

BENSON-MONTIN-GREER DRILLING CORP.

221 PETROLEUM CENTER BUILDING, FARMINGTON, NM. 87401 505-325-8874

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March 12, 1988

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To: CANADA OJITOS UNIT
WORKING INTEREST OWNERS

Re: CANADA OJITOS UNIT
RIO ARRIBA COUNTY, NEW MEXICO:
REQUEST FOR APPROVAL OF INSTALLATION
OF GAS PROCESSING PLANT:
AFE ENCLOSED

With reference to our letter of February 20, we now request approval of installation of a gasoline plant.

Enclosed is AFE covering the plant costs. We would appreciate your reviewing this and responding at your earliest convenience.

As noted in our letter of February 20 and set out on the AFE, each owner's approval of the AFE is conditioned upon approval of the Oil Conservation Commission to expansion of the pressure maintenance project.

We are still working on the various plant design options, including acquisition of a used plant and modifying it; so we do not have a precise cost estimate yet; however we feel certain that costs can be held within the AFE - in fact we anticipate the final cost will be substantially less than that shown on the AFE. For the reasons of timing described in our February 20 letter, we request your approval now prior to our settling on a final design and cost. In this respect we ask that you rely on our judgment and Sun's experience and expertise in these matters.

In general with respect to our recommended method of operation and plant economics, we note that it is not our intention to process gas and market the residue directly. Rather, to the extent practical, it is our intention, and recommendation to the unit owners, that the pressure maintenance project be continued. From time to time we anticipate it will be necessary to market some gas for the reasons previously outlined; but for the most part we hope to continue the pressure maintenance project much as it has been carried on in the past. When gas is marketed, it will not be marketed from the tailgate

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of the plant but rather will be that produced from the wells without going through the plant.

This means that plant economics will not be based on the "margin" - as is ordinarily the case. Rather the income from the plant liquids will be over and above any income which the unit owners would otherwise realize: this will be particularly true the first two or three years during "payout" of the facility.

We are thinking about processing approximately 10,000 MCF a day of formation gas. Because of the simplicity of the overall system from a practical day-to-day operation of the plant, the wells and their gas lift system, we are considering treating the entire gas flow stream and using stripped gas for gas lift. Preliminary results from laboratory analyses indicate an approximate economic balance if the gas is handled this way as opposed to keeping the flow stream segregated. The main additional cost here would be recompression of the gas lift gas - and at this point it appears this additional cost will be minimal.

As to volume of gas available to support the plant, it is our plan that first loading of the plant would come from gas produced from the downdip oil recovery wells. As this gas volume from time to time changes, supplemental gas will be taken from the updip high gas-oil ratio ("cycling") wells. These wells include the ones we have been working over recently to open up the A and B zones. Three of these wells have now been worked over. Of these three, the A-16 is yet to be tested; the C-34 appears to have an increase of about 500 MCF/D (total 1500 MCF/D) along with an increase of 20 or 30 barrels of oil. The L-11 shows a substantial increase in gas; but we do not yet know if it has picked up any oil (still recovering load oil). This well will have a capacity of 5000 to 6000 MCF/D. We will be recommending workover of the A-22 (Section 22, Township 25 North, Range 1 West) to open up the A and B zones in it. All in all, we expect to have a capacity from all of these cycling wells of 15,000 MCF/D or more.

Further with respect to loading of the plant, it is our thought that when the gas volume available from the unit is less than the plant's capacity, we should be able to make it economically attractive for Gavilan gas to be processed through the plant; and that some owners might take advantage of this.

We assume that each owner will have his own ideas as to future values of gas and gasoline plant products; and how to incorporate this in their estimated rates of return.

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Also we recognize that some of the owners may have their own ideas as to "sweep efficiency" of the reinjected gas and its effect upon "leaning" the produced gas. The consequences of these effects - along with the value of the products - will be of more significance in later years than initially. We anticipate plant payout before these factors become significant. Accordingly as to plant economics, we are providing you with our estimated maximum cost of installation of the facility and initial annual net revenue.

It seems to us that very little risk is involved in achieving payout of the facility; and that the only risk involved is the amount of "profit" and rate of return. Presumably this will be among the subjects discussed at our April Operators' Meeting; however we believe that the decision with respect to approval of the plant can be made at this time with the information available, and request that the owners do give this AFE consideration now.

BENSON-MONTIN-GREER DRILLING CORP.

BY:


Albert R. Greer, President

ARG/tlp

Enclosures

ESTIMATED GASOLINE PLANT PRODUCTS
REVENUE

<u>Component</u>	<u>Mol %</u>	<u>GPM</u>	<u>Percent Recovery</u>	<u>GPM Recovered</u>	<u>\$/Gal</u>	<u>\$/MCF</u>
C ₁	83.584					
C ₂	9.572	2.556	70	1.789	.11	.197
C ₃	4.010	1.099	90	.989	.21	.208
iC ₄	.473	.154	100	.154	.30	.046
nC ₄	.864	.271	100	.271	.28	.076
iC ₅	.221	.080	100	.080	.32	.026
nC ₅	.218	.079	100	.079	.32	.025
C ₆ ⁺	.117	.050	100	.050	.32	.016
N ₂	.270					
CO ₂	<u>.671</u>	<u> </u>				<u> </u>
	100.000	4.289				.594

NET REVENUE IF OPERATING ON "MARGIN"

EXAMPLE: \$1.50/MCF

SHRINKAGE DUE TO PLANT FUEL 17%

BTU LOSS 1193 → 1048

$$1.50 \times .83 \times \frac{1048}{1193} = \$1.09$$

$$+ \frac{.59}{1.68}$$

$$1.68 - 1.50 = \$.18/MCF = \text{MARGIN}$$

BASIC ECONOMICS
GAS PROCESSING PLANT
FOR CANADA OJITOS UNIT

ANNUAL REVENUE

	<u>\$M/Year</u>
Revenue from products:	
Gross at 10,000 MCF/D and \$.594/MCF	2170
After royalty and taxes	1665
Less Operating Expense	<u>300</u>
NET REVENUE	1335

At ¹.18/MCF
MARGIN
\$M/year
657
504
300
204

COST OF PROCESSING PLANT FACILITY

	<u>\$M</u>
Plant complete and installed: including recompression, de-ethanizer, amine plant, surge tank, pipeline, pumps and metering	2300
Products pipeline to MAPCO system, including right-of-way	<u>1650</u>
TOTAL COSTS	3950

BENSON-MONTIN-GREER DRILLING CORP.
AUTHORITY FOR EXPENDITURE

CANADA OJITOS UNIT
RIO ARRIBA COUNTY, NEW MEXICO

GAS PROCESSING PLANT AND FACILITIES

AFE #1884

\$M

Plant complete and installed: including recompression, de-ethanizer, ammine plant, surge tank, pipeline, pumps and metering	2300
Products pipeline to MAPCO system, including right-of-way:	
44.6 miles of 4-1/2" .156 wall line pipe, coated	\$3.20/foot
Freight (laid down on location)	.30/foot
	<u>\$3.50/foot</u>
Ditching, laying, backfilling	<u>2.80/foot</u>
Total	\$6.30/foot
44.6 miles at \$6.30/foot	1484
Right-of-Way and Miscellaneous	<u>166</u>
TOTAL COSTS	3950

Participants' approval of this AFE is conditioned upon the Oil Conservation Commission approving expansion of the pressure maintenance project (Case 9111, hearing date March 17, 1988).

Approved:

Date:
