

**HOBBS OCD**  
**FEB 08 2016**  
**RECEIVED**

**DISTRICT I**  
 1825 N. FRENCH DR., HOBBS, NM 88240  
 Phone: (575) 393-6161 Fax: (575) 393-0720

**DISTRICT II**  
 811 S. FIRST ST., ARTESIA, NM 88210  
 Phone: (575) 748-1283 Fax: (575) 748-9720

**DISTRICT III**  
 1000 RIO BRAZOS RD., AZTEC, NM 87410  
 Phone: (505) 334-6176 Fax: (505) 334-6170

**DISTRICT IV**  
 1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
 Phone: (505) 478-3480 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 30-025- <b>43067</b>	Pool Code 97922	Pool Name WC-025 G-06 S223421L; Bone Spring
Property Code <b>315744</b>	Property Name SMALLS FEDERAL	Well Number 6H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3405.7

**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	28	22-S	34-E		190'	SOUTH	2010'	EAST	LEA

**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
B	28	22-S	34-E		330'	NORTH	1980'	EAST	EL

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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 SURFACE LOCATION**  
 Y=494230.4 N  
 X=765819.0 E  
 LAT.=32.355817' N  
 LONG.=103.472511' W

**NAD 27 PROPOSED BOTTOM HOLE LOCATION**  
 Y=498986.8 N  
 X=765818.1 E  
 LAT.=32.368890' N  
 LONG.=103.472390' W

**GRID AZ. - 359°59'30"**  
**HORZ. DIST. - 4756.4**

**PROJECT AREA**  
**PRODUCING AREA**

**B.H.** (Bottom Hole)  
**S.L.** (Surface Location)

**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.

*Melanie J Wilson* 2/22/15  
 Signature Date

Melanie J Wilson  
 Printed Name

mwilson@concho.com  
 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.

JANUARY 9, 2015  
 Date of Survey

Signature & Seal of Professional Surveyor

*Chad Harcrow* 2/4/15  
 Certificate No. CHAD HARCROW 17777  
 W.O. # 14-1291 DRAWN BY: AF

**FEB 11 2016**

**COG Operating LLC, Smalls Federal 6H**

N	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	Are anchors required by manufacturer? No.
N	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

See COA

**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW Gel	8.6 - 9.0	28-34	N/C
Surf csg	Int shoe	*Saturated Brine	10.0 - 10.2	28-34	N/C
Int shoe	TMD	Cut Brine	8.6 - 9.3	28-34	N/C

See COA

\*If lost circulation is encountered, will switch to fresh water.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	Pason PVT
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**6. Logging and Testing Procedures**

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned	Interval
X Mud log	Production

**COG Operating LLC, Smalls Federal 6H**

**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	4869 psi – 2 <sup>nd</sup> Bone Spring Sand (10290' – Lateral TVD)
Abnormal Temperature	No

Mitigation measure for abnormal conditions.

- Lost circulation material/sweeps/mud scavengers.
- Maintain stock of LCM and weighting materials onsite.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

**8. Other facets of operation**

Is this a walking operation? Yes. *See COA*  
 Will be pre-setting casing? No.  
 Will well be hydraulically fractured? Yes.

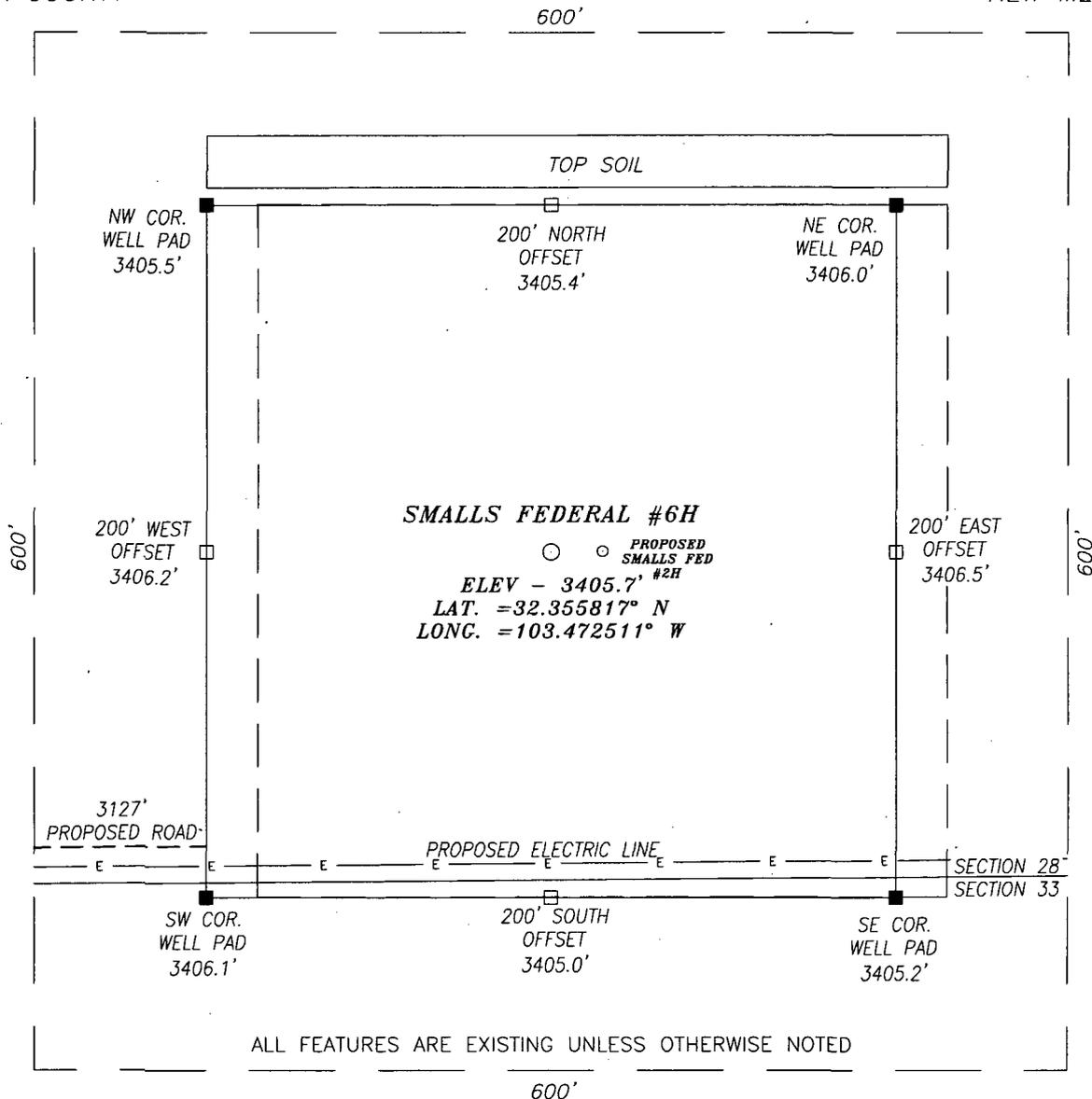
**Attachments**

- Directional Plan
- BOP & Choke Schematics
- C102 and supporting maps
- Rig plat
- H2S schematic
- H2S contingency plan
- Interim reclamation plat

SECTION 28, TOWNSHIP 22 SOUTH, RANGE 34 EAST, N.M.P.M.,

LEA COUNTY

NEW MEXICO



ALL FEATURES ARE EXISTING UNLESS OTHERWISE NOTED

600'

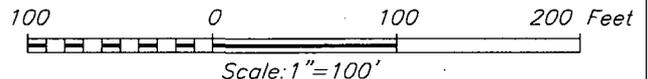
**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF HWY 128 AND DELAWARE BASIN ROAD GO NORTH ON DELAWARE BASIN RD. APPROX. 9 MILES TO SHARP RIGHT TURN; THEN CONTINUE ON DELAWARE BASIN RD. APPROX. 1.5 MILES TO A CALICHE LEASE ROAD ON THE LEFT (NORTH); THEN GO ALONG LEASE ROAD APPROX. 2.0 MILES TO A PROPOSED ROAD ON THE RIGHT (EAST); PROPOSED WELL IS APPROX. 0.6 MILES ALONG PROPOSED ROAD.

**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**  
 2314 W. MAIN ST, ARTESIA, N.M. 88210  
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 c.harcrow@harcrowsurveying.com



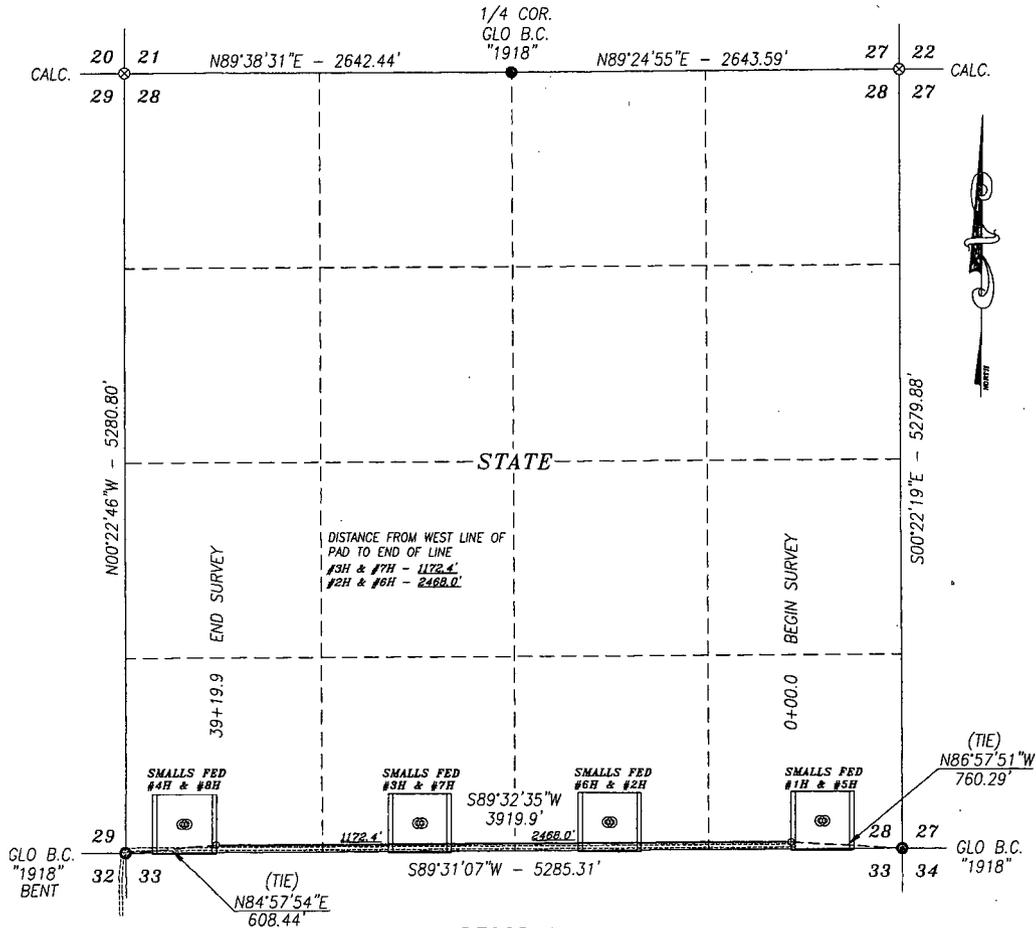
*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777

1/27/16  
 DATE

<b>COG OPERATING, LLC</b>		
SMALLS FEDERAL #6H WELL LOCATED 190 FEET FROM THE SOUTH LINE AND 2010 FEET FROM THE EAST LINE OF SECTION 28, TOWNSHIP 22 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO		
SURVEY DATE: 07/10/2015	PAGE: 1 OF 1	
DRAFTING DATE: 07/13/2015		
APPROVED BY: CH	DRAWN BY: WN	FILE: 15-843

**PIPELINE PLAT  
COG OPERATING, LLC.**

2-7/8 POLY FLOWLINE FROM SMALLS FED #1H & #5H TO THE SMALLS FED #4H & #8H IN  
SECTION 28, TOWNSHIP 22 SOUTH, RANGE 34 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 28, TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMPM, LEA 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 SE/4 OF SAID SECTION, WHICH LIES N86°57'51\"W 760.29 FEET FROM SOUTHEAST CORNER THEN S89°32'35\"W 3919.9 FEET TO A POINT IN THE SW/4 SW/4 OF SAID SECTION, WHICH LIES N84°57'54\"E 608.44 FEET FROM THE SOUTHWEST CORNER.

SAID STRIP OF LAND BEING 3919.9 FEET OR 237.57 RODS IN LENGTH, CONTAINING 2.700 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

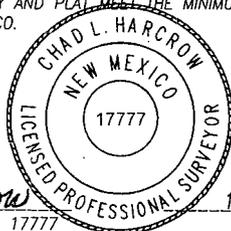
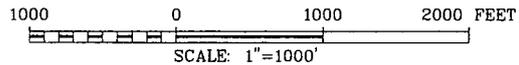
SE/4 SE/4	34.08 RODS OR 0.387 ACRES	SE/4 SW/4	80.08 RODS OR 0.910 ACRES
SW/4 SE/4	80.08 RODS OR 0.910 ACRES	SW/4 SW/4	43.33 RODS OR 0.493 ACRES

**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 GRID VALUES.

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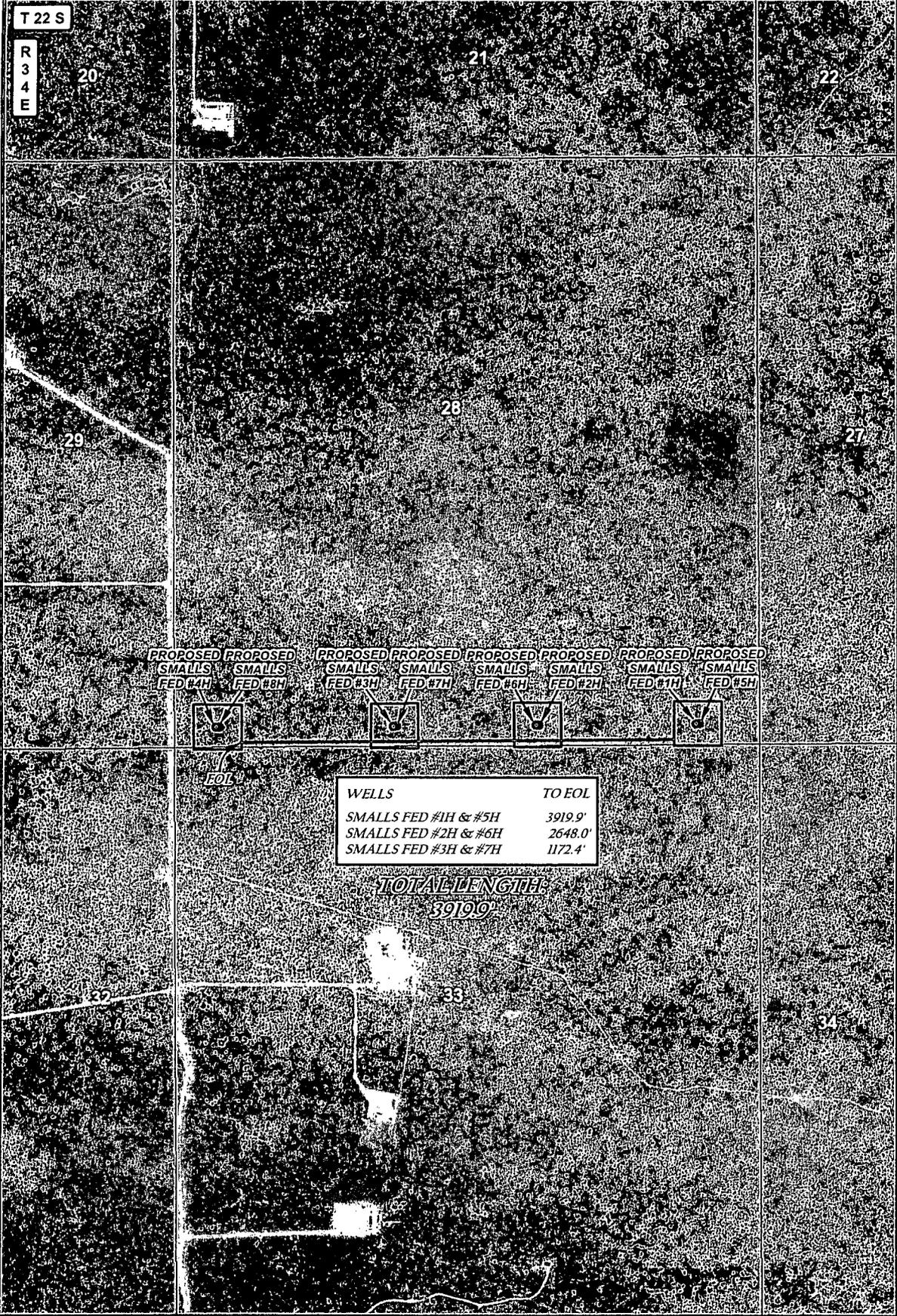
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*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

12/18/15  
DATE

<b>COG OPERATING, LLC</b>	
SURVEY OF A PROPOSED PIPELINE LOCATED IN SECTION 28, TOWNSHIP 22 SOUTH, RANGE 34 EAST, LEA COUNTY, NMPM, NEW MEXICO	
SURVEY DATE: DECEMBER 15, 2015	
DRAFTING DATE: DECEMBER 16, 2015	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: VD
	FILE: 15-1427



**LEGEND**

- WELL
- WELLPAD
- FLOWLINE

**SMALLS FED FLOWLINE SYSTEM**

SECTION: 28	TOWNSHIP: 22 S.	RANGE: 34 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 15-1427	LEASE: SMALLS FED	

0 0.05 0.1 0.2 Miles      1 IN = 1,000 FT

PIPELINE OVERVIEW      IMAGERY      -12/16/2015      S.I.P.

**CONCHO**  
COG OPERATING, LLC

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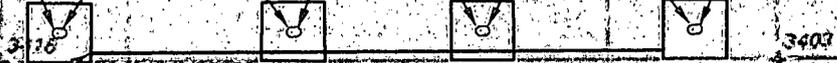
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T 22 S

R  
3  
4  
E

28

PROPOSED SMALLS FED #4H  
 PROPOSED SMALLS FED #8H  
 PROPOSED SMALLS FED #3H  
 PROPOSED SMALLS FED #7H  
 PROPOSED SMALLS FED #6H  
 PROPOSED SMALLS FED #2H  
 PROPOSED SMALLS FED #1H  
 PROPOSED SMALLS FED #5H



WELLS	TO EOL
SMALLS FED #1H & #5H	3919.9'
SMALLS FED #2H & #6H	2648.0'
SMALLS FED #3H & #7H	1172.4'

**TOTAL LENGTH:**  
3919.9'

Tank

TRAIL

33

Tank  
3395

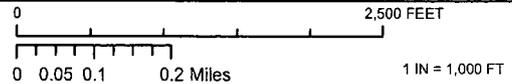
Drill Hole 3345

**LEGEND**

- WELL
- WELLPAD
- FLOWLINE
- ▭ PRIVATE
- ▭ STATE OF NM
- ▭ US BLM

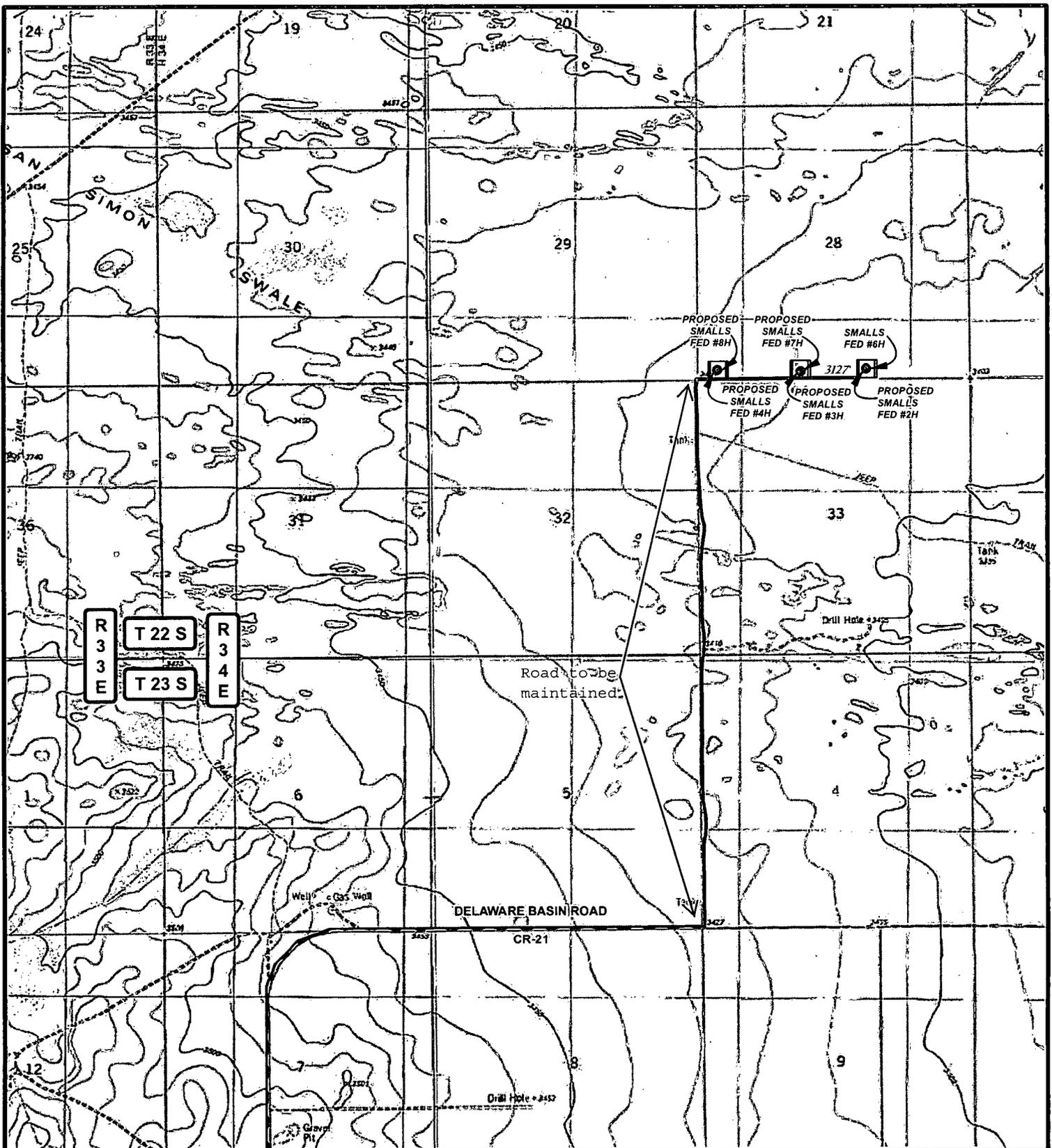
**SMALLS FED FLOWLINE SYSTEM**

SECTION: 28      TOWNSHIP: 22 S.      RANGE: 34 E.  
 STATE: NEW MEXICO      COUNTY: LEA      SURVEY: N.M.P.M.  
 W.O. # 15-1427      LEASE: SMALLS FED



PIPELINE OVERVIEW      LAND STATUS      12/16/2015      SP.



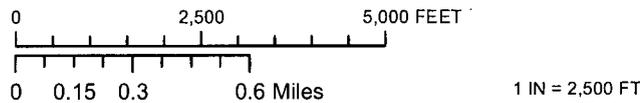


**LEGEND**

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

**SMALLS FEDERAL #6H**

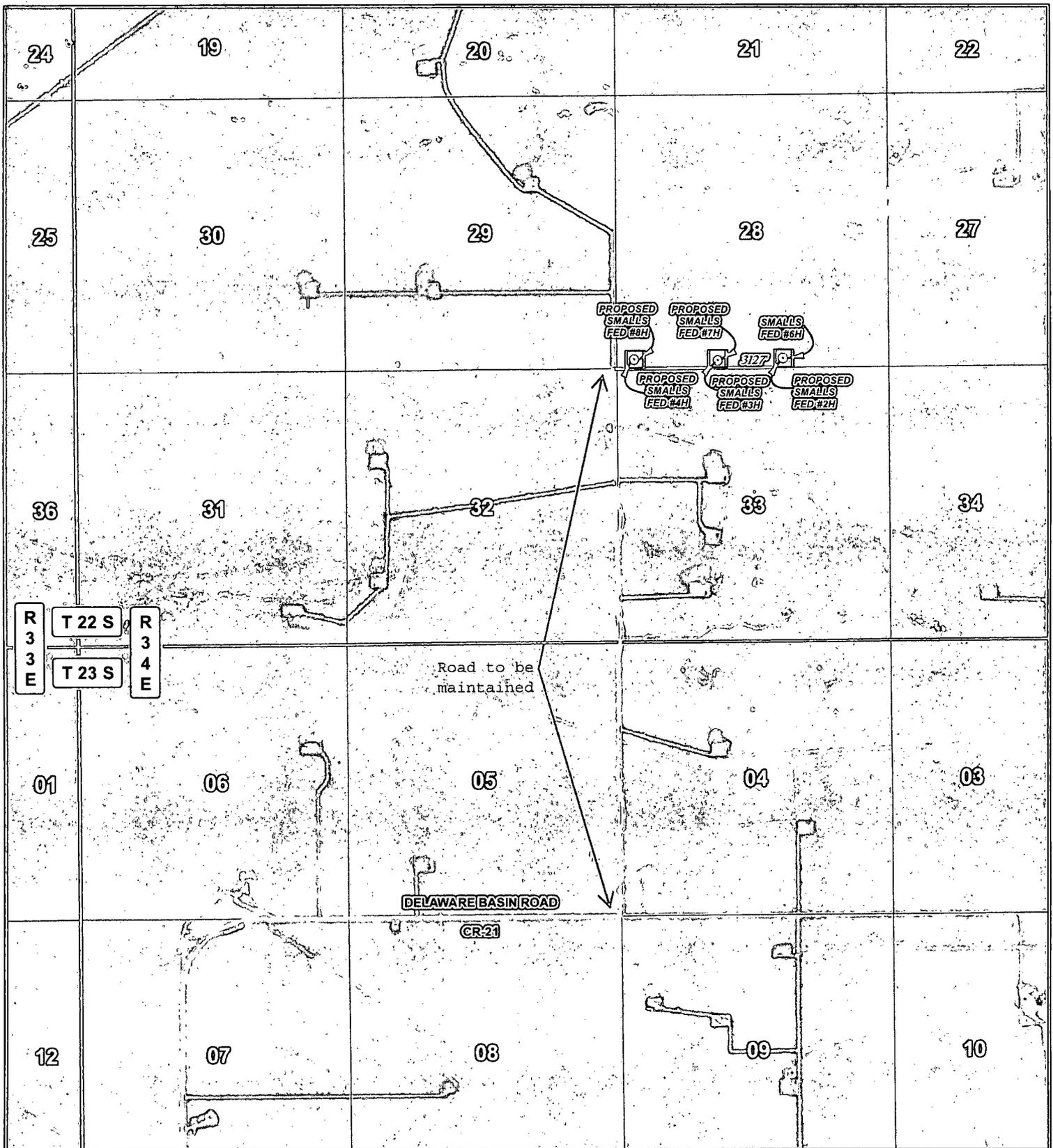
SEC: 28    TWP: 22 S.    RGE: 34 E.    ELEVATION: 3405.7'  
 STATE: NEW MEXICO    COUNTY: LEA    190' FSL & 2010' FEL  
 W.O. # 14-1291    LEASE: SMALLS FED    SURVEY: N.M.P.M



LOCATION MAP    TOPO    01/28/2015    A.F

**CONCHO**  
 COG OPERATING, LLC

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R 33 E  
T 22 S  
T 23 S  
R 34 E

Road to be maintained

DELAWARE BASIN ROAD

CR-21

**LEGEND**

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

**SMALLS FEDERAL #6H**

SEC: 28	TWP: 22 S.	RGE: 34 E.	ELEVATION: 3405.7'
STATE: NEW MEXICO		COUNTY: LEA	190' FSL & 2010' FEL
W.O. # 14-1291	LEASE: SMALLS FED	SURVEY: N.M.P.M	

0 2,500 5,000 FEET

0 0.15 0.3 0.6 Miles

1 IN = 2,500 FT

LOCATION MAP    IMAGERY    01/23/2015    A/P

  
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 COG OPERATING, LLC

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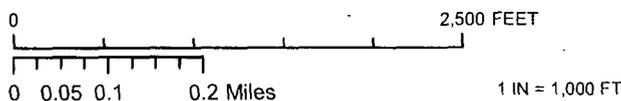


**LEGEND**

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

**SMALLS FEDERAL #6H**

SEC: 28	TWP: 22 S.	RGE: 34 E.	ELEVATION: 3405.7'
STATE: NEW MEXICO		COUNTY: LEA	190' FSL & 2010' FEL
W.O. # 14-1291	LEASE: SMALLS FED		SURVEY: N.M.P.M

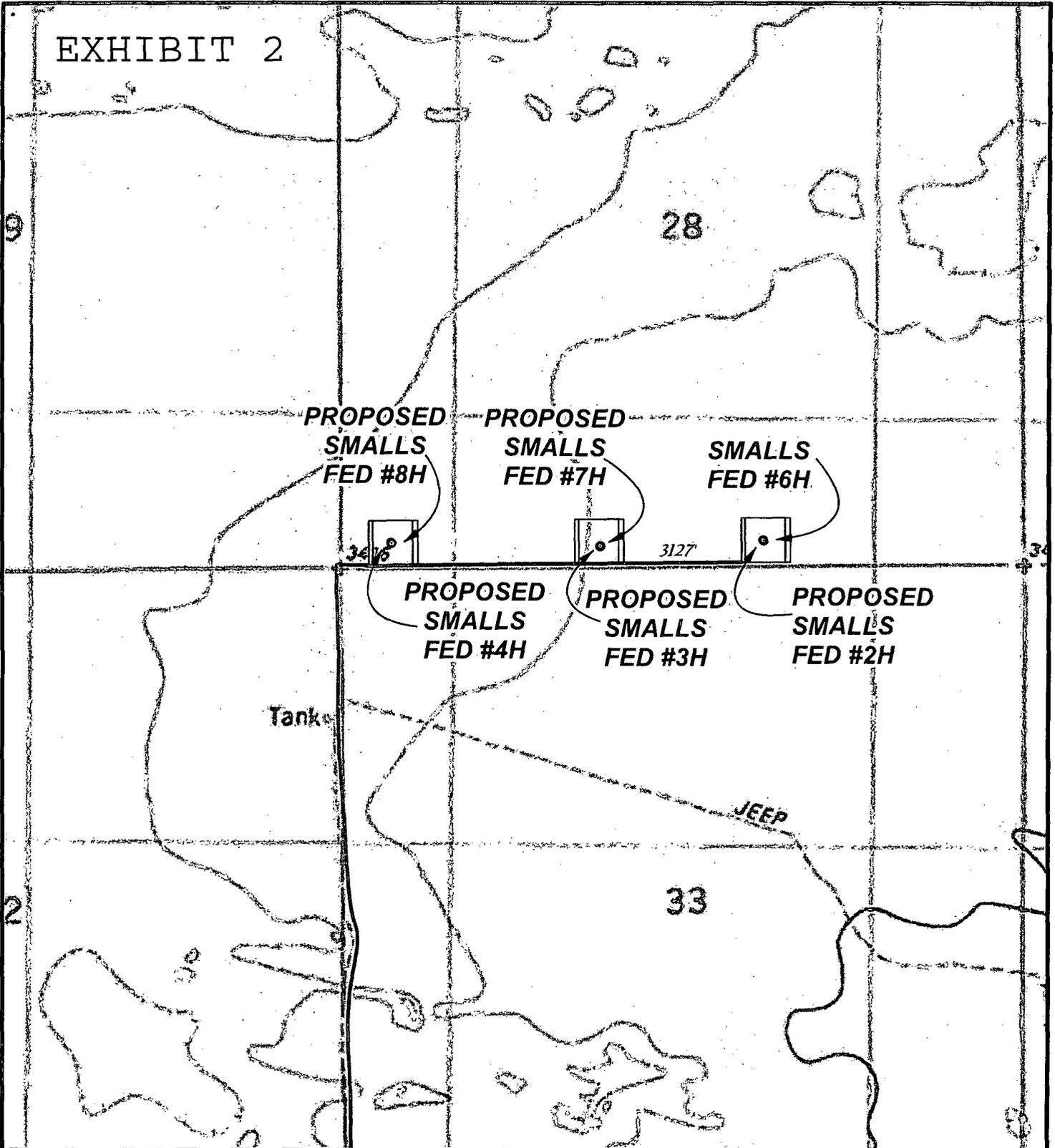


LOCATION MAP    IMAGERY ROAD    01/28/2015    A.F

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EXHIBIT 2



**LEGEND**

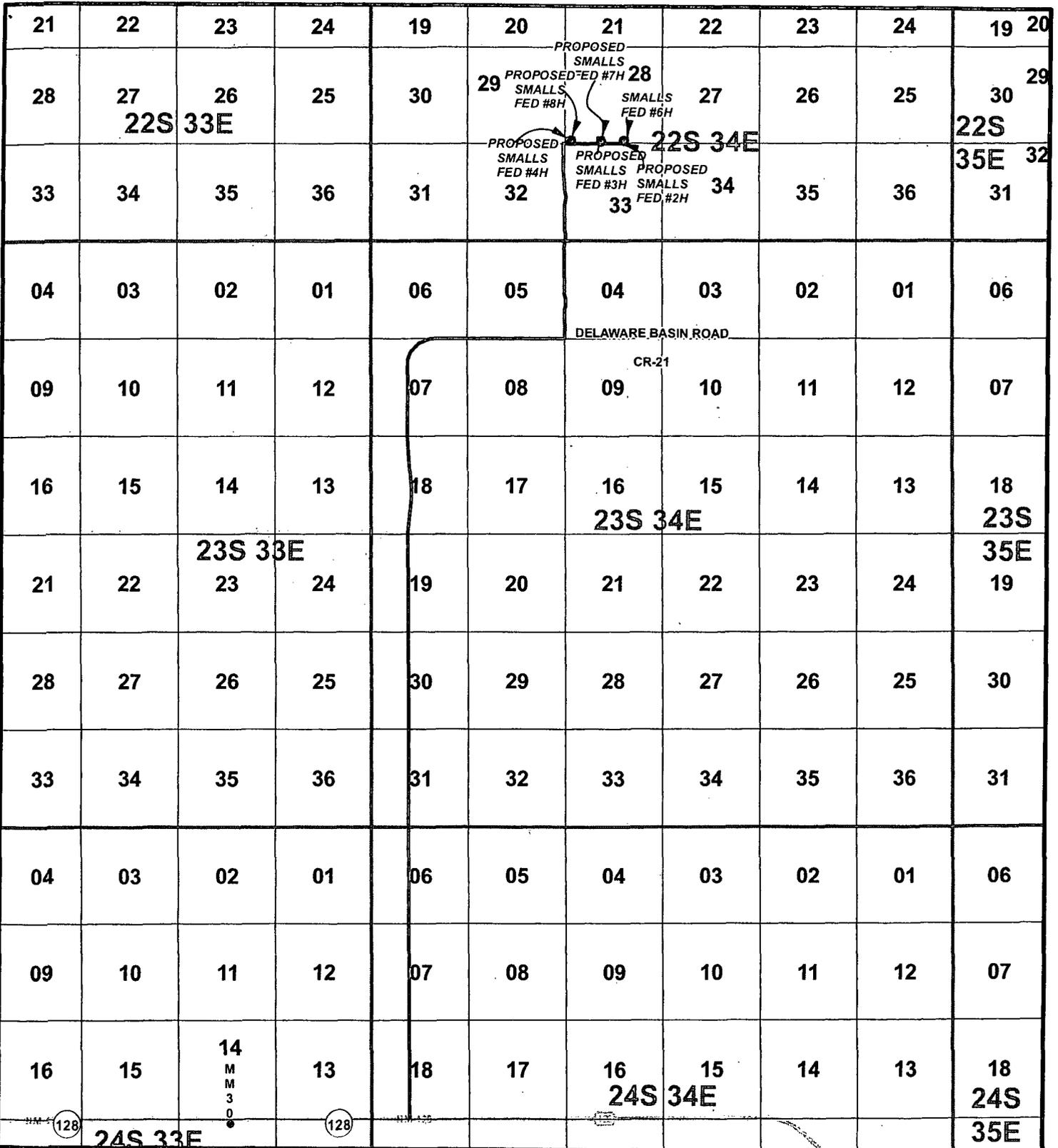
- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

SMALLS FEDERAL #6H			
SEC: 28	TWP: 22 S.	RGE: 34 E.	ELEVATION: 3405.7'
STATE: NEW MEXICO		COUNTY: LEA	190' FSL & 2010' FEL
W.O. # 14-1291	LEASE: SMALLS FED	SURVEY: N.M.P.M	
0 0.05 0.1 0.2 Miles		2,500 FEET	
0 0.05 0.1 0.2 Miles		1 IN = 1,000 FT	
LOCATION MAP	TOPO ROAD	01/28/2015	A.F

**CONCHO**  
COG OPERATING, LLC

---

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**LEGEND**

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

**SMALLS FEDERAL #6H**

SEC: 28    TWP: 22 S.    RGE: 34 E.    ELEVATION: 3405.7'

STATE: NEW MEXICO    COUNTY: LEA    190' FSL & 2010' FEL

W.O. # 14-1291    LEASE: SMALLS FED    SURVEY: N.M.P.M

0 2,500 5,000 7,500 10,000 12,500 15,000 17,500 FEET

0 0.5 1 2 Miles    1 IN = 7,000 FT

VICINITY MAP    01/28/2015    A.F

  
**CONCHO**  
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---


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# EXHIBIT 4

16

15

14

20

21

22

23

3  
8  
9  
10

330' FNL & 1980' FEL

29

28

27

26

2

1

SMALLS  
FED #6H

32

33

34

35

5  
6  
4  
0

R  
3  
4  
E

T 22 S

T 23 S

DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH JANUARY 12, 2015.

## LEGEND

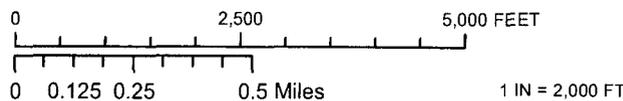
- WELL
- ⊙ BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER

## SMALLS FEDERAL #6H

SEC: 28 TWP: 22 S. RGE: 34 E. ELEVATION: 3405.7'

STATE: NEW MEXICO COUNTY: LEA 190' FSL & 2010' FEL

W.O. # 14-1291 LEASE: SMALLS FED SURVEY: N.M.P.M



1 MILE MAP

01/27/2015

A.F

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