

Mallon Resources Corporation

999 18th Street
Suite 1700
Denver, Colorado 80202
303-293-2333 FAX: 303-293-3601
NASDAQ: "MLRC"



OIL CONSERVATION DIVISION
RECEIVED

APR 14 1994 8 50

April 14, 1994

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

Attention: Mr. David Catanach

Re: Application for Administrative Approval for Downhole Commingling
Mobil '12' Federal #1
Sec. 12, T23S-R26E, Carlsbad, S.
Eddy County, New Mexico

Dear Mr. Catanach:

Mallon Oil Company recently acquired operations of the above referenced well, the Mobil '12' Federal #1. The well currently produces from the Morrow and Atoka zones and these zones are commingled downhole as approved by Commission Order Number R-4953. Two additional zones are prospective in this well, the Strawn and the Canyon. It is anticipated that the Strawn at this location is in communication with the Strawn producers in the surrounding area and has suffered pressure depletion. It is not economical to drill for these prospective zones but Mallon Oil Company believes the zones should be produced at this time to prevent any further potential depletion. The pressure expected in the Strawn formation is approximately 1,000 psi or less which is similar to the current Morrow-Atoka reservoir pressure which is in the range of 800 to 850 psi as detailed in the attachment.

Mallon Oil Company respectfully requests administrative approval for down-hole commingling of the Morrow, Atoka and Strawn formations in the well. The commingling is necessary to permit the Strawn formation to be produced in this well. As the Strawn is believed to be depleted by surrounding Strawn producing wells. The reservoir pressure is expected to be low, in the range of 1,000 psi, and remaining reserves attributable to this well do not justify a separate completion. There will not be crossflow between zones. Current reservoir pressure in all zones is approximately 800 to 1,000 psi while the flowing well bottom hole pressure is less than one quarter of these reservoir pressures. The

Application for Administrative Approval for Downhole Commingling
Mobil '12' Federal #1
Sec. 12, T23S-R26E, Carlsbad, S.
Eddy County, New Mexico
Page 2 of 2

ownership from all current producing and proposed zones is common. The enclosed attachments detail the information required by rule 303C for administrative approval of downhole commingling.

Please do not hesitate to contact me if you have any questions about this matter.

Sincerely,

MALLON OIL COMPANY

A handwritten signature in black ink, appearing to read "Ray E. Jones". The signature is fluid and cursive, with the first name "Ray" and last name "Jones" clearly distinguishable.

Ray E. Jones
Vice President, Engineering

REJ/tm

Attachment

**Application for Downhole Commingling
Under NMOCD Rule 303C
For Gas Wells**

- a) By operator:
Mallon Oil Company
999 18th Street, Suite 1700
Denver, CO 80202
- b) In the well:
Mobil '12' Federal #1
NWNE Sec. 12, T23S-R26E
Eddy County, New Mexico
- For the pools:
Carlsbad, S. - Morrow
Carlsbad, S. - Atoka
Carlsbad, S. - Strawn
- c) A plat of the area surrounding the Mobil '12' Federal #1 well showing the ownership of direct and diagonal offset locations is included.
- d) The Morrow and the Atoka zones in this well produce dry gas, therefore no state form C116 are required or available for the current completion.
- e) A production decline curve is included that shows the Morrow and Atoka production. Both zones have been commingled downhole since 1974. The Strawn has not been completed in this well.
- f) The Morrow-Atoka bottom hole pressure was measured on April 7, 1994 after a one day shut in and was 787 psi at 10,700 feet. It is not certain what type of fluid was in the wellbore below 10,700 feet. A static gas gradient would result in a pressure of 789 psi at 10,842 feet, the top Atoka perforation. Use of a water gradient would yield an estimated pressure of up to 850 psi at the top of the Atoka

- g) There will be no loss in total gas quality or value due to mixing of the production streams.

The Morrow and Atoka zones produce gas with no condensate. A copy of a gas analysis from these zones is included. The gas is 96.7 percent methane. A Strawn gas analysis is not available for this well. Strawn wells in the area produce gas and some condensate. The condensate yield is in the range of a wet gas so no reservoir or bottom hole condensation would occur and the production streams from the three zones will be compatible

- h) Because of reduced operation costs per zone, commingling of the zones would allow each individual zone to be produced to a lower economic rate and would increase ultimate recovery from all zones.
- i) The Morrow and the Atoka have been commingled downhole since 1974. Allocation for the Morrow and Atoka have been 70 and 30 percent respectively of the total wellstream production.

The Strawn will be flow tested during the completion. This rate and the current well rate from the Morrow and Atoka will be used to determine an allocation factor. This factor will then be forwarded to the NMOCD for review.

- j) A reference map for the Mobil '12' Federal #1 well and surrounding wells has been included. A circle with a radius of approximately one mile has been drawn around this well for reference only. The direct and diagonal offset wells:

<u>Well Name</u>	<u>Spot</u>	<u>Location</u>	<u>Operator</u>
Collatt Estate Comm. #1	J	Sec. 1, T23S-R26E	Merit Energy Company
Gulf Federal Comm. #1	K	Sec. 1, T23S-R26E	Mallon Oil Company
Humble Grace Comm. #1	P	Sec. 2, T23S-R26E	Michael P. Grace
Panagra Comm. #1	B	Sec. 11, T23S-R26E	Michael P. Grace
Pan-Am State Comm. #1	J	Sec. 11, T23S-R26E	Marathon Oil
Echols Comm. #1	J	Sec. 12, T23S-R26E	Mallon Oil Company
Gulf Federal Comm. #2	L	Sec. 6, T23S-R27E	Mallon Oil Company
Stephens Comm. #1	F	Sec 7, T23S-R27E	Merit Energy Company
Stephens 'A' Comm. #1	N	Sec. 7, T23S-R27E	Merit Energy Company

6-23P-27E

Tool No 1-C

All offset operators and the Bureau of Land Management have been notified in writing of the proposed commingling. Those notified and their addresses are:

Merit Energy Company
12221 Merit Drive, Suite 500
Dallas, TX 75251

Michael P. Grace
Attention: Ms. Juanita L. Jones
P. O. Box 207
Carlsbad, NM 88220

Marathon Oil Company
P. O. Box 552
Midland, TX 79702

Bureau of Land Management
P. O. Box 1778
Carlsbad, NM 88220

BORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5398
Order No. R-4953

APPLICATION OF PENNZOIL UNITED,
INC., FOR DOWNHOLE COMMINGLING,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 8, 1975, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 28th day of January, 1975, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Pennzoil United, Inc., is the owner and operator of the Mobil 12 Federal Well No. 1, located in Unit B of Section 12, Township 23 South, Range 26 East, NMPM, South Carlsbad Field, Eddy County, New Mexico.

(3) That said well is a gas well which has been dually completed in the Atoka and Morrow formations for several years.

(4) That the applicant has recently perforated additional producing zones in the Atoka and Morrow formations in said well.

(5) That for unknown reasons, the perforation work resulted in communication of the Atoka and Morrow zones within the wellbore of said well.

(6) That to perform the work necessary to achieve separation of the two zones in the wellbore would result in substantial risk to human life or damage to the reservoir with concurrent underground waste.

(7) That the applicant proposes to commingle Atoka and Morrow gas production in the wellbore of the subject well.

- (8) That the Morrow zone in said well is prorated.
- (9) That the Atoka zone in said well is not prorated.
- (10) That if the production for both zones were credited to the Morrow zone, the well would still be a marginal well.
- (11) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.
- (12) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (13) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Artesia district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (14) That in order to allocate the commingled production to each of the commingled zones in the subject well for statistical purposes, 30 percent of the commingled production should be allocated to the Atoka zone, and 70 percent of the commingled production to the Morrow zone.
- (15) That for purposes of prorationing, 100 percent of the production from the subject well should be charged against the well's gas allowable for the Morrow zone.

IT IS THEREFORE ORDERED:

- (1) That the applicant, Pennzoil United, Inc., is hereby authorized to commingle Atoka and Morrow production within the wellbore of the Mobil 12 Federal Well No. 1, located in Unit B of Section 12, Township 23 South, Range 26 East, NMPM, South Carlsbad Field, Lea County, New Mexico.
- (2) That for statistical purposes, 30 percent of the commingled production shall be allocated to the Atoka zone and 70 percent of the commingled production shall be allocated to the Morrow zone.
- (3) That 100 percent of the commingled production shall be charged against the well's gas allowable for the Morrow zone.
- (4) That the operator of the subject well shall immediately notify the Commission's Artesia district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

-3-

CASE NO. 5398

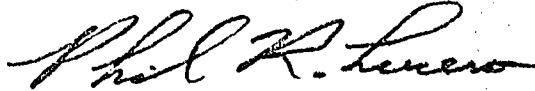
Order No. R-

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman



PHIL R. LUCERO, Member



A. L. PORTER, Jr., Member & Secretary

S E A L

jr/

Date of Plat. April 15, 1994

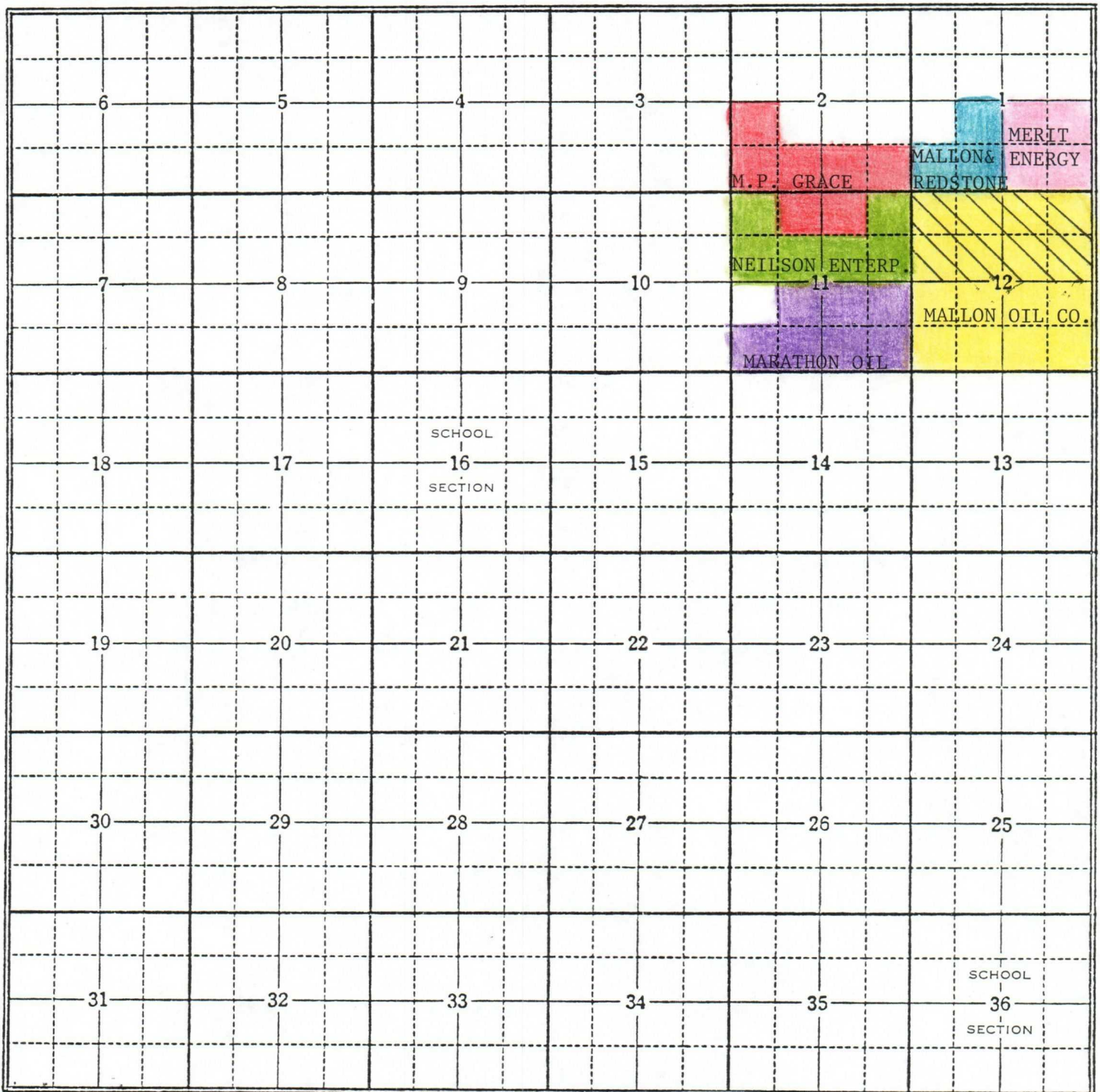
EDDY

County,

Township 23 SOUTH

Range 26 EAST

No. 912.—Bradford Publishing Co., 1824-46 Stout Street, Denver, Colorado —10-78



SCALE.

32 chains to one-half inch.

Date of Plat. APRIL 15, 1994

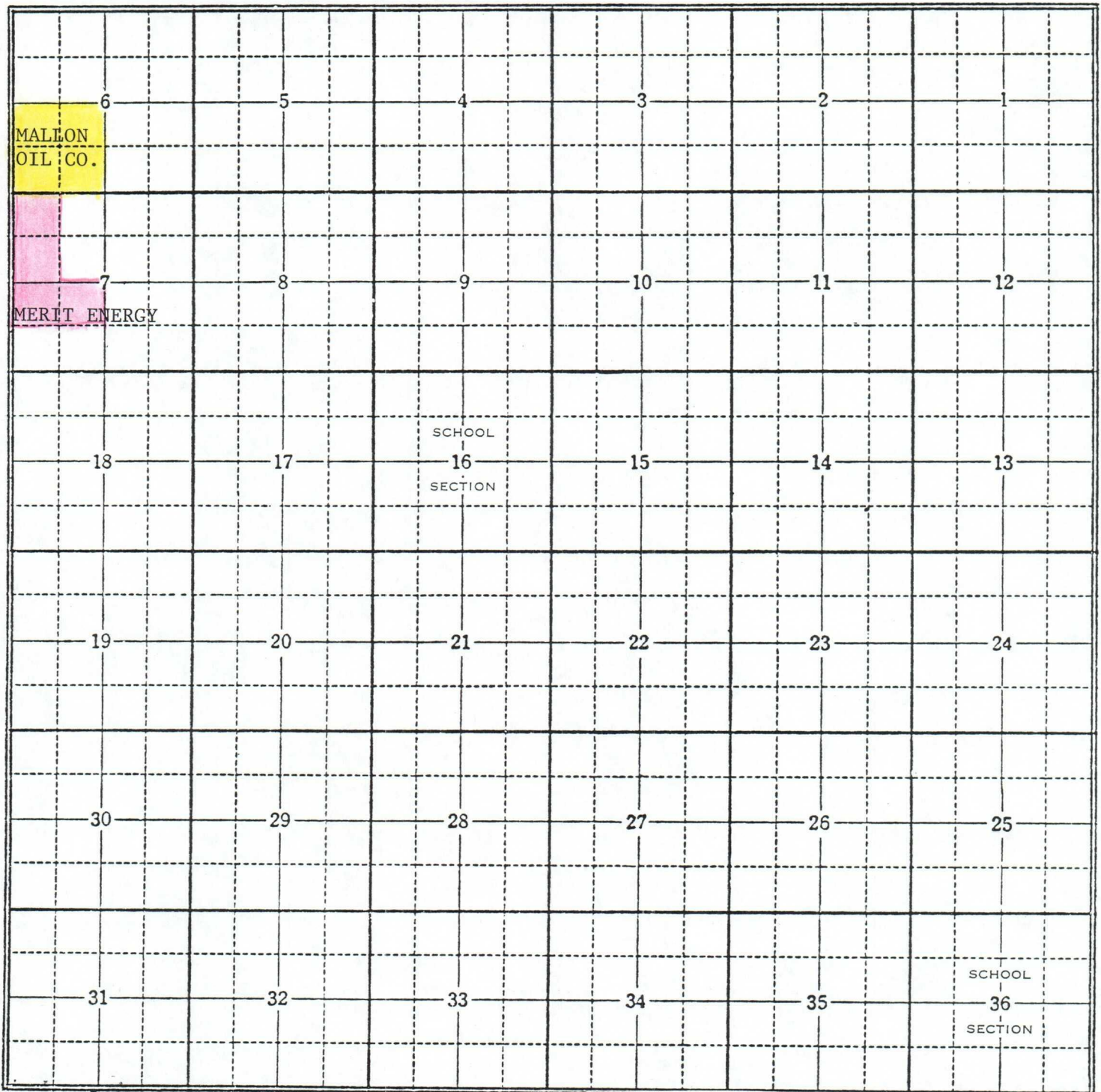
EDDY

County,

Township 23 SOUTH

Range 27 EAST

No. 912.—Bradford Publishing Co., 1824-46 Stout Street, Denver, Colorado—10-78



SCALE.

32 chains to one-half inch.

**OPERATORS AND WORKING INTEREST
OWNERS ON OFFSETTING LEASES TO
THE N/2 OF SECTION 12, T23S, R26E
EDDY COUNTY, NEW MEXICO**

**Mobil 12-1 Federal
Morrow & Atoka Formations**

Acreage dedicated to the well: N/2 of Section 12, T-23-S, R-26-E

**N/2 of Section 12, T-23-S, R-26E
(NM-040547 & NM-027994)**

**Operator: Mallon Oil Company
 999 18th Street
 Suite 1700
 Denver, Colorado 80202**

Working Interest Owners:	Mallon Oil Company	58.4803%
	Wainoco Oil & Gas	17.7497%
	Redstone Oil & Gas	11.8850%
	W. Wesley Perry	5.9425%
	Olwick Corporation	5.9425%

**S/2 of Section 12, T-23-S, R-26E
(NM-040547 & Fee)**

**Operator: Mallon Oil Company
 999 18th Street
 Suite 1700
 Denver, Colorado 80202**

Working Interest Owners:	Mallon Oil Company	23.3200%
	Marathon Oil Co.	24.6100%
	Marshall & Winston	6.2589%
	Cal-Mon Oil Co.	3.0428%
	Centurion Energy	3.1206%
	Cody Energy Inc.	12.3050%
	Diverse GP III	9.1200%
	TEX-OK Energy LP	12.3050%
	Redstone Oil & Gas	2.9200%
	Monaghan Living Trst	0.0777%
	W. Wesley Perry	1.4600%
	Olwick Corporation	1.4600%

SE/4 of Section 1, T-23-S, R-26E
(Fee)

Operator: Merit Energy Company
12221 Merit Drive
Suite 500
Dallas, Texas 75251

Working Interest Owners: Merit Energy Company

Note: Pooled with the NE/4

S/2SW/4 and NE/4SW/4 of Section 1, T-23-S, R-26-E
(NM-040547)

Operator: to 5,000 feet - Redstone Oil & Gas Co.
8235 Douglas Avenue
Suite 1050
Dallas, Texas 75225

below 5,000'- Mallon Oil Company
999 18th Street
Suite 1700
Denver, Colorado 80202

Working Interest Owners: Mallon Oil Company
Redstone Oil & Gas
W. Wesley Perry
Olwick Corp.
Wainoco Oil & Gas
Matador Petroleum

S/2S/2 & NW/4SW/4 of Section 2, T-33-S, R-26-E
(State L-1582)

Operator: Michael P. Grace
P.O. Box 207
Carlsbad, New Mexico 88220

Working Interest Owners: Michael P. Grace

Note: Assignments limited from surface to 12,111 feet below the surface.

NE/4NE/4 and S/2NE/4 of Section 11, T-23-S, R-26-E
(State K-2511-2)

Operator: Nielson Enterprises, Inc.
P.O. Box 370
Cody, Wyoming 82414

Working Interest Owners:	Nielson Enterprises, Inc.	75.00%
	Michael P. Grace (in unit)	25.00%

Note: N/2 Unitized, Grace owns in NW/4NE/4 and NE/4NW/4.

S/2 Except the NW/4SW/4 of Section 11, T-23-S, R-26-E
(State K-2511)

Operator: Marathon Oil Company
P.O. Box 552
Midland, Texas 79702

Working Interest Owners:	Marathon Oil Company	21.875%
	Nielson Enterprises Inc. & TEX-OK Energy Inc.	43.750%
	John H. Hill	12.500%
	Seneca Oil & Gas Co.	13.333%
	Prudential Funds, Inc.	8.542%

Note: Net Working Interest goes from 70% to 65% upon recovery of 125% of drilling, testing, equipping and completing well. Assignments limited from surface to 12,243 feet below the surface, Amoco has deep rights.

SW/4 of Section 6, T-23-S, R-27-E
(NM-040547)

Operator: Mallon Oil Company

Working Interest Owners:	Mallon Oil Company	72.20955%
	Wainoco Oil & Gas Co.	15.90506%
	Redstone Oil & Gas	5.94269%
	W. Wesley Perry	2.97135%
	Olwick Corporation	2.97135%

W/2NW/4 and N/2SW/4 of Section 7, T-23-S, R-27-E
(NM-91071 out of NM-040547)

Operator: N/2SW/4 = Merit Energy Company
W/2NW/4 = Merit Energy Company

Working Interest Owners:	to 5,000 feet - Merit Energy Company	
	5,000' to base of the Morrow formation -	
	Mallon Oil Company	45.3606% Net
	Merit Net Partners, LP	36.8900% Net
	Wainoco, Inc.	17.7497% Net

Note: N/2SW/4 communitized as to S/2 of Section 7.
W/2NW/4 communitized as to N/2 of Section 7 subject to JOA
dated 5-7-73, The Superior Oil Company, Operator.

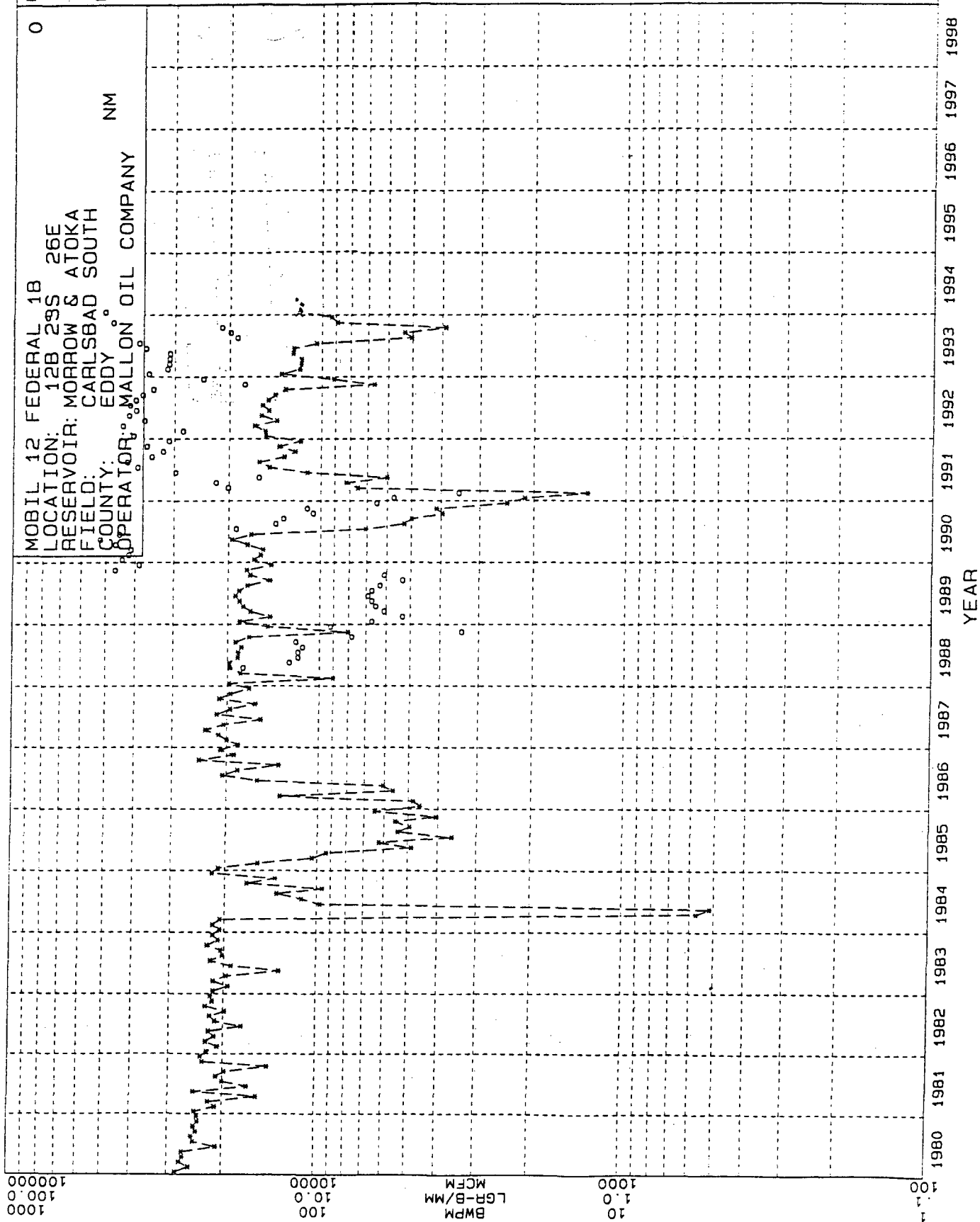
MOBIL 12 FEDERAL 1B
LOCATION: 12B 29S 26E
RESERVOIR: MORROW & ATOKA
FIELD: CARLSBAD SOUTH

○

MCFM

BWP 0

Q



TRANSWESTERN PIPELINE COMPANY
(A SUBSIDIARY OF HOUSTON NATURAL GAS)

PENNZOIL

AUG 09 1985

MIDLAND

GAS QUALITY TEST REPORT

PRODUCER PENNZOIL STATION NO. 1054-1
FIELD S. CARLSBAD EFFECTIVE DATE 07-03-85
RESERVOIR MORROW LAB NUMBER 6
STATION NAME MOBIL 12 FED.#1

COMPONENTS	SPECIFIC GRAVITY	MOLE FRACTION	LIQUEFIABLE HYDROCARBONS	COMPONENT GPM	GPM CONTENT
NITROGEN	.9672	.0041	PROPANE	27.514	.0633
CARBON DIOXIDE	1.5195	.0109	ISOBUTANE	32.698	.0131
HELIUM	.1382		N-BUTANE	31.510	.0095
OXYGEN	1.1048	.0000	LPG		.0858
HYDROGEN SULFIDE	1.1766	.0000	ISOPENTANE	36.582	.0073
WATER VAPOR	.6220	.0000	N-PENTANE	36.213	0.0000
			HEXANES	41.111	0.0000
			HEPTANES+	46.126	.0138
METHANE	.5539	.9643	NATURAL GASOLINE		.0212
ETHANE	1.0382	.0172			
PROPANE	1.5225	.0023	TOTAL LIQUEFIABLE GPM		.1070
ISOBUTANE	2.0068	.0004			
N-BUTANE	2.0068	.0003	WATER VAPOR CONTENT:		
ISOPENTANE	2.4911	.0002	GAS MIXTURE STATIC PSIG		300.0
N-PENTANE	2.4911	.0000	FLOWING GAS TEMP (F)		92.0
HEXANES	2.9753	.0000	WATER VAPOR DEW POINT (F)		-
HEPTANES+	3.5807	.0003	LBS WATER VAPOR / MMCF		59.0
			DEHY INSTALLED (TW)		YES
			DEHY IN SERVICE (TW)		NO
COMPOSITION-----		1.0000	INSTRUMENT TYPE		UGC
			MOL FRACTION		.0012
MIXTURE SPECIFIC GRAVITY			SULFUR CONTENT (GR. PER 100 CF)		
CALC. FROM ANAL. (REAL)		.580	HYDROGEN SULFIDE		
DETERMINED BY TEST INST.		.580	MERCAPTANS		
			SULFIDES		
MIXTURE HEATING VALUE			RESIDUALS		
(BTU/CF @ 14.73 PSIA, 60F, SAT.)			TOTAL SULFUR		
CALCULATED FROM ANALYSIS		1001	MOLE FRACT H2S		
BY CALORIMETRY		NONE	COMPRESSIBILITY (Z)		.9979

PR: 14:07 JUL 5, 1985

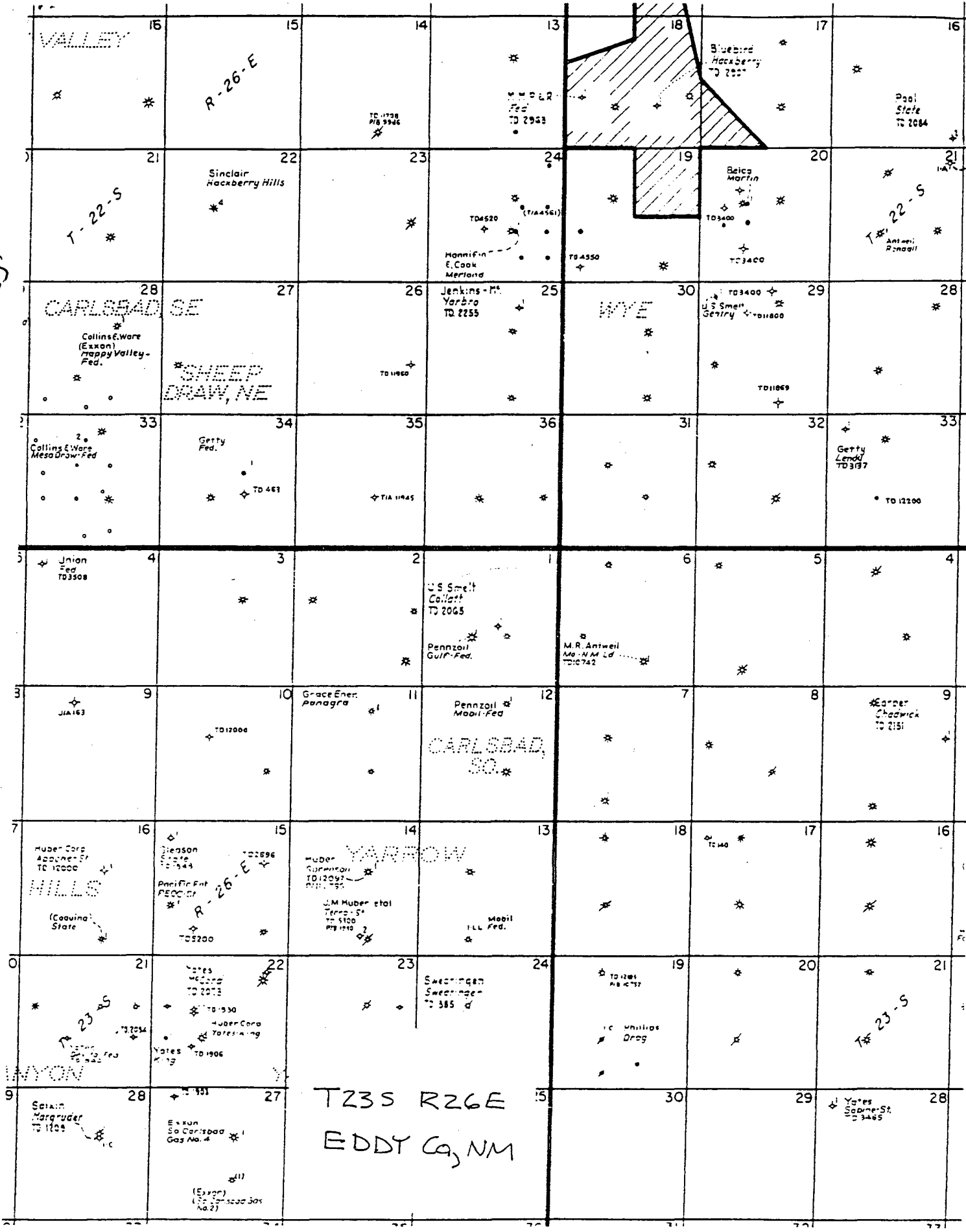
ANALYST *Joe Heen* [TW]

REMARKS:00

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GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK GC GCWAI 74703/HP 97701M75

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OIL CONSERVATION DIVISION
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State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

Attention: Mr. David Catanach

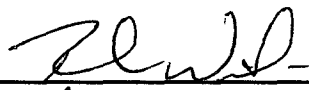
Re: Mobil '12' Federal #1
NWNE Sec. 12, T23S-R26E
Downhole Commingling Application

DLC-1016

Dear Mr. Catanach:

Please be advised that we have no objections to Mallon Oil Company's application for downhole commingling of the Morrow, Atoka and Strawn zones in the Mobil '12' Federal #1 well located in NWNE, Unit B, Sec. 12, T23S-R26E, Eddy County, New Mexico.

Sincerely,


By MARATHON Oil Company
RAJPAL WICKS

LAJEMAN, CPL/ESA
Title

5-4-94
Date

OIL CONSERVATION DIVISION
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'94 MAY 26 AM 8 50

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

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NWNE Sec. 12, T23S-R26E
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Sincerely,

Robert R. Mateych
By

Region Manager
Title

5/23/94
Date