

WATERFLOOD STUDY OF THE MESA GALLUP FIELD SAN JUAN COUNTY, NEW MEXICO

FOR:

GRAND RESOURCES, INC.

March 21, 1989 (Revised April 21, 1989)



JACK SCHRENKEL & ASSOCIATES, INC.

320 S. BOSTON, SUITE 719 • TULSA, OKLAHOMA 74103-3709 March 22, 1989 (918) 582-7900/TELEX: 701481 UD (Revised April 21, 1989)

Grand Resources, Inc. 2250 E. 73rd St. Tulsa, Oklahoma 74136

Gentlemen:

In response to your instructions we have made a study of the Mesa Gallup Field located in San Juan, New Mexico, for the purpose of determining the feasibility of waterflooding this field. As you know the adjacent Horseshoe Gallup and Many Rocks Fields have been successfully waterflooded for many years. The engineering and geologic data available on the Mesa Gallup reservoir and analogies with the Horseshoe Gallup and Many Rocks Fields indicates a high probability of additional oil being recovered from the Mesa Gallup Field by secondary recovery operations. The cumulative production from the Mesa Gallup reservoir, as of December 31, 1988, is 562,200 barrels.

The economic primary oil has been recovered and the field has been marginal for several years. A waterflood program will recover an additional 440,000± barrels of oil with a required investment of \$372,000 and an estimated future profit to unit owners of \$3,094,000. Pertinent information on the Field is summarized in Table 1 and comparative recoveries with the Many Rocks Field and the Navajo F, G, & M leases in the Horseshoe Gallup Field are presented on Table 2.

The reservoir is a northwest southeast trending strike sand which is shown by Map 2 (Gallup Net Pay). The field contains 10,410 oil acre-feet, which it is believed that 8,160 acre-feet may be swept. Initially it is proposed to use the 4 injection wells shown on Map 1. In addition there is a small gas-cap on the northwest tip of the field indicated by the dashed lines. A fault at the east boundary of Tract No. 12 appears to isolate the Dugan Horseshoe No. 2-E in S. 30-T.32N-R.18W from the Mesa Gallup reservoir. This fault is said to be expressed at the surface. The exclusion or inclusion of the Dugan Horseshoe No. 2-E would have only negligible effect on recoveries or equities.

It is proposed that the Morrison Sand water supply well be drilled NE SE S.23-T.32N-R.18W and the injection plant constructed at this point to service the water injection wells. An adequate water supply to produce and inject approximately 1,000 barrels of water per day may be developed in the Morrison water sands at depths 2500-3000 Grand Resources, Inc.

feet at the injection plant location. The Morrison is a blanket water sand and study of wells in the area indicates a depth of less than 3000 feet should be adequate to develop a satisfactory water supply.

Many of the oil wells drilled in Sections 14, 23, 24 and 25 have been cored by the operators who originally drilled the wells and are those properties owned by Grand Resources, et al. Details of wells in the general vicinity are shown by Appendix 2. In addition Appendix 1 lists the complete production history of properties in this reservoir.

To effectively waterflood the field, it should be unitized to include the 6 wells operated by Ari-Mex Exploration in Sections 10 and 15. Ari-Mex has expressed their desire to join in an unitized effort to waterflood. The proposed unit boundary and the tracts are shown by Map 1. The legal description, by tract, gross acre-feet, net floodable acre-feet, number of wells, cumulative oil (in thousands of barrels), and tract participation factors are shown on Table 3. These values are summed by operator. All of the mineral interests are owned by the Navajo Nation with this area being productive since August 24, 1961.

The field is at its economic limit. December production was 360 barrels for the field, which is an average of 18 barrels per well per month or approximately 1/2 barrel per day. From this it is obvious the field is at its economic limit. For this reason no primary participation factors or values were assigned.

It is our recommendation that the secondary participation be weighted 60 percent net floodable acre-feet, 10 percent well count, and 30 percent cumulative oil production as of December 31, 1988. In our opinion this results in a equitable distribution of future oil to each unit owner in proportion to the actual value they bring to the unit. Based on the foregoing the recommended working interest participation factors are as follows:

Ari-Mex Exploration	14.26925%
21st Century Investment Co.	57.86825%
Jack Schrenkel	21.43269%
Grand Resources	6.42981%
TOTAL	100.00000%

Grand Resources, Inc.

March 22, 1989 (Revised April 21, 1989)

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In addition to Table 4 showing the economics of water injection for the Unit owners, Table 5 sets out the future revenue to the Navajo Nation from this proposed Unit operation.

It is our recommendation that we proceed with this unitization effort and secondary recovery project in a diligent This is one of those happy projects where everyone will manner. benefit.

Yours very truly, Jack Schrenkel & Associates, Inc.

JS:sl

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Proposed Unit & Tract 1	L
Gallup Net Pay 2	2
Gallup Cumulative Oil 3	3
Gallup Average Flow Capacity	
$C.I. = 100 \text{ md-ft} \dots 4$	ł
Top of Gallup Sand 5	;

APPENDIX 1

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Mesa Gallup Field Total (Exclusing Dugan Prod. Horseshoe #2-E)
Grand Resources - Navajo "C" 1 - 6
Grand Resources - Aztec Navajo A4 & 5
Grand Resources - Navajo #3 - 12
Ari-Mex Explor. - 6 Navajo Leases
Dugan Prod. - Horseshoe #2E
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APPENDIX 2

Well Data

TABLE 1

PERTINENT DATA

Name of Field Location Discovery Well Date of Discovery Producing Reservoir Depth Current Producing Rate (December 1988) Producing Wells Surface area - Productive Volume of the reservoir Average pay thickness Porosity Permeability, average Connate Water Saturation Oil gravity Oil viscosity @ 94°F Initial solution gas-oil ratio Oil volume factor Initial bottom hole pressure Reservoir Temperature Primary reserves Oil-in-place per acre-foot original Cumulative field production, as of December 31, 1988 Remaining primary reserves Waterflood reserves Water source Required investment (water supply well & plant injection system, convert 3 wells to water injection) Estimated Future Profit (Undiscounted)

Mesa Gallup T.32N, R.18W NMPM San Juan County, New Mexico Amalgamated Petroleum No. 3 Navajo August 24, 1961 Gallup Sandstone 1100-1500 feet 360 BOPM 20 (19 oil, 1 SI gas well) 940 acres 10410 acre-feet 11.2 feet 13.1 percent 70 md 31 percent 40° API 7 cp (est) 60± cu. ft. per bbl. 1.035 RB/STB 240 psig (?) 94°F (?) 562,200 barrels 668 barrels 574,500 barrels 0 barrels 440,000 barrels Morrison Water Sands (2500-3000 feet) \$372,000 \$3,094,000

TABLE 2

COMPARATIVE RECOVERIES AND RESERVOIR CHARACTERISTICS FOR ADJACENT GALLUP FIELDS

	Navajo F, G, & M Lease (l) (Horseshoe Gallup Fld)	Many Rocks Fld (2)	Mesa Gallup (12/31/88)
Number of Wells	54	18	21
Average Porosity, % Permeability, md Connate Water Saturation, %	16.2 90 34	14.2 145 30	13.1 70 31
Oil Volume Factor Acres Productive Sand Vol., AF	1.03 2445 27559	1.03 968 6395	1.035 940 10410
Floodable Acre Feet Net Pay Thickness	? 11.3	? 6.6	8160 11.2
Oil-In-Place, MSTB Cumulative Oil, MSTB Recovery, %	22328 4265 (7-1-80) 19 (7-1-80)	4808 801 (7-1-80) 16.7 (7-1-80)	8.3
Oil-In-Place STB/AF Produced Water/Oil Ratio	810 25	751 23	678 0
Remaining Reserve, MSTB	394 (7-1-80)	100 (7-1-80)	440 (4-1-89)
Ultimate Production, MSTB	4659	811	1014.5
Ultimate Recovery, %	20.9	16.9	14.2
(1) Disc. late 1956 Wtr Inj started three leases, Oct. 1960		• •	. Nov. 1962 Inj. started

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OPERATOR »	
CURRENT	
AND	
DESCRIPTION	
LEGAL	1014
TRACT	014 F0×01
* *	4 0 1

OPERATOR ARI-MEX EXPLORATION ARI-MEX EXPLORATION	шшш		GRAND RESOURCES GRAND RESOURCES GRAND RESOURCES GRAND RESOURCES	
DESCRIPTION SE/4 S10 - N/2 N/2 + E/2 NE/4 S15 W/2 NE/4 + SE/4	W/2 + N/2 NE/4 + N/2 SE/4 S14 N/2 SE S14 S/2 SW/4 S13	W/2 + S/2 NE/4 + S/2 SE/4 S23 N/2 NE/4 S23 N/2 SE/4 S23	E/2 + N/2 NW + N/2 SW/4.S24 S/2 NW/4 S24 S/2 SW/4 S24 N/2 S25	
TRACT NO	10 4 10	œ م ور	9 1110 111	

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** MESA GALLUP WATER FLOOD PARAMETERS (12/88, JSA) **

CUM DIL	80,88	10.42	97.76	3.70	0.00	47.34	88.16	0.00	68,53	72.81	56,92	35.65	562.17
ND WELLS	4	CJ	ы	Ŧ	0		ល	0	CJ	ญ	*-4	ณ	20
NET-AF	735	135	2800	100	40	330	760	30	1120	430	290	890	8160
GROSS-AF	740	355	3313	167	155	489	810	60	1701	565	835	1220	10410
ACRES	200	240	480	80	80	480	80	80	480	80	80	320	2680
TRACT NO	Ţ	ณ	м	4	വ	Ġ	7	8		10	11	10	

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RECOMMENDED TRACT PARTICIPATION FACTORS

TABLE 3

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60% NET_AF
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BY TRACTS
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INTEREST)
(WORKING
EXPENSE
T N
INTEREST

* *

TEXACO		0,000000
NAVAJO Nation		0.000000
GRAND RSC. Incororated	$\begin{array}{c} 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 &$.0642981
JACK SCHRENKEL	0.000000 0.000000 0682629 0035819 0007353 0136319 0282322 0282322 0282322 0282322 0282322 0282322 0282322 0282325 02823658 02823658	.2143269
21th CENTURY INVESTMENT C	0.000000 1843098 1843098 0096710 0019853 0368061 0762268 0014890 0870235 053189 0530878 0637643	.5786825
ARI-MEX EXPLORATION	$\begin{array}{c} 1172054\\ 0.000000\\ 0.00000\\ 0.00000\\ 0.00000\\ 0.00000\\ 0.00000\\ 0.0000\\ 0.00000\\ 0.00000\\ 0.00000\\ 0.00000\\ 0.00000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.000\\ 0.0000\\ 0.0000\\ 0.000\\ 0.000\\ 0.000\\ 0.0000\\ 0.000\\ 0$.1426925
ICT NO. ACT FACTOR	1172054 2730516 2730516 0143274 01245276 1129286 1129286 1289237 0804724 0934637 0934637	1.000000
TRACT TRACT	-01410400000000000000000000000000000000	

** INTEREST IN NET REVENUE BY TRACTS **

TEXACO		
NAVAJO NATION	0146507 0031859 0341315 0017909 0017909 0003677 0068159 0141161 0161155 0161155 0116829 0116829 0118082	
GRAND RESC. INCORORATED	$\begin{array}{c} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 $	*
JACK SCHRENKEL	0.000000 0.000000 0.000000 0.00057300 00054342 00054342 00054342 0005433 0175032 0204826 0204826 0204821 0204451 0200185	1× 101+-
21th CENTURY INVESTMENT C	0.000000 1612711 1612711 0084621 0017371 0017371 0017371 0017371 0017371 0017371 0017372 0022018 0025018 0055018 00	5
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TRACT TRACT	-01241307000-0-0	

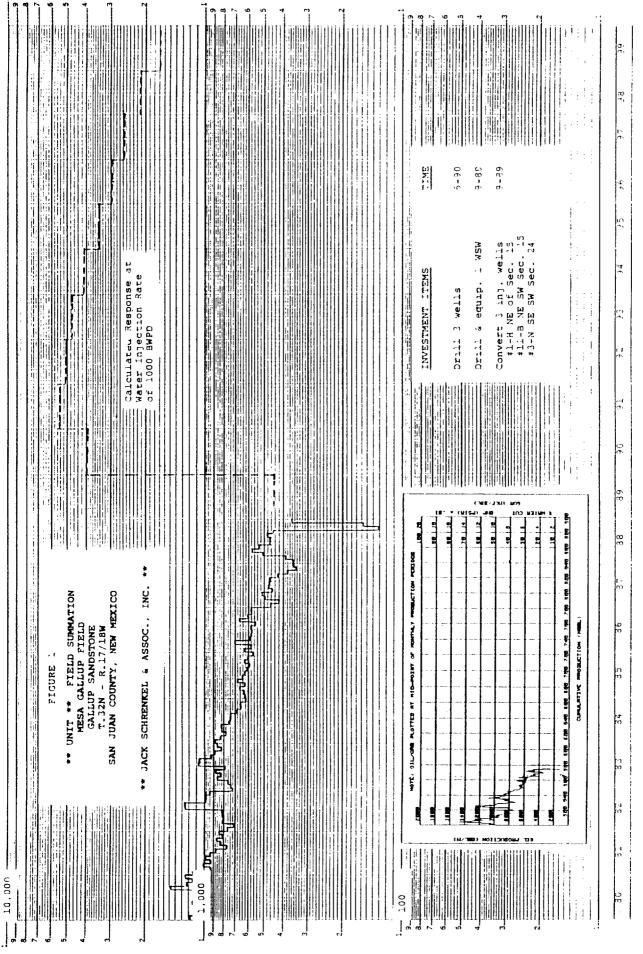
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TABLE 3 (Continued)

2 3992 #88	***** *******************************										PROPOSED UNIT	1 ≢1
e . 42 YRS	INTANGIBLE;		HS TANGIBLE;	IN] HI	CONU 3			, 42 YRS	œu	53 H\$ INTANGIBLE;		DRL/EGP 45478 M\$ TANCIBLE
8H	TO 4.8 YRS D ELC AT 440.0	5000.0 B/H	(4)CPD 8		= 20 01L 1676.2 3/H		ECONOMIC LIMIT =			MICS OF FOR UNIT	INJECTION FOR	PROJECTED WATER INJE
	0 8/H 0 1.0 YRS 10 2.6 YRS 10 3.0 YRS	- RATE IS = 450 B/M = 450.0 B/M TO 1.0 = 5500.0 B/M TO 2. = 5400.0 B/M TO 2.	INITIAL R (1)CRP E (2)CRP E (3)CRP E		PA CAT: RS TIER: \$/M	\$/H \$/B Cost: 2200	Gas: 0 Oil: 15 Operating				TABLE 4	, , , , ,
-	-	CTIONS.	PROJE(5 1 0	⊷ n	РКІ	R T	- - -	TES	E ESTIMATE	RESERUE	REMARKS/BASIS OF
197673	WORTH 8 40.002	a.	č 691751	WORTH 9 30.002	۹.	X 820400	40RTH 8 25.002	a .	X 978718	WORTH & 20.00%	a_	P 40RTH 2 15.00% 1176376
2178826 2178826 1427185	-3363 -3363 -1281	41232 2182189 1428466	95486 2140957 1411188	159377 2045471 1367176	234631 1886094 1286368	323260 1651463 1155508	423649 1328203 957188	469579 904554 671289	515933 434975 322704	207072 -80958 -98590	-288030 -288030 -284587	NET INCOME \$ CUMULATIVE INCOME \$ CUM: P 40RTH @ 10.00 % \$
202000 170000 2719825	247825	264000	264000	264000	264000	264000	264000	264000	264000	12900 51000 216000	73000 119000 144000	INTANGIBLE INVES \$ CAPITAL INVES \$ OPERATING COST \$
5270651	94442	305232	359486	423377	498631	587260	687649	733579	779933	603072	47976	GAS SAS SAS SAS SAS SAS SAS SAS SAS SAS
5270651	244462	305222	359486	423377	498631	587260	687649	733579	226622	603072	47970	COND
385000	17857	22296	26259	30926	36423	42897	50230	53585	56971	44052	3504	
	1.51	1.31	1.31		1.31	15 1	17 17	1.31	1.31	1.31	1.31	OIL SEVERENCE \$/B 3AS SEVERENCE \$/A 4INDFALL PROFIT \$/B
202000 17000										129000 51008	73000	INTANGIBLE INVES 5 CAPITAL INVES 5 TAYES
2719825	247825 15.00	264000 15.00	264000 15.30	264000 15.00	264000 15.00	264000 15.00	264000 15.00	264000 15.00	264000 15.00	216000 15.00	144000 15.00	0PERATING COST 5/B 01L PRICES 5/B 01L PRICES 5/B
440000	20408	25481	30016	35344	41626	49025	57406	61240	65110	50345	4005	GROSS VALUES UNITS DIL/COND BBL SAS HCF
T0TAL 0F 10.68 YRS	12-31-1998+	12-31-1998	12-31-1997	12-31-1996	12-31-1995	12-31-1994	12-31-1993	12-31-1992	12-31-1991	12-31-1990	12-31-1989	ENDING
\$2,178,926	INCOME = \$	FUTURE NET	· · · · · · · · · · · · · · · · · · ·	GAS = 0 H	BBL,	= 44000	ATE: 0IL	*** ULTIMA	= 0 HCF	GAS	= 1 38L,	
	*	оме тах	AL INC	RE FEDER	ж ЮПТОР	H FL.OW	TED CASH	PREDIC	TES AND	ESTIMAT	RESERUE	*
	LINIT	мыны	NNI 87.5 NNI NNI	****	100 NO.	(1) WI (2) WI (3) WI (4) WI RRC/OTC			KESA GALLUP FLD Gallup Sandstone \$15/8 New Hexico API NO. –	HESA GALLUP GALLUP SAND \$15/8 NEW HEXICO API NO		PROPOSED UNIT GRAND RESOURCES INC. ** CASE ** SAN JUAN COUNTY LEASE NO : \$1
	ю	sc cost(INE		6	1 / 198	F APRIL	AS 01			FLD	AESA GALLUP
2-27-89,:5:30	5-2			ОКСАНОИА	/ TULSA,	LEUN ENGINEERS	INC. / PETROLEUM	AND ASSOCIATES	SCHRENKEL AND	JACK SI		

		JACK	SCHRENKEL AND ASSOCIATES) ASSOCIATES	INC. /	PETROLEUM ENCINEERS	ers / Tulsa,	OKLAHOMA			2-5	2-27-89,15:30
MESA GALLUP	-UP FLD			9 SA	IF APRIL	1 , 19	89		MINER	ALI	NT	
PROPOSED UNIT GRAND RESOURCES INC. ** CASE ** SAN JUAN COUNTY LEASE NO : #1		APII 515	HESA CALLUP FLD Callup Sandstone \$15/b Net Hexico API NO			(1) HI (2) HI (3) HI (4) HI RRC/07(инни	NI 12.5 NI NI	нннн		
	* RESERVE	н С	IMATES AND) PREDIC	TED CAS	H FLOW	× BEF(ORE FEDE	RAL INC	ЮМЕ ТАХ	*	
CUNULATIVE;	01L = 0 BBL,	6	GAS = 0 NCF	*** ULTIN	ATE: 01L	= 440000	BBL,	GAS = 0	HCF ***	FUTURE NET	INCOME =	\$794,197
FIRST PERIOD STARTS 0 PERIOD ENDING	14-1-1989 12-31-1989	39 12-31-1990	12-31-1991	12-31-1992	12-31-1993	12-31-1994	12-31-1995	12-31-1996	12-31-1997	12-31-1998	12-31-1998+	TOTAL OF 10.68 YRS
GROSS VALUES DTL/COND GAS	UNITS BBL 4005 HCF		65110	61240	57406	49025	41626	35344	30010	25481	20408	440000
SOR OPERATING COST OIL PRICES	H/B \$ 144000 \$/B 15,00	10 216000 15.00	264000 15.00	264000 15.00	264000 15.00	264000 15,00	264000 15.00	264000 15.00	264000 15.00	264000 15.30	247821 15.00	2719821
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	\$/B 0.56 \$/A \$/B	3 6 0.56	0.56	0.56	0.56	G.56	ŋ.56	3,56	0,56	0.56	Û.56	
	BBL 501	11 6293	8139	7655	7176	6128	5203	4418	3751	3185	2551	55000
COND	nur \$ 7234 \$	54 90871	117527	110538	103621	88488	75131	63796	54164	45991	36836	794197
REVENUE TO NI INTANCIBLE INVES CAPITAL INVES OPERATING COST	7234 \$	5 4 90871	117527	110538	103621	88483	75131	63796	54164	45991	36836	794197
NET INCOME CUMULATIVE INCOME CUM. P 40RTH 3 10.00 Z	\$ 7234 \$ 7234 \$ 7148	34 90871 34 90871 34 98105 488770	117527 215632 184739	110538 326170 266795	103621 429791 336724	88488 518279 391011	75131 593410 432913	63796 657206 465260	54164 711370 490225	45991 757361 509497	36836 36836 36836 14032	794197 794197 523529
P MORTH 9 15.00X 4	439569	P WORTH & 20.00%	002 375758	ď	40RTH 8 25.0	0 0X 326158	đ	40RTH 8 30.00X	1 X 286831	d 1	UORTH @ 40.00Z	z 229078
REMARKS/BASIS	OF RESERVE	VE ESTIMATE	IATES	-	START	ING PRI	CES & C	0575	PROJE	CTIONS.	-	
- PROJECTED E INJECTION MINER	TABLE 5 TED ECONOMICS OF WATER TION FOR NAVAJO NATION MINERAL INTEREST	F WATER NATION T	·		Gas: 0 0il: 15 0perating NUMBER 0F ECONOMIC	\$/H \$/B Cost: 2200 UELL(S) = LIMIT = 16	HEPA CAT: 101 IRS TIER: 3 1RS + 15 100 \$/M = 20 01L 1676.2 B/H	=	INITIAL (1) CRP 8 (2) CRP 8 (3) CRP 8 (4) CRP 9 (5) CPD 8	- RATE IS = 45 9 450.0 B/H T 8 5500.0 B/H 9 5400.0 B/H 9 5400.0 B/H 9 500.0 B/H 9 15.1 2/YR T	0 8/H 0 1.0 YRS T0 2.0 YRS T0 3.0 YRS T0 4.0 YRS T0 4.0 YRS 0 1676.2 8/H	AT 440.0 MB
DRL/EGP 35478 H\$	78 %\$ TANGIBLE;	53 M\$ INTANGIBLE;	œv	. 42 YRS			CONV	3 INJ41	H\$ TANGIBLE;	;;20 H\$	INTANGIBLE;	9 42 YRS
† 1	PROPOSED UNIT	Ĺ									333 dūd 3333333	1888888 PAGE 3

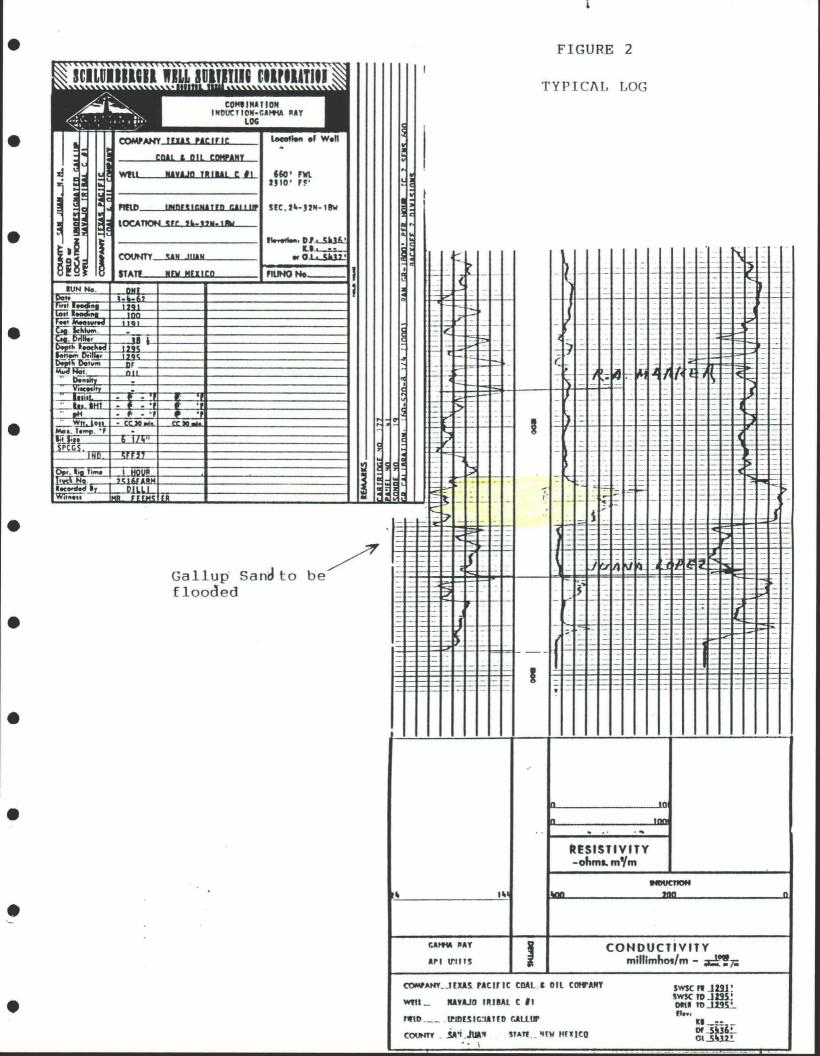
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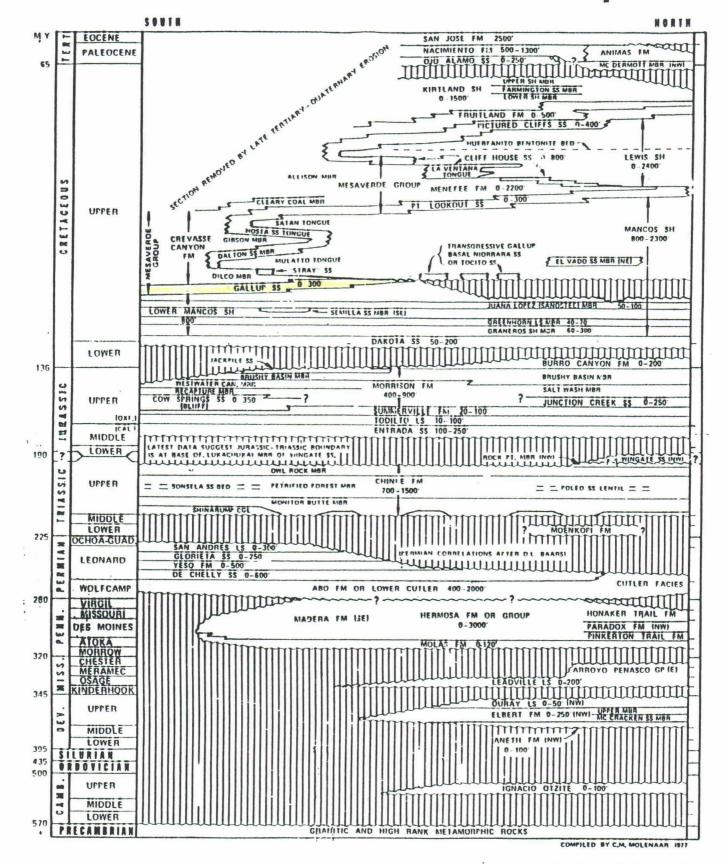
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OIL PRODUCTION, BBL/HONTH

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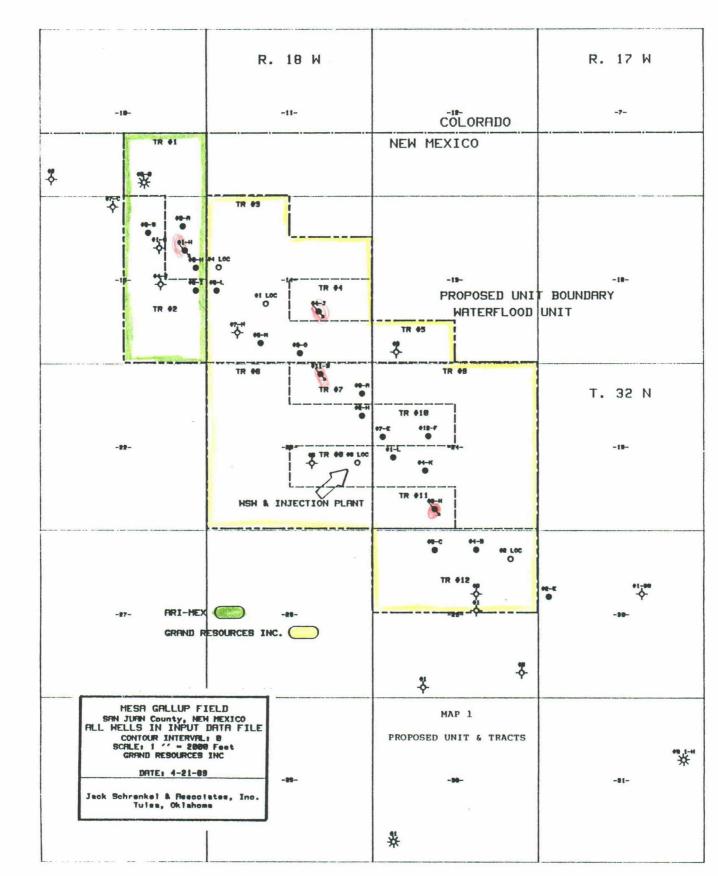


TIME-STRATIGRAPHIC NOMENCLATURE CHART (SAN JUAN BASIN)

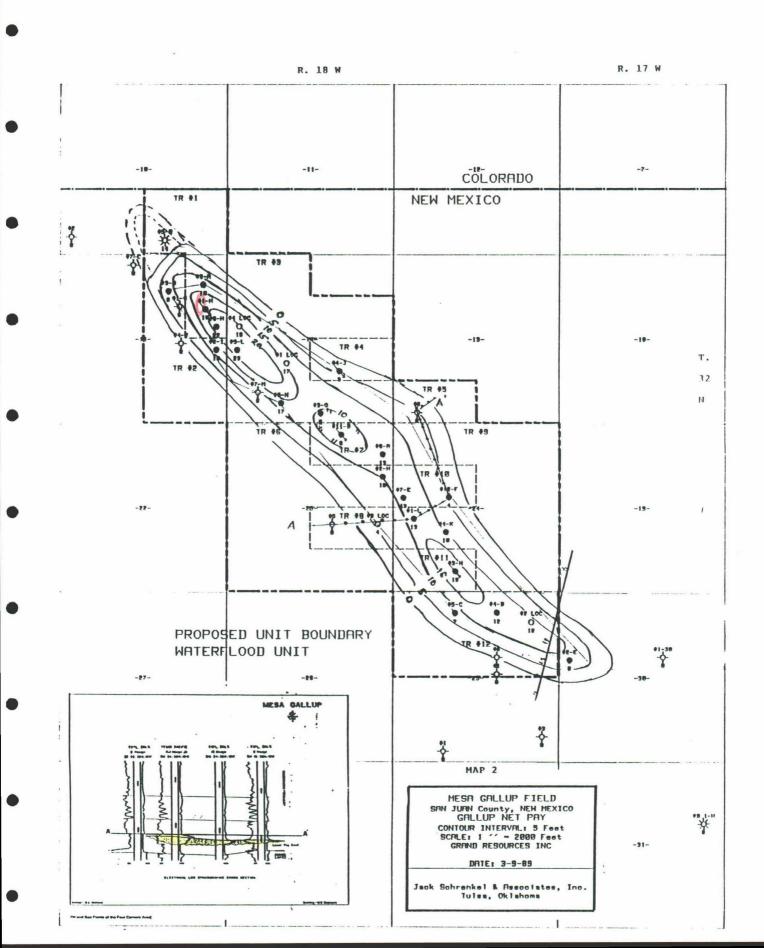


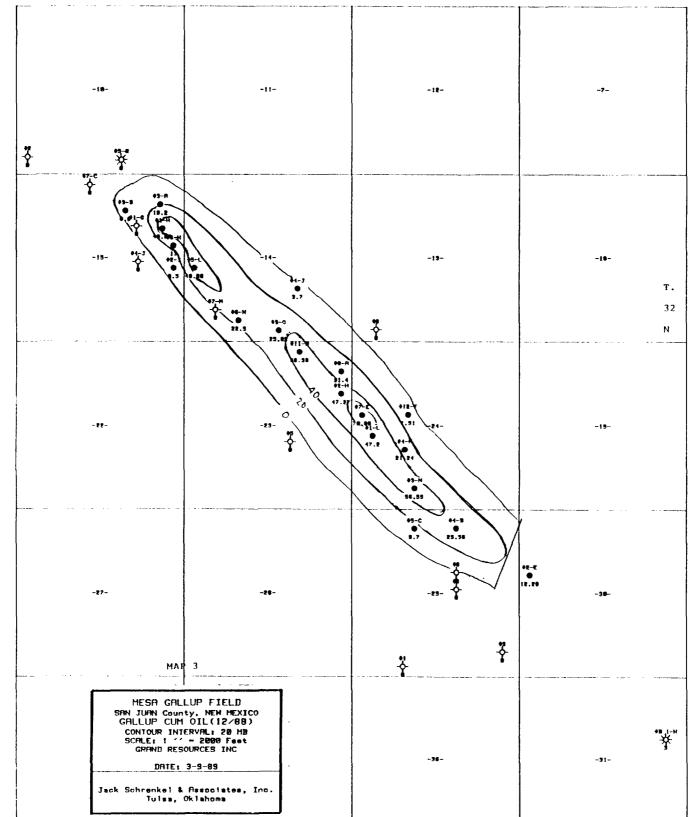
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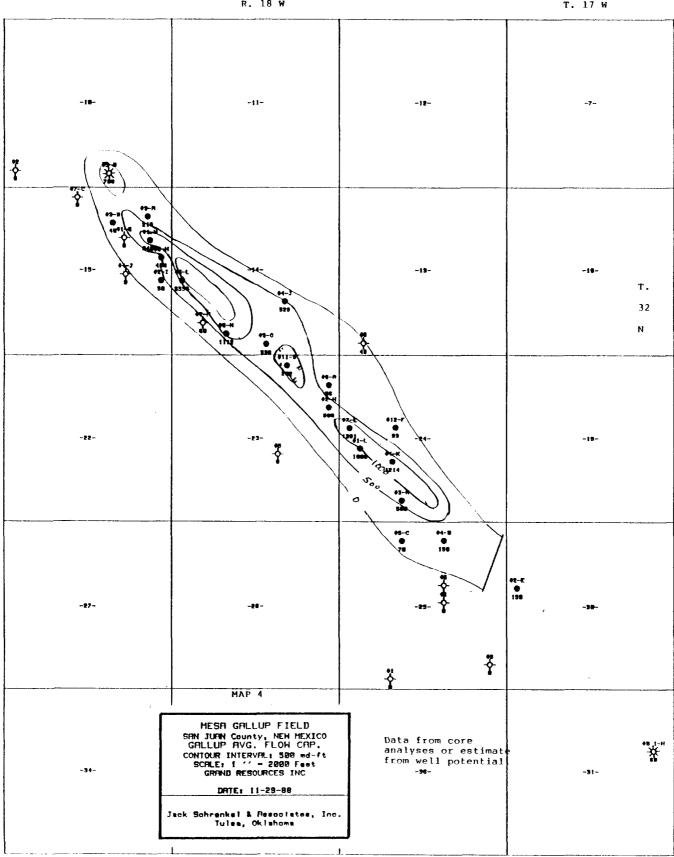




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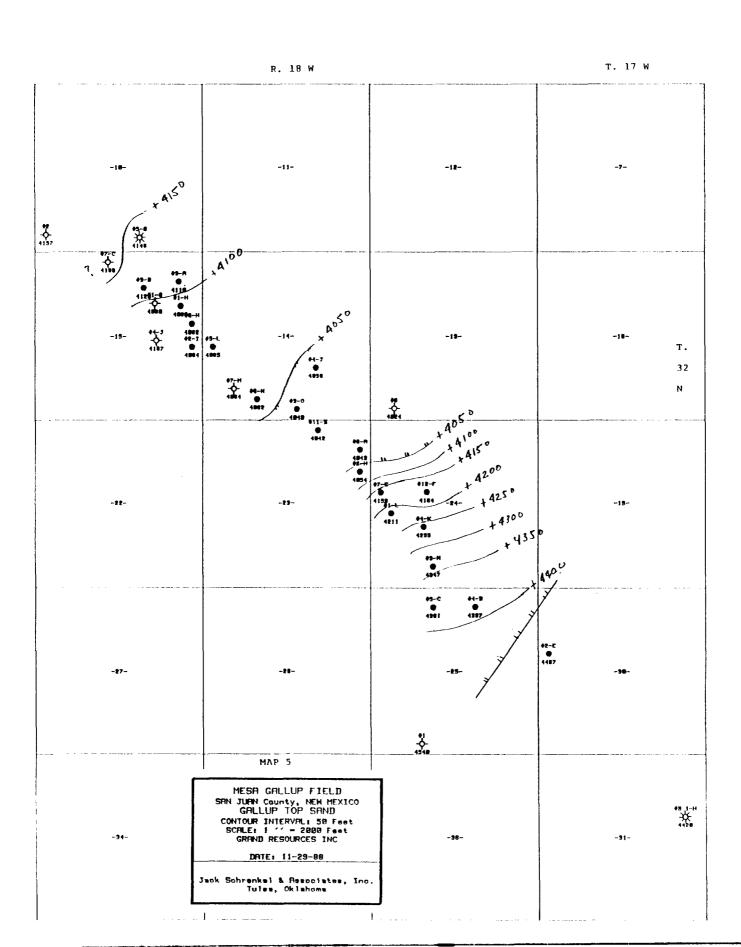
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R. 18 W

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APPENDIX 1

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PRODUCTION DATA BY LEASE

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*** FIELD PRODUCTION SUMMARY ***

Date: 4-24-89

of 4 leases through 12-88

in the MESA GALLUP Field, GALLUP Formation(s)

T.32N-R.17/18W: SAN JUAN, NM

				¥− CUM	ION DATA / Last R Total F	ATE /-*
				OIL		WATER
NUMBER	WELL NAME	OPERATOR	LAST Date		(MMCF) (MCF)	(MBBL) (BBL)
40	6 NAVAJO LSES	 ARI-MEX	6-73	90.0	0.0	0.0
			12-88	48	0	0
				13.6	0.0	0.0
27	NAVAJO C 1 - 6	GRAND RES. INC.	6-73	212.7	0.0	0.0
			12-88	116	0	0
				33.0	0.0	0.0
i	AZTEC NAVAJO A4&5	GRAND RES. INC.	6-73	35.2	0.0	0.0
			i2-88	61	0	0
				17.3	0.0	0.0
14	NAVAJO #3 - 12	GRAND RES. INC.	6-73	220.4	0.0	0.0
			12-88	127	0	0
				36.1	0.0	0.0
				558.3	0.0	0.0
				352	0	0

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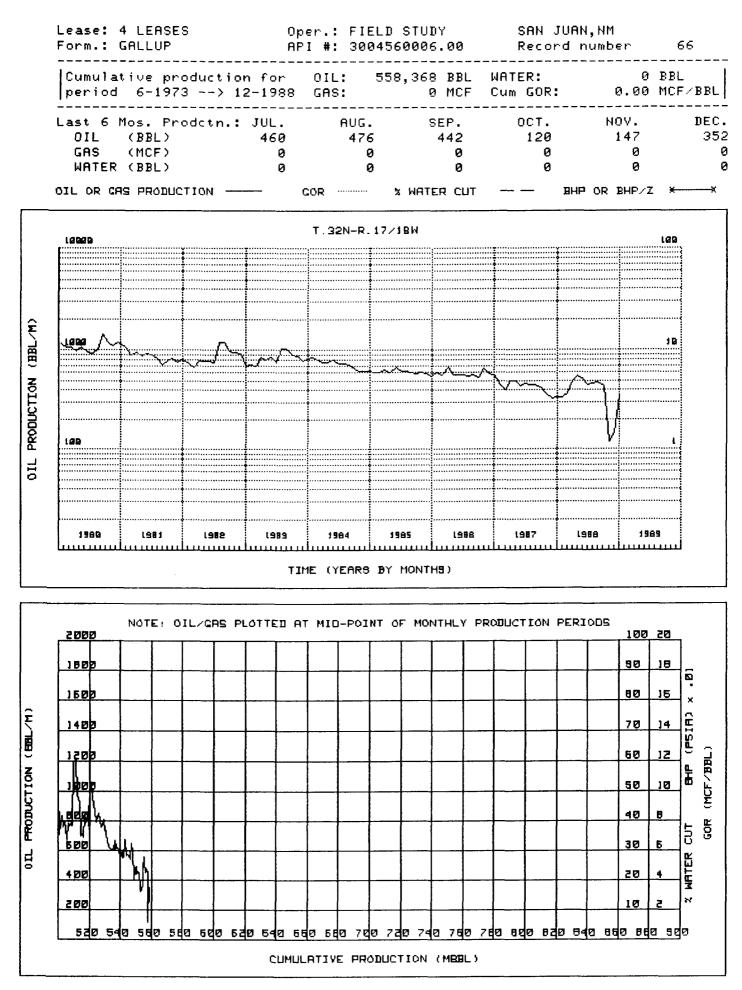
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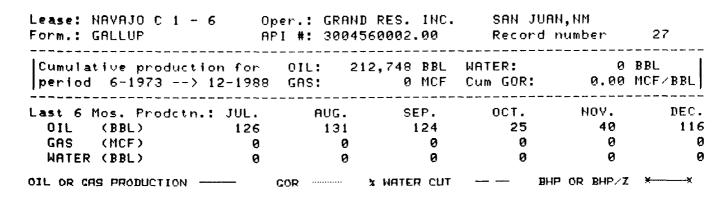
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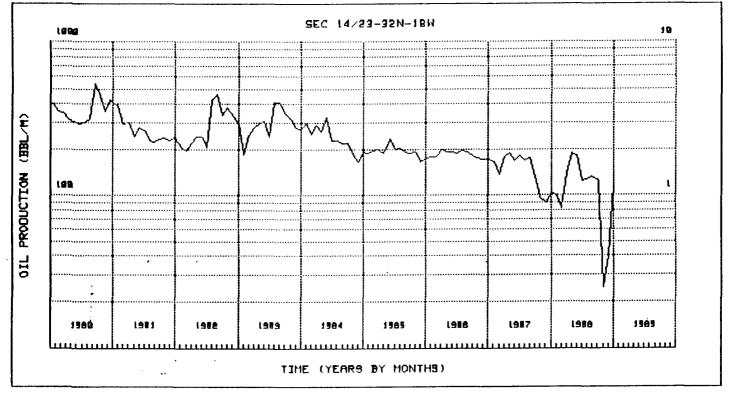
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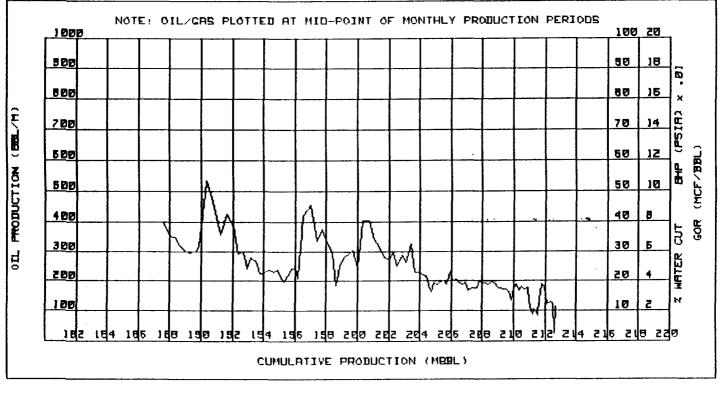


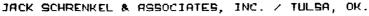
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JACK SCHRENKEL & ASSOCIATES, INC. / TULSA, OK.









Form Date	ation	: MESA GAL : GALLUP st Produc er : -		6- 73	011	l Cun as	st Recor of Above : P30045	e Date	9 : 1- ; 1	80 197380	Lea Lea AP 1	erator ise (ation /RRC/OTO /RRC/OTO IJUAN C Lord Nuwl	: NAVAJ : SEC 1 : 30045	RES. INC 0 C 1 - 6 4/23-32N- 60002.00	
80		JAN	FER	HAR	APR	HAY	JUN	JUL.	aug	SEP	OCT	NOV	DEC	YEAR Total	CUH
OIL	B/H	399	357	353	321	308	297	300	319	535	451	361	427	4428	171808
8 1 01L	B/M	388	295	304	245	281	270	229	228	234	240	230	239	3183	194791
82 011	B/H	211	196	220	243	242	209	424	458	338	377	332	296	3546	198537
83 Oil	B/M	185	251	280	274	306	246	408	408	342	320	281	276	3597	202134
84 01L	B/H	297	254	288	264	325	232	231	223	220	185	165	193	2877	205011
85 01l	B/N	191	197	200	191	233	202	207	192	187	194	167	174	2337	207348
86 01L	B/M	179	178	202	173	193	189	196	192	183	176	173	174	2228	209576
87 01L	B/M	165	137	178	191	168	183	171	175	131	98	90	105	1792	211369
88 01L	B/M	100	84	139	189	182	124	126	131	124	25	40	116	1380	212748

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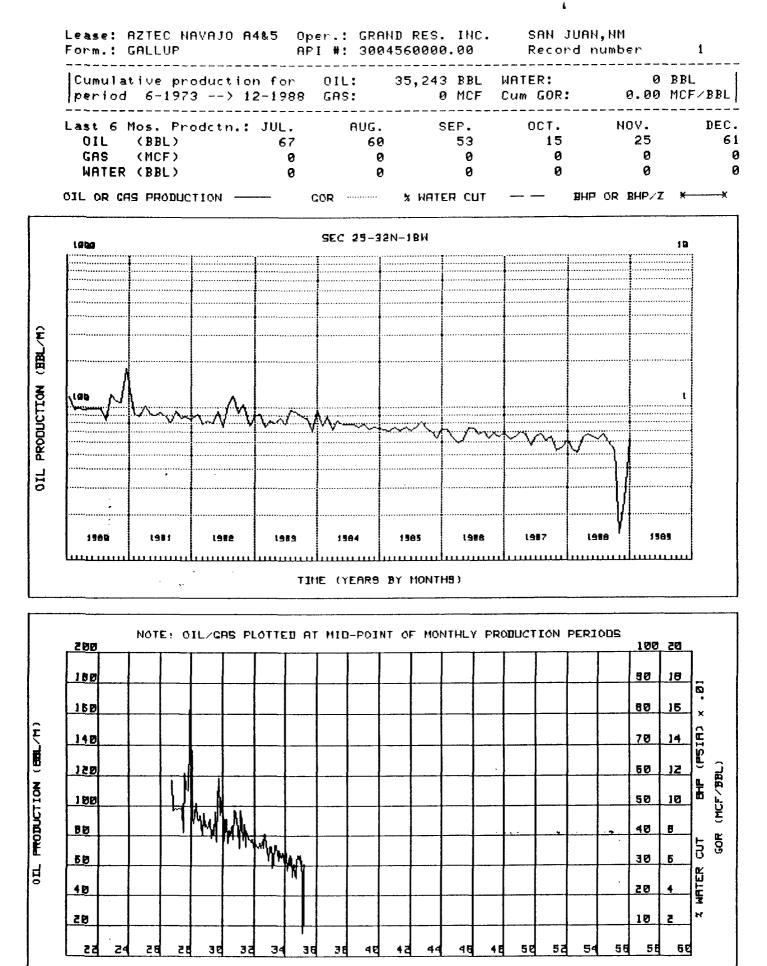
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> *** JACK SCHRENKEL & ASSOCIATES *** CONSULTING PETROLEUM ENGINEERS ** TULSA, OKLAHOMA

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CUMULATIVE PRODUCTION (MEDL)

JACK SCHRENKEL & ASSOCIATES, INC. / TULSA, OK.

Form Date	ation 🗉	: MESA GAL : GALLUP st Product er : -		6- 73	Oil	te of Fir L Cum as le Name	of Above	Date	a i 1- i	80 26704	Lea Loc AP 1	erator 15e cation (/RRC/DTC V JUAN C cord Numi	: SEC 2): 30045	RES. INC NAVAJO A 5-32N-18W 6000.00	445
80	5 /M	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR Total	CUM
01L 81 01L		117 93	97 89	99 102	98 91	99 90	99 9 4	99 88	83 80	122 95	112 86	110 88	181 85	1316 1081	28020 29101
82 011	B/N	91	79	. 84	80	96	76	104	119	94	105	77	88	1093	30194
83 01L	B/M	91	75	84	80	86	78	9 7	96	88	86	72	97	1030	31224
84 01L	B /H	77	88	73	84	79	78	78	76	78	73	76	74	934	32158
85 01L	B/H	73	72	75	72	76	72	75	81	74	70	64	73	877	33035
86 DIL	B/M	73	65	59	63	74	74	67	70	64	69	65	69	812	33847
87 011	B/H	63	65	70	68	57	65	67	61	65	53	56	61	751	34598
88 01L	B/M	54	· 52	· 64	67	65	62	67	60	-53	15	25	61	645	35243

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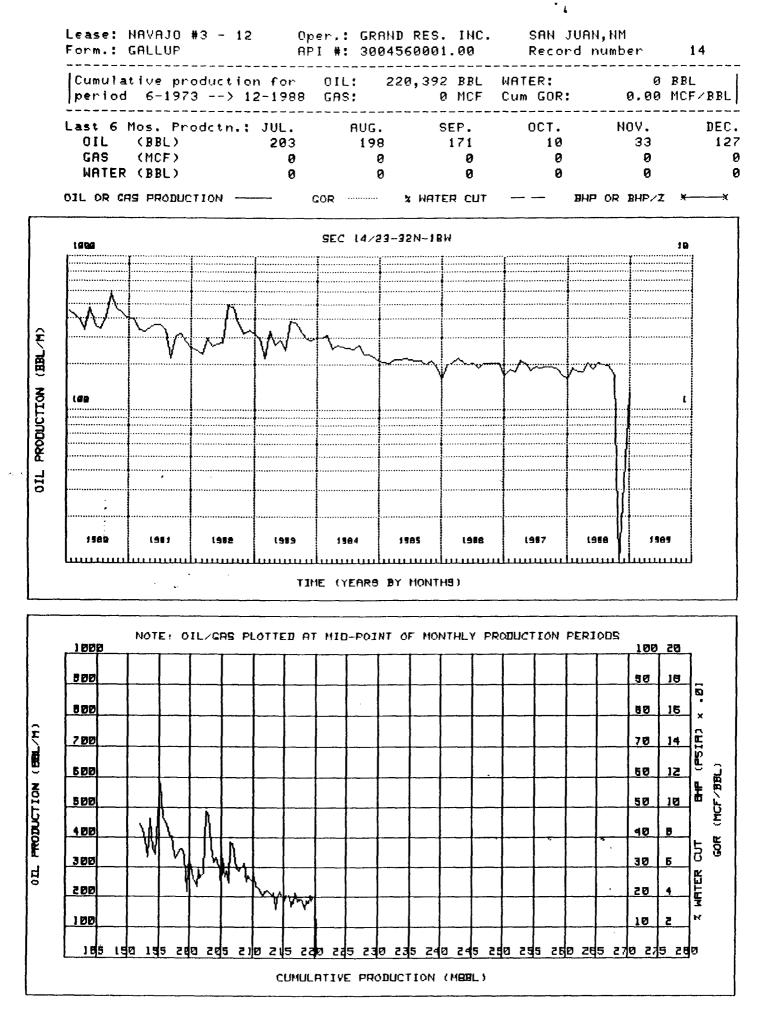
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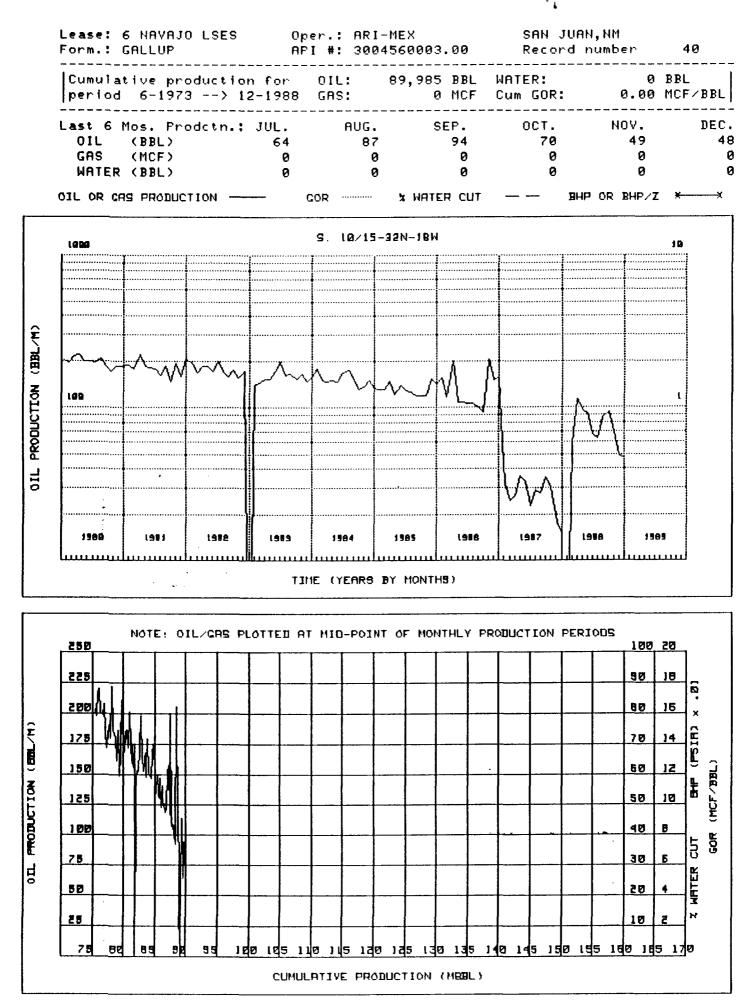
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JACK SCHRENKEL & ASSOCIATES, INC. / TULSA, OK.



JACK SCHRENKEL & ASSOCIATES, INC. / TULSA, OK.

Form	ation	: MESA GAL : GALLUP st Product er : -		6- 73	Di	te of Fir 1 Cun as 1e Nane	of Above	e Date	a: 1- ;	80 75339	Up Le Lo SA Re	erator ase cation L/RRC/UTI V JUAN C cord Nuw	: ARI-M : 6 NAV : 5, 10 C: 30045 O., NM ber = 4	EX AJQ LSES /15-32N-1 60003.00	8M
90 01L		JAN	FEB	MAR	APR	MAY	JUN	JIIL	AUG	SEP	OCT	NOV	DEC	YEAR Total	CUM
OIL	B/M	204	198	218	220	200	201	199	208	185	172	186	187	2378	77717
81 01L	B/M	191	181	222	188	183	181	162	187	149	193	159	211	2207	79924
82 110	B/M	174	169	186	187	172	202	174	160	176	157	174	0	1951	81875
83 01L	B/M	139	146	154	154	172	178	162	165	154	165	148	159	1917	83792
84 01L	8/M	180	150	147	151	147	168	175	150	133	137	150	135	1825	85617
85 01L	B/K	132	131	147	123	141	129	126	119	120	121	155	142	1586	87203
86 01l	B/H	158	117	201	108	109	106	107	100	93	206	150	157	1612	89815
87 01L	B/M	32	25	27	36	33	23	29	28	35	30	18	15	331	87146
88 01L	B/M	0 .	58	114	97	91	67	64	87	~ 94	70	49	48	839	87785

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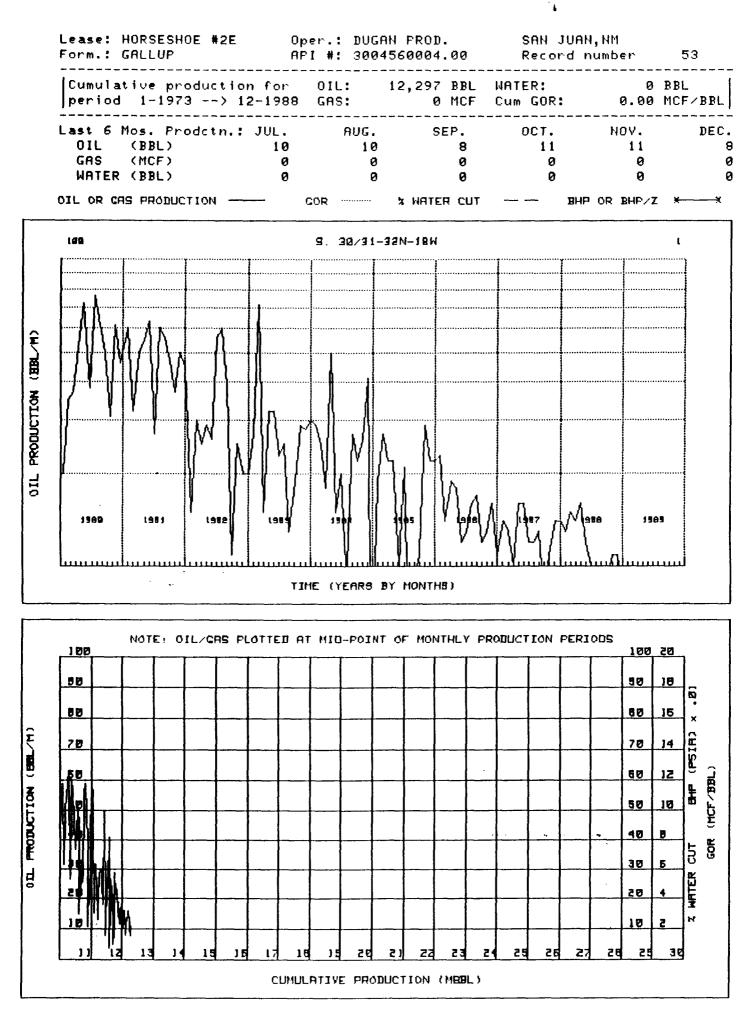
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*** JACK SCHRENKEL & ASSOCIATES *** CONSULTING FETROLEUM ENGINEERS ** TULSA, OKLAHOMA

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JACK SCHRENKEL & ASSOCIATES, INC. / TULSA, OK.

Form	ation :	MESA GAL GALLUP st Produc Ir : -		1- 73	Di	te of Fin 1 Cum as 1e Name	of Above	e Date	a: 1- :	80 9459	Le	erator ase cation L/RRC/DII N JUAN C cord Num	<u>- 1</u> S. 31	PROD. SHOE \$2E)/31-32N-1 60004.00 53	8W
8 0 01L		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR Total	CUM
	B/M	21	35	37	52	72	38	76	61	50	31	61	46	579	100
81 01L	B/H	59	32	50	55	63	27	60	56	47	37	50	45	581	106
82 011	17N	15	30	25	29	26	56	59	39	11	25	20	20	355	109
83 0IL	B/H	27	71	15	32	32	23	25	13	19	29	28	30	344	11
84 0IL	B/H	29	25	18	50	15	20	8	27	22	26	41	4	285	11
85 0IL	B/M	19	27	22	22	10	21	5	9	11	29	22	22	219	11
86 01L	B/H	23	14	19	18	12	13	16	17	12	13	16	11	184	12
87 Dil	B/N	14	13	19	16	16	12	12	13	8	11	14	14	153	12
88 011	3/H	13	, 15	, 14 .	16	12	10	10	10	. B	11	11	8	138	12

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*** JACK SCHRENKEL & ASSOCIATES *** CONSULTING PETROLEUM ENGINEERS ** TULSA, OKLAHOMA

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APPENDIX 2

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WELL DATA

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WELL NAME S-T-R Elevation	API NO X TOP SAND(SS)	OPERATOR Y Base Sand(SS)	WELL CODE COMP DATE NET FT	TOTAL DEPTH POROSITY(PCT)	ELEVATION AUG K (md)	FORMATION KH (md-ft)
CUM 01L(12/88)	IBOPD	BOPM(12/88)	6**	ALL		
HORSESHOE #2-E 30-32N-17W 5525 12.28		DUGAN PROD 3210 4475 8	0 6-17-64 8 9**	1175 - All		GAL 150
HORSESHOE #B 1- 31-32N-17W 5490 3.0	1-H- 4620 4420 4	DUGAN PROD 3300 4412 0	G 3-29-64 8 9**	1145 - ALL	5490 -	GAL 60
NAVAJO #2 10-32N-18W 5253 0	30-045-11498 350 4157	HAYNES & UT DRLG 540 4139 U	LGDH 5-11-64 0	1183 - ALL	5253	GAL 0
NAVAJO #5-0 10-32N-18 W 5810 0	30-045-20111 3300 4146	ARI-MEX 440 4132 0	G 10-4-67 14	1873 - ALL	5810 12.96	GAL 700
NAVAJO #6 13-32N-18 u 5424 0	- 760 4024	EXPL DRLG 365 4018 0	DН 1-6-62 6	1372 9 ALL	ភ 4 ភ ភ 4 ភ 4	GAL 49
NAVAJO (C/ #7-M 14-32N-18W 5338 0	1 - 990 4064	EXPL DRLG 990 4050 0	DH 4-69 6	1327 - All	د338 ۱	GAL 60
NAVAJO TRIBAL C 14-32N-18W 5347 25.89	2970 2970 36	MURPHY DIL CORP 330 4031 4	0 4-3-60 9**	1380 13.7 ALL	5347 62	GAL GAL GG6
NAVAJO TRIBAL C 14-32N-18W 5724 48.66	30-045-20251 330 4085 84	EXPL DRLG 2310 4060 90	0 3-31-68 23 9**	1762 17 ALL	5724 214	GAL 5555

	a 04	RATOR E SAND(M(12/88	WELL CODE COMP DATE NET FT 9**	TOTAL DEPTH POROSITY(PCT) ALL	ELEVATION AUG K (md)	FORMATION KH (md-ft)
NAVAJO #4-J 14-32N-18W 5.7		AMALGAMATED PET 1650 4025 0	r CWI 11-20-61 3 9**	1365 12.1 ALL	5347 178	6AL 529
NAVAJO TRIBAL C 14-32N-18W 5306 22.5	: 30-045-20430 1720 4062 77	EXPL DRLG 650 4040 22	0 3-27-69 17 9**	1310 14.5 ALL	5306 65	GAL 1112
NAVAJO C #1-H 15-32N-18W 5311 48.69	30-045-11472 4595 4089 32	ARI MEX 3580 4071 40	Сыг 5-2-64 18 9**	1276 - All	5311 133	GAL 2400
NAVAJO #3-A 15-32N-18W 5360 19.2	30-045-11478 4530 4110 19	ARI MEX 4335 4100 8	0 61-30-64 10 9**	1312 - ALL	5340 -	GAL 215
NAVAJO #7-C 15-32N-18W 5390 0	30-045-20409 2310 4196	AAA FISHING TO(4950 4192 8	ТООСЪН 2-24-69 0	1295 0 All	5390	GA F
NAVAJO 'B' #1-G 15-32N-18 u 5278 0	; 30-045-20621 3780 4080	AAA FISHING TOO 3660 4076 8	ТООГЪН 12-18-70 6	1285 0 All	5278 0	GAL 0
NAVAJO #4-J 15-32N-18W 5422 0	30-045-20208 3830 4167	AAA FISHING TOO 2510 0 8	TOOLDH 1-24-68 0	1414 0 ALL	5422 0	GAL 0
NAVAJO 'B' #3-B 15-32N-18W 5318 6.8	3 30-045-20627 3430 4120 62	ARI MEX 4130 4114 5	0 3-27-70 6 9**	1275 - All	5318	GAL 40

NAME R ATION OIL(12/	NO SAND(SS) D	OPERATOR Y BASE SAND(SS) BOPM(12/88)	WELL CODE COMP DATE NET FT 9**	TOTAL DEPTH POROSITY(PCT) ALL	ELEVATION AUG K (md)	FORMATION KH (md-ft)
NAVAJO 'B' #2-I 15-32N-18W 5696 3.5	30-045-20622 4950 4084	ARI MEX 2310 4072 1	0 8-15-70 12 9**		5696	GAL 50
NAVAJO #6-H 15-32N-18W 5374 13.0	30-045-20271 4950 4092 -	ARI MEX 3030 4070 0	0 5-16-68 22 9**	1360 - ALL	5374	GAL 400
NAVAJO #8-A 23-32N-18W 5421 31.4	- 4950 23 23	EXPL DRLG 4330 4031 0	0 2-15-62 13 9**	1445 10.6 All	5421 2.8	GAL 36
NAVAJO #5 23-32N-18 u 5375 0	л 3345 1	EXPL DRLG 2135 0	DH 1-3-62 0	- ALL	ា ស រ ប	GAL 0
NAVAJO #11-B 23-32N-18W 5416 56.38	- 3630 87 87	EXPL DRLG 4950 4026 14	CWI 1-28-62 6 9**	1436 11.8 ALL	5416 34	202 202
NAVAJO TRIBAL C 23-32N-18W 5461 47.27	- 4950 89 89	TEX PACIFIC 3630 4044 0	0 3-22-62 10 9**	1478 - ALL	5461	GAL 900
NAVAJO #7-E 24-32N-18W 5565 70.88	-330 4155 88	EXPL DRLG 2970 4136 20	0 1-19-62 13 9**	1482 13.7 ALL	5565 106	GAL 1381
NAVAJO TRIBAL C 24-32N-18 W 5432 47.20	- 660 4211 92	TEX PACIFIC 2310 4199 0	0 3-6-62 13 9**	1300 - ALL	년 4 3 2 1 1	GAL 1000

NAME R Ation Oil(1	API NO X TOP SAND(SS) IbOPD	<u>ш</u> 0 с	WELL CODE COMP DATE NET FT 9**	TOTAL DEPTH POROSITY(PCT) ALL	ELEVATION AUG K (md)	FORMATION KH (md-ft)
NAVAJO TRIBAL C 24-32N-18W 5702 21.24		MURPHY DIL 1890 4242 0	0 4-15-62 10 9**	1510 14.2 ALL	5702 121	GAL 1214
NAVAJO #12-F 24-32N-18W 5685 1.51	- 1780 4164 8	EXPL DRLG 2990 4155 0	а 3-25-62 9**	- 15.6 All	5685 23	GAL 93
NAVAJO #3-N 24-32N-18W 5451 56.55	- 1980 4347 49	AMALGAMATED 660 4328 61	CWI 8-15-61 19 9**	1163 - ALL	ី4ច1 -	GAL 500
AZTEC NAVAJO 'A 25-32N-18W 5468 25.55		EXPL DRLG(TEXAC 4680 4381 61	00 11-11-61 12 9**	1120 - ALL	5468 1	GAL 150
TRACY #1 25-32N-18W 5471 0	30-045-20389 1610 4540	WILBUR STEVENS 330 61	DH 1-10-79 0	1610 - All	5471 -	GAL
NAVAJO #6 25-32N-18 u 0	- 3300	R.L. BAYLESS 3300 - 61	ĎН 7-2-64 0	1093 - All	1 I	GAL 0
S. BLUE HILLS # 25-32N-18W 5449 0	#1- 3300 -	ZOLLER & DANNEBEDH 2770 7- 61 61	EDH 7-26-65 0	1573 - ALL	5449	GAL 0
TEXAS NAVAJO 'A 25-32N-18W 5498 0	, A΄ − 4745 -	AZTEC 0 & G 790 61	DH 11-14-59 0	1616 - ALL	1 1 8 8	GAL 0

NA TI IL	APINO X TOP SAND(SS) IBOPD	OPERATOR Y Base Sand(SS) Bopm(12/88)	WELL CODE Comp date Net Ft 9**	TOTAL DEPTH POROSITY(PCT) ALL	ELEVATION AVG K (md)	FORMATION KH (md-ft
AZTEC NAVAJO 'A 25-32N-18W 5426 9.7	`- 1980 4381 5		CO 2-1-62 7 9**	1062 - All	5426	GAL 70
AZTEC & NAVAJO 36-32N-18W 5364	/30-045-11151 660 5	TEXACD INC 660 0	G 5-8-62 -	8150 - All	5364	GAL -
TRIBAL #1-30 30-32N-17W -	3300	BAUNGARTNER 3300 -	DH 9**	ALT 	Ŧ j	GAL -
NAVAJO C #1 LOC 14-32N-18W -		GRAND RSC 1900 -	1 - L 1 - 7 8 *	- ALL ALL	t j	GAL -
AZTEC NAVAJO A 4 25-32N-18W -	* - 4400 -	GRAND RSC 4400 -	1 - 1 - 6 0 - 8 *	- ALL	ŧ 1	GAL -
NAVAJO C ≢3 LOC 23-32N-18W -	- + 4800 	GRAND RSC 2150 -	1 4 0 * *	- - ALL	î į	GAL -
NAVAJO C #4 LOC 14-32N-18W -	1411 00	GRAND RSC 3050 -	0111 × × ×	ALL AL	1 1	GAL

ENERGY	STATE OF NEW NEXICO DIL C AND HINERALS DEPARTMENT	ONSERVATION DIVISION POST OFFICE BOX 2016 STATE LAND OFFICE BURDING SEANTA FE, NEW MEXICO 8/501		ORM C-108 ovised 7-1-81
APPLICAT	ION FOR AUTHORIZATION TO INJECT			. —
Ι.	Purpose: 🖾 Secondary Recovery Application qualifies for adminis	Pressure Haintens strative approval?	nce Dinnoso yes Dno	1 Shorage
II.	Operator: GRAND RESOURCE	S, INC.		المحاصلين والمراجعة وحبار والجزو والارتقال ومنوك والمراجع والمحاصر
	Address: 2250 E. 73rd S	st., Ste 400		مسینی است این با با است است از این موسی است این با برد
	Contact party: MARVIN ROBING	/1TZ	Phone: (918) 492-2366
111.	Well data: Complete the data requi proposed for injection.	red on the reverse Additional sheets	side of this form may be attached	n for sach well if necessary.
IV.	Is this an expansion of an existing If yes, give the Division order num	project? yes ber authorizing the		•
۷.	Attach a'map that identifies all we injection well with a one-half mile well. This circle identifies the w	radius circle draw	n around sach pr	any proposed oposed injection
• v1.	Attach a tabulation of data on all penetrate the proposed injection zo well's type, construction, date dri a schematic of any plugged well ill	ne. Such data shal lled, location, dep	1 include a desc th, record of co	riplion of each
V11.	Attach data on the proposed operation	on, including:		
	 Proposed average and maximulation Whether the system is open Proposed average and maximulation Sources and an appropriate the receiving formation If injection is for disposation at or within one mile of the disposal zone format literature, studies, near 	or closed; um injection pressu: analysis of inject: if other than reinje al purposes into a the proposed well, ion water (may be m	re; ion fluid and com acted produced wa cone not producti attach a chemica	patibility with ter; and ve of wil 2r gas l analysis of
• VIII.	Attach appropriate geological data detail, geological name, thickness bottom of all underground sources total dissolved solids concentrati injection zone as well as any such injection interval.	, and depth. Give of drinking water (ons of 10,000 mg/l	the geologic name aquifers containi or less) overlyir	and cears to ing wathing with igg the proposed
1×.	Describe the proposed stimulation.	program, if any.	-	
• x.	Attach appropriate logging and tes with the Division they need not be		(If well logs h	have been filed
• XI.	Attach a chemical analysis of fres available and producing) within on location of wells and dates sample	e mile of any injec	more fresh wate: tion or disposal	r wells dif well woowing
XII.	Applicants for disposal wells must examined available geologic and en or any other hydrologic connection source of drinking water.	gineering data and	find no evidence	of open faults
XIII.	Applicants must complete the "Proc	f of Notice" section	on on the reverse	side of this form.
XIV.	Certification			
	I hereby certify that the informal to the best of my knowledge and be Name:	elief. TZ v	PRESIDEN	TT
	Signature:		Data:	analiy fan Antigan yn ywraigen yn ywrai
subm	he information required under Section illed, il need not he duplicated and he carlier submittal.	ons VI, VIII, X, an	d XI above has be	en previouslo
	RIBUITON: Original and one copy to rict office.	Santa Fe with one	copy to the appro	priate Wassion

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III. WELL DATA

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- A. The following well data must be submitted for each injection well covered by this applicatio 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.

XIV. 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 interded 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.

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. WELL IN AREA OF REVIEW

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CEMENT SXS STATUS	circ. P&A	0 P	ዋ	Ρ&Α		д				_	_	_	-								R
CEMENI	circ	0		•			ቧ	P & A	P&A	ዋ	д	д	д		д	д	д	д	д	д	P&A
•		100	100	circ		45	35	circ.	circ.	40	40	40	40		80	80	80	35	35	35	circ.
CASING SIZE & DEPTH	7"830	4½" @1045	3½" @1057	5½"852		4፟ት" 01158	45" 01357	7"@30	7"e66	45" @1481	45"@1437	45"01438	4ኑ"		4½"01288	45"01476	45"01373	4½"e1357	45"01749	45" @1310	7"830
FORMA- TION	=	GALLUP	=	=		=	=	E	2			=	E		=	2	=	=	=	=	:
I.P. (B0PD)	t	ω	ъ	1		49	9	ł	I	88	88	87	ω		92	89	36	9	84	77	I
COMPLETION INTERVAL	I	1051-66	1037-45	I		1110-26	1315-23	I	1	1423-38	1383-94	1381-92	1521-28		1225-36	1407-17	1312-20	1315-23	1642-65	1252-69	ł
TOTAL DEPTH	1573	1120	1062	1093		1163	1365	1254	1472	1482	1445	1438	1573		1295	1478	1380	1365	1762	1310	1327
SECTION	25,32N-18W	25,32N-18W	25,32N-18W	25,32N-18W		24,32N-18W	14,32N-18W	23,32N-18W	13,32N-18W	24,32N-18W	23,32N-18W	23,32N-18W	24,32N-18W		24,32N-18W	23,32N-18W	14,32N-18W	14,32N-18W	14,32N-18W	14,32N-18W	14,32N-18W
LOCATION	2319FW-1980FE	B600FN-1980FE	C610FN-1980FW	3300FS-3300FW		N660FS-1980FW	J1650FS-1710FE	J2135FS-1935FE	365FS-760FW	E2310FN-330FW	A950FN-330FE	B330FN-1650FE	F2290FN-1780FW		L660FN-2310FS	H1650FN-330FE	O330FS-2310FE	J1650FS-1710FE	L2310FS-330FW	N1720FW-650FS	H990FS-990FW
SPUD DATE	7-26-65	11-8-61	12-4-61	7-2-64		8-10-61	10-3-61	11-29-61	12-30-61	1-13-62	2-10-62	1-24-62	2-18-62		2-26-62	3-10-62	3-17-62	10-3-61	3-23-68	3-12-69	4-7-69
WELL NAME	BLUEHILL #1	A" #4	"A" #5	NAV #6	NAVAJO	£#	5 #	:0 #5	9# 0;	# 7	#8	#11	#12	NAVAJO TRIBAL C	#1	#2	#3	#4	#5	# 6	0 #7
OPERATOR	ZOLLER & DANNENBERG	=	GRAND NAV ".	RL BAYLESS		GRAND	GRAND	EXPL/DRILL/C	EXPL/DRILL/C	GRAND	GRAND	GRAND	GRAND	NAVAJ	GRAND	GRAND	GRAND	GRAND	GRAND	GRAND	EXPL/DRILL/C(

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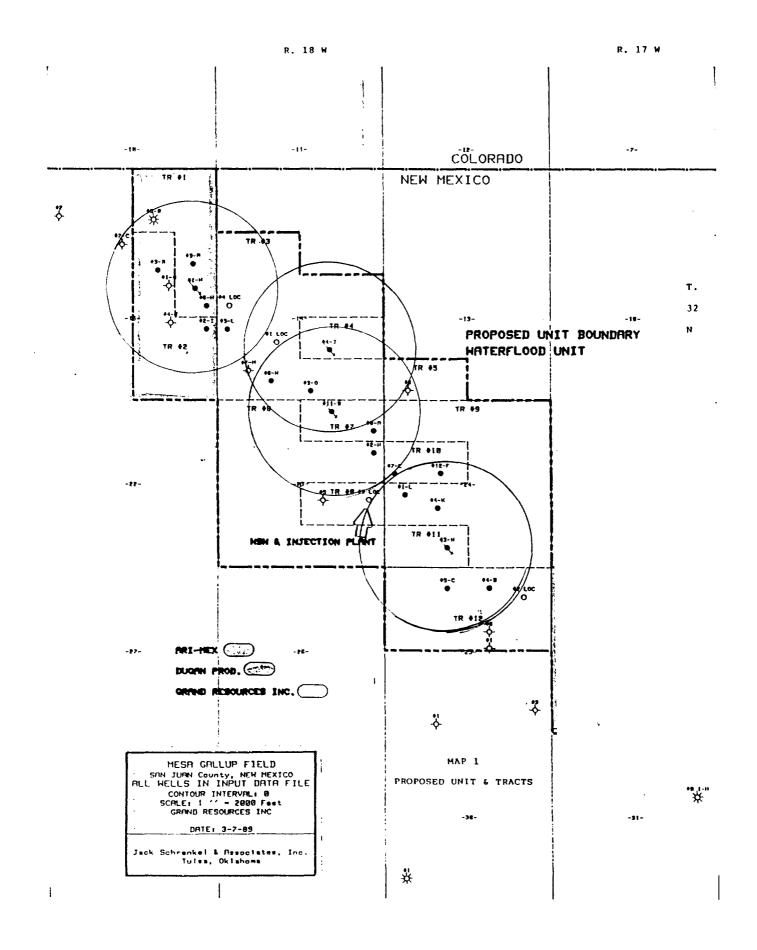
WELL IN AREA OF REVIEN

OPERATOR	NELL NAME	SPUD DATE	LOCATION	SECTION	TOTAL DEPTH	COMPLETION INTERVAL	I.P. (BOPD)	FORMA- TION	CASING SIZE & DEPTH	CEMENT	STATUS
AZTEC OIL & GAS	NAV #3	11-14-59	4745FW-790JFS	25,32N-18W	1660		Ũ	GALLUP	8.5/8460	35	Р&А
DUGAN	HORSESHOE #2E 6-17-64	5 6-17-64	330FW-3210FS	30,32N-17W	1175	1101-10	10	GALLUP	45"01172	35	Ч
ARI-MEX	NAV B #2	10-15-70	4950FW-2310FS	15,32N-18W	1718	1612-14	10	=	4 5 "01717	125	Ъ
ARI-MEX	NAV #6	5 - 16 - 68	4950FW-3030FS	15,32N-18W	1360	1282-1304		=	45"01345	35	д
ARI-MEX	NAV C #1	5-2-64	4595FW-3580FS	15,32N-18W	1276	1223-38	32	:	45"01276	50	д
ARI-MEX	NAV #3A	5-30-64	4530FW-4335FS	15,32N-18W	1312	1250-60	19	•	45"01312	35	д
AAA FSHING TI	C NAV #4	1-24-68	3850FW-2510FS	15,32N-18W	1414	I		8	7" 250	circ.	Ρ&Α
AAA FSHING TL	NAV B #1	12-18-70	1650FW-1650FE	15,32N-18W	1285	1		=	7"860	25	P & A
ARI-MEX	NAV B #3	3-19-70	1115FW-1480FE	15,32N-18W	1275	1197-1205	9	=	4፟ት" ፅ1272	125	Ъ
AAA FSHING TL	NAV #7	2-24-69	2310FW-4950FS	15,32N-18W	1295	I	I	E	7" @30 c	circ.	P&A
ARI-MEX	NAV #5	10-4-67	3300FW-440FS	10,32N-17W	1873	1664-78	9		4½"@1764	135	ዋ
HARLAN DRLG	NAV #2	5-4-64	350FW-540FS	10,32N-17W	1183	ł	I	=	7"@30 c	circ.	Р&А

V (CONT.)

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GRAND RESOURCES, INC. WATERFLOOD PERMIT

- VII. 1. Average daily injection rate 300 BWPD per injection well. For 4 injection wells total average injection rate is 1200 BWPD. With a ll-year life total injection volume should be approximately 4.8 MMBW. Maximum injection rate should not exceed 500 BWPD per well.
 - 2. System will be a closed system.
 - 3. Maximum injection pressure will be 1000 psi. The average to be determined by a step-rate test after start-up.
 - 4. An adequate source of water should be derived from the Morrison Water Sand at approximately 3000 feet. This water source is widely used in the area.
- VIII. The Gallup formation is a reasonably clean sand stone with calcarious cementation present. The reservoir produces a solution gas drive with no apparent water leg. Average pay thickness 11.2 feet. Porosity is 13.1%. Average permeability is in the 70 md range. Connate water saturation of 31%. The Gallup sand is encountered between 1000 to 1400 from the surface depending on the topography of the location.
- IX. Since all wells have been frac stimulated, there is no proposed restimulation program in the future.

Attached please find a representative log for well $# \underline{1C NAV};$ Section, 24-32N-18W.

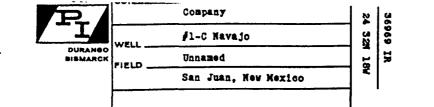
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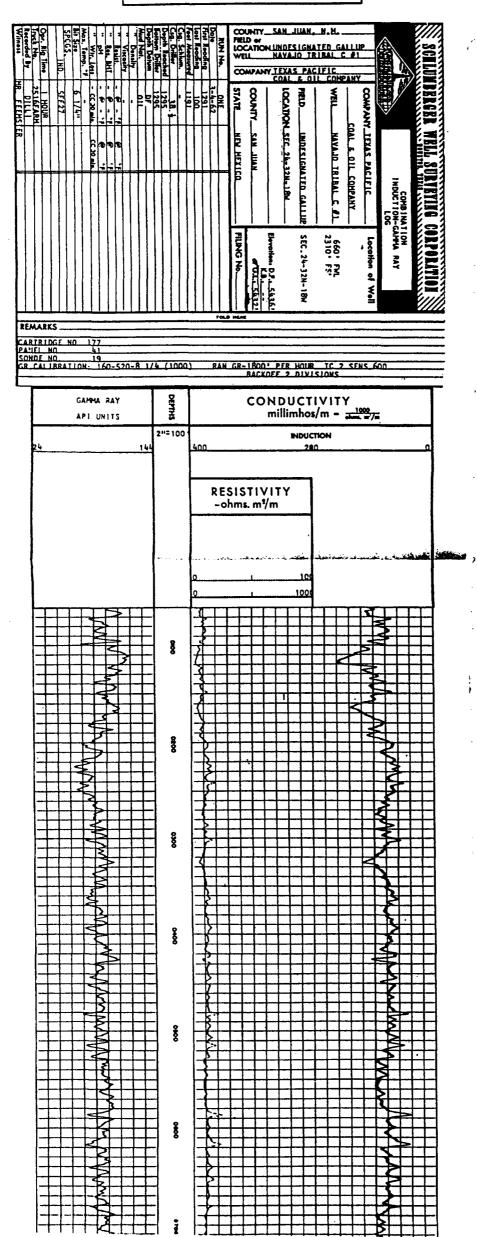
NAME:_____

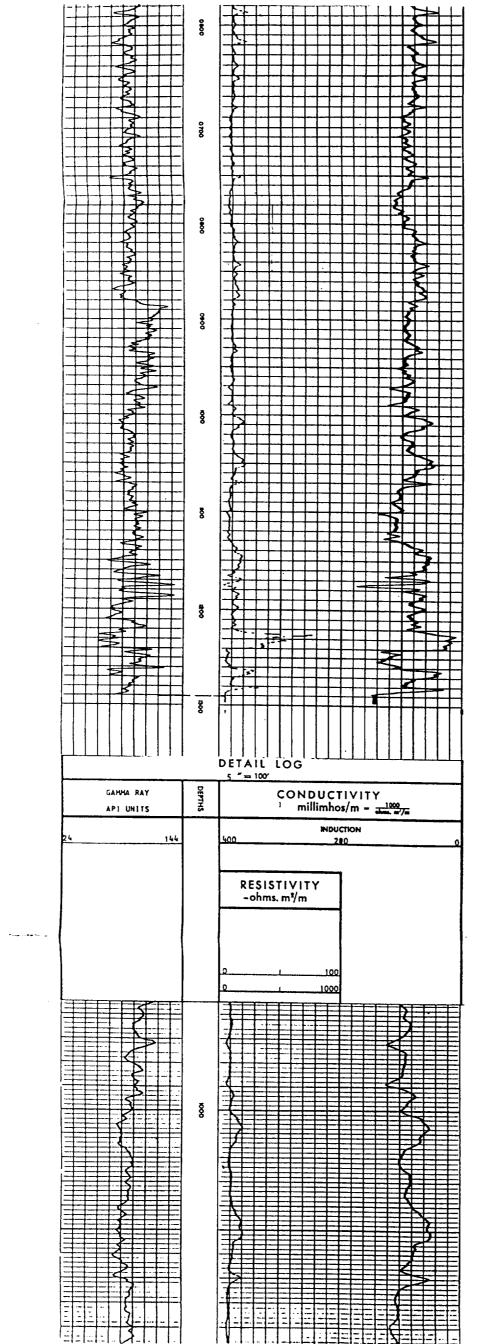
TITLE:_____

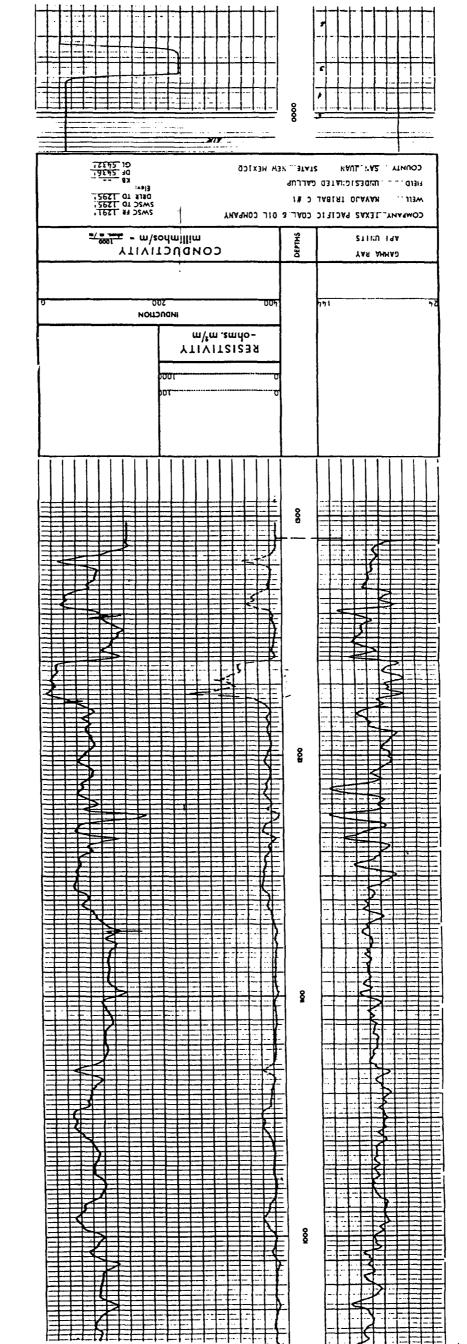
SIGNATURE:_____

DATE:_____





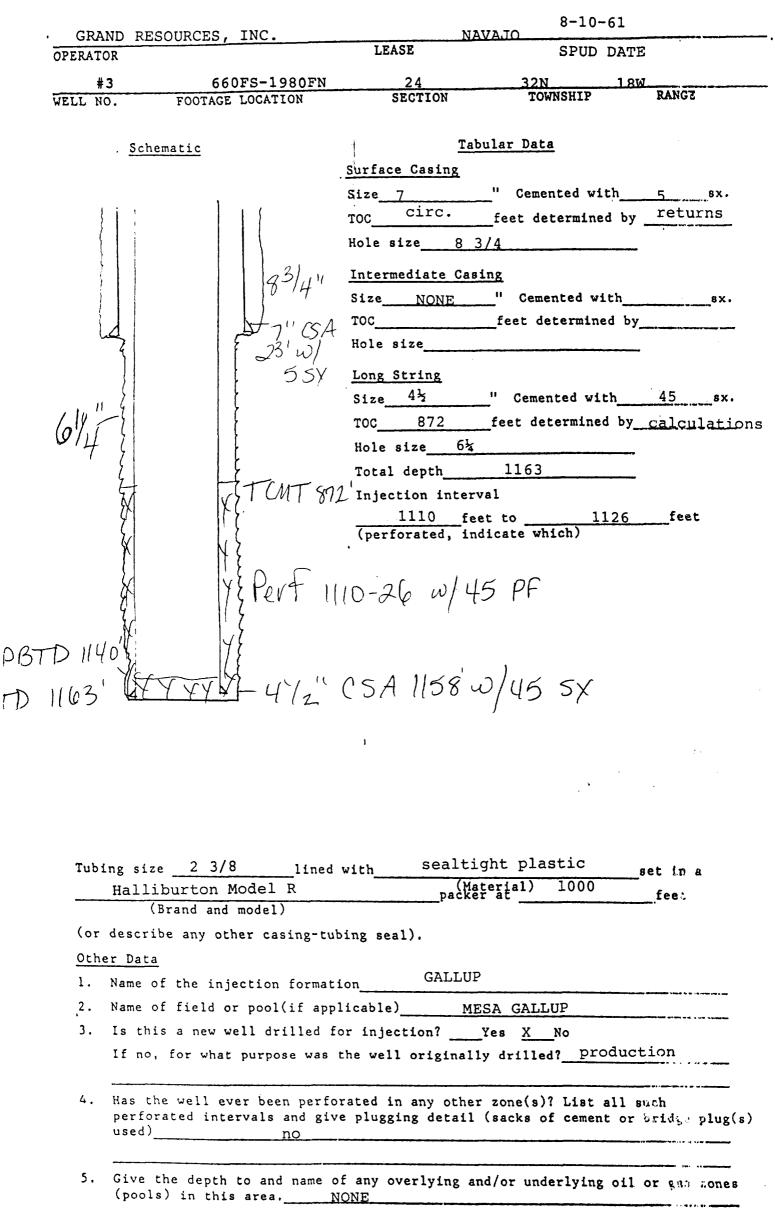




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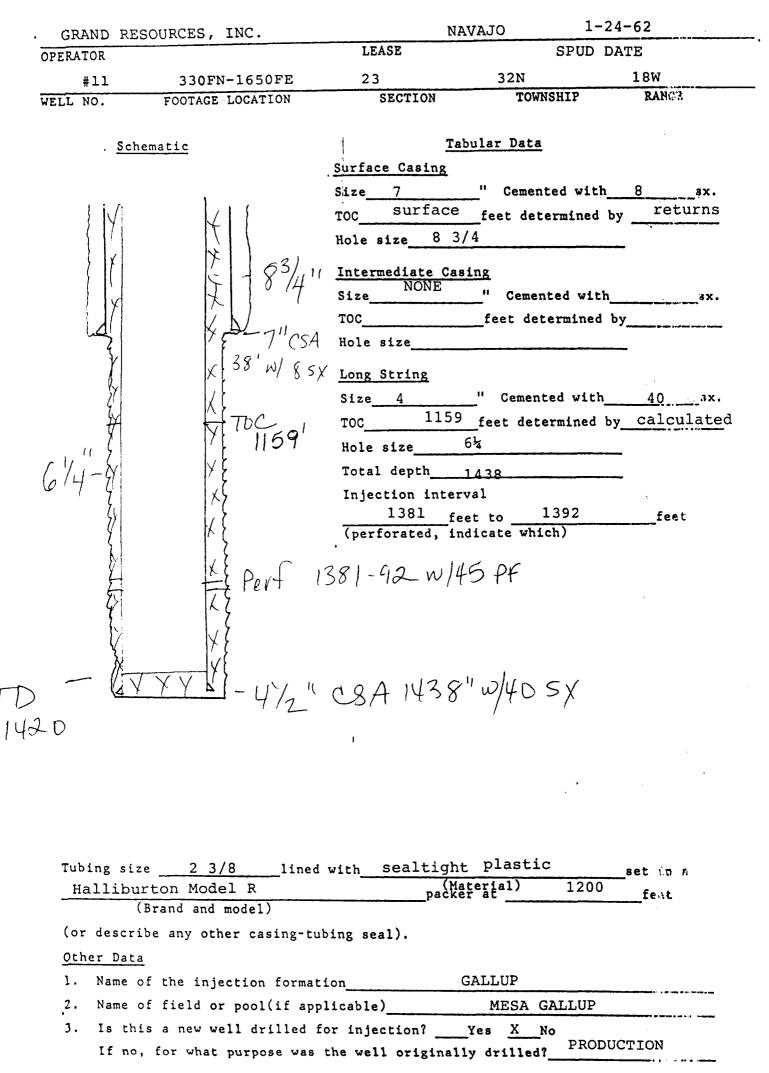
OPENION 15 32N 18N well NO. FOOTAGE LOCATION SECTION TOWNSEIP RANVE Schematic Intermediate Casing Size 7 Commented with 10 st. Schematic Intermediate Casing Size 7 Commented with 10 st. Note Size 7 Commented with 10 st. Note Size 7 Commented with st. Note Size Add Intermediate Casing Size NORE Commented with 50 st. Note Size Add Intermediate Casing Note Size Add Intermediate Casing Note Size Add Intermediate Casing Note Size Add Interval st. Note Size Add Interval st. Note Note Size Add Interval Note Injection interval Izie st. Note Note Size Size Size Note Note Size Size Size Note Note Size Size Size			NAVAJO "C LEASE	<u> </u>			
PELL NO. PORTAGE LOCATION SECTION TOWNSHIP RAIVE Schematic Streing 7 Camented with	OPERATOR						
Tabular Data Schematic Schematic Streface Casing Site 10 Constants Site Total casing Site Constants Site NONE Optimizer Site Site Optimizer Site Site Site Optimizer Constants Site Optimizer Constants Site Site <th colspan="2" site<<="" td=""><td></td><td></td><td></td><td></td><td></td></th>	<td></td> <td></td> <td></td> <td></td> <td></td>						
Tubing size 2 3/8 lined with sealtight plastic set in " Halliburton Model R packer st 1100 freet (Brand and model) (or describe any other casing-tubing seal). freet freet Other Data 1. Name of the injection formation GALLUP 2. Name of field or pool(if applicable) MESA GALLUP 3. Is this a new well drilled for injection? Yes No 4. Has the well ever been perforated in any other zone(a)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(sused) No 5. Give the depth to and name of any overlying and/or underlying oil Cf at Winnes	WELL NO.	FOOTAGE LOCATION chematic $8^{3/4''}$ $7''C8A3C W_{10}SXY_{10}SXY_{10}SX$	SECTION <u>Tabula</u> <u>Surface Casing</u> Size 7 " TOC <u>circ.</u> f Hole size 8 3 <u>Intermediate Casing</u> Size <u>NONE</u> " TOC <u>f</u> Hole size <u>f</u> Hole size <u>f</u> Hole size <u>6</u> Total depth <u>1</u> Injection interval <u>1223</u> feet (perforated, indic	TOWNSHIP <u>ar Data</u> Cemented with <u>eet determined by</u> /4 Cemented with <u>feet determined by</u> Cemented with <u>eet determined by</u> <u>1238</u> ate which)	RANGE 10 sx. returns sx. 50 sx. ōalculation		
Tubing size	141-11, 24127.24 D3250'		Total depth <u>1</u> Injection interval <u>1223</u> feet (perforated, indic 38	276 to1238 ate which) ffick	t'93C		
 (Brand and model) (or describe any other casing-tubing seal). Other Data Name of the injection formation GALLUP Name of field or pool(if applicable) MESA GALLUP Is this a new well drilled for injection? Yes X No <pre> If no, for what purpose was the well originally drilled? production </pre> Has the well ever been perforated in any other zone(s)? List all such <pre> perforated intervals and give plugging detail (sacks of cement or bridge plug(a </pre> 5. Give the depth to and name of any overlying and/or underlying oil compares 	-76			· · ·			
 (or describe any other casing-tubing seal). <u>Other Data</u> Name of the injection formation GALLUP Name of field or pool(if applicable) MESA GALLUP Is this a new well drilled for injection?Yes XNo If no, for what purpose was the well originally drilled? 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(sused)			والشميسيسي ويهود ويهرج والمساد بالمتكال فليستك فتستكر والمتكار والمتكار والمتكر والمتعاد		sét [n a		
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	Hall (or desc Other Da 1. Name 2. Name 3. Is If r 4. Has per	Liburton Model R (Brand and model) Tribe any other casing-tunt ata e of the injection format e of field or pool(if app this a new well drilled f no, for what purpose was the well ever been performated intervals and give	(Mater packer a bing seal). tion <u>GALLUP</u> blicable) <u>MES</u> for injection? <u>Yes</u> the well originally o prated in any other ze	<pre>[a1) 1100 CA GALLUP s X No drilled? product. one(s)? List all s</pre>	feet ion		

INJECTION WELL DATA SHEET



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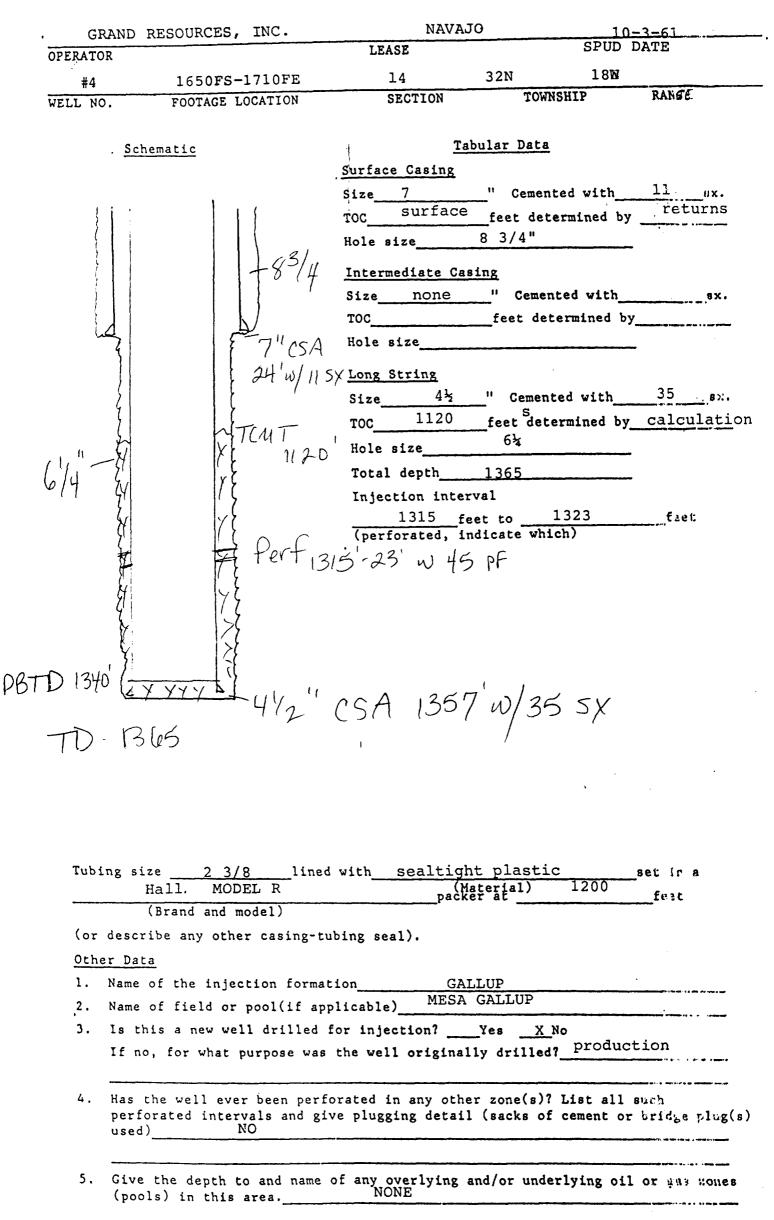
INJECTION WELL DATA SHEET



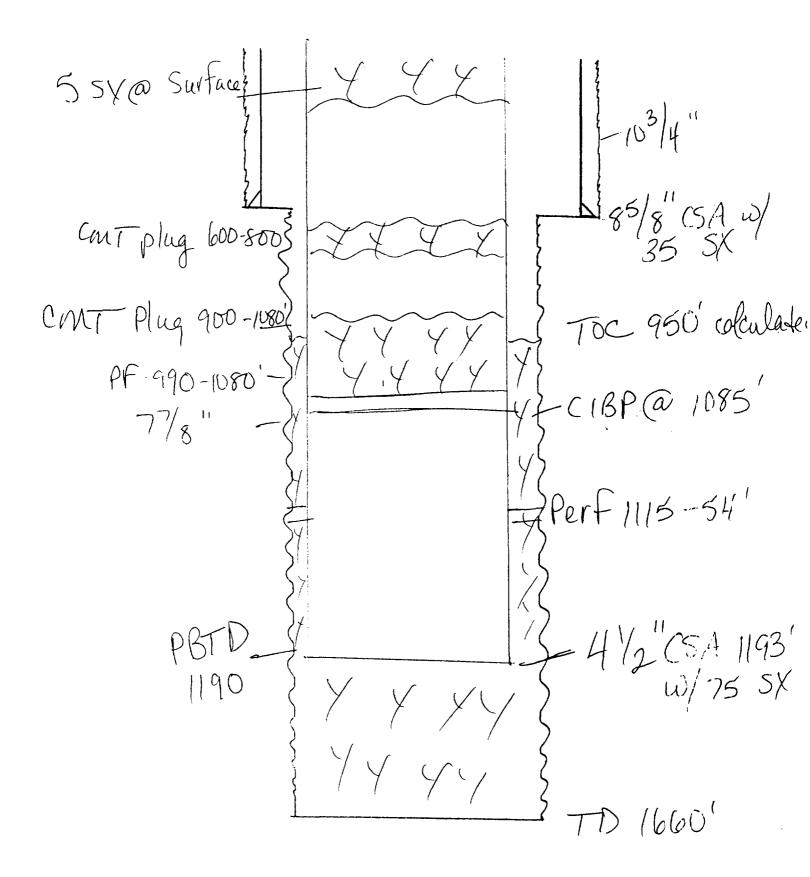
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) ______NO

5. Give the depth to and name of any overlying and/or underlying oil or gus zones (pools) in this area. NONE

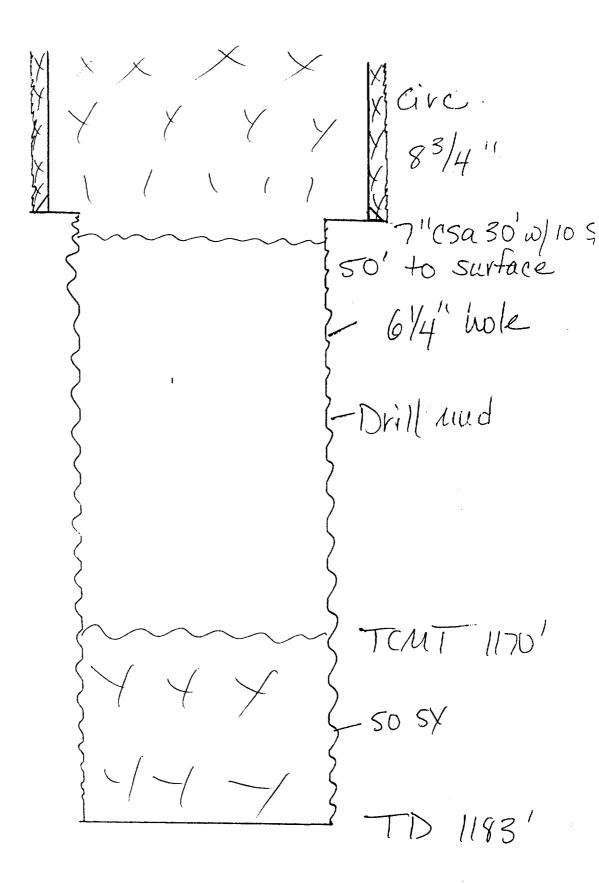
INJECTION WELL DATA SHEET



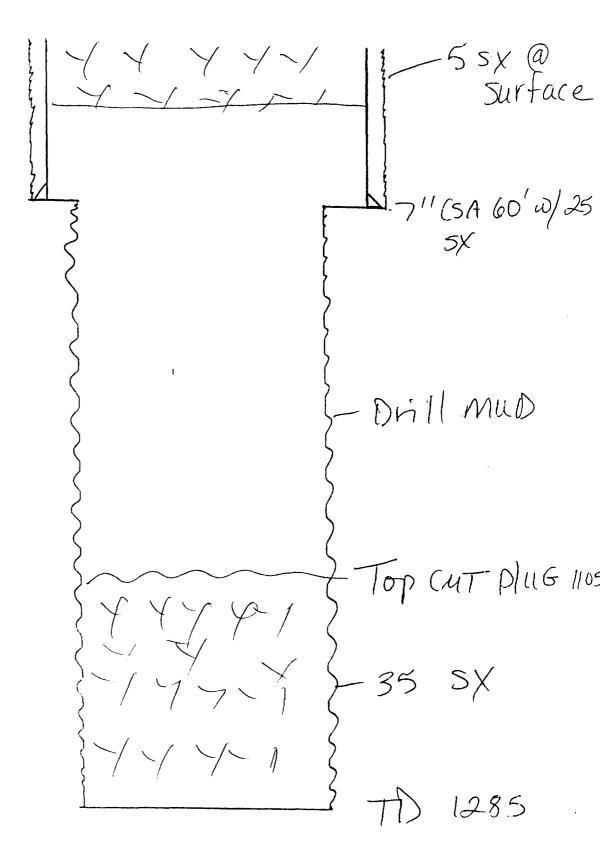
AZTEC (DIL	& GAS	со.	NAVAJO	11-1	4-59
OPERATOR				LEASE	SPUD	DATE
#3			790FS-535FE	25	32N	18W
WELL NO.		FOOTA	GE LOCATION	SECTION	TOWNSHIP	RANGE
			1			



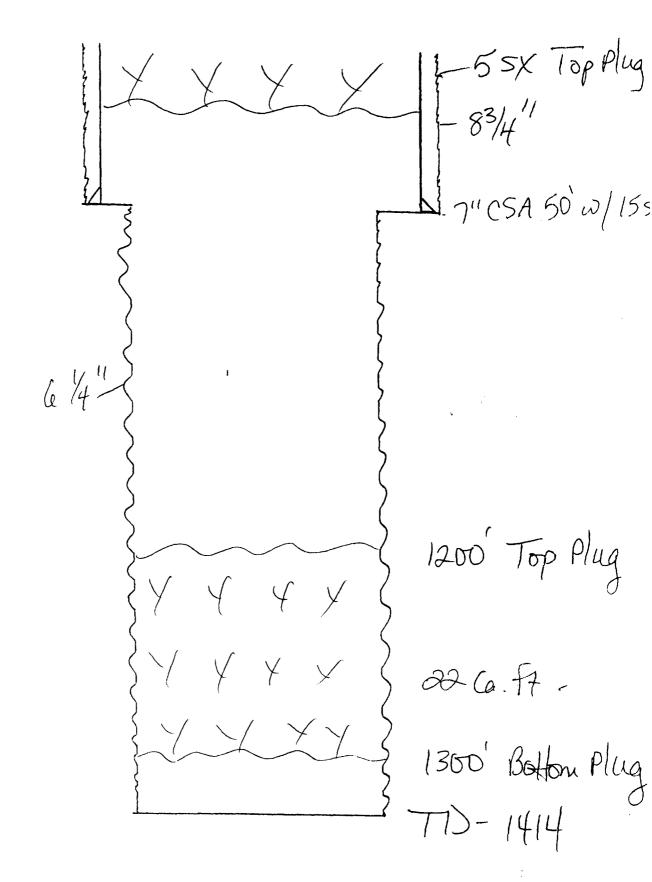
HARLAN	DRILLING CO.	NAVAJO	5-4-6	4
OPERATOR		LEASE	SPUD	DATE
#2	350FW-540FS	10	32N	<u>17w</u>
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
		- - -		



AAA	FISHING	TOOL	NAVAJO	12-3-	-70
OPERATOR			LEASE	SPUD	DATE
B-1		1650FN-1650FE	15	32N	18W
WELL NO.	FOO	FAGE LOCATION	SECTION	TOWNSHIP	RANGE
				· .	

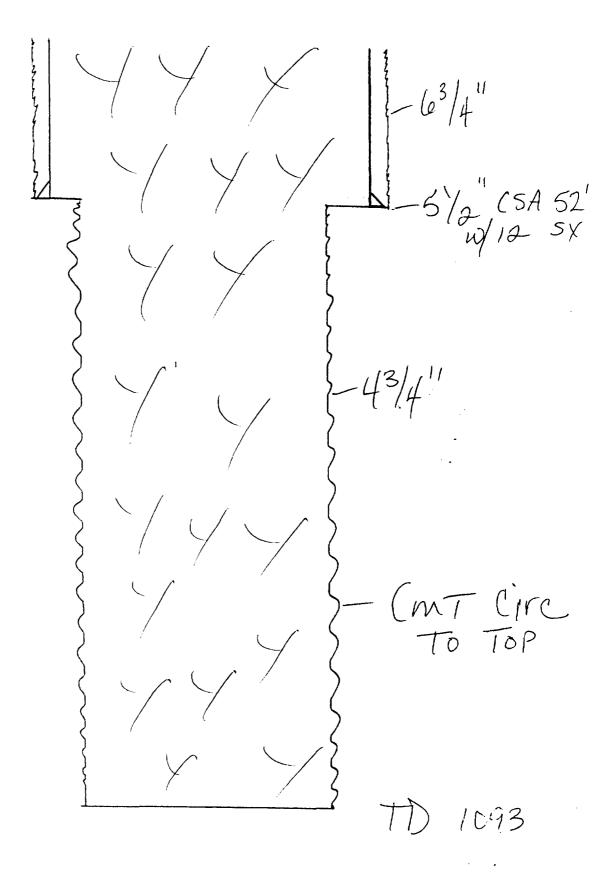


AAA FIS	HING TOOL	OLAVAN		1-24-68
OPERATOR		LEASE	SPUI	DATE
#4	3850FW-251	OFS	15 32N	18W
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RAN 31

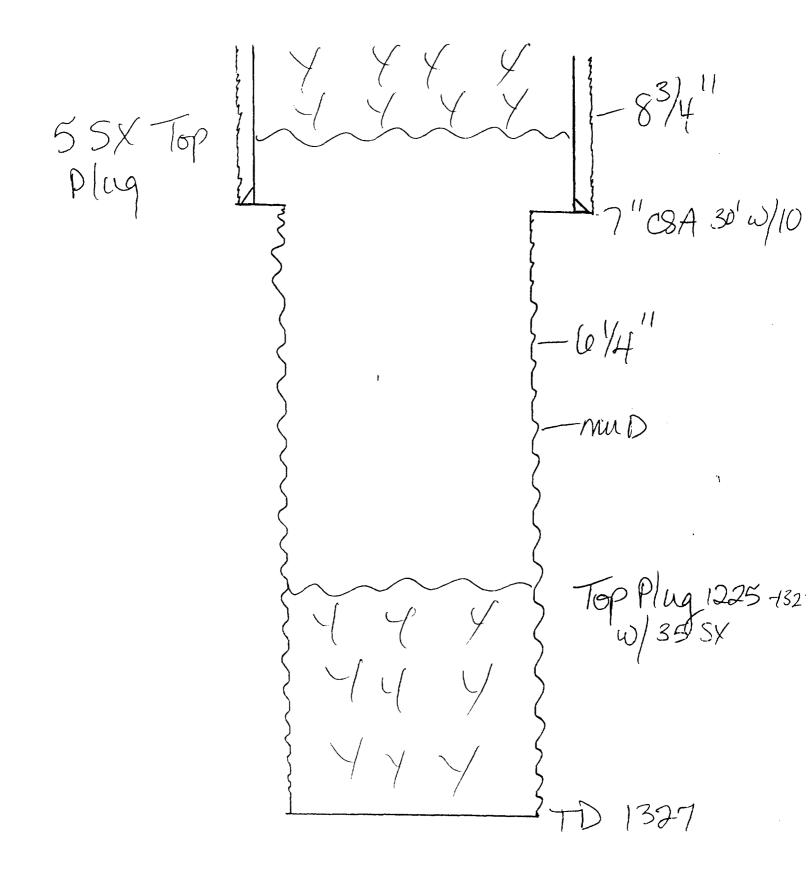


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R. L.	BAYLESS	NAVAJQ	7-1-	64
OPERATOR		LEASE	SPUD 1	DATE
#6	1980FN-1980FE	25	32N	18W
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

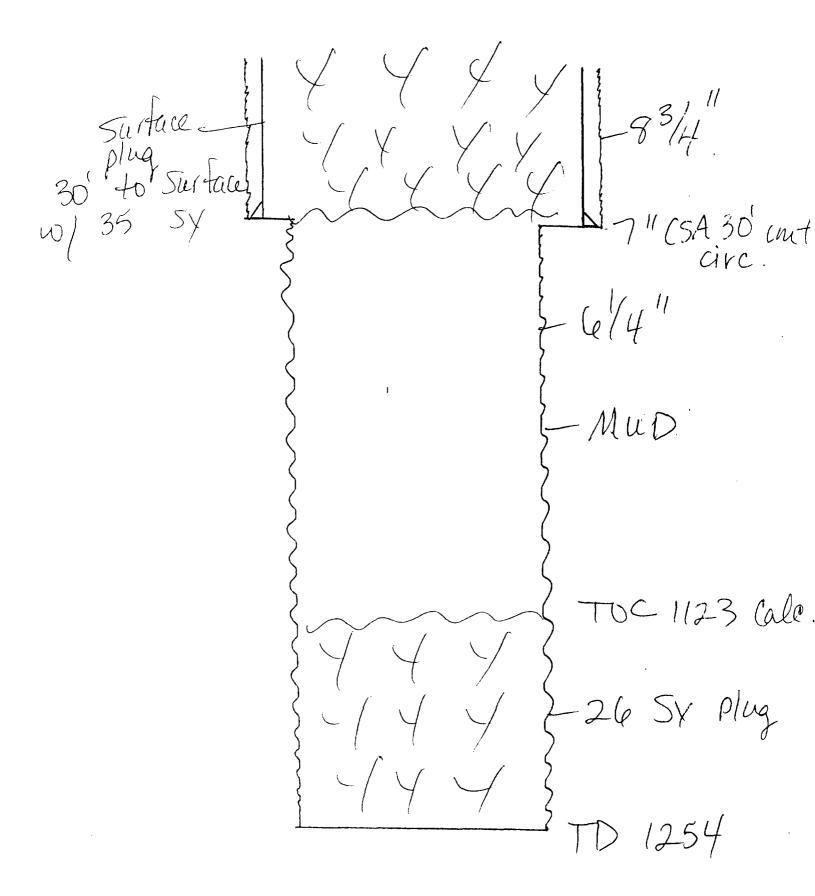


EXPLORA	EXPLORATION DRILLING CO.) 4-7	4-7-69	
OPERATOR		LEASE	SPUD	DATE	
#7	990FS-990Fw	14	32N	18W	
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE	



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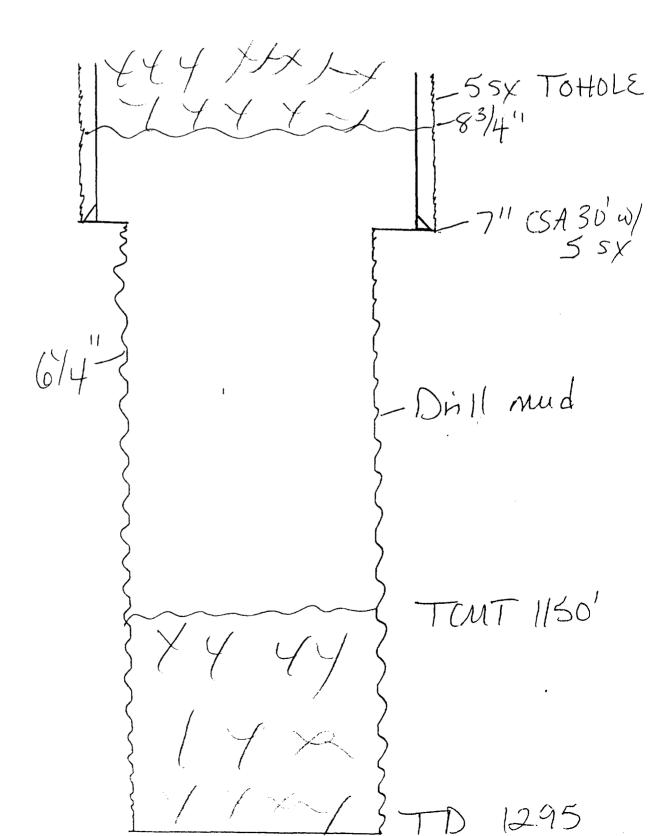
EXPLORATION DRILLING CO.		NAVAJO	11-29-61		
OPERATOR		LEASE	SPUD DATE		
#5	2135FS-1935FE	23	32N	18W	
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE	



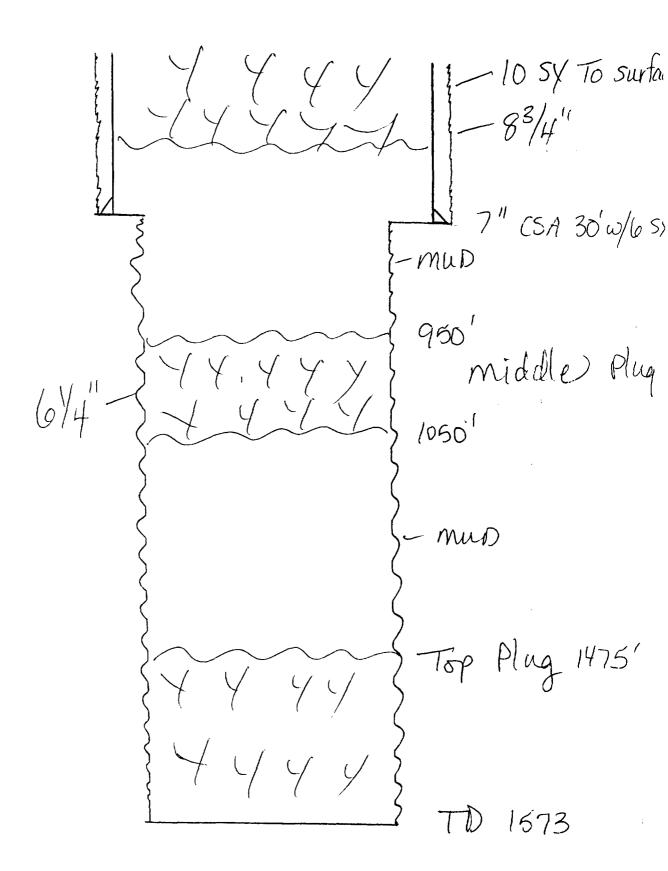
EXPLORATION DRILLING CO.		OLAVAJO		12-30-61		
OPERATOR		LEASE SPUD DA		DATE		
#6	365FS-760FW		13	32N	1	8W
WELL NO.	FOOTAGE LOCATION	-	SECTION	TOWN	SHIP	SANGE
		с 1			s.	

654 To surface 8374 hole -7" CBA 66 w/ 15 5 ξ 1 CMT Plug 1350' w/28 '5X +1) 1170

AAA FISHING TOOL OPERATOR		NAVAJO	2-24-69 SPUD DATE	
		LEASE		
<u> </u>	2310FW-4950FS	15	32N	18W
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
		, , ,		



ZOLLER	æ	DANNEBERG	BLUEHILL	7-26-63	
OPERATOR			LEASE	SPUD	DATE
#1		2319FN-1980FE	25	32N	1 <u>8W</u>
WELL NO.		FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
			1		



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		EXAMINER CATANACH
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	Exhibit "A" (Map of Unit Area) Exhibit "B" (Schedule of Ownership and Tract Partici	pation)
	Skilore B (Schedure of OwnerShip and fract Partici	pacrony

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UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE MESA GALLUP UNIT SAN JUAN COUNTY, NEW MEXICO

۲.

THIS AGREEMENT, entered into as of the <u>lst</u> day of <u>JUNE</u>, 1989, by and between the parties subscribing, ratifying, or consenting hereto, and herein referred to as the "parties hereto",

WITNESSETH:

WHEREAS, the parties hereto are the owners of working, royalty, or other oil and gas interests in the Unit Area subject to this Agreement; and

WHEREAS, the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Secs. 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field, or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Section 1, Chapter 88, Laws 1943, as amended by Section 1 of Chapter 176, Laws of 1961) (Chapter 19, Article 10, Section 45, New Mexico Statutes 1978 Annotated), to consent to and approve the development or operation of State lands under agreements made by lessees of State land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Section 1, Chapter 88, Laws 1943, as amended by Section 1, Chapter 162, Laws of 1951) (Chapter 19, Article 10, Section 47, New Mexico Statutes 1978 Annotated) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field or area; and

WHEREAS, the Oil Conservation Division of the State of New Mexico (hereinafter referred to as the "Division") is authorized by an Act of the Legislature (Chapter 72, Laws of 1935 as amended) (Chapter 70, Article 2, Section 2 et seq., New Mexico Statutes 1978 Annotated) to approve this Agreement and the conservation provisions hereof; and

WHEREAS, the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico is authorized by law (Chapter 65, Article 3 and Article 14, N.M.S. 1953 Annotated) to approve this Agreement and the conservation provisions hereof; and WHEREAS, the parties hereto hold sufficient interest in the Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

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WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent waste, and secure other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions, and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their respective interest in the below-defined Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder or valid, pertinent, and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement; and as to non-Federal lands, the oil and gas operating regulations in effect as of the Effective Date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the non-Federal land is located, are hereby accepted and made a part of this Agreement.

SECTION 2. UNIT AREA AND DEFINITIONS. For the purpose of this Agreement, the following terms and expressions as used herein shall mean:

(a) "Unit Area" is defined as those lands described in Exhibit "B" and depicted on Exhibit "A" hereof, and such land is hereby designated and recognized as constituting the Unit Area, containing 2,680 acres, more or less, in San Juan County, New Mexico.

(b) "Land Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.

(a) "Division" is defined as the Oil Conservation Division of the Departcontrol Energy and Minerals of the State of New Mexico.

(d) "Authorized Officer" or "A.O." is any employee of the Bureau of Land Management who has been delegated the required authority to act on behalf of the BLM.

(e) "Secretary" is defined as the Secretary of the Interior of the United States of America, or his duly authorized delegate.

(f) "Department" is defined as the Department of the Interior of the United States of America.

(g) "Proper BLM Office" is defined as the Bureau of Land Management office having jurisdiction over the federal lands included in the Unit Area.

(h) "Unitized Formation" shall mean that interval underlying the Unit Area, the vertical limits of which extend from an upper limit described as +

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(h) Unitized formation shall mean that interval containing the Mesa Gallup sand underlying the unit area, the vertical limits of which extend from an upper limit described as + 4500 feet above mean sea level to a lower limit of + 4000 feet above mean sea level. The Mesa Gallup sand was recorded on the Schlumberger Combination Induction-Gamma Ray Log taken on the Navajo Tribal "C" #1 well located 660FW-2310FS, Section 24-32N-18W, San Juan County, New Mexico on March 4, 1962, as being the interval from 1220 to 1240 feet on the log. With a Derrick Floor (DF) elevation of 5436, the Gallup formation on the subject logs exists between +4216 to +4196.

(i) "Unitized Substances" are all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons, other than outside substances, within and produced from the Unitized Formation.

(j) "Tract" is each parcel of land described as such and given a Tract number in Exhibit "B".

(k) "Tract Participation" is the sum of the percentages obtained by multiplying the Working Interest of a Working Interest Owner in each Tract by the Tract Participation of such Tract.

(1) "Unit Participation" is the sum of the percentages obtained by multiplying the Working Interest of a Working Interest Owner in each Tract by the Tract Participation of such Tract.

(m) "Working Interest" is the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an Oil and gas lease, operating agreement, or otherwise held, which interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and operations thereof hereunder. Provided that any royalty interest created out of a working interest subsequent to the execution of this Agreement by the owner of the working interest shall continue to be subject to such working interest burdens and obligations.

(n) "Working Interest Owner" is any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise. The owner of oil and gas rights that are free of lease or other instrument creating a Working Interest in another shall be regarded as a Working Interest Owner to the extent of seven-eighths (7/8) of his interest in Unitized Substances, and as a Royalty Owner with respect to his remaining one-eighth (1/8) interest therein.

(o) "Royalty Interest" or "Royalty" is an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor or by an oil and gas lease and any overriding royalty interest, oil payment interest, net profit contacts, or any other payment or burden which does not carry with it the right to search for and produce unitized substances.

(p) "Royalty Owner" is the owner of a Royalty Interest.

(q) "Unit Operating Agreement" is the agreement entered into by and between the Unit Operator and the Working Interest Owners as provided in Section 9, infra, and shall be styled "Unit Operating Agreement, <u>MESA</u> <u>GALLUP UNIT AREA</u> <u>SAN JUAN</u>County, New Mexico".

(r) "Oil and Gas Rights" is the right to explore, develop and operate lands within the Unit Area for the production of Unitized Substances, or to share in the production so obtained or the proceeds thereof.

(s) "Outside Substances" is any substance obtained from any source other than the Unitized Formation and injected into the Unitized Formation.

(t) "Unit Manager" is any person or corporation appointed by Working Interest Owners to perform the duties of Unit Operator until the selection and qualifications of a successor Unit Operator as provided for in Section 7 hereof.

(u) "Unit Operator" is the party designated by Working Interest Owners under the Unit Operating Agreement to conduct Unit Operations.

(v) "Unit Operations" is any operation conducted pursuant to this Agreement and the Unit Operating Agreement.

(w) "Unit Equipment" is all personal property, lease and well equipment, plants, and other facilities and equipment taken over or otherwise acquired for the joint account for use in Unit Operations.

(x) "Unit Expense" is all cost, expense, or indebtedness incurred by Working Interest Owners or Unit Operator pursuant to this Agreement and the Unit Operating Agreement for or on account of Unit Operations.

(y) "Effective Date" is the date determined in accordance with Section 24, or as redetermined in accordance with Section 39.

SECTION 3. EXHIBITS. The following exhibits are incorporated herein by -reference: Exhibit "A" attached hereto is a map showing the Unit Area and the boundaries and identity of tracts and leases in said Unit Area to the extent known to the Unit Operator. Exhibit "B" attached hereto is a schedule showing, to the extent known to the Unit Operator, the acreage comprising each Tract, percentages and kind of ownership of oil and gas interests in all land in the Unit Area, and Tract Participation of each Tract. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as owned by such party. The shapes and descriptions of the respective Tracts have been established by using the best information available. Each Working Interest Owner is responsible for supplying Unit Operator with accurate information relating to each Working Interest Owner's interest. If it subsequently appears that any Tract, because of diverse royalty or working interest ownership on the Effective Date hereof, should be divided into more than one Tract, or when any revision is requested by the A.O., or any correction of any error other than

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mechanical miscalculations or clerical is needed, then the Unit Operator, with the approval of the Working Interest owners, may correct the mistake by revising the exhibits to conform to the facts. The revision shall not include any reevaluation of engineering or geological interpretations used in determining Tract Participation. Each such revision of an exhibit made prior to thirty (30) days after the Effective Date shall be effective as of the Effective Date. Each other such revision of an exhibit shall be effective at 7:00 A.M., on the first day of the calendar month next following the filing for record of the revised exhibit or on such other date as may be determined by Working Interest Owners and set forth in the revised exhibit. Copies of such revision shall be filed with the Land Commissioner, and not less than four copies shall be filed with the A.O. In any such revision, there shall be no retroactive allocation or adjustment of Unit Expense or of interests in the Unitized Substances produced, or proceeds thereof.

SECTION 4. EXPANSION. The above described Unit Area may, with the approval of the A.O. and Land Commissioner, when practicable be expanded to include therein any additional Tract or Tracts regarded as reasonably necessary or advisable for the purposes of this Agreement provided however, in such expansion there shall be no retroactive allocation or adjustment of Unit Expense or of interests in the Unitized Substances produced, or proceeds thereof. Pursuant to Subsection (b), the Working Interst Owners may agree upon an adjustment of investment by reason of the expansion. Such expansion shall be effected in the following manner:

(a) The Working Interest Owner or Owners of a Tract or Tracts desiring to bring such Tract or Tracts into this unit, shall file an application therefor with Unit Operator requesting such admission.

(b) Unit Operator shall circulate a notice of the proposed expansion to each Working Interest Onwer in the Unit Area and in the Tract proposed to be included in the unit, setting out the basis for admission, the Tract Participation to be assigned to each Tract in the enlarged Unit Area and other pertinent data. After negotiation (at Working Interest Owner's meeting or otherwise) if at least three Working Interest Owners having in the aggregate <u>seventy-five percent (757)</u> of the Unit Participation then in effect have agreed to inclusion of such Tract or Tracts in the Unit Area, then Unit Operator shall:

(1) After obtaining preliminary concurrence by the A.O. and Land Commissioner, prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional Tract or Tracts, the Tract Participation to be assigned thereto and the proposed effective date thereof; and

(2) Deliver copies of said notice to Land Commissioner, the A.O. at the Proper BLM Office, each Working Interest Owner and to the last known address of each lessee and lessor whose interest are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objection to such proposed expansion; and

(3) File, upon the expiration of said thirty (30) day period as set out in (2) immediately above with the Land Commissioner and A.O. the following:
(a) evidence of mailing or delivering copies of said notice of expansion; (b) an application for approval of such expansion; (c) an instrument containing the appropriate joinders in compliance with the participation requirements of Section 14,

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and Section 34, infra; and (d) a copy of all objections received along with the Unit Operator's response thereto.

The expansion shall, after due consideration of all pertinent information and approval by the Land Commissioner and the A.O., become effective as of the date prescribed in the notice thereof, preferably the first day of the month subsequent to the date of notice. The revised Tract Participation of the respective Tracts included within the Unit Area prior to such enlargement shall remain the same ratio one to another.

SECTION 5. UNITIZED LAND. All land committed to this Agreement as to the Unitized Formation shall constitute land referred to herein as "Unitized Land" or "Land subject to this Agreement". Nothing herein shall be construed to unitize, pool, or in any way affect the oil, gas and other minerals contained in or that may be produced from any formation other than the Unitized Formation as defined in Section 2(h) of this Agreement.

SECTION 6. UNIT OPERATOR. GRAND RESOURCES, INC. is hereby designated the Unit Operator, and by signing this instrument as Unit Operator, agrees and consents to accept the duties and obligations of Unit Operator for the operation, development, and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, when such interests are owned by it and the term "Working Interest Owner" when used herein shall include or refer to the Unit Operator as the owner of a Working Interest when such an interest is owned by it.

Unit Operator shall have a lien upon interests of Working Interest Owners in the Unit Area to the extent provided in the Unit Operating Agreement.

SECTION 7, RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Morking Interest Owners, the Land Commissioner and the A.O. unless a new Unit Operator shall have taken over and assumed the duties and obligations of unit Operator price to the expiration of said period.

The Unit Operator shall, upon default or failure in the performance of its duties and obligations hereunder, be subject to removal by Working Interest Owners having in the aggregate eighty percent (80%) or more of the Unit Participation then in effect exclusive of the Working Interest Owner who is the Unit Operator. Such removal shall be effective upon notice thereof to the Land Commissioner and the A.O.

In all such instances of effective resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible for the performance of the duties of the Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them in any action to be taken hereunder. The resignation or removal of Unit Operator under this Agreement shall not terminate its right, title or interest as the owner of a Working Interest or other interest in Unitized Substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all wells, equipment, books and records, materials, appurtenances and any other assets used in connection with the Unit Operations to the new duly qualified successor Unit Operator or to the Unit Manager if no such new Unit Operator is elected. Nothing herein shall be construed as authorizing the removal of any material, equipment or appurtenances needed for the preservation of any wells. Nothing herein contained shall be construed to relieve or discharge any Unit Operator or Unit Manager who resigns or is removed hereunder from any liability or duties accruing or performable by it prior to the effective date of such resignation or removal.

SECTION 8. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall select a successor Unit Operator as herein provided. Such selection shall not become effective until (a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator, and (b) the selection shall have been approved by the Land Commissioner and the A.O. If no successor Unit Operator or Unit Manager is selected and qualified as herein provided, the Land Commissioner and/or the A.O., at their election, may declare this Agreement terminated.

In selecting a successor Unit Operator, the affirmative vote of three or more Working Interest Owners having a total of sixty-five percent (65%) or more of the total Unit Participation shall prevail; provided that if any one Working Interest Owner has a Unit Participation of more than thirty-five percent (35%), its negative vote or failure to vote shall not be regarded as sufficient unless supported by the vote of one or more other Working Interest Owners having a total Unit Participation of at least five percent (5%). If the Unit Operator who is removed votes only to succeed itself or fails to vote, the successor Unit Operator may be selected by the affirmative vote of the owners of at least seventy-five percent (75%) of the Unit Participation remaining after excluding the Unit Participation of Unit Operator so removed.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OFERATING AGREEMENT. Costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among and borne by the Working Interest Owners in accordance with the Unit Operating Agreement. Such Unit Operating Agreement shall also provide the manner in which the Working Interest Owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereto in conformity with their underlying operating agreements, leases or other contracts and such other rights and obligations as between Unit Operator and the Working Interest Owners as may be agreed upon by the Unit Operator and the Working Interest Owners; however, no such Unit Operating Agreement shall be deemed either to modify any of the terms and conditions of this Agreement or to relieve the Unit Operator of any right or obligation established under this Agreement, and in case of any inconsistency or conflict between this Agreement and the Unit Operating Agreement, this Agreement shall prevail. Copies of any Unit Operating Agreement executed pursuant to this Section shall be filed with the Land Commissioner and with the A.O. at the Proper BLM Office as required prior to approval of this Agreement.

SECTION 10. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise

specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto including surface rights which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Upon request, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and together with this Agreement, shall constitute and define the rights, privileges and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the pruposes herein specified.

SECTION 11. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances and that the object and purpose of this Agreement is to formulate and to put into effect an improved recovery project in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. Unit Operator shall have the right to inject into the Unitized Formation any substances for secondary recovery or enhanced recovery purposes in accordance with a plan of operation approved by the Working Interest Owners, the A.O., the Land Commissioner and the Division, including the right to drill and maintain injection wells on the Unitized Land and completed in the Unitized Formation, and to use abandoned well or wells producing from the Unitized Formation for said purpose. Subject to like approval, the Plan of Operation may be revised as conditions may warrant.

The initial Plan of Operation shall be filed with the A.O., the Land Commissioner and the Division concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operations and all revisions thereof shall be as complete and adequate as the A.O., the Land Commissioner and the Division may determine to be necessary for timely operation consistent herewith. Upon approval of this Agreement and the initial plan by the A.O. and Commissioner, said plan, and all subsequently approved plans, shall constitute the operating obligations of the Unit Operator under this Agreement for the period specified therein. Thereatter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for like approval a plan for an additional specified period of operations. After such operations are commenced, reasonable diligence shall be exercised by the Unit Operator in complying with the obligations of the approved Plan of Operation.

Notwithstanding anything to the contrary herein contained, should the Unit Operator fail to commence Unit Operations for the secondary recovery of Unitized Substances from the Unit Area within eighteen (18) months after the effective date of this Agreement, or any extension thereof approved by the A.O., this Agreement shall terminate automatically as of the date of default.

SECTION 12. USE OF SURFACE AND USE OF WATER. The parties to the extent of their rights and interests, hereby grant to Unit Operator the right to use as much of the surface, including the water thereunder, of the Unitized Land as may reasonably be necessary for Unit Operations.

Unit Operator's free use of water or brine or both for Unit Operations, shall

not include any water from any well, lake, pond or irrigation ditch of a surface owner, unless approval for such use is granted by the surface owner.

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Unit Operator shall pay the surface owner for damages to growing crops, fences, improvements and structures on the Unitized Land that result from Unit Operations, and such payments shall be considered as items of unit expense to be borne by all the Working Interest Owners of lands subject hereto.

SECTION 13. TRACT PARTICIPATION. In Exhibit "B" attached hereto there are listed and numbered the various Tracts within the Unit Area, and set forth opposite each Tract are figures which represent the Tract Participation, during Unit Operations if all Tracts in the Unit Area qualify as provided herein. The Tract Participation of each Tract as shown in Exhibit "B" was determined in accordance with the following formula:

Tract Participation = 60% C/D + 30% E/F + 10% A/B

- A:= Tract floodable volume. Determined by planimetering (Isopach Map) floodable reservoir volume beneath each unit tract.
- B= Total unit floodable volume. Determined by planimetering (Isopach Map) floodable reservoir volume beneath the unit area.
- C= Tract cumulative production to December 31, 1988. D= Total Unit cumulative production to December 31, 1988. E= Tract current # of wells. F= Total unit # of wells.

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In the event less than all Tracts are qualified on the Effective Date hereof, the Tract Participation shall be calculated on the basis of all such qualified Tracts rather than all Tracts in the Unit Area.

SECTION 14. TRACTS QUALIFIED FOR PARTICIPATION. On and after the Effective Date hereof, the Tracts within the Unit Area which shall be entitled to participation in the production of Unitized Substances shall be those Tracts more particularly described in Exhibit "B" that corner or have a common boundary (Tracts separated only by a public road or a railroad right-of-way shall be considered to have a common boundary), and that otherwise qualify as follows:

(a) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest have become parties to this Agreement and as to which Royalty Owners owning seventy-five percent (75%) or more of the Royalty Interest have become parties to this Agreement.

(b) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest have become parties to this Agreement, and as to which Royalty Owners owning less than seventy-five percent (75%) of the Royalty Interest have become parties to this Agreement, and as to which (1) the Working Interest Owner who operates the Tract and Working Interest Owners owning at least seventy-five percent (75%) of the remaining Working Interest in such Tract have joined in a request for the inclusion of such Tract, and as to which (2) Working Interest Owners owning at least seventy-five percent (75%) of the combined Unit Participation in all Tracts that meet the requirements of Section 14(a) above have voted in favor of the inclusion of such tract.

(c) Each Tract as to which Working Interest Owners owning less than onehundred percent (100%) of the Working Interest have become parties to this Agreement, regardless of the percentage of Royalty Interest therein that is committed hereto; and as to which (1) the Working Interest Owner who operates the Tract and Working Interest Owner owning at least seventy-five percent (75%) of the remaining Working Interest in such Tract who have become parties to this Agreement have joined in a request for inclusion of such Tract, and have executed and delivered, or obligated themselves to execute and deliver an indemnity agreement indemnifying and agreeing to hold harmless the other owners of committed Working Interests, their cuccessors and assigns, against all claims and demands that may be made by the owners of working Interest in such Tract who are not parties to this Agreement, and which arise out of the inclusion of the Tract, and as to which (2) Working Interest Owners owning at least seventy-five percent (75%) of the Unit Participation in all Tracts that meet the requirements of Section 14(a) and 14(b) have voted in favor of the inclusion of such Tract and to accept the indemnity agreement. Upon the inclusion of such a Tract, the Tract Participations which would have been attributed to the nonsubscribing owners of Working Interest in such Tract, had they become parties to this Agreement and the Unit Operating Agreement, shall be attributed to the Working Interest Owners in such Tract who have become parties to such agreements, and joined in the indemnity agreement, in proportion to their respective Working Interests in the Tract.

If on the Effective Date of this Agreement there is any Tract or Tracts which have not been effectively committed to or made subject to this Agreement by qualifying as above provided, then such Tract or Tracts shall not be entitled to participate hereunder. Unit Operator shall, when submitting this Agreement for final approval by the Land Commissioner and the A.O., file therewith a schedule of those tracts which have been committed and made subject to this Agreement and are entitled to participate in Unitized Substances. Said schedule shall set forth opposite each such committed Tract the lease number or assignment number, the owner of record of the lease, and the percentage participation of such tract which shall be computed according to the participation formula set forth in Section 13 (Tract Participation) above. This schedule of participation shall be revised Exhibit "B" and upon approval thereof by the Land Commissioner and the A.O. shall become a part of this Agreement and shall govern the allocation of production of Unitized Substances until a new schedule is approved by the Land Commissioner and A.O.

SECTION 15.A. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on unitized land for drilling, operating, camp and other production or development purposes and for injection or unavoidable loss in accordance with a Plan of Operation approved by the A.O. and Land Commissioner) shall be apportioned among and allocated to the qualified Tracts in accordance with the respective Tract Participations effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the schedule of participation in Exhibit "B". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract) shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among, or accounted for, to the parties entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions, as they would have participated and shared in the production from such Tracts, or in the proceeds thereof, had this Agreement not been entered into; and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances.

It the Working Interest and/or the Royalty Interest in any Tract are divided with respect to separate parcels or portions of such Tract and owned now or hereafter in severalty by different persons, the Tract Participation shall in the absence of a recordable instrument executed by all owners in such Tract and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

SECTION 15.B. WINDFALL PROFIT TAX. In order to comply with the Windfall Profit Tax Act of 1980, as amended, and applicable regulations and to ensure that interest owners of each Tract retain the Windfall Profit Tax benefits accruing to each Tract prior to joining the Unit, for Windfall Profit Tax purposes only, crude oil shall be allocated to individual Tracts as follows:

SECTION 15.C. IMPUTED NEWLY DISCOVERED CRUDE OIL. Each Tract contributing newly discovered crude oil to the Unit Area, that is, each Tract certified as a newly discovered property for Windfall Profit Tax purposes prior to joining the

Unit (Newly Discovered Tract), shall be allocated imputed newly discovered crude oil in the proportion that the Tract Participation of such Tract bears to the total of the Tract Participations of all Newly Discovered Tracts; provided, however, that imputed newly discovered crude oil allocated to any Tract under this Subsection 15.C. shall not exceed in any month, the total number of barrels of crude oil allocable out of unit production to such Tract in accordance with its Tract Participation. In the event a Newly Discovered Tract is so allocated a number of barrels of imputed newly discovered crude oil which is less than the total number of barrels of crude oil allocable out of unit production to such Tract in accordance with its Tract Participation, then such Newly Discvoered Tract shall be allocated any remaining unallocated newly discovered crude oil in the proportion that the Tract Participation of such Tract bears to the total of Tract Participations of all Newly Discovered Tracts not previously so allocated the total number of barrels allocable out of unit production in accordance with their Tract Participations. This additional allocation process shall continue to be repeated, as outlined in the preceding sentence, until such time as:

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(a) all Newly Discovered Tracts have been so allocated a number of barrels of imputed newly discovered crude oil equal to the total number of barrels of crude oil allocable out of unit production to such Tracts in accordance with their Tract Participations; or

(b) there is no imputed newly discovered crude oil remaining to be allocated,

whichever occurs first.

Any imputed newly discovered crude oil in excess of the amount of oil allocable to a Tract in accordance with this Subsection 15.C. shall be termeder excess imputed newly discovered crude oil.

SECTION 15.D. IMPUTED STRIPPER CRUDE OIL. Each Tract contributing stripper crude oil to the Unit Area, that is, each Tract certified as a stripper property for Windfall Profit Tax purposes prior to joining the Unit (Stripper Tract), shall be allocated imputed stripper crude oil in the proportion that the Tract Participation of such Tract bears to the total of the Tract Participations of all Stripper Tracts; provided, however, that imputed stripper crude oil allocated to any Tract under this Subsection 15.D. shall not exceed, in any month, the total number of barrels of crude oil allocable out of unit production to such Tract in accordance with its Tract Participation. In the event a Stripper Tract is so allocated a number of barrels of imputed stripper crude oil which is less than the cotal number of barrels of crude oil allocable out of unit production to such Tract in accordance with its Tract Participation, then such Stripper Tract shall be allocated any remaining unallocated imputed stripper crude oil in the proportion that the Tract Participation of such Tract bears to the total of the Tract Participations of all Stripper Tracts not previously so allocated the total number of barrels allocable out of unit production in accordance with their Tract Participations. This additional allocation process shall continue to be repeated, as outlined in the preceding sentence, until such time as:

(a) all Stripper Tracts have been so allocated a number of barrels of imputed stripper crude oil equal to the total number of barrels of crude oil allocable out of unit production to such Tracts in accordance with their Tract Participations; or

(b) there is no imputed stripper crude oil remaining to be allocated,

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whichever comes first.

Any imputed stripper crude oil in excess of the amount of oil allocable to a Tract in accordance with this Subsection 15.D. shall be termed excess imputed stripper crude oil.

SECTION 15.E. EXCESS IMPUTED NEWLY DISCOVERED CRUDE OIL. Each Tract shall be allocated any excess imputed newly discovered crude oil in the proportion that its Tract Participation bears to the total of the Tract Participations of all Tracts not previously allocated the total number of barrels of crude oil allocable to these Tracts out of unit production in accordance with the Tract Participations of such Tracts; provided, however, that excess imputed newly discovered crude oil allocated to each such Tract, when added to the total number of barrels of imputed newly discovered crude oil previously allocated to it, shall not exceed, in any month, the total number of barrels of oil allocable to it out of unit production in accordance with its Tract Participation.

SECTION 15.F. EXCESS IMPUTED STRIPPER CRUDE OIL. Each Tract shall be allocated any excess imputed stripper crude oil in the proportion that its Tract Participation bears to the total of the Tract Participations of all Tracts not previously allocated the total number of crude oil barrels allocable to these Tracts out of unit production in accordance with the Tract Participations of such Tracts; provided, however, that excess imputed stripper crude oil allocated to each such Tract, when added to the total number of barrels of imputed stripper crude oil previously allocated to it, shall not exceed, in any month, the total number of barrels of oil allocable to it out of unit production in accordance with its Tract Participation.

SECTION 15.G. TAKING UNITIZED SUBSTANCES IN KIND. The Unitized Substances allocated to each Tract shall be delivered in kind to the respective parties entitled thereto by virtue of the ownership of oil and gas rights therein. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose within the Unitized Area, provided the same are so constructed, maintained and operated as not to interfere with Unit Operations. Subject to Section 17 hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the part, taking delivery. In the event any Working Interest Owner shall tail to take or otherwise adequately dispose of its propertionate share of the production from the Unitized Formation, then so long as such condition continues, Unit Operator, for the account and at the expense of the Working Interest Owner of the Tract or Tracts concerned, and in order to avoid curtailing the operation of the Unit Area, may, but shall not be required to, sell or otherwise dispose of such production to itself or to others, provided that all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no event shall any such contract be for a period in excess of one year, and at not less than the prevailing market price in the area for like production, and the account of such Working Interest Owner shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner of the Tract or Tracts concerned. Notwithstanding the foregoing, Unit Operator shall not make a sale into interstate commerce of any Working Interest Owner's share of gas production without first giving such Working Interest Owner sixty (60) days' notice of such intended sale.

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Any Working Interest Owner receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of all royalty, overriding royalty and production payments due thereon, and each such party shall hold each other Working Interest Owner harmless against all claims, demands and causes of action by owners of such royalty, overriding royalty and production payments.

If, after the Effective Date of this Agreement, there is any Tract or Tracts that are subsequently committed hereto, as provided in Section 4 (Expansion) hereof, or any Tract or Tracts within the Unit Area not committed hereto as of the Effective Date hereof but which are subsequently committed hereto under the provisions of Section 14 (Tracts Qualified For Participation) and Section 32 (Nonjoinder And Subsequent Joinder); or if any Tract is excluded from this Agreement as provided for in Section 21 (Loss of Title), the schedule of participation as shown in Exhibit "B" shall be revised by the Unit Operator; and the revised Exhibit "B", upon approval by the Land Commissioner and the A.O., shall govern the allocation of production on and after the effective date thereof until a revised schedule is approved as hereinabove provided.

SECTION 16. OUTSIDE SUBSTANCES. If gas obtained from formations not subject to this Agreement is introduced into the Unitized Formation for use in repressuring, stimulating of production or increasing ultimate recovery which shall be in conformity with a Plan of Operation first approved by the Land Commissioner and the A.O., a like amount of gas with appropriate deduction for loss or depletion from any cause may be withdrawn from unit wells completed in the Unitized Formation royalty free as to dry gas, but not royalty free as to the products extracted therefrom; provided that such withdrawal shall be at such time as may be provided in the approved Plan of Operation or as otherwise may be consented to or prescribed by the Land Commissioner and the A.O. as conforming to good petroleum engineering practices and provided further that such right of withdrawal shall terminate on the termination date of this Agreement.

SECTION 17. ROYALTY SETTLEMENT. The State of New Mexico and United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share and of the Unitized Substances allocated to such Tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts, laws and regulations on or before the last day of each month for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under the leases, except that such Royalty shall be computed on Unitized Substances as allocated to each Tract in accordance with the terms of this Agreement. With respect to Federal leases committed hereto on which the royalty rate depends upon the daily average production per well, such average production shall be determined in accordance with the operating regulations pertaining to Federal leases as though the committed Tracts were included in a single consolidated lease.

If the amount of production or the proceeds thereof accruing to any Royalty Owner (except the United States of America) in a Tract depends upon the average

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production per well or the average pipeline runs per well from such Tract during any period of time, then such production shall be determined from and after the effective date hereof by dividing the quantity of Unitized Substances allocated hereunder to such Tract during such period of time by the number of wells located thereon capable of producing Unitized Substances as of the Effective Date hereof, provided that any Tract not having any well so capable of producing Unitized Substances on the Effective Date hereof shall be considered as having one such well for the purpose of this provision.

All Royalty due the State of New Mexico and the United States of America and the other Royalty Owners hereunder shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts committed hereto, in lieu of actual production from such Tract or Tracts.

With the exception of Federal and State requirements to the contrary, Working Interest Owners may use or consume Unitized Substances for Unit Operations and no Royalty, overriding royalty, production or other payments shall be payable on account of Unitized Substances used, lost or consumed in Unit Operations.

Each Royalty Owner (other than the State of New Mexico and the United States of America) that executes this Agreement represents and warrants that it is the owner of a Royalty Interest in a Tract or Tracts within the Unit Area as its interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interests of all parties shall be adjusted accordingly.

SECTION 18. RENTAL SETTLEMENT. Rentals or minimum Royalties due on the leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum Royalty in lieu thereof, due under their leases. Rental for lands of the State of New Mexico subject to this Agreement shall be paid at the rate specified in the respective leases from the State of New Mexico. Rental or minimum Royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America; unless such rental or minimum Royalty is waived, suspended or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 19. CONSERVATION. Operations hereunder and production of Unitized Subtances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 20. DRAINAGE. The Unit Operator shall take all reasonable and prudent measures to prevent drainage of Unitized Substances from unitized land by wells on land not subject to this Agreement.

The Unit Operator, upon approval by the Working Interest Owners, the A.O. and the Land Commissioner, is hereby empowered to enter into a borderline agreement or agreements with working interest owners of adjoining lands not subject to this Agreement with respect to operation in the border area for the maximum economic recovery, conservation purposes and proper protection of the parties and interest affected.

SECTION 21. LOSS OF TITLE. In the event title to any Tract of unitized land shall fail and the true owner cannot be induced to join in this Agreement, such Tract shall be automatically regarded as not committed hereto, and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title to any Royalty, Working Interest, or other interests subject thereto, payment or delivery on account thereof may be withheld without liability for interest until the dispute is finally settled; provided, that, as to State or Federal lands or leases, no payments of funds due the United States or the State of New Mexico shall be withheld, but such funds shall be deposted as directed by the A.O. or Land Commissioner (as the case may be) to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

If the title or right of any party claiming the right to receive in kind all or any portion of the Unitized Substances allocated to a Tract is in dispute, Unit Operator at the direction of Working Interest Owners shall either:

(a) require that the party to whom such Unitized Substances are delivered or to whom the proceeds thereof are paid furnish security for the proper accounting therefor to the righful owner if the title or right of such party fails in whole or in part, or

(b) withhold and market the portion of Unitized Substances with respect to which title or right is in dispute, and impound the proceeds thereof until such time as the title or right thereto is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds so impounded shall be paid to the party rightfully entitled thereto.

Each Working Interest Owner shall indemnify, hold harmless, and defend all other Working Interest Owners against any and all claims by any party against the interest attributed to such Working Interest Owner on Explaint "B".

Unit Operator as such is relieved from any responsibility for any detect or failure of any title hereunder.

SECTION 22. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisons hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Secretary and the Land Commissioner, respectively, shall and by their approval hereof, or by the approval hereof by their duly authorized representatives do hereby establish, alter, change or revoke the drilling, producing, rental, minimum Royalty and Royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

Without limiting the generality of the foregoing, all leases, subleases and

contracts are particulary modified in accordance with the following:

(a) The development and operation of lands subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each Tract subject to this Agreement, regardless of whether there is any development of any Tract of the Unit Area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling, producing or improved recovery operations performed hereunder shall be deemed to be performed upon and for the benefit of each Tract, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on the land therein embraced.

(c) Suspension of drilling or producing operations within the Unit Area pursuant to direction or consent of the Land Commissioner and the A.O., or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each Tract within the Unitized Area.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development, or operation for oil and gas which by its terms might expire prior to the termination of this Agreement, is hereby extended beyond any such term so provided therein, so that it shall be continued in full force and effect for and during the term of this Agreement.

(e) Any lease embracing lands of the State of New Mexico which is made subject to this Agreement shall continue in force beyond the term provided therein as to the lands committed hereto until the termination hereof.

(f) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall be segregated as to that portion committed and that not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the Effective Date hereof. Provided, however, that notwithstanding any of the provisions of this Agreement to the contrary, such lease (including both segregated portions) shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease if oil or gas is, (or has heretofore been discovered in paying quantities on some part of the lands embraced in such lease committed to this Agreement or, so long as a portion of the Unitized Substances produced from the Unit Area is, under the terms of this Agreement, allocated to the portion of the lands covered by such lease committed to this Agreement, or, at any time during the term hereof, as to any lease that is then valid and subsisting and upon which the leases or the Unit Operator is then engaged in bona fide drilling, reworking, or improved recovery operations on any part of the lands embraced therein shall remain in full force and effect so long as such operations are diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil or gas in paying quantities is being produced from any portion of said lands.

(f) The segregation of any Federal lease committed to this Agreement is governed by the following provision in the fourth paragraph of Section 17(j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960 (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization; provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 23. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer; and no assignment or transfer of any Royalty Interest owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument or transfer.

SECTION 24. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective on the first day of the calendar month next following the approval of this Agreement by the A.O., the Land Commissioner and the Commission.

If this Agreement does not become effective on or before <u>JUNE 1,1990</u>, it shall ipso facto expire on said date (hereinafter called "Expiration Date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners owning a combined Participation of at least seventy-five percent (75%); and at least seventy-five percent (75%) of such Working Interest Owners committed to this Agreement have decided to extend Expiration Date for a period not to exceed one (1) year (hereinafter called "Extended Expiration Date"). If Expiration Date is so extended and this Agreement does not become effective on or before Extended Expiration Date, it shall ipso facto expire on Extended Expiration Date and thereafter be of no further force and effect.

Unit Operator shall file for record within thirty (30) days after the Effective Date of this Agreement, in the office of the County Clerk of <u>San Juan</u> County, New Mexico, where a counterpart of this Agreement has become effective according to its terms and stating further the effective date.

The terms of this Agreement shall be for and during the time that Unitized Substances are produced from the unitized land and so long thereafter as drilling, reworking or other operations (including improved recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days unless sooner terminated as herein provided.

This Agreement may be terminated with the approval of the Land Commissioner

and the A.O. by Working Interest Owners owning eighty percent (80%) of the Unit Participation then in effect whenever such Working Interest Owners determine that Unit Operations are no longer profitable, or in the interest of conservation. Upon approval, such termination shall be effective as of the first day of the month after said Working Interest Owners' determination. Notice of any such termination shall be filed by Unit Operator in the office of the County Clerk of Lea County, New Mexico, within thirty (30) days of the effective date of termination.

Upon termination of this Agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts just as if this Agreement had never been entered into.

Notwithstanding any other provision in the lease unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

SECTION 25. RATE OR PROSPECTING, DEVELOPMENT AND PRODUCTION. All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State statute. The A.O. is hereby vested with authority to alter or modify from time to time, in his discretion, the rate of prospecting and development and within the limits made or fixed by the Division to alter or modify the quantity and rate of production under this Agreement, such authority being hereby limited to alteration of modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification; provided, further, that no such alteration or modification shall be effective as to any land of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Land Commissioner and as to any lands in the State of New Mexico or privately owned lands subject to this Agreement or to the quantity and rate of production from such lands in the absence of specific written approval thereof by the Division.

Powers in this Section vested in the A.O. shall only be exercised after -notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice, and thereafter subject to administrative appeal before becoming final.

SECTION 26. NONDISCRIMINATION. Unit Operator in connection with the performance of work under this Agreement relating to leases of the United States, agrees to comply with all of the provisions of Section 202(1) to (7) inclusive of Executive Order 11246, (30 F.R. 12319), which are hereby incorporated by reference in this Agreement.

SECTION 27. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any interests affected hereby before the Land Commissioner, the Department, and the Division, and to appeal from any order issued under the rules and regulations of the Land Commissioner, the Department or the Division, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Land Commissioner, the Department or the Division or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 28. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified or registered mail, addressed to such party or parties at their last known address set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 29. NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said Unitized Lands are located, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive; provided, however, each party hereto covenants that it will not resort to any action to partition the unitized land or the Unit Equipment.

SECTION 30. EQUIPMENT AND FACILITIES NOT FIXTURES ATTACHED TO REALTY. Each Working Interest Owner has heretofore placed and used on its Tract or Tracts committed to this Agreement various well and lease equipment and other property, equipment and facilities. It is also recognized that additional equipment and facilities may hereafter be placed and used upon the Unitized Land as now or hereafter constituted. Therefore, for all purposes of this Agreement, any such equipment shall be considered to be personal property and not fixtures attached to realty. Accordingly, said well and lease equipment and personal property is hereby severed from the mineral estates affected by this Agreement, and it is agreed that any such equipment and personal property shall be and remain personal property of the Working Interest Owners for all purposes.

SECTION 31. UNAVOIDABLE DELAY. All obligations under this Agreement requiring the Unit Operator to commence or continue improved recovery operations or to operate on or produce Unitized Substances from any of the land covered by this Agreement shall be suspended while, but only so long as, the Unit Operator, despice the exprcise of due care and diligence, is prevented from complying with each obligations, in whole or in part, by strikes, acts of God, Federal, ~ State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials or equipment in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 32. NONJOINDER AND SUBSEQUENT JOINDER. Joinder by any Royalty Owner, at any time, must be accompanied by appropriate joinder of the corresponding Working Interest Onwer in order for the interest of such Royalty Owner to be regarded as effectively committed. Joinder to this Agreement by a Working Interest Owner, at any time, must be accompanied by appropriate joinder to the Unit Operating Agreement in order for such interest to be regarded as effectively committed to this Agreement.

Any oil or gas interest in the Unitized Formations not committed hereto prior to submission of this Agreement to the Land Commissioner and the A.O. for final approval may thereafter be committed hereto upon compliance with the applicable provisions of this Section and of Section 14 (Tracts Qualified for Participation) hereof, at any time up to the Effective Date hereof on the same basis of Tract Participation as provided in Section 13, by the owner or owners thereof subscribing, ratifying, or consenting in writing to this Agreement and, if the interest is a Working Interest, by the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that from and after the Effective Date hereof the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such basis as may be agreed upon by Working Interest Owners owning not less than sixty-five percent (65%) of the Unit Participation then in effect, and approved by the Land Commissioner and A.O. Such subsequent joinder by a proposed Working Interest Owner must be evidenced by his execution or ratification of this Agreement and the Unit Operating Agreement and, where State or Federal land is involved, such joinder must be approved by the Land Commissioner or A.O. Such joinder by a proposed Royalty Owner must be evidenced by his execution, ratification or consent of this Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such proposed Royalty Owner. Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective as of the first day of the month following the filing with the Land Commissioner and A.O. of duly executed counterparts of any and all documents necessary to establish effective commitment of any Tract or interest to this Agreement, unless objection to such joinder by the Land Commisioner or the A.O., is duly made sixty (60) days after such filing.

SECTION 33. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing, specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the land within the described Unit Area. Furthermore, this Agreement shall extend to and be binding on the parties hereto, their successors, heirs and assigns.

SECTION 34. JOINDER IN DUAL CAPACITY. Execution as herein provided by any party as either a Working Interest Owner or a Royalty Owner shall commit all interests owned or controlled by such party; provided, that if the party is the owner of a Working Interest, he must also execute the Unit Operating Agreement.

SECTION 35. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the unitized land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No taxes shall be charged to the United States or to the State of New Mexico, nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 36. NO PARTNERSHIP. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective. This Agreement is not intended to create, and shall not be construed to create, an associ-

ation or trust, or to impose a partnership duty, obligation or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligation as herein provided.

SECTION 37. PRODUCTION AS OF THE EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all leases and other tanks within the Unit Area in order to ascertain the amount of merchantable oil above the pipeline connection, in such tanks as of 7:00 A.M. on the Effective Date hereof. All such oil which has then been produced in accordance with established allowables shall be and remain the property of the Working Interest Onwer entitled thereto, the same as if the unit had not been formed; and the responsible Working Interest Owner shall promptly remove said oil from the unitized land. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Onwers, subject to the payment of all Royalty to Royalty Owners under the terms hereof. The oil that is in excess of the prior allowable of the wells from which it was produced shall be regarded as Unitized Substances produced after Effective Date hereof.

If, as of the Effective Date hereof, any Tract is overproduced with respect to the allowable of the wells on that Tract and the amount of over-production has been sold or otherwise disposed of, such over-production shall be regarded as a part of the Unitized Substances produced after the Effective Date hereof and shall be charged to such Tract as having been delivered to the parties entitled to Unitized Substances allocated to such Tract.

SECTION 38. NO SHARING OF MARKET. This Agreement is not intended to provide and shall not be construed to provide, directly or indirectly, for any cooperative refining, joint sale or marketing of Unitized Substances.

SECTION 39. STATUTORY UNITIZATION. If and when Working Interest Owners owning at least seventy-five percent (75%) Unit Participation and Royalty Owners owning at least seventy-five percent (75%) Royalty Interest have become parties to this Agreement or have approved this Agreement in writing and such Working Interest Owners have also become parties to the Unit Operating Agreement, Unit Operator may make application to the Division for statutory unitization of the uncommitted interests pursuant to the Statutory Unitization Act (Chapter 65, Article 14, N.M.S. 1953 Annotated). If such application is made and statutory unitization is approved by the Division, then effective as of the date of the Division's order approving statutory unitization, this Agreement and/or the Unit Operating Agreement shall automatically be revised and/or amended in accordance with the following:

(1) Section 14 of this Agreement shall be revised by substituting for the entire said section the following:

"SECTION 14. TRACTS QUALIFIED FOR PARTICIPATION. On and after the Effective Date hereof, all Tracts within the Unit Area shall be entitled to participation in the production of Unitized Substances."

(2) Section 24 of this Agreement shall be revised by substituting for the first three paragraphs of said section the following:

"SECTION 24. EFFECTIVE DATE AND TERM. This Agreement shall become effective on the first day of the calendar month next following the effective date of the Division's order approving statutory unitization upon the terms and conditions of this Agreement, as amended (if any amendment is necessary) to conform to the Division's order; approval of this Agreement, as so amended, by the Land Commissioner; and the A.O. and the filing by Unit Operator of this Agreement or notice thereof for record in the office of the County Clerk of <u>SAN JUAN</u> County, New Mexico. Unit Operator shall not file this Agreement or notice thereof for record, and hence this Agreement shall not become effective, unless within ninety (90) days after the date all other prerequisites for effectiveness of this Agreement have been satisfied, such filing is approved by Working Interest Owners owning a combined Unit Participation of at least sixty-five percent (65%) as to all Tracts within the Unit Area.

"Unit Operator shall, within thirty (30) days after the Effective Date of this Agreement, file for record in the office of the County Clerk of <u>San Juan</u> County, New Mexico, a certificate to the effect that this Agreement has become effective in accordance with its terms, therein identifying the Division's order approving statutory unitization and stating the Effective Date."

(3) This Agreement and/or the Unit Operating Agreement shall be amended in any and all respects necessary to conform to the Division's order approving statutory unitization.

Any and all amendments of this Agreement and/or the Unit Operating Agreement that are necessary to conform said agreements to the Division's order approving statutory unitization shall be deemed to be hereby approved in writing by the parties hereto without any necessity for further approval by said parties, except as follows:

(a) If any amendment of this Agreement has the effect of reducing any Royalty Owner's participation in the production of Unitized Substances, such Royalty Owner shall not be deemed to have hereby approved the amended agreement without the necessity of further approval in writing by said Royalty Onwer; and

(b) If any amendment of this Agreement and/or the Unit Operating Agreement has the effect of reducing any Working Interest Owner's participation in the production of Unitized Substances or increasing such Working Interest Owner's share of Unit Expense, such Working Interest Owner shall not be deemed to have hereby approved the amended agreements without the necessity of further approval in writing by said Working Interest Owner.

Executed as of the day and year first above written.

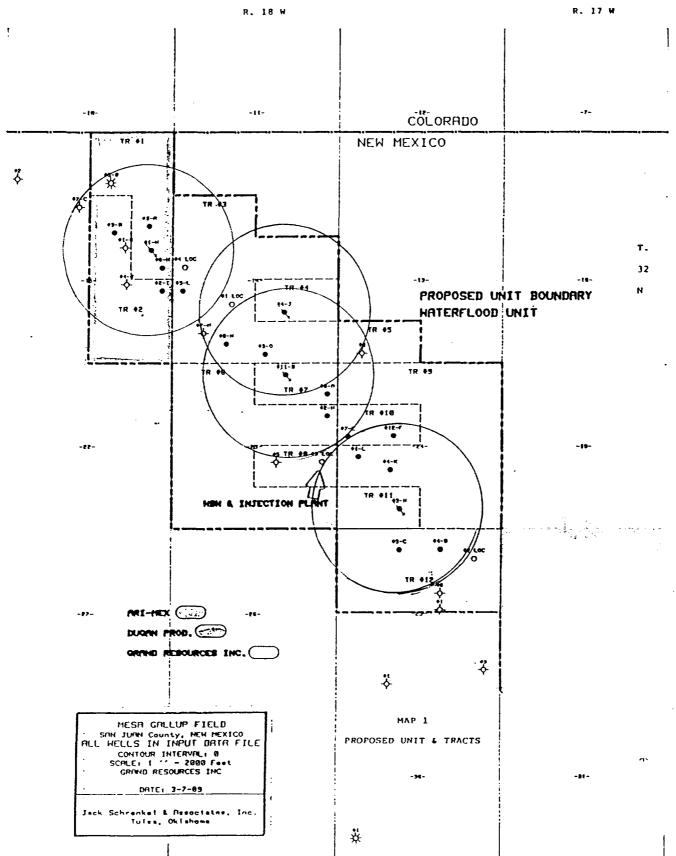
Attest:	GRAND RESOURCES, INC.
	bу
,	President
SECRETARY	2250 E. 73rd St, Ste 400 Tulsa, OK 74136
State of OKLAHOMA	
:ss. County of TULSA)	
The foregoing instrument was	acknowledged before me this day of

, 1989 by MARVIN ROBINOWITZ who is <u>PRESIDENT</u> GRAND RESOURCES, INC., <u>an OKLAHOMA</u> corporation on behalf of said corporation.

My Commission Expires:

Notary Public

EXHIBIT "A"



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UNIT OPERATING AGREEMENT MESA GALLUP UNIT SAN JUAN COUNTY, NEW MEXICO

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- Right to Operate
 Multiple Completions

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INIT OPERATING AGREEMENT MESA GALLUP UNIT SAN JUAN COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the <u>lst</u> day of <u>JUNE</u>, I989, by the parties who have signed the original of this instrument, a counterpart thereof or other instrument agreeing to be bound by the provisions hereof;

WITNESSETH:

WHEREAS, the parties hereto, as Working Interest Owners have executed that certain agreement entitled "Unit Agreement, Mesa Gallup Unit, San Juan County, New Mexico" hereinafter referred to as "Unit Agreement", and which, among other things, provides for a separate agreement to be made and entered into by and between Working Interest Owners to provide for Unit Operations therein defined:

NOW, THEREFORE, in considerations of the mutual agreements herein set forth, it is agreed as follows:

ARTICLE 1

<u>Confirmation of Unit Agreement</u>. The Unit Agreement is hereby confirmed and incorporated herein by reference and made a part of this Agreement. The definitions in the Unit Agreement are adopted for all purposes of this Agreement. In the event of any conflict between the Unit Agreement and this Agreement, the Unit Agreement shall prevail.

ARTICLE 2 EXHIBITS

The following exhibits are incorporated herein by reference or attachment:

1. <u>Exhibits "A" and "B"</u> of the Unit Agreement.

2. <u>Exhibit "C"</u>, Parts I and II, attached hereto, is a summary showing each Working Interest Owner's Interest in each Tract, the percentage of total Unit Participation attributable to each such interest, and the total Unit Participation of each Working Interest Owner.

3. <u>Exhibit "D"</u>, attached hereto, contains insurance provisions applicable to Unit Operations.

4. <u>Exhibit "E"</u>, attached hereto, is the Accounting Procedure applicable to Unit Operations. In the event of conflict between this agreement and Exhibit "E", this agreement shall prevail.

5. <u>Exhibit "F"</u>, attached hereto, contains Certificate of Compliance provisions provided for in Article 21.

6. <u>Exhibit "G"</u>, attached hereto, is the Gas Balancing Agreement applicable to Unit Operations.

7. <u>Revision of Exhibits</u>. Whenever Exhibit "A" or "B" are revised, Exhibit "C" shall be revised accordingly and be effective as of the same date. Unit Operator shall also revise Exhibit "C" from time to time as required to conform to changes in ownership of which Unit Operator has been notified as provided in the Unit Agreement.

8. <u>Reference to Exhibits</u>. When reference is made herein to an exhibit, it is to the exhibit as originally attached or, if revised, to the last revision.

ARTICLE 3 SUPERVISION OF OPERATIONS BY WORKING INTEREST OWNERS

1. <u>Overall Supervision</u>. Subject to the other terms and provisions of this agreement and of the Unit Agreement, Working Interest Owners shall exercise overall supervision and control of all matters pertaining to the Unit Operations pursuant to this Agreement and the Unit Agreement. In the exercise of such power, each Working Interest Owner shall act solely in its own behalf in the capacity of an individual owner and not on behalf of the owners as an entirety.

Particular Powers - Duties. The Working Interest Owners, using 2. the voting procedures given in Article 4.3, unless otherwise specifically provided in this Agreement, shall decide matters pertaining to Unit Opera tions which include, but are not limited to the following:

a. Method of Operation. The kind, character and method of operation, including any type of pressure maintenance, secondary recovery or

other enhanced recovery program to be employed. b. <u>Drilling of Wells</u>. The drilling, deepening, or sidetracking of any well within the Unit Area for the production of Unitized Substances; and the drilling of any well for injection, salt water disposal or for any other Unit purpose.

The reworking, recompleting c. Well Workovers and Change of Status. or repairing of any well for the purpose of production of Unitized Substances reasonably estimated to require an expenditure in excess of the expenditure limitation specified in Article 3.2.d. hereinbelow; and the abandonment or change of status of any well in the Unit, or

the use of any such well for injection or other purposes. d. <u>Expenditures</u>. Making of any single expenditure in excess of <u>Fifteen thousand (\$15,000.00) Dollars</u>, except as prov except as provided in Article 7.9 hereof; provided that approval by Working Interest Owners for the drilling, sidetracking, reworking, drilling deeper or plugging back of any well shall include approval of all necessary expenditures required therefor and for completing, testing and equipping the same, including necessary flow lines, separators and lease tankage.

e. Amendment of Overhead Rates. The amendment of the overhead rates provided for in Section III of Exhibit "E" if, as set forth in Section III.3 of Exhibit "E", such rates are found to be insufficient or excessive.

f. <u>Disposition of Surplus Facilities</u>. Selling or otherwise disposing of any major item of surplus unit material or equipment, the current list price of new equipment similar thereto being Fifteen thousand (\$15,000.00) Dollars _____ qr more.

Appearance Before a Court or Regulatory Body. The designating of 8. a representative to appear before any court or regulatory body in matters pertaining to unit operations; provided, however, that the authorization by Working Interest Owners of the designation of any such representatives shall not prevent any Working Interest Owner from appearing in person or from designating another representative in its own behalf.

h. Audit Exceptions. Any unresolved audit exceptions relating to audits as provided for in Exhibit "E".

i. Assignments to Committees. The appointment or designation of committees or subcommittees necessary for the study of any problem in connection with Unit Operations.

The selection of a successor to the Unit Operator. The enlargement of the Unit Area. i.

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1. The adjustment and readjustment of investments.

Acquisition of Wells for Unit Operations. m.

The termination of the Unit Agreement. n.

ARTICLE - 6 MANNER OF EXERCISING SUPERVISION

Designation of Representatives. Each Working Interest Owner, other 1. than individuals, shall advise Unit Operator in writing the names and addresses of its representative and alternate who are authorized to represent and bind it in respect to any matter pertaining to the development and

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operation of the Unit area. Such representative or alternate may be changed from time to time by written notice to Unit Operator. Individual Working Interest Owners shall represent themselves, or may designate, in writing, an agent to so represent.

2. <u>Meetings</u>. All meetings of Working Interest Owners for the purpose of considering and acting upon any matter pertaining to the development and operation of the Unit area shall be called by Unit Operator upon its own motion or at the request of two or more Working Interest Owners having a total Unit Participation of not less than ten (10%) percent. No meeting shall be called on less than fourteen (14) days' advance written notice, with agenda for the meeting attached. The Working Interest Owners attending such meeting shall not be prevented from amending items included in the agenda or from deciding such amended item or from deciding other items presented at such meeting. The representative of Unit Operator shall be Chairman of each meeting.

3. <u>Voting Procedure</u>. Working Interest Owners shall act upon and determine all matters coming before them, as follows:

a. <u>Voting Interest</u>. Each Working Interest Owner shall have a voting interest equal to its Unit Participation in effect at the time of the vote.

b. <u>Vote Required</u>. Unless otherwise provided herein or in the Unit Agreement, Working Interest Owners shall determine all matters by the affirmative vote of four or more Working Interest Owners having a combined voting interest of at least sixty-five percent (65%); however, should any one Working Interest Owner have more then thirty percent (30%) voting interest, its negative vote or failure to vote shall not defeat a motion and such motion shall pass if approved by Working Interest Owners having a majority voting interest, unless two or more additional Working Interest Owners having a combined voting interest of at least five percent (5%) likewise vote against the motion or fail to vote.

c. <u>Vote at Meeting by Non-Attending Working Interest Owners</u>. Any Working Interest Owner not represented at a meeting may vote on any item included in the agenda of the meeting by letter or telegram addressed to the Chairman of the meeting, provided such vote is received prior to the submission of such item to vote. Such vote shall not be counted with respect to any item on the agenda which is amended at the meeting.

d. <u>Poll Votes</u>. Working Interest Owners may decide any matter by vote taken by letter or telegram, provided the matter is first submitted in writing to each Working Interest Owner and no meeting on the matter is called, as provided in Article 4.2, within fourteen (14) days after such proposal is dispatched to Working Interest Owners. Such vote will be final and Unit Operator will give prompt notice of the results of such voting to all Working Interest Owners.

ARTICLE 5 INDIVIDUAL RIGHTS AND PRIVILEGES OF WORKING INTEREST OWNERS

1. <u>Reservation of Rights</u>. Working Interest Owners severally reserve to themselves all their rights, powers, authority and privileges, except as expressly otherwise provided in this Agreement and in the Unit Agreement.

2. <u>Specific Rights</u>. Each Working Interest Owner shall have, among others, the following specific rights and privileges:

a. <u>Access to Unit Area</u>. Access to the Unit Area, at all reasonable times, to inspect the operations hereunder and all wells and records and data pertaining thereto.

b. <u>Reports by Request</u>. The right to receive from Unit Operator, upon written request, copies of all reports to any governmental agency, reports of crude oil runs and stocks, inventory reports and all other data pertaining to Unit Operations. The cost of gathering and furnishing data not ordinarily furnished by Unit Operator to all Working Interest Owners shall be charged solely to Working Interest Owners requesting the same.

c. <u>Audits</u>. The right to audit the accounts of Unit Operator according to the provisions of Exhibit "E".

ARTICLE 6 UNIT OPERATOR

1. <u>Unit Operator</u>. <u>Grand Resources</u> is hereby designated as Unit Operator.

2. <u>Resignation or Removal</u>. Unit Operator may resign at any time. Unit Operator may be removed at any time by the affirmative vote of Working Interest Owners having <u>Eighty</u> percent (80%) or more of the voting interest remaining after excluding the voting interest of Unit Operator. Such resignation or removal shall not become effective until sixty (60) days after the first day of the month following the resignation or removal, unless a successor Unit Operator has taken over Unit Operations prior to the expiration of such period.

3. <u>Selection of Successor</u>. Upon the resignation or removal of Unit Operator, a successor Unit Operator shall be selected by Working Interest Owners as provided in Section 8, of the Unit Agreement.

4. <u>Records and Information</u>. The Unit Operator resigning or being removed shall give complete cooperation to the new Unit Operator and shall deliver to its successor all records and information necessary to the discharge of the new Unit Operator's duties and obligations.

ARTICLE 7 POWERS AND DUTIES OF UNIT OPERATOR

1. <u>Exclusive Rights to Operate Unit</u>. Subject to the other provisions of this Agreement, and to the orders, directions and limitations rightfully given or imposed by Working Interest Owners, Unit Operator shall have the exclusive right, and shall be obligated, to conduct Unit Operations.

2. <u>Workmanlike Conduct</u>. Unit Operator shall conduct all operations hereunder in a good and workmanlike manner and, in the absence of specific instructions from Working Interest Owners, shall have the right and duty to conduct such operations in the same manner as would a prudent operator under the same or in similar circumstances. Unit Operator shall freely consult with Working Interest Owners and keep them advised of all matters arising in connection with such operations which Unit Operator, in the exercise of its best judgment, considers important. Unit Operator shall not be liable to Working Interest Owners for damages, unless such damages result from the gross negligence or willful misconduct of Unit Operator.

3. Liens and Encumbrances. Unit Operator shall endeavor to keep the land and leases in the Unit Area free from all liens and encumbrances occasioned by its operations hereunder, except the lien of Unit Operator granted hereunder.

4. <u>Employees</u>. The number of employees used by Unit Operator in conducting operations hereunder, the selection of such employees, the hours or labor and the compensation for services to be paid any and all such employees shall be determined by Unit Operator. Such employees shall be employed by Unit Operator.

5. <u>Records</u>. Unit Operator shall keep true and correct books, accounts and records of its operations hereunder.

6. <u>Reports to Working Interest Owners</u>. Unit Operator shall furnish to each Working Interest Owner periodic reports of the development and operation of the Unit Area.

7. <u>Reports to Governmental Authorities</u>. Unit Operator shall make all reports to governmental authorities that it has the duty to make as Unit Operator.

8. <u>Engineering and Geological Information</u>. Unit Operator shall furnish to each Working Interest Owner, upon written request, a copy of the log of, and copies of engineering and geological data pertaining to any wells drilled by Unit Operator at Unit expense.

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9. <u>Expenditures</u>. Unit <u>Operator is authorized to make single expend-</u> itures not in excess of <u>fifteen thousand (\$15,000.00)</u> dollars without prior approval of Working Interest Owners. If an emergency occurs, Unit Operator may immediately make or incur such expenditures as in its opinion are required to deal with the emergency. Unit Operator shall report to Working Interest Owner, as promptly as possible, the nature of the emergency and the action taken.

10. Wells Drilled by Unit Operator. All wells drilled by Unit Operator shall be at the usual rates prevailing in the area. Unit Operator may employ its own tools and equipment, but the charge therefor shall not exceed the prevailing rate in the area, and the work shall be performed by Unit Operator under the same terms and conditions as are usual in the area in contracts of independent contractors doing work of a similar nature.

11. <u>Border Agreements</u>. Unit Operator may, after approval by Working Interest Owners, enter into border agreements with respect to lands adjacent to the Unit Area for the purpose of coordinating operations.

ARTICLE 8 TAXES

1. <u>Ad Valorem Taxes</u>. Beginning with the first calendar year after the Effective Date hereof, Unit Operator shall make and file all necessary property tax renditions, whether on real or personal property and returns with the proper taxing authorities with respect to all property of each Working Interest Owner used or held by Unit Operator for Unit Operations. Unit Operator shall settle assessments arising therefrom. All such property taxes shall be paid by Unit Operator and charged to the joint account; however, if the interest of a Working Interest Owner is subject to a separately assessed overriding royalty interest production payment or other interest in excess of a one-eighth (1/8) royalty, such Working Interest Owner shall notify Unit Operator of such interest prior to the rendition date land shall be given credit for the reduction in taxes paid resulting therefrom. Any Working Interest Owner dissatisfied with any assessment of its interest in real or personal property shall have the right, at its own expense, and after due notice to the Unit Operator, to protest and resist any such assessment.

2. <u>Taxes and Assessments</u>. Each Working Interest Owner shall pay or cause to be paid all production, severance, gathering, windfall profits tax and other taxes and assessments imposed upon or on account of the production or handling of its share of Unitized Substances.

Income Tax Election. Notwithstanding any provisions herein that the rights and liabilities hereunder are several and not joint or collective, or that this Agreement and operations hereunder shall not constitute a partnership, if for Federal income tax purposes this Agreement and the operations hereunder are regarded as a partnership, then each of the Parties hereto elects to be excluded from the application of all of the provisions of Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, as permitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Unit Operator is authorized and directed to execute on behalf of each of the Parties hereto such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by Federal Regulations 1.761-1(a). Should there be any requirement that each Party hereto give further evidence of this election, each such Party shall execute such documents and furnish such other evidence as may be required by the Federal Internal Revenue Service or as may be necessary to evidence this election. Each party hereto further agrees not to give any notices or take any other action inconsistent with the election made hereby. If any present or future income tax laws of the state in which the Unit Area is located or any future income tax law of the United States contain provi-sions similar to those in Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, under which an election similar to that provided by Section 761 of the Code is permitted, each of the Parties hereto agrees to make such election as may be permitted or required by such laws. In making the foregoing election, each of the Parties states that the income

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derived by such Party from the operations under this Agreement can be adequately determined without the computation of partnership taxable income.

ARTICLE 9 INSURANCE

<u>Insurance</u>. Unit Operator, with respect to Unit Operations, shall: (a) comply with the Workmen's Compensation Laws of the State of New Mexico,

(b) carry Employer's Liability and other insurance required by the laws of the State of New Mexico, and

(c) provide other insurance as set forth in Exhibit "D".

ARTICLE 10 ADJUSTMENT OF INVESTMENTS

1. <u>Personal Property Taken Over</u>. Upon the effective date hereof, Working Interest Owners shall deliver to Unit Operator possession of:

a. <u>Wells and Well Equipment</u>. All wells located upon the Unit Area, together with the casing, tubing, and downhole equipment up to and including the christmas tree.

b. Lease and Operating Equipment. All lease and operating equipment, salt water disposal wells and facility systems related to the unitized formation which Working Interest Owners determine to be necessary or desirable for conducting Unit Operations.

c. <u>Records</u>. A copy of all production and well records pertaining to any well which has historically or is currently producing from the Unitized Formation.

2. <u>Inventory and Evaluation of Personal Property</u>. Working Interest Owners shall appoint an inventory committee which shall, as of the Effective Date hereof, or as soon thereafter as feasible, cause to be taken, under the supervision of the Unit Operator and at Unit Expense, joint physical inventories of lease and well equipment within the Unit Area, which inventories shall be used as a basis for determining the controllable items of equipment to be taken over by the Unit Operator hereunder. The Unit Operator shall notify each Working Interest Owner within each separate Tract at least five (5) days prior to the taking of the inventory with respect to said Tract, so that each of said Working Interest Owners may make arrangements to be represented at the taking of the inventory. Such inventories shall exclude all items not of use and value to the Unit and not necessary to Unit Operations. Such inventories shall include and be limited to those items of equipment normally considered controllable as recommended in the material classification manual in Bulletin No. 6 dated May, 1971, or any amendments thereto, published by the Petroleum Accountants Society of North America, except that certain items normally considered noncontrollable, such as sucker rods and other items as agreed upon by the Working Interest Owners may be included in the inventories in order to insure a more equitable adjustment of investments. Immediately following completion, such inventories shall be priced in accordance with the provision of Exhibit "E", Accounting Procedure, attached hereto and made a part hereof; such pricing shall be performed under the supervision of, by the personnel of and in the offices of the Unit Operator, with Working Interest Owners furnishing such additional pricing help as may be available and necessary. It is specifically provided that with respect to each well taken over for Unit Operations, no value shall be assigned to intangible drilling costs of such well or to the down-hole casing therein.

3. <u>Inventory and Valuations</u>. After completion of the inventory and evaluation of property in accordance with the provisions of Article 10.2, Unit Operator shall submit to each Working Interest Owner a copy of the inventory and valuations thereon together with a letter ballot for approval of such inventory and valuations. Within sixty (60) days after receipt of such inventory and valuations each Working Interest Owner shall return such letter ballot to Unit Operator indicating its approval or disapproval thereof. It is agreed that such inventory and valuations shall be binding upon all parties if approved by Working Interest Owners owning as much as sixty-five percent (65%) of the Working Interest in the Unit Area.

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4. <u>Investment Adjustment</u>. As soon as practicable after approval by Working Interest Owners of the inventory and valuations as provided in Article 10.3, each Working Interest Owner shall be credited with the value of its interest in all personal property so taken over by Unit Operator under Articles 10.1.a and 10.1.b, and charged with an amount equal to that obtained by multiplying the total value of all such personal property so taken over by Unit Operator under Sections 10.1.a and 10.1.b by such Working Interest Owner's Unit Participation, as shown on Exhibit "C", attached hereto. If the charge against any Working Interest Owner is greater than the amount credited to such Working Interest Owner, the resulting net charge shall be paid and in all other respects be treated as any other item of Unit Expense chargeable against such Working Interest Owner. If the credit to any Working Interest Owner is greater than the amount charged against such Working Interest Owner, the resulting net credit to any Working Interest Owner, the resulting net charge working Interest Owner, the resulting net credit shall be paid to such Working Interest Owner by Unit Operator out of funds received by it in settlement of the net charges described above.

5. <u>General Facilities</u>. The acquisition of warehouses, warehouse stocks, lease houses, camps, facilities systems, and office building necessary for, and directly related to, Unit Operations shall be by negotiation by and between the owners thereof and Unit Operator, subject to the approval of Working Interest Owners.

6. <u>Ownership of Personal Property and Facilities</u>. Each Working Interest Owner, individually, shall, by virtue hereof, own an undivided interest in all personal property and facilities taken over or otherwise acquired by Unit Operator pursuant to this agreement equal to its Unit Participation, shown on Exhibit "C", attached hereto.

ARTICLE 11 WELLS

1. <u>Existing Wells</u>. All wells upon the Unit Area which have been completed for production within the unitized formation are deemed neces-sary for Unit Operations and shall be delivered to Unit Operator in accordance with Article 10.

2. <u>Necessary Wells</u>. In the event it becomes necessary, or advisable, that additional wells be drilled upon the Unit Area, whether for production purposes, disposal purposes or for use as injection wells, the costs thereof shall be a unit expense to be borne by all Working Interest Owners in accordance with Exhibit "C".

ARTICLE 12 DEVELOPMENT AND OPERATING COSTS

1. <u>Basis of Charge to Working Interest Owners</u>. Subject to the provisions of Section 12.2 hereof, Unit Operator initially shall pay all Unit Expense. Each Working Interest Owner shall reimburse Unit Operator for its share of Unit Expenses. All charges, credits, and accounting for Unit Expense shall be in accordance with Exhibit "E" attached hereto. Each Working Interest Owner's share of such charges shall be the same as its Unit Participation.

2. <u>Advance Billings</u>. Unit Operator shall have the right, at its option, to require other Working Interest Owners to advance their respective proportions of estimated development and operating costs and expenses by submitting to such other Working Interest Owners, on or before the 15th day of any month, an itemized estimate of such costs and expenses for the succeeding month with a request for payment in advance. Within fifteen (15) days thereafter, each such other Working Interest Owner shall pay to Unit Operator its proportionate part of such estimate. Adjustment between estimates and the actual costs shall be made by Unit Operator at the close of

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each calendar month, and the accounts of the Working Interest Owners shall be adjusted accordingly.

3. <u>Commingling of Funds</u>. Funds received by Unit Operator under this agreement need not be segregated by Unit Operator or maintained by it as a separate fund, but may be commingled with its own funds.

4. Lien and Security Interest of Unit Operator and Working Interest Owners. Each Working Interest Owner grants to Unit Operator a lien upon its Oil and Gas Rights in each Tract, and a security interest in its share of Unitized Substances when extracted and its interest in all Unit Equipment, to secure payment of its share of Unit Expense, together with interest thereon at the rate of $1\frac{1}{2}$ % (one and one-half percent) per month. To the extent that Unit Operator has a security interest under the Uniform Commercial Code of the State, Unit Operator shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of judgment by Unit Operator for the secured indettedness shall not be deemed an election of remedies or otherwise affect the lien rights or security interest as security for the payment thereof. In addition, upon default by any Working Interest Owner in the payment of its share of Unit Expense, Unit Operator shall have the right, without prejudice to other rights or remedies, to collect from the purchaser the proceeds from the sale of such Working Interest Owner's share of Unitized Substances until the amount owed by such Working Interest Owner, plus interest has been paid. Each purchaser shall be entitled to rely upon Unit Operator's written statement concerning the amount of any default. Unit Operator grants a like lien and security interest to the Working Interest Owners.

5. <u>Unpaid Unit Expense</u>. If any Working Interest Owner fails to pay its share of Unit Expense within sixty (60) days after rendition of a statement therefor by Unit Operator, the non-defaulting Working Interest Owners shall, upon request by Unit Operator, pay the unpaid amount as if it were Unit Expense in the proportion that the Unit Participation of each such Working Interest Owner bears to the Unit Participation of all such Working Interest Owners. Each Working Interest Owner so paying its share of the unpaid amount shall, to obtain reimbursement thereof, be subrogated to the security rights described in Section 12.4 of this agreement.

6. <u>Carved-Out Interest</u>. If any Working Interest Owner shall, after executing this agreement, create an overriding royalty, production payment, net proceeds interest, carried interest, or any other interest out of its Working Interest, such carved-out interest shall be subject to the terms and provisions of this agreement, specifically including, but without limitation, Section 12.4 hereof entitled "Lien and Security Interest of Unit Operator and Working Interest Owners." If the Working Interest Owner creating such carved-out interest (a) fails to pay any Unit Expense chargeable to such Working Interest Owner under this agreement, and the production of Unitized Substances accruing to the credit of such Working Interest Owner is insufficient for that purpose, or (b) withdraws from this agreement under the terms and provisions of Article 17 hereof, the carved-out interest shall be chargeable with a pro rata portion of all Unit Expense incurred hereunder, the same as though carved-out interest were a Working Interest, and Unit Operator shall have the right to enforce against such carved-out interest the lien and all other rights granted in Section 12.4 for the purpose of collecting the Unit Expense chargeable to the carved-out interest.

7. <u>Rentals</u>. The Working Interest Owners in each Tract shall pay all rentals, minimum royalty, advance rentals or delay rentals due under the lease thereon and shall concurrently submit to the Unit Operator evidence of payment.

8. <u>Budgets</u>. Before or as soon as practical after the Effective Date, Unit Operator shall prepare a budget of estimated Unit Expense for the remainder of the calendar year, and, on or before the first day of each August thereafter, shall prepare a budget for the ensuing calendar year. A budget shall set forth the estimated Unit Expense by quarterly periods. Budgets shall be estimates only, and shall be adjusted or corrected by Working Interest Owners and Unit Operator whenever an adjustment or correction is proper. A copy of each budget and adjusted budget shall be furnished promptly to each Working Interest Owner.

ARTICLE 13 NON-UNITIZED FORMATIONS

1. <u>Right to Operate</u>. Any Working Interest Owner that now has or hereafter acquires the right to drill for and produce oil, gas or other minerals from a formation underlying the Unit Area other than the Unitized Formation, shall have the right to do so notwithstanding this Agreement or the Unit Agreement. In exercising the right, however, the Working Interest Owner shall exercise care to prevent unreasonable interference with Unit Operations. No Working Interest Owner other than Unit Operator shall produce Unitized Substances through any well drilled or operated by it. If any Working Interest Owner drills any well into or through the Unitized Formation, the Unitized Formation shall be protected in a manner satisfactory to other Unit Working Interest Owners so that production of Unitized Substances will not be adversely affected.

2. <u>Multiple Completions</u>. No well now or hereafter completed in the Unitized Formation shall ever be completed as a multiple completion with the Unitized Formation unless such multiple completion and subsequent handling of the multiple completion is approved by Working Interest Owners in accordance with the voting procedure described in Article 4.3 of this Agreement.

ARTICLE 14 TITLES

1. <u>Warranty and Indemnity</u>. Each Working Interest Owner represents and warrants that it is the owner of the respective Working Interest as shown to be owned by it on appropriate Exhibits to this Agreement and that such interest is not subject to any liens, mortgages or other encumbrances, hereby indemnifies and holds the other Working Interest Owners harmless from any loss due to the failure, in whole or in part, of its title to any such interest, except failure of title arising out of operations hereunder; provided, however, that such indemnity and any liability for breach of warranty shall be limited to an amount equal to the net value that had been received from the sale of Unitized Substances attributed hereunder to the interest as to which title failed. Each failure of title will be effective, insofar as this Agreement is concerned, as of the first day of the calendar month in which such failure is finally determined and there shall be no retroactive adjustment of Unit Expense or retroactive allocation of Unitized Substances or the proceeds therefrom as a result of title failure.

2. <u>Failure of Title Because of Unit Operations</u>. The failure of title to any Working Interest in any Tract because of Unit Operations, including nonproduction from such Tract, shall not change the Unit Participation of the Working Interest Owner whose title failed in relation to the Unit Participations of the other Working Interest Owners at the time of the title failure.

ARTICLE 15 LIABILITY, CLAIMS AND SUITS

1. <u>Individual Liability</u>. The duties, obligations, and liabilities of Working Interest Owners shall be several and not joint or collective; and nothing contained herein shall ever be construed as creating a partnership of any kind, joint venture or an association or trust between or among Working Interest Owners.

2. <u>Settlements</u>. Unit Operator may settle any single damage claim or suit involving Unit Operations if the expenditure does not exceed Ten thousand (\$10,000.00) Dollars

and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, Working Interest Owners shall determine the further handling of the claim or suit, unless such authority is delegated to Unit Operator. All costs and expense of handling, settling, or otherwise discharging such claim or suit shall be an item of Unit Expense, subject to such limitation as is set forth in Exhibit "E". If a claim is made against any Working Interest Owner or if any Working Interest Owner is sued on account of any matter arising from Unit Operations over which such Working Interest Owner individually has no control because of the rights given Working Interest Owners and Unit Operator

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by this Agreement and the Unit Agreement, the Working Interest Owner shall immediately notify Unit Operator, and the claim or suit shall be treated as any other claim or suit involving Unit Operations.

ARTICLE 16

<u>Notices</u>. All notices required hereunder shall be in writing and shall be deemed to have been properly served when sent by mail or telegram to the address of the representative of each Working Interest Owner as furnished to Unit Operator in accordance with Article 4 hereof.

ARTICLE 17 WITHDRAWAL OF WORKING INTEREST OWNER

1. <u>Withdrawal</u>. A Working Interest Owner may withdraw from this Agreement by transferring, without warranty of title either express or implied, to the Working Interest Owners who do not desire to withdraw all its Oil and Gas Rights, exclusive of Royalty Interests, together with its interest in all Unit Equipment and in all wells used in Unit Operations, provided that such transfer shall not relieve such Working Interest Owner from any obligation or liability incurred prior to the first day of the month following receipt by Unit Operator of such transfer. The delivery of the transfer shall be made to Unit Operator for the transferees. The transferred interest shall be owned by the transferees in proportion to their respective Unit Participations. The transferees, in proportion to the respective interests so acquired, shall pay the transferor for its interest in Unit Equipment, the salvage value thereof less its share of the estimated cost of salvaging same and of plugging and abandoning all wells then being used or held for Unit Operations, as determined by Working Interest Owners. In the event such withdrawing owner's interest in the aforesaid salvage value is less than such owner's share of such estimated costs, the withdrawing owner, as a condition precedent to withdrawal, shall pay the Unit Operator, for the benefit of Working Interest Owners succeeding to its interest, a sum equal to the deficiency. Within sixty (60) days after receiving delivery of the transfer, Unit Operator shall render a final statement to the withdrawing owner for its share of Unit Expense, including any deficiency in salvage value, as determined by Working Interest Owners, incurred as of the first day of the month following the date of receipt of the transfer. Provided all Unit Expense, including any deficiency hereunder, due from the withdrawing owner has been paid in full within thirty (30) days after the rendering of such final statement by the Unit Operator, the transfer shall be effective the first day of the month following its receipt by Unit Operator and, as of such effective date, withdrawing owner shall be relieved from all further obligations and liabilities hereunder and under the Unit Agreement, and the rights of the withdrawing Working Interest Owner hereunder and under the Unit Agreement shall cease insofar as they existed by virtue of the interest transferred.

2. <u>Limitation on Withdrawal</u>. Notwithstanding anything set forth in Article 17.1, Working Interest Owners may refuse to permit the withdrawal of a Working Interest Owner if its Working Interest is burdened by any royalties, overriding royalties, production payments, net proceeds interest, carried interest, or any other interest created out of the Working Interest in excess of one-eighth (1/8th) lessor's royalty, unless the other Working Interest Owners willing to accept the assignment agree to accept the Working Interest subject to such burdens.

ARTICLE 18 ABANDONMENT OF WELLS

1. <u>Rights of Former Owners</u>. If Working Interest Owners decide to permanently abandon any well completed in the Unitized Formation within the Unit Area prior to termination of the Unit Agreement, Unit Operator shall give written notice of such fact to the Working Interest Owners of the Tract on which such well is located and said Working Interest Owners shall have the right and option for a period of sixty (60) days after receipt of such notice to notify Unit Operator of their election to take over and own said well and to deepen or plug back said well to a formation other than the Unitized Formation. Within sixty (60) days after said Working Interest Owners have so notified Unit Operator of their desire to take over such well, they shall pay the Unit Operator, for credit to the joint account of the Working Interest Owners, the amount as estimated and fixed by Working Interest Owners to be the net salvage value of the equipment in and on said well, except casing and other equipment originally contributed at no cost. The Working Interest Owners of the Tract, by taking over the well, agree to seal off the Unitized Formation in a manner satisfactory to Working Interest Owners, and upon abandonment to plug the well in compliance with all applicable laws and regulations.

2. <u>Plugging</u>. In the event the Working Interest Owners of a Tract do not elect to take over a well located thereon which is proposed for abandonment, Unit Operator shall plug and abandon the well in accordance with applicable laws, and regulations.

ARTICLE 19 EFFECTIVE DATE AND TERM

1. <u>Effective Date</u>. This Agreement shall become effective on the date and at the time the Unit Agreement becomes effective.

2. <u>Term</u>. This agreement shall continue in full force and effect so long as the Unit Agreement remains in force and effect and thereafter until (a) all Unit Wells have been abandoned and plugged or turned over to Working Interest Owners in accordance with article 20 hereof, (b) all personal and real property acquired for the Joint Account of Working Interest Owners have been disposed of by Unit Operator in accordance with instructions of Working Interest Owners, and (c) there has been a final accounting.

ARTICLE 20 ABANDONMENT OF OPERATIONS

1. <u>Termination</u>. Upon termination of the Unit Agreement, the following will occur:

Oil and Gas Rights. Oil and Gas Rights in and to each separate а. shall no longer be affected by this Agreement, and thereafter the parties shall be governed by the terms and provisions of the leases, contracts, and other instruments affecting the separate Tracts. b. <u>Right to Operate</u>. Working Interest Owners of any Tract desiring to take over and continue to operate a well or wells located thereon may do so by paying Unit Operator, for the credit of the joint account, the net salvage value, as determined by the Working Interest Owners, of the equipment in and on the well, except casing and other equipment originally contributed at no cost, and by agreeing to properly plug the well at such time as it is abandoned. Salvaging Wells. Unit Operator shall salvage as much of the с. casing and equipment in or on wells not taken over by Working Interest Owners of separate Tracts as can economically and reasonably be salvaged, and shall cause the wells to be plugged and abandoned in compliance with applicable laws and regulations. d. Cost of Abandonment. The cost of abandonment of Unit Operations shall be Unit Expense.

e. <u>Distribution of Assets</u>. Working Interest Owners shall share in the distribution of Unit Equipment, or the proceeds thereof in proportion to their Unit Participations.

ARTICLE 21

LAWS, REGULATIONS AND CERTIFICATE OF COMPLIANCE

1. Laws and Regulations. This Agreement and operations hereunder are subject to all valid laws and valid rules, regulations and orders of all regulatory bodies having jurisdiction and to all other applicable federal, state, and local laws, ordinances, rules, regulations and orders; and any provision of this Agreement found to be contrary to or inconsistent with any such law, ordinance, rule, regulation or order shall be deemed modified accordingly.

2. <u>Certificate of Compliance</u>. In the performance of work under this Agreement, the parties agree to comply and Unit Operator shall require each independent contractor to comply with the provisions of Exhibit "F".

ARTICLE 22 EXCISE TAX PROVISIONS

1. Crude Oil Excise Tax. For the period during which excise taxes are payable under the Crude Oil Windfall Profit Tax Act of 1980 on any party's Unitized Substances, the first crude oil allocated to any Tract after distribution of any incremental tertiary crude as hereinafter provided shall be the tax tier type of crude oil actually produced or considered to have been produced from such Tract during the base period under I.R.C. regulations but not to exceed its Tract Participation share or the amount of such tax tier type of crude oil currently available. Any excess of a tax tier type of crude oil existing after the foregoing specific identification allocation shall be allocated to the remaining Tracts in the Unit which have an under-allocation of crude oil in proportion to the amount of their relative underallocations of crude oil. Anything hereinabove notwithstanding, any incremental tertiary oil as defined under I.R.C. Section 4993 shall be allocated to each Tract in accordance with its Tract Participation prior to any other allocation of tax tier type of crude oil under this Article 22.1 In no case shall the sum of the different tax tier types of crude oil allocated to any Tract exceed the total amount of crude oil allocable under its Tract Participation.

2. <u>Amendment bv Working Interest Owners</u>. This Article 22 may be amended or deleted by vote of the Working Interest Owners using the voting procedure set out in Article 4.3 of this Operating Agreement if in the opinion of the Working Interest Owners (a) application of Article 22 as written becomes unworkable or inequitable as a result of changes in laws or regulations of any governmental agency, or (b) amendment or deletion of this Article 22 is necessary to comply with applicable laws, rules, regulations or orders of any governmental agency having jurisdiction.

ARTICLE 23

<u>Governmental Regulations</u>. Working Interest Owners agree to release Unit Operator from any and all losses, damages, injuries, claims and causes of action arising out of, incident to or resulting directly or indirectly from Unit Operator's interpretation or application of rules, rulings, regulations or orders of any governmental agency or predecessor agencies to the extent Unit Operator's interpretation or application of such rules, rulings, regulations or orders were made in good faith. Working Interest Owners further agree to reimburse Unit Operator for their proportionate share of any amounts Unit Operator may be required to refund, rebate or pay as a result of an incorrect interpretation or application of the above noted rules, rulings, regulations or orders, together with their proportionate part of interest and penalties owing by Unit Operator as a result of such incorrect interpretation or application of such rules, rulings, regulations or orders.

ARTICLE 24

<u>Counterpart Execution</u>. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless or whether or not it is executed by all other parties owning or claiming an interest in the land within the above described Unit Area. Furthermore, this Agreement shall extend to and be binding on the parties hereto, their successors, heirs and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement upon the respective dates indicated opposite their respective signatures.

Attest:

By- Fin hours

GRAND RESOURCES, INC. By President

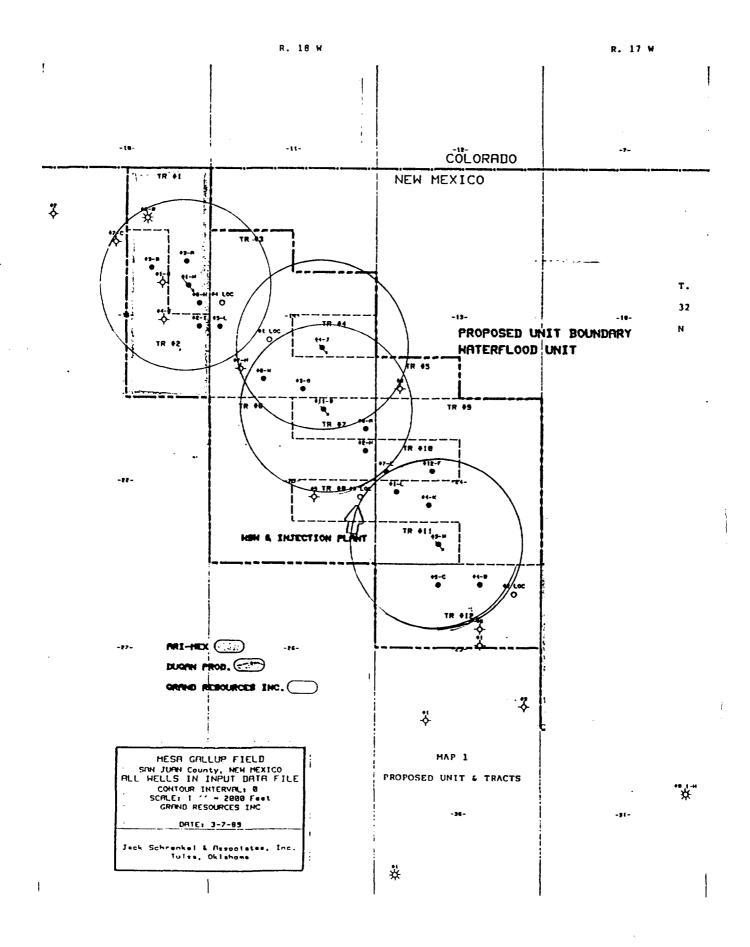
STATE OF OKLAHOMA COUNTY OF TULSA

The foregoing instrument was acknowledged before me this ______ day of ______ 1989, by ______ Marvin Robinowitz who is ______ President ______ of Grand Resources, Inc., an Oklahoma Corporation, on behalf of said corporation.

My commission expires: Notary Public MARTH

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EXHIBIT "C"

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** HESA GALLUP WATER FLOOD PARAMETERS (12/88, JSA) **

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EXHIBIT "D"

ATTACHED TO AND MADE A PART OF UNIT OPERATING AGREEMENT FOR THE MESA GALLUP UNIT, DATED JUNE 1, 1989. GRAND RESOURCES, INC., OPERATOR.

Operator and Operator's contractors and subcontractors shall, during the drilling and completing of any and all well or wells drilled on the Unit Area and during the performance of all operations, carry the following described minimum insurance coverage on the Unit Area.

- A. Employer's Liability with limit of \$500.00, and Workmen's Compensation Insurance covering Operator's employees and employees of Operator's contractors and subcontractors engaged in operations under this Agreement, in compliance with the laws of the State where the work is to be performed.
- B. General Liability Insurance covering the parties hereto in connection with all operations conducted by Operator or Operator's contractors and subcontractors in the amount of \$1,000.000 combined single limit or equivalent.
- C. Automobile Liability and Property Damage Insurance covering the parties hereto in connection with all operations conducted by Operator or Operator's contractors and subcontractors with a combined Bodily Injury and Death limit of \$1,000.000.

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			ACCOUNTIN	G PROC	EDURE		
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1.	Defi	nitions					
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	is att "Join	ached. t Operations" shall me	ean all operations necessary				
	"Join	e of the Joint Property t Account" shall mean	the account showing the cl	harges paid and	credits receive	d in the conduct of the	Joint Opera-
	tions "Ope	and which are to be s rator" shall mean the	hared by the Parties. party designated to conduc	t the Joint Opera	ations.		
	"Par	ties" shall mean Opera	n the Parties to this agreer itor and Non-Operators.				
	of oth "Tec siona	her employees and/or hnical Employees" sha	nall mean those employees y contract labor directly emp all mean those employees h mary function in Joint Oper Property.	ployed on the Joi aving special an	nt Property in id specific eng	a field operating capa ineering, geological or	city. other profes-
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2.	Stat	ement and Billings					
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3.		ances and Payments erator's Lien an	d additional provis	ions.		of the Agreement	
	Α.	share of estimated ca ing or by the first da	ovided for in the agreeme sh outlay for the succeedin y of the month for which th flect advances received fro	g month's operat e advance is requ	ion within fift aired, whicheve	een (15) days after rece	ipt of the bill-
	В.	within such time, the	shall pay its proportion of a e unpaid balance shall bear	· interest monthl	y at the rate	of 11% (one and	one-half)
			tod by the applicable usury corney's fees, court costs, ar	-laws in the stat	o in which the	Joint Property is loos	od, whichever
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4.	Adj	iustments					
	prov clus unle Ope peri	vided, however, all bil lively be presumed to l ess within the said twe erator for adjustment. 1	shall not prejudice the righ ls and statements rendered be true and correct after tv nty-four (24) month period No adjustment favorable to his paragraph shall not pre in Section V.	to Non-Operato venty-four (24) m a Non-Operator Operator shall be	rs by Operator nonths followin takes written made unless	during any calendar ng the end of any such exception thereto and n it is made within the sa	year shall con- calendar year, nakes claim on ume prescribed

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5. Audits

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- A. A Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the Joint Account for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided, however, the making of an audit shall not extend the time for the taking of written exception to and the adjustments of accounts as provided for in Paragraph 4 of this Section I. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct a joint audit in a manner which will result in a minimum of inconvenience to the Operator. Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator. The audits shall not be conducted more than once each year without prior approval of Operator, except upon the resignation or removal of the Operator, and shall be made at the expense of those Non-Operators approving such audit.
- B. The Operator shall reply in writing to an audit report within 180 days after receipt of such report.
- Approval By Non-Operators Refer to Article 4. of the Agreement for voting procedures.

Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto. Operator shall notify all Non-Operators of the Operator's proposal, and the agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

II. DIRECT CHARGES

Operator shall charge the Joint Account with the following items:

1. Ecological and Environmental

Costs incurred for the benefit of the Joint Property as a result of governmental or regulatory requirements to satisfy environmental considerations applicable to the Joint Operations. Such costs may include surveys of an ecological or archaeological nature and pollution control procedures as required by applicable laws and regulations.

2. Rentals and Royaltics

Lease rentals and royalties paid by Operator for the Joint Operations.

- 3. Labor
 - A. (1) Salaries and wages of Operator's field employees directly employed on the Joint Property in the conduct of Joint Operations.
 - (2) Salaries of First Level Supervisors in the field.
 - (3) Salaries and wages of Technical Employees directly employed on the Joint Property if such charges are excluded from the overhead rates.
 - (4) Salaries and wages of Technical Employees either temporarily or permanently assigned to and directly employed in the operation of the Joint Property if such charges are excluded from the overhead rates.
 - B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to employees whose salaries and wages are chargeable to the Joint Account under Paragraph 3A of this Section II. Such costs under this Paragraph 3B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 3A of this Section II. If percentage assessment is used, the rate shall be based on the Operator's cost experience.
 - C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's costs chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II.
 - D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraph 3A of this Section II.
- 4. Employee Benefits

Operator's current costs of established plans for employees' group life insurance, hospitalization, pension, retirement, stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II shall be Operator's actual cost not to exceed the percent most recently recommended by the Council of Petroleum Accountants Societies, or twenty-six percent (26%), whichever percent is higher.

5. Material

Material purchased or furnished by Operator for use on the Joint Property as provided under Section IV. Only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and is reasonably practical and consistent with efficient and economical operations. The accumulation of surplus stocks shall be avoided.

6. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store where like material is normally available or railway receiving point nearest the Joint Property unless agreed to by the Parties.

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- B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store where like material is normally available, or railway receiving point nearest the Joint Property unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.
- C. In the application of subparagraphs A and B above, the option to equalize or charge actual trucking cost is available when the actual charge is \$400 or less excluding accessorial charges. The \$400 will be adjusted to the amount most recently recommended by the Council of Petroleum Accountants Societies.

7. Services

The cost of contract services, equipment and utilities provided by outside sources, except services excluded by Paragraph 10 of Section II and Paragraph i, ii, and iii, of Section III. The cost of professional consultant services and contract services of technical personnel directly engaged on the Joint Property if such charges are excluded from the overhead rates. The cost of professional consultant services or contract services of technical personnel not directly engaged on the Joint Property shall not be charged to the Joint Account unless previously agreed to by the Parties.

8. Equipment and Facilities Furnished By Operator

- A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on gross investment less accumulated depreciation not to exceed <u>eight</u> percent (<u>8</u>) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.
- B. In lieu of charges in paragraph 8A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property less 20%. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

9. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause, except those resulting from Operator's gross negligence or willful misconduct. Operator shall furnish Non-Operator written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

10. Legal Expense

Expense of handling, investigating and settling litigation or claims, discharging of liens, payment of judgements and amounts paid for settlement of claims incurred in or resulting from operations under the agreement or necessary to protect or recover the Joint Property, except that no charge for services of Operator's legal staff or fees or expense of outside attorneys shall be made unless previously agreed to by the Parties. All other legal expense is considered to be covered by the overhead provisions of Section III unless otherwise agreed to by the Parties, except as provided in Section I, Paragraph 3.

11. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties. If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to the Joint Account shall be made and paid by the Parties hereto in accordance with the tax value generated by each party's working interest.

12. Insurance

Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the event Joint Operations are conducted in a state in which Operator may act as self-insurer for Worker's Compensation and/ or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.

13. Abandonment and Reclamation

Costs incurred for abandonment of the Joint Property, including costs required by governmental or other regulatory authority.

14. Communications

Cost of acquiring, leasing, installing, operating, repairing and maintaining communication systems, including radio and microwave facilities directly serving the Joint Property. In the event communication facilities/systems serving the Joint Property are Operator owned, charges to the Joint Account shall be made as provided in Paragraph 8 of this Section II.

15. Other Expenditures

Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III and which is of direct benefit to the Joint Property and is incurred by the Operator in the necessary and proper conduct of the Joint Operations.

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			III. OVERHEAD	
1. O	verl	nead - Dri	illing and Producing Operations	
i,			ation for administrative, supervision, office services and warehousing costs. O	perator shall charge drilling
			Rate Basis, Paragraph 1A, or age Basis, Paragraph 1B	
	01 3. a. p	wages plu A. Section ccounting o rovided for	rwise agreed to by the Parties, such charge shall be in lieu of costs and exper us applicable burdens and expenses of all personnel, except those directly of II. The cost and expense of services from outside sources in connection with or matters before or involving governmental agencies shall be considered as i r in the above selected Paragraph of this Section III unless such cost and a direct charge to the Joint Account.	chargeable under Paragraph n matters of taxation, traffic, ncluded in the overhead rates
ii	. T a	he salaries, nd contrac	s, wages and Personal Expenses of Technical Employees and/or the cost of pr ct services of technical personnel directly employed on the Joint Property:	ofessional consultant services
			e covered by the overhead rates, or ot be covered by the overhead rates.	
ii	a	nd contrac	s, wages and Personal Expenses of Technical Employees and/or costs of pr ct services of technical personnel either temporarily or permanently assigned on of the Joint Property:	
			e covered by the overhead rates, or ot be covered by the overhead rates.	
A	. C)verhead -	Fixed Rate Basis	
	(1) Operato	or shall charge the Joint Account at the following rates per well per month	:
		Drilling (Pror	g Well Rate \$ <u>3,500.00</u> rated for less than a full month)	
		Produc	cing Well Rate \$ _325.00	
	(2) Applica	ation of Overhead - Fixed Rate Basis shall be as follows:	
		(a) Dr	rilling Well Rate	
) Charges for drilling wells shall begin on the date the well is spudded and t ing rig, completion rig, or other units used in completion of the well is relea that no charge shall be made during suspension of drilling or completion more consecutive calendar days.	sed, whichever is later, excep
		(2)) Charges for wells undergoing any type of workover or recompletion for a work days or more shall be made at the drilling well rate. Such charges a from date workover operations, with rig or other units used in workover, or other unit release, except that no charge shall be made during suspe (15) or more consecutive calendar days.	shall be applied for the perio commence through date of ri
		(b) Pr	roducing Well Rates	
		(1)) An active well either produced or injected into for any portion of the mont well charge for the entire month.	h shall be considered as a on
•		(2)	Each active completion in a multi-completed well in which production is no be considered as a one-well charge providing each completion is considered ing regulatory authority.	ot commingled down hole sha a separate well by the govern
		(3)	An inactive gas well shut in because of overproduction or failure of purcha be considered as a one-well charge providing the gas well is directly co outlet.	
		(4)	A one-well charge shall be made for the month in which plugging and abs pleted on any well. This one-well charge shall be made whether or not the drilling well rate applies.	
		(5)	5) All other inactive wells (including but not limited to inactive wells covered able, transferred allowable, etc.) shall not qualify for an overhead charge	
		to whi rently Produ of ave Depar	vell rates shall be adjusted as of the first day of April each year following the ich this Accounting Procedure is attached. The adjustment shall be compute in use by the percentage increase or decrease in the average weekly earning uction Workers for the last calendar year compared to the calendar year pr erage weekly earnings of Crude Petroleum and Gas Production Workers as rtment of Labor, Bureau of Labor Statistics, or the equivalent Canadian in da, as applicable. The adjusted rates shall be the rates currently in use, p hent.	ed by multiplying the rate cu gs of Crude Petroleum and G ecceding as shown by the ind published by the United Stat idex as published by Statisti
	B.	Overhead	Percentage-Basis-	
			ator shall charge the Joint Account at the following rates:-	
			-4-	

Ta) Development

Percent (_____%) of the cost of development of the Joint Property exclusive of costs provided under Paragraph 10 of Section II and all salvage credits.

(b) Operating

Percent (______%) of the cost of operating the Joint Property exclusive of costs provided under Paragraphs 2 and 10 of Section II, all salvage credits, the value of injected substances purchased for secondary recovery and all taxes and assessments which are levied, assessed and paid upon the mineral interest in and to the Joint Property.

(2) Application of Overhead - Percentage Basis shall be as follows:

For the purpose of determining charges on a percentage basis under Paragraph 1B of this Section III, development shall include all costs in connection with drilling, redrilling, deepening, or any remedial operations on any or all wells involving the use of drilling rig and crew capable of drilling to the producing interval on the Joint Property; also, preliminary expenditures necessary in preparation for drilling and expenditures incurred in abandoning when the well is not completed as a producer, and original cost of construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, except Major Construction as defined in Paragraph 2 of this Section III. All other costs shall be considered as operating.

2. Overhead - Major Construction

To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall entry negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for overhead based on the following rates for any Major Construction project in excess of 3

A. _____% of first \$100,000 or total cost if less, plus

B. _____% of costs in excess of \$100,000 but less than \$1,000,000, plus

C. ______% of costs in excess of \$1,000,000.

Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single project shall not be treated separately and the cost of drilling and workover wells and artificial lift equipment shall be excluded.

3. Catastrophe Overhead

To compensate Operator for overhead costs incurred in the event of expenditures resulting from a single occurrence due to oil spill, blowout, explosion, fire, storm, hurricane, or other catastrophes as agreed to by the Parties, which are necessary to restore the Joint Property to the equivalent condition that existed prior to the event causing the expenditures, Operator shall either negotiate a rate prior to charging the Joint Account or shall charge the Joint Account for overhead based on the following rates:

- A. _____% of total costs through \$100,000; plus
- B. _____ % of total costs in excess of \$100,000 but less than \$1,000,000; plus

C. _____% of total costs in excess of \$1,000,000. *Prime Rate as shown by the Wall Street

Journal on the day of the occurrence plus 2%. Expenditures subject to the overheads above will not be reduced by insurance recoveries, and no other overhead provisions of this Section III shall apply.

4. Amendment of Rates

The overhead rates provided for in this Section III may be amended from time to time only by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS

Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all Material movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

1. Purchases

Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of Material found to be defective or returned to vendor for any other reasons, credit shall be passed to the Joint Account when adjustment has been received by the Operator.

2. Transfers and Dispositions

Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator. unless otherwise agreed to by the Parties, shall be priced on the following basis exclusive of cash discounts:

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A. New Material (Condition A)

- (1) Tubular Goods Other than Line Pipe
 - (a) Tubular goods, sized 2% inches OD and larger, except line pipe, shall be priced at Eastern mill published carload base prices effective as of date of movement plus transportation cost using the 80,000 pound carload weight basis to the railway receiving point nearest the Joint Property for which published rail rates for tubular goods exist. If the 80,000 pound rail rate is not offered, the 70,000 pound or 90,000 pound rail rate may be used. Freight charges for tubing will be calculated from Lorain, Ohio and casing from Youngstown, Ohio.
 - (b) For grades which are special to one mill only, prices shall be computed at the mill base of that mill plus transportation cost from that mill to the railway receiving point nearest the Joint Property as provided above in Paragraph 2.A.(1)(a). For transportation cost from points other than Eastern mills, the 30,000 pound Oil Field Haulers Association interstate truck rate shall be used.
 - (c) Special end finish tubular goods shall be priced at the lowest published out-of-stock price, f.o.b. Houston, Texas, plus transportation cost, using Oil Field Haulers Association interstate 30,000 pound truck rate, to the railway receiving point nearest the Joint Property.
 - (d) Macaroni tubing (size less than 2% inch OD) shall be priced at the lowest published out-of-stock prices f.o.b. the supplier plus transportation costs, using the Oil Field Haulers Association interstate truck rate per weight of tubing transferred, to the railway receiving point nearest the Joint Property.
- (2) Line Pipe
 - (a) Line pipe movements (except size 24 inch OD and larger with walls ¼ inch and over) 30,000 pounds or more shall be priced under provisions of tubular goods pricing in Paragraph A.(1)(a) as provided above. Freight charges shall be calculated from Lorain, Ohio.
 - (b) Line pipe movements (except size 24 inch OD and larger with walls ¾ inch and over) less than 30,000 pounds shall be priced at Eastern mill published carload base prices effective as of date of shipment, plus 20 percent, plus transportation costs based on freight rates as set forth under provisions of tubular goods pricing in Paragraph A.(1)(a) as provided above. Freight charges shall be calculated from Lorain, Ohio.
 - (c) Line pipe 24 inch OD and over and ¾ inch wall and larger shall be priced f.o.b. the point of manufacture at current new published prices plus transportation cost to the railway receiving point nearest the Joint Property.
 - (d) Line pipe, including fabricated line pipe, drive pipe and conduit not listed on published price lists shall be priced at quoted prices plus freight to the railway receiving point nearest the Joint Property or at prices agreed to by the Parties.
- (3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint Property.
- (4) Unused new Material, except tubular goods, moved from the Joint Property shall be priced at the current new price, in effect on date of movement, as listed by a reliable supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint Property. Unused new tubulars will be priced as provided above in Paragraph 2 A (1) and (2).
- B. Good Used Material (Condition B)

Material in sound and serviceable condition and suitable for reuse without reconditioning:

(1) Material moved to the Joint Property

At seventy-five percent (75%) of current new price, as determined by Paragraph A.

- (2) Material used on and moved from the Joint Property
 - (a) At seventy-five percent (75%) of current new price, as determined by Paragraph A, if Material was originally charged to the Joint Account as new Material or
 - (b) At sixty-five percent (65%) of current new price, as determined by Paragraph A, if Material was originally charged to the Joint Account as used Material.
- (3) Material not used on and moved from the Joint Property

At seventy-five percent (75%) of current new price as determined by Paragraph A.

The cost of reconditioning, if any, shall be absorbed by the transferring property.

- C. Other Used Material
 - (1) Condition C

Material which is not in sound and serviceable condition and not suitable for its original function until after reconditioning shall be priced at fifty percent (50%) of current new price as determined by Paragraph A. The cost of reconditioning shall be charged to the receiving property, provided Condition C value plus cost of reconditioning does not exceed Condition B value.

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(2) Condition D

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Material, excluding junk, no longer suitable for its original purpose, but usable for some other purpose shall be priced on a basis commensurate with its use. Operator may dispose of Condition D Material under procedures normally used by Operator without prior approval of Non-Operators.

- (a) Casing, tubing, or drill pipe used as line pipe shall be priced as Grade A and B seamless line pipe of comparable size and weight. Used casing, tubing or drill pipe utilized as line pipe shall be priced at used line pipe prices.
- (b) Casing, tubing or drill pipe used as higher pressure service lines than standard line pipe, e.g. power oil lines, shall be priced under normal pricing procedures for casing, tubing, or drill pipe. Upset tubular goods shall be priced on a non upset basis.
- (3) Condition E

Junk shall be priced at prevailing prices. Operator may dispose of Condition E Material under procedures normally utilized by Operator without prior approval of Non-Operators.

D. Obsolete Material

Material which is serviceable and usable for its original function but condition and/or value of such Material is not equivalent to that which would justify a price as provided above may be specially priced as agreed to by the Parties. Such price should result in the Joint Account being charged with the value of the service rendered by such Material.

- E. Pricing Conditions
 - (1) Loading or unloading costs may be charged to the Joint Account at the rate of twenty-five cents (25¢) per hundred weight on all tubular goods movements, in lieu of actual loading or unloading costs sustained at the stocking point. The above rate shall be adjusted as of the first day of April each year following January 1, 1985 by the same percentage increase or decrease used to adjust overhead rates in Section III, Paragraph 1.A(3). Each year, the rate calculated shall be rounded to the nearest cent and shall be the rate in effect until the first day of April next year. Such rate shall be published each year by the Council of Petroleum Accountants Societies.
 - (2) Material involving erection costs shall be charged at applicable percentage of the current knocked-down price of new Material.
- 3. Premium Prices

Whenever Material is not readily obtainable at published or listed prices because of national emergencies, strikes or other unusual causes over which the Operator has no control, the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in providing such Material, in making it suitable for use, and in moving it to the Joint Property; provided notice in writing is furnished to Non-Operators of the proposed charge prior to billing Non-Operators for such Material. Each Non-Operator shall have the right, by so electing and notifying Operator within ten days after receiving notice from Operator, to furnish in kind all or part of his share of such Material suitable for use and acceptable to Operator.

4. Warranty of Material Furnished By Operator

Operator does not warrant the Material furnished. In case of defective Material, credit shall not be passed to the Joint Account until adjustment has been received by Operator from the manufacturers or their agents.

V. INVENTORIES

The Operator shall maintain detailed records of Controllable Material.

1. Periodic Inventories, Notice and Representation

At reasonable intervals, inventories shall be taken by Operator of the Joint Account Controllable Material. Written notice of intention to take inventory shall be given by Operator at least thirty (30) days before any inventory is to begin so that Non-Operators may be represented when any inventory is taken. Failure of Non-Operators to be represented at an inventory shall bind Non-Operators to accept the inventory taken by Operator.

2. Reconciliation and Adjustment of Inventories

Adjustments to the Joint Account resulting from the reconciliation of a physical inventory shall be made within six months following the taking of the inventory. Inventory adjustments shall be made by Operator to the Joint Account for overages and shortages, but, Operator shall be held accountable only for shortages due to lack of reasonable diligence.

3. Special Inventories

Special inventories may be taken whenever there is any sale, change of interest, or change of Operator in the Joint Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory. In cases involving a change of Operator, all Parties shall be governed by such inventory.

- 4. Expense of Conducting Inventories
 - A. The expense of conducting periodic inventories shall not be charged to the Joint Account unless agreed to by the Parties.
 - B. The expense of conducting special inventories shall be charged to the Parties requesting such inventories, except inventories required due to change of Operator shall be charged to the Joint Account.

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EXHIBIT "F"

I. EQUAL EMPLOYMENT OPPORTUNITY PROVISION

During the performance of this contract, the operator agrees as follows:

- (1) The Operator will not discriminate against any employee or applicant for employment because of race, color, religion, national origin or sex. The Operator will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin or sex. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Operator agrees to post in conspicuous places, available to employees and applicants for employment notices to be provided for the contracting officer setting forth the provision of this non-discrimination clause.
- (2) The Operator will, in all solicitations or advertisements for employees placed by or on behalf of the Operator, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin or sex.
- (3) The Operator will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Operator's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Operator will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevent orders of the Secretary of Labor.
- (5) The Operator will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the Operator's non-compliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the Operator may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The Operator will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Operator will take such action with respect to any subscontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for non-compliance.

Provided however, that in the event the Operator becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Operator may request the United States to enter into such litigation to protect the interests of the United States.

Operator acknowledges that it may be required to file Standard Form 100 (EEO-1) promulgated jointly by the Office of Federal Contract Compliance, and Equal Employment Opportunity Commission and Plans for Progress with Joint Reporting Committee, Federal Depot, Jeffersonville, Indiana, within thirty (30) days of the date of contract award if such report has not been filed for the current year and otherwise comply with or file such other compliance reports as may be required under Executive Order 11246, as amended and Rules and Regulations adopted thereunder.

Operator further acknowledges that he may be required to develop a written affirmative action compliance program as required by the Rules and Regulations approved by the Secretary of Labor under authority of Executive Order 11246 and supply Non-Operators with a copy of such program if they so request.

II. CERTIFICATION OF NON-SEGREGATED FACILITIES

- (1) Operator assures Non-Operators that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location, under its control, where segreated facilities are maintained. For this purpose, it is understood that the phrase "segregated facilities" includes facilities which are in fact segregated on a basis of race, color, religion or national origin, because of habit; local custom or otherwise. It is further understood and agreed that maintaining or providing segregated facilities for its employees or permitting its employees to perform their services at any location under its control where segregated facilities are maintained is a violation of the equal opportunity clause required by Executive Order 11246 of September 24, 1965.
- (2) Operator further understands and agrees that a breach of the assurance herein contained subjects it to the provisions of the Order at 41 CFR Chapter 60 of the Secretary of Labor dated May 21, 1968, and the provisions of the equal opportunity clause enumerated in contracts between the United States of America and Non-Operators.
- (3) Whoever knowingly and willfully makes any false, fictitious or fraudulent representation may be liable to criminal prosecution under 18 U.S.C. \S 1001.

III. OCCUPATIONAL SAFETY AND HEALTH ACT

Operator will observe and comply with all safety and health standards promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Standards Act published in 29 CFR Part 1518 and adopted by the Secretary of Labor as occupational safety and health standards under the Williams-Steiger Occupational Safety and Health Act of 1970. Such safety and health standards shall apply to all subcontractors and their employees as well as to the prime contractor and its employees.

IV. VETERAN'S PREFERENCE

Operator agrees to comply with the following insofar as contracts it lets for an amount of \$10,000 or more which will generate 400 or more man-days of employment (each manday consisting of any day in which an employee performs more than one hour of work) and further agrees to include the following provision in contracts with Contractors and Subcontractors:

"CONTRACTOR AND SUBCONTRACTOR LISTING REQUIREMENT

(1) As provided by 41 CFR 50-250, the contractor agrees that all employment openings of the contractor which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those now generated by the contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed but excluding those of independently operated corporate affiliates, shall, to the maximum extent feasible, be offered for listing at an appropriate local office of the State employment service system wherein the opening occurs and to provide such periodic reports to such local office regarding employment openings and hires as may be required: Provided, that this provision shall not apply to openings which the contractor fills from within the contractor's organization or are filled pursuant to a customary and traditional employer-union hiring arrangement and that listing of employment openings shall involve only the normal obligations which attach to the placing of job orders.

(2) The contractor agrees to place the above provisions in any subcontract directly under this contract."

V. CERTIFICATION OF COMPLIANCE WITH ENVIRONMENTAL LAWS

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Operator agrees to comply with the Clean Air Act (42 U.S.C. § 1857) and the Federal Water Pollution Control Act (33 U.S.C. § 1251) when conducting operations involving nonexempt contracts. In all nonexempt contracts with subcontractors, Operator shall require:

- No facility to be utilized by Subcontractor in the performance of this contract with Operator is listed on the Environmental Protection Agency (EPA) List of Violating Facilities. See Executive Order No. 11738 of September 12, 1973, and 40 CFR § 15.20.
- (2) Prompt written notification shall be given by Subcontractor to Operator of any communication indicating that any such facility is under consideration to be included on the EPA List of Violating Facilities.
- (3) Subcontractor shall comply with all requirements of Section 114 of the Clean Air Act (42 U.S.C. § 1857) and Section 308 of the Federal Water Pollution Control Act (33 U.S.C. § 1251), relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in these Sections, and all regulations and guidelines issued thereunder.
- (4) The foregoing criteria and requirements shall be included in all of Subcontractor's nonexempt subcontracts, and Subcontractor shall take such action as the Government may direct as a means of enforcing such provisions. See 40 CFR \$ 15.4 & 5.
- (5) Operator agrees to notify non-operators of any violations in the afore provisions.
- VI. Operator agrees to comply with Executive Orders 11458 and 11625 regarding Minority Business Enterprises and all orders, rules, and regulations issued thereunder or amendments thereto.
- VII. Operator agrees to comply with Rehabilitation Act of 1973 and all orders, rules and regulations issued thereunder and amendments thereto.

EXHIBIT "F"

I. EQUAL EMPLOYMENT OPPORTUNITY PROVISION

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During the performance of this contract, the operator agrees as follows:

- (1) The Operator will not discriminate against any employee or applicant for employment because of race, color, religion, national origin or sex. The Operator will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin or sex. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Operator agrees to post in conspicuous places, available to employees and applicants for employment notices to be provided for the contracting officer setting forth the provision of this non-discrimination clause.
- (2) The Operator will, in all solicitations or advertisements for employees placed by or on behalf of the Operator, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin or sex.
- (3) The Operator will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Operator's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Operator will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevent orders of the Secretary of Labor.
- (5) The Operator will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the Operator's non-compliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the Operator may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The Operator will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Operator will take such action with respect to any subscontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for non-compliance.

Provided however, that in the event the Operator becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Operator may request the United States to enter into such litigation to protect the interests of the United States.

Operator acknowledges that it may be required to file Standard Form 100 (EEO-1) promulgated jointly by the Office of Federal Contract Compliance, and Equal Employment Opportunity Commission and Plans for Progress with Joint Reporting Committee, Federal Depot, Jeffersonville, Indiana, within thirty (30) days of the date of contract award if such report has not been filed for the current year and otherwise comply with or file such other compliance reports as may be required under Executive Order 11246, as amended and Rules and Regulations adopted thereunder.

Operator further acknowledges that he may be required to develop a written affirmative action compliance program as required by the Rules and Regulations approved by the Secretary of Labor under authority of Executive Order 11246 and supply Non-Operators with a copy of such program if they so request.

II. CERTIFICATION OF NON-SEGREGATED FACILITIES

- (1) Operator assures Non-Operators that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location, under its control, where segreated facilities are maintained. For this purpose, it is understood that the phrase "segregated facilities" includes facilities which are in fact segregated on a basis of race, color, religion or national origin, because of habit; local custom or otherwise. It is further understood and agreed that maintaining or providing segregated facilities for its employees or permitting its employees to perform their services at any location under its control where segregated facilities are maintained is a violation of the equal opportunity clause required by Executive Order 11246 of September 24, 1965.
- (2) Operator further understands and agrees that a breach of the assurance herein contained subjects it to the provisions of the Order at 41 CFR Chapter 60 of the Secretary of Labor dated May 21, 1968, and the provisions of the equal opportunity clause enumerated in contracts between the United States of America and Non-Operators.
- (3) Whoever knowingly and willfully makes any false, fictitious or fraudulent representation may be liable to criminal prosecution under 18 U.S.C. \S 1001.

III. OCCUPATIONAL SAFETY AND HEALTH ACT

Operator will observe and comply with all safety and health standards promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Standards Act published in 29 CFR Part 1518 and adopted by the Secretary of Labor as occupational safety and health standards under the Williams-Steiger Occupational Safety and Health Act of 1970. Such safety and health standards shall apply to all subcontractors and their employees as well as to the prime contractor and its employees.

IV. VETERAN'S PREFERENCE

Operator agrees to comply with the following insofar as contracts it lets for an amount of \$10,000 or more which will generate 400 or more man-days of employment (each manday consisting of any day in which an employee performs more than one hour of work) and further agrees to include the following provision in contracts with Contractors and Subcontractors:

"CONTRACTOR AND SUBCONTRACTOR LISTING REQUIREMENT

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(1) As provided by 41 CFR 50-250, the contractor agrees that all employment openings of the contractor which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those now generated by the contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed but excluding those of independently operated corporate affiliates, shall, to the maximum extent feasible, be offered for listing at an appropriate local office of the State employment service system wherein the opening occurs and to provide such periodic reports to such local office regarding employment openings and hires as may be required: Provided, that this provision shall not apply to

openings which the contractor fills from within the contractor's organization or are filled pursuant to a customary and traditional employer-union hiring arrangement and that listing of employment openings shall involve only the normal obligations which attach to the placing of job orders.

(2) The contractor agrees to place the above provisions in any subcontract directly under this contract."

V. CERTIFICATION OF COMPLIANCE WITH ENVIRONMENTAL LAWS

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Operator agrees to comply with the Clean Air Act (42 U.S.C. § 1857) and the Federal Water Pollution Control Act (33 U.S.C. § 1251) when conducting operations involving nonexempt contracts. In all nonexempt contracts with subcontractors, Operator shall require:

- (1) No facility to be utilized by Subcontractor in the performance of this contract with Operator is listed on the Environmental Protection Agency (EPA) List of Violating Facilities. See Executive Order No. 11738 of September 12, 1973, and 40 CFR § 15.20.
- (2) Prompt written notification shall be given by Subcontractor to Operator of any communication indicating that any such facility is under consideration to be included on the EPA List of Violating Facilities.
- (3) Subcontractor shall comply with all requirements of Section 114 of the Clean Air Act (42 U.S.C. § 1857) and Section 308 of the Federal Water Pollution Control Act (33 U.S.C. § 1251), relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in these Sections, and all regulations and guidelines issued thereunder.
- (4) The foregoing criteria and requirements shall be included in all of Subcontractor's nonexempt subcontracts, and Subcontractor shall take such action as the Government may direct as a means of enforcing such provisions. See 40 CFR § 15.4 & 5.
- (5) Operator agrees to notify non-operators of any violations in the afore provisions.
- VI. Operator agrees to comply with Executive Orders 11458 and 11625 regarding Minority Business Enterprises and all orders, rules, and regulations issued thereunder or amendments thereto.
- VII. Operator agrees to comply with Rehabilitation Act of 1973 and all orders, rules and regulations issued thereunder and amendments thereto.

EXHIBIT "G"

GAS STORAGE AND BALANCING PROVISION

During the period or periods when any party hereto has no market for, or its purchaser is unable to take, or if any party fails to take its share of gas, the other parties shall be entitled to produce each month one hundred per cent (100%) of the allowable gas production assigned to the Unit Area by the appropriate governmental entity having jurisdiction, and each of such parties shall take its pro-rata share. All parties hereto shall share in and own the condensate recovered at the surface in accordance with their respective interests, but each party taking such gas shall own all of the gas delivered to its purchaser. Each party unable to market its share of the gas produced shall be credited with gas in storage equal to its share of the gas produced, less its share of gas used in lease operations, vented or lost. Operator shall maintain a current account of the gas balance between the parties and shall furnish all parties hereto monthly statements showing the total quantity of condensate recovered.

After notice to Operator, any party may begin taking or delivering its share of the gas produced. In addition to its share, each party, until it has recovered its gas in storage and balanced its gas account, shall be entitled to take or deliver a volume of gas equal to twenty-five per cent of each over-produced party's share of gas produced. If more than one party is entitled to the additional gas produced, they shall divide such additional gas in accordance with Unit participation. In the event production of gas permanently ceases prior to the time that the accounts of the parties have been balanced, a complete balancing shall be accomplished by a money settlement. Such settlement shall be based upon the weighted average price received by each over-produced party for its share of gas produced and sold.

At all times while gas is produced from the Unit Area, each party shall make appropriate settlement of all royalties, overriding royalty interest, and other payments out of or in lieu of production for which it is responsible, as if each party were taking or delivering to a purchaser its share, and its share only, or such gas production. Each party hereto agrees to hold each party harmless from any and all claims for royalty payments asserted by royalty owners to whom each party is accountable.

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF GRAND RESOURCES FOR A WATERFLOOD PROJECT SAN JUAN COUNTY, NEW MEXICO.

CASE NO. 9637

AFFIDAVIT

STATE OF NEW MEXICO))ss. COUNTY OF SANTA FE)

WILLIAM F. CARR, attorney in fact and authorized representative of Grand Resources Inc., the Applicant herein, being first duly sworn, upon oath, states that the notice provisions of Rule 1207 of the New Mexico Oil Conservation Division have been complied with, that Applicant has caused to be conducted a good faith diligent effort to find the correct addresses of all interested persons entitled to receive notice as shown by Exhibit "A" attached hereto, and that pursuant to Rule 1207, notice has been given at the correct addresses provided by such rule.

Dielian F. Earl CARR

SUBSCRIBED AND SWORN to before me this Add day of April, 1989.

My Commission Expires: 19.1991

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EXHIBIT A

Dugan Production Corporation Post Office Box 5820 Farmington, New Mexico 87499

Attn: Tom Dugan

Air Mex Corporation First Western National Bank Building Post Office Box 249 Moab, Utah 84532

Attn: Skip Nightengale

Bureau of Land Management 435 Montano Rd., NE Albuquerque, New Mexico 87107

CAMPBELL & BLACK, P.A.

LAWYERS

JACK M. CAMPBELL BRUCE D. BLACK MICHAEL B. CAMPBELL WILLIAM F. CARR ØRADFOAD C. BERGE MARK F. SHERIDAN J. SCOTT HALL JOHN H. BEMIS MARTE D. LIGH "STONE PATRICIA A. MATTHEWS JEFFERSON PLACE SUITE I - 110 NORTH GUADALUPE POST OFFICE BOX 2208 SANTA FE, NEW MEXICO 87504-2208 TELEPHONE: (505) 988-4421 TELECOPIER: (505) 983-6043

March 8, 1989

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Dugan Production Corporation Post Office Box 5820 Farmington, New Mexico 87499

Attn: Tom Dugan

Re: Application of Grand Resources Inc. for Statutory Unitization, San Juan County, New Mexico

Gentlemen:

This letter is to advise you that Grand Resources Inc. has filed an application with the New Mexico Oil Conservation Division seeking an order statutorily unitizing for the purpose of establishing a secondary recovery project, all mineral interests in the designated and undesignated Mesa-Gallup Pool underlying 4800.00 acres, more or less, of Federal Indian lands in Sections 10, 13, 14, 15, 23 and 24 and the N/2 of Section 25, Township 32 North, Range 18 West and Section 30, Township 32 North, Range 17 West. Said unit is to be designated the Mesa-Gallup Unit Area. Among the matters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the determination of the horizontal and vertical limits of the unit area; the determination of the fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations; including but not limited to, unit voting procedures, selection, removal or

Dugan Production Corporation March 8, 1989 Page Two

substitution of unit operator, and time of commencement and termination of unit operations. Applicant also requests that any such order issued in this case include a provision for carrying any nonconsenting working interest owner maintain the unit area upon such terms and conditions to be determined by the Division as just and reasonable.

This application has been set for hearing before an Examiner of the Oil Conservation Division on March 29, 1989. You do not need to be present at the hearing, but failure to appear at the hearing or otherwise become a party of record in this case will preclude you from challenging this matter at a later date.

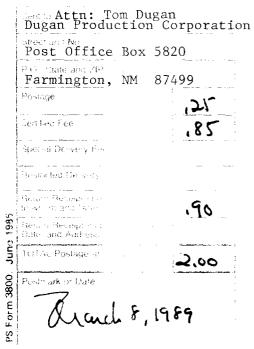
Very truly you,

WILLIAM F. CARR ATTORNEY FOR GRAND RESOURCES, INC. WFC:mlh cc: Marvin Rabinowitz

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CAMPBELL & BLACK, P.A.

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JACK M. CAMPBELL BRUCE D. BLACK MICHAEL B. CAMPBELL WILLIAM F. CARR BRADFORD C. BERGE MARK F. SHERIDAN J. SCOTT HALL JOHN H. BEMIS MARTE D. LIGHTSTONE PATRICA A. MATTHEWS JEFFERSON PLACE SUITE I - 110 NORTH GUADALUPE POST OFFICE BOX 2208 SANTA FE, NEW MEXICO 87504-2208 TELEPHONE: (505) 988-4421 TELECOPIER: (505) 983-6043

March 8. 1989

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Air-Mex Corporation First Western National Bank Building Post Office Box 249 Moab, Utah 84532

Attn: Skip Nightengale

Re: Application of Grand Resources Inc. for Statutory Unitization, San Juan County, New Mexico

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Very truly youns,

WILLIAM F. CARR ATTORNEY FOR GRAND RESOURCES, INC. WFC:mlh cc: Marvin Rabinowitz

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PS Form 3800, June 1985

CAMPBELL & BLACK, P.A.

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JACK M. CAMPBELL BRUCE D. BLACK MICHAEL B. CAMPBELL WILLIAM F. CARR BRADFORD C. BERGE MARK F. SHERIDAN J. SCOTT HALL JOHN H. BEMIS MARTE D. LIGHTSTONE PATRICIA A. MATTHEWS JEFFERSON PLACE SUITE I - 110 NORTH GUADALUPE POST OFFICE BOX 2208 SANTA FE, NEW MEXICO 87504-2208 TELEPHONE: (505) 988-4421 TELECOPIER: (505) 983-6043

March 8, 1989

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Dugan Production Corporation Post Office Box 5820 Farmington, New Mexico 87499

Attn: Tom Dugan

Re: Application of Grand Resources Inc. for Approval of a Waterflood Project, San Juan County, New Mexico

Gentlemen:

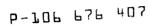
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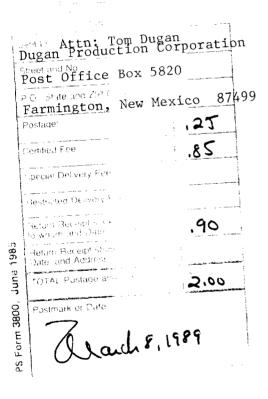
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Very truly yours,

WILLIAM F. CARR ATTORNEY FOR GRAND RESOURCES, INC. WFC:mlh cc: Marvin Rabinowitz

-865 DOMESTIC RETURN RECEIPT	28 Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865
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CAMPBELL & BLACK, P.A.

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March 8, 1989

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Air-Mex Corporation First Western National Bank Building Post Office Box 249 Moab, Utah 84532

Attn: Skip Nightengale

Re: Application of Grand Resources Inc. for Approval of a Waterflood Project, San Juan County, New Mexico

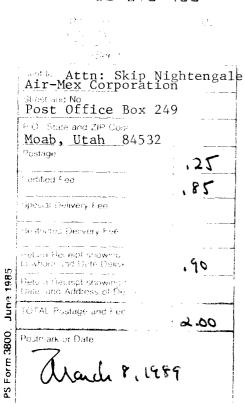
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WILLIAM F. CARR ATTORNEY FOR GRAND RESOURCES, INC. WFC:mlh cc: Marvin Rabinowitz



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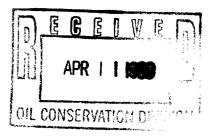
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CAMPBELL & BLACK, P.A.

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April 11, 1989



HAND-DELIVERED

William J. LeMay, Director Oil Conservation Division New Mexico Department of Energy, Minerals and Natural Resources State Land Office Building Santa Fe, New Mexico 87503

> Re: Case No. 9637: In the Matter of the Application of Grand Resources Inc. for a Waterflood Project, San Juan County, New Mexico

Dear Mr. LeMay:

Enclosed please find an original and two copies of Oil Conservation Division Form C-108 which is the written application of Grand Resources Inc. in the above-referenced case which has been set for hearing before a Division examiner on April 26, 1989.

Your attention to this matter is appreciated.

truly yours,

WILLIAM F'. CARR

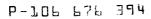
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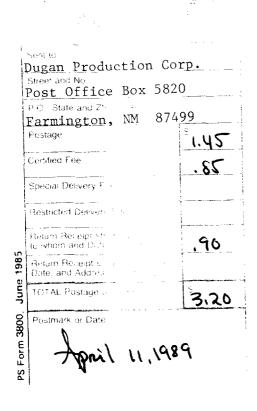
cc w/enclosures: Certified Mail - Return Receipt Requested

Bureau of Land Management 435 Montano Rd., NE Albuquerque, New Mexico 87107

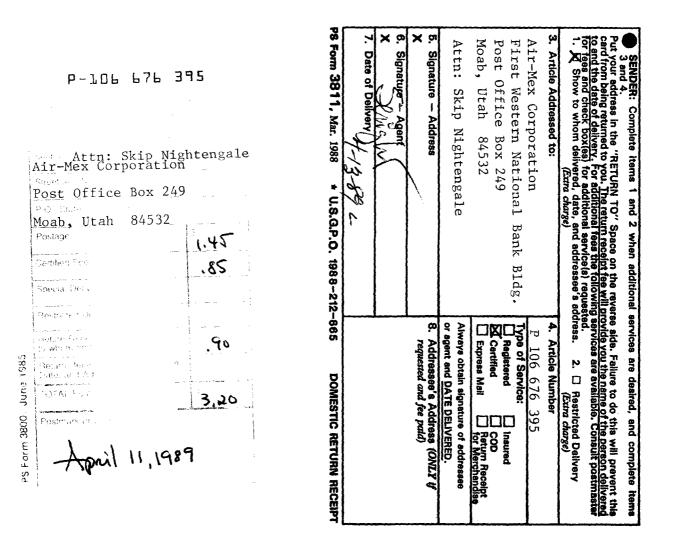
Dugan Production Corporation Post Office Box 5820 Farmington, New Mexico 87499

Air Mex Corporation First Western National Bank Building Post Office Box 249 Moab, Utah 84532 Attn: Skip Nightengale





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