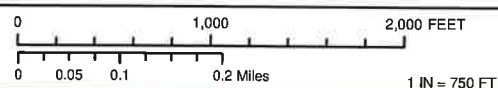


**LEGEND**

- WELL
- WELLPAD
- EXIST. ROAD
- ACCESS ROAD

**BOO RADLEY COM ACCESS ROADS**

SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-995		LEASE: BOO RADLEY



LOCATION MAP

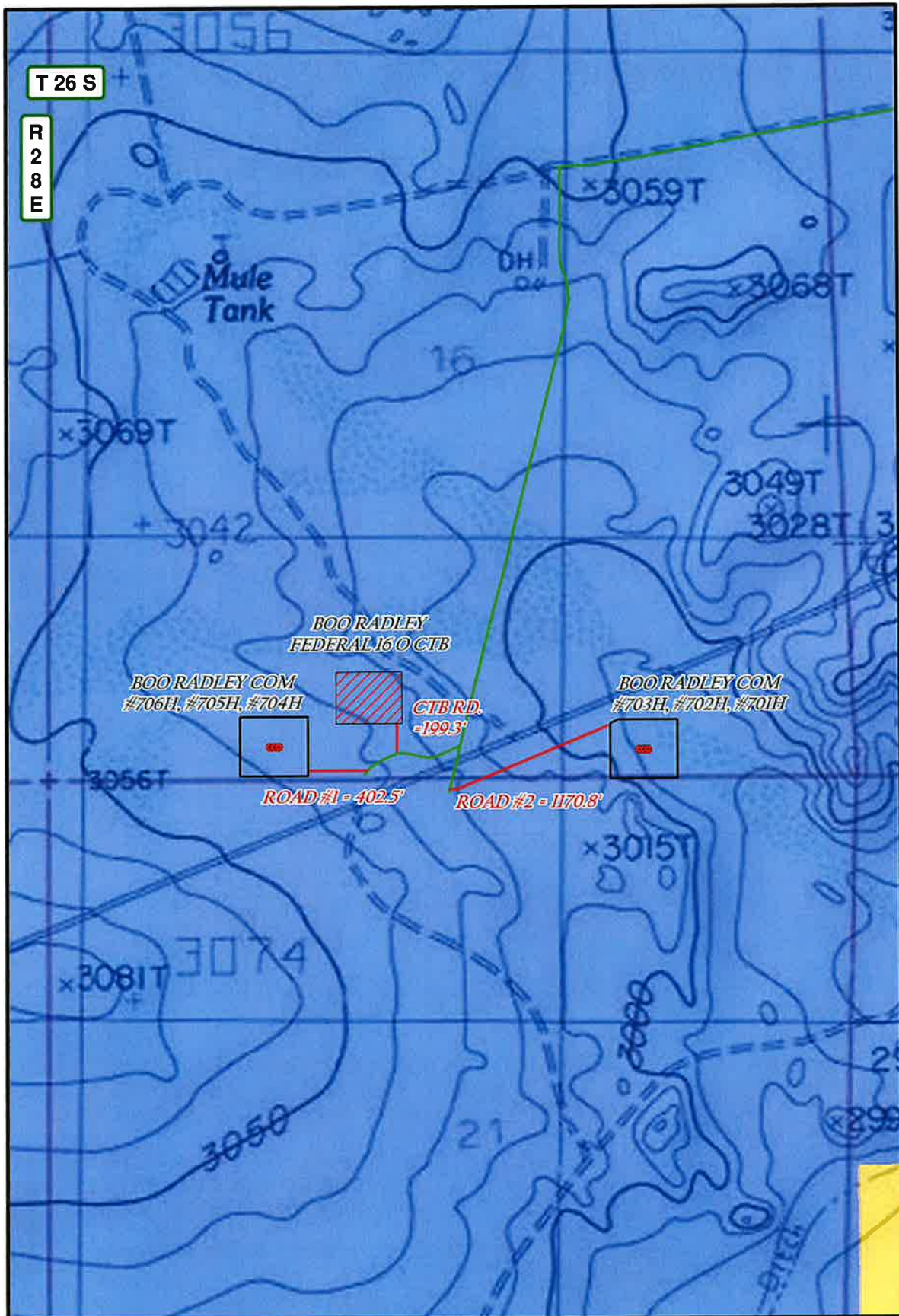
IMAGERY

7/23/2020

W.N.

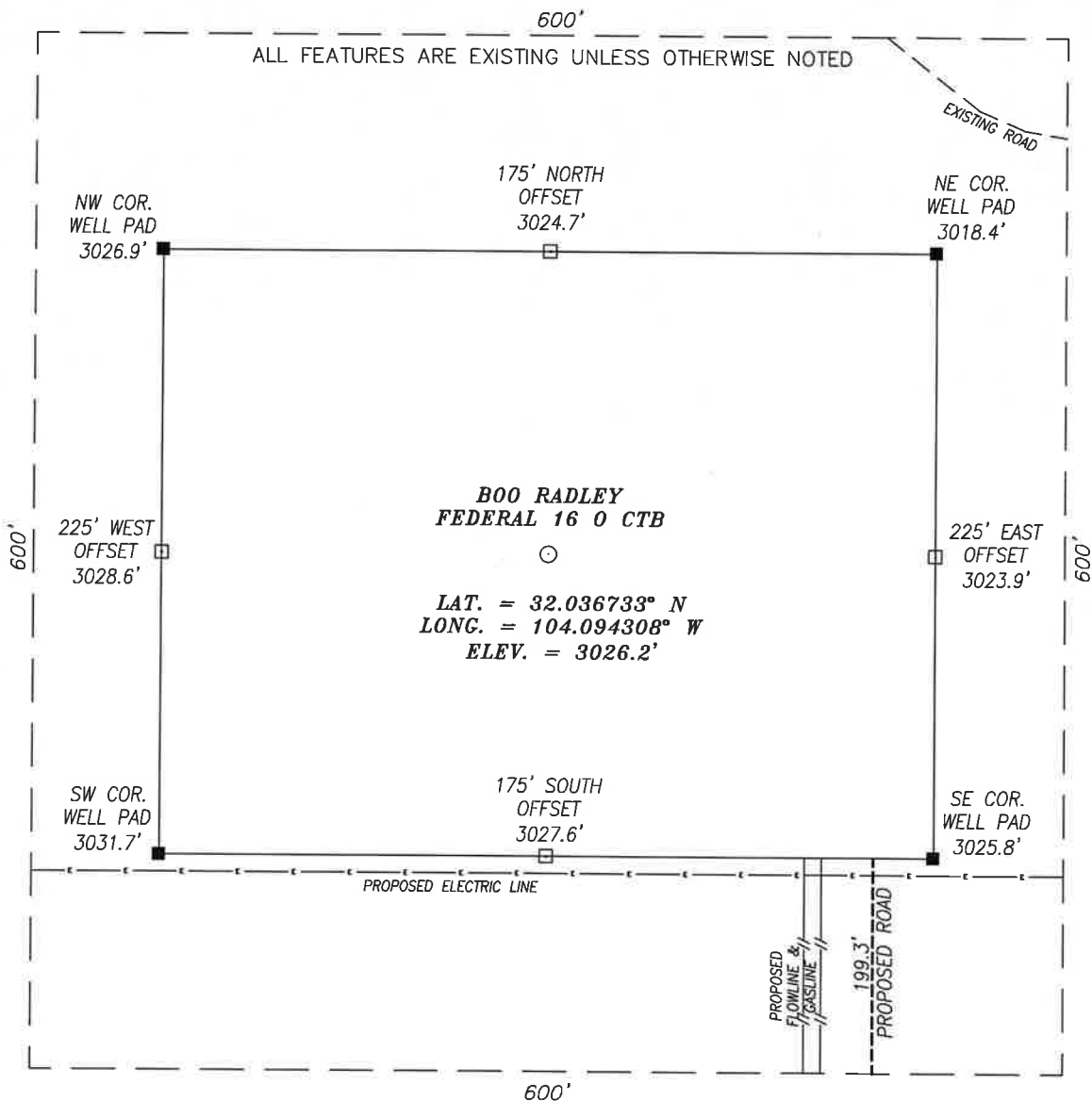
**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



LEGEND		BOO RADLEY COM ACCESS ROADS		CONCHO		
●	WELL	SECTION: 16, 21	TOWNSHIP: 26 S.	RANGE: 28 E.	COG OPERATING, LLC	
□	WELLPAD	STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M		
—	EXIST. ROAD	W.O. # 20-995	LEASE: BOO RADLEY			
—	ACCESS ROAD					 HARCROW SURVEYING, LLC. 2316 W. MAIN ST, ARTESIA, NM 88210 PH: (575) 746-2158 c.harcrow@harcrowsurveying.com
□	PRIVATE	LOCATION MAP				
□	STATE OF NM	LAND STATUS				
□	US BLM	7/23/2020 W.N.				

SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF HWY. 285 AND WHITES CITY RD. (CR. 724), GO WEST APPROX. 0.9 MILES THEN TURN LEFT (SOUTHEASTERLY) ONTO CALICHE RD; THEN GO APPROX. 2.3 MILES AND TURN LEFT (SOUTHERLY); THEN GO APPROX. 0.7 MILES; TURN RIGHT AND GO APPROX. 0.1 MILES TO THE PROPOSED ROAD. PROPOSED PAD LIES APPROX. 420 FEET TO THE NORTHWEST.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

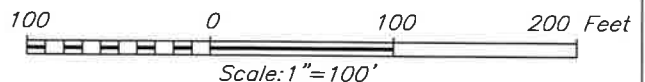
7/27/20  
DATE

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com

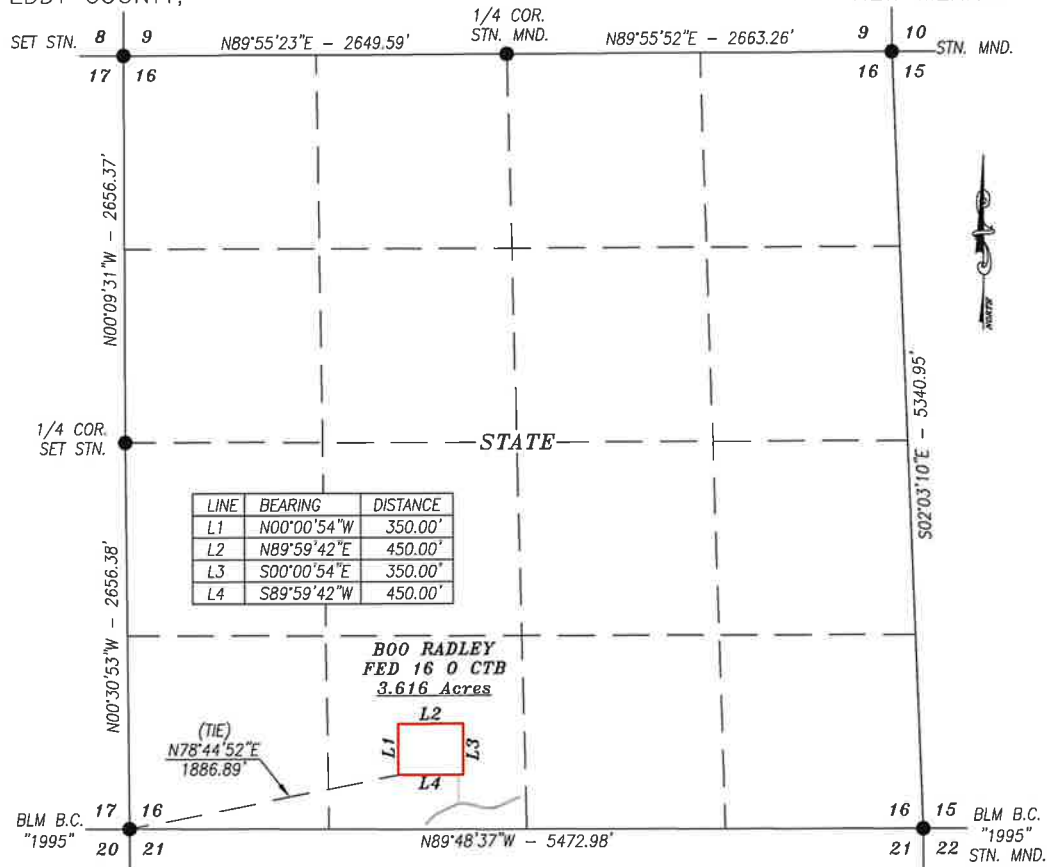


**COG OPERATING, LLC**

SURVEY DATE: JULY 17, 2020	600S
DRAFTING DATE: JULY 22, 2020	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

EXHIBIT A  
**STATE BUSINESS LEASE**  
**COG OPERATING, LLC.**

A STATE BUSINESS LEASE FOR THE "BOO RADLEY FED 16 0 CTB" IN  
**SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A PROPOSED PAD LOCATED WITHIN STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N78°44'52"E 1886.89 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'54"W 350.00 FEET; THEN N89°59'42"E 450.00 FEET; THEN S00°00'54"W 350.00 FEET; THEN S89°59'42"W 450.00 FEET TO THE POINT OF BEGINNING.

SAID PAD CONTAINS 3.616 ACRES AND IS LOCATED ALL IN THE SE/4 SW/4.

**BASIS OF BEARING:**

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.

**CERTIFICATION**

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20  
DATE

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

**COG OPERATING, LLC**

SURVEY OF A PROPOSED PAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

EXHIBIT A

DRAFTING DATE: JULY 22, 2020

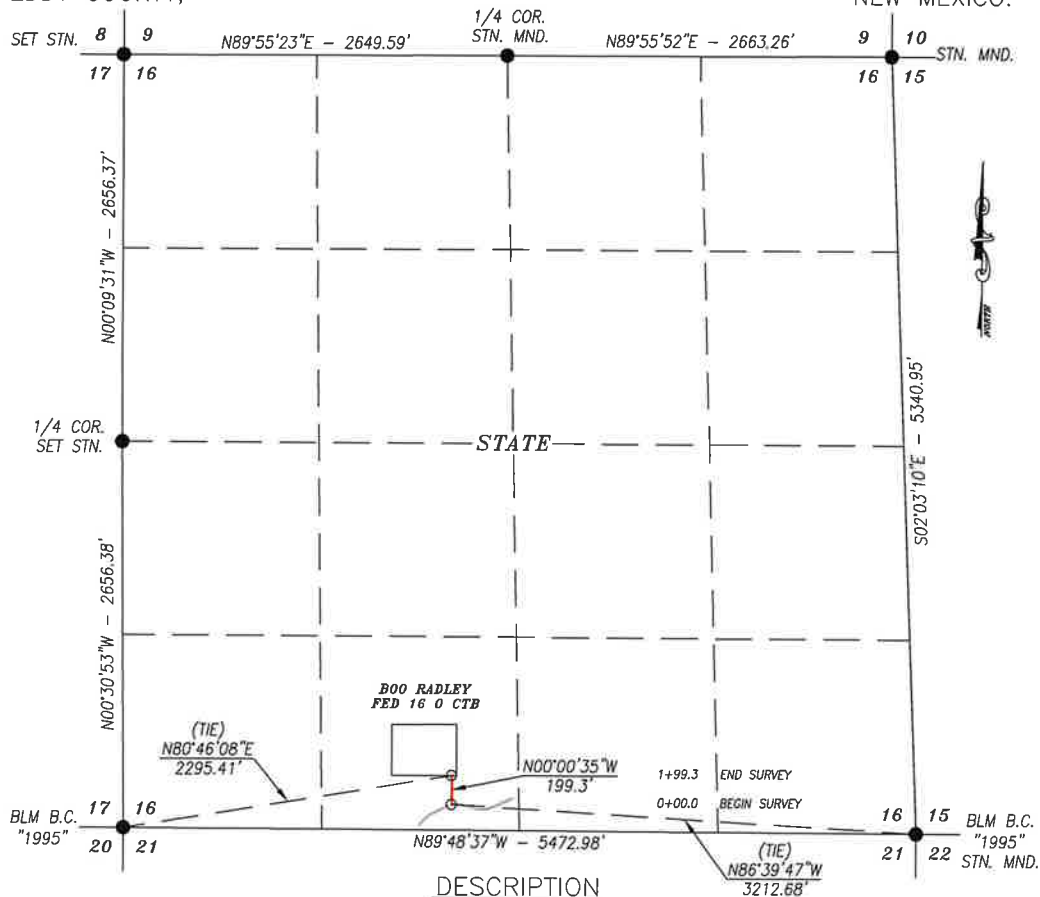
PAGE 1 OF 1

APPROVED BY: CH DRAWN BY: WN

FILE: 20-963

EXHIBIT B  
ACCESS ROAD PLAT  
COG OPERATING, LLC.

AN ACCESS ROAD FOR THE "BOO RADLEY FED 16 O CTB" IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°39'47"W 3212.68 FEET FROM THE SOUTHEAST CORNER; THEN N00°00'35"W 199.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N80°46'08"E 2295.41 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 199.3 FEET OR 12.08 RODS IN LENGTH, CONTAINING 0.137 ACRES MORE OR LESS AND BEING LOCATED ALL IN THE SE/4 SW/4.

BASIS OF BEARING:

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.

**HARCROW SURVEYING, LLC**

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



CERTIFICATION

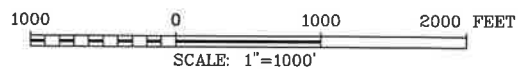
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

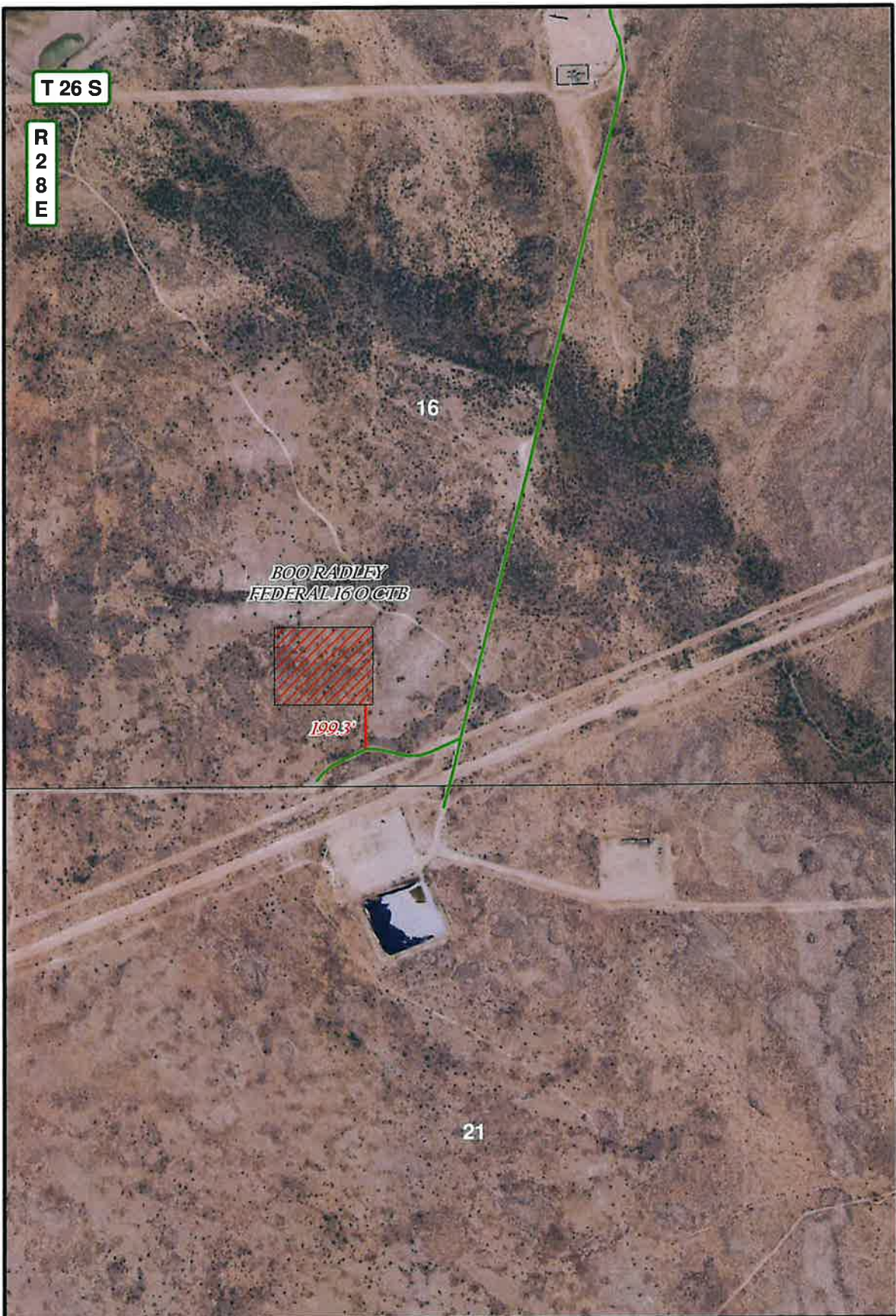
7/27/20  
DATE



**COG OPERATING, LLC**

SURVEY OF A PROPOSED ROAD LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020	EXHIBIT B
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
FILE: 20-963	

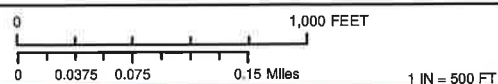


# **LEGEND**

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD

## **BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD**

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-963 LEASE: BOO RADLEY



LOCATION MAP IMAGERY 7/22/2020 W.N.

**CONCHO**  
 COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST. ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

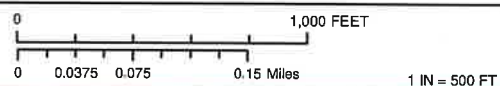


# **LEGEND**

-  CTB PAD
-  EXIST. ROAD
-  ACCESS ROAD
-  PRIVATE
-  STATE OF NM
-  US BLM

## **BOO RADLEY FEDERAL 16 O CTB & ACCESS ROAD**

SECTION: 16	TOWNSHIP: 26 S.	RANGE: 28 E.
STATE: NEW MEXICO	COUNTY: EDDY	SURVEY: N.M.P.M
W.O. # 20-963	LEASE: BOO RADLEY	



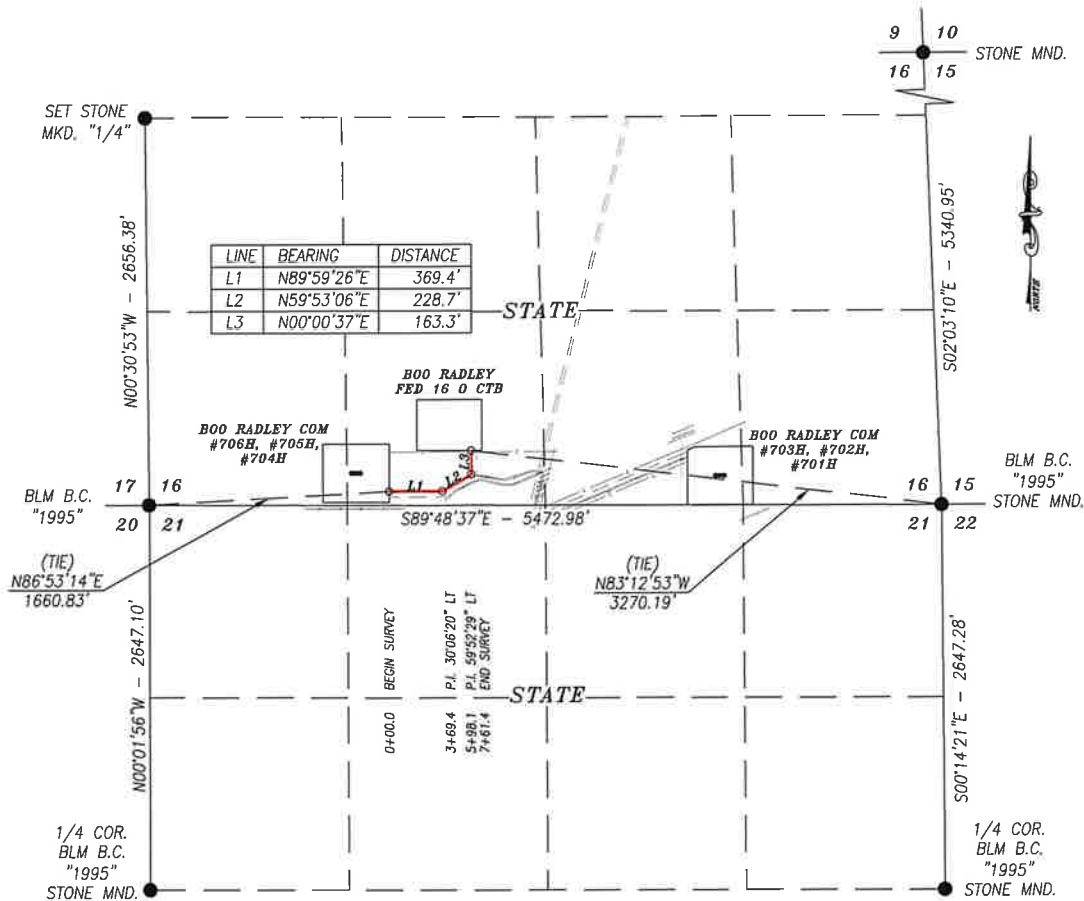
LOCATION MAP	LAND STATUS	7/22/2020	W.N.
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**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N86°53'14"E 1660.83 FEET FROM THE SOUTHWEST CORNER; THEN N89°59'26"E 369.4 FEET; THEN N59°53'06"E 228.7; THEN N00°00'37"E 163.3 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°12'53"W 3270.19 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 761.4 FEET OR 46.15 RODS IN LENGTH, CONTAINING 0.524 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

### BASIS OF BEARING:

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.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

HARCROW SURVEYING, LLC  
2316 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com



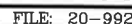
1000 0 1000 2000 FEET  
SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED FLOWLINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020	FLOWLINE #1
DRAFTING DATE: JULY 22, 2020	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: DS
	FILE: 20-992

A PROPOSED FLOWLINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

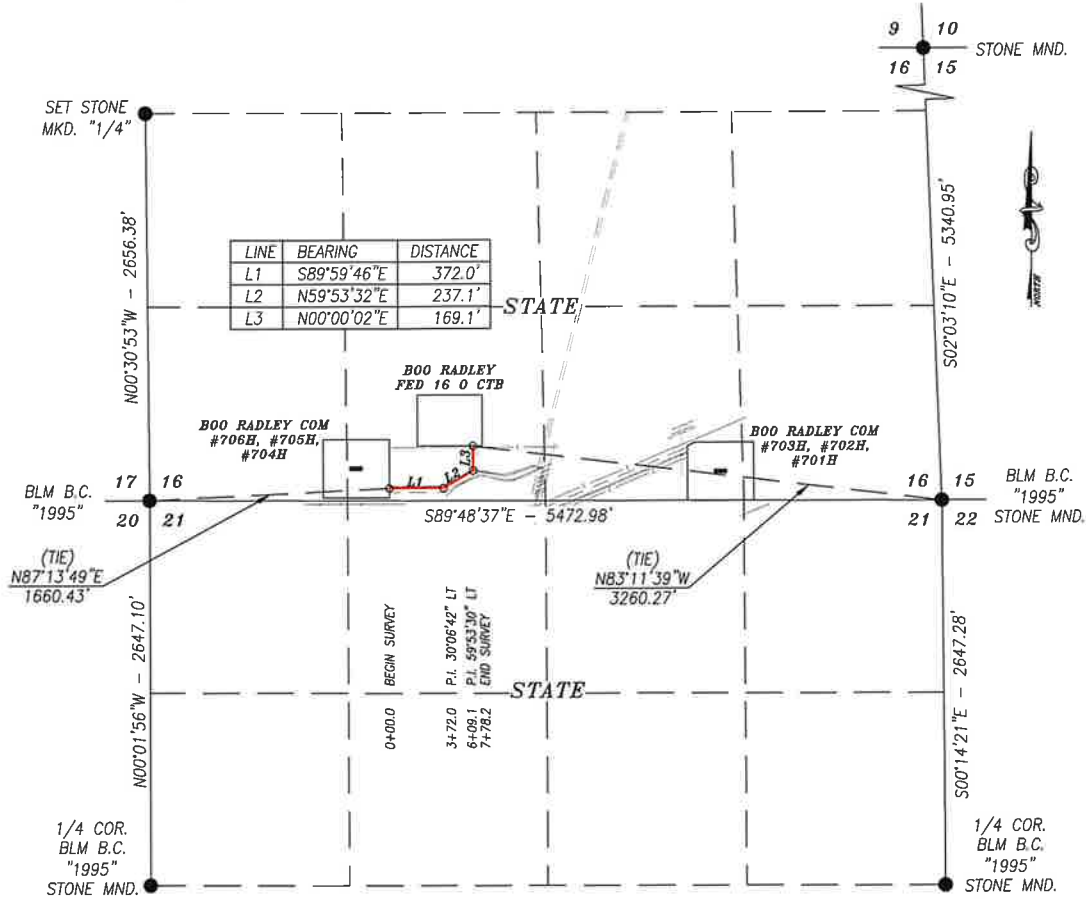


CHAD HARCROW N.M.P.S. NO. 17777

DATE \_\_\_\_\_

# PIPELINE PLAT COG OPERATING, LLC.

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET RIGHT AND 15.0 FEET LEFT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N87°13'49"E 1660.43 FEET FROM THE SOUTHWEST CORNER; THEN S89°59'46"E 372.0 FEET; THEN N59°53'32"E 237.1; THEN N00°00'02"E 169.1 FEET TO A POINT IN THE SE/4 SW/4 OF SAID SECTION, WHICH LIES N83°11'39"W 3260.27 FEET FROM SOUTHEAST CORNER.

SAID STRIP OF LAND BEING 778.2 FEET OR 47.16 RODS IN LENGTH, CONTAINING 0.536 ACRES MORE OR LESS AND BEING ENTIRELY LOCATED IN THE SE/4 SW/4.

## BASIS OF BEARING:

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.

## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

## HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET

SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED GAS LINE LOCATED IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 20, 2020

GAS LINE #1

DRAFTING DATE: JULY 22, 2020

PAGE 1 OF 1

APPROVED BY: CH

DRAWN BY: DS

FILE: 20-993

A PROPOSED GAS LINE FOR THE BOO RADLEY WELLS IN  
SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



APPROVED BY: CH	DRAWN BY: DS	FILE: 20-993
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Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

07/28/20  
DATE

T 26 S

R  
2  
8  
E

16

FLOWLINE #1  
761.4'

1,2,3

7





FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

-  WELL  
 WELLPAD  
 FLOWLINE  
 GAS LINE

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993    LEASE: BOO RADLEY

0    500    1,000 FEET

0    0.03    0.06    0.12 Miles

1 IN = 500 FT

PIPELINE OVERVIEW

IMAGERY

7/23/2020

D.S.

 **CONCHO**  
 COG OPERATING, LLC

 **HARCROW SURVEYING, LLC.**  
 2316 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
EFLOWLINE #1  
761.4'

1,2,3

7

FLOWLINE #2  
1982.6'

4,5,6

GAS LINE #1  
778.2'GAS LINE #2  
1982.5'

NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- FLOWLINE
- GAS LINE
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM FLOWLINES &amp; GAS LINES

SECTIONS: 16 &amp; 21    TOWNSHIP: 26 S.    RANGE: 28 E.

STATE: NEW MEXICO    COUNTY: EDDY    SURVEY: N.M.P.M

W.O. # 20-992, 993

LEASE: BOO RADLEY

0 500 1,000 FEET

0 0.03 0.06 0.12 Miles    1 IN = 500 FT

PIPELINE OVERVIEW

LAND STATUS

7/23/2020

D.S.

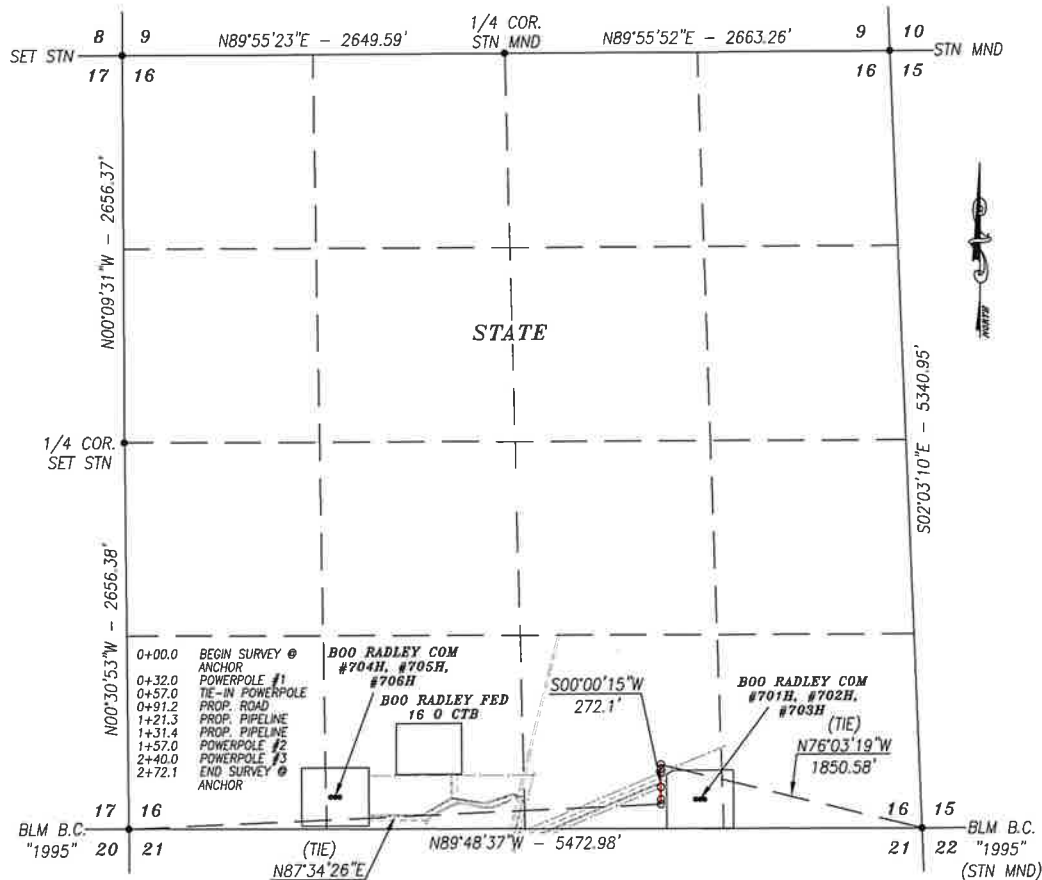
**CONCHO**  
COG OPERATING, LLC

**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

# POWERLINE PLAT: LINE #1

COG OPERATING, LLC.

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY;

BEGINNING AT A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N76°03'19\"W 1850.58 FEET FROM THE SOUTHEAST CORNER; THEN S00°00'15\"W 272.1 FEET, TO A POINT IN THE SW/4 SE/4 OF SAID SECTION, WHICH LIES N87°34'26\"E 3680.19 FEET FROM SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 272.1 FEET OR 16.49 RODS IN LENGTH, CONTAINING 0.187 ACRES MORE OR LESS AND BEING LOCATED ENTIRELY IN THE SW/4 SE/4 OF SAID SECTION.

## BASIS OF BEARING:

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.

## HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com



## CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

7/27/20

DATE



SCALE: 1"=1000'

## COG OPERATING, LLC.

SURVEY OF A PROPOSED POWERLINE LOCATED IN SECTION 16, TOWNSHIP 26 SOUTH, RANGE 28 EAST, NMPM, EDDY COUNTY, NEW MEXICO

SURVEY DATE: JULY 17, 2020

POWERLINE #1

DRAFTING DATE: JULY 23, 2020

PAGE 1 OF 1

APPROVED BY: CH

DRAWN BY: JH

FILE: 20-994

A PROPOSED POWERLINE SERVICING THE BOO RADLEY COM WELLS & BOO RADLEY  
FEDERAL 16 O CENTRAL TANKBATTERY IN  
*SECTIONS 16 & 21, TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,*  
EDDY COUNTY, NEW MEXICO.



FILE: 20-994

7/27/20  
DATE



# LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD

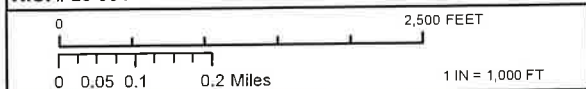
## BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21      TOWNSHIP: 26 S.      RANGE: 28 E.

STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M

W.O. # 20-994

LEASE: BOO RADLEY COM



POWERLINE OVERVIEW

IMAGERY

7/22/2020

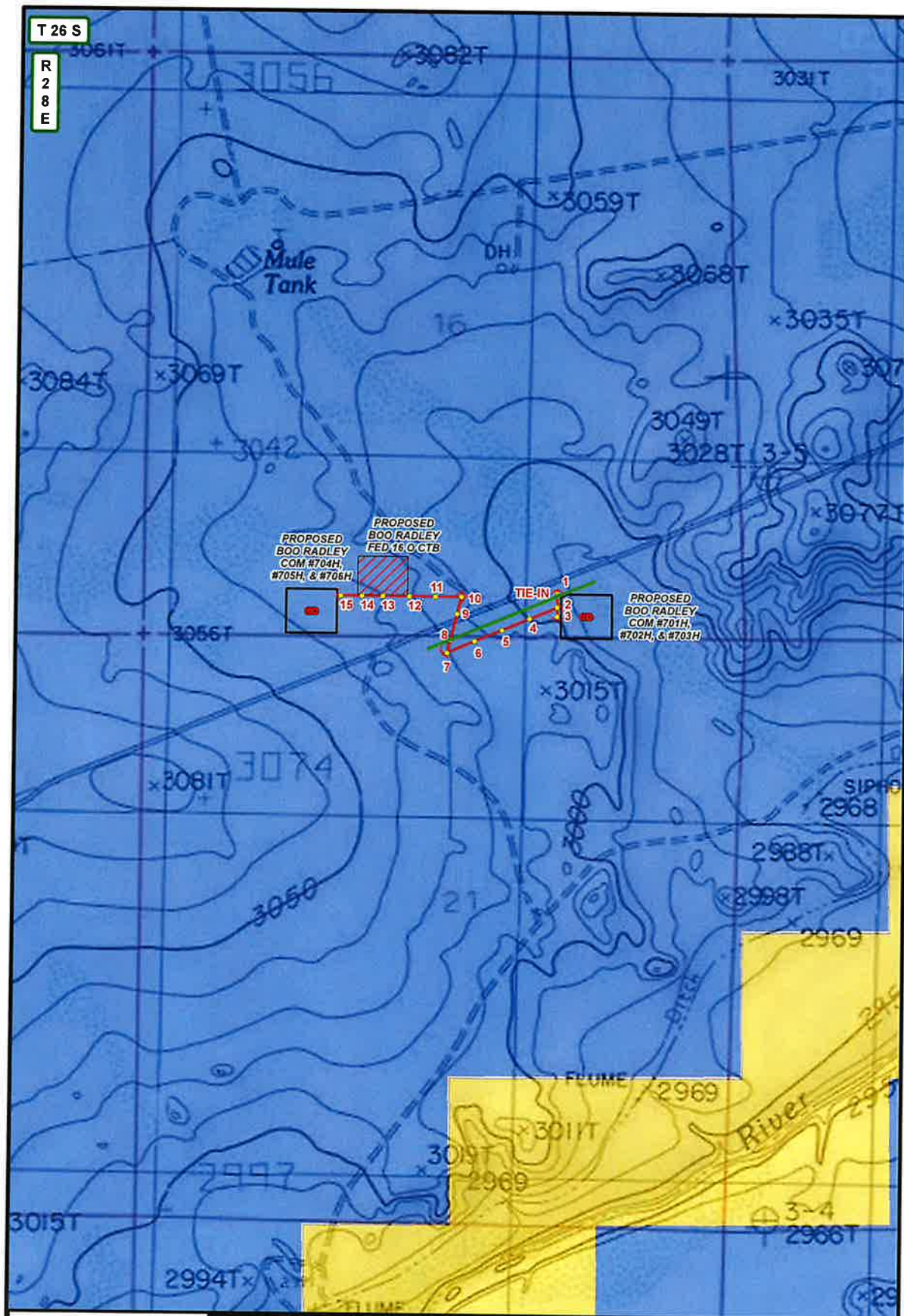
J.H.

**CONCHO**  
COG OPERATING, LLC

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2314 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158 FAX: (575) 746-2158  
c.harcrow@harcrowsurveying.com

T 26 S

R 28 E

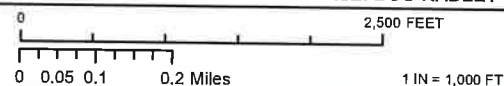


# LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM POWERLINE

SECTIONS: 16 & 21 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-994 LEASE: BOO RADLEY COM



POWERLINE OVERVIEW LAND STATUS 7/22/2020 J.H.

**CONCHO**  
 COG OPERATING, LLC

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 c.harcrow@harcrowsurveying.com

T 26 S

R  
2  
8  
E

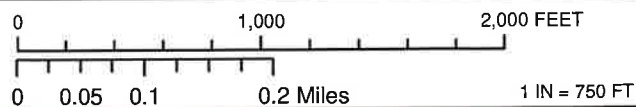
NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
3	BOO RADLEY COM #704H	220' FSL & 1460' FWL	3036.2'	20-962
4	BOO RADLEY COM #703H	200' FSL & 1550' FEL	2995.0'	20-957
5	BOO RADLEY COM #702H	200' FSL & 1520' FEL	2994.7'	20-958
6	BOO RADLEY COM #701H	200' FSL & 1490' FEL	2993.9'	20-959
7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M  
 W.O. # 20-957 LEASE: BOO RADLEY



LOCATION MAP

LAND STATUS

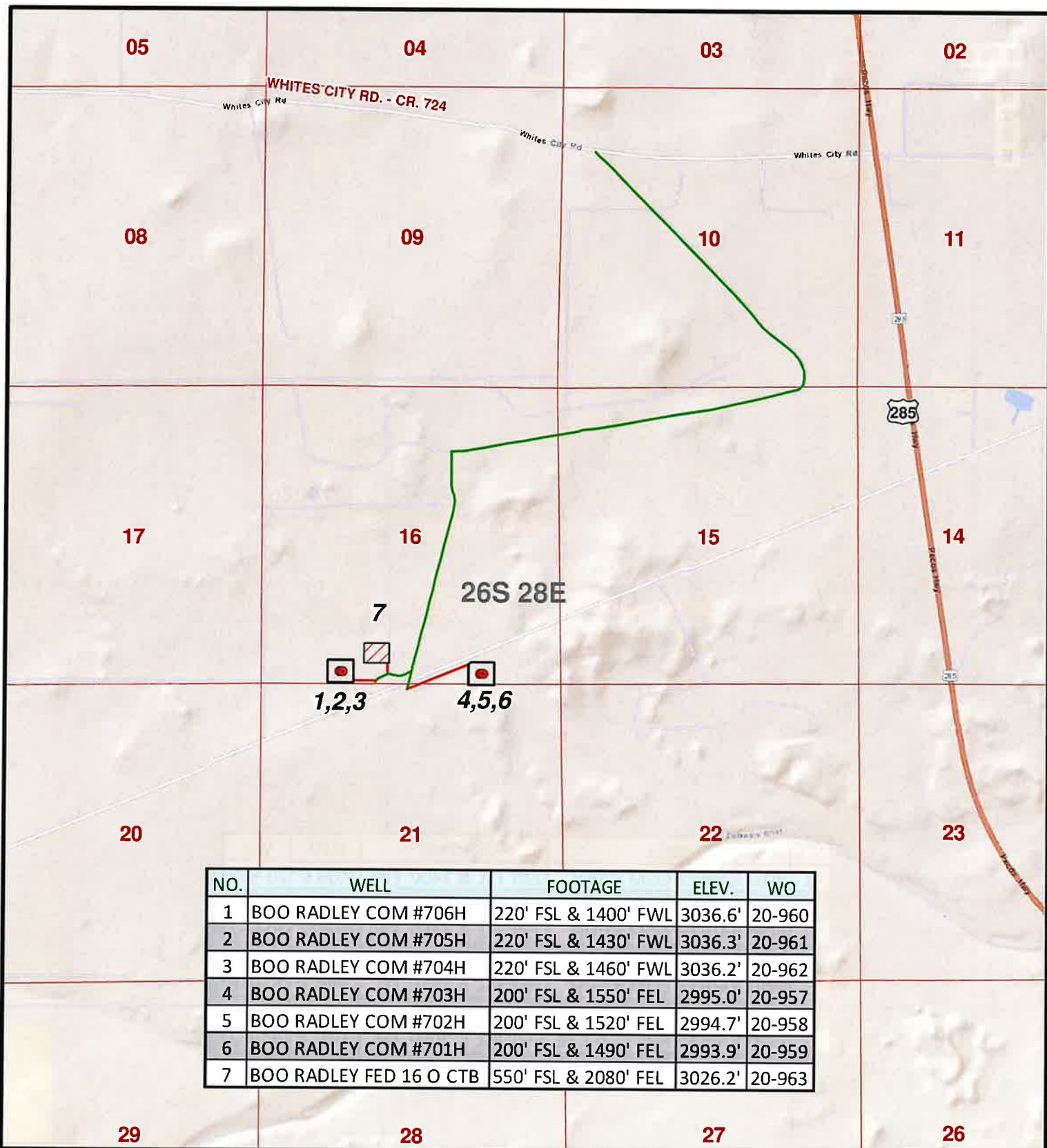
7/22/2020

W.N.

COG OPERATING, LLC



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 2316 W. MAIN ST, ARTESIA, NM 88210  
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 c.harcrow@harcrowsurveying.com



NO.	WELL	FOOTAGE	ELEV.	WO
1	BOO RADLEY COM #706H	220' FSL & 1400' FWL	3036.6'	20-960
2	BOO RADLEY COM #705H	220' FSL & 1430' FWL	3036.3'	20-961
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7	BOO RADLEY FED 16 O CTB	550' FSL & 2080' FEL	3026.2'	20-963

## LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

## BOO RADLEY COM WELLS (OVERALL MAP)

SECTION: 16 TOWNSHIP: 26 S. RANGE: 28 E.  
 STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
 W.O. # 20-957 LEASE: BOO RADLEY

0 1,000 2,000 3,000 4,000 5,000 6,000 FEET

0 0.15 0.3 0.6 Miles

1 IN = 2,250 FT

LOCATION MAP

VICINITY

7/22/2020

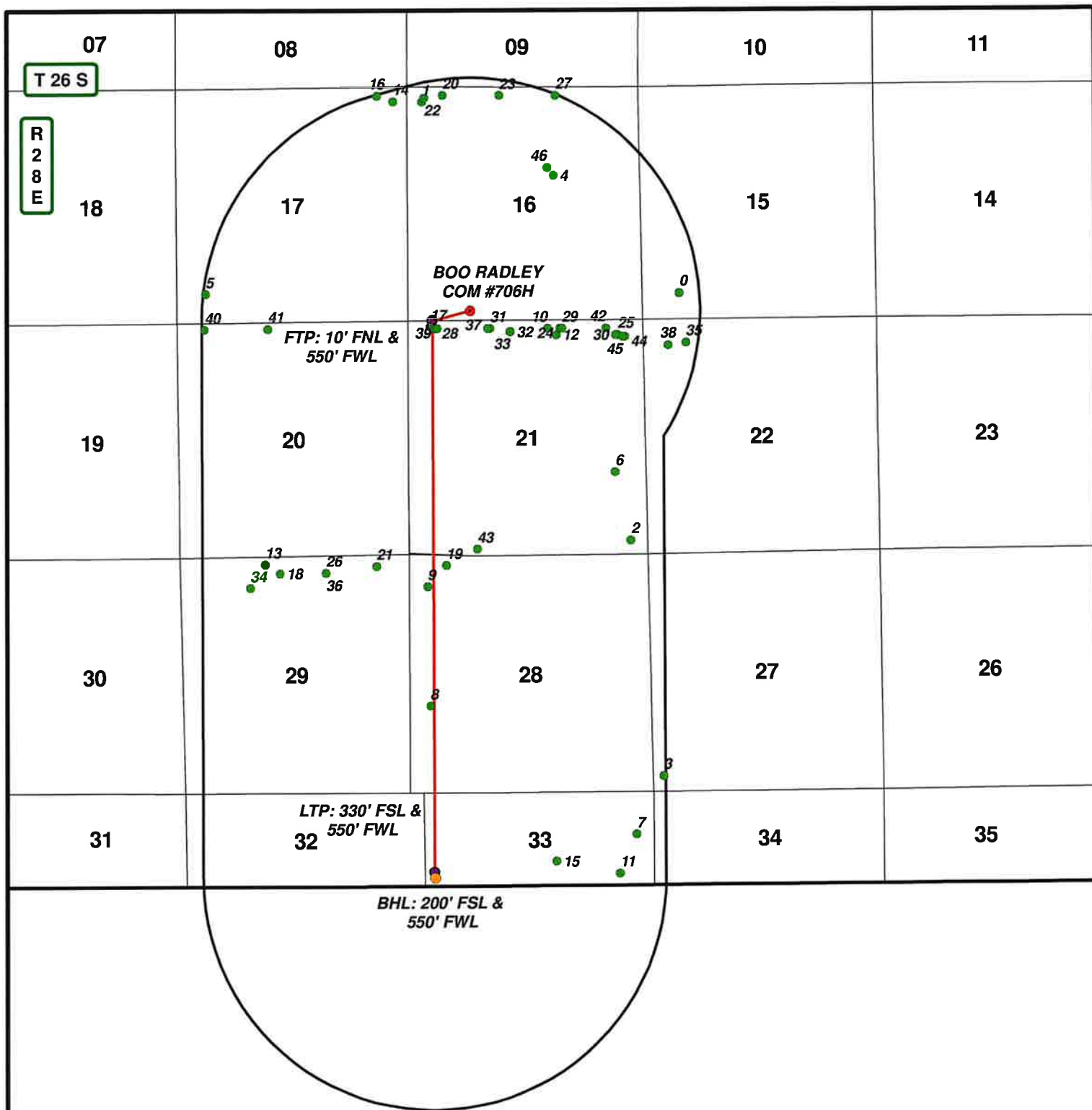
W.N.



COG OPERATING, LLC



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 PH: (575) 746-2158  
[c.harcrow@harcrowsurveying.com](mailto:c.harcrow@harcrowsurveying.com)



DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

### LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER
- DRILL PATH

### BOO RADLEY COM #706H

SEC: 16 TWP: 26 S. RGE: 28 E. ELEVATION: 3036.6"

STATE: NEW MEXICO COUNTY: EDDY 220' FSL & 1400' FWL

W.O. # 20-960 LEASE: BOO RADLEY SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.25 0.5 1 Miles

1 IN = 3,000 FT

1 MILE MAP

7/23/2020

W.N.



COG OPERATING, LLC



**HARCROW SURVEYING, LLC.**  
2316 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 746-2158  
c.harcrow@harcrowsurveying.com

## BOO RADLEY COM #706H - 1 MILE DATA (20-960)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	INS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	STATE OF NM "B" 001	SUN OIL CO	3001502527	15	26.05	28E	600 S		860 W		32.036889	-104.080989	Plugged
1	STATE OF NM 006	VANDERLAAN T	3001502528	16	26.05	28E	340 N		330 W		32.04886	-104.09997	Plugged
2	HUMBLE STATE 001	GLENN BENNETT	3001502530	21	26.05	28E	330 S		330 E		32.021524	-104.084662	Plugged
3	SUN ST 27 001	CHAPMAN FORD	3001502534	27	26.05	28E	330 S		330 W		32.006824	-104.082376	Plugged
4	STATE LG 1175 001	JAKE L HAMON	3001521398	16	26.05	28E	1980 N		1980 E		32.044302	-104.090314	Plugged
5	MANZANA UT 001	RAY H HASKINS	3001524462	17	26.05	28E	660 S		660 W		32.036938	-104.116004	Plugged
6	GETTY STATE 001	RAY H HASKINS	3001524474	21	26.05	28E	1880 S		660 E		32.025777	-104.085782	Plugged
7	POGO ST 001	SLEDGE OIL & GAS INC	3001523607	33	26.05	28E	990 N		330 E		32.003178	-104.084369	Plugged
8	ALL STATE COM 002H	MARBOB ENERGY CORP	3001537499	28	26.05	28E	1980 S		330 W		32.011235	-104.099544	Unknown
9	ALL STATE COM 001H	MARBOB ENERGY CORP	3001537498	28	26.05	28E	660 N		330 W		32.018698	-104.099698	Unknown
10	SKEEN 21 B2BO STATE COM 001H	MEWBOURNE OIL CO	3001543247	21	26.05	28E	185 N		2180 E		32.034723	-104.090816	Unknown
11	GRAHAM NASH STATE COM 005H	COG OPERATING LLC	3001542453	33	26.05	28E	280 S		760 E		32.000751	-104.085613	Unknown
12	SKEEN 21 STATE COM 002H	MEWBOURNE OIL CO	3001539773	21	26.05	28E	330 N		1980 E		32.034324	-104.090162	Unknown
13	HONEY GRAHAM STATE COM 002H	COG OPERATING LLC	3001541234	29	26.05	28E	130 N		1980 W		32.020094	-104.111677	Unknown
14	SRO STATE UNIT 018H	COG OPERATING LLC	3001539999	17	26.05	28E	330 N		330 E		32.048888	-104.102111	Unknown
15	GRAHAM NASH STATE COM 006H	COG OPERATING LLC	3001542464	33	26.05	28E	560 S		2200 E		32.001511	-104.090348	Unknown
16	SRO STATE COM 068H	COG OPERATING LLC	3001543092	17	26.05	28E	200 N		690 E		32.049241	-104.103278	Unknown
17	SKEEN 21 DM STATE 001	MEWBOURNE OIL CO	3001540863	21	26.05	28E	150 N		500 W		32.034828	-104.099418	Unknown
18	HONEYGRAHAM STATE 006H	COG OPERATING LLC	3001538488	29	26.05	28E	330 N		2310 W		32.019549	-104.110608	Unknown
19	GRAHAM NASH STATE COM 008H	COG OPERATING LLC	3001542203	28	26.05	28E	190 N		760 W		32.019999	-104.09833	Unknown
20	GRAHAM CRACKER 16 STATE 001H	COG OPERATING LLC	3001541935	16	26.05	28E	190 N		800 W		32.049264	-104.098446	Unknown
21	HONEY GRAHAM STATE COM 005H	COG OPERATING LLC	3001541608	29	26.05	28E	190 N		820 E		32.019969	-104.103453	Unknown
22	GRAHAM CRACKER 16 STATE 009H	COG OPERATING LLC	3001543005	16	26.05	28E	250 N		380 W		32.049107	-104.099808	Unknown
23	GRAHAM CRACKER 16 STATE 002H	COG OPERATING LLC	3001541533	16	26.05	28E	190 N		2080 W		32.049243	-104.094295	Unknown
24	SKEEN 21 D3BO STATE COM 003H	MEWBOURNE OIL CO	3001542811	21	26.05	28E	185 N		1900 E		32.034722	-104.089908	Unknown
25	SKEEN 21 B3AP STATE COM 001H	MEWBOURNE OIL CO	3001542810	21	26.05	28E	330 N		560 E		32.03432	-104.085558	Unknown
26	HONEY GRAHAM 29 STATE 003H	COG OPERATING LLC	3001538274	29	26.05	28E	330 N		1980 E		32.019566	-104.107206	Unknown
27	GRAHAM CRACKER 16 STATE 003H	COG OPERATING LLC	3001541633	16	26.05	28E	190 N		1910 E		32.049222	-104.090163	Unknown
28	SKEEN 21 B3DM STATE COM 002H	MEWBOURNE OIL CO	3001542855	21	26.05	28E	185 N		610 W		32.034731	-104.09906	Unknown
29	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542853	21	26.05	28E	185 N		1850 E		32.034722	-104.089746	Unknown
30	SKEEN 21 D3AP STATE COM 002H	MEWBOURNE OIL CO	3001542856	21	26.05	28E	330 N		610 E		32.03432	-104.08572	Unknown
31	SKEEN 21 B3CN STATE COM 001H	MEWBOURNE OIL CO	3001542854	21	26.05	28E	185 N		1850 W		32.034727	-104.095039	Unknown
32	SKEEN 21 B2CN STATE 001H	MEWBOURNE OIL CO	3001542934	21	26.05	28E	266 N		2310 W		32.034503	-104.093543	Unknown
33	SKEEN 21 STATE 001H	CHESAPEAKE OPERATING, INC.	3001537802	21	26.05	28E	250 N		2310 W		32.034547	-104.093544	Unknown
34	HONEYGRAHAM STATE 007H	COG OPERATING LLC	3001538595	29	26.05	28E	660 N		1650 W		32.018631	-104.11275	Unknown
35	DIAMONDBACK 22 STATE COM 006H	COG PRODUCTION, LLC	3001543195	22	26.05	28E	520 N		990 W		32.033812	-104.080526	Unknown
36	HONEY GRAHAM STATE COM 004H	COG OPERATING LLC	3001541379	29	26.05	28E	330 N		1980 E		32.019566	-104.107206	Unknown
37	SKEEN 21 D3CN STATE COM 002H	MEWBOURNE OIL CO	3001542857	21	26.05	28E	185 N		1800 W		32.034727	-104.095201	Unknown
38	DIAMONDBACK 22 STATE COM 002H	OGX RESOURCES, LLC	3001539105	22	26.05	28E	580 N		580 W		32.03364	-104.081853	Unknown
39	SKEEN 21 D3DM STATE COM 003H	MEWBOURNE OIL CO	3001542812	21	26.05	28E	185 N		660 W		32.034731	-104.098898	Unknown
40	COTTONWOOD NORTH 20 STATE 001H	NEARBURG PRODUCING CO	3001543266	20	26.05	28E	150 N		640 W		32.034711	-104.116066	Unknown
41	COTTONWOOD NORTH 20 STATE 002H	NEARBURG PRODUCING CO	3001543263	20	26.05	28E	150 N		2070 W		32.034747	-104.111429	Unknown
42	SKEEN 21 B2AP STATE COM 001H	MEWBOURNE OIL CO	3001543246	21	26.05	28E	185 N		820 E		32.034719	-104.086406	Unknown
43	GRAHAM NASH FEDERAL COM 013H	COG OPERATING LLC	3001543811	21	26.05	28E	200 S		1550 W		32.021012	-104.096034	Unknown
44	SKEEN 21 W2AP STATE COM 002H	MEWBOURNE OIL CO	3001544553	21	26.05	28E	330 N		550 E		32.034186	-104.085036	Unknown
45	SKEEN 21 W2AP STATE COM 001H	MEWBOURNE OIL CO	3001544552	21	26.05	28E	330 N		600 E		32.034186	-104.085198	Unknown
46	SALT CEDAR 16 STATE SWD #001 001	COG OPERATING LLC	3001545826	16	26.5	28E	1850 N		2185 E		32.044761	-104.090784	New (Not drilled or compl)

Intent ☐ As Drilled ☐

API #								
Operator Name: COG OPERATING, LLC.			Property Name: BOO RADLEY COM			Well Number 702H		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	21	26-S	28-E		10	NORTH	1210	EAST	EDDY
Latitude 32.035161					Longitude -104.087256				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	33	26-S	28-E	4	330	SOUTH	1210	EAST	EDDY
Latitude 32.000889					Longitude -104.087253				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #								
Operator Name:			Property Name:			Well Number		

KZ 06/29/2018

[illegible]

Below base of bone spring to 9500 feet	
Gross Working Interest Recapitulation	
Lessees	
COG Operating LLC	63.0259261%
COG Production LLC	7.7693960%
COG Acreage LP	0.6233351%
Concho Oil & Gas	1.0479876%
OXY Y-1 Company	2.2041636%
OXY USA Inc.	8.2302779%
Sharbro Energy, LLC	0.3534687%
EOG via YPC & Abo	0.0000000%
EOG via Yates Industries	0.0000000%
EOG via Myco	0.0000000%
The Allar Company	9.5973893%
Tap Rock Resources, LLC	0.0000000%
Tap Rock via Trey & Janet Fowlkes	0.0000000%
Edwin H. Fowlkes, III W/O	0.0000000%
Janet Reneee Fowlkes Murray W/O	0.0000000%
Chevron U.S.A. Inc.	7.1480557%
Lessees Subtotal	100.0000000%

TRUE  
1.00000000

TOTAL COG ENTITIES		
Gross	Net	NRI
72.4666448%	56.4835269%	77.9441729%

Below 9500'	
Gross Working Interest Recapitulation	
Lessees	
COG Operating LLC	63.4217807%
COG Production LLC	7.6009683%
COG Acreage LP	0.6115950%
Concho Oil & Gas	1.0322015%
OXY Y-1 Company	2.1773655%
OXY USA Inc.	8.0611944%
Sharbro Energy, LLC	0.3494495%
EOG via YPC & Abo	0.0000000%
EOG via Yates Industries	0.0000000%
EOG via Myco	0.0000000%
The Allar Company	9.5973893%
Tap Rock Resources, LLC	0.0000000%
Tap Rock via Trey & Janet Fowlkes	0.0000000%
Edwin H. Fowlkes, III W/O	0.0000000%
Janet Reneee Fowlkes Murray W/O	0.0000000%
Chevron U.S.A. Inc.	7.1480557%
Lessees Subtotal	100.0000000%

TOTAL COG ENTITIES		
Gross	Net	NRI
72.6665455%	56.6334524%	77.9360737%

TRUE  
1.00000000



May 20, 2020

Via CMRRR No. 9489 0090 0027 6245 1433 31  
and via electronic mail to jack@allarcompany.com

**The Allar Company**  
P.O. Box 1567  
Graham, TX 76450  
Attn: Jack Graham

Re: **Boo Radley Fed Com 701H – 706H**  
Boo Radley Fed Com Unit  
All of Sections 21, 28, & 33, T26S-R28E  
Eddy County, New Mexico

**BEFORE THE OIL CONSERVATION DIVISION**  
Santa Fe, New Mexico  
**Exhibit No. C4**  
Submitted by: **COG OPERATING LLC**  
Hearing Date: September 10, 2020  
Case No. 21410

Dear Mr. Graham:

COG Operating, LLC ("COG"), as Operator, hereby proposes the drilling of the following horizontal wells with productive laterals located in All of Sections 21, 28, & 33, Township 26 South, Range 28 East, Eddy County, New Mexico (collectively, the "Operation"). The surface pad locations will be located in Units N and P of Section 16, T26S-R28E (subject to change).

- **Boo Radley Fed Com 701H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,500'. The surface location for this well is proposed at a legal location in Unit P of Section 16, and a bottom hole location at a legal location in Unit P of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached Authority for Expenditure ("AFE").
- **Boo Radley Fed Com 702H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,490'. The surface location for this well is proposed at a legal location in Unit P of Section 16, and a bottom hole location at a legal location in Unit P of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.
- **Boo Radley Fed Com 703H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,480'. The surface location for this well is proposed at a legal location in Unit P of Section 16, and a bottom hole location at a legal location in Unit O of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.
- **Boo Radley Fed Com 704H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,470'. The surface location for this well is proposed at a legal location in Unit N of Section 16, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.

- **Boo Radley Fed Com 705H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,460'. The surface location for this well is proposed at a legal location in Unit N of Section 16, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.
- **Boo Radley Fed Com 706H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,450'. The surface location for this well is proposed at a legal location in Unit N of Section 16, and a bottom hole location at a legal location in Unit M of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.

COG is proposing to drill these wells under the terms of a new Operating Agreements which will follow under separate cover.

In the interest of time, if we do not reach an agreement within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a horizontal spacing unit for the proposed wells.

Please indicate your participation elections in the space provided below, sign and return this letter, along with a signed copy of the enclosed AFEs and a copy of your geologic requirements, to my attention at the letterhead address or by email to [bunderwood@concho.com](mailto:bunderwood@concho.com). Should you have any questions, please do not hesitate to contact me at 432.688.6644.

Sincerely,

**COG Operating LLC**

*//Buck Underwood//*

Buck Underwood  
Senior Landman

BU:bh  
Enc

Please Indicate your election below:

<b><u>WELL NAME</u></b>	<b><u>PARTICIPATE</u></b> Elect to participate in drilling & completion of well	<b><u>DO NOT PARTICIPATE</u></b> Elect <b>NOT</b> to participate in drilling & completion of well
<b>Boo Radley Fed Com 701H</b>		
<b>Boo Radley Fed Com 702H</b>		
<b>Boo Radley Fed Com 703H</b>		
<b>Boo Radley Fed Com 704H</b>		
<b>Boo Radley Fed Com 705H</b>		
<b>Boo Radley Fed Com 706H</b>		

**THE ALLAR COMPANY**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 701H  
SHL 26S-R28E, Sec 16: 280 FSL, 1180 FEL, or Unit P  
BHL 26S-R28E, Sec 33: 200 FSL, 330 FEL, or Lot 4  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,871  
TVD 9,521

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Lctr/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 268,000.00				\$ -	\$ 268,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envrmntl/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-Lctr/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	308				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00

<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Trtr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00				\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00

<b>Total Gross Cost</b>	\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00
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Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:  
\_\_\_\_\_% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

**COG OPERATING LLC**  
**AUTHORITY FOR EXPENDITURE**  
**Drill & Complete**

Well Name BOO RADLEY FED COM 702H  
 SHL 26S-R28E, Sec 16: 280 FSL, 1210 FEL, or Unit P  
 BHL 26S-R28E, Sec 33: 200 FSL, 1210 FEL, or Lot 4  
 Formation WOLFCAMP  
 Legal 21, 28, & 33, T26S-R28E

Prospect ATLAS 2628  
 State & County NEW MEXICO, EDDY  
 Objective DRILL & COMPLETE  
 Depth 22,855  
 TVD 9,505

AFE Numbers

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envrnmnt/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 308,000.00			\$ -	\$ 308,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Hlr Trlr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lfr/Compression	527				\$ 25,000.00			\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:  
 \_\_\_\_\_  
 % Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
 By: \_\_\_\_\_

Printed Name:  
 Title:  
 Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 703H  
SHL 26S-R28E, Sec 18, 280 FSL, 1240 FEL, or Unit P  
BHL 26S-R28E, Sec 33, 200 FSL, 2090 FEL, or L3  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,838  
TVD 9,488

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Lctn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 268,000.00				\$ -	\$ 268,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmtl	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Floal Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envmntl/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-Lctn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	397						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 226,000.00				\$ -	\$ 226,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Trtr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00			\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

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**COG OPERATING LLC**  
**AUTHORITY FOR EXPENDITURE**  
**Drill & Complete**

Well Name BOO RADLEY FED COM 704H  
 SHL 26S-R28E, Sec 16: 220 FSL, 1460 FWL, or Unit N  
 BHL 26S-R28E, Sec 33: 200 FSL, 2325 FWL, or L2  
 Formation WOLFCAMP  
 Legal 21, 28, & 33, T26S-R28E  
 AFE Numbers

Prospect ATLAS 2628  
 State & County NEW MEXICO, EDDY  
 Objective DRILL & COMPLETE  
 Depth 22,827  
 TVD 9,477

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Blis	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envrnmnt/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Hlr Titr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgcs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00			\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 166,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20 \_\_\_\_\_

We approve:  
 \_\_\_\_\_  
 % Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
 By: \_\_\_\_\_

Printed Name:  
 Title:  
 Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 705H  
SHL 26S-R28E, Sec 16: 220 FSL, 1430 FWL, or Unit N  
BHL 26S-R28E, Sec 33: 200 FSL, 1430 FWL, or L2  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,808  
TVD 9,458

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	206			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bits	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envrmtl/Clsd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00		\$ -	\$ -	81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Completion OH	306				\$ 15,000.00		\$ -	\$ -	15,000.00
C-Frac Equipment	307				\$ 932,000.00		\$ -	\$ -	932,000.00
C-Frac Chemicals	308				\$ 399,000.00		\$ -	\$ -	399,000.00
C-Frac Proppant	309				\$ 181,000.00		\$ -	\$ -	181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00		\$ -	\$ -	282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00		\$ -	\$ -	41,000.00
C-Water	312				\$ 552,000.00		\$ -	\$ -	552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00		\$ -	\$ -	306,000.00
C-Contract Labor	325				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Company Sprvsn	326				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Contract Sprvsn	327				\$ 145,000.00		\$ -	\$ -	145,000.00
C-Artificial Lift Install	329				\$ 44,000.00		\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00		\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Water Disposal	339				\$ 39,000.00		\$ -	\$ -	39,000.00
C-Contingency	343				\$ 144,000.00		\$ -	\$ -	144,000.00
C-Dyed Diesel	345				\$ 315,000.00		\$ -	\$ -	315,000.00
C-Drillout	346				\$ 325,000.00		\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00	\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00	\$ -	\$ -	41,000.00
TB-Contract Labor	356					\$ 172,000.00	\$ -	\$ -	172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	115,000.00
D-Surface Casing	401			\$ 25,000.00			\$ -	\$ -	25,000.00
D-Intermed Csg	402			\$ 228,000.00			\$ -	\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00			\$ -	\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00			\$ -	\$ -	76,000.00
C-Tubing	504				\$ 52,000.00		\$ -	\$ -	52,000.00
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TB-Htr Trtr/Seprtr	512					\$ 176,000.00	\$ -	\$ -	176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00	\$ -	\$ -	113,000.00
C-Pckns/Anchors/Hgrs	514				\$ 65,000.00		\$ -	\$ -	65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00	\$ -	\$ -	194,000.00
TB-Pumps-Surface	521					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Miscellaneous	523					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Meters/Lads	525					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00	\$ -	\$ -	29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00			\$ -	\$ -	25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	9,591,000.00

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COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 706H  
SHL 26S-R28E, Sec 16: 220 FSL, 1400 FWL, or Unit N  
BHL 26S-R28E, Sec 33: 200 FSL, 550 FWL, or L1  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,791  
TVD 9,441

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Lctr/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envmntl/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-Lctr/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504			\$ 52,000.00				\$ -	\$ 52,000.00
C-Wellhead Equip	505			\$ 28,000.00				\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Ttr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514			\$ 65,000.00				\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00				\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20 \_\_\_\_\_

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.



July 7, 2020

Via CMRRR No. 9489 0090 0027 6152 5942 95

Via electronic mail to [jack@allarcompany.com](mailto:jack@allarcompany.com)

**The Allar Company**

P.O. Box 1567

Graham, TX 76450

Attn: Jack Graham

**Re: Revised Boo Radley Fed Com 701H – 706H**

Boo Radley Fed Com Unit

All of Sections 21, 28, & 33, T26S-R28E

Eddy County, New Mexico

Dear Mr. Graham:

Reference is herein made to the proposal letter dated May 20, 2020 covering the Boo Radley Fed Com wells, wherein COG Operating, LLC ("COG"), as Operator, proposed the drilling of the Boo Radley Fed Com 701H – 706H wells, located with productive laterals in All of Sections 21, 28, & 33, Township 26 South, Range 28 East, Eddy County, New Mexico. At this time COG would like to re-propose these wells to correct and amend the bottom hole legal descriptions detailed in the original proposal. The TVD's, formations and AFE costs remain the same. Please see attached revised AFEs which reflect the corrected bottom hole location and the details of each well outlined below:

- **Boo Radley Fed Com 701H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,521'. The surface location for this well is proposed at a legal location in 280 FSL, 1180 FEL or Unit P of Section 16, and a bottom hole location at a legal location in 200 FSL, 330 FEL or Lot 4 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached Authority for Expenditure ("AFE").
- **Boo Radley Fed Com 702H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,505'. The surface location for this well is proposed at a legal location 280 FSL, 1210 FEL or Unit P of Section 16, and a bottom hole location at a legal location 200 FSL, 1210 FEL or Lot 4 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.
- **Boo Radley Fed Com 703H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,488'. The surface location for this well is proposed at a legal location 280 FSL 1240 FEL or Unit P of Section 16, and a bottom hole location at a legal location 200 FSL, 2090 FEL or Lot 3 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.

- **Boo Radley Fed Com 704H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,476.5'. The surface location for this well is proposed at a legal location 220 FSL, 1460 FWL or Unit N of Section 16, and a bottom hole location at a legal location 200 FSL, 2325 FWL or Lot 2 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.
- **Boo Radley Fed Com 705H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,458'. The surface location for this well is proposed at a legal location 220 FSL, 1430 FWL or Unit N of Section 16, and a bottom hole location at a legal location 200 FSL, 1430 FWL or Lot 2 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.
- **Boo Radley Fed Com 706H**, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,441'. The surface location for this well is proposed at a legal location 220 FSL, 1400 FWL or Unit N of Section 16, and a bottom hole location at a legal location 200 FSL, 550 FWL or Lot 1 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,591,100.00, as shown on the attached AFE.

COG is proposing to drill these wells under the terms of the proposed Boo Radley Fed Com Unit Operating Agreement dated June 1, 2020.

In the interest of time, if we do not reach an agreement within 30 days of this letter dated July 7, 2020, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a horizontal spacing unit for the proposed wells.

Should you have any questions, please do not hesitate to contact me at 432.221.0470 or [elauffer@concho.com](mailto:elauffer@concho.com).

Sincerely,

**COG Operating LLC**

*//Lizzy Laufer//*

Lizzy Laufer  
Landman II

LL:bh  
Enc

Please Indicate your election below:

<u>WELL NAME</u>	<b>PARTICIPATE</b> Elect to participate in drilling & completion of well	<b>DO NOT PARTICIPATE</b> Elect <b>NOT</b> to participate in drilling & completion of well
Boo Radley Fed Com 701H		
Boo Radley Fed Com 702H		
Boo Radley Fed Com 703H		
Boo Radley Fed Com 704H		
Boo Radley Fed Com 705H		
Boo Radley Fed Com 706H		

THE ALLAR COMPANY

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 701H  
SHL 26S-R28E, Sec 18: 280 FSL, 1180 FEL, or Unit P  
BHL 26S-R28E, Sec 33: 200 FSL, 330 FEL, or Lot 4  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,871  
TVD 9,521

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envmtl/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	348				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Ttr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00			\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name: BOO RADLEY FED COM 702H  
SHL 26S-R28E, Sec 18: 280 FSL, 1210 FEL, or Unit P  
BHL 26S-R28E, Sec 33: 200 FSL, 1210 FEL, or Lot 4  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,855  
TVD 9,505

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
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D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
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PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 703H  
SHL 26S-R28E, Sec 16: 280 FSL, 1240 FEL, or Unit P  
BHL 26S-R28E, Sec 33: 200 FSL, 2090 FEL, or L3  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2626  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,836  
TVD 9,486

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tslg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envmntl/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Trlr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lcts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00			\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20 \_\_\_\_\_

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 704H  
SHL 26S-R28E, Sec 16: 220 FSL, 1460 FWL, or Unit N  
BHL 26S-R28E, Sec 33: 200 FSL, 2325 FWL, or L2  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,827  
TVD 9,477

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Lcnu/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	208			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bits	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Crnt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envmntl/Clsd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00		\$ -	\$ -	81,000.00
C-Lcnu/Pits/Roads	305				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Completion OH	306				\$ 15,000.00		\$ -	\$ -	15,000.00
C-Frac Equipment	307				\$ 932,000.00		\$ -	\$ -	932,000.00
C-Frac Chemicals	308				\$ 399,000.00		\$ -	\$ -	399,000.00
C-Frac Proppant	309				\$ 181,000.00		\$ -	\$ -	181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00		\$ -	\$ -	282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00		\$ -	\$ -	41,000.00
C-Water	312				\$ 552,000.00		\$ -	\$ -	552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00		\$ -	\$ -	306,000.00
C-Contract Labor	325				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Company Sprvsn	326				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Contract Sprvsn	327				\$ 145,000.00		\$ -	\$ -	145,000.00
C-Artificial Lift Install	329				\$ 44,000.00		\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00		\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Water Disposal	339				\$ 39,000.00		\$ -	\$ -	39,000.00
C-Contingency	343				\$ 144,000.00		\$ -	\$ -	144,000.00
C-Dyed Diesel	345				\$ 315,000.00		\$ -	\$ -	315,000.00
C-Drillout	346				\$ 325,000.00		\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00	\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00	\$ -	\$ -	41,000.00
TB-Contract Labor	356					\$ 172,000.00	\$ -	\$ -	172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	7,915,000.00

<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	29,000.00
TB-Htr Trlr/Seprtr	512					\$ 176,000.00		\$ -	176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00			\$ -	25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	1,676,000.00

<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	9,591,000.00
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COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:

COG Operating LLC

% Working Interest

By: \_\_\_\_\_

Company:

By: \_\_\_\_\_

Printed Name:

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 705H  
SHL 26S-R28E, Sec 16: 220 FSL, 1430 FWL, or Unit N  
BHL 26S-R28E, Sec 33: 200 FSL, 1430 FWL, or L2  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,808  
TVD 9,458

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	206			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bils	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tslg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envrmnt/Clsd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
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C-Completion OH	306				\$ 15,000.00		\$ -	\$ -	15,000.00
C-Frac Equipment	307				\$ 932,000.00		\$ -	\$ -	932,000.00
C-Frac Chemicals	308				\$ 399,000.00		\$ -	\$ -	399,000.00
C-Frac Proppant	309				\$ 181,000.00		\$ -	\$ -	181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00		\$ -	\$ -	282,000.00
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C-Contract Labor	325				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Company Sprvsn	326				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Contract Sprvsn	327				\$ 145,000.00		\$ -	\$ -	145,000.00
C-Artificial Lift Install	329				\$ 44,000.00		\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00		\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Water Disposal	339				\$ 39,000.00		\$ -	\$ -	39,000.00
C-Contingency	343				\$ 144,000.00		\$ -	\$ -	144,000.00
C-Dyed Diesel	345				\$ 315,000.00		\$ -	\$ -	315,000.00
C-Drillout	346				\$ 325,000.00		\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00	\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00	\$ -	\$ -	41,000.00
TB-Contract Labor	356					\$ 172,000.00	\$ -	\$ -	172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	38,000.00
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PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	7,915,000.00
<b>Tangible Costs</b>									
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D-Intermed Csg	402			\$ 228,000.00			\$ -	\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00			\$ -	\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00			\$ -	\$ -	76,000.00
C-Tubing	504				\$ 52,000.00		\$ -	\$ -	52,000.00
C-Wellhead Equip	505				\$ 28,000.00		\$ -	\$ -	28,000.00
TB-Tanks	510					\$ 77,000.00	\$ -	\$ -	77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00	\$ -	\$ -	29,000.00
TB-Hlr Trlr/Seprtr	512					\$ 176,000.00	\$ -	\$ -	176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00	\$ -	\$ -	113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00		\$ -	\$ -	65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00	\$ -	\$ -	194,000.00
TB-Pumps-Surface	521					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Miscellaneous	523					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Meters/Lacts	525					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00	\$ -	\$ -	29,000.00
C-Gas Lfr/Compression	527				\$ 25,000.00		\$ -	\$ -	25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 166,000.00	\$ -	1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

COG Operating LLC

We approve:  
% Working Interest

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 706H  
SHL 26S-R28E, Sec 18: 220 FSL, 1400 FWL, or Unit N  
BHL 26S-R28E, Sec 33: 200 FSL, 550 FWL, or L1  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,791  
TVD 9,441

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Lcfn/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	206			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bits	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tslg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envmntl/Clsd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00		\$ -	\$ -	81,000.00
C-Lcfn/Pits/Roads	305				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Completion OH	306				\$ 15,000.00		\$ -	\$ -	15,000.00
C-Frac Equipment	307				\$ 932,000.00		\$ -	\$ -	932,000.00
C-Frac Chemicals	308				\$ 399,000.00		\$ -	\$ -	399,000.00
C-Frac Proppant	309				\$ 181,000.00		\$ -	\$ -	181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00		\$ -	\$ -	282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00		\$ -	\$ -	41,000.00
C-Water	312				\$ 552,000.00		\$ -	\$ -	552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00		\$ -	\$ -	306,000.00
C-Contract Labor	325				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Company Sprvsn	326				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Contract Sprvsn	327				\$ 145,000.00		\$ -	\$ -	145,000.00
C-Artificial Lift Install	329				\$ 44,000.00		\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00		\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Water Disposal	339				\$ 39,000.00		\$ -	\$ -	39,000.00
C-Contingency	343				\$ 144,000.00		\$ -	\$ -	144,000.00
C-Dyed Diesel	345				\$ 315,000.00		\$ -	\$ -	315,000.00
C-Drillout	346				\$ 325,000.00		\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00	\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00	\$ -	\$ -	41,000.00
TB-Contract Labor	356					\$ 172,000.00	\$ -	\$ -	172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	115,000.00
D-Surface Casing	401			\$ 25,000.00			\$ -	\$ -	25,000.00
D-Intermed Csg	402			\$ 228,000.00			\$ -	\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00			\$ -	\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00			\$ -	\$ -	76,000.00
C-Tubing	504				\$ 52,000.00		\$ -	\$ -	52,000.00
C-Wellhead Equip	505				\$ 28,000.00		\$ -	\$ -	28,000.00
TB-Tanks	510					\$ 77,000.00	\$ -	\$ -	77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00	\$ -	\$ -	29,000.00
TB-Hlr Trlr/Septr	512					\$ 176,000.00	\$ -	\$ -	176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00	\$ -	\$ -	113,000.00
C-Pckrs/Anchors/Hgrs	514			\$ 65,000.00			\$ -	\$ -	65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00	\$ -	\$ -	194,000.00
TB-Pumps-Surface	521					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Miscellaneous	523					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Meters/Lacts	525					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00	\$ -	\$ -	29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00		\$ -	\$ -	25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 7/6/20

We approve:

COG Operating LLC

% Working Interest

By: \_\_\_\_\_

Company:

By: \_\_\_\_\_

Printed Name:

Title: \_\_\_\_\_

Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.



August 6, 2020

*Via electronic mail to jack@allarcompany.com*

**The Allar Company**

P.O. Box 1567

Graham, TX 76450

Attn: Jack Graham

**Re: Revised Boo Radley Fed Com 701H & 702H**

Boo Radley Fed Com Unit

All of Sections 21, 28, & 33, T26S-R28E

Eddy County, New Mexico

Dear Mr. Graham:

Please allow this correspondence to serve as an informational letter regarding the well proposals referenced above, previously revised on July 6, 2020. COG is correcting a typographical error to the measured depth ("MD") and total vertical depth ("TVD") of the Boo Radley Fed Com 701H and 702H. The Boo Radley Fed Com 701H MD should be 22,821' and the TVD should be 9,471'. The Boo Radley Fed Com 702H MD should be 22,805' and the TVD should be 9,455', each within the Wolfcamp A formation, respectively. The AFE costs remain the same as previously provided, but I have enclosed new copies for your review which reflects these described depths.

Should you have any questions, please do not hesitate to contact me at 432.221.0470 or [elaufer@concho.com](mailto:elaufer@concho.com).

Sincerely,

**COG Operating LLC**

*//Lizzy Laufer//*

Lizzy Laufer

Landman II

LL:bh

Enc

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 701H  
SHL 26S-R28E, Sec 18: 280 FSL, 1180 FEL, or Unit P  
BHL 26S-R28E, Sec 33: 200 FSL, 330 FEL, or Lot 4  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2828  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,821  
TVD 9,471

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drtg Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envmntl/Cisd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
C-Completion OH	306				\$ 15,000.00			\$ -	\$ 15,000.00
C-Frac Equipment	307				\$ 932,000.00			\$ -	\$ 932,000.00
C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
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C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
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C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
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PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
<b>Tangible Costs</b>									
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D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
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TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Trtr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514			\$ 65,000.00				\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
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COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 5/20/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name:  
Title:  
Date: \_\_\_\_\_

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**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name: BOO RADLEY FED COM 702H  
SHL 26S-R28E, Sec 16: 280 FSL, 1210 FEL, or Unit P  
BHL 26S-R28E, Sec 33: 200 FSL, 1210 FEL, or Lot 4  
Formation: WOLFCAMP  
Legal: 21, 28, & 33, T26S-R28E  
AFE Numbers:

Prospect: ATLAS 2628  
State & County: NEW MEXICO, EDDY  
Objective: DRILL & COMPLETE  
Depth: 22,805  
TVD: 9,455

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Ldn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
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D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cmi	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
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D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envrnmnt/Clsd Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00			\$ -	\$ 81,000.00
C-Ldn/Pits/Roads	305				\$ 10,000.00			\$ -	\$ 10,000.00
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C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
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C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
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TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
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PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00

<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	\$ 115,000.00
D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
C-Tubing	504				\$ 52,000.00			\$ -	\$ 52,000.00
C-Wellhead Equip	505				\$ 28,000.00			\$ -	\$ 28,000.00
TB-Tanks	510					\$ 77,000.00		\$ -	\$ 77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00		\$ -	\$ 29,000.00
TB-Htr Trtr/Seprtr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hgrs	514				\$ 65,000.00			\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527				\$ 25,000.00			\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00

<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00
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Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 5/20/20 \_\_\_\_\_

We approve:

COG Operating LLC

% Working Interest

By: \_\_\_\_\_

Company:

By: \_\_\_\_\_

Printed Name:

Title: \_\_\_\_\_

Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.



August 12, 2020

*Via electronic mail to jack@allarcompany.com*

**The Allar Company**

P.O. Box 1567

Graham, TX 76450

Attn: Jack Graham

**Re: Amended Boo Radley Fed Com 701H, 702H, 703H, and 706H**

Boo Radley Fed Com Unit

All of Sections 21, 28, & 33, T26S-R28E

Eddy County, New Mexico

Dear Mr. Graham:

COG Operating LLC ("COG") previously proposed the Boo Radley Fed Com 701H-706H. Please allow this correspondence to serve as an informational letter regarding the following amendments to the wells described below. A copy of each respective AFE is attached which has only been revised to show the amended location. Due to an existing pipeline and other surface constraints, COG has made the following amendments in bold:

- Boo Radley Fed Com 701H, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,471'. The surface location for this well is proposed at a legal location in **200' FSL, 1490' FEL or Unit O** of Section 16, and a bottom hole location at a legal location in 200 FSL, 330 FEL or Lot 4 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico.
- Boo Radley Fed Com 702H, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,455'. The surface location for this well is proposed at a legal location in **200' FSL, 1520' FEL or Unit O** of Section 16, and a bottom hole location at a legal location in 200 FSL, 1210 FEL or Lot 4 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico.
- Boo Radley Fed Com 703H, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,488'. The surface location for this well is proposed at a legal location in **200' FSL, 1550' FEL or Unit O** of Section 16, and a bottom hole location at a legal location in 200 FSL, 2090 FEL or Lot 3 of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico.
- Boo Radley Fed Com 706H, to be drilled to a depth sufficient to test the Wolfcamp A Sand formation at an approximate total vertical depth of 9,441'. The surface location for this well is proposed at a legal location in **220' FSL, 1400' FWL or Unit N** of Section 16, and a bottom hole location at a legal location in 200' FSL, 550' FWL or **Lot 5** of Section 33. The dedicated horizontal spacing unit will be All of Sections 21, 28, & 33 of T26S-R28E, Eddy County, New Mexico.

Should you have any questions, please do not hesitate to contact me at 432.221.0470 or [elauf@concho.com](mailto:elauf@concho.com).

August 12, 2020  
Page 2

Sincerely,

**COG Operating LLC**

*//Lizzy Laufer//*

Lizzy Laufer  
Landman II

LL:bh  
Enc

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 701H  
SHL 26S-R28E, Sec 16: 200' FSL, 1490' FEL, or Unit O  
BHL 26S-R28E, Sec 33: 200 FSL, 330 FEL, or Lot 4  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,821  
TVD 9,471

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	206			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bits	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tslg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envmntl/Cisd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00		\$ -	\$ -	81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Completion OH	306				\$ 15,000.00		\$ -	\$ -	15,000.00
C-Frac Equipment	307				\$ 932,000.00		\$ -	\$ -	932,000.00
C-Frac Chemicals	308				\$ 399,000.00		\$ -	\$ -	399,000.00
C-Frac Proppant	309				\$ 181,000.00		\$ -	\$ -	181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00		\$ -	\$ -	282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00		\$ -	\$ -	41,000.00
C-Water	312				\$ 552,000.00		\$ -	\$ -	552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00		\$ -	\$ -	306,000.00
C-Contract Labor	325				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Company Sprvsn	326				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Contract Sprvsn	327				\$ 145,000.00		\$ -	\$ -	145,000.00
C-Artificial Lift Install	329				\$ 44,000.00		\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00		\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Water Disposal	339				\$ 39,000.00		\$ -	\$ -	39,000.00
C-Contingency	343				\$ 144,000.00		\$ -	\$ -	144,000.00
C-Dyed Diesel	345				\$ 315,000.00		\$ -	\$ -	315,000.00
C-Drillout	346				\$ 325,000.00		\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00	\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00	\$ -	\$ -	41,000.00
TB-Contract Labor	356					\$ 172,000.00	\$ -	\$ -	172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	7,915,000.00

<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392						\$ 115,000.00	\$ -	115,000.00
D-Surface Casing	401			\$ 25,000.00			\$ -	\$ -	25,000.00
D-Intermed Csg	402			\$ 228,000.00			\$ -	\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00			\$ -	\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00			\$ -	\$ -	76,000.00
C-Tubing	504			\$ 52,000.00			\$ -	\$ -	52,000.00
C-Wellhead Equip	505			\$ 28,000.00			\$ -	\$ -	28,000.00
TB-Tanks	510					\$ 77,000.00	\$ -	\$ -	77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00	\$ -	\$ -	29,000.00
TB-Htr Trlr/Seprtr	512					\$ 176,000.00	\$ -	\$ -	176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00	\$ -	\$ -	113,000.00
C-Pckrs/Anchors/Hgns	514			\$ 65,000.00			\$ -	\$ -	65,000.00
TB-Couplings/Fittings/Valves	515				\$ 194,000.00		\$ -	\$ -	194,000.00
TB-Pumps-Surface	521				\$ 24,000.00		\$ -	\$ -	24,000.00
TB-Instrumentation/SCADA/POC	522				\$ 20,000.00		\$ -	\$ -	20,000.00
TB-Miscellaneous	523				\$ 20,000.00		\$ -	\$ -	20,000.00
TB-Meters/Lacts	525				\$ 24,000.00		\$ -	\$ -	24,000.00
TB-Flares/Combusters/Emission	526				\$ 29,000.00		\$ -	\$ -	29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00			\$ -	\$ -	25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	1,676,000.00

<b>Total Gross Cost</b>	\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ -	9,591,000.00
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Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 5/20/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 702H  
SHL 26S-R28E, Sec 16: 200 FSL, 1490 FEL, or Unit O  
BHL 26S-R28E, Sec 33: 200 FSL, 1210 FEL, or Lot 4  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,805  
TVD 9,455

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00				\$ -	\$ 102,000.00
D-Drilling Overhead	206			\$ 9,000.00				\$ -	\$ 9,000.00
D-Daywork Contract	209			\$ 711,000.00				\$ -	\$ 711,000.00
D-Directional Drig Services	210			\$ 340,000.00				\$ -	\$ 340,000.00
D-Fuel & Power	211			\$ 152,000.00				\$ -	\$ 152,000.00
D-Water	212			\$ 80,000.00				\$ -	\$ 80,000.00
D-Bits	213			\$ 112,000.00				\$ -	\$ 112,000.00
D-Mud & Chemicals	214			\$ 269,000.00				\$ -	\$ 269,000.00
D-Cement Surface	217			\$ 21,000.00				\$ -	\$ 21,000.00
D-Cement Intermed	218			\$ 80,000.00				\$ -	\$ 80,000.00
D-Prod-2nd Int Cml	219			\$ 118,000.00				\$ -	\$ 118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00				\$ -	\$ 64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00				\$ -	\$ 70,000.00
D-Contract Labor	225			\$ 7,000.00				\$ -	\$ 7,000.00
D-Company Sprvsn	226			\$ 54,000.00				\$ -	\$ 54,000.00
D-Contract Sprvsn	227			\$ 127,000.00				\$ -	\$ 127,000.00
D-Tstq Csg/Tbg	228			\$ 43,000.00				\$ -	\$ 43,000.00
D-Mud Logging Unit	229			\$ 48,000.00				\$ -	\$ 48,000.00
D-Rentals-Surface	235			\$ 209,000.00				\$ -	\$ 209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00				\$ -	\$ 97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00				\$ -	\$ 150,000.00
D-Welding Services	238			\$ 4,000.00				\$ -	\$ 4,000.00
D-Contingency	243			\$ 65,000.00				\$ -	\$ 65,000.00
D-Envmntl/Cld Loop	244			\$ 329,000.00				\$ -	\$ 329,000.00
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C-Frac Chemicals	308				\$ 399,000.00			\$ -	\$ 399,000.00
C-Frac Proppant	309				\$ 181,000.00			\$ -	\$ 181,000.00
C-Frac Proppant Transportation	310				\$ 282,000.00			\$ -	\$ 282,000.00
C-Fuel Delivery & Services	311				\$ 41,000.00			\$ -	\$ 41,000.00
C-Water	312				\$ 552,000.00			\$ -	\$ 552,000.00
C-Frac Surface Rentals	315				\$ 306,000.00			\$ -	\$ 306,000.00
C-Contract Labor	325				\$ 10,000.00			\$ -	\$ 10,000.00
C-Company Sprvsn	326				\$ 10,000.00			\$ -	\$ 10,000.00
C-Contract Sprvsn	327				\$ 145,000.00			\$ -	\$ 145,000.00
C-Artificial Lift Install	329				\$ 44,000.00			\$ -	\$ 44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00			\$ -	\$ 363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00			\$ -	\$ 10,000.00
C-Water Disposal	339				\$ 39,000.00			\$ -	\$ 39,000.00
C-Contingency	343				\$ 144,000.00			\$ -	\$ 144,000.00
C-Dyed Diesel	345				\$ 315,000.00			\$ -	\$ 315,000.00
C-Drillout	346				\$ 325,000.00			\$ -	\$ 325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00		\$ -	\$ 2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00		\$ -	\$ 41,000.00
TB-Contract Labor	356					\$ 172,000.00		\$ -	\$ 172,000.00
PEQ-Contract Labor	374						\$ 38,000.00	\$ -	\$ 38,000.00
PEQ-Water Disposal	387						\$ 179,000.00	\$ -	\$ 179,000.00
PEQ-HRZ Well Offset Frac	391						\$ 18,000.00	\$ -	\$ 18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00
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D-Surface Casing	401			\$ 25,000.00				\$ -	\$ 25,000.00
D-Intermed Csg	402			\$ 228,000.00				\$ -	\$ 228,000.00
D-Production Casing/Liner	403			\$ 315,000.00				\$ -	\$ 315,000.00
D-Wellhead Equip	405			\$ 76,000.00				\$ -	\$ 76,000.00
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C-Wellhead Equip	505			\$ 28,000.00				\$ -	\$ 28,000.00
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TB-Hlr Trlr/Seprlr	512					\$ 176,000.00		\$ -	\$ 176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00		\$ -	\$ 113,000.00
C-Pckrs/Anchors/Hqrs	514			\$ 65,000.00				\$ -	\$ 65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00		\$ -	\$ 194,000.00
TB-Pumps-Surface	521					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Miscellaneous	523					\$ 20,000.00		\$ -	\$ 20,000.00
TB-Meters/Lacts	525					\$ 24,000.00		\$ -	\$ 24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00		\$ -	\$ 29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00				\$ -	\$ 25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	\$ 41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 5/20/20

We approve:  
\_\_\_\_\_  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
By: \_\_\_\_\_

Printed Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

**COG OPERATING LLC**  
**AUTHORITY FOR EXPENDITURE**  
**Drill & Complete**

Well Name BOO RADLEY FED COM 703H  
 SHL 26S-R28E, Sec 16: 200 FSL, 1550 FEL, or Unit O  
 BHL 26S-R28E, Sec 33: 200 FSL, 330 FEL, or Lot 4  
 Formation WOLFCAMP  
 Legal 21, 28, & 33, T26S-R28E  
 AFE Numbers

Prospect ATLAS 2628  
 State & County NEW MEXICO, EDDY  
 Objective DRILL & COMPLETE  
 Depth 22,805  
 TVD 9,488

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-Lctn/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	206			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bits	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envmntl/Cldd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
C-Wellbore Frac Prep	304			\$ 81,000.00			\$ -	\$ -	81,000.00
C-Lctn/Pits/Roads	305			\$ 10,000.00			\$ -	\$ -	10,000.00
C-Completion OH	306			\$ 15,000.00			\$ -	\$ -	15,000.00
C-Frac Equipment	307			\$ 932,000.00			\$ -	\$ -	932,000.00
C-Frac Chemicals	308			\$ 399,000.00			\$ -	\$ -	399,000.00
C-Frac Proppant	309			\$ 181,000.00			\$ -	\$ -	181,000.00
C-Frac Proppant Transportation	310			\$ 282,000.00			\$ -	\$ -	282,000.00
C-Fuel Delivery & Services	311			\$ 41,000.00			\$ -	\$ -	41,000.00
C-Water	312			\$ 552,000.00			\$ -	\$ -	552,000.00
C-Frac Surface Rentals	315			\$ 306,000.00			\$ -	\$ -	306,000.00
C-Contract Labor	325			\$ 10,000.00			\$ -	\$ -	10,000.00
C-Company Sprvsn	326			\$ 10,000.00			\$ -	\$ -	10,000.00
C-Contract Sprvsn	327			\$ 145,000.00			\$ -	\$ -	145,000.00
C-Artificial Lift Install	329			\$ 44,000.00			\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331			\$ 363,000.00			\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337			\$ 10,000.00			\$ -	\$ -	10,000.00
C-Water Disposal	339			\$ 39,000.00			\$ -	\$ -	39,000.00
C-Contingency	343			\$ 144,000.00			\$ -	\$ -	144,000.00
C-Dyed Diesel	345			\$ 315,000.00			\$ -	\$ -	315,000.00
C-Drillout	346			\$ 325,000.00			\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351				\$ 2,000.00		\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353				\$ 41,000.00		\$ -	\$ -	41,000.00
TB-Contract Labor	356				\$ 172,000.00		\$ -	\$ -	172,000.00
PEQ-Contract Labor	374					\$ 38,000.00	\$ -	\$ -	38,000.00
PEQ-Water Disposal	387					\$ 179,000.00	\$ -	\$ -	179,000.00
PEQ-HRZ Well Offset Frac	391					\$ 18,000.00	\$ -	\$ -	18,000.00
<b>Total Intangible Costs</b>		\$ -	\$ -	\$ 3,261,000.00	\$ 4,204,000.00	\$ 215,000.00	\$ 235,000.00	\$ -	\$ 7,915,000.00

<b>Tangible Costs</b>									
PEQ-Flowback Crews & Equip	392					\$ 115,000.00	\$ -	\$ -	115,000.00
D-Surface Casing	401			\$ 25,000.00			\$ -	\$ -	25,000.00
D-Intermed Csg	402			\$ 228,000.00			\$ -	\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00			\$ -	\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00			\$ -	\$ -	76,000.00
C-Tubing	504			\$ 52,000.00			\$ -	\$ -	52,000.00
C-Wellhead Equip	505			\$ 28,000.00			\$ -	\$ -	28,000.00
TB-Tanks	510				\$ 77,000.00		\$ -	\$ -	77,000.00
TB-Flowlines/Pipelines	511				\$ 29,000.00		\$ -	\$ -	29,000.00
TB-Htr Trlr/Seprtr	512				\$ 176,000.00		\$ -	\$ -	176,000.00
TB-Electrical System/Equipment	513				\$ 113,000.00		\$ -	\$ -	113,000.00
C-Pckrs/Anchors/Hgns	514			\$ 65,000.00			\$ -	\$ -	65,000.00
TB-Couplings/Fittings/Valves	515				\$ 194,000.00		\$ -	\$ -	194,000.00
TB-Pumps-Surface	521				\$ 24,000.00		\$ -	\$ -	24,000.00
TB-Instumentation/SCADA/POC	522				\$ 20,000.00		\$ -	\$ -	20,000.00
TB-Miscellaneous	523				\$ 20,000.00		\$ -	\$ -	20,000.00
TB-Meters/Lacts	525				\$ 24,000.00		\$ -	\$ -	24,000.00
TB-Flares/Combusters/Emission	526				\$ 29,000.00		\$ -	\$ -	29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00			\$ -	\$ -	25,000.00
PEQ-Wellhead Equipment	531					\$ 41,000.00	\$ -	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 158,000.00	\$ -	\$ 1,676,000.00

<b>Total Gross Cost</b>	\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ -	\$ 9,591,000.00
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Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 5/20/20

We approve:  
 % Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company:  
 By: \_\_\_\_\_

Printed Name:  
 Title:  
 Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
Drill & Complete**

Well Name BOO RADLEY FED COM 706H  
SHL 26S-R28E, Sec 16; 220 FSL, 1400 FWL, or Unit N  
BHL 26S-R28E, Sec 33; 200 FSL, 550 FWL, or Lot 5  
Formation WOLFCAMP  
Legal 21, 28, & 33, T26S-R28E  
AFE Numbers

Prospect ATLAS 2628  
State & County NEW MEXICO, EDDY  
Objective DRILL & COMPLETE  
Depth 22,791  
TVD 9,441

Cost Description	Code	PreSpud (PS)	Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Intangible Costs</b>									
D-LcIn/Pits/Roads	205			\$ 102,000.00			\$ -	\$ -	102,000.00
D-Drilling Overhead	206			\$ 9,000.00			\$ -	\$ -	9,000.00
D-Daywork Contract	209			\$ 711,000.00			\$ -	\$ -	711,000.00
D-Directional Drig Services	210			\$ 340,000.00			\$ -	\$ -	340,000.00
D-Fuel & Power	211			\$ 152,000.00			\$ -	\$ -	152,000.00
D-Water	212			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Bits	213			\$ 112,000.00			\$ -	\$ -	112,000.00
D-Mud & Chemicals	214			\$ 269,000.00			\$ -	\$ -	269,000.00
D-Cement Surface	217			\$ 21,000.00			\$ -	\$ -	21,000.00
D-Cement Intermed	218			\$ 80,000.00			\$ -	\$ -	80,000.00
D-Prod-2nd Int Cmt	219			\$ 118,000.00			\$ -	\$ -	118,000.00
D-Float Equipment & Centralizers	221			\$ 64,000.00			\$ -	\$ -	64,000.00
D-Csg Crews & Equip	222			\$ 70,000.00			\$ -	\$ -	70,000.00
D-Contract Labor	225			\$ 7,000.00			\$ -	\$ -	7,000.00
D-Company Sprvsn	226			\$ 54,000.00			\$ -	\$ -	54,000.00
D-Contract Sprvsn	227			\$ 127,000.00			\$ -	\$ -	127,000.00
D-Tstg Csg/Tbg	228			\$ 43,000.00			\$ -	\$ -	43,000.00
D-Mud Logging Unit	229			\$ 48,000.00			\$ -	\$ -	48,000.00
D-Rentals-Surface	235			\$ 209,000.00			\$ -	\$ -	209,000.00
D-Rentals-Subsrfc	236			\$ 97,000.00			\$ -	\$ -	97,000.00
D-Trucking/Forklift/Rig Mob	237			\$ 150,000.00			\$ -	\$ -	150,000.00
D-Welding Services	238			\$ 4,000.00			\$ -	\$ -	4,000.00
D-Contingency	243			\$ 65,000.00			\$ -	\$ -	65,000.00
D-Envmntl/Clsd Loop	244			\$ 329,000.00			\$ -	\$ -	329,000.00
C-Wellbore Frac Prep	304				\$ 81,000.00		\$ -	\$ -	81,000.00
C-LcIn/Pits/Roads	305				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Completion OH	306				\$ 15,000.00		\$ -	\$ -	15,000.00
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C-Contract Labor	325				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Company Sprvsn	326				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Contract Sprvsn	327				\$ 145,000.00		\$ -	\$ -	145,000.00
C-Artificial Lift Install	329				\$ 44,000.00		\$ -	\$ -	44,000.00
C-Perf/Wireline Svc	331				\$ 363,000.00		\$ -	\$ -	363,000.00
C-Trucking/Forklift/Rig Mob	337				\$ 10,000.00		\$ -	\$ -	10,000.00
C-Water Disposal	339				\$ 39,000.00		\$ -	\$ -	39,000.00
C-Contingency	343				\$ 144,000.00		\$ -	\$ -	144,000.00
C-Dyed Diesel	345				\$ 315,000.00		\$ -	\$ -	315,000.00
C-Dnllout	346				\$ 325,000.00		\$ -	\$ -	325,000.00
TB-Damages/Right of Way	351					\$ 2,000.00	\$ -	\$ -	2,000.00
TB-Location/Pits/Roads	353					\$ 41,000.00	\$ -	\$ -	41,000.00
TB-Contract Labor	356					\$ 172,000.00	\$ -	\$ -	172,000.00
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<b>Tangible Costs</b>									
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D-Intermed Csg	402			\$ 228,000.00			\$ -	\$ -	228,000.00
D-Production Casing/Liner	403			\$ 315,000.00			\$ -	\$ -	315,000.00
D-Wellhead Equip	405			\$ 76,000.00			\$ -	\$ -	76,000.00
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TB-Tanks	510					\$ 77,000.00	\$ -	\$ -	77,000.00
TB-Flowlines/Pipelines	511					\$ 29,000.00	\$ -	\$ -	29,000.00
TB-Hlr Trlr/Septr	512					\$ 176,000.00	\$ -	\$ -	176,000.00
TB-Electrical System/Equipment	513					\$ 113,000.00	\$ -	\$ -	113,000.00
C-Pckrs/Anchors/Hqrs	514			\$ 65,000.00			\$ -	\$ -	65,000.00
TB-Couplings/Fittings/Valves	515					\$ 194,000.00	\$ -	\$ -	194,000.00
TB-Pumps-Surface	521					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Instrumentation/SCADA/POC	522					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Miscellaneous	523					\$ 20,000.00	\$ -	\$ -	20,000.00
TB-Meters/Lacts	525					\$ 24,000.00	\$ -	\$ -	24,000.00
TB-Flares/Combusters/Emission	526					\$ 29,000.00	\$ -	\$ -	29,000.00
C-Gas Lift/Compression	527			\$ 25,000.00			\$ -	\$ -	25,000.00
PEQ-Wellhead Equipment	531						\$ 41,000.00	\$ -	41,000.00
<b>Total Tangible Costs</b>		\$ -	\$ -	\$ 644,000.00	\$ 170,000.00	\$ 706,000.00	\$ 156,000.00	\$ -	\$ 1,676,000.00
<b>Total Gross Cost</b>		\$ -	\$ -	\$ 3,905,000.00	\$ 4,374,000.00	\$ 921,000.00	\$ 391,000.00	\$ -	\$ 9,591,000.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 5/20/20

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

Company: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

Chronology Exhibit

5/20/20: Well proposals and AFE's sent to Chevron, Allar, Sharbro, Oxy USA, Oxy Y-1. Sent via CMRRR & Email.

6/23/20: JOA emailed to Chevron, Allar, Sharbro, Oxy USA, Oxy Y-1.

6/26/20: Designation of Pooled Unit and Communitization Agreements mailed to Chevron, Allar, Sharbro, Oxy USA, Oxy Y-1.

7/7/20: Revised wells proposals & AFE's sent to Chevron, Allar, Sharbro, Oxy USA, Oxy Y-1. Sent via CMRRR & Email.

8/6/20: Informational letter addressing MD and TVD for the 701H and 702H sent to Chevron, Allar, Sharbro, Oxy USA, Oxy Y-1.

8/12/20: Informational letter addressing SHL on the 701H, 702H, 703H and 706H sent to Chevron, Allar, Sharbro, Oxy USA, Oxy Y-1.

**STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION**

**APPLICATION OF COG OPERATING LLC  
FOR COMPULSORY POOLING,  
EDDY COUNTY, NEW MEXICO.**

**CASE NO. 21410**

**AFFIDAVIT OF BENJAMIN DAVIS, GEOLOGIST**

Benjamin Davis, of lawful age and being first duly sworn, declares as follows:

1. My name is Benjamin Davis. I work for COG Operating, LLC ("COG") as a Geologist.
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum geology, and my credentials have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by COG in this case, and I have conducted a geologic study of the lands in the subject area.
4. In Case No. 21410, COG is targeting the Wolfcamp formation.
5. COG Exhibit D-1 is a project location map outlining Sections 21, 28, and 33 comprising the proposed spacing unit in Case No. 21410.
6. COG Exhibit D-2 is a subsea structure map off the top of the Wolfcamp Structure. Within Sections 21, 28, and 33, there are pink lines on the map that reflect the path of the proposed wellbores for the **Boo Radley Com 701H-706H Wells**. The contour interval is 50 feet. The structure map shows that the Wolfcamp Structure is dipping gently to the east. The structure appears consistent in this section. I do not observe any faulting, pinchouts, or other geologic hazards to developing a horizontal well.

**BEFORE THE OIL CONSERVATION DIVISION**  
Santa Fe, New Mexico  
**Exhibit No. D**  
Submitted by: **COG OPERATING LLC**  
Hearing Date: September 10, 2020  
Case No. 21410

7. **COG Exhibit D-3** is a map that shows the location of the three wells that were used to construct a cross-section from A to A'. I consider these wells to be representative of the geology of the area.

8. **COG Exhibit D-4** is a stratigraphic cross section for the three representative wells from A to A'. The exhibit shows logs for gamma ray, resistivity, density, and neutron for the wells. The proposed target interval in the Upper Wolfcamp for these wells is labeled and depicted with a green bracket. The logs in the cross-section demonstrate that the targeted interval within the Wolfcamp formation is consistent in thickness, across the entire spacing unit.

9. Based on my geologic study of the areas, I have not identified any geologic impediments to drilling horizontal wells in the area.

10. In my opinion, each tract comprising the proposed spacing unit will be productive and contribute more-or-less equally to production from the wellbores.

11. In my opinion, the stand-up orientation of the proposed wells is the preferred orientation for horizontal well development in this area and is appropriate to efficiently and effectively develop the subject acreage.

12. In my opinion, the granting of COG's application in this case is in the best interest of conservation, the prevention of waste, and protection of correlative rights.

13. **COG Exhibits D-1 through D-4** were prepared by me or compiled from COG's business records and are true and accurate to the best of my knowledge.

**FURTHER AFFIANT SAYETH NOT.**

Benjamin Davis  
BENJAMIN DAVIS

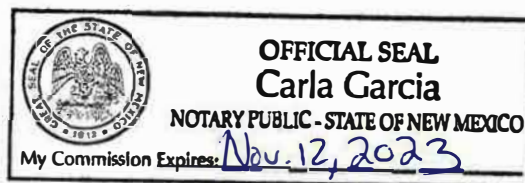
STATE OF TEXAS                    )  
  )  
COUNTY OF MIDLAND            )

SUBSCRIBED and SWORN to before me this 8 day of September 2020 by  
Benjamin Davis.

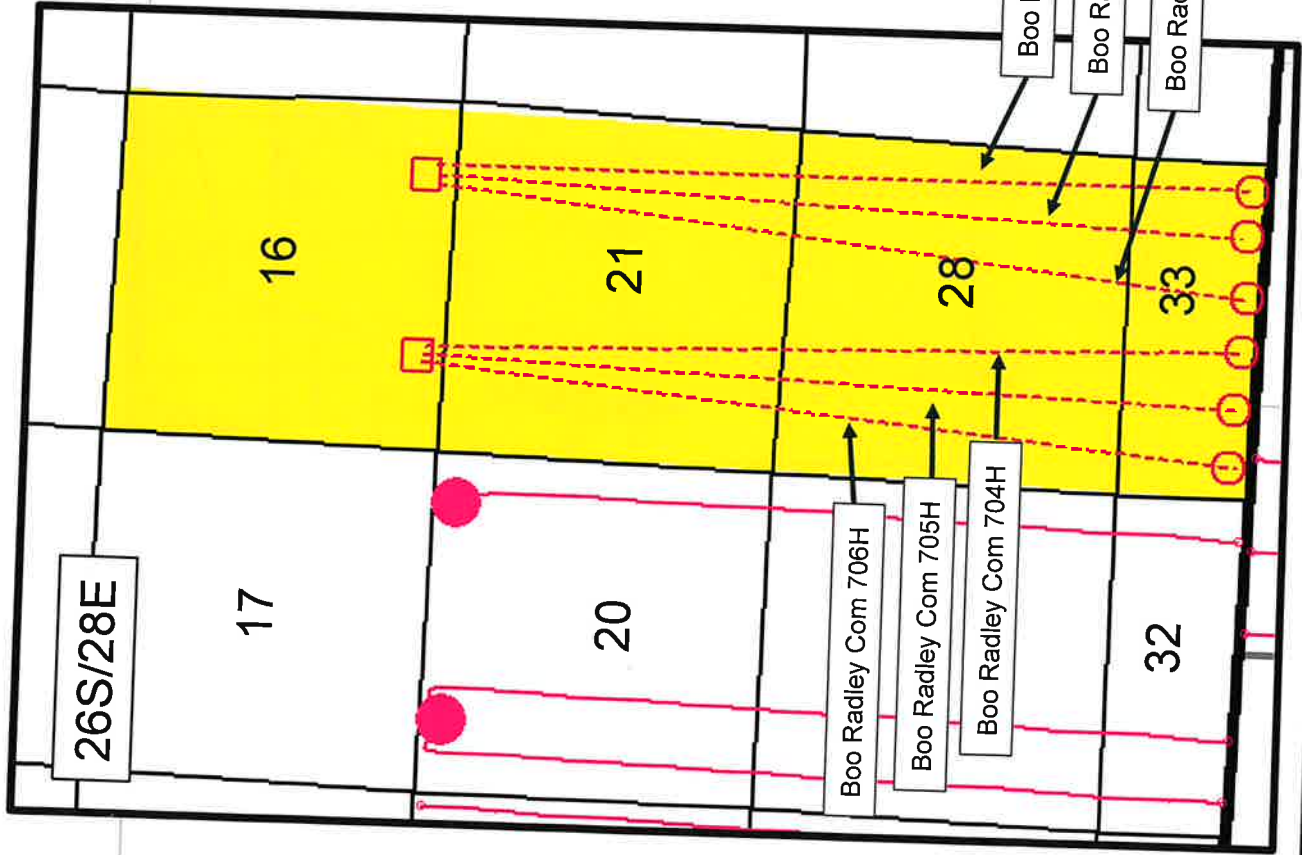
Carla Garcia  
NOTARY PUBLIC

My Commission Expires:

Nov. 12, 2023

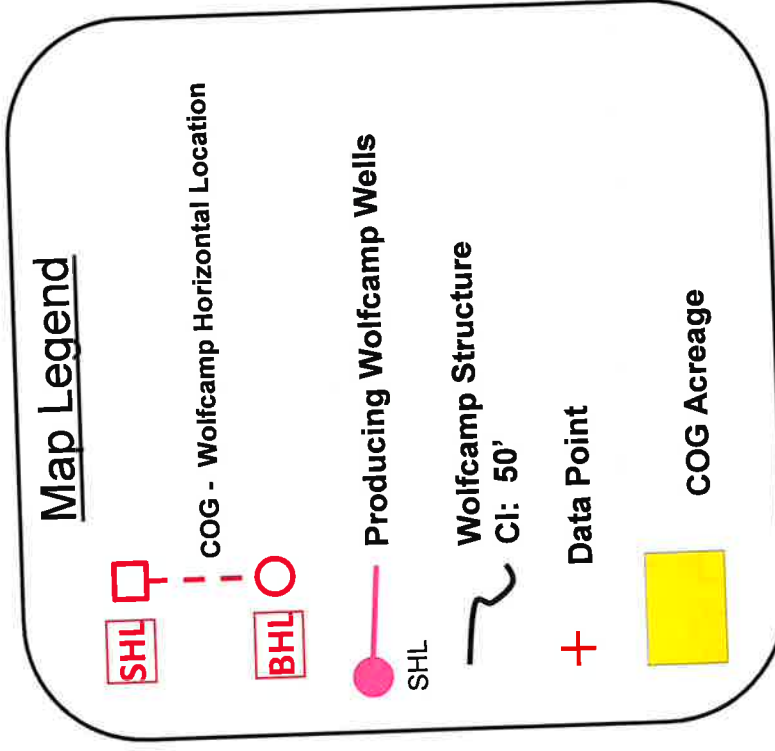
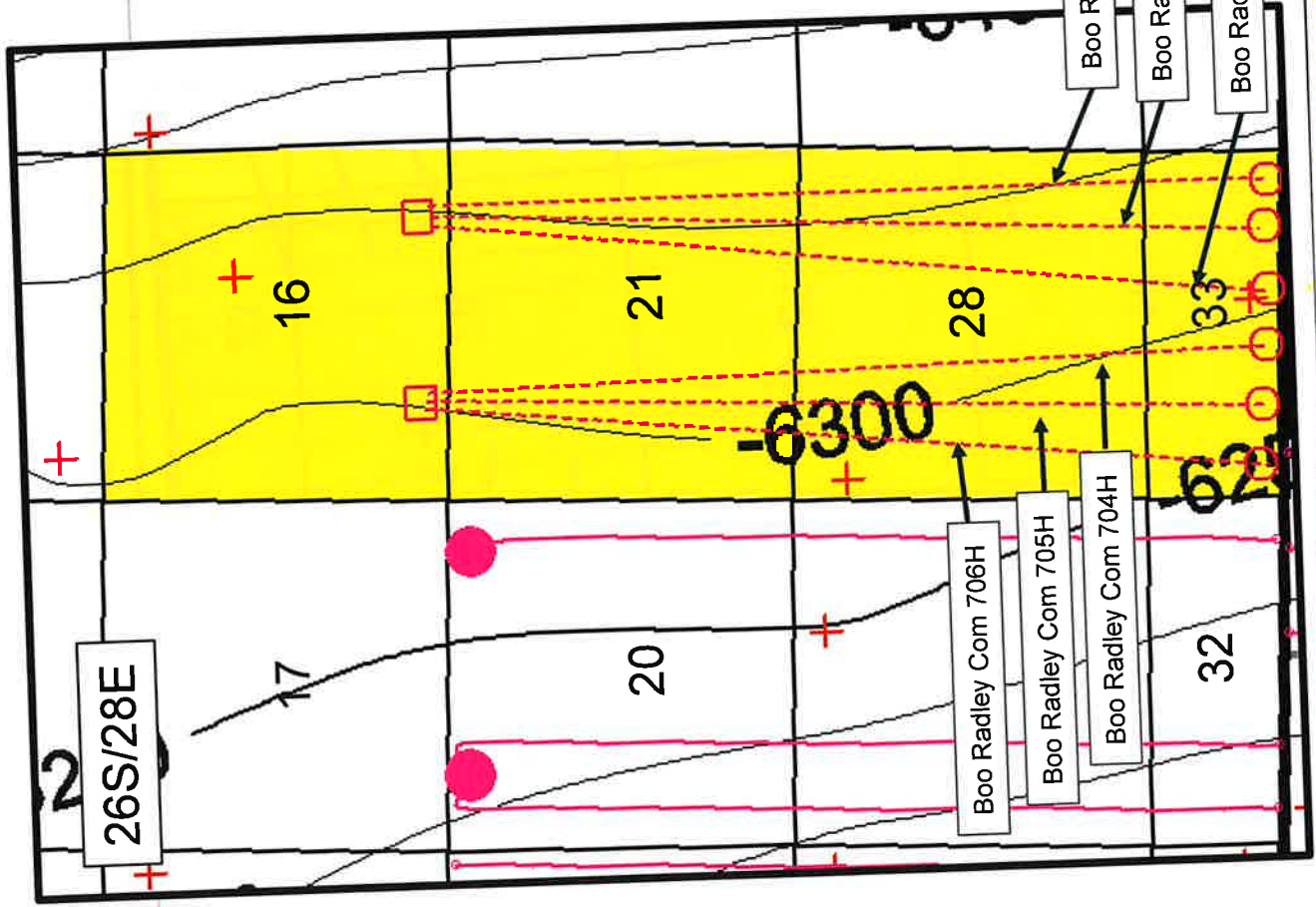


# Wolfcamp Pool Boo Radley Com 701H-706H

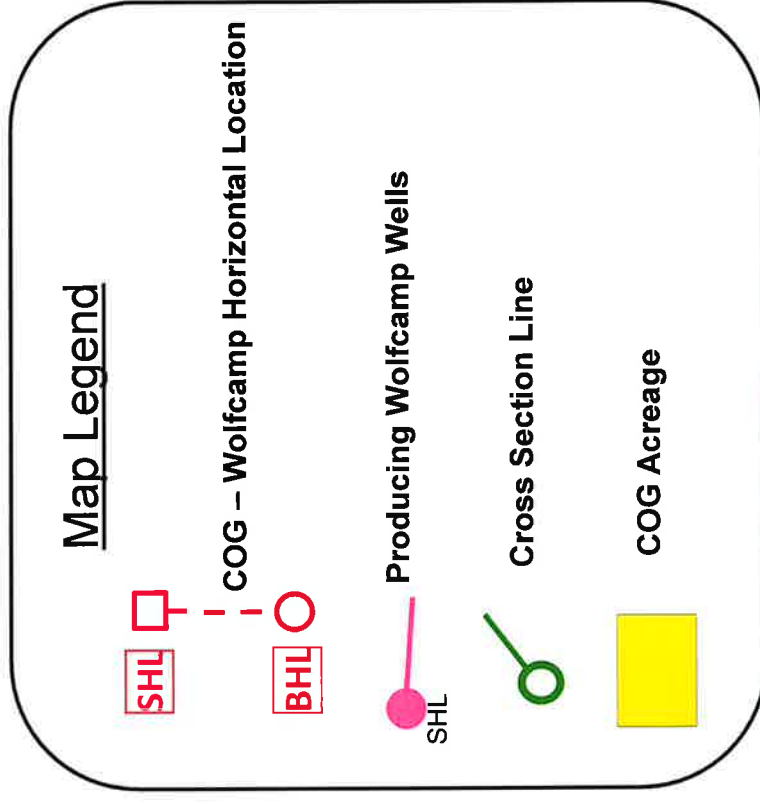
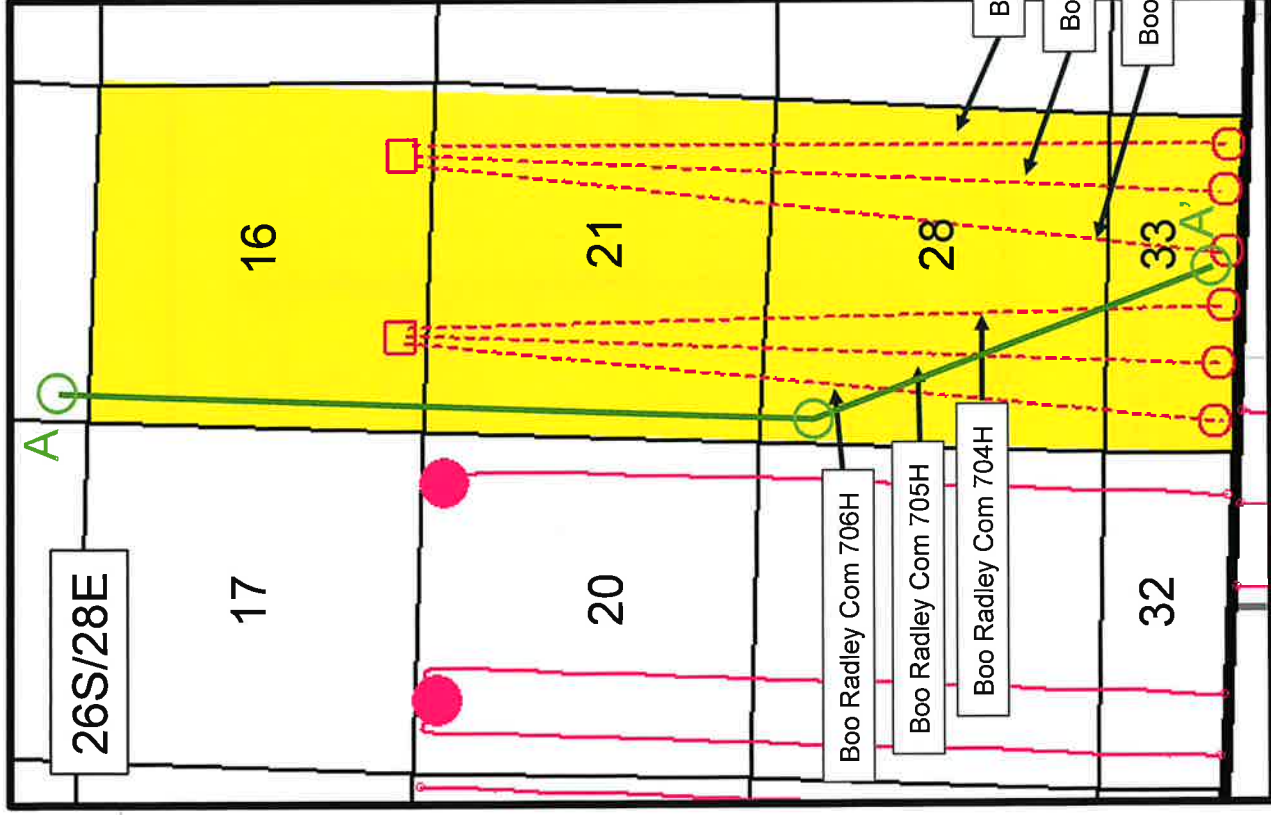


# Wolfcamp Pool

## Wolfcamp Structure Map



# Wolfcamp Pool Cross Section Map



BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. D3

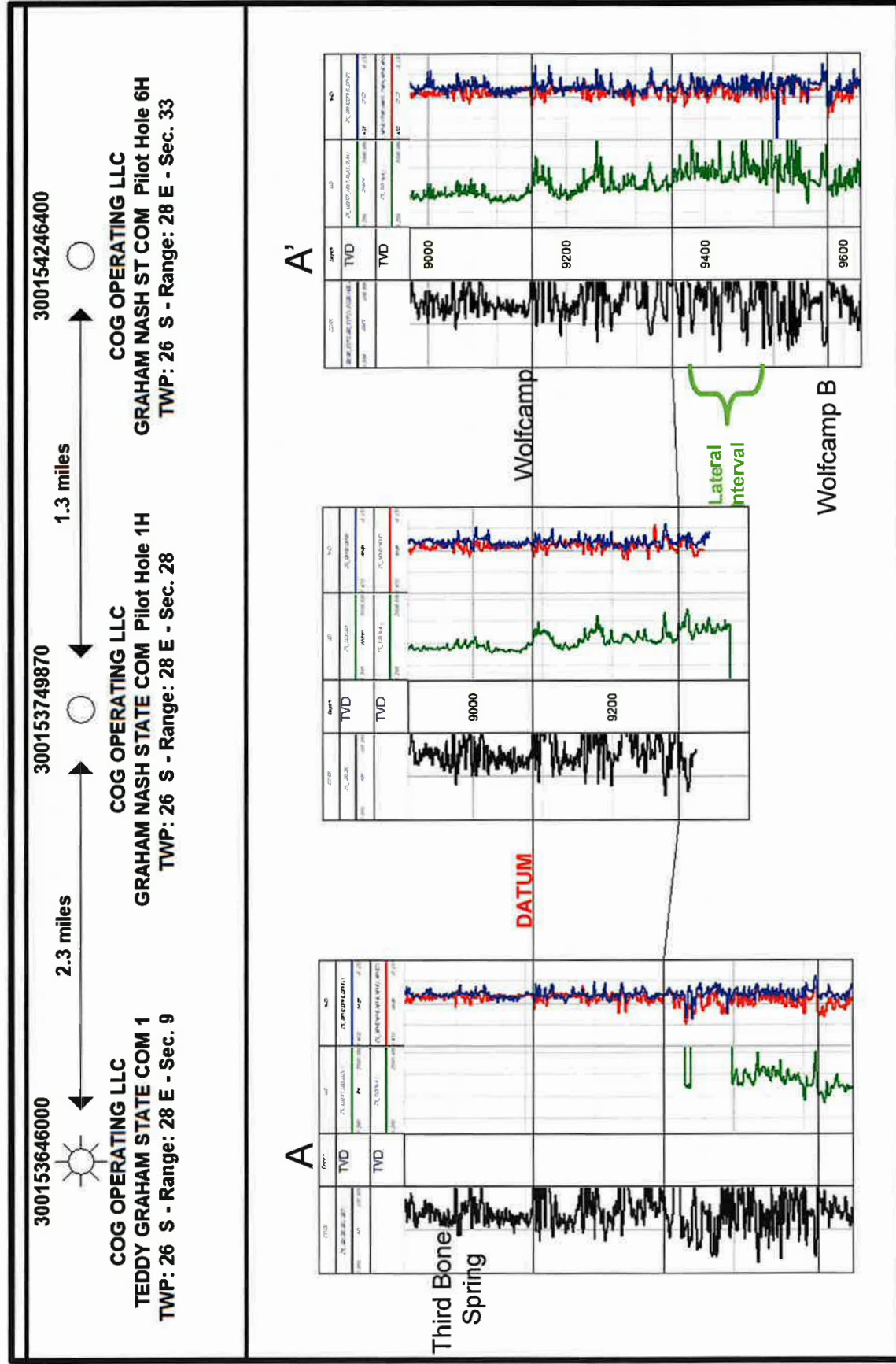
Submitted by: COG OPERATING LLC

Hearing Date: September 10, 2020

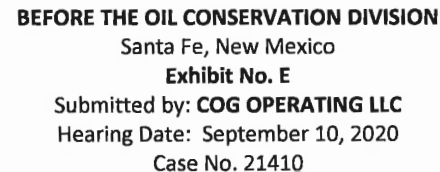
Case No. 21410



# Stratigraphic Cross Section A – A'



BEFORE THE OIL CONSERVATION DIVISION  
 Santa Fe, New Mexico  
 Exhibit No. D4  
 Submitted by: COG OPERATING LLC  
 Hearing Date: September 10, 2020  
 Case No. 21410



**HOLLAND & HART**



**Michael H. Feldewert**

**Phone** (505) 988-4421

**Fax** (505) 983-6043

[mfeldewert@hollandhart.com](mailto:mfeldewert@hollandhart.com)

August 21, 2020

**VIA CERTIFIED MAIL**  
**CERTIFIED RECEIPT REQUESTED**

**TO: ALL INTEREST OWNERS SUBJECT TO POOLING PROCEEDINGS**

**Re: Application of COG Operating, LLC for Compulsory Pooling, Eddy County,  
New Mexico.  
Boo Radley Com 701H-706H wells**

Ladies & Gentlemen:

This letter is to advise you that COG Operating LLC has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Examiner on September 10, 2020, and the status of the hearing can be monitored through the Division's website at <http://www.emnrd.state.nm.us/oecd/>.

**During the COVID-19 Pubic Health Emergency, state buildings are closed to the public and hearings will be conducted remotely. To participate in the electronic hearing, please see the instructions posted on the OCD Hearings website: <http://www.emnrd.state.nm.us/OCD/announcements.html>.**

You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date. Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter, please contact Lizzy Laufer, at (512) 587-6873 or [ELaufer@concho.com](mailto:ELaufer@concho.com).

Sincerely,

Michael H. Feldewert

**ATTORNEY FOR COG OPERATING LLC**

COG - Boo Radley 701H-706H  
Case No. 21410 Postal Delivery Report

TrackingNo	DeliveryAddress	AddressLine2	State	Zip	EDCReportURL	USPS_History
9414811898765829957966	Buckhorn Minerals IV, LP	1800 Bering Dr Ste 1075	Houston	TX	77057-3148	Your item was delivered at Aug 26 in HOUSTON,TX 77057.
9414811898765829957157	EOG Resources Inc.	5509 Champions Dr	Midland	TX	79706-2843	Your item was delivered at Aug 25 in MIDLAND,TX 79702.
9414811898765829957126	George Thompson & Shirley Thompson	4619 94th St	Lubbock	TX	79424-5015	Your item was delivered at Aug 25 in LUBBOCK,TX 79424.
9414811898765829957195	Kemp Smith, LLP	221 N Kansas St Ste 1700	El Paso	TX	79901-1401	Your item was delivered at Aug 26 in EL PASO,TX 79901.
9414811898765829957188	Malaga EF7, LLC	PO Box 2064	Midland	TX	79702-2064	Your item was delivered at Aug 31 in MIDLAND,TX 79701.
9414811898765829957171	Malaga Royalty, LLC	PO Box 2064	Midland	TX	79702-2064	Your item was delivered at Aug 31 in MIDLAND,TX 79701.
9414811898765829957355	Margie Fort Burns a/k/a Marguerite Fort Burns	12711 Colorado Blvd Unit 505	Thornton	CO	80241-2869	Your item was delivered at Aug 24 in THORNTON,CO 80241.
9414811898765829957324	Mewbourne Oil Company	500 W Texas Ave Ste 1020	Midland	TX	79701-4279	In Transit, Arriving Late at Aug 29 in , .
9414811898765829957393	OXY USA Inc.	5 Greenway Plz Ste 110	Houston	TX	77046-0521	Your item was delivered at Aug 26 in HOUSTON,TX 77046.
9414811898765829957348	OXY Y-1 Company	5 Greenway Plz Ste 110	Houston	TX	77046-0521	Your item was delivered at Aug 26 in HOUSTON,TX 77046.
9414811898765829957379	Philip L. White	PO Box 25968	Albuquerque	NM	87125-0968	Your item was delivered at Aug 27 in ALBUQUERQUE,NM 87101.
9414811898765829957904	Chevron U.S.A. Inc.	6301 Deauville	Midland	TX	79706-2964	Your item was delivered at Aug 25 in MIDLAND,TX 79706.

COG - Boo Radley 701H-706H  
Case No. 21410 Postal Delivery Report

9414811898765829957058	Ricky D Raindl	PO Box 142454	Irving	TX	75014-2454	Your item was delivered at Aug 25 in IRVING,TX 75014.
9414811898765829957027	Sharbro Energy LLC	327 W Main St	Artesia	NM	88210-2160	Your item was delivered at Aug 26 in ARTESIA,NM 88210.
9414811898765829957003	The Allar Company	PO Box 1567	Graham	TX	76450-7567	Your item was delivered at Aug 24 in GRAHAM,TX 76450.
9414811898765829957096	Wayne A Bissett and Laura Bissett	PO Box 2101	Midland	TX	79702-2101	Your item was delivered at Aug 31 in MIDLAND,TX 79701.
9414811898765829957942	Chevron U.S.A. Inc.	6301 Deauville	Midland	TX	79706-2964	Your item was delivered at Aug 25 in MIDLAND,TX 79706.
9414811898765829957935	Christine S. Fowlkes Aka Christine Speidel Fowlkes	416 S. Manzita Drive	Horizon City	TX	79928	Your item was delivered at Aug 24 in EL PASO,TX 79928.
9414811898765829957614	Christopher Fowlkes	416 S. Manzita Drive	Horizon City	TX	79928	Your item was delivered at Aug 24 in EL PASO,TX 79928.
9414811898765829957669	David Kerby & Rebecca Kerby	16704 County Road 1440	Wolfforth	TX	79382-4704	Your item was delivered at Aug 26 in WOLFFORTH,TX 79382.
9414811898765829957690	Debra Kay Primera	PO Box 28504	Austin	TX	78755-8504	Your item was delivered at Aug 28 in AUSTIN,TX 78731.
9414811898765829957683	Delaware Ranch, Inc.	1304 W Riverside Dr	Carlsbad	NM	88220-4033	Your item was delivered at Aug 26 in CARLSBAD,NM 88220.
9414811898765829957676	EG3, Inc	PO Box 1567	Graham	TX	76450-7567	Your item was delivered at Aug 24 in GRAHAM,TX 76450.

**Affidavit of Publication**

**Ad # 0004345384**

**This is not an invoice**

**HOLLAND & HART**  
POBOX 2208

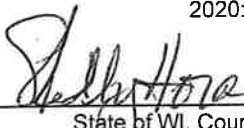
**SANTA FE, NM 87504**

I, a legal clerk of the **Carlsbad Current Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

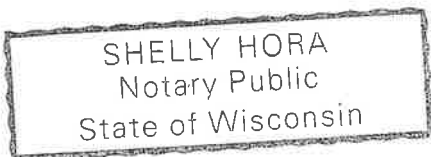
**08/25/2020**

  
\_\_\_\_\_  
Legal Clerk

Subscribed and sworn before me this August 25,  
2020:

  
\_\_\_\_\_  
State of WI, County of Brown  
NOTARY PUBLIC

  
\_\_\_\_\_  
My commission expires



Ad # 0004345384  
PO #: Boo  
# of Affidavits 1

**This is not an invoice**

**BEFORE THE OIL CONSERVATION DIVISION**  
Santa Fe, New Mexico  
**Exhibit No. F**  
Submitted by: **COG OPERATING LLC**  
Hearing Date: September 10, 2020  
Case No. 21410

STATE OF NEW MEXICO  
ENERGY, MINERALS AND  
NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
SANTA FE, NEW MEXICO

The State of New Mexico, Energy Minerals and Natural Resources Department, Oil Conservation Division ("Division") hereby gives notice that the Division will hold public hearings before a hearing examiner on the following case. During the COVID-19 Public Health Emergency, state buildings are closed to the public and Division hearings will be conducted remotely. The remote electronic public hearing will be conducted remotely on the following case. The hearing will be conducted on Thursday, September 10, 2020, beginning at 8:15 a.m. To participate in the electronic hearing, see the instructions posted below. The docket may be viewed at <http://www.emnrd.state.nm.us/OCD/hearings.html> or obtained from Marlene Salvidrez, at [Marlene.Salvidrez@state.nm.us](mailto:Marlene.Salvidrez@state.nm.us). Documents filed in the case may be viewed at <http://ocdimage.emnrd.state.nm.us/imaging/CaseFileCriteria.aspx>. If you are an individual with a disability who needs a reader, amplifier, qualified sign language interpreter, or other form of auxiliary aid or service to attend or participate in a hearing, contact Marlene Salvidrez at [Marlene.Salvidrez@state.nm.us](mailto:Marlene.Salvidrez@state.nm.us), or the New Mexico Relay Network at 1-800-659-1779, no later than Monday, August 31, 2020.

Persons may view and participate in the hearings through the following link and as indicated below:

<https://nmemnrd.webex.com/nmemnrd/onstage/g.php?MTID=eb341e0bce66f096439328d9faf7f2575>  
Event number: 146 302 1001  
Event password: sPP2Cx4x38D

Join by video: 1463021001@nmemnrd.webex.com  
You can also dial 173.243.2.68 and enter your meeting number

Join by audio: +1-408-418-9388 United States Toll  
Access code: 146 302 1001

STATE OF NEW MEXICO TO:  
All named parties and persons  
having any right, title, interest  
or claim in the following case  
and notice to the public.

(NOTE: All land descriptions herein refer to the New Mexico Principal Meridian whether or not so stated.)

To: All overriding royalty interest owners and pooled parties, including: OXY Y-1 Company; OXY USA Inc.; Sharbro Energy LLC; The Allar Company; Chevron U.S.A. Inc.; EG3, Inc; Malaga Royalty, LLC; Malaga EF7, LLC; Philip L. White, his heirs and devisees; Margie Fort Burns a/k/a Marguerite Fort Burns; Debra Kay Primera, her heirs and devisees; Ricky D. Raindl, his heirs and devisees; Christine S. Fowlkes, aka Christine Speidel Fowlkes, her heirs and devisees; Christopher Fowlkes, his heirs and devisees; Kemp Smith, LLP; David Kerby & Rebecca Kerby, their heirs and devisees; George Thompson & Shirley Thompson, their heirs and devisees; Buckhorn Minerals IV, LP; Wayne A. Bissett and Laura Bissett, their heirs and devisees; Delaware Ranch, Inc.; Mewbourne Oil Company; and EOG Resources Inc.

Case No. 21410: Application of COG Operating LLC for compulsory pooling, Eddy County, New Mexico. Applicant in the above-styled cause seeks an order pooling all uncommitted interest owners in the Wolfcamp formation [Purple Sage Wolfcamp Gas Pool (98220)] underlying a standard 1,538.88-acre, more or less, horizontal spacing unit comprised of all of Sections 21, 28, and 33, Township 26 South, Range 28 East, Eddy County, New Mexico. Applicant seeks to dedicate the above-referenced horizontal spacing unit to the following proposed wells:

- The Boo Radley Com 701H well, and the Boo Radley Com 702H well to be drilled from a common surface hole location in SW/4 SE/4 (Unit O) of Section 16 to bottom hole locations in the SE/4 NE/4 (Lot 4) of Section 33;
  - The Boo Radley Com 703H well to be drilled from a surface hole location in SW/4 SE/4 (Unit O) of Section 16 to a bottom hole location in the SW/4 NE/4 (Lot 3) of Section 33;
  - The Boo Radley Com 704H well and the Boo Radley Com 705H well to be drilled from a common surface hole location in SE/4 SW/4 (Unit N) of Section 16 to bottom hole locations in the SE/4 NW/4 (Lot 2) of Section 33; and
  - The Boo Radley Com 706H well to be drilled from a surface hole location in SE/4 SW/4 (Unit N) of Section 16 to a bottom hole location in the SW/4 NW/4 (Lot 1) of Section 33.
- The completed interval for the proposed Boo Radley Com 704H well will be within 330' of the quarter-quarter line separating the W/2 and the E/2 of Sections 21, 28, and 33 to allow inclusion of the E/2 of Sections 21, 28, and 33 into a

standard horizontal well spacing unit. Also, to be considered will be the cost of drilling and completing the wells, the allocation of the cost thereof, the actual operating costs and charges for supervision, the designation of applicant as operator, and the imposition of 200% charge for risk involved in drilling and completing each well. Said area is located approximately 15 miles south of Malaga, New Mexico.

*August 25, 2020*