

DATE IN <u>4.12.11</u>	SUSPENSE	ENGINEER <u>WJ</u>	LOGGED IN <u>4.12.11</u>	TYPE <u>SND</u>	APP NO. <u>1110244779</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



COG-229137

Loco Hills SND 34#5

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]**

[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 Operations Engineer 2/28/2011
 Title Date

MFairchild@Conchoresources.com
 e-mail Address

RECEIVED OOD
 2011 APR - 8 P 1:20

F/34/175/30E

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: **COG Operating, LLC.**

ADDRESS: **550 West Texas, Ste 100, Midland TX 79701-4287**

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 ☒ 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: **Sr. Operations Engr.**

SIGNATURE: Mark A. Fairchild DATE: **3/3/2010**

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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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.

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.

INJECTION WELL DATA SHEET

OPERATOR: **COG Operating, LLC.**WELL NAME & NUMBER: **Loco Hills SWD 34 #5**WELL LOCATION: **1650 FNL; 1595 FWL****F**

UNIT LETTER

34

SECTION

17S

TOWNSHIP

30E

RANGE

WELLBORE SCHEMATIC

*Cement volumes will increase of those shown on this application to account for hole conditions unknown at this time.

WELL CONSTRUCTION DATA
Surface CasingHole Size: **17 1/2"**Casing Size: **13 3/8"**Cemented with: _____ sx. _____ ft³or **278*** _____ ft³

13 3/8" Surface Csg Set @ 400'

Top of Cement: **Surface**Method Determined: **Circulate**Intermediate CasingHole Size: **12 1/4"**Casing Size: **9 5/8"**Cemented with: _____ sx. _____ ft³or **1,253*** _____ ft³

9 5/8" Intermediate Csg Set @ 4,000'

Top of Cement: **Surface**Method Determined: **Circulate**Production CasingHole Size: **8 3/4"**Casing Size: **7"**Cemented with: _____ sx. _____ ft³or **1,524*** _____ ft³

Perforated interval, 8,550 to 8,850'

Top of Cement: **Surface**Method Determined: **Circulate**Total Depth: **9,700'**

7" Long String Set @ 9,700'

Injection Interval**Jet Perforations: 8,550 feet to 8,850'**

(Perforated or Open Hole; indicate which)

Other Type of Tubing/Casing Seal (if applicable): **N/A**

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

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

2. Name of the Injection Formation: **Wolfcamp Reef**
3. Name of Field or Pool (if applicable): **None**
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, none**
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

San Andres @ 3,295 ; Paddock @ 6,610 ; Blinebry @ 7,840



ATTACHMENT TO APPLICATION C-108

COG Operating Inc.
Loco Hills SWD 34 #5
Sec. 34, T-17-S, R-30-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 to 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 injection pressure: Vacuum
Proposed maximum injection pressure: 1700 psig
 - 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 (NMSLO) and to each leasehold operator within a half mile as required.

COG SENM SWD Well Questionnaires

Date: 2/28/11

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

Note: Answers to questions in this color

What will be the well name?

Loco Hills SWD 34 #5

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 the top perforation.

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?

Wolfcamp Reef, between 8,500 and 9,250' ✓

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?

1700 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 wells 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 Wolfcamp and the surface.

Will the system be open or closed?

Closed

District I
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 15, 2009
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code		³ Pool Name	
⁴ Property Code		⁵ Property Name LOCO HILLS SWD "34"			⁶ Well Number 5
⁷ OGRID No. 229137		⁸ Operator Name COG OPERATING, LLC			⁹ Elevation 3551.8

¹⁰ Surface Location

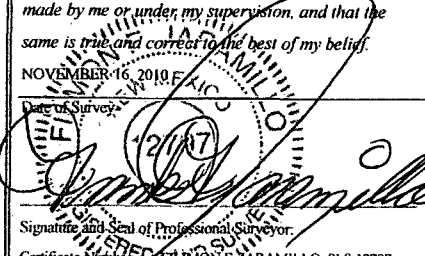
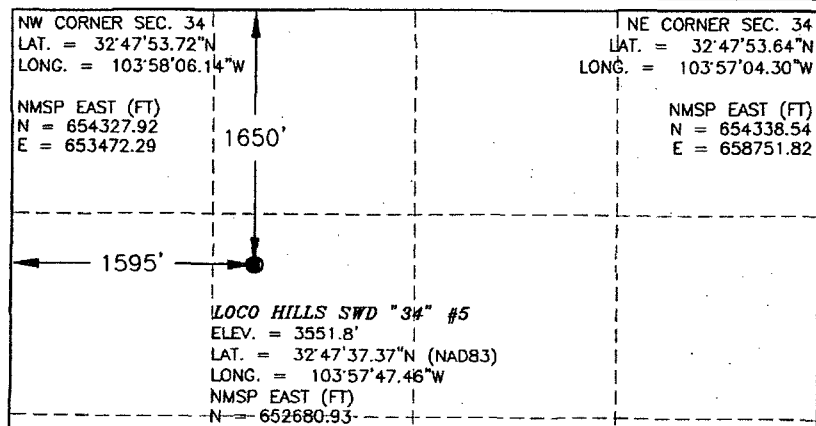
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	34	17 S	30 E		1650	NORTH	1595	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

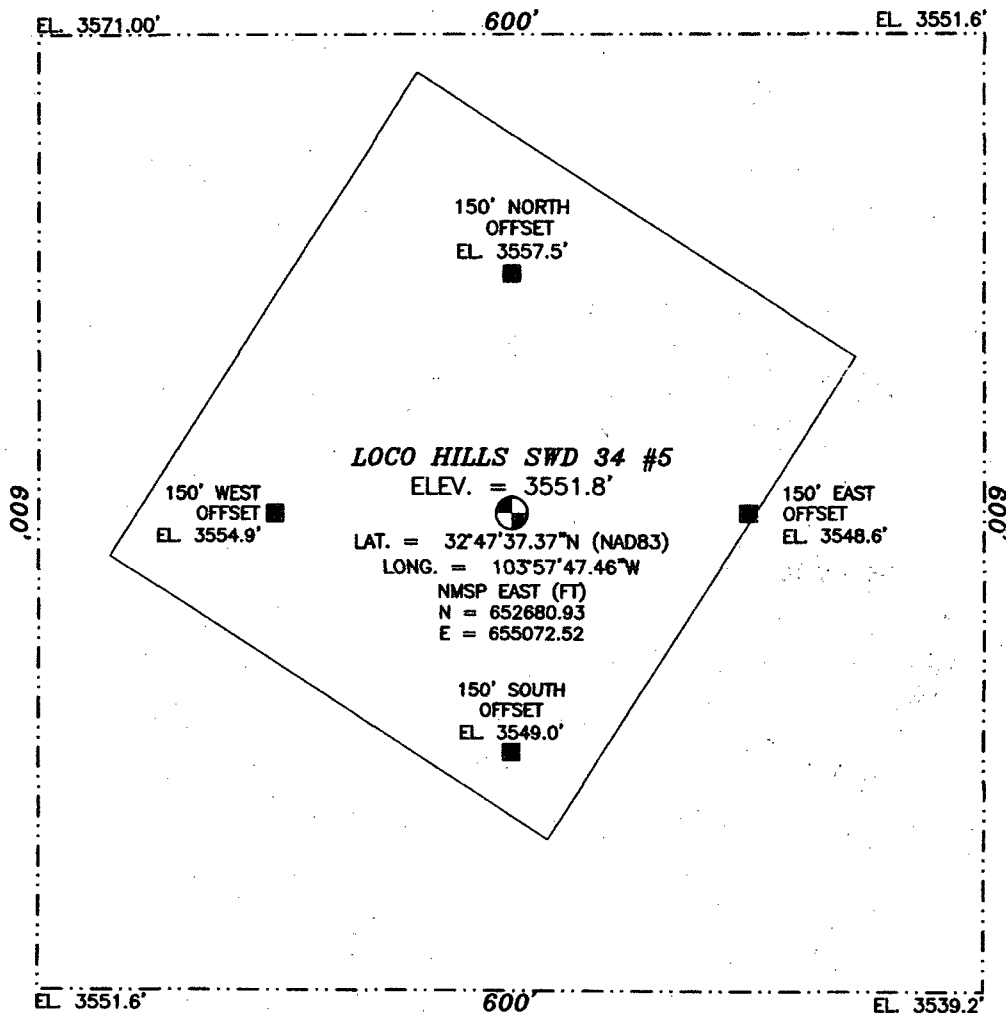
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

NW CORNER SEC. 34 LAT. = 32°47'53.72"N LONG. = 103°58'06.14"W NMSP EAST (FT) N = 654327.92 E = 653472.29	NE CORNER SEC. 34 LAT. = 32°47'53.64"N LONG. = 103°57'04.30"W NMSP EAST (FT) N = 654338.54 E = 658751.82	<p>¹⁷ 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 _____ Date _____ Printed Name _____</p> <p>¹⁸ 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>NOVEMBER 16, 2010 Date of Survey _____ Signature and Seal of Professional Surveyor:  Certificate Number: FILIMON J. JARAMILLO, PLS 12797 SURVEY NO. 298</p>
<p>LOCO HILLS SWD "34" #5 ELEV. = 3551.8' LAT. = 32°47'37.37"N (NAD83) LONG. = 103°57'47.46"W NMSP EAST (FT) N = 652680.93 E = 655072.52</p>		
SW CORNER SEC. 34 LAT. = 32°47'01.49"N LONG. = 103°58'06.14"W NMSP EAST (FT) N = 649048.56 E = 653490.07	SE CORNER SEC. 34 LAT. = 32°47'01.42"N LONG. = 103°57'04.31"W NMSP EAST (FT) N = 649059.97 E = 658769.90	
		

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



SCALE 1" = 100

DIRECTIONS TO LOCATION

FROM STATE HIGHWAY 82 AND PAVED CR 217 (HAGGERMAN CUTOFF) GO SOUTH ON CR 217 0.4 MILES WHERE ROAD BENDS RIGHT AND TURN LEFT ON CALICHE ROAD AND GO SOUTHEAST 2.0 MILES TURN LEFT AND GO NORTH-NORTHEAST 0.25 MILES TO THE EXISTING MAGGIE "34" FED. #1 WELL AND LOCATION IS WEST OF THE WELL 175'.

COG OPERATING, LLC
LOCO HILLS SWD "34" #5
LOCATED 1,650 FT. FROM THE NORTH LINE
AND 1,595 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH,
RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SURVEY NO. 298

DECEMBER 8, 2010

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

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



COG OPERATING, LLC
LOCO HILLS SWD "34" #5
LOCATED 1,650 FT. FROM THE NORTH LINE
AND 1,595 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH,
RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 9, 2010

SURVEY NO. 298

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

VICINITY MAP



EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 9, 2010

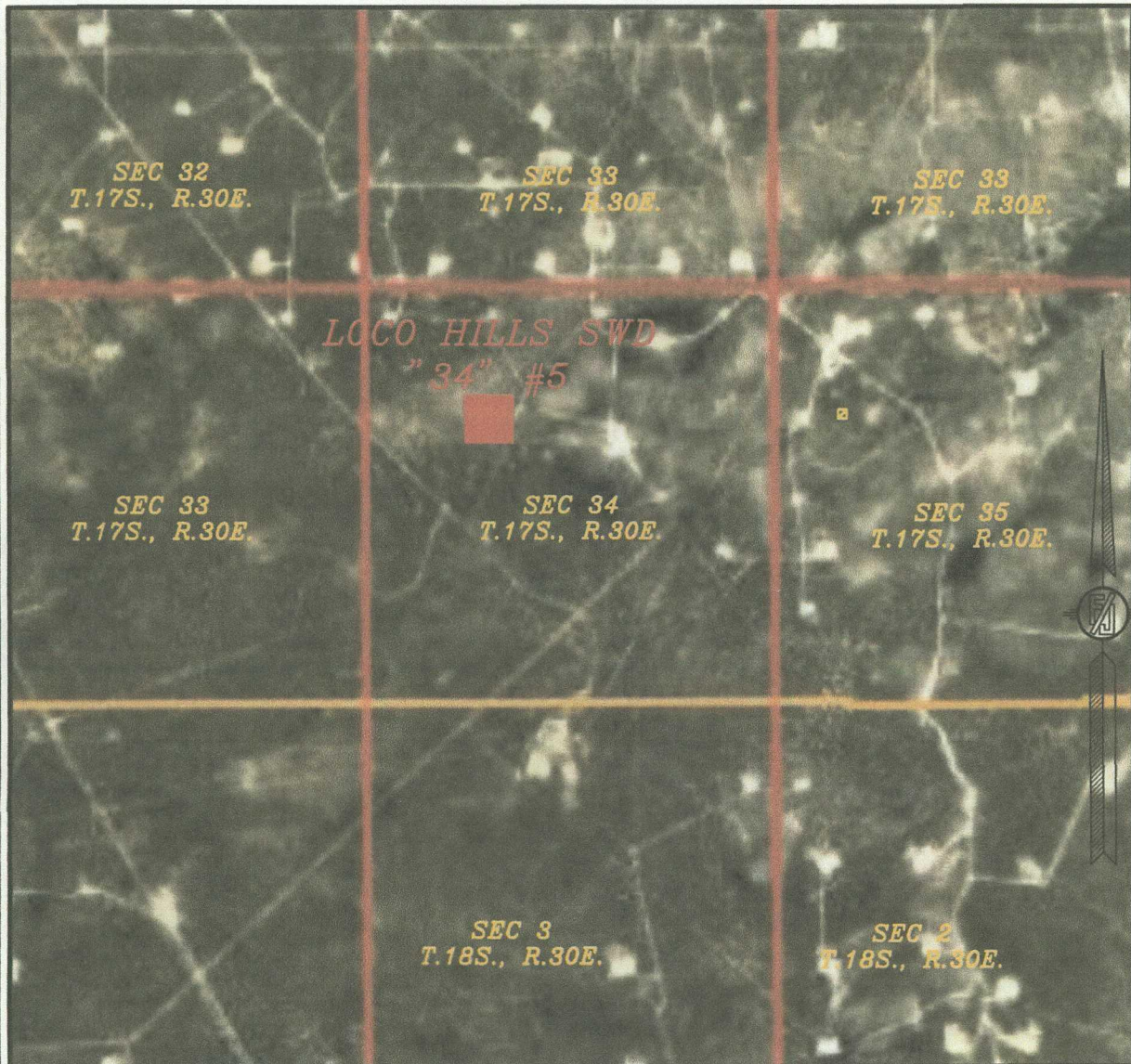
SURVEY NO. 298

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

301 SOUTH CANAL
(575) 887-5830

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 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
LOCO HILLS SWD "34" #5
LOCATED 1,650 FT. FROM THE NORTH LINE
AND 1,595 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH,
RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 9, 2010

SURVEY NO. 298

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

Loco Hills SWD 33 #6

Wells within area of review that penetrate proposed disposal interval:

API #: 3001534525 Well_Name: FULL TANK 33 FED COM #001
Location: B-33-17.0S-30E, 990 FNL, 1980 FEL Lat:32.7955734707 Long:-103.97486498
Operator Name: CIMAREX ENERGY CO. OF COLORADO [Operator and Lessee Info] County: Eddy
Land Type: Federal Well Type: Gas Spud Date:4/28/2006 Plug Date:
Elevation GL: 3611 Depth TVD: 11750
Pools associated:

API #: 3001531995 Well_Name: BIG TANK 33 FEDERAL Property Number.: 001
Location: J-33-17.0S-30E, 1980 FSL, 1380 FEL Lat:32.7892062939 Long:-103.972897429
Operator Name: SOUTHWESTERN ENERGY PRODUCTION COMPANY County: Eddy
Land Type: Federal Well Type: Gas Spud Date:10/8/2001 Plug Date:12/1/2001
Elevation GL: 3600 Depth TVD: 11719

Loco Hills SWD 34 #5

Wells within area of review that penetrate proposed disposal interval:

API #: 3001523988 Well_Name: ARNOLD FEDEAL COM #001
Location: G-34-17.0S-30E, 1980 FNL, 1980 FEL Lat:32.7928459779 Long:-103.95768997
Operator Name: THREE RIVERS OPERATING COMPANY LLC [Operator and Lessee Info] County: Eddy
Land Type: Federal Well Type: Gas Spud Date:4/21/2004 Plug Date:
Elevation GL: 3550 Depth TVD: 11552
Pools associated:

Empire State SWD 8 #1

Wells within area of review that penetrate proposed disposal interval:

API #: 3001530702 Well_Name: CONOCO 8 STATE COM #001
Location: J-8-17.0S-29E, 1650 FSL, 1550 FEL Lat:32.8464450089 Long:-104.093491625
Operator Name: EOG RESOURCES INC [Operator and Lessee Info] County: Eddy
Land Type: State Well Type: Oil Spud Date:8/11/1999 Plug Date:
Elevation GL: 3611 Depth TVD: 10920

Three Rivers Operating Company LLC

Lease & Well #

Arnold Federal Com #1

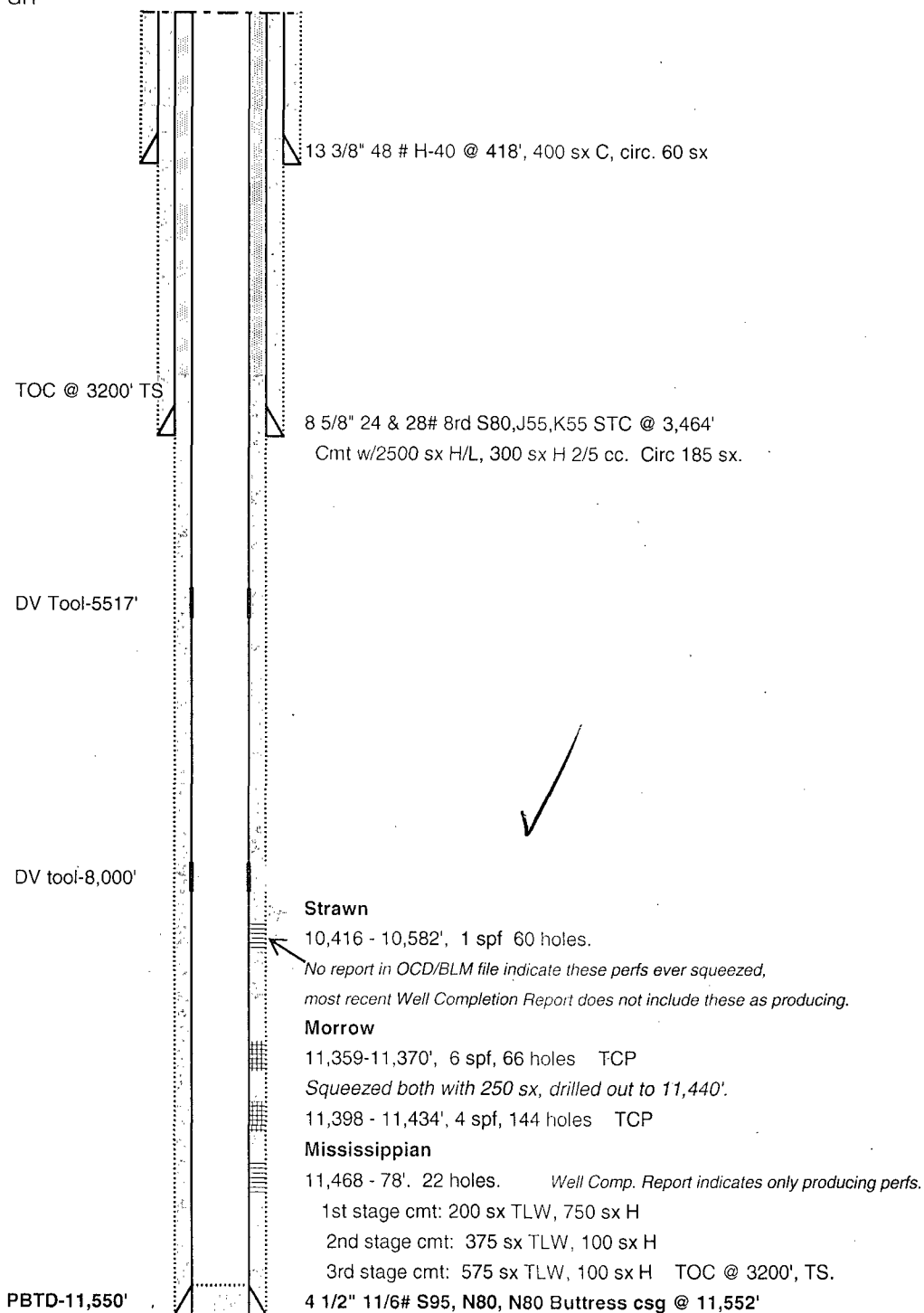
3001523988

SPUD - 12/15/1981

Eddy Co., NM

Sec 34 T17S R30E 1980 FNL & 1980 FEL

Elevation - 3550' GR



Loco Hills SWD 34 #5

Wells within area of review that penetrate proposed disposal interval:

API #: 3001523988 **Well_Name:** ARNOLD FEDEAL COM # 001
Location: G-34-17.0S-30E , 1980 FNL, 1980 FEL **Lat:**32.7928459779 **Long:**-103.95768997
Operator Name: THREE RIVERS OPERATING COMPANY LLC [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Gas **Spud Date:**4/21/2004 **Plug Date:**
Elevation GL: 3550 **Depth TVD:** 11552
Pools associated:

Wells within area of review that do not penetrate proposed disposal interval:

API #: 3001504360 **Well_Name:** GRAYBURG JACKSON PSU MB # 002
Location: L-27-17.0S-30E , 1650 FSL, 330 FWL **Lat:**32.8028280779 **Long:**-103.967318632
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3632 **Depth TVD:**
Pools associated:

API #: 3001520256 **Well_Name:** GRAYBURG JACKSON PSU MB # 012
Location: L-27-17.0S-30E , 1815 FSL, 1295 FWL **Lat:**32.8032800918 **Long:**-103.964163354
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3624 **Depth TVD:**
Pools associated:

API #: 3001504361 **Well_Name:** GRAYBURG JACKSON WF UNIT **Property Number.:** 004
Location: K-27-17.0S-30E , 1650 FSL, 2310 FWL **Lat:**32.8028248398 **Long:**-103.960843762
Operator Name: PHILLIPS PETROLEUM CO **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**12/4/1993
Elevation GL: 3623 **Depth TVD:**

API #: 3001531163 **Well_Name:** GRAYBURG JACKSON PSU MB # 017
Location: K-27-17.0S-30E , 1600 FSL, 2550 FWL **Lat:**32.8026869994 **Long:**-103.960058807
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**6/29/2000 **Plug Date:**
Elevation GL: 3618 **Depth TVD:** 3650
Pools associated:

API #: 3001504359 **Well_Name:** GRAYBURG JACKSON PSU MB # 001
Location: M-27-17.0S-30E , 990 FSL, 330 FWL **Lat:**32.8010140053 **Long:**-103.967316995
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Injection **Spud Date:** **Plug Date:**
Elevation GL: 3631 **Depth TVD:**
Pools associated:

API #: 3001504358 **Well_Name:** GRAYBURG JACKSON PSU MB # 003Q
Location: N-27-17.0S-30E , 990 FSL, 1650 FWL **Lat:**32.8010118965 **Long:**-103.963000415
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Injection **Spud Date:** **Plug Date:**
Elevation GL: 3627 **Depth TVD:**
Pools associated:

API #: 3001504362 **Well_Name:** GRAYBURG JACKSON PSU MB # 005
Location: O-27-17.0S-30E , 978 FSL, 2323 FEL **Lat:**32.8009768191 **Long:**-103.95882317
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Injection **Spud Date:** **Plug Date:**
Elevation GL: 3613 **Depth TVD:**
Pools associated:

API #: 3001524132 **Well_Name:** MADDREN DEEP UNIT "B" **Property Number.:** 001
Location: O-27-17.0S-30E , 660 FSL, 2180 FEL **Lat:**32.8001025647 **Long:**-103.958354256
Operator Name: PHILLIPS PETROLEUM CO **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**1/1/1900 1 **Plug Date:**1/1/1900 1
Elevation GL: 0 **Depth TVD:** 0

API #: 3001530023 **Well_Name:** GRAYBURG JACKSON PSU MB # 014
Location: N-27-17.0S-30E , 330 FSL, 2310 FWL **Lat:**32.7991966943 **Long:**-103.960840462
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**2/23/1998 **Plug Date:**
Elevation GL: 3596 **Depth TVD:** 3700
Pools associated:

API #: 3001530022 **Well_Name:** GRAYBURG JACKSON PSU MB # 013
Location: M-27-17.0S-30E , 330 FSL, 990 FWL **Lat:**32.7991989039 **Long:**-103.965157042
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**2/15/1998 **Plug Date:**
Elevation GL: 3620 **Depth TVD:** 3700
Pools associated:

API #: 3001504445 **Well_Name:** GRAYBURG JACKSON PSU FG # 001Q
Location: D-34-17.0S-30E , 330 FNL, 330 FWL **Lat:**32.7973858579 **Long:**-103.967313843
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Injection **Spud Date:** **Plug Date:**
Elevation GL: 3616 **Depth TVD:** 3360
Pools associated:

API #: 3001504446 **Well_Name:** GRAYBURG JACKSON PSU FG **Property Number.:** 002
Location: C-34-17.0S-30E , 332 FNL, 1666 FWL **Lat:**32.7973782246 **Long:**-103.962945638
Operator Name: SOUTHERN BAY OPERATING, L.L.C. **County:** Eddy
Land Type: Federal **Well Type:** Injection **Spud Date:** **Plug Date:**
Elevation GL: 3595 **Depth TVD:** 0

API #: 3001510611 **Well_Name:** GRAYBURG JACKSON PSU AD # 008
Location: B-34-17.0S-30E , 330 FNL, 2140 FEL **Lat:**32.7973813963 **Long:**-103.958218574
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Injection **Spud Date:** **Plug Date:**
Elevation GL: 3558 **Depth TVD:**
Pools associated:

API #: 3001531410 **Well_Name:** GRAYBURG JACKSON PSU FG **Property Number.:** 004
Location: C-34-17.0S-30E , 790 FNL, 2110 FWL **Lat:**32.7961186051 **Long:**-103.961492777
Operator Name: AROC (TEXAS) INC **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3555 **Depth TVD:** 0

API #: 3001531467 **Well_Name:** GRAYBURG JACKSON PSU FG **Property Number.:** 003
Location: D-34-17.0S-30E , 990 FNL, 1290 FWL **Lat:**32.7955702844 **Long:**-103.964173354
Operator Name: AROC (TEXAS) INC **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3577 **Depth TVD:** 0

API #: 3001532047 **Well_Name:** MAGGIE 34 FEDERAL # 001
Location: F-34-17.0S-30E , 1650 FNL, 1780 FWL **Lat:**32.793755372 **Long:**-103.962569607
Operator Name: THREE RIVERS OPERATING COMPANY LLC [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**11/1/2001 **Plug Date:**
Elevation GL: 3543 **Depth TVD:** 5207
Pools associated:

API #: 3001521317 **Well_Name:** MCINTYRE G FED **Property Number.:** 003
Location: H-34-17.0S-30E , 1650 FNL, 990 FEL **Lat:**32.7937515749 **Long:**-103.954454162
Operator Name: SOUTHWEST ROYALTIES INC **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**1/1/1900 1 **Plug Date:**1/1/1900 1
Elevation GL: 0 **Depth TVD:** 0

API #: 3001504376 **Well_Name:** GRAYBURG JACKSON WF UNIT **Property Number.:** 001
Location: P-28-17.0S-30E , 990 FSL, 330 FEL **Lat:**32.8010147315 **Long:**-103.969475285
Operator Name: PHILLIPS PETROLEUM CO **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**12/1/1993
Elevation GL: 3628 **Depth TVD:**

API #: 3001530170 **Well_Name:** GRAYBURG JACKSON PSU MA # 006Z
Location: P-28-17.0S-30E , 330 FSL, 50 FEL **Lat:**32.7992004791 **Long:**-103.968557984
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**4/18/1998 **Plug Date:**
Elevation GL: 3622 **Depth TVD:** 3700
Pools associated:

API #: 3001531157 **Well_Name:** GRAYBURG JACKSON PSU ME # 003A
Location: O-28-17.0S-30E , 330 FSL, 1330 FEL **Lat:**32.7992013016 **Long:**-103.972743758
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:**6/22/2000 **Plug Date:**
Elevation GL: 3618 **Depth TVD:** 3650
Pools associated:

API #: 3001531468 **Well_Name:** GRAYBURG JACKSON PSU BB **Property Number.:** 004
Location: B-33-17.0S-30E , 990 FNL, 1650 FEL **Lat:**32.7955733083 **Long:**-103.973786008
Operator Name: AROC (TEXAS) INC **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3609 **Depth TVD:** 0

API #: 3001531324 **Well_Name:** GRAYBURG JACKSON PSU BB **Property Number.:** 003
Location: A-33-17.0S-30E , 870 FNL, 600 FEL **Lat:**32.7959025148 **Long:**-103.97035322
Operator Name: AROC (TEXAS) INC **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3631 **Depth TVD:** 0

API #: 3001504443 **Well_Name:** GRAYBURG JACKSON PSU BB # 001A
Location: A-33-17.0S-30E , 330 FNL, 990 FEL **Lat:**32.7973870107 **Long:**-103.971629728
Operator Name: SOUTHERN BAY OPERATING, L.L.C. [[Operator and Lessee Info](#)] **County:** Eddy
Land Type: Federal **Well Type:** Oil **Spud Date:** **Plug Date:**
Elevation GL: 3619 **Depth TVD:**
Pools associated:



New Mexico Office of the State Engineer

Point of Diversion by Location

(with Owner Information)

No PODs found.

POD Search:

POD Basin: Roswell Artesian

PLSS Search:

Section(s): 34

Township: 17S

Range: 30E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/3/11 4:02 PM

Page 1 of 1

POINT OF DIVERSION BY LOCATION

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Kathy McCarroll, being first duly sworn,
on oath says:

That she is the Classified Supervisor of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

March 16 _____ 2011

That the cost of publication is **\$44.09** and that payment thereof has been made and will be assessed as court costs.

Kathy McCarroll

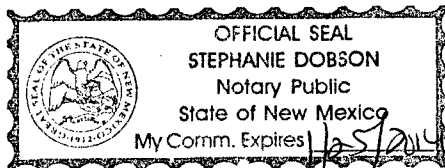
Subscribed and sworn to before me this

16th day of March, 2011

Stephanie Dobson

My commission Expires on 11/25/2014





Notary Public

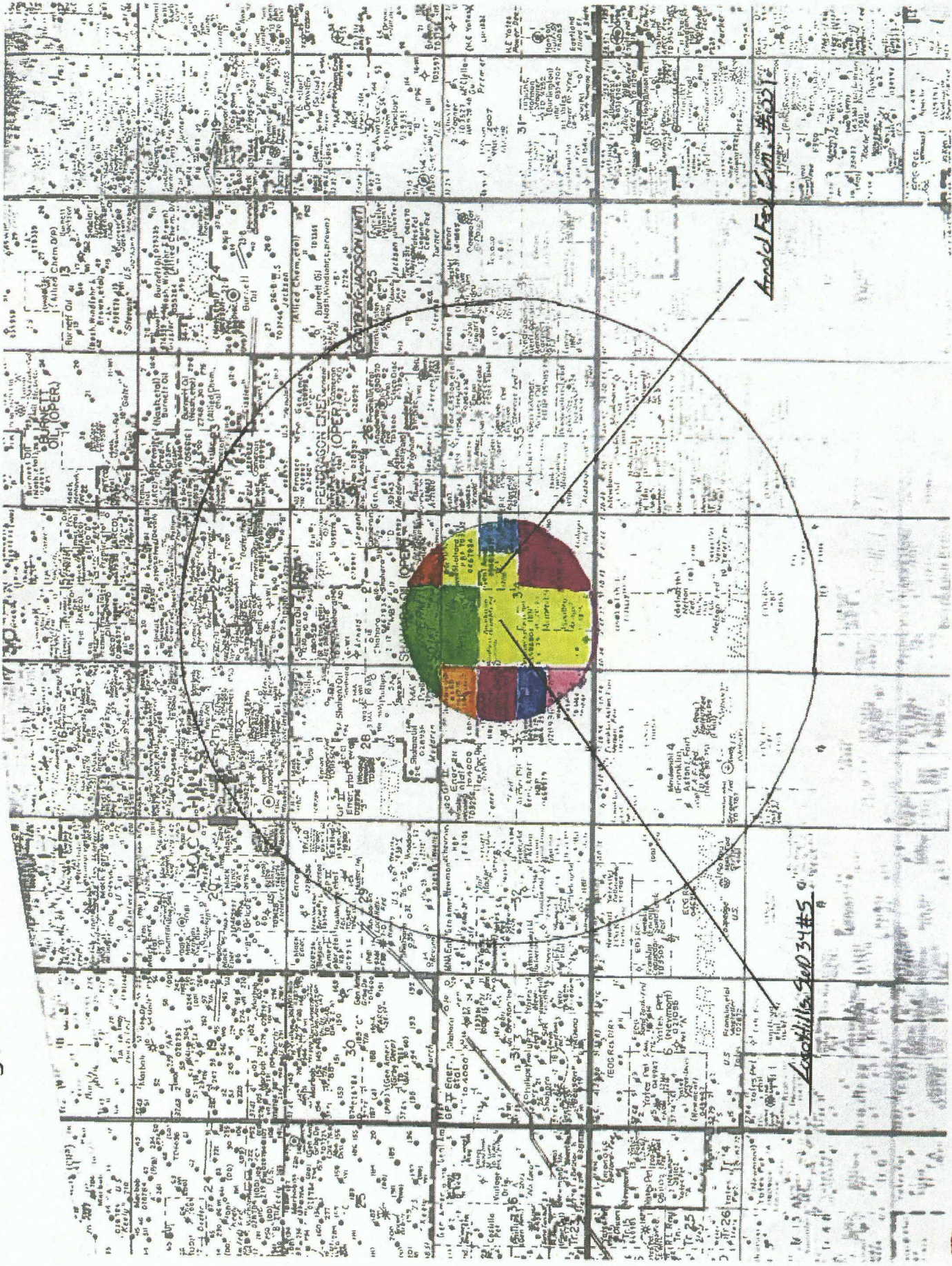






March 16, 2011

Legal Notice
March 1, 2011

COG Operating LLC is applying to drill the Loco Hills SWD 34 #5 as a water disposal well. The well is located at 1650' FNL & 1595' FWL, Sec. 34, T. 17 S., R. 30 E., Eddy County, NM. The well will dispose of water produced from oil and gas wells into the Wolfcamp Reef zone at a depth of 8500' to 9250' at a maximum rate of 20,000 barrels of water per day and at a maximum pressure of 1,700 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; phone number is (432) 349-4729.

 - Southwestern Bay Operating LLC  - EOG Resources  - JFG Enterprises (Held) + Cassman Permian, LLC  - Cimrex Energy Co. d/b/a



 - Phillips Petroleum Co.  - AROL Texas, Inc. / Southern Bay Operating LLC  - Three Rivers Operating  - Sardwest Properties



April 3, 2011

New Mexico State Land Office
310' Old Santa Fe Trail
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.

Well: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 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

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Total Postage & Fees	\$ 6.66



Sent To NM3LO
Street, Apt. No.,
or PO Box No. 310 Old Santa Fe Trail
City, State, ZIP+4 Santa Fe, NM 87504



April 3, 2011

Southern Bay Operating, LLC
110 Cyptrx Drive 2 #220
Houston, TX 77090

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: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

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

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Please call me if you have any questions.

Sincerely,

Tye Orr
Consulting Landman
(432) 349-4729

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Sent To	Southern Bay Operating, LLC
Street, Apt. No., or PO Box No.	110 Cyptrx Dr 2 #220
City, State, ZIP+4	Houston, TX 77090

See Reverse for Instructions



April 3, 2011

Three Rivers Operating Company LLC
1122 South Capital of Texas Hwy, Suite 325
Austin, TX 78746

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: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 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

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APR - 5 - 2011
USPS 47074

Sent To Three Rivers Operating Co. Inc.
Street, Apt. No.,
or PO Box No. 1122 S. Capital of TX Hwy, Suite 325
City, State, ZIP+4 Austin, TX 78746



April 3, 2011

Aroc (Texas), Inc.
110 Cypress Station Drive #220
Houston, TX 77090

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: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 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

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Street, Apt. No., or PO Box No.	110 Cypress Station Dr. #220
City, State, ZIP+4	Houston, TX 77090

PS Form 3800, August 2006



April 3, 2011

Cimarex Energy
1700 Lincoln Street, Suite 1800
Denver, CO 80203

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: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 miles East of Artesia, NM

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

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

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Please call me if you have any questions.

Sincerely,


Tye Orr
Consulting Landman
(432) 349-4729

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Sent to Cimarex Energy
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or PO Box No. 1700 Lincoln St. Suite 1800
City, State, ZIP+4[®] Denver, CO 80203

PS Form 3800, August 2006 See Reverse for Instructions

MIDLAND TX VILLAGE STA 79704
MAY 12 2011
Postmark
Here



April 3, 2011

EOG Resources, Inc.
P.O. 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.

Well: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 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

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

PS Form 3800, August 2005 See Reverse for Instructions



April 3, 2011

JFG Enterprises
P.O. Box 100
Artesia, NM 88211

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: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 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

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City, State, ZIP+4[®] Artesia, NM 88211

PS Form 3800, August 2006

Postmark: CITY VILLAGE STA 79704 MAY 10 2011



April 3, 2011

Nadel & Gussman Permian, LLC
Attn: Kathy Garrow
601 N. Marienfeld, Suite 508
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: Loco Hills SWD 34 #5

Proposed Disposal Zone: Wolfcamp Reef (from 8,500' to 9,250')

Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E

Eddy County, NM

Approximate Location: 10-12 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

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Stamp: MIDLAND TX VILLAGE STA 79701 MAY 10 2011

Sent To	Nadel & Gussman Permian, LLC
Street, Apt. No., or PO Box No.	601 N. Marienfeld, Suite 508
City, State, ZIP+4	Midland, TX 79701

PS Form 3800, August 2005 See Reverse for Instructions



April 3, 2011

Phillips Petroleum Company
4001 Penbrook St.
Odessa, TX 79762

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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Location: 1650' FNL & 1595' FWL Sec 34, T17S, R30E
Eddy County, NM

Approximate Location: 10-12 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

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Sent To: Phillips Pet Co.
Street, Apt. No., or PO Box No.: 4001 Penbrook St.
City, State, ZIP+4: Odessa, TX 79762

PS Form 3800, August 2006 See Reverse for Instructions



April 3, 2011

Southwest Royalties
407 N. Big Spring, Suite 300
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.

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Eddy County, NM

Approximate Location: 10-12 miles East of Artesia, NM

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

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

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Please call me if you have any questions.

Sincerely,

Tye Orr
Consulting Landman
(432) 349-4729

7010 1670 0001 6470 1724

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Sent To: Southwest Royalties
Street, Apt. No., or PO Box No.: 407 N. Big Spring, Suite 300
City, State, ZIP+4: Midland, TX 79701

PS Form 3800, August 2006 See Reverse for Instructions

Inactive Well List

Total Well Count: 2870 Inactive Well Count: 6

Printed On: Sunday, May 29 2011

District	API	Well	ULSTR	OCD Unit	OGRID	Operator	Lease Type	Well Type	Last Production	Formation/Notes	Status	TA Exp Date
2	30-015-02692	E HI LONESOME FEDERAL #006	D-13-16S-29E	D	229137	COG OPERATING LLC	F	O	02/2010			
2	30-015-34278	FPR STATE #001 #001	P-36-19S-29E	P	229137	COG OPERATING LLC	S	O	11/2009	MORROW		
2	30-015-10334	SINCLAIR PARKE #001	F-22-17S-30E	F	229137	COG OPERATING LLC	F	O	02/2010			
2	30-015-23938	SOUTH SHUGART DEEP #001	3-4 -19S-31E	C	229137	COG OPERATING LLC	F	G	03/2009			
2	30-015-03789	TYLER FEDERAL #002	O-35-17S-29E	O	229137	COG OPERATING LLC	F	O	09/2009			
1	30-025-38079	WEST PEARL 36 STATE #001	F-36-19S-34E	F	229137	COG OPERATING LLC	S	G	11/2007	Morrow		

WHERE Ogrid:229137, County:All, District:All, Township:All, Range:All, Section:All, Production(months):15, Excludes Wells Under ACOI, Excludes Wells in Approved TA Period

CMD :
OG5SEC2

ONGARD
VIEW LAND BY ULSTR

05/29/11 15:21:58
OGOWVJ -TQ7V
PAGE NO: 3

Sec : 34 Twp : 17S Rng : 34E Cnty1 : Lea
Cnty2 : Cnty3 :

U Lot/ Qtr	SRF SUB	ACTIVE	Bene	REMARKS
L Trct Qtr	ACREAGE	OWNER	LEASE #	(may show restrictions codes)
D	NW4NW4	40.00 ST ST R2	3517 0000	
E	SW4NW4	40.00 ST ST B0	0871 0003 MI	
		G0	2161 0000	
		M0	1125 0000	
		R2	2510 0000	
F	SE4NW4	40.00 ST ST B0	0871 0003 MI	
		G0	2161 0000	
		M0	1056 0000	
		R0	0983 0000	
		R1	7860 0000	
G	SW4NE4	40.00 ST ST B0	1406 0011 MI	
PF01 HELP	PF02 PREV	PF03 EXIT	PF04 GoTo	PF05
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11
				PF12

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Monday, April 18, 2011 11:23 AM
To: 'Mark Fairchild'; 'Tye Orr'
Cc: Brooks, David K., EMNRD; Ezeanyim, Richard, EMNRD
Subject: SWD applications

Hello Mark and Tye:

I have received your hardcopies in the mail of 6 SWD applications. These were logged in and assigned to me to review. I glanced through them and see a couple things that you are probably aware of.

- 5/1/11
- PENDING
- a. It seems that the State of New Mexico owns the surface of all but one of these – that one is a federal surface. Since State leases should be faster than Federal leases to generate approved APD's, please let me know when the API numbers will be coming for these? Which ones will come first? The SWD permits are site specific as are API numbers – we like to have API numbers before releasing SWD permits. If the proposed well moves location after we issue an SWD, the disposal permit is no longer valid.
 - b. The Maljamar SWD 30 #2 application has a blurry newspaper notice – please mail another copy.
 - c. The cement top data for surrounding wells – active or P&Aed is not there.
 - d. The wellbore diagrams of P&Aed wells within the ½ mile AOR not there. You could also send diagrams of the non-plugged wells to show cement coverage – your option.
 - e. It appears that owners were researched and notice was provided. We ask all applicants for SWD to tell us exactly which tracts of lands are owned by the parties that were noticed. One way to show that to us is to send a SectspRge map with the ½ mile circle drawn around the proposed SWD site. On that map, outline all the tracts of common ownership. Reference these tracts in a separate page listing the owner or owners of each specific tract. Since the work has already been done to determine whom to notice, you should have this information.

Thank You,

William V. Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 ~ Fax 505.476.3462



Jones, William V., EMNRD

From: Mark Fairchild [MFairchild@conchoresources.com]
Sent: Thursday, April 21, 2011 9:13 AM
To: Jones, William V., EMNRD
Cc: Noel Olivas; Robyn Odom; Kelly Holly; Sammie Hodges; Tye Orr
Subject: COG SENM SWD Drilling Applications, Additional Data
Attachments: Maljamar SWD 30 #2.xls; Arnold Federal Com #1.xls; Big Tank 33 Fed Com #1.xls; COG SENM SWD Drilling NMOCD Additional Well Data.docx; Conoco 8 State Com #1.xls; Full Tank 33 Fed Com #1.xls

Will, attached please find:

1. A document with all of our proposed new drills by name with the well data for any well within $\frac{1}{2}$ mile that penetrates the zones applied for disposal.
2. A complete wellbore diagram of with cement tops of the wells from one above that penetrate the applied for disposal horizon.
3. Please let me know if this completes our SWD Drilling Application requirements.

Thanks

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



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Jones, William V., EMNRD

From: Tye Orr [tyeorr@yahoo.com]
Sent: Wednesday, May 11, 2011 2:30 PM
To: Jones, William V., EMNRD
Subject: Re: Loco Hills 34 #5 SWD Application
Attachments: EOG Notice Receipt.jpeg; Southwest Notice Receipt.jpeg; Phillips Notice Receipt.jpeg; JFG Notice Receipt.jpeg; Nadel Notice Receipt.jpeg; Cimarex Notice Receipt.jpeg

Will,

Attached are the remaining proof of notice documents for the subject well to complete the SWD application per your request. Please let me know if you have any other questions. Thanks.

Tye Orr

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Sunday, May 29, 2011 3:34 PM
To: Mark Fairchild; 'Tye Orr'
Cc: Ezeanyim, Richard, EMNRD; Dade, Randy, EMNRD; Gray, Darold, EMNRD
Subject: Disposal application from COG Operating LLC: Loco Hills SWD "34" Well No. 5 30-015-NA Wolfcamp Reef

Hello Mark:

Would you please let me know the depth range you want permitted for disposal into this proposed well?

The newspaper notice and parts of the application differ.

Also, since this is a State well, any word on the API number?

I have no problem with the casing design and it is past the 15 day notice date, so don't see any reason to delay the APD.

Randy and Darold may have other reasons?

Thank You,

William V Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 ~ Fax 505.476.3462



Received
6/1/15

Well: Loco Hills SWD 34 #5
Location: 1650 FNL; 1595 FWL, Unit Ltr. F, Sec 34, T17S, R30E, Eddy Co. NM
API:
Permits:
Regulatory: NMOCD: BLM: State Well
Notice Requirements:

Objective: Drill and complete as a Wolfcamp reef SWD well. 7" L-80 casing set through the disposal interval.

Summary of Conduct of Operations:
 1. Main Objective: Wolfcamp reef SWD well.
 2. Offset wells have encountered few to no drilling hazards.

Geology:	Yates	1450'	Blaine	7840'	Primary Objective
	7 Rivers	1830'	Tubb	8165'	
	Queen	2460'	Wolfcamp	8320'	
	Grayburg	2840'	T/Wolfcamp Reef	8500'	
	San Andres	3295'	B/Wolfcamp Reef	9250'	
	Glorieta	6490'	Cisco	9310'	
	Paddock	6610'			

Logging Program: See Geological prog, attached.

Bit & Casing Program:

Casing					
Bit Size	Size	Wt	Grd	Connection	Footage
17 /12"	13 3/8"	48 ppf	H40	STC	+/- 400
12 1/4"	9 5/8"	36 ppf	J55	STC	3400'
		40 ppf	J55	STC	600'
				Total 9 5/8"	4,000
8 3/4"	7"	26 ppf	L80	LTC	+/- 9,700'

Special Req:
 1. Sand blast bottom 1500' of 7".
 2. DV Tool at 7,000'
 3. Two, 3, short joints, on top of DV and one as landing joint.

Cementing Program: Vendor: Rising Star Services
 See attached Cementing Data Sheet

Cementing Hardware: Weatherford (Gemco) w/ PDC drillable on all floats and collars.

Well Control: All BOP's tested to 2000 psig by thrid party.

Mud System: Closed loop

Hole	From	To	Type	Wt	Vis
Surface	40	200	Fresh, Spud	8.9-9.4	32-34
Intermediate	400	4,000	Brine	9.8-10.2	28-30
Production	4,000	9,700	Fresh Water	8.4-8.8	28

Wellhead: see attached, Downing

Injection Permit Checklist (07/9/2010)

WFX PMX SWD 1284 Permit Date 5/28/11 UIC Qtr (A/M/J)

Wells 1 Well Name(s): LAGO HUS SWD 3445

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

Footages 1650 TNL / 1595 FWL Unit F Sec 34 Tsp 17S Rge 30 County EDOY

General Location: N. of Reef

Operator: COG OPERATING, LLC Contact Mark Fairchild

OGRID: 229137 RULE 5.9 Compliance (Wells) OK (Finan Assur) OK 5.9 OK? OK

Well File Reviewed Current Status: Planned well

Planned Work to Well:

Diagrams: Before Conversion After Conversion Elogs in Imaging File: Well Log & Test / Res

Well Details:	Sizes Hole.....Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
New Existing Surface	17 1/2 13 1/8	400		2138 CF	CIRC
New Existing Interm	12 1/4 9 5/8	4000		1893 CF	CIRC
New Existing LongSt	8 3/4 7"	9300		1521 CF	CIRC
New Existing Liner					
New Existing OpenHole					

Depths/Formations:	Depths, Ft.	Formation	Tops?
Formation(s) Above			
Injection TOP: 9250	9250	WC Ref	Max. PSI 1700
Injection BOTTOM: 9850	9850	WC 11	Open Hole Perfs 3 1/2
Formation(s) Below			

Capitan Reef? (Potash? Noticed?) (WIPP? Noticed?) Salado Top/Bot Cliff House?

Fresh Water: Depths: No RE Formation Wells? Analysis? Affirmative Statement

Disposal Fluid Analysis? Sources: Xero etc

Disposal Interval: Analysis? Production Potential/Testing: Will Test

Notice: Newspaper Date 3/16/11 Surface Owner SLO Mineral Owner(s)

RULE 26.7(A) Affected Persons: C. Moore / EAG / J. H. / ALAN / BILL / 3 RIVER / COCKBURN / CONROY / CRA

AOR: Map? Well List? Active Wells Producing in Interval? Repairs Which Wells?

.....P&A Wells Diagrams? Repairs Which Wells?

Questions: Will SWAB Request Sent Reply: