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MAY 17 '89

HOBBS AREA

Amoco Production Company

501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

May 12, 1989

Technical Committee Members
Proposed Eunice Monument West Unit
Addressee List Attached

File: MJH-119-416

Revision of Remaining Reserves
Proposed Eunice Monument West Unit
Lea County, New Mexico

As charged by the Working Interest Owners at the April 11, 1989 Eunice Monument West Unit (EMWU) WIO meeting, please find attached the revisions to the primary reserves for tracts in the proposed unit area. The revisions meet the goal of a compromise position between the current EMWU decline curve analysis and the current proposed Monument Unit "life index" method.

Prior to reassessing remaining reserves associated with each tract in the EMWU area, it was noted that some of the tabulations in the "Oil Participation Values as of 9/30/82" table and resulting calculations in Appendix A of the March 17, 1987 report were in error. A review of remaining reserves as calculated for each production graph indicated the correct values were not transferred to the table. For example, the first production graph was for the Amerada Hess H. W. Andrews lease which produces from the Eumont. Calculated remaining reserves from October 1, 1982 were 40,346 BO. The value reflected in the table for remaining reserves was 33,261 BO. Further review of the table in Appendix A revealed additional minor errors. All corrections have been made, and a revised "Oil Participation Values as of 9/30/82" table is included as Attachment No. 1.

With the corrected table, participation for each Working Interest Owner was calculated using the participation formula for the Eunice Monument South Unit. A comparison of the revised participation calculated from the corrected table to the participation calculated using remaining reserve values from the proposed Monument Unit Technical Committee report indicated Amoco and ARCO continued to have the greatest disparity, while the remaining working interests differed by a maximum of only 0.24%:

BEFORE EXAMINER CATANACH OIL CONSERVATION DIVISION CHEVRON EXHIBIT NO. <u>6</u> CASE NO. <u>10059-61</u>

	Revised Table (5/89)	EMWU Participation Using AHC Values
Amerada Hess	1.6721%	1.79%
Amoco	32.8523	29.66
ARCO	28.5064	31.15
Chevron	19.0641	19.30
Conoco	13.5200	13.49
SWEPI	4.3851	4.61

The corrections made to the "Oil Participation Values as of 9/30/82" table did not satisfy the charge of the Working Interest Owners, indicating additional analysis was needed.

It is recommended to use the decline curve analysis from the EMWU Technical Committee report in combination with a variation of the "life index" concept as used in the analysis of the proposed Monument Unit. From Page 7 of the EMWU Technical Committee report, an economic life of 39 years was estimated for the entire unit area under continued primary operations. The remaining life of each tract was also calculated using the current rate, the economic limit, and the exponential decline rate noted on each production graph. Six of the ten leases which produce from the Grayburg-San Andres had a projected lease life greater than 39 years. The "life index" concept in the proposed Monument Unit was used for leases where conventional decline curve analysis was not applicable. The current rate for a lease without a decline was multiplied by a determined time period (or Life Index, LI) to obtain a value for remaining reserves. The life index value was also used as a "cap" or upper limit for leases which production was on a decline, but whose tract life exceeded the predetermined LI value. Again, the current rate was multiplied by the LI to determine remaining reserves.

The variation to the "life index" method is to continue to use the decline rate values for the EMWU Technical Committee report with a maximum lease life of 39 years from October 1, 1982. It was also noted the Gillully A lease had the shallowest decline rate (3.41%) and the longest life (78.37 years). A review of the lease production indicated a decline rate of 4.7% could be estimated using the third quarter 1970 and fourth quarter 1981 oil production values (Attachment No. 2). This change in the Gillully A lease decline rate, in conjunction with the maximum 39 year life for all tracts under continued primary decline was used to calculate remaining primary reserves (Attachment No. 3).

With the change in remaining reserves, a revised participation table was generated (Attachment No. 4). The calculated Working Interest Owner participation is shown in Attachment No. 5 along with previous values. The method of using a 39 year maximum life for the leases in the EMWU area along with the change in the decline rate on the Gil-

Technical Committee Members

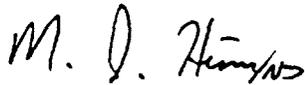
May 12, 1989

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lully A lease satisfies the charge to the Technical Committee, i.e. a compromise position for the remaining reserve parameters.

Also enclosed is a ballot for approval of the Technical Committee work completed to date. This includes the March 17, 1987 report, the February 19, 1988 addendum, and this letter documenting the change in remaining reserves. Upon approval, the Technical Committee work will be submitted to working interest owners for their review and approval. Please respond to the ballot by May 24, 1989. Should additional information be needed, please contact Ken Craig at (713) 556-3210 or Nat Simpson at (713) 556-3263.

Yours very truly,



M. J. Hinn
Technical Committee Chairman

KNC/knc

Attachments

Enclosure

PROPOSED EUNICE MONUMENT WEST UNIT

TECHNICAL COMMITTEE REPRESENTATIVES

ADDRESSEE LIST

Amerada Hess Corporation

Attn: Mr. J. C. Hefley
P. O. Box 2040
Tulsa, OK 74136

Amerada Hess Corporation

Attn: Jim Almrud
100 N.W. 7th Street
Seminole, TX 79360

Amoco Production Company

Attn: M. J. Hinn
P. O. Box 3092
Houston, TX 77253

ARCO Oil and Gas Company

Attn: Jack Lowder
P. O. Box 1610
Midland, TX 79702

Chevron USA Inc.

Attn: Jim Gardner
P. O. Box 670
Hobbs, NM 88240

Chevron USA Inc.

Attn: Ray Vaden
P. O. Box 1635
Houston, TX 77251

Conoco, Inc.

Attn: Jerry Hoover
P. O. Box 460
Hobbs, NM 88240

Shell Western E&P, Inc.

Attn: Mr. Val Brock
P. O. Box 991
Houston, TX 77001

EUNICE MONUMENT WEST UNIT

REVISED "OIL PARTICIPATION VALUES AS OF 9/30/82"

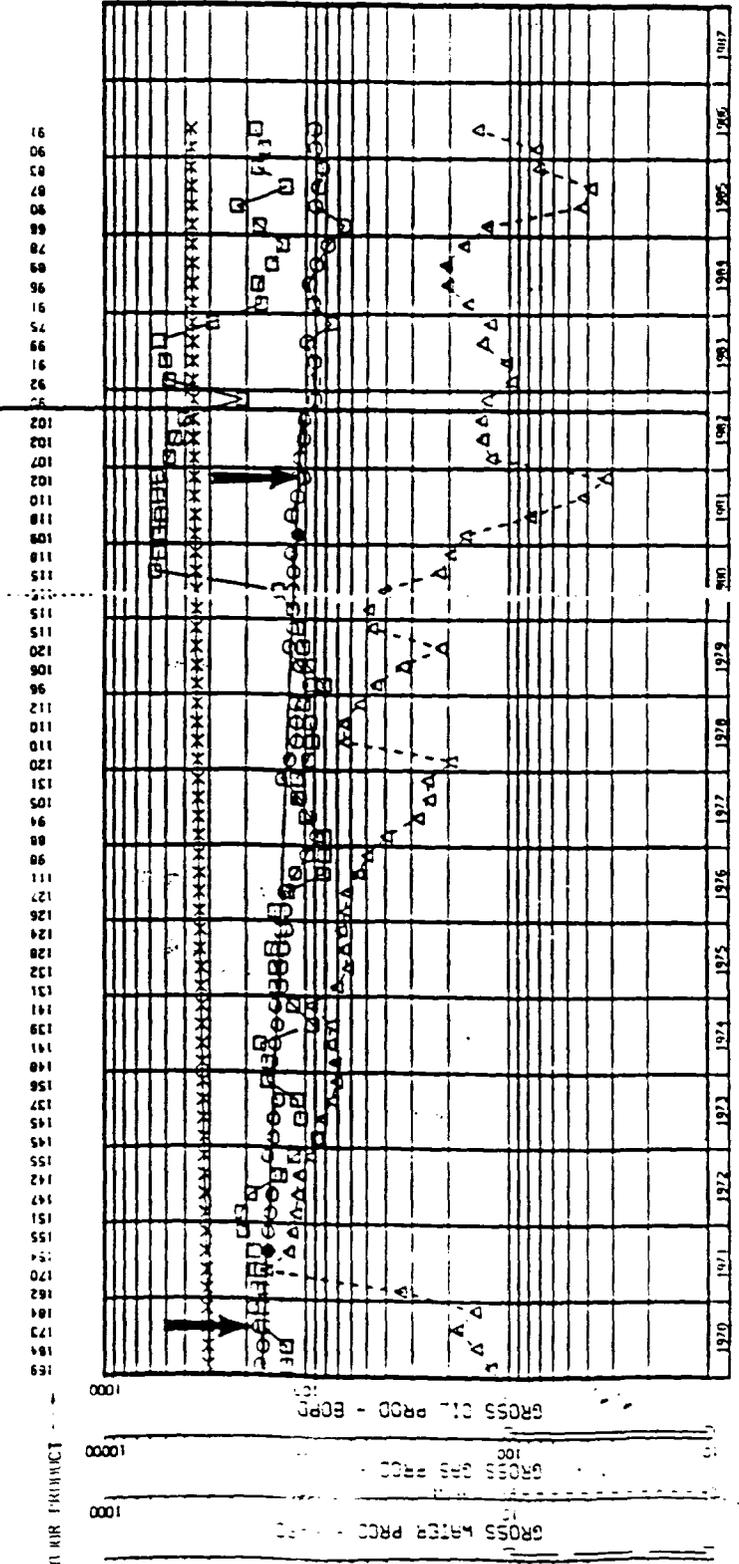
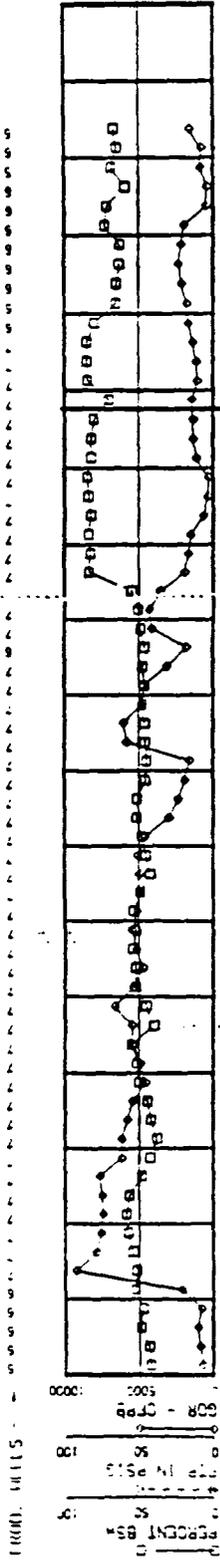
OPERATOR LEASE	EUMONT			GRAYBURG			SAN ANDRES		
	CUM	% RES	% CUM	RES	% RES	% CUM	RES	% RES	% CUM
AMERADA HESS	506,557	34.11924	3.329	40,346	22.52673	0	0	0.00000	0
AMOCO	0	0.00000	0	0	0.00000	3,614,614	995,894	25.90602	28,273
ARCO	0	0.00000	0	0	0.00000	1,036,306	172,936	4.49855	10,568
CHEVRON	0	0.00000	0	0	0.00000	3,003,541	307,521	7.99949	16,859
CONOCO	1,746,858	15.14588	3,742	17,910	25.32142	1,816,884	570,605	14.84305	12,748
SHELL	0	0.00000	0	0	0.00000	1,352,296	121,188	3.15244	5,064
TOTAL	3,192,354	100.00000	14,778	118,250	100.00000	20,307,209	3,844,257	100.00000	163,234

OPERATOR LEASE	EUMONT			GRAYBURG			SAN ANDRES		
	CUM	% RES	% CUM	RES	% RES	% CUM	RES	% RES	% CUM
AMERADA HESS	506,557	2.15560	40,346	1.01819	3.329	1.87010			
AMOCO	3,614,614	15.38162	995,894	25.13293	28,273	15.88264			
ARCO	1,036,306	4.40989	172,936	4.36431	10,568	5.93668			
CHEVRON	3,003,541	12.78126	307,521	7.76077	16,859	9.47071			
CONOCO	625,543	2.66193	172,129	4.34394	5,720	3.21327			
SHELL	755,623	3.21548	41,379	1.04426	2,293	1.28812			
TOTAL	3,543,742	15.16514	588,515	14.85209	16,490	9.26342			
AMERADA HESS	6,283,316	26.73801	1,411,150	35.61256	78,319	43.99647			
AMOCO	370,879	1.57824	30,448	0.76840	1,730	0.97184			
ARCO	997,485	4.24470	17,681	0.44621	2,655	1.49147			
CHEVRON	1,389,661	5.91356	63,320	1.59798	6,712	3.77053			
CONOCO	1,352,296	5.75456	121,188	3.05837	5,064	2.84475			
SHELL	23,499,563	100.00000	3,962,507	100.00000	178,012	100.00000			



INDUSTRY PRODUCTION DATA KATH-TIME FLOIS
 API NO: VARIOUS

WELL: AMOCO GELMULLY A (G-SAI) LOCATION: HOUSTON
 FIELD: EUNICE MONUMENT (G-SAI) RESERVOIR: GS
 OPERATOR: VARIOUS COMP. DATE: 3753,846
 STATE: NM 30 COUNTY: LEA TOT. OIL CUM: 3,999,775
 FIRST PROD: LAST PROD: 06 06 TOT. GAS CUM: PIRFS:
 REQUESTOR: YARITSKY-2IFRAY



Q1 = 152.8 BOPD FROM 2ND QTR OF '71
 Q2 = 110.5 BOPD FROM 1ST QTR OF '81
 : = 9.50 YEARS
 D = .0341 YEAR⁻¹
 Q (10-1-82) = 3040 BOPM
 EL = 210 BOPM
 N = 995,872 B0

$D = \ln(173/102)/11.25 \text{ yrs} = 4.7\%$

1986 10 30 REPORT NUMBER 321

FILENAME: EMMULET

RESERVE CALCULATIONS - MAXIMUM LEASE LIFE EQUAL 39 YEARS
 GILLULLY A LSE DECLINE EQUAL 4.7%

OPERATOR	LEASE	ZONE	DECLINE (%)	Q1 (BOPM)	Q EL (BOPM)	M (BO)
AMERADA HESS	NW ANDREWS	EUMONT	11.57	479	90	40,346
AMOCO	GILLULLY A FED	GB-SA	4.70	3,040	486	652,085
ARCO	MJ BYRD	GB-SA	7.39	1,123	63	172,449
	WP BYRD	GB-SA	7.18	1,990	150	307,521
CHEVRON	GRAHAM STATE H	GB-SA	4.65	697	114	150,452
	RR BELL G	GB-SA	7.83	300	30	41,379
CONOCO	REED B	EUMONT	10.72	340	180	17,910
		GB-SA	3.47	1,830	473	469,280
	SANDERSON A	EUMONT	73.56	212	30	2,969
		GB-SA	7.09	8,710	548	1,381,639
	SANDERSON AB14	EUMONT	6.03	183	30	30,448
	SANDERSON B 1	EUMONT	24.17	173	60	5,610
		GB-SA	16.90	230	60	12,071
	SANDERSON B 14	EUMONT	17.17	360	60	20,967
		GB-SA	8.50	360	60	42,353
SWEPI	STATE E	GB-SA	5.05	570	80	116,436
AREA	TOTAL		13.50			3,463,715

	PARTICIPATION VALUES *				RECOMMENDED PARTICIPATION USING 39 YR LIFE
	(1)	(2)	(3)	(4)	
	REVISED TABLE				
	MARCH 17, 1987 USING CORRECTED				
	TECH. COMM. REPORT REMAINING RESERVES W/AHC VALUES COLUMNS 1 & 3				
		EMMU AREA	AVG. OF		
AMERADA HESS	1.6514 %	1.6721 %	1.79 %	1.72 %	1.73074 %
AMOCO	32.2317	32.8523	29.66	30.94	30.72705
ARCO	28.9705	28.5064	31.15	30.06	29.59665
CHEVRON	19.5553	19.0641	19.30	19.43	19.52167
CONOCO	13.3271	13.5200	13.49	13.41	13.91750
GWEPI	4.2640	4.3051	4.61	4.44	4.50639

* USING THE EUNICE MONUMENT SOUTH UNIT PARTICIPATION FORMULA

BALLOT

As a Representative of the Technical Committee formed to study the proposed Eunice Monument West Unit, I (we) approve the submittal of the Technical Committee Study (which includes the March 17, 1987 report, the February 19, 1988 addendum, and data from the letter dated May 12, 1989 to the Technical Committee representatives) to the working interest owners for their consideration.

Signed: _____

Title: _____

Company: _____

KC 11
MJA
JAA
JCP



Amoco Production Company

501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

J.C. Allen
Regional Unitization and
Proration Manager

July 6, 1989

Working Interest Owners
Proposed Eunice Monument West Unit (EMWU)
(Addressee List Attached)

File: JCA-191-416

Gentlemen:

EMWU/EMSU Expansion Ballot (7/6/89)
Lea County, New Mexico

This is to advise you that the ballot of May 12, 1989, for submittal of the Technical Committee Study (which includes the March 17, 1987 report, the February 19, 1988 addendum, and data from the May 12, 1989 letter to the Technical Committee representatives) has been approved by the Eunice Monument West Unit (EMWU) Technical Committee. Attached for your approval is a Working Interest Owner ballot to (1) approve the Technical Committee Study, (2) approve the use of the Eunice Monument South Unit (EMSU) participation formula for the basis of EMWU participation in the expanded EMSU, and (3) authorize Amoco, as EMWU expediter, to apply to Chevron (EMSU operator) for expansion of the EMSU to include the EMWU area.

We ask that you return your ballot to the undersigned at the letterhead address as soon as possible. This will expedite the formal application to Chevron for EMSU expansion and result in an expansion effective date as early as possible in 1990. If you have any questions, please call Dan Janik at 713/556-3930.

We appreciate your prompt attention to this important unitization matter.

Yours very truly,

DAJ

Attachments

BEFORE EXAMINER CATA/NACH
OIL CONSERVATION DIVISION
CHEVRON EXHIBIT NO. <u>7</u>
CASE NO. <u>10059-61</u>