

# **SRC ENERGY**

**WELD COUNTY (NAD83, TRUE NORTH)  
6N-66W-18 LINCOLN STATE 3-18 PAD  
LINCOLN STATE 8N-17B-M**

**Wellbore #1  
Design #1**

## **Anticollision Summary Report**

**12 December, 2017**

|                                     |   |                       |                       |  |  |
|-------------------------------------|---|-----------------------|-----------------------|--|--|
| <b>Reference</b>                    | Design #1   |                       |                       |  |  |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       |                       |  |  |
| <b>Interpolation Method:</b>        | Stations  | <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 9,999.98 usft                     | <b>Error Surface:</b> | Pedal Curve           |  |  |
| <b>Warning Levels Evaluated at:</b> | 2.45 Sigma  | <b>Casing Method:</b> | Added to Error Values |  |  |

|                            |                  |                          |                       |                                    |  |
|----------------------------|------------------|--------------------------|-----------------------|------------------------------------|--|
| <b>Survey Tool Program</b> |                  | <b>Date</b>              | 12/12/2017            |                                    |  |
| <b>From (usft)</b>         | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>      | <b>Description</b>                 |  |
| 0.00                       | 1,750.00         | Design #1 (Wellbore #1)  | SRC Energy_ISCWSA REV | Fixed:v2:crustal field declination |  |
| 1,750.00                   | 15,414.73        | Design #1 (Wellbore #1)  | SRC Energy_ISCWSA REV | Fixed:v2:crustal field declination |  |

| <b>Summary</b>  |                                 |                              |                                 |                                  |                   |         |
|---|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|---------|
| Site Name   | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| <b>Offset Well - Wellbore - Design</b>                |                                 |                              |                                 |                                  |                   |         |
| 6N-66W-06 Offsets Incomplete                          |                                 |                              |                                 |                                  |                   |         |
| Simonsen-Schaefer 7E-203 - PDC Energy PR Well - Actu  | 6,556.36                        | 12,010.00                    | 3,308.56                        | 3,189.44                         | 27.775            | CC, ES  |
| Simonsen-Schaefer 7E-203 - PDC Energy PR Well - Actu  | 6,750.00                        | 12,010.00                    | 3,333.23                        | 3,212.68                         | 27.650            | SF      |
| Simonsen-Schaefer 7E-423 - PDC Energy PR Well - Actu  | 6,634.40                        | 11,988.00                    | 2,986.70                        | 2,890.25                         | 30.966            | CC, ES  |
| Simonsen-Schaefer 7E-423 - PDC Energy PR Well - Actu  | 8,000.00                        | 11,988.00                    | 3,683.74                        | 3,556.70                         | 28.998            | SF      |
| Simonsen-Schaefer 7J-243 - PDC Energy PR Well - Actu  | 6,597.62                        | 11,830.00                    | 2,838.83                        | 2,752.18                         | 32.763            | CC      |
| Simonsen-Schaefer 7J-243 - PDC Energy PR Well - Actu  | 6,600.00                        | 11,830.00                    | 2,838.83                        | 2,752.17                         | 32.758            | ES      |
| Simonsen-Schaefer 7J-243 - PDC Energy PR Well - Actu  | 8,300.00                        | 11,830.00                    | 3,729.24                        | 3,600.19                         | 28.897            | SF      |
| Simonsen-Schaefer 7J-403 - PDC Planned Well - Planne  | 6,685.66                        | 11,938.00                    | 2,705.18                        | 2,643.26                         | 43.687            | CC      |
| Simonsen-Schaefer 7J-403 - PDC Planned Well - Planne  | 6,700.00                        | 11,938.00                    | 2,705.27                        | 2,643.21                         | 43.589            | ES      |
| Simonsen-Schaefer 7J-403 - PDC Planned Well - Planne  | 8,800.00                        | 11,938.00                    | 3,794.51                        | 3,666.84                         | 29.722            | SF      |
| Simonsen-Schaefer 7M-243 - PDC Planned Well - Plann   | 6,750.00                        | 11,983.00                    | 2,516.68                        | 2,469.36                         | 53.186            | ES      |
| Simonsen-Schaefer 7M-243 - PDC Planned Well - Plann   | 6,765.58                        | 11,983.00                    | 2,516.63                        | 2,469.47                         | 53.368            | CC      |
| Simonsen-Schaefer 7M-243 - PDC Planned Well - Plann   | 9,600.00                        | 11,983.00                    | 3,746.10                        | 3,614.82                         | 28.536            | SF      |
| 6N-66W-07 Offsets Incomplete                          |                                 |                              |                                 |                                  |                   |         |
| FRYE 1 - Marlin Oil AB Well - No Surveys              | 250.00                          | 200.00                       | 2,300.45                        | 2,290.10                         | 222.106           | CC      |
| FRYE 1 - Marlin Oil AB Well - No Surveys              | 400.00                          | 349.93                       | 2,303.71                        | 2,288.41                         | 150.484           | ES      |
| FRYE 1 - Marlin Oil AB Well - No Surveys              | 4,600.00                        | 4,481.00                     | 2,798.64                        | 2,630.31                         | 16.627            | SF      |
| FRYE-SWANSON-FRYE 1 - PDC Energy AB Well - Actua      | 9,714.46                        | 7,099.53                     | 2,713.21                        | 2,613.98                         | 27.342            | CC      |
| FRYE-SWANSON-FRYE 1 - PDC Energy AB Well - Actua      | 9,800.00                        | 7,102.61                     | 2,714.55                        | 2,613.04                         | 26.740            | ES      |
| FRYE-SWANSON-FRYE 1 - PDC Energy AB Well - Actua      | 10,700.00                       | 7,134.53                     | 2,886.44                        | 2,766.63                         | 24.094            | SF      |
| HERGERT 1 - Frizzell AB Well - No Surveys             | 250.00                          | 260.00                       | 2,535.68                        | 2,523.43                         | 207.101           | CC      |
| HERGERT 1 - Frizzell AB Well - No Surveys             | 400.00                          | 409.93                       | 2,538.24                        | 2,520.88                         | 146.259           | ES      |
| HERGERT 1 - Frizzell AB Well - No Surveys             | 6,750.00                        | 6,707.37                     | 3,206.72                        | 2,953.18                         | 12.648            | SF      |
| Schaefer 34-7D - PDC Energy PR Well - Actual Ensign S | 8,285.13                        | 7,318.10                     | 2,743.87                        | 2,657.01                         | 31.590            | CC      |
| Schaefer 34-7D - PDC Energy PR Well - Actual Ensign S | 8,400.00                        | 7,317.10                     | 2,746.27                        | 2,656.59                         | 30.623            | ES      |
| Schaefer 34-7D - PDC Energy PR Well - Actual Ensign S | 9,400.00                        | 7,308.54                     | 2,961.70                        | 2,852.43                         | 27.105            | SF      |
| Schaefer 43-7D - PDC Energy PR Well - Actual Ensign S | 500.17                          | 643.37                       | 3,287.36                        | 3,279.33                         | 409.693           | CC, ES  |
| Schaefer 43-7D - PDC Energy PR Well - Actual Ensign S | 11,600.00                       | 7,072.50                     | 4,384.24                        | 4,239.44                         | 30.277            | SF      |
| Schaefer 7DD - PDC Energy PR Well - Actual Ensign Su  | 100.00                          | 50.21                        | 3,286.29                        | 3,278.93                         | 446.884           | CC, ES  |
| Schaefer 7DD - PDC Energy PR Well - Actual Ensign Su  | 10,400.00                       | 7,242.40                     | 3,723.36                        | 3,608.20                         | 32.333            | SF      |
| Schaefer 7TD - PDC Energy PR Well - Actual Ensign Sur | 8,803.38                        | 7,173.38                     | 2,173.30                        | 2,088.70                         | 25.688            | CC      |
| Schaefer 7TD - PDC Energy PR Well - Actual Ensign Sur | 8,900.00                        | 7,174.06                     | 2,175.45                        | 2,088.10                         | 24.907            | ES      |
| Schaefer 7TD - PDC Energy PR Well - Actual Ensign Sur | 9,600.00                        | 7,179.08                     | 2,314.69                        | 2,212.05                         | 22.552            | SF      |
| Schaefer 7XD - PDC Energy PR Well - Actual Ensign Su  | 250.00                          | 216.00                       | 3,276.62                        | 3,265.98                         | 307.771           | CC      |
| Schaefer 7XD - PDC Energy PR Well - Actual Ensign Su  | 10,400.00                       | 7,157.79                     | 3,373.98                        | 3,239.69                         | 25.124            | ES      |
| Schaefer 7XD - PDC Energy PR Well - Actual Ensign Su  | 11,500.00                       | 7,195.99                     | 3,586.29                        | 3,427.50                         | 22.586            | SF      |

## Summary

| Site Name<br>Offset Well - Wellbore - Design           | Reference                   | Offset                      | Distance                     |                               | Separation<br>Factor | Warning             |
|--|-----------------------------|-----------------------------|------------------------------|-------------------------------|----------------------|---------------------|
|  | Measured<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                      |                     |
| 6N-66W-08 Offsets Incomplete                           |                             |                             |                              |                               |                      |                     |
| Booth U-8-7HN - Bayswater Planned Well - Planned Ens   | 8,134.95                    | 16,217.20                   | 2,874.87                     | 2,535.84                      | 8.480                | CC, ES              |
| Booth U-8-7HN - Bayswater Planned Well - Planned Ens   | 8,200.00                    | 16,172.50                   | 2,875.25                     | 2,536.03                      | 8.476                | SF                  |
| Booth V-8-7HN - Bayswater Planned Well - Planned Ensi  | 8,129.72                    | 16,303.30                   | 2,576.41                     | 2,238.01                      | 7.614                | CC, ES              |
| Booth V-8-7HN - Bayswater Planned Well - Planned Ensi  | 8,200.00                    | 16,251.56                   | 2,576.85                     | 2,238.33                      | 7.612                | SF                  |
| Booth W-8-7HC - Bayswater Planned Well - Planned Ens   | 8,126.82                    | 16,395.90                   | 2,385.93                     | 2,048.56                      | 7.072                | CC, ES              |
| Booth W-8-7HC - Bayswater Planned Well - Planned Ens   | 8,200.00                    | 16,340.26                   | 2,386.40                     | 2,048.96                      | 7.072                | SF                  |
| Booth X-8-7HN - Bayswater Planned Well - Planned Ensi  | 8,123.51                    | 16,246.00                   | 2,215.11                     | 1,877.34                      | 6.558                | CC, ES, SF          |
| HERGERT 8-33 - SRC Energy PR Well - No Surveys         | 11,141.42                   | 7,029.37                    | 2,587.34                     | 2,214.99                      | 6.949                | CC                  |
| HERGERT 8-33 - SRC Energy PR Well - No Surveys         | 11,200.00                   | 7,029.49                    | 2,588.00                     | 2,214.08                      | 6.921                | ES                  |
| HERGERT 8-33 - SRC Energy PR Well - No Surveys         | 11,500.00                   | 7,030.09                    | 2,612.06                     | 2,231.12                      | 6.857                | SF                  |
| HERGERT 8-34 - SRC Energy PR Well - No Surveys         | 12,297.74                   | 7,019.70                    | 2,558.35                     | 2,152.42                      | 6.302                | CC                  |
| HERGERT 8-34 - SRC Energy PR Well - No Surveys         | 12,400.00                   | 7,019.91                    | 2,560.39                     | 2,151.78                      | 6.266                | ES                  |
| HERGERT 8-34 - SRC Energy PR Well - No Surveys         | 12,600.00                   | 7,020.31                    | 2,576.15                     | 2,163.04                      | 6.236                | SF                  |
| HERGERT 8-43 - SRC Energy PR Well - No Surveys         | 13,811.88                   | 7,017.76                    | 2,575.40                     | 2,124.99                      | 5.718                | CC                  |
| HERGERT 8-43 - SRC Energy PR Well - No Surveys         | 13,900.00                   | 7,017.94                    | 2,576.90                     | 2,124.19                      | 5.692                | ES                  |
| HERGERT 8-43 - SRC Energy PR Well - No Surveys         | 14,100.00                   | 7,018.34                    | 2,591.46                     | 2,134.41                      | 5.670                | SF                  |
| 6N-66W-09 Offsets Incomplete                           |                             |                             |                              |                               |                      |                     |
| Circle B 6-66-9-0164CH - SRC Energy PR Well - Actual S | 15,414.73                   | 11,895.00                   | 2,757.35                     | 2,480.23                      | 9.950                | CC, ES, SF          |
| LOVELY 14-9 - Bill Barrett AB Well - No Surveys        | 15,414.73                   | 7,011.00                    | 2,805.26                     | 2,313.88                      | 5.709                | CC, ES, SF          |
| 6N-66W-16 Offsets Incomplete                           |                             |                             |                              |                               |                      |                     |
| STATE-HOPPE 16-3 - Noble Energy PR Well - Actual VE    | 15,414.73                   | 7,005.54                    | 731.44                       | 690.00                        | 17.650               | CC, ES, SF          |
| 6N-66W-17 Offsets Incomplete                           |                             |                             |                              |                               |                      |                     |
| ANTELOPE 1-17 - Apache AB Well - No Surveys            | 12,216.66                   | 7,000.54                    | 139.92                       | -262.95                       | 0.347                | Level 1, CC, ES, SF |
| FRANK KEMP 1 - UK Operator AB Well - No Surveys        | 13,506.06                   | 4,850.00                    | 2,429.56                     | 2,236.34                      | 12.574               | CC, ES              |
| FRANK KEMP 1 - UK Operator AB Well - No Surveys        | 14,400.00                   | 4,850.00                    | 2,588.80                     | 2,372.50                      | 11.969               | SF                  |
| Fritzler 17-32-12 - GWOG PR Well - Actual Ensign Surve | 14,226.50                   | 7,410.49                    | 509.35                       | 266.01                        | 2.093                | CC, ES              |
| Fritzler 17-32-12 - GWOG PR Well - Actual Ensign Surve | 14,300.00                   | 7,409.73                    | 514.62                       | 267.54                        | 2.083                | SF                  |
| Fritzler 17-42-11 - GWOG PR Well - Actual Ensign Surve | 15,414.73                   | 7,374.22                    | 543.44                       | 268.61                        | 1.977                | CC, ES, SF          |
| FRITZLER 43-17 - GWOG PR Well - Actual Ensign Surve    | 14,847.67                   | 7,190.53                    | 1,151.60                     | 896.48                        | 4.514                | CC                  |
| FRITZLER 43-17 - GWOG PR Well - Actual Ensign Surve    | 14,900.00                   | 7,189.91                    | 1,152.79                     | 896.08                        | 4.491                | ES, SF              |
| HERGERT 17-21 - SRC Energy PR Well - No Surveys        | 12,453.08                   | 7,016.02                    | 1,410.13                     | 999.77                        | 3.436                | CC                  |
| HERGERT 17-21 - SRC Energy PR Well - No Surveys        | 12,500.00                   | 7,016.11                    | 1,410.91                     | 999.42                        | 3.429                | ES, SF              |
| HERGERT 17-22 - Noble Energy PR Well - Actual VES S    | 11,063.59                   | 7,043.11                    | 1,093.06                     | 952.25                        | 7.763                | CC                  |
| HERGERT 17-22 - Noble Energy PR Well - Actual VES S    | 11,100.00                   | 7,042.65                    | 1,093.67                     | 952.04                        | 7.722                | ES                  |
| HERGERT 17-22 - Noble Energy PR Well - Actual VES S    | 11,200.00                   | 7,041.37                    | 1,101.54                     | 958.34                        | 7.692                | SF                  |
| HERGERT 17-25 - SRC Energy PR Well - No Surveys        | 11,528.15                   | 7,023.15                    | 604.53                       | 221.07                        | 1.577                | CC, ES, SF          |
| MCGLOTHLIN 17-11 - SRC Energy PR Well - No Survey      | 14,770.34                   | 7,004.30                    | 1,630.28                     | 1,152.11                      | 3.409                | CC                  |
| MCGLOTHLIN 17-11 - SRC Energy PR Well - No Survey      | 14,800.00                   | 7,004.24                    | 1,630.55                     | 1,151.64                      | 3.405                | ES                  |
| MCGLOTHLIN 17-11 - SRC Energy PR Well - No Survey      | 14,900.00                   | 7,004.04                    | 1,635.42                     | 1,154.58                      | 3.401                | SF                  |
| MCGLOTHLIN 17-12 - SRC Energy SI Well - No Surveys     | 13,681.65                   | 7,004.50                    | 1,606.77                     | 1,160.67                      | 3.602                | CC                  |
| MCGLOTHLIN 17-12 - SRC Energy SI Well - No Surveys     | 13,700.00                   | 7,004.46                    | 1,606.88                     | 1,160.31                      | 3.598                | ES                  |
| MCGLOTHLIN 17-12 - SRC Energy SI Well - No Surveys     | 13,800.00                   | 7,004.26                    | 1,611.13                     | 1,162.46                      | 3.591                | SF                  |
| MCGLOTHLIN 17-42 - SRC Energy PR Well - No Survey      | 13,639.16                   | 6,976.41                    | 1,183.61                     | 739.76                        | 2.667                | CC                  |
| MCGLOTHLIN 17-42 - SRC Energy PR Well - No Survey      | 13,700.00                   | 6,976.54                    | 1,185.18                     | 739.52                        | 2.659                | ES, SF              |
| McGlothlin 8-6-17 - GWOG PR Well - Actual MS Energy    | 15,414.73                   | 7,203.82                    | 1,794.30                     | 1,521.28                      | 6.572                | CC, ES, SF          |
| SCHAEFFER 17-31 - SRC Energy PR Well - No Surveys      | 12,371.66                   | 6,976.85                    | 1,351.95                     | 945.36                        | 3.325                | CC                  |
| SCHAEFFER 17-31 - SRC Energy PR Well - No Surveys      | 12,400.00                   | 6,976.91                    | 1,352.24                     | 944.75                        | 3.318                | ES                  |
| SCHAEFFER 17-31 - SRC Energy PR Well - No Surveys      | 12,500.00                   | 6,977.11                    | 1,358.02                     | 947.90                        | 3.311                | SF                  |
| SCHAEFFER 17-32 - SRC Energy PR Well - No Surveys      | 10,876.85                   | 6,976.83                    | 1,375.96                     | 1,013.21                      | 3.793                | CC                  |
| SCHAEFFER 17-32 - SRC Energy PR Well - No Surveys      | 10,900.00                   | 6,976.88                    | 1,376.15                     | 1,012.66                      | 3.786                | ES                  |
| SCHAEFFER 17-32 - SRC Energy PR Well - No Surveys      | 11,000.00                   | 6,977.08                    | 1,381.46                     | 1,015.12                      | 3.771                | SF                  |
| ULRICH PC I 17-07D - SRC Energy PR Well - Actual Ens   | 13,563.84                   | 7,172.69                    | 109.40                       | -119.41                       | 0.478                | Level 1, CC, ES, SF |
| ULRICH PC I 17-08 - SRC Energy PR Well - No Surveys    | 14,730.77                   | 6,986.62                    | 173.59                       | -302.78                       | 0.364                | Level 1, CC, ES, SF |
| ULRICH PC I 17-17D - SRC Energy PR Well - Actual Ens   | 14,027.14                   | 7,185.42                    | 998.21                       | 763.27                        | 4.249                | CC, ES, SF          |

## Summary

| Site Name   | Reference<br>Measured<br>Depth<br>(usft) | Offset<br>Measured<br>Depth<br>(usft) | Distance                     |                               | Separation<br>Factor | Warning             |
|---|--|---------------------------------------|------------------------------|-------------------------------|----------------------|---------------------|
| Offset Well - Wellbore - Design                   |  |                                       | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                      |                     |
| 6N-66W-18 LINCOLN STATE 3-18 PAD                  |  |                                       |                              |                               |                      |                     |
| LINCOLN 30C-13-M - Wellbore #1 - Design #1        | 200.00                                   | 196.00                                | 241.07                       | 233.51                        | 31.863               | CC, ES              |
| LINCOLN 30C-13-M - Wellbore #1 - Design #1        | 8,600.00                                 | 6,812.36                              | 1,859.38                     | 1,795.17                      | 28.955               | SF                  |
| LINCOLN 30N-13B-M - Wellbore #1 - Design #1       | 250.00                                   | 245.00                                | 254.46                       | 246.86                        | 33.473               | CC, ES              |
| LINCOLN 30N-13B-M - Wellbore #1 - Design #1       | 8,800.00                                 | 6,681.98                              | 2,128.05                     | 2,060.23                      | 31.376               | SF                  |
| LINCOLN 31C-13-M - Wellbore #1 - Design #1        | 250.00                                   | 247.00                                | 184.32                       | 176.72                        | 24.244               | CC, ES              |
| LINCOLN 31C-13-M - Wellbore #1 - Design #1        | 7,600.00                                 | 7,231.49                              | 388.83                       | 344.04                        | 8.683                | SF                  |
| LINCOLN 31N-13B-M - Wellbore #1 - Design #1       | 250.00                                   | 247.00                                | 189.80                       | 182.20                        | 24.964               | CC, ES              |
| LINCOLN 31N-13B-M - Wellbore #1 - Design #1       | 7,100.00                                 | 7,566.64                              | 581.75                       | 538.86                        | 13.564               | SF                  |
| LINCOLN 31N-13C-M - Wellbore #1 - Design #1       | 250.00                                   | 247.00                                | 196.92                       | 189.31                        | 25.900               | CC, ES              |
| LINCOLN 31N-13C-M - Wellbore #1 - Design #1       | 7,900.00                                 | 6,982.14                              | 928.13                       | 879.87                        | 19.233               | SF                  |
| LINCOLN 32C-13-M - Wellbore #1 - Design #1        | 250.00                                   | 247.00                                | 184.33                       | 176.73                        | 24.245               | CC, ES              |
| LINCOLN 32C-13-M - Wellbore #1 - Design #1        | 7,800.00                                 | 7,122.19                              | 439.05                       | 387.30                        | 8.485                | SF                  |
| LINCOLN 32N-13B-M - Wellbore #1 - Design #1       | 250.00                                   | 247.00                                | 181.19                       | 173.59                        | 23.832               | CC, ES              |
| LINCOLN 32N-13B-M - Wellbore #1 - Design #1       | 7,493.43                                 | 7,265.99                              | 248.97                       | 204.25                        | 5.567                | SF                  |
| LINCOLN 4C-13-M - Wellbore #1 - Design #1         | 250.00                                   | 247.00                                | 205.99                       | 198.39                        | 27.094               | CC, ES              |
| LINCOLN 4C-13-M - Wellbore #1 - Design #1         | 8,100.00                                 | 6,950.00                              | 1,127.94                     | 1,075.32                      | 21.436               | SF                  |
| LINCOLN 4N-13B-M - Wellbore #1 - Design #1        | 250.00                                   | 247.00                                | 216.31                       | 208.70                        | 28.451               | CC, ES              |
| LINCOLN 4N-13B-M - Wellbore #1 - Design #1        | 8,300.00                                 | 6,800.00                              | 1,446.91                     | 1,391.12                      | 25.935               | SF                  |
| LINCOLN 4N-13C-M - Wellbore #1 - Design #1        | 250.00                                   | 246.00                                | 228.14                       | 220.54                        | 30.009               | CC, ES              |
| LINCOLN 4N-13C-M - Wellbore #1 - Design #1        | 8,400.00                                 | 6,800.00                              | 1,616.76                     | 1,557.73                      | 27.390               | SF                  |
| LINCOLN 5N-13A-M - Wellbore #1 - Design #1        | 7,077.21                                 | 7,501.17                              | 61.91                        | 18.12                         | 1.414                | Level 3, CC, ES, SF |
| LINCOLN 5N-13C-M - Wellbore #1 - Design #1        | 7,459.49                                 | 7,317.68                              | 17.22                        | -26.47                        | 0.394                | Level 1, CC, ES, SF |
| LINCOLN STATE 1C-17-M - Wellbore #1 - Design #1   | 250.00                                   | 250.00                                | 120.22                       | 112.62                        | 15.810               | CC, ES              |
| LINCOLN STATE 1C-17-M - Wellbore #1 - Design #1   | 15,414.73                                | 15,479.99                             | 1,334.38                     | 839.80                        | 2.698                | SF                  |
| LINCOLN STATE 1N-17B-M - Wellbore #1 - Design #1  | 250.00                                   | 250.00                                | 100.19                       | 92.59                         | 13.176               | CC, ES              |
| LINCOLN STATE 1N-17B-M - Wellbore #1 - Design #1  | 15,414.73                                | 15,350.74                             | 1,105.16                     | 606.03                        | 2.214                | SF                  |
| LINCOLN STATE 1N-17C-M - Wellbore #1 - Design #1  | 250.00                                   | 249.00                                | 139.90                       | 132.29                        | 18.398               | CC, ES              |
| LINCOLN STATE 1N-17C-M - Wellbore #1 - Design #1  | 15,414.73                                | 15,395.33                             | 1,527.58                     | 1,028.53                      | 3.061                | SF                  |
| LINCOLN STATE 26C-17-M - Wellbore #1 - Design #1  | 200.00                                   | 199.00                                | 179.97                       | 172.41                        | 23.785               | CC, ES              |
| LINCOLN STATE 26C-17-M - Wellbore #1 - Design #1  | 15,414.73                                | 15,513.70                             | 1,991.66                     | 1,494.90                      | 4.009                | SF                  |
| LINCOLN STATE 26N-17B-M - Wellbore #1 - Design #1 | 250.00                                   | 249.00                                | 159.93                       | 152.33                        | 21.033               | CC, ES              |
| LINCOLN STATE 26N-17B-M - Wellbore #1 - Design #1 | 15,414.73                                | 15,324.87                             | 1,759.67                     | 1,260.41                      | 3.525                | SF                  |
| LINCOLN STATE 40C-17-M - Wellbore #1 - Design #1  | 652.69                                   | 649.90                                | 19.85                        | 11.69                         | 2.434                | CC                  |
| LINCOLN STATE 40C-17-M - Wellbore #1 - Design #1  | 15,414.73                                | 15,607.89                             | 287.26                       | -105.93                       | 0.731                | Level 1, ES, SF     |
| LINCOLN STATE 40N-17C-M - Wellbore #1 - Design #1 | 655.42                                   | 649.84                                | 39.69                        | 31.53                         | 4.865                | CC                  |
| LINCOLN STATE 40N-17C-M - Wellbore #1 - Design #1 | 15,414.73                                | 15,545.73                             | 351.83                       | -139.08                       | 0.717                | Level 1, ES, SF     |
| LINCOLN STATE 41N-17A-M - Wellbore #1 - Design #1 | 250.00                                   | 250.00                                | 80.15                        | 72.54                         | 10.540               | CC                  |
| LINCOLN STATE 41N-17A-M - Wellbore #1 - Design #1 | 300.00                                   | 301.39                                | 80.15                        | 72.50                         | 10.482               | ES                  |
| LINCOLN STATE 41N-17A-M - Wellbore #1 - Design #1 | 15,414.73                                | 15,212.00                             | 887.03                       | 390.50                        | 1.786                | SF                  |
| LINCOLN STATE 41N-17B-M - Wellbore #1 - Design #1 | 475.77                                   | 478.97                                | 39.96                        | 32.12                         | 5.093                | CC                  |
| LINCOLN STATE 41N-17B-M - Wellbore #1 - Design #1 | 15,414.73                                | 15,358.64                             | 439.98                       | -60.49                        | 0.879                | Level 1, ES, SF     |
| LINCOLN STATE 41N-17C-M - Wellbore #1 - Design #1 | 390.54                                   | 393.54                                | 60.06                        | 52.32                         | 7.765                | CC, ES              |
| LINCOLN STATE 41N-17C-M - Wellbore #1 - Design #1 | 15,414.73                                | 15,504.16                             | 689.17                       | 207.15                        | 1.430                | Level 3, SF         |
| LINCOLN STATE 8C-17-M - Wellbore #1 - Design #1   | 588.68                                   | 591.06                                | 19.90                        | 11.87                         | 2.478                | CC                  |
| LINCOLN STATE 8C-17-M - Wellbore #1 - Design #1   | 15,414.73                                | 15,541.66                             | 327.98                       | -88.98                        | 0.787                | Level 1, ES, SF     |

## Summary

| Site Name<br>Offset Well - Wellbore - Design         | Reference                   | Offset                      | Distance                     |                               | Separation<br>Factor | Warning             |
|--|-----------------------------|-----------------------------|------------------------------|-------------------------------|----------------------|---------------------|
|  | Measured<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                      |                     |
| 6N-66W-18 Offsets Incomplete                         |                             |                             |                              |                               |                      |                     |
| ANTELOPE 1 - Marlin Oil AB Sussex Well - No Surveys  | 250.00                      | 180.00                      | 2,745.64                     | 2,735.87                      | 281.123              | CC                  |
| ANTELOPE 1 - Marlin Oil AB Sussex Well - No Surveys  | 650.00                      | 578.70                      | 2,752.82                     | 2,729.37                      | 117.389              | ES                  |
| ANTELOPE 1 - Marlin Oil AB Sussex Well - No Surveys  | 4,600.00                    | 4,435.00                    | 2,945.77                     | 2,777.99                      | 17.557               | SF                  |
| CARLSON 18-41 - Noble Energy SI Well - No Surveys    | 9,646.41                    | 6,981.35                    | 1,387.66                     | 1,060.56                      | 4.242                | CC                  |
| CARLSON 18-41 - Noble Energy SI Well - No Surveys    | 9,700.00                    | 6,981.46                    | 1,388.70                     | 1,059.91                      | 4.224                | ES                  |
| CARLSON 18-41 - Noble Energy SI Well - No Surveys    | 9,800.00                    | 6,981.66                    | 1,396.14                     | 1,064.53                      | 4.210                | SF                  |
| CARLSON 33-18 - GWOG PR Well - No Surveys            | 8,249.46                    | 7,008.53                    | 869.56                       | 580.94                        | 3.013                | CC                  |
| CARLSON 33-18 - GWOG PR Well - No Surveys            | 8,300.00                    | 7,008.63                    | 871.03                       | 580.84                        | 3.002                | ES, SF              |
| DICKERSON 1 - Stuarco AB Sussex Well - No Surveys    | 5,000.00                    | 4,854.00                    | 2,650.65                     | 2,466.43                      | 14.389               | SF                  |
| DICKERSON 1 - Stuarco AB Sussex Well - No Surveys    | 9,512.83                    | 4,854.00                    | 2,136.72                     | 2,095.94                      | 52.395               | CC                  |
| DICKERSON 1 - Stuarco AB Sussex Well - No Surveys    | 9,600.00                    | 4,854.00                    | 2,138.50                     | 2,095.51                      | 49.739               | ES                  |
| DUNBAR 18-31 - Noble Energy AB Well - Actual VES Su  | 6,747.63                    | 6,593.55                    | 1,582.46                     | 1,551.39                      | 50.928               | CC                  |
| DUNBAR 18-31 - Noble Energy AB Well - Actual VES Su  | 6,750.00                    | 6,595.85                    | 1,582.46                     | 1,551.38                      | 50.909               | ES                  |
| DUNBAR 18-31 - Noble Energy AB Well - Actual VES Su  | 7,800.00                    | 6,950.10                    | 1,978.07                     | 1,934.04                      | 44.921               | SF                  |
| KOCHERT 11-18 - SRC Energy SI Well - No Surveys      | 250.00                      | 242.00                      | 1,768.14                     | 1,756.48                      | 151.584              | CC                  |
| KOCHERT 11-18 - SRC Energy SI Well - No Surveys      | 1,700.00                    | 1,680.48                    | 1,807.70                     | 1,742.94                      | 27.911               | ES                  |
| KOCHERT 11-18 - SRC Energy SI Well - No Surveys      | 6,700.00                    | 6,628.33                    | 2,133.98                     | 1,882.41                      | 8.483                | SF                  |
| KOCHERT 12-18 - SRC Energy SI Well - No Surveys      | 6,495.62                    | 6,406.43                    | 1,684.54                     | 1,440.49                      | 6.902                | CC                  |
| KOCHERT 12-18 - SRC Energy SI Well - No Surveys      | 6,500.00                    | 6,410.77                    | 1,684.56                     | 1,440.34                      | 6.898                | ES                  |
| KOCHERT 12-18 - SRC Energy SI Well - No Surveys      | 6,650.00                    | 6,557.80                    | 1,703.31                     | 1,453.49                      | 6.818                | SF                  |
| PEXOIL MURPHY & DICKERSON 1 - Pexoil AB Sussex       | 4,541.25                    | 4,421.00                    | 1,229.72                     | 1,062.31                      | 7.346                | CC, ES, SF          |
| R A 1 - Francis Energy AB Well - No Surveys          | 6,559.49                    | 6,469.57                    | 2,305.56                     | 2,060.26                      | 9.399                | CC                  |
| R A 1 - Francis Energy AB Well - No Surveys          | 6,600.00                    | 6,509.33                    | 2,306.62                     | 2,059.79                      | 9.345                | ES                  |
| R A 1 - Francis Energy AB Well - No Surveys          | 6,800.00                    | 6,703.59                    | 2,342.86                     | 2,088.49                      | 9.210                | SF                  |
| TIGGES 18-11 - SRC Energy PR Well - No Surveys       | 9,373.76                    | 7,009.80                    | 1,224.17                     | 903.92                        | 3.823                | CC                  |
| TIGGES 18-11 - SRC Energy PR Well - No Surveys       | 9,400.00                    | 7,009.85                    | 1,224.46                     | 903.57                        | 3.816                | ES                  |
| TIGGES 18-11 - SRC Energy PR Well - No Surveys       | 9,500.00                    | 7,010.05                    | 1,230.67                     | 907.65                        | 3.810                | SF                  |
| TIGGES 18-13 - SRC Energy PR Well - No Surveys       | 8,260.22                    | 7,011.55                    | 260.97                       | -28.04                        | 0.903                | Level 1, CC, ES, SF |
| TIGGES 18-14 - SRC Energy PR Well - No Surveys       | 9,486.51                    | 7,008.97                    | 83.70                        | -239.77                       | 0.259                | Level 1, CC, ES, SF |
| TIGGES 18-15 - SRC Energy PR Well - No Surveys       | 8,785.86                    | 7,003.61                    | 754.47                       | 451.19                        | 2.488                | CC                  |
| TIGGES 18-15 - SRC Energy PR Well - No Surveys       | 8,800.00                    | 7,003.64                    | 754.60                       | 451.03                        | 2.486                | ES, SF              |
| TIGGES 31-18 - SRC Energy SI Well - No Surveys       | 8,283.48                    | 7,011.60                    | 1,194.39                     | 904.75                        | 4.124                | CC                  |
| TIGGES 31-18 - SRC Energy SI Well - No Surveys       | 8,300.00                    | 7,011.63                    | 1,194.51                     | 904.48                        | 4.119                | ES                  |
| TIGGES 31-18 - SRC Energy SI Well - No Surveys       | 8,400.00                    | 7,011.83                    | 1,200.06                     | 907.86                        | 4.107                | SF                  |
| WALKER 11-18 - Petro Canada AB Well - No Surveys     | 1,959.54                    | 1,922.49                    | 1,787.58                     | 1,714.20                      | 24.360               | CC                  |
| WALKER 11-18 - Petro Canada AB Well - No Surveys     | 5,600.00                    | 5,527.53                    | 1,857.99                     | 1,648.15                      | 8.854                | ES                  |
| WALKER 11-18 - Petro Canada AB Well - No Surveys     | 6,650.00                    | 6,565.80                    | 1,921.56                     | 1,671.76                      | 7.693                | SF                  |
| Walker-Shands 18-18 - SRC Energy PR Well - Actual En | 250.00                      | 235.00                      | 289.29                       | 278.01                        | 25.638               | CC                  |
| Walker-Shands 18-18 - SRC Energy PR Well - Actual En | 400.00                      | 384.93                      | 292.88                       | 276.55                        | 17.936               | ES                  |
| Walker-Shands 18-18 - SRC Energy PR Well - Actual En | 700.00                      | 683.57                      | 321.41                       | 294.47                        | 11.927               | SF                  |
| Walker-Shands 3-18 - SRC Energy PR Well - No Surveys | 250.00                      | 226.00                      | 306.83                       | 295.67                        | 27.498               | CC                  |
| Walker-Shands 3-18 - SRC Energy PR Well - No Surveys | 400.00                      | 375.93                      | 310.36                       | 294.16                        | 19.167               | ES                  |
| Walker-Shands 3-18 - SRC Energy PR Well - No Surveys | 6,750.00                    | 6,658.63                    | 1,163.05                     | 912.29                        | 4.638                | SF                  |
| Walker-Shands 6-18 - SRC Energy PR Well - Actual Ens | 250.00                      | 235.00                      | 274.98                       | 263.70                        | 24.370               | CC                  |
| Walker-Shands 6-18 - SRC Energy PR Well - Actual Ens | 3,800.00                    | 3,846.86                    | 277.36                       | 238.52                        | 7.141                | ES                  |
| Walker-Shands 6-18 - SRC Energy PR Well - Actual Ens | 4,200.00                    | 4,236.78                    | 286.52                       | 244.86                        | 6.879                | SF                  |
| 6N-67W-10 Offsets Incomplete                         |                             |                             |                              |                               |                      |                     |
| Bower FD 11-322HC - GWOG Planned Well - Planned G    | 6,524.71                    | 13,035.16                   | 8,665.56                     | 8,593.47                      | 120.196              | CC, ES              |
| Bower FD 11-322HC - GWOG Planned Well - Planned G    | 6,700.00                    | 13,035.16                   | 8,689.60                     | 8,616.98                      | 119.654              | SF                  |
| Bower FD 11-322HN - GWOG Planned Well - Planned G    | 6,511.44                    | 12,854.66                   | 8,634.60                     | 8,563.85                      | 122.038              | CC, ES              |
| Bower FD 11-322HN - GWOG Planned Well - Planned G    | 6,700.00                    | 12,854.66                   | 8,662.48                     | 8,591.15                      | 121.444              | SF                  |
| Bower FD 11-359HN - GWOG Planned Well - Planned G    | 6,521.11                    | 13,026.84                   | 8,542.84                     | 8,477.97                      | 131.687              | CC, ES              |
| Bower FD 11-359HN - GWOG Planned Well - Planned G    | 6,700.00                    | 13,026.84                   | 8,568.25                     | 8,502.90                      | 131.108              | SF                  |
| Bower FD 11-362HC - GWOG Planned Well - Planned G    | 6,530.39                    | 13,174.35                   | 8,494.68                     | 8,432.09                      | 135.731              | CC, ES              |
| Bower FD 11-362HC - GWOG Planned Well - Planned G    | 6,700.00                    | 13,174.35                   | 8,517.70                     | 8,454.72                      | 135.239              | SF                  |
| Bower FD 11-362HN - GWOG Planned Well - Planned G    | 6,518.04                    | 13,011.68                   | 8,440.31                     | 8,379.11                      | 137.911              | CC, ES              |
| Bower FD 11-362HN - GWOG Planned Well - Planned G    | 6,700.00                    | 13,011.68                   | 8,466.94                     | 8,405.33                      | 137.432              | SF                  |
| MILLER 1 - GWOG AB Well - Actual VES Surveys         | 0.00                        | 0.00                        | 8,485.14                     |                               |                      |                     |
| MILLER 1 - GWOG AB Well - Actual VES Surveys         | 7,000.00                    | 6,864.52                    | 8,893.87                     | 8,859.23                      | 256.704              | SF                  |



## Summary

| Site Name   | Reference<br>Measured<br>Depth<br>(usft) | Offset<br>Measured<br>Depth<br>(usft) | Distance                     |                               | Separation | Warning |
|---|--|---------------------------------------|------------------------------|-------------------------------|------------|---------|
| Offset Well - Wellbore - Design                       |  |                                       | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) | Factor     |         |
| 6N-67W-12 Offsets Incomplete                          |  |                                       |                              |                               |            |         |
| FLOCKHART 12-43(DIR) - SRC Energy SI Well - Actual E  | 250.00                                   | 227.00                                | 4,447.51                     | 4,436.51                      | 404.254    | CC      |
| FLOCKHART 12-43(DIR) - SRC Energy SI Well - Actual E  | 500.00                                   | 476.68                                | 4,452.83                     | 4,433.31                      | 228.048    | ES      |
| FLOCKHART 12-43(DIR) - SRC Energy SI Well - Actual E  | 6,300.00                                 | 6,360.12                              | 5,092.82                     | 4,912.07                      | 28.175     | SF      |
| FLOCKHART 12-44 - SRC Energy PR Well - No Surveys     | 250.00                                   | 260.00                                | 3,363.91                     | 3,351.67                      | 274.748    | CC      |
| FLOCKHART 12-44 - SRC Energy PR Well - No Surveys     | 500.00                                   | 509.68                                | 3,368.97                     | 3,348.09                      | 161.365    | ES      |
| FLOCKHART 12-44 - SRC Energy PR Well - No Surveys     | 6,750.00                                 | 6,707.37                              | 3,887.12                     | 3,632.90                      | 15.291     | SF      |
| Knievel 14-12D - PDC Energy PR Well - Actual Ensign S | 151.45                                   | 155.47                                | 5,874.79                     | 5,867.42                      | 797.057    | CC, ES  |
| Knievel 14-12D - PDC Energy PR Well - Actual Ensign S | 6,750.00                                 | 6,981.89                              | 7,387.93                     | 7,329.54                      | 126.515    | SF      |
| Knievel 24-12D - PDC Energy PR Well - Actual Ensign S | 250.00                                   | 254.00                                | 5,870.31                     | 5,858.47                      | 495.785    | CC      |
| Knievel 24-12D - PDC Energy PR Well - Actual Ensign S | 500.00                                   | 503.68                                | 5,874.78                     | 5,854.34                      | 287.363    | ES      |
| Knievel 24-12D - PDC Energy PR Well - Actual Ensign S | 6,700.00                                 | 6,698.01                              | 6,137.12                     | 6,083.15                      | 113.716    | SF      |
| Simonsen 12E-223 - PDC Planned Well - Planned Ensign  | 6,515.53                                 | 11,562.40                             | 7,845.34                     | 7,719.81                      | 62.495     | CC, ES  |
| Simonsen 12E-223 - PDC Planned Well - Planned Ensign  | 6,650.00                                 | 11,562.40                             | 7,859.83                     | 7,733.90                      | 62.415     | SF      |
| Simonsen 12J-243 - PDC Energy PR Well - Actual Ensig  | 6,519.12                                 | 11,570.00                             | 6,848.81                     | 6,723.03                      | 54.454     | CC, ES  |
| Simonsen 12J-243 - PDC Energy PR Well - Actual Ensig  | 6,600.00                                 | 11,570.00                             | 6,854.03                     | 6,728.08                      | 54.418     | SF      |
| 6N-67W-13 Offsets Incomplete                          |  |                                       |                              |                               |            |         |
| FREE ENTERPRISE 1-13 - McGarvey-Stark AB Sussex       | 4,860.41                                 | 4,500.00                              | 5,046.63                     | 4,875.89                      | 29.557     | CC, ES  |
| FREE ENTERPRISE 1-13 - McGarvey-Stark AB Sussex       | 5,000.00                                 | 4,500.00                              | 5,048.56                     | 4,877.69                      | 29.546     | SF      |
| KADLUB/MILLER 1 - Mission Oil AB Well - No Surveys    | 250.00                                   | 235.00                                | 7,079.68                     | 7,068.24                      | 618.756    | CC      |
| KADLUB/MILLER 1 - Mission Oil AB Well - No Surveys    | 6,500.00                                 | 6,426.77                              | 7,135.62                     | 6,890.85                      | 29.152     | ES      |
| KADLUB/MILLER 1 - Mission Oil AB Well - No Surveys    | 7,000.00                                 | 6,871.02                              | 7,334.27                     | 7,072.68                      | 28.038     | SF      |
| KADLUB-MILLER 2 - Bonanza Creek AB Well - No Surve    | 6,488.74                                 | 6,448.62                              | 5,725.64                     | 5,480.09                      | 23.318     | CC      |
| KADLUB-MILLER 2 - Bonanza Creek AB Well - No Surve    | 6,500.00                                 | 6,459.77                              | 5,725.74                     | 5,479.76                      | 23.277     | ES      |
| KADLUB-MILLER 2 - Bonanza Creek AB Well - No Surve    | 6,950.00                                 | 6,867.95                              | 5,885.40                     | 5,623.89                      | 22.506     | SF      |
| KREYKES 13-11 - Noble Energy SI Well - No Surveys     | 250.00                                   | 241.00                                | 3,198.34                     | 3,186.71                      | 274.948    | CC      |
| KREYKES 13-11 - Noble Energy SI Well - No Surveys     | 5,200.00                                 | 5,145.42                              | 3,315.04                     | 3,120.00                      | 16.997     | ES      |
| KREYKES 13-11 - Noble Energy SI Well - No Surveys     | 6,800.00                                 | 6,718.41                              | 3,450.73                     | 3,195.20                      | 13.504     | SF      |
| KREYKES 13-13 - Noble Energy SI Well - No Surveys     | 6,490.86                                 | 6,423.72                              | 4,540.69                     | 4,296.02                      | 18.558     | CC      |
| KREYKES 13-13 - Noble Energy SI Well - No Surveys     | 6,500.00                                 | 6,432.77                              | 4,540.76                     | 4,295.74                      | 18.532     | ES      |
| KREYKES 13-13 - Noble Energy SI Well - No Surveys     | 6,850.00                                 | 6,761.40                              | 4,639.45                     | 4,381.92                      | 18.016     | SF      |
| KREYKES 13-14 - Noble Energy SI Well - No Surveys     | 6,490.63                                 | 6,411.49                              | 2,891.19                     | 2,646.95                      | 11.838     | CC      |
| KREYKES 13-14 - Noble Energy SI Well - No Surveys     | 6,500.00                                 | 6,420.77                              | 2,891.26                     | 2,646.66                      | 11.821     | ES      |
| KREYKES 13-14 - Noble Energy SI Well - No Surveys     | 6,750.00                                 | 6,661.63                              | 2,943.42                     | 2,689.67                      | 11.600     | SF      |
| KREYKES 13-15 - Noble Energy SI Well - No Surveys     | 3,861.48                                 | 3,824.92                              | 3,732.41                     | 3,588.03                      | 25.851     | CC      |
| KREYKES 13-15 - Noble Energy SI Well - No Surveys     | 6,500.00                                 | 6,437.77                              | 3,750.53                     | 3,505.35                      | 15.297     | ES      |
| KREYKES 13-15 - Noble Energy SI Well - No Surveys     | 6,800.00                                 | 6,723.41                              | 3,828.03                     | 3,572.03                      | 14.953     | SF      |
| PITNER 13-12 - Noble Energy SI Well - No Surveys      | 250.00                                   | 266.00                                | 4,252.01                     | 4,239.58                      | 341.840    | CC      |
| PITNER 13-12 - Noble Energy SI Well - No Surveys      | 6,488.73                                 | 6,446.61                              | 4,388.34                     | 4,143.03                      | 17.889     | ES      |
| PITNER 13-12 - Noble Energy SI Well - No Surveys      | 6,850.00                                 | 6,786.40                              | 4,495.09                     | 4,236.95                      | 17.413     | SF      |
| Rubyanna 13C-25W - Extraction PR Well - Actual BHI Su | 6,556.40                                 | 6,811.00                              | 2,499.14                     | 2,440.09                      | 42.323     | CC, ES  |
| Rubyanna 13C-25W - Extraction PR Well - Actual BHI Su | 6,700.00                                 | 6,826.47                              | 2,517.97                     | 2,458.29                      | 42.191     | SF      |
| RUBYANNA 13NC-26W - Extraction PR Well - Actual BH    | 6,570.03                                 | 6,718.00                              | 2,681.82                     | 2,629.43                      | 51.186     | CC, ES  |
| RUBYANNA 13NC-26W - Extraction PR Well - Actual BH    | 6,750.00                                 | 6,749.00                              | 2,709.22                     | 2,655.94                      | 50.848     | SF      |
| STROMBERGER 13-31 - Noble Energy PR Well - Actual     | 6,511.34                                 | 6,377.70                              | 6,166.05                     | 6,133.41                      | 188.915    | CC, ES  |
| STROMBERGER 13-31 - Noble Energy PR Well - Actual     | 7,150.00                                 | 6,880.25                              | 6,458.12                     | 6,422.57                      | 181.689    | SF      |
| STROMBERGER 13-32 - Noble Energy PR Well - Actual     | 6,513.13                                 | 6,440.47                              | 7,278.89                     | 7,246.11                      | 222.014    | CC, ES  |
| STROMBERGER 13-32 - Noble Energy PR Well - Actual     | 7,100.00                                 | 6,824.06                              | 7,531.42                     | 7,496.21                      | 213.888    | SF      |
| YANCEY 1 - Chandler AB Well - No Surveys              | 250.00                                   | 237.00                                | 3,139.71                     | 3,128.20                      | 272.894    | CC      |
| YANCEY 1 - Chandler AB Well - No Surveys              | 5,000.00                                 | 4,943.37                              | 3,253.00                     | 3,065.75                      | 17.372     | ES      |
| YANCEY 1 - Chandler AB Well - No Surveys              | 6,800.00                                 | 6,714.41                              | 3,397.96                     | 3,142.59                      | 13.306     | SF      |

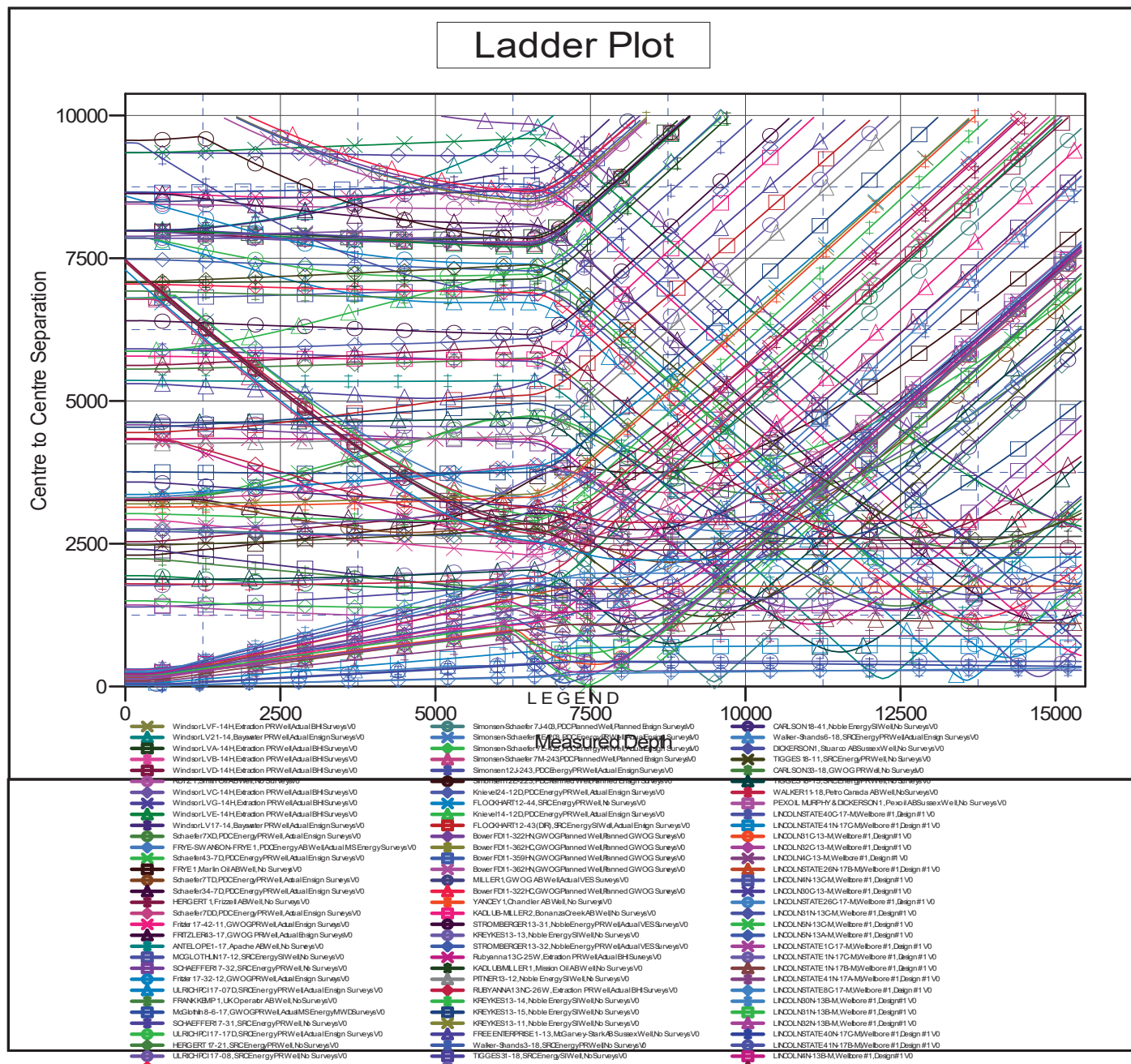
## Summary

| Site Name<br>Offset Well - Wellbore - Design            | Reference                   | Offset                      | Distance                     |                               | Separation<br>Factor | Warning |
|---|-----------------------------|-----------------------------|------------------------------|-------------------------------|----------------------|---------|
|   | Measured<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                      |         |
| 6N-67W-14 Offsets Incomplete                            |                             |                             |                              |                               |                      |         |
| RUTZ 1 - Smith Oil AB Well - No Surveys                 | 6,493.98                    | 6,425.81                    | 8,358.83                     | 8,114.08                      | 34.153               | CC      |
| RUTZ 1 - Smith Oil AB Well - No Surveys                 | 6,500.00                    | 6,431.77                    | 8,358.85                     | 8,113.88                      | 34.121               | ES      |
| RUTZ 1 - Smith Oil AB Well - No Surveys                 | 7,050.00                    | 6,909.32                    | 8,586.83                     | 8,323.62                      | 32.624               | SF      |
| Windsor LV 17-14 - Bayswater PR Well - Actual Ensign S  | 0.00                        | 0.00                        | 7,981.28                     |                               |                      |         |
| Windsor LV 17-14 - Bayswater PR Well - Actual Ensign S  | 7,000.00                    | 6,980.13                    | 9,175.63                     | 9,134.30                      | 222.015              | SF      |
| Windsor LV 21-14 - Bayswater PR Well - Actual Ensign S  | 0.00                        | 0.00                        | 7,983.72                     |                               |                      |         |
| Windsor LV 21-14 - Bayswater PR Well - Actual Ensign S  | 6,750.00                    | 1,570.00                    | 9,865.49                     | 9,841.38                      | 409.077              | SF      |
| Windsor LV A-14H - Extraction PR Well - Actual BHI Surv | 4,667.13                    | 4,802.00                    | 7,830.95                     | 7,797.55                      | 234.437              | CC      |
| Windsor LV A-14H - Extraction PR Well - Actual BHI Surv | 4,800.00                    | 4,892.23                    | 7,831.40                     | 7,797.19                      | 228.880              | ES      |
| Windsor LV A-14H - Extraction PR Well - Actual BHI Surv | 6,900.00                    | 6,591.00                    | 8,014.69                     | 7,966.69                      | 166.968              | SF      |
| Windsor LV B-14H - Extraction PR Well - Actual BHI Surv | 4,780.86                    | 4,870.25                    | 7,777.79                     | 7,745.92                      | 244.042              | CC      |
| Windsor LV B-14H - Extraction PR Well - Actual BHI Surv | 4,900.00                    | 4,959.29                    | 7,778.04                     | 7,745.54                      | 239.336              | ES      |
| Windsor LV B-14H - Extraction PR Well - Actual BHI Surv | 6,850.00                    | 6,628.34                    | 7,900.72                     | 7,857.93                      | 184.646              | SF      |
| Windsor LV C-14H - Extraction PR Well - Actual BHI Surv | 6,370.12                    | 6,401.00                    | 7,777.67                     | 7,740.83                      | 211.108              | CC      |
| Windsor LV C-14H - Extraction PR Well - Actual BHI Surv | 6,400.00                    | 6,401.00                    | 7,777.72                     | 7,740.78                      | 210.542              | ES      |
| Windsor LV C-14H - Extraction PR Well - Actual BHI Surv | 6,750.00                    | 6,401.00                    | 7,838.89                     | 7,801.03                      | 207.047              | SF      |
| Windsor LV D-14H - Extraction PR Well - Actual BHI Surv | 6,490.27                    | 6,479.14                    | 7,734.36                     | 7,698.41                      | 215.168              | CC, ES  |
| Windsor LV D-14H - Extraction PR Well - Actual BHI Surv | 6,800.00                    | 6,495.00                    | 7,813.01                     | 7,776.28                      | 212.707              | SF      |
| Windsor LV E-14H - Extraction PR Well - Actual BHI Surv | 6,383.16                    | 6,312.00                    | 7,697.82                     | 7,661.01                      | 209.118              | CC      |
| Windsor LV E-14H - Extraction PR Well - Actual BHI Surv | 6,400.00                    | 6,312.00                    | 7,697.84                     | 7,660.97                      | 208.809              | ES      |
| Windsor LV E-14H - Extraction PR Well - Actual BHI Surv | 6,850.00                    | 6,354.77                    | 7,809.18                     | 7,771.07                      | 204.938              | SF      |
| Windsor LV F-14H - Extraction PR Well - Actual BHI Surv | 6,502.47                    | 6,588.00                    | 7,721.49                     | 7,679.48                      | 183.794              | CC, ES  |
| Windsor LV F-14H - Extraction PR Well - Actual BHI Surv | 6,800.00                    | 6,682.00                    | 7,792.40                     | 7,749.35                      | 181.016              | SF      |
| Windsor LV G-14H - Extraction PR Well - Actual BHI Surv | 6,499.52                    | 6,541.11                    | 7,746.15                     | 7,697.85                      | 160.384              | CC      |
| Windsor LV G-14H - Extraction PR Well - Actual BHI Surv | 6,500.00                    | 6,541.19                    | 7,746.15                     | 7,697.85                      | 160.378              | ES      |
| Windsor LV G-14H - Extraction PR Well - Actual BHI Surv | 6,750.00                    | 6,587.00                    | 7,797.88                     | 7,748.80                      | 158.896              | SF      |

Coordinates are relative to: LINCOLN STATE 8N-17B-M

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.44°





Central Meridian is -105.500000

Grid Convergence at Surface is:  $0.44^\circ$

