EAGLE MESA LEASE OWNERSHIP INDEX
EXHIBIT "B"

Tract Participation

Attached to and made a part of that certain Secondary Unit Agreement
dated July 12, 1991

TRACT No.	LEGAL DESCRIPTION	NO. OF ACRES	LEASE SERIAL NO. & EXPIR. DATE	LESSEE OF RECORD		NAME OF OWNER & PERCENT OF ORRI		ENT. FORM. WORKING INT.		NET PAY % PERCENT
1	T19N-R4W, NMPM Sec. 11: SE/4 SE/4 Sec. 12: SW/4 SW/4	80/a	NM-87227 HBU	MOG	100%	Dave Baker Bill Chittum	1.5% 2.5%	MOG	100%	28%
2	T19N-R4W, NMPM Sec. 14: N/2 NE/4, SE/4 NE/4	120/a	NOO-C-2717 HBP	MOG	100%	Dave Baker Bill Chittum	2.5% 2.5%	MOG	100%	43%
3	T19N R4W, NMPM Sec. 13: W/2 NW/4	80/a	NOO-C-2713 HBP	MOG	100%	Dave Baker Bill Chittum	2.5% 2.5%	MOG	100%	29%
	TOTALS:	280/a								100%

Based upon the above tract participation.

MOG's WI in the Secondary Unit Area is as follows:

MOG	100%
Total	100%

EXHIBIT "C"

PLAN OF OPERATION

ATTACHED TO AND MADE A PART OF THAT CERTAIN SECONDARY UNIT AGREEMENT DATED JULY 12, 1991

Merrion Oil & Gas Corporation (Merrion), as Operator of the Eagle Mesa Secondary Unit plans to re-enter the Navajo 13-C1 well located in the NW/4 NW/4 of Section 13, Township 19 North, Range 4 West, and plugback, sidetrack and drill a horizontal well across the Eagle Mesa Entrada reservoir. If the Navajo 13-C1 well is not usable, then Merrion will drill a new well. Prior to initiating said operation, Merrion will submit the proper A.P.D. for BLM approval.

Merrion is planning to initiate an injection program designed to enhance production. Merrion will submit a detailed Plan of Operation for BLM approval prior to commencing any type of secondary or tertiary flood.

Also, in addition to the above, Merrion shall submit to the BLM an updated Plan of Operation each year on or before January 15th.

EAGLE MESA SECONDARY UNIT AGREEMENT
GEOLOGICAL JUSTIFICATION
BY L.D. ENDSLEY
AUGUST 30, 1990

I. INTRODUCTION

Merrion Oil and Gas Corporation would like to form a Secondary Unit Agreement with two separate participating areas. The purpose of this report is to provide justification for this proposal by describing the techniques used to generate the most accurate structure contour map and net pay map possible from available data. This report will further demonstrate that there is sufficient geological and engineering data available to support the idea that there are two separate producible oil accumulations within the Eagle Mesa field outline.

II. GEOLOGY

The Eagle Mesa field produces from the Jurassic Entrada sandstone, an eolian dune deposit. The Entrada dunes found in this part of the San Juan Basin are the longitudinal type with the long axis, or dune crests, parallel to the paleo-wind transport direction. The dunes are elongated in a south-southwesterly direction.

The dune is ± 220' thick at its thickest and only ± 140' thick in the southern lobe.

One of the key ingredients to successfully exploring for Entrada dunes is to find sufficient preserved topography over and above regional sand thickness to trap oil. Eagle Mesa field has roughly 90' of structural closure that satisfies this criteria.

III. RESERVOIR ATTRIBUTES

The Entrada sandstone at Eagle Mesa field, in general, has an average porosity of 15 % an average permeability of 400 md and produces a gas free, low API gravity [illegible] oil.

This is a strong bottom water drive reservoir with a 30' oil column and a [illegible]' water column. The oil is roughly 13 times more viscous than formation water at reservoir conditions, and as was mentioned before, has no associated gas. These factors combine to form severe water coning around the wellbore as the wells are produced. Because of this, water-free production is not possible and disposal facilities are a must.

There exists in the Entrada sandstone a strong hydrodynamic flow which tends to [illegible] the oil water contact. The absence of associated gas amplifies the magnitude of this

ILLEGIBLE

Production tests conducted by Filon Exploration in the 1970's suggests that a moveable oil column less than 10' thick in any Entrada reservoir yielded such low original oil to total fluid produced as to be uneconomic.

A case in point is the Filon Exploration Jordan #12-1 well in sec. 12- T19N-R4W. Log calculations indicate that an oil column slightly greater than 10' existed at this location. The well was completed as a dry hole and no tests were run. It was felt that the well was sufficiently close to their established cut-off for productivity as to not warrant a test.

IV. MAPPING TECHNIQUES

Exploring for Entrada dunes is analogous to exploring for pinnacle reefs in that they are discreet, isolated features that cannot be found by standard subsurface geologic techniques. Consequently, the only feasible and successful exploration tool is seismic data acquisition. The seismic data is only beneficial for isolating sand dunes when the proper acquisition geometries and processing parameters are used. Once the dunes are identified the next questions to answer are did the dunes get charged and if so, what effect has hydrodynamics had on oil distribution in the reservoir?

Current net pay mapping techniques utilize the most detailed "depth" structure map that can be generated from seismic time values, the subsurface datum of the base of moveable oil from well control, if available, and an estimation of the magnitude and direction of the hydrodynamic gradient either from well control or regional ground water potentiometric mapping.

To arrive at the net pay map at Eagle Mesa field, first a detailed structure map had to be generated. Seismic time values on the Entrada were picked from the 10 seismic lines that cover the feature. These times were then converted to depth and the depth values contoured. Time:depth conversions are based upon well control data in the field and seismic logs in the area. The resultant structure map is as accurate as is possible given the data available.

The next step is to calculate the base of the moveable oil from wireline log data. Water saturation calculations for Entrada reservoirs are done using Archies formula with different values for a, m, and n that have been derived from whole core analysis. The moveable oil has generally been found to be that portion of the reservoir that calculated 40% oil saturation or greater. There is always an 8 - 10' transition or immovable oil section that calculates between 20% and 40% oil saturation. This section is a water washed zone and is a non-recoverable portion of the reservoir. Consequently, that portion of the reservoir that falls between the oil/water contact and the 10' net pay contour cannot be produced.

Once the base of the moveable oil is established and converted to subsea datum it is then possible to construct an equipotential contour map that defines the direction and magnitude of the hydrodynamic gradient in the reservoir. In the case of Eagle Mesa field data suggests that a hydrodynamic gradient of 50' / mile to the south-southwest exists.

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EXHIBIT 6

Case #10971
NMOCD Examiner Hearing
May 12, 1994
Merrion Oil & Gas

EAGLE MESA - NAV 13C-1 SHORT RADIUS HORIZONTAL WELL

Economic Data		Well Type (Oil,Gas):	Oil
Working Interest	100.00%		
Net Revenue Intere	79.00%		
Production Tax - (	8.28%		
Oil	8.28%		
Operating Cost	15,000	$/mo	
Gas btu Value		btu/scf	
Prod Price Escalato	4.0%	%/yr	
Op Cost Escalator	4.0%	per yr	
P&A cost	20	M$	
Constant Prices:	NO	(yes/no)	
Beg Oil Price	15.00	$/bbl	
Beg Gas Price		$/mmbtu	

Economic Indicators		
Payout =	0.7	Years
DcfROR =	105.1%	
IROI =	2.34	$/$
EROI =	3.34	$/$
Interest rate =	15%	
Investment =	380.0	M$
Project Risk Factor -		
Average Oil Price -	$16.25	/bbl
Average Gas Price -		/mmbtu

Oil Production		
1-1-94 Reserves	196600	stb
1-1-94 Qo	208	bopd
Qel	40	bopd
Decline Fraction	0.300	per yr
Life	5.00	years

Gas Production		
1-1-94 Reserves		mcf
1-1-94 Qg		mcfd
Qel		mcfd
Decline Fraction	0.120	per yr
Life	#DIV/0!	years

Present Worth Profile	
% Disc	Value M$
	887.6
5%	771.1
10%	672.5
15%	588.3
20%	515.6
25%	452.4
30%	397.0
35%	348.0
40%	304.6
45%	265.8
50%	231.0

		OIL PRODUCTION					GAS PRODUCTION					PRICE	
	Year	Begin Qo bopd	End Qo bopd	Avg Prod bopd	Yearly Prod stb	Cum Prod stb	Begin Qg mcfd	End Qg mcfd	Avg Prod mcfd	Yearly Prod mcf	Cum Prod mcf	Oil Price $/Bbl	Gas Price $/mmbtu
	1/1/94												
1	1994	208.0	154.1	179.7	65,590	65,590						15.00	
2	1995	154.1	114.2	133.1	48,590	114,181						15.60	
3	1996	114.2	84.6	98.6	35,997	150,177						16.22	
4	1997	84.6	62.6	73.1	26,667	176,844						16.87	
E 5	1998	62.6	46.4	54.1	19,755	196,600						17.55	
6	1999	46.4	34.4	40.1	14,635	211,235						18.25	
7	2000	34.4	25.5	29.7	10,842	222,077						18.98	

		INVESTMENT		EXPENSE	NET CASH FLOW					Discounted	
	Year	Gross Invest M$	Net Invest M$	Operating M$	Annual Revenue Oil M$	Annual Revenue Gas M$	Annual Profit M$	Cum Profit M$	15% Discount Factor	Annual Profit M$	Cum Profit M$
	1/1/94	380.0	380.0				(380.0)	(380.0)	1.00	(380.0)	(380.0)
1	1994			180.0	712.9		532.9	152.9	0.87	463.4	83.4
2	1995			187.2	549.2		362.0	514.9	0.76	273.8	357.1
3	1996			194.7	423.2		228.5	743.4	0.66	150.2	507.4
4	1997			202.5	326.0		123.6	867.0	0.57	70.6	578.0
E 5	1998	20	20.0	210.6	251.2		20.6	887.6	0.50	10.2	588.3
6	1999			219.0	193.5		(25.5)	862.1	0.43	(11.0)	577.3
7	2000			227.8	149.1		(78.7)	783.5	0.38	(29.6)	547.7

EAGLE MESA VERTICAL WELL

Economic Data		
Working Interest	100.00%	
Net Revenue Interest	79.00%	
Production Tax- Ga	8.28%	
Oil	8.28%	
Operating Cost	15,000	$/mo
Gas btu Value		btu/scf
Prod Price Escalator	4.0%	%/yr
Op Cost Escalator	4.0%	per yr
P&A cost	20	M$
Constant Prices:	NO	(yes/no)
Beg Oil Price	15.00	$/bbl
Beg Gas Price		$/mmbtu

Well Type (Oil,Gas): Oil

Economic Indicators		
Payout =	2.5	Years
DcfROR =	-4.5%	
IROI =	0.03	$/$
EROI =	1.03	$/$
Interest rate =	15%	
Investment =	400.0	M$
Project Risk Factor -		
Average Oil Price-	$15.92	/bbl
Average Gas Price-		/mmbtu

Present Worth Profile	
% Disc	Value M$
	(24.0)
5%	(47.7)
10%	(68.9)
15%	(88.0)
20%	(105.2)
25%	(120.7)
30%	(134.9)
35%	(147.8)
40%	(159.6)
45%	(170.4)
50%	(180.3)

Oil Production		
1-1-94 Reserves	102026	stb
1-1-94 Qo	120	bopd
Qel	40	bopd
Decline Fraction	0.300	per yr
Life	4.00	years

Gas Production		
1-1-94 Reserves		mcf
1-1-94 Qg		mcfd
Qel		mcfd
Decline Fraction	0.120	per yr
Life	#DIV/0!	years

		OIL PRODUCTION					GAS PRODUCTION					PRICE	
	Year	Begin Qo bopd	End Qo bopd	Avg Prod bopd	Yearly Prod stb	Cum Prod stb	Begin Qg mcfd	End Qg mcfd	Avg Prod mcfd	Yearly Prod mcf	Cum Prod mcf	Oil Price $/Bbl	Gas Price $/mmbtu
	1/1/94												
1	1994	120.0	88.9	103.7	37,841	37,841						15.00	
2	1995	88.9	65.9	76.8	28,033	65,874						15.60	
3	1996	65.9	48.8	56.9	20,767	86,641						16.22	
E 4	1997	48.8	36.1	42.2	15,385	102,026						16.87	

		INVESTMENT		EXPENSE	NET CASH FLOW						Discounted	
	Year	Gross Invest M$	Net Invest M$	Operating M$	Annual Revenue Oil M$	Annual Revenue Gas M$	Annual Profit M$	Cum Profit M$	15% Discount Factor	Annual Profit M$	Cum Profit M$
	1/1/94	400.0	400.0				(400.0)	(400.0)	1.00	(400.0)	(400.0)
1	1994			180.0	411.3		231.3	(168.7)	0.87	201.1	(198.9)
2	1995			187.2	316.9		129.7	(39.0)	0.76	98.1	(100.8)
3	1996			194.7	244.1		49.4	10.4	0.66	32.5	(68.3)
E 4	1997	20	20.0	202.5	188.1		(34.4)	(24.0)	0.57	(19.7)	(88.0)