Date Compiled: 1 July 1967

Field Name: Russell

Spearfish Pool

Location: Township 160 North, Range 79 West

Bottineau County, North Dakota

Producing Formation(s)

Name | Age
Spearfish | Jurassic

Discovery Well

Name: Vaughn Petroleum Inc.

No. 1 Carl Kersten

Location: NWNE 9-T160N-R79W

Completion date: 5 October 1963

Total Depth: 3701' K.B. 1460'

Casing: 4¼" @ 3701' with 200 Sx

Completion: Perf. 3397-3403'

Open Hole

Acidization: 250 gallons

Initial Potential: P 50 BOPD, 26% SW

Pressures

Description of trap

Stratigraphic - sand shales out updip

Reservoir Data

Porosity: 17%

Permeability: 20 - 100 md average

Fluid Saturation

Oil: 65%

Water: 35%

Oil-Water Contact: 1941'

Oil Column: 25'

Gas-Oil Ratio: Less than 100:1

Recovery Data

bbl/acre-foot: 140

ultimate primary recovery: 135,000

Initial Pressures

Flow

Bottom Hole Shut-in: 1816#

Current Bottom Hole Shut-in: 959# average March 1966

Reservoir drive mechanism: Solution gas

Formation water salinity

Percent H₂S

Gravity and Pour Point: 35° API

Cumulative Production, 1 July 1967:

70,650 barrels Oil

38,307 barrels Water

Production and Marketing

No. of producing wells: 2

No. of abandoned wells: 0

No. of dry holes: 6

No. of shut-in wells: 0

Proved acreage: 160 Acres

No. of salt water disposal wells: 0

No. of pressure maintenance injection wells: 0

Approved well spacing: 80 Acres

References

Market outlet: U. S. Crude Oil Purchasing Co.

Major operators: Geochemical Surveys