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May 10, 1996

Via Hand Delivery


Michael E. Stogner
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico

Dear Mr. Stogner:

Enclosed is a proposed order regarding Case No. 11,520, the application of Mewbourne Oil Company to increase the injection pressure in the Querecho Plains Bone Spring Sand Unit. Also enclosed is a wellbore sketch of the QPBSSU Well No. 11-2 which you requested at the hearing. Please call me if you need anything else.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, L.L.P.


James Bruce

cc: Kevin Mayes

ocdltr.3

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

MAY 11 1996

Oil Conservation Division

APPLICATION OF MEWBOURNE OIL
COMPANY TO INCREASE INJECTION
PRESSURE, LEA COUNTY, NEW MEXICO

CASE NO. 11,520
ORDER NO. R-9737-B

ORDER OF THE DIVISION
(Proposed by Mewbourne Oil Company)

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1996 at Santa Fe, New Mexico before Examiner Michael E. Stogner.

NOW, on this _____ day of May, 1996, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Mewbourne Oil Company, seeks to increase the surface injection pressure in fourteen injection wells within its Querecho Plains Bone Spring Sand Unit ("QPBSSU") waterflood project located in Township 18 South, Range 32 East, NMPM.

(3) The QPBSSU, covering 2400 acres of federal land, was instituted in late 1993 pursuant to Order No. R-9985. Authorization of the waterflood project for the unit was granted by Order No. R-9737-A. Said order authorized an injection pressure of

2000 psi.

(4) Current producing rates from the QPBSSU are approximately 225 bopd (an increase from 100 bopd when the unit was instituted) and 325 MCF/day of gas. The gas:oil ratio in the unitized formation is now 1400:1, a decrease from 7000:1 when the unit was instituted.

(5) Order No. R-9737-A authorized injection into fifteen wells within the QPBSSU waterflood project. Due to "thief" zones within the unitized formation, only fourteen wells are currently being used as injectors.

(6) Applicant requests authority to inject into the fourteen injection wells at the injection pressures set forth below:

<u>Well No.</u>	<u>Location</u>	<u>Injection Pressure</u>
QPBSSU #12C-4	Unit I § 14	2320
QPBSSU #12B-3	Unit J § 14	2330
QPBSSU #3-4	Unit B § 23	2320
QPBSSU #3-7	Unit I § 23	2320
QPBSSU #3-2	Unit J § 23	2320
QPBSSU #4-2	Unit K § 23	2320
QPBSSU #10-3	Unit L § 23	2320
QPBSSU #2A-1	Unit D § 24	2320
QPBSSU #11-2	Unit A § 26	2320
QPBSSU #11-1	Unit B § 26	2240
QPBSSU #12D-2	Unit C § 26	2250
QPBSSU #12E-1	Unit D § 26	2530
QPBSSU #7A-11	Unit A § 27	2320
QPBSSU #7A-10	Unit G § 27	2250

The requested injection pressures for the QPBSSU Well Nos. 12B-3, 11-1, 12D-2, 12E-1, and 7A-10 are based upon step-rate tests. (Three injectors, the QPBSSU Nos. 3-2, 3-4, and 3-7, inject into a thief zone and could not be tested.) The injection pressure of 2320 psi for the remaining wells is an average of the step-rate tests.

(7) The frac gradient at 2320 psi is 0.73 psi/foot, which equals the average frac gradient of 0.74 psi/foot determined by the

ISIP of 17 fracture stimulation jobs the applicant conducted on wells in the Querecho Plains-Upper Bone Spring Pool.

(8) An increase in injection pressure will allow the applicant to increase water injection volumes, which will accelerate production.

(9) The step-rate tests show that the requested injection pressures will not propagate any fractures out of the First Bone Spring Sand (Querecho Plains-Upper Bone Spring Pool).

(10) Under Order No. R-9737-A, any injection pressure increase can only be approved after notice and hearing. Applicant's witness stated that there may be a need for future pressure increases, and requested that any such requests be processed administratively. Based upon the evidence submitted, such request is reasonable.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Mewbourne Oil Company, is hereby authorized to increase injection pressure in the fourteen injection wells within its Querecho Plains-Bone Spring Sand Unit ("QPBSSU"), located in Township 18 South, Range 32 East, NMPM, Lea County, New Mexico. The authorized injection pressure for each injection well is set forth on Exhibit "A" attached hereto.

(2) Any additional increase in injection pressure for wells within the waterflood project area for the QPBSSU may be processed administratively in compliance with Division rules and regulations.

(3) All other terms of Order No. R-9737-A shall remain in effect.

(4) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

EXHIBIT "A"

CASE NO. 11,520
ORDER NO. R-9737-B

Authorized Injection Pressures
Querecho Plains Bone Spring Sand Unit Waterflood Project
Township 18 South, Range 32 East, NMPM
Lea County, New Mexico

<u>Well No.</u>	<u>Location</u>	<u>Injection Pressure</u>
QPBSSU #12C-4	Unit I § 14	2320
QPBSSU #12B-3	Unit J § 14	2330
QPBSSU #3-4	Unit B § 23	2320
QPBSSU #3-7	Unit I § 23	2320
QPBSSU #3-2	Unit J § 23	2320
QPBSSU #4-2	Unit K § 23	2320
QPBSSU #10-3	Unit L § 23	2320
QPBSSU #2A-1	Unit D § 24	2320
QPBSSU #11-2	Unit A § 26	2320
QPBSSU #11-1	Unit B § 26	2240
QPBSSU #12D-2	Unit C § 26	2250
QPBSSU #12E-1	Unit D § 26	2530
QPBSSU #7A-11	Unit A § 27	2320
QPBSSU #7A-10	Unit G § 27	2250

MEWSOURNE OIL COMPANY

BURLINSON FEDERAL

OPERATION

LEASE

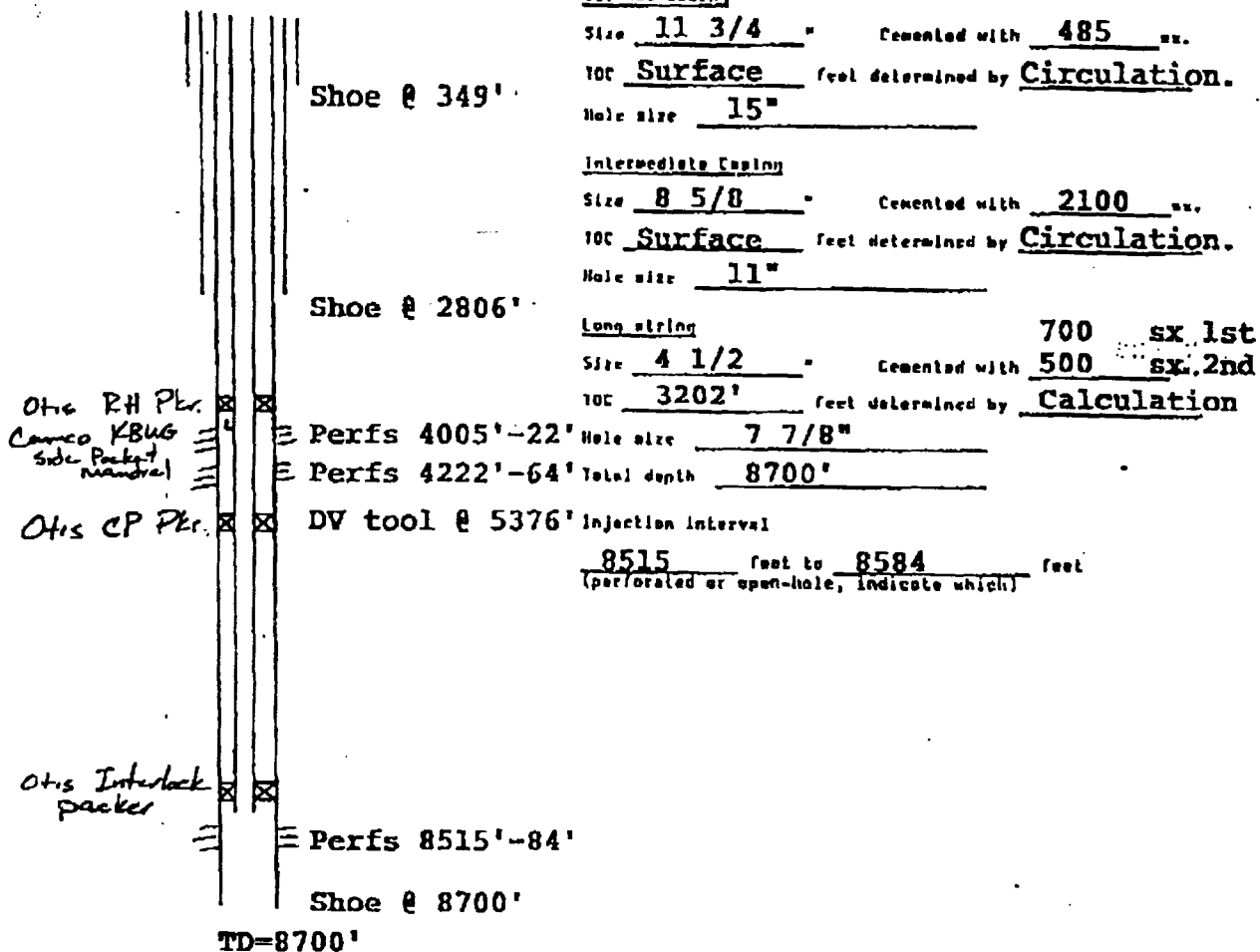
(*) 660' FNL 660' FEL 26 18S 32E

WELL NO. PORTAGE LOCATION SECTION TOWNSHIP RANGE

(*) Querecho Plains QA Sand Unit No. 30 & QPRSSU 11-2

Schematic

Tabular Data



Surface Casing

Size 11 3/4 " Cemented with 485 ss.TOC Surface feet determined by Circulation.Hole size 15"

Intermediate Casing

Size 8 5/8 " Cemented with 2100 ss.TOC Surface feet determined by Circulation.Hole size 11"

Long string

Size 4 1/2 " Cemented with 700 ss. 1stTOC 3202' feet determined by CalculationHole size 7 7/8"Total depth 8700'Tubing size 2 3/8" lined with Polyethylene set in a

(material)

various

(brand and model)

packer at _____ feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Queen, Penrose and Bone Spring2. Name of Field or Pool (if applicable) Querecho Plains3. Is this a new well drilled for injection? ☐ Yes ☒ NoIf no, for what purpose was the well originally drilled? Oil production4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) The well iscurrently injecting water into the Bone Spring. This application seeks permission to inject into the Bone Spring and Queen.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

Above = Yates/Seven RiversBelow = Bone Spring Carbonate