

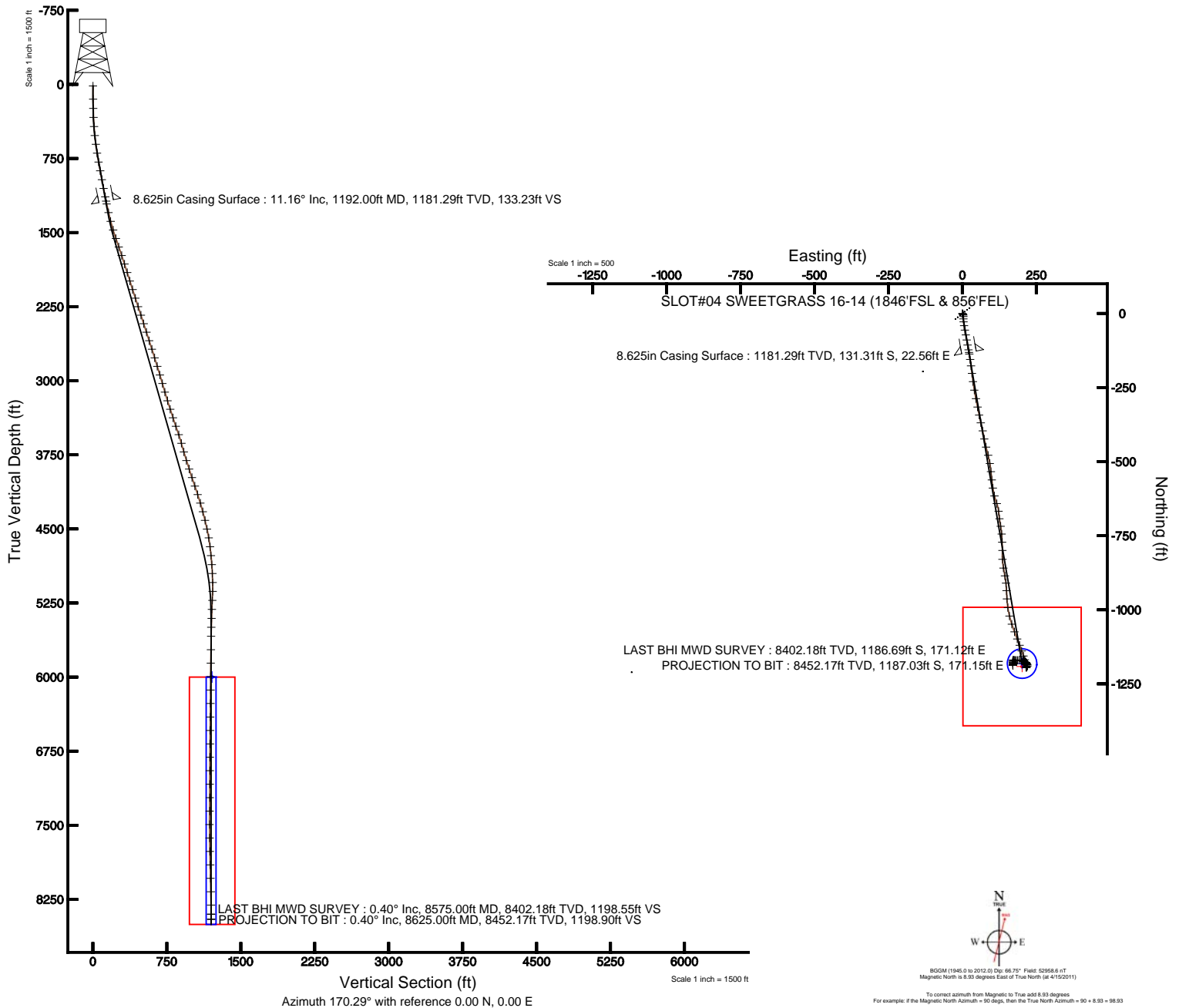


KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#04 SWEETGRASS 16-14 (1846°FSL & 856°FEL)
Field: WELD COUNTY (KERR MCGEE) Well: SWEETGRASS 16-14
Facility: SEC.14-T1N-R68W Wellbore: SWEETGRASS 16-14 PWB



| | |
|---|--|
| Pia reference wellbore is SWEETGRASS 16-14 (REV-A.1) PWB | |
| True vertical depths are referenced to XTREME 12 (RKB) | Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet |
| Measured depths are referenced to XTREME 12 (RKB) | North Reference: True north |
| XTREME 12 (RKB) to Mean Sea Level: 5151 feet | Scale: True distance |
| Mean Sea Level to Mud line (At Slot: SWEETGRASS 16-14 (1846°FSL & 856°FEL)): 0 feet | Depths are in feet |
| Coordinates are in feet referenced to Sd | Created by: cookdam on 7/20/2011 |





Actual Wellpath Report

SWEETGRASS 16-14 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|---|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#04 SWEETGRASS 16-14 (1846'FSL & 856'FEL) |
| Area | COLORADO | Well | SWEETGRASS 16-14 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | SWEETGRASS 16-14 AWB |
| Facility | SEC.14-T1N-R68W | | |

| REPORT SETUP INFORMATION | | | |
|--------------------------|---|----------------------|------------------------------------|
| Projection System | NAD83 / Lambert Colorado SP, Northern Zone (501), US feet | Software System | WellArchitect® 3.0.0 |
| North Reference | True | User | Cookdanm |
| Scale | 0.999963 | Report Generated | 7/20/2011 at 3:49:23 PM |
| Convergence at slot | 0.35° East | Database/Source file | WA_DENVER/SWEETGRASS_16-14_AWB.xml |

| WELLPATH LOCATION | | | | | | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | -18.58 | -23.52 | 3149980.73 | 1261241.89 | 40°02'57.314"N | 104°57'51.329"W |
| Facility Reference Pt | | | 3150004.14 | 1261260.61 | 40°02'57.498"N | 104°57'51.026"W |
| Field Reference Pt | | | 3197771.84 | 1268891.29 | 40°04'09.600"N | 104°47'36.000"W |

| WELLPATH DATUM | | | |
|--------------------------|-------------------|---|-------------------|
| Calculation method | Minimum curvature | XTREME 12 (RKB) to Facility Vertical Datum | 5151.00ft |
| Horizontal Reference Pt | Slot | XTREME 12 (RKB) to Mean Sea Level | 5151.00ft |
| Vertical Reference Pt | XTREME 12 (RKB) | XTREME 12 (RKB) to Mud Line at Slot (SLOT#04 SWEETGRASS 16-14 (1846'FSL & 856'FEL)) | 5151.00ft |
| MD Reference Pt | XTREME 12 (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 170.29° |



Actual Wellpath Report

SWEETGRASS 16-14 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|---|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#04 SWEETGRASS 16-14 (1846'FSL & 856'FEL) |
| Area | COLORADO | Well | SWEETGRASS 16-14 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | SWEETGRASS 16-14 AWP |
| Facility | SEC.14-T1N-R68W | | |

| WELLPATH DATA (87 stations) † = interpolated/extrapolated station | | | | | | | | |
|---|-----------------|-------------|----------|----------------|------------|-----------|---------------|----------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
| 0.00† | 0.000 | 127.100 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 15.00 | 0.000 | 127.100 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 149.00 | 1.200 | 127.100 | 148.99 | 1.02 | -0.85 | 1.12 | 0.90 | |
| 242.00 | 1.200 | 155.200 | 241.97 | 2.67 | -2.32 | 2.30 | 0.63 | |
| 334.00 | 2.500 | 165.400 | 333.92 | 5.60 | -5.13 | 3.21 | 1.45 | |
| 426.00 | 4.000 | 180.900 | 425.77 | 10.76 | -10.28 | 3.67 | 1.88 | |
| 517.00 | 5.800 | 179.800 | 516.44 | 18.41 | -18.06 | 3.64 | 1.98 | |
| 607.00 | 7.300 | 174.200 | 605.85 | 28.60 | -28.29 | 4.23 | 1.81 | |
| 698.00 | 8.800 | 171.000 | 695.95 | 41.33 | -40.92 | 5.90 | 1.72 | |
| 789.00 | 10.300 | 168.900 | 785.68 | 56.43 | -55.78 | 8.56 | 1.69 | |
| 879.00 | 11.000 | 168.600 | 874.13 | 73.05 | -72.09 | 11.80 | 0.78 | |
| 970.00 | 10.900 | 171.400 | 963.48 | 90.33 | -89.11 | 14.81 | 0.59 | |
| 1061.00 | 11.300 | 169.300 | 1052.78 | 107.85 | -106.38 | 17.75 | 0.62 | |
| 1147.00 | 11.100 | 168.900 | 1137.14 | 124.55 | -122.78 | 20.91 | 0.25 | |
| 1221.00 | 11.200 | 169.300 | 1209.74 | 138.86 | -136.83 | 23.61 | 0.17 | |
| 1311.00 | 12.700 | 172.800 | 1297.79 | 157.48 | -155.24 | 26.48 | 1.85 | |
| 1402.00 | 15.100 | 172.100 | 1386.12 | 179.32 | -176.91 | 29.36 | 2.64 | |
| 1493.00 | 17.400 | 173.200 | 1473.48 | 204.76 | -202.16 | 32.60 | 2.55 | |
| 1584.00 | 18.300 | 172.800 | 1560.10 | 232.63 | -229.85 | 36.00 | 1.00 | |
| 1674.00 | 19.400 | 169.300 | 1645.27 | 261.69 | -258.55 | 40.55 | 1.75 | |
| 1765.00 | 18.300 | 168.900 | 1731.39 | 291.08 | -287.42 | 46.10 | 1.22 | |
| 1856.00 | 18.500 | 169.600 | 1817.74 | 319.80 | -315.64 | 51.46 | 0.33 | |
| 1947.00 | 16.900 | 168.600 | 1904.43 | 347.46 | -342.81 | 56.68 | 1.79 | |
| 2037.00 | 17.600 | 166.500 | 1990.38 | 374.11 | -368.87 | 62.44 | 1.04 | |
| 2128.00 | 18.200 | 167.500 | 2076.97 | 402.04 | -396.12 | 68.73 | 0.74 | |
| 2219.00 | 17.600 | 170.000 | 2163.57 | 429.99 | -423.54 | 74.20 | 1.07 | |
| 2310.00 | 18.300 | 165.100 | 2250.14 | 457.98 | -450.90 | 80.26 | 1.83 | |
| 2400.00 | 18.500 | 166.100 | 2335.54 | 486.29 | -478.42 | 87.32 | 0.42 | |
| 2491.00 | 17.900 | 170.500 | 2421.99 | 514.67 | -506.22 | 93.10 | 1.65 | |
| 2582.00 | 17.600 | 174.400 | 2508.66 | 542.38 | -533.71 | 96.75 | 1.35 | |
| 2673.00 | 18.700 | 173.300 | 2595.14 | 570.67 | -561.89 | 99.80 | 1.27 | |
| 2763.00 | 17.100 | 172.300 | 2680.78 | 598.31 | -589.34 | 103.25 | 1.81 | |
| 2854.00 | 17.400 | 164.900 | 2767.69 | 625.23 | -615.73 | 108.59 | 2.43 | |
| 2945.00 | 17.400 | 160.700 | 2854.53 | 652.19 | -641.71 | 116.63 | 1.38 | |
| 3036.00 | 16.600 | 173.700 | 2941.59 | 678.59 | -667.48 | 122.56 | 4.26 | |
| 3126.00 | 16.300 | 173.000 | 3027.90 | 704.04 | -692.80 | 125.51 | 0.40 | |
| 3217.00 | 16.500 | 168.400 | 3115.21 | 729.71 | -718.13 | 129.66 | 1.44 | |
| 3308.00 | 17.700 | 176.800 | 3202.19 | 756.38 | -744.61 | 133.03 | 3.01 | |
| 3399.00 | 17.400 | 176.500 | 3288.96 | 783.65 | -772.00 | 134.64 | 0.34 | |
| 3490.00 | 18.600 | 180.000 | 3375.51 | 811.48 | -800.10 | 135.47 | 1.77 | |
| 3581.00 | 19.800 | 178.600 | 3461.44 | 841.04 | -830.02 | 135.84 | 1.41 | |
| 3671.00 | 18.400 | 169.100 | 3546.51 | 870.33 | -859.22 | 138.90 | 3.78 | |
| 3762.00 | 16.200 | 169.100 | 3633.38 | 897.39 | -885.79 | 144.02 | 2.42 | |
| 3853.00 | 15.200 | 174.000 | 3720.99 | 921.99 | -910.12 | 147.67 | 1.82 | |
| 3944.00 | 17.600 | 177.500 | 3808.29 | 947.54 | -935.73 | 149.52 | 2.85 | |
| 4034.00 | 18.500 | 177.200 | 3893.86 | 975.22 | -963.59 | 150.81 | 1.01 | |
| 4125.00 | 19.300 | 170.800 | 3979.96 | 1004.59 | -992.86 | 153.92 | 2.44 | |
| 4216.00 | 18.100 | 167.000 | 4066.16 | 1033.75 | -1021.48 | 159.50 | 1.88 | |
| 4307.00 | 18.200 | 161.700 | 4152.63 | 1061.91 | -1048.74 | 167.14 | 1.82 | |
| 4398.00 | 17.200 | 159.200 | 4239.33 | 1089.17 | -1074.82 | 176.38 | 1.38 | |
| 4489.00 | 15.600 | 158.500 | 4326.62 | 1114.35 | -1098.78 | 185.65 | 1.77 | |
| 4579.00 | 13.900 | 158.500 | 4413.65 | 1136.78 | -1120.10 | 194.04 | 1.89 | |
| 4670.00 | 11.700 | 162.800 | 4502.39 | 1156.63 | -1139.08 | 200.78 | 2.63 | |
| 4761.00 | 11.300 | 157.800 | 4591.56 | 1174.48 | -1156.15 | 206.88 | 1.18 | |
| 4852.00 | 6.100 | 165.200 | 4681.49 | 1188.01 | -1169.09 | 211.48 | 5.83 | |
| 4942.00 | 5.600 | 167.300 | 4771.02 | 1197.16 | -1178.00 | 213.67 | 0.60 | |
| 5033.00 | 4.900 | 167.700 | 4861.64 | 1205.48 | -1186.13 | 215.48 | 0.77 | |
| 5124.00 | 3.000 | 202.100 | 4952.43 | 1211.39 | -1192.13 | 215.41 | 3.25 | |
| 5215.00 | 1.900 | 126.900 | 5043.36 | 1214.51 | -1195.25 | 215.72 | 3.42 | |

| | | | | | | | |
|---------|-------|--------|---------|---------|----------|--------|------|
| 5305.00 | 2.600 | 39.000 | 5133.31 | 1214.24 | -1194.56 | 218.20 | 3.51 |
|---------|-------|--------|---------|---------|----------|--------|------|



Actual Wellpath Report

SWEETGRASS 16-14 AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|---|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#04 SWEETGRASS 16-14 (1846'FSL & 856'FEL) |
| Area | COLORADO | Well | SWEETGRASS 16-14 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | SWEETGRASS 16-14 AWB |
| Facility | SEC.14-T1N-R68W | | |

WELLPATH DATA (87 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|---------|-----------------|-------------|----------|----------------|------------|-----------|---------------|---------------------|
| 5396.00 | 3.100 | 15.100 | 5224.20 | 1210.65 | -1190.58 | 220.14 | 1.40 | |
| 5487.00 | 2.400 | 340.600 | 5315.11 | 1206.54 | -1186.40 | 220.14 | 1.94 | |
| 5578.00 | 2.000 | 331.500 | 5406.04 | 1203.15 | -1183.21 | 218.75 | 0.58 | |
| 5668.00 | 1.500 | 323.100 | 5496.00 | 1200.62 | -1180.89 | 217.30 | 0.62 | |
| 5759.00 | 1.000 | 326.600 | 5586.97 | 1198.83 | -1179.27 | 216.14 | 0.56 | |
| 5896.00 | 1.300 | 304.400 | 5723.95 | 1196.66 | -1177.40 | 214.20 | 0.39 | |
| 6032.00 | 0.900 | 297.100 | 5859.92 | 1194.94 | -1176.04 | 211.98 | 0.31 | |
| 6168.00 | 0.600 | 286.100 | 5995.91 | 1193.99 | -1175.35 | 210.35 | 0.24 | |
| 6304.00 | 1.000 | 300.500 | 6131.90 | 1192.92 | -1174.55 | 208.64 | 0.33 | |
| 6440.00 | 0.700 | 306.900 | 6267.88 | 1191.55 | -1173.45 | 206.95 | 0.23 | |
| 6577.00 | 1.900 | 282.600 | 6404.85 | 1190.08 | -1172.46 | 204.07 | 0.94 | |
| 6713.00 | 1.700 | 282.200 | 6540.78 | 1188.47 | -1171.54 | 199.89 | 0.15 | |
| 6849.00 | 1.800 | 282.200 | 6676.71 | 1186.92 | -1170.66 | 195.83 | 0.07 | |
| 6985.00 | 1.900 | 261.800 | 6812.64 | 1186.06 | -1170.53 | 191.52 | 0.49 | |
| 7121.00 | 1.900 | 271.700 | 6948.57 | 1185.56 | -1170.78 | 187.03 | 0.24 | |
| 7258.00 | 1.600 | 264.000 | 7085.51 | 1184.98 | -1170.92 | 182.86 | 0.28 | |
| 7394.00 | 1.500 | 272.400 | 7221.46 | 1184.49 | -1171.04 | 179.19 | 0.18 | |
| 7530.00 | 1.300 | 288.600 | 7357.42 | 1183.38 | -1170.47 | 175.95 | 0.32 | |
| 7666.00 | 1.400 | 286.500 | 7493.38 | 1181.92 | -1169.51 | 172.90 | 0.08 | |
| 7802.00 | 1.400 | 186.400 | 7629.35 | 1182.78 | -1170.69 | 171.12 | 1.58 | |
| 7939.00 | 1.600 | 189.800 | 7766.31 | 1186.19 | -1174.24 | 170.61 | 0.16 | |
| 8075.00 | 1.200 | 168.700 | 7902.27 | 1189.40 | -1177.50 | 170.56 | 0.48 | |
| 8211.00 | 1.100 | 171.900 | 8038.24 | 1192.13 | -1180.19 | 171.02 | 0.09 | |
| 8347.00 | 1.500 | 187.100 | 8174.21 | 1195.14 | -1183.25 | 170.99 | 0.39 | |
| 8482.00 | 0.700 | 166.900 | 8309.18 | 1197.66 | -1185.81 | 170.96 | 0.65 | |
| 8575.00 | 0.400 | 174.700 | 8402.18 | 1198.55 | -1186.69 | 171.12 | 0.33 | LAST BHI MWD SURVEY |
| 8625.00 | 0.400 | 174.700 | 8452.17 | 1198.90 | -1187.03 | 171.15 | 0.00 | PROJECTION TO BIT |

HOLE & CASING SECTIONS - Ref Wellbore: SWEETGRASS 16-14 AWB Ref Wellpath: SWEETGRASS 16-14 AWP

| String/Diameter | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|------------------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 12.25in Open Hole | 15.00 | 1202.00 | 1187.00 | 15.00 | 1191.10 | 0.00 | 0.00 | -133.21 | 22.93 |
| 8.625in Casing Surface | 15.00 | 1192.00 | 1177.00 | 15.00 | 1181.29 | 0.00 | 0.00 | -131.31 | 22.56 |
| 7.875in Open Hole | 1202.00 | 8625.00 | 7423.00 | 1191.10 | 8452.17 | -133.21 | 22.93 | -1187.03 | 171.15 |

TARGETS

| Name | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|--|---------|----------|------------|-----------|-------------------|--------------------|----------------|-----------------|--------|
| SWEETGRASS 16-14 GEO TARGET 50' RADIUS (660'FSL & 660'FEL, REV-1) | | 6000.00 | -1181.76 | 202.11 | 3150189.97 | 1260061.42 | 40°02'45.636"N | 104°57'48.730"W | circle |
| SWEETGRASS 16-14 LEGAL BOX (190'N,210'S,200'E,200'W OF GEO TARGET) | | 6000.00 | -1191.76 | 202.14 | 3150190.06 | 1260051.42 | 40°02'45.537"N | 104°57'48.730"W | square |

WELLPATH COMPOSITION - Ref Wellbore: SWEETGRASS 16-14 AWB Ref Wellpath: SWEETGRASS 16-14 AWP

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|---------------|-------------|------------------------------|----------------------------|----------------------|
| 15.00 | 8575.00 | NaviTrak (Standard) | BHI MWD SURVEYS <149-8575> | SWEETGRASS 16-14 AWB |
| 8575.00 | 8625.00 | Blind Drilling (std) | Projection to bit | SWEETGRASS 16-14 AWB |



Actual Wellpath Report

SWEETGRASS 16-14 AWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|---|
| Operator | KERR MCGEE OIL & GAS ONSHORE LP | Slot | SLOT#04 SWEETGRASS 16-14 (1846'FSL & 856'FEL) |
| Area | COLORADO | Well | SWEETGRASS 16-14 |
| Field | WELD COUNTY (KERR MCGEE) | Wellbore | SWEETGRASS 16-14 AWB |
| Facility | SEC.14-T1N-R68W | | |

WELLPATH COMMENTS

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment |
|------------|--------------------|----------------|-------------|---------------------|
| 8575.00 | 0.400 | 174.700 | 8402.18 | LAST BHI MWD SURVEY |
| 8625.00 | 0.400 | 174.700 | 8452.17 | PROJECTION TO BIT |