

CULBERTSON & IRWIN, INC.

-- OIL --

MIDLAND, TEXAS

July 7, 1941

315 PETROLEUM
BUILDING

TELEPHONE 968
P. O. BOX 1071

Mr. J.M. Kelly, Sec.
New Mexico Oil Conservation Commission,
Santa Fe, N.M.

Re: Tentative Proposal for Repressuring
Culbertson & Irwin, Inc. Liberty
Royalty Corporation lease W/2 of
W/2 of Section 3-Twp. 25S-Rge 37E,
Lea County, N.M.

Gentlemen:

On May 24 Culbertson & Irwin, Inc. requested of the Oil Conservation Commission the use of their Liberty Royalty No. 3 well for an input well and to produce the allowable that came from this well out of their Liberty Royalty Nos. 1 and 2 in connection with the repressuring project on this lease.

Culbertson & Irwin now requests the Commission to call a formal hearing to consider this matter and would appreciate it if the hearing could be held this month.

The formal petition is now being prepared and will be mailed to the Commission within the next few days.

Yours very truly,



President
CULBERTSON & IRWIN, INC.

CASE NO. 27.

IN THE MATTER OF THE PROPOSED)
PRESSURE MAINTENANCE PROJECT IN) BEFORE THE
THE NE PORTION OF THE LANGLIE POOL) CONSERVATION COMMISSION
EMBRACING THE LIBERTY ROYALTIES CORP.) OF THE
LEASE described as W/2 of W/2 of) STATE OF NEW MEXICO
Sec. 3, Twp. 25-S, Rge. 37-E, Lea County)

TO THE HONORABLE JOHN E. MILES,
CHAIRMAN, AND THE HONORABLE H. R. RODGERS
AND HONORABLE JOHN M. KELLY, MEMBERS OF THE
NEW MEXICO OIL CONSERVATION COMMISSION:

NOW COMES Culbertson & Irwin, Inc., a New Mexico corporation,
operator of the captioned Liberty Royalties Corporation lease, and
files this its Petition to the New Mexico Oil Conservation
Commission for an Order authorizing and granting the following:

1. Permission to set up and operate a pressure maintenance project in the Northeast portion of the Langlie Pool embracing the West One-half of the West One-half (W/2 W/2) of Section No. 3, Township 25-South, Range 37-East, Lea County, known as the Liberty Royalties Corporation lease.
2. Permission to use as a gas input well the Liberty Royalties Corporation well #3 located 660 feet East of the West Line and 2310 feet North of the South line of said Section No. 3, and through this well to inject into the oil and gas zone from which the wells now located on this lease are producing, compressed dry gas in such quantities and under such pressures as seem advisable in order to accomplish the purpose of this project, namely, the maintenance of the formation pressure in the aforesaid oil and gas zone.
3. The allocation to said well Liberty Royalties Corporation #3, so long as it is being used as a gas input well, of its present allowable as determined by official test.

4. Permission to produce for proration purposes from wells #1 and #2 on this lease, or from either of them, in addition to their respective allotments, an amount of oil equivalent to the allowable credited to said well #3.

In support of this Petition, petitioner respectfully states and would show that at the present time the casinghead gas being produced from the three wells on the Liberty Royalties Corporation lease is being delivered and sold to the El Paso Natural Gas Company casinghead gas plant located in the Mattix Pool. This gas is measured by meter at the lease and thereafter co-mingled with casinghead gas from other properties in this area. After extraction of the gasoline that portion of the residue dry gas for which there is a market is purchased by the Gas Company and taken into their gas lines; the remainder of the dry gas is blown to the air.

The El Paso Natural Gas Company has installed a compressor plant in conjunction with the casinghead gasoline plant and is now delivering compressed dry gas to the Langlie Repressuring Unit. This company has similarly agreed to deliver compressed dry gas to our Liberty Royalties Corporation lease, and it is such gas that we propose to return to the producing formation through our well Liberty Royalties Corporation #3.

The proposed pressure maintenance project would be a conservation measure in the following ways:

1. Under present conditions the gas which will be returned to the formation would otherwise be blown to the air. This gas, or at least a portion thereof, will be conserved by storing it in the original underground reservoir for future use. It is expected that a somewhat greater volume of gas will be injected into the formation than is being produced therefrom and thus over a period of time

and after the withdrawal of all available oil from the present producing zone this zone will be a gas reservoir.

2. By the use of the compressed gas as a lifting medium it is expected that the flowing life of the producing wells can be considerably lengthened. The flowing life of the wells will be largely determined by economic factors, that is, the relation between the cost of the input gas and the proceeds from the oil recovered and the relation between the cost of the input gas and the cost of other lifting methods; however, it is believed that under the proposed plan the cost of producing or lifting the oil will be materially less over the life of the wells than by any other means.
3. It is believed that the ultimate recovery of oil from the property will be considerably greater than could be obtained by any other means.

The volume of input gas and the pressure at which it is injected into the formation will be determined by various physical factors. It is our intention, however, to inject the gas at a pressure which will be slightly in excess of the bottom hole formation pressure and it is estimated that approximately 250,000 cubic feet of gas per day will be returned to the formation at the beginning of the experiment.

Bottom-hole pressure and gas-oil ratio tests of wells #1 and #2 on the Liberty Royalties Corporation lease will be taken at regular intervals, and in view of the fact that the operators of the leases adjoining this property on the East and the West have indicated their full approval of our proposed plan, we are confident that similar tests will be made of the wells on these adjoining leases.

All information obtained from and relative to this project will be made available to the proper State authorities.

WHEREFORE, your petitioner prays that the said Honorable Commission, after due notice of this Petition and a hearing hereon as provided for by law and the rules and regulations of said Commission, enter an Order granting this Petition and authorizing your petitioner to institute, create and operate in accordance with the plan as set forth herein a pressure maintenance project on its Liberty Royalties Corporation lease in the Northeast portion of the Langlie Pool embracing the land hereinbefore set out.

Respectfully submitted,

CULBERTSON & IRWIN, INC.

By .
President.