

USG SECTION 19 WELL NO. 17
COMMUNICATION TEST
AUGUST 19, 1965

J-19-29-16

Injection Interval:

Top: 2157 = 9-5/8" csg. seat
Base: 3100 = Top of cement behind 7" csg.

Observed Data:

Specific gravity of gas = .700 (est)
Specific gravity of oil = .788
Measured wellhead pressure = 1023 psia
Wellhead temperature = 60° (520° Rankine)
Reservoir temperature = 150° (610° Rankine)
Gravity of crude = 48°
Injection pressure = 380 lb.

Sonolog Results:

Joints to fluid = 10
Depth of fluid = 307'
Average joint = 30.71'

Summation of Calculation:

Pressure at fluid level = 13 lbs. + 1023 = 1036 psia
H = 2157 (injection depth)
H = 2157 - 307 = 1850'
BHP at 2157 = pressure at fluid level + .788 X .433 X 1850 =
1667 + 12 = 1679 psia
BHP at 3100' = 1036 + (3100 - 307) (.788) (.433) = 952 + 1036 =
1988 psia

Injection Interval:

Specific gravity = 1.0365 (salt water)
2157 X .433 X 1.0635 = 994 + 380 = 1374 psig at 2157
3100 X .433 X 1.0635 = 1429 + 380 = 1809 psig at 3100

Therefore, pressure on inside of 7" casing at both top and bottom of injection interval is greater than pressure of interval being used for injection.

