

District I
1625 N. French Dr., Hobbs, NM 88249
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 Road, 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

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

RECEIVED

MAR 18 2014

NMOCD ARTESIA

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address COG Operating LLC 2208 West Main Street Artesia, NM 88210		OGRID Number 229137
Property Code 308619	Property Name Graham Nash State Com	APL Number 30-015-42203
		Well No 8H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
D	28	26S	28E		190	North	760	West	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
5	33	26S	28E		330	South	660	West	Eddy

9. Pool Information

Pool Name	Pool Code
Hay Hollow; Bone Spring	30215

Additional Well Information

11 Work Type New Well	12 Well Type Oil	13 Cable/Rotary	14 Lease Type State	15 Ground Level Elevation 2989.2'
16 Multiple N	17 Proposed Depth 14703'	18 Formation Bone Spring	19 Contractor	20 Spud Date 3/26/2014
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/lb	Setting Depth	Sacks of Cement	Estimated TOC
Surface	17.5	13.375	48	350'	410	
Intmd	12.25	9.625	36	2400	700	
Production	8.75	5.5	17	14703'	2860	2100

Casing/Cement Program: Additional Comments

Drill 17-1/2" hole to ~350' w/ fresh water spud mud. Run 13-3/8" 48# H40 STC casing to TD and cement to surface in one stage. Will use 1" tubing and Class C w/ 2% CaCl₂ to cement to surface, if necessary.

Drill 12-1/4" hole to ~2400' with saturated brine water. Run 9-5/8" 36# J55 LTC casing to TD and cement to surface in one stage.

Drill 8-3/4" vertical hole, curve and lateral to 14703' with cut brine. Run 5-1/2" 17# P110 Tenaris TXP BTC casing to TD and cement in one stage bringing TOC to 2100' (300' overlap).

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	5000	Cameron

<p>23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.</p> <p>I further certify that I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.</p> <p>Signature: <i>Mayte Reyes</i></p>		<p>OIL CONSERVATION DIVISION</p> <p>Approved By: <i>T.C. Shepard</i></p> <p>Title: "Geologist"</p> <p>Approved Date: <i>3-18-2014</i> Expiration Date: <i>3-18-2016</i></p>	
<p>Printed name: Mayte Reyes</p> <p>Title: Regulatory Analyst</p> <p>E-mail Address: mreyes1@concho.com</p>			
<p>Date: 3/18/2014</p> <p>Phone: 575-748-6945</p>		<p>Conditions of Approval Attached</p>	

DISTRICT I
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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 30-015- 42203	Pool Code 30215	Pool Name Hay Hollow; Bone Spring
Property Code 308619	Property Name GRAHAM NASH STATE COM	Well Number 8H
UGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 2989.2

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	28	26-S	28-E		190	NORTH	760	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
E	33	26-S	28-E	1	330	SOUTH	660	WEST	EDDY

Dedicated Acres 228.88	Joint or Infill	Consolidation Code	Order No.
223.79			

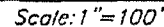
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>Y=371284.8 N X=572150.1 E</p> <p>NAD 27 SURFACE LOCATION Y=371092.9 N X=572910.5 E LAT.=32.020030° N LONG.=104.098083° W</p> <p>Y=371221.5 N X=573521.6 E</p> <p>GRID AZ. L. 0°43'01" - 70°17'5"</p> <p>NAD 27 PROPOSED BOTTOM HOLE LOCATION Y=364075.9 N X=572822.7 E LAT.=32.000741° N LONG.=104.098416° W</p> <p>Y=363743.3 N X=572163.5 E</p> <p>Y=363748.8 N X=573533.7 E</p>	<p>SECTION 28</p> <p>SECTION 33</p> <p>LOT 1</p> <p>LOT 2</p> <p>LOT 3</p> <p>LOT 4</p> <p>28.87 Ac</p> <p>29.11 Ac</p> <p>28.85 Ac</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 Parker</i> 3/18/14 Signature Date Melanie J Parker Printed Name mparker@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>MARCH 8, 2014 Date of Survey</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Chad L. Hargrow</i> 3/17/14 Certificate No. CHAD HARGROW 17777 W.O. # 14-156 DRAWN BY: VO</p>
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NEW MEXICO



HEADING SOUTH; ON HWY 285 TURN RIGHT (WEST) ONTO CR # 724 (WHITE CITY RD.) AND GO APPROX. 3.1 MILES; THEN TURN LEFT (SOUTH) AND GO APPROX. 3.1 MILES; THEN TURN LEFT (EAST) AND GO APPROX. 1.05 MILES TO EXISTING GRAHAM NASH STATE COM #1H WELL PAD; GO TO NORTHEAST PAD CORNER; THEN PROPOSED WELL IS APPROX. 415 FEET NORTHEAST.

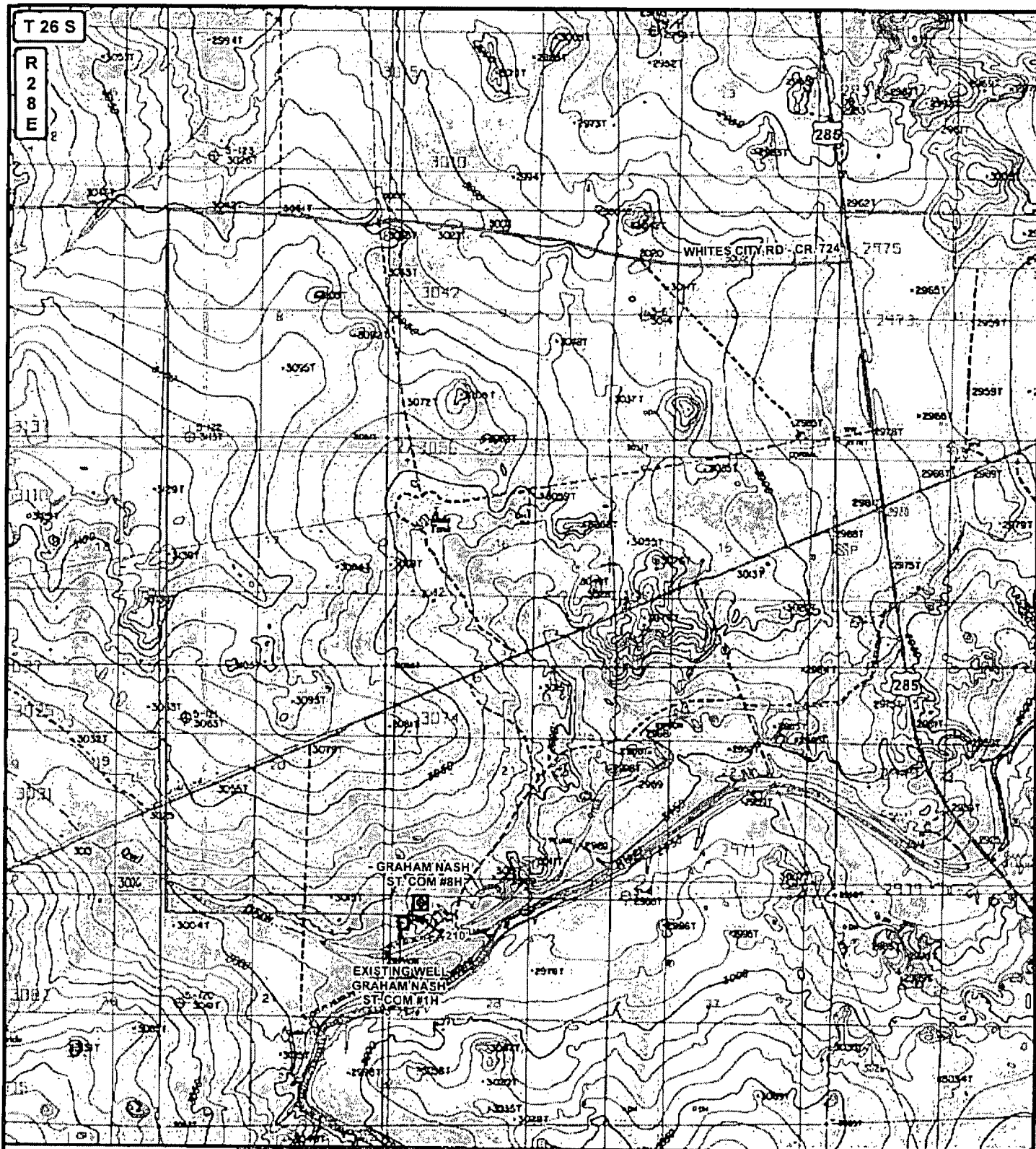


GRAHAM NASH ST. COM #8H WELL
LOCATED 190 FEET FROM THE NORTH LINE
AND 760 FEET FROM THE WEST LINE OF SECTION 28,
TOWNSHIP 26 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PAGE: 1 OF 1

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FILE: 14-156



LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PROPOSED ROAD

GRAHAM NASH ST. COM #8H

SEC: 28 TWP: 26 S. RGE: 28 E. ELEVATION: 2989.2'

STATE: NEW MEXICO COUNTY: EDDY 190' FNL & 760' FWL

W.O. # 14-156 LEASE: GRAHAM NASH ST. SURVEY: N.M.P.M

0 2,500 5,000 7,500 FEET

0 0.2 0.4 0.8 Miles

1 IN = 3,000 FT

LOCATION MAP

TOPO

03/11/2013

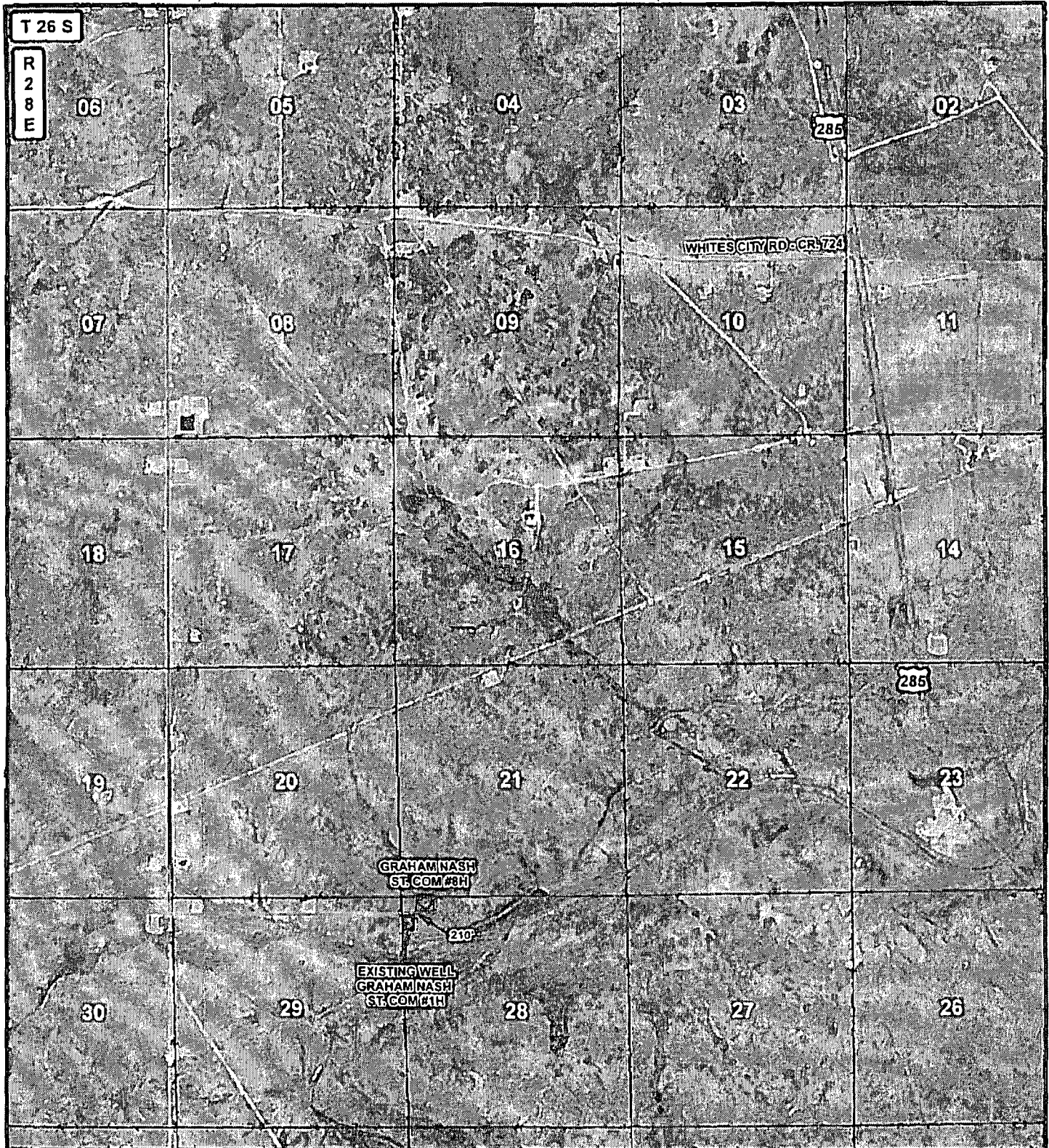


CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC
1107 WATSON ARTISIAN NM 86210
PH (505) 513-2570 FAX (505) 746-2158
chad_harcrow77@yahoo.com



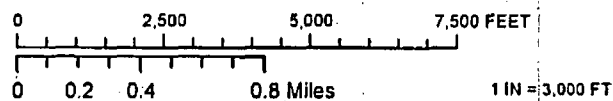


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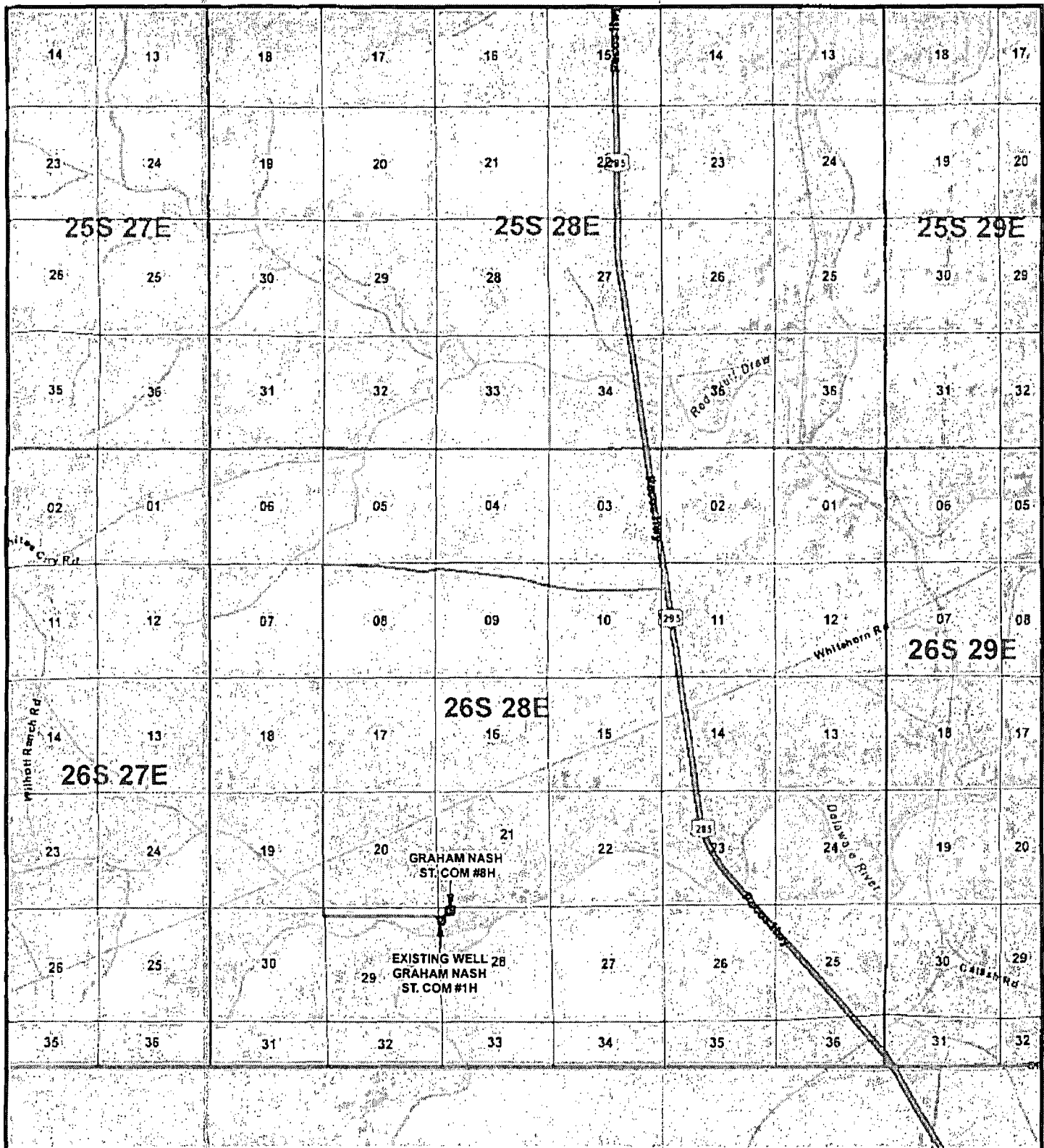


LOCATION MAP IMAGERY 03/01/2011 SUT

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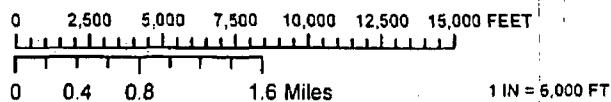


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 W.O. # 14-156 LEASE: GRAHAM NASH ST. SURVEY: N.M.P.M



VICINITY MAP

03/11/2014

S.I.

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 COG OPERATING, LLC

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