# KELLAHIN & KELLAHIN Attorney at Law

#### W. Thomas Kellahin

Recognized Specialist in the Area of Natural Resources-oil and gas law-New Mexico Board of Legal Specialization P.O. Box 2265 Santa Fe, New Mexico 87504 117 North Guadalupe Santa Fe, New Mexico 87501

Telephone 505-982-4285 Facsimile 505-982-2047 kellahin@earthlink.net

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May 6, 2005

#### HAND DELIVERED

Mr. Mark E. Fesmire, Director Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, New Mexico 87505

Case 13503

Re: East Blinebry-Drinkard Unit Waterflood Project Application of Apache Corporation for approval of a waterflood project and qualification of the Project Area for the Recovered Oil Tax Rate pursuant to the Enhanced Oil Recovery Act Lea County, New Mexico

Dear Mr. Fesmire:

On behalf of Apache Corporation, find enclosed our referenced application which we request be set for hearing on the Examiner's docket now scheduled for June 2, 2005. Also enclosed is our proposed advertisement of this case for the NMOCD docket.

Verv Thomas Kellahin

cc: Apache Corporation Attn: Mario Moreno

### ADVERTISEMENT FOR JUNE 2, 2005 DOCKET

From an upper limit being 75 feet above the stratigraphic Blinebry marker to a lower limit at the top of the Abo formation as seen on the type log from the Continental Lockhart B-11 #17 well located 1980 feet FNL and 1980 feet FEL, Section 11, T21S, R37E and is that interval which is correlative to the interval from 5615 feet to 6795 feet below the surface measured from the derrick floor as shown on this type log. The Blinebry marker has been defined by the NMOCD at a depth of 5457 feet (elevation 3380, sub-sea datum 2077) in Exxon State S#30 well located in the SW/4NW/4 of Section 2, T22S, R37E, Lea County, New Mexico.

Through 17 injection wells located in the following described area:

Township 21 South, Range 37East, NMPM

Section 1:	Lots 11 thru 15, SW/4 and W/2SE/4
Section 11:	E/2 and $NW/4$
Section 12:	W/2NE/4, NW/4, W/2SE/4, SW/4
Section 13:	W/2, W/2NE/4 and NW/4SE/4
Section 14:	NE/4 and E/2SE/4

Applicant also requests that the Division, in accordance with Division Rule 701 and pursuant to the New Mexico "Enhanced Oil Recovery Act," approve this project for the recovered oil tax rate for enhanced oil recovery. Applicant requests that the Division establish procedures for the administrative approval of additional injection wells within the unit area without the necessity of further hearings and the adoption of any provisions necessary for such other matters as may be appropriate for the waterflood operations. This Unit is located approximately 4 miles Northeast of Eunice, New Mexico

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

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

2005 MAY 6 PM

CASE NO. 13 403

# APPLICATION APACHE CORPORATION FOR APPROVAL OF ITS EAST BLINEBRY-DRINKARD UNIT WATERFLOOD PROJECT AND TO QUALIFY THIS PROJECT FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE "NEW MEXICO ENHANCED OIL RECOVERY ACT," LEA COUNTY, NEW MEXICO

### APPLICATION

APACHE CORPORATION, in accordance with Division Rule 701 and pursuant to the New Mexico "Enhanced Oil Recovery Act," applies to the New Mexico Oil Conservation Division for an order approving its East Blinebry-Drinkard Unit Waterflood Project and for the recovered oil tax rate for enhanced oil recovery and in support states:

(1) Apache Corporation is the operator of wells within the proposed Project Area that consists of 2080.00 total acre of federal and fee lands described as follows:

Township 21 South, Range 37East, NMPM

Section 1:Lots 11 thru 15, SW/4 and W/2SE/4Section 11:E/2 and NW/4Section 12:W/2NE/4, NW/4, W/2SE/4, SW/4Section 13:W/2, W/2NE/4 and NW/4SE/4Section 14:NE/4 and E/2SE/4

See Locator Map attached as Exhibit "A"

(2) Apache Corporation proposes that this waterflood project will be limited to the following interval:

From an upper limit being 75 feet above the stratigraphic Blinebry marker to a lower limit at the top of the Abo formation as seen on the type log from the Continental Lockhart B-11 #17 well located 1980 feet FNL and 1980 feet FEL, Section 11, T21S, R37E and is that interval which is correlative to the interval from 5615 feet to 6795 feet below the surface measured from the derrick floor as shown on this type log. The Blinebry marker has been defined by the NMOCD at a depth of 5457 feet (elevation 3380, sub-sea datum 2077) in Exxon State S#30 well located in the SW/4NW/4 of Section 2, T22S, R37E, Lea County, New Mexico.

(3) The Project Area is within the boundaries of the Blinebry Oil & Gas Pool, the Drinkard Oil Pool and the Tubb Gas Pool.

(4) Apache Corporation proposes to institute a waterflood project by the injection of produced water from the San Andres formation into the Blinebry and Drinkard portions of the Blinebry Oil & Gas Pool and Drinkard Pool pursuant to a plan of operations that is more completely set forth in Division Form C-108, attached as Exhibit "B"

(5) Applicant requests that the Division establish procedures for the administrative approval of additional injection wells within the unit area without the necessity of further hearings and the adoption of any provisions necessary for such other matters as may be appropriate for the waterflood operations.

(6) The following data is provided in accordance with procedure requirements (Order R-9708) for a Certificate of Qualification for an Enhanced Oil Recovery Project to qualify this project for the recovered oil tax rates pursuant to the "Enhanced Oil Recovery Act," NMSA 1978, Sections 7-29A-1 through 7-29A-5, as amended.

a.	Operators name and address:	Apache Corporation
		Two Warren Place, Suite 1500
		6120 South Yale Avenue
		Tulsa, OK 74136

b. Description of the project area:

1. Plat outlining the project area: See Exhibit "A" attached

2. Description of the project area:

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#### Township 21 South, Range 37East, NMPM

Section 1:	Lots 11 thru 15, SW/4 and W/2SE/4
Section 11:	E/2 and NW/4
Section 12:	W/2NE/4, NW/4, W/2SE/4, SW/4
Section 13:	W/2, W/2NE/4 and NW/4SE/4
Section 14:	NE/4 and E/2SE/4

- 3. Total acres: The current project is flooding approximately 2080 acres.
- Name of subject pool and formation: The Blinebry and Drinkard formations of the Blinebry Oil & Gas Pool and the Drinkard Oil Pool without adversely affecting the Tubb Gas Pool.
- c. Status of operations in the project area:
  - 1. if unitized: Awaiting regulatory approvals
  - 2. if an application for approval of a unit plan has been made, the date of filing to be filed on April 6, 2005
  - 3. if not unitized----
- d. Method of recovery to be used:
  - 1. Fluids to be injected.

Apache Corporation will inject water and associated fluids produced from the San Andres formation

- 2. Division Order approving the project: not yet
- If the project has not been approved by the Division, provide the date the application with form C-108 was filed: May 6, 2005
- e. Description of the project:
  - 1. A list of producing wells.

See Exhibit "C" for a list of the 40 producing wells in the project area.

2. A list of injection wells.

See Exhibit "D" for a list of the 17 injection wells in the project area.

- 3. Capital cost of additional facilities: estimated \$ 796,650.
- 4. Estimated total project Costs: estimated \$2,427,162.
- 5. Estimated total value of incremental production to be recovered from the project. Estimated \$5,789,589.
- 6. Anticipated injection commencement date: October 1, 2005
- 7. Type of fluid injected and volume:
  - a. Produced (San Andres formation) water
  - b. Anticipate injection volumes: not to exceed 10,000 bwpd

f. Production data: Provide graphs, charts and other supporting data to show the production history and production forecast of oil, gas, casinghead gas and water from the project area.

See Exhibit "E" attached

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Wherefore, Applicant requests that this application be set for hearing and that after said hearing, the Division enter its order approving this application.

Respectfully submitted. ビー -

W. Thomas Kellahin Kellahin & Kellahin P. O. Box 2265 Santa Fe, NM 87504 Attorney for Applicant

### VERIFICATION

STATE OF OKAHOMA ) ) COUNTY OF TULSA )

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Kevin Mayes, being duly sworn upon his oath, deposes and states: He is a petroleum engineer employed by Apache Corporation, that he is familiar with the matters set forth in this application and the statements therein are true and correct to the best of his knowledge.

Kevin Mayes

SUBSCRIBED AND SWORN to before me this  $\frac{4}{2}$  day of April 2005, by Kevin Mayes

Notary Public



My commission expires: My COmmission #:

es: 2-2-2008 t: 00000222



#### STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

#### **APPLICATION FOR AUTHORIZATION TO INJECT**

I.	PURPOSE: X Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? Yes X No
II.	OPERATOR:Apache Corporation
	ADDRESS:6120 S. Yale Ave., Suite 1500 Tulsa, OK 74136
	CONTACT PARTY: Kevin Mayes PHONE: (918)491-4972
III.	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? Yes Yes No If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol>
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	NAME: Kevin Mayes
	SIGNATURE: DATE: DATE: JZ9/05
*	If the information required under Sections VI III, X, and XI above has been previously submitted, it need Please show the date and circumstances of the earlier submittal:
DISTI	RIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

#### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining material, and setting depth.

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

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

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,

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

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

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



Operators	Well
XTO Energy, Inc. (Formerly Cross Timbers) 810 Houston St. Fort Worth, TX 76102 Attn: Land Dept.	Dauron
McElvain Oil & Gas Properties, Inc 1050 17th Street Suite 1800 Denver, CO 80265 Attn: James Hohenstein	Coogan
Exxon Mobil Corporation P.O. Box 4697 Houston, TX 77210-4697 Attn: Dan Barber	Wantz
Chevron U.S.A. Inc 11111 South Wilcrest Houston, TX 77099 Attn: James Baca	Naomi Keenum
Ralph C. Bruton 3500 Acoma Hobbs, NM 88240	Bunin 3Y

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	OLD WELL NAM	IES	1.00171011		-	CONVERTED	-	
	LEASE NAME	WELL #	LOCATION	FOOTAGE	TYPE	INJ VOLUMES	Tract	Surface Owners
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1		1	1 219 375	2970 ESI 330 EM/		429	10	Bridger MT 59014
		•	1210 37	2370101, 3307442		723		
			-					State of New Mexico
12	FILIOTT-MONTEREY	5	1 21S 37E	660 FSL 810 FWL	OIL	641	3	
-		<sup>-</sup>		+				William F. McNeill, et al
			ĺ					P.O. Box 339
3	LOCKHART B 11	4	11 21S 37E	330 FNL, 1650 FWL	OIL	392	5A	Bridger, MT 59014
								William F. McNeill, et al
							1	P.O. Box 339
4	LOCKHART B 11	6	11 21S 37E	330 FNL, 330 FEL	OIL	250	5A	Bridger, MT 59014
								James Allan & Lucille Bryant
								8204 Indigo Court NE
5	LOCKHART B 11	8	11 21S 37E	660 FSL, 1980 FEL	OIL	870	5A	Albuquerque, NM 87122
								William F. McNeill, et al
								P.O. Box 339
6	LOCKHART B 11	9	11 21S 37E	660 FNL, 330 FEL	OIL	528	5A	Bridger, MT 59014
							-	James Allan & Lucille Bryant
					0.1			8204 Indigo Court NE
$\vdash'$	LOCKHART B 11	11	11 215 3/E	1980 FSL, 330 FEL	OIL	/1/	5A	
		4.4	11 010 275	1650 ENIL 1650 EEL	01	661	EA	P.U. BOX 339 Bridger MT 50014
- 0		:4	112133/E	1050 FINL, 1050 FEL		100	5A	Milliam E. MoNoill, et al.
1								
a	LOCKHART B 11	17	11 215 37E	1980 ENI 1980 EEL	01	202	54	Bridger MT 59014
<u>                                     </u>			11210072	10001 NE, 10001 EE				William F. McNeill, et al
[								P.O. Box 339
10	LOCKHART B 11 E	1	11 21S 37E	2310 FNL. 660 FWL	OIL	817	5B	Bridger, MT 59014
				,,,,,,,,				William F. McNeill, et al
								P.O. Box 339
11	LOCKHART B 12	4	12 21S 37E	1650 FNL, 660 FWL	OIL	60	5C	Bridger, MT 59014
								William F. McNeill, et al
ļ								P.O. Box 339
12	LOCKHART B 12	6	12 21S 37E	330 FNL, 1980 FWL	OIL	486	5C	Bridger, MT 59014
								William F. McNeill, et al
			10.010.075					P.O. Box 339
13	LOCKHART B 12	11	12 215 3/E	1980 FNL, 660 FVVL	OIL-SI	250	50	Bridger, MI 59014
								Eva Mae Tousiant, et al
11		2	13 219 37E		01	346	50	DUX 110 Eurice NM 89231
			10 2 10 J/C	1000 F NE, 000 F VVL		540	30	James Allan & Lucille Royant
								8204 Indiao Court NE
15	LOCKHART B-14 A	3	14 21\$ 37E	660 FNL, 330 FEL	OIL	519	5C	Albuquerque, NM 87122
							· · ·	William F. McNeill, et al
								P.O. Box 339
16	CHESHER	2	12 2 <b>1S</b> 37E	660 FSL, 660 FWL	OIL-TA	436	9	Bridger, MT 59014
								N.B. Bunin Properties
								P.O. Box 65
17	GULF BUNIN	2	13 21S 37E	660 FNL, 1650 FWL	OIL	529	13	Lincoln City, OR 97367
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4223 3460 6589-6665, 5752-5856 3354 3462 65786-7400, 6574-6771 6464 5750-6041	9755 cibp 5700-7412 6582-6708	5299 3/53 6453-6570 O.H.	3480 7/52 8133-8221 2420 5500 5765	3/65 5904-6054 w/ cibb 6550'	3243 112/52 7958-8095	1/61 6985-7330	4/61 6735-6795	6/80 6735-7330 commingled	3891 7/53 8050-8150	19/64 6601-6/4/ 2/00	3791 3/54 5796-5840	1/83 5796-5996	4226 5/54 5780-5881	3522 9/54 5/83-5884 230/4 1/56 5607 5082	3842 11/56 5R04-5984	4118 3/56 5712-5908	3692 5/53 7063-7125	8/56 ret 7020, 6050-6300, 5654-5840	10/82 sqz 5/22-5840	2/84 sqz 5654-5/22 & 6050-6300	2/04 0030-1 2/04	6/55 5680-5890, pb 6250	3066 3/55 5720-6036	3649 4/55 57 18-5934	10/68 5718-5934, 4510-5125 SWD	3621 5055 5718-5954	9/94 P&A	3599 6/55 5800-5964 0/50 5734 5753	3599 8/55 5808-5968	4068 9/55 5726-5842, 5646-5726	surf 6/83 6952-7282	1/85 6170-6454	3258 12/52 6583-6648 O.H.	6/58 5728-5882	5046 11/54 7000-7344	1/58 ret 6902, 5702-5817, 6163-6287 8/96 cityo 5841	curf 71/56 5741-5877	3566 9/56 5716-5831	11/98 3496-3557 BP@5670	2/03 cibp 2915 Tad		0400 1 1 1030 301 0-3900 6/70 57294-5918	2/82 5631-5918		2457 2152 6010-7516 O H	3457 2/52 6919-7516 0.H.	3457 2/52 6919-7516 O.H.	3457 252 6919-7516 0.H
13 3/8 @ 307' CMT W/ 2505X; 9 5/8 @ 2995' CMT W/ 11505X; 7 @ 6750' CMT W/ 4755X 13 3/8 @ 322' CMT W/ 2505X; 9 5/8 @ 2912' CMT W/ 9505X; 7 @ 7450' CMT W/ 7705X	13 3/R @ 368' CMT W/ 300SX - 9 5/R @ 3094' CMT W/ 450SX - 7 @ 7494' CMT W/ 650SX	13 3/8 @ 174' CMT W/ 250SX; 8 5/8 @ 3044' CMT W/ 900SX; 5 1/2 @ 6453' CMT W/ 250SX	13 3/8 @ 275' CMT W/ 2505X; 9 5/8 @ 3149' CMT W/ 1350SX; 7 @ 8268' CMT W/ 900SX		13 3/8 @ 253' CMT WI 225SX; 9 5/8 @ 3149' CMT WI 1000SX; 7 @ 8563' CMT WI 1000SX				10 3/4 @ 255' CMT W/ 250SX; 7 5/8 @ 3160' CMT W/ 1100SX; 5 1/2 @ 8201' CMT W/ 450SX		10 3/4 @ 242' CMT W/ 2505X: 7 5/8 @ 3149' CMT W/ 15705X: 5 1/2 @ 6030' CMT W/ 485SX		10 3/4 @ 263' CMT WI 250SX; 7 5/8 @ 3149' CMT WI 1255SX; 5 1/2 @ 5897' CMT WI 362SX	10 34 @ 247 CMT WI 250SX; 7 5/6 @ 3148 CMT WI 914SX; 5 1/2 @ 5922 CMT WI 520SX 46 314 @ 3507 CMT WI 350SY: 7 5/6 @ 3208 CMT WI 1045SY: 5 1/2 @ 5065 CMT WI 523SY	10 34 @ 275 CMT WI 2005X, 7 3/0 @ 2130 CMT WI 10435X, 5 1/2 @ 3333 CMT WI 4785X	10 34 @ 260' CMT WI 300SX; 7 5/8 @ 3152' CMT WI 900SX; 5 1/2 @ 5964' CMT WI 400SX	13 3/8 @ 238' CMT W/ 250SX; 9 5/8 @ 3150' CMT W/ 1525SX; 7 @ 7576' CMT W/ 730SX				113 218 @ 362' CMT WI 260CY 0 518 @ 3140' CMT WI 1676CY 7 @ 6248' CMT WI 664CY	10 00 6 707 CMI MI 70000 2 00 6 0143 CMI MI 1010000 1 6 0140 CMI MI 00100	1 10 314 @ 253' CMT WI 250SX; 7 518 @3149' CMT WI 1155SX; 5 112 @ 6048' CMT WI 646SX	0 10 3/4 @ 256' CMT W/ 250SX; 7 5/8 @3149' CMT W/ 1045SX; 5 1/2 @ 6049' CMT W/ 520SX		10 314 @ 289' CMT WI 250SX+ 7 518 @3149' CMT WI 1335SX+ 5 1D @ 6049' CMT WI 526SX		10 3/4 @ 249' CMT WI 250SX; 7 5/8 @ 3149' CMT WI 1045SX; 5 1/2 @ 5999' CMT WI 520SX	010 3/4 @ 258' CMT W/ 275SX: 7 5/8 @3149' CMT W/ 1360SX: 5 1/2 @ 5999' CMT W/ 520SX	10 3/4 @ 258' CMT W/ 200SX; 7 5/8 @3099' CMT W/ 1145SX; 5 1/2 @ 5984' CMT W/ 415SX	) 8 5/8 @ 1446' CMT WI 740SX; 5 1/2 @ 7800' CMT WI 2150SX		113 3/8 @ 250' CMT W/ 250SX: 9 5/8 @ 3149' CMT W/ 1500SX: 7 @ 6583' CMT W/ 625SX		10 3/4 @ 268' CMT W/ 250SX; 7 5/8 @ 3149' CMT W/ 1623SX; 5 1/2 @ 7446' CMT W/ 520SX		118 5/8 @ 1411' CMT W/ 725SX 5 112 @ 5800' CMT W/ 2575SX	10 3/4 @ 263' CMT W/ 250SX, 7 5/8 @ 2948' CMT W/ 1060SX, 5 1/2 @ 5874' CMT W/ 500SX			1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 30 10 313 CMI WI 20034, 0 310 10 3243 CMI WI 130034, 3 112 10 3340 CMI WI 10034			CALLER A 220 CMT WI 250SY - 8 518 G 325C CMT WI 2100SY - 5 1/2 G 6910 CMT WI 750SY	513 3/B @ 220' CMT W/ 250SX: 8 5/B @ 3256' CMT W/ 2100SX: 5 1/2 @ 6919' CMT W/ 750SX	5 13 3/8 @ 220' CMT W/ 250SX; 8 5/8 @ 3256' CMT W/ 2100SX; 5 1/2 @ 6919' CMT W/ 750SX	13 3/8 @ 220' CMT W/ 250SX; 8 5/8 @ 3256' CMT W/ 2100SX; 5 1/2 @ 6919' CMT W/ 750SX
1/60 6760 12/61 7450	4/62 7500	3/53 6570	4/52 8266		6/52 8565				4/53 8202		1/54 6030		4/54 5900	8/54 5923 17/55 6000	1/56 6050	2/56 5965	1/53 7575				8/63 675/	000	1/55 6050	3/55 6050		4/55 6050	22	5/55 6000	6/55 6000	7/55 5985	4/83 7800		10/52 6648		11/53 744		5/56 590	8/56 5880			10/66	0000 00001			1764 769	12/51 769	12/51 769	12/51 769
30025065300000	30025065360000	30025065350000	30025065380002		30025065480000				30025065390001		30025065410000		30025065420000	30025065430000	30025065450000	30025065460000	30025065550000				2002506555000	000000000000000000000000000000000000000	30025065570000	30025065580000		30025065590000		3002506560000	30025065610000	30025065620000	30025280110000		30025065730001		30025065740000		30025065750000	30025065760000				nnnzeconeznne			20075065490000	30025065490000	30025065490000	30025065490000
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11 21S 37E 2310 FSL, 1650 FEL 11 21S 37E 1980 FNL, 1980 FWL	11 21S 37E 11980 FNL 1980 FEL	11 21S 37E 2310 FNL, 660 FWL	12 21S 37E 330 FNL, 660 FWL		12 21S 37E 990 FNL, 1650FWL				12 21S 37E 1650 FNL, 660 FWL		12 21S 37E 330 FNL, 1980 FWL		12 21S 37E 330 FNL, 330 FWL	12 215 37E 1980 FNL, 1980 FWL 12 215 37E 1980 ENI 2310 EEI	12 21S 37F 660 FNI 2310 FFI	12 21S 37E 1980 FNL, 660 FWL	13 21S 37E 660 FSL, 660 FWL				13 21S 37E 1980 ENI 660 EWI		13 21S 37E 1980 FNL, 1980 FWL	13 21S 37E 1980 FSL, 1980 FWL		13 21S 37F 660 FS1 1980 FWI		13 21S 37E 1980 FNL, 1980 FEL	13 21S 37E 1980 FSL 1980 FEL	13 21S 37E 1980 FSL, 660 FWL	13 21S 37E 660 FSL, 2100 FWL		14 21S 37E 1980 FNL, 660 FEL		14 21S 37E 660 FSL, 660 FEL		14 21S 37F GED ENI 330 FEI	14 21S 37E 1980 FSL, 330 FEL			10 310 37E 4000 F01 600 FW	17 2 13 31 E 1 300 L 31' 900 L MF			12 212 27E 1080 FS1 1980 FMI	12 21S 37E 1980 FSL 1980 FWL	12 21S 37E 1980 FSL, 1980 FWL	12 21S 37E 1980 FSL, 1980 FWL

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						2/89 6919-7516 O.H.
						4/02 P&A
FSL, 1650 FEL	01	0025065510000	4/55	9150 13 3/8 @ 298' CMT W/ 3005X, 8 5/8 @ 3239' CMT W/ 15005X, 5 1/2 @ 6063' CMT W/ 2205X	5047	7/55 5850-5910
-SL, 660 FWL	01	0025065500000	3/56	5920 13 3/8 @ 314' CMT W/ 300SX; 8 5/8 @ 3248' CMT W/ 1500SX; 5 1/2 @ 5919' CMT W/ 100SX	5457	4/56 5720-5815
FSL, 1980 FWL	OIL 3	0025065540000	3/52	7674 13 3/8 @ 210' CMT W/ 250SX; 8 5/8 @ 3182' CMT W/ 2200SX; 5 1/2 @ 6950' CMT W/ 50SX	5300	5/52 6950-7510
						2/55 ctbp 6/ 50, sq2 2005x thru holes at 6150 (temp toc 5300), 5750-5870
						8/73 sqz 5750-5870 &c/o, cibp 6875
						perf 6575-6837
						2/00 542 CSU 196A 3200 401 3
SL,2310 FEL	OIL 3	0025065530000	3/56	5938 13 3/8 @ 314' CMT W/ 300SX; 8 5/8 @ 3249' CMT W/ 1250SX; 5 1/2 @ 5937' CMT W/ 100SX	2821	4/56 5759-5882
						10/71 sq (5360-5380)w/ 550 sx
-NL, 1980 FEL	OIL 3	0025065830002	12/53	6631 13 3/B @ 221' CMT W/ 250SX; 8 5/B @ 3000' CMT W/ 2040SX; 5 1/2 @ 6490' CMT W/ 350SX	4874	3/54 6490-6631
						3/57 cibp 5900, 5748-5794
0 FNL, 1650 FEL	· IIO	3002506584000	10/57	5850 13 3/8 @ 287' CMT W/ 300SX; 8 5/8 @ 2997' CMT W/ 1600SX; 5 1/2 @ 5850' CMT W/ 375SX	4119	6/63 drill out clop 11/57 5735-5832
FNL, 2310 FEL	OIL 3	10025368100000	10/05	6850 8 5/8 @ 1274' CMT W/ 5755X: 5 1/2 @ 6850' CMT W/ 11005X	1030	6/80 5614-5760 5655-6639
FNL, 1650 FWL		30025065660000	5/54	6010 13 3/8 @ 125 CMT W/ 430SX; 9 5/8 @ 3000 CMT W/ 1300SX; 7 @ 6010 CMT W/ 200SX	3350	10/54 5702-5888
FNL, 860 FWL	OIL	30025065680000	2/56	030U 12 37 19 100 CMT WI 1233X, 9 300 10 3443 CMT WI 20003X, 7 19 0300 CMT WI 1003X 6504 13 38 10 140° CMT WI 1503X, 8 58 10 3240° CMT WI 25005X, 5 112 10 6499° CMT WI 8005X	2806	3/56 57 16-5830
D ESI 1650 FMI		10025200610000	17/84	7500 8 5/8 @ 1408' CMT WI 730SY - 5 1/2 @ 7500' CMT WI 1460SY		2/85 7041-7462
0 FSL 1980 FEL	OIL 3	30025293720000	9/85	8002 B 5/8 @ 1562' CMT W/ 750SX; 5 1/2 @ 8001' CMT W/ 2500SX		10/85 7202-7724
4 FNL, 330 FWL	OIL	30025063380000	1/55	5960 10 3/4 @ 224' CMT W/ 2005X; 7 5/8 @ 3045' CMT W/ 11005X; 5 1/2 @ 5935' CMT W/ 2005X, 4" 7-7510 w/ 150 sx		0.H. 5935-5960
5 FNL. 990 FWL	01	1002530640000	7/89	778016 5/8 @ 1560' CMT W/ 600SX: 5 1/2 @ 7780' CMT W/ 1275SX		2/84 0/43-0324 8/89 7065-7306
FSL, 990 FEL	OIL	30025063310000	5/56	6039 8 5/8 @ 3030' CMT WI 1400SX. 5 1/2 @ 5958' CMT WI 500SX		0.H. 5958-6039
FSL 990 FEL	011	10025296880000	6/86	782018 5/8 @ 1553' CMT W/ 700SX- 5 1/2 @ 7804' CMT W/ 2300SX		11//4 P&A 7/86 7126-7760
SL, 660 FWL	OIL 3	10025063290000	9/51	8370 13 38 @ 288 CMT W/ 2505X; 8 5/8 @ 3150 CMT W/ 13805X; 5 1/2 @ 8333' CMT W/ 7385X		11/51 8005-8268
						6/62 PB 7263, 7088-7213
FSL 200 FWL CC	011	30025344140000	11/98	6911 8 5/8 @ 1350' CMT WI 410SX; 5 1/2 @ 6910' CMT WI 1375SX	563	6660-6797, 5736-5901
FSL 1400 FEL CI	OIL	30025354060000	10/01	6270 B 5.6 @ 1403' CMT W/460SX; 5 1/2 @ 6270' CMT W/ 1350SX	88	5781-5970
9 FSL 1463 FWL C		30025354040000	8/01	6950 8 5/8 @ 1356' CMT W/ 460SX; 5 1/2 @ 6950' CMT W/ 1335SX 6060 8 5/8 @ 1378' CMT W/ 460SX; 5 1/2 @ 6950' CMT W/ 1400SV	788	5734-6679 6740 6603
0 FSL 1980 FEL CI		10025063650000	12/54	1000 0 0 0 0 0 10 0 0 10 0 0 0 0 0 0 0	2648	D.H. 5764-5925
D FSL 990 FEL CO C	CIL-WO	30025063530002	10/88	8470 13 3/B @ 109 CMT WI 150SX; B 5/B @ 3099' CMT WI 1375SX; 5 1/2 @ 6019' CMT WI 600SX, 4" 5571-7587 w 825 sx	2400	8195-8215, 7925-75, 5810-5975
						3/85 /90-/3/1 10/88 bn @7030 5786-6888
0 FSL 560 FWL CC	TA	30025063710001	6/82	7956 13 3/8 @ 224' CMT W/ 250SX; 8 5/8 @ 3142' CMT W/ 2000SX; 5 1/2 @ 7810' CMT W/ 500SX	5502	7810-7956 O.H.
		00010001000	CUID	סדבר זה פי קבעי רווד און ממתיע. זה מוז פי ממתיו רווד און בממתיע, זי 6 מקבעי רווד און ממתיע.	2000	6/82 plug 7800 7534-7759
		20025063602005	8/93	1939 10 @ 233 CMI WI 3005X, 10 34 @ 2804 CMI WI 10005X, / @ 3300 CMI WI 8005X	COOP	/ 903-8230 6/63 6625-6761
						12/74 plug 6590, 6332-6540
	-					6/93 5/40-6/86
) FSL 1700 FEL CI		30025348840000	3/00	6300 8 5/8 @ 1336' CMT W/ 460SX; 5 1/2 @ 6300' CMT W/ 1110SX 6304  8 5/8 @ 1290' CMT W/ 460SX: 5 1/2 @ 6304' CMT W/ 1150SX	1176	5756-6094 5774-6116
5 FSL 990 FEL CO	E OW-JIC	30025063550002	10/88	7542 13 3/B @ 336' CMT WI 450SX, 9 5/B @ 3044' CMT WI 1400SX; 7 @ 5834' CMT WI 600SX, 41/2" 5131-7542 wi 325sx	2642	5834-5950 O.H.
						10/85 7134-7411 40/88 h-@7075 5787 6028
FSL 2317 FEL CO		10025063500000	3/53	B285 13 3/B @ 271' CMT W/ 300SX, B 5/B @ 2498' CMT W/ 1700SX; 5 1/2 @ 8258' CMT W/ 675SX	5142	8150-8238
						12/56 5797-5902 C 151 - 5703 5500 5540 5850
-	_					0101 20 31 31 - 1307 0040-0000

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1 2 215 375 13319 561 2317 561 74 TA 200750500001		1 1 1 1 1 1	
2 2 2 3 2 5 2 5 2 5 1 5 C 2 1 200230030000		3/64 //	(/8-8104
2 2 2 3 3 1 2 2 3 3 4 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	024 23/2 13 3/8 @ 332 CMI WI 4305X, 8 5/8 @ 3039 CMI WI 19005X, 5 1/2 @ 5859 CMI WI 6055X	3066	859-5975 O.H.
2 2 1 3 3 1 E 333 F SL 333 F EL CUN UIL 130025063490000	6/52 B013 12 3/4 @ 287' CMT WI 3005X, B 5/8 @ 3049' CMT WI 11005X, 5 1/2 @ 8009' CMT WI 9255X	3738 76	615-7955
2 2 2 3 3 /E 960 F 3L 1/80 FEL CO 01L 30025063660000	2/55 5925 13 3/8 @ 334' CMT W/ 5755X, 8 5/8 @ 3049' CMT W/ 2005X, 5 1/2 @ 5769' CMT W/ 8255X	1961 5	769-5925 O.H.
2 215 37E 660 FSL 1980 FEL CO P&A 30025063620000	2/52 7926 13 3/8 @ 264' CMT W/ 3005X; 9 5/8 @ 3026' CMT W/ 12005X; 7 @ 7925' CMT W/ 8505X	3403 78	850-7915
		Ŧ	0/02 P&A
2 21S 37E 660 FSL 1980 FWL CC 0IL 30025063730000	9/51 7854 13 3/8 @ 225' CMT WI 250SX: 8 5/8 @ 3162' CMT WI 1950SX: 5 1/7 @ 7852' CMT WI 825SX	4044 78	828-7844
		/6	/58 7610-7633
		12	/68 6577-6735
		5/	/85 bp@7450, sq 5898-6735
			prod 7014-7349
2 21S 37E 660 FSL 330 FEL CON OIL 30025063520000	5/53 597012 3/4 @ 309" CMT WI 3505X: 8 5/8 @ 3099" CMT WI 23005X: 5 1/2 @ 5750" CMT WI 1955X	4850 5	750-5970 O.H.
2 21S 37E 660 FSL 660 FEL CON 0IL 30025063630000	3/52   B168   13 3/8 @ 225 CMT W/ 350SX: B 5/8 @ 2084 CMT W/ 10755X 5 @ 8167' CMT W/ 975SX	4306 80	000-8140
2 21S 37E 660 FSL 660 FWL COI 0IL 30025063690000	950 7906 13 3/8 223 CMT W/ 300SX 8 5/8 @ 3150 CMT W/ 2201SX 5 12 @ 7760 CMT W/ 500SX	5452 7	760-7906 O H
			2157 7612-7697
			74 plug 7650, perf 6562-6828
			/88 sg 6562-6828 & 7612-7697.
			perf 7203-7238
2 21S 37E 710 FSL 610 FWL COI OIL-WO 30025063700004	9/88 [6718]13 3/8 @ 228' CMT W/ 2505X; 8 5/8 @ 3150' CMT W/ 17005X; 5 1/2 @ 6536' CMT W/ 5005X	4228 6:	536-6718 O.H.
		12	/58 bp@6513, perf 6200-6427
		-	/74 bp@6465, perf 6112-6427
		6	/88 5778-6718
2 213 3/E 860 FSL 1980 FEL CU 0/L 30025063480000	5/52 71778 12 3/4 @ 259' CMT WI 3005X; 8 5/6 @ 2989' CMT WI 11005X; 5 1/2 @ 7777' CMT WI 8705X	3761 7	595-7740
		6	/61 6916-7238
		1	/62 6698-67 / 2
2 2 1 3 3 7 E 390 F 51 500 F WL UN UN 30023064880000	200 2014 13 300 263 CM W 3005X 5 18 CM W 15005X 5 12 0 5113 CM W 1005X	6 L945	001-583/
2 2 2 3 3 7 E 33U F 31 E 39U F 31 CUI UIL 30025064900000	1026 3910 13 36 @ 303 CM1 W 3005C 8 36 @ 3148 CM1 W 11005C 5 1Z @ 3512 CM1 W 2005C	4889 5	612-5910 U.H.
2 2 1 3 3/E 1980 F 3L 800 F WL CU UIL 300200000	144 D20 420 13 30 @ 220 CMT W/ 3005/, B 30 @ 3041 CMT W/ 20005/, B 112 @ 6010 CMT W/ 3005/ 4141 2010 13 30 @ 220 CMT W/ 3005/ B 50 @ 3141 CMT W/ 20005/, B 112 @ 6010 CMT W/ 3005/	4362	
2 2 1 3 3/E 1300 FOL 1000 FWL U UIL 300/2003/ 20000	11/21 P0/24 13 5/9 @ 205 CM W/ 2905X, 8 36 @ 3145 CM W/ 2005X, 3 12 2940 5/01 CM W/ 255X	2940	
2 2 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	321 920/ 13.3/6 @ 223 CMI W/ 33034, 9 3/6 @ 3/69 CMI W/ 20003X, 5 1/2 @ 9053 CMI W/ 10805X	20/2/02	
		- 4	U/86 BF 8000, / 668-/ 802
3 21S 37E 510 FSL 660 FEL CON OIL-WO 30025064980003	11/01 1975 10 3/4 @ 259' CMT W/ 2505X; 7 5/8 @ 3149' CMT W/ 11755X; 5 1/2 @ 7974' CMT W/ 4005X	4114 7	868-7966
		2	/62 6890-7275
		ē	i/84 sq 6890-7275, perf 7517-7776
		-	11/01 bp 4300, perf 3893-4006
3 21S 37E 660 FSL 660 FEL CON OIL 30025064970000	6/50 [5760] 13 3/8 @ 224' CMT W/ 250SX; 9 5/8 @ 3049' CMT W/ 1200SX; 7 @ 6759' CMT W/ 775SX	2636 6	645-6705
3 21S 37E 810 FSL 660 FEL CON 0IL-WO 30025065030001	11/63 7825 10 3/4 @ 260' CMT W/ 250SX; 7 5/8 @ 3149' CMT W/ 1420SX; 5 1/2 @ 7805' CMT W/ 625SX	1820 7	.528-7676
			11/63 3958-4069
			190 P&A
10 21S 37E 1131 FSL 1342 FEL CI OIL 30025344360000	8/96 6800 8 5/8 @ 1310' CMT W/ 410SX: 5 1/2 @ 6800' CMT W/ 1365SX	499 5	5702-6690
10 21S 37E 1330 FSL 315 FEL CO OIL 30025344370000	8/98 6800 B 5/8 @ 1315' CMT W/ 410SX; 5 1/2 @ 6800' CMT W/ 1315SX	730 5	5593-6658
10 21S 37E 1470 FNL 1350 FEL C 0IL 30025355450000	9/01 6880 8 5/8 @ 1225' CMT W/ 460SX; 5 1/2 @ 6880' CMT W/ 1375SX	533 5	5613-5668
10 21S 37E 1715 FNL 409 FEL CO OIL-WO 30025064750001	12/01 6560 10 3/4 @ 207 CMT W/ 1505X, 7 5/8 @ 3004 CMT W/ 7005X, 5 1/2 @ 6453' CMT W/ 3005X	3580 6	3453-6580 O.H.
			12/01 bp @4250, perf 3845-3958
10 Z1S 3/E 1980 FNL 1980 FEL CI 01L 30025064520000	651 / 981 10 3/4 @ 268 CM W/ 2505X; / 5/8 @ 3009 CM1 W/ SX; 5 1/2 @ 7980 CM1 W/ 5255X	2953 /	827-7965
10 21S 3/E 1980 FNL 2310 FEL CI OIL 30025064560000	7/52 7 800 13 3/6 @ 253 CMT W/ 2505X; 9 5/6 @ 3099 CMT W/ 10005X; 7 5/6 @ 7795' CMT W/ 12505X	sur 7	520-7782
10 215 27E 1080 FMI 650 FTI 20 011 2002000	0164 7720 20 20 CALT MU EV. 7 201 & 20001 CALT MU EV. 7 201 CALT MU 2010V	1 0300	11/04 3/ 20-0/ 00
10 213 3/E 1360 FNL 060 FEL CO 011 300250054530000	8/51 / / 28 10 3/4 @ 260 CMI WI 5X, / 3/4 @ 3099 CMI W/ 15255X, 5 1/2 @ / / 2/7 CMI W/ 4045X	ACBE	584-7690
10 315 37E 1080 ESI 1080 EEI CI CII 2003E0E46800000	10.64 7111 10 214 6 220 CUT WI 35002. 9 E0 6 3400 CUT WI 40002. E 10 6 7141 CMT WI 20002		11/63 5/ 26-/ 366
10 213 37E 1300 FSL 1900 FEL CH UIL 300230040600000	1/101 / 1/11/12/24/20 252 / 101/2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 20 6/201 / 7573/13/26 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2010 / 2	2743 6	3/0-//US
		2	16.4 5776-5R46
		- 9	5/90 5704-6670
10 21S 37E 2388 FSL 1306 FEL CI OIL 300253443400001	9/96 6850 8 5/8 @ 1325 CMT WI 410SX: 5 1/2 @ 6850 CMT WI 1350SX	618 5	5600-6684
10 21S 37E 330 FNL 990 FEL CON OIL 30025064480000	12/51 7774 113 3/8 @ 215 CMT W/ 2005X; 8 5/8 @ 3002 CMT W/ 23005X; 5 1/2 @ 7772 CMT W/ 3505X	4860 7	7460-7692
		2	2/66 6847-7377
		-	11/75 sq 6847-7377, perf 7552-7676
		e.	3/93 P&A
10 21S 37E 550 FNL 740 FEL CON OIL 30025359050000	6/02 4200 8 5/8 @ 400' CMT W/ 250SX; 5 1/2 @ 4200' CMT W/ 850SX	276 3	3882-4002

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API#:30025-06559

DATE: 06/27/94 BY: JOEL PORTER

WELL:
POOL:
LOCATION:

COUNTY/STATE:

Chesher No. 1 Wantz Abo 1980' FSL & 1980' FWL Unit K, Sec 12, T-21S, R-37E Lea County, New Mexico



H. HENDRIX CORP. ID:5053942653

### WELL DATA SHEET

LEASE <u>Elliott Federal</u> WELL NO. 2 FIELD <u>Drinkard</u> DATE 1-31-96 LOCATION 1980 FEET FROM South LINE AND 1980 FEET FROM west LINE SECTION \_\_\_\_ TOWNSHIP 21-5 RANGE 37-E COUNTY Lea STATE N.M. Lease Regigt Ser. No. NMLC065525A Date Completed 1-31-96 PrAd \* WH conno NoNe GE: Initial Formation Syrface Osx. Cmt Plug FROM: 7079 TO: Initial Production Suntace KDB to GE BWPD BOPD DF to GE MCFPD GOR Botot (mt. 8 120' Plugging Date: 1-29-96 Set CIBP@ 5675, Spot 60 BASS P+A Mud from 5675'to 7200. 103/4" OD 40.5 108. 1-30-96 Seat 255% Cut. Plug tram 5675 Surf. Pipe set & to 5457'(218') - Cut 5'2'Cse. @3189. - PoH+LD. P+A Mud 242 W/ 125 BX RIH -1236 O.E. The - 5pot 90 5x Cart. Plug cat. Circ? Yes from 3250 ypt= 2779. - Pot -17bg.

Tec@2828 75/8" OD 24 lbs.  $\frac{178}{410} \text{ Thd } \overline{\text{Gr}} + \frac{1755}{755}$   $\frac{1760}{\text{Csg set at}}$   $\frac{3151}{100} \text{ W/ } \frac{400}{400} \text{ SX}$   $\frac{3151}{100} \text{ W/ } \frac{400}{100} \text{ SX}$ QOSXCM+ Plue @ 3189' Bat. A Cat 3250'

54 CIBPO \$475

Sound Parts

5815-6930

Perts 6682 + + 6+12

51/2 " OD

JSS.

4". 10.46 \$ \$ \$ \$ Cro.

P+AM-d

TLC#5457 TIT

TOC-4400

w/ 30 sx. c.mt. TOC at Surface by Braden Head Topfill Subsequent Workover or Reconditioning:

1-31.96 - RIH+ Ta. Cat. @ 2828 - Cive. P.A. Mudturn 2828 yete Suntace. Pot withe. to 120: - Cast. Sty Csa. Fran 120' to Surface.

BWPD Present Prod. \_\_\_\_\_BOPD \_\_\_\_ MCFPD GOR Date 15.5 Csg set 8

5955' W/ 100 SX Remarks or Additional Data: Cmt. Circ? No

Sawyalimen IUC & 4900 by De Coler

From 7079 to 5724 DRA - A.

### ITEM VII OF NEW MEXICO OCD FORM C-108 DATA ON PROPOSED OPERATIONS EAST BLINEBRY DRINKARD UNIT

- Proposed average initial injection rate is 8325 bwpd. Maximum injection rate should not exceed 10,000 bwpd.
- 2) The injection system will be operated as a closed system.
- 3) Proposed average initial injection pressure is 1120 psi (0.2 psi/ft). Proposed maximum pressure will not exceed the pressure limitations ordered by the Division. Apache Corp will perform step rate tests and anticipates securing a maximum injection pressure of 1375 psi (same as the Northeast Drinkard Unit).
- 4) Source water will come from the San Andres Formation.
- 5) Not Applicable.

### ITEM VIII OF NEW MEXICO OCD FORM C-108 GEOLOGIC DATA ON THE INJECTION ZONE & UNDERGROUND DRINKING WATER EAST BLINEBRY DRINKARD UNIT

The Formations being targeted for water injection are the Blinebry, Tubb and Drinkard at depths ranging from approximately 5600' to 6800'. These formations are Leonardian in age and are a sequence of shallow marine carbonates, which have for the most part been dolomatized. A five percent porosity cut off is used to determine "pay" as porosity less than this is considered non-productive at the existing and proposed reservoir pressures and reservoir fluid regimes. Net pay isopach maps show the areal extent of the targeted reservoir. The vertical extent of the reservoir is limited top and bottom by impermeable shales and carbonates. All injected fluids should remain in the reservoir with the exception of cycling to the surface through wellbores.

Based on communications with the New Mexico States Engineer's Roswell office and a review of online files there are 15 fresh water wells (see attached) in the area of review. The deepest of these wells is 136'. Which is the assumed base of fresh water. All wellbores involved with the proposed injection program are constructed to not allow injection water into this fresh water source.

### ITEMS IX THROUGH XII OF NEW MEXICO OCD FORM C-108 EAST BLINEBRY DRINKARD UNIT

IX All of the current wellbores proposed for unitization have an existing fracture stimulation. Any new wells drilled subsequent to unitization will also be treated with a fracture stimulation, and it is assumed that all of the wellbores will be treated with acid at least once during the life of the waterflood.

X All logging and test data for the existing wellbores already exists on file with the State of New Mexico Oil Conservation Division and will not be resubmitted with this application.

XI It appears the only strata within one mile of our proposed unit which contains water of possible drinking quality is confined to 136' and shallower. No contamination of this drinking water should occur as all existing wellbores which penetrate the Blinebry, Tubb and Drinkard are constructed as to not allow injection water to escape the system.

XII After reviewing the geology in a one and one-half mile radius around the proposed waterflood area there appears no evidence of fractures or any hydrologic connection between the zone of injection and any overlying or underlying strata.

	OLD WELL NAM	MES				CONVERTED
	LEASE NAME	WELL #	LOCATION	FOOTAGE	TYPE	INJ VOLUMES
1	ELLIOTT B	4	1 21S 37E	3630 FNL, 330 FWL		
2	ELLIOTT B	5	1 21S 37E	4620 FSL, 1650 FWL	OIL	
3	ELLIOTT B	3	121S 3/E	660 FSL, 2310 FEL	OIL	
4	ELLIOIT B	2	121S 3/E	2970 FSL, 1650 FWL	OIL	 
5	COOGAN FEDERAL	2	121S 3/E	4195 FNL, 2310 FWL		· · · · · · · · · · · · · · · · · · ·
6	ELLIOTT FEDERAL	1	1 21S 3/E	1650 FSL, 330 FWL	OIL	
7	ELLIOTT	6	1 21S 37E	660 FSL, 1980 FWL	OIL	
8	MONTEREY FED	7	1 21S 37E	990 FSL, 2480 FWL	OIL	
9	H T FEDERAL	1	1 21S 37E	1980 FSL, 1980 FEL	OIL	
10	H T FEDERAL	2	1 21S 37E	3100 FSL, 1980 FEL	OIL	
11	LOCKHART B 11	2	11 21S 37E	330 FNL, 330 FWL	OIL	
12	LOCKHART B 11	5	11 21S 37E	330 FNL, 1650 FEL	OIL	
13	LOCKHART B 11	7	11 21S 37E	330 FNL, 480 FEL	OIL	
14	LOCKHART B 11	10	11 21S 37E	1980 FNL, 330 FEL	OIL	
15	LOCKHART B 11	12	11 21S 37E	660 FNL, 1980 FEL	OIL	
16	LOCKHART B 11	13	11 21S 37E	660 FSL, 330 FEL	OIL	
17	LOCKHART B 11	15	11 21S 37E	2310 FSL, 1650 FEL	OIL	
18	LOCKHART B 11	16	11 21S 37E	1980 FNL, 1980 FWL	OIL	
19	LOCKHART B 12	1	12 21S 37E	330 FNL, 660 FWL	OIL	
20	LOCKHART B 12	3	12 21S 37E	990 FNL, 1650FWL	OIL	
21	I OCKHART B 12	7	12 21S 37E	330 FNL 330 FWI	OIL-SI	
22	I OCKHART B 12	8	12 21S 37E	1980 FNL 1980 FWL	OIL	
23	LOCKHART B 12	9	12 21S 37E	1980 FNI 2310 FFI	OIL-SI	
24	OCKHART B 12	10	12 215 37E	660 FNI 2310 FFI		
25	LOCKHART B 13 A	1	13 21S 37E	660 FSI 660 FWI	011	
26	LOCKHART B 13 A	3	13 21S 37E	1980 FNI 1980 FWI	011-51	
27	LOCKHART B 13 A	6	13 21S 37E	1980 FNI 1980 FFI		<u> </u>
28		7	13 215 37E	1980 FSI 1980 FEI		
20		8	13 210 37E	1980 FSL 660 EWI		
29		0	13 218 37L	660 ESL 2100 EWI		
21		9	1321337E	1000 FOL, 2100 FVVL		
31		2	1421037E	1900 FNL, 000 FEL		
32		2	14 2 15 3/E	1000 FSL, 000 FEL	OIL-TA	
33		2	12 215 3/E	1900 FSL, 000 FVVL		
34		1	12 215 3/E	2310 FSL, 1650 FEL	UIL-TA	
35		1	12 215 3/E	000 FSL, 1980 FWL		
36	SMITH	2	14 215 3/E	000 FNL, 1980 FEL		
31	SMITH	3	14 215 3/E	1980 FNL, 1650 FEL	OIL	
38	SMITH	4	14 21S 37E	330 FNL, 2310 FEL	OIL	
39	GULF BUNIN	3	13 21S 37E	660 FNL, 2310 FEL	OIL	
40	GULF BUNIN	4	13 21S 37E	660 FNL, 860 FWL	OIL	
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OLD WELL NAM	IES				CONVERTED
LEASE NAME	WELL #	LOCATION	FOOTAGE	TYPE	INJ VOLUMES
1 ELLIOTT B	1	1 21S 37E	2970 FSL, 330 FWL	OIL	429
2 ELLIOTT-MONTEREY	5	1 21S 37E	660 FSL, 810 FWL	OIL	641
3 LOCKHART B 11	4	11 21S 37E	330 FNL, 1650 FWL	OIL	392
4 LOCKHART B 11	6	11 21S 37E	330 FNL, 330 FEL	OIL	250
5 LOCKHART B 11	8	11 21S 37E	660 FSL, 1980 FEL	OIL	870
6 LOCKHART B 11	9	11 21S 37E	660 FNL, 330 FEL	OIL	528
7 LOCKHART B 11	11	11 21S 37E	1980 FSL, 330 FEL	OIL	717
8 LOCKHART B 11	14	11 21S 37E	1650 FNL, 1650 FEL	OIL	661
9 LOCKHART B 11	17	11 21S 37E	1980 FNL, 1980 FEL	OIL	393
10 LOCKHART B 11 E	1	11 21S 37E	2310 FNL, 660 FWL	OIL	817
11 LOCKHART B 12	4	12 21S 37E	1650 FNL, 660 FWL	OIL	60
12 LOCKHART B 12	6	12 21S 37E	330 FNL, 1980 FWL	OIL	486
13 LOCKHART B 12	11	12 21S 37E	1980 FNL, 660 FWL	OIL-SI	250
14 LOCKHART B 13 A	2	13 21S 37E	1980 FNL, 660 FWL	OIL	346
15 LOCKHART B-14 A	3	14 21S 37E	660 FNL, 330 FEL	OIL	519
16 CHESHER	2	12 21S 37E	660 FSL, 660 FWL	OIL-TA	436
17 GULF BUNIN	2	13 21S 37E	660 FNL, 1650 FWL	OIL	529
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5/4/2005

