

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

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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

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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.

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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

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EXHIBIT "A"

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	

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EXHIBIT "B"

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	N
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	N
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	N
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	

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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

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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

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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

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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.

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EXHIBIT "C"