

HISTORY OF OIL OR GAS WELL

Harris-Federal Well No. 1 was spudded at 2:30 PM, 12-26-61 w/Cable Tools. Drilled 16' hole to 470'. Reduced hole size to 13'. Ramped hole to 24'. Set 22' casing at 150'. Released Cable Tool Rig. Rigged up Rotary Tools. Began rotary drilling 1-29-62. Ramped and drilled 20' hole to 327'. Cemented 300' 16' casing at 325' w/400 ex. Drilled 13 3/4' hole to 3355'. Ran log. Drilled to 4736'. Ran logs. Drilled to 5093'. Set 10 3/4' casing at 5093' w/2175 ex. Cored from 5105' - 5116' & 5135' - 5136'. Recovered limestone, shale, and sand w/no shows. Drilled 9 5/8' hole to 11,564'. Ran DST # 1: 11,451' - 11,564' (113' Wolfcamp). Tool open 2 hours thru 5/8" BC, 3/4" TC, & 1 1/2" DP. Opened w/strong blow. GTS 30 minutes. TSTM. NPTM. Declined to weak blow in 45 minutes. Remained weak to moderate for remainder of flow period. Recovery 377' (3.3 bbls.) gas cut mud. 1 hour ISIRBP 921 psi. IFIRBP/FFIRBP 113/173 psi. 1 hour FSIRBP 745 psi. BHP in & out 5077 psi/5097 psi. Conclusive Test. (Foster) Drilled to 11,696'. Ran DST # 2: 11,564' - 11,696' (132' Wolfcamp). Tool open 2 hours thru 5/8" BC, 3/4" TC, & 1 1/2" DP. GTS 11 minutes. Recovery 545' (4.3 bbls.) gas cut mud, no oil. 60 mins. ISIRBP 2000 psi. FHRP 235 - 274 psi. 60 minutes PSIRBP 745 psi. BHP 6391 - 6835 psi. Recovery mud titrated 800 ppm Cl⁻. Pit mud titrated 1000 ppm Cl⁻. Conclusive Test. (Foster) Drilled to 11,943'. Ran logs. Cemented 7 5/8" casing at 11,943' w/1100 ex. Drilled 6 3/4' hole to 12,111'. Ran DST # 3: 11,942' - 12,111' (169' Acoma). Tool open 2 hours thru 5/8" BC, 1" TC, 3 1/2" DP. GTS 5 minutes. Estimated maximum rate 225 MCFTD. Recovery 810' (4.1 bbls.) gas cut mud. 2 hours ISIRBP 2006 psi (failed). FHRP 300 - 407 psi. 2 1/2 hours PSIRBP 7630 psi. BHP 7651 - 7630 psi. Conclusive Test. (Johnston) Drilled to 14,229'. Ran logs. Drilled to 14,655'. Ran logs. Set 5 1/2" liner w/300 ex. Drilled 4 3/4' hole to 14,752'. Ran DST # 4: 14,655' - 14,752' (97' Devonian). Tool open 2 hours thru 5/8" BC, 5/8" TC, 3 1/2" & 2 7/8" DP. GTS 8 minutes. Flowed at rate of 450 MCFTD. Recovery 570' black sulfurous emulsion. Pit mud titrated 1500 ppm Cl⁻. Recovery fluid 1500 ppm Cl⁻. 60 minutes ISIRBP 6345 psi. FHRP 295 - 395 psi. 120 minutes PSIRBP 6175 psi. BHP 7705 psi. Conclusive Test. (HOWCO) Drilled to 14,832'. Ran DST # 5: 14,655' - 14,832' (177' Devonian). Tool open 3 1/2 hours thru 5/8" BC, 1" & 3/8" TC, 3 7/8" DP. Flowed to atmosphere for 35 minutes to clean. Flowed at rate of 3.45 MCFTD on 3/8" choke (FP 1100 psi) + 20 bbls. condensate (50.5 bbls./MCF). Gravity 55.6 deg. API. Recovery 310' (1 bbl.) condensate + 30' (.17 bbls.) gas, condensate, & mud cut salty sulfur water. 60 minutes ISIRBP 6345 psi. FHRP 1236 - 1395 psi. 120 minutes PSIRBP 6345 psi. BHP 7705 psi. Recovered water titrated 13,000 ppm Cl⁻. Pit water titrated 1600 ppm Cl⁻. Conclusive Test. (HOWCO) Ran logs. Conditioned hole. Laid down drill pipe. Ran tubing and packer, set packer at 14,620'. Treated w/2000 gallons 15% HGA. Took COAP potential test. Shut in.

DEVIATION RECORD

674' = 3/4 deg.
1341' = 1 deg.
1325' = 3/4 deg.
2135' = 3/4 deg.
2927' = 1 1/2 deg.
3057' = 1 1/4 deg.
3150' = 1 deg.
3260' = 1 1/2 deg.
3360' = 1 deg.
3410' = 1 deg.
3500' = 1 deg.
4010' = 2 3/4 deg.
4060' = 2 3/4 deg.
4127' = 2 deg.
4136' = 3 deg.
4250' = 3 deg.
4300' = 4 1/2 deg.
4323' = 3 1/2 deg.
4436' = 2 3/4 deg.
4438' = 3 deg.
4560' = 2 1/2 deg.
4615' = 2 1/4 deg.
4678' = 2 deg.
4770' = 1 3/4 deg.
4795' = 1 3/4 deg.
4851' = 1 1/4 deg.
4928' = 1 1/4 deg.

5382' = 1 deg.
5730' = 3/4 deg.
7270' = 1/2 deg.
7336' = 3/4 deg.
7494' = 1/2 deg.
7609' = 1/4 deg.
7907' = 1/2 deg.
8207' = 1/4 deg.
8402' = 1/2 deg.
8590' = 1/2 deg.
8763' = 3/4 deg.
9012' = 1/2 deg.
9051' = 1/2 deg.
9434' = 2 1/2 deg.
9533' = 2 deg.
9613' = 3 deg.
9646' = 2 1/2 deg.
9155' = 3 deg.
9380' = 2 3/4 deg.
10,220' = 2 1/2 deg.
10,307' = 2 1/2 deg.
10,450' = 2 deg.
10,516' = 2 deg.
10,712' = 1 3/4 deg.
10,869' = 1 3/4 deg.
11,335' = 1 3/4 deg.

11,453' = 2 deg.
11,706' = 1 1/2 deg.
12,169' = 1 deg.
12,334' = 1 deg.
12,410' = 1 deg.
12,650' = 1 3/4 deg.
12,825' = 1 3/4 deg.
13,229' = 3 deg.
13,323' = 2 3/4 deg.
13,495' = 3 1/4 deg.
13,545' = 3 1/4 deg.
13,861' = 4 1/4 deg.
13,920' = 4 1/4 deg.
13,979' = 4 1/4 deg.
14,155' = 4 1/4 deg.
14,432' = 3/4 deg.
15,579' = 3 1/4 deg.

Original Signed By
R. A. LOWERY

R. A. Lowery
District Exploitation Engineer