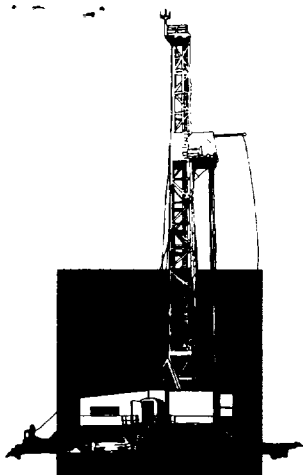




MORANCO

P. O. BOX 1860 HOBBS, NEW MEXICO 88240 (505) 397-3511 (915) 563-0562

December 5, 1977

Mr. Joe Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Expansion of Rice-Hardin Pilot
Water Flood NE/4 Section 13,
T18S, R37E, and NW/4 Section
18, T18S, R38E, Lea County,
New Mexico

Dear Sir:

On November 2, 1970, by Order R-4050 the New Mexico Oil Conservation Commission authorized a water flood on our Rice Lease to inject water into the Rice No. 4, located NW/4 NE/4 Section 13, T18S, R37E. By order No. WFX-411 on March 14, 1974, we received administrative approval to expand the water flood project to include two additional injection wells: Rice No. 1, Unit H 13-18-37 and Hardin No. 3, Unit D 18-18-38.

We now are asking for administrative approval for an additional injection well, the Hardin No. 2, Unit F 18-18-38.

To support the application we are submitting the following required by Rule 701.

1. Attached is a plat of the North portion of the Hobbs Pool. The present and proposed Hardin #2 injection well is identified. Also shown are wells within a 2 mile radius of the proposed injection well. The producing formations are also identified on the plat.
2. Attached is a PGAC log on the Moranco Hardin #2.
3. Attached is a diagrammatic sketch of the proposed injection well indicating the casing data, cementing data, cement tops, producing interval, etc.



The More Hole Per Dollar People!

Mr. Joe Ramey
New Mexico Oil Conservation Commission
December 5, 1977
Page Two

4. The proposed injection zone is the Grayburg at a perforated depth of 4024-4069. The injection fluid will be fresh water from the Ogallala formation. The water well is located near the Rice #1, Unit G 13-18-37. Based on other injection wells, we anticipate a daily volume of approximately 200 barrels of water per day to be injected into the Hardin #2.

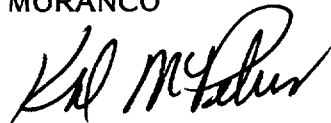
We also support our application with the following requirements by the New Mexico Oil Conservation Commission Memorandum dated 8-24-77.

1. Attached is a step rate test on the Moranco Hardin #3 dated 10-19-77. The fracture pressure is indicated to be 2735 psi. Based on this test and injection pressures necessary on our other injection well, we request that we be granted a maximum surface pressure of 1800 psi.
2. Attached is a tabulation of all the wells within a 1/2 mile radius of the proposed Hardin #2 injection well. Summarized are the data required in the Memorandum of 8-24-77.
3. Attached is a schematic drawing of the Humble Hardin B #1 located E-18-18-38, plugged in 1933. This is the only plugged and abandoned well located within 1/2 mile of the proposed injection well.

We respectfully request that we be granted administrative approval of the Hardin No. 2 injection well. By copy of this letter, we are notifying all offset operators.

Yours very truly,

MORANCO

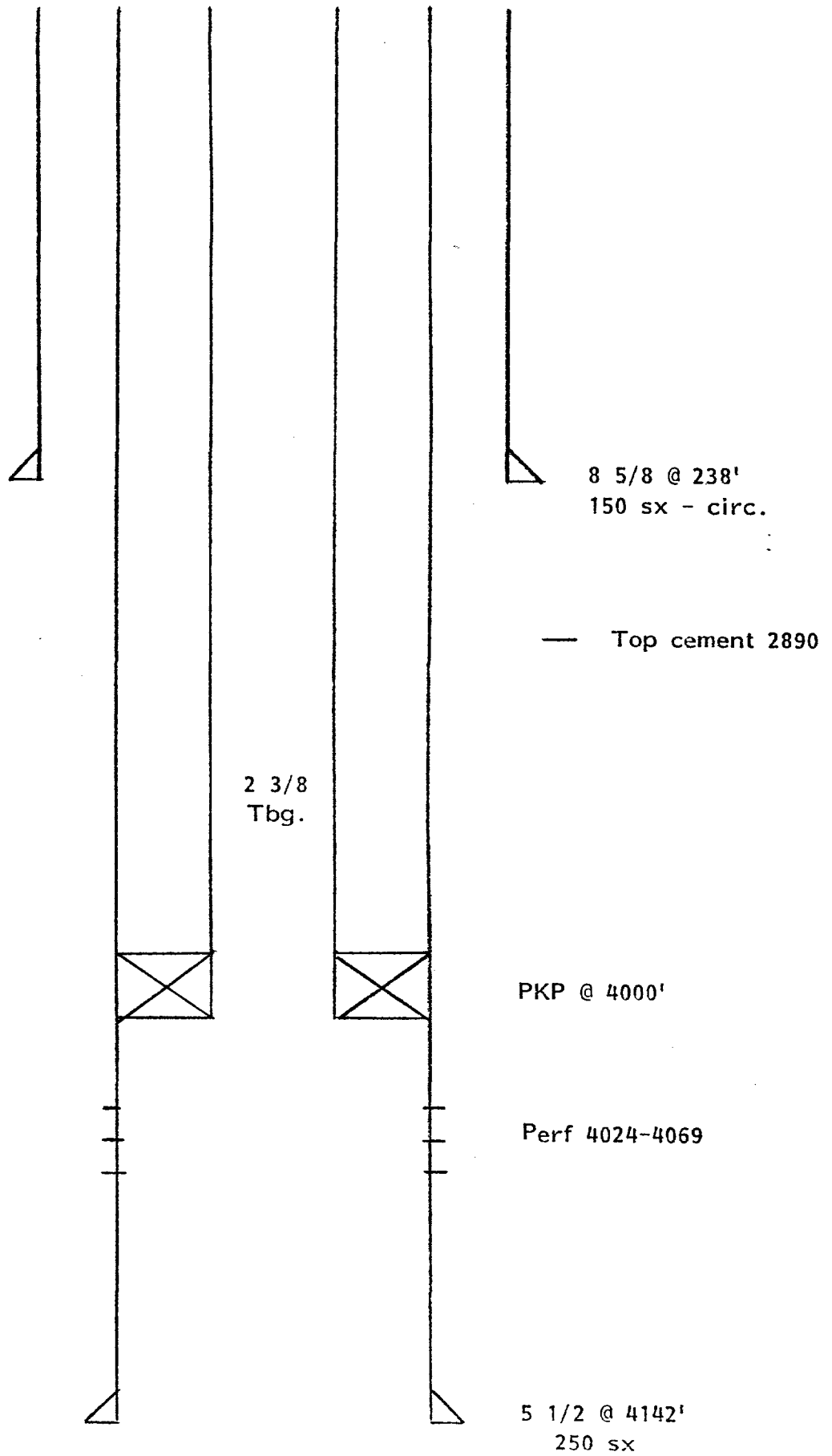


K. D. McPeters

KDM/d
Attach.

cc: Continental Oil Company, P. O. Box 460, Hobbs, NM 88240
Amerada Hess Corp., P. O. Box 817, Seminole, TX 79360
Shell Oil Company, P. O. Box 2648, Houston, TX 77001
Gulf Energy & Minerals Co., P. O. Box 670, Hobbs, NM 88240

DIAGRAMMATIC SKETCH
MORANCO - HARDIN #2
F-18-18-38

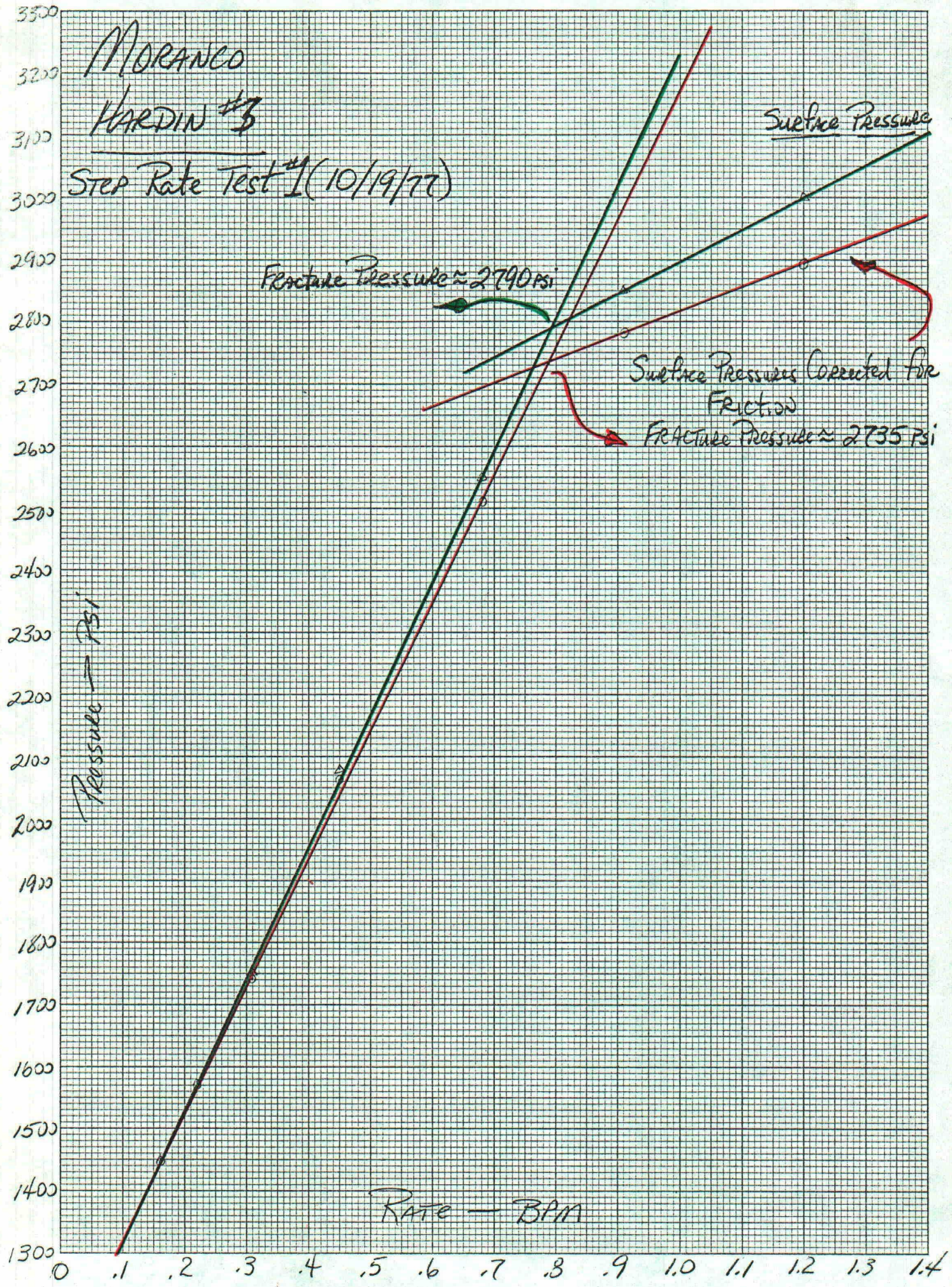


11-28-77

46 1322

10 X 10 TO 1 1/2 INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

MORANCO
HARDIN #3
STEP RATE TEST #1 (10/19/77)



TABULAR SUMMARY OF WELLS 1/2 MILE OF MORANCO HARDIN NO. 2

Well	Location	Csg Data - Cement				TD	Prod. Interval
		Surf	Prod	Other			
MORANCO	Rice #1	C	13-18-37	8 5/8 @ 200' 200 sx - circ	5 1/2 @ 4020' 300 sx TC 2656	4136	OH 4020-4136 Injection Well
MORANCO	Hardin #1	E	18-18-38	8 5/8 @ 338' 200 sx - circ	5 1/2 @ 4126' 2850 sx - circ	4128	Perf 4020-4098
MORANCO	Hardin #3	D	18-18-38	8 5/8 @ 240' 200 sx - circ	4 1/2 @ 4160' 650 sx TC 2740	4169	Perf 4066-4146' Injection Well
MORANCO	Hardin #4	C	18-18-38	8 5/8 @ 222' 200 sx - circ	4 1/2 @ 4194' 400 sx TC 2525	4194	Perf 4087-4162
Gulf	Hardin #1	O	18-18-38	13 3/8 @ 228' 180 sx - circ	7" @ 4024 w/250 sx	4221	Temp. aband. Orig. OH 4024-4221 1951, Perf 4050-4120 4221 w/70 sx
Gulf	Hardin #3	I	18-18-38	8 5/8 @ 428' 325 sx - circ	5 1/2 @ 4199 w/1600 sx	4200	Perf 4094-4146
Gulf	Hardin #4	G	18-18-38	8 5/8 @ 421' 350 sx - circ	4 1/2 @ 4157 w/1400 sx	4170	Perf 4064-4112
Gulf	Hardin #5	J	18-18-38	8 5/8 @ 306' w/310 sx	4 1/2 @ 4158 w/1027 sx	4170	Perf 4052-4107
Gulf	Hardin #6	H	18-18-38	8 5/8 @ 305' w/300 sx	4 1/2 @ 4177 w/350 sx	4177	Perf 4139-4168
Gulf	Hardin #8	A	18-18-38	8 5/8 @ 315' 175 sx - circ	4 1/2 @ 4270 w/305 sx	4270	Perf 4224-4246
Gulf	Hardin #9	O	18-18-38	8 5/8 @ 275 150 sx - circ	5 1/2 @ 4339 w/285 sx	4340	Perf 3999-4049

TABULAR SUMMARY OF WELLS 1/2 MILE OF MORANCO HARDIN NO. 2

Well	Location	Csg Data - Cement				TD	Prod. Interval
		Surf	Prod	Other			
Amerada	Hardin #2	N	18-18-38	12 1/2 @ 228' w/250 sx	7" @ 3937 w/300 sx	9 5/8 @ 2802 w/450 sx 4" liner 4148- 4323 w/35 sx	4152 4325 Temp. aband. Orig. 3937-4152 1968 perf. 3992-4052 deepen
Amerada	Hardin #3	L	18-18-38	12 1/4 @ 225' w/250 sx	7" @ 4134 w/300 sx	9 5/8 @ 2803 w/450 sx	4180 Temp. aband. Perf. 3980-4011
Amerada	Hardin #4	N	18-18-38	7 5/8 @ 440' w/150 sx	5 1/2 @ 3180 w/600 sx		3270 OH 3180-3270 Bowers Well
Amerada	Hardin #5	K	18-18-38	9 5/8 @ 327' w/250 sx	4 1/2 @ 4289 w/185 sx		4290 Temp aband. Perf. 4004-4028

DIAGRAMMATIC SKETCH
Humble Hardin B #1
E - 18-18-38
Plugged and Abandoned 1933

160 sx plug
2700' - 3100'

125 sx plug
3700' - 4010'

8 3/4 Hole

Surface plug ? sx
15 1/2" @ 222' w/225 sx
cement circulated

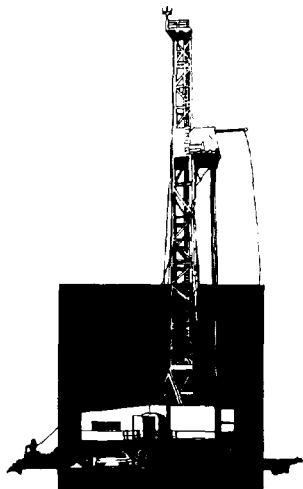
Estimated top cement 1500'

7" stub @ 2700 (est)
9 5/8 @ 2820' w/650 sx

Estimate Top Cement (7") 3000'

7" @ 4010 w/300 sx

TD - 4720



MORANCO

NOV 14 1977

P. O. BOX 1860 HOBBS, NEW MEXICO 88240 (505) 397-3511 (915) 563-0562

November 10, 1977

Mr. Joe Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Expansion of Rice-Hardin Pilot
Water Flood NE/4 Section 13,
T18S, R37E and NW/4 Section 18,
T18S, R38E, Lea County, New
Mexico

Dear Sir:

- ✓ On November 2, 1970, by Order No. R-4050 the New Mexico Oil Conservation Commission authorized a water flood project on our Rice Lease to inject water into the Rice No. 4, located NW/4 NE/4 Section 13, T18S, R37E. On
- ✓ March 14, 1974, by Order No. WFX-411 we received administrative approval to expand the water flood project to include two additional injection wells: Rice No. 1 Unit H 13-18-37 and Hardin No. 3 Unit D 18-18-38.

We now wish to add an additional injection well, the Hardin No. 2 Unit F 18-18-38. See attached map.

We respectfully request administrative approval for the addition of one injection well in the Rice-Hardin water flood project. By copy of this letter we are advising all offset operators.

Yours very truly,

K. D. McPeters

KDM/d

cc: Continental Oil Company, P. O. Box 460, Hobbs, NM 88240
Amerada Hess Corp., P. O. Box 817, Seminole, TX 79360
Shell Oil Company, P. O. Box 2648, Houston, TX 77001
Gulf Energy & Minerals Co., P. O. Box 670, Hobbs, NM 88240

11-19-77: 2 copies to file 761 and 11-20-77 3-77



The More Hole Per Dollar People!

AIRPORT

9-17-78 L-1400 2153	Aztec 9-17-78 L-1400 2153	Schneider 4-15-75 L-2793 10 ⁰⁰	So. Union Sup. 6-1-87 LG-4213 37 ⁸⁹	G.D. Williamson E. D.J. Sorenson 6-1-81 L-6311 12 ⁵⁸	G.D. Williamson E. D.J. Sorenson Brown HBP A-4096	J.B. B.E. Penny Spore (S) LG	J.C. Gomez(S) Surf. Div.	H.B.P. A-4096	Exp'l. H.B.P. A-4096	LG-47 12 ⁵⁸	HBP Jr.	(M.C.) Phenon	Brown, T.D. 5003
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