

STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY AND MINERALS  
OIL CONSERVATION DIVISION

RECEIVED

JUL 23 1990

APPLICATION OF CHEVRON U.S.A., INC.  
FOR AUTHORITY TO EXPAND WATERFLOOD  
PROJECT FOR THE ANISE MONUMENT  
SOUTH UNIT AND AMEND ORDER R-7766,  
LEA COUNTY, NEW MEXICO.

OIL CONSERVATION DIV.  
SANTA FE

CASE NO. 10060

A P P L I C A T I O N

CHEVRON U.S.A., INC. hereby applies to the New Mexico Oil Conservation Division for an amendment to Order R-7766 authorizing Chevron U.S.A., Inc. to expand its waterflood project for the Eunice Monument South Unit, Lea County, New Mexico, and in support of its Application states:

1. On December 27, 1984, the Commission entered Order R-7766 which authorized Gulf Oil Corporation now Chevron U.S.A., Inc. (by merger) to institute a waterflood project in its Eunice Monument South Unit as shown on Exhibit "A", a plat of the unit, and as set forth in a copy of said order which is attached hereto as Exhibit "B" and incorporated by reference herein.
2. The Applicant as operator, Chevron U.S.A., Inc., now seeks authority to expand its waterflood project in its Eunice Monument South Unit, by the injection of water

into the unitized interval which shall include the formations which extend from an upper limit of 100 feet below mean sea level or the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation in the proposed Unit Expansion Area B as shown on Exhibit "C" and as described on Exhibit "D" attached to this Application.

3. Chevron proposes to commence waterflood operations for Expansion Area B utilizing an 80-acre five spot injection pattern using the well numbering system and proposed unit injection wells as shown and identified for Expansion Area B in Exhibit "E" attached hereto.

4. Said injection wells shall be conversions of existing wells or newly drilled wells as noted on said Exhibit "F".

5. The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

6. The producing formations in the proposed project area are in an advanced stage of depletion and the area is suitable for waterflooding.

7. The operator will endeavor to take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

8. The operator proposes the injection wells or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation in any injection well, but seeks authority to increase said pressure limitation, should circumstances warrant.

9. The operator also seeks authority to institute infill development of the existing Unit Area and the Expansion Area by administrative approval of the Division Director after a proposed 40 acre-five spot, 20-acre five spot, or other systematic development program if approved by vote of the working interest owners, the authorized officer of the BLM, and the New Mexico Land Commissioner.

10. The subject Application should be approved and the project should be governed by the provisions of Rule 701 through 708 of the Commission Rules and Regulations.

11. Applicant has filed concurrent with this Application the appropriate Forms C-108 and consolidated attachments for each of the new injection wells.

12. Applicant has sent notice to the offset operators and surface owners as required by Division rules as shown on Exhibit "G" attached hereto.

Respectfully submitted,

KELLAHIN, KELLAHIN & AUBREY

By: 

W. THOMAS KELLAHIN  
Post Office Box 2268  
Santa Fe, New Mexico 87504  
(505) 988-4285

ATTORNEYS FOR CHEVRON U.S.A., INC.

R 36 E R 37 E

UNIT AREA "B"

T  
20  
S

UNIT AREA "B"			
	ACREAGE	PERCENTAGE	
	FEDERAL LANDS	2.280	76.00
	STATE LANDS	400	13.33
	PATENTED LANDS	320	10.67
	TOTAL	3.000	100.00
UNIT AREA B OUTLINE			(90) TRACT NUMBER

UNIT AREA "A"			
	ACREAGE	PERCENTAGE	
	FEDERAL LANDS	2,734.76	19.27
	STATE LANDS	8,274.80	58.32
	PATENTED LANDS	3,180.28	22.41
	TOTAL	14,189.84	100.00
UNIT AREA A OUTLINE			(103) TRACT NUMBER

UNIT AREAS "A" & "B" OF THE EUNICE MONUMENT SOUTH UNIT			
	ACREAGE	PERCENTAGE	
	FEDERAL LANDS	5,014.76	29.17
	STATE LANDS	8,674.80	50.47
	PATENTED LANDS	3,500.28	20.36
	TOTAL	17,189.84	100.00
UNIT BOUNDARY			(90) TRACT NUMBER

SCALE IN MILES  
NOTE: UNLESS OTHERWISE INDICATED THE VARIOUS SECTIONS ON THIS PLAN CONTAIN 640.00 ACRES

R 36 E

R 37 E

UNIT EFFECTIVE 2-1-85

UNIT EXPANSION AREA "B" ADDED EFFECTIVE 1990

REV. 10-4-84  
REV. 2-1-85  
REV. 3-20-90

R 35 E

R 36 E

T  
21  
S

UNIT AREA "A"

R 35 E R 36 E

EXHIBIT "A"

# EUNICE MONUMENT SOUTH UNIT AREA

LEA COUNTY, NEW MEXICO

CHEVRON U.S.A. INC.  
HOUSTON, TEXAS

STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY AND MINERALS  
OIL CONSERVATION COMMISSION

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

CASE No. 8398  
Order No. R-7766

APPLICATION OF GULF OIL CORPORATION  
FOR A WATERFLOOD PROJECT, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This case came on for hearing at 9:00 A.M. on November 7, 1984, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 27th day of December, 1984, the Commission, a quorum having been present, having considered the testimony and the record and being otherwise fully advised in the premises,

FINDS THAT:

- (1) Due public notice has been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Gulf Oil Corporation, in Commission Case 8398, seeks authority to institute a waterflood project in its Eunice Monument South Unit, by the injection of water into the unitized interval which shall include the formations which extend from an upper limit of 100 feet below mean sea level or the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation in the proposed unitized area, all as shown on Exhibit "A" attached to this order.
- (3) The subject Commission Case 8398 was consolidated for hearing with Commission Cases 8397 and 8399.
- (4) Gulf proposes to utilize an 80-acre five spot injection pattern using a well number system and proposed

Unit injection wells all as shown and identified on Exhibit "B" attached hereto.

(5) Said injection wells shall be conversions of existing wells or newly drilled wells as noted on said Exhibit "B".

(6) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) The producing formations in the proposed project area are in an advanced stage of depletion and the area is suitable for waterflooding.

(8) There are five wells within or adjacent to the proposed project which may not have been completed or plugged in a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.

(9) The five possible problem wells are identified and described on Exhibit "C" attached hereto.

(10) Prior to instituting injection within one-half mile of any of the five possible "problem wells" Gulf shall first contact the Oil Conservation Division's District Supervisor at Hobbs to develop a plan acceptable to the Director of said Division for repairing or replugging such wells, for monitoring for determination of fluid movement from the injected interval, or for the drilling of replacement producing wells to lower reservoir pressure and fluid levels in order to protect neighboring properties and to protect other oil or gas zones or fresh water.

(11) The operator should otherwise take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(12) The injection wells or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation in any injection well, but the Division Director should have authority to increase said pressure limitation, should circumstances warrant.

(13) The subject application should be approved and the project should be governed by the provisions of Rule 701 through 708 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Gulf Oil Corporation, is hereby authorized to institute a waterflood project in the Eunice Monument South Unit Area for the acreage described on Exhibit "A" attached hereto and made a part hereof, by the injection of water into the unitized interval which shall include the formations which extend from an upper limit described as 100 feet below mean sea level or at the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation said geologic markers having been as found to occur at 3,666 feet to 5,283 feet, respectively, in the Continental Oil Company's Meyer B-4 Well No. 23 located 660 feet from the South line and 1980 feet from the East line of Section 4, Township 21 South, Range 36 East, Lea County, New Mexico.

(2) Applicant, Gulf Oil Corporation, is hereby authorized to utilize for injection purposes the wells identified and described on Exhibit "B" attached hereto and made a part hereof.

(3) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation, provided however, the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such pressure will not result in fracturing of the confining strata.

(4) Injection into each of said wells shall be through plastic or cement-lined tubing, set in a packer which shall be located as near as practicable to the uppermost perforations, or, in the case of open-hole completions, as near as practicable to the casing-shoe; that the casing-tubing annulus shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention attracting leak detection device.

(5) Prior to injection into any well located within one-half mile of any of the five wells listed on Exhibit "C" attached to this order, the applicant shall consult with the supervisor of the Oil Conservation Division's district office at Hobbs to develop a plan acceptable to

the Director of said Division, for the repairing, plugging, or replugging of said wells or for the monitoring for determination of fluid movement from the injected interval or for the drilling of producing wells to lower reservoir pressure and fluid levels in the vicinity of said wells in order to protect neighboring properties and to protect other oil or gas zones or fresh water.

(6) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(7) The authorized subject waterflood project is hereby designated the Eunice Monument South Unit Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Commission Rules and Regulations.

(8) Monthly progress reports of the waterflood projects herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(9) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

-5-

Case No. 8398  
Order No. R-7766

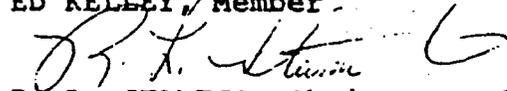
DONE at Santa Fe, New Mexico, on the day and year  
hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

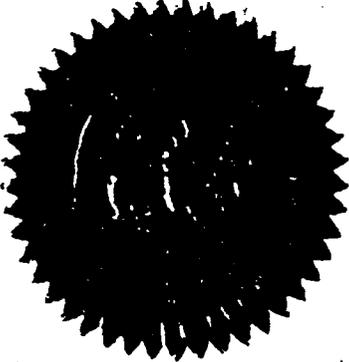
JIM BACA, Member



ED KELLEY, Member



R. L. STAMETS, Chairman and  
Secretary



S E A L

LEA COUNTY, NEW MEXICO

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM

Section 25: All

Section 36: All

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM

Section 30: S/2, S/2 N/2, NE/4 NW/4 and NW/4 NE/4

Section 31: All

Section 32: All

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM

Section 2: S/2 S/2

Section 3: Lots 3, 4, 5, 6, 11, 12, 13, and 14  
and S/2

Sections 4 through 11: All

Section 12: W/2 SW/4

Section 13: NW/4 NW/4

Sections 14 through 18: All

Section 21: N/2 and N/2 S/2

Section 22: N/2 and N/2 S/2

CASE NO. 8398  
ORDER NO. R-7766  
EXHIBIT "A"

LEA COUNTY, NEW MEXICO

179	D	3	21	36
181	B	4	21	36
183	D	4	21	36
185	B	5	21	36
187	D	5	21	36
189	B	6	21	36
191	D	6	21	36
193	F	6	21	36
195	H	6	21	36
197	F	5	21	36
199	H	5	21	36
201	F	4	21	36
203	H	4	21	36
205	F	3	21	36
207	L	3	21	36
209	J	4	21	36
211	L	4	21	36
213	J	5	21	36
215	L	5	21	36
217	J	6	21	36
219	L	6	21	36
221	N	6	21	36
223	P	6	21	36
225	N	5	21	36
227	P	5	21	36
229	N	4	21	36
231	P	4	21	36
233	N	3	21	36
235	R	3	21	36
237	T	3	21	36
239	R	4	21	36
241	T	4	21	36
243	R	5	21	36
245	T	5	21	36
247	R	6	21	36

N

N

N

CASE NO. 8398  
ORDER NO. R-7766  
EXHIBIT "B"

LEA COUNTY, NEW MEXICO

UNIT WELL NO.	UNIT LETTER	SECTION-TOWNSHIP-RANGE		NEW WELL
		SOUTH	EAST	
101	C	30	20 37	N
102	A	25	20 36	
104	C	25	20 36	
106	E	25	20 36	
108	G	25	20 36	
110	E	30	20 37	
112	G	30	20 37	
114	I	30	20 37	
116	K	30	20 37	
118	I	25	20 36	
120	K	25	20 36	
122	M	25	20 36	
124	O	25	20 36	
126	M	30	20 37	
128	O	30	20 37	
130	A	32	20 37	N
132	C	32	20 37	
134	A	31	20 37	
136	C	31	20 37	
138	A	36	20 36	
140	C	36	20 36	
142	E	36	20 36	
144	G	36	20 36	
146	E	31	20 37	
148	G	31	20 37	
150	E	32	20 37	
152	G	32	20 37	
154	I	32	20 37	N
156	K	32	20 37	
158	I	31	20 37	
160	K	31	20 37	
162	I	36	20 36	
164	K	36	20 36	
166	M	36	20 36	
168	O	36	20 36	
170	M	31	20 37	
172	O	31	20 37	
174	M	32	20 37	
176	O	32	20 37	

CASE NO. 8398  
ORDER NO. R-7766  
EXHIBIT "B"

LEA COUNTY, NEW MEXICO

249	T	6	21	36
251	V	6	21	36
253	X	6	21	36
255	V	5	21	36
257	X	5	21	36
259	V	4	21	36
261	X	4	21	36
263	V	3	21	36
265	X	3	21	36
267	V	2	21	36
269	X	2	21	36
271	B	11	21	36
273	D	11	21	36
275	B	10	21	36
277	D	10	21	36
279	B	9	21	36
281	D	9	21	36
283	B	8	21	36
285	D	8	21	36
287	B	7	21	36
289	D	7	21	36
291	F	7	21	36
293	H	7	21	36
295	F	8	21	36
297	H	8	21	36
299	F	9	21	36
301	H	9	21	36
303	F	10	21	36
305	H	10	21	36
307	F	11	21	36
309	H	11	21	36
310	L	12	21	36
312	J	11	21	36
314	L	11	21	36
316	J	10	21	36
318	L	10	21	36
320	J	9	21	36
322	L	9	21	36
324	J	8	21	36

CASE NO. 8398  
ORDER NO. R-7766  
EXHIBIT "B"

LEA COUNTY, NEW MEXICO

326	L	8	21	36
328	J	7	21	36
330	L	7	21	36
332	N	7	21	36
334	P	7	21	36
336	N	8	21	36
338	P	8	21	36
340	N	9	21	36
342	P	9	21	36
344	N	10	21	36
346	P	10	21	36
348	N	11	21	36
350	P	11	21	36
352	D	13	21	36
354	B	14	21	36
356	D	14	21	36
358	B	15	21	36
360	D	15	21	36
362	B	16	21	36
364	D	16	21	36
366	B	17	21	36
368	D	17	21	36
370	B	18	21	36
372	D	18	21	36
374	F	18	21	36
376	H	18	21	36
378	F	17	21	36
380	H	17	21	36
382	F	16	21	36
384	H	16	21	36
386	F	15	21	36
388	H	15	21	36
390	F	14	21	36
392	H	14	21	36
394	J	14	21	36
396	L	14	21	36
398	J	15	21	36
400	L	15	21	36
402	J	16	21	36
404	L	16	21	36

N

CASE NO. 8398  
ORDER NO. R-7766  
EXHIBIT "B"

LEA COUNTY, NEW MEXICO

406	J	17	21	36
408	L	17	21	36
410	J	18	21	36
412	L	18	21	36
414	N	18	21	36
416	P	18	21	36
418	N	17	21	36
420	P	17	21	36
422	N	16	21	36
424	P	16	21	36
426	N	15	21	36
428	P	15	21	36
430	N	14	21	36
432	P	14	21	36
434	B	22	21	36
436	D	22	21	36
438	B	21	21	36
440	D	21	21	36
442	F	21	21	36
444	H	21	21	36
446	F	22	21	36
448	H	22	21	36
450	J	22	21	36
454	J	21	21	36
456	L	21	21	36
452	L	22	21	36

CASE 8398  
ORDER NO. R-8398  
EXHIBIT "B"

- (1) Amoco Production Co. State "C" Tr. 11 Well No. 3  
located 1980 feet from the South line and 1980 feet from  
the East line of Section 2, Township 21 South, Range 36  
East;
- (2) Amoco Production Co. State "C" Tr. 11 Well No. 4  
located 3300 feet from the South line and 1980 feet from  
the East line of Section 2, Township 21 South, Range 36  
East;
- (3) Texas Crude Oil Co. Kincheloe 2 State Well No. 1  
located 1980 feet from the South line and 1980 feet from  
the West line of Section 2, Township 21 South, Range 36  
East;
- (4) El Paso Natural Gas Co. Coleman Well No. 1  
located 2310 feet from the South line and 2310 feet from  
the East line of Section 17, Township 21 South, Range 36  
East;
- (5) Texaco Inc. New Mexico "H" NCT-1 Well No. 28, a dry  
hole, located 990 feet from the South line and 660  
feet from the East line of Section 31, Township 20 South,  
Range 37 East;

all in Lea County, New Mexico.

CASE NO. 8398  
Order No. R-7766  
EXHIBIT "C"

# R 36 E

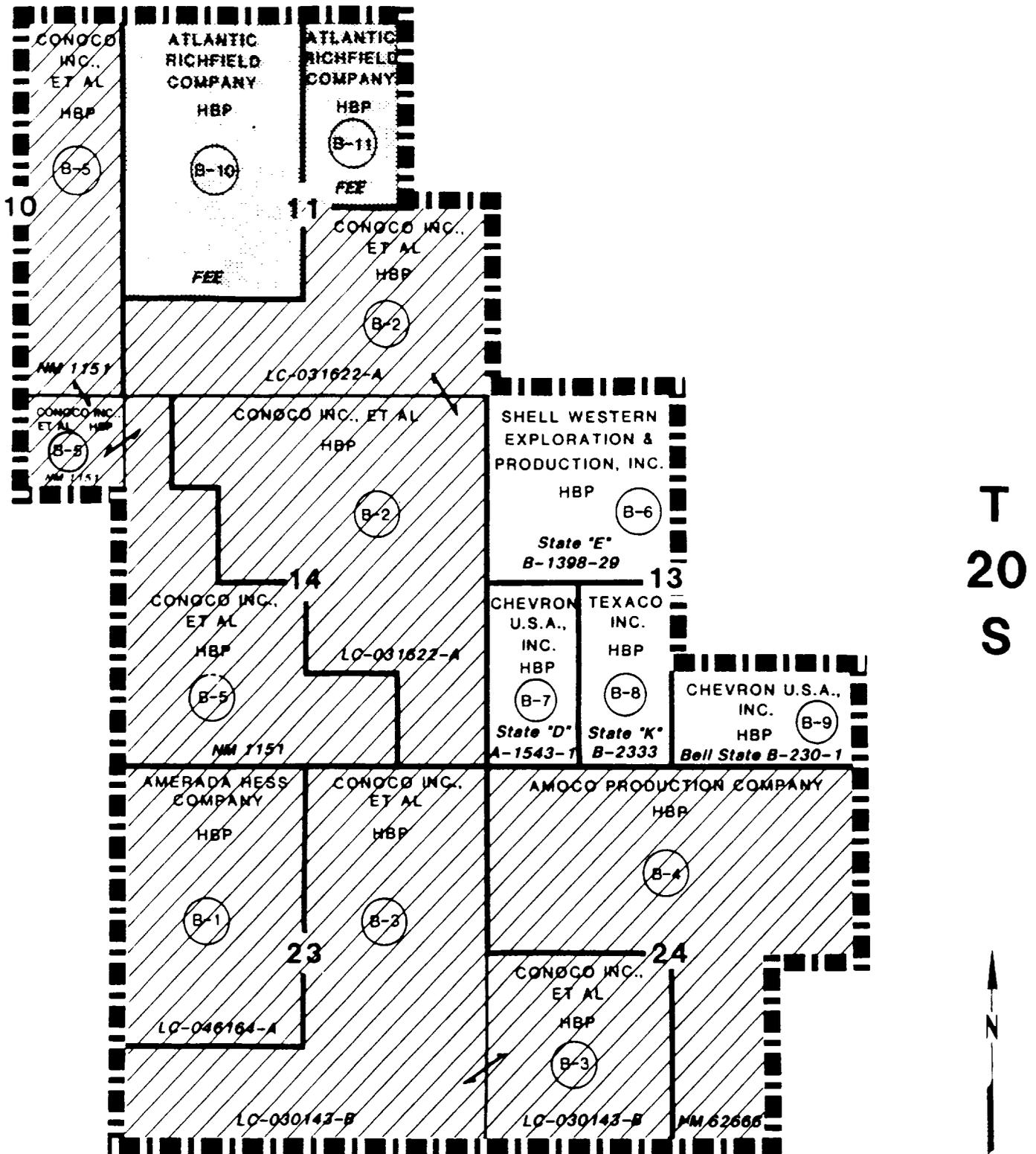
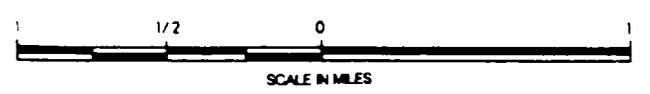


EXHIBIT "C"

	ACREAGE	PERCENTAGE
	FEDERAL LANDS	2280 76.00
	STATE LANDS	400 13.33
	PATENTED LANDS	320 10.67
	<b>TOTAL</b>	<b>3000 100.00</b>

 UNIT OUTLINE       TRACT NUMBER



NOTE: UNLESS OTHERWISE INDICATED THE VARIOUS SECTIONS ON THIS PLAT CONTAIN 640.00 ACRES

## EUNICE MONUMENT SOUTH UNIT EXPANSION AREA "B"

LEA CO., NEW MEXICO  
UNIT EFFECTIVE 2-1-85  
EXPANDED/REV. --90

CHEVRON U.S.A. INC.  
HOUSTON, TEXAS

EXHIBIT "D"

LEA COUNTY, NEW MEXICO

ORIGINAL UNIT AREA A

TOWNSHIP 20 SOUTH, RANGE 36 EAST, N.M.P.M.

Section 25: All

Section 36: All

TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M.

Section 30: S/2, S/2 N/2, NE/4 NW/4 and NW/4 NE/4

Section 31: All

Section 32: All

TOWNSHIP 21 SOUTH, RANGE 36 EAST N.M.P.M.

Section 2: S/2 S/2

Section 3: Lots 3, 4, 5, 6, 11, 12, 13, and 14  
and S/2

Section 4 through 11: All

Section 12: W/2 SW/4

Section 13: NW/4 NW/4

Sections 14 through 18: All

Section 21: N/2 and N/2 S/2

Section 22: N/2 and N/2 S/2

EXPANSION AREA B

TOWNSHIP 20 SOUTH, RANGE 36 EAST, N.M.P.M.

Section 10: E/2 E/2

Section 11: W/2, W/2 NE/4, SE/4

Section 13: W/2, S/2 SE/4

Section 14: All

Section 15: NE/4 NE/4

Section 23: All

Section 24: N/2, SW/4, W/2 SE/4

LEA COUNTY, NEW MEXICO

Case XXXX  
Order No. R - XXXX

EXHIBIT "E"

Unit Expansion Area B

Unit Well No.	Unit Letter	Section	Township - South	Range - East	New Well
850	B	11	20	36	
851	C	11	20	36	
852	D	11	20	36	
853	A	10	20	36	
854	H	10	20	36	
855	E	11	20	36	
856	F	11	20	36	
857	G	11	20	36	
858	I	11	20	36	
859	J	11	20	36	
860	K	11	20	36	
861	L	11	20	36	
862	I	10	20	36	
863	P	10	20	36	
864	M	11	20	36	
865	N	11	20	36	
866	O	11	20	36	
867	P	11	20	36	
868	C	13	20	36	
869	D	13	20	36	
870	A	14	20	36	
871	B	14	20	36	
872	C	14	20	36	
873	D	14	20	36	
874	A	15	20	36	
875	E	14	20	36	
876	F	14	20	36	
877	G	14	20	36	
878	H	14	20	36	
879	E	13	20	36	
880	F	13	20	36	
881	K	13	20	36	N
882	L	13	20	36	
883	I	14	20	36	
884	J	14	20	36	
885	K	14	20	36	
886	L	14	20	36	
887	M	14	20	36	N
888	N	14	20	36	
889	O	14	20	36	

Unit Expansion Area B - Exhibit "B" continued

890	P	14	20	36	
891	M	13	20	36	
892	N	13	20	36	N
893	O	13	20	36	
894	P	13	20	36	N
895	A	24	20	36	
896	B	24	20	36	
897	C	24	20	36	
898	D	24	20	36	
899	A	23	20	36	
900	B	23	20	36	
901	C	23	20	36	
902	D	23	20	36	
903	E	23	20	36	
904	F	23	20	36	
905	G	23	20	36	
906	H	23	20	36	
907	E	24	20	36	
908	F	24	20	36	
909	G	24	20	36	
910	H	24	20	36	
911	J	24	20	36	
912	K	24	20	36	
913	L	24	20	36	
914	I	23	20	36	
915	J	23	20	36	
916	K	23	20	36	
917	L	23	20	36	
918	M	23	20	36	
919	N	23	20	36	
920	O	23	20	36	
921	P	23	20	36	
922	M	24	20	36	
923	N	24	20	36	
924	O	24	20	36	N

PROPOSED EUNICE MONUMENT SOUTH UNIT EXPANSION AREA B  
 PROPOSED INJECTION WELLS

LOCATION DATA

PROPOSED WELLNO	LEASE NAME	WELLNO	FOOTAGE	UNIT/SEC./T/R	OPERATOR	FIELD/POOL
EMSU 851 WIC	:WILLIAM P. BYRD	: 1	: 330' FNL & 2310' FWL	C-11-20S-36E	:ARCO OIL & GAS	:EUNICE MONUMENT G/SA:
EMSU 853 WIC	:SANDERSON 'B-1'	: 1	: 660' FNL & 330' FEL	A-10-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 855 WIC	:BYRD GAS COM	: 5	: 1650' FNL & 330' FWL	E-11-20S-36E	:ARCO OIL & GAS	:EUMONT Y,7R'S,Q(GAS):
EMSU 857 WIC	:MARY J. BYRD	: 3	: 2310' FNL & 2310' FEL	G-11-20S-36E	:ARCO OIL & GAS	:EUNICE MONUMENT G/SA:
EMSU 858 WIC	:SANDERSON 'A'	: 1	: 1980' FSL & 660' FEL	I-11-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 860 WIC	:WILLIAM P. BYRD	: 3	: 1650' FSL & 2310' FWL	K-11-20S-36E	:ARCO OIL & GAS	:EUNICE MONUMENT G/SA:
EMSU 862 WIC	:SANDERSON 'B-1'	: 3	: 2310' FSL & 330' FEL	I-10-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 864 WIC	:SANDERSON 'A'	: 6	: 990' FSL & 990' FWL	M-11-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 866 WIC	:SANDERSON 'A'	: 4	: 990' FSL & 1650' FEL	O-11-20S-36E	:CONOCO, INC.	:EUN.MON G/SA,EUMONT :
EMSU 868 WIC	:STATE 'E'	: 1	: 660' FNL & 1980' FWL	C-13-20S-36E	:SHELL WESTERN	:EUNICE MONUMENT G/SA:
EMSU 870 WIC	:SANDERSON 'A'	: 7	: 660' FNL & 660' FEL	A-14-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 872 WIC	:SANDERSON 'A'	: 11	: 330' FNL & 2310' FWL	C-14-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 874 WIC	:SANDERSON 'B-1'	: 8	: 330' FNL & 330' FEL	A-15-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 875 WIC	:SANDERSON 'B14'	: 4	: 1650' FNL & 990' FWL	E-14-20S-36E	:CONOCO, INC.	:EUMONT Y,7R'S,Q(OIL):
EMSU 877 WIC	:SANDERSON 'A'	: 13	: 1650' FNL & 1650' FEL	G-14-20S-36E	:CONOCO, INC.	:EUN.MON./EUMONT GAS):
EMSU 879 WIC	:STATE 'E'	: 4	: 1980' FNL & 660' FWL	E-13-20S-36E	:SHELL WESTERN	:EUNICE MONUMENT G/SA:
EMSU 883 WIC	:SANDERSON 'A'	: 10	: 1980' FSL & 660' FEL	I-14-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 885 WIC	:SANDERSON 'B14'	: 2	: 2310' FSL & 2310' FWL	K-14-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 889 WIC	:SANDERSON 'B14'	: 1	: 990' FSL & 1650' FEL	O-14-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 891 WIC	:GRAHAM STATE NCT-H	: 2	: 660' FSL & 660' FWL	M-13-20S-36E	:CHEVRON USA	:EUNICE MONUMENT G/SA:
EMSU 893 WIC	:R. R. BELL NCT-G	: 2	: 660' FSL & 1980' FEL	O-13-20S-36E	:CHEVRON USA	:EUNICE MONUMENT G/SA:
EMSU 895 WIC	:GILLULLY 'A' FEDL.	: 2	: 660' FNL & 660' FEL	A-24-20S-36E	:AMOCO PROD. CO.	:EUNICE MONUMENT G/SA:
EMSU 897 WIC	:GILLULLY 'A' FEDL.	: 9	: 660' FNL & 1980' FWL	C-24-20S-36E	:AMOCO PROD. CO.	:EUNICE MONUMENT G/SA:
EMSU 899 WIC	:REED 'B'	: 1	: 330' FNL & 330' FEL	A-23-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:
EMSU 901 WIC	:H. W. ANDREWS	: 7	: 660' FNL & 2310' FWL	C-23-20S-36E	:AMERADA HESS	:EUMONT Y,7R'S,Q :
EMSU 903 WIC	:H. W. ANDREWS	: 10	: 1980' FNL & 660' FWL	E-23-20S-36E	:AMERADA HESS	:EUMONT Y,7R'S,Q :
EMSU 905 WIC	:REED 'B'	: 8	: 1980' FNL & 1650' FEL	G-23-20S-36E	:CONOCO, INC.	:EUMONT Y,7R'S,Q :
EMSU 907 WIC	:GILLULLY 'A' FEDL.	: 14	: 1980' FNL & 660' FWL	E-24-20S-36E	:AMOCO PROD. CO.	:EUNICE MONUMENT G/SA:
EMSU 909 WIC	:GILLULLY 'A' FEDL.	: 11	: 1980' FNL & 1980' FEL	G-24-20S-36E	:AMOCO PROD. CO.	:EUNICE MONUMENT G/SA:
EMSU 912 WIC	:REED 'B'	: 12	: 1980' FSL & 1980' FWL	K-24-20S-36E	:CONOCO, INC.	:EUN.MON/EUMONT GAS :
EMSU 914 WIC	:REED 'B'	: 5	: 1980' FSL & 330' FEL	I-23-20S-36E	:CONOCO, INC.	:EUMONT Y,7R'S,Q :
EMSU 916 WIC	:H. W. ANDREWS	: 9	: 1980' FSL & 1980' FWL	K-23-20S-36E	:AMERADA HESS	:EUMONT Y,7R'S,Q :
EMSU 918 WIC	:REED 'B'	: 9	: 660' FSL & 660' FWL	M-23-20S-36E	:CONOCO, INC.	:EUMONT Y,7R'S,Q :
EMSU 920 WIC	:REED 'B'	: 6	: 990' FSL & 1650' FEL	O-23-20S-36E	:CONOCO, INC.	:EUMONT Y,7R'S,Q :
EMSU 922 WIC	:REED 'B'	: 13	: 660' FSL & 990' FWL	M-24-20S-36E	:CONOCO, INC.	:EUNICE MONUMENT G/SA:

PROPOSED NEW INJECTION WELLS

PROPOSED WELLNO	TENTATIVE LOCATION
EMSU 881 WI	1935' FSL & 705' FWL SEC.13 T20S R36E (UNIT K) LEA COUNTY, NEW MEXICO
EMSU 887 WI	660' FSL & 660' FWL SEC.14 T20S R36E (UNIT M) LEA COUNTY, NEW MEXICO
EMSU 924 WI	705' FSL & 2025' FEL SEC.24 T20S R36E (UNIT O) LEA COUNTY, NEW MEXICO

Edward H. Klein Estate  
P. O. Box 1502  
Hobbs, New Mexico 88240

Delbert Dale & Jimmy T. Cooper  
Box 421  
Monument, NM 88265

State of New Mexico  
Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, NM 87504

ATTN: Mr. Floyd Prondo

United States Dept. of Interior  
Bureau of Land Management  
Roswell District Office  
P. O. Box 1397  
Roswell, NM 88201

ATTN: Mr. Armando Lopez

United States Dept. of Interior  
Bureau of Land Management  
Roswell District Office  
P. O. Box 1397  
Roswell, NM 88201

ATTN: Mr. Armando Lopez

State of New Mexico  
Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, NM 87504

ATTN: Mr. Floyd Prondo

State of New Mexico  
Department of Energy & Minerals  
Oil Conservation Division  
District 1  
P. O. Box 1980  
Hobbs, NM 88240

ATTN: Mr. Jerry Sexton

Durham, Inc.  
P. O. Drawer 273  
Midland, TX 79702

Texaco Producing, Inc.  
P. O. Box 46555  
Denver, CO. 80201-6555

Elliot Oil Co.  
P. O. Box 1355  
Roswell, NM 88202

Two States Oil Company  
Suite 960  
Thanksgiving Tower  
Dallas, TX 75201

Greenhill Petroleum  
16010 Barker's Point Lane  
Suite 325  
Houston, TX 77079

Warrior Inc.  
c/o Unique Engineering  
P. O. Box 5970  
Hobbs, NM 88240

Meridian Oil Co.  
21 Desta Drive  
Midland, TX 79705

Mobil Expl. & Prod. U.S. Inc.  
12450 Greenspoint Drive  
Houston, TX 77060-1991

Penroc Oil  
P. O. Box 5970  
Hobbs, NM 88241

Phillips Petroleum Co.  
P. O. Box 1967  
Houston, TX 77001

## Amerada Hess Corporation

P. O. Box 2040  
Tulsa, OK 74102

ATTN: Mr. J. C. Hefley

## Amoco Production Company

P. O. Box 3092  
Houston, TX 77253

ATTN: Mr. J. C. Allen

## Arco Oil and Gas Company

P. O. Box 1610  
Midland, TX 79702

ATTN: Mr. D. C. Dodd  
Mr. J. A. Nicholson

## Chevron U.S.A., Inc.

P. O. Box 670  
Hobbs, NM 88240

ATTN: Mr. J. C. Prindle

## Conoco, Inc.

10 Desta Drive West  
Midland, TX 79705

ATTN: Joint Interest Operations

## Shell Western E&amp;P, Inc.

P. O. Box 576  
Houston, TX 77001

Attn: Mr. J. H. Smitherman

RECEIVED

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose:  Secondary Recovery  Pressure Maintenance  Disposal  Storage  
Application qualifies for administrative approval?  yes  no

JUL 25 1990  
OIL CONSERVATION DIV.  
SANTA FE

II. Operator: Chevron U.S.A. Inc.

Address: P.O. Box 670 Hobbs, New Mexico 88240

Contact party: J. D. Dolan Phone: 505-393-4121

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project?  yes  no  
If yes, give the Division order number authorizing the project R-7766

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 source 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.

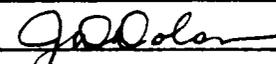
XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

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: Jimmy D. Dolan Title Reservoir Engineer

Signature:  Date: 7-9-90

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

## 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.

## IV. 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, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

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

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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.

III: Typographical  
Schematics



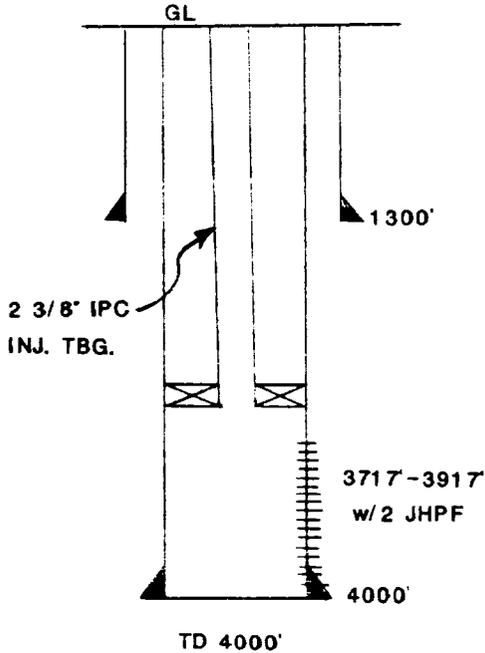
INJECTION WELL DATA SHEET

Chevron U.S.A. Inc.  
OPERATOR

Eunice Monument South Unit Expansion Area B  
LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE  
Proposed New Injection Well

SCHEMATICS



TUBULAR DATA

Surface Casing

Size 8-5/8 " Cemented with 800 sx  
TOC Surf \_\_\_\_\_ feet determined by Circ.  
Hole size 12-1/4

Long String

Size 5-1/2 " Cemented with 800 sx  
TOC Surf \_\_\_\_\_ feet determined by Circ.  
Hole Size 7-7/8"  
Total Depth 4000'

Injection interval

3717 feet to 3917 feet  
(perforated)

Tubing size 2-3/8" lined with IPC set in a Nickel Plated  
(Material)  
Baker Model AD-1 Tension packer at 3617 feet (or describe any other casing-tubing  
(Brand and Model)  
seal).

Other Data

1. Name of the injection formation Crayburg
2. Name of Field or Pool (if applicable) Eunice Monument
3. Is this a new well drilled for injection? X Yes        No  
If no, for what purpose was the well originally drilled? \_\_\_\_\_
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2600' to top of Eumont for overlying zone.

INJECTION WELL DATA SHEET

Chevron U.S.A. Inc.  
OPERATOR

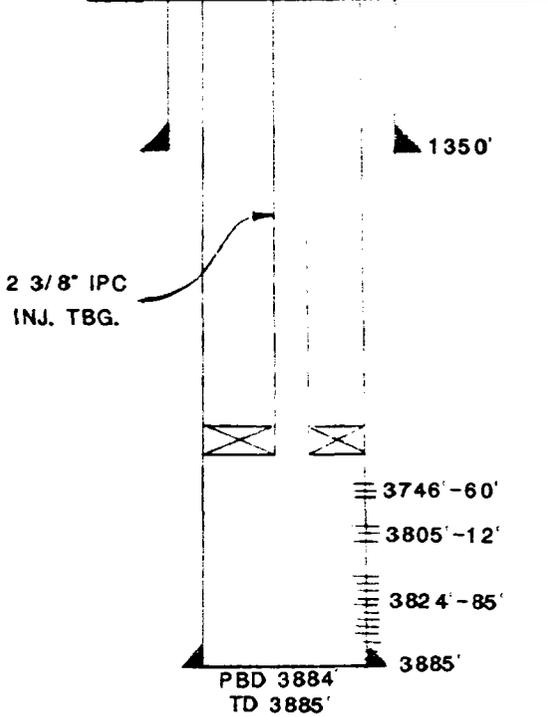
Eunice Monument South Unit Expansion Area B  
LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE  
Two casing strings

SCHEMATICS

TUBULAR DATA

DF - 3583'



Surface Casing

Size 8-5/8 " Cemented with 800 sx  
TOC Surf feet determined by Circ.  
Hole size 11

Long String

Size 5-1/2 " Cemented with 500 sx  
TOC 83 feet determined by TS  
Hole Size 6-3/4"  
Total Depth 3885'

Injection interval

3746 feet to 3885 feet  
(perforated)

Tubing size 2-3/8" lined with IPC set in a Nickel Plated  
(Material)

Baker Model AD-1 Tension packer at 3646 feet (or describe any other casing-tubing  
(Brand and Model) seal).

Other Data

- Name of the injection formation Grayburg
- Name of Field or Pool (if applicable) Eunice Monument
- Is this a new well drilled for injection? Yes  No  
If no, for what purpose was the well originally drilled? Oil Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
- Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2600' to top of Eumont for overlying zone.

INJECTION WELL DATA SHEET

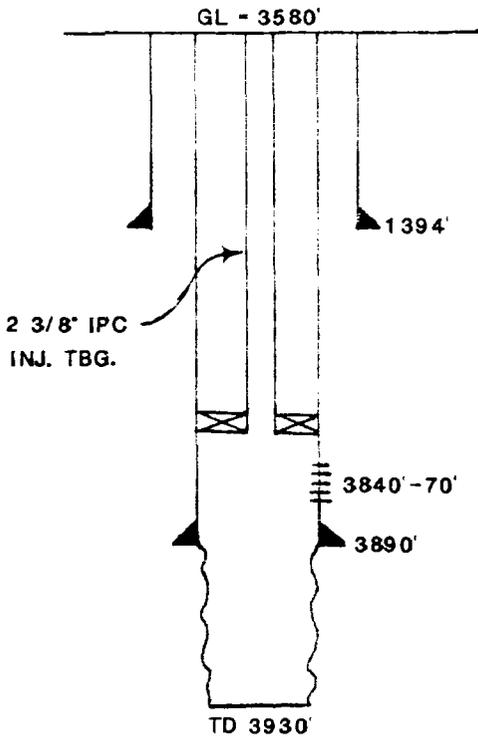
Chevron U.S.A. Inc.  
OPERATOR

Eunice Monument South Unit Expansion Area B  
LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE  
Two strings casing with open hole and casing perforations.

SCHEMATICS

TUBULAR DATA



Surface Casing

Size 8-5/8 " Cemented with 800 sx  
TOC Surf feet determined by Circ.  
Hole size 11"

Long String

Size 5-1/2 " Cemented with 450 sx  
TOC 425 feet determined by IS  
Hole Size 6-3/4"  
Total Depth 3930'

Injection interval

3840 feet to 3930 feet  
(perforated and open hole)

Tubing size 2-3/8" lined with IPC set in a Nickel Plated  
(Material)

Baker Model AD-1 Tension packer at 3740 feet (or describe any other casing-tubing  
(Brand and Model) seal).

Other Data

1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Eunice Monument
3. Is this a new well drilled for injection? Yes  No  
If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2600' to top of Eumont for overlying zone.

INJECTION WELL DATA SHEET

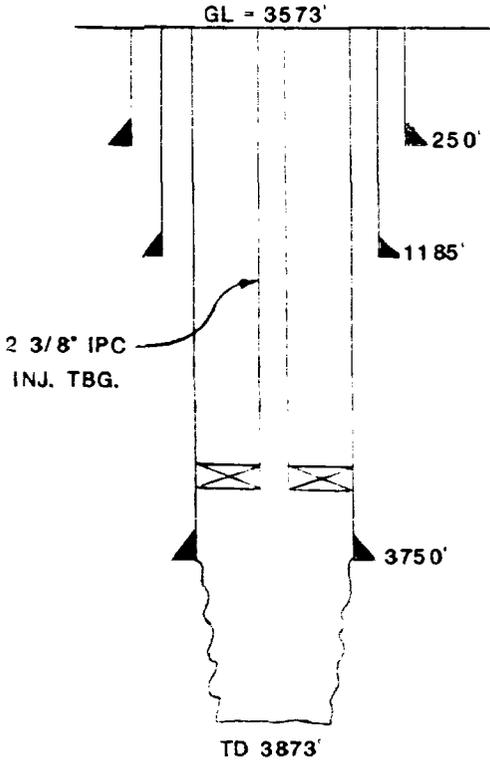
Chevron U.S.A. Inc.  
OPERATOR

Eunice Monument South Unit Expansion Area B  
LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE  
Three strings open hole

SCHEMATICS

TUBULAR DATA



Surface Casing

Size 10-3/4 " Cemented with 225 sx  
TOC Surf feet determined by Calc.  
Hole size 12-1/4"

Intermediate Casing

Size 7-5/8 " Cemented with 425 sx  
TOC Surf feet determined by Calc.  
Hole size 9-7/8"

Long String

Size 5-1/2 " Cemented with 425 sx  
TOC Surf feet determined by Calc.  
Hole Size 6-3/4"  
Total Depth 3873'

Injection interval

3750 feet to 3873 feet  
(~~not cased~~ open hole)

TD 3873'

Tubing size 2-3/8" lined with IPC set in a Nickel Plated  
(Material)

Baker Model AD-1 Tension packer at 3650 feet (or describe any other casing-tubing  
(Brand and Model)  
seal).

Other Data

1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Eunice Monument
3. Is this a new well drilled for injection? Yes  No  
If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2600' to top of Eumont for overlying zone.

INJECTION WELL DATA SHEET

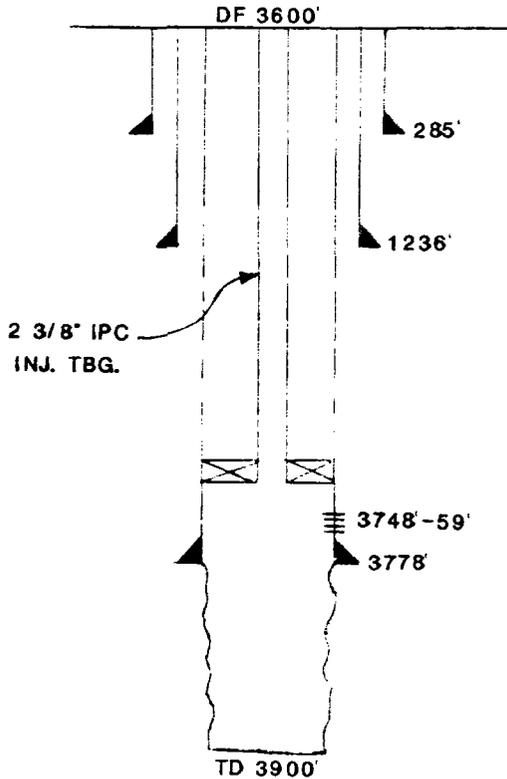
Chevron U.S.A. Inc.  
OPERATOR

Eunice Monument South Unit Expansion Area B  
LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE  
Three strings with open hole and casing perforations.

SCHEMATICS

TUBULAR DATA



Surface Casing

Size 10-3/4 " Cemented with 225 sx  
TOC Surf \_\_\_\_\_ feet determined by Calc.  
Hole size 12-1/4"

Intermediate Casing

Size 7-5/8 " Cemented with 425 sx  
TOC Surf \_\_\_\_\_ feet determined by Calc.  
Hole size 9-7/8"

Long String

Size 5-1/2 " Cemented with 425 sx  
TOC Surf \_\_\_\_\_ feet determined by Calc.  
Hole Size 6-3/4"  
Total Depth 3900'

Injection interval  
3748 feet to 3900 feet  
(perforated and open hole)

Tubing size 2-3/8" lined with IPC set in a Nickel Plated (Material)

Baker Model AD-1 Tension packer at 3648 feet (or describe any other casing-tubing (Brand and Model) seal).

Other Data

1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Eunice Monument
3. Is this a new well drilled for injection? Yes  No  
If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2600' to top of Eumont for overlying zone.

INJECTION WELL DATA SHEET

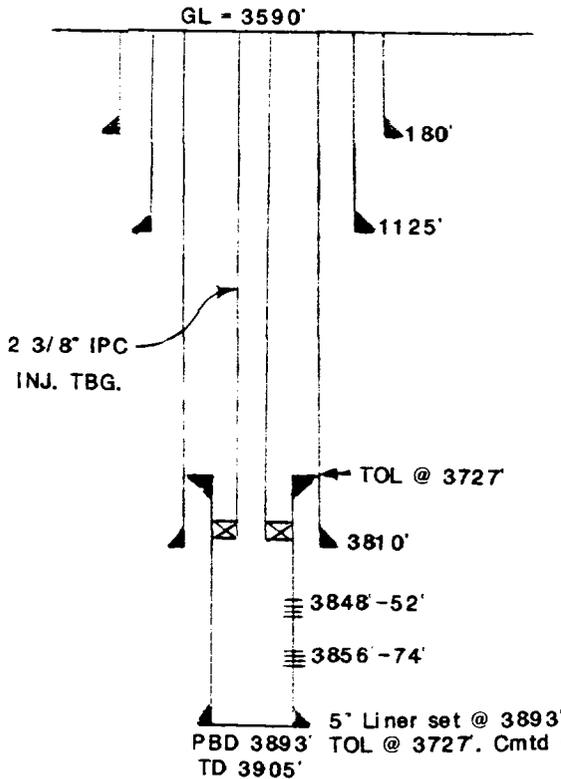
Chevron U.S.A. Inc.  
 OPERATOR

Eunice Monument South Unit Expansion Area B  
 LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE  
 Three strings with liner

SCHEMATICS

TUBULAR DATA



Surface Casing

Size 12-1/2 " Cemented with 2/8 sx  
 TOC Surf feet determined by Circ.  
 Hole size 15-1/2"

Intermediate Casing

Size 9-5/8 " Cemented with 400 sx  
 TOC 420 feet determined by Calc.  
 Hole size 11-1/4"

Long String

Size 7 " Cemented with 300 sx  
 TOC 1966 feet determined by Calc.  
 Hole Size 8-3/4"  
 Total Depth 3905'

Injection interval

3848 feet to 3874 feet  
 (perforated)

5' Liner set @ 3893'  
 PBD 3893 TOL @ 3727. Cmtd w/ 44 sx.  
 TD 3905'

Tubing size 2-3/8" lined with IPC set in a Nickel Plated  
 (Material)

Baker Model AD-1 Tension packer at 3748 feet (or describe any other casing-tubing  
 (Brand and Model)  
 seal).

Other Data

1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Eunice Monument
3. Is this a new well drilled for injection? Yes  No  
 If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2600' to top of Eumont for overlying zone.

V. Area Map