

MALLON OIL COMPANY

AUTHORIZATION FOR EXPENDITURE

Well Name and Number Amoco-Red Bluff-Federal #3 AFE NO. _____
 County Eddy State New Mexico Prospect Name Pecos River
 Section 28 TWP 26S RGE 29E Well Location NW/4 NE/4
 Field Brushy Draw Objective Formation Cherry Canyon Depth 5,200'

DETAILS OF COST ESTIMATE

910 & 920 INTANGIBLE COSTS

		DRY HOLE	PRODUCER
101	Damages _____ Losses _____	\$ --	\$ --
102	Roads & Location _____	5,000	6,000
103.1	Mobilization/Demobilization Incl. _____	--	--
103.2	Drilling-Footage <u>5200</u> ft. @ <u>\$7.85</u> /ft	40,820	40,820
103.3	Daywork <u>1</u> days WDP. @ <u>3200</u> /day:	3,200	3,200
103.4	Turnkey Contract <u>11/A</u>	--	--
201	Completion Unit <u>6</u> days @ <u>\$1,300</u>	--	7,800
106	Mud _____ Chemicals _____	2,500	2,500
107	Power, Water & Fuel _____	3,000	6,500
108	Equipment Rental _____	3,000	6,000
109	Coring _____ Testing _____	--	--
140	Logging _____	7,000	7,000
111	Cementing Services _____	5,000	14,500
112	Consultants _____	2,000	4,400
115	Trucking & Hauling _____	500	1,500
117	Other Costs _____ Contingency 5%	3,900	7,200
118	Administrative Overhead _____	2,000	4,500
125	Bits _____ Incl. _____	--	--
130	Mud Logging _____	4,500	4,500
202	Well Stimulation <u>37,000</u> Perforation <u>4000</u>		41,000
165	Abandonment Costs _____	--	
TOTAL INTANGIBLE DRILLING COSTS		\$ 82,420	\$157,420

930 TANGIBLE EQUIPMENT COSTS

299	Surface Casing <u>450</u> ft <u>8 5/8"</u> size @ <u>\$9.00</u> /ft	\$ 4,050	\$ 4,050
300	Intermediate Csg. <u>--</u> ft <u>--</u> size @ <u>\$ --</u> /ft	--	--
301	Production Csg. <u>5,200'</u> ft <u>5 1/2"</u> size @ <u>\$6.00</u> /ft		31,200
302	Tubing & Attachments <u>5,200'</u> <u>2 7/8"</u> @ <u>1.50</u>		7,800
303	Rods & Pumps _____		8,000
304	Well Head Equipment _____	600	1,500
305	Flowlines <u>4,500'</u> x <u>.75</u>		3,375
306	Installation <u>4,500'</u> x <u>.50</u>		2,250
307	Pumping Unit & Engines _____		25,000
308	Tank Battery & Fittings _____		--
309	Non-Controllable Equipment _____		--
310	Treaters-separators _____		--
311	Buildings _____		--
312	Other Equipment _____ Contingency 5%		4,200

BEFORE EXAMINER CATANACH
 OIL CONSERVATION DIVISION

AFE Date: _____

MICHELL EXHIBIT NO. 3

CASE NO. 9868

TOTAL TANGIBLE EQUIPMENT COSTS

\$ 4,650 \$ 87,375

TOTAL COST

\$ 87,070 \$244,795

FIELD/PROSPECT Brushy Draw-Delaware/Pecos River

WELL NAME Amoco-Red Bluff-Federal #3

LOCATION 330' FNL, 1885' FEL, (NW/4 NE/4), Section 28, T26S, R29E

COUNTY, STATE Eddy County, New Mexico

CONTRACTOR (TENTATIVE) CapStar Drilling

LEASE NUMBER
1269

PROPERTY NO.
NW-01-17

PREPARED BY: DATE:
Joe H. Cox, Jr. C6-05-89

APPROVED BY: DATE:
Kevin M. Fitzgerald C6-05-89

APPROVED BY: DATE:

ANTICIPATED START/STOP DATES

COST ESTIMATE	TANGIBLE EXPENSE	INTANGIBLE EXPENSE	TOTAL
DRILLING-CASING POINT _____	\$ 4,650	\$ 82,420	\$ 87,070
DRILLING-COMPLETION _____	\$ 82,725	\$ 75,000	\$ 157,725
WORKOVER _____	\$ _____	\$ _____	\$ _____
OTHER (SPECIFY) _____	\$ _____	\$ _____	\$ _____
TOTAL COSTS	\$ 87,375	\$ 157,420	\$ 244,795

PROJECT DESCRIPTION

Under the terms of the Operating Agreement Mallon Oil Company proposes the drilling of the above captioned well. Well is to be drilled through the Williamson Sand Member of the Cherry Canyon Formation to a total depth of approximate 5,200'. The estimates of costs are based on actual bids and historical costs, however are estimates only and subject to overruns. Partners will be notified if the cost exceeds authorized amounts by 10% or more.

ATTACH PROGNOSIS AND COST BREAKDOWN

COST SHARING

DCP

ACP

George Mitchell, Jr.	28.46	\$ 24,780	28.46	\$ 44,889
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PARTNER APPROVAL

COMPANY:

SIGNATURE:

DATE:

George Mitchell, Jr.

PLEASE RETURN THIS COPY
TO MALLON OIL COMPANY

MALLON OIL COMPANY

1099 18th Street, Suite 2750, Denver, Colorado 80202
(303) 293-2333

July 17, 1989

Mr. George Mitchell, Jr.
Mr. Terry Lewis
P.O. Box 50682
Midland, TX 79710

Dear George and Terry:

Enclosed is some of the geological information we discussed pertaining to the selection of our next Brushy Draw drillsite. As I mentioned the maps are pretty informal, I have just done pencil revisions on some old maps as new well data has become available.

The net isopach of density porosity greater than 20% has been a good map for tracking the primary channels through the field. There have been wells completed outside the zero line of this map that have done reasonably well within the field but all of the best field producers have been on the better porosity trends. Our #11 well, which was drilled away from the channel thread and affected depletion-wise by existing producers is an example of what we are trying to avoid drilling at the present time. Under our present economics and with a 5% escalation scenario that well is only projected to produce a total of 24,000 BO. On an undiscounted basis we expect to lose over \$140,000 on that well.

The #13 well, which is the key well to either of the proposed locations we discussed, falls within the channel trend and is expected to produce around 56,000 BO. The economic projection on the #13 is nothing to get very excited about but a well of this type should allow development to proceed.

At least part of the improvement in projected reserves for the #13 over the #11 is probably due to a lesser degree of pressure depletion at that field step-out location as well as a somewhat higher structural position. An example of the importance of these factors can be seen in the #14 well which showed relatively poor log porosities in the lower portion of the Williamson Sand, which comprises the bulk of the field pay. The #14 should produce over 45,000 BO which, again using the actual current economics, will place the well somewhat short of payout.

Mallon is presently taking some measures to improve the producing economics such as on-lease saltwater disposal, but it will still be very important to optimize each additional location. The Amoco-Red Bluff-Federal #3 site was selected for it's position on the projected

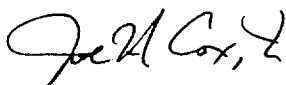
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channel trend it's distance from areas of large volumes of withdrawals, and it's structurally higher location. The channel trend as defined by the >20% porosity map narrows and is forced on a more northeasterly track as a result of the most recently drilled Amoco-Red Bluff-Federal #1 well. The Amoco-Red Bluff-Federal #2 site could be included in an interpretation of the channel but I feel that the #3 site would be more likely to encounter a substantial portion of the full channel thickness. Since the basin slope at the time of deposition of the Williamson Sand (and other Delaware horizons) was pretty consistently to the southwest in the Brushy Draw Field vicinity I anticipate that if the channel continues it will turn that direction. This adds some risk to the Amoco-Red Bluff-Federal #3 site, but with the high porosities encountered in the #13 well indicating it to be within the trend I doubt the channel would turn sharply enough to exclude the proposed site.

If you have any questions, please feel free to call.

Sincerely,

MALLON OIL COMPANY

A handwritten signature in dark ink, appearing to read "Joe H. Cox, Jr.", with a stylized flourish at the end.

Joe H. Cox, Jr.
Production Manager

JHC:er
Enclosure(s)