Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
9/25/2017		PMX WFX	PMAM1726933068

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

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

Applicant: CHEVRON USA INC. **OGRID Number:** 4323
Well Name: VACUUM GLORIETA WEST UNIT #82 **API:** 30-025-31840
Pool: VACUUM GRAYBURG;SAN ANDRES **Pool Code:** 62180

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐NSL ☐NSP(PROJECT AREA) ☐NSP(PRORATION UNIT) ☐SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐DHC ☐CTB ☐PLC ☐PC ☐OLS ☐OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☒ WFX ☑ PMX ☐SWD ☐IPI ☐EOR ☐PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☒ Royalty, overriding royalty owners, revenue owners
C. ☒ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☐ Surface owner
G. ☒ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **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.

Cindy Herrera-Murillo
Print or Type Name

Cindy Herrera-Murillo
Signature

09/21/2017
Date

575-263-0431
Phone Number

Cherreramurillo@chevron.com
e-mail Address

Chevron

Cindy Herrera-Murillo
Regulatory Specialist
Midcontinent BU

Chevron North America Exploration and Production Company
1616 W. Bender Blvd Room 121
Hobbs FMT, Hobbs, NM 88240
Tel 575-263-0431
Fax 575-263-0445
cherreramurillo@chevron.com

September 21,2017

New Mexico Oil Conservation Division
1220 South San Francis Drive
Santa Fe, New Mexico 87504

Re: Application for Authorization to Inject
OCD Form C-108
Central Vacuum Unit
Lea County, New Mexico

Chevron North America respectfully requests administrative approval to convert the Vacuum Glorieta West Unit #82 (API # 30-025-31840) to Central Vacuum Unit #373 WAG Injection well in the Grayburg San Andres formation. The Central Vacuum Unit #373 is located: 2576' FSL & 149' FEL, Unit Letter I, Section 36, T17S, R34E, Lea County, New Mexico.

Chevron plans to inject water, CO2, and produced gas into the Grayburg San Andres formations perforated area: 4,362' – 4,718'.

Attached are the OCD C-108 and the information relative to an injection well. A copy of the legal notice has been submitted to the Hobbs News-Sun and the affidavit will be submitted to your office upon our receipt.

Any objections to this Authorization to Inject must be sent to the New Mexico Oil Conservation Division; 1220 South St. Francis Drive; Santa Fe, NM 87504, within 20 days of receipt of this notification. If you require additional information, please contact me at 575-263-0431, or by email at: cherreramurillo@chevron.com.

Sincerely,

Cindy Herrera-Murillo

Cindy Herrera-Murillo
Regulatory Specialist

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: CHEVRON U.S.A. INC (OGRID – 4323)

ADDRESS: 6301 DEAUVILLE BLVD MIDLAND, TX 79706

CONTACT PARTY: RYAN WARMKE PHONE: 432-687-7452

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? ___X___ Yes _____ No
If yes, give the Division order number authorizing the project: ORDER # R-5530-E

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. ATTACHED

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. ATTACHED

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.). ATTACHED

*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. ATTACHED

IX. Describe the proposed stimulation program, if any. ATTACHED

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). PREVIOUSLY SUBMITTED

*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. PREVIOUSLY SUBMITTED

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. ATTACHED

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. ATTACHED

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: Cindy Herrera-Murillo TITLE: Permitting Specialist

SIGNATURE: Cindy Herrera-Murillo DATE: 09/21/2017

E-MAIL ADDRESS: Cherreramurillo@chevron.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. ATTACHED

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. ATTACHED

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. ATTACHED

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: CHEVRON U.S.A. INC.

WELL NAME & NUMBER: CENTRAL VACUUM UNIT #373

WELL LOCATION: 2576'FSL & 149 FEL | I | 36 | 17-S | 34-E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 11" Casing Size: 8-5/8"

Cemented with: 650 sx. ***or*** _____ ft^3

Top of Cement: SURFACE Method Determined: CIRCULATION

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2"

Cemented with: 1360 sx. ***or*** _____ ft^3

Top of Cement: SURFACE Method Determined: CIRCULATION

Total Depth: 6334'

Injection Interval

4362' feet to 4718'

(New Perforations)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" Lining Material: IPC (TK-15)

Type of Packer: 5-1/2" Nickel plated Internally plastic coated AS1-X Inj Pkr w/ 1.50" ID "F" SS PN

Packer Setting Depth: +/- 4345'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

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

   If no, for what purpose was the well originally drilled? Glorieta & Paddock waterflood injection
2. Name of the Injection Formation: Grayburg San Andres
3. Name of Field or Pool (if applicable): Central Vacuum Unit
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. Yes, currently completed in the Glorieta Pool in the Vacuum Glorieta Field, as the VGWU #82 wellbore, with gross perfs from 5962' – 6085'.
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Glorieta (5850-6200'), Drinkard (6400-7200'), Abo (8400-9200'), Wolfcamp (9200-10,000')

Ryan Warmke
Vacuum Technical Team
Production Engineer

North America Exploration and Production Company
6301 Deauville Blvd
Midland, Texas 79706
Tel 432-687-7452
RyanWarmke@chevron.com

October 10, 2017

Re: Vacuum Glorieta West Unit #82 (to be Central Vacuum Unit #373) – Permit to Inject

There is no connection between the San Andres, which is the zone of injection, and the underground sources of drinking water in the Vacuum area which is the area of injection.

Sincerely,

Ryan Warmke

Ryan Warmke
Production Engineer

CURRENT WELLBORE DIAGRAM

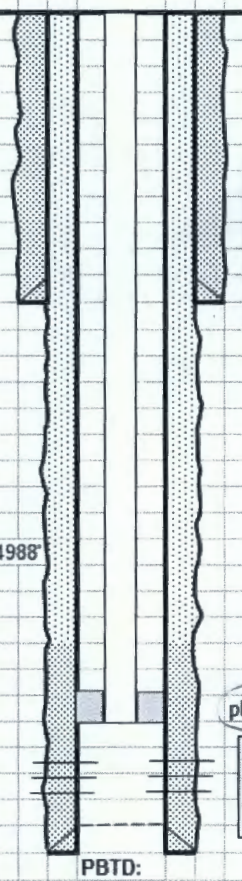
Created:	8/17/2007	**By:**	HLH						
Updated:	2/23/2016	**By:**	CJB						
Lease:	Vacuum Glorieta West Unit			**Well No.:**	82	**Field:**	Vacuum Glorieta West Unit		
Surface Location:	2576' FSL & 149' FEL			**Unit Ltr:**		**Sec:**	36	**TSHP/Range:**	17S 34E
Bottomhole Location:				**Unit Ltr:**	I	**Sec:**		**TSHP/Range:**	
County:	Lea	**St:**	NM	**St Lease:**		**API:**	30-025-31840	**Cost Center:**	
Current Status:	Water Injector			**Elevation:**		**CHVNO:**		TEPI:	
Directions to Wellsite:								MVP:	

Surface Csg.	
Size:	8-5/8"
Wt.:	24#
Set @:	1500'
Sxs cmt:	650
Circ:	Yes
TOC:	
Hole Size:	11"
Production Csg.	
Size:	5-1/2"
Wt.:	15.5, 17#
Set @:	6334'
Sxs Cmt:	1360
Circ:	Yes
TOC:	
Hole Size:	7-7/8"

KB:	4,000
DF:	
GL:	3,986
Original Spud Date:	3/10/1993
Original Compl. Date:	

Well History

3/27/2001: CO scale to 6296' AC 2000 gals 15%, 859/1159# pkr-5910'
2/20/2016: POOH w/ Tbg & pkr. Isolate leak from 4,996 - 5028 & perform "300 psi" job. CO from 5,934' to PBTD. Tested casing to 550 psi and held good. RIH with new injection packer and tubing. Test to 580 psi & RTI.



183 joints 2-3/8" 4.7# J-55 TK-15 tbg set @ 5893
2' on/off tool w/ 1.43" F PN
5-1/2" AS1X pkr set @ 5902'

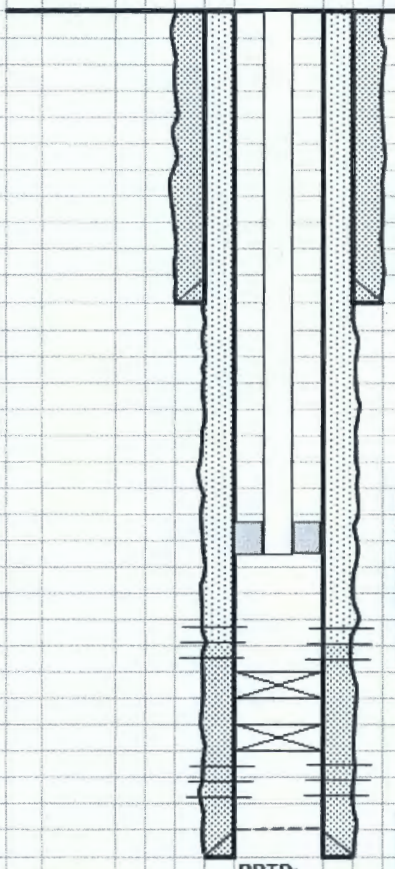
Perforation detail:
5962-97,6018-44,57-85' (2SPF) 178 holes
AC 5500 gals 15%

PBTD:
TD: 6,334

Proposed
WELLBORE DIAGRAM
Convert to CVU 373

Created:	8/17/2002	**By:**	HLH						
Updated:		**By:**							
Lease:	Vacuum Glorieta West Unit			**Well No.:**	82		**Field:**	Vacuum Glorieta West Unit	
Surface Location:	2576' FSL & 149' FEL			**Unit Ltr:**		**Sec:**	36	**TSHP/Range:**	17S 34E
Bottomhole Location:				**Unit Ltr:**	I	**Sec:**		**TSHP/Range:**	
County:	Lea	**St:**	NM	**St Lease:**		**API:**	30-025-31840	**Cost Center:**	
Current Status:	Water Injector			**Elevation:**		**CHVNO:**		TEPI:	
Directions to Wellsite:								MVP:	

Surface Csg.	
Size:	8-5/8"
Wt.:	24#
Set @:	1500'
Sxs cmt:	650
Circ:	Yes
TOC:	
Hole Size:	11"
Production Csg.	
Size:	5-1/2"
Wt.:	15.5, 17#
Set @:	6334'
Sxs Cmt:	1360
Circ:	Yes
TOC:	
Hole Size:	7-7/8"
Top of Grayburg	4019'
Top of San Andres	4331'



PBTD:
TD: 6,334

KB:	4,000
DF:	
GL:	3,986
Original Spud Date:	3/10/1993
Original Compl. Date:	

Well History

3/27/2001: CO scale to 6296' AC 2000 gals 15%. 859/1159# pkr-5910'
2/20/2016: POOH w/ Tbg & pkr. Isolate leak from 4,996 - 5028 & perform "300 psi" job. CO from 5,934' to PBTD. Tested casing to 550 psi and held good. RIH with new injection packer and tubing. Test to 580 psi & RTI.

Proposed Packer +/- 4,350'

Proposed Perforations:
2 spf 120 degree phasing
4362-65', 4375-78', 4383-4403', 4409-27, 4429-33', 4447-52', 4470-76', 4529-51', 4555-61', 4574-80', 4590-92', 4610-22', 4630-52', 4665-78', 4684-88', 4697-4718'

CIBP @ 4,900'

CIBP @ 5,900' w/ 35' Cement on top

Perforation detail:
5962-97,6018-44,57-85' (2SPF) 178 holes
AC 5500 gals 15%

ATTACHMENT TO FORM C-108

RE: Central Vacuum Unit #373

I. Chevron Corporation plans to recomplete the Vacuum Glorieta West Unit #82 to the Central Vacuum Unit #373 as an injection well in the Vacuum Grayburg San Andres formation.

II. Chevron U.S.A. INC.

6301 DEAUVILLE BLVD

MIDLAND, TX 79706

III. Well Data Sheets attached.

IV. This is an expansion of an existing project. Order #R-5530-E.

V. Map attached designating ½ mile and 2 mile radius of review area.

VI. Well tabulation and P&A Schematics are attached.

VII. 1) Anticipated injection rates could be as high as 3,000 barrels of water per day, or 10 million cubic feet of CO2 per day.

2) This will be a closed system

3) Water, produced gas & CO2 will be injected into the Grayburg San Andres pool of the Vacuum Field. Water injection in the CVU 373 will be at the expected maximum rate of 3,000 barrels of water per day and an expected maximum surface pressure of 1500 psi. CO2 and produced gas injection will be at the expected maximum rate 10 million cubic feet of CO2 per day and an expected maximum surface pressure of 1850 psi.

4,5) This data has been previously submitted under NMOCD Order #R-5530-E.

VIII. This data has been previously submitted under NMOCD Order #R-5530-E.

IX. The stimulation program will be ~15,000 gallons 15% HCL acid with rock salt as a diverter.

X. Logs will be submitted as soon as possible after the well is recompleted.

XI. This data has been previously submitted under NMOCD Order #R-5530.

XII. Chevron U.S.A. INC. has examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the injection zone and any underground source of drinking water.

XIII. Copies of the OCD for C-108, the Well Data Sheet, and map have been sent to the offset operators and surface owners as per the listing below:

A copy of the Legal Notice as published in the Hobbs News Sun is attached to this filing.

Certified copy will be forwarded as soon as it is received in this office.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-31840	62180	VACUUM GRAYBURG; SAN ANDRES

[4] Property Code	[5] Property Name	[6] Well Number
29923	CENTRAL VACUUM UNIT	373

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON USA INC.	3995'

[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
I	36	17S	34E		2576	SOUTH	149	EAST	LEA

[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.
40			

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]

149'

2576'

[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.

Cindy Herrera-Murillo — 09/212/2017
Signature — Date

CINDY HERRERA-MURILLO
Printed Name

CHERRERAMURILLO@CHEVRON.COM
E-mail Address

[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.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

CVU 373 (Formerly VGWU 82)

Job Scope: Recomplete in the San Andres

API: 30-025-31840

Lea County, NM

Workover Procedure

1. MIRU PU
2. RU WL & set a plug in PN
3. ND WH NU BOP
4. Test BOP
5. POOH & LD tubing & packer
6. RU WL, make gauge ring run to 5,905', PU & set CIBP @ 5,900' & dump bail 35' cement
7. Pressure test to 550 psi for 30 minutes
8. RIH w/ perforating guns and perf: 4362-65', 4375-78', 4383-4403', 4409-27, 4429-33', 4447-52', 4470-76', 4529-51', 4555-61', 4574-80', 4590-92', 4610-22', 4630-52', 4665-78', 4684-88', 4697-4718'
9. RIH w/ 2-7/8" workstring & treating packer, set packer @ 4,310'
10. Acidize perfs
11. RIH w/ 5-1/2" AS1X pkr with On/Off tool and 1.50" PN on 2-7/8" TK-15, set packer at 4,350'
12. Conduct MIT
13. ND BOP, NU WH
14. RDMO PU

CERTIFIED MAILING LIST

Respondant Name/Address:	Certified Receipt #
Mobil Production TX & NM Tax Reporting & Analysis Center PO Box 53 Houston, TX 77001Cortland, NY 13045	7011 0110 002 0279 9444
Roy Pearce 1717 Jackson St Pecos, TX 79772	7011 0110 0002 0279 9451
State of NM Land Office P O Box 1148 Santa Fe, NM 87504	7011 0110 0002 0279 8102

Chevron

Cindy Herrera-Murillo
Regulatory Specialist
Midcontinent BU

Chevron North America Exploration and Production Company
1616 W. Bender Blvd Room 134
Hobbs FMT, Hobbs, NM 88240
Tel 575-263-0431
Fax 575-263-0445
cherreramurillo@chevron.com

September 7,2017

Re: Application for Authorization to Inject
Chevron's Vacuum Glorieta West Unit #82
Section 36, T17S, R34E,
Lea County, New Mexico

Roy Pearce
1717 Jackson St
Pecos, TX 79772

Interest Owner,

Chevron U.S.A. Inc. respectfully gives notice of intent to convert the Vacuum Glorieta West Unit #82 (API # 30-025-31840) to Central Vacuum Unit #373 WAG Injection well in the Grayburg San Andres Formation. The Central Vacuum Unit #373 is located in Section 36, T17S, R34E, Lea County, New Mexico.

Chevron plans to inject water, CO2, and produced gas into the Grayburg San Andres formations perforated area is 4,362' – 4,718'. **Any objections to this Intent to convert to SWD must be sent to the New Mexico Oil Conservation Division; 1220 South St. Francis Drive; Santa Fe, NM 87504, within 20 days of receipt of this notification.** If you require additional information, please contact me at 575-263-0431, or by email at: cherreramurillo@chevron.com.

Sincerely,

Cindy Herrera-M

Cindy Herrera-Murillo
Regulatory Specialist

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Roy Pearce
1717 Jackson St
Pecos, TX 79772

9590 9401 0006 5168 5753 49

2. Article Number *(Transfer from service label)*
7011 0110 0002 0279 9451

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)*
C. Date of Delivery
9/11/17

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

McMillan, Michael, EMNRD

From: Herrera-Murillo, Cindy O <CHerreraMurillo@chevron.com>
Sent: Monday, October 30, 2017 1:35 PM
To: McMillan, Michael, EMNRD
Subject: RE: Vacuum Glorieta West Unit Well No. 82 proposed well bore diagram

Mike,
I mailed certified to SLO and Mobil on 09/08/2017.
Thanks,

Chevron

Cindy Herrera-Murillo
Permitting Specialist SE NM
1616 W. Bender Blvd
Hobbs, NM 88240
575-263-0431
Cherreramurillo@chevron.com

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Monday, October 30, 2017 1:18 PM
To: Herrera-Murillo, Cindy O <CHerreraMurillo@chevron.com>
Subject: [**EXTERNAL**] RE: Vacuum Glorieta West Unit Well No. 82 proposed well bore diagram

Please provide the dates of mailing to NMSLO and Mobil
Mike

From: McMillan, Michael, EMNRD
Sent: Friday, October 27, 2017 1:51 PM
To: Cindy Herrera-Murillo <CHerreraMurillo@chevron.com>
Subject: Vacuum Glorieta West Unit Well No. 82 proposed well bore diagram

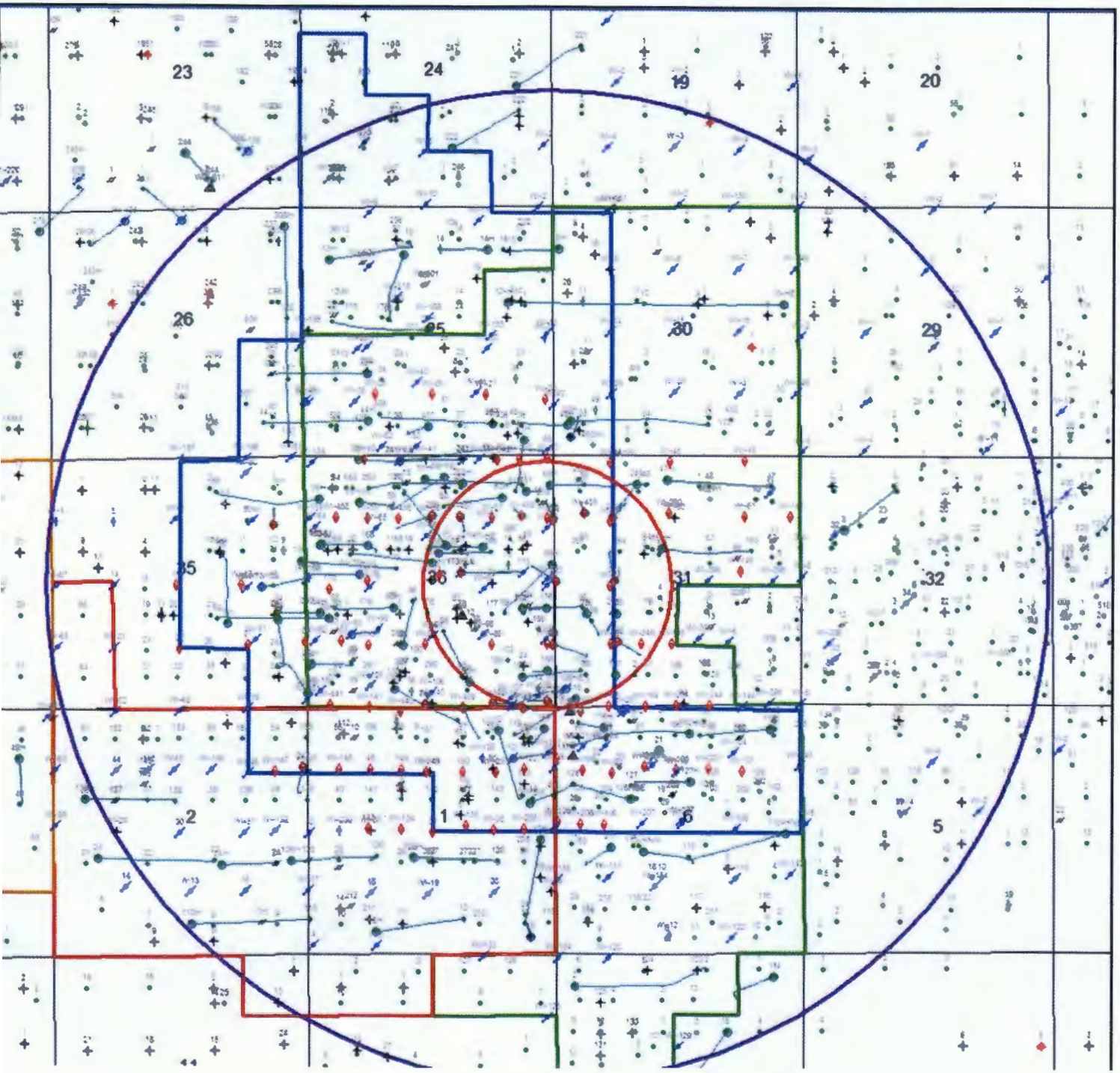
Cindy:
The OCD is concerned about the proposed well bore diagram in the Vacuum Glorieta West Unit Well No. 82. Chevron is proposing approximately 1200 feet between the lowest perf and the plug.
The OCD would prefer the plug to be approximately 200 feet below the bottom perf.

Thanks You

Mike

Michael McMillan
1220 South St. Francis

Vacuum Glorieta West Unit #82



Vacuum Glorieta West Unit #82
36 T17S-R34E
SHL: 2576 FSL; 149 FEL
BHL: 2576 FSL; 149 FEL

Key

½ Mile Radius

2 Mile Radius

Vacuum Glorieta West Unit

Central Vacuum Unit

Vacuum Grayburg San Andres Unit

West Vacuum Unit

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
August 15, 2017
and ending with the issue dated
August 15, 2017.

Publisher

Sworn and subscribed to before me this
15th day of August 2017.

Business Manager

My commission expires
January 29, 2019
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

[redacted]

LEGAL NOTICE
August 15, 2017

Notice is hereby given of this application of CHEVRON U.S.A. INC.

6301 Deauville Blvd, Midland, TX 79706, to the Oil conservation of the State of New Mexico, and the Commissioner of Public Lands, State of New Mexico for approval for Central Vacuum Unit #373 to a CO2 injection well. The Central Vacuum Unit #373 is located 2,576' FSL & 149' FEL, Unit Letter I, Section 35, T17S, R34E, Lea County, New Mexico. The injection interval is in the San Andres formation from 4,382'-4,716' through perforations. The maximum injection rate will be 6,000 MCFPD of CO2 or 3,000 BWPD with a maximum pressure of 2,000 psi on CO2 or 1,500 psi on water. Interest parties should file objections or requests for hearing with the Oil Conservation Division, 1220 South Francis Dr, Santa Fe, New Mexico 87505, within 15 days. Inquiries regarding this application should be directed to Chevron North America, Attn: Ryan Wamke, 6301 Deauville Blvd, Midland, TX 79706 #31995

01102480 00197994

CHEVRON USA INC.
15 SMITH ROAD
MIDLAND, TX 79705

API	Current Well Name	Current Operator	Status	Survey Location
300253863600	CENTRAL VACUUM UNIT 258	CHEVRON U S A INCORPORATED	Abnd Location - Never Drilled	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253521201	CVU 173H	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253814000	NM O ST 40	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253187502	VACUUM GLORIETA WEST UNIT 108	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253187501	VGWU 108H	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253884900	CVU 238	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300254046300	CVU 258 ROZ	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300254046400	CVU 259 ROZ	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253170900	CVU 271	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300254046600	CVU 274	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300254046800	CVU 284	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253800200	CVU 342	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253863900	CVU 457	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253864000	CVU 458	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253864100	CVU 459	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253188400	VGWU 107	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253184000	VGWU 82	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253184100	VGWU 94	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253184300	VGWU 95	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253184400	VGWU 96	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300254046900	CVU 285	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253010400	CVU 242	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300254046500	CVU 273	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252570600	CVU 43	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252572300	CVU 57	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252572400	CVU 58	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252572500	CVU 59	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300252572900	CVU 74	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300252573100	CVU 83	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252573200	CVU 84	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252570900	CVU 85	CHEVRON U S A INCORPORATED	Injection Well	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253180800	VGWU 67	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253183900	VGWU 68	CHEVRON U S A INCORPORATED	Injection Well	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253371101	CVU 167H	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253372200	CVU 175	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253333100	CVU 176	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253371200	CVU 177	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253333200	CVU 178	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253332900	CVU 187	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253333000	CVU 188	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300254046100	CVU 249	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23

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300252086200	CVU 250	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
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300250223000	CVU 51	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
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300253357000	STATE BA 14	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253229800	STATE D 3	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300252082300	STATE E 2	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253012600	VGWU 102	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253245000	VGWU 189	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252143200	VGWU 61H	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
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300250295801	CVU 49H	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300252085400	SKELLY -J- STATE 2	CONOCOPHILLIPS COMPANY	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253494501	STATE BA 15H	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300252033901	VGWU 103H	CHEVRON U S A INCORPORATED	Oil	SECT: 31 TWP: 17S RNG: 35E MRDN: 23
300253113101	VGWU 115H	CHEVRON U S A INCORPORATED	Oil	SECT: 1 TWP: 18S RNG: 34E MRDN: 23
300253071601	VGWU 60H	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
300253342901	VGWU 89H	CHEVRON U S A INCORPORATED	Oil	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
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300252041800	NEW MEXICO O STATE NCT-1 12	CHEVRON U S A INCORPORATED	Plugged and Abandoned	SECT: 36 TWP: 17S RNG: 34E MRDN: 23
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300253184200	VGWU 81	CHEVRON U S A INCORPORATED	Temporarily Abandoned	SECT: 36 TWP: 17S RNG: 34E MRDN: 23

CVU #73 Wellbore Diagram

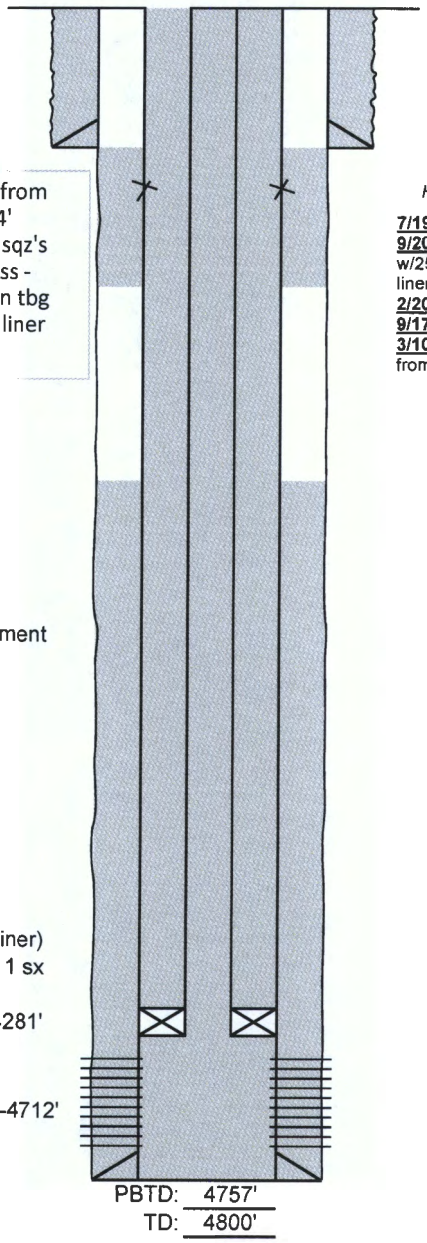
Created:	05/18/04	By:	SMG	Well #:	73	St. Lse:	
Updated:		By:		API	30-025-25728		
Lease:	Central Vacuum Unit			Unit Ltr.:	H	Section:	36
Field:	Central Vacuum Unit			TSHP/Rng:	S-17 E-34		
Surf. Loc.:	1330' FNL & 10' FEL			Unit Ltr.:		Section:	
Bot. Loc.:				TSHP/Rng:			
County:	Lea	St.:	NM	Directions:	Buckeye, NM		
Status:	Plugged & Abandonded			Chevno:			

Surface Casing

Size:	9 5/8"
Wt., Grd.:	40#, K-55
Depth:	409'
Sxs Cmt:	425
Circulate:	Yes
TOC:	Surface
Hole Size:	12 1/4"

Production Casing

Size:	4 1/2"
Wt., Grd.:	10.5#, K-55
Depth:	4800'
Sxs Cmt:	2200
Circulate:	Yes
TOC:	2460', CBL
Hole Size:	7 7/8"



KB:	
DF:	
GL:	3,985'
Ini. Spud:	01/29/78
Ini. Comp.:	02/21/78

History

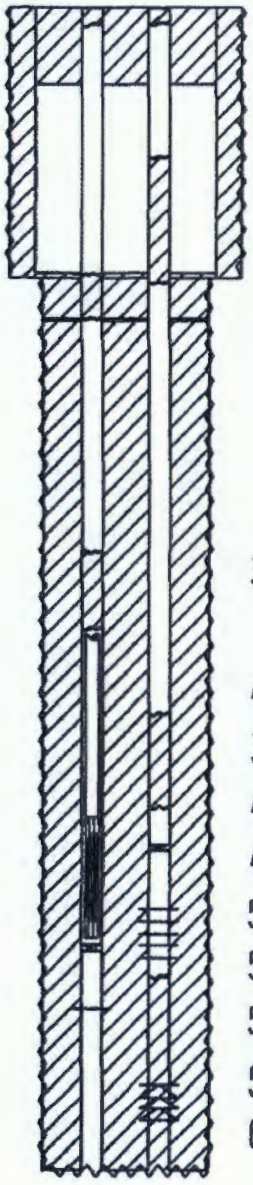
7/1997: csg insp log, AC 4381-4712' w/12M gals, 2250/975#
9/2002: csg leak 441-472', sq w/200sx+200sx, leak 441-504', sq w/250sx, still leaking, ran tracer survey, sq 1134-776', TA'd until run liner
2/2003: AC 6M+RS, ran 2-7/8" liner 4282', cmt w/211sx
9/17/08: Tagged at 4378'
3/10/15: P&A Well - Pump 128 sx Class C Cement to perforations from surface.

P&A: 5-03-77

TEXACO E&P INC.

NM "O" State NCT-1 No. 12

30-025-20418



0 - 50' CEMENT PLUG

0 - 450' CEMENT 100 sx from surface

890 - 1610' CEMENT PLUG 20 sx

1580 - 1581' SQUEEZE PERFS

1570 - 1860' CEMENT 250 sx

0 - 1599' 8 5/8" OD 17.28#/ft SURF CSG

0 - 1599' CEMENT 540 sx, circulated

0 - 1599' 11"" OD HOLE

3220 - 3690' CEMENT PLUG 13 sx

4210 - 4740' CEMENT PLUG 13 sx cement

3720 - 4800' 2.063" OD TBG

4800 - 5520' RETAINER 250 sx

4961 - 5001' CIBP 35' cement

5305 - 5638' PERFS San Andres SWD

5560 - 5600' CIBP 35' cement

5945 - 5945' PERFS

5750 - 6919' CEMENT PLUG 50 sx

6350 - 6617' SQUEEZE PERFS Blinebry

0 - 6918' 2.875" OD 6.40#/ft TBG Glorieta

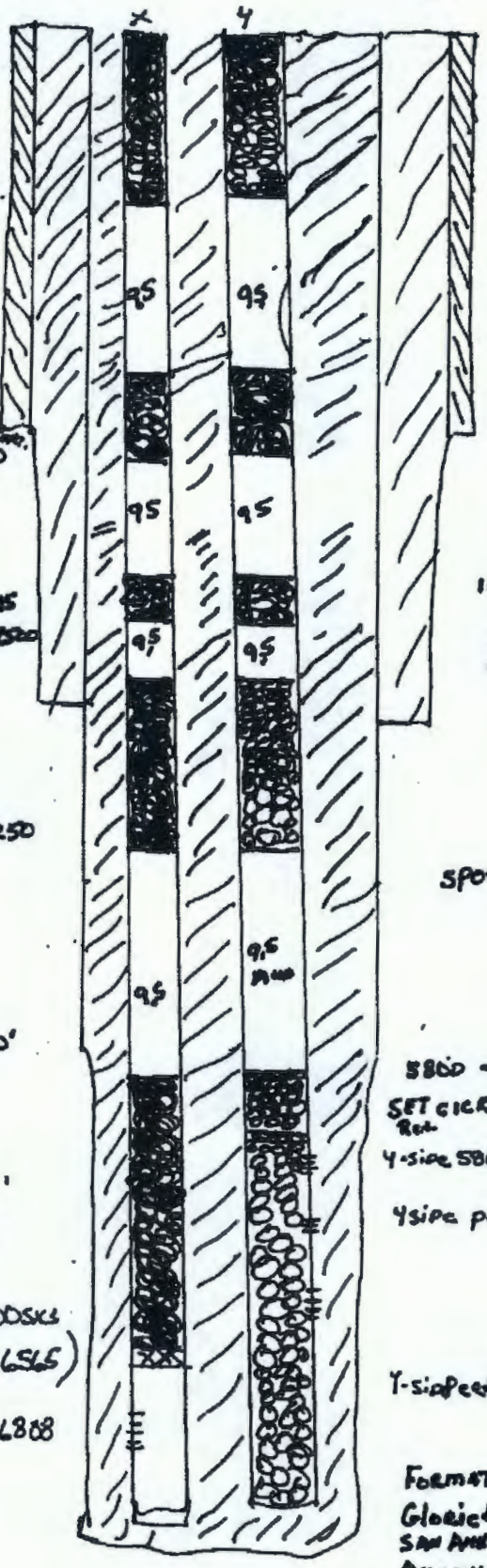
0 - 6919' 2.875" OD 6.40#/ft TBG

1850 - 6918' CEMENT 900 sx, TOC by T.S.

1599 - 6920' 7-7/8"" OD HOLE

1800 FSL & 1800 FEL
SEC 36, TWN 17S, RANGE 34E
ELEVATION: 3991' GR
COMPLETION DATE: 1-11-63
COMPLETION INTERVAL: 5305' - 5638' (L SA)
5945' - 5949' (GLOR)

[redacted] Mexico "O" STATE [redacted] T-1 #15



20sx cmt f/600'- surf

11¾" 42# csg

SET @ 1550' cmt w/ 1000sxs.

cmt. cmt circ.

drlg 15" hole.

(6-27-80 - cmt down 11¾" & 8⅝"

csg, ANN. w/ 650sx csg leak 1495-268

cmt circ up 8⅝" by 2⅞" ann. to surface.

X - sidespot-15 sx 1600-1250

(tight spots f/ 2472-2800')

X-side spot-sx 15 f/2840-2520

8⅝" CSG SET @ 3300' f/2840-2520

24# & 32# J-55-H40

cmt w/900sxs.

cmt. circ. drlg 11" hole

X-side Spot 45sx cmt f/ 4550-3250

X-side spot 35sx cmt f/6565-5500'

7⅞" hole f/ 3300-6915 TD.

RAN 2⅜" csg ON X side to 6909'

RAN 2⅜" csg ON Y side to 6915'

cmt both strings togA Thru w/ 1200sxs

cmt. cal TOC. 3084' (CIBP 6565)

Xside - Perf 6681-6888

20sxs. cmt Spotted f/ 600' - surface.

Spot 10sxs. f/ 1550 - 1250'

Perf @ 1600' (tag to pump in to) w/60sxs. w/circ @ 1550'

10sx cmt spot 2800' - 2500'

Perf @ SQ 2840 (YATES) w/60 sxs cmt. w/circ @ 2800'

spot 45sx plug f/ 4550-3250

5800 - 5500' - Spot 10sx cmt plug

SET CICR @ 5800' sq 90sxs. below Ret

Y-side 5865-5871

Yside perfs 5932'-6169

Y-side Perf - 6180-6185'

FORMATION tops

Glorieta - 5864

San Andres - 4500

Queens - 3700'

YATES - 2790'

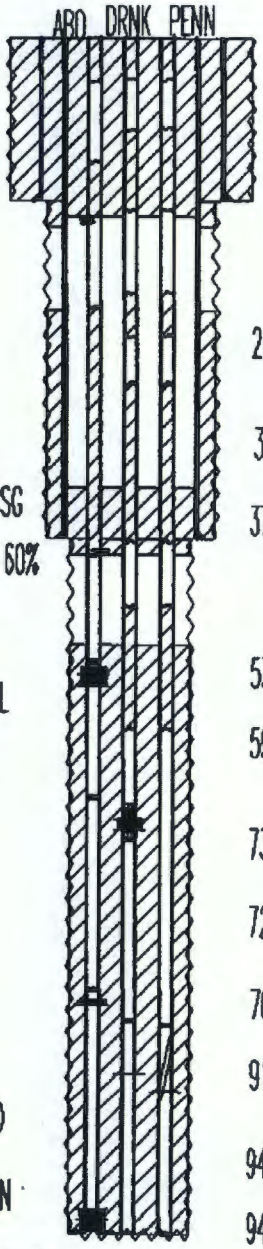
B-SALT 2680

T-SALT - 1615'

TD 6915'

P&A: 6-23-95

TEXACO E&P INC.
NM "O" STATE NCT-1 No. 18
API# 30 025 20274



0 - 1555' 13 3/8" OD 65.00#/ft SURF CSG

0 - 1555' CEMENT 1200 sx, CIRC.

0 - 1555' 17.5" OD HOLE

0 - 1800' CEMENT 850 sx, BOC by T.S.

0 - 4796' 9 5/8" OD 36.00#/ft INT CSG

2690 - 4796' CEMENT 1700 sx, TOC calc. 60%

1555 - 4796' 12.255" OD HOLE

4300 - 4950' CEMENT 135 sx, TOC by CBL

0 - 10801' 2.875" OD 6.50#/ft TBG ABO

0 - 11510' 2.875" OD 6.50#/ft TBG PENN

0 - 11508' 2.875" OD 6.50#/ft TBG DRINKARD

5817 - 11510' CEMENT 2200 sx, TOC by T.S.

4796 - 11510' 8.75" OD HOLE

0 - 400' CEMENT PLUG 15 sx

838 - 1650' CEMENT PLUG 20 sx

1185 - 1700' CEMENT PLUG

2454 - 2850' CEMENT PLUG 10 sx

3294 - 3700' CEMENT PLUG 10 sx

3700 - 4850' CEMENT PLUG 30 sx

5382 - 6600' CEMENT PLUG 30 sx

5955 - 5995' CIBP 35' CMT

7339 - 7665' RETAINER 45 sx

7265 - 7305' CIBP 35' CMT

7665 - 7705' CIBP 35' CMT

9115 - 9155' CIBP 35' CMT

9420 - 9460' CIBP 35' CMT

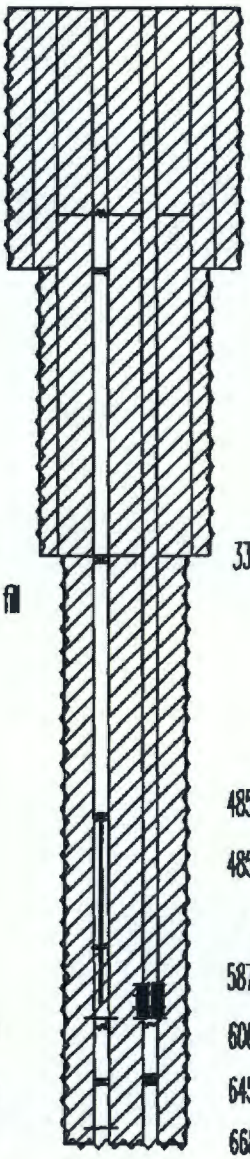
9465 - 9505' CIBP 35' CMT

11400 - 11430' CIBP 35' CMT

1880 FNL & 560 FEL
SEC 36, TWN 17 S, RANGE 34 E
ELEVATION: 4005 DF
COMPLETION DATE: 10-09-63
COMPLETION INTERVALS: 7492 - 7606 (DRNK)

P&A: 10-21-92

TEXACO E&P INC.
NM "O" STATE NCT-1 No. 21
API# 30 025 20197



0 - 1570' 11 3/4" OD 42.00#/ft SURF CSG
0 - 1570' CEMENT 1100 sx, CIRC.
0 - 1570' 15" OD HOLE

0 - 3302' 8 5/8" OD 24.00#/ft INT CSG
0 - 3302' CEMENT 1650 sx, TOC calc. 50% fill
1570 - 3302' 11" OD HOLE

0 - 6836' 2.875" OD 6.40#/ft TBG Glorieta
0 - 6838' 2.875" OD 6.40#/ft TBG Blinebry
1250 - 6850' CEMENT 1400 sx, TOC by CBL
3302 - 6850' 7.875" OD HOLE

1250 - 1251' SQUEEZE PERFS
0 - 1250' CEMENT SQZ annulus w/ 300 sx
1570 - 1610' CIBP 35' cement

3300 - 3340' CIBP 35' cement

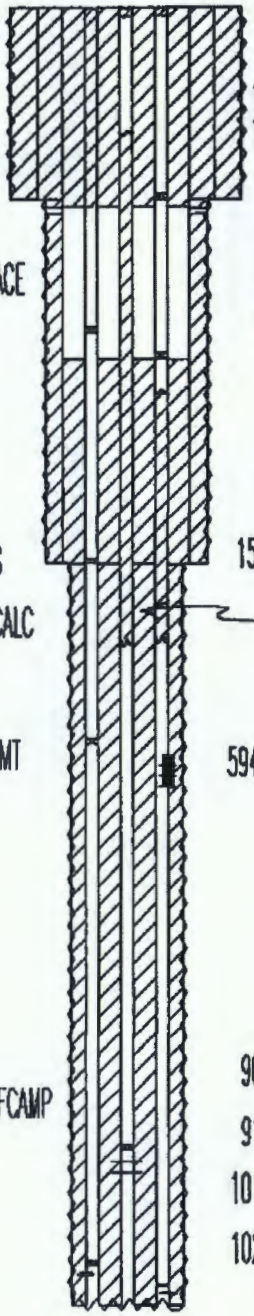
4850 - 4890' CIBP 35' cement
4855 - 6000' 3/4" Rods
0 - 6085' CEMENT PLUG SQZ w/ 280 sx
5878 - 6086' ABANDONED PERFS Glorieta
6080 - 6085' ABANDONED PERFS Commingle
6450 - 6490' CIBP 35' cement
6685 - 6749' PERFS Blinebry

1900 FNL & 1900 FEL
SEC 36, TWN 17 S, RANGE 34 E
ELEVATION: 4007 DF
COMPLETION DATE: 10-26-63
COMPLETION INTERVALS: 5878 - 6086 (Glorieta)
6685 - 6749 (Blinebry)

RTM WPS

P&A 8 23 92
GLOR/ ABO/ WC

TEXACO INC
NEW MEXICO "O" STATE NO. 24
API# 3002520946



0 - 1600' CEMENT BRDNHD SQZ W/900 SX

0 - 1534' 13.375" OD SURF CSG
0 - 1534' CEMENT 1200 sx
0 - 1597' CEMENT CIRC. to SURFACE
1597 - 1597' SQUEEZE PERFS

0 - 4418' 9.625" OD INT CSG
1650 - 4418' CEMENT 1700 sx CALC

5810 - 5850' CIBP 35' CMT

9950 - 9990' CIBP 35' CMT
10042 - 10062' ABANDONED PERFS WOLFCAMP

0 - 10229' 2.875" OD TBG (X)
0 - 10300' 2.875" OD TBG (Y)
0 - 10284' 2.875" OD TBG (Z)
2800 - 10300' CEMENT 2400 sx

0 - 50' CEMENT PLUG
0 - 1597' CEMENT PLUG
1013 - 5000' CEMENT PLUG
1494 - 1534' CIBP 35' CMT CAP

0 - 1534' 17.5 " OD HOLE
2380 - 2800' CIBP 35' CMT CAP
3065 - 5000' CEMENT PLUG

4378 - 4418' CIBP 35' CMT

1534 - 4418' 12.25 " OD HOLE

Both string a filled w/ # cement to ?', when any casing was cemented?

5942 - 6200' ABANDONED PERFS GLORIETA

9040 - 9080' CIBP 35' CMT CAP
9133 - 9263' PERFS ABO
10134 - 10155' CIBP 16' HYD CAP
10206 - 10212' ABANDONED PERFS PENN 40 SX

TD: 10300'

4418 - 10300' 8.5 " OD HOLE

860 FSL & 660 FEL
SEC 36 , TWN 17 S, RANGE 34 E
ELEVATION: 3995 KB
COMPLETION DATE: 07-04-64

RTM 1/95

CURRENT WELLBORE DIAGRAM

Created:	12/22/2003	**By:** SMG/MCD					
Updated:		**By:**					
Lease:	New Mexico O NCT-1	**Well No:**	14			**Field:**	Vacuum Wolfcamp-Abo
Surface Location:	1874' FSL & 2086' FEL	**Unit Ltr:**	J	**Sec:**	36	**TSHP/Range:**	17S-34E
Bottomhole Location:	Same	**Unit Ltr:**		**Sec:**		**TSHP/Range:**	
County:	Lea	**St:** NM		**St Lease:**	B-155-1	**API:**	30-025-20008 **Cost Center:**
Current Status:	P&A'd Oil Well			**Elevation:**	3993		
Directions to Wellsite:	Buckeye, New Mexico						

Surface Casing

Size:	13 3/8"
Wt.:	54.5#,
Set @:	1593'
Sxs cmt:	1200
Circ:	Yes
TOC:	Surface
Hole Size:	20"

Intermediate Casing

Size:	9 5/8"
Wt.:	36#
Set @:	4825'
Sxs Cmt:	1700
Circ:	
TOC:	1,400'
Hole Size:	12-1/4"

Total Depth: 12,154'

X String (Abo)

Size:	2 7/8"
Wt.:	6.4#, J-55
Set @:	10800'
TOC:	4,650'
CIBP:	9295'
X String PBTD:	9295'

Y String (Wolfcamp)

Size:	2 7/8"
Wt.:	6.4#, J-55
Set @:	10800'
TOC:	4,650'
CIBP:	
Y String PBTD:	

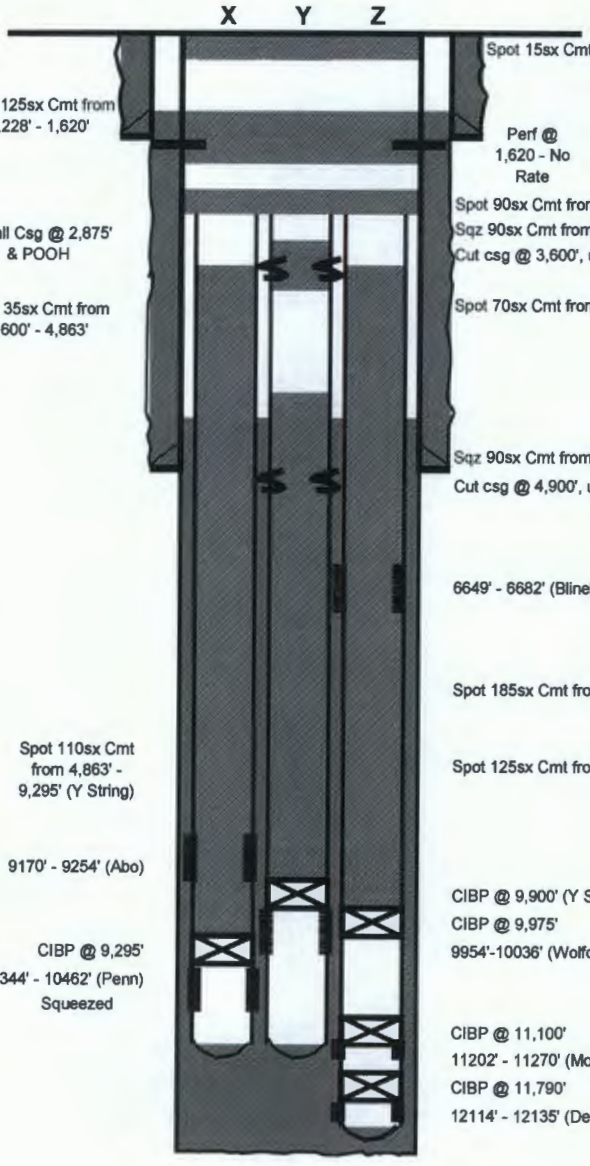
Z String (Blinebry)

Size:	3 1/2"
Wt.:	9.2#, J-55
Set @:	12,152'
TOC:	4,650'
CIBP:	11,100'
CIBP:	11,790'
Z String PBTD:	11,100'

Combined sacks of cement for X, Y, Z strings: 1,850

Perforations

X String (Abo)	9170' - 9254' (Abo)
	10344' - 10462' (Penn)
Y String (Wolfcamp)	9954'-10036' (Wolfcamp)
Z String (Blinebry)	6649' - 6682' (Blinebry)



TD: 12,154'

KB:
DF: 4,008'
GL: 3,993'
Original Spud Date: 2/11/1963
Original Compl. Date: 1/25/1963

Squeezed

CURRENT WELLBORE DIAGRAM

Created:	12/22/2003	**By:** SMG/MCD					
Updated:		**By:**					
Lease:	New Mexico O NCT-1	**Well No:**	16			**Field:**	Vacuum Glorieta
Surface Location:	1980' FSL & 990' FEL	**Unit Ltr:**	H	**Sec:**	36	**TSHP/Range:**	17S-34E
Bottomhole Location:	Same	**Unit Ltr:**		**Sec:**		**TSHP/Range:**	
County:	Lea	**St:**	NM	**St Lease:**	B-155-1	**API:**	30-025-20945
Current Status:	P&A'd Oil Well			**Elevation:**		**Cost Center:**	
Directions to Wellsite:	Buckeye, New Mexico						

Surface Casing

Size:	11 3/4"
Wt.:	42#,
Set @:	1530'
Sxs cmt:	1000
Circ:	Yes
TOC:	Surface
Hole Size:	15"

Intermediate Casing

Size:	8 5/8"
Wt.:	24#
Set @:	3300'
Sxs Cmt:	750
Circ:	
TOC:	2400'
Hole Size:	10 5/8"

Total Depth: 6,800'

X String (Abo)

Size:	2 7/8"
Wt.:	6.4#, J-55
Set @:	6797'
TOC:	3,292'
CIBP:	
X String PBTD:	

Y String (Wolfcamp)

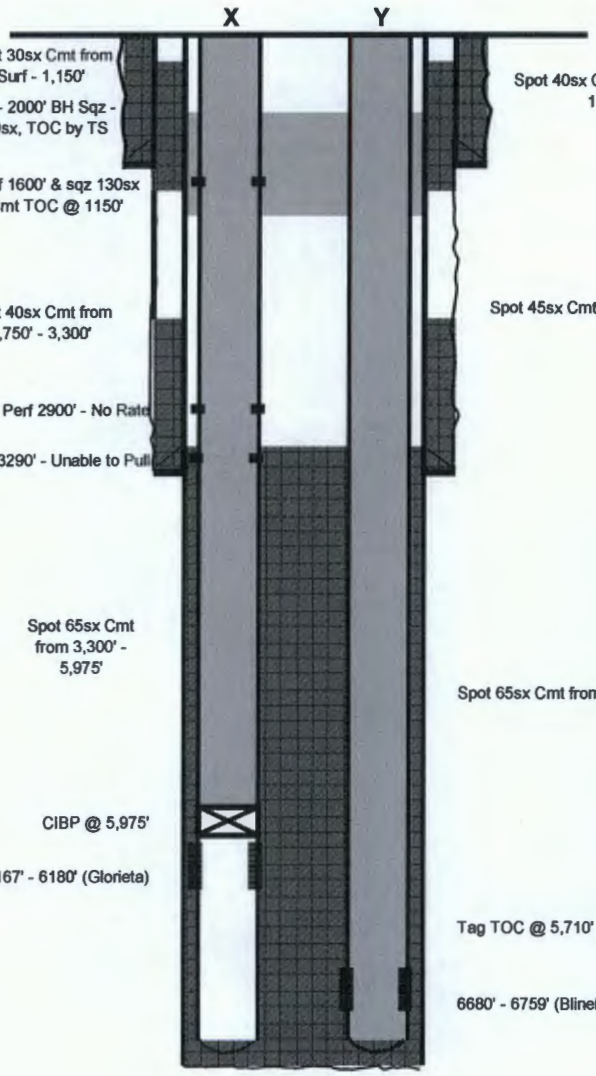
Size:	2 7/8"
Wt.:	6.4#, J-55
Set @:	6800'
TOC:	3,292'
CIBP:	
Y String PBTD:	

Combined sacks of cement for X & Y strings: 1,200

Perforations

X String (Glorieta) 6167' - 6180' (Glorieta)

Y String (Blinebry) 6680' - 6759' (Blinebry)



TD: 6,800'

KB:
DF: 4,002'
GL:
Original Spud Date: 2/27/1964
Original Compl. Date: 3/26/1964

CURRENT WELLBORE DIAGRAM

Created:	5/29/2014	**By:** TFIZ					
Updated:	12/17/2015	**By:** CJB					
Lease:	Vacuum Glorieta West Unit		**Well No.:**	75	**Field:**	Vacuum Glorieta	
Surface Location:	2310' FNL & 990' FEL		**Unit Ltr:**	H	**Sec:**	36	**TSHP/Range:** 17S-34E
Bottomhole Location:			**Unit Ltr:**		**Sec:**		**TSHP/Range:**
County:	Lea	**St:** NM	**St Lease:**		**API:**	30-025-30969	**Cost Center:** UCT492400
Current Status:	Plugged & Abandonded		**Elevation:**	4008' KB			
Directions to Wellsite:	Buckeye, New Mexico						

Surface Casing

Size:	11 3/4"
Wt.:	42#, H-40
Set @:	1550'
Sks cmt:	1200 sks
Circ:	Yes, 142 Sks
TOC:	Surface
Hole Size:	15"

Intermediate Casing

Size:	8 5/8"
Wt.:	32# K-55 LT&C
Set @:	3000'
Sxs Cmt:	600
Circ:	Yes, 158 Sks
TOC:	Surface
Hole Size:	11"

Production Casing

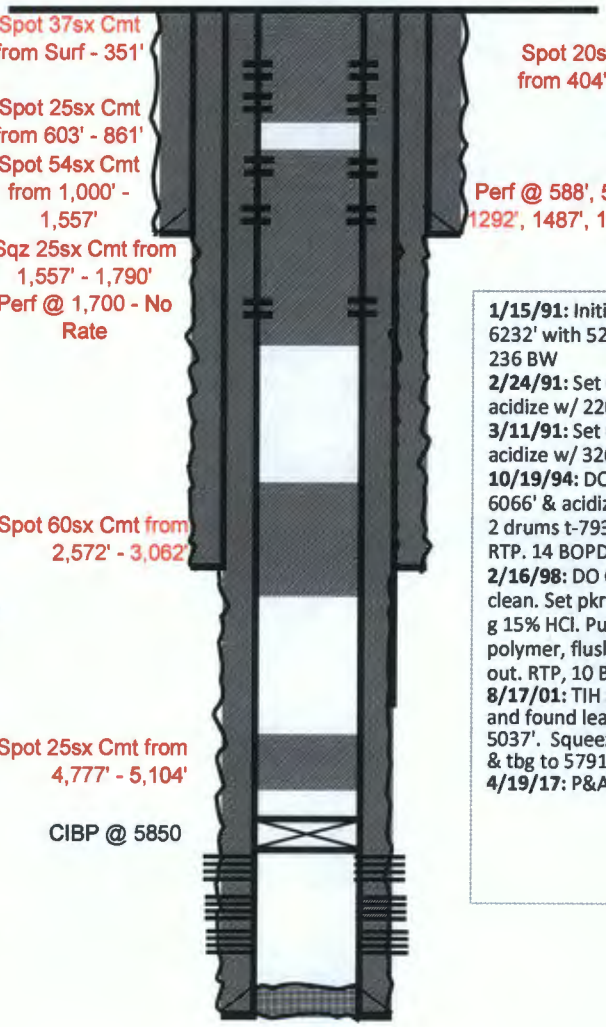
Size:	5 1/2"
Wt.:	15.5# K-55 LT&C
Set @:	6300'
Sks Cmt:	1st stg 350 sks, 2nd stg 630 sks
Circ:	Yes, 70 sks
TOC:	Surface
Hole Size:	7 7/8"

PBTD:	6270'
TD:	6300'

Perforations:

Glorieta

5892'-5974' (56 holes)
6012'-6040' (42 holes)
6159'-6232' (78 holes)
6010'-6066' (114 holes)



TD: 6300'

Spot 20sx Cmt from 404' - 603'

KB:	4008'
DF:	
GL:	3995'
Original Spud Date:	12/14/1990
Original Compl. Date:	1/7/1991

Perf @ 588', 592', 795', 800', 1280', 1292', 1487', 1489', 1491', 1500' - No Rate

1/15/91: Initial Completion, acizide perfs 6159-6232' with 5200 gal 15% NEFE HCl, test 12 BNO & 236 BW
2/24/91: Set CIBP @ 6135'. Perf 6012'-6040' & acidize w/ 2200 g 15% HCl, test 20 BNO & 146 BW
3/11/91: Set CIBP @ 6006'. Perf 5892'-5974' & acidize w/ 3200 g 15% HCl, test 25 BNO & 108 BW
10/19/94: DO CIBP @ 6006'. Perf w/ 2 SPF 6010'-6066' & acidize w/ 7500 g HCl. Scale squeezed w/ 2 drums t-793 in 20 bfw, overflush w/ 350 bfw. RTP. 14 BOPD, 287 BWPD, 25 MCFPD.
2/16/98: DO CIBP @ 6135', C/O to 6261' & circ clean. Set pkr @ 5824' & acidize all perfs w/ 3000 g 15% HCl. Pump 40 bbls pad and 384 bbls polymer, flush w/ 68 bbls. TIH bit & WS and clean out. RTP, 10 BO, 298 BW, 8 MCFD
8/17/01: TIH and set CIBP @ 5850'. Test casing and found leak. Isolate leak in DV tool from 5005-5037'. Squeeze from 5037-4980. TIH w/ bit, dc's & tbg to 5791'. Test casing to 600 psi, ok. TA well.
4/19/17: P&A Well

CURRENT
WELLBORE DIAGRAM

Created:	1/15/2003	**By:** SMG					
Updated:	8/31/2011	**By:** chay					
Lease:	Central Vacuum Unit		**Well No.:**	66	**Field:**	Vacuum Grayburg San Andres	
Surface Location:	1980' FNL & 660' FEL		**Unit Ltr:**	H	**Sec:** 36	**TSHP/Range:**	17S-34E
Bottomhole Location:			**Unit Ltr:**		**Sec:**	**TSHP/Range:**	
County:	Lea	**St:** NM	**St Lease:**	B-155	**API:** 30-025-02236	**Cost Center:**	
Current Status:	*P&A'd 10/17/2001*		**Elevation:**	4000' GL		TEPI:	BCT493000
Directions to Wellsite:	Buckeye, New Mexico					MVP:	BCT494500

Surface Csg.

Size:	10 3/4"
Wt.:	32.75#, LW
Set @:	258'
Sxs cmt:	200 sxs
Circ:	Yes
TOC:	Surface
Hole Size:	12 1/4"

Intermediate Csg.

Size:	7 5/8"
Wt.:	26.40#, LW
Set @:	1536'
Sxs Cmt:	200 sxs
Circ:	Yes
TOC:	18', 60% FILL
Hole Size:	9 7/8"

Production Csg.

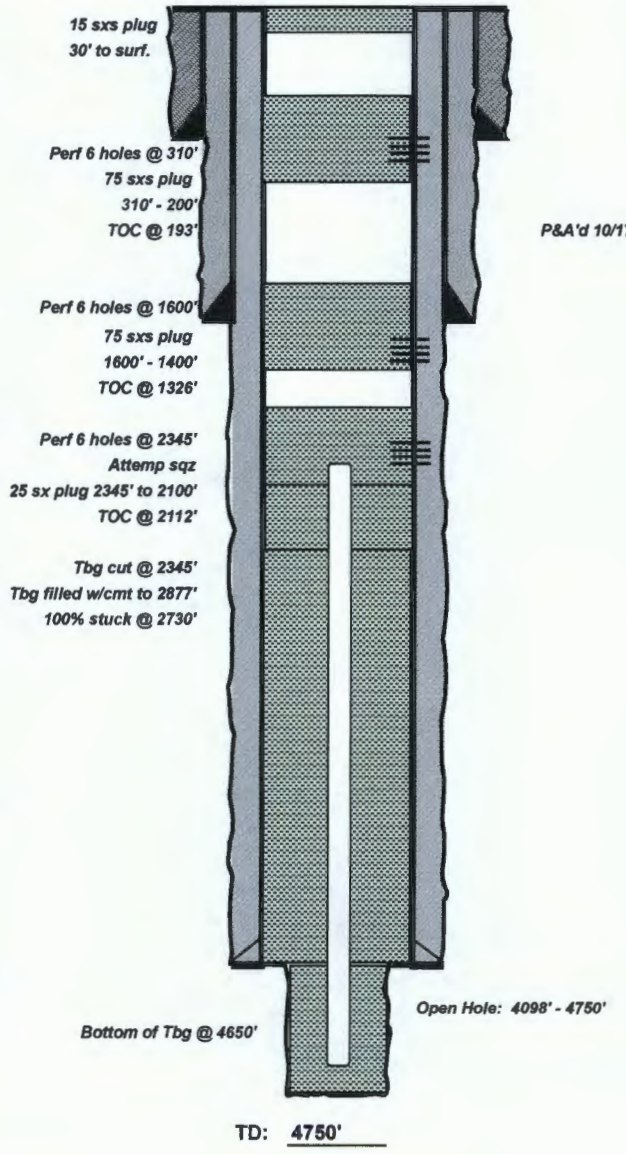
Size:	5 1/2"
Wt.:	17#, SMLS
Set @:	4098'
Sxs Cmt:	250 sxs
Circ:	Yes
TOC:	Surface
Hole Size:	6 3/4"

Open Hole

Hole Size:	6 3/4" & 4 3/4"
Depth:	4098'-4728'

TD: **4750'**

Well Plugged and Abandoned as of 10/17/01



KB:
DF: 4009'
GL: 4000'
Original Spud Date: 4/12/1938
Original Compl. Date: 5/14/1938

Remarks:

CURRENT WELLBORE DIAGRAM

Created:	7/31/2007	**By:** HLH					
Updated:	7/31/2007	**By:** HLH					
Lease:	Central Vacuum Unit		**Well No.:**	67	**Field:**	Vacuum	
Surface Location:	1980' FEL & 1980' FNL		**Unit Ltr:**	G	**Sec:** 36	**TSHP/Range:**	17S-34E
Bottomhole Location:			**Unit Ltr:**		**Sec:**	**TSHP/Range:**	
County:	Lea	**St:** NM	**St Lease:**		**API:** 30-025-02237	**Cost Center:**	
Current Status:	Plugged & Abandoned		**Elevation:**	4007'	**CHVNO:** FA3398	TEPI:	
Directions to Wellsite:						MVP:	

Surface Csg.

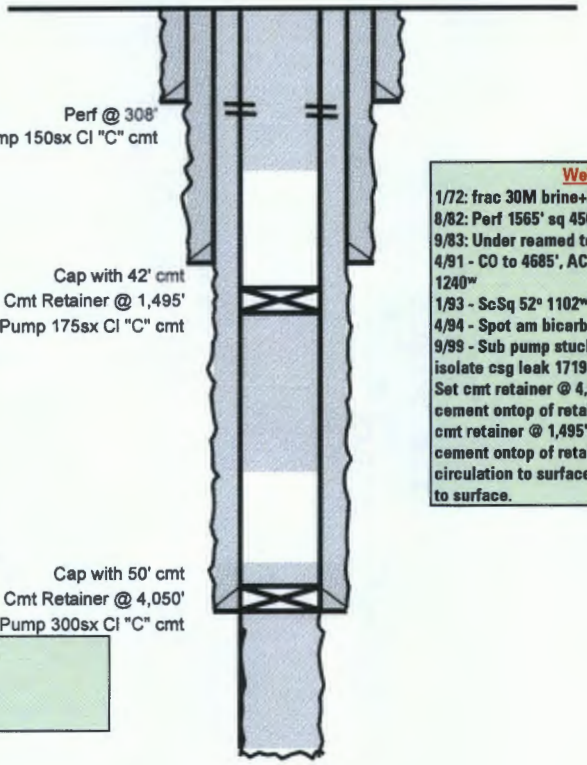
Size:	10-3/4"
Wt.:	32.75#
Set @:	258'
Sxs cmt:	200
Circ:	
TOC:	surface
Hole Size:	12 1/4"

Intermiate Csg.

Size:	7-5/8"
Wt.:	26.4#
Set @:	1538'
Sxs Cmt:	200
Circ:	
TOC:	801' calc.
Hole Size:	9 7/8"

Production Csg.

Size:	5-1/2"
Wt.:	17#
Set @:	4094'
Sxs Cmt:	250
Circ:	
TOC:	2728' bond log.
Hole Size:	6 3/4"



Perforation detail:

OH 4092-4742'

PBTD:
TD: 4742'

KB: 4016'
DF:
GL: 4007'
Original Spud Date: 5/8/1938
Original Compl. Date: 5/30/1938

Well History

1/72: frac 30M brine+30M sand
8/82: Perf 1565' sq 450sx
9/83: Under reamed to 4647'
4/91 - CO to 4685', AC 8M+RS, ScSq, before 48° 760w, after 62° 1240w
1/93 - ScSq 52° 1102w 45g
4/94 - Spot am bicarb, AC 9M, ScSq, 69° 1020w 45g
9/99 - Sub pump stuck, attempt to mill, attempt to sidetrack, isolate csg leak 1719-2621', sqz several times, move to P&A. Set cmt retainer @ 4,050' & pump 300sx class C cement & 50' cement ontop of retainer. Circulate casing with 10# mud. Set cmt retainer @ 1,495' & pump 175sx class C cement & 42' cement ontop of retainer.RUWL & perf @ 308', establish circulation to surface & pump 150sx class C cement, cement to surface.

Remarks:

CURRENT WELLBORE DIAGRAM

Created:	5/16/2003	By:	SMG						
Updated:	8/1/2007	By:	HLH						
Updated:	9/8/2008	By:	N Cayce						
Lease:	Central Vacuum Unit			**Well No.:**	71		**Field:**	Vacuum	
Surface Location:	2630 FNL & 2623 FEL			**Unit Ltr:**	G	**Sec:**	36	**TSHP/Range:**	17S-34E
Bottomhole Location:	Same			**Unit Ltr:**		**Sec:**		**TSHP/Range:**	
County:	Lea	**St:**	NM	**St Lease:**	B-155	**API:**	30-025-25727	**Cost Center:**	
Current Status:	P&A'd Injector			**Elevation:**	4003' GL	**CHVNO:**		**TEPI:**	BCT493000
Directions to Wellsite:	Buckeye, New Mexico							**MVP:**	BCT494500

Surface Csg.

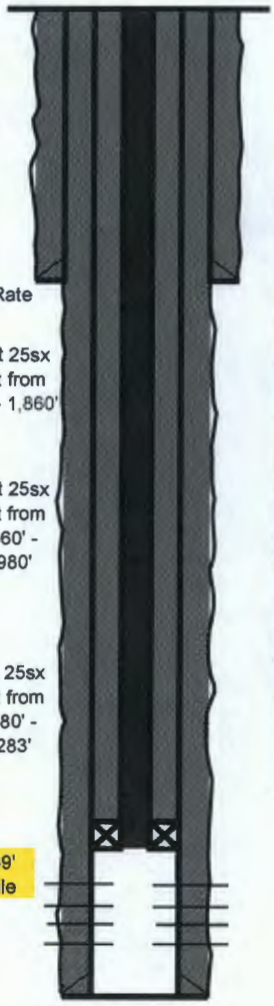
Size:	8 5/8"
Wt.:	24#, K-55
Set @:	399'
Sxs cmt:	425
Circ:	Yes, 100 sxs
TOC:	Surface
Hole Size:	12 1/4"

Production Csg.

Size:	4 1/2"
Wt.:	10.5#, K-55
Set @:	4800'
Cement Details:	2200
Circ:	Yes, 300 sxs
TOC:	Surface
Hole Size:	7 7/8"

Perfs: 4373-4712'

Perforation detail:
2-16-78: 4373', 83', 93', 4408', 19', 50', 63', 4531', 36', 48', 59', 68', 76', 4620', 31', 40', 50', 61', 71', 80', 88', 4703', 12'.
3-2/12-86: 4373', 83', 98', 4408', 19', 50', 63', 4531', 36', 48', 59', 68', 76', 4620', 31', 40', 50', 61', 71', 80', 88', 4703', 12'.
6-17/21-96: 4367', 85', 4404', 14', 67', 4542', 55', 4638', 43', 46', 57', 65', 69', 73', 92', 95', & 4700'.



PBTD: 4768' ft
TD: 4800' ft

KB: 12'
DF: 4014
GL: 4003

Original Spud Date: 1/31/1978
Original Compl. Date: 2/22/1978

Well & Failure History

2-27-78: Acid: Acid with 6,900 gls 15%HCl and 800# rock salt.
6-14-84: Acid: Acid with 3,000 gls of 15% NEFE.
3-2/12-86: Add perfs, Acid: Add perfs @ 2 spf as follows: 4373', 83', 98', 4408', 19', 50', 63', 4531', 36', 48', 59', 68', 76', 4620', 31', 40', 50', 61', 71', 80', 88', 4703', 12'. Acid over 4620'-4712' with 4,500 gls 20% NEFE, 700# rock salt. Acid over 4373'-4576' with 5,500 gls 20% NEFE, 800# rock salt.
10/2/1990: Tag Well: Tagged at 4,670' with 1-1/4 sinker bar.
6/17-21/96: Clean Out, Add Perfs, Acid: Tag @ 4375' and clean out to 4786'. Add perfs @ 2 spf w/ 3-1/8" csg gun as follows: 4367', 85', 4404', 14', 67', 4542', 55', 4638', 43', 46', 57', 65', 69', 73', 92', 95', & 4700'. Acid with 6,000 gls 20% NEFE HCl & 4500# rock salt & 140 ball sealers.
5/21/97 TIH w/new 2-3/8" fiberglass duo-line inj. tbg & 4-1/2" Guiberson G-6 inj pkr.
7/7/97 Began CO2 injection.
7/2003: 8-5/8" csg corroded internally. Dug out 8'. Repaired 4-1/2" & 8-5/8" csg. Installed new 8-5/8" head. Cleaned out to 4768'. Acidize perfs from 4343' to 4712' w/6000 gals 15% HCL. PU new pkr & 2 7/8" duo-line tbg & TIH to 4289'. Set pkr. **Cement in 2-7/8" duo-line tbg in 4-1/2" csg** w/210 sx Class C cement. Shear pump out plug @ 3400#, pumped 1000 gals HCL acid & flushed w/30 bbls FW.
8/8/2003: Acid: Acid with 6,000 gls 15% HCl and 4,000# diverter.
7/7/05: Tagged @ 4364'.
9/6/08 Tag @ 4283'. Couldn't get thru pkr.
5/13/14: P&A Well

ZONES

Top	Top Def	Interval	Net
GB Marker	4,155		
GB Dol Top	4,270	40	-
GB Dol Bott	4,310	30	-
San Andres	4,340	160	60
LSA	4,500	220	140
O/W	4,720		
TOTAL		450	200
Gross / Net Ratio		44.4%	
Total perforated		29	14.5%

CVU 72

Created:	9/1/2006	By: TKMO			
Updated:	8/30/2011	By: CHAY			
Lease:	Central Vacuum Unit	**Well No.:**	72	**Field:**	Central Vacuum Unit
Surface Location:	2630' FNL & 1330' FWL	**Unit Ltr:**	G	**Sec:** 36	**TSHP/Range:** 17S-34E
Bottomhole Location:	Same	**Unit Ltr:**		**Sec:**	**TSHP/Range:**
County:	Lea **St: NM**	**St Lease:**	B-1565	**API:** 30-025-25697	**Cost Center:**
Current Status:	P&A'd Injector	**Elevation:**	3991' GR		TEPI: UCT493000
Directions to Wellsite:	Buckeye, New Mexico				MVP: BCT494500

Surface Csg.

Size:	8 5/8"	inches
Wt.:	24	
Set @:	350	ft
Sxs cmt:	350	
Circ:	Yes	
TOC:	Surface	
Hole Size:	11"	Inches

Production Casing

Size:	4 1/2	inches
Wt.:	10.5	
Set @:	4,812	ft
Sxs Cmt:	2300	
Circ:	Yes	
TOC:	Surface	
Hole Size:	7-7/8"	Inches

TD: 4,812

Perforations:

Grayburg San Andres — 1/25/78 (initial) 4373' - 4663'

4373,84,4406,26,50,67,82,4502,14[illegible]
45,60,76,86,4603,31,43,53,63

KB: 4003'
DF: 4002'
GL: 3991'
Original Spud Date: 11/10/1977
Original Compl. Date: 1/25/1978

TD: 4,812
PBTD: 4,718

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 11650
ORDER NO. R-5530-E

APPLICATION OF TEXACO EXPLORATION AND PRODUCTION INC. FOR AMENDMENT OF DIVISION ORDER NO. R-5530, AS AMENDED, TO INCREASE INJECTION PRESSURES IN ITS CENTRAL VACUUM UNIT PRESSURE MAINTENANCE PROJECT AREA, AUTHORIZE A TERTIARY RECOVERY PROJECT BY THE INJECTION OF CARBON DIOXIDE AND TO QUALIFY THIS PROJECT FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE "ENHANCED OIL RECOVERY ACT", LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a. m. on December 19, 1996, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 30th day of April, 1997, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) By Division Order R-5496, entered in Case No. 5970 on August 9, 1977, the Division, upon application of Texaco Inc., approved the Central Vacuum Unit, said unit comprising some 3,046 acres, more or less, of State and fee lands described as follows:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 25: S/2, SE/4 NE/4
Section 36: All

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 30: All
Section 31: N/2, SW/4, SW/4 SE/4

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 12: N/2 NE/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 6: All
Section 7: NW/4, NW/4 NE/4

(3) By Order No. R-5530 entered in Case No. 6008 on September 20, 1977, the Division authorized Texaco Inc. to institute a pressure maintenance project within the aforesaid Central Vacuum Unit by the injection of water into the Grayburg and San Andres formations, Vacuum Grayburg-San Andres Pool, through fifty-five initial injection wells.

(4) The "Unitized Formation" for the Central Vacuum Unit includes the stratigraphic interval underlying the Unit Area in the Vacuum-Grayburg-San Andres Pool between the depths of 3,858 feet (plus 144 feet sub-sea) and 4,858 feet (minus 856 feet sub-sea) on the Welex Acoustic Velocity Log, run on November 15, 1963, in the Texaco Inc. State of New Mexico "O" (NCT-1) Well No. 23, located in Unit O of Section 36, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico (now Vacuum Glorieta West Unit Well No. 101).

(5) The applicant, Texaco Exploration and Production Inc. (Texaco) seeks:

a) to amend Division Order No. R-5530, as amended, to authorize the implementation of tertiary recovery operations within the Central Vacuum Unit Pressure Maintenance Project by the alternate injection of water and carbon dioxide and produced gases (WAG) into the Grayburg and San Andres formations;

b) authorization to increase the surface injection pressure for water in certain injection wells to 1500 psi, provided that step rate tests conducted on these wells do not indicate fracturing of the injection formation;

c) authorization to inject carbon dioxide gas at a maximum surface injection pressure of 350 psi above the maximum allowed surface water injection pressure, not to exceed 1850 psi; and,

d) to qualify the proposed tertiary recovery project for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(6) The applicant proposed that the project area for the tertiary recovery project comprise some 1,550 acres, more or less, being a portion of the Central Vacuum Unit Area, described as follows:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 25: S/2 S/2 SE/4, S/2 SE/4 SW/4, SE/4 SW/4 SW/4
Section 36: S/2, NE/4, E/2 NW/4, SW/4 NW/4, S/2 NW/4 NW/4, NE/4 NW/4 NW/4

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 30: S/2 S/2 SW/4, S/2 SW/4 SE/4, SW/4 SE/4 SE/4
Section 31: W/2, SW/4 SE/4, W/2 NE/4, SE/4 NE/4, S/2 NE/4 NE/4, NW/4 NE/4 NE/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 6: N/2 NW/4, NW/4 NE/4, SW/4 NW/4, N/2 NE/4 NE/4, SW/4 NE/4 NE/4, NW/4 SE/4 NE/4, N/2 SW/4 NE/4, N/2 SE/4 NW/4, SW/4 SE/4 NW/4, N/2 NW/4 SW/4, NW/4 NE/4 SW/4

(7) Current secondary recovery operations within the Central Vacuum Unit are summarized as follows:

Number of Producing Wells:	88
Number of Injection Wells:	86
Current Oil Production:	4,100 BOPD
Current Water Injection:	63,000 BWPD
Cumulative Oil Recovery:	72 MMSTBO
Cumulative Secondary Oil Recovery (1977-Date):	42 MMSTBO
Current Average Water Cut:	96%

(8) According to evidence and testimony presented by the applicant, its plan of operation within the proposed tertiary recovery project includes:

a) implementing a change in the process used for the displacement of crude oil by initiating water-alternating-gas (WAG) injection (injecting water and carbon dioxide (CO_2) in alternating slugs of produced gas and CO_2 with slugs of water);

b) injecting an estimated 259 BCF of CO_2 and other produced gases and 148 million barrels of water over the life of the proposed tertiary project, which is estimated to be approximately 25 years;

c) utilizing a total of fifty-one (51) injection wells (all as shown on Exhibit "A" attached hereto) and seventy-one (71) producing wells (sixty-eight (68) existing wells and three (3) new wells proposed to be drilled) within the proposed tertiary recovery project; and,

d) injecting at sufficient pressure so as to maintain reservoir pressure at high enough levels to meet miscible pressure requirements in the reservoir.

(9) The proposed tertiary recovery project area (described in Finding No. 6 above) represents approximately 50 percent of the area contained within the Central Vacuum Unit. According to applicant's testimony, the proposed tertiary recovery project is being limited to only a portion of the Central Vacuum Unit for the following reasons:

a) the targeted area represents that portion of the Central Vacuum Unit which contains the best hydrocarbon pore volume within the Grayburg-San Andres reservoir; and,

b) the current economics of the proposed tertiary recovery project dictate that CO_2 injection should be initially limited to that portion of the Central Vacuum Unit containing sufficient hydrocarbon pore volume.

(10) Applicant further testified that the proposed tertiary recovery project may be expanded in the future into other areas of the Central Vacuum Unit in the event economic considerations become more favorable.

(11) Further evidence and testimony presented by the applicant indicates that the amount of recoverable oil attributed to a positive production response from the expanded use of enhanced oil recovery technology for the proposed tertiary recovery project is an estimated 20.3 million stock tank barrels along with 23.2 BCF of hydrocarbon gas.

(12) Texaco testified that the initiation of tertiary recovery operations utilizing the methodology proposed should result in the additional recovery set forth in Finding Paragraph No. (11) above for a projected cost of approximately $345.7 million which includes field installations and upgrades, well remediation, separation and compression facilities, the purchase of CO_2 and the costs associated with the recycling of injectant.

(13) The proposed tertiary recovery project is offset by the following described tertiary CO_2 floods within the Vacuum Grayburg-San Andres Pool, approved respectively, by Division Order Nos. R-6856, as amended, and Order No. R-10599-B:

a) to the east is the Phillips Petroleum Company East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project located in portions of Townships 17 and 18 South, Range 35 East, NMPM, East Vacuum Grayburg-San Andres Unit Area, Lea County, New Mexico. The current authorized bottomhole pressure in this project area equates to a surface injection pressure for CO_2 of approximately 1850 psig; and,

b) to the west is the Phillips Petroleum Company State "35" Unit Pressure Maintenance Project which is also a CO_2 tertiary recovery project underlying the N/2, E/2 SW/4, and SE/4 of Section 35, Township 17 South, Range 34 East, NMPM, State "35" Com Unit Area, Lea County, New Mexico. The authorized surface injection pressure for CO_2 in this project area is 1850 psig.

(14) The evidence and testimony presented in this case indicates that it is prudent to implement the proposed tertiary recovery project within the Central Vacuum Unit at this time, and that such implementation will result in the recovery of additional oil and gas from the project area which may otherwise not be recovered, thereby preventing waste.

(15) The evidence further indicates that the oil and gas recovered as a result of implementing the proposed tertiary recovery project will be allocated to each tract within the Central Vacuum Unit on a fair and reasonable basis, thereby protecting correlative rights.

(16) The proposed tertiary recovery project should be approved.

(17) The evidence presented by Texaco indicates that the proposed tertiary recovery project meets all the criteria for certification by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(18) The certified "EOR Project Area" should initially comprise the area described in Finding Paragraph No. (6) above, provided however, the "EOR Project Area" eligible for the recovered oil tax rate may be contracted and reduced dependent upon the evidence presented by the applicant in its demonstration of the occurrence of a positive production response.

(19) To be eligible for the EOR tax credit, the applicant should advise the Division when CO_2 (WAG) injection commences within the "EOR Project Area" and request the Division certify the subject tertiary recovery project to the New Mexico Taxation and Revenue Department.

(20) At such time as a positive production response occurs from CO_2 (WAG) injection operations and within seven years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefiting from tertiary recovery operations. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those lands and wells which are eligible for the tax credit.

(21) Division Order No. R-5530 established maximum surface injection pressures within the Central Vacuum Unit equal to 0.2 psi/ft. of depth to the uppermost injection perforation in each of the fifty-five initial injection wells, or approximately 800 psi.

(22) Throughout the course of secondary recovery operations, the maximum surface injection pressures for the injection wells within the Central Vacuum Unit have been increased upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata. Pressure increases such as described are usually based upon the results of step rate tests.

(23) The current maximum surface injection pressures within the proposed tertiary recovery project area range from approximately 872 psi to 2775 psi.

(24) With regards to the injection pressures within the proposed tertiary recovery project area, the applicant seeks:

a) authority to inject CO_2 at a surface injection pressure 350 psi above the current maximum surface injection pressure for water for a given well (all as shown on applicant's Exhibit No. 12), said CO_2 injection pressure not to exceed 1850 psi;

b) authority to continue to conduct step rate tests and receive pressure increase authority on injection wells within the tertiary recovery project area whose current maximum surface injection pressure for water is less than 1500 psi; and,

c) authority to increase the surface injection pressure for water to 1500 psi on eight wells located within the tertiary recovery project area which have shown no "break" or fracture on current step rate tests, (these wells having been identified on applicant's Exhibit No. 12).

(25) The evidence and testimony presented by Texaco indicates that the proposed maximum CO_2 surface injection pressure of 1850 psi, or 350 psi above the current maximum surface injection pressure for water, is reasonable, necessary and should not result in the migration of injected fluid from the proposed injection interval.

(26) Texaco should be authorized to conduct step rate tests and obtain surface injection pressure increases for water within those injection wells in the tertiary recovery project area whose current maximum surface injection pressure for water is less than 1500 psi.

(27) Texaco should be required to submit current step rate tests on those eight wells described in Finding No. (24)(c) above prior to obtaining Division approval to increase the surface injection pressure for water on these wells to 1500 psi.

(28) All injection wells or the pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than the individual well surface injection pressure authorized by this order.

(29) The applicant testified that there are no "problem wells" within the one-half mile "area of review" and further testified that all plugged and abandoned wells and all producing wells are cemented in a manner adequate to confine the injected fluid to the proposed injection interval.

(30) Texaco proposed that each of the injection wells shown on Exhibit "A" be equipped no different than previously equipped for waterflood operation.

(31) In support of this request, Texaco testified that it anticipates no additional corrosion problems within these wellbores as a result of CO_2 injection.

(32) Texaco's request should be granted, provided however, the Division may require the installation of additional or upgraded wellbore tubulars and packers should it become apparent that the injection of CO_2 is causing beyond normal corrosion problems.

(33) If not previously equipped, each of the injection wells shown on Exhibit "A" should be equipped with internally coated tubing installed in a packer set within 100 feet of the uppermost injection perforation or casing shoe; the casing-tubing annulus should be filled with an inert fluid; and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(34) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of any new injection equipment and of the mechanical integrity pressure tests in order that the same may be witnessed.

(35) The application should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Texaco Exploration and Production Inc., is hereby authorized to institute an EOR tertiary recovery project by means of combined water, carbon dioxide (CO_2), and produced gas injection (WAG) in its Central Vacuum Unit Area located in portions of Townships 17 and 18 South, Ranges 34 and 35 East, NMPM, Lea County, New Mexico, by the injection of water, CO_2, and produced gases into the Grayburg and San Andres formations, Vacuum-Grayburg-San Andres Pool, through the correlative gross perforated and/or open hole interval between the depths of 3,858 feet (plus 144 feet sub-sea) and 4,858 feet (minus 856 feet sub-sea) on the Welex Acoustic Velocity Log, run on November 15, 1963, in the Texaco Inc. State of New Mexico "O" (NCT-1) Well No. 23, located in Unit O of Section 36, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico (now Vacuum Glorieta West Unit Well No. 101), within each of the fifty-one injection wells shown on Exhibit "A" attached hereto.

IT IS FURTHER ORDERED THAT:

(2) Any previous injection authority not in conflict with the provisions set forth in this order shall remain in full force and effect.

(3) WAG injection operations shall be accomplished through internally coated tubing installed in a packer set within approximately 100 feet of the uppermost injection perforations or casing shoe; the casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(4) For those injection wells within the "EOR Project Area" whose current maximum surface injection pressure for water is less than 1500 psi (as shown on applicant's Exhibit No. 12), the applicant is hereby authorized to inject water into each of these wells at the current maximum surface injection pressure, provided however, such pressure may be administratively increased by the Division upon a showing that such increase will not result in the fracturing of the injection formation or confining strata, and shall be further authorized to inject CO_2 and produced gases at a maximum surface injection pressure of 350 psi above the current maximum surface injection pressure for water, provided however, such CO_2 injection shall not occur at a surface injection pressure in excess of 1850 psi.

(5) For those injection wells within the "EOR Project Area" whose current maximum surface injection pressure for water exceeds 1500 psi (as shown on applicant's Exhibit No. 12), the applicant is hereby authorized to inject water into each of these wells at the current maximum surface injection pressure, and shall be further authorized to inject CO_2 and produced gases at a maximum surface injection pressure of 1850 psi.

(6) Texaco shall be required to submit current step rate tests on those eight wells described in Finding No. (24)(c) above prior to obtaining Division approval to increase the surface injection pressure for water on these wells to 1500 psi.

(7) The Division Director shall retain the authority to administratively authorize a pressure limitation in excess of the above pressure limits upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(8) The operator shall immediately notify the Supervisor of the Hobbs District Office of the Division of the failure of the casing in any of the injection wells, the leakage of water, natural gas, CO_2, or oil from or around any producing well, or the leakage of water, natural gas, CO_2, or oil from any plugged and abandoned well within the "EOR Project Area", and shall take such steps as may be necessary to correct such failure or leakage.

(9) The subject tertiary recovery project is hereby certified as a qualified "Enhanced Oil Recovery Project" pursuant to the"Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(10) The certified and approved "EOR Project Area" shall include those lands described as follows, provided however, the "EOR Project Area" eligible for the recovered oil tax rate may be reduced dependent upon the evidence presented by the applicant in its demonstration of the occurrence of a positive production response.

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 25: S/2 S/2 SE/4, S/2 SE/4 SW/4, SE/4 SW/4 SW/4
Section 36: S/2, NE/4, E/2 NW/4, SW/4 NW/4, S/2 NW/4 NW/4, NE/4 NW/4 NW/4

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 30: S/2 S/2 SW/4, S/2 SW/4 SE/4, SW/4 SE/4 SE/4
Section 31: W/2, SW/4 SE/4, W/2 NE/4, SE/4 NE/4, S/2 NE/4 NE/4, NW/4 NE/4 NE/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 6: N/2 NW/4, NW/4 NE/4, SW/4 NW/4, N/2 NE/4 N/4, SW/4 NE/4 NE/4, NW/4 SE/4 NE/4, N/2 SW/4 NE/4, N/2 SE/4 NW/4, SW/4 SE/4 NW/4, N/2 NW/4 SW/4, NW/4 NE/4 SW/4

(11) To be eligible for the EOR credit, prior to commencing WAG injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(12) At such time as a positive production response occurs and within seven years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations. The Division may review the application administratively or set it for hearing. Based upon evidence prescnted, the Division will certify to the New Mexico Taxation and Revenue Department those lands and wells which are eligible for the credit.

(13) The injection authority granted herein for the fifty-one WAG injection wells shall terminate one year after the effective date of this order if thc operator has not commenced WAG injection operations into these wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(14) The subject tertiary recovery project is hereby designated the Central Vacuum Unit Tertiary Recovery Project and shall be governed by the provisions of Rules Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(15) Monthly progress reports of the tertiary recovery project herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(16) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LeMAY
Director

S E A L

EXHIBIT "A"
CASE NO. 11650
ORDER NO. R-5530-E
TEXACO EXPLORATION AND PRODUCTION INC.
CENTRAL VACUUM UNIT
TERTIARY PROJECT INJECTION WELLS

WELL NO	FOOTAGE	U	SECTION	TWNSHP	RANGE	API NUMBERS
CVU #40	42' FNL, 1247' FWL	D	36	17S	34E	30-025-25703
U #41	60' FNL, 2552' FWL	C	36	17S	34E	30-025-25704
U #42	32' FNL, 1286' FEL	A	36	17S	34E	30-025-25705
CVU #43	35' FNL, 127' FEL	A	36	17S	34E	30-025-25706
CVU #44	134' FNL, 1219' FWL	D	31	17S	35E	30-025-25719
CVU #45	121' FNL, 2475' FWL	C	31	17S	35E	30-025-25720
CVU #46	119' FNL, 1224' FEL	A	31	17S	35E	30-025-25818
CVU #55	1310' FNL, 1310' FWL	D	36	17S	34E	30-025-25721
CVU #56	1310' FNL, 2630' FWL	C	36	17S	34E	30-025-25722
CVU #57	1310' FNL, 1330' FEL	B	36	17S	34E	30-025-25723
CVU #58	1310' FNL, 132' FEL	A	36	17S	34E	30-025-25724
CVU #59	1403' FNL, 1200' FWL	E	31	17S	35E	30-025-25725
CVU #60	1310' FNL, 2535' FWL	C	31	17S	35E	30-025-25707
CVU #61	1310' FNL, 1230' FEL	A	31	17S	35E	30-025-25819
CVU #70	2630' FNL, 1310' FWL	E	36	17S	34E	30-025-25726
CVU #71	2630' FNL, 2623' FEL	G	36	17S	34E	30-025-25727
CVU #72	2630' FNL, 1330' FEL	G	36	17S	34E	30-025-25697
CVU #73	2630' FNL, 142' FEL	H	36	17S	34E	30-025-25728
CVU #74	2561' FSL, 1180' FWL	L	31	17S	35E	30-025-25729
CVU #81	1332' FSL, 1310' FWL	L	36	17S	34E	30-025-25708
CVU #82	1333' FSL, 2528' FWL	K	36	17S	34E	30-025-25730
U #83	1330' FSL, 1330' FEL	J	36	17S	34E	30-025-25731
U #84	1333' FSL, 151' FEL	I	36	17S	34E	30-025-25732

CVU #85	1336' FSL, 1201' FWL	L	31	17S	35E	30-025-25709
CVU #93	10' FSL, 1136 FWL	M	31	17S	35E	30-025-25733
CVU #94	50' FSL, 2549' FEL	O	31	17S	35E	30-025-25734
CVU #99	1408' FNL, 1211' FWL	E	6	18S	35E	30-025-25710
CVU #100	1372' FNL, 2544' FWL	F	6	18S	35E	30-025-25711
CVU #101	1410' FNL, 1336' FEL	G	6	18S	35E	30-025-25712
CVU #106	2520' FNL, 1040' FWL	E	6	18S	35E	30-025-25796
CVU #136	2450' FNL, 40' FWL	E	6	18S	35E	30-025-25997
CVU #137	1100' FNL, 40' FWL	D	6	18S	35E	30-025-25998
CVU #138	10' FSL, 70' FEL	P	36	17S	34E	30-025-25999
CVU #139	85' FSL, 958' FEL	P	36	17S	34E	30-025-26078
CVU #140	10' FSL, 2571' FWL	N	36	17S	34E	30-025-26000
CVU #141	10' FSL, 1310' FWL	M	36	17S	34E	30-025-26001
CVU #144	35' FNL, 1330' FEL	B	6	18S	35E	30-025-26788
CVU #145	1310' FSL, 2475' FWL	N	31	17S	35E	30-025-26789
CVU #146	2465' FNL, 1335' FEL	G	31	17S	35E	30-025-26790
CVU #147	1310' FNL, 200' FEL	A	31	17S	35E	30-025-26791
CVU #159	1310' FNL, 100' FWL	D	36	17S	34E	30-025-27969
CVU #160	2602' FNL, 35' FWL	E	36	17S	34E	30-025-27970
CVU #161	180' FSL 10' FWL	M	36	17S	34E	30-025-27971
CVU #193	101' FNL, 534' FWL	D	6	18S	35E	30-025-32800
CVU #194	14' FNL, 1917' FWL	C	6	18S	35E	30-025-38010
CVU #199	1372' FNL, 584' FWL	E	6	18S	35E	30-025-32804
CVU #200	1301' FNL, 1875' FWL	C	6	18S	35E	30-025-32805
CVU #201	1360' FNL, 1973' FEL	G	6	18S	35E	30-025-32806
CVU #206	2509' FNL, 536' FWL	E	6	18S	35E	30-025-32808
CVU #207	2500' FNL, 1825' FWL	F	6	18S	35E	30-025-32809
CVU #244	10' FNL, 1930' FEL	B	6	18S	35E	30-025-32810

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 14401
ORDER NO. R-5530-F

APPLICATION OF CHEVRON U.S.A., INC. FOR AMENDMENT OF DIVISION ORDER NO. R-5530-E TO REVISE THE INJECTION WELL COMPLETION REQUIREMENTS AND TO CHANGE THE BASIS FOR THE CALCULATION OF THE AUTHORIZED INJECTION PRESSURE FROM SURFACE PRESSURE TO THE AVERAGE RESERVOIR PRESSURE IN ITS PREVIOUSLY APPROVED TERTIARY RECOVERY PROJECT IN THE CENTRAL VACUUM UNIT EOR PROJECT AREA, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on December 3, 2009, at Santa Fe, New Mexico, before Examiner David K. Brooks.

NOW, on this 12th day of January, 2010, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due notice has been given, and the Division has jurisdiction of the subject matter of this case.

(2) Cases No. 14401 and 14402 were consolidated for hearing and a joint record was made. However, separate orders will be issued.

(3) Chevron U.S.A., Inc. ("Applicant") seeks amendment of Order No. R-5530-E, which authorizes injection of water, carbon dioxide (CO2) and produced gases for pressure maintenance into the Central Vacuum Unit in Lea County, New Mexico, in three respects, as follows:

(a) amending Ordering Paragraph (3) of Order No. R-5530-E, which currently requires that the casing-tubing annulus in any injection well be filled with an inert fluid, and an approved leak detection device be attached to the annulus, to retroactively authorize continued injection into seven wells where the tubing has been cemented in place;

(b) amending Ordering Paragraph (3) of Order No. R-5530-E, which currently requires that injection tubing be installed in a packer set within approximately 100 feet of the uppermost injection perforations or casing shoe, to retroactively and prospectively authorize setting packers in injection wells more than 100 feet above the uppermost injection perforations or casing shoe, provided that the packer is set within the Unitized Formation; and

(c) amending Ordering Paragraphs (4) and (5) of Order No. R-5530-E, which currently limits surface injection pressure for CO2 to 350 pounds per square inch (psi) more than the pressure authorized for water injection, but in no event more than 1,850 psi, to establish an injection pressure limit for CO2 based on bottomhole pressure.

(4) At the hearing, Applicant appeared through counsel and presented geologic, operational and engineering testimony, as follows:

(a) Regarding the injection wells with cemented tubing, Applicant's witnesses testified:

(i) Applicant has cemented the tubing in seven injection wells in the Central Vacuum Unit (subject wells), as follows:

Central Vacuum Unit Well No. 58	API No. 30-025-25724
Central Vacuum Unit Well No. 73	API No. 30-025-25728
Central Vacuum Unit Well No. 71	API No. 30-025-25727
Central Vacuum Unit Well No. 57	API No. 30-025-25732
Central Vacuum Unit Well No. 16	API No. 30-025-25793
Central Vacuum Unit Well No. 6	API No. 30-025-25809
Central Vacuum Unit Well No. 27	API No. 30-025-25815

(ii) In each case, the tubing was cemented with the approval of the Division's Hobbs District Office following casing leaks and unsuccessful repair attempts.

(iii) Since filing this Application, Applicant has conducted blanking plug tests to determine tubing integrity on each of the subject wells, and all of them passed.

(iv) There is no practicable means to restore the casing-tubing annulus in the subject wells. Loss of the injection capacity of the subject wells and similarly constructed wells in the Vacuum Grayburg San Andres Unit would result in loss of approximately 485 barrels of oil per day of production.

(v) Re-drilling the subject wells would cost an estimated $2 million dollars per well and would likely not be economic under Applicant's investment criteria. Discontinuing use of these wells for injection, if they were not re-drilled, would waste approximately 2.21 million barrels of proven reserves.

(vi) Applicant proposes to conduct annual blanking-plug tests on each of the subject wells to insure tubing integrity, and to continuously monitor injection pressures versus injection volumes with its Supervisory Control and Data Acquisition (SCADA) system, to monitor cement and casing integrity.

(vii) A leak anywhere down-hole in the injection well would occasion an anomaly in the normally consistent correlation between injection rate and injection pressure. The SCADA system will be programmed to report an "alarm" if an anomaly in this relationship for any of the subject wells persists for 24 hours. This will provide more rapid leak detection than conventional inspection methods.

(b) Regarding packer setting depths, Applicant's witnesses testified:

(i) Due to wear on the tubing in these old wells, it is often necessary, when re-setting the packer, to move up-hole in order to secure a reliable packer seat.

(ii) There are a total of 31 injection wells in the Central Vacuum Unit and the Vacuum Grayburg San Andres Unit in which the packers are currently set more than 100 feet above the highest injection perforation and the casing shoe. The packers in all of these wells are set below the top of the injection formation and within the unitized interval. The existing packer setting depths in these wells have been approved by the Division's Hobbs District Office.

(iii) There are additional wells in these units where the packers cannot be re-set within 100 feet of the highest injection perforation or the casing shoe.

(iv) Correlated formation tops in this unit generally are approximately 350 feet above the uppermost injection perforations.

(c) Regarding authorized injection pressure, Applicant's witnesses testified:

(i) Order No. R-5530-E limits surface injection pressure for CO2 to 350 psi greater than the applicable injection pressure limit for water, but in no event more than 1,850 psi.

(ii) In this unit, if Applicant were injecting 100% pure CO2, a surface injection pressure of 1,850 psi would produce an average bottomhole injection pressure of approximately 3,600 psi.

(iii) However, the CO2 being injected by the Applicant is approximately 87% pure, as determined by tests at the tailgate of Applicant's recycle facility.

(iv) Using 87% CO2, a surface injection pressure of 1,850 psi produces a bottomhole injection pressure of approximately 3,200 psi, or 400 psi less than was contemplated when these limits were set.

(v) Applicant has conducted step-rate tests resulting in approval of surface injection pressures for water from 1,920 psi to 2,500 psi. Allowing for the 350 psi differential authorized for CO2 injection, as compared to water injection, provided in Order No. R-5530-E, these tests indicate that a surface injection pressure of 2,200 psi for CO2 will not exceed formation fracture pressure.

(vi) Applicant would prefer that the CO2 injection pressure limit for this unit be set by reference to bottomhole pressure, at the originally contemplated 3,600 psi. However, if a surface injection pressure limit is needed for purposes of inspection, Applicant requests that it be raised to 2,200 psi.

The Division concludes that:

(5) The Division's district offices do not have authority to waive requirements set forth in hearing or administrative orders issued by the Director unless specifically authorized in the order or by rule. Hence, the injection wells where the tubing has been cemented, and where packers have been set substantially more than 100 feet above the uppermost injection perforation or casing shoe, are currently in violation of permit conditions.

(6) Applicant's proposed inspection protocol using blanking plug tests and SCADA monitoring provides a reasonable substitute for monitoring annular pressure.

Hence, allowing continued utilization of the subject wells for injection, subject to the conditions proposed by Applicant and set forth in this Order, will not cause waste, impair correlative rights or endanger public health or the environment, and this application should be granted, as to these wells only, to allow their continued operation.

(7) Setting packers in which the injection tubing is installed in this unit more than 100 feet above the uppermost injection perforation or casing shoe will not cause waste, impair correlative rights or endanger public health or the environment so long as the packer in each well is set within the Unitized Formation, as defined in Finding Paragraph (4) of Order No. R-5530-E. Accordingly, this Application should be granted to allow packers to be set within these parameters both as to existing wells that are presently in violation, and as to wells in which a need may subsequently arise to raise the packer-setting depth.

(8) The evidence indicates that injection of CO2 in this unit at a bottomhole pressure not to exceed 3,600 psi will not damage the formation, and thus will not cause waste, impair correlative rights or endanger public health or the environment. However, to facilitate enforcement, the surface injection pressure limit should be set at 2,200 psi. The operator of the unit should be directed to notify the Hobbs District Office of the Division prior to implementing any significant change in the purity of the CO2 being used for injection in this unit.

IT IS THEREFORE ORDERED THAT:

(1) Ordering Paragraph (3) of Order No. R-5530-E is hereby amended to read as follows:

> (3) For all injection wells in the "EOR Project Area", excluding heretofore permitted injection wells where the tubing has been cemented in place, injection shall be accomplished through internally coated tubing installed in a packer set as close as practically possible to the uppermost injection perforations or casing shoe, so long as the packer set point remains within the Unitized Formation; and the casing-tubing annulus shall be filled with an inert fluid, and a gauge or approved leak detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer. Prior to re-setting any packer more than 100 feet above the uppermost injection perforation or casing shoe, the operator shall secure approval of the Division's Hobbs District Office.

(2) The seven heretofore permitted injection wells identified below, which have had their injection tubing cemented in place, are hereby approved for continued use as water or CO2 injection wells provided that each well's mechanical integrity is verified annually by a blanking plug Mechanical Integrity Test and, provided further, that the operator maintains records of monitoring that demonstrate the absence of significant

changes in the relationship between injection pressure and injection flow rate. Such records shall be available for inspection by the Division upon request.

Central Vacuum Unit Well No. 58	API No. 30-025-25724
Central Vacuum Unit Well No. 73	API No. 30-025-25728
Central Vacuum Unit Well No. 71	API No. 30-025-25727
Central Vacuum Unit Well No. 57	API No. 30-025-25732
Central Vacuum Unit Well No. 16	API No. 30-025-25793
Central Vacuum Unit Well No. 6	API No. 30-025-25809
Central Vacuum Unit Well No. 27	API No. 30-025-25815

(3) Ordering Paragraphs (4) and (5) of Order No. R-5530-E are hereby amended to read as follows:

> (4) For any injection wells within the "EOR Project Area" whose current maximum injection pressure (pursuant to orders in effect on the date of issuance of Order No. R-5530-F) for water is less than 1,500 psi, the Applicant is authorized to inject water into each of these wells at the current maximum surface injection pressure, provided however, such pressure may be administratively increased by the Division upon a showing that such increase will not result in fracturing of the injection formation or confining strata, and shall be further authorized to inject CO2 and produced gasses at a maximum surface injection pressure of 750 psi above the current maximum injection pressure for water, provided, however, such CO2 injection shall not occur at a surface injection pressure in excess of 2,200 psi (which is estimated to be the equivalent of 3,600 psi average bottomhole injection pressure).
>
> (5) For those injection wells within the "EOR Project Area" whose current maximum surface injection pressure for water exceeds 1,500 psi (pursuant to orders in effect on the date of issuance of Order No. R-5530-F), Applicant is authorized to inject water into each of these wells at the current maximum surface injection pressure, and shall be further authorized to inject CO2 and produced gasses at a maximum surface injection pressure of 2,200 psi (which is estimated to be the equivalent of 3,600 psi average bottomhole injection pressure). The Division may grant increases in the maximum surface injection pressure authorized by this paragraph by administrative order.

(4) Except as specifically modified hereby, Order Nos. R-5530 through R-5530-E, inclusive, shall continue in effect to the same extent as immediately prior to the issuance of this Order.

(5) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.
Director

R-5530-F
**WAG → 5530-F
2200psi → CO2 & P.
150 → H2O

Current
*WAG → 5530-E
1850psi → CO2 + P.G.
1500psi → H2O

C-108 Review Checklist: Received _____ Add. Request _____ Reply Date _____ Suspended _____ [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: R-5530-E

Well No. 82 Well Name(s): Vacuum Glorieta Unit

API : 30-0 25-31840 Spud Date: 3-10-1993 New or Old: N (UIC Class II Primacy 03/07/1982)
2576FSL

Footages 144FEL Lot ___ or Unit I Sec 36 Tsp 17S Rge 34E County Lea

General Location: ~25 miles S of Hobbs Pool: _____ Pool No.: 62180

BLM 100K Map: Hobbs Operator: Chevron USA Inc OGRID: 4323 Contact: Cindy Herrera-Murillo

COMPLIANCE RULE 5.9: Total Wells: _____ Inactive: _____ Fincl Assur: _____ Compl. Order? _____ IS 5.9 OK? ___ Date: _____

WELL FILE REVIEWED ◯ Current Status: Active

WELL DIAGRAMS: NEW: Proposed ◯ or RE-ENTER: Before Conv. ◯ After Conv. ◯ Logs in Imaging: Y

Planned Rehab Work to Well: _____

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement (Sx) or Cf	Cement Top and Determination Method
Planned __ or Existing __ Surface	11"/8 5/8"	1500		650	Surface/Visual
Planned __ or Existing __ Interm/Prod	7 7/8"/5½"	6334	4998	1350	Surface/Visual
Planned __ or Existing __ Interm/Prod					
Planned __ or Existing __ Prod/Liner					
Planned __ or Existing __ Liner					
Planned __ or Existing __ OH / PERF	4362-4716		Inj Length 354'		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Gr. SA	3942
Confining Unit: Litho. Struc. Por.		SA	
Proposed Inj Interval TOP:			
Proposed Inj Interval BOTTOM:			
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD 6334 PBTD _____
NEW TD _____ NEW PBTD 5903 → 1200' below Perfs
NEW Open Hole ◯ or NEW Perfs ◯
Tubing Size 2 7/8 in. Inter Coated? Y
Proposed Packer Depth 3900 ft → 1000' below approving limit
Min. Packer Depth 426 (100-ft limit)
Proposed Max. Surface Press. _____ psi
Admin. Inj. Press. _____ (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P ___ Noticed? ___ BLM Sec Ord ◯ WIPP ◯ Noticed? ___ Salt/Salado T: 1650 B: 2630 NW: Cliff House fm ___

FRESH WATER: Aquifer Quaternary Max Depth 24 HYDRO AFFIRM STATEMENT By Qualified Person ✓

NMOSE Basin: Lea CAPITAN REEF: thru adj NA No. Wells within 1-Mile Radius? _____ FW Analysis

Disposal Fluid: Formation Source(s) Produced H2O Analysis? _____ On Lease ◯ Operator Only ◯ or Commercial ◯

Disposal Int: Inject Rate (Avg/Max BWPD): 3618/6,000 Protectable Waters? _____ Source: _____ System: Closed or Open

HC Potential: Producing Interval? Y Formerly Producing? _____ Method: Logs/DST/P&A/Other _____ 2-Mile Radius Pool Map ◯

AOR Wells: 1/2-M Radius Map? Y Well List? _____ Total No. Wells Penetrating Interval: _____ Horizontals? _____

Penetrating Wells: No. Active Wells 17 Num Repairs? ___ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 3 Num Repairs? ___ on which well(s)? _____ Diagrams? X

NOTICE: Newspaper Date Aug 15, 2017 Mineral Owner NMSLO Surface Owner NMSLO N. Date _____

RULE 26.7(A): Identified Tracts? Y Affected Persons: Mobil N. Date _____

Order Conditions: Issues: _____

Add Order Cond: _____