

466381

\* BIT # 10 + UR SMITH DGG BIT DIAMETER : 17.50 inch NOZZ 10/18/19  
 MUD RHEOLOGICAL PARAMETERS : PV = 22 YP = 45 GEL = 15 \*

| * TIME   | * DEPTHS   |          |          | * DRILLING PARAMETERS |        |     |      |       | * MUD PARAMETERS |        |         |             | * GAS |             |      |        | * OVERPRESSURE SURVEY |      |     |        | * ACCUMULATED ON BIT |      |       |      |    |
|----------|------------|----------|----------|-----------------------|--------|-----|------|-------|------------------|--------|---------|-------------|-------|-------------|------|--------|-----------------------|------|-----|--------|----------------------|------|-------|------|----|
|          | * MEASURED | * VERTCL | * LAGGED | * ROP                 | * WOB  | RPM | TORG | PRESS | FLOW             | PIT    | DENSITY | TEMPERATURE |       | RESISTIVITY |      | * GAS  | DCS                   |      |     | * FEET | * COST               |      |       |      |    |
| * Hr:mn  | * feet     | * feet   | * feet   | * ft/h                | * klbs | rpm | ftlb | psi   | gpm              | * bbls | IN      | OUT         | IN    | OUT         | ohm  | * unit | ppg                   | ppg  | ppg | * feet | DHr                  | \$   |       |      |    |
| D * 3:50 | 2552.6     | 2548.8   | 2450.0   | 600.3                 | -1.0   | 88  | 800  | 2000  | 781              | 412    | 8.7     | 8.7         | 83.6  | 90.6        | .98  | .97    | 4                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 406.1 | 6.26 | 91 |
| D * 3:51 | 2555.8     | 2552.0   | 2450.0   | 1026.                 | -1.2   | 76  | 700  | 2000  | 788              | 410    | 8.7     | 8.7         | 83.5  | 90.4        | .98  | .97    | 4                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 408.1 | 6.27 | 90 |
| D * 3:51 | 2558.0     | 2555.4   | 2450.0   | 415.3                 | -1.2   | 88  | 700  | 2093  | 791              | 410    | 8.7     | 8.7         | 83.5  | 90.7        | .98  | .96    | 4                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 471.5 | 6.27 | 90 |
| D * 3:51 | 2561.5     | 2559.0   | 2450.0   | 401.7                 | -2.1   | 82  | 700  | 2000  | 785              | 406    | 8.7     | 8.7         | 83.6  | 90.5        | .98  | .97    | 4                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 495.0 | 6.28 | 89 |
| D * 3:52 | 2563.1     | 2560.5   | 2450.0   | 429.8                 | -1.0   | 81  | 800  | 2000  | 786              | 406    | 8.7     | 8.7         | 83.6  | 90.5        | .98  | .97    | 4                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 496.6 | 6.28 | 89 |
| D * 3:59 | 2566.1     | 2562.9   | 2450.0   | 295.1                 | -1.2   | 82  | 800  | 2075  | 785              | 420    | 8.7     | 8.7         | 83.8  | 90.3        | .98  | .98    | 3                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 499.0 | 6.30 | 89 |
| D * 4: 0 | 2571.1     | 2566.9   | 2450.0   | 376.0                 | -1.2   | 80  | 800  | 2004  | 780              | 416    | 8.7     | 8.7         | 83.8  | 90.4        | .98  | .97    | 1                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 502.9 | 6.31 | 88 |
| D * 4: 0 | 2572.0     | 2568.6   | 2450.0   | 853.8                 | -1.4   | 79  | 700  | 2004  | 780              | 414    | 8.7     | 8.7         | 83.8  | 90.5        | .98  | .97    | 1                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 504.6 | 6.31 | 88 |
| D * 4: 0 | 2575.5     | 2573.0   | 2450.0   | 619.6                 | -1.0   | 79  | 700  | 2004  | 783              | 410    | 8.7     | 8.7         | 83.8  | 90.7        | .98  | .97    | 1                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 509.1 | 6.32 | 87 |
| D * 4: 1 | 2578.6     | 2576.1   | 2450.0   | 507.1                 | -.1    | 82  | 700  | 2004  | 783              | 404    | 8.7     | 8.7         | 83.7  | 90.3        | .98  | .97    | 1                     | .16  | .93 | 8.6    | 8.7                  | 12.7 | 512.2 | 6.33 | 86 |
| D * 4: 2 | 2581.3     | 2578.7   | 2453.0   | 371.6                 | -2.4   | 81  | 700  | 2000  | 780              | 404    | 8.7     | 8.7         | 83.8  | 90.2        | .98  | .97    | 1                     | .00  | .93 | 8.6    | 8.7                  | 12.7 | 514.8 | 6.34 | 86 |
| D * 4: 2 | 2585.2     | 2581.2   | 2453.0   | 285.3                 | -.0    | 83  | 700  | 2004  | 781              | 400    | 8.7     | 8.7         | 83.8  | 90.1        | .98  | .98    | 4                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 517.3 | 6.35 | 86 |
| D * 4: 3 | 2587.9     | 2585.0   | 2454.0   | 171.6                 | -1.2   | 78  | 800  | 2004  | 785              | 400    | 8.7     | 8.7         | 83.9  | 90.0        | .98  | .97    | 4                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 521.0 | 6.36 | 85 |
| D * 4: 4 | 2590.7     | 2588.2   | 2454.0   | 859.0                 | -.3    | 78  | 800  | 2075  | 785              | 400    | 8.7     | 8.7         | 84.2  | 90.2        | .98  | .97    | 4                     | .11  | .93 | 8.6    | 8.7                  | 12.7 | 524.3 | 6.37 | 85 |
| D * 4: 4 | 2593.2     | 2590.7   | 2454.0   | 652.1                 | -.1    | 78  | 800  | 2004  | 789              | 400    | 8.7     | 8.7         | 84.2  | 90.2        | .98  | .97    | 4                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 526.7 | 6.37 | 84 |
| D * 4:12 | 2596.2     | 2591.9   | 2455.0   | 283.1                 | -.0    | 82  | 800  | 2070  | 779              | 376    | 8.7     | 8.7         | 84.0  | 89.0        | .98  | .99    | 8                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 528.0 | 6.38 | 84 |
| D * 4:12 | 2599.6     | 2596.6   | 2455.0   | 261.2                 | -1.2   | 83  | 800  | 2075  | 791              | 374    | 8.7     | 8.7         | 84.0  | 89.8        | .98  | .98    | 8                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 532.7 | 6.38 | 83 |
| D * 4:13 | 2604.0     | 2600.7   | 2455.0   | 512.3                 | -2.4   | 84  | 700  | 2075  | 780              | 370    | 8.7     | 8.7         | 84.0  | 89.7        | .98  | .98    | 7                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 536.8 | 6.39 | 83 |
| D * 4:13 | 2606.1     | 2601.5   | 2459.0   | 141.7                 | -1.6   | 84  | 700  | 2075  | 782              | 370    | 8.7     | 8.7         | 84.1  | 89.5        | .98  | .98    | 7                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 537.6 | 6.39 | 83 |
| D * 4:14 | 2609.0     | 2605.7   | 2459.0   | 448.5                 | -.7    | 84  | 700  | 2065  | 785              | 366    | 8.7     | 8.7         | 84.1  | 89.6        | .98  | .98    | 5                     | .21  | .93 | 8.6    | 8.7                  | 12.7 | 541.8 | 6.40 | 82 |
| D * 4:14 | 2612.5     | 2609.9   | 2459.0   | 561.6                 | -.8    | 81  | 700  | 2075  | 785              | 366    | 8.7     | 8.7         | 84.0  | 89.4        | .98  | .98    | 5                     | -.00 | .93 | 8.6    | 8.7                  | 12.7 | 546.0 | 6.41 | 82 |
| D * 4:15 | 2615.3     | 2612.7   | 2468.0   | 574.5                 | -1.8   | 83  | 800  | 2075  | 779              | 366    | 8.7     | 8.7         | 84.1  | 89.7        | .98  | .98    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 548.8 | 6.41 | 81 |
| D * 4:15 | 2617.3     | 2614.3   | 2468.0   | 288.8                 | -1.8   | 83  | 800  | 2075  | 776              | 364    | 8.7     | 8.7         | 84.2  | 89.7        | .98  | .98    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 550.4 | 6.42 | 81 |
| D * 4:15 | 2620.5     | 2616.2   | 2468.0   | 784.1                 | -2.7   | 82  | 800  | 2079  | 784              | 362    | 8.7     | 8.7         | 84.1  | 89.3        | .98  | .99    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 552.2 | 6.42 | 81 |
| D * 4:24 | 2623.5     | 2620.6   | 2481.0   | 242.2                 | 1.5    | 77  | 900  | 2121  | 785              | 406    | 8.7     | 8.7         | 84.0  | 89.3        | .98  | .97    | 8                     | .31  | .94 | 8.6    | 8.7                  | 12.7 | 556.7 | 6.45 | 80 |
| D * 4:24 | 2626.2     | 2622.5   | 2481.0   | 976.7                 | -.2    | 78  | 1000 | 2121  | 785              | 404    | 8.7     | 8.7         | 83.9  | 89.5        | .98  | .98    | 8                     | -.09 | .94 | 8.6    | 8.7                  | 12.7 | 558.6 | 6.45 | 80 |
| D * 4:24 | 2630.1     | 2627.0   | 2481.0   | 611.7                 | -.3    | 78  | 800  | 2130  | 795              | 404    | 8.7     | 8.7         | 83.9  | 89.5        | .98  | .99    | 8                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 563.1 | 6.45 | 79 |
| D * 4:25 | 2632.2     | 2628.6   | 2481.0   | 287.1                 | -1.1   | 82  | 700  | 2135  | 790              | 404    | 8.7     | 8.7         | 83.9  | 89.6        | .98  | .99    | 7                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 564.6 | 6.46 | 79 |
| D * 4:25 | 2635.1     | 2631.5   | 2481.0   | 161.1                 | -1.1   | 81  | 800  | 2135  | 795              | 404    | 8.7     | 8.7         | 83.9  | 89.7        | .98  | .98    | 7                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 567.5 | 6.47 | 79 |
| D * 4:26 | 2638.9     | 2636.2   | 2481.0   | 531.2                 | -.1    | 83  | 700  | 2135  | 795              | 404    | 8.7     | 8.7         | 83.8  | 89.5        | .98  | .99    | 7                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 572.7 | 6.48 | 78 |
| D * 4:26 | 2641.3     | 2638.7   | 2481.0   | 375.5                 | -.7    | 80  | 800  | 2135  | 785              | 406    | 8.7     | 8.7         | 83.8  | 89.9        | .98  | .98    | 5                     | .00  | .94 | 8.6    | 8.7                  | 12.7 | 574.8 | 6.48 | 78 |
| D * 4:26 | 2644.9     | 2642.2   | 2481.0   | 936.8                 | -.0    | 82  | 700  | 2130  | 791              | 406    | 8.7     | 8.7         | 83.8  | 89.8        | .99  | .98    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 578.3 | 6.49 | 78 |
| D * 4:26 | 2647.1     | 2643.4   | 2481.0   | 678.2                 | -3.4   | 83  | 700  | 2139  | 795              | 408    | 8.7     | 8.7         | 83.6  | 89.8        | .99  | .98    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 579.5 | 6.49 | 77 |
| D * 4:27 | 2650.5     | 2647.5   | 2481.0   | 336.0                 | -.1    | 83  | 800  | 2130  | 791              | 408    | 8.7     | 8.7         | 83.4  | 89.8        | .99  | .98    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 583.6 | 6.50 | 77 |
| D * 4:35 | 2654.5     | 2651.5   | 2497.0   | 412.4                 | -.7    | 79  | 800  | 2112  | 780              | 428    | 8.7     | 8.7         | 82.0  | 89.1        | 1.01 | 1.00   | 8                     | .00  | .94 | 8.6    | 8.7                  | 12.7 | 587.6 | 6.52 | 77 |
| D * 4:35 | 2656.5     | 2652.7   | 2497.0   | 686.7                 | -.5    | 82  | 800  | 2107  | 780              | 426    | 8.7     | 8.7         | 82.0  | 89.3        | 1.01 | .99    | 8                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 588.7 | 6.52 | 76 |
| D * 4:35 | 2659.8     | 2656.5   | 2502.0   | 911.8                 | -.1    | 82  | 900  | 2112  | 789              | 428    | 8.7     | 8.7         | 81.9  | 89.6        | 1.01 | .99    | 8                     | .00  | .94 | 8.6    | 8.7                  | 12.7 | 592.6 | 6.53 | 76 |
| D * 4:36 | 2662.4     | 2659.9   | 2502.0   | 535.5                 | -.3    | 78  | 900  | 2112  | 790              | 428    | 8.7     | 8.7         | 81.6  | 89.6        | 1.01 | .99    | 8                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 595.9 | 6.54 | 76 |
| D * 4:36 | 2665.5     | 2662.3   | 2502.0   | 886.3                 | -1.9   | 80  | 800  | 2121  | 781              | 422    | 8.7     | 8.7         | 81.5  | 89.9        | 1.01 | .99    | 7                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 598.4 | 6.55 | 75 |
| D * 4:37 | 2669.9     | 2666.6   | 2504.0   | 398.4                 | -.3    | 82  | 700  | 2121  | 790              | 426    | 8.7     | 8.7         | 81.6  | 89.1        | 1.01 | .99    | 7                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 603.9 | 6.55 | 75 |
| D * 4:37 | 2672.4     | 2669.1   | 2504.0   | 338.1                 | -2.6   | 83  | 700  | 2112  | 782              | 424    | 8.7     | 8.7         | 81.7  | 89.1        | 1.01 | 1.00   | 5                     | .00  | .94 | 8.6    | 8.7                  | 12.7 | 605.2 | 6.56 | 75 |
| D * 4:38 | 2676.3     | 2673.6   | 2504.0   | 1486.                 | -.0    | 83  | 700  | 2125  | 795              | 420    | 8.7     | 8.7         | 81.7  | 90.0        | 1.01 | .98    | 5                     | -.00 | .94 | 8.6    | 8.7                  | 12.7 | 609.6 | 6.57 | 74 |
| D * 4:38 | 2678.4     | 2675.8   | 2504.0   | 861.0                 | -3.2   | 85  | 700  | 2130  | 795              | 422    | 8.7     | 8.7         | 81.7  | 90.0        | 1.01 | .98    | 4                     | .00  | .94 | 8.6    | 8.7                  | 12.7 | 611.9 | 6.57 | 74 |
| D * 4:38 | 2680.3     | 2676.5   | 2506.0   | 329.8                 | -2.3   | 88  | 800  | 2130  | 785              | 420    | 8.7     | 8.7         | 81.6  | 89.9        | 1.01 | .98    | 5                     | .00  | .94 | 8.6    | 8.7                  | 12.7 | 612.6 | 6.57 | 74 |
| D * 4:39 | 2684.4     | 2681.9   | 2506.0   | 545.2                 | -.3    | 79  | 800  | 2125  | 785              | 420    | 8.7     | 8.7         | 81.6  | 89.8        | 1.01 | .98    | 5                     | .16  | .94 | 8.6    | 8.7                  | 12.8 | 617.9 | 6.58 | 73 |
| D * 4:47 | 2686.1     | 2682.6   | 2534.0   | 78.2                  | 1.0    | 79  | 1100 | 2112  | 779              | 442    | 8.7     | 8.7         | 81.6  | 88.9        | 1.00 | .98    | 7                     | .37  | .94 | 8.6    | 8.7                  | 12.8 | 618.6 | 6.60 | 73 |
| D * 4:48 | 2689.4     | 2686.6   | 2534.0   | 121.0                 | -.9    | 82  | 1000 | 2102  | 775              | 434    | 8.7     | 8.7         | 81.6  | 88.8        | 1.01 | .98    | 7                     | -.00 | .94 | 8.6    | 8.7                  | 12.8 | 622.6 | 6.61 | 73 |
| D * 4:49 | 2692.1     | 2689.5   | 2535.0   | 417.6                 | 2.0    | 75  | 1000 | 2107  | 776              | 426    | 8.7     | 8.7         | 81.5  | 89.0        | 1.01 | .98    | 5                     | .24  | .94 | 8.6    | 8.7                  | 12.8 | 625.6 | 6.62 | 72 |
| D * 4:50 | 2696.1     | 2693.1   | 2535.0   | 128.6                 | -1.5   | 83  | 900  | 2121  | 780              | 424    | 8.7     | 8.7         | 81.6  | 89.2        | 1.00 | .98    | 4                     | -.00 | .94 | 8.6    | 8.7                  | 12.8 | 629.2 | 6.64 | 72 |

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 021 vlla