

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) 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 30-025- 43067 | Pool Code 97922 | Pool Name WC-025 G-06 S223421L; Bone Spring |
| Property Code 315744 | 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

| | |
|--|---|
| <p>NAD 27 SURFACE LOCATION Y=494230.4 N X=765819.0 E LAT.=32.355817° N LONG.=103.472511° W</p> <p>NAD 27 PROPOSED BOTTOM HOLE LOCATION Y=498986.8 N X=765818.1 E LAT.=32.368890° N LONG.=103.472390° W</p> <p>PROJECT AREA PRODUCING AREA GRID AZ. - 359°59'30" HORZ. DIST. - 4756.4</p> <p>B.H. S.L. 190'</p> | <p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Melanie J Wilson</i> 7/22/15 Signature Date Melanie J Wilson Printed Name mwilson@concho.com E-mail Address</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>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</p> |
|--|---|

FEB 11 2016

COG Operating LLC, Smalls Federal 6H

See COA

| | |
|---|---|
| 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. |

5. Mud Program

See COA

| 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 |

*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 |
|---|-----------|

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 nd 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 | H ₂ S is present |
| Y | H ₂ S Plan attached |

8. Other facets of operation

Is this a walking operation? Yes.

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

NEW MEXICO

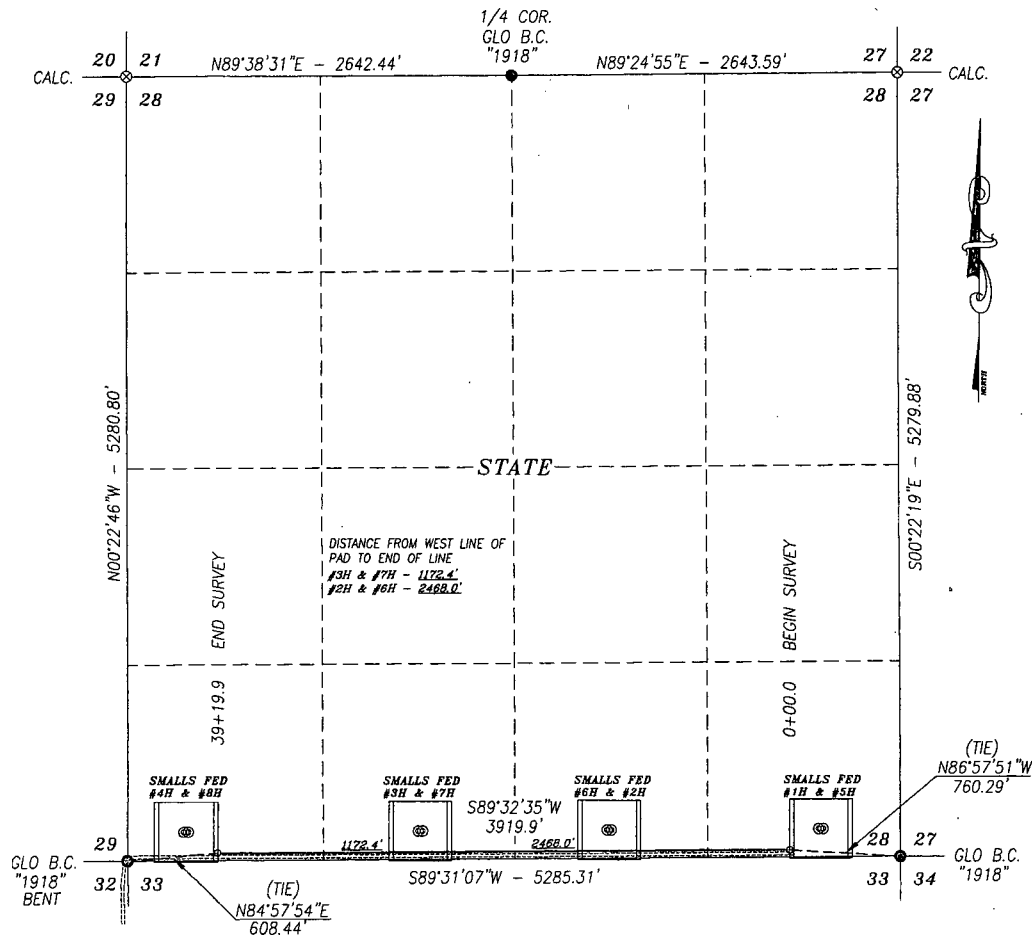


1/27/16
DATE

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\"W 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
SW/4 SE/4 80.08 RODS OR 0.910 ACRES

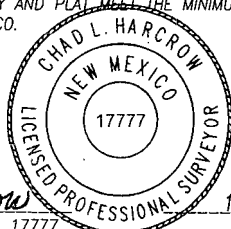
SE/4 SW/4 80.08 RODS OR 0.910 ACRES
SW/4 SW/4 43.33 RODS OR 0.493 ACRES

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.

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.

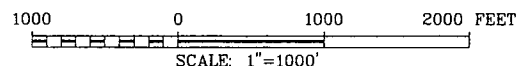


Chad Harcrow
CHAD HARCROW N.M.P.S. NO. 17777

12/18/15
DATE

HARCROW SURVEYING, LLC

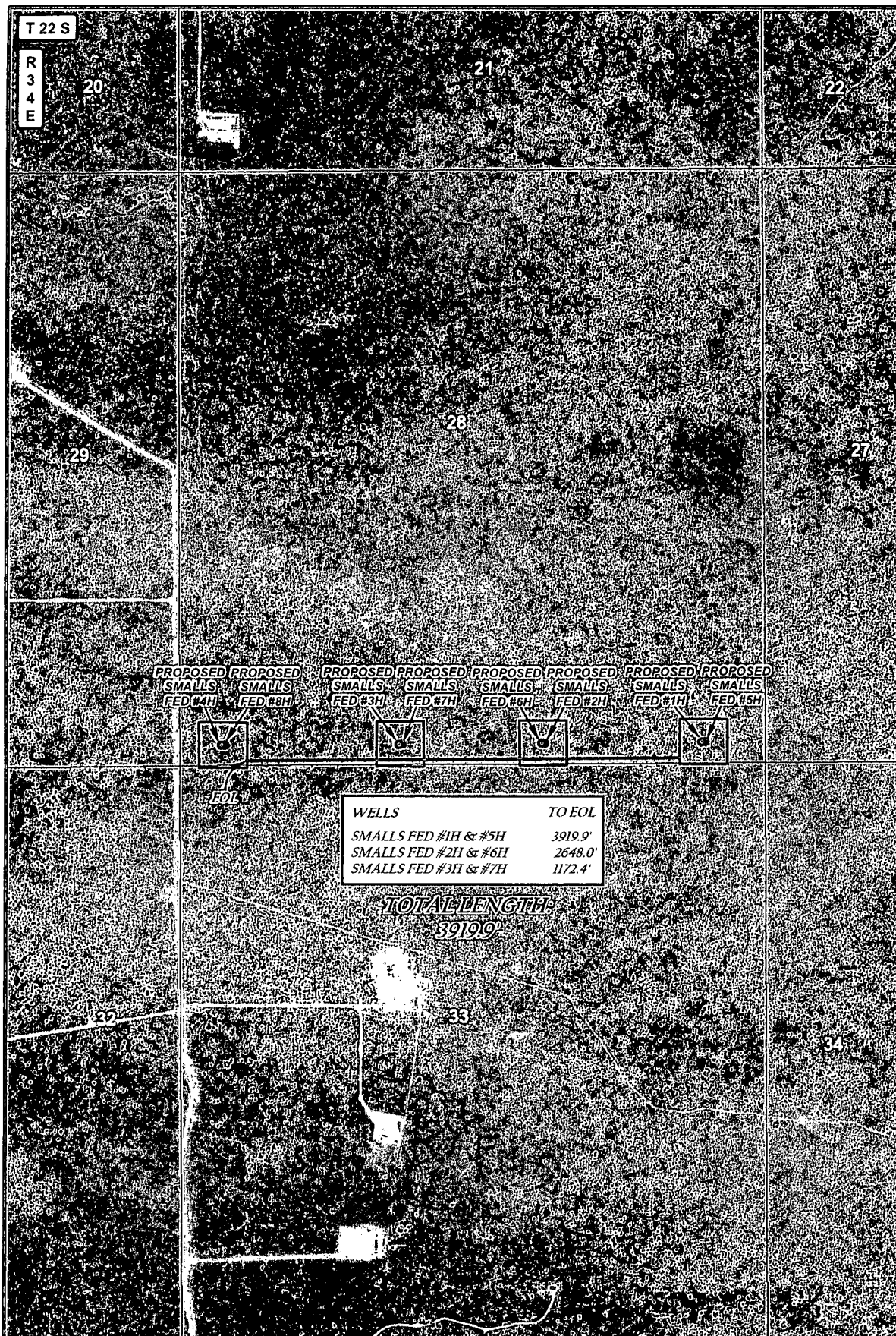
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COG OPERATING, LLC

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 |

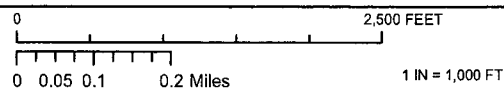


LEGEND

- 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

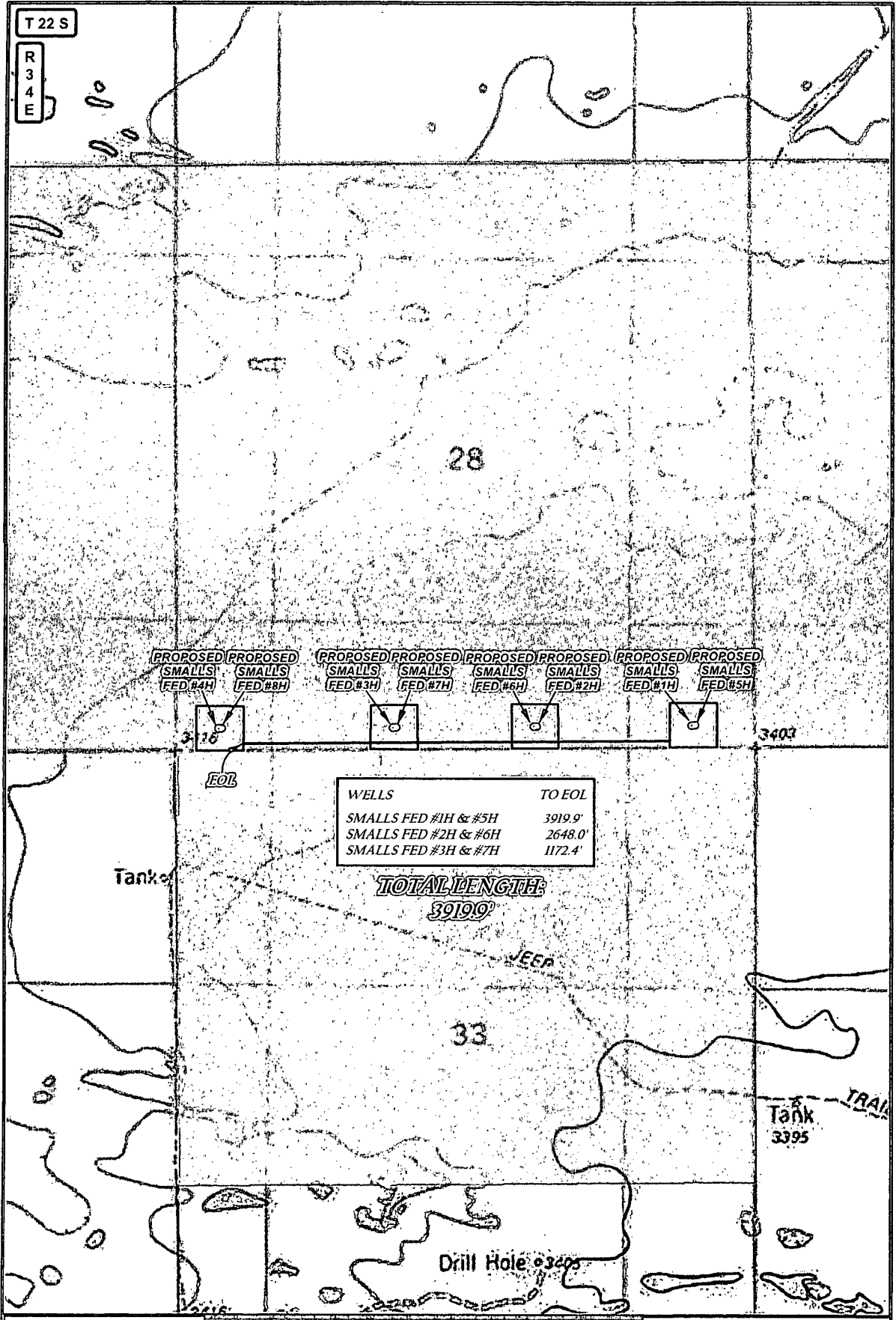


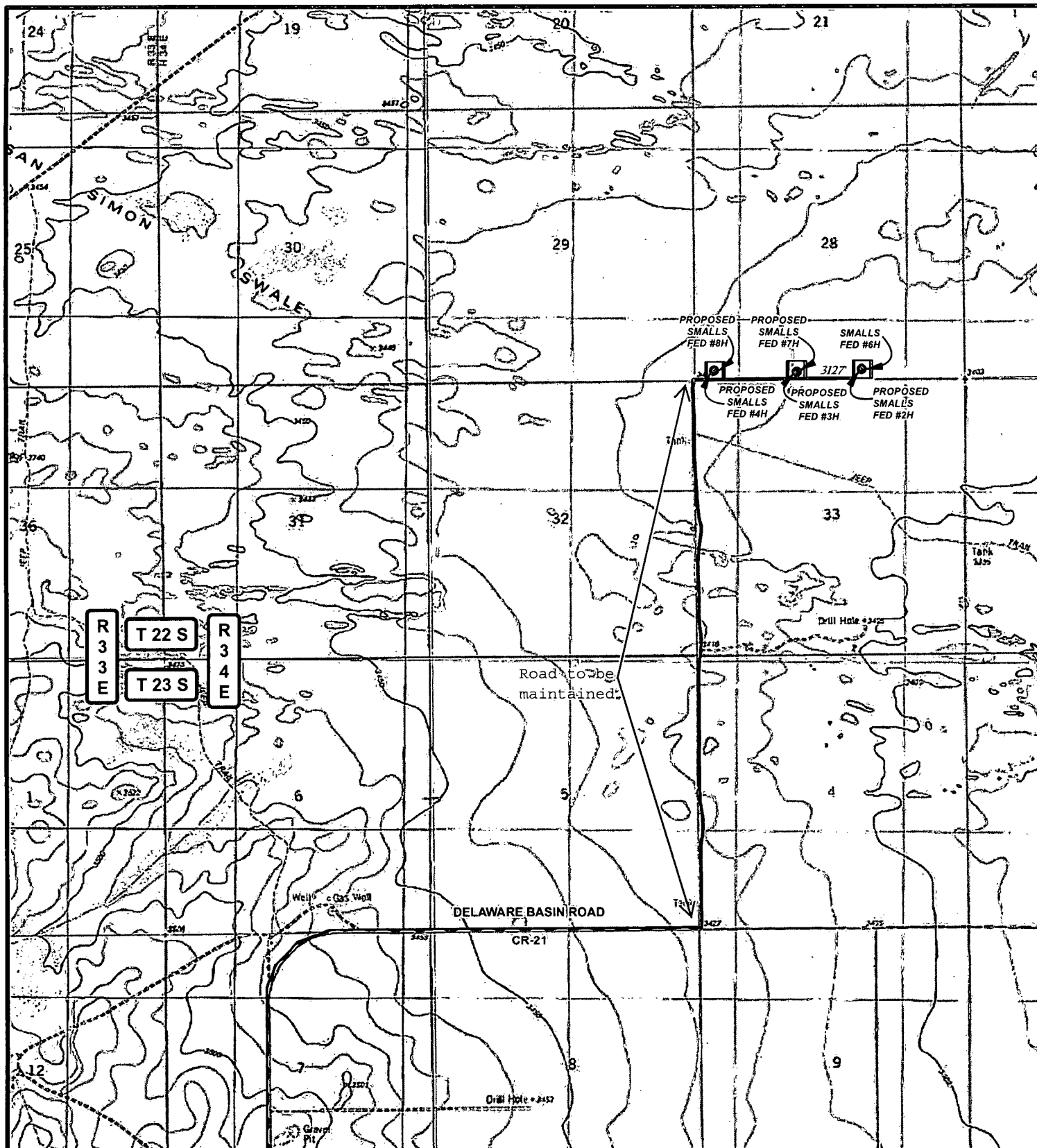
PIPELINE OVERVIEW IMAGERY 12/16/2015 S.I.P.

CONCHO
 COG OPERATING, LLC

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T 22 S
R 34 E





R 3 3 E T 22 S R 3 4 E
T 23 S

DELAWARE BASIN ROAD

CR-21

Drill Hole #342

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

TOPO

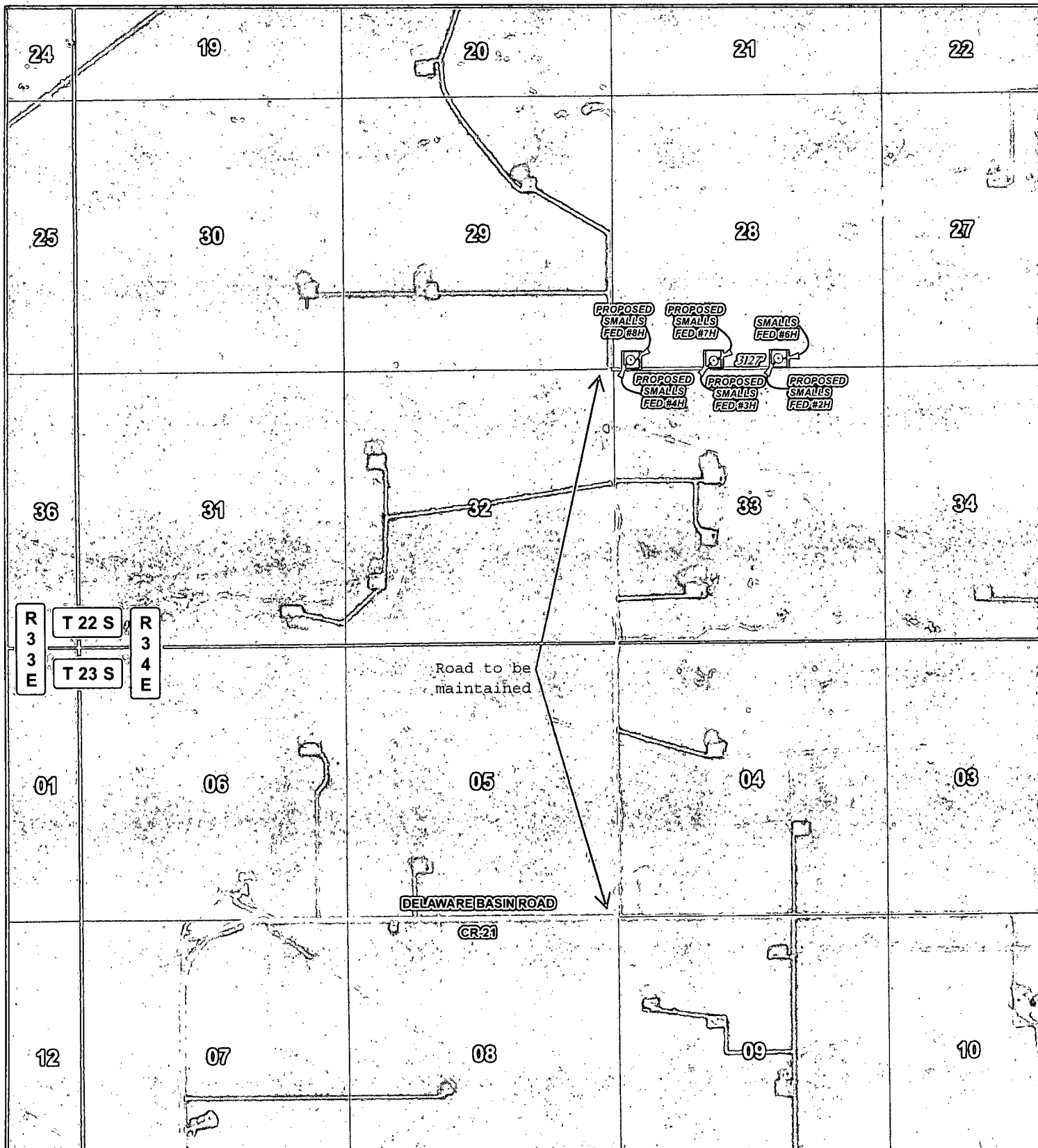
01/28/2015

A.F

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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

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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.F

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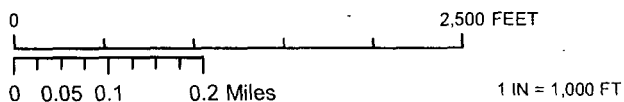


LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

SMALLS FEDERAL #6H

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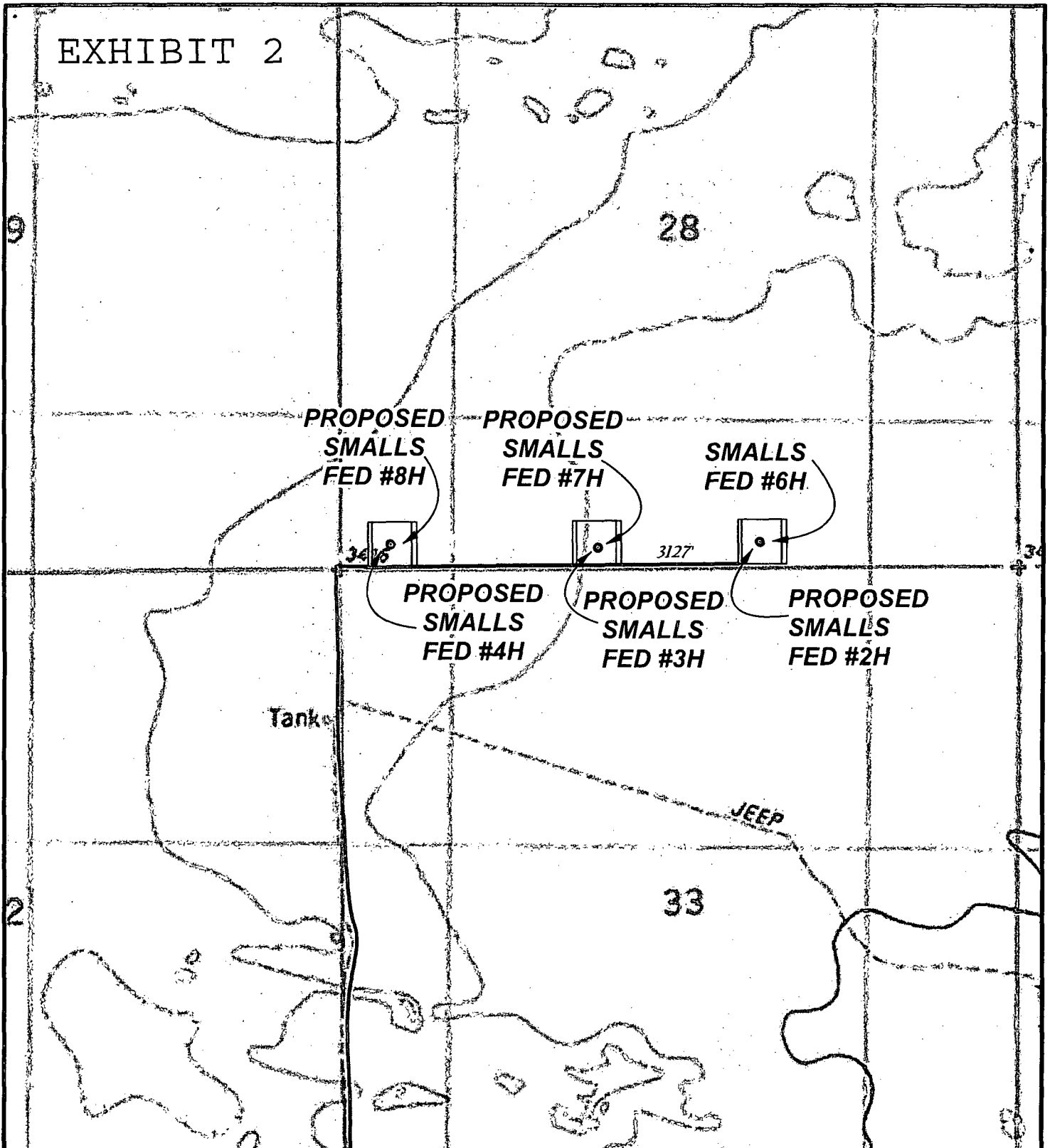


LOCATION MAP IMAGERY ROAD 01/23/2015 A.F

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EXHIBIT 2

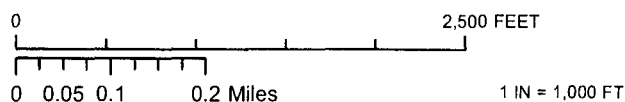


LEGEND

- 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



LOCATION MAP

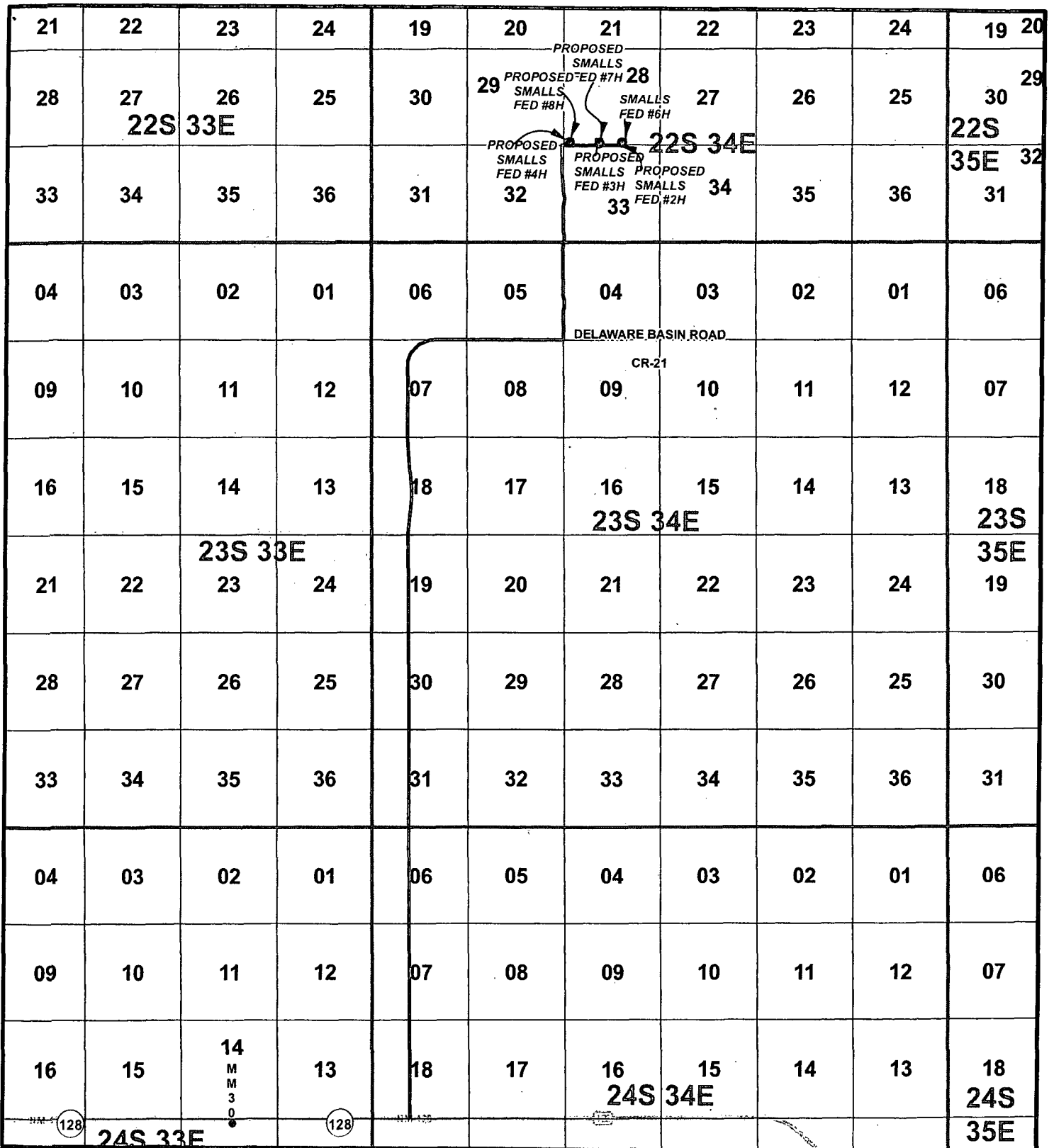
TOPO ROAD

01/28/2015

A.F

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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

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COG OPERATING, LLC

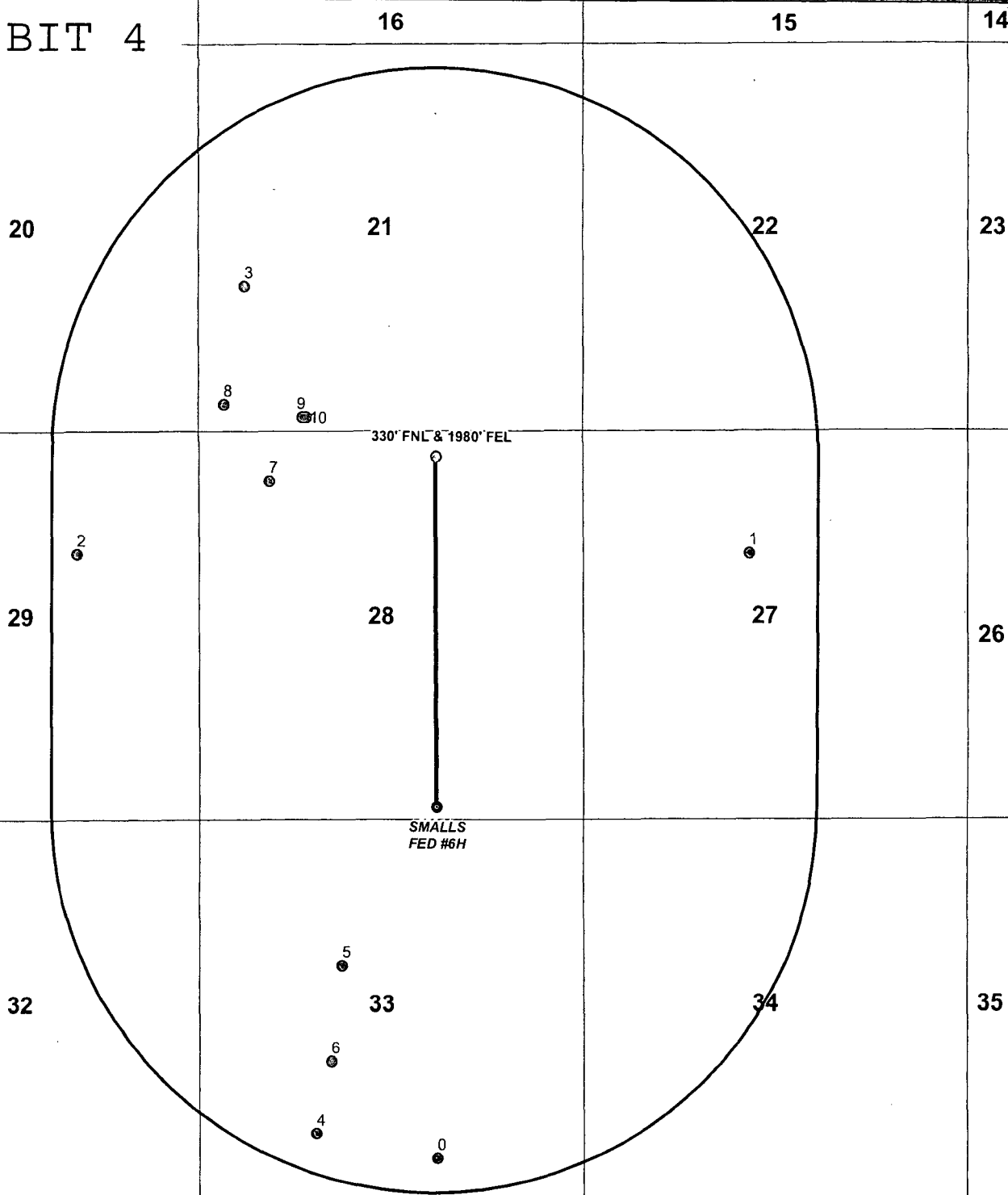
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EXHIBIT 4



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

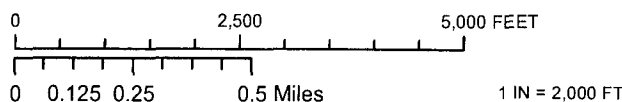
- WELL
- ◉ BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER

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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