Mid-Continent Region
Production United States

Marathon Oil Company

P.O. Box 552
Midland, Texas 79702
Telephone 915/682-1626

May 7, 1991

WORKING INTEREST OWNERS
Proposed Tamano (BSSC) Unit
(Mailing List Attached)

RE: Approval of Minutes
Proposed Tamano (BSSC) Unit
Working Interest Owners Meeting
April 23, 1991

Enclosed are the amended minutes from the above-referenced meeting. Changes to the original copy you received with the letter of April 26, 1991 have been suggested by working interest owners to be as follows:

1. Page 2, Section III, Paragraph 2. To the end of the paragraph, the following sentence was added: "HEYCO stated that they were not staffed like Marathon, and would need time to fully evaluate study."

2. Page 2, Section VI, Paragraph 1. To the end of the paragraph, the following sentence was added: "The agenda did not indicate that a vote would be taken on a final formula; no one was aware that this would be a topic in the second meeting."

These changes have been incorporated into the enclosed copy. You are asked to sign both originals of this letter approving the enclosed minutes and return one original to Marathon Oil Company at the letterhead address by May 21, 1991. Your time and consideration of this matter are greatly appreciated.

Very truly yours,

MARATHON OIL COMPANY

D. J. Loran
Engineering Manager
Midland Operations

APPROVED this _____ day of _____, 1991.

BY: _____

ITS: _____

DDT/TAMANO.051.274/sk

MINUTES

PROPOSED TAMANO (BSSC) UNIT
WORKING INTEREST OWNERS MEETING

APRIL 23, 1991

I. Meeting convened at 10:10 A.M. CDT. Mr. D. J. Loran, Engineering Manager, opened the meeting by welcoming everyone. Mr. Loran reviewed the agenda which is outlined as follows:

1. Approval of minutes from March 25, 1991 Working Interest Owners Meeting.
2. Review of Pre-Unitization Voting Procedure.
3. Ratify Feasibility Study.
4. Vote on Unit Area.
5. Vote on Unitized Interval.
6. Discussion of Final Participation Formula.
7. Any other discussion.

After reviewing the agenda, Mr. Loran opened the floor for discussion of the minutes from the March 25, 1991 Working Interest Owners Meeting. There were no indications from Working Interest Owners that revisions were necessary. Mr. Ed Hudson of Hudson and Hudson moved to accept the minutes. Mr. R. F. Blucher of Pennzoil seconded the motion and the motion was passed by all parties attending. It is noted here that all working interest was represented at this meeting except for the Yates Energy group. (A list of attendees is attached.)

II. Mr. Loran then presented the results of Ballot 3, which pertained to the voting procedure for pre-unitization matters. He indicated that a consensus was reached using a formula in which each Working Interest Owner's voting percentage would be the sum of four percent of surface acres, two percent of usable wellbores, 60 percent of the average daily oil rate between October 1, 1990 and March 31, 1991, and 34 percent estimated remaining gross primary oil production as of April 1, 1991. A consensus would be reached if 75 percent of the voting interest approved the subject matter. Mr. Loran explained that 84.32661 percent of the voting percentage approved this formula and that a consensus procedure had therefore been established. Results of Ballot 3 are attached.

Mr. Blucher stated that Pennzoil did not vote on Ballot 3 because they wanted an approval requirement of 80 percent of the voting interest plus at least three parties approving on any given matter.

Mr. R. F. Nokes of HEYCO stated that HEYCO does not like any formula that includes production rate as a parameter. He expressed further concerns that other parameters, such as surface acres and usable wellbores, should be considered.

Mr. Loran reviewed an overhead slide of a table of possible parameters (attached). He indicated that surface acres and usable wellbores were not representative of production performance in this reservoir. He

further explained that in a meeting between Marathon and the BLM, the BLM, who is a royalty owner, did not like surface acres and usable wellbores. Mr. Loran then reviewed an overhead slide of the results of Ballot 3.

Mr. Nokes reiterated his objection to six-month average daily oil rate as a parameter. He also stated an objection to estimated reserves as the reserves are reported in the feasibility study. He felt that the estimated remaining primary reserves for the HEYCO-operated wells, as presented in the study, were too low. He indicated that the formula gives Marathon too much leverage.

Mr. T. W. Gunn of HEYCO asked Mr. Loran about the meeting with the BLM. Mr. Loran expanded on the conversation.

A vote was then called for by Mr. Loran on a pre-unitization voting procedure requiring 80 percent approval plus three parties. This vote was approved by five voting groups representing 94.13821 percent of the voting interest. Kerr-McGee and the HEYCO group were the only two attending groups to disapprove the vote. Their voting percentage totals 4.01117 percent. Yates Energy, with a 1.85062 percent vote, was absent. (Results of vote are attached.)

III. Mr. Loran opened the floor for discussion of the feasibility study at this time.

Mr. Nokes expressed concerns about the computer model results that were presented in the feasibility study. He also expressed concerns about oil rates being increased from 230 BOPD per well to 460 BOPD per well on the Marathon-operated leases, and increasing GOR. Mr. Nokes also protested the lack of opportunity to discuss results of the model, especially porosity distribution, with Marathon. HEYCO stated that they were not staffed like Marathon, and would need time to fully evaluate the study.

Mr. Bill Hollingshead of Pennzoil indicated he was also skeptical of the model at first. He therefore came to Marathon's office in Midland for a few days to review model input data and results. He satisfied himself that the model was a good predictive tool.

Mr. Nokes still expressed concern about the model and about the high oil rates from Marathon-operated wells.

Mr. Randall Hudson of Hudson and Hudson commented he did not understand why HEYCO objected to high oil rates. He indicated that each company is realizing production from wells as the wells are capable of delivering. If HEYCO-operated wells could produce 460 BOPD per well, then HEYCO would surely have produced them at that rate. Because Marathon-operated wells have produced at the top allowable rate for long periods of time, and

because HEYCO-operated wells could not, the Marathon-operated wells were obviously in a better part of the reservoir and should not be penalized.

Mr. Nokes stated that HEYCO still considered rate to be unfair.

Mr. Blucher asked HEYCO how surface acres and usable wellbores related to production.

Mr. Nokes responded that no relationship exists. However, HEYCO had other uses for the wellbores, and should be credited because of the well's potential use.

Mr. Loran moved to accept the feasibility study and the data contained within the study. Mr. Blucher seconded the motion. The motion passed with a 91.96217 percent approval and four parties. Results of the vote are attached.

IV. Unit area was then discussed. Mr. Loran moved to accept the area as it is described in the feasibility study. Mr. R. Hudson seconded the motion. All seven voting groups in attendance, representing 98.14938 percent, approved the motion. (Results of vote are attached.)

V. Unit interval was the next order of business. Mr. Hollingshead expressed concerns about including the entire Bone Spring Second Carbonate, but after some consideration, thought, that for practical purposes, the entire interval was good.

Mr. Nokes asked for a footage interval. Mr. Loran presented an overhead describing the interval as being 7,905 feet to 8,190 feet in the Johnson "B" Federal Well No. 4 (Marathon, et. al.). Mr. Blucher pointed out that the Unit Agreement indicated the top of the interval to be 7,908 feet. The ballot was corrected to 7,908 feet.

Mr. Loran moved to accept the unitized interval. Mr. Rick Carter of Pennzoil seconded the motion. All seven parties, representing 98.14938 percent, approved the motion. (Results of vote are attached.)

VI. Regarding the final participation formula, the Pennzoil group stated they are comfortable with the formula for the pre-unitization procedure as a final participation formula.

Mr. R. J. Gasper of Wainoco stated that Wainoco is in general agreement with Pennzoil.

Mr. Nokes again stated HEYCO's objection to the formula for the previously discussed reasons.

Mr. Loran asked for feedback from other companies. Mr. David Newell of ARCO indicated that ARCO was not aware a final formula would be voted on, and if parameters such as OOIP by tract would be provided. The agenda did not indicate that a vote would be taken on a final formula; no one was aware that this would be a topic in the second meeting.

Mr. Stephen Landgrave of Kerr-McGee stated the formula was unacceptable.

The Hudson and Hudson group state the formula was acceptable.

Mr. Nokes indicated that HEYCO would like to submit a formula, but it would take 3 to 4 weeks to generate one. He asked if voting percentages were determined using 230 BOPD per well as a maximum rate. Mr. Loran indicated that using 230 BOPD per well made little difference. Mr. Nokes then asked why the average rate over the life of the well was not used as a parameter. Mr. Loran answered that several parameters were reviewed, and that the parameters in the formula seemed reasonable and acceptable. Mr. Loran felt the formula was fair to everyone. Mr. Blucher added that the parameters in the formula are normally used in unitization processes.

Mr. Carter motioned that the pre-unitization formula be used as the final participation formula. Mr. R. Hudson seconded the motion. Four parties representing 91.96217 percent approved the motion. Two parties representing 4.01117 percent disapproved. One party representing 2.17604 percent abstained. (Results of vote are attached.)

VII. Mr. Loran then initiated discussion of Unit Agreement and Unit Operating Agreement. He asked for revisions back as soon as possible. Approval of these documents sufficiently prior to May 28, 1991 would enable Marathon to file on May 28, 1991 for the June 20, 1991 New Mexico Oil Conservation Division docket.

Mr. Gunn asked what basis for 75 percent acceptance would be used before Marathon could file with the NMOCD. Mr. Loran indicated the final participation formula would be used.

Mr. Blucher asked what model document was used to prepare the UA and UOA. Mr. T. C. Lowry of Marathon said that no one particular model was used. Rather, actual agreements from the North Monument (Grayburg/San Andres) Unit and Arrowhead (Grayburg) Unit were used as a basis.

Mr. Landgrave then stated that, for the record, Kerr-McGee would approve Ballot 2A if approved by other parties. Mr. Nokes indicated HEYCO would also approve Ballot 2A.

Mr. Loran asked the Pennzoil group about the status of Pennzoil's well proposal in the SE SE of Section 10, T-18-S, R-31-E. Mr. Hollingshead

answered that Pennzoil was prepared to withdraw the well proposal, and would do so in writing soon.

Mr. R. Hudson then stated that Hudson and Hudson, although abstaining from Ballot 2, would have approved Ballot 2C.

Mr. Loran then invited all attendees to stay for lunch.

ARCO indicated they will have a vote other than "abstain" prior to Marathon's filing with the NMOCD.

Mr. Loran motioned to adjourn the meeting. Mr. Blucher seconded the motion. All seven parties approved the motion.

Following adjournment, Mr. T. W. Wesling and Mr. D. D. Taimuty, both of Marathon, provided copies of the decline curves for all available wells to Mr. Newell and to Mr. Gunn. The four gentlemen then reviewed each of the HEYCO-operated wells in detail. No objections to the reserve calculations as presented in the feasibility study were made.

TAMANO WORKING INTEREST OWNERS MEETING
ATTENDEES LIST
APRIL 23, 1991

NAME	COMPANY OR INDIVIDUAL REPRESENTED	TITLE
Randy Hodgins	Pennzoil	Engineer
Rick Carter	Pennzoil	Division Engineer
Bill Hollingshead	Pennzoil	Exploration Advisor
Bob Blucher	Pennzoil	Landman
Ed Hudson	Hudson and Hudson	Attorney
Randall Hudson	Hudson and Hudson	Geologist
Leonard Carpenter	HEYCO	Materials Manager
Ray F Nokes	HEYCO	Production Manager/Engineer
Tim W. Gunn	HEYCO	Petroleum Engineer
R. J. Gasper	Wainoco	Engineering Manager
David Newell	ARCO	Senior Engineer
Stephen Landgrave	Kerr-McGee	Senior Staff Engineer
Randy J. Bruner	Marathon Oil Company	Region Development Geologist
Randal Wilson	Marathon Oil Company	Landman
Tom Wesling	Marathon Oil Company	Production Engineer
Greg Wilson	Marathon Oil Company	Development Geologist
Tim Robertson	Marathon Oil Company	Land Supervisor
Dan Taimuty	Marathon Oil Company	Reservoir Engineer
Dave Petro	Marathon Oil Company	Reservoir Engineering Supervisor
David J. Loran	Marathon Oil Company	Engineering Manager

DDT/TAMANO.048.274/sk

UNITIZATION PARAMETER TABLE
WORKING INTEREST OWNERS MEETING
APRIL 23, 1991

PROPOSED TAMANO (BSSC) UNIT
TAMANO (BONE SPRING) FIELD
EDDY COUNTY, NEW MEXICO

WELL	SURFACE ACRES	%	USABLE WELLBORES	%	CUMULATIVE OIL THRU 3/91*	%	OIL RATE 10/90-3/91*	%	DAILY OIL RATE BOPD 10/90-3/91*	%	EST PRIM REM OIL FROM STUDY THRU 3/91**	%	EST. ULT. OIL FROM STUDY AS OF 4/91**	%
JBF #3	40	4.55	1	5.26	12,285	0.84	742	0.21	4.08	0.18	3,664	0.52	16,154	0.75
JBF #4	40	4.55	1	5.26	235,214	16.03	17,254	4.95	95.33	4.20	24,197	3.45	262,008	12.09
JBF #5	40	4.55	1	5.26	47,969	3.27	1,887	0.54	10.37	0.46	10,749	1.53	59,215	2.73
JBF #6	40	4.55	1	5.26	239,804	16.34	56,088	16.08	315.10	13.88	89,422	12.77	335,069	15.46
JBF #7	40	4.55	1	5.26	205,931	14.04	14,073	4.03	77.32	3.41	145,504	20.77	360,816	16.65
JBF #8	40	4.55	1	5.26	176,690	12.04	21,051	6.03	116.30	5.12	37,759	5.39	212,328	9.80
JBF #9	40	4.55	1	5.26	73,026	4.98	51,740	14.83	297.36	13.10	65,178	9.31	138,694	6.40
JBF #10	40	4.55	1	5.26	4,002	0.27	4,002	1.15	22.48	0.99	7,055	1.01	11,104	0.51
BRUG #1	40	4.55	1	5.26	32,604	2.22	1,561	0.45	8.58	0.38	11,663	1.67	44,629	2.06
BRUG #2	40	4.55	1	5.26	87,583	5.97	50,522	14.48	287.06	12.64	76,419	10.91	166,074	7.66
STETCO #1	40	4.55	1	5.26	84,102	5.73	74,972	21.49	418.84	18.45	75,599	10.79	142,333	6.57
STETCO #2	40	4.55	1	5.26	1,527	0.10	1,527	0.44	15.27	0.67	12,775	1.82	14,395	0.66
STETCO #3	40	4.55	1	5.26	29,273	2.00	29,273	8.39	464.65	20.46	85,396	12.19	113,033	5.21
STETCO #4	40	4.55	0	0.00	0	0.00	0	0.00	0.00	0.00	0	0.00	0	0.00
STETCO #5	40	4.55	0	0.00	0	0.00	0	0.00	0.00	0.00	0	0.00	0	0.00
STETCO #6	40	4.55	0	0.00	0	0.00	0	0.00	0.00	0.00	0	0.00	0	0.00
AJ 11 #1	40	4.55	1	5.26	37,684	2.57	4,577	1.31	26.15	1.15	14,070	2.01	51,359	2.37
AJ 11 #2	40	4.55	1	5.26	19,689	1.34	1,421	0.41	8.46	0.37	1,798	0.26	21,932	1.01
MLD 11 #2	40	4.55	1	5.26	13,343	0.91	1,392	0.40	8.34	0.37	7,102	1.01	20,261	0.93
MLD 11 #3	40	4.55	1	5.26	37,489	2.56	3,809	1.09	21.52	0.95	5,821	0.83	43,489	2.01
MLD 11 #4	40	4.55	1	5.26	123,561	8.42	9,583	2.72	53.39	2.35	17,503	2.50	140,784	6.50
MLD 11 #5	40	4.55	1	5.26	5,365	0.37	3,520	1.01	20.00	0.88	8,763	1.25	13,837	0.64
	880	100.00	19	100.00	1,467,141	100.00	348,914	100.00	2,271	100.00	700,437	100.00	2,167,514	100.00

*-PRODUCTION ESTIMATED FOR THE MONTHS OF JAN. THRU MAR. AS DETAILED IN THE WATERFLOOD FEASIBILITY STUDY
**-MEYCO'S MARCH PRODUCTION WAS ESTIMATED BASED ON FEBRUARY'S AVERAGE DAILY OIL RATE

PROPOSED TAMANO (BSSC) UNIT
TAMANO FIELD
EDDY COUNTY, NEW MEXICO
BALLOT 3
VOTE TO ESTABLISH VOTING PROCEDURE FOR PRE-UNIT MATTERS

WORKING INTEREST OWNER	BALLOT 3	APPROVED	DISAPPR.	ABSTAIN
ARCO	2.17604	2.17604	-	-
HEYCO, et al	3.27402	-	3.27402	-
HUDSON & HUDSON, et al	20.35541	20.35541	-	-
KERR McGEE	0.73715	-	0.73715	-
MARATHON	54.81112	54.81112	-	-
PENNZOIL	9.81160	-	-	-
WAINOCO	6.98404	6.98404	-	-
YATES ENERGY, et al	1.85062	-	-	-
TOTAL	100.00000	84.32661	4.01117	0.00000

PROPOSAL TO BE VOTED ON BY
THE WORKING INTEREST OWNERS

Proposed Tamano (BSSC) Unit
Tamano (Bone Spring) Field
Eddy County, New Mexico
April 23, 1991

Item: Propose that the consensus procedure for pre-unit matters require 80% voting approval plus at least three parties approving the matters.

MOVED BY: D. J. Loran SECONDED BY: R. F. Blucher

	APPROVE, %	DISAPPROVE, %	ABSTAIN
Atlantic Richfield	2.17604		
HEYCO, et. al.		3.27402	
Hudson & Hudson, et. al.	20.35541		
Kerr McGee		0.73715	
Marathon	54.81112		
Pennzoil	9.81160		
Wainoco	6.98404		
Yates, et. al.	ABSENT		
TOTAL	94.13821	4.01117	

PROPOSAL TO BE VOTED ON BY
THE WORKING INTEREST OWNERS

Proposed Tamano (BSSC) Unit
Tamano (Bone Spring) Field
Eddy County, New Mexico
April 23, 1991

Item: The Working Interest Owners of the proposed Tamano (BSSC) Unit accept the Waterflood Feasibility Study of March, 1991 and the conclusions and recommendations set forth within the study.

MOVED BY: D. J. Loran SECONDED BY: R. F. Blucher

	APPROVE, %	DISAPPROVE, %	ABSTAIN
Atlantic Richfield		2.17604	
HEYCO, et. al.		3.27402	
Hudson & Hudson, et. al.	20.35541		
Kerr McGee		0.73715	
Marathon	54.81112		
Pennzoil	9.81160		
Wainoco	6.98404		
Yates, et. al.	ABSENT		
TOTAL	91.96217	6.18721	

PROPOSAL TO BE VOTED ON BY
THE WORKING INTEREST OWNERS

Proposed Tamano (BSSC) Unit
Tamano (Bone Spring) Field
Eddy County, New Mexico
April 23, 1991

Item: The Working Interest Owners of the proposed Tamano (BSSC) Unit accept as the unit area the acreage described as the SE/4 and the S/2 of the NE/4 of Section 10, and all of Section 11, T-18-S, R-31-E, Eddy County, New Mexico.

MOVED BY: D. J. Loran SECONDED BY: R. Hudson

	APPROVE, %	DISAPPROVE, %	ABSTAIN
Atlantic Richfield	2.17604		
HEYCO, et. al.	3.27402		
Hudson & Hudson, et. al.	20.35541		
Kerr McGee	0.73715		
Marathon	54.81112		
Pennzoil	9.8116		
Wainoco	6.98404		
Yates, et. al.	ABSENT		
TOTAL	98.14938		

PROPOSAL TO BE VOTED ON BY
THE WORKING INTEREST OWNERS

Proposed Tamano (BSSC) Unit
Tamano (Bone Spring) Field
Eddy County, New Mexico
April 23, 1991

Item: The Working Interest Owners of the proposed Tamano (BSSC) Unit accept as the unitized interval the Bone Spring Second Carbonate formation, which is described as the interval from 7,908' to 8,190' in the Johnson "B" Federal Well No. 4 (Marathon Oil Company) located in Section 11, T-18-S, R-31-E, Eddy County, New Mexico. This interval is described in the Waterflood Feasibility Study of March, 1991.

MOVED BY: D. J. Loran SECONDED BY: R. Carter

	APPROVE, %	DISAPPROVE, %	ABSTAIN
Atlantic Richfield	2.17604		
HEYCO, et. al.	3.27402		
Hudson & Hudson, et. al.	20.35541		
Kerr McGee	0.73715		
Marathon	54.81112		
Pennzoil	9.81160		
Wainoco	6.98404		
Yates, et. al.	ABSENT		
TOTAL	98.14938		

PROPOSAL TO BE VOTED ON BY
THE WORKING INTEREST OWNERS

Proposed Tamano (BSSC) Unit
Tamano (Bone Spring) Field
Eddy County, New Mexico
April 23, 1991

Item: Use the pre-unitization voting formula as the final participation formula for the proposed Tamano (BSSC) Unit.

MOVED BY: R. Carter SECONDED BY: R. Hudson

	APPROVE, %	DISAPPROVE, %	ABSTAIN
Atlantic Richfield			2.17604
HEYCO, et. al.		3.27402	
Hudson & Hudson, et. al.	20.35541		
Kerr McGee		0.73715	
Marathon	54.81112		
Pennzoil	9.81160		
Wainoco	6.98404		
Yates, et. al.	ABSENT		
TOTAL	91.96217	4.01117	2.17604