



WEXPRO COMPANY

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R. M. KIRSCH
PRESIDENT

July 16, 1984

Mr. Douglas Ball
Ball Associates, Ltd.
105 Main Street
Black Hawk, CO 80422

Mr. Robert Lake
Price Waterhouse
50 West Broadway
Salt Lake City, UT 84101

Gentlemen:

RE: East Hiawatha Enhanced Recovery Project

FACTS

The East Hiawatha field in Sweetwater County, Wyoming, and Moffat County, Colorado, is one of the earliest discovered by the Company. The early wells were drilled from 1923 through the 1950s to gas-capped oil reservoirs in the Wasatch geologic formation. These are nearly depleted and three of them are candidates for water flood or other enhanced recovery projects. Wexpro will examine the middle oil sand for enhanced recovery feasibility. Wexpro Agreement Schedule 2(a) lists the reservoir(s) associated with 101/105 leases and prior Wexpro wells as a "productive oil reservoir." Because of a well in the gas cap, Schedule 3(a) also lists the Wasatch formation as a "productive gas reservoir."

As part of the feasibility study, Wexpro will core the Wasatch formation from 2,000 feet to 2,530 feet in the proposed F. Wilson 26 well, then drill to the Fort Union reservoir, 2,000 feet below the enhanced recovery target zones. The total depth is anticipated to be 4,751 feet.

The Wasatch core will help determine the reservoir rock characteristics and what chemicals the water flood or enhanced recovery project will need so that the injected substance will drive efficiently and be compatible with formation rock and fluid chemistry.

Wexpro has contracted with the firm of TIORCO, which specializes in enhanced recovery projects, for its advice on the initial handling, packing and analyzing of the retrieved core.

Messrs. Robert Lake and Douglas Ball
July 16, 1984
Page 2

An enhanced recovery project is notable for the heavy front end costs of planning, testing and engineering. Full knowledge of the reservoir characteristics is essential in properly planning and executing the enhanced recovery project.

PROBLEM

Below the Wasatch enhanced recovery zone, the Fort Union drilling will continue to 4,751 feet, the total depth. Wexpro first requests monitor concurrence that a part of the well costs will be appropriate costs of the enhanced recovery project. Second, if the well is dry in the Fort Union formation, how much of the cost should be allocated to the enhanced recovery project?

DISCUSSION

Paragraph III-8(a) of the Wexpro Agreement provides that "Wexpro will exercise prudent judgment, as if it were the owner of the productive gas reservoirs, in determining the desirability and necessity of development gas drilling under this Article, as well as the timing and methods to be used in any such drilling."

Section 1-30 of the Wexpro Agreement defines "Enhanced Recovery Facilities" as follows:

Such facilities as are necessary in connection with "secondary" and "tertiary" petroleum hydrocarbon recovery techniques. These techniques involve man induced pressure changes or improved sweep efficiency using injected fluids within a productive oil or gas reservoir, often through injection of foreign materials or injection of natural gas for the purpose of increasing the yield from the reservoir. Such techniques do not refer to stimulation procedures used prior to completion to make a well commercial even if essentially similar procedures used on an already commercial well would be classified as "enhanced recovery procedures."

The proposed enhanced recovery project in the East Hiawatha field qualifies as "enhanced recovery facilities" because of the injection of water or other substances as the drive and pressure mechanism.

Paragraph III-2(b) sets forth Wexpro's operating rights:

Wexpro will own all operating rights and will be the operator of all facilities related to such leaseholds. Wexpro will fund and drill or cause to be funded and drilled all necessary and appropriate development wells on these properties and provide the necessary facilities

Messrs. Robert Lake and Douglas Ball
July 16, 1984
Page 3

which in its opinion will be reasonably and prudently necessary to efficiently produce the hydrocarbons in the productive gas reservoirs.

Wexpro believes that it is prudent to develop the facilities for an enhanced recovery project in the Wasatch formation.

In Section I-14 the term "Well" is defined as:

The well bore and all underground and surface materials and facilities installed in connection with drilling into the earth's surface for the production or injection of hydrocarbons and other substances. The term "well" includes all appurtenant facilities.

In Section I-41 the investment of Wexpro is defined in part to include:

All subsequent increments to the investment of Wexpro will include future capital, net of depreciation, invested by Wexpro to produce hydrocarbons from productive oil and natural gas reservoirs and will be as otherwise provided in this agreement. This will include all depreciated investment in plant and AFUDC in development well drilling and enhanced recovery facilities. . . . New increments of the investment of Wexpro after July 31, 1981, will not include any capitalized dry hole costs. (Emphasis added.)

Section II-6 provides an extensive discussion of "Enhanced Recovery Procedures." That section reads as follows:

II-6. Enhanced Recovery Procedures. It may be necessary or desirable to implement enhanced recovery procedures in certain prior Wexpro wells and productive oil reservoirs in order to maximize the recovery of oil. The investment in such procedures may be substantial and the results of these operations may not always be successful. If the revenues from the additional oil recovered as a result of such procedures do not cover the expenses, royalties and return as they are related to the enhanced recovery procedures, the initiation of such procedures would result in more of the total Wexpro oil production revenues being allocated to a return on this new capital, with less available for the "54-46 formula." To assure that investment for enhanced recovery procedures will be prudently made, the following terms will apply:

(b) The capital investment required for enhanced recovery facilities will be made entirely by

Messrs. Robert Lake and Douglas Ball
July 16, 1984
Page 4

Wexpro. In lieu of the base rate of return (r), such enhanced recovery investment will be assigned a rate of return as follows:

(i) If, at the time an authority for expenditure (AFE) for an enhanced recovery project is executed, the total of the amounts described in subparagraphs II-4(f)(i) and (ii) for the prior 12 months have been less than 3.00% of the average investment of Wexpro allocated to oil production for such a 12-month period, the rate of return to apply only to that enhanced recovery investment will be the base rate of return plus a 2.00% risk premium (r+2.00).

(ii) In all other cases, the base rate of return (r) will apply.

(c) The aggregate enhanced recovery facilities investment will look to all natural gas liquids and oil production for recovery of investment, expenses and return. Each amount invested will be deemed made on the first day of the month closest to the date when it was made and will be depreciated on the basis of individual enhanced recovery projects.

Paragraph 5 of Exhibit A describes the return applicable to enhanced recovery projects. That paragraph provides in part that "For natural gas that is produced from enhanced recovery facilities to which a 2% adjustment is applicable (Paragraph II-6(b)), a 2% risk premium applies to those facilities only."

Finally, Section VIII-13 of the Wexpro Agreement provides:

Except as specifically provided herein, in all aspects of exploration for and development of oil and natural gas discoveries and production on transferred leaseholds and account 101/105 leaseholds transferred under this agreement, the parties will operate in accordance with prudent, standard and accepted field and reservoir management and engineering practices, and with due regard for the benefits provided the Company's utility operations.

PROPOSAL

Wexpro proposes for the monitors' consideration:

Before the F. Wilson No. 26 drilling begins, Wexpro will estimate the drilling, testing, completing, and equipping costs to the base of the Wasatch

Messrs. Robert Lake and Douglas Ball
July 16, 1984
Page 5

formation and also estimate the costs to the base of the Fort Union reservoir. The overall estimate will include the wellhead cost and will show:

(1) The estimate of costs to drill the well solely to the base of the Wasatch formation enhanced recovery project reservoirs.

(2) The additional estimated costs from the surface to the base of the Wasatch to drill the well to the 4,751 foot total depth. These costs shall be called Fort Union incremental costs.

(3) The estimate of costs to be incurred below the base of the Wasatch.

(4) The estimated costs attributable to the Wasatch testing and coring.

The actual costs of drilling, completing, testing and equipping the well will be apportioned among the four categories and these costs will be allocated between the Wasatch project and the Fort Union project as follows:

(a) Costs incurred above the Wasatch project base, including enhanced recovery coring and testing but without the Fort Union incremental costs, will be allocated to the Wasatch project. Wexpro will be entitled to a rate of return according to Wexpro Agreement Section II-6 and Exhibit "A," paragraph 5.

(b) The Fort Union incremental costs and the costs incurred below the base of the Wasatch, (2) and (3) above, will be allocated to the Fort Union project. They will be considered development drilling if the well is commercial in the Fort Union or as dry hole costs if not commercial.

If you find this proposal acceptable, please so indicate below.

Very truly yours,



ckb

ACCEPTED to this 31 day of August, 1984.

By Price Waterhouse by Kaufman
Wexpro Monitor
Price Waterhouse

By Douglas Ball
Wexpro Monitor
Ball Associates, Ltd. *President*

Re: East Hiawatha Enhanced Recovery Project

APPROVED this _____ day of _____, 1985.

BALL ASSOCIATES, LTD.

PRICE WATERHOUSE

By _____
Date _____

By _____
Date _____

UTAH DIVISION OF PUBLIC UTILITIES

STAFF OF WYOMING PUBLIC SERVICE
COMMISSION

By _____
Date _____

By _____
Date _____