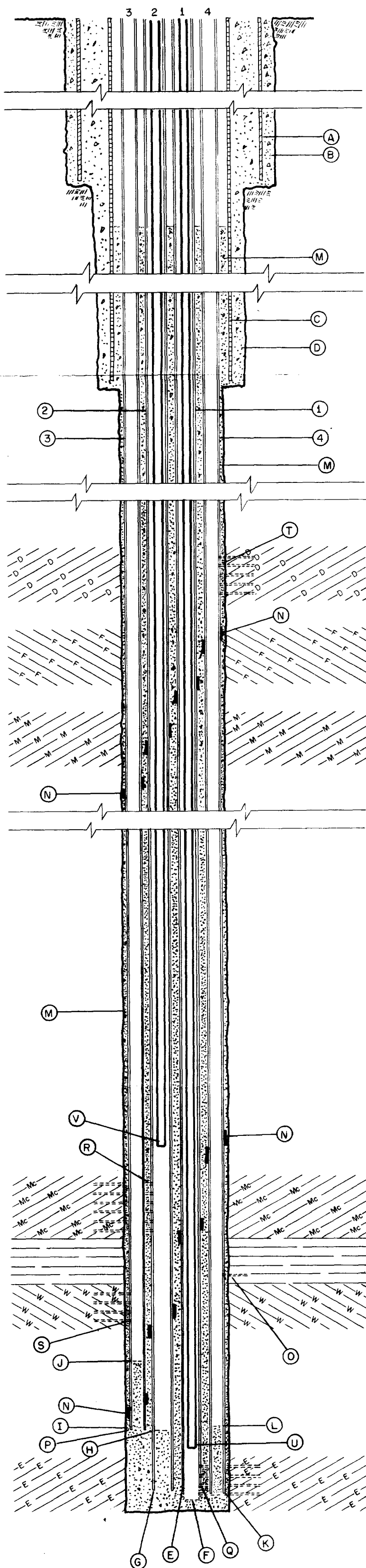


**SCHEMATIC OF COMPLETION**

ELWYN C. HALE  
HALE STATE WELL #3  
1650' FNL & 330' FEL  
SEC. 2, T25S, R37E,  
LEA COUNTY, NEW MEXICO  
PREPARED BY  
JOHN W. WEST ENGINEERING CO.  
NOV. 7, 1962



1. ELLENBERGER STRING
  2. MCKEE STRING
  3. WADDEL STRING
  4. DEVONIAN STRING
- A. SURFACE STRING: 15 JOINTS 16" O.D. 65# SMLS. CSG. T&C. SET 507.43'
  - B. SURFACE STRING: CEMENTED-560 SKS. 50-50% POZMIX DEG. W/4% GEL. CEMENT CIRCULATED.
  - C. INTERMEDIATE STRING: 111 JOINTS 10 3/4" N40 J55 SMLS. CSG. W/ 2 JOINTS (43.17') 13 3/8" SMLS. CSG. ON TOP. SET AT 3440.18'.
  - D. INTERMEDIATE STRING: CEMENTED-3600 SKS. 50-50% POZMIX CEMENT W/ 8% GEL & 200 SKS. 50-50% POZMIX W/2% GEL. CEMENT CIRCULATED.

**OIL STRINGS**

1. (ELLENBERGER) 269 JOINTS 3 1/2" O.D. 9.20# J55 NUE SMLS. TUBING T&C. TESTED TO 2000 PSI-HELD.  
E. SET AT 8477'  
F. DRILLED OUT TO 8480'
  2. (MCKEE) 268 JOINTS 3 1/2" O.D. 9.20# J55 NUE SMLS. TUBING T & C. TESTED TO 2000 PSI-HELD.  
G. SET AT 8478'  
H. DRILLED OUT TO 8380.97'
  3. (WADDEL) 268 JOINTS 2 7/8" O.D. 6.40# J55 NUE SMLS. TUBING T & C. TESTED TO 2000 PSI-DIDN'T HOLD- LATER SQUEEZED. (SEE P.)  
I. SET AT 8379.50'  
J. DRILLED OUT TO 8283.68'
  4. (DEVONIAN) 277 JOINTS 2 7/8" O.D. J55 NUE SMLS. TUBING TUBING. TESTED TO 2000 PSI-HELD.  
K. SET AT 8479'  
L. DRILLED OUT TO 8375'
- M. ALL 4 OIL STRINGS CEMENTED- 2000 SKS. 50-50% POZMIX ENCORE CEMENT. PUMPED THROUGH ALL 4 STRINGS. TURBULENT FLUID ADDITIVE USED. TEMP. SURVEY FOUND TOP OF CEMENT AT 800' FROM SURFACE.
- N. CENTRALIZERS (OR TURBULIZERS) ALL 4 STRINGS CENTRALIZED-GIST BAR TYPE. CENTRALIZERS STAGGERED ON STRINGS AT APPROX. 6' CENTERS.

**CENTRALIZER LOCATIONS:**

FROM 6600 TO 7000, ON 30' CTRS.; 7000 TO 7480, ON 60' CTRS. (COVERING DEVONIAN, FUSSELMAN, MONTOYA)

FROM 7800 TO 8480, ON 30' CTRS. (COVERING MCKEE, WADDEL, ELLENBERGER)

**PRELIMINARY SQUEEZES**

- O. PERFORATED STRING 4 (DEVONIAN) WITH 2 HOLES AT 3127 BETWEEN MCKEE AND WADDEL. SQUEEZED 160 SKS. CEMENT INTO CHALE. FINAL PRESSURE 5000 PSI.
- P. DRILLED OUT STRING 3 (WADDEL) AND FOUND SHOE NOT HOLDING. SQUEEZED 200 SKS. OF CEMENT AT 8379.50 BETWEEN WADDELL AND ELLENBERGER. FINAL PRESSURE 4000 PSI

**PERFORATIONS**

- Q. PERFORATED STRING 1 (ELLENBERGER) 8460-8480
- R. PERFORATED STRING 2 (MCKEE) 8020-8024, 8042-8076, 8086-8096
- S. PERFORATED STRING 3 (WADDEL) 8136-8158, 8166-8174
- T. PERFORATED STRING 4 (DEVONIAN) 6790-6820

**NOTE:** HELD RECORDED PRESSURES ON ALL STRINGS OF CASING WHILE PERFORATING, NO PRESSURE EQUALIZATION SHOWN.

**STIMULATION**

1. ELLENBERGER: 500 GAL. MUD ACID
2. MCKEE: NONE
3. WADDEL: 500 GAL. MUD ACID
4. DEVONIAN: 500 GAL. MUD ACID

**TUBING**

- U. SET TUBING IN STRING 1 (ELLENBERGER)- 257 JOINTS 1 1/2" NOMINAL 1.900" O.D. 1.610" I.D. COUPLING 2.116" O.D. INTEGRAL N80 SMLS. TUBING W/20' OF PERFORATIONS. SET AT 8437- FULL PLUGGED.
- V. SET TUBING IN STRING 2 (MCKEE)- 242 JOINTS 1 1/2" NOMINAL 1.900" O.D. 1.610" I.D. COUPLING 2.116" O.D. INTEGRAL N80 SMLS. TUBING W/20' OF PERFORATIONS. SET AT 7918.99- BULL PLUGGED.

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 1

CASE NO. 2670

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 2670  
Order No. R-2368

APPLICATION OF ELWYN C. HALE  
FOR A QUADRUPLE COMPLETION,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 8, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 21st day of November, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Elwyn C. Hale, seeks authority to complete his Hale State Well No. 3, located in Unit H of Section 2, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, as a quadruple completion (combination) in the Devonian, McKee, Waddell, and Ellenburger Pools, North Justis Field, to produce oil from the McKee and Ellenburger formations through parallel strings of tubed 3 1/2-inch casing and to produce oil from the Devonian and Waddell formations through parallel strings of 2 7/8-inch casing, all cemented in a common well bore.

(3) That the mechanics of the proposed quadruple completion are feasible and in accord with good conservation practices.

(4) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Elwyn C. Hale, is hereby authorized to complete his Hale State Well No. 3, located in Unit H of Section

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CASE No. 2670  
Order No. R-2368

2, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, as a quadruple completion (combination) in the Devonian, McKee, Waddell, and Ellenburger Pools, North Justis Field, to produce oil from the McKee and Ellenburger formations through parallel strings of tubed 3 1/2-inch casing and to produce oil from the Devonian and Waddell formations through parallel strings of 2 7/8-inch casing, all cemented in a common well bore.

PROVIDED HOWEVER, That the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

PROVIDED FURTHER, That the applicant shall take zone segregation tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Ellenburger formation.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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


STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



EDWIN L. MECHEM, Chairman



E. S. WALKER, Member



A. L. PORTER, Jr., Member & Secretary



esr/