



**marbob**  
energy corporation

~~CONFIDENTIAL~~  
JUN 15 2000

7/5/00

June 13, 2000

New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Attn: David Catanach  
Engineer

RE: M. Dodd "A" Federal No. 48 - API #30-015-30790  
Down Hole Commingling Application

Dear Mr. Catanach:

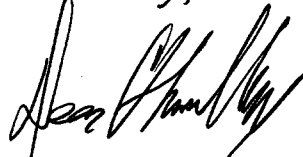
Marbob Energy Corporation submitted for NMOCD approval an Application for Down Hole Commingling on January 6, 2000. We are seeking approval to commingle production from the Grayburg San Andres with Yeso production in the above referenced well.

Since submitting, you have requested further information on our method of determining the submitted allocation percentages. Crude allocation was determined from the beginning Yeso production curve from the M. Dodd A Federal No. 48 located 900' FSL and 330' FEL, Section 22-17S-29E versus established Grayburg-San Andres production curve from the M. Dodd A Lease in Sections 14, 15, 22-17S-29E. As you can see, the ultimate recovery from this

well in the Yeso should be about 140,500 barrels of oil and 178,000 mcf of gas. The average recovery per well in the Grayburg San Andres formations was 104,924 barrels of oil and 261,690 mcf based on the history and present decline of the 38 producing wells on the lease. The current cumulative production from the A-27 as of January, 2000 is 33,010 barrels of oil and 160,766 mcf of gas. This well was completed in zones from 2600 feet to 3350 feet subsurface. We believe that additional pay exists below 3350 in the lower San Andres which will allow us to recover as much oil from the Grayburg San Andres interval as the A-27 will ultimately recover. We do not believe that these lower zones will contain the amount of gas produced from the upper San Andres zones. As such, we have estimated oil recovery of 39,500 barrels from the San Andres and 87,600 mcf of gas. Because of the close proximity of this well to the A-27, we do not believe significant reserves in those zones can be obtained. Certainly, there is considerable guess work in these calculations, but we believe they reflect the best information currently available in conjunction with our knowledge of this reservoir. These estimated ultimates then became our basis for the allocation percentages.

If you need any additional information, please contact me.

Sincerely,

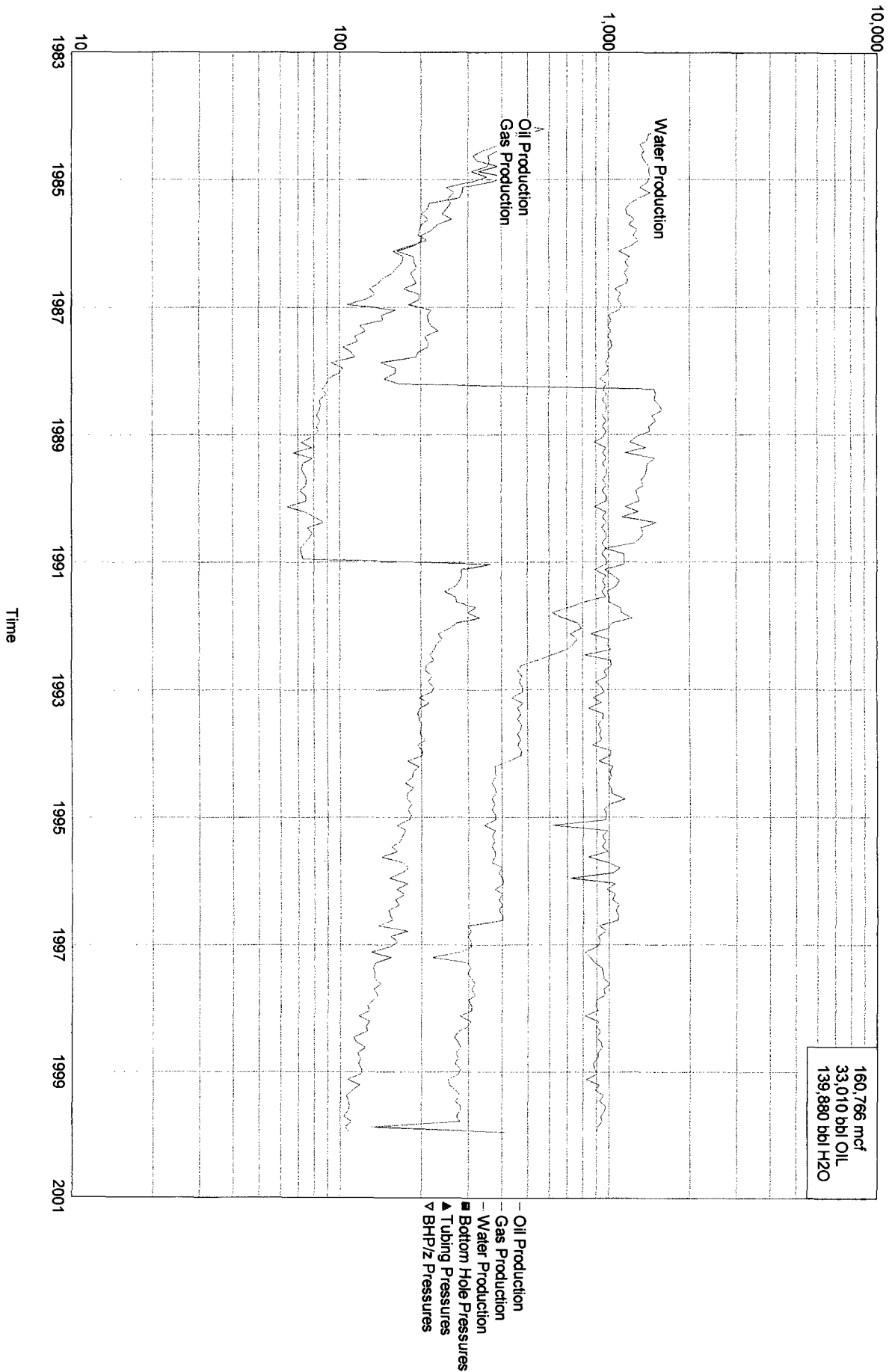
A handwritten signature in black ink, appearing to read "Dean Chumbley", written over a horizontal line.

Dean Chumbley  
Land Department

DC/mm

Lease Name: M DODD A  
 County, State: EDDY, NM  
 Operator: MARBOB ENERGY CORPORATION  
 Field: GRAYBURG  
 Reservoir: JCKS-SVRV-QN-GRBG-SA  
 Location: S17 E29 0

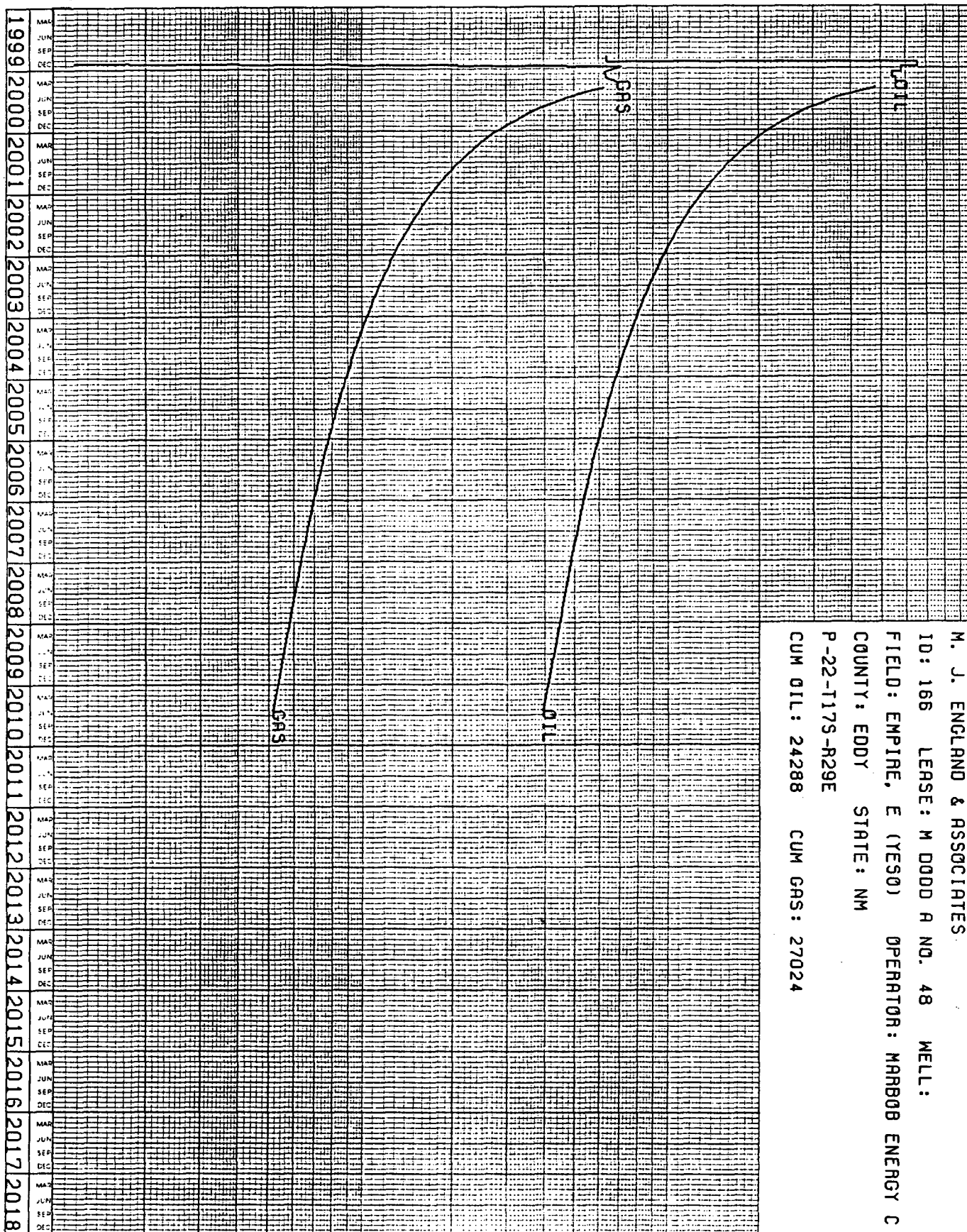
GRAYBURG JCKS-SVRV-QN-GRBG-SA



GAS (MCF) \_\_\_\_\_  
OIL (BBL) \_\_\_\_\_

1000  
100

10000  
1000



MARBOB ENERGY CORPORATION - EVALUATION OF FUTURE NET RESERVES AND SALES  
INCOME ATTRIBUTABLE TO CERTAIN LEASEHOLD INTERESTS AS OF APRIL 1, 2000  
- ESCALATED PRICES AND COSTS -

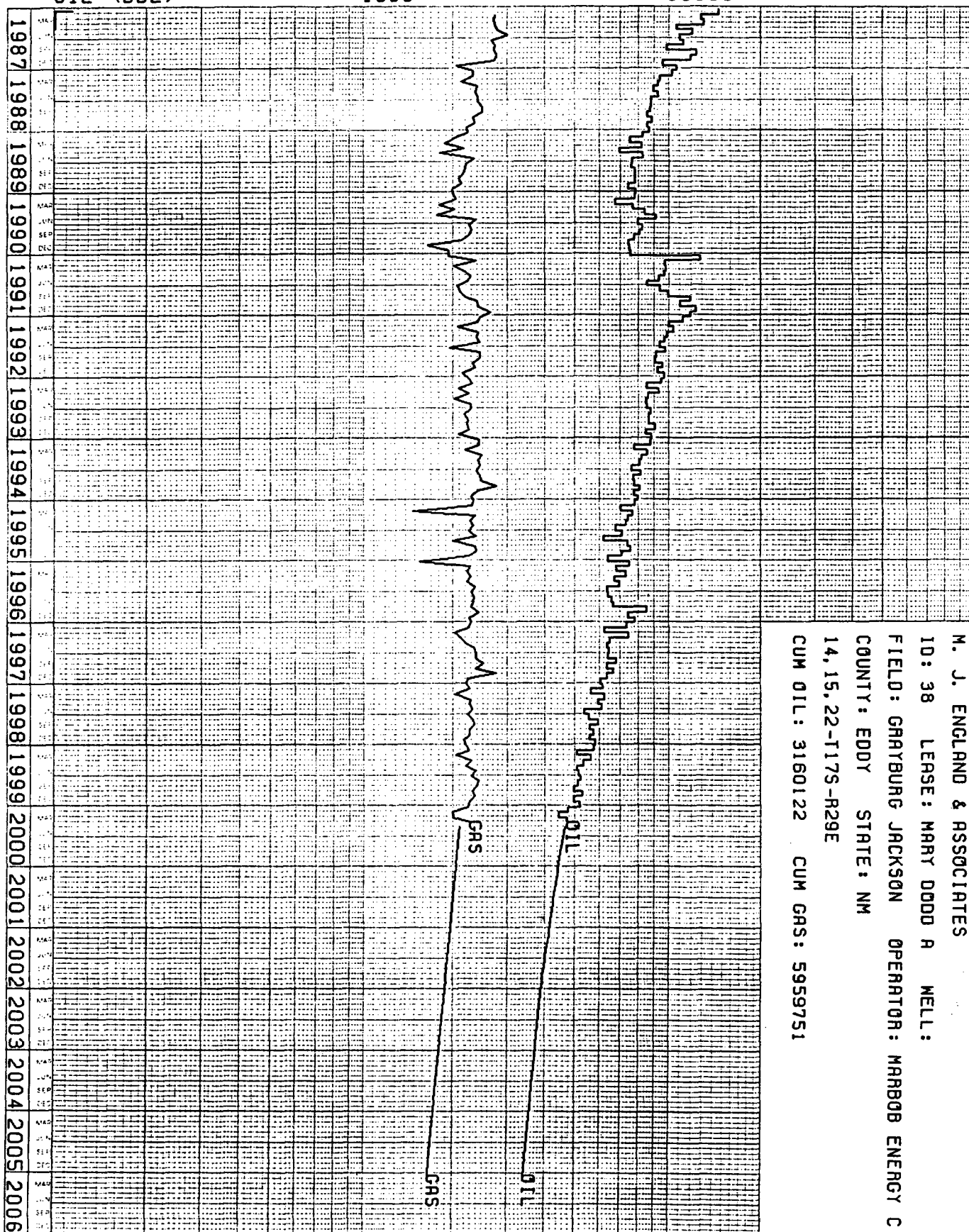
WELL	YEAR	-----GROSS PRODUCTION-----	-----NET PRODUCTION-----	-----PRICE-----	-----SALES INCOME-----	-----
CNT		BBL OIL	BBL OIL	OIL	GAS \$	TOTAL \$
2000	1	28,729	5,548	18.98	15,748	121,052
2001	1	19,970	3,857	19.22	11,083	85,195
2002	1	13,707	2,647	19.80	7,839	60,238
2003	1	10,730	2,072	20.40	6,322	48,595
2004	1	8,940	1,622	21.02	5,426	41,137
2005	1	7,728	1,492	22.623	4,831	37,137
2006	1	6,845	1,322	22.30	4,408	33,983
2007	1	6,169	1,191	22.97	4,092	31,455
2008	1	5,633	1,088	23.66	3,848	29,583
2009	1	5,181	1,001	24.37	3,646	28,027
2010	1	2,433	470	3.110	1,751	13,458
2011	0	0	0	0.000	0	0
2012	0	0	0	0.000	0	0
2013	0	0	0	0.000	0	0
2014	0	0	0	0.000	0	0
2015	0	0	0	0.000	0	0
TOT		116,064	22,414	20.58	68,993	530,350
YEAR	TAXES	-----EXPENSES-----	-----NET-----	-----OTHER-----	ANNUAL	NET CASH FLOW
		MKTG	OPER	TOTAL	INCOME	10.00 PCT DISCOUNTED
2000	8,256	0	14,175	22,431	98,621	95,360
2001	5,810	0	19,158	24,969	60,227	53,525
2002	4,110	0	23,843	27,953	36,416	29,377
2003	3,314	0	20,325	23,639	24,955	18,292
2004	2,844	0	20,935	23,779	17,928	11,944
2005	2,533	0	21,563	24,096	13,041	7,898
2006	2,311	0	22,210	24,521	9,362	5,156
2007	2,145	0	23,876	26,021	6,434	3,223
2008	2,018	0	25,563	27,580	4,003	1,825
2009	1,911	0	24,269	26,181	1,846	769
2010	0	0	12,406	13,324	134	52
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
TOT	36,170	0	221,214	257,384	272,965	227,420
PCNT DSCNT		\$ VALUE				
0.00		272,965				
8.00		234,933				
9.00		231,095				
12.00		220,518				
14.00		214,158				
16.00		208,279				
18.00		202,830				
20.00		197,764				
22.00		193,045				
24.00		188,636				
26.00		184,508				

P-22-117S-R29E

PREPARED BY: MJE & A  
EFFECTIVE DATE: APRIL 1, 2000  
LEASE ID: 166  
LEASE NAME: M DODD A NO. 48  
WELL NAME:  
STATE: NEW MEXICO  
COUNTY: EDDY  
FIELD: EMPIRE, E (YESO)  
OPERATOR: MARBOB ENERGY CORP  
RES CAT: PROVED DEVELOPED PRODUCING  
ECON LIMIT: 1006  
166 RESERVOIR: YESO - OIL - PUMPING

GAS (MCF) ————— 10000  
OIL (BBL) ————— 1000

100000  
10000



M. J. ENGLAND & ASSOCIATES

ID: 38 LEASE: MARY DODD A WELL:

FIELD: GRAYBURG JACKSON OPERATOR: MARBOB ENERGY C

COUNTY: EDDY STATE: NM

14, 15, 22-T17S-R29E

CUM OIL: 3160122 CUM GAS: 5959751

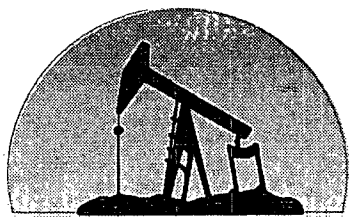
MARBOR ENERGY CORPORATION - EVALUATION OF FUTURE NET RESERVES AND SALES  
INCOME ATTRIBUTABLE TO CERTAIN LEASEHOLD INTERESTS AS OF APRIL 1, 2000  
- ESCALATED PRICES AND COSTS -

WELL	YEAR	GROSS PRODUCTION			NET PRODUCTION			PRICE			SALES INCOME		
		BBL OIL	MCF GAS	BBL OIL	MCF GAS	OIL	GAS	OIL \$	GAS \$	TOTAL \$			
2000	38	40,489	184,363	7,751	32,817	147,117	77,337	224,854	224,854	224,854			
2001	38	50,733	237,200	9,712	42,222	186,830	101,373	288,203	288,203	288,203			
2002	38	47,461	227,712	9,086	40,533	180,027	100,237	280,265	280,265	280,265			
2003	38	45,116	218,603	8,637	38,911	176,275	98,115	272,390	272,390	272,390			
2004	38	43,311	209,859	8,292	37,355	174,300	98,005	272,305	272,305	272,305			
2005	38	41,579	201,445	7,960	35,861	172,348	96,907	269,255	269,255	269,255			
2006	38	39,916	193,406	7,641	34,426	170,418	95,822	266,239	266,239	266,239			
2007	38	38,319	185,670	7,336	33,049	168,509	94,748	263,258	263,258	263,258			
2008	38	36,786	178,243	7,042	31,727	166,522	93,487	260,309	260,309	260,309			
2009	38	35,315	171,113	6,761	30,458	164,756	92,538	257,294	257,294	257,294			
2010	38	33,902	164,269	6,490	29,240	162,910	91,500	254,511	254,511	254,511			
2011	38	32,546	157,698	6,231	28,070	161,086	90,574	251,660	251,660	251,660			
2012	38	31,244	151,390	5,981	26,947	159,282	89,560	248,842	248,842	248,842			
2013	38	29,995	145,334	5,742	25,870	156,825	88,557	245,782	245,782	245,782			
2014	38	28,795	139,521	5,512	24,835	151,021	87,565	238,586	238,586	238,586			
2016	38	25,1502	121,616	5,147	21,6914	131,062	83,562	215,725	215,725	215,725			
TOT		827,010	3,984,461	158,323	709,234	3,154	3,866	3,817,389	2,236,686	6,054,075			
YEAR	TAXES	EXPENSES			NET INCOME			OTHER COSTS			NET CASH FLOW		
		MKTG	OPER	TOTAL	OPER	INCOME	COSTS	ANNUAL	CUMULATIVE	10.00 PCT DISCOUNTED			
2000	18,368	0	5,315	23,683	201,171	0	0	201,171	193,433	193,433			
2001	23,543	0	7,183	30,726	257,477	0	0	257,477	227,794	421,227			
2002	22,895	0	7,399	30,293	249,971	0	0	249,971	201,044	622,271			
2003	22,497	0	7,621	30,117	242,211	0	0	242,211	179,310	801,581			
2004	22,245	0	7,849	30,094	239,175	0	0	239,175	160,974	962,555			
2005	21,995	0	8,085	30,080	236,163	0	0	236,163	149,506	1,107,061			
2006	21,749	0	8,327	30,076	233,175	0	0	233,175	129,715	1,236,776			
2007	21,506	0	8,517	30,083	230,210	0	0	230,210	116,431	1,353,206			
2008	21,265	0	8,834	30,126	227,268	0	0	227,268	104,500	1,457,707			
2009	21,026	0	9,099	30,163	224,347	0	0	224,347	93,786	1,551,493			
2010	20,791	0	9,372	30,212	221,449	0	0	221,449	82,164	1,633,657			
2011	20,558	0	9,654	30,212	218,571	0	0	218,571	73,525	1,711,182			
2012	20,328	0	9,943	30,271	215,139	0	0	215,139	67,766	1,778,948			
2013	20,045	0	10,197	30,242	208,868	0	0	208,868	60,644	1,839,592			
2014	19,490	0	10,228	29,719	1,848,002	0	0	1,848,002	53,527	1,893,119			
2016	176,256	0	113,366	289,622	5,318,468	0	0	5,318,468	292,633	2,185,752			
TOT	494,557	0	241,050	735,607	5,318,468	0	0	5,318,468	2,185,752	2,185,752			
PCNT DSCNT	\$ VALUE												
		ULTIMATE GROSS	CUM PROD GROSS	FUTURE RES GROSS	FUTURE RES NET	GROSS WELL COUNT	NET WELL COUNT	INTERESTS	YR MO	OILINT	GASINT	WORKINT	TANGINT
0.00	5,318,468	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
8.00	2,514,750	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
9.00	2,532,967	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
12.00	1,927,397	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
14.00	1,721,017	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
16.00	1,553,522	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
18.00	1,413,592	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
20.00	1,300,487	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
22.00	1,203,256	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
24.00	1,120,215	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000
26.00	1,048,580	3,987,132	3,160,122	9,944,212	5,959,751	3,984,461	7,709,234	0.000	0	0.191440	0.178000	0.210000	0.210000

14, 15, 22-T17S-R29E

PREPARED BY: MUE & A  
EFFECTIVE DATE: APRIL 1, 2000  
LEASE ID: 38  
LEASE NAME: MARY DODD A  
WELL NAME:  
STATE: NEW MEXICO  
COUNTY: EDDY  
FIELD: GRAYBURG JACKSON  
OPERATOR: MARBOR ENERGY CORP  
RES CAT: PROVED DEVELOPED PRODUCING  
ECON LIMIT: 2601  
038 RESERVOIR: SR-QN-GB-SA-OIL-PUMPING

DHC 1/27/00

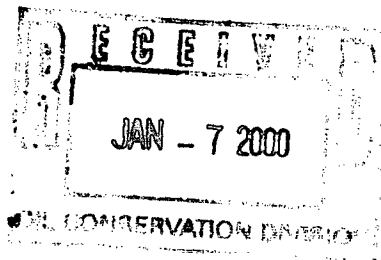


**marbob**  
energy corporation

2160

January 6, 2000

Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505-6429



RE: Application for Downhole Commingling  
M. Dodd "A" Federal No. 48 - API #30-015-30790

Gentlemen:

Marbob Energy Corporation respectfully submits, for administrative approval, the enclosed Form C-107-A. This application requests approval to down hole commingle production from the Seven Rivers, Queen, Grayburg, San Andres, Glorietta, and Yeso formations.

Please do not hesitate to contact me should you have any questions or require any additional information.

Sincerely,

Dean Chumbley  
Land Department

DC/mm  
Enclosures



DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
DISTRICT II  
511 South First St., Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410  
DISTRICT IV  
2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
**OIL CONSERVATION DIVISION**

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

Form C-107-A  
Revised August 1999

APPROVAL PROCESS:

☐ Administrative ☐ Hearing

EXISTING WELLBORE

☐ YES ☐ NO

**APPLICATION FOR DOWNHOLE COMMINGLING**

Marbob Energy Corporation P. O. Box 227, Artesia, NM 88211-0227  
Operator Address  
M Dodd "A" Federal 48 P-22-17S-29E Eddy  
Lease Well No. Unit Ltr. - Sec - Twp - Rge County  
Spacing Unit Lease Types: (check 1 or more)  
OGRID NO. 14049 Property Code 6504 API NO. 30-015-30790 Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Grayburg Jackson (SR-Q-GRBG-SA)		Empire (Yeso) East
2. Top and Bottom of Pay Section (Perforations)	To be perforated 2675' - 3350'		4028' - 4303'
3. Type of production (Oil or Gas)	Oil		Oil
4. Method of Production (Flowing or Artificial Lift)	Artificial Lift		Artificial Lift
5. Bottomhole Pressure	a. (Current)	a.	a.
Oil Zones - Artificial Lift: Estimated Current	b. (Original)	b.	b.
Gas & Oil - Flowing: Measured Current			
All Gas Zones: Estimated Or Measured Original			
6. Oil Gravity (BAPI) or Gas BTU Content	36.3°		37.1°
7. Producing or Shut-in?	Awaiting Perforation		Producing
Production Marginal? (yes or no)	Expected to be marginal		Yes
* If Shut-In, give date and oil/gas/water rates of last production	Date: N/A Rates:	Date: Rates:	Date: N/A Rates:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: N/A Rates:	Date: Rates:	Date: 12/28/99 Rates: 0-212 G-223 W-627
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)			
8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)	Oil: 22 % Gas: 33 %	Oil: % Gas: %	Oil: 78 % Gas: 67 %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No  
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No
11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No
15. NMOC Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). \_\_\_\_\_
16. ATTACHMENTS:
- \* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
  - \* Production curve for each zone for at least one year. (If not available, attach explanation.)
  - \* For zones with no production history, estimated production rates and supporting data.
  - \* Data to support allocation method or formula.
  - \* Notification list of working, overriding, and royalty interests for uncommon interest cases.
  - \* Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Dean Chumbley TITLE Land Department DATE 1/5/00

TYPE OR PRINT NAME Dean Chumbley TELEPHONE NO. (505) 748-3303

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

**DISTRICT IV**  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

API Number 30-015-30790		Pool Code 28509	Pool Name GRBG JACKSON SR Q GRBG SA
Property Code 5504	Property Name M. DODD "A" FEDERAL		Well Number 48
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION		Elevation 3573

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	22	17 S	29 E		900	SOUTH	330	EAST	EDDY

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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330'
900'

### OPERATOR CERTIFICATION

*I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.*

*Robin Cockrum*

Signature

ROBIN COCKRUM

Printed Name

PRODUCTION ANALYST

Title

9/2/99

Date

DMCC

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### SURVEYOR CERTIFICATION

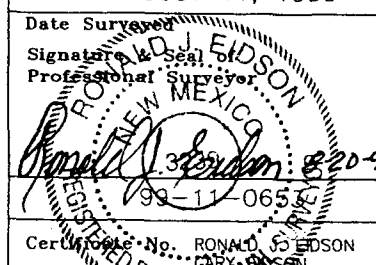
*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

AUGUST 11, 1999

Date Surveyed

Signature & Seal

Professional Surveyor



DMCC

Certificate No. 8220-99

99-11-0652

3239

12641

12185

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

**DISTRICT IV**  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-30790		Pool Code 96610	Pool Name Empire; Yeso East
Property Code 6504	Property Name M. DODD "A" FEDERAL		Well Number 48
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION		Elevation 3573

### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	22	17 S	29 E		900	SOUTH	330	EAST	EDDY

## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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<div style="border: 1px solid black; width: 100%; height: 100%; position: relative;"> <!-- Empty grid area --> </div>	<div style="border: 1px solid black; width: 100%; height: 100%; position: relative;"> <!-- Empty grid area --> </div>

### OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Title

Date

ROBIN COCKRUM

PRODUCTION ANALYST

9/2/99

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### SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Surveyed

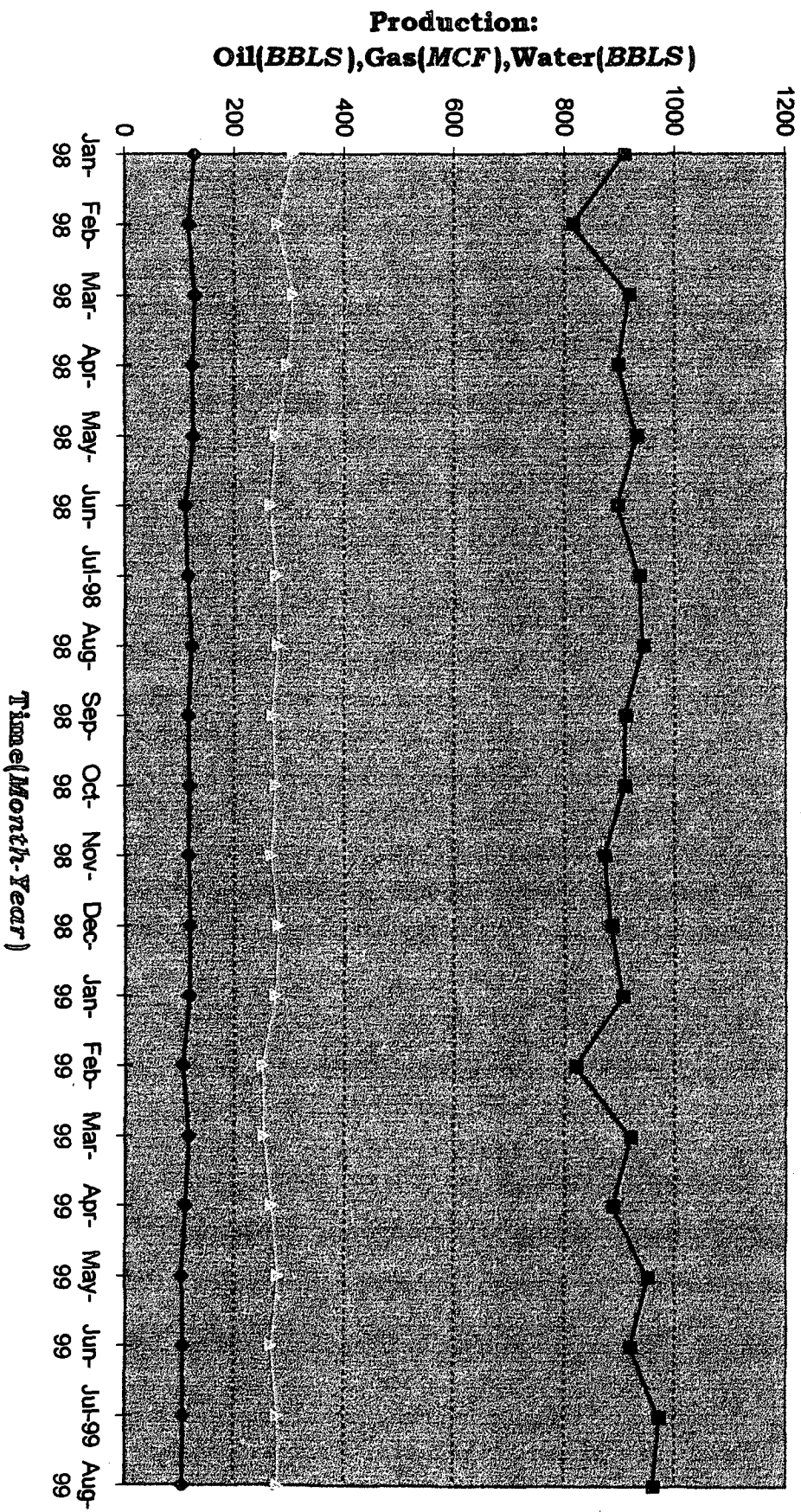
Signature & Seal of Professional Surveyor

AUGUST 11, 1999

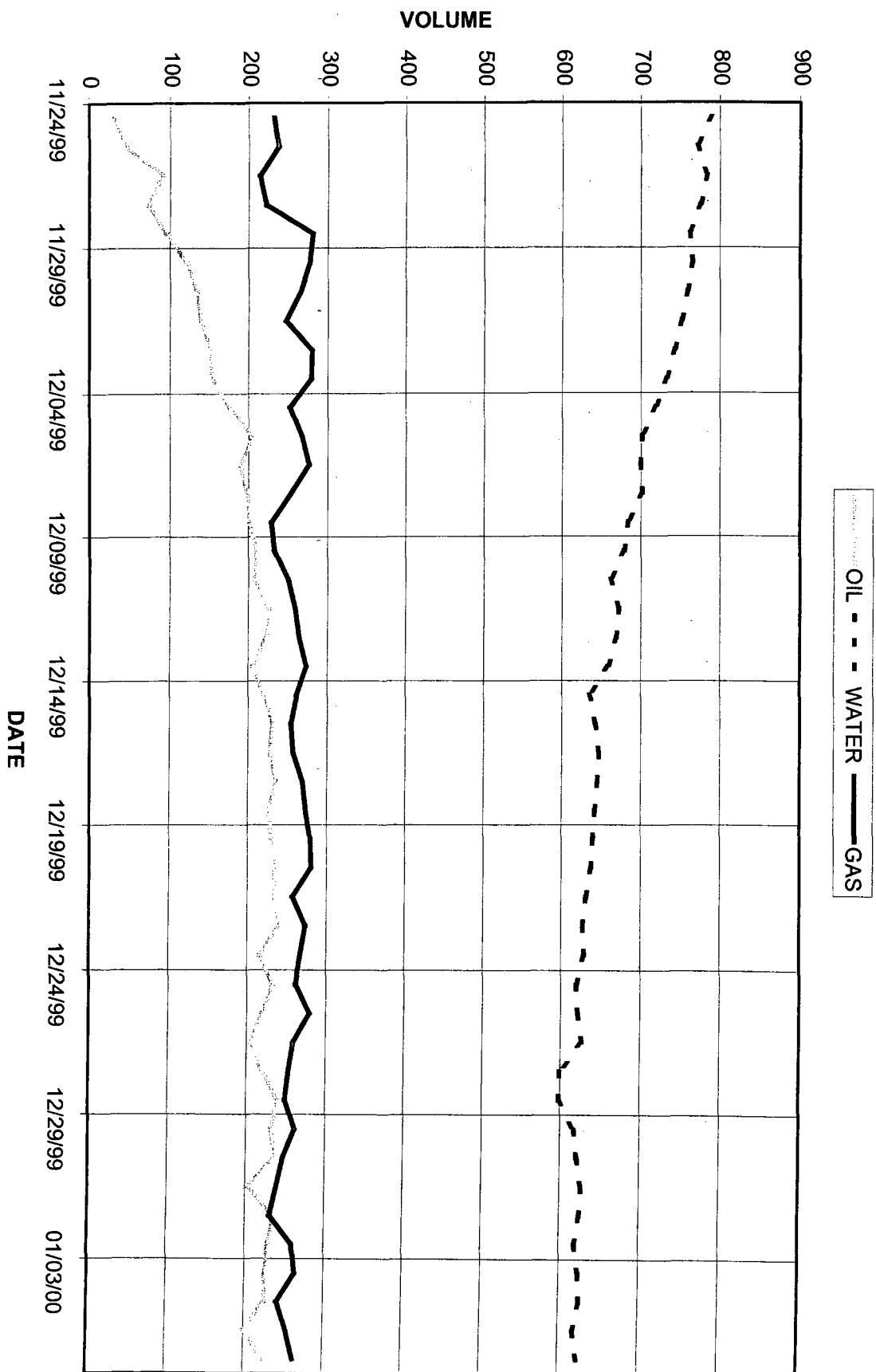
DMCC

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# Oil&Gas Production Curve of Well: *M DODDA No.:* *027(98,99)*



# MARY DODD "A" FED #48





**marbob**  
energy corporation

January 6, 2000

United States Department of the Interior  
Bureau of Land Management  
2909 West Second Street  
Roswell, New Mexico 88201

Gentlemen:

Marbob Energy Corporation has made application with the New Mexico Oil Conservation Division to downhole commingle production from the M. Dodd "A" Federal No. 48. The NMOCD requires applicant to notify BLM in writing of this application if the well is located on federal land. Marbob's M. Dodd "A" No. 48 is located in Unit P of Section 22 in Township 17 South and Range 29 East.

Therefore, in accordance with the NMOCD requirement, please find the enclosed copy of Application for Downhole Commingling Form C-107-A. Please contact me should you have any questions or need any additional information.

Sincerely,

Dean Chumbley  
Land Department

DC/mm  
Enclosures