

PRESIDENT

State of West Virginia Division of Environmental Protection Section of Oil and Gas

Well Operator's Report of Well Work

| Farm Name: | DONALD MICH | AELS | | | C | perator Well I | No. : LONGACRE #3 | |
|---|--|---|--|-----------------------------------|--------------------------------|--------------------------------------|--|--|
| LOCATION: | Elevation: | 1022' | | (| Quadrang | gle: WEST UN | ION | A 13 |
| | District: Latitude: Longitude: | WEST U 13100 4220 | NION Feet South of S Feet West of 8 | | 20 Min. | | DODDRIDGE | ι |
| Company: | 22 G | OIL COMPA ARTON PLA TON, WV 2 | \ZA | Ţ | Casing & Tubing Size | Used in Drilling | Left In Well | Cement Fill Up Cu. Ft. |
| Agent: | JAN | E. CHAPMA | ١N | - | | | | |
| Inspector: Permit Issued Well Work Co Well Work Co | mmenced: | MIKE UN 08/13/02 08/22/02 08/25/02 | | - - - | 5 5/8" | 1016' | 1016' | 235 sks To Surface |
| Verbal Pluggi Permission gi Rotary X Total Depth (| ng ranted on: Cable | | Rig | - 4 | 1/2" | 2690' | 2690' | 250 sks |
| Fresh water of Salt water de | depths (ft) 16 pths (ft) No | 65' ne | • | | | | Carlie i i i i i i i i i i i i i i i i i i | Parameter to constant takken in |
| | mined in area ((ft): <u>15'- 18'</u> / DATA | | . | | | | DEC 8 4 2002 WV Dysortmond of Environmental Prof. 1300 1890' – 1909' | The second secon |
| Gas: | Final open flo Time of oper | Squaw Gordon ow odor ow 1,958 n flow betwe | MCF / d MCF / d en initial and fina g (surface pres | Oil: Init | tial open t Oil: Fina N/ | e depth (ft) flow0 al open flows A | | |
| Gas: | Initial open fl Final open flo Time of oper | ow | mmingled MCF / d ICF / d en initial and fina sig (surface pre | Oil: Init Oil: Fir al tests | tial open t nal open f | flow low | Bbl / d Bbl / d | |
| FRAC SYS | CTURING OR S | TIMULATIN ILED GEOL THE WELL | G, PHYSICAL OGICAL RECO | CHANGI ORD OF A | E, ETC. ALL FOR | 2). THE WEL | PERFORATED INTER LL LOG WHICH IS A ICLUDING COAL | RVALS, |

Longacre #3 (47-017 -4697) Two Stage Foam Frac – B.J. Services

1st Stage:

Gordon (12 holes) (2583' to 2616')

60 Quality Foam. 500 gal. 15% HCL.

35,000# 20/40 sand, 425,000 SCF N2,

535 bbls foam.

2nd Stage:

Squaw (7 holes) (1920' to 2000')

Big Injun (18 holes) (1931' to 1962')

Keener (6 holes) (1893' to 1900')

60 Quality Foam. 1,000 gal 15% HCL. 40,000# 20/40 sand, 545,000 SCF N2,

585 bbls foam.

WELL LOG

| KB-GL | 0 | 10 | |
|-------------------------|------|-------|----------------------------------|
| Clay | 10 | 12 | |
| Sand | 12 | 15 | |
| Coal | 15 | 18 | |
| Sand & Shale | 18 | 44 | |
| Red Rock | 44 | 50 | |
| Shale & Sand & Red Rock | 50 | 169 | |
| Sand | 169 | 210 | Down @ 170 |
| Red Rock | 210 | 240 | Damp @ 170' |
| Sand & Shale | 240 | 290 | |
| Sand | 290 | 340 | |
| Sand & Shale & Red Rock | 340 | 986 | |
| Sand & Shale | 986 | 1096 | |
| Sand | 1096 | 1215 | |
| Sand & Shale | 1215 | 1605 | |
| Sand | 1605 | 1796 | |
| Sand & Shale | 1796 | 1846 | Gan Chaeka |
| Big Lime | 1846 | 1890 | Gas Checks |
| Keener | 1890 | 1909 | 1756' – Oil Odor 2071' - Odor |
| Shale & Lime | 1909 | 1826 | 2352' - Odor |
| Big Injun | 1826 | 1964 | |
| Shale | 1964 | 1965 | 2573' – Odor |
| Squaw | 1965 | 2002 | TD - Odor |
| Sand & Shale | 2002 | 2161 | |
| Weir | 2161 | 2255 | |
| Sand & Shale | 2255 | 2372 | |
| Berea | 2372 | 2380 | |
| Sand & Shale | 2380 | 2568 | |
| Gordon | 2568 | 2622 | |
| Shale | 2622 | 2745 | |
| TD | 2745 | 21110 | |