DATE IN 7/7/08 | SUSPENSE | ENGINEER W Jones | LOGGED IN 7/8/08 | TYPE WFX PMX 250 | APP NO. PKVR0819029181

ABOVE THIS LINE FOR DIVISION USE ONLY

Conoco Phillips Vacuum ABO UNIT #317

NEW MEXICO OIL CONSERVATION DIVISION

- 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

30-025-03073

Application Acronyms:

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

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

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

Check One Only for [B] or [C]

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

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

[D] Other: Specify _____

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

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner N.A. (COP-operated)

[C] ☑ Application is One Which Requires Published Legal Notice

[D] ☑ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☑ For all of the above, Proof of Notification or Publication is Attached, and/or, w/application package

[F] ☐ Waivers are Attached

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

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

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

Celeste G. Dale	Celeste G. Dale	Regulatory Specialist	07/07/08
Print or Type Name	Signature	Title	Date

Celeste.g.dale@conocophillips.com
e-mail Address

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? _____ Yes _____ No

II. OPERATOR: ConocoPhillips Company

ADDRESS : 3300 N. "A" Street, Bldg. 6 Midland TX 79705

CONTACT PARTY : Celeste G. Dale PHONE : (432)688-6884

III. WELL DATA: Complete the data required on the reverse side of this form for each well processed 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 R-3181

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness. and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

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

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

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

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Celeste G. Dale TITLE: Regulatory Specialist

SIGNATURE: Celeste G. Dale DATE: 06/19/2008

E-MAIL ADDRESS: celeste.g.dale@conocophillips.com

* If the information required under Sections VI, VHI, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal: _____

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

RE: Vacuum Abo Unit #13-17

Section I	ConocoPhillips Company plans to convert the currently temporarily abandoned production well Vacuum Abo Unit #13-17 to water injection for the purpose of secondary recovery
Section II	ATTN: Celeste Dale (432-688-6884) ConocoPhillips Company 3300 N. "A" Street Bldg. 6 Midland, TX 79705
Section III	Well Data Sheet attached
Section IV	This is an expansion of an existing project. Order # R-3181
Section V	Map attached designating ½ mile and 2 mile radius of review area
Section VI	Well tabulation and P&A Schematic attached.
Section VII	1) Average water injection shall be approximately 2,000 barrels of water per day. Maximum daily water injections should not exceed 4,000 barrels of water per day. 2) This will be a closed system. 3) The average injection pressure is expected to be zero. The maximum injection pressure should not exceed 1600 psig. 4) Source of injection fluid will be re-injected produced water. 5) Injection will be into the Abo formation for the purpose of secondary recovery.
Section VIII	This data has been previously submitted on XX/XX/XXXX under NMOCD order XX
Section IX	Proposed stimulation program will be ~6,000 gallons of 15% HCL ferchek acid plus rock salt as a diverter.
Section X	Well logs have been previously submitted.
Section XI	This data has been previously submitted on XX/XX/XXXX under NMOCD order XX
Section XII	ConocoPhillips Company has examined available geologic and engineering data, and finds no evidence of open faults or other hydrologic connection between the injection zone and any underground source of drinking water.
Section XIII	Proof of notification

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement,.and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505 within 15 days.

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: ConocoPhillips Company

WELL NAME & NUMBER: Vacuum Abo Unit #13-17

WELL LOCATION: 890' FSL & 2210' FEL | O | 5 | 18S | 35E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

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

Cemented wtih: 475 sx. *or* _____ ft^3

Top of Cement: Surface Method Determined: Circ

Intermediate Casing

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

Cemented with: 1350 sx. *or* _____ ft^3

Top of Cement: 350' Method Detemined: Temp. Survey

Production Casing

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

Cemented with: 679 sx. *or* _____ ft^3

Top of Cement: 2590' Method Determined: Temp. Survey

Total Depth: 9099'

Injection Interval

8593 feet to ~~9024~~ 8798

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" Lining Material: Internal plastic coated

Type of Packer: 5-1/2" Baker Lok Set nickel plated pkr

Packer Setting Depth: 8550'

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? Abo formation producer

2. Name of the Injected Formation: Abo

3. Name of Field or Pool (if applicable): Vacuum Abo

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

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injected zone in this area: San Andres: 5620' wet at this location.

   Paddock: 6430' wet at this location.

   Drinkard: 7950' wet at this location.

   Wolfcamp: Not pentrated in this well. Anticipated depth approximately 10,000'.

Cc: Ezeanyim, Richard, EMNRD; Warnell, Terry G, EMNRD
Subject: Injection Application from ConocoPhillips: VAU#17 Unit O Sec 5 T18S R35E Lea County

Hello Celeste:
Your application looks like it will be approved and Rule 40 looks OK, but a few questions and requests to ensure the C-108 is complete:

1) The well file mentions some casing problems but nothing is specific about this in the well file or in the application - what is the problem with the casing?
The well failed an MIT on 11/21/07. There was a suspected casing leak shallow in the well. Well passed testing 08/08/08, reported to Maxey Brown , NMOCD, rec'd. verbal appvl.

2) The R-3181, as amended, allows gas or water injection wells for purposes of Pressure Maintenance into the Vacuum Abo Reef Pool within this Vacuum Abo Unit. This is actually a PMX type of application instead of WFX - you can always determine between these by reading the hearing order that permitted the injection project.
(Thank you...)

3) Please have your Geologist pick the top and bottom of the Abo Reef in this well.
Top Abo: 8410' (-4447')
Top Abo Reef: 8642' (-4679)
Base Abo Reef: Not penetrated in this wellbore

4) What is the top and bottom of the permitted injection interval in the Vacuum Abo Unit in the vicinity of this well and is the proposed injection interval within these depths? (You may need to read R-3508)
Uppermost permitted depth: 8558'
Lowermost permited depth: 9020'

5) Please send a "Post Conversion" wellbore diagram - and let me know if ConocoPhillips intends to re-perforate the squeezed perfs down to 9024 feet?

The proposed injection interval is from 8593' to 8798'. See wellbore diagram (attached) .

6) Please ask your pumpers or foreman to get a new sample of fresh water as close to this well as possible and have it analyzed and label it and send the analysis in.
Document attached. EVGSAU #3202-S07, S. 32 T17S R35E

7) Who owns the rights (operator, lessee, or mineral owners) to the minerals in the Abo Reef in Unit G of Section 8 the portion of which seems to be outside the Vacuum Abo Unit but within the 1/2 mile AOR. If separate from ConocoPhillips, please notify this affected party or parties.
Map attached, Chevron & Mineral Technologies. Notice of application will be sent to both parties.

Please gather all requested info and send it all in together as one package.

Regards,

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

Water Analysis Report

8/15/2008

Address:

Customer: Conoco Phillips
Attention: Tracy Nixon
CC:

Lease: EVGSAU
Formation:
Salesman: Robert Halsell

Target Name: EVGSAU 3202-S07 **Sample Point:** EVGSAU 3202-S07

Sample Date: 08/07/2008 **Test Date:** 08/15/2008

Water Analysis(mg/L)

Calcium	561
Magnesium	389
Barium	
Strontium	
Sodium(calc.)	1442
Bicarbonate Alkalinity	159
Sulfate	350
Chloride	4000
Resistivity	0.9274

Appended Data(mg/L)

CO2	10
H2S	34
Iron	1
Oxygen	

Physical Properties

Ionic Strength(calc.	0.16
pH(calc.)	7.07
Temperature(°F)	90
Pressure(psia)	50
Density	8.37

Additional Data

Specific Gravity	1.00
Total Dissolved Solids(Mg/L)	6902
Total Hardness(CaCO3 Eq Mg/	2997

Dew Point	
Lead	
Zinc	

Calcite Calculation Information

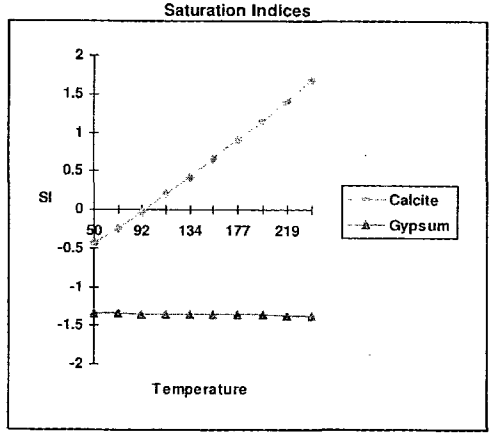
Calculation Method	Value
CO2 in Brine(mg/L)	10

Remarks:

SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-0.05	
Gypsum (Calcium Sulfate)	-1.35	
Hemihydrate (Calcium Sulfate)	-1.18	
Anhydrite (Calcium Sulfate)	-1.60	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

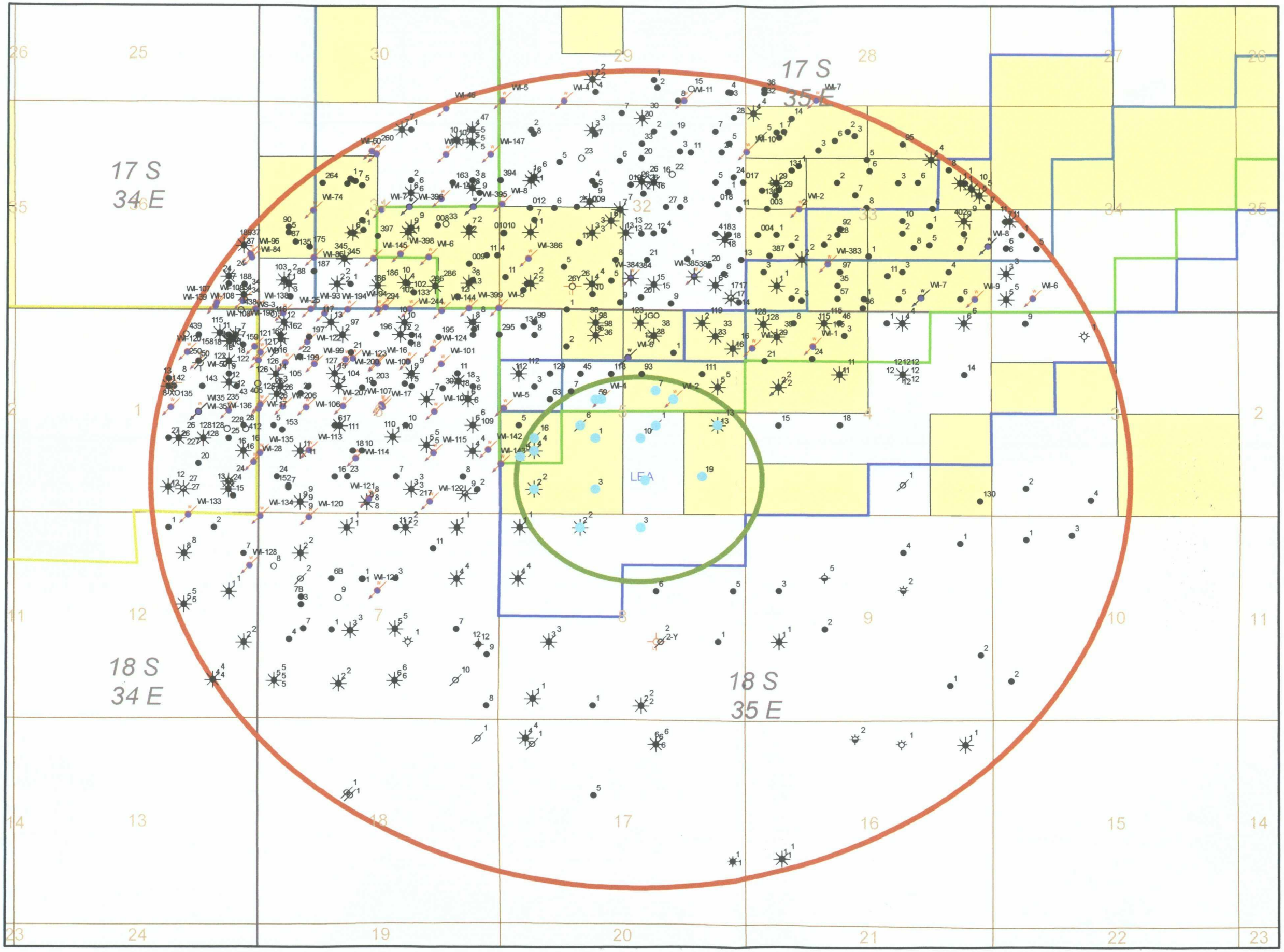
Saturation Indices



Saturation Index Data Points

	50	71	92	113	134	156	177	198	219	240
Calcite	-0.44	-0.24	-0.03	0.20	0.42	0.66	0.90	1.15	1.41	1.68
Gypsum	-1.34	-1.34	-1.35	-1.35	-1.35	-1.35	-1.36	-1.36	-1.37	-1.37

Lab Tech.:



Legend

- nme_abo_well13_17_r2miles
- nme_abo_well13_17_rhalfmile
- **Unit_outlns_Vaccum**
- **Unit_Name**
  - STVU
  - ABO
  - EVGU
  - NVABOWU
  - VGEU
  - VGSAU
  - WVU
- **vacuum_wells_2miles**
- **CURRENT_ST**
  - CO2INJ
  - D&A
  - D&A-G
  - D&A-O
  - D&A-OG
  - D&AW
  - D&AWO
  - D&AWOG
  - GAS
  - INJ
  - J&A
  - LOC
  - OIL
  - OIL-WO
  - SERVCE
  - START
  - W-INJ
  - WI-O

N
W E
S

ConocoPhillips

Mid America Business Unit

Lea County, New Mexico

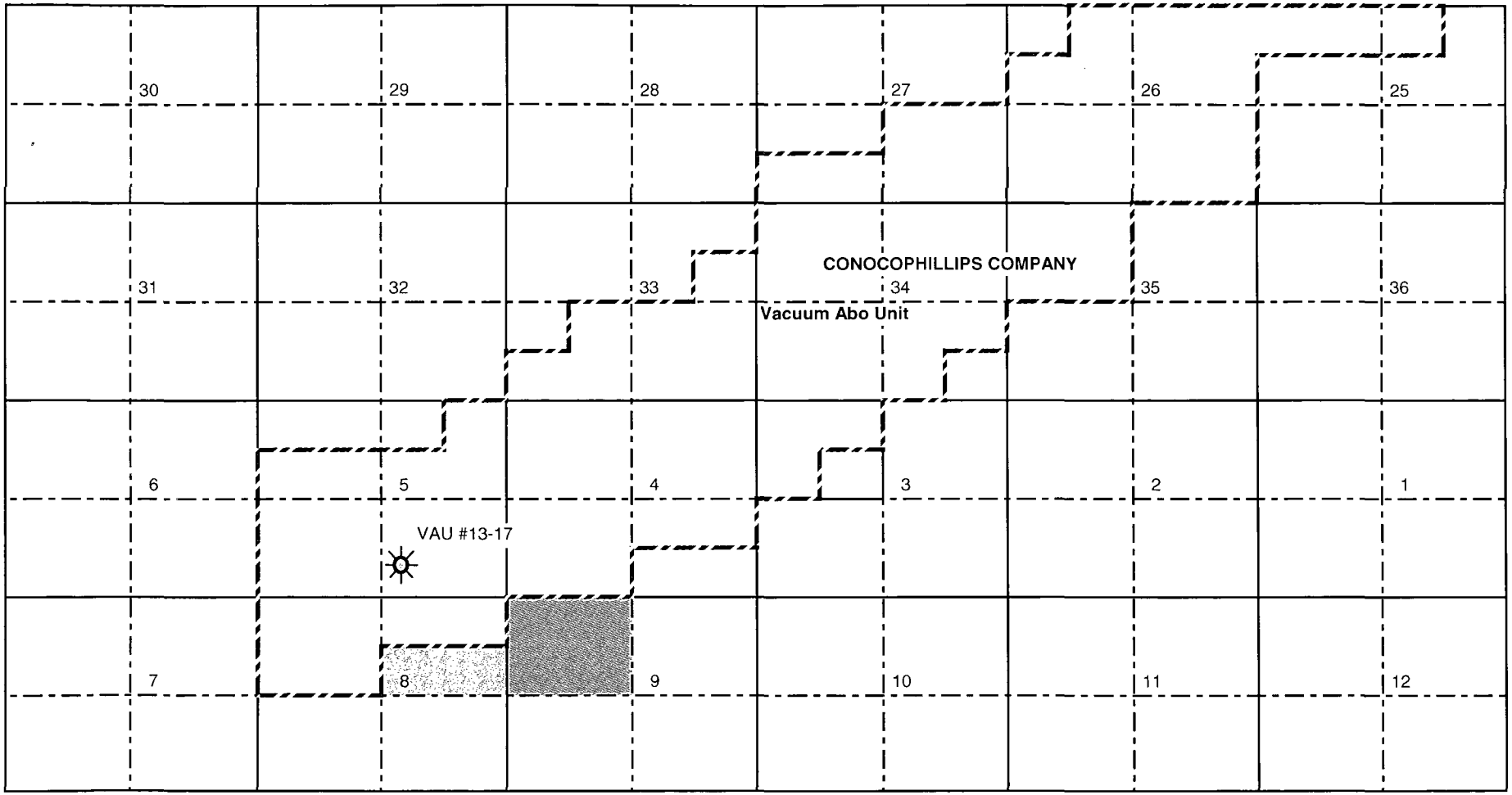
WELLS W/ 2MILES VACUUM ABO 13-17

Author:	Aaron Fuhr	Date:	03/25/08
Compiled by:	KTA	Scale:	1 inch = 36000 feet
Project File:			

\\conoco\ho_tce\pl\48esri\per\working\kta_wells_2miles_around_3002503073.mxd

API Number	Lease	Well #	Well Type	Status	Hole Size	Casing Size	Set at	Sacks Cement	Cement Top	Method Determined	Field	Producing Formation	Operator	County	Surface Township	Surface Range	Section	Unit	Surface Lat	Surface Long	Surface Footage N/S	Surface Footage E/W	True Vertical Depth	Spud	Completion	P&A Date
30-025-03073	Vacuum Abo Unit	13-17	Oil	Inactive	17-1/2"	13-3/8"	342'	475	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	O	32.77196	-103.4778	890 FSL	2210 FEL	9100'	8/5/1961	9/19/1961	
					11"	8-5/8"	3251'	1350	350'	temperature																
					7-7/8"	5-1/2"	9099'	679	2590'	temperature																
30-025-03064	Vacuum Abo Unit	14-02	Oil	Inactive	17"	13-3/8"	300'	300	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	M	32.77131	-103.48557	660 FSL	660 FWL	9062'	7/18/1961	8/22/1961	
					11"	8-5/8"	3451'	200	surface	circulation																
					7-7/8"	4-1/2"	9062'	778	2605	calculation																
30-025-03065	Vacuum Abo Unit	14-03	Oil	P&A	17"	13-3/8"	313'	390	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	N	32.77132	-103.48128	660 FSL	1980 FWL	9107'	8/16/1961	9/17/1961	9/19/2005
					11"	8-5/8"	3233'	250	1670'	calculation																
					7-7/8"	4-1/2"	9107'	450	5150'	bond log																
30-025-03074	Vacuum Abo Unit	13-19	Inj	P&A	17"	13-3/8"	313'	375	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	P	32.77224	-103.47383	990 FSL	990 FEL	9100'	9/15/1961	10/21/1961	8/21/2003
					11"	8-5/8"	3310'	1200	420'	temperature																
					7-7/8"	5-1/2"	9093'	679	3170'	temperature																
30-025-31903	Vacuum Abo Unit	14-05	Oil	Inactive	17-1/2"	13-3/8"	1585'	1500	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	L	32.77355	-103.48632	1475 FSL	430 FWL	9100'	4/4/1993	8/5/1993	
					11"	8-5/8"	5200'	1950	468'	temperature																
					7-7/8"	5-1/2"	9100'	1953	5420'	temperature																
30-025-03066	Vacuum Abo Unit	14-04	Oil	Inactive	17"	13-3/8"	1640'	1500	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	L	32.77403	-103.48557	1650 FSL	660 FWL	8912'	9/13/1961	10/15/1961	
					11"	8-5/8"	5100'	2950	surface	circulation																
					7-7/8"	5-1/2"	8900'	1100	surface	circulation																
30-025-03063	Vacuum Abo Unit	14-01	Oil	Inactive	17"	13-3/8"	315'	290	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	K	32.77498	-103.48128	1980 FSL	1980 FWL	9006'	6/18/1961	7/21/1961	
					11"	8-5/8"	3132'	200	No record																	
					7-7/8"	4-1/2"	9006'	690	4100'	Cement Bond Log																
30-025-03070	Vacuum Abo Unit	13-10	Oil	Inactive	17"	13-3/8"	297'	350	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	J	32.77495	-103.47813	1980 FSL	2310 FEL	8956'	4/19/1961	8/15/1961	
					11"	8-5/8"	3250'	1300	surface	circulation																
					7-7/8"	5-1/2"	8956'	640	3250'	temperature																
30-025-03071	Vacuum Abo Unit	13-13	Oil	Producing	16"	13-3/8"	326'	375	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	I	32.77587	-103.47277	2310 FSL	660 FEL	9100'	5/21/1961	6/23/1961	
					11"	8-5/8"	3227'	1200	160'	Calculation																
					7-7/8"	5-1/2"	9099'	679	3200'	temperature																
30-025-03061	Vacuum Abo Unit	06-59	Oil	Producing	17-1/2"	13-3/8"	331'	350	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	F	32.77768	-103.48128	2310 FNL	1980 FWL	8982'	7/29/1961	9/16/1961	
					11"	8-5/8"	3250'	400	2000'	temperature																
					7-7/8"	5-1/2"	8982'	545	3600'	temperature																
30-025-26931	East Vacuum Grayburg San Andres Unit	0524-004	Inj	Water Inj	11"	8-5/8"	365'	275	surface	circulation	Vacuum	San Andres	ConocoPhillips	Lea	18S	35E	5	F	32.77771	-103.48089	2300 FNL	2100 FWL	4800'	10/4/1980	310/1981	
					7-7/8"	5-1/2"	4800'	1300	surface	circulation																
30-025-26932	East Vacuum Grayburg San Andres Unit	0546-002	Inj	Water Inj	12-1/4"	8-5/8"	361'	400	surface	circulation	Vacuum	San Andres	ConocoPhillips	Lea	18S	35E	5	G	32.77771	-103.47583	2300 FNL	1600 FEL	4800'	10/1/1980	7/10/1981	
					7-7/8"	5-1/2"	4800'	1300	surface	circulation																
30-025-03069	Vacuum Abo Unit	13-07	Inj	P&A	16"	13-3/8"	297'	350	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	5	G	32.77831	-103.47707	2080 FNL	1980 FEL	8975'	3/14/1961	4/24/1961	3/12/2002
					11"	8-5/8"	3233'	1200	surface	circulation																
					7-7/8"	5-1/2"	8971'	529	3212'	temperature																
30-025-03109	Vacuum Abo Unit	15-02	Oil	P&A	17-1/4"	13-3/8"	314'	310	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	8	C	32.7686	-103.48236	330 FNL	1650 FWL	8957'	1/21/1962	2/25/1962	10/19/2004
					11"	8-5/8"	3275'	1100	surface	circulation																
					7-7/8"	5-1/2"	8969'	775	2860'	temperature																
30-025-03110	Vacuum Abo Unit	15-03	Inj	Water Inj	17-1/4"	13-3/8"	304'	320	surface	circulation	Vacuum	Abo	ConocoPhillips	Lea	18S	35E	8	B	32.7686	-103.47811	330 FNL	2310 FEL	9048'	3/5/1962	5/3/1962	
					11"	8-5/8"	3274'	1355	surface	circulation																
					7-7/8"	5-1/2"	9047'	810	3180'	temperature																
30-025-03056	Santa Fe	16	Dry hole	P&A	13-3/4"	9-5/8"	1548'	875	surface	circulation	Vacuum	Yates	ConocoPhillips	Lea	18S	35E	5	L	32.77494	-103.48557	1980 FSL	660 FWL	5030'	11/15/1938	4/24/1939	5/17/1939
					8-5/8"	7"	4174'	400	surface	calculation																
30-025-21899	State VAA	6	Dry hole	P&A	11"	8-5/8"	337'	275	surface	circulation	Vacuum	Grayburg San Andres	Phillips Petroleum Co.	Lea	18S	35E	5	K	32.77585	-103.48235	2310 FSL	1650 FWL	4860'	11/8/1966	12/5/1966	11/20/1966
					7-7/8"	None		None	Abandoned																	
30-025-03068	State 35	1	Dry hole	P&A	11"	8-5/8"	427'	285	surface	circulation	Vacuum	Grayburg San Andres	Standard Oil of Texas	Lea	18S	35E	5	J	32.77586	-103.47706	2310 FSL	1980 FEL	4603'	8/25/1959	9/10/1959	1/16/1960
					7-7/8"	5-1/2"	4603'	150	3700'	calculation																

VACUUM ABO UNIT



Chevron USA Inc.
11111 S. Wilcrest, N-1111
Houston, TX 77099
Attn: Davis Phan

Mineral Technologies
P.O. Box 5823
Midland, TX 79704
Attn: Land Department

Vacuum Abo Unit Boundary

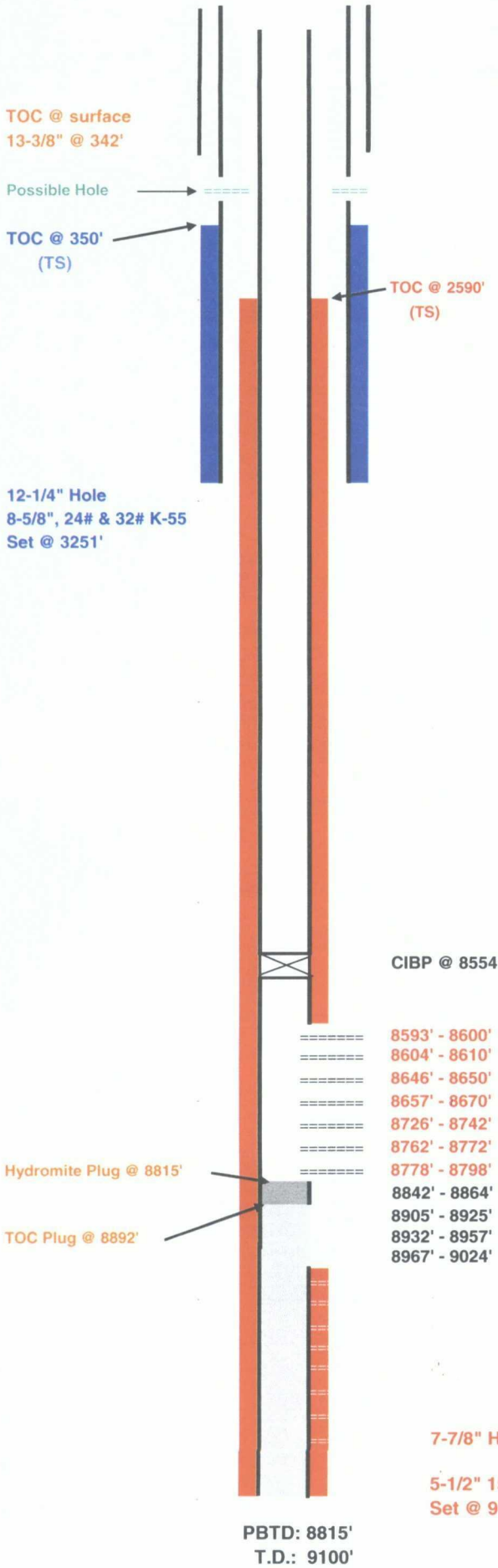
Well Location

Offset Operators - Chevron

Offset Operator - Mineral Technologies

CONOCOPHILLIPS
WELLBORE DIAGRAM
VAU #13 - 17 (TA)

CURRENTLY



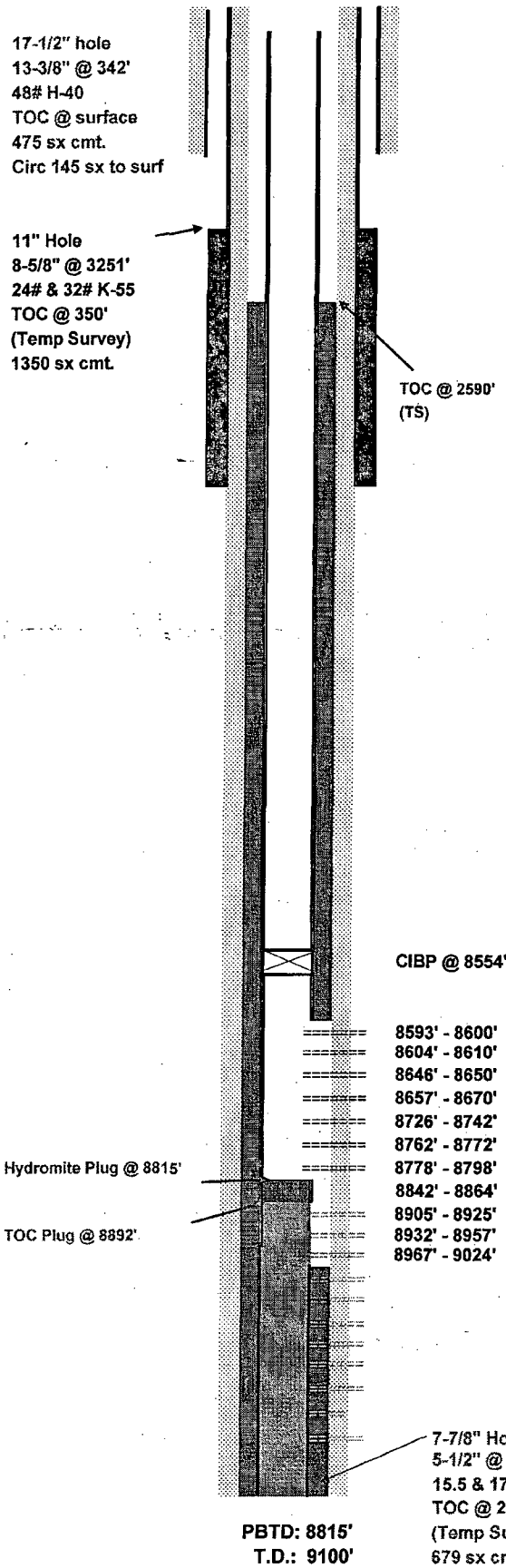
Date:	7-Aug-08
Lease and Well No.:	VAU #13-17 (TA)
Location:	890' FSL & 2210' FEL
	Sec. 5, T18S-R35E
County/State:	Lea County, New Mexico
Field:	Vacuum
RKB:	3964'
GL:	3949'
Producing Formation:	ABO
Spud Date:	8/5/1961
Completion Date:	
API Number:	30-025-03073
Status:	TA'd

Stimulation History

DATE	INTERVAL	TYPE	Gals	Lbs Sand	Max Press	ISIP
3/23/62	8905-9024	XM-38	6000		4700	2900
1/21/68	8726-8864	15% HCL	1000	-	2300	1500
1/24/68	8726-8864	28% HCL	3000		3100	800
1/24/76	8726-8798	28% HCL	4500		2000	0
8/15/90	8726-8798	15% HCL	1920		1500	900
8/18/90	8593-8670	15% HCL	4400		4400	3700
8/29/91	8593-8798	15% HCL	10000		3780	1990
8/29/91	8593-8798	in 3 stages	w/4400 CO2			

8593' - 8600'	2 spf	14 HOLES		
8604' - 8610'	2 spf	12 HOLES		
8646' - 8650'	2 spf	8 HOLES		
8657' - 8670'	2 spf	26 HOLES	(Injection interval)	
8726' - 8742'	2 spf	32 HOLES		
8762' - 8772'	2 spf	20 HOLES		
8778' - 8798'	2 spf	40 HOLES		
8842' - 8864'	2 spf	44 HOLES	Plugged w/Hydromite (5/11/73)	
8905' - 8925'	2 spf	40 HOLES	Cmt Sqz'd (1/17/68)	
8932' - 8957'	2 spf	50 HOLES	Cmt Sqz'd (1/17/68)	
8967' - 9024'	2 spf	114 HOLES	Cmt Sqz'd (1/17/68)	

CONOCOPHILLIPS
WELLBORE DIAGRAM
VAU #13 - 17 (TA)



Date:	27-Feb-08
Lease and Well No.:	VAU #13-17 (TA)
Location:	890' FSL & 2210' FEL
	Sec. 5, T18S-R35E
County/State:	Lea County, New Mexico
Field:	Vacuum
RKB:	3964'
GL:	3949'
Producing Formation:	ABO
Spud Date:	8/5/1961
Completion Date:	9/19/1961
API Number:	30-025-03073
Status:	TA'd

Stimulation History

DATE	INTERVAL	TYPE	Gals	Lbs Sand	Max Press	ISIP
3/23/62	8905-9024	XM-38	6000		4700	2900
1/21/68	8726-8864	15% HCL	1000	-	2300	1500
1/24/68	8726-8864	28% HCL	3000		3100	800
1/24/76	8726-8798	28% HCL	4500		2000	0
8/15/90	8726-8798	15% HCL	1920		1500	900
8/18/90	8593-8670	15% HCL	4400		4400	3700
8/29/91	8593-8798	15% HCL	10000		3780	1990
8/29/91	8593-8798	In 3 stages	w/4400 CO2			

Proposed Injection Equipment

Tubing	2-7/8"	J-55	Tk-99	Internal Plastic Coated	8550'
Packer	5-1/2"	15.5#	Baker Lok Set nickel-plated		8550'

8593' - 8600'	2 spf	14 HOLES		
8604' - 8610'	2 spf	12 HOLES		
8646' - 8650'	2 spf	8 HOLES		
8657' - 8670'	2 spf	26 HOLES		
8726' - 8742'	2 spf	32 HOLES		
8762' - 8772'	2 spf	20 HOLES		
8778' - 8798'	2 spf	40 HOLES		
8842' - 8864'	2 spf	44 HOLES	Plugged w/Hydromite (5/11/73) - 750 pounds	
8905' - 8925'	2 spf	40 HOLES	Cmt Sqz'd (1/17/68) - 125 sx cement	
8932' - 8957'	2 spf	50 HOLES	Cmt Sqz'd (1/17/68) - 125 sx cement	
8967' - 9024'	2 spf	114 HOLES	Cmt Sqz'd (1/17/68) - 125 sx cement	

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

PUBLISHER

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1

weeks.

Beginning with the issue dated

June 13 2008

and ending with the issue dated

June 13 2008

Kathi Bearden

PUBLISHER

Sworn and subscribed to before me this 13th day of June 2008

Notary Public.

My Commission expires
February 07, 2009
(Seal)

OFFICIAL SEAL
DORA MONTZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: _____

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 publication has been made.

LEGAL NOTICE
June 13, 2008

ConocoPhillips Company, 3300 North "A" Street, Bldg 6, Midland, Texas 79705, has filed NMOCD Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division, seeking administrative approval for the purpose of injecting water for secondary recovery. The well is the Vacuum Abo Unit #13-17, located 890' FSL & 2210' FEL, Section 5, T18S, R35E, Lea County, New Mexico.

The volumes will be injected into the Abo formation at a depth of 8593'-9024', with a maximum injection pressure of 1600 psig and a maximum rate of 4000 barrels water per day.

All interested parties opposing the action must file objections or requests for hearing with the Oil Conservation Division, 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained be contracting Celeste Dale, Regulatory Specialist at 3300 N. "A" St. Bldg 6, Midland, Texas 79705, or (432) 688-6884.
#24123

01102332000 67551427

CONOCOPHILLIPS, CO.
3300 N. "A" STREET BUILDING 6
MIDLAND, TX 79705

Jones, William V., EMNRD

From: Dale, Celeste G [Celeste.G.Dale@conocophillips.com]
Sent: Wednesday, August 27, 2008 6:38 AM
To: Jones, William V., EMNRD
Subject: Certification Document Attached

Attachments: 20080827070809_001.PDF

release 9/11/08

20080827070809_0
01.PDF (38 KB)...

Will,
I've mailed the original signed document (attached) to you. If you should need anything else to process this injection application, please phone/email.

Many Thanks!

Celeste

Celeste G. Dale
Regulatory Specialist
ConocoPhillips Company
Mid-Continent Business Unit,
3300 N. "A" St., Bldg. 6 #133
Midland, TX 79705-5490
432-688-6884
Fax 432-688-6019

VAK #13-17

-----Original Message-----
From: Dale, Celeste G
Sent: Wednesday, August 27, 2008 7:11 AM
To: Dale, Celeste G
Subject:

GlobalScan document sent from cgdale.

PROOF OF NOTICE
Vacuum Abo Unit #13-17, LEA CO., NM

RECEIVED
2008 AUG 29 PM 12 37

I hereby certify that a copy of this application was sent by certified mail to the below listed parties on August 26, 2008.

Signed: _____
Name: Celeste G. Dale
Title: Regulatory Specialist
Date: 08/26/2008

LEASEHOLD OPERATORS

ConocoPhillips Company
3300 N. "A" St., Bldg. 6
Midland, TX 79705-5490
Attn: Regulatory
432-688-6884

Chevron, USA Inc. USPS Cert. Mail Article #7002 2410 0001 5940 5019
11111 S. Wilcrest, N-1111
Houston, TX 77099
Attn: Davis Phan
281-561-3507

Mineral Technologies USPS Cert. Mail Article #7002 2410 0001 5940 5026
P. O. Box 5823
Midland, TX 79704
Attn: Land Dept.
432-685-3520

SURFACE OWNER

State of New Mexico USPS Cert. Mail Article #7002 2410 0001 59470 5033
Commissioner of Public Lands
P. O. Box 1148
Santa Fe, NM 87501-1148
505-827-5760

State of New Mexico USPS Cert. Mail Article #7002 2410 0001 5940 5040
Oil Conservation Division
1625 N. French Drive
Hobbs, NM 88240
575-393-6161

Notification of Offset Operators:

ConocoPhillips is the leasehold Operator of the Vacuum Abo Unit and the VAU Well #13-17 ½ mile radius falls within the boundaries of that unit. Therefore no notification to offset operators is required.

Notification to Surface Owner:

State of New Mexico
Commissioner of Public Lands
P.O. Box 1148
Santa Fe, NM 87501-1148

A copy of this application has been sent to the above listed party on this the 19th day of June, 2008.

Celeste G. Dale
Regulatory Specialist


17 S
34 E
17 S
35 E
18 S
34 E
18 S
35 E
LEA
Legend
W
E
ConocoPhillips
Mid America Business Unit
Lea County, New Mexico
WELLS W/ 2MILES VACUUM ABO 13-17
\\conoco\ho_toe\p\148esri\per\working\kta_wells_2miles_around_3002503073.mxd

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Wednesday, August 06, 2008 4:14 PM
To: 'Dale, Celeste G'
Cc: Ezeanyim, Richard, EMNRD; Warnell, Terry G, EMNRD
Subject: RE: Injection Application from ConocoPhillips: VAU#17 Unit O Sec 5 T18S R35E Lea County

For question 4 - read R-3180 instead of R-3508 - sorry about that.

Also, let me know which Abo "Pool" this well is in?

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

From: Jones, William V., EMNRD
Sent: Wednesday, August 06, 2008 4:09 PM
To: 'Dale, Celeste G'
Cc: Ezeanyim, Richard, EMNRD; Warnell, Terry G, EMNRD
Subject: Injection Application from ConocoPhillips: VAU#17 Unit O Sec 5 T18S R35E Lea County

Hello Celeste:
Your application looks like it will be approved and Rule 40 looks OK, but a few questions and requests to ensure the C-108 is complete:

1) The well file mentions some casing problems but nothing is specific about this in the well file or in the application - what is the problem with the casing?

2) The R-3181, as amended, allows gas or water injection wells for purposes of Pressure Maintenance into the Vacuum Abo Reef Pool within this Vacuum Abo Unit. This is actually a PMX type of application instead of WFX - you can always determine between these by reading the hearing order that permitted the injection project.

3) Please have your Geologist pick the top and bottom of the Abo Reef in this well.

4) What is the top and bottom of the permitted injection interval in the Vacuum Abo Unit in the vicinity of this well and is the proposed injection interval within these depths? (You may need to read R-3508)

5) Please send a "Post Conversion" wellbore diagram - and let me know if ConocoPhillips intends to re-perforate the squeezed perfs down to 9024 feet?

6) Please ask your pumpers or foreman to get a new sample of fresh water as close to this well as possible and have it analyzed and label it and send the analysis in.

7) Who owns the rights (operator, lessee, or mineral owners) to the minerals in the Abo Reef in Unit G of Section 8 the portion of which seems to be outside the Vacuum Abo Unit but within the 1/2 mile AOR. If separate from ConocoPhillips, please notify this affected party or parties.

Please gather all requested info and send it all in together as one package.

Regards,

8/6/2008

Jones, William V., EMNRD

From: Dale, Celeste G [Celeste.G.Dale@conocophillips.com]
Sent: Friday, August 22, 2008 11:21 AM
To: Jones, William V., EMNRD
Subject: RE: Injection Application from ConocoPhillips: VAU#17 Unit O Sec 5 T18S R35E Lea County
Importance: High
Attachments: VAU Map (2).xls; VAU #13-17TAWBS (2).XLS; EVGSAU #3202-S07 Wtr Analysis.pdf

Will,
The following attachments, per your request. Answers are in red next to your questions, below. I will mail the Notices to Chevron and Mineral Technologies.

Many Thanks!

Celeste

Celeste G. Dale
Regulatory Specialist
ConocoPhillips Company
Mid-Continent Business Unit,
3300 N. "A" St., Bldg. 6 #133
Midland, TX 79705-5490
432-688-6884
Fax 432-688-6019

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Wednesday, August 06, 2008 5:14 PM
To: Dale, Celeste G
Cc: Ezeanyim, Richard, EMNRD; Warnell, Terry G, EMNRD
Subject: RE: Injection Application from ConocoPhillips: VAU#17 Unit O Sec 5 T18S R35E Lea County

For question 4 - read R-3180 instead of R-3508 - sorry about that.

Also, let me know which Abo "Pool" this well is in?
Vacuum; Abo Reef (#61780)

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

From: Jones, William V., EMNRD
Sent: Wednesday, August 06, 2008 4:09 PM
To: 'Dale, Celeste G'

Injection Permit Checklist (7/8/08)

Case ____ R- ____ SWD ____ WFX PMX 250 IPI ____ Permit Date 8/17/08 UIC Qtr July ay Sept

Wells 1 Well Name: Vacuum ABO UNIT #17

API Num: (30-) 025-03073 Spud Date: 8/5/61 New/Old: OLD (UIC primacy March 7, 1982)

Footages 890 FSL/2210 FEL Unit O Sec 5 Tsp 18S Rge 35E County Lea

Operator: ConocoPhillips Company Contact Celeste G. Dale

OGRID: 217817 RULE 40 Compliance (Wells) 2/44/08 (Finan Assur) OK

Operator Address 3300 N. "A" St, Bldg 6, Midland, TX 79705

Current Status of Well: TA'ED

Planned Work to Well: Repair CSG ? & Convert Planned Tubing Size/Depth: 2 7/8 @ 8550

	Sizes Hole.......Pipe		Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing ____ Surface	17 1/2	13 3/8	342	475	CIRC
Existing ____ Intermediate	11	8 5/8	3251	1350	350 TS
Existing ____ Long String	7 7/8	5 1/2	9099	679	2590 TS

DV Tool ____ Liner — Open Hole ____ Total Depth 9099 PBTD ____

Well File Reviewed ✓

Diagrams: Before Conversion ✓ After Conversion ? Elogs in Imaging File: ✓

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)			
Above (Name and Top)	7950	DRINKARD	wet
Injection...... Interval TOP:	8593	ABO	
Injection........... Interval BOTTOM:	~~9024~~ 8798	ABO Reef	
Below (Name and Top)	10,000	WC	—

R-3181

abo Reef TOP = ? 8642

1719 PSI Max. WHIP

NO Open Hole (Y/N)

NO Deviated Hole?

Sensitive Areas: Capitan Reef — Cliff House — Salt Depths ??

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

Fresh Water: Depths: ? Wells(Y/N) ? Analysis Included (Y/N): ____ Affirmative Statement ✓

Salt Water: Injection Water Types: Same ← Analysis? →

Injection Interval.....Water Analysis: — Hydrocarbon Potential See Rec

Notice: Newspaper(Y/N) ✓ Surface Owner SLO Mineral Owner(s) ____

RULE 701B(2) Affected Parties: CO Phillips (only)

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

Active Wells 8 Num Repairs 0 Producing in Injection Interval in AOR Yes

..P&A Wells 4 Num Repairs 0 All Wellbore Diagrams Included? NO

Questions to be Answered:

Water INJ — not Gas inj

VAR of pool

8593/2 ... 17186

Required Work on This Well: ____ Request Sent ____ Reply: ____

AOR Repairs Needed: ____ Request Sent ____ Reply: ____

____ Request Sent ____ Reply: ____