

Oilfield Services, Central U.S. Land



**Reservoir Development**  
PathFinder, a Schlumberger Company  
9200 West Reno Avenue  
Oklahoma City, Oklahoma 73127 USA  
Phone: (405) 789-1515  
Fax: (405) 789-1519

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November 14, 2015

OXY USA INC.  
5 Greenway Plaza, Suite 110  
HOUSTON, TX 77046-0521

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

FEB 02 2016

RECEIVED

Re:

CLIENT: OXY USA INC.  
WELL: CEDAR CANYON 27 FEDERAL 7H  
FIELD: PIERCE CROSSING; BONE  
SPRING, EAST  
RIG: H&P 615  
COUNTY: EDDY  
API NO: 30-015-43233  
JOB NO: 15MLD2439

Sec 28, T24S, R29E, Eddy  
32.185763 N, 103.981099 W

Enclosed, please find the original copy of the survey performed on the referenced well by PathFinder, a division of Schlumberger Technology Corporation (P-5 No. 754900).  
Other information required by your office is as follows.

| <u>Name &amp; Title of<br/>Surveyor</u> | <u>Drainhole Number</u>                        | <u>Surveyed Depths</u>       | <u>Dates Performed</u>                    | <u>Type of Survey</u> |
|-----------------------------------------|------------------------------------------------|------------------------------|-------------------------------------------|-----------------------|
| Kane Junmanee<br>FE                     | CEDAR CANYON 27<br>FEDERAL 7H<br>Original Hole | 8098.00 Ft to<br>13847.00 Ft | November 10, 2015 to<br>November 14, 2015 | SlimPulse             |

A plat of the bottom hole location is oriented both to the surface location and to the lease lines (or until line in case of pooling), is attached to the survey report.

If any other information is required, please contact the undersigned at the above letterhead and phone number.  
Sincerely,

Alexander Paharsingh  
Field Service Manager

CC: OXY USA INC.  
Enclosures: [2]  
County of EDDY  
State of NEW MEXICO

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**Reservoir Development**

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9200 West Reno Avenue  
Oklahoma City, Oklahoma 73127 USA  
Phone: (405) 789-1515  
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**PATHFINDER**  
A Schlumberger Company

I, Kane Jumanee certify that: I am employed by Schlumberger Drilling and Measurements; that I did on the day(s) of November 10, 2015 through November 14, 2015, conduct or supervise the taking of the SlimPulse surveys from a depth of 8098.00 feet to a depth of 13847.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Schlumberger Drilling and Measurements; that I am authorized and qualified to make this report; that this survey W71 request of OXY USA WTP LP for the CEDAR CANYON 27 FEDERAL 711 Well (Original Hole) API No. 30-015-43233 and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Schlumberger Drilling and Measurements.

*Kane Jumanee* Signed on behalf of Kane Jumanee  
by Emily Martin

By  
Kane Jumanee  
MWD

Subscribed and Sworn to before me this 18th day of December (month) 2015 (yr)

My Commission expires:

September 5, 2016

*Michelle Ellwood*

Notary Public

Midland, TX  
(County State)



SCHLUMBERGER  
Survey Report

14-Nov-2015

Client: OXY USA INC.  
Field: PIERCE CROSSING; BONE SPRING, EAST

Well: Cedar Canyon 27 Federal 7H  
API number: 30-015-43233  
Engineer: Kane Kinnane

Spud date: 22 Sep-15  
Last survey date: 14-Nov-15  
Total accepted surveys: 62  
MD of first survey: 8098.00 ft  
MD of last survey: 13847.00 ft

County: Eddy  
State: New Mexico  
Rig: M&P 615

Latitude: 32° 11' 9.193" N  
Longitude: 103° 58' 52.422" W

Survey calculation methods

Method for positions: Minimum curvature  
Method for DLS: Lubinski

Depth reference

Permanent datum: MSL  
Depth reference: Driller's Depth  
GI above permanent: 2924.30  
KB above permanent: 2950.80  
DB above permanent: 2950.80

Vertical section origin

Latitude (+N/-): 0.00 ft  
Departure (+E/-): 0.00 ft

Grid Coordinates

NAD27 New Mexico State Plane, Eastern Zone, US Feet  
X: 608930.22 ft  
Y: 431524.12 ft

Azimuth from Vsect Origin to target: 99.16 degrees

MWD Survey Reference Criteria

Run1 Calculation Date: 9-Nov-2015  
Location G: 998.94325 mgn Tolerance G: 2.50 mgn  
Location B: 48340.17 nT Tolerance B: 300.00 nT  
Magnetic Dip: 60.0443 degrees Tolerance Dip: 0.45 degrees

Run2 Calculation Date: 11-Nov-2015  
Location G: 998.94325 mgn Tolerance G: 2.50 mgn  
Location B: 48339.59 nT Tolerance B: 300.00 nT  
Magnetic Dip: 60.0443 degrees Tolerance Dip: 0.45 degrees

HDGM Model: 2015

Run1

Magnetic dec (+E/-): 7.2782 degrees  
Grid Conv (+E/-): 0.1882 degrees  
Total Azim Corr (+E/-): 7.09 degrees

Run2

Magnetic dec (+E/-): 7.2776 degrees  
Grid Conv (+E/-): 0.1876 degrees  
Total Azim Corr (+E/-): 7.09 degrees

Survey Correction Index Description

0 = Uncorrected 1 = Sag Corrected

2 = DMAG Corrected 3 = Sag + DMAG Corrected

| Survey List |            |               |               |                |             |               |              |              |                 |                 |                    |       |            |
|-------------|------------|---------------|---------------|----------------|-------------|---------------|--------------|--------------|-----------------|-----------------|--------------------|-------|------------|
| Seq         | MD<br>(ft) | Incl<br>(deg) | Azim<br>(deg) | Course<br>(ft) | TVD<br>(ft) | V Sec<br>(ft) | N/-S<br>(ft) | E/-W<br>(ft) | Closure<br>(ft) | at Azi<br>(deg) | DLS<br>(deg/100ft) | Tool  | Correction |
| 1           | 0.00       | 0.00          | 0.00          | -999.25        | 0.00        | 0.00          | 0.00         | 0.00         | 0               | 90.00           | 0.00               | TIP   | 0          |
| 2           | 26.50      | 0.01          | 44.57         | 26.50          | 26.50       | 0.00          | 0.00         | 0.00         | 0               | 44.57           | 0.04               | GI    | 0          |
| 3           | 438.00     | 0.24          | 44.57         | 411.50         | 438.00      | 0.52          | 0.64         | 0.63         | 0.9             | 44.57           | 0.06               | Other | 0          |
| 4           | 515.00     | 0.28          | 44.57         | 77.00          | 515.00      | 0.72          | 0.89         | 0.88         | 1.25            | 44.57           | 0.05               | Other | 0          |
| 5           | 698.00     | 0.31          | 214.79        | 181.00         | 696.00      | 0.77          | 0.80         | 0.91         | 1.21            | 48.50           | 0.32               | Other | 0          |
| 6           | 788.00     | 0.14          | 276.39        | 92.00          | 788.00      | 0.55          | 0.61         | 0.65         | 0.9             | 46.94           | 0.30               | Other | 0          |
| 7           | 879.00     | 0.00          | 0.00          | 91.00          | 879.00      | 0.44          | 0.62         | 0.54         | 0.83            | 41.08           | 0.15               | Other | 0          |
| 8           | 1068.00    | 0.94          | 60.33         | 189.00         | 1067.99     | 1.65          | 1.39         | 1.89         | 2.35            | 53.66           | 0.50               | Other | 0          |
| 9           | 1161.00    | 1.42          | 49.78         | 94.00          | 1161.97     | 3.00          | 2.52         | 3.45         | 4.28            | 53.80           | 0.56               | Other | 0          |
| 10          | 1256.00    | 1.27          | 45.65         | 94.00          | 1255.94     | 4.38          | 4.01         | 5.08         | 6.47            | 51.77           | 0.19               | Other | 0          |
| 11          | 1351.00    | 1.50          | 59.49         | 95.00          | 1350.91     | 5.96          | 5.37         | 6.91         | 8.75            | 52.13           | 0.43               | Other | 0          |
| 12          | 1445.00    | 1.10          | 52.96         | 94.00          | 1444.89     | 7.54          | 6.54         | 8.69         | 10.88           | 53.03           | 0.45               | Other | 0          |

|    |         |       |        |        |         |        |         |         |         |        |       |           |   |
|----|---------|-------|--------|--------|---------|--------|---------|---------|---------|--------|-------|-----------|---|
| 13 | 1539.00 | 1.71  | 25.78  | 94.00  | 1538.86 | 8.58   | 8.35    | 10.02   | 13.04   | 50.20  | 0.94  | Other     | 0 |
| 14 | 1633.00 | 4.47  | 321.85 | 94.00  | 1632.74 | 6.27   | 12.49   | 8.37    | 15.03   | 33.81  | 4.28  | Other     | 0 |
| 15 | 1727.00 | 8.46  | 298.31 | 94.00  | 1726.14 | -7.96  | 18.66   | 0.01    | 18.66   | 0.03   | 5.01  | Other     | 0 |
| 16 | 1821.00 | 9.56  | 296.86 | 94.00  | 1818.97 | -16.93 | 25.46   | -13.04  | 28.61   | 332.88 | 1.19  | Other     | 0 |
| 17 | 1916.00 | 8.66  | 295.47 | 95.00  | 1912.77 | -31.21 | 32.10   | -26.54  | 41.85   | 320.42 | 0.98  | Other     | 0 |
| 18 | 2010.00 | 7.73  | 304.39 | 94.00  | 2005.81 | -43.82 | 38.72   | -38.14  | 54.35   | 315.43 | 1.67  | Other     | 0 |
| 19 | 2104.00 | 4.79  | 296.97 | 94.00  | 2099.25 | -53.28 | 44.07   | -46.86  | 64.33   | 313.74 | 3.24  | Other     | 0 |
| 20 | 2198.00 | 1.08  | 35.69  | 94.00  | 2193.14 | -56.62 | 46.57   | -49.84  | 68.21   | 313.06 | 5.39  | Other     | 0 |
| 21 | 2292.00 | 1.56  | 16.40  | 94.00  | 2287.11 | -54.07 | 48.52   | -48.96  | 68.93   | 314.74 | 0.69  | Other     | 0 |
| 22 | 2386.00 | 1.75  | 41.14  | 94.00  | 2381.07 | -55.14 | 50.82   | -47.66  | 69.67   | 316.84 | 0.78  | Other     | 0 |
| 23 | 2480.00 | 2.52  | 86.18  | 94.00  | 2475.01 | -52.37 | 52.04   | -44.65  | 68.57   | 319.37 | 1.90  | Other     | 0 |
| 24 | 2574.00 | 5.90  | 146.07 | 94.00  | 2568.78 | -47.05 | 48.17   | -39.89  | 62.54   | 320.37 | 5.45  | Other     | 0 |
| 25 | 2668.00 | 4.41  | 159.91 | 94.00  | 2662.40 | -41.99 | 40.77   | -35.95  | 54.35   | 318.59 | 2.05  | Other     | 0 |
| 26 | 2762.00 | 6.06  | 143.86 | 94.00  | 2756.01 | -36.69 | 33.36   | -31.78  | 46.08   | 316.39 | 2.33  | Other     | 0 |
| 27 | 2856.00 | 4.02  | 139.83 | 94.00  | 2849.64 | -30.67 | 26.84   | -26.73  | 37.88   | 315.11 | 2.20  | Other     | 0 |
| 28 | 2950.00 | 1.19  | 156.94 | 94.00  | 2943.54 | -27.65 | 23.42   | -24.23  | 33.7    | 314.03 | 3.09  | Other     | 0 |
| 29 | 3044.00 | 0.39  | 149.12 | 94.00  | 3037.53 | -26.92 | 22.25   | -23.68  | 32.49   | 313.21 | 0.86  | Other     | 0 |
| 30 | 3139.00 | 0.09  | 209.10 | 95.00  | 3132.53 | -26.78 | 22.02   | -23.57  | 32.25   | 313.04 | 0.50  | Other     | 0 |
| 31 | 3232.00 | 0.36  | 150.94 | 93.00  | 3225.53 | -26.66 | 21.81   | -23.49  | 32.05   | 312.87 | 0.48  | Other     | 0 |
| 32 | 3326.00 | 0.06  | 60.78  | 94.00  | 3319.53 | -26.44 | 21.57   | -23.30  | 31.75   | 312.79 | 0.39  | Other     | 0 |
| 33 | 3420.00 | 0.14  | 288.37 | 94.00  | 3413.53 | -26.51 | 21.63   | -23.37  | 31.84   | 312.79 | 0.20  | Other     | 0 |
| 34 | 3514.00 | 0.53  | 126.73 | 94.00  | 3507.53 | -26.24 | 21.41   | -23.13  | 31.52   | 312.79 | 0.71  | Other     | 0 |
| 35 | 3608.00 | 0.18  | 23.28  | 94.00  | 3601.53 | -25.82 | 21.28   | -22.72  | 31.13   | 313.13 | 0.64  | Other     | 0 |
| 36 | 3702.00 | 0.12  | 51.03  | 94.00  | 3695.52 | -25.72 | 21.48   | -22.59  | 31.17   | 313.56 | 0.10  | Other     | 0 |
| 37 | 3796.00 | 0.22  | 228.60 | 94.00  | 3789.52 | -25.77 | 21.42   | -22.65  | 31.17   | 313.41 | 0.36  | Other     | 0 |
| 38 | 3890.00 | 0.00  | 0.00   | 94.00  | 3883.52 | -25.88 | 21.30   | -22.78  | 31.19   | 313.08 | 0.23  | Other     | 0 |
| 39 | 3984.00 | 0.44  | 302.72 | 94.00  | 3977.52 | -26.21 | 21.50   | -23.08  | 31.55   | 312.96 | 0.47  | Other     | 0 |
| 40 | 4078.00 | 0.43  | 327.92 | 94.00  | 4071.52 | -26.78 | 21.99   | -23.58  | 32.24   | 313.01 | 0.20  | Other     | 0 |
| 41 | 4172.00 | 0.18  | 25.57  | 94.00  | 4165.52 | -26.97 | 21.43   | -23.70  | 32.63   | 313.42 | 0.39  | Other     | 0 |
| 42 | 4266.00 | 0.26  | 28.40  | 94.00  | 4259.52 | -26.86 | 22.75   | -23.53  | 32.73   | 314.03 | 0.09  | Other     | 0 |
| 43 | 4360.00 | 0.53  | 22.40  | 94.00  | 4353.52 | -26.69 | 23.34   | -23.27  | 32.95   | 315.09 | 0.29  | Other     | 0 |
| 44 | 4454.00 | 0.25  | 241.85 | 94.00  | 4447.52 | -26.75 | 23.64   | -23.28  | 33.18   | 315.44 | 0.79  | Other     | 0 |
| 45 | 4548.00 | 0.35  | 277.50 | 94.00  | 4541.51 | -27.20 | 23.58   | -23.75  | 33.47   | 314.80 | 0.22  | Other     | 0 |
| 46 | 4643.00 | 0.35  | 15.35  | 95.00  | 4636.51 | -27.46 | 23.50   | -23.96  | 33.84   | 314.93 | 0.56  | Other     | 0 |
| 47 | 4737.00 | 0.26  | 133.12 | 94.00  | 4730.51 | -27.25 | 24.03   | -23.73  | 33.77   | 315.37 | 0.56  | Other     | 0 |
| 48 | 4831.00 | 0.37  | 230.36 | 94.00  | 4824.51 | -27.27 | 23.69   | -23.80  | 33.59   | 314.86 | 0.51  | Other     | 0 |
| 49 | 4925.00 | 0.28  | 312.92 | 94.00  | 4918.51 | -27.66 | 23.65   | -24.21  | 33.85   | 314.34 | 0.46  | Other     | 0 |
| 50 | 5019.00 | 2.38  | 208.05 | 94.00  | 5012.48 | -28.49 | 22.09   | -25.29  | 33.58   | 311.13 | 2.62  | Other     | 0 |
| 51 | 5113.00 | 7.44  | 203.67 | 94.00  | 5106.11 | -30.65 | 14.79   | -28.66  | 32.15   | 297.29 | 5.39  | Other     | 0 |
| 52 | 5207.00 | 9.67  | 202.07 | 188.00 | 5202.01 | -37.22 | -11.00  | -39.48  | 40.98   | 254.43 | 1.19  | Other     | 0 |
| 53 | 5301.00 | 8.46  | 188.65 | 94.00  | 5304.84 | -38.92 | -25.15  | -43.48  | 50.23   | 239.96 | 1.58  | Other     | 0 |
| 54 | 5409.00 | 8.63  | 189.16 | 94.00  | 5477.80 | -38.86 | -38.95  | -45.65  | 60.01   | 229.53 | 0.20  | Other     | 0 |
| 55 | 5503.00 | 6.89  | 196.65 | 94.00  | 5570.93 | -39.60 | -51.32  | -48.39  | 70.53   | 223.32 | 2.14  | Other     | 0 |
| 56 | 5607.00 | 7.82  | 207.63 | 94.00  | 5664.16 | -42.36 | -62.38  | -52.97  | 81.84   | 220.33 | 1.79  | Other     | 0 |
| 57 | 5711.00 | 8.50  | 209.98 | 94.00  | 5757.21 | -46.85 | -74.07  | -59.40  | 94.95   | 218.73 | 0.81  | Other     | 0 |
| 58 | 5815.00 | 8.54  | 208.48 | 94.00  | 5850.18 | -51.63 | -86.22  | -66.20  | 108.7   | 217.52 | 0.24  | Other     | 0 |
| 59 | 5919.00 | 7.88  | 203.77 | 94.00  | 5943.21 | -55.56 | -98.25  | -72.13  | 121.88  | 216.38 | 1.00  | Other     | 0 |
| 60 | 6023.00 | 8.93  | 204.80 | 94.00  | 6036.20 | -59.15 | -110.77 | -77.79  | 135.36  | 215.08 | 1.13  | Other     | 0 |
| 61 | 6127.00 | 9.31  | 187.03 | 94.00  | 6129.03 | -60.84 | -124.94 | -81.78  | 149.33  | 213.21 | 3.01  | Other     | 0 |
| 62 | 6231.00 | 6.22  | 178.83 | 94.00  | 6222.16 | -59.64 | -137.58 | -82.60  | 160.48  | 210.98 | 3.48  | Other     | 0 |
| 63 | 6335.00 | 6.30  | 195.03 | 94.00  | 6315.61 | -59.26 | -147.66 | -83.84  | 169.8   | 209.59 | 1.87  | Other     | 0 |
| 64 | 6439.00 | 6.91  | 192.75 | 95.00  | 6409.98 | -60.15 | -158.27 | -86.45  | 180.34  | 208.65 | 0.70  | Other     | 0 |
| 65 | 6543.00 | 7.59  | 188.09 | 94.00  | 6503.23 | -60.38 | -169.93 | -88.57  | 191.63  | 207.53 | 0.96  | Other     | 0 |
| 66 | 6647.00 | 7.41  | 188.60 | 94.00  | 6596.42 | -60.21 | -182.07 | -90.35  | 203.25  | 206.39 | 0.20  | Other     | 0 |
| 67 | 6751.00 | 1.49  | 182.32 | 94.00  | 6689.82 | -59.61 | -192.55 | -91.44  | 213.16  | 205.40 | 2.17  | Other     | 0 |
| 68 | 6855.00 | 8.23  | 189.65 | 94.00  | 6783.14 | -59.13 | -203.68 | -92.75  | 223.81  | 204.48 | 3.05  | Other     | 0 |
| 69 | 6959.00 | 7.05  | 195.00 | 94.00  | 6876.31 | -59.78 | -215.89 | -95.37  | 236.02  | 203.83 | 1.46  | Other     | 0 |
| 70 | 7063.00 | 8.75  | 196.69 | 94.00  | 6969.41 | -61.30 | -228.31 | -98.92  | 248.82  | 203.43 | 1.83  | Other     | 0 |
| 71 | 7167.00 | 8.59  | 192.17 | 95.00  | 7063.33 | -62.62 | -242.17 | -102.49 | 262.96  | 202.94 | 0.74  | Other     | 0 |
| 72 | 7271.00 | 8.32  | 188.94 | 94.00  | 7156.31 | -62.96 | -255.75 | -105.03 | 276.47  | 202.33 | 0.58  | Other     | 0 |
| 73 | 7375.00 | 8.56  | 182.59 | 94.00  | 7249.29 | -62.13 | -269.45 | -106.40 | 289.7   | 201.55 | 1.02  | Other     | 0 |
| 74 | 7479.00 | 6.20  | 193.72 | 94.00  | 7342.51 | -61.74 | -281.38 | -107.92 | 301.36  | 200.98 | 2.92  | Other     | 0 |
| 75 | 7583.00 | 7.53  | 204.62 | 94.00  | 7435.84 | -63.78 | -291.91 | -111.69 | 312.55  | 200.94 | 1.97  | Other     | 0 |
| 76 | 7687.00 | 1.94  | 196.89 | 94.00  | 7529.19 | -66.08 | -302.16 | -115.67 | 323.54  | 200.95 | 1.94  | Other     | 0 |
| 77 | 7791.00 | 9.23  | 170.07 | 94.00  | 7622.38 | -64.26 | -314.25 | -115.78 | 334.9   | 200.13 | 5.05  | Other     | 0 |
| 78 | 7895.00 | 8.00  | 180.07 | 94.00  | 7715.32 | -60.76 | -328.22 | -114.49 | 347.61  | 199.23 | 2.06  | Other     | 0 |
| 79 | 7999.00 | 6.82  | 160.75 | 94.00  | 7808.55 | -57.07 | -340.03 | -112.66 | 358.21  | 198.33 | 2.91  | Other     | 0 |
| 80 | 8103.00 | 9.02  | 173.10 | 94.00  | 7901.66 | -52.38 | -352.62 | -109.93 | 369.35  | 197.32 | 2.95  | Other     | 0 |
| 81 | 8207.00 | 13.53 | 164.64 | 49.00  | 7949.70 | -48.93 | -361.96 | -107.95 | 377.72  | 196.61 | 9.78  | Other     | 0 |
| 82 | 8311.00 | 22.23 | 140.58 | 114.00 | 8058.23 | -27.16 | -391.58 | -90.67  | 401.94  | 193.04 | 9.87  | SlimPulse | 0 |
| 83 | 8415.00 | 24.71 | 128.62 | 94.00  | 8144.50 | 3.31   | -417.60 | -64.01  | 422.48  | 188.71 | 5.70  | SlimPulse | 0 |
| 84 | 8519.00 | 25.27 | 128.51 | 94.00  | 8229.70 | 37.90  | -442.35 | -32.96  | 443.58  | 184.16 | 0.59  | SlimPulse | 0 |
| 85 | 8623.00 | 30.57 | 136.37 | 93.00  | 8311.87 | 74.07  | -471.86 | -1.08   | 471.86  | 180.13 | 6.93  | SlimPulse | 0 |
| 86 | 8727.00 | 37.19 | 147.36 | 93.00  | 8389.12 | 111.72 | -512.73 | 30.46   | 513.63  | 176.60 | 9.68  | SlimPulse | 0 |
| 87 | 8831.00 | 51.22 | 144.41 | 94.00  | 8456.34 | 156.68 | -566.72 | 67.29   | 570.7   | 173.23 | 15.08 | SlimPulse | 0 |
| 88 | 8935.00 | 60.77 | 132.88 | 94.00  | 8508.97 | 216.87 | -624.69 | 118.91  | 635.91  | 169.22 | 14.35 | SlimPulse | 0 |
| 89 | 9039.00 | 66.36 | 119.69 | 94.00  | 8550.95 | 291.63 | -674.14 | 186.66  | 699.51  | 164.52 | 13.88 | SlimPulse | 0 |
| 90 | 9143.00 | 65.93 | 109.33 | 93.00  | 8588.64 | 373.50 | -709.38 | 263.91  | 756.88  | 159.59 | 10.20 | SlimPulse | 0 |
| 91 | 9247.00 | 70.26 | 102.31 | 94.00  | 8623.74 | 460.05 | -733.05 | 347.75  | 811.35  | 154.62 | 8.31  | SlimPulse | 0 |
| 92 | 9351.00 | 71.55 | 104.11 | 94.00  | 8654.49 | 548.55 | -753.36 | 434.22  | 869.54  | 150.04 | 2.27  | SlimPulse | 0 |
| 93 | 9455.00 | 73.66 | 108.45 | 93.00  | 8682.30 | 636.68 | -778.25 | 519.38  | 935.64  | 146.28 | 5.00  | SlimPulse | 0 |
| 94 | 9559.00 | 75.12 | 109.34 | 40.00  | 8693.03 | 674.66 | -790.73 | 555.83  | 966.54  | 144.90 | 4.44  | SlimPulse | 0 |
| 95 | 9663.00 | 80.11 | 109.15 | 53.00  | 8704.30 | 725.63 | -807.79 | 604.71  | 1009.06 | 143.18 | 9.41  | SlimPulse | 0 |
| 96 | 9767.00 | 85.38 | 107.54 | 45.00  | 8709.95 | 769.69 | -821.84 | 647.07  | 1046    | 141.79 | 12.02 | SlimPulse | 0 |
| 97 | 9871.00 | 90.00 | 103.94 | 48.00  | 8711.88 | 817.31 | -834.84 | 693.21  | 1085.13 | 140.30 | 12.21 | SlimPulse | 0 |

|     |          |       |       |        |         |         |         |         |         |        |      |           |   |
|-----|----------|-------|-------|--------|---------|---------|---------|---------|---------|--------|------|-----------|---|
| 98  | 9501.00  | 88.48 | 94.60 | 187.00 | 8714.36 | 1004.08 | -864.92 | 877.55  | 1232.14 | 134.59 | 5.06 | SlimPulse | 0 |
| 99  | 9594.00  | 88.14 | 90.75 | 93.00  | 8717.10 | 1096.43 | -869.26 | 970.39  | 1302.79 | 131.85 | 4.15 | SlimPulse | 0 |
| 100 | 9680.00  | 88.96 | 94.91 | 86.00  | 8719.28 | 1181.86 | -873.51 | 1056.23 | 1370.64 | 129.59 | 4.93 | SlimPulse | 2 |
| 101 | 9867.00  | 88.41 | 92.36 | 187.00 | 8723.57 | 1367.92 | -885.36 | 1742.79 | 1525.91 | 125.47 | 1.39 | SlimPulse | 2 |
| 102 | 9962.00  | 85.76 | 90.81 | 95.00  | 8728.40 | 1461.96 | -887.99 | 1337.62 | 1605.54 | 123.58 | 3.23 | SlimPulse | 2 |
| 103 | 10055.00 | 88.10 | 90.13 | 93.00  | 8733.38 | 1553.75 | -888.75 | 1430.48 | 1684.09 | 121.85 | 2.62 | SlimPulse | 2 |
| 104 | 10148.00 | 91.54 | 90.70 | 93.00  | 8733.67 | 1645.66 | -889.42 | 1523.46 | 1764.09 | 120.28 | 3.75 | SlimPulse | 2 |
| 105 | 10241.00 | 92.26 | 86.48 | 93.00  | 8730.59 | 1737.01 | -887.14 | 1616.36 | 1843.81 | 118.76 | 4.60 | SlimPulse | 2 |
| 106 | 10334.00 | 92.37 | 85.48 | 93.00  | 8726.83 | 1827.48 | -880.62 | 1709.05 | 1922.59 | 117.26 | 1.08 | SlimPulse | 2 |
| 107 | 10521.00 | 87.58 | 85.16 | 187.00 | 8726.91 | 2008.99 | -865.37 | 1895.38 | 2083.58 | 114.54 | 2.57 | SlimPulse | 2 |
| 108 | 10614.00 | 85.79 | 87.12 | 93.00  | 8732.29 | 2099.44 | -859.12 | 1988.00 | 2165.7  | 113.37 | 2.85 | SlimPulse | 2 |
| 109 | 10707.00 | 89.30 | 87.09 | 93.00  | 8736.27 | 2190.29 | -854.43 | 2080.78 | 2249.38 | 112.32 | 3.77 | SlimPulse | 2 |
| 110 | 10800.00 | 88.72 | 87.90 | 93.00  | 8737.88 | 2281.36 | -850.36 | 2173.68 | 2334.09 | 111.37 | 1.07 | SlimPulse | 2 |
| 111 | 10894.00 | 90.85 | 90.16 | 94.00  | 8738.23 | 2373.88 | -848.77 | 2267.65 | 2421.29 | 110.52 | 3.30 | SlimPulse | 2 |
| 112 | 10987.00 | 92.28 | 89.18 | 93.00  | 8735.71 | 2465.57 | -848.24 | 2360.61 | 2508.39 | 109.76 | 1.85 | SlimPulse | 2 |
| 113 | 11081.00 | 90.99 | 91.16 | 94.00  | 8733.04 | 2558.37 | -848.52 | 2454.57 | 2597.09 | 109.07 | 2.50 | SlimPulse | 2 |
| 114 | 11176.00 | 87.96 | 91.16 | 95.00  | 8733.91 | 2652.43 | -850.44 | 2549.54 | 2687.63 | 108.45 | 3.19 | SlimPulse | 2 |
| 115 | 11269.00 | 87.96 | 89.78 | 93.00  | 8737.22 | 2744.30 | -851.20 | 2642.47 | 2776.18 | 107.85 | 1.48 | SlimPulse | 2 |
| 116 | 11363.00 | 88.65 | 88.48 | 94.00  | 8740.00 | 2836.82 | -849.77 | 2736.42 | 2865.33 | 107.25 | 1.57 | SlimPulse | 2 |
| 117 | 11457.00 | 87.37 | 89.60 | 94.00  | 8743.27 | 2929.30 | -848.20 | 2830.34 | 2954.71 | 106.68 | 1.81 | SlimPulse | 2 |
| 118 | 11550.00 | 91.99 | 91.33 | 93.00  | 8743.79 | 3021.20 | -848.95 | 2923.31 | 3044.09 | 106.19 | 5.30 | SlimPulse | 2 |
| 119 | 11643.00 | 89.41 | 91.00 | 93.00  | 8742.65 | 3113.28 | -850.84 | 3016.28 | 3133.98 | 105.75 | 2.80 | SlimPulse | 2 |
| 120 | 11737.00 | 89.20 | 90.09 | 94.00  | 8743.79 | 3206.21 | -851.74 | 3110.26 | 3224.78 | 105.31 | 0.99 | SlimPulse | 2 |
| 121 | 11831.00 | 88.72 | 90.02 | 94.00  | 8745.50 | 3299.01 | -851.83 | 3204.25 | 3315.54 | 104.89 | 0.52 | SlimPulse | 2 |
| 122 | 11924.00 | 89.44 | 90.40 | 93.00  | 8746.99 | 3390.86 | -852.17 | 3297.23 | 3405.58 | 104.49 | 0.88 | SlimPulse | 2 |
| 123 | 12018.00 | 89.06 | 90.06 | 94.00  | 8748.22 | 3483.71 | -852.55 | 3391.22 | 3496.75 | 104.11 | 0.54 | SlimPulse | 2 |
| 124 | 12112.00 | 86.69 | 90.44 | 94.00  | 8751.71 | 3576.51 | -852.96 | 3485.15 | 3588.01 | 103.75 | 2.55 | SlimPulse | 2 |
| 125 | 12206.00 | 90.22 | 90.30 | 94.00  | 8754.23 | 3669.35 | -853.56 | 3579.10 | 3679.48 | 103.41 | 3.77 | SlimPulse | 2 |
| 126 | 12299.00 | 87.38 | 91.41 | 93.00  | 8756.17 | 3761.35 | -854.95 | 3672.06 | 3770.27 | 103.11 | 3.29 | SlimPulse | 2 |
| 127 | 12393.00 | 88.44 | 90.75 | 94.00  | 8759.60 | 3854.35 | -856.72 | 3765.98 | 3867.2  | 102.82 | 1.33 | SlimPulse | 2 |
| 128 | 12488.00 | 87.48 | 89.58 | 95.00  | 8762.98 | 3948.12 | -856.99 | 3860.92 | 3954.88 | 102.51 | 1.59 | SlimPulse | 2 |
| 129 | 12581.00 | 88.34 | 91.40 | 93.00  | 8766.37 | 4039.99 | -857.79 | 3953.85 | 4045.82 | 102.24 | 2.16 | SlimPulse | 2 |
| 130 | 12675.00 | 91.88 | 91.38 | 94.00  | 8766.19 | 4133.11 | -860.07 | 4047.80 | 4138.17 | 102.00 | 3.77 | SlimPulse | 2 |
| 131 | 12769.00 | 90.30 | 90.07 | 94.00  | 8764.40 | 4226.07 | -861.26 | 4141.77 | 4230.37 | 101.75 | 2.18 | SlimPulse | 2 |
| 132 | 12862.00 | 90.92 | 90.30 | 93.00  | 8763.41 | 4317.93 | -861.56 | 4234.77 | 4321.52 | 101.50 | 0.71 | SlimPulse | 2 |
| 133 | 12955.00 | 88.44 | 91.21 | 93.00  | 8763.93 | 4409.52 | -862.78 | 4327.75 | 4412.91 | 101.27 | 2.84 | SlimPulse | 2 |
| 134 | 13048.00 | 90.06 | 87.52 | 93.00  | 8765.15 | 4501.53 | -861.75 | 4420.71 | 4503.93 | 101.03 | 4.33 | SlimPulse | 2 |
| 135 | 13141.00 | 89.89 | 87.56 | 93.00  | 8765.19 | 4592.63 | -857.76 | 4513.63 | 4594.41 | 100.76 | 0.19 | SlimPulse | 2 |
| 136 | 13235.00 | 87.89 | 87.72 | 94.00  | 8767.01 | 4684.71 | -853.89 | 4607.53 | 4685.98 | 100.50 | 2.13 | SlimPulse | 2 |
| 137 | 13328.00 | 85.65 | 88.83 | 94.00  | 8772.31 | 4776.86 | -851.07 | 4701.33 | 4777.74 | 100.26 | 2.66 | SlimPulse | 2 |
| 138 | 13422.00 | 89.61 | 90.11 | 93.00  | 8776.15 | 4868.44 | -850.21 | 4794.23 | 4869.03 | 100.06 | 4.47 | SlimPulse | 2 |
| 139 | 13515.00 | 93.12 | 89.94 | 93.00  | 8773.94 | 4960.22 | -850.25 | 4887.18 | 4960.59 | 99.87  | 3.78 | SlimPulse | 2 |
| 140 | 13609.00 | 92.98 | 89.87 | 94.00  | 8768.94 | 5052.87 | -850.17 | 4981.05 | 5053.08 | 99.69  | 0.15 | SlimPulse | 2 |
| 141 | 13702.00 | 86.93 | 86.41 | 93.00  | 8769.01 | 5144.12 | -847.24 | 5073.95 | 5144.2  | 99.48  | 7.55 | SlimPulse | 2 |
| 142 | 13795.00 | 90.02 | 86.63 | 93.00  | 8771.49 | 5234.82 | -841.60 | 5166.73 | 5234.82 | 99.25  | 3.33 | SlimPulse | 2 |
| 143 | 13847.00 | 92.09 | 86.46 | 52.00  | 8770.53 | 5285.55 | -838.46 | 5218.62 | 5285.55 | 99.13  | 3.99 | SlimPulse | 2 |
| 144 | 13900.00 | 92.09 | 86.46 | 53.00  | 8768.60 | 5337.22 | -835.19 | 5271.49 | 5337.24 | 99.00  | 0.00 | PROJ      | 0 |



## H&P 615

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Vertical Section (ft) Azim = 99.164° Scale = 1:150 (ft) Origin = 0N/-S, 0E/-W