

DATE IN <u>3-2-10</u>	SUSPENSE	ENGINEER <u>[Signature]</u>	LOGGED IN <u>3-2-10</u>	TYPE <u>SWD</u>	APP NO. <u>1006152393</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION  
- Engineering Bureau -  
1220 South St. Francis Drive, Santa Fe, NM 87505-004



COG op.  
229137

Empire Fed SWD #3

## ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

### Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]  
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

Eddy

### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify \_\_\_\_\_

### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners  
[B] ☒ Offset Operators, Leaseholders or Surface Owner  
[C] ☐ Application is One Which Requires Published Legal Notice  
[D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,  
[F] ☐ Waivers are Attached

### [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Mark A. Fairchild  
Print or Type Name

Mark A. Fairchild  
Signature

Senior Ops. Engineer 2/3/2010  
Title Date

MFairchild@conchoresources.com  
e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? Yes No
- II. OPERATOR: COG Operating, LLC  
ADDRESS: 550 West Texas, Ste 100, Midland, TX 79701  
CONTACT PARTY: Mark A. Fairchild PHONE: 432-686-3021
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes X No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Mark A. Fairchild TITLE: Senior Ops. Engineer  
SIGNATURE: Mark A. Fairchild DATE: 2/3/2010  
E-MAIL ADDRESS: MFairchild@conchoresources.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

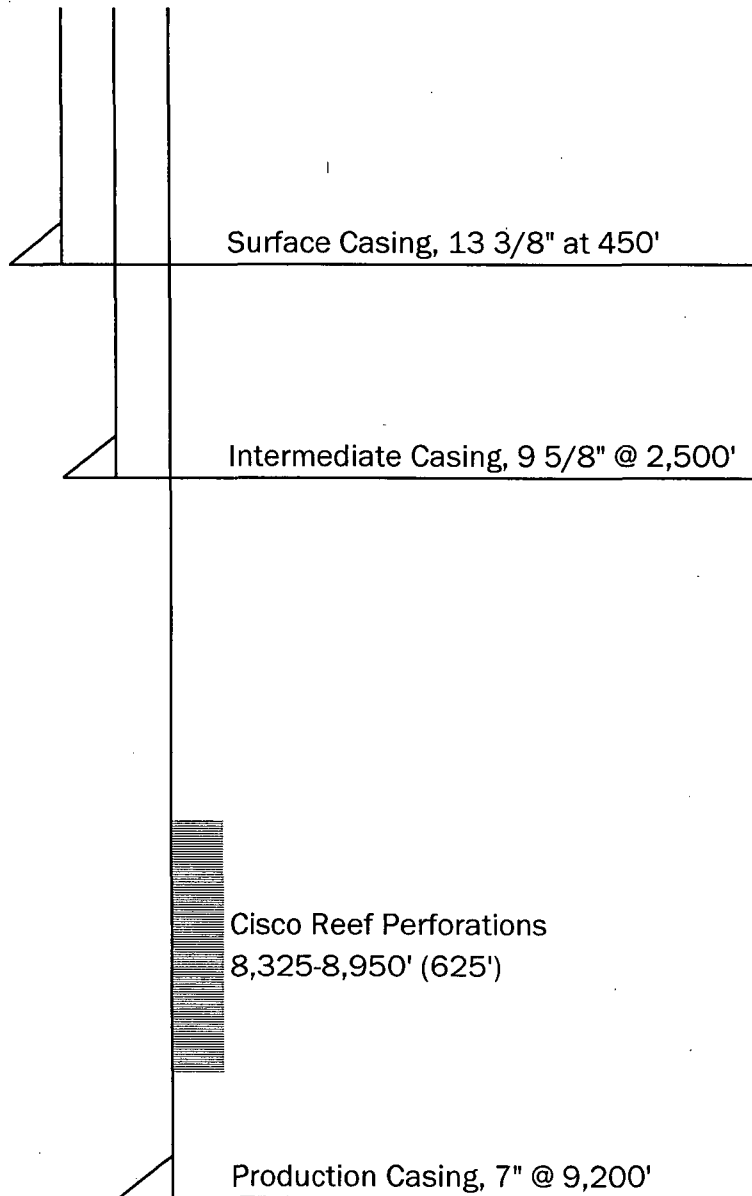
- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Date: 02/10/10  
Company: COG Operating LLC  
OGRID: 229137  
Lease: Empire Federal SWD  
Well: #3  
Location: 1980' FSL and 1980' FWL, Sec 10, T17S; R29E  
Co. Eddy  
State: NM



Date: 2/10/2010  
 Company: COG Operating LLC  
 OGRID: 229137  
 Lease: Empire Federal SWD  
 Well: #3  
 Location: 1980' FSL and 1980' FWL, Sec 10, T17S; R29E  
 Co. Eddy  
 State: NM

Casing & Fluids:	String	Bit		Casing				Mud				
		Hole	Size	Grade	Weight	From	To	Ftg	Type	Weight	Vis	FL
	Conductor	24"	20"	Used		40	0	40				
	Surface	17 1/2"	13 3/8"	H40	48	450	0	450	Fresh/Spud	8.6-9.2	28-34	NC
	Intermediate	12 1/4"	9 5/8"	J55	36	2,500	0	2,500	Cut Brine	9.8-10.1	28-29	NC
	Long	8 3/4"	7"	L80	26	9,200	0	9,200	Cut Brine	8.7-9.3	28-34	10-12 log
	Tubing:		3 1/2"					8,275	8rd, EUE, IPC			
	Packer:	Nickel Plated, Compression set w/ nipples										

Cement:		TOC		Lead	Tail
		Surface	Surface		
	Conductor	Surface			
	Surface	Surface	250 sxs, 14.8 ppg, 1.35 cuft/sx	250 sxs, 14.8 ppg, 1.35 cuft/sx	
	Intermediate	Surface	550 sxs, 13.5 ppg, 1.75 cuft/sx	200 sxs, 14.8 ppg, 1.35 cuft/sx	
	Long	Surface	1st Stage, DV tool at 7,200		
			300 sxs, 50/50 poz 14.2 ppg, 1.32 cuft/sx		
			2nd Stage		
			650 sxs, lite, 12.4 ppg, 2.14 cuft/sx	100 sxs, Cl C, 15.6 ppg, 1.19 cuft/sx	

Objective: Formation: Cisco Reef  
 TD: 9,200  
 Perforations: 8325-8950' (625')  
 Injection Rate: 15-20K BWPD

Tops: Rustler: 400'  
 Yates: 825'  
 Seven Rivers: 1,250'  
 Queen: 1,800'  
 Grayburg: 2,200'  
 San Andres: 2,550'  
 Glorietta: 3,950'  
 Tubb: 5,375'  
 Wolfcamp: 7,250'  
 WC Reef Disposal: 7,600-7,800' (200')  
 Cisco: 8,175'  
 Cisco Reef Disposal: 8,325-8,950' (625')

Date: 02/10/10  
 Company: COG Operating LLC  
 OGRID: 229137  
 Lease: Empire Federal SWD  
 Well: #3  
 Location: 1980' FSL and 1980' FWL, Sec 10, T17S; R29E  
 Co. Eddy  
 State: NM

19. Proposed Casing and Cement Program

Type	Hole Sz	Csg Sz	Csg Wt	Set Depth	Sacks	TOC
Conductor	24"	20"		40		Surface
Surface	17 1/2"	13 3/8"	48	450	500	Surface
Intermediate	12 1/4"	9 5/8"	36	2500	750	Surface
Long	8 3/4"	7"	26	9200	1050	Surface

Additional Comments

COG proposes to drill a 24" hole and set 20" conductor casing, cemented to surface with fresh mud.  
 A 17 1/2" hole will be drilled to approximately 450' to set 13 3/8" casing and cement to surface.  
 The Surface hole will be drilled with fresh water spud mud. The intermediate 12 1/4" hole  
 will be drilled w/ cut brine to approximately 2,500' where 9 5/8" casing will be set and cemented  
 to surface. Cut brine will be used to drill the long string hole to approximately 9,200'  
 where 7" casing will be set and cemented to surface with a DV tool at approximately 7,000'.

Side 1

# INJECTION WELL DATA SHEET

OPERATOR: COG Operating, LLC

WELL NAME & NUMBER: Empire Federal SWD #3

WELL LOCATION: 1980 FSL and 1980 FWL

FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

K

10

T17S

29E

## WELLBORE SCHEMATIC

## WELL CONSTRUCTION DATA

### Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8"

Cemented with: sx. or 660 ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circulated

### Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 5/8"

Cemented with: sx. or 1,402 ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circulated

### Production Casing

Hole Size: 8 3/4" Casing Size: 7"

Cemented with: sx. or 927 ft<sup>3</sup>

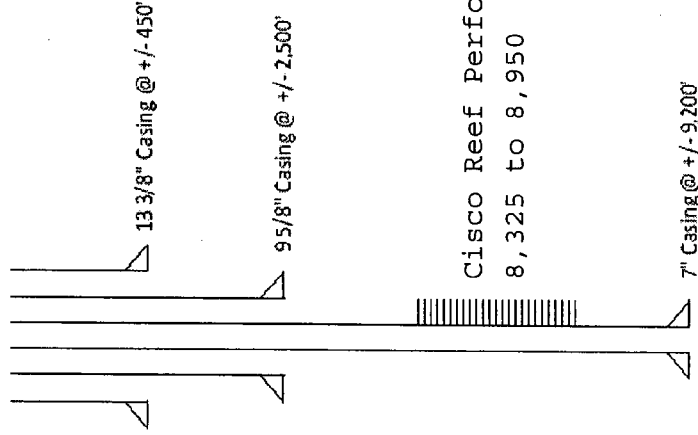
Top of Cement: Surface Method Determined: Circulated

Total Depth: 9,200

### Injection Interval

8,325 feet to 8,950

(Perforated or Open Hole; indicate which)



Other Type of Tubing/Casing Seal (if applicable): None

### Additional Data

1. Is this a new well drilled for injection?      X    Yes    No

If no, for what purpose was the well originally drilled?

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Queen at 1,800'; Grayburg @ 2,200; San Andres @ 2,550





ATTACHMENT TO APPLICATION C-108

COG Operating Inc.  
Empire State SWD #3  
Se. 10, T-17-S, R-29-E  
Eddy County, NM

- III. WELL DATA – See attached on reverse side of form as requested.
- V. MAP ATTACHED
- VI. LIST OF WELLS AND DATA ATTACHED.
- VII. PROPOSED OPERATIONS
  - 1. The injection volume will average 10,000-15,000 BWPD while the maximum injection volumes are expected to be 20,000 BWPD.
  - 2. This will be a closed loop system.
  - 3. Proposed average and maximum injection pressure: Vacuum
  - 4. Analysis attached, only produced water.
  - 5. This well is not yet drilled. COG will swab the formation and recover fluid samples for analysis and reporting to NMOCD. Research disposal zone formation water and attach and chemical analysis.
- VIII. SEE ATTACHED
- IX. SEE ATTACHED
- X. Logging and test data will be run on the well when drilled.
- XI. No fresh water found or recorded by state engineer or OCD.

- XII. The disposal formation will have several thousand feet of overburden on top of it. In these several thousands of feet of impermeable shale and evaporate zones of various thickness exists. These zones will stop any hydraulic communication between geologic strata.
- XIII. Notice (this application) has been sent to the surface owner (BLM), operators of all wells, and lessees, working interest, or lease operating right holders, and lessors within a half mile.

COG SENM SWD Well Questionnaires

Date: 2/10/2010

By: Mark A. Fairchild, Office: 432-686-3021

What will be the well name?

Empire Federal SWD #3

What logs have been/will be run in the well?

Logs will be run as follows: porosity and resistivity

How will you re-enter/drill/convert the well?

The well will be drilled 100% with rotary tools.

How will you test the mechanical integrity of the casing?

A State of New Mexico supervised MIT test to 500 psig will be run on the tubing/casing annulus.

What size tubing do you plan to use?

The tubing will be 3 1/2" Nominal OD.

How will tubing be internally lined?

The tubing will be internally plastic coated.

What type packer will be used?

A nickel plated compression set packer will be utilized.

Where will packer be set?

Within 50 to 100' above top perf.

Will there be any other type of casing/tubing seal?

No.

What is the fracture gradient?

Approx 0.75

Will the well be stimulated?

Yes

If yes, how will the well be stimulated?

Large conventional acid job.

Into what perforated intervals will you inject?

Cisco Reef, 8,325 to 8,950'

What will be the average daily volume injected?

10-15,000 BWPD

What will be the maximum daily volume injected?

20, 000 BWPD

What will be the average injection pressure?

Vacuum

What will be the maximum injection pressure?

1725                      psig

Will water be trucked or piped to the well?

Piped

What wells will dispose into it?

Various wells owned exclusively by COG on our SWD water line system

Any non-COG wells?

No outside operated water will be disposed of.

What surface facilities (e.g.; tanks, pumps, filters) will be installed?

4 - 750 Bbl water storage tanks, 1 - 1,000 Bbl Gun Barrel

2 - 500 Bbl steel tanks, 1 - 400 BHP H pump

Do you have an analysis of the produced water you plan to inject?

Yes

Do you have an analysis of the formation water into which you'll inject?

No, these well are on a vacuum and do not produce.

How will the geology prevent migration into fresh water zones (e.g., thickness of shale or salt layers)?

Various impervious geological barriers exist between the Cisco and the surface.

Will the system be open or closed?

Closed

1625 N. French Dr., Hobbs, NM 88240

**District II**

**1301 W. Grand Avenue, Artesia, NM 88210**

District III

**1000 Rio Brazos Rd., Aztec, NM 87410**

**District IV**

**1220 S. St. Francis Dr., Santa Fe, NM 87505**

## 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 October 12, 2005

**Submit to Appropriate District Office**

**State Lease - 4 Copies**

Fee Lease - 3 Copies

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number		<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name EMPIRE FEDERAL SWD		<sup>6</sup> Well Number 3
<sup>7</sup> OGRID No. 229137	<sup>8</sup> Operator Name COG OPERATING, LLC		<sup>9</sup> Elevation 3582.9'

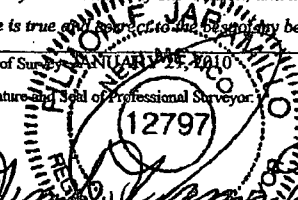
## 10 Surface Location

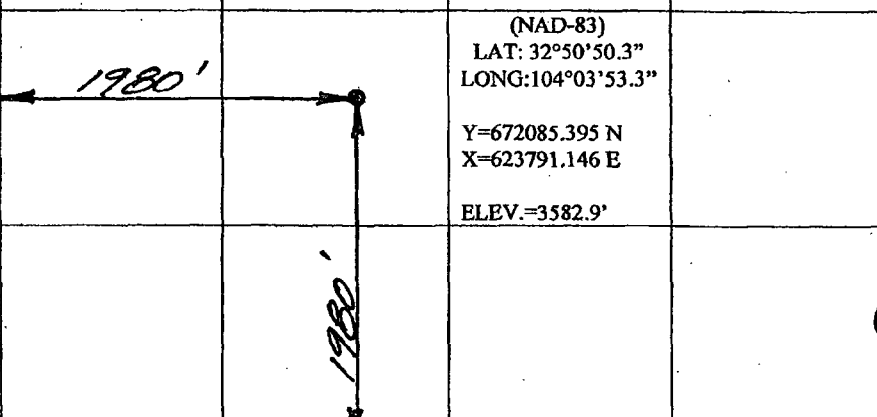
UL or lot no. K	Section 10	Township 17 S.	Range 29 E.	Lot Idn	Feet from the 1980	North/South line SOUTH	Feet from the 1980	East/West line WEST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

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	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code			<sup>15</sup> 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.

16				<p><b>17 OPERATOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p>
				<p><b>18 SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>Date of Survey JANUARY 1995</p> <p>Signature of Professional Surveyor _____</p> <p style="text-align: center;">  </p> <p>Certificate Number 12797</p> <p>MADRON SURVEYING INC.</p>



(NAD-83)

LAT: 32°50'50.3"

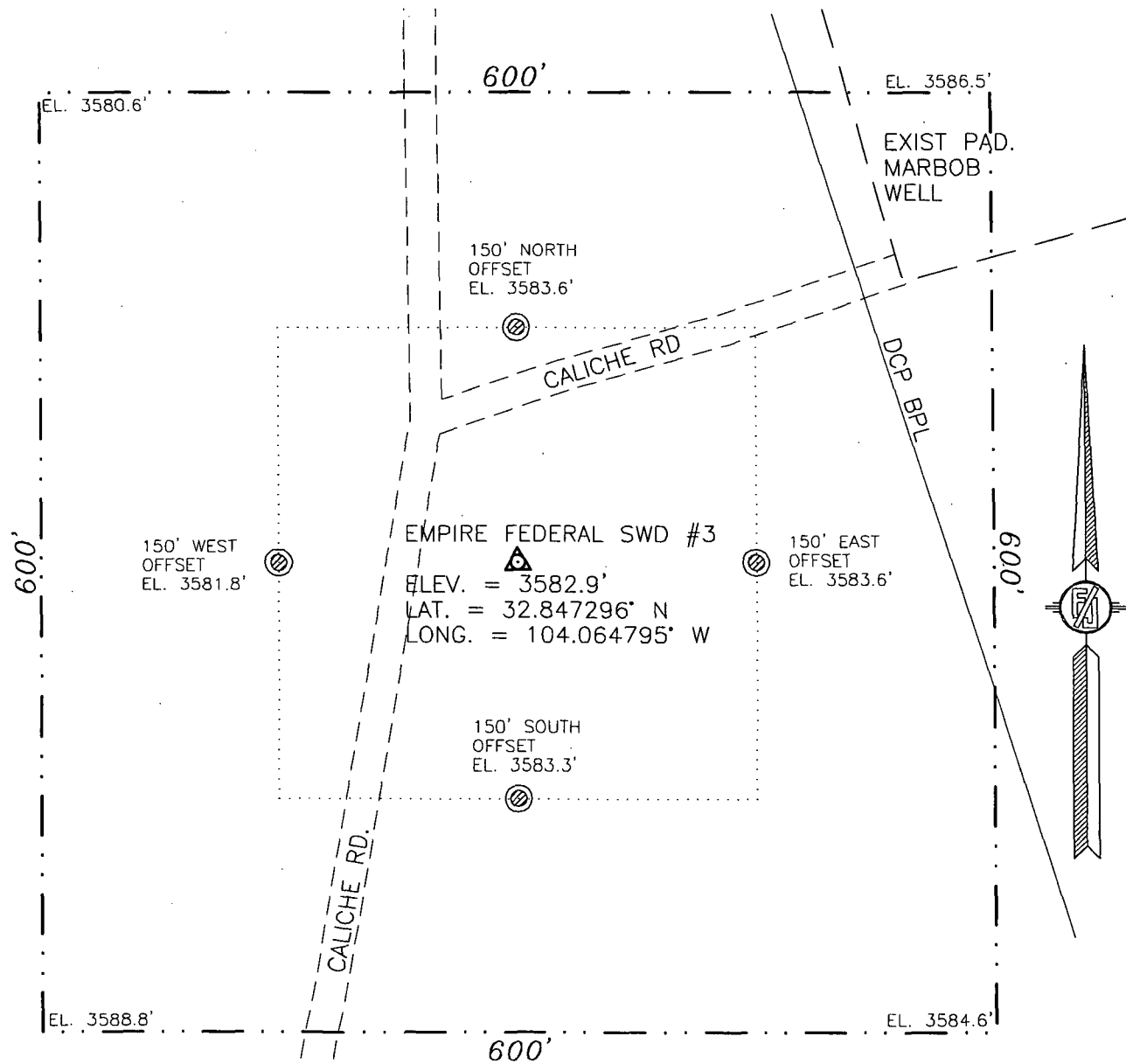
LONG: 104°03'53.3"

Y=672085.395 N

X=623791.146 E

ELEV.=3582.9'

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200  
SCALE 1" = 100'

**DIRECTIONS TO LOCATION**

FROM U.S. HWY. 82 AND CR. #214 (BARNEVILL DRAW) GO NORTH ON CO. RD. #214 1.5 MILES, TURN RIGHT ON LSE. ROAD AND GO EAST 0.1 MILE, TURN LEFT ON LSE. ROAD AND GO NORTH 0.3 MILES AND LOCATION IS ON RIGHT (EAST) APPROX 80'.

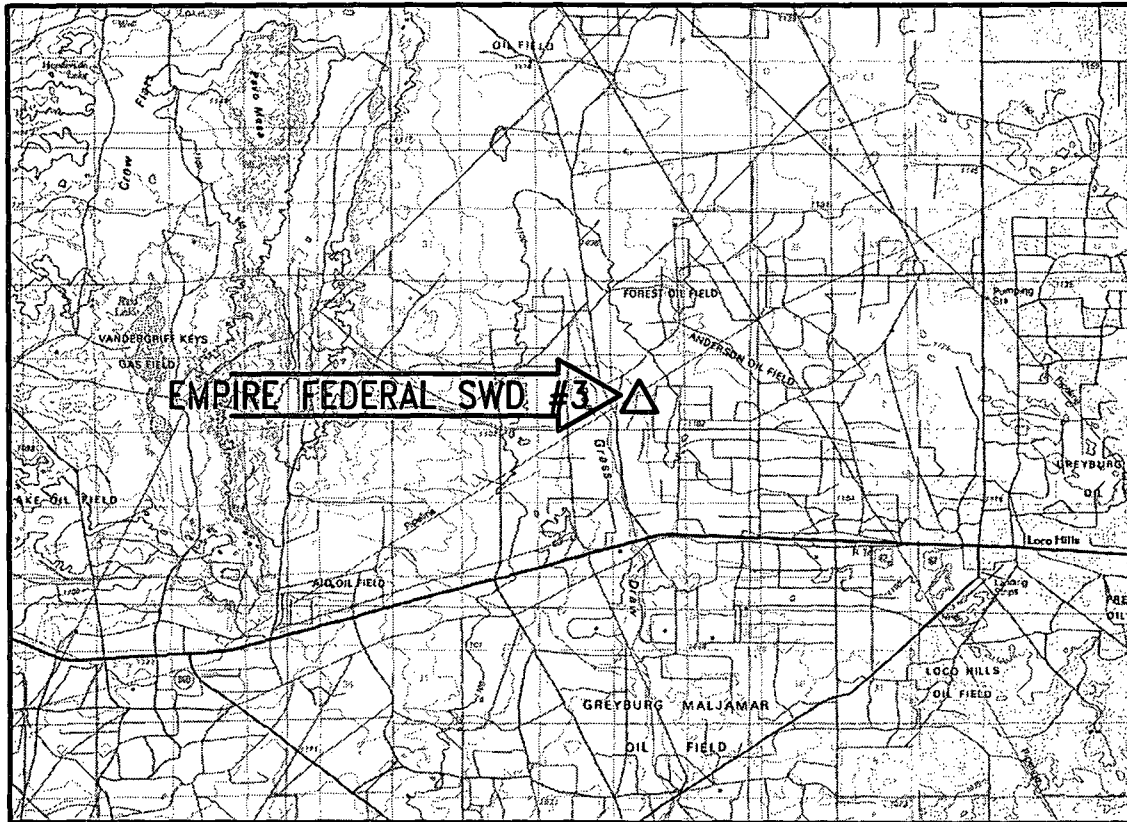
COG OPERATING LLC  
EMPIRE FEDERAL SWD #3  
LOCATED 1980 FT. FROM THE SOUTH LINE  
AND 1980 FT. FROM THE WEST LINE OF  
SECTION 10, TOWNSHIP 17 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JANUARY 21, 2010

SURVEY NO. 060C

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

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



DIRECTIONS TO LOCATION  
FROM U.S. HWY. 82 AND CR. #214 (BARNEVILL  
DRAW) GO NORTH ON CO. RD. #214 1.5 MILES,  
TURN RIGHT ON LSE. ROAD AND GO EAST 0.1  
MILE, TURN LEFT ON LSE. ROAD AND GO NORTH  
0.3 MILES AND LOCATION IS ON RIGHT (EAST)  
APPROX 80'.

NOT TO SCALE

SEC. 10 TWP. 17-S RGE. 29-E  
SURVEY N.M.P.M.  
COUNTY EDDY STATE NEW MEXICO  
DESCRIPTION 1980' FSL & 1980' FWL  
ELEVATION 3582.9  
OPERATOR COG OPERATING LLC  
LEASE EMPIRE

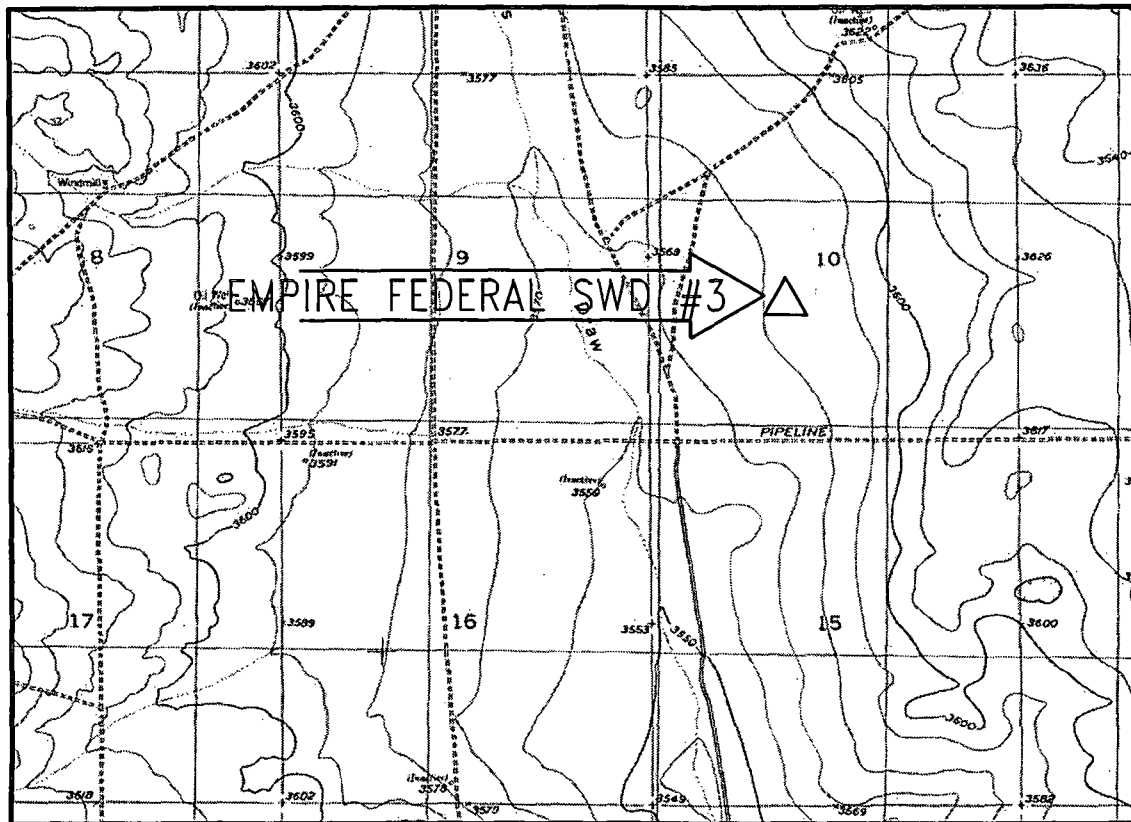
COG OPERATING LLC  
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AND 1980 FT. FROM THE WEST LINE OF  
SECTION 10, TOWNSHIP 17 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JANUARY 21, 2010

SURVEY NO. 060C

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

SECTION 10, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LOCATION VERIFICATION MAP



NOT TO SCALE

CONTOUR INTERVAL:  
 Red Lake SE.

DIRECTIONS TO LOCATION

FROM U.S. HWY. 82 AND CR. #214 (BARNEVILL  
 DRAW) GO NORTH ON CO. RD. #214 1.5 MILES,  
 TURN RIGHT ON LSE. ROAD AND GO EAST 0.1  
 MILE, TURN LEFT ON LSE. ROAD AND GO NORTH  
 0.3 MILES AND LOCATION IS ON RIGHT (EAST)  
 APPROX 80'.

SEC. 10 TWP. 17-S RGE. 29-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY STATE NEW MEXICO  
 DESCRIPTION 1980' FSL & 1980' FWL  
 ELEVATION 3582.9  
 OPERATOR COG OPERATING LLC  
 LEASE EMPIRE

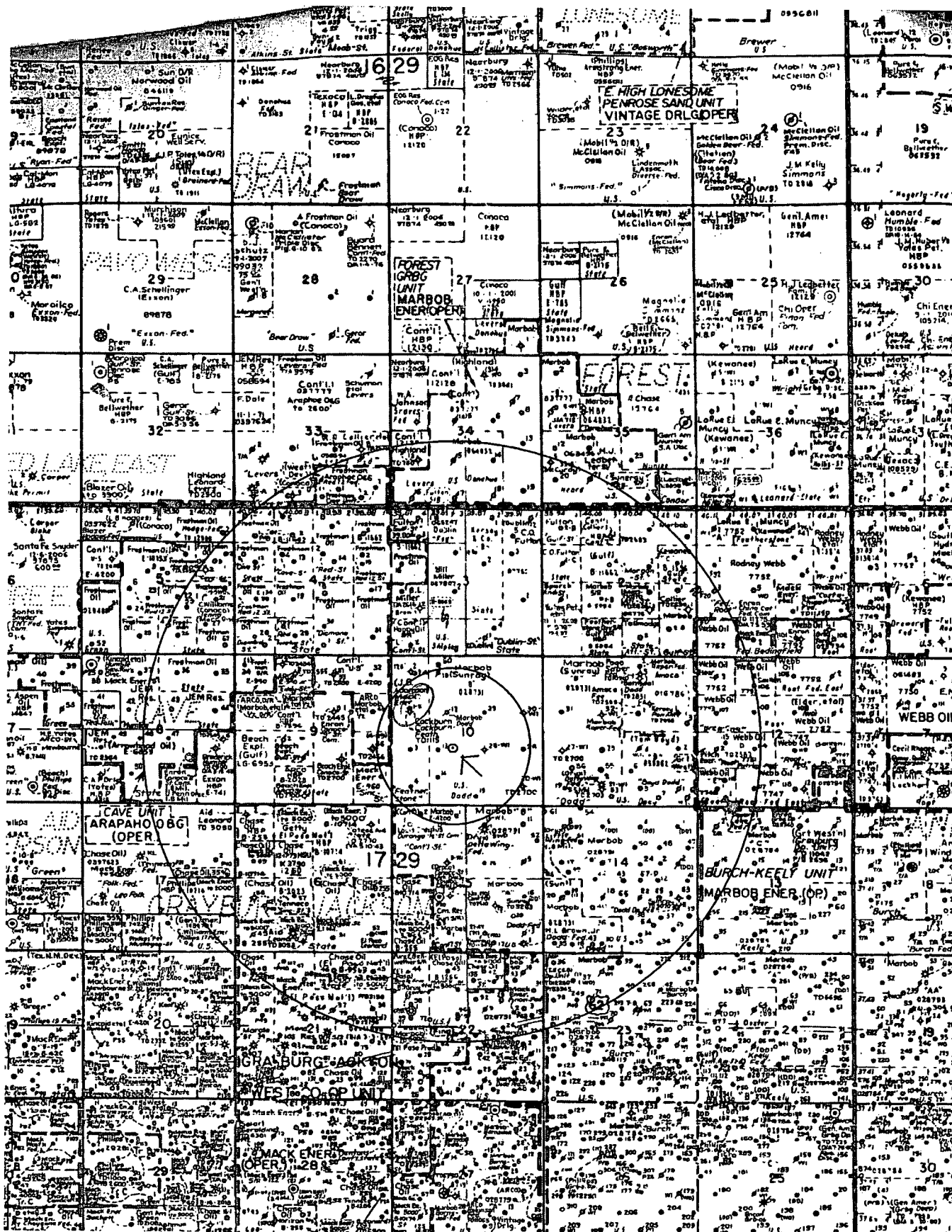
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 AND 1980 FT. FROM THE WEST LINE OF  
 SECTION 10, TOWNSHIP 17 SOUTH,  
 RANGE 29 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

JANUARY 21, 2010

SURVEY NO. 060C

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





Disposal Well

API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STATE	CO	LAND	U/L	SEC	TWN	RNG	N/S	E/W
	Empire Federal SWD	3	COG OPERATING LLC	9,200'	SWD	NM	EDDY	State		10	17S	29E	1,980'S	1,980'W

Wells within 1/2 mile which penetrate proposed disposal interval

API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STATE	CO	LAND	U/L	SEC	TWN	RNG	N/S	E/W
30-015-31974	Durango 10 Federal	1	RKI Exploration & Production, LLC	10,925'	Gas	NM	Eddy	Fed	P	9	17S	29E	840'S	1,140'E

MISSING one well  
30-05-35770



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires: November 30, 2000

CLSF

Oil Cons.  
N.M. Div-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

1. Type of Well



Oil Well



Gas Well



Other

2. Name of Operator

LOUIS DREYFUS NATURAL GAS CORP.

3a. Address

Suite 600

14000 QUAIL SPGS PKWY, OKLA CITY, OK 73134

3b. Phone No. (include area code)

405-749-1300

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

UL P, 840' FSL & 1140' FEL, Sec. 10-17M-29E

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Durango "10" Federal #1

9. API Well No.

30-015-31974

10. Field and Pool, or Exploratory Area

Grayburg; Morrow

11. County or Parish, State

Eddy

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION



Notice of Intent



Subsequent Report



Final Abandonment Notice

TYPE OF ACTION



Acidize



Altering Casing



Casing Repair



Change Plans



Convert to Injection



Deepen



Fracture Treat



New Construction



Plug and Abandon



Plug Back



Production (Start/Resume)



Reclamation



Recomplete



Temporarily Abandon



Water Disposal



Water Shut-Off



Well Integrity



Other

Spud & set casing

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Spud well 10/09/01

10/10/01 Ran 10 jts 13 3/8", 48#, H-40 csg., set @ 423'. Cemented lead w/175 sx Halco-lite prem, tailed w/200 sx Premium Plus, circulated 106 sx to pit. Bumped plug, float failed, SI, displaced with 60 bbl fresh water. WOC 21 hrs, commenced drilling.

10/15/01 Ran 60 jts 9 5/8", 36#, J-55, LT&C csg., set @ 2698'. Cemented lead w/825 sx Interfill "C", tailed w/200 sx Premium Plus "C", circulated 90 sx to pit. Plug down @ 12:45 am, float held okay. WOC 21 hrs., commenced drlg.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Carla Christian

Title Regulatory Technician

Signature

Carla Christian

Date October 22, 2001

ACCEPTED FOR RECORD FOR FEDERAL OR STATE OFFICE USE

Approved by

(ORIG. SGD.) DAVID R. GLASS

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Oil Cons.  
N.M. Div-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210  
FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000  
5. Record Serial No.  
NMLC-028731 (b)

215F

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

1. Type of Well

☐

Oil Well

☒

Gas Well

☐

Other

2. Name of Operator

LOUIS DREYFUS NATURAL GAS CORP.

3a. Address

Suite 600

14000 QUAIL SPGS PKWY, OKLA CITY, OK 73134

3b. Phone No. (include area code)

405-749-1300

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

UL P, 840' FSL & 1140' FEL, Sec. 10-17<sup>S</sup>-29E

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Durango "10" Federal #1

9. API Well No.

30-015-31974

10. Field and Pool, or Exploratory Area

Grayburg; Morrow

11. County or Parish, State

Eddy

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

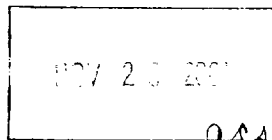
TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Set Casing.
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

11/08/01 Ran 259 jts 5 1/2", 17#, P-110 & N-80, csg., set @ 10,924'. Cemented 1st stage lead w/300 sx Interfill "H", tailed w/900 sx Super "H". Cemented 2nd stage lead w/700 sx Interfill "C", tailed w/50 sx Premium Plus. Bumped plug, float held.

Rig released, 11/08/01, WOCU.

ACCEPTED FOR RECORD



ALEXIS C. SWOBODA  
PETROLEUM ENGINEER

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Carla Christian

Title Regulatory Technician

Signature

Carla Christian

Date November 16, 2001

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

S

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well  
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
Mewbourne Oil Company 14744

3a. Address  
PO Box 5270 Hobbs, NM 88240

3b. Phone No. (include area code)  
505-393-5905

4. Location of Well (Footage, Sec., T. R., M., or Survey Description)  
1650' FNL & 990' FWL, Sec 10-T17S-R29E (Unit E)

5. Lease Serial No  
NMLC-068722

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No

8. Well Name and No  
Salamander 10 Federal Com #1

9. API Well No.  
30-015-35770

10. Field and Pool, or Exploratory Area  
Grayburg Morrow 77840

11. County or Parish, State  
Eddy County, NM

DEC 4 2007  
OCD-ARTESIA

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other TD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

3. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

(2nd Hole)  
11/12/07...TD'ed 8 3/4" hole @ 10750'. Ran 10750' 5 1/2" 17# P110 LT&C csg. Halliburton cmt 1st Stage w/300 sks Interfill "H" w/0.1% HR-7 (yd @ 2.48 cuft/sk @ 11.9 PPG). Tail w/205 sks Super "H" w/additives (yd @ 1.61 cuft/sk @ 13.2 PPG). Plug down @ 11:15 am 11/15/07. Drop bomb & open DV tool w/660#. Cmt 2nd Stage w/1105 sks Interfill "H" w/0.1% HR7(yd @ 2.48 cuft/sk @ 11.9 PPG). Tail w/230 sks Premium Class "H" neat (yd @ 1.2 cuft/sk @ 15.6 PPG). Plug down @ 7:30 pm 11/15/07. Circ 23 sks to pit. Closed DV Tool w/3060#. At 7:30 pm 11/15/07, tested casing to 3060# for 30 mins. Set wellhead slips w/120k. Test tubing spool pack-off to 3500#.

Released rig at 6:00 am 11/16/07.

Process of filing Change of Ownership to BP Operating on 11/19/07.

14 I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Kristi Green

Title Hobbs Regulatory

Signature

Date 11/20/07

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

ACCEPTED FOR RECORD

Approved by (Signature)

Name  
(Printed/Typed)

Title

Office

NOV 28 2007  
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

WESLEY W. INGRAM  
PETROLEUM ENGINEER

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on next page)

## OCD-ARTESIA

Form 3160-5  
(August 2007)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SEP 22 2009

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

<b>SUBMIT IN TRIPLICATE – Other instructions on page 2.</b>		5. Lease Serial No. NMLC068722
1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator BP America Production Company		7. If Unit of CA/Agreement, Name and/or No. NMNM120425
3a. Address P. O. Box 1089 Eunice, New Mexico 88231		8. Well Name and No. Salamander "10" Federal Com #1
3b. Phone No. (include area code) 575 / 394-1648		9. API Well No. 30-015-35770
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1650' FNL & 990' FWL Unit Letter "E" Section 10 - T17S - R29E		10. Field and Pool or Exploratory Area Grayburg Morrow
		11. Country or Parish, State Eddy County, New Mexico

## 12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BJA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

MIRU PU and ancillary equipment on 8/13/09 to abandon wellbore. Killed well, installed BOP, POH & laid down all production equipment and set abandonment plugs as follows (see attached WB Schematic for additional details):

1. Ran 5½" CIBP on 2 3/8" tubing and set @ 10,505'. Circulated hole clean with freshwater and tested 5½" casing & CIBP to 800 psi, OK. Spotted approximately 100 sx Class "H" onto CIBP. Plug set on 8/19/09 & tagged on 8/20/09 @ 9537'. Morrow - Atoka plug set from 9537' - 10,505'.
2. Set tubing just above bottom plug and circulated hole with 9.0 ppg mud laden fluid.
3. Spotted 25 sx Class "H" from 8214' - 7990' across DV tool @ 8124' on 8/20/09.
4. Spotted 25 sx Class "H" from 7335' - 7110' across top of Wolfcamp on 8/20/09.
5. Spotted 25 sx Class "C" from 6238' - 5975' across top of Abo on 8/20/09.
6. Spotted 25 sx Class "C" from 4014' - 3750' across top of Glorieta on 8/20/09.
7. Spotted 25 sx Class "C" @ 3144' on 8/20/09 and tagged @ 2862' on 8/24/09. Plug set 2862' - 3144', which is across the 9 5/8" intermediate casing shoe @ 3015'.
8. Set bottom of tubing @ 1050' = 119' below top of Yates @ 931', spotted 110 sx Class "C" to surface, laid down tubing and filled casing with cement to compensate for tubing displacement. This plug covers top of Yates @ 931', salt section 350' - 650', 13 5/8" surface casing shoe @ 300' and provides the top plug. This plug was set 8/24/09.
9. RD PU and ancillary equipment on 8/24/09 and cut WH, casings and anchors to 3' below GL and installed regulation Dr. Hole Madder on 8/25/09.

Location will be reclaimed and BLM notified when site is ready for final inspection.

Accepted as to plugging of the well bore.  
Liability under bond is retained until  
Surface restoration is completed.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) M. D. Westmoreland		Title Wells Operation Superintendent
Signature <i>M. D. Westmoreland</i>		Date 08/27/2009

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____	Title _____	<b>ACCEPTED FOR RECORD</b> SEP 13 2009 BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office _____	

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(Instructions on page 2)



# BP America Production Company

Lease & Well #

**Salamander 10 Federal Com #1**

API # 30 015 35770

Federal lse SN. NMLC068722

Eddy Co., NM

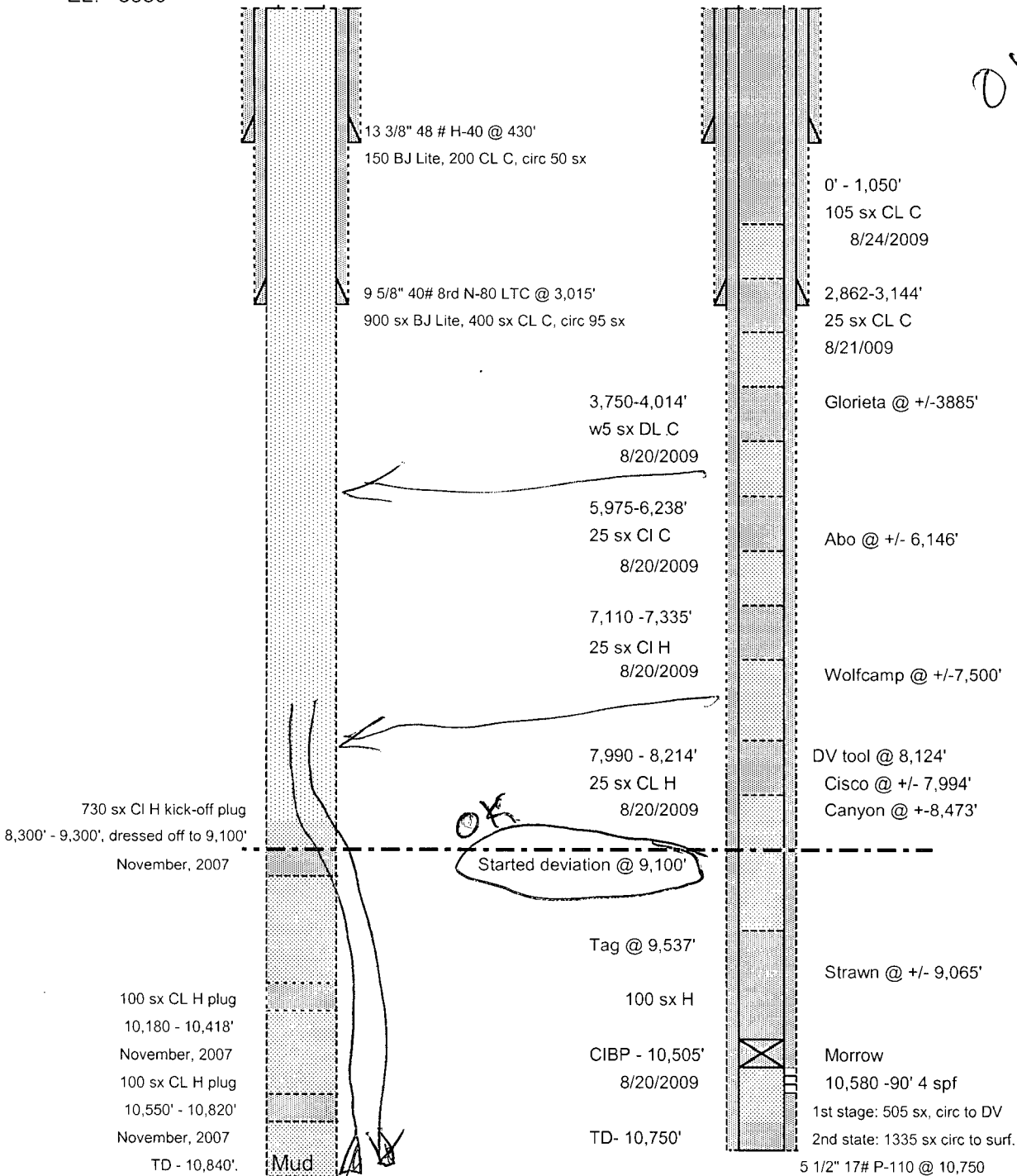
Sec 10 T17S R29E 1650 FNL & 990 FWL

SPUD - 9/29/2007

EL. 3580

**Before Deviation**

**After kick-off and & Deviate, P&A**







*New Mexico Office of the State Engineer*  
**Point of Diversion by Location**  
(with Owner Information)

UTMAD83 Radius Search (in meters):

Easting (X): 587311

Northing (Y): 3634540

Radius: 1610

No PODs found.

2/19/2010: Fresh Water Well Search, COG SENM Empire Federal SWD #3,  
1 mile radius of location. No wells found

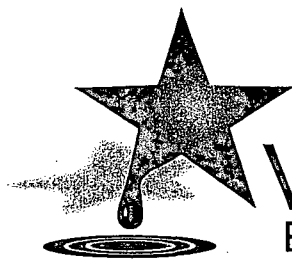
## **Legal Notice**

**COG Operating LLC** is applying to drill the Empire State SWD #3 as a water disposal well.

The well is located in 1980' FSL & 1980' FWL, Sec. 10, T. 17 S., R. 29 E., Eddy County, NM. The well will dispose of water produced from oil and gas wells into the Cisco Reef zone at a depth of 8325' to 8950' at a maximum rate of 20,000 barrels of water per day and at a maximum pressure of 1,720 psi.

Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505, within 15 days.

Additional information can be obtained  
by contacting Tye Orr  
Veritas 321 Energy Partners, LP  
P.O. Box 173  
Midland, TX  
(432) 349-4729



VERITAS 321  
ENERGY PARTNERS, LP

Bureau of Land Management  
620 Greene Street  
Carlsbad, NM 88220

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Empire Federal SWD #3

Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980' FWL Sec 10, T 17S, R29E  
Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

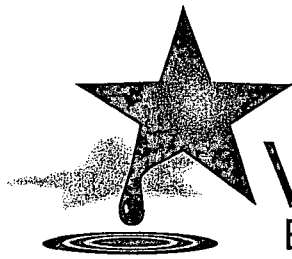
Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Tony Esslinger

U.S. Postal Service <sup>TM</sup>	
CERTIFIED MAIL <sup>®</sup> RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a>	
OFFICIAL USE	
Postage	\$ 0.61
Certified Fee	2.80
Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.71
Postmark Here	
Sent to Bureau of Land Management 620 Greene Street Carlsbad NM 88220	



VERITAS 321  
ENERGY PARTNERS, LP

Conoco Phillips  
PO Box 2197  
Houston, TX 77252

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Empire Federal SWD #3

Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980' FWL Sec 10, T 17S, R29E

Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

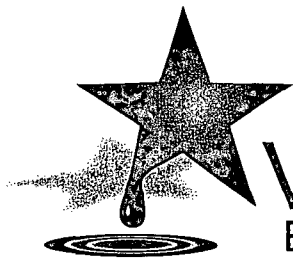
Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a>	
OFFICIAL USE	
Postage	\$ 0.61
Certified Fee	2.80
Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.71
Sent To Conoco Phillips P.O. Box 2197 Houston TX 77252	

Sincerely,

Tony Esslinger



**VERITAS 321**  
ENERGY PARTNERS, LP

Darrell G. Finney and Mary L. Finney  
2707 West Ave  
Artesia, NM 88210

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Empire Federal SWD #3

Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980' FWL Sec 10, T 17S, R29E

Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Tony Esslinger

<b>U.S. Postal Service</b>	
<b>CERTIFIED MAIL™ RECEIPT</b>	
<small>(Domestic Mail Only; No Insurance Coverage Provided)</small>	
<small>For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a></small>	
<b>OFFICIAL USE</b>	
Postage	\$ 0.61
Certified Fee	2.80
Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.71
Sent to: Darrell G. & Mary L. Finney	
Street, Apt. No., or PO Box No. 2707 West Ave.	
City, State, ZIP+4 Artesia, NM 88210	

702 • 432.682.4002 • 432.684.4741 fax



# VERITAS 321

ENERGY PARTNERS, LP

Tandem Energy Corp.  
200 N. Loraine, Suite 500  
Midland, TX 79701

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Empire Federal SWD #3

Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980' FWL Sec 10, T 17S, R29E  
Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Tony Esslinger

U.S. Postal Service <sup>TM</sup>	
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BP America Production Co.  
PO Box 3092  
Houston, TX 77253

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Empire Federal SWD #3

Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980' FWL Sec 10, T 17S, R29E  
Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

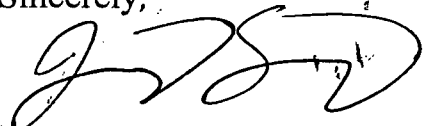
Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

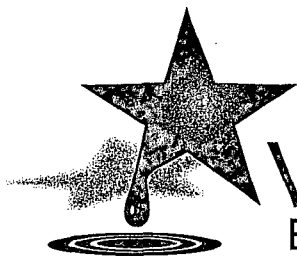
  
Tony Esslinger

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City, State, Zip+4	Houston, TX 77253

9702 • 432.682.4002 • 432.684.4741 fax



**VERITAS 321**  
ENERGY PARTNERS, LP

Marks & Garner Prod Ltd Co.  
PO Box 1089  
Hobbs, NM 88241

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

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Please call me if you have any questions.

Sincerely,

Tony Esslinger

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City, State, ZIP+4 Hobbs NM 88241	

PS Form 3800, August 2005 See Reverse for Instructions

1702 • 432.682.4002 • 432.684.4741 fax





# VERITAS 321

ENERGY PARTNERS, LP

Nadel and Gussman Capitan, LLC  
15 East 5<sup>th</sup> Street, Suite 3200  
Tulsa, OK 74103

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980' FWL Sec 10, T 17S, R29E  
Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Tony Esslinger

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Send To:	Nadel & Gussman Capitan, LLC
Street, Apt. No., or PO Box No.	15 East 5th St. Suite 3200
City, State, ZIP+4	Tulsa, OK 74103



VERITAS 321  
ENERGY PARTNERS, LP

Mack C. Chase Trust  
PO Box 693  
Artesia, NM 88210

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Approximate Location: 4 miles East of Artesia, NM

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Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

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Please call me if you have any questions.

Sincerely,

Tony Esslinger

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Sent To: Mack C. Chase Trust  
Street, Apt. No., or PO Box No.: P.O. Box 693  
City, State, ZIP+4: Artesia, NM 88210

702 • 432.682.4002 • 432.684.4741 fax



**VERITAS 321**  
ENERGY PARTNERS, LP

EOG Resources  
PO Box 2267  
Midland, TX 79702

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

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Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

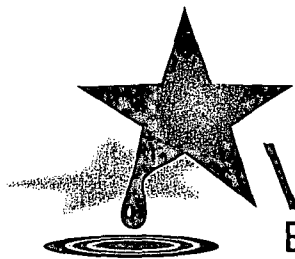
Please call me if you have any questions.

Sincerely,

Tony Esslinger

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Street, Apt. No., or PO Box No. <b>P.O. Box 2267</b>	
City, State, ZIP+4 <b>Midland, TX 79702</b>	

9702 • 432.682.4002 • 432.684.4741 fax



# VERITAS 321

ENERGY PARTNERS, LP

RKI Exploration & Production, LLC  
3817 NW Expressway, Suite 950  
Oklahoma City, OK 73112

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

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Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

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Please call me if you have any questions.

Sincerely,

Tony Esslinger

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Sent by	RKI Exploration & Production, LLC
Street, Apt. No., or PO Box No.	3817 NW Expressway Ste 950
City, State, ZIP	Oklahoma City, OK 73112



New Mexico State Land Office  
P.O. Box 1148  
Santa Fe, NM 87504

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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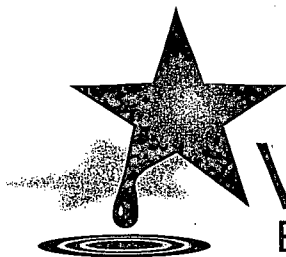
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Please call me if you have any questions.

Sincerely,

Tony Esslinger

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Street, Apt. No., or PO Box No. P.O. Box 1148	
City, State, ZIP+4 Santa Fe, NM 87504	



VERITAS 321  
ENERGY PARTNERS, LP

J&J Service, Inc.  
PO Box 324  
Lovington, NM 88260

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

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Please call me if you have any questions.

Sincerely,

Tony Esslinger



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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.71

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Sent To	J&J Service, Inc.
Street, Apt., P.O., or PO Box No.	P.O. Box 324
City, State, ZIP+4	Lovington NM 88260

9702 • 432.682.4002 • 432.684.4741 fax

**Jones, William V., EMNRD**

---

**From:** Jones, William V., EMNRD  
**Sent:** Monday, March 15, 2010 2:43 PM  
**To:** 'Mark Fairchild'  
**Cc:** Ezeanyim, Richard, EMNRD; Reeves, Jacqueta, EMNRD; 'Wesley\_Ingram@blm.gov'; Warnell, Terry G, EMNRD  
**Subject:** Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef 8325 - 8950

Hello Mark:

After reviewing I have the following requests:

- 12 a. Please send a list of all anticipated formation names that will be contributing waters to this well and a "typical" analysis for each.
- 1 b. Your application shows a search of the State Engineer site to look for water wells. Please ask your field people to locate the nearest Windmill or Cattle tank and get a sample for analysis if located within 1 mile of this well.
- ✓ c. The newspaper notice was confusing as listing Veritas 321 Energy Partners as contact info – is this correct? If not, please renote. Another point is that newspaper notices should have an informal location in addition to a legal location that gives the reader a general idea of where the well is located – for example, 4 miles NW of Loco Hills, NM.
- ? d. We ask that the applicant break up the ½ mile AOR into consistently owned "tracts" of land and list these tracts with the owners of each tract. Please note that if there is a Lessee of a tract of land at Cisco Reef depths, then you don't have to notice the mineral interest owner(s) of the Cisco Reef depth. That being said, THANK YOU for being thorough with the notice.
- ? e. I did see that Marbob and Hanson Energy operate shallower wells and therefore may own rights to the Cisco depths – if there is a question, please send them notice also.
- 20 T&US f. This is a new proposed well in an area where the well records indicate older wells had difficulty circulating adequate cement – See the records on 30-015-35219. Therefore any approved injection permit may have a stipulation that a cement bond log be run not only to locate cement tops, but to locate areas with poor cement bond.
- OK g. Your AOR well list failed to list the P&Aed 30-015-35770. Please send a wellbore diagram of this well as it currently exists – showing both holes. I believe, the well was drilled then plugged back and sidetracked and then plugged again.
- ? h. As soon as the API number is available for the subject well – send it to my attention, so we can update our database.

We will only hold up the permit pending the wellbore diagram and the notice questions. These are all relatively minor items – Thank You for this application.

Regards,

William V. Jones PE  
New Mexico Oil Conservation Division  
1220 South St. Francis

**Jones, William V., EMNRD**

---

**From:** Jones, William V., EMNRD  
**Sent:** Wednesday, March 17, 2010 1:31 PM  
**To:** 'Mark Fairchild'  
**Subject:** FW: Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef 8325 - 8950

Hello Mark:

Please also send a copy of the C-108 to the BLM in Carlsbad.

Thank You,

Will Jones



**Jones, William V., EMNRD**

---

**From:** Jones, William V., EMNRD  
**Sent:** Thursday, March 18, 2010 2:44 PM  
**To:** 'Tye Orr'  
**Cc:** 'Mark Fairchild'  
**Subject:** RE: Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef 8325 - 8950

Hello Tye:

Sorry about the phone...

Don't re-do newspaper notice just because of this "informal" location add-on, just remember it for next time. It is mentioned in our rules - the C-108 form is very old and has not kept up with changes in the Rules. This discrepancy issue always comes up. When doing permit applications, always read the applicable rules in addition to the appropriate form. ✓

The 30-015-35770 well - just find out all the pertinent casing/cementing data and do a hand drawn well sketch showing this data. I like the hand drawn diagrams better than the computer generated ones (normally). Be sure and put the API number on the top of all forms. ✓

Thank you,

William V. Jones PE  
New Mexico Oil Conservation Division  
1220 South St. Francis  
Santa Fe, NM 87505  
505-476-3448

-----Original Message-----

**From:** Tye Orr [mailto:tye@veritas321.com]  
**Sent:** Thursday, March 18, 2010 3:17 PM  
**To:** Jones, William V., EMNRD  
**Cc:** 'Mark Fairchild'  
**Subject:** FW: Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef 8325 - 8950

Mr. Jones,

I have tried to call but have received no call back. After reviewing your email, I have a few questions. First, concerning the Newspaper notice, Veritas 321 Energy is the agency doing the permitting for Concho, so yes it is correct. Next, we have done this permitting process for Concho before and have never had the issue come up concerning an informal description of the location. The C-108 application does not ask for a formal and informal description. All other notices have been exactly the same and they have always been ok. Please let me know for sure if this is going to hold the permit up or not. I sure hope it wouldn't. Last, I looked on the OCD website in the wells files to try and find a well bore plat as you requested for the P&Aed 30-015-35770 well and could not find one filed. Please let me know how you want to handle this. Everything else I will get with Concho on and get these things to you ASAP. Thanks.

Tye Orr  
Crew Chief

P.O. Box 173  
Midland, TX 79702  
(432) 682-4002 office  
(432) 349-4729 cell

-----Original Message-----

From: Mark Fairchild [mailto:MFairchild@conchoresources.com]  
Sent: Wednesday, March 17, 2010 7:52 AM  
To: 'tye@veritas321.com'  
Subject: Fw: Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef 8325 - 8950

Please send  
Mark A. Fairchild  
COG. OPERATING LLC

----- Original Message -----

From: Wesley\_Ingram@blm.gov <Wesley\_Ingram@blm.gov>  
To: Jones, William V., EMNRD <William.V.Jones@state.nm.us>  
Cc: Reeves, Jacqueta, EMNRD <Jacqueta.Reeves@state.nm.us>; Mark Fairchild; Ezeanyim, Richard, EMNRD <richard.ezeanyim@state.nm.us>; Warnell, Terry G, EMNRD <TerryG.Warnell@state.nm.us>  
Sent: Tue Mar 16 18:23:26 2010  
Subject: Re: Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef 8325 - 8950

Will,

In early March, I contacted Tony Esslinger with Veritas 321 Energy Partners and requested the full package to review.  
The BLM has not received these documents. The BLM received a cover letter and the two page application and a plat.

Thanks, Wesley

"Jones, William  
V., EMNRD"  
<William.V.Jones@  
state.nm.us>

03/15/2010 02:42  
PM

"Mark Fairchild"  
<MFairchild@conchoresources.com>

To

cc

"Ezeanyim, Richard, EMNRD"  
<richard.ezeanyim@state.nm.us>,  
"Reeves, Jacqueta, EMNRD"  
<Jacqueta.Reeves@state.nm.us>,  
<Wesley\_Ingram@blm.gov>, "Warnell,  
Terry G, EMNRD"  
<TerryG.Warnell@state.nm.us>

Subject

Disposal Application from COG  
Operating LLC: Empire Federal SWD  
#3 30-015-NA Proposed new well  
for disposal into the Cisco Reef

**Jones, William V., EMNRD**

---

**From:** Jones, William V., EMNRD  
**Sent:** Monday, April 12, 2010 3:36 PM  
**To:** 'Mark Fairchild'  
**Cc:** Ezeanyim, Richard, EMNRD; 'Wesley\_Ingram@blm.gov'; Reeves, Jacqueta, EMNRD  
**Subject:** Disposal Application from COG Operating LLC: Empire Federal SWD #3 30-015-NA  
Proposed new well for disposal into the Cisco Reef formation 8325 - 8950

Hello Mark:

Looked this application and the data you folks gathered over again this morning and have a few last requests on this one.

All in all, this application looks like it may be fine, be need to cross all the tees.

Here are the items I believe still need to be addressed – other items in the previous email of March 15, 2010 I believe have been answered:

- Will*  
*Sent*
- a. Please send a list of all anticipated formation names that will be contributing waters to this well and a “typical” analysis for each.
  - b. Your application shows a search of the State Engineer site to look for water wells. Please ask your field people to locate the nearest Windmill or Cattle tank and get a sample for analysis if located within 1 mile of this well.
  - c. Please look at the ½ mile AOR and all the consistently owned “tracts” of land within this AOR and list these tracts with the owners of each tract – and let us know whether these parties have been noticed.  
*Yes*  
(For example:  
The N/2 N/2 of Sec 15 is controlled by Marbob and they were noticed.  
The E/2 E/2 of Sec 9 is controlled by Marbob and Mack and Mack was also noticed.  
Etc.)
  - d. What about Marbob and Hanson Energy? They operate shallower wells and therefore may own rights to the Cisco depths – if there is a question, please send them notice also.
  - e. On March 16<sup>th</sup>, we received a note from the BLM that the entire C-108 package had not been mailed to them in Carlsbad. The certified receipts sent with this application don’t have the postmark dates or the dates or other dates on them. Please let me know if the notices sent for all affected parties consisted of the entire C-108 or just a portion of it and let me know if the BLM now has a copy of this application.
  - f. Have you had any feedback from the BLM?

Regards,

William V. Jones PE  
New Mexico Oil Conservation Division  
1220 South St. Francis  
Santa Fe, NM 87505  
505-476-3448

**Jones, William V., EMNRD**

---

**From:** Mark Fairchild [MFairchild@conchoresources.com]  
**Sent:** Tuesday, April 13, 2010 7:59 AM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: Disposal Application from COG Operating LLC: Empire State SWD #2 30-015-NA Proposed new well for disposal into the Cisco Reef formation 8300 - 8900  
**Attachments:** representative\_sample\_blinebry\_formation.pdf;  
representative\_sample\_paddock\_formation.pdf

*William, the two representative water samples are attached. Each zone contributes approximately 50% of the volume we dispose of.*

M.A. Fairchild  
COG OPERATING LLC  
Office: 432-686-3021  
Cell: 432-230-7170



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---

**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Monday, April 12, 2010 5:05 PM  
**To:** Mark Fairchild  
**Cc:** Ezeanyim, Richard, EMNRD; Reeves, Jacqueta, EMNRD  
**Subject:** Disposal Application from COG Operating LLC: Empire State SWD #2 30-015-NA Proposed new well for disposal into the Cisco Reef formation 8300 - 8900

Hello again Mark:

Thank you for the reply back on many of the 3/15/10 requested items.

There are still a few issues, but the main one in this case is the issue of the Conoco 9 State Com #1 30-015-30690. This well is not plugged such that the Wolfcamp is isolated from the proposed disposal interval – and Cimarex operates a Wolfcamp well in the Area of Review. Also, notice was not sent to Cimarex in this case – that I have a record of.

In addition, this Conoco 9 State Com #1 is not plugged to isolate the proposed disposal interval from deeper – upper Penn intervals.

We cannot approve this disposal application unless you agree to re-enter this well and set new plugs to isolate the proposed Cisco disposal interval from upper and lower strata.



Catalyst Oilfield Services  
 11999 E Hwy 158  
 Gardendale, TX 79758  
 (432) 563-0727  
 Fax: (432) 224-1038

## Water Analysis Report

Customer: COG Operating LLC - NM Sample #: 6861  
 Area: Artesia Analysis ID #: 216  
 Location: Typical Blinebry 0  
 Sample Point: Wellhead

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	1/11/07	Chloride:	152968.0	Sodium:	57440.1
Analysis Date:	2/7/07	Bicarbonate:	62.8	Magnesium:	4065.0
Analyst:	Mitchell Labs	Carbonate:		Calcium:	29844.8
TDS (mg/l or g/m3):	244706.2	Sulfate:	320.0	Strontium:	
Density (g/cm3):	1.17			Barium:	
Hydrogen Sulfide:	5			Iron:	4.9
Carbon Dioxide:	61.6			Manganese:	0.600
Comments:		pH at time of sampling:	6.5		
		pH at time of analysis:			
		pH used in Calculation:	6.5		
		Temperature @ lab conditions (F):	70	Conductivity (micro-ohms/cm):	225000
				Resistivity (ohm meter):	.0444

### Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.38	2.22	-0.24	0.00	-0.20	0.00	0.00	0.00	0.00	0.00
100	0.45	2.77	-0.31	0.00	-0.21	0.00	0.00	0.00	0.00	0.00
120	0.51	3.33	-0.37	0.00	-0.18	0.00	0.00	0.00	0.00	0.00
140	0.57	3.88	-0.41	0.00	-0.13	0.00	0.00	0.00	0.00	0.00



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11999 E Hwy 158  
Gardendale, TX 79758  
(432) 563-0727  
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## Water Analysis Report

Customer: COG Operating LLC - NM Sample #: 6518  
Area: Artesia Analysis ID #: 166  
Location: Typical Paddock 0  
Sample Point: Wellhead

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	10/18/06	Chloride:	118129.8	Sodium:	63736.9
Analysis Date:	10/20/06	Bicarbonate:	125.7	Magnesium:	1356.6
Analyst:	Mitchell Labs	Carbonate:		Calcium:	9326.4
TDS (mg/l or g/m3):	193512.6	Sulfate:	800.0	Strontium:	
Density (g/cm3):	1.135			Barium:	
Hydrogen Sulfide:	5			Iron:	36.1
Carbon Dioxide:	57			Manganese:	1.070
Comments:		pH at time of sampling:	6.9		
		pH at time of analysis:			
		pH used in Calculation:	6.9		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	375000
				Resistivity (ohm meter):	.0267

### Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
°F										
80	0.68	7.56	-0.23	0.00	-0.20	0.00	0.00	0.00	0.00	0.00
100	0.72	8.72	-0.30	0.00	-0.21	0.00	0.00	0.00	0.00	0.00
120	0.75	9.89	-0.36	0.00	-0.19	0.00	0.00	0.00	0.00	0.00
140	0.79	11.05	-0.41	0.00	-0.15	0.00	0.00	0.00	0.00	0.00

**Jones, William V., EMNRD**

---

**From:** Jones, William V., EMNRD  
**Sent:** Tuesday, April 13, 2010 11:21 AM  
**To:** 'Mark Fairchild'  
**Subject:** Disposal Applications from COG Operating LLC: Empire State SWD #2 and Federal #3

Mark:

Let me know after you check with Veritas about noticing Marbob and Hanson Energy on the #3 well?

Also, let me know if these footage locations are fixed? (The disposal permits are site specific, so once the permit is issued, if the footage location changes, the permit would no longer be valid and it would require a new application.)

Thanks for the water analysis.

Will

**Jones, William V., EMNRD**

---

**From:** Tye Orr [tye@veritas321.com]  
**Sent:** Friday, April 16, 2010 2:11 PM  
**To:** Jones, William V., EMNRD  
**Cc:** mfairchild@conchoresources.com  
**Subject:** Extended Notices  
**Attachments:** Extended Notice (Aspen).pdf; ATT3669687.txt; Extended Notice (Cimarex).pdf; ATT3669688.txt; Extended Notice (EOG).pdf; ATT3669689.txt; Extended Notice (Hanson).pdf; ATT3669690.txt; Extended Notice (Marbob).pdf; ATT3669691.txt

William, attached are the notices you had in question for the Empire State SWD #2 and #3 wells that I have applied for on behalf of Concho. All have been mailed as of today. These are for your records per your request. Please let me know if you have any questions. Thanks.

*Relecom  
5/3/10*



**Jones, William V., EMNRD**

---

**From:** Mark Fairchild [MFairchild@conchoresources.com]  
**Sent:** Friday, April 16, 2010 8:40 AM  
**To:** Jones, William V., EMNRD  
**Cc:** Robert Ready; Tye Orr  
**Subject:** RE: Empire Area SWD wells #2 and 3

*Just talked to Ty and he will mail today!*

M.A. Fairchild  
COG OPERATING LLC  
Office: 432-686-3021  
Cell: 432-230-7170



**CONFIDENTIALITY NOTICE:** The information in this email may be confidential and/or privileged. If you are not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any review, dissemination or copying of this email and its attachments, if any, or the information contained herein, is prohibited. If you have received this email in error, please immediately notify the sender by return email and delete this email from your system. Thank you.

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Friday, April 16, 2010 9:40 AM  
**To:** Mark Fairchild  
**Subject:** RE: Empire Area SWD wells #2 and 3

Mark:  
Sounds like a plan.  
If you noticed other parties other than the BLM, please send the receipts.

William V. Jones PE  
New Mexico Oil Conservation Division  
1220 South St. Francis  
Santa Fe, NM 87505  
505-476-3448

---

**From:** Mark Fairchild [mailto:MFairchild@conchoresources.com]  
**Sent:** Friday, April 16, 2010 7:50 AM  
**To:** Jones, William V., EMNRD  
**Cc:** Erick Nelson; Robert Ready; Tye Orr; Phyllis Edwards; Robyn Odom; Keith Corbett  
**Subject:** Empire Area SWD wells #2 and 3

William, just got off the phone with Mr. Ingram of the BLM and he has #3 on his desk and all is good. Should sign this date. Will await the now 14 days for release of SWD permit and then send the API's to you when y'all issue them. Please let me know of anything that needs our attention. Thanks!



Marbob Energy  
2208 W. Main St.  
Artesia, NM 88210

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Empire Federal SWD #3

Proposed Disposal Zone: Cisco Reef (from 8,325' to 8,950')

Location: 1980' FSL & 1980 FWL Sec 10, T17S, R29E

Eddy County, NM

Approximate Location: 4 miles East of Artesia, NM

Applicant Name: COG Operating LLC (432) 685-4340

Applicant's Address: 550 West Texas, Suite 1300, Midland, TX 79701

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Tye Orr  
Consulting Landman  
(432) 349-4729

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	

Postage	\$ .78
Certified Fee	2.30
Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.38

Postmark  
Here

Sent To	Marbob Energy
Street, Apt. No., or PO Box No.	2208 W. Main St.
City, State, ZIP+4	Artesia, NM 88210



Hanson Operating, Company, Inc.  
P.O. Box 1515  
Roswell, NM 88202

COG Operating LLC is applying (see attached application) to drill a salt water disposal well as described below. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following proposed water disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

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Please call me if you have any questions.

Sincerely,

Tye Orr  
Consulting Landman  
(432) 349-4729

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
(Domestic Mail Only. No Insurance Coverage Provided)	
For Delivery Information Visit our website at www.usps.com	
OFFICIAL USE	
Postage	\$ .78
Certified Fee	2.30
Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 5.38
Postmark Here	
Sent To <u>Hanson Operating Company, Inc.</u>	
Street, Apt. No., or PO Box No. <u>P.O. Box 1515</u>	
City, State, ZIP+4 <u>Roswell, NM 88202</u>	

# 123 Injection Permit Checklist (11/30/09)

Case \_\_\_\_\_ R- \_\_\_\_\_ SWD ~~123~~ WFX \_\_\_\_\_ PMX \_\_\_\_\_ IPI \_\_\_\_\_ Permit Date 4/13/10 UIC Qtr ~~1~~ 2

# Wells 1 Well Name: EMPIRE Federal SWD #3

API Num: (30-) 015 Spud Date: New well New/Old: N (UIC primacy March 7, 1982)

Footages 1980 FSL/1980 FWL Unit K Sec 10 Tsp 17S Rge 29E County EDDY

Operator: COG O'Neal, LLC Contact Mark A. Fairchild

OGRID: 229B7 RULE 5.9 Compliance (Wells) 6/1588 (Finan Assur) OK OK

Operator Address: 550 West TEXAS, Suite 100, MIDLAND, TX 79701

Location and Current Status: New Drill Planned For Injection

Planned Work to Well: Drill/Equip/ID Planned Tubing Size/Depth: 3 1/2

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing — Surface	17 1/2 13 3/8	450	250/250	Swf
Existing — Intermediate	12 1/4 9 5/8	2500	550/200	Swf
Existing — Long String	8 3/4 7"	9200	300 1.32 / 2.14 / 1.19 650/100	Swf

DV Tool 7200 Liger \_\_\_\_\_ Open Hole \_\_\_\_\_ Total Depth 9200

Well File Reviewed \_\_\_\_\_

Diagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: will be run

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)	<u>7150</u>	<u>WC Reef</u>	
Above (Name and Top)	<u>8150</u>	<u>C1500</u>	
Injection.....	<u>8325</u>	<u>CISGO Reef</u>	<u>NO</u>
Interval TOP:	<u>8325</u>		
Injection.....	<u>8950</u>	<u>Cine Reef</u>	<u>NO</u>
Interval BOTTOM:	<u>8950</u>		
Below (Name and Top)			

1665 PSI Max. WHIP  
Open Hole (Y/N) \_\_\_\_\_  
Deriated Hole? \_\_\_\_\_

Sensitive Areas: Capitan Reef Chiff House Salt Depths 400' - 800'

..... Potash Area (R-111-P) \_\_\_\_\_ Potash Lessee \_\_\_\_\_ Noticed? \_\_\_\_\_

Fresh Water: Depths: none Wells \_\_\_\_\_ Analysis? \_\_\_\_\_ Affirmative Statement ☒

Disposal Fluid Sources: \_\_\_\_\_ Analysis? \_\_\_\_\_

Disposal Interval Production Potential/Testing/Analysis Analysis: will Swab Test & Get Sample

Notice: Newspaper(Y/N) ? Surface Owner BLM Mineral Owner(s) \_\_\_\_\_

RULE 26.7(A) Affected Parties: CONOCO PHILLIPS / FINNEY / Tordella / BP / Gaff / Guss / Chase

Area of Review: Adequate Map (Y/N) ☒ and Well List (Y/N) ☒

Active Wells 1 Num Repairs 0 Producing in Injection Interval in AOR NO

..P&A Wells 1 Num Repairs \_\_\_\_\_ All Wellbore Diagrams Included? \_\_\_\_\_

Questions to be Answered: Run CBL

address St # wrong on Neighbor Notice WHO is THE own  
Came OK? Veritas  
F.W. STOCK TANKS, or WINDMILLS?

Required Work on This Well: Notice Hanson Energy Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_

AOR Repairs Needed: & Morbale Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_

Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_