

Tom Geddie



KERR-MCGEE CORPORATION

KERR-MCGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

PLEASE REPLY TO

EXPLORATION AND PRODUCTION DIVISION
U S ONSHORE REGION
P O BOX 25861
OKLAHOMA CITY, OKLAHOMA 73125

APR 1 1989

PHONE

405 848-9750

April 6, 1989

Working Interest Owners
Proposed K-M Chaveroo San Andres Unit
(see attached list)

Re: Minutes of Working Interest Owner's Meeting
K-M Chaveroo San Andres Unit
Sections 1 & 2-T8S-R33E
Chaveroo Field
Chaves County, NM

Gentlemen:

A meeting of the working interest owners in the proposed K-M Chaveroo San Andres Unit was held at 10:00 a.m. on April 4, 1989 in Kerr-McGee's U. S. Onshore Region office in Oklahoma City, OK. Attachment 1 is a list of those in attendance. The meeting was requested by Kerr-McGee and was chaired by Kerr-McGee. The purpose of the meeting was to obtain agreement on Kerr-McGee's waterflood plans and on unit participation for the proposed unit.

Information was presented on the current status of wells in the project area and on analogous San Andres waterfloods in this vicinity of New Mexico. Anticipated secondary oil recovery and estimated operating costs and capital investments were presented by Kerr-McGee. Attachment 2 is a copy of data provided to the participants at the meeting. There were no objections to Kerr-McGee's waterflood plans or estimated costs. The Unit Agreement and Unit Operating Agreement were not discussed in any detail. However, it was noted that the draft agreements previously submitted to the working interest owners would be finalized after approval of the Unit Agreement is received from the New Mexico Department of Public Lands.

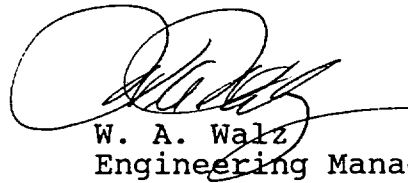
Possible parameters for unit participation were presented by Kerr-McGee, with the conclusion that cumulative primary oil production was a fair and equitable parameter for determining participation. Kerr-McGee made a motion that the unit participation formula be based 100% on cumulative oil production through 12-31-88. Warren American seconded the motion and it carried unanimously. Kerr-McGee stated that their target date for submission of a secondary recovery unit application to the New Mexico Commission was May 1, 1989. Bristol and Warren American

OIL COMPANY	
Kerr-McGee	8
CASE NO.	9682 + 9683

were in full support of getting the unit formed and initiating secondary operations as soon as possible.

Bristol and Warren American both agreed to place a value on their interest in the Levick State "2" No. 1 and make a counter-proposal to Kerr-McGee on the purchase offer Kerr-McGee made previously. Bristol and Warren American stated they should be able to do this within two weeks.

There being no further business, the meeting was adjourned at 11:30 a.m.

A handwritten signature in black ink, appearing to read 'W. A. Walz', is written over the typed name and title.

W. A. Walz
Engineering Manager

FBC/cew

WORKING INTEREST OWNERS
PROPOSED K-M CHAVEROO SAN ANDRES UNIT

Bristol Resources Corp.
Attention: Mr. Bob Key
3601 East 51st St., Suites B & C
Tulsa, Oklahoma 74136

Warren American Oil Co.
Attention: Mr. Paul Woodul
P. O. Box 470372
Tulsa, Oklahoma 74147-0372

Kerr-McGee Corporation
Attention: Mr. Wayne Walz
4005 N. W. Expressway
Oklahoma City, Oklahoma 73116

ATTACHMENT 1

PROPOSED K-M CHAVEROO SAN ANDRES UNIT
MEETING OF WORKING INTEREST OWNERS

April 4, 1989
10:00 a.m.

NAME	TELEPHONE	COMPANY REPRESENTING	LOCATION
Bob Quance	(405) 848-9750	Kerr-McGee	Oklahoma City
Ivan D. Geddie	(405) 848-9750	Kerr-McGee	Oklahoma City
Floyd (Beef) Chambers	(405) 848-9750	Kerr-McGee	Oklahoma City
Dave Christian	(405) 270-3869	Kerr-McGee	Oklahoma City
Bob Key	(918) 747-9817	Bristol Resources	Tulsa
Paul J. Woodul	(918) 492-8100	Warren American	Tulsa
Tom Jewell	(918) 492-8100	Warren American	Tulsa

ATTACHMENT 2

AGENDA
PROPOSED K-M CHAVEROO SAN ANDRES UNIT

Kerr-McGee Regional Office
10:00 a.m. - April 4, 1989

1. Introductory Remarks
2. Highlights of Kerr-McGee's waterflood feasibility study dated 7/15/88 and map of waterflood area showing current well status.
3. Current status of project area:
 - Exhibit 1 - 1988 Oil, Gas & Water Production
 - Exhibit 2 - Proposed Unit Participation
 - Exhibit 3 - Summary of Oil Recovery Performance- Analogous Waterfloods
 - Exhibit 4 - Water Supply Agreement
4. Discuss information provided to Bristol & Warren American in Kerr-McGee's letter dated 3/20/89.
5. Agreement on Unit Participation.
6. Review of Unit Agreement and Unit Operating Agreement.
7. Adjustment of Investment.
8. Timetable for Concluding Unit Negotiations on or before 5/1/89.
9. Any other item concerning Secondary Recovery and Unitization.

Attachment: letter to Bristol Resources Corp. dated 3/30/89

RJQ20:lrg02

EXHIBIT I

K-M CHAVEROO SAN ANDRES UNIT
 PRODUCTION FOR 1988
 CHAVES COUNTY, NEW MEXICO

LEASE NAME, WELL	S T R	STATUS	CUMULATIVE THRU 12/31/87	1988												CUM. TOTAL THRU 12/31/88			
				JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.		TOTAL		
STATE F #1D	2 T8S R33E	S	OIL 68269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68269
			GAS 74842	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74842
			WTR 8539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8539
#2C	2 T8S R33E	P	OIL 67368	28	30	30	49	51	25	52	22	68	47	45	53	245	500	500	67868
			GAS 99777	214	258	249	240	237	274	301	237	261	294	134	61	245	2944	2944	102721
			WTR 11420	56	60	90	49	51	50	26	44	30	24	57	67	53	598	598	12018
#3E	2 T8S R33E	P	OIL 82667	56	60	59	49	51	51	52	65	45	70	67	53	678	678	83345	
			GAS 97009	89	107	104	100	99	114	125	99	109	122	56	102	1226	1226	98235	
			WTR 35318	84	90	118	74	77	77	104	43	89	47	86	61	950	950	36268	
#4F	2 T8S R33E	P	OIL 114502	56	60	89	49	51	51	52	65	68	70	45	53	709	709	115211	
			GAS 176935	214	258	249	240	237	274	301	237	261	293	134	245	2943	2943	179878	
			WTR 22450	112	120	148	98	77	102	104	65	89	93	114	122	1244	1244	23694	
#5L	2 T8S R33E	P	OIL 181889	250	181	178	293	206	177	158	172	136	164	134	157	2206	2206	184095	
			GAS 214006	232	279	270	180	178	91	225	177	196	221	100	184	2333	2333	216339	
			WTR 11389	0	0	0	24	0	0	22	30	0	0	29	0	105	105	11494	
#6K	2 T8S R33E	P	OIL 129527	84	60	59	49	51	51	53	43	45	47	45	53	640	640	130167	
			GAS 106694	107	129	125	120	119	137	150	118	130	147	67	122	1471	1471	108165	
			WTR 16151	112	90	118	74	77	77	80	65	59	47	57	91	947	947	17098	
#7J	2 T8S R33E	P	OIL 85801	56	60	59	49	77	51	79	86	68	47	67	53	752	752	86553	
			GAS 73970	89	107	104	100	99	114	125	99	109	122	56	102	1226	1226	75196	
			WTR 37352	168	150	118	98	103	77	105	65	149	118	172	182	1505	1505	38857	
#8I	2 T8S R33E	P	OIL 91609	84	90	89	73	77	76	79	86	91	94	67	79	985	985	92594	
			GAS 94187	161	193	187	180	178	207	225	177	196	221	100	184	2209	2209	96396	
			WTR 20414	84	90	89	73	77	76	79	65	120	94	143	122	1112	1112	21526	
#10H	2 T8S R33E	S	OIL 99965	28	30	30	24	26	51	0	0	0	0	0	0	189	189	100154	
			GAS 105334	143	172	166	160	158	183	0	0	0	0	0	0	982	982	106316	
			WTR 53609	28	30	30	48	26	77	0	0	0	0	0	0	269	269	53878	
#11H	2 T8S R33E	P	OIL 84212	28	30	30	24	24	51	53	43	45	47	45	79	552	552	84764	
			GAS 127904	161	193	189	180	178	206	225	177	196	221	100	184	2210	2210	130114	
			WTR 6026	28	0	0	0	0	26	53	22	0	24	29	61	320	320	6346	
#12O	2 T8S R33E	P	OIL 83292	111	121	89	97	77	76	79	86	68	70	67	79	1020	1020	84312	
			GAS 78901	54	64	62	59	59	73	76	59	64	73	33	61	733	733	79634	
			WTR 132547	666	635	682	534	513	532	606	366	535	420	515	669	6673	6673	139220	
#13P	2 T8S R33E	P	OIL 61743	56	60	59	49	77	76	79	65	68	70	67	79	805	805	62548	
			GAS 70456	107	130	124	120	119	137	150	118	130	147	67	122	1471	1471	71927	
			WTR 69004	224	240	266	221	231	228	211	173	178	163	200	213	2548	2548	71552	
#14C	2 T8S R33E	P	OIL 15610	111	90	150	97	104	100	105	86	91	118	90	104	1246	1246	16856	
			GAS 34051	410	495	476	459	454	526	577	454	499	564	255	470	5639	5639	39690	
			WTR 54729	749	840	810	703	728	700	814	516	743	632	858	912	9005	9005	63734	

EXHIBIT I

K-M CHAVEROO SAN ANDRES UNIT
 PRODUCTION FOR 1988
 CHAVES COUNTY, NEW MEXICO

LEASE NAME, WELL	S T R	STATUS	CUMULATIVE THRU 12/31/87	1988												CUM. TOTAL THRU 12/31/88		
				JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.		TOTAL	
STATE FU #9E	1	T8S R33E	P	OIL GAS WTR	63253 35041 40053	71 62 71	64 58 96	68 62 102	68 62 102	66 60 99	68 62 102	71 62 107	72 60 75	70 63 105	60 60 87	58 62 103	799 735 1144	64052 35776 41197
STATE C #1B	2	T8S R33E	P	OIL GAS	94111 129906	267 0	253 0	0 0	0 0	84 143	98 130	76 159	62 145	119 141	84 102	88 128	1226 1005	95337 130911
#2A	2	T8S R33E	P	OIL GAS	84589 98633	0 0	0 0	0 0	0 0	77 131	70 120	89 147	88 133	59 130	56 95	59 120	567 917	85156 99550
#3H	2	T8S R33E	P	OIL GAS	24428 109475	0 0	0 0	0 0	0 0	813 90	2024 97	499 120	590 118	421 152	297 110	268 139	5586 1008	30014 110483
#4D	1	T8S R33E	P	OIL GAS	51232 34045	0 0	0 0	0 0	0 0	154 1277	141 1190	172 738	157 787	546 56	355 56	375 59	8199 615	59431 34660
LEVICK STATE #1G	2	T8S R33E	P	OIL GAS WTR	93029 140197 36562	107 225 81	102 321 77	103 260 78	102 235 102	100 209 100	92 325 92	90 305 90	100 290 101	98 279 0	87 306 120	92 301 155	1174 3290 1097	94203 143487 37659
TOTAL				OIL GAS WTR	1644956 1912194 725778	1393 2268 2463	1291 2764 2518	1092 2627 2679	1396 2747 5670	1417 2606 4558	1336 3389 8328	1323 2956 3813	1292 3081 4658	1342 3331 3327	1166 1877 3562	1286 2899 3957	15671 33717 51624	1660627 1945911 777402

EXHIBIT 2

PROPOSED K-M CHAVEROO SAN ANDRES UNIT
 DERIVATION OF TRACT PARTICIPATION FACTORS
 CHAVEROO SAN ANDRES POOL
 PARTICIPATION

TRACT	OPERATOR LEASE	ORIGINAL WELL #	WELL LOCATION	STATUS	NEW UNIT WELL #	TOTAL PRIMARY RECOVERY TO 31 DECEMBER 1988 BBLs	TRACT PARTICIPATION FACTOR
1	Kerr-McGee State F	1D	2 8S 33E	P	02-04	68,269	
		2C	2 8S 33E	P	02-03	67,868	
		3E	2 8S 33E	P	02-05	83,345	
		4F	2 8S 33E	P	02-06	115,211	
		5L	2 8S 33E	P	02-12	184,095	
		6K	2 8S 33E	P	02-11	130,167	
		7J	2 8S 33E	P	02-10	86,553	
		8I	2 8S 33E	P	02-09	92,594	
		10N	2 8S 33E	P	02-14	100,154	
		11M	2 8S 33E	P	02-13	84,764	
		12O	2 8S 33E	P	02-15	84,312	
		13P	2 8S 33E	P	02-16	62,548	
		14C	2 8S 33E	P	02-03	16,856	
						=====	
						1,176,736	70.860945
2	Bristol Levick State "2"	1G	2 8S 33E	P	02-07	94,203	
						=====	
						94,203	5.672738
3	Kerr-McGee State C	1B	2 8S 33E	P	02-02	95,337	
		2A	2 8S 33E	P	02-01	85,156	
		3H	2 8S 33E	P	02-08	110,483	
		4D	1 8S 33E	P	01-04	34,660	
		5C	1 8S 33E	SWD	01-03	0	
						=====	
						325,636	19.609220
4	Kerr-McGee State FU	9E	1 8S 33E	P	01-05	64,052	
						=====	
						64,052	3.857097
TOTALS						1,660,627	100.000000

RJQ:lrg01a1

EXHIBIT 3

SUMMARY OF OIL RECOVERY PERFORMANCE - ANALOGOUS WATERFLOODS

OPERATOR/PROJECT	# OF PROD WELLS	PROD AREA (ACRES)	MBO	ULTIMATE PRIMARY BO/WELL	MBO	ULTIMATE SECONDARY BO/WELL	SPI BO/I
FINA HORTON FEDERAL UNIT	30	1200	1,940	65,000	2,367	79,000	1.21
COASTAL STATES FLYING "M" UNIT	43	3440	3,000	70,000	2,654	61,700	0.81
CHAMPLIN LAUCK-FEDERAL #29M	2	80	51	25,500	44	22,000	0.81
AVERAGE:				53,500		54,200	1.01
KERR-McGEE STATE "C" LEASE	4	160	325	81,250			
KERR-McGEE STATE "F" LEASE	13	480	1,177	90,500			
KERR-McGEE STATE "FU" LEASE	1	40	64	64,000			
	18	680	1,566	87,000			
BRISTOL LEVICK STATE "2" LEASE	1	40	94	94,000			
SPR - 0.70 AS OF 1/1/88	19	720	1,660	87,400			



KERR-McGEE CORPORATION

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

PLEASE REPLY TO

March 20, 1989

EXPLORATION AND PRODUCTION DIVISION
U S ONSHORE REGION
P O BOX 25861
OKLAHOMA CITY, OKLAHOMA 73125

PHONE

405 848-9750

Bristol Resources Corporation
Suites B and C
3601 East 51st Street
Tulsa, OK 74135

RE: K-M CHAVEROO SAN ANDRES UNIT (PROPOSED)
SECTION 1 & 2-8S-33E
CHAVES COUNTY, NEW MEXICO

Gentlemen:

Reference is made to your letters of January 31, 1989 and February 2, 1989, subject as above, wherein you requested investment costs, reserves, operating costs and water supply costs for the proposed waterflood unit.

As the result of our analysis of this proposed secondary recovery project we anticipate an initial investment of \$719,000 gross, including \$187,000 for a water supply system. After waterflood response, a future investment of \$186,000 gross, is anticipated to acquire larger lift equipment. Operating costs are expected to be \$532,000 during the first year of the waterflood and total \$9,214,000 over a project life of 20 years on a non-escalated or constant dollar basis. See attachments.

The participation formula proposed for the K-M Chaveroo San Andres Unit is a simple unit formula which credits cumulative oil production (essentially ultimate primary recovery) to December 31, 1988 as 100%. On this basis, the Working Interest Owners in the SW/4 NE/4 of Section 2, located within the proposed unit area, would have a total tract participation of 5.672738%. This was based on a primary recovery for Bristol's Levick State "2" lease of 94,203 barrels of oil and a total unit primary recovery of 1,660,627 barrels of oil as of December 31, 1988. This formula is considered by Kerr-McGee to be fair, reasonable and equitable since it represents the relative contribution and quality of each tract in the proposed K-M Chaveroo San Andres Unit.

You will find attached a copy of the proposed unit agreement and unit operating agreement. Please give Floyd Chambers or Wayne Walz a telephone call at 405/848-9750 if additional information is needed. A meeting of the Unit working interest owners will be held at 10:00 a.m. on April 4, 1989, in Kerr-McGee's Regional Office, 4005 N.W. Expressway, Oklahoma City. Please so notify Chambers or Walz if you will not be able to attend this meeting.

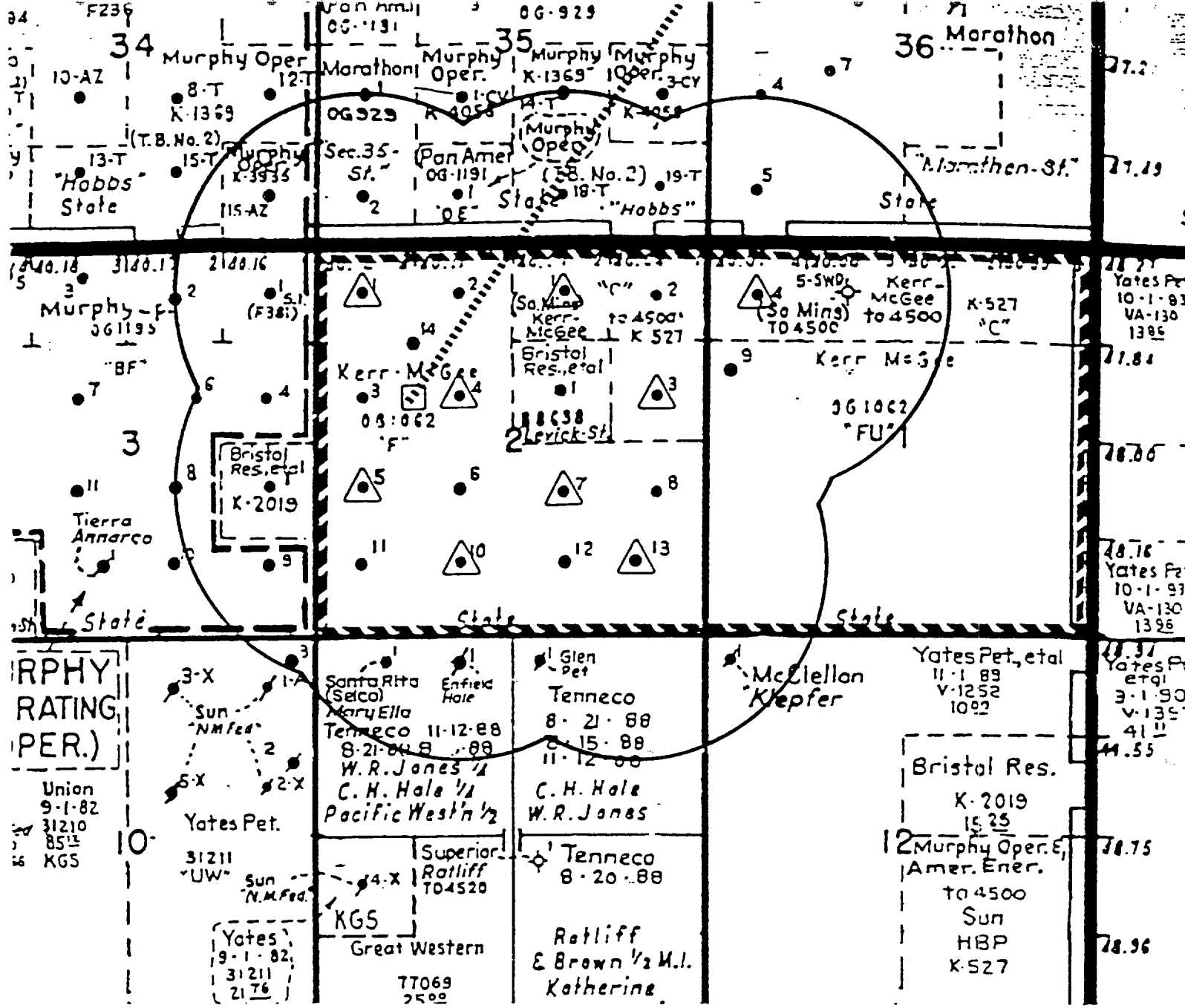


M. H. Vaughn
Vice President
U. S. Onshore

MHV:IDG:lrg

cc: Warren American Oil Company
P. O. Box 470372
Tulsa, OK 74147-0372
Attn: Mr. Stephen K. Warren

Warren American Oil Company
P. O. Box 971
Midland, Texas 79702
Attn: Mr. James O'Neill



MURPHY RATING (PER.)

Union
9-1-82
31210
8513
KGS

10
Yates Pet.
31211
"UW"
Sun
N.M.Fed.
Yates
9-1-82
31211
2176

3-X
Sun
"N.M.Fed."
1-A
2
5-X
2-X
Yates Pet.
31211
"UW"
Sun
N.M.Fed.

Yates
9-1-82
31211
2176

Santa Rita (Seico)
Mary Ella
Tenneco 11-12-88
8-21-84 B
W.R. Jones 1/4
C.H. Hale 1/2
Pacific West'n 1/2

Superior
Ratliff
T04520
KGS
Great Western
T7069
2502


Glen Pet
Tenneco
8-21-88
8-15-88
11-12-88
C.H. Hale
W.R. Jones

Tenneco
8-20-88
Ratliff
& Brown 1/2 M.I.
Katherine

McClellan
Kieffer

Yates Pet. et al
11-1-89
V-1252
1092

Bristol Res.
K-2019
15-25
12 Murphy Oper. E,
Amer. Ener.
to 4500
Sun
HBP
K-527

 **KERR-MCGEE CORPORATION**

CHAVEROO
CHAVES & ROOSEVELT CO.'s, NEW MEXICO
**PROPOSED K-M CHAVEROO
SAN ANDRES UNIT**

Scale: 1" = 2000' Date: 2/89 By: R. Quance

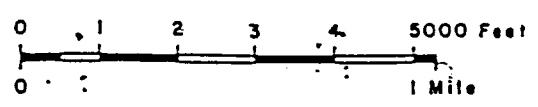


TABLE 1
 ESTIMATED COSTS AT 1989 PRICES
 PROPOSED K-M CHAVEROO SAN ANDRES UNIT

THOUSANDS OF DOLLARS

PROJ YEAR	WELLS PROD	WELLS INJ	WI MB/YR	% WATER PURCHASED	WATER PURCHASED MB/YR	PURCHASED WATER AT \$.10/B	PROD WELL AT \$19M*	INJ WELL AT \$10M*	INJ COST*	TOTAL
1	10	9	1150	100	1150	115	190	90	137	532
2	10	9	1150	100	1150	115	190	90	137	532
3	10	9	1150	100	1150	115	190	90	137	532
4	10	9	1150	67	771	77	190	90	137	494
5	10	9	1150	67	771	77	190	90	137	494
6	10	9	1150	50	575	58	190	90	137	475
7	10	9	1150	50	575	58	190	90	137	475
8	10	9	1150	50	575	58	190	90	137	475
9	10	9	1150	50	575	58	190	90	137	475
10	10	9	1150	50	575	58	190	90	137	475
11	10	9	1150	50	575	58	190	90	137	475
12	10	9	1150	50	575	58	190	90	137	475
12	10	9	1150	50	575	58	190	90	137	475
14	10	9	1150	50	575	58	190	90	137	475
15	10	9	1150	50	575	58	190	90	137	475
16	10	9	805	0	0	0	190	90	96	376
17	10	9	805	0	0	0	190	90	96	376
18	10	9	805	0	0	0	190	90	96	376
19	10	9	805	0	0	0	190	90	96	376
20	10	9	805	0	0	0	190	90	96	376
			21275		10742	1079	3800	1800	2535	9214

* TABLE 2

RJQ05S1:1rg01

TABLE 2

PROPOSED K-M CHAVEROO SAN ANDRES UNIT
 ESTIMATED OPERATING EXPENSE AT 1989 PRICES

Current Operating Cost	\$18,600/month
Base Cost for Injector and Producers in waterflood	\$18,600/month
Less: Saltwater Disposal	350
Electricity	2,250
	<hr/>
	\$16,000/month = \$840/well/month
	19 wells (10 prod + 9 inj)
<u>Injectors</u>	
Operating Cost	\$840/well/month (\$10,000/well/year)
<u>Cost for Producers</u>	\$840/month/well
Plus: Pump change/year	200
Electricity at \$.10/kw-hour (HP = 12)	550
	<hr/>
	\$1590/month/well (\$19,000/well/yr)

Injection Cost

$$\text{HP} = 3150 \text{ BPD} \times 2000 \text{ psi} \times .000017 = 107 \text{ hp}$$

$$\text{BHP} = 107 \text{ hp} / 0.75 (\text{Pump Efficiency}) = 150 \text{ hp at } \$.10/\text{kw-hr}$$

Electrical Cost = \$9,000/month

Costs for Water Injection = \$2,400/month

Injection Cost = \$11,400/month or \$137,000/year

RJQ15:lrg01

TABLE 3

COST OF WATER SUPPLY TO KERR-MCGEE

	Date	Cost	Result
Test Dale Brown's Wells	1/24-26/89	\$2,197	44,000 BWPO
Drill WSW "F" #1	11/15-16/89	\$5,212	P & A
Drill WSW "FU" #1	11/16-17/88	\$10,819	Test @ 86.6 GPM
Drill WSW "F" #2	11/22-23/88	\$11,106	P & A
Drill WSW 2	1/24-2/1/89	\$12,353	Test @ 13 GPM
Drill WSW 3	1/25-2/1/89	\$10,294	Test @ 4 GPM
		<hr/>	
	TOTAL	\$51,981	

RJQ:lrg01

TABLE 4
 PROPOSED K-M CHAVEROO SAN ANDRES UNIT
 ESTIMATED COSTS

Initial Investment

150 hp triplex pump with mounting & motor pump house	\$ 56,000
Treaters & free water knockout	
4' x 20' treater & 6' x 15' FWKO	21,000
18,000' 2½" (2000#WP) fiberglass pip at \$3.80/ft	68,000
9 injection packers (lok set) at \$2,500/each	23,000
Plastic coating for 9 WIW's - 4200' at \$2.00/ft	76,000
2-1000 bbl fiberglass water tanks	30,000
10,000' 3" SDR trunk lines at \$3.10/ft	31,000
Transfer pumps from tank batteries to WI station	32,000
44,500' of 4" PVC ditched & buried at \$3.50/ft	156,000
Water storage tanks	31,000
Water supply costs to drill 5 water supply wells	52,000
350 KWA transfer capacity	10,000
Miscellaneous valves, connections, chokes, etc.	12,000
Tubing inspection	14,000
Rig work - 30 days at \$1,200/day	36,000
Location work & roads	13,000
Transportation	10,000
Labor	25,000
Supervision	10,000
District overhead	6,000
Miscellaneous	7,000
	\$719,000

Future Investment After Waterflood Response

5-228 D pumping units with 40 hp motors	\$125,000
7/8" & 3/4" rods - 16,000' at \$1.50/ft	24,000
9000' of 2 3/8" tubing at \$2.80/ft	25,000
Rig work - 10 days at \$1,200/day	12,000
	\$186,000

Total Investment	\$905,000
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RJQ16:lrg01



KERR-McGEE CORPORATION

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

U. S. Onshore Oper.

OCT 14 1988

E & P DIV.

EXPLORATION AND PRODUCTION DIVISION

October 13, 1988

Mr. Dale W. Brown
South Star Route
Box 40
Elida, New Mexico 88116

WATER AGREEMENT
DATED SEPTEMBER 22, 1988

You will find attached a copy of the subject agreement which evidences execution by Kerr-McGee Corporation.

for Kelley Kisenberg
Ivan D. Beddie
T-25C McGee Tower
P. O. Box 25861
Oklahoma City, OK 73125
Tel: (405) 270-2124

IDG:rgb

bcc: Phillips-Namken-CFR (Chaveroo W. F. Project)
M. H. Vaughn (information)
F. Chambers (information)
Lease Records (Original-please place of record in Roosevelt County, N.M.)
E-Br-B
Hold

WATER AGREEMENT

THIS AGREEMENT entered into effective as of the 22nd day of September, 1983, by and between KERR-MCGEE CORPORATION ("Kerr-McGee"), a Delaware corporation, and DALE W. BROWN and Myrna L. Brown ~~and~~ ~~XXXXXX~~ husband and wife (hereinafter referred to as "Owner").

WHEREAS, Owner is the owner of a right to appropriate water pursuant to Permit n/a, Certificate n/a, issued by the State Engineer of New Mexico from Section(s) 8 & 9 Township 7S, Range 34E, Roosevelt County, New Mexico; and

WHEREAS, Kerr-McGee owns oil producing acreage in all or parts of Sections 1 & 2, Township 8 South (T8S), Range 33 East (R33E), Chaves County, New Mexico, together with additional acreage located in the vicinity thereof, and requires a reliable and adequate supply of water for waterflooding operations of the acreage; and

WHEREAS, Owner has excess water available for sale to Kerr-McGee; and

WHEREAS, Kerr-McGee is agreeable to be bound by the terms and conditions of Owner's Permit n/a, Certificate n/a.

NOW, THEREFORE, in consideration of the premises and other good and valuable consideration and the covenants herein contained, the parties agree as follows:

1. Owner hereby grants to Kerr-McGee, commencing on the effective date hereof, the exclusive right and option to purchase excess water from Owner, as necessary to meet Kerr-McGee's requirements for water for such waterflood operations, expected to be two thousand barrels of water per day (2000 BWPD), or more, to the extent that those requirements can be supplied out of water that can be pumped from the existing well(s) or future wells from which Owner has the right to appropriate water. For the purpose of this agreement "excess water" means water which Owner has the right to appropriate which is not required for use by Owner for Owner's domestic, agricultural and animal husbandry needs.

2. Unless terminated earlier, this Agreement shall be for a term of one (1) year from the effective date hereof, together with the right and option by Kerr-McGee to renew the Agreement for periods of one (1) year each upon the same terms and conditions for so long as such water is needed by Kerr-McGee for the waterflood operations described above. Upon execution of this

Agreement by Owner, Kerr-McGee shall pay Owner the sum of one-thousand Dollars (\$1,000.00) for the first year of this Agreement. If Kerr-McGee elects to extend the Agreement for additional periods, it shall deliver a notice of exercise of its option to renew to Owner and its payment of One Thousand Dollars (\$1,000.00) in consideration for the renewal period not later than the end of the initial term of this Agreement. Subsequent renewals may be made by payment to Owner of such amount on or before the expiration of the then current one (1) year period or any renewal period thereof.

3. Kerr-McGee agrees to pay Owner for water received pursuant to the terms hereof at the rate of \$.10 per barrel, provided, it is understood that Kerr-McGee may deduct amounts paid to Owner for any renewals of this Agreement from sums due for water delivered hereunder. It is agreed that if Owner's rates for electrical service are increased during the term of this Agreement, then the rate to be paid for water specified above shall be adjusted accordingly by mutual agreement of the parties, effective the next succeeding renewal period, so as to keep Owner whole with respect to such increased electrical costs for deliveries of water during such renewal period.

4. Owner agrees to install a meter to measure the water sold to Kerr-McGee to provide for +1% accuracy. Kerr-McGee shall have the right to periodically check the accuracy of metering and to require adjustments of invoice amounts. Owner agrees to submit a monthly invoice to Kerr-McGee not later than the 15th day of each month for water delivered in the preceding month and Kerr-McGee agrees to make settlement with Owner by the 15th day of the following month. Owner agrees to allow Kerr-McGee to install and service such pipeline and appurtenances as are necessary to connect and transport water across Owner's property.

5. Any notice required or permitted to be given hereunder shall be considered as having been properly given when and at the time the same shall have been deposited in the United States mail with postage thereon prepaid and addressed to whom the notice is given at the following specified addresses:

Kerr-McGee Corporation
Kerr-McGee Center
P. O. Box 25861
Oklahoma City, OK 73125
Attn: J. S. Onshore Region Office

Dale Brown _____
South Star Route _____
Box 40 _____
Elida, New Mexico 88116 _____

Either party may change its address for the purpose of this Paragraph by giving written notice to the other.

6. Owner hereby covenants to do all such further acts necessary for perfecting his title in and rights to the water produced from the well(s) used to provide the water purchased by Kerr-McGee. Owner and Kerr-McGee agree to execute and deliver such other additional instruments and agreements necessary to carry out this agreement between the parties.

7. Kerr-McGee shall have the right to terminate this Agreement at any time on written notice to Owner. Following such notice, Kerr-McGee shall have no further rights or obligations hereunder except to pay Owner for any water received by Kerr-McGee prior to such date of termination and for which payment has not been made.

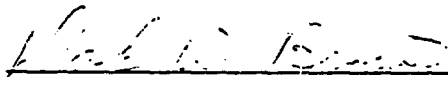
8. This Agreement shall bind and inure to the benefit of the successors, assigns, heirs and legal representatives of the parties.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and effective as of the day and year first above written.

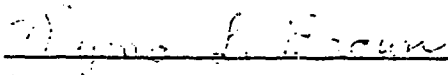
KERR-MCGEE CORPORATION

BY 

DALE BROWN



Myrna L. Brown





ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)
)ss.
COUNTY OF Roosevelt)

The foregoing instrument was acknowledged before me this 23rd day of September, 1988, by Dale W. Brown and Myrna L. Brown, husband and wife.

Witness my hand and official seal.

Lola Bresthouse
Notary Public

My Commission Expires:
June 23, 1990

STATE OF OKLAHOMA)
)ss.
COUNTY OF OKLAHOMA)

The foregoing instrument was acknowledged before me this 11th day of October, 1988, by Robert Henderson as Vice President of Kerr-McGee Corporation, a Delaware corporation, on behalf of the corporation.

Witness my hand and official seal.

Truman D. Bellan
Notary Public

My Commission Expires:
4-27-92