

# **Crestone Peak Resources**

**DJ BASIN**

**S18-T1N-R67W (HINGLEY)**

**HINGLEY 3C-18H-N167**

**OH**

**PLAN #2**

## **Anticollision Summary Report**

**21 January, 2018**

# Cathedral Energy Services

## Anticollision Summary Report

|                           |                         |                                     |                             |
|---------------------------|-------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | Crestone Peak Resources | <b>Local Co-ordinate Reference:</b> | Well HINGLEY 3C-18H-N167    |
| <b>Project:</b>           | DJ BASIN                | <b>TVD Reference:</b>               | 23' KB @ 5133.00usft        |
| <b>Reference Site:</b>    | S18-T1N-R67W (HINGLEY)  | <b>MD Reference:</b>                | 23' KB @ 5133.00usft        |
| <b>Site Error:</b>        | 0.00 usft               | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | HINGLEY 3C-18H-N167     | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.00 usft               | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | OH                      | <b>Database:</b>                    | USA EDM 5000 Multi Users DB |
| <b>Reference Design:</b>  | PLAN #2                 | <b>Offset TVD Reference:</b>        | Offset Datum                |

|                                     |   |                       |                     |
|-------------------------------------|---|-----------------------|---------------------|
| <b>Reference</b>                    | PLAN #2   |                       |                     |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       |                     |
| <b>Interpolation Method:</b>        | MD Interval 100.00usft  | <b>Error Model:</b>   | ISCWSA              |
| <b>Depth Range:</b>                 | Unlimited   | <b>Scan Method:</b>   | Closest Approach 3D |
| <b>Results Limited by:</b>          | Maximum center-center distance of 1,403.64 usft                     | <b>Error Surface:</b> | Pedal Curve         |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma  | <b>Casing Method:</b> | Not applied         |

|                            |                  |                          |                  |                     |
|----------------------------|------------------|--------------------------|------------------|---------------------|
| <b>Survey Tool Program</b> | <b>Date</b>      | 1/21/2018                |                  |                     |
| <b>From (usft)</b>         | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b>  |
| 0.00                       | 2,000.00         | PLAN #2 (OH)             | VESSI_GYROFLEX   | VESSI Gyroflex Gyro |
| 2,001.00                   | 12,435.68        | PLAN #2 (OH)             | MWD+HDGM         | OWSG MWD + HDGM     |

| Summary                                      |                                 |                              |                                 |                                  |                   |              |
|--|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|--------------|
| Site Name                                    | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning      |
| Offset Well - Wellbore - Design              |                                 |                              |                                 |                                  |                   |              |
| S18-T1N-R67W (HINGLEY)                       |                                 |                              |                                 |                                  |                   |              |
| 22-24 - KAISER-FRANCIS OIL - NO SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| B C HOPKINS 3 - FRITZLER WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| B C HOPKINS 4 - FRITZLER WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| BLANCHE C 4 - KPK WELL - NO SURVEYS          |                                 |                              |                                 |                                  |                   | Out of range |
| BLANCHE C HOPKINS 1 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| BLANCHE C HOPKINS 2 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| DACONO 16-13 - KMG WELL - GYRO               |                                 |                              |                                 |                                  |                   | Out of range |
| EMERY31-13(1-68) 1 - NOBLE WELL - NO SURVEYS |                                 |                              |                                 |                                  |                   | Out of range |
| FOREMAN 1 - KPK WELL - NO SURVEYS            |                                 |                              |                                 |                                  |                   | Out of range |
| FOREMAN 2 - KPK WELL - NO SURVEYS            |                                 |                              |                                 |                                  |                   | Out of range |
| FOREMAN 3 - KPK WELL - SURVEYS               |                                 |                              |                                 |                                  |                   | Out of range |
| FOREMAN UNIT 4 - KPK WELL - SURVEYS          |                                 |                              |                                 |                                  |                   | Out of range |
| GRAHAM ELIZABETH W 1 - KMG WELL - NO SURVEY  |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 13C-20HZX - KMG STK - SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 13C-20HZX - KMG WELL - SURVEYS     |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 14N-20HZ - KMG WELL - SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 34N-20HZ - KMG WELL - SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 35C-20HZ - KMG WELL - SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 35N-20HZ - KMG WELL - SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| GRIFFITHS 36C-20HZ - KMG WELL - SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| HALEY 41-13 #1 - KMG WELL - NO SURVEYS       |                                 |                              |                                 |                                  |                   | Out of range |
| HART 7-42 - KMG WELL - NO SURVEYS            |                                 |                              |                                 |                                  |                   | Out of range |
| HERBERS 31-20 - CPR WELL - GYRO              |                                 |                              |                                 |                                  |                   | Out of range |
| HICKS 13-18 - KPK WELL - NO SURVEYS          |                                 |                              |                                 |                                  |                   | Out of range |
| HICKS 14-18 - BAYSWATER WELL - NO SURVEYS    | 1,972.27                        | 1,921.26                     | 315.74                          | 308.11                           | 41.382            | CC           |
| HICKS 14-18 - BAYSWATER WELL - NO SURVEYS    | 2,000.00                        | 1,948.53                     | 315.78                          | 308.04                           | 40.791            | ES           |
| HICKS 14-18 - BAYSWATER WELL - NO SURVEYS    | 5,000.00                        | 4,900.42                     | 629.58                          | 606.51                           | 27.284            | SF           |
| HICKS 23-18 - STARLIGHT WELL - NO SURVEYS    |                                 |                              |                                 |                                  |                   | Out of range |
| HICKS 24-18 - BAYSWATER WELL - NO SURVEYS    | 400.00                          | 376.00                       | 431.49                          | 430.17                           | 327.682           | CC, ES       |
| HICKS 24-18 - BAYSWATER WELL - NO SURVEYS    | 5,200.00                        | 5,000.00                     | 1,191.32                        | 1,167.54                         | 50.108            | SF           |
| HICKS 4-18 - CPR WELL - GYRO                 | 100.00                          | 72.78                        | 619.21                          | 619.09                           | 4,821.235         | CC           |
| HICKS 4-18 - CPR WELL - GYRO                 | 400.00                          | 370.93                       | 619.98                          | 618.82                           | 534.989           | ES           |
| HICKS 4-18 - CPR WELL - GYRO                 | 8,900.00                        | 7,583.52                     | 1,152.79                        | 1,111.25                         | 27.753            | SF           |
| HINGLEY 1 - CPR WELL - GYRO                  |                                 |                              |                                 |                                  |                   | Out of range |
| HINGLEY 12-18 - PDC WELL - GYRO              | 10,813.98                       | 7,537.08                     | 134.56                          | 67.80                            | 2.016             | CC, ES, SF   |
| HINGLEY 1A-18H-A167 - OH - PLAN #2           |                                 |                              |                                 |                                  |                   | Out of range |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Summary Report

|                           |                         |                                     |                             |
|---------------------------|-------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | Crestone Peak Resources | <b>Local Co-ordinate Reference:</b> | Well HINGLEY 3C-18H-N167    |
| <b>Project:</b>           | DJ BASIN                | <b>TVD Reference:</b>               | 23' KB @ 5133.00usft        |
| <b>Reference Site:</b>    | S18-T1N-R67W (HINGLEY)  | <b>MD Reference:</b>                | 23' KB @ 5133.00usft        |
| <b>Site Error:</b>        | 0.00 usft               | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | HINGLEY 3C-18H-N167     | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.00 usft               | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | OH                      | <b>Database:</b>                    | USA EDM 5000 Multi Users DB |
| <b>Reference Design:</b>  | PLAN #2                 | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Summary                                       |                                 |                              |                                 |                                  |                   |                 |
|---|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|-----------------|
| Site Name                                     | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning         |
| Offset Well - Wellbore - Design               |                                 |                              |                                 |                                  |                   |                 |
| S18-T1N-R67W (HINGLEY)                        |                                 |                              |                                 |                                  |                   |                 |
| HINGLEY 1-B - VESSELS WELL - NO SURVEYS       |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1B-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1C-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1D-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1E-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1F-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1G-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1H-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1I-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1J-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 1K-18H-A167 - OH - PLAN #2            |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 2J - PDC WELL - GYRO                  | 11,643.20                       | 7,520.31                     | 884.23                          | 805.36                           | 11.212            | CC, ES          |
| HINGLEY 2J - PDC WELL - GYRO                  | 11,700.00                       | 7,520.41                     | 886.05                          | 806.85                           | 11.188            | SF              |
| HINGLEY 2S - TEXAS TEA WELL - NO SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 3A-18H-N167 - OH - PLAN #1            | 200.00                          | 199.00                       | 19.79                           | 19.31                            | 41.085            | CC, ES          |
| HINGLEY 3A-18H-N167 - OH - PLAN #1            | 12,435.68                       | 12,644.31                    | 314.76                          | 165.97                           | 2.115             | SF              |
| HINGLEY 3B-18H-N167 - OH - PLAN #2            | 300.00                          | 299.00                       | 9.79                            | 8.96                             | 11.787            | CC              |
| HINGLEY 3B-18H-N167 - OH - PLAN #2            | 6,900.00                        | 6,904.11                     | 42.87                           | 1.12                             | 1.027             | Level 2, ES, SF |
| HINGLEY 3D-18H-N167 - OH - PLAN #2            | 400.00                          | 400.00                       | 10.36                           | 9.18                             | 8.767             | CC, ES          |
| HINGLEY 3D-18H-N167 - OH - PLAN #2            | 12,435.68                       | 12,575.26                    | 343.16                          | 189.04                           | 2.227             | SF              |
| HINGLEY 3E-18H-N167 - OH - PLAN #1            | 405.96                          | 406.15                       | 18.70                           | 16.89                            | 10.317            | CC, ES          |
| HINGLEY 3E-18H-N167 - OH - PLAN #1            | 12,433.34                       | 12,456.97                    | 659.79                          | 501.57                           | 4.170             | SF              |
| HINGLEY 3F-18H-N167 - OH - PLAN #1            | 435.85                          | 436.17                       | 29.61                           | 28.30                            | 22.622            | CC, ES          |
| HINGLEY 3F-18H-N167 - OH - PLAN #1            | 12,429.50                       | 12,715.24                    | 724.50                          | 571.26                           | 4.728             | SF              |
| HINGLEY 3G-18H-N167 - OH - PLAN #2            | 400.00                          | 400.00                       | 40.04                           | 38.85                            | 33.883            | CC, ES          |
| HINGLEY 3G-18H-N167 - OH - PLAN #2            | 12,435.68                       | 12,541.56                    | 994.33                          | 837.43                           | 6.338             | SF              |
| HINGLEY 3H-18H-N167 - OH - PLAN #2            | 200.00                          | 200.00                       | 50.21                           | 49.73                            | 103.858           | CC, ES          |
| HINGLEY 3H-18H-N167 - OH - PLAN #2            | 12,435.68                       | 12,449.81                    | 1,319.93                        | 1,162.81                         | 8.401             | SF              |
| HINGLEY 3I-18H-N167 - OH - PLAN #1            | 400.00                          | 400.00                       | 60.21                           | 59.03                            | 50.956            | CC, ES          |
| HINGLEY 3I-18H-N167 - OH - PLAN #1            | 7,100.00                        | 6,963.83                     | 1,354.70                        | 1,313.44                         | 32.830            | SF              |
| HINGLEY 3J-18H-N167 - OH - PLAN #1            | 300.00                          | 300.00                       | 70.21                           | 69.38                            | 84.333            | CC, ES          |
| HINGLEY 3J-18H-N167 - OH - PLAN #1            | 6,200.00                        | 6,038.51                     | 1,380.34                        | 1,346.45                         | 40.726            | SF              |
| HINGLEY 3K-18H-N167 - OH - PLAN #2            | 103.50                          | 103.50                       | 80.35                           | 80.21                            | 548.019           | CC              |
| HINGLEY 3K-18H-N167 - OH - PLAN #2            | 200.00                          | 199.14                       | 80.62                           | 80.13                            | 166.754           | ES              |
| HINGLEY 3K-18H-N167 - OH - PLAN #2            | 5,900.00                        | 5,726.25                     | 1,401.87                        | 1,369.92                         | 43.879            | SF              |
| HINGLEY 3S - TEXAS TEA WELL - NO SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 4 - DENVER EAST WELL - NO SURVEYS     |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY 5 - DENVER EAST WELL - NO SURVEYS     |                                 |                              |                                 |                                  |                   | Out of range    |
| HINGLEY FARMS 32-18 - CPR WELL - GYRO         |                                 |                              |                                 |                                  |                   | Out of range    |
| HOPKINS 3 - KPK WELL - NO SURVEYS             |                                 |                              |                                 |                                  |                   | Out of range    |
| HOPKINS 32-19 1 - FRITZLER RESOURCES - NO SUR |                                 |                              |                                 |                                  |                   | Out of range    |
| HOPKINS 41C-19#2 - FRITZLER RESOURCES - NO SU |                                 |                              |                                 |                                  |                   | Out of range    |
| HSR RMF 12-8 - KMG WELL - NO SURVEYS          |                                 |                              |                                 |                                  |                   | Out of range    |
| JELTS 15C-19HZ - KMG WELL - SURVEYS           |                                 |                              |                                 |                                  |                   | Out of range    |
| JELTS 16N-19HZ - KMG WELL - SURVEYS           |                                 |                              |                                 |                                  |                   | Out of range    |
| JELTS 36N-19HZ - KMG WELL - SURVEYS           |                                 |                              |                                 |                                  |                   | Out of range    |
| JELTS 37C-19HZ - KMG WELL - SURVEYS           |                                 |                              |                                 |                                  |                   | Out of range    |
| JELTS 37N-19HZ - KMG WELL - SURVEYS           |                                 |                              |                                 |                                  |                   | Out of range    |
| JELTS 39C-19HZ - KMG WELL - SURVEYS           |                                 |                              |                                 |                                  |                   | Out of range    |
| JOHNSON 21-24 - MGF OIL CORP WELL - NO SURVE  |                                 |                              |                                 |                                  |                   | Out of range    |
| LAURIDSON 18-16 - KMG WELL - GYRO             |                                 |                              |                                 |                                  |                   | Out of range    |
| LAURIDSON 2-A - KPK WELL - NO SURVEYS         |                                 |                              |                                 |                                  |                   | Out of range    |
| LAURIDSON 31-24 - KPK WELL - NO SURVEYS       |                                 |                              |                                 |                                  |                   | Out of range    |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Summary Report

|                           |                         |                                     |                             |
|---------------------------|-------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | Crestone Peak Resources | <b>Local Co-ordinate Reference:</b> | Well HINGLEY 3C-18H-N167    |
| <b>Project:</b>           | DJ BASIN                | <b>TVD Reference:</b>               | 23' KB @ 5133.00usft        |
| <b>Reference Site:</b>    | S18-T1N-R67W (HINGLEY)  | <b>MD Reference:</b>                | 23' KB @ 5133.00usft        |
| <b>Site Error:</b>        | 0.00 usft               | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | HINGLEY 3C-18H-N167     | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.00 usft               | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | OH                      | <b>Database:</b>                    | USA EDM 5000 Multi Users DB |
| <b>Reference Design:</b>  | PLAN #2                 | <b>Offset TVD Reference:</b>        | Offset Datum                |

### Summary

| Site Name  | Reference<br>Measured<br>Depth<br>(usft) | Offset<br>Measured<br>Depth<br>(usft) | Distance<br>Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) | Separation<br>Factor | Warning      |
|--|--|---------------------------------------|--|-------------------------------|----------------------|--------------|
| <b>Offset Well - Wellbore - Design</b>           |  |                                       |  |                               |                      |              |
| S18-T1N-R67W (HINGLEY)                           |  |                                       |  |                               |                      |              |
| LAURIDSON 32-24 - SRC ENERGY WELL - NO SURVEY    |  |                                       |  |                               |                      | Out of range |
| LAURIDSON 41-24 - STARLIGHT RES WELL - NO SURVEY |  |                                       |  |                               |                      | Out of range |
| LAURIDSON 42-24 - KPK WELL - NO SURVEYS          |  |                                       |  |                               |                      | Out of range |
| LAURIDSON VV 18-10 - KMG WELL - GYRO             |  |                                       |  |                               |                      | Out of range |
| LAURIDSON VV18-4J - KMG WELL - GYRO              |  |                                       |  |                               |                      | Out of range |
| LAURIDSON-A 1 - KPK WELL - NO SURVEYS            |  |                                       |  |                               |                      | Out of range |
| LINKUS 32-24 - PDC WELL - NO SURVEYS             |  |                                       |  |                               |                      | Out of range |
| LINKUS 41-24 - PDC WELL - GYRO                   | 7,311.08                                 | 7,164.47                              | 1,194.75                                 | 1,162.07                      | 36.559               | CC, ES       |
| LINKUS 41-24 - PDC WELL - GYRO                   | 7,400.00                                 | 7,247.98                              | 1,197.24                                 | 1,164.35                      | 36.393               | SF           |
| M B SCHWAB 2 - KMG WELL - NO SURVEYS             |  |                                       |  |                               |                      | Out of range |
| MARGUERITE TOTEMS U 2 - KMG WELL - GYRO          |  |                                       |  |                               |                      | Out of range |
| MARK 1-A - CHAPARRAL RES - NO SURVEYS            |  |                                       |  |                               |                      | Out of range |
| NRC 11-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 12-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 13-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 14-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 15-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 22-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 23-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 28N-8HZ - KMG WELL - SURVEYS                 |  |                                       |  |                               |                      | Out of range |
| NRC 29N-8HZ - KMG WELL - SURVEYS                 |  |                                       |  |                               |                      | Out of range |
| NRC 30C-8HZ - KMG WELL - SURVEYS                 |  |                                       |  |                               |                      | Out of range |
| NRC 35-8 - KMG WELL - SURVEYS                    |  |                                       |  |                               |                      | Out of range |
| NRC 3C-8HZ - KMG WELL - SURVEYS                  |  |                                       |  |                               |                      | Out of range |
| NRC 4C-8HZ - KMG WELL - SURVEYS                  |  |                                       |  |                               |                      | Out of range |
| NRC 4N-8HZ - KMG WELL - SURVEYS                  |  |                                       |  |                               |                      | Out of range |
| PAUL HEINZE 1 - KPK WELL - NO SURVEYS            |  |                                       |  |                               |                      | Out of range |
| RALPH 13C-19HZ - KMG WELL - SURVEYS              | 6,323.28                                 | 6,295.93                              | 82.48                                    | 47.99                         | 2.392                | CC           |
| RALPH 13C-19HZ - KMG WELL - SURVEYS              | 7,380.02                                 | 7,322.63                              | 84.38                                    | 45.62                         | 2.177                | ES, SF       |
| RALPH 14N-19HZ - KMG WELL - SURVEYS              | 2,483.76                                 | 2,455.13                              | 750.23                                   | 740.52                        | 77.225               | CC           |
| RALPH 14N-19HZ - KMG WELL - SURVEYS              | 2,500.00                                 | 2,468.95                              | 750.27                                   | 740.48                        | 76.623               | ES           |
| RALPH 14N-19HZ - KMG WELL - SURVEYS              | 6,800.00                                 | 6,754.99                              | 1,400.78                                 | 1,366.09                      | 40.385               | SF           |
| RALPH 34C-19HZ - KMG WELL - SURVEYS              | 7,451.41                                 | 7,442.86                              | 368.29                                   | 328.83                        | 9.332                | CC, ES       |
| RALPH 34C-19HZ - KMG WELL - SURVEYS              | 7,500.00                                 | 7,468.09                              | 370.76                                   | 330.62                        | 9.236                | SF           |
| RALPH 35C-19HZ - KMG WELL - SURVEYS              | 3,726.85                                 | 3,733.35                              | 587.18                                   | 570.29                        | 34.752               | CC           |
| RALPH 35C-19HZ - KMG WELL - SURVEYS              | 3,800.00                                 | 3,805.00                              | 587.45                                   | 570.07                        | 33.792               | ES           |
| RALPH 35C-19HZ - KMG WELL - SURVEYS              | 7,300.00                                 | 7,219.90                              | 995.85                                   | 958.90                        | 26.951               | SF           |
| RALPH 35N-19HZ - KMG WELL - SURVEYS              | 4,681.42                                 | 4,662.66                              | 173.75                                   | 150.98                        | 7.628                | CC           |
| RALPH 35N-19HZ - KMG WELL - SURVEYS              | 4,700.00                                 | 4,680.38                              | 173.81                                   | 150.91                        | 7.588                | ES           |
| RALPH 35N-19HZ - KMG WELL - SURVEYS              | 5,000.00                                 | 4,976.65                              | 182.03                                   | 157.22                        | 7.337                | SF           |
| RALPH 36C-19HZ - KMG WELL - SURVEYS              | 1,948.01                                 | 1,901.88                              | 709.15                                   | 701.28                        | 90.040               | CC           |
| RALPH 36C-19HZ - KMG WELL - SURVEYS              | 2,000.00                                 | 1,951.49                              | 709.34                                   | 701.21                        | 87.276               | ES           |
| RALPH 36C-19HZ - KMG WELL - SURVEYS              | 4,900.00                                 | 4,720.87                              | 1,188.55                                 | 1,164.73                      | 49.899               | SF           |
| ROCKY MOUNTAIN FUEL 1 - KMG WELL - NO SURVEY     |  |                                       |  |                               |                      | Out of range |
| SCHWAB #1-32-13 - KMG WELL - NO SURVEYS          |  |                                       |  |                               |                      | Out of range |
| STONEBRAKER 24-12 - KMG WELL - SURVEYS           |  |                                       |  |                               |                      | Out of range |
| STONEBRAKER 25-12 - KMG WELL - SURVEYS           |  |                                       |  |                               |                      | Out of range |
| STONEBRAKER 8-12 - KMG WELL - SURVEYS            |  |                                       |  |                               |                      | Out of range |
| TROUDT 44-7 - KMG WELL - GYRO                    |  |                                       |  |                               |                      | Out of range |
| UNDERHILL 28N-17HZ - KMG WELL - SURVEYS          |  |                                       |  |                               |                      | Out of range |
| UPRR 42 PAN AM 'AL' 1 - KMG WELL - GYRO          |  |                                       |  |                               |                      | Out of range |
| UPRR 42 PAN AM GAS 1 - KMG WELL - NO SURVEYS     |  |                                       |  |                               |                      | Out of range |
| UPRR 42 PAN AM N #2 - KPK WELL - NO SURVEYS      |  |                                       |  |                               |                      | Out of range |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Summary Report

|                           |                         |                                     |                             |
|---------------------------|-------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | Crestone Peak Resources | <b>Local Co-ordinate Reference:</b> | Well HINGLEY 3C-18H-N167    |
| <b>Project:</b>           | DJ BASIN                | <b>TVD Reference:</b>               | 23' KB @ 5133.00usft        |
| <b>Reference Site:</b>    | S18-T1N-R67W (HINGLEY)  | <b>MD Reference:</b>                | 23' KB @ 5133.00usft        |
| <b>Site Error:</b>        | 0.00 usft               | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | HINGLEY 3C-18H-N167     | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.00 usft               | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | OH                      | <b>Database:</b>                    | USA EDM 5000 Multi Users DB |
| <b>Reference Design:</b>  | PLAN #2                 | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Summary                                      |                                 |                              |                                 |                                  |                   |              |
|--|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|--------------|
| Site Name                                    | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning      |
| S18-T1N-R67W (HINGLEY)                       |                                 |                              |                                 |                                  |                   |              |
| UPRR 42 PAN AM N 1 - KMG WELL - GYRO         |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM N 4 - KPK WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-AJ 1 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-AJ 4 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-AS 1 - KMG WELL - GYRO        |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-AV 1 - KPK WELL - SURVEYS     |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-J 2 - KPK WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-J 3 - KPK WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 42 PAN AM-N 3 - KPK WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM 1 2 - KPK WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM 1 3 - KPK WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM H 10 - KPK WELL - NO SURVEYS  | 5,066.97                        | 4,879.00                     | 745.69                          | 721.63                           | 31.002            | CC, ES       |
| UPRR 43 PAN AM H 10 - KPK WELL - NO SURVEYS  | 5,100.00                        | 4,879.00                     | 746.42                          | 722.18                           | 30.790            | SF           |
| UPRR 43 PAN AM H 2 - KPK WELL - NO SURVEYS   | 3,608.31                        | 3,514.60                     | 1,389.21                        | 1,373.51                         | 88.512            | CC           |
| UPRR 43 PAN AM H 2 - KPK WELL - NO SURVEYS   | 3,900.00                        | 3,801.53                     | 1,390.20                        | 1,372.66                         | 79.266            | ES           |
| UPRR 43 PAN AM H 2 - KPK WELL - NO SURVEYS   | 4,700.00                        | 4,588.48                     | 1,403.02                        | 1,380.32                         | 61.810            | SF           |
| UPRR 43 PAN AM I #5 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM M TRUE #1 - KMG WELL - GYRO   | 6,922.84                        | 6,715.45                     | 964.91                          | 930.95                           | 28.419            | CC, ES       |
| UPRR 43 PAN AM M TRUE #1 - KMG WELL - GYRO   | 7,000.00                        | 6,790.98                     | 967.57                          | 933.16                           | 28.112            | SF           |
| UPRR 43 PAN AM O 1 - KMG WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM-H 7 - AMOCO WELL - NO SURVEYS |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM-I 14 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM-I 15 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM-I 26 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM-I 31 - KPK WELL - NO SURVEYS  |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR 43 PAN AM-J 1 - KMG WELL - NO SURVEYS   |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR PAN AM H 3 - KPK WELL - NO SURVEYS      |                                 |                              |                                 |                                  |                   | Out of range |
| UPRR43PANAM-I 16 - KPK WELL - NO SURVEYS     |                                 |                              |                                 |                                  |                   | Out of range |

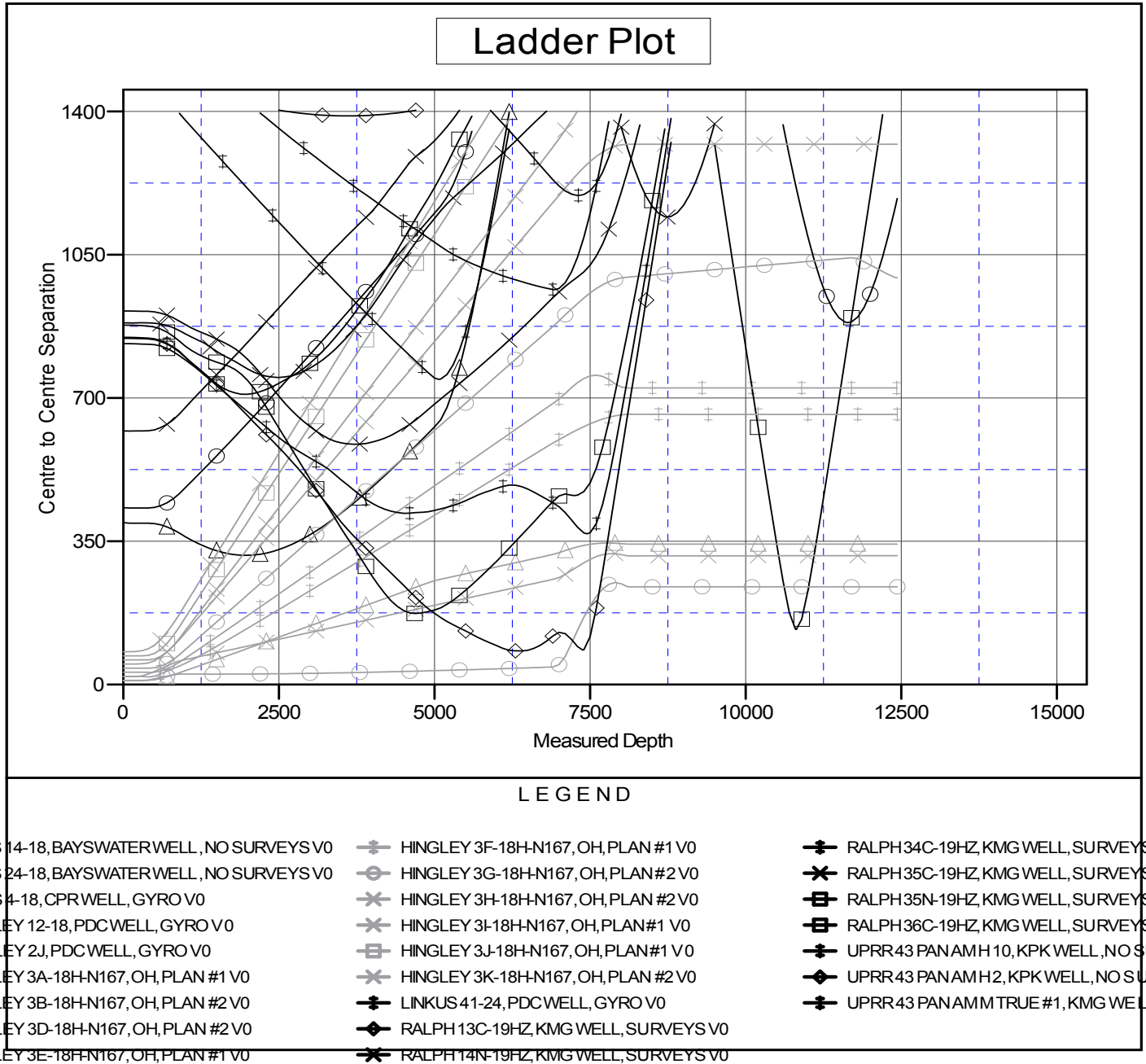
# Cathedral Energy Services

## Anticollision Summary Report

|                           |                         |                                     |                             |
|---------------------------|-------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | Crestone Peak Resources | <b>Local Co-ordinate Reference:</b> | Well HINGLEY 3C-18H-N167    |
| <b>Project:</b>           | DJ BASIN                | <b>TVD Reference:</b>               | 23' KB @ 5133.00usft        |
| <b>Reference Site:</b>    | S18-T1N-R67W (HINGLEY)  | <b>MD Reference:</b>                | 23' KB @ 5133.00usft        |
| <b>Site Error:</b>        | 0.00 usft               | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | HINGLEY 3C-18H-N167     | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.00 usft               | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | OH                      | <b>Database:</b>                    | USA EDM 5000 Multi Users DB |
| <b>Reference Design:</b>  | PLAN #2                 | <b>Offset TVD Reference:</b>        | Offset Datum                |

Reference Depths are relative to 23' KB @ 5133.00usft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: HINGLEY 3C-18H-N167  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.36°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Summary Report

|                           |                         |                                     |                             |
|---------------------------|-------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | Crestone Peak Resources | <b>Local Co-ordinate Reference:</b> | Well HINGLEY 3C-18H-N167    |
| <b>Project:</b>           | DJ BASIN                | <b>TVD Reference:</b>               | 23' KB @ 5133.00usft        |
| <b>Reference Site:</b>    | S18-T1N-R67W (HINGLEY)  | <b>MD Reference:</b>                | 23' KB @ 5133.00usft        |
| <b>Site Error:</b>        | 0.00 usft               | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | HINGLEY 3C-18H-N167     | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.00 usft               | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | OH                      | <b>Database:</b>                    | USA EDM 5000 Multi Users DB |
| <b>Reference Design:</b>  | PLAN #2                 | <b>Offset TVD Reference:</b>        | Offset Datum                |

Reference Depths are relative to 23' KB @ 5133.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000

Coordinates are relative to: HINGLEY 3C-18H-N167  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.36°

