

**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: (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 November 14, 2012

## Energy Minerals and Natural Resources

### Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

RECEIVED

NOV 18 2013

NMOCD ARTESIA

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address COG Operating LLC 2208 West Main Street Artesia, NM 88210		<sup>2</sup> OGRID Number 229137
<sup>3</sup> Property Code 70228		<sup>4</sup> Property Name Willow 17 State SWD
		<sup>5</sup> API Number 30-015-41806
		<sup>6</sup> Well No 1.

### 7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
P	17	25S	28E		660'	South	660'	East	Eddy

### 8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

### 9. Pool Information

Pool Name	Pool Code
SWD; Devonian	96101

### Additional Well Information

<sup>11</sup> Work Type New Well	<sup>12</sup> Well Type SWD	<sup>13</sup> Cable/Rotary	<sup>14</sup> Lease Type State	<sup>15</sup> Ground Level Elevation 3016.2'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 15,300'	<sup>18</sup> Formation Devonian	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 12/1/2013
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

### 21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26	20	94	300'	550	
Intrmd	17.5	13.375	54.5	2300'	1350	
Production	12.25	9.625	40	9100'	1350	2100'
Liner	8.75	7	29	14000'	500	9100'
Disposal	6.125	OH		15300'		

### Casing/Cement Program: Additional Comments

Plan to drill a 26" hole to 300' with Fresh Water. Run 20", 94#, H-40 csg and cmt to surface. Drill 17-1/2" hole to 2300' with Brine, and run 13-3/8", 54.5#, J-55 and cement to surface. Drill 12-1/4" hole to approximately 9100' with cut brine, and run 9-5/8", 40#, J-55/ P-110 csg and cement to 2100'. Drill 8-3/4" hole to approximately 14,000' with cut brine, run & hang a 7", 29#, P-110 liner and cement back to liner hanger. Drill 6-1/8" hole to approximately 15,300' with cut brine, and leave it open hole for salt water disposal purposes.

### 22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	Cameron

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

I further certify that I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature: *Mayte Reyes*

Printed name: Mayte Reyes

Title: Regulatory Analyst

E-mail Address: mreyes1@concho.com

Date: 11/18/2013

Phone: 575-748-6945

### OIL CONSERVATION DIVISION

Approved By:

*T.C. Shepard*

Title:

"Geologist"

Approved Date:

11/18/2013

Expiration Date:

11/18/2015

Conditions of Approval Attached

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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-41806	<sup>2</sup> Pool Code 96101	<sup>3</sup> Pool Name SWD; Devonian
<sup>4</sup> Property Code 40220	<sup>5</sup> Property Name WILLOW 17 STATE SWD	
<sup>7</sup> OGRID No. 229137	<sup>8</sup> Operator Name COG OPERATING, LLC.	<sup>6</sup> Well Number 1
		<sup>9</sup> Elevation 3016.2

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	25 S	28 E		660	SOUTH	660	EAST	EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface

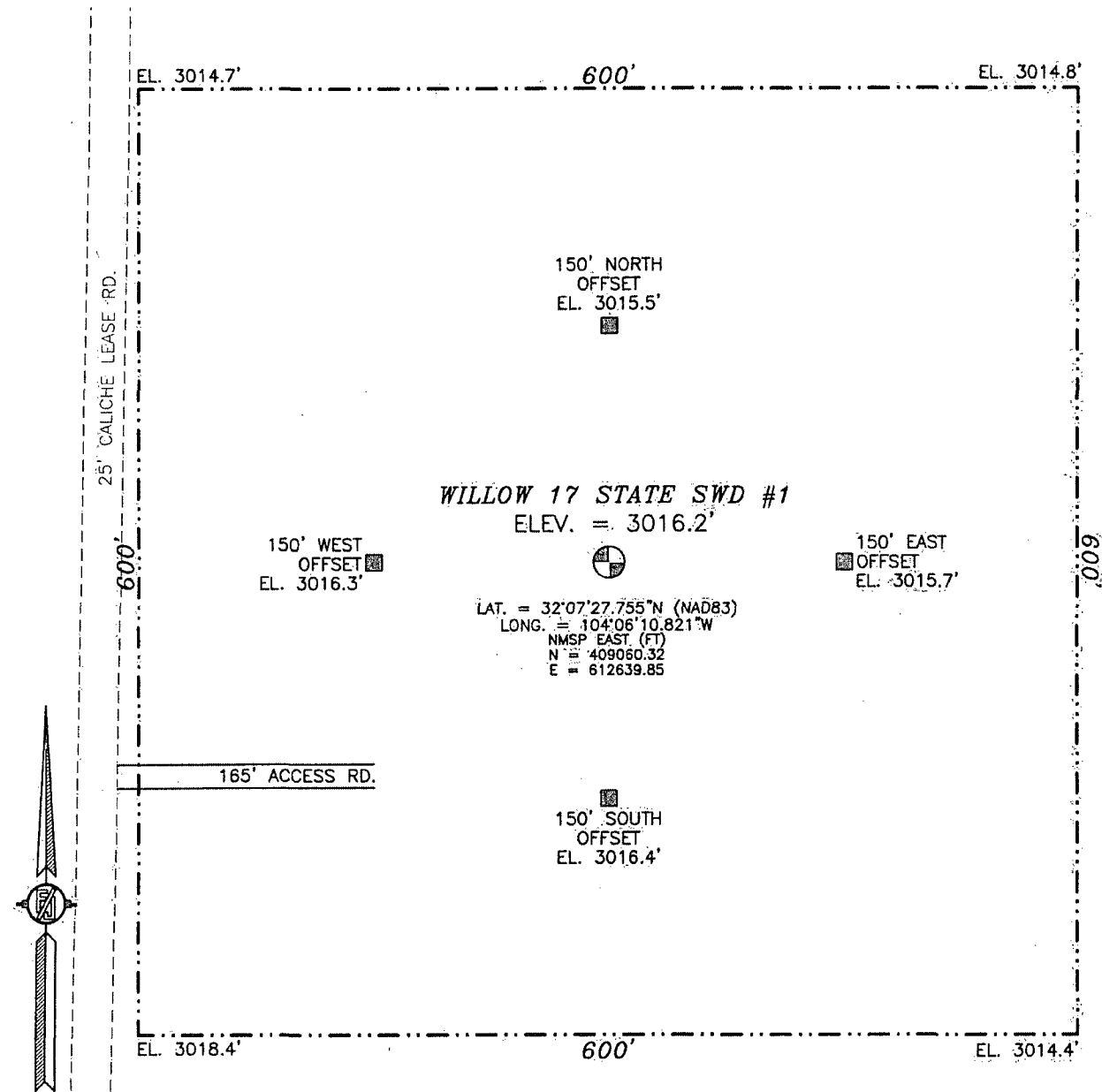
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres N/A	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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>NW CORNER SEC. 17 LAT. = 32°08'14.49"N LONG. = 104°07'05.63"W NMSP EAST (FT) N = 413773.22 E = 607917.21</p>	<p>NE CORNER SEC. 17 LAT. = 32°08'14.48"N LONG. = 104°06'03.55"W NMSP EAST (FT) N = 413783.46 E = 613255.10</p>	<p><sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature: <i>Melanie Parker</i> Date: 11/18/13 Printed Name: Melanie Parker E-mail Address: mparker@concho.com</p>
<p>SW CORNER SEC. 17 LAT. = 32°07'20.86"N LONG. = 104°07'05.05"W NMSP EAST (FT) N = 408353.79 E = 607978.31</p>	<p>SE CORNER SEC. 17 LAT. = 32°07'21.28"N LONG. = 104°06'03.09"W NMSP EAST (FT) N = 408407.20 E = 613306.43</p>	
<p>WILLOW 17 STATE SWD #1 ELEV. = 3016.2' LAT. = 32°07'27.755"N (NAD83) LONG. = 104°06'10.821"W NMSP EAST (FT) N = 409060.32 E = 612639.85</p>		<p><sup>18</sup> 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.</p> <p>MARCH 15, 2013 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>Antonio Jaramillo</i> Certificate Number: 12797 SURVEY NO. 410A</p>

SECTION 17, TOWNSHIP 25 SOUTH, RANGE 28 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO



0 10 50 100 200

SCALE 1" = 100'

**DIRECTIONS TO LOCATION**

FROM MILE MARKER 10 ON HIGHWAY 285 HEAD SOUTH 0.9 MILES TO  
TURN OFF ON RIGHT HAND SIDE (WEST) HEAD WEST 1.8 MILES TO  
ROAD INTERSECTION TO THE RIGHT (NORTH) GO NORTH ON LEASE  
ROAD 650 FT. SITE IS 300 FT ON RIGHT (EAST).

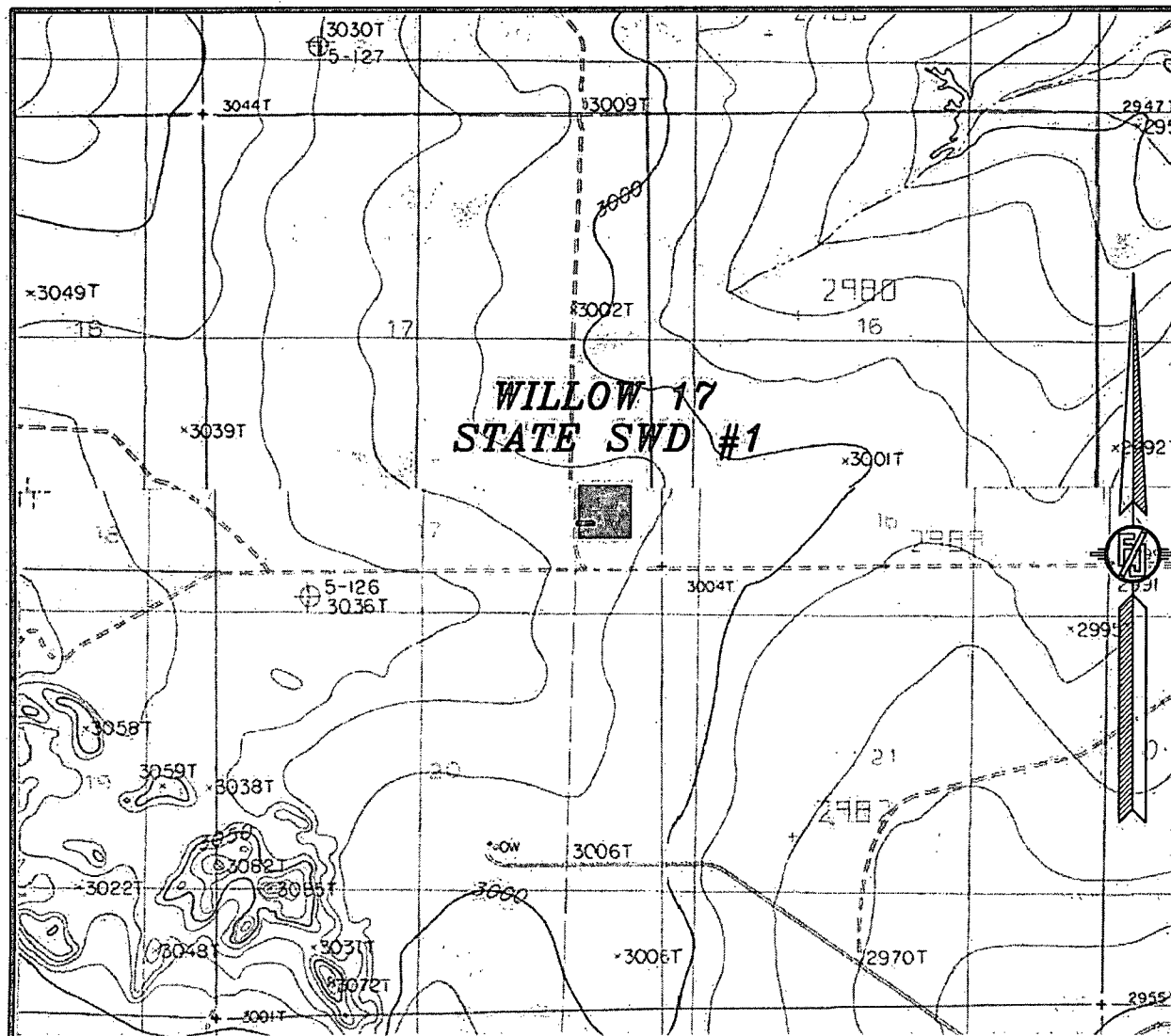
COG OPERATING, LLC  
**WILLOW 17 STATE SWD #1**  
LOCATED 660 FT. FROM THE SOUTH LINE  
AND 660 FT. FROM THE EAST LINE OF  
SECTION 17, TOWNSHIP 25 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 15, 2013

SURVEY NO. 410A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 887-5830

SECTION 17, TOWNSHIP 25 SOUTH, RANGE 28 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
**LOCATION VERIFICATION MAP**



CONTOUR INTERVAL:  
 MALGA  
 RED BLUFF

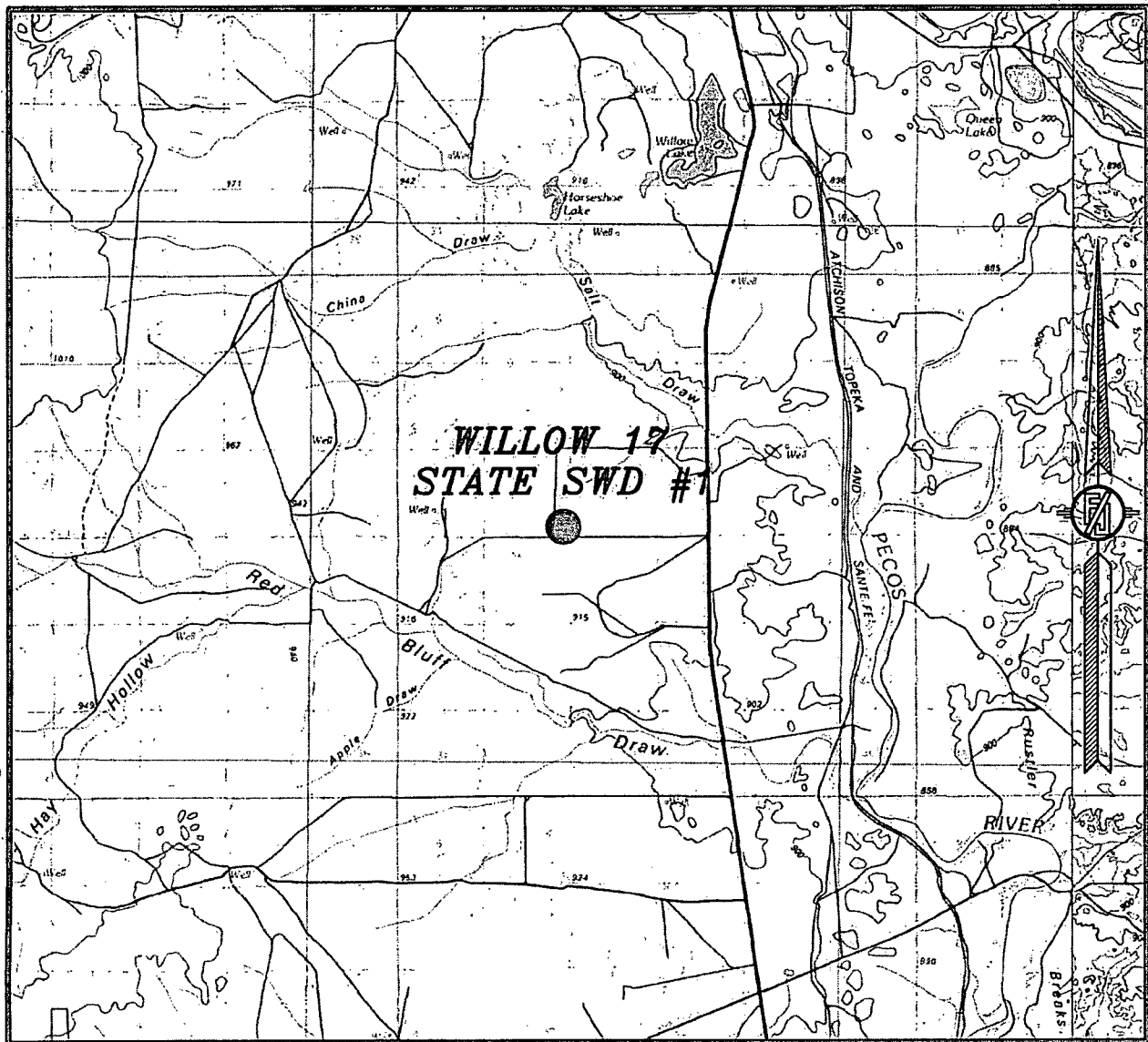
NOT TO SCALE

**COG OPERATING, LLC**  
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 RANGE 28 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MARCH 15, 2013

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 887-5830 CARLSBAD, NEW MEXICO SURVEY NO. 410A

SECTION 17, TOWNSHIP 25 SOUTH, RANGE 28 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
**VICINITY MAP**



NOT TO SCALE

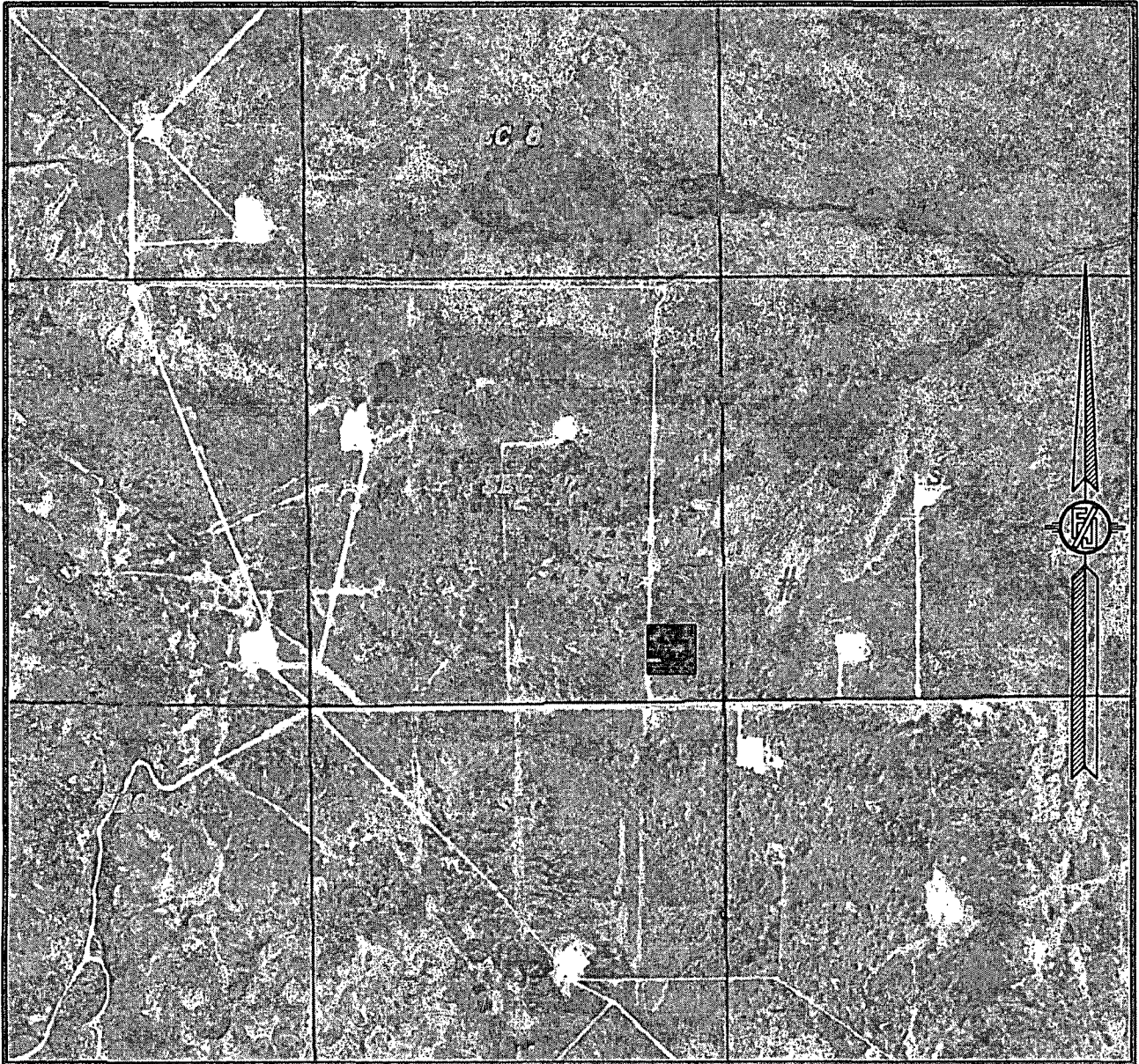
**COG OPERATING, LLC**  
**WILLOW 17 STATE SWD #1**  
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SECTION 17, TOWNSHIP 25 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 15, 2013

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 887-5830 CARLSBAD, NEW MEXICO SURVEY NO. 410A

SECTION 17, TOWNSHIP 25 SOUTH, RANGE 28 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

## AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
USDA - AUG, 2009

COG OPERATING, LLC  
WILLOW 17 STATE SWD #1  
LOCATED 660 FT. FROM THE SOUTH LINE  
AND 660 FT. FROM THE EAST LINE OF  
SECTION 17, TOWNSHIP 25 SOUTH,  
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EDDY COUNTY, STATE OF NEW MEXICO

MARCH 15, 2013

SURVEY NO. 410A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 887-5830

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**John Bemis**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**Jami Bailey**  
Division Director  
Oil Conservation Division



Administrative Order SWD-1387  
January 24, 2013

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of 19.15.26.8B NMAC, COG Operating LLC, seeks an administrative order to utilize its proposed Willow 17 State SWD Well No. 1 (API 30-015-NA) to be located 660 feet from the South line and 660 feet from the East line, Unit letter P of Section 17, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

**THE DIVISION DIRECTOR FINDS THAT:**

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

**IT IS THEREFORE ORDERED THAT:**

The applicant, COG Operating LLC, is hereby authorized to utilize its proposed Willow 17 State SWD Well No. 1 (API 30-015-NA) to be located 660 feet from the South line and 660 feet from the East line, Unit letter P of Section 17, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the Devonian formation through an open hole interval from approximately 14000 feet to 15300 feet through internally coated tubing and a packer set within 100 feet of the permitted interval.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially



commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 2800 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.



Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters, or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



JAMI BAILEY  
Director

JB/wvjj

cc: Oil Conservation Division – Artesia District Office  
State Land Office – Oil, Gas, and Minerals Division

## Permit Conditions of Approval

API: 30-015-41806

OCD Reviewer	Condition
CSHAPARD	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string