

HOBBS OCD

APR 29 2016

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5D Plan Report

Devon Energy

Field Name: *Lea Co, NM Nad 83 NMEZ*
Site Name: *Green Wave 20-29 Fed 76H,77H,78H Pad*
Well Name: *Green Wave 20-29 Fed 78H Pilot*
Plan: *P1:V1*

12 May 2015



Weatherford[®]

Green Wave 20-29 Fed 78H Lat

| | | |
|-------------------------|---|------------------------------------|
| Field Name | Map Units : US ft | Company Name : Devon Energy |
| Lea Co, NM, Nad 83 NMEZ | Vertical Reference Datum (VRD) : Mean Sea Level | |
| | Projected Coordinate System : NAD83 / New Mexico East (ftUS) | |
| | Comment : | |

| | | | |
|--|---|-------------------------------------|---------------------------------|
| Site Name | Units : US ft | North Reference : Grid | Convergence Angle : 0.45 |
| Green Wave 20-29 Fed 76H, 77H, 78H Pad | Position | | |
| | Northing : 375210.52 US ft | Latitude : 32° 1' 43.35" | |
| | Easting : 803702.93 US ft | Longitude : -103° 29' 12.16" | |
| | Elevation above Mean Sea Level : 3349.00 US ft | | |
| | Comment : | | |

| | | | |
|--------------------------|---|-----------------------------------|-------------------------------------|
| Slot Name | Position (Offsets relative to Site Centre) | | |
| Green Wave 20-29 Fed 78H | +N / -S : 0.59 US ft | Northing : 375211.11 US ft | Latitude : 32° 1' 43.35" |
| | +E / -W : 99.95 US ft | Easting : 803802.88 US ft | Longitude : -103° 29' 11.00" |
| | Slot TVD Reference : Ground Elevation | | |
| | Elevation above Mean Sea Level : 3348.00 US ft | | |
| | Comment : | | |

| | | | |
|------------------------------|--|-----------------------------------|-----------------------------------|
| Well Name | Type : Sidetrack | UWI : | Plan : P1:V1 |
| Green Wave 20-29 Fed 78H Lat | Parent : Green Wave 20-29 Fed 78H Pilot | Tie Point Method : TVD | Tie Point : 12115.00 US ft |
| | Rig Height Kelly Bushing : 30.00 US ft | Comment : | |
| | Relative to Mean Sea Level : 3378.00 US ft | | |
| | Closure Distance : 7533.71 US ft | Closure Azimuth : 175.041° | |
| | Vertical Section (Position of Origin Relative to Slot) | | |
| | +N / -S : 0.00 US ft | +E / -W : 0.00 US ft | Az : 179.49° |
| | Magnetic Parameters | | |
| | Model : BGGM | Field Strength : 48025.3nT | Dec : 7.18° |
| | | | Dip : 59.90° |
| | | | Date : 15/Nov/2015 |

Target Set

Name : Green Wave 20-29 Fed 78H Lat
Number of Targets : 2

Comment :

| | | | |
|---------------------|---|-----------------------------------|-------------------------------------|
| Target Name: | Position (Relative to Slot centre) | | |
| LP Tgt | +N / -S : 44.23 US ft | Northing : 375255.34 US ft | Latitude : 32° 1' 43.74" |
| | +E / -W : 584.55 US ft | Easting : 804387.43 US ft | Longitude : -103° 29' 14.20" |
| Shape: | TVD (Kelly Bushing) : 12638.00 US ft | | |
| Cuboid | Orientation Azimuth : 0.00° | Inclination : 0.00° | |
| | Dimensions Length : 20.00 US ft | Breadth : 20.00 US ft | Height : 20.00 US ft |

SD Plan Report

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|--|--|--|--|
| Target Name: PBHL 78H Lat Shape: Cuboid | Position (Relative to Slot centre) +N / -S : 7505.51US.ft Northing : 367705.60 US.ft Latitude : 32°0'29.03" +E / -W : 651.28 US.ft Easting : 804454.16US.ft Longitude : -103°29'4.12" | | |
| | TVD (Kelly Bushing) : 12614.00 US ft | | |
| Orientation Azimuth : 0.00° | | Inclination : 0.00° | |
| Dimensions Length : 20.00 US ft | | Breadth : 20.00 US ft Height : 20.00 US ft | |

Well path created using minimum curvature

| Salient Points (Relative to Slot centre, TVD relative to Kelly Bushing) | | | | | | | | | | | |
|---|---------|--------|-------------|-------------------|-------------------|------------|-------------------|-----------------------|-----------------------|-------------|--------------|
| MD (US.ft) | Inc (°) | Az (°) | TVD (US.ft) | N. Offset (US.ft) | E. Offset (US.ft) | VS (US.ft) | DLS (°/100 US.ft) | B. Rate (°/100 US.ft) | T. Rate (°/100 US.ft) | T. Face (°) | Comment |
| 12142.54 | 0.00 | 0.00 | 12115.00 | 44.23 | 584.55 | -39.03 | 0.00 | 0.00 | 0.00 | 0.00 | KOP |
| 12962.34 | 90.18 | 179.49 | 12635.87 | -478.24 | 589.17 | 483.47 | 11.00 | 11.00 | 0.00 | 179.49 | LP |
| 19989.92 | 90.18 | 179.49 | 12614.00 | -7505.51 | 651.28 | 7511.01 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL 78H Lat |

| Interpolated Points (Relative to Slot centre, TVD relative to Kelly Bushing) | | | | | | | | | | | |
|--|---------|--------|-------------|-------------------|-------------------|------------|-------------------|------------------|-----------------|---------|--|
| MD (US.ft) | Inc (°) | Az (°) | TVD (US.ft) | N. Offset (US.ft) | E. Offset (US.ft) | VS (US.ft) | DLS (°/100 US.ft) | Northing (US.ft) | Easting (US.ft) | Comment | |
| 12142.54 | 0.00 | 0.00 | 12115.00 | 44.23 | 584.55 | -39.03 | 0.00 | 375255.34 | 804387.43 | KOP | |
| 12242.54 | 11.00 | 179.49 | 12214.39 | 34.66 | 584.63 | -29.46 | 11.00 | 375245.77 | 804387.51 | | |
| 12342.54 | 22.00 | 179.49 | 12310.12 | 6.30 | 584.89 | -1.10 | 11.00 | 375217.41 | 804387.77 | | |
| 12442.54 | 33.00 | 179.49 | 12398.69 | -39.80 | 585.29 | 45.01 | 11.00 | 375171.31 | 804388.17 | | |
| 12542.54 | 44.00 | 179.49 | 12476.83 | -101.95 | 585.84 | 107.16 | 11.00 | 375109.16 | 804388.72 | | |
| 12642.54 | 55.00 | 179.49 | 12541.67 | -177.87 | 586.51 | 183.09 | 11.00 | 375033.24 | 804389.39 | | |
| 12742.54 | 66.00 | 179.49 | 12590.84 | -264.77 | 587.28 | 269.99 | 11.00 | 374946.34 | 804390.16 | | |
| 12842.54 | 77.00 | 179.49 | 12622.52 | -359.45 | 588.12 | 364.68 | 11.00 | 374851.66 | 804391.00 | | |
| 12942.54 | 88.00 | 179.49 | 12635.55 | -458.44 | 588.99 | 463.67 | 11.00 | 374752.67 | 804391.87 | | |
| 12962.34 | 90.18 | 179.49 | 12635.87 | -478.24 | 589.17 | 483.47 | 11.00 | 374732.87 | 804392.05 | LP | |
| 13042.54 | 90.18 | 179.49 | 12635.62 | -558.43 | 589.88 | 563.66 | 0.00 | 374652.68 | 804392.76 | | |
| 13142.54 | 90.18 | 179.49 | 12635.31 | -658.43 | 590.76 | 663.66 | 0.00 | 374552.68 | 804393.64 | | |
| 13242.54 | 90.18 | 179.49 | 12635.00 | -758.43 | 591.64 | 763.66 | 0.00 | 374452.68 | 804394.52 | | |
| 13342.54 | 90.18 | 179.49 | 12634.69 | -858.42 | 592.53 | 863.66 | 0.00 | 374352.69 | 804395.41 | | |
| 13442.54 | 90.18 | 179.49 | 12634.37 | -958.42 | 593.41 | 963.66 | 0.00 | 374252.69 | 804396.29 | | |
| 13542.54 | 90.18 | 179.49 | 12634.06 | -1058.41 | 594.30 | 1063.66 | 0.00 | 374152.70 | 804397.18 | | |
| 13642.54 | 90.18 | 179.49 | 12633.75 | -1158.41 | 595.18 | 1163.66 | 0.00 | 374052.70 | 804398.06 | | |
| 13742.54 | 90.18 | 179.49 | 12633.44 | -1258.40 | 596.06 | 1263.66 | 0.00 | 373952.71 | 804398.94 | | |
| 13842.54 | 90.18 | 179.49 | 12633.13 | -1358.40 | 596.95 | 1363.66 | 0.00 | 373852.71 | 804399.83 | | |
| 13942.54 | 90.18 | 179.49 | 12632.82 | -1458.40 | 597.83 | 1463.66 | 0.00 | 373752.71 | 804400.71 | | |
| 14042.54 | 90.18 | 179.49 | 12632.51 | -1558.39 | 598.72 | 1563.66 | 0.00 | 373652.72 | 804401.60 | | |
| 14142.54 | 90.18 | 179.49 | 12632.20 | -1658.39 | 599.60 | 1663.66 | 0.00 | 373552.72 | 804402.48 | | |
| 14242.54 | 90.18 | 179.49 | 12631.88 | -1758.38 | 600.48 | 1763.66 | 0.00 | 373452.73 | 804403.36 | | |
| 14342.54 | 90.18 | 179.49 | 12631.57 | -1858.38 | 601.37 | 1863.66 | 0.00 | 373352.73 | 804404.25 | | |
| 14442.54 | 90.18 | 179.49 | 12631.26 | -1958.37 | 602.25 | 1963.66 | 0.00 | 373252.74 | 804405.13 | | |
| 14542.54 | 90.18 | 179.49 | 12630.95 | -2058.37 | 603.13 | 2063.66 | 0.00 | 373152.74 | 804406.01 | | |
| 14642.54 | 90.18 | 179.49 | 12630.64 | -2158.36 | 604.02 | 2163.66 | 0.00 | 373052.75 | 804406.90 | | |
| 14742.54 | 90.18 | 179.49 | 12630.33 | -2258.36 | 604.90 | 2263.66 | 0.00 | 372952.75 | 804407.78 | | |
| 14842.54 | 90.18 | 179.49 | 12630.02 | -2358.36 | 605.79 | 2363.65 | 0.00 | 372852.75 | 804408.67 | | |
| 14942.54 | 90.18 | 179.49 | 12629.71 | -2458.35 | 606.67 | 2463.65 | 0.00 | 372752.76 | 804409.55 | | |
| 15042.54 | 90.18 | 179.49 | 12629.40 | -2558.35 | 607.55 | 2563.65 | 0.00 | 372652.76 | 804410.43 | | |
| 15142.54 | 90.18 | 179.49 | 12629.08 | -2658.34 | 608.44 | 2663.65 | 0.00 | 372552.77 | 804411.32 | | |
| 15242.54 | 90.18 | 179.49 | 12628.77 | -2758.34 | 609.32 | 2763.65 | 0.00 | 372452.77 | 804412.20 | | |
| 15342.54 | 90.18 | 179.49 | 12628.46 | -2858.33 | 610.20 | 2863.65 | 0.00 | 372352.78 | 804413.08 | | |
| 15442.54 | 90.18 | 179.49 | 12628.15 | -2958.33 | 611.09 | 2963.65 | 0.00 | 372252.78 | 804413.97 | | |
| 15542.54 | 90.18 | 179.49 | 12627.84 | -3058.33 | 611.97 | 3063.65 | 0.00 | 372152.78 | 804414.85 | | |

SD Plan Report

| Interpolated Points (Relative to Slot centre, TVD relative to Kelly Bushing) | | | | | | | | | | |
|--|------------|-----------|----------------|----------------------|----------------------|---------------|----------------------|---------------------|--------------------|--------------|
| MD (US ft) | Inc (°) | Az (°) | TVD (US ft) | N. Offset (US ft) | E. Offset (US ft) | VS (US ft) | DLS (%/100 US ft) | Northing (US ft) | Easting (US ft) | Comment |
| 15642.54 | 90.18 | 179.49 | 12627.53 | -3158.32 | 612.86 | 3163.65 | 0.00 | 372052.79 | 804415.74 | |
| 15742.54 | 90.18 | 179.49 | 12627.22 | -3258.32 | 613.74 | 3263.65 | 0.00 | 371952.79 | 804416.62 | |
| 15842.54 | 90.18 | 179.49 | 12626.91 | -3358.31 | 614.62 | 3363.65 | 0.00 | 371852.80 | 804417.50 | |
| 15942.54 | 90.18 | 179.49 | 12626.59 | -3458.31 | 615.51 | 3463.65 | 0.00 | 371752.80 | 804418.39 | |
| 16042.54 | 90.18 | 179.49 | 12626.28 | -3558.30 | 616.39 | 3563.65 | 0.00 | 371652.81 | 804419.27 | |
| 16142.54 | 90.18 | 179.49 | 12625.97 | -3658.30 | 617.28 | 3663.65 | 0.00 | 371552.81 | 804420.16 | |
| 16242.54 | 90.18 | 179.49 | 12625.66 | -3758.29 | 618.16 | 3763.65 | 0.00 | 371452.82 | 804421.04 | |
| 16342.54 | 90.18 | 179.49 | 12625.35 | -3858.29 | 619.04 | 3863.65 | 0.00 | 371352.82 | 804421.92 | |
| 16442.54 | 90.18 | 179.49 | 12625.04 | -3958.29 | 619.93 | 3963.65 | 0.00 | 371252.82 | 804422.81 | |
| 16542.54 | 90.18 | 179.49 | 12624.73 | -4058.28 | 620.81 | 4063.65 | 0.00 | 371152.83 | 804423.69 | |
| 16642.54 | 90.18 | 179.49 | 12624.42 | -4158.28 | 621.69 | 4163.65 | 0.00 | 371052.83 | 804424.57 | |
| 16742.54 | 90.18 | 179.49 | 12624.11 | -4258.27 | 622.58 | 4263.65 | 0.00 | 370952.84 | 804425.46 | |
| 16842.54 | 90.18 | 179.49 | 12623.79 | -4358.27 | 623.46 | 4363.64 | 0.00 | 370852.84 | 804426.34 | |
| 16942.54 | 90.18 | 179.49 | 12623.48 | -4458.26 | 624.35 | 4463.64 | 0.00 | 370752.85 | 804427.23 | |
| 17042.54 | 90.18 | 179.49 | 12623.17 | -4558.26 | 625.23 | 4563.64 | 0.00 | 370652.85 | 804428.11 | |
| 17142.54 | 90.18 | 179.49 | 12622.86 | -4658.25 | 626.11 | 4663.64 | 0.00 | 370552.86 | 804428.99 | |
| 17242.54 | 90.18 | 179.49 | 12622.55 | -4758.25 | 627.00 | 4763.64 | 0.00 | 370452.86 | 804429.88 | |
| 17342.54 | 90.18 | 179.49 | 12622.24 | -4858.25 | 627.88 | 4863.64 | 0.00 | 370352.86 | 804430.76 | |
| 17442.54 | 90.18 | 179.49 | 12621.93 | -4958.24 | 628.77 | 4963.64 | 0.00 | 370252.87 | 804431.65 | |
| 17542.54 | 90.18 | 179.49 | 12621.62 | -5058.24 | 629.65 | 5063.64 | 0.00 | 370152.87 | 804432.53 | |
| 17642.54 | 90.18 | 179.49 | 12621.30 | -5158.23 | 630.53 | 5163.64 | 0.00 | 370052.88 | 804433.41 | |
| 17742.54 | 90.18 | 179.49 | 12620.99 | -5258.23 | 631.42 | 5263.64 | 0.00 | 369952.88 | 804434.30 | |
| 17842.54 | 90.18 | 179.49 | 12620.68 | -5358.22 | 632.30 | 5363.64 | 0.00 | 369852.89 | 804435.18 | |
| 17942.54 | 90.18 | 179.49 | 12620.37 | -5458.22 | 633.18 | 5463.64 | 0.00 | 369752.89 | 804436.06 | |
| 18042.54 | 90.18 | 179.49 | 12620.06 | -5558.22 | 634.07 | 5563.64 | 0.00 | 369652.89 | 804436.95 | |
| 18142.54 | 90.18 | 179.49 | 12619.75 | -5658.21 | 634.95 | 5663.64 | 0.00 | 369552.90 | 804437.83 | |
| 18242.54 | 90.18 | 179.49 | 12619.44 | -5758.21 | 635.84 | 5763.64 | 0.00 | 369452.90 | 804438.72 | |
| 18342.54 | 90.18 | 179.49 | 12619.13 | -5858.20 | 636.72 | 5863.64 | 0.00 | 369352.91 | 804439.60 | |
| 18442.54 | 90.18 | 179.49 | 12618.82 | -5958.20 | 637.60 | 5963.64 | 0.00 | 369252.91 | 804440.48 | |
| 18542.54 | 90.18 | 179.49 | 12618.50 | -6058.19 | 638.49 | 6063.64 | 0.00 | 369152.92 | 804441.37 | |
| 18642.54 | 90.18 | 179.49 | 12618.19 | -6158.19 | 639.37 | 6163.64 | 0.00 | 369052.92 | 804442.25 | |
| 18742.54 | 90.18 | 179.49 | 12617.88 | -6258.18 | 640.26 | 6263.64 | 0.00 | 368952.93 | 804443.14 | |
| 18842.54 | 90.18 | 179.49 | 12617.57 | -6358.18 | 641.14 | 6363.64 | 0.00 | 368852.93 | 804444.02 | |
| 18942.54 | 90.18 | 179.49 | 12617.26 | -6458.18 | 642.02 | 6463.63 | 0.00 | 368752.93 | 804444.90 | |
| 19042.54 | 90.18 | 179.49 | 12616.95 | -6558.17 | 642.91 | 6563.63 | 0.00 | 368652.94 | 804445.79 | |
| 19142.54 | 90.18 | 179.49 | 12616.64 | -6658.17 | 643.79 | 6663.63 | 0.00 | 368552.94 | 804446.67 | |
| 19242.54 | 90.18 | 179.49 | 12616.33 | -6758.16 | 644.67 | 6763.63 | 0.00 | 368452.95 | 804447.55 | |
| 19342.54 | 90.18 | 179.49 | 12616.01 | -6858.16 | 645.56 | 6863.63 | 0.00 | 368352.95 | 804448.44 | |
| 19442.54 | 90.18 | 179.49 | 12615.70 | -6958.15 | 646.44 | 6963.63 | 0.00 | 368252.96 | 804449.32 | |
| 19542.54 | 90.18 | 179.49 | 12615.39 | -7058.15 | 647.33 | 7063.63 | 0.00 | 368152.96 | 804450.21 | |
| 19642.54 | 90.18 | 179.49 | 12615.08 | -7158.15 | 648.21 | 7163.63 | 0.00 | 368052.96 | 804451.09 | |
| 19742.54 | 90.18 | 179.49 | 12614.77 | -7258.14 | 649.09 | 7263.63 | 0.00 | 367952.97 | 804451.97 | |
| 19842.54 | 90.18 | 179.49 | 12614.46 | -7358.14 | 649.98 | 7363.63 | 0.00 | 367852.97 | 804452.86 | |
| 19942.54 | 90.18 | 179.49 | 12614.15 | -7458.13 | 650.86 | 7463.63 | 0.00 | 367752.98 | 804453.74 | |
| 19989.92 | 90.18 | 179.49 | 12614.00 | -7505.51 | 651.28 | 7511.01 | 0.00 | 367705.60 | 804454.16 | PBHL 78H Lat |