

Houston Division
Production Operations, United States



P.O. Box 2409
Hobbs, New Mexico 88240
Telephone 505/393-7106

March 22, 1985

Division Director
Energy & Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Re: Downhole Commingling the Dayton Hardy Well No. 1
(I, Sec. 20, T21S, R37E), Penrose Skelly (Grayburg) and Eumont
(Queen) Lea County, New Mexico

Dear Sir:

Marathon Oil Company requests permission to downhole commingle production in the above referenced well. The Dayton Hardy No. 1 was drilled and completed open hole from 3494' - 3750' in the Queen and Grayburg formations in 1938. A formation packer set in 1939 at 3675' separated the Grayburg (3675' - 3750') from the Queen (3494' - 3670').

In January and February of 1985 the Grayburg was acidized and the Queen was fracture stimulated. The formation packer was removed and a pumping unit was placed on the well. Production has increased from 20 MCFD to 189 MCFD, 3 BOPD, and 11 BWPD.

Additional information as required under Rule 303(C) is attached for your consideration.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Thomas F. Zapatka'.

Thomas F. Zapatka
Production Engineer

TFZ/lp

Enclosures

Rule 303(C) 2 Information

- A. Operator: Marathon Oil Company
P. O. Box 2409
Hobbs, New Mexico 88240
- B. Lease: Dayton Hardy Well No. 1
660' FEL & 1980' FSL
Sec. 20, T21S, R37E
Lea County, New Mexico
- Pools to be commingled are Penrose-Skelly Grayburg and Eumont Queen
- C. Plat: See attachments
- D. A Form C-116 is attached.
- E. A production decline curve for the lower Penrose-Skelly (Grayburg) zone is attached. This well was completed in 1938 in the Penrose Skelly Grayburg. In 1939 a formation packer was installed separating the Grayburg from the Queen formation. The initial production rate was 40 BOPD. Prior to this workover in March 1985 this well was producing 20 MCFD, no liquids. Cumulative production as of December 1, 1984 was 66,615 BO, 1,476 MMCF and 1,687 BW.
- F. Bottom-hole pressures taken of both these zones are attached.
- G. The fluid produced is crude oil, formation water and gas. There is no evidence of incompatibility.
- H. The commingling of gas from these zones has no effect on the resultant price. Ownership of the zones is common.
- I. Eumont (Queen) 100% of the liquids
80% of the gas
Penrose Skelly (Grayburg) 20% of the gas

These figures are based on production prior to and after the stimulation and commingling.

- J. All offset operators have been notified by letter of the proposed commingling. Offset operators are:

Gulf Oil Company, P. O. Box 670, Hobbs, NM 88240
Conoco Oil Company, P. O. Box 460, Hobbs, NM 88240
Arco Oil Company, P. O. Box 1710, Hobbs, NM 88240
Texaco Producing Inc., P. O. Box 728, Hobbs, NM 88240
Hunt Oil Company, Drawer 1350, Midland, TX 79702
Petro-Lewis Corp., P. O. Box 2250, Denver, CO 80201

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-116
Revised 10-1-78

GAS-OIL RATIO TESTS

Operator Marathon Oil Company		Pool Penrose Skelly (Grayburg) & Eumont (Queen)		County Lea										
Well P. O. Box 2409		Hobbs, NM 88240		Type of Test - (X) <input checked="" type="checkbox"/> Scheduled <input type="checkbox"/> Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBC. PRESS.	DAILY ALLOW-ABLE	SYSTEM OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU. FT/BB	
		U	S	T						R	WATER BBL'S.	CRAV. OIL BBL'S.		GAS M.C.F.
Dayton Hardy	1	I	20	21S	37E	3-19-85	P		24	11	34	3	189	63,000

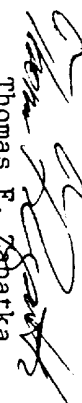
No well will be assigned an allowable greater than the amount of oil produced on the official test.
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowable when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

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


Thomas F. Zaparka
(Signature)

Production Engineer

(Title)
March 22, 1985

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MAR 26 1985

O.C.
HONEST OFFICE

CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator Marathon Oil Company			Lease Dayton Hardy			Well No. 1		
Unit Letter I	Section 20	Township 21S	Range 37E	County Lea				
Actual Footage Location of Well: <div style="display: flex; justify-content: space-between;"> 660 feet from the East line and 1980 feet from the South line </div>								
Ground Level Elev. 3489	Producing Formation Queen & Grayburg		Pool Penrose Skelly - Eumont			Dedicated Acreage: 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.

		Sec. 20	
			#1

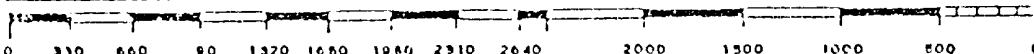
CERTIFICATION

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

Name Thomas F. Zapatka
Position Production Engineer
Company Marathon Oil Company
Date March 22, 1985

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 knowledge and belief.

Date Surveyed
Registered Professional Engineer and/or Land Surveyor
Certificate No.



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G.C.B.
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PETROLEWIS		CAMPBELL & HEDRICK		ARCO	HUNT	SUN
51,621 BO 2 OPD	205MCFGPD 21,881BO 1 BOPD 29 MCFGPD	3662 BO 2 MCFGPD 1 BOPD	7 1270 BO 16 MCFGPD	-48 2 17,550 BO 6 BOPD 27 MCFGPD 11 BWPD	2 26,674 BO	A
34,610 BO 4 BOPD 17 MCFGPD 12 BWPD	43,707 BO 33 MCFGPD	ELLIOT 6 6489 BO	W. LEE PETROLEWIS 4 14,692 BO	32,097 BO 1	1 26,065 BO	
WARLICK		RANDLE	RANDLE	A.W. YORK	WEATHERLY	
PETROLEWIS 60,282 BO 3 BOPD 2 24 MCFGPD 6 BWPD	GULF -200 3 32,444 BO	MARATHON -209 3 10,381 BO 1 BOPD 16 MCFGPD 1 BWPD	1 66,700 BO 21 MCFGPD	39,199 BO	CONOCO 5566 BO 6 BOPD 41 MCFGPD	CONE
WARLICK 30 MCFGPD	31,173 BO	GETTY -205 1 45,584 BO	18,731 BO 6 BOPD 153 MCFGPD	45,247 BO	ALPHA "21" CO. LANSFORD	ANDERSON
CAMPBELL & HEDRICK 27,183 BO 2 BOPD 3 48 MCFGPD 17 BWPD	16,030 BO	4 41,545 BO	19,533 BO 7 BOPD 63 MCFGPD	8529 BO 7 BOPD 63 MCFGPD	M.E. WANTZ	
HARDY	C.L. HARDY	D.C. HARDY	HUNT	GULF		
37,402 BO 6 MCFGPD	MOBIL 2 42,066 BO	63,037 BO 3 BOPD 92 MCFGPD 3 BWPD	1 11,548 BO	2 50,163 BO 32,394 BO 160,149 BO 5 BOPD 18 MCFGPD 4 BWPD	11 60,312 BO	16 189,695 BO
	130,673 BO 2 BOPD 7 MCFGPD 1 BWPD	V. LINAM SUN A	1 37,674 BO	97,012 BO 2 BOPD 23 MCFGPD 1 BWPD	7 12,229 BO	26

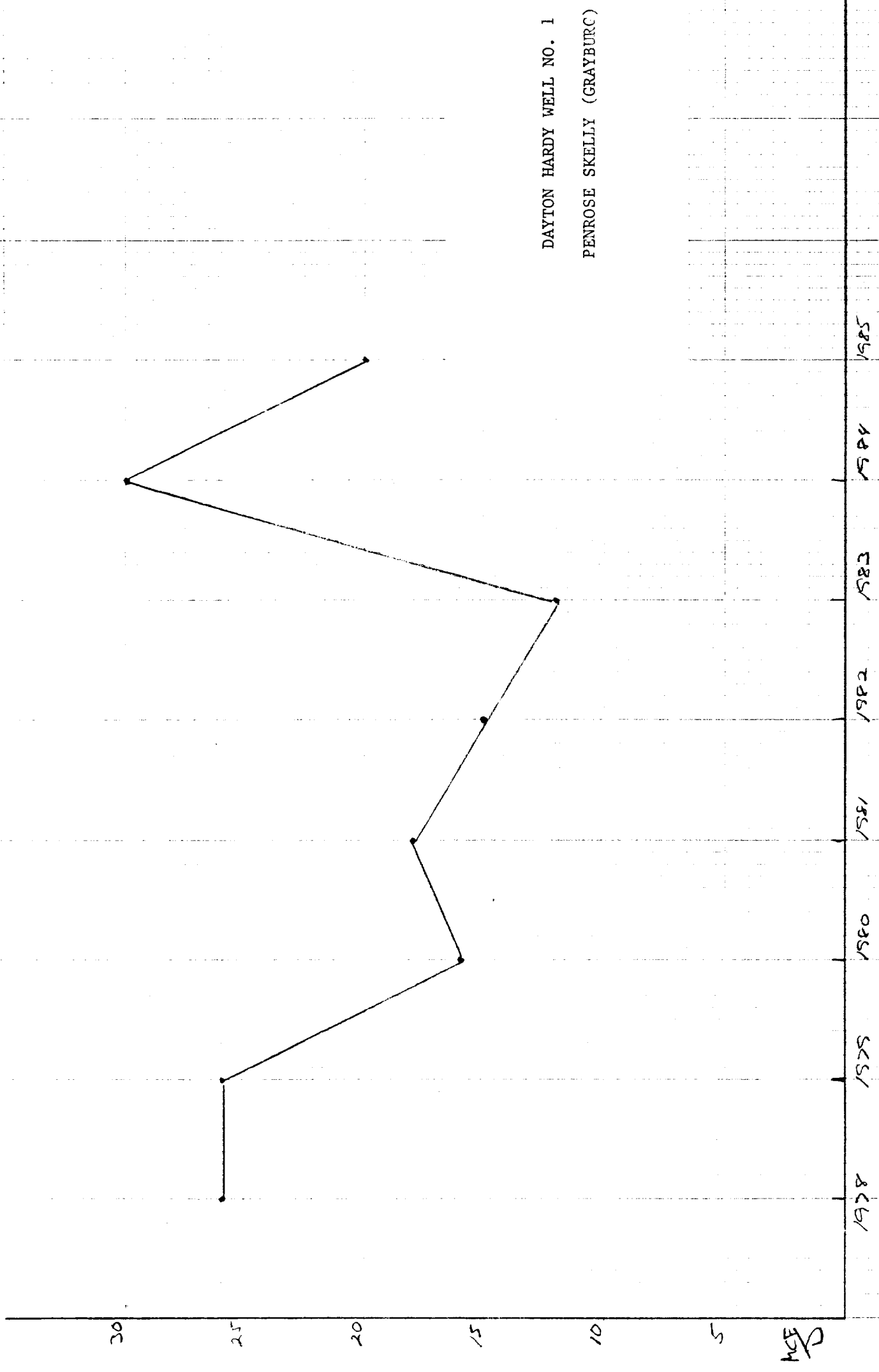
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DAYTON HARDY WELL NO. 1

PENROSE SKELLY (GRAYBURC)



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HONORARY OFFICE

MARATHON OIL COMPANY
Dayton Hardy Well No. 1
Lea County, New Mexico
January 21, 1985
GL 3489'; KB 3492'
Eumont Queen

42 Hour Shut In Pressure Data

[illegible]

Bomb was run per request of Mr. Thomas Zapatka to determine shut in bottom hole pressure. Used Marathon's 2150# element.

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OCS
HUMAN RESOURCES OFFICE

MARATHON OIL COMPANY
Dayton Hardy Well No. 1
Lea County, New Mexico
January 8, 1985
GL 3489'; KB 3492'
Penrose Skelly (Grayburg)

24 Hour Shut In Pressure Data

<u>Depth</u>	<u>Pressure</u>	<u>Δ P</u>	<u>Δ P</u>	<u>Gradient</u>
<u>0</u>	<u>241#</u>	<u></u>	<u></u>	<u></u>
<u>1000'</u>	<u>252#</u>	<u>11#</u>	<u>1000'</u>	<u>.011</u>
<u>2000'</u>	<u>264#</u>	<u>12#</u>	<u>1000'</u>	<u>.012</u>
<u>3000'</u>	<u>270#</u>	<u>6#</u>	<u>1000'</u>	<u>.006</u>
<u>3540'</u>	<u>372#</u>	<u>102#</u>	<u>540'</u>	<u>.188</u>
<u>3750'</u>	<u>412#</u>	<u></u>	<u></u>	<u></u>
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Pressure @ Datum

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13" @ 389'

8 5/8" @ 1249'

7" @ 3494'

3750'

FIELD Drinkard

LEASE & WELL NO. Dayton Hardy Well No. 1

LOCATION 660' FEL & 1980' FSL, Sec. 20, T21S, R37E

COUNTY & STATE Lea County, New Mexico

STATUS Pumping
(Pumping, Flowing, Gas-Lift, etc.)

TD 3750' PBDT KB 3489' GL 3486'

SURFACE CASING 13", 40# set at 389' with 100 sacks

INTERMEDIATE CASING 8 5/8", 32# set at 1249'
with 200 sacks

PRODUCTION CASING 7", 24# set at 3494' with 200 sacks

TUBING 2 3/8", 4.7#, 8rd, J55 from 3.00' - 382'
10V, J55 from 382' - 3649'. Mud joint at bottom of
seating nipple

RODS _____

PUMPING UNIT

PRESENT COMPLETION Penrose Skelly
(Formation and Interval)

Queen/Grayburg Open hole from 3494' - 3750'

HISTORY Drilled and completed in 1938 in the Grayburg from 3675 - 3750'. In 1985 the
Queen was fractured and the Grayburg acidized. Both were then downhole commingled.

PREPARED BY Thomas F. Zapatka DATE March 22, 1985

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