

**BEFORE THE
OIL CONSERVATION DIVISION
Santa Fe, New Mexico**

Case No. 12023 Exhibit No. 8

Submitted by: Hanagan Petroleum Corporation

Hearing Date: August 6, 1998

August 6, 1998

Lori Wrotenbery, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: *Application of Hanagan Petroleum Corporation for Enhanced Oil Recovery
Project Qualification for the Recovered Oil Tax Rate for the Twin Lakes San
Andres Unit, Chaves County, New Mexico*

Dear Ms. Wrotenbery:

Hanagan Petroleum Corporation hereby makes application to qualify the Twin Lakes San Andres Unit for the recovered oil tax rate as authorized by the Enhanced Oil Recovery Act. Hanagan Petroleum Corporation plans to commence drilling, recompletions and conversions of wells to redesign the waterflood pattern in this unit and is making application pursuant to the rules promulgated by Commission Order No. R-9708 entered on August 27, 1992.

In accordance with Order No. R-9789, Hanagan Petroleum Corporation provides the following information:

A. Operator's name and address:

Hanagan Petroleum Corporation
Post Office Box 1737
Roswell, New Mexico 88202-1737

B. Description of Project Area:

1. A plat showing the project area is attached hereto as Exhibit A.
2. Description of Project Area:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM

Section 25: SE/4 NW/4, NE/4 SW/4, S/2 SW/4 and SE/4
Section 26: SE/4 SE/4
Section 35: E/2 E/2
Section 36: All

TOWNSHIP 8 SOUTH, RANGE 29 EAST, NMPM

Section 30: Lots 1 through 4, E/2 SW/4 and SW/4 SE/4
Section 31: All
Section 32: W/2 SW/4

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM

Section 1: Lots 1 through 4, S/2 N/2, SE/4 and E/2 SW/4
Section 2: Lot 1
Section 12: NE/4, E/2 SE/4 and NW/4 SE/4

TOWNSHIP 9 SOUTH, RANGE 29 EAST, NMPM

Section 5: Lots 3 and 4, S/2 NW/4 and SW/4
Section 6 and 7: All
Section 8: N/2 NW/4 and SW/4 NW/4
Section 18: Lot 1, E/2 NW/4, and W/2 NE/4

3. Total Acres in project area: 4,863.82

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4. Name of the subject pool and formation:

Twin Lakes San Andres Associated Pool
San Andres formation

C. Status of operations in the project area:

The Twin Lakes San Andres Unit was approved pursuant to the Statutory Unitization Act by Oil Conservation Division Order No. R-8557 dated December 2, 1987.

Waterflood operations have been conducted in this unit since 1987 pursuant to Division Order No. R-8611 as subsequently expanded by Division Order WFX-582.

D. Method of recovery to be used:

1. Injection fluids: water
2. Waterflood operations were approved by Division Order No. R-8611 as subsequently expanded by Division Order WFX-582.

E. Description of project:

1. List of producing wells: Exhibit B attached hereto
2. List of injection wells: Exhibit B attached hereto
3. Capital cost of additional facilities: \$ 7.7 million
4. Total project costs: \$ 7.7 million
5. Estimated total value of the additional production that will be recovered as a result of the project expansion: An additional 3.3 million

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barrels valued at \$49.5 million.

6. Anticipated date for commencement of injection:
September, 1998 or ASAP.
7. Type of fluid to be injected and the anticipated volume: Water will be injected at an anticipated daily rate of 10,000 barrels in the project area.
8. Explanation of changes in technology:

The project involves the redevelopment of the Twin Lakes San Andres Associated Pool to 40 acre, five-spot waterflood patterns. The current 80 acre, five-spot pattern is not effectively sweeping the entire reservoir and the expansion of this waterflood project will increase the ultimate recovery of reserves from this pool. The expansion of this waterflood project will improve the project's sweep efficiency as water injection is initiated in previously unswept portions of the reservoir.

F. Project history and forecast:

See the production curves marked Exhibits C and D which show the production history and forecast, respectively, for the project area.

Very truly yours,

Mike Hanagan
President
Hanagan Petroleum Corporation

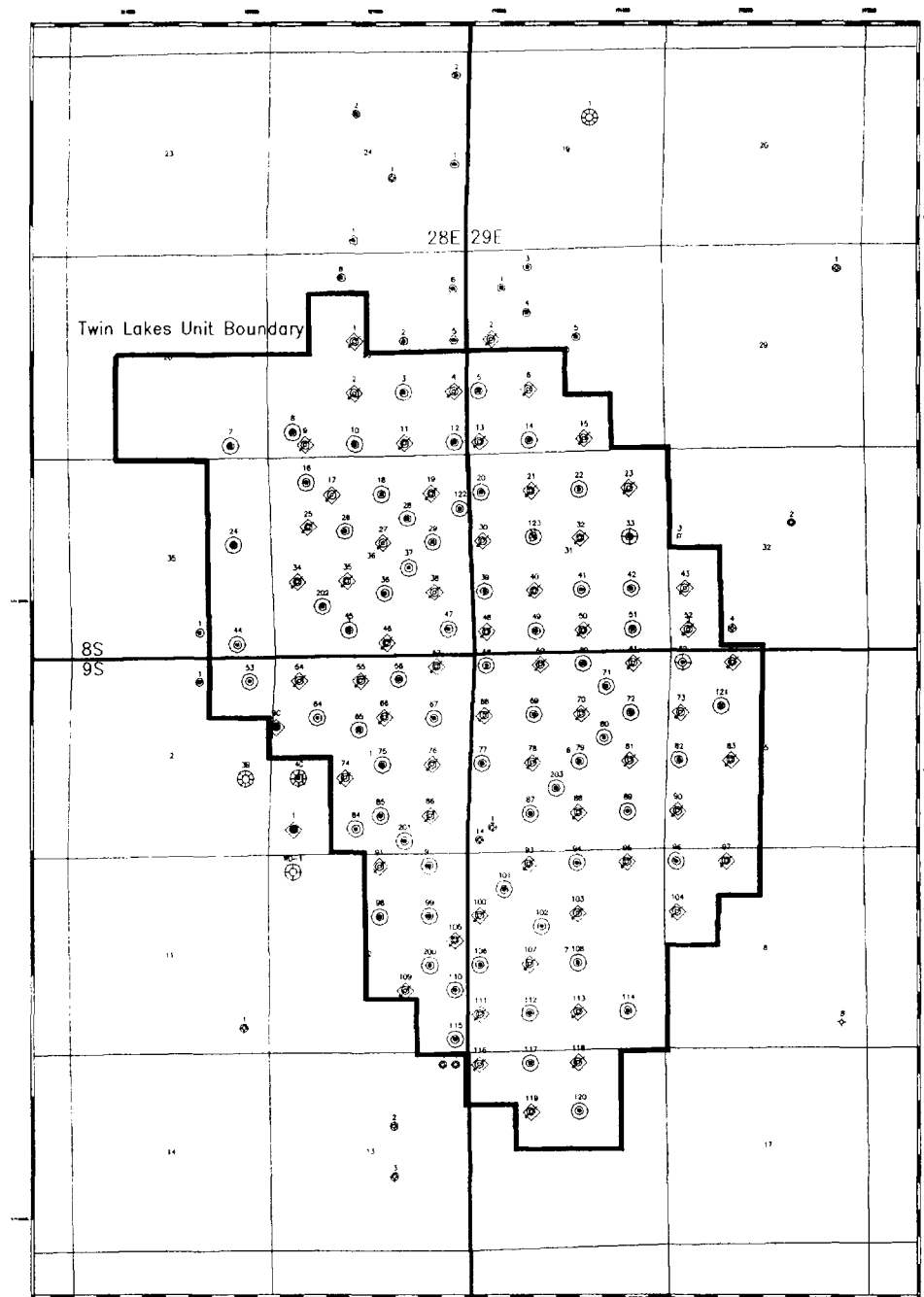
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EXHIBIT A: Plat of Project Area

EXHIBIT B: Table of wells in the Expanded Project Area

EXHIBIT C: Historical Production Curve

EXHIBIT D: Production Forecast



LEGEND	
	Unit Producer
	Injector
	Non-Unit Producer

Hanagan Petroleum Corporation		
TWIN LAKES SAN ANDRES UNIT		
Application for EOR Qualification		
Exhibit a - Unit Area		
Chaves Co., NM		Exhibit A
1"=5000'		Hanagan

EXHIBIT "B"

TWIN LAKE SAN ANDRES UNIT
EXHIBIT "B"

WELL NAME	LOCATION	STATUS	NEW STATUS
TLSAU #1	25-T8S-R28E, 2310 FNL & 2310 FWL	INJ	
TLSAU #2	25-T8S-R28E, 1650 FSL & 2310 FWL	INJ	
TLSAU #3	25-T8S-R28E, 1650 FSL & 1650 FEL	PROD	INJ
TLSAU #4	25-T8S-R28E, 1650 FSL & 330 FEL	INJ	
TLSAU #5	30-T8S-R29E, 1650 FSL & 330 FWL	PROD	INJ
TLSAU #6	30-T8S-R29E, 1650 FSL & 1650 FWL	INJ	
TLSAU #7	26-T8S-R28E, 330 FSL & 990 FEL	P & A*	
TLSAU #8	25-T8S-R28E, 660 FSL & 660 FWL	T/A	
TLSAU #9	25-T8S-R28E, 330 FSL & 990 FWL	INJ	
TLSAU #10	25-T8S-R28E, 330 FSL & 2310 FWL	T/A	INJ
TLSAU #11	25-T8S-R28E, 330 FSL & 1650 FEL	INJ	
TLSAU #12	25-T8S-R28E, 330 FSL & 330 FEL	PROD	INJ
TLSAU #13	30-T8S-R29E, 330 FSL & 330 FWL	INJ	
TLSAU #14	30-T8S-R29E, 330 FSL & 1650 FWL	PROD	INJ
TLSAU #15	30-T8S-R29E, 330 FSL & 2139 FEL	INJ	
TLSAU #16	36-T8S-R28E, 660 FNL & 990 FWL	PROD	
TLSAU #17	36-T8S-R28E, 990 FNL & 1650 FWL	INJ	
TLSAU #18	36-T8S-R28E, 990 FNL & 2310 FEL	PROD	INJ
TLSAU #19	36-T8S-R28E, 990 FNL & 990 FEL	INJ	
TLSAU #20	31-T8S-R29E, 990 FNL & 330 FWL	PROD	INJ
TLSAU #21	31-T8S-R29E, 990 FNL & 1650 FWL	INJ	
TLSAU #22	31-T8S-R29E, 990 FNL & 2310 FEL	PROD	INJ
TLSAU #23	31-T8S-R29E, 990 FNL & 990 FEL	INJ	
TLSAU #24	35-T8S-R28E, 2310 FNL & 990 FEL	P & A*	
TLSAU #25	36-T8S-R28E, 1850 FNL & 990 FWL	INJ	
TLSAU #26	36-T8S-R28E, 1980 FNL & 1980 FWL	PROD	INJ
TLSAU #27	36-T8S-R28E, 2310 FNL & 2310 FEL	INJ	
TLSAU #28	36-T8S-R28E, 1650 FNL & 1650 FEL	PROD	
TLSAU #29	36-T8S-R28E, 2310 FNL & 990 FEL	PROD	INJ
TLSAU #30	31-T8S-R29E, 2310 FNL & 330 FWL	INJ	
TLSAU #32	31-T8S-R29E, 2310 FNL & 2310 FEL	INJ	
TLSAU #34	36-T8S-R28E, 1980 FSL & 660 FWL	INJ	
TLSAU #35	36-T8S-R28E, 1980 FSL & 1980 FWL	INJ	
TLSAU #36	36-T8S-R28E, 1650 FSL & 2310 FEL	PROD	INJ
TLSAU #37	36-T8S-R28E, 2310 FSL & 1650 FEL	PROD	
TLSAU #38	36-T8S-R28E, 1650 FSL & 990 FEL	INJ	
TLSAU #39	31-T8S-R29E, 1650 FSL & 330 FWL	PROD	INJ
TLSAU #40	31-T8S-R29E, 1650 FSL & 1650 FWL	INJ	
TLSAU #41	31-T8S-R29E, 1650 FSL & 2310 FEL	PROD	INJ
TLSAU #42	31-T8S-R29E, 1650 FSL & 990 FEL	PROD	INJ
TLSAU #43	32-T8S-R29E, 1650 FSL & 430' FWL	INJ	
TLSAU #44	35-T8S-R28E, 330 FSL & 990 FEL	P & A*	

EXHIBIT "B"

TLSAU #45	36-T8S-R28E, 660 FSL & 1980 FWL	PROD	INJ
TLSAU #46	36-T8S-R28E, 330 FSL & 2310 FEL	INJ	
TLSAU #47	36-T8S-R28E, 660 FSL & 660 FEL	PROD	INJ
TLSAU #48	31-T8S-R29E, 570 FSL & 330 FWL	INJ	
TLSAU #49	31-T8S-R28E, 560 FSL & 1650 FWL	PROD	INJ
TLSAU #50	31-T8S-R29E, 560 FSL & 2310 FEL	INJ	
TLSAU #51	31-T8S-R29E, 560 FSL & 990 FEL	S/I**	INJ
TLSAU #52	32-T8S-R29E, 540 FSL & 480 FWL	INJ	
TLSAU #53	2-T9S-R28E, 660' FNL & 660 FEL	P & A*	
TLSAU #54	1-T9S-R28E, 660' FNL & 660 FWL	INJ	
TLSAU #55	1-T9S-R28E, 672 FNL & 2285 FWL	INJ	
TLSAU #56	1-T9S-R28E, 660' FNL & 1980 FEL	PROD	
TLSAU #57	1-T9S-R28E, 330 FNL & 990 FEL	INJ	
TLSAU #58	6-T9S-R29E, 330 FNL & 330 FWL	PROD	INJ
TLSAU #59	6-T9S-R29E, 330 FNL & 1750 FWL	INJ	
TLSAU #60	6-T9S-R29E, 330 FNL & 2310 FEL	PROD	INJ
TLSAU #61	6-T9S-R29E, 330 FNL & 990 FEL	INJ	
TLSAU #63	5-T9S-R29E, 330 FNL & 1650 FWL	INJ	
TLSAU #64	1-T9S-R28E, 1650 FNL & 1190 FWL	PROD	
TLSAU #65	1-T9S-R28E, 1980 FWL & 2310 FWL	PROD	
TLSAU #66	1-T9S-R28E, 1650 FNL & 2310 FEL	INJ	
TLSAU #67	1-T9S-R28E, 1700 FNL & 990 FEL	PROD	
TLSAU #68	6-T9S-R29E, 1650 FNL & 330 FWL	INJ	
TLSAU #69	6-T9S-R29E, 1650 FNL & 1650 FWL	PROD	INJ
TLSAU #70	6-T9S-R29E, 1650 FNL & 2310 FEL	INJ	
TLSAU #71	6-T9S-R29E, 950 FNL & 1675 FEL	PROD	
TLSAU #72	6-T9S-R29E, 1650 FNL & 990 FEL	S/I**	INJ
TLSAU #73	5-T9S-R29E, 1650 FNL & 330 FWL	INJ	
TLSAU #74	1-T9S-R28E, 1980 FSL & 1980 FWL	INJ	
TLSAU #75	1-T9S-R28E, 2310 FSL & 2310 FEL	PROD	
TLSAU #76	1-T9S-R28E, 2310 FSL & 990 FEL	INJ	
TLSAU #77	6-T9S-R29E, 2310 FSL & 330 FWL	PROD	INJ
TLSAU #78	6-T9S-R29E, 2310 FSL & 1650 FWL	INJ	
TLSAU #79	6-T9S-R29E, 2310 FSL & 2310 FEL	PROD	INJ
TLSAU #80	6-T9S-R29E, 2310 FNL & 1675 FEL	PROD	
TLSAU #81	6-T9S-R29E, 2310 FSL & 990 FEL	INJ	
TLSAU #82	5-T9S-R29E, 2310 FSL & 330 FWL	PROD	INJ
TLSAU #83	5-T9S-R29E, 2300 FSL & 1700 FWL	INJ	
TLSAU #84	1-T9S-R28E, 660 FSL & 2310 FWL	S/I**	
TLSAU #85	1-T9S-R28E, 990 FSL & 2310 FEL	PROD	
TLSAU #86	1-T9S-R28E, 990 FSL & 990 FEL	INJ	
TLSAU #87	6-T9S,R29E, 990 FNL & 1650 FWL	PROD	INJ
TLSAU #88	6-T9S-R29E, 990 FSL & 2310 FSL	INJ	
TLSAU #89	6-T9S-R29E, 990 FSL & 990 FEL	PROD	INJ
TLSAU #90	5-T9S-R29E, 990 FSL & 330 FWL	INJ	
TLSAU #91	12-T9S-R28E, 330 FNL & 2310 FEL	INJ	
TLSAU #92	12-T9S-R28E, 330 FNL & 990 FEL	PROD	
TLSAU #93	7-T9S-29E, 330 FNL & 1650 FWL	INJ	
TLSAU #94	7-T9S-R29E, 330 FNL & 2310 FEL	PROD	INJ

EXHIBIT "B"

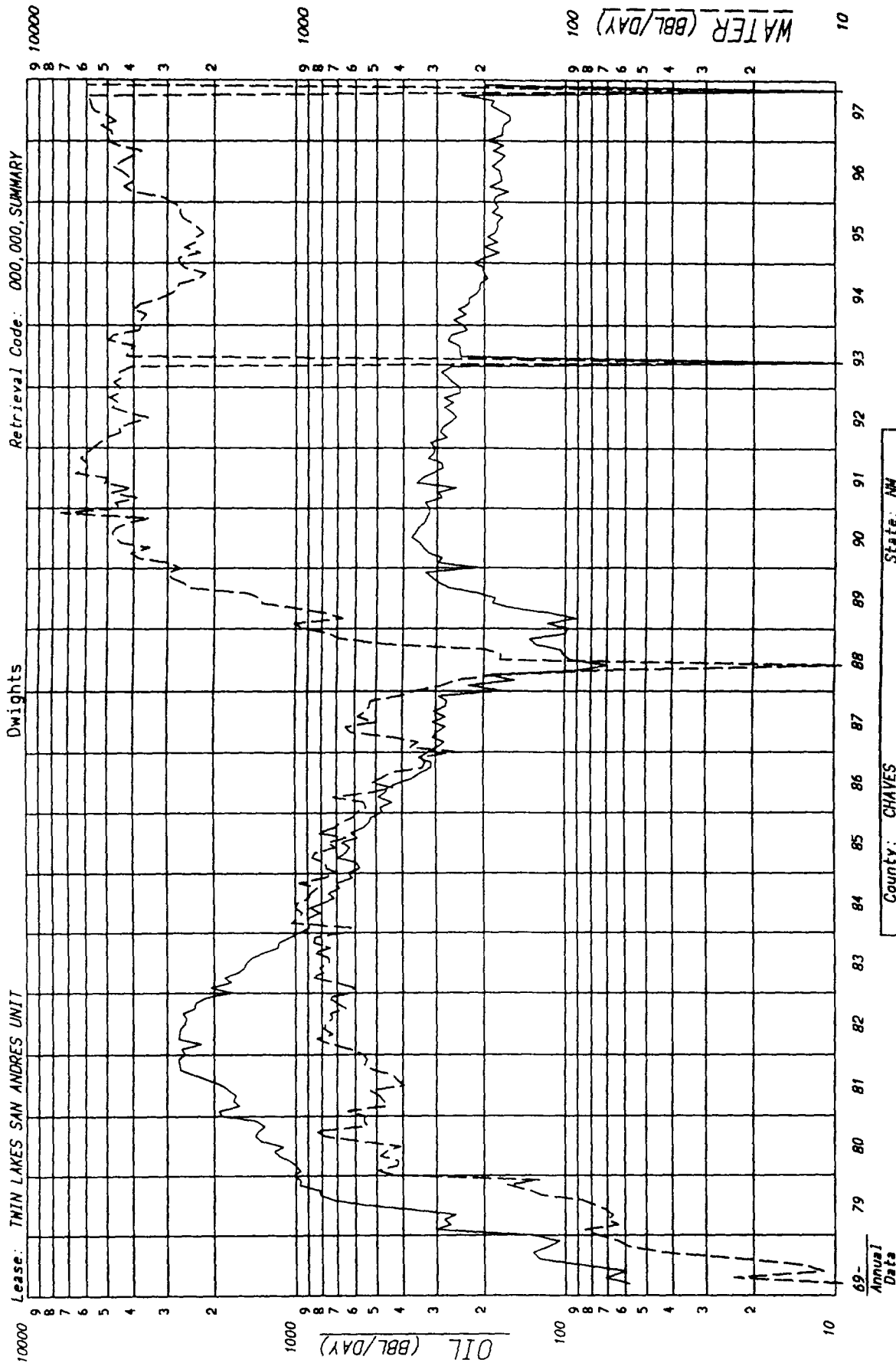
TLSAU #95	7-T9S-R29E, 330 FNL & 990 FEL	INJ	
TLSAU #96	8-T9S-R29E, 330 FNL & 330 FWL	S/I**	INJ+
TLSAU #97	8-T9S-R29E, 330 FNL & 1650 FWL	INJ	
TLSAU #98	12-T9S-R28E, 1650 FNL & 2310 FEL	T/A	
TLSAU #99	12-T9S-R28E, 1650 FNL & 990 FEL	PROD	
TLSAU #100	7-T9S-R29E, 1650 FNL & 330 FWL	INJ	
TLSAU #101	7-T9S-R29E, 990 FNL & 990 FWL	PROD	
TLSAU #102	7-T9S-R29E, 1980 FNL & 1980 FWL	PROD	INJ
TLSAU #103	7-T9S-R29E, 1650 FNL & 2310 FEL	INJ	
TLSAU #104	8-T9S-R29E, 1650 FNL & 330 FWL	INJ	
TLSAU #105	12-T9S-R28E, 2310 FNL & 330 FEL	INJ	
TLSAU #106	7-T9S-R29E, 2310 FSL & 330 FWL	PROD	INJ
TLSAU #107	7-T9S-R29E, 2310 FSL & 1650 FWL	INJ	
TLSAU #108	7-T9S-R29E, 2310 FSL & 2310 FEL	PROD	
TLSAU #109	12-T9S-R28E, 1650 FSL & 1650 FSL	INJ	
TLSAU #110	12-T9S-R28E, 1650 FSL & 330 FEL	PROD	
TLSAU #111	7-T9S-R29E, 990 FSL & 330 FWL	INJ	
TLSAU #112	7-T9S-R29E, 990 FSL & 1650 FWL	PROD	INJ
TLSAU #113	7-T9S-R29E, 990 FSL & 2310 FEL	INJ	
TLSAU #114	7-T9S-R29E, 990 FSL & 990 FEL	PROD	
TLSAU #115	12-T9S-R28E, 330 FSL & 330 FEL	PROD	
TLSAU #116	18-T9S-R29E, 330 FNL & 330 FWL	INJ	
TLSAU #117	18-T9S-R29E, 330 FNL & 1650 FWL	S/I**	INJ
TLSAU #118	18-T9S-R29E, 330 FNL & 2310 FEL	INJ	
TLSAU #119	18-T9S-R29E, 1650 FNL & 1650 FWL	INJ	
TLSAU #120	18-T9S-R29E, 1650 FNL & 2310 FEL	PROD	INJ
TLSAU #121	5-T9S-R29E, 1500 FNL & 1405 FWL	PROD	
TLSAU #122	36-T8S-R28E, 1400 FNL & 250 FEL	PROD	
TLSAU #123	31-T8S-R29E, 2237 FNL & 1679 FWL	PROD	INJ
TLSAU #200	12-T9S-R28E, 2310 FSL & 990 FEL	PROD	
TLSAU #201	1-T9S-R28E, 330 FSL & 1650 FEL	PROD	
TLSAU #202	36-T8S-R28E, 1300 FSL & 1300 FWL	PROD	
TLSAU #203	6-T9S-R29E, 1650 FSL & 2310 FWL	PROD	
KUCHEMANN #1	30-T8S-R29E, 2310' FNL, 660' FWL	INJ	

NEW WELLS

TLSAU 300	25-T8S-R28E	PROD
TLSAU 301	25-T8S-R28E	PROD
TLSAU 302	25-T8S-R28E	PROD
TLSAU 303	30-T8S-R29E	PROD
TLSAU 304	36-T9S-R28E	PROD
TLSAU 305	36-T9S-R28E	PROD
TLSAU 306	36-T8S-R28E	PROD
TLSAU 307	31-T8S-R29E	PROD
TLSAU 308	36-T8S-R28E	PROD
TLSAU 309	31-T8S-R29E	PROD
TLSAU 310	31-T8S-R29E	PROD
TLSAU 311	31-T8S-R29E	PROD
TLSAU 312	36-T8S-R28E	PROD

EXHIBIT "B"

TLSAU 313	36-T8S-R28E	PROD
TLSAU 314	36-T8S-R28E	PROD
TLSAU 315	31-T8S-R29E	PROD
TLSAU 316	31-T8S-R29E	PROD
TLSAU 317	31-T8S-R29E	PROD
TLSAU 318	36-T8S-R28E	PROD
TLSAU 319	31-T8S-R29E	PROD
TLSAU 320	31-T8S-R29E	PROD
TLSAU 321	31-T8S-R29E	PROD
TLSAU 322	31-T8S-R29E	PROD
TLSAU 323	31-T8S-R29E	PROD
TLSAU 324	31-T8S-R29E	PROD
TLSAU 325	31-T8S-R29E	PROD
TLSAU 326	6-T9S-R29E	PROD
TLSAU 327	6-T9S-R29E	PROD
TLSAU 328	6-T9S-R29E	PROD
TLSAU 329	6-T9S-R29E	PROD
TLSAU 330	6-T9S-R29E	PROD
TLSAU 331	6-T9S-R29E	PROD
TLSAU 332	6-T9S-R29E	PROD
TLSAU 333	6-T9S-R29E	PROD
TLSAU 334	7-T9S-R29E	PROD
TLSAU 335	7-T9S-R29E	PROD
TLSAU 336	7-T9S-R29E	PROD
TLSAU 337	7-T9S-R29E	PROD
TLSAU 338	7-T9S-R29E	PROD
TLSAU 339	7-T9S-R29E	PROD
TLSAU 340	7-T9S-R29E	PROD
TLSAU 341	18-T9S-R29E	PROD



County: CHAVES State: NM
 Field: TWIN LAKES (SAN ANDRES) SA
 Reservoir: SAN ANDRES
 Operator:
 Oil Cum: 4830362 Gas Cum: 4705754
 Location: 9S 29E

F.P. Date 10-71

Exhibit C

TWIN LAKES SAN ANDRES UNIT
Exhibit D - Production Forecast

