

Rate #5

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FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SURFACE) PRESSURE (Pc & Pw) ***
COMPANY : COLLINS AND WARE LEASE : S SHOOTER WELL NO. : FED 13 NO 1 DATE : 11 20 91 ***
UNIT : B SECTION : 13 TOWNSHIP : 20 RANGE : 33 ***
L : 13282 H : 13282 L/H : 1.0 G/GMIX : 0.677 ***
CO2 : 0.59 N2 : 0.53 H2S : 0 ***
d : 2.441 Fr : 0.010763 Qm : 0.000 (L/H) (FrQm) 0.000000 ***
PCF : 669 TCR : 382 ***
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LINE ITEM : SOURCE 1 2 3 4 5 6 ***
1 H 13282 6641 0 ***
2 GH 18991.914 4495.96 0 DELTA P = 955.6 ***
3 137.8GH 337197 168598 0 ***
Pw = 2275.4 ***
4 Pc on Pn 3231.0 2772.2 2763.3 2296.9 2270.2 2272.9 ***
5 Pn 4.87 4.14 4.13 3.43 3.39 3.40 ***
6 T 666.82 600.41 600.41 534 534 534 ***
7 Tr 1.75 1.57 1.57 1.40 1.40 1.40 ***
8 Z 0.898 0.816 0.816 0.706 0.706 0.706 ***
9 P/ZP/Z 4/8 3629.4 3396.9 3387.1 3252.9 3216.4 3220.1 ***
10 P/TZ 9/6 5.4429 5.6577 5.6413 6.0916 6.0233 6.0302 ***
11 Ln10*2/1000(10)2/100 ***
12 L/H(FrQm)2 ***
13 11+12 ***
14 In 10/13 183.727 176.752 177.265 164.162 166.022 165.833 ***
15 M=Pn-Pn-1 459 468 466 493 490 ***
16 N=In+In-1 360.479 360.992 341.427 343.287 343.098 ***
17 M x N 15x16 168339 168266 ***
18 SUM(MxN) SUM17 337197 168358 ***
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