## INTERNAL REVENUE SERVICE

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August 20, 1999

## LEGEND:

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## Dear :

In a letter dated , , , you requested the Service's determination that your enhanced oil recovery project in the  $\underline{A}$  qualifies for the credit under § 43 of the Internal Revenue Code. Specifically you requested rulings that:

- 1. Each of the two tertiary recovery methods used are qualified tertiary recovery methods, and;
- 2. the project is a "qualified enhanced oil recovery project" within the meaning of § 43(c)(2) of the Code.

According to your submission the facts are as follows.

 $\underline{B}$  owns an interest in and is operator of the  $\underline{A}$  unit. The  $\underline{A}$  was produced for a number of years by primary production. In  $\underline{c}$  the  $\underline{A}$  was unitized for pressure maintenance which included

in re-injection of produced gas, inert gas, and produced water. Subsequently tertiary recovery projects were initiated. A successful polymer augmented water flood began in <u>d</u> and was terminated in <u>e</u>. An unsuccessful immiscible carbon dioxide injection project was commenced in <u>f</u> and terminated in <u>g</u>. The previous production activities depleted the reservoir to a thin oil column sandwiched between a secondary gas cap and a water invaded zone.

A large volume of relatively immobile oil remained trapped in the water invaded formation. To produce this oil  $\underline{B}$  began another tertiary recovery project in  $\underline{h}$ . This project simultaneously de-watered the watered-out portions of the reservoir and injected immiscible non-hydrocarbon gas. The project is successfully lowering the water/oil contact toward its original position prior to field discovery. This method was recognized as a qualified tertiary recovery method in a private letter ruling issued by the Service.

To supplement this tertiary recovery method, two additional processes, a thermal steam drive process which began in  $\underline{i}$  and a microemulsion flooding surfactant process, which began in  $\underline{i}$ , have been added. The methods are being implemented in the following manner:

- 1. A dilute surfactant is injected into the water invaded formation below the projected depth of the final co-production water-oil contact to liberate oil trapped in the water invaded matrix.
- 2. A number of well bores will be reactivated to capture oil that the surfactant will mobilize from the water invaded zones.
- 3. New wells will be drilled to inject steam that will enhance gravity drainage of oil from the secondary gas-cap in areas of sufficient gas cap thickness. Warm condensate water from the thermal process will migrate to the water column and thereby also improve the effectiveness of the surfactant process.

The thermal process is expected to increase oil fluidity, to expand the oil, and to distill residual oil. It is anticipated that the thermal process will recover  $\underline{k}\%$  of the oil in place and that the microemulsion flooding will produce  $\underline{m}\%$  of the oil in place.

Your submission contains a copy of the Petroleum Engineers Certification of an Enhanced Oil Recovery Project for each project. The engineer states that with each process there will be more than an insignificant increase in the ultimate amount of crude oil recovered.

Section 43(a) provides a credit in an amount equal to 15% of certain costs paid or incurred by a taxpayer in connection with a qualified enhanced oil recovery project.

Section 43(c)(2) defines the term "qualified enhanced oil recovery project" to mean any project that: (1) involves the application (in accordance with sound engineering principles) of one or more qualified tertiary recovery methods (as defined in § 193(b)(3)) that reasonably can be expected to result in a more than insignificant increase in the amount of crude oil that ultimately will be recovered; (2) is located within the United States (within the meaning of § 638(1); and (3) with respect to which the first injection of liquids, gases, or other matter commences after December 31, 1990.

Section 1.43-2(e)(1) of the Income Tax Regulations defines the term "qualified tertiary recovery method" to mean any one or combination of the tertiary recovery methods described in § 1.43-2(e)(2) or a method not described in § 1.43-2(e)(2), which has been determined by revenue ruling to be a "qualified tertiary recovery method." A taxpayer may request a private letter ruling that a method not described in section 1.43-2(e)(2) or in a revenue ruling is a qualified tertiary recovered method.

Among the methods listed in section 1.43-2(e)(2) are steam drive injection ( $\S$  1.43-2(e)(2)(i)(A)) and microemulsion flooding ( $\S$  1.43-2(e)(2)(ii)(A)).

Your description of the processes places them within the definitions of steam drive injection and microemulsion flooding.

Since the process of microemulsion flooding and the process of steam drive injection are named in § 1.43-2(e)(2) of the regulations as qualified enhanced oil recovery processes, your processes are qualified processes.

Section 43(c)(2) of the Code provides that a taxpayer may employ more than one qualified process in a project. You have represented that more than an insignificant increase in ultimate recovery will be obtained as required under  $\S 43(c)(2)$ . Your project is a qualified tertiary recovery project (provided it otherwise meets the requirements of  $\S 43$  and the regulations thereunder).

This ruling is limited to the Taxpayer's request under § 1.43-2(e)(1). Except as specifically ruled on above, we express or imply no opinion concerning the federal income tax consequences of the facts of this case under any other provisions of the Code. Specifically, we express or imply no opinion whether the project implemented by the Taxpayer otherwise meets the requirements of a qualified enhanced oil recovery project under § 43 and the regulations

This ruling is directed only to the taxpayer who requested it. Section 6110(k)(3) of the Code provides that it may not be used or cited as precedent.

A copy of this ruling should be attached to your tax return filed for the year in which the transaction covered by this ruling is consummated. A copy is enclosed for this purpose.

Sincerely yours,

Joseph H. Makurath Senior Technician Reviewer Branch 7 Office of the Assistant Chief Counsel (Passthroughs and Special Industries)