

BEFORE THE OIL CONSERVATION COMMISSION OF THE
STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING:

CASE NO. 127

ORDER NO. 750

IN THE MATTER OF THE APPLICATION OF
RALPH LOWE FOR A SPECIAL ORDER
AUTHORIZING DUAL COMPLETION FOR OIL
AND GAS PRODUCTION FROM TWO SEPARATE
ZONES FROM A SINGLE WELL BORE OF SHELL
STATE NO. 2-C, LOCATED 990 FEET FROM
THE SOUTH LINE AND 1650 FEET FROM THE
WEST LINE OF SECTION 36, TOWNSHIP 23
SOUTH, RANGE 36 EAST, N.M.P.M., LEA
COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10:00 o'clock a.m., February 17, 1948, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 8th day of March, 1948, the Commission having before it for consideration the testimony and other evidence adduced at the hearing of said cause, together with the application of petitioner, and being fully advised in the premises:

FINDS:

1. That public notice of hearing upon said application having been given as required by law fixing the 17th day of February, 1948, at Santa Fe, New Mexico, as the time and place for hearing, the Commission has jurisdiction of the case;
2. That in previous dual completion cases before the Commission, and in this case, it appears questionable whether or not mechanical devices are available to absolutely prevent comingling of gas and fluid hydrocarbons from two or more different strata through single well bore;
3. That the evidence adduced at said hearing of this case establishes that the gas encountered is characterized as "sweet." No evidence was offered as to the corrosive properties of the oil encountered or expected to be encountered.
4. That additional evidence as to the efficiency of packers and mechanical devices in the matter of dual production by a single well bore in the Langlie-Mattix Pool could be had by granting the application of the petitioner.

IT IS THEREFORE ORDERED BY THE COMMISSION that effective February 17, 1948, Ralph Lowe, petitioner, be, and he hereby is granted permission to dually complete and produce his Shell-State No. 2-C Well in the Langlie-Mattix Pool, Lea County, New Mexico, in such manner that gas and/or fluid hydrocarbons are produced through the tubing from the 3600-foot zone, and that gas and/or fluid hydrocarbons are produced through the annulus, or space between the tubing, and casing of said well from the upper horizon between the depths of 2875 feet and 2905 feet:

PROVIDED, HOWEVER, that said Shell-State No. 2-C Well shall be dually completed and produced in such manner that there is absolutely no comingling within the bore of the well of gas or fluid hydrocarbons produced from each of the separate productive stratum encountered therein. In order to prevent any comingling of gas or fluid hydrocarbons within said well bore, the dual completion thereof shall be made as follows: The well having been completed to the 3600-foot horizon through appropriate casing perforations at the proper depth, the upper zone in like manner may be produced by casing perforations at the 2875 to 2905-foot interval, and each zone or formation carefully tested. Such test and subsequent tests shall be witnessed by an agent of the Commission and by representatives of any offset operator, if any there be. In event intercommunication between the zones behind the casing is indicated by formation tests, corrective measures shall be applied and such tests continued and corrective measures applied, until it is known that no intercommunication between the respective zones behind the casing exists. Should the test or tests establish the absence of intercommunication between the horizons outside of the casing, the petitioner herein may proceed with the dual completion of said well as follows: A suitable packer of the type approved by petitioner's consulting engineer shall be so set as to effectively prevent migration of reservoir gas and fluid hydrocarbons from one zone to another within the casing; the well shall be tubed through the packer; provided further, however, that it shall not be necessary for petitioner to install a circulating port or choke above the packer, should the upper horizon reflect only gas production; nothing herein, however, shall be construed to preclude the installation of such port above the packer if conditions may require, but in case of non-installation above the packer, the circulating device shall be incorporated in the packer; and provided, further, that any packer installed in said well shall be properly tested for leakage at the time of the dual completion and shall be carefully retested at six-month intervals thereafter. The original and all subsequent tests shall be witnessed by a representative of the Commission and by representatives of offset operators, if any there be, and the results of each test properly attested to by the petitioner and all the witnesses and shall be filed with the Commission within ten days after the actual completion of each such test.

IT IS FURTHER PROVIDED that in event intercommunication between the zones is found or is suspected by any witness as the result of any test, the well shall be immediately shut in, the Commission notified, and prompt and immediate action shall be taken by the petitioner to prevent such intercommunication, following which, a retest for leakage shall be made forthwith and witnessed as aforesaid; provided, further, that intercommunication tests between the zones required by this order shall be made as follows: Both zones shall be simultaneously closed in and kept closed a sufficient length of time to reach stabilization as determined by a dead weight tester. A recording depth pressure gauge shall then be run at the maximum depth possible; the zone open to the annulus shall be produced at a maximum safe rate until stabilized flow conditions are obtained. In event a significant decrease in pressure is shown by the recording pressure gauge, intercommunication shall be deemed to exist.

PROVIDED, FURTHER, that said well must be equipped in such manner that reservoir pressures may be determined on each of the two specified strata separately, and further that said well must be equipped with all necessary connections required to permit recording meters to be installed and used at any time, so that when such meters are installed all natural gas produced from each separate stratum may be accurately measured and the gas-oil ratio determined.

The petitioner having introduced at the hearing an electric log showing position and thickness of the upper horizon shall within a reasonable time supplement the same with data respecting the lower productive horizon.

The petitioner having submitted as exhibits at the hearing completion diagrams, any changes in actual procedure shall be immediately reported to the Commission. Upon final completion of said dual completion of said well, the petitioner shall file with the Commission a report of the step by step procedure followed in producing each zone and an exposition of the merits and demerits of the equipment and mechanical devices used and employed to effect the separation of the productive horizons.

IT IS FURTHER ORDERED that upon failure of the petitioner herein to comply with any provision or provisions of this order, the authority granted hereunder shall immediately terminate.

IT IS FURTHER ORDERED that this case be and it is hereby held open on the docket for such further order or orders as may seem necessary or convenient to the Commission.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


THOMAS J. MABRY, CHAIRMAN

JOHN E. MILES, MEMBER


R. R. SPURRIER, SECRETARY

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico, by its Oil Conservation Commission, hereby gives notice, pursuant to law, of the following public hearing to be held February 17, 1948, beginning at 10:00 o'clock a.m. on that day in the City of Santa Fe, New Mexico:

STATE OF NEW MEXICO TO:

All named parties in the following case,
and notice to the public:

Case No. 127

In the matter of the application of Ralph Lowe to dually complete, for oil and gas production from two separate zones, Shell, State No. 2-C, located 990 feet from the south line and 1,650 feet from the west line of section 36, township 23 south, range 36 east, N.M.P.M., Lea County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on February 2, 1948.

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

By


R. R. SPURRER, Secretary