



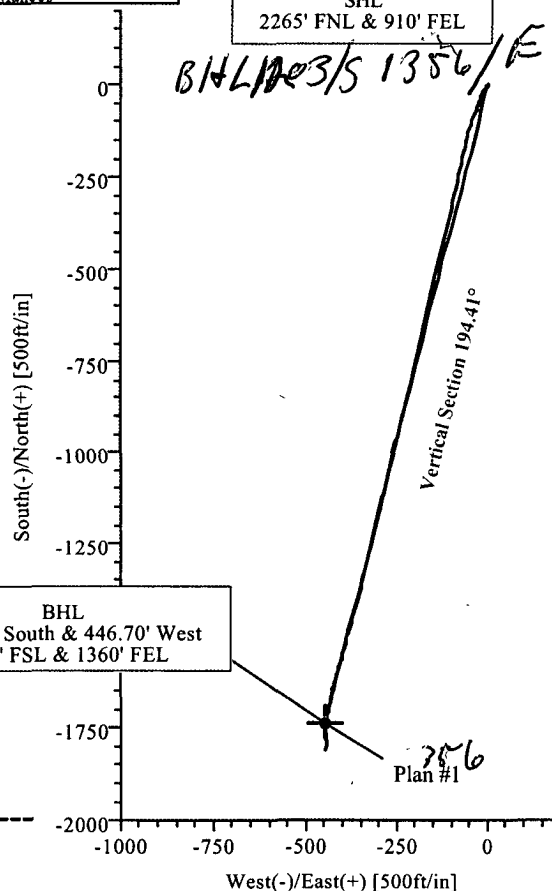
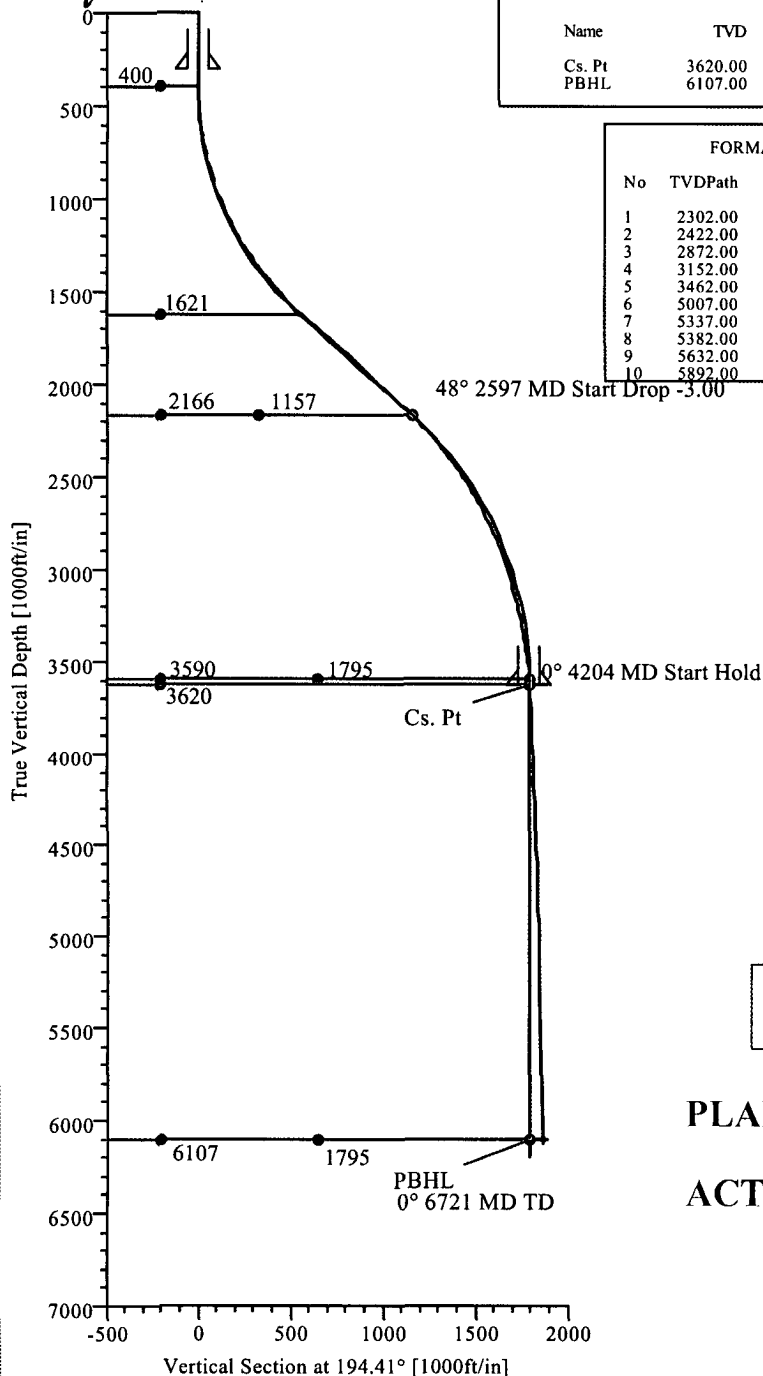
Weatherford®

Rosa Unit #138C
Sect. 17 T31N R6W
2265' FNL & 910' FEL
San Juan County, NM
Plan 1
Plan vs. Actual

30-045-34212

10-1107

KB ELEVATION: 6347'
GR ELEVATION: 6333'



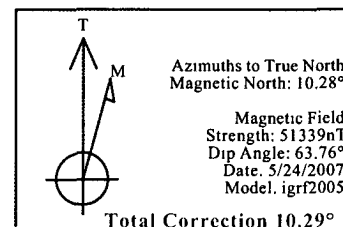
B

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	194.41	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	194.41	400.00	0.00	0.00	0.00	0.00	0.00	
3	1778.57	48.25	194.41	1621.31	-529.75	-136.12	3.50	194.41	546.96	
4	2596.65	48.25	194.41	2166.06	-1120.88	-288.00	0.00	0.00	1157.29	
5	4203.94	0.00	194.41	3590.00	-1738.53	-446.70	3.00	180.00	1795.00	
6	4233.94	0.00	194.41	3620.00	-1738.53	-446.70	0.00	0.00	1795.00	Cs. Pt
7	6720.94	0.00	194.41	6107.00	-1738.53	-446.70	0.00	0.00	1795.00	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Rosa Unit 138C	0.00	0.00	2147347.26	2826323.04	36°54'02.232N	107°28'49.044W	N/A

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	
Cs. Pt	3620.00	-1738.53	-446.70	2145607.09	2825882.77	Point	
PBHL	6107.00	-1738.53	-446.70	2145607.09	2825882.77	Circle (Radius: 50)	

FORMATION TOP DETAILS			
No	TVDPath	MDPath	Formation
1	2302.00	2790.16	Ojo Alamo Ss.
2	2422.00	2947.05	Kirtland
3	2872.00	3467.83	Fruitland
4	3152.00	3762.01	Pictured Cliffs
5	3462.00	4075.85	Lewis
6	5007.00	5620.94	Cliff House Ss Trans
7	5337.00	5950.94	Cliff House Ss
8	5382.00	5995.94	Menefee
9	5632.00	6245.94	Point Lookout
10	5892.00	6505.94	Mancos



SHL
2265' FNL & 910' FEL

BHL 1738.53' South & 446.70' West
1280' FSL & 1360' FEL

PLAN ---

ACTUAL ---

Plan Plan #1 (Rosa Unit 138C)

Created By: Jose Perez Date: 06/27/07
Weatherford Drilling Services
11943 FM 529
Houston TX USA 77041
(713) 896 8194 MAIN
(713) 896 8408 FAX

File "AS DRILLED" plat



Weatherford Drilling Services Survey Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 6/27/2007	Time: 15:53:38	Page: 1
Field: San Juan County, NM (NAD 83)	Co-ordinate(NE) Reference: Site: Rosa Unit 138C, True North		
Site: Rosa Unit 138C	Vertical (TVD) Reference: SITE 6347.0		
Well: Rosa Unit 138C	Section (VS) Reference: Well (0.00N,0.00E,194.41Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Field: San Juan County, NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Western Zone
Coordinate System: Site Centre
Geomagnetic Model: igrf2005

Site: Rosa Unit 138C
Sect. 17 T31N R6W
San Juan County, NM

Site Position:	Northing: 2147347.26 ft	Latitude: 36 54 2.232 N
From: Geographic	Easting: 2826323.04 ft	Longitude: 107 28 49.044 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 6333.00 ft		Grid Convergence: 0.21 deg

Well: Rosa Unit 138C
2265' FNL & 910' FEL

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 2147347.26 ft	Latitude: 36 54 2.232 N
+E/-W 0.00 ft	Easting: 2826323.04 ft	Longitude: 107 28 49.044 W
Position Uncertainty: 0.00 ft		

Wellpath: 1

BHL 1280' FSL & 1360' FEL

Height 6347.00 ft

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 10.28 deg
Mag Dip Angle: 63.76 deg
+E/-W Direction deg

Current Datum: SITE
Magnetic Data: 5/24/2007
Field Strength: 51339 nT

Vertical Section: Depth From (TVD) ft

0.00

0.00

0.00

194.41

Survey: MWD Surveys

Start Date: 5/29/2007

Company: Weatherford Drilling Services
Tool:

Engineer:
Tied-to: From Surface

Survey: MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
448.00	2.69	213.67	447.98	-0.94	-0.62	1.06	5.60	5.60	0.00	
478.00	3.56	212.42	477.94	-2.31	-1.51	2.61	2.91	2.90	-4.17	
509.00	4.50	210.67	508.86	-4.17	-2.65	4.70	3.06	3.03	-5.65	
539.00	5.38	209.79	538.75	-6.40	-3.95	7.18	2.94	2.93	-2.93	
570.00	6.44	208.54	569.58	-9.19	-5.50	10.27	3.44	3.42	-4.03	
601.00	7.88	208.92	600.34	-12.58	-7.36	14.01	4.65	4.65	1.23	
631.00	9.06	209.92	630.01	-16.42	-9.53	18.28	3.96	3.93	3.33	
662.00	10.56	207.92	660.56	-21.05	-12.08	23.39	4.96	4.84	-6.45	
693.00	11.63	208.04	690.98	-26.32	-14.88	29.19	3.45	3.45	0.39	
723.00	12.13	205.04	720.34	-31.84	-17.64	35.23	2.65	1.67	-10.00	
754.00	13.63	198.17	750.56	-38.27	-20.15	42.08	6.91	4.84	-22.16	
784.00	14.13	204.04	779.68	-44.97	-22.75	49.21	4.98	1.67	19.57	
814.00	15.44	203.92	808.69	-51.96	-25.86	56.76	4.37	4.37	-0.40	
845.00	16.63	203.54	838.48	-59.80	-29.30	65.21	3.85	3.84	-1.23	
875.00	17.63	203.04	867.15	-67.92	-32.80	73.94	3.37	3.33	-1.67	
906.00	18.56	203.04	896.62	-76.78	-36.56	83.46	3.00	3.00	0.00	
937.00	19.50	202.17	925.92	-86.11	-40.45	93.47	3.17	3.03	-2.81	
967.00	20.56	200.79	954.11	-95.67	-44.21	103.66	3.87	3.53	-4.60	
997.00	21.13	198.17	982.15	-105.74	-47.76	114.30	3.64	1.90	-8.73	
1028.00	22.31	196.67	1010.94	-116.68	-51.19	125.75	4.21	3.81	-4.84	
1059.00	23.38	195.79	1039.51	-128.24	-54.56	137.78	3.62	3.45	-2.84	
1091.00	24.56	194.17	1068.75	-140.80	-57.91	150.78	4.22	3.69	-5.06	



Weatherford Drilling Services

Survey Report



Weatherford

Company: WILLIAMS PRODUCTION
Field: San Juan County, NM (NAD 83)
Site: Rosa Unit 138C
Well: Rosa Unit 138C
Wellpath: 1

Date: 6/27/2007 Time: 15:53:38 Page: 2
Co-ordinate(NE) Reference: Site: Rosa Unit 138C, True North
Vertical (TVD) Reference: SITE 6347.0
Section (VS) Reference: Well (0.00N,0.00E,194.41Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1123.00	25.75	191.92	1097.72	-154.05	-60.98	164.37	4.77	3.72	-7.03	
1155.00	26.63	192.42	1126.43	-167.85	-63.95	178.49	2.84	2.75	1.56	
1186.00	27.88	192.29	1153.99	-181.72	-66.99	192.67	4.04	4.03	-0.42	
1218.00	28.69	191.29	1182.17	-196.56	-70.09	207.82	2.93	2.53	-3.12	
1250.00	30.38	192.29	1210.01	-212.00	-73.31	223.58	5.50	5.28	3.12	
1281.00	31.75	192.54	1236.56	-227.62	-76.75	239.56	4.44	4.42	0.81	
1313.00	32.94	192.04	1263.60	-244.35	-80.40	256.67	3.81	3.72	-1.56	
1345.00	34.00	192.17	1290.29	-261.61	-84.10	274.31	3.32	3.31	0.41	
1376.00	35.13	192.17	1315.82	-278.80	-87.81	291.88	3.65	3.65	0.00	
1408.00	36.00	192.29	1341.85	-296.99	-91.75	310.48	2.73	2.72	0.37	
1440.00	36.88	192.29	1367.59	-315.56	-95.79	329.47	2.75	2.75	0.00	
1472.00	37.88	191.79	1393.02	-334.56	-99.85	348.88	3.27	3.12	-1.56	
1503.00	38.81	193.04	1417.33	-353.34	-103.98	368.10	3.91	3.00	4.03	
1535.00	39.81	192.79	1442.09	-373.10	-108.51	388.37	3.16	3.12	-0.78	
1567.00	40.56	192.29	1466.54	-393.26	-112.99	409.00	2.55	2.34	-1.56	
1598.00	41.56	192.42	1489.91	-413.15	-117.35	429.35	3.24	3.23	0.42	
1630.00	42.81	192.29	1513.62	-434.14	-121.95	450.83	3.92	3.91	-0.41	
1662.00	44.00	193.29	1536.87	-455.58	-126.82	472.81	4.29	3.72	3.12	
1694.00	45.06	193.59	1559.68	-477.40	-132.04	495.24	3.38	3.31	0.94	
1725.00	46.19	192.92	1581.36	-498.97	-137.11	517.40	3.96	3.65	-2.16	
1757.00	47.00	192.92	1603.35	-521.63	-142.31	540.64	2.53	2.53	0.00	
1789.00	47.94	193.29	1624.98	-544.60	-147.66	564.21	3.06	2.94	1.16	
1820.00	48.63	193.29	1645.61	-567.12	-152.98	587.35	2.23	2.23	0.00	
1852.00	49.50	193.17	1666.58	-590.65	-158.51	611.52	2.73	2.72	-0.37	
1884.00	50.06	192.67	1687.24	-614.47	-163.97	635.94	2.12	1.75	-1.56	
1915.00	50.25	193.04	1707.10	-637.67	-169.27	659.74	1.10	0.61	1.19	
1947.00	49.56	191.79	1727.71	-661.58	-174.53	684.20	3.68	-2.16	-3.91	
1979.00	49.00	191.67	1748.59	-685.32	-179.46	708.43	1.77	-1.75	-0.37	
2011.00	48.13	191.54	1769.77	-708.82	-184.29	732.39	2.74	-2.72	-0.41	
2043.00	47.63	192.29	1791.23	-732.05	-189.19	756.10	2.34	-1.56	2.34	
2075.00	46.75	193.54	1812.97	-754.93	-194.44	779.57	3.97	-2.75	3.91	
2106.00	46.75	193.67	1834.21	-776.88	-199.75	802.14	0.31	0.00	0.42	
2138.00	46.44	193.79	1856.20	-799.46	-205.26	825.39	1.01	-0.97	0.37	
2170.00	46.31	194.04	1878.28	-821.94	-210.84	848.55	0.70	-0.41	0.78	
2201.00	46.56	195.17	1899.65	-843.68	-216.50	871.01	2.76	0.81	3.65	
2233.00	46.56	195.42	1921.65	-866.09	-222.63	894.25	0.57	0.00	0.78	
2265.00	47.00	195.17	1943.56	-888.58	-228.78	917.56	1.49	1.37	-0.78	
2297.00	46.94	194.92	1965.40	-911.17	-234.85	940.95	0.60	-0.19	-0.78	
2328.00	47.00	193.54	1986.55	-933.14	-240.42	963.61	3.26	0.19	-4.45	
2360.00	47.06	194.29	2008.37	-955.87	-246.05	987.03	1.73	0.19	2.34	
2392.00	46.75	193.79	2030.23	-978.54	-251.72	1010.39	1.50	-0.97	-1.56	
2423.00	47.19	193.79	2051.38	-1000.54	-257.12	1033.05	1.42	1.42	0.00	
2455.00	47.31	193.79	2073.10	-1023.36	-262.72	1056.55	0.37	0.37	0.00	
2487.00	47.38	192.92	2094.79	-1046.26	-268.16	1080.08	2.01	0.22	-2.72	
2519.00	47.50	193.67	2116.43	-1069.20	-273.58	1103.65	1.77	0.37	2.34	
2550.00	47.31	193.79	2137.41	-1091.37	-279.00	1126.46	0.68	-0.61	0.39	
2582.00	47.06	194.42	2159.16	-1114.13	-284.72	1149.94	1.64	-0.78	1.97	
2614.00	46.06	194.17	2181.16	-1136.65	-290.45	1173.17	3.18	-3.12	-0.78	
2645.00	45.00	193.79	2202.88	-1158.12	-295.80	1195.29	3.53	-3.42	-1.23	
2677.00	44.19	193.54	2225.67	-1179.95	-301.11	1217.76	2.59	-2.53	-0.78	
2709.00	43.13	194.54	2248.82	-1201.38	-306.46	1239.85	3.95	-3.31	3.12	
2740.00	41.31	193.92	2271.77	-1221.57	-311.59	1260.68	6.02	-5.87	-2.00	
2772.00	40.75	193.42	2295.91	-1241.98	-316.55	1281.68	2.03	-1.75	-1.56	



Weatherford Drilling Services

Survey Report

**Weatherford**

Company: WILLIAMS PRODUCTION
Field: San Juan County, NM (NAD 83)
Site: Rosa Unit 138C
Well: Rosa Unit 138C
Wellpath: 1

Date: 6/27/2007 Time: 15:53:38 Page: 3
Co-ordinate(NE) Reference: Site: Rosa Unit 138C, True North
Vertical (TVD) Reference: SITE 6347.0
Section (VS) Reference: Well (0.00N,0.00E,194.41Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2804.00	39.94	194.79	2320.30	-1262.07	-321.60	1302.40	3.75	-2.53	4.28	
2836.00	39.44	193.54	2344.93	-1281.88	-326.60	1322.83	2.94	-1.56	-3.91	
2867.00	39.13	194.29	2368.92	-1300.94	-331.32	1342.46	1.83	-1.00	2.42	
2899.00	37.81	194.54	2393.97	-1320.22	-336.28	1362.37	4.15	-4.12	0.78	
2931.00	36.56	193.67	2419.47	-1338.97	-340.99	1381.71	4.24	-3.91	-2.72	
2963.00	35.88	193.92	2445.28	-1357.34	-345.50	1400.61	2.17	-2.12	0.78	
2994.00	34.00	195.04	2470.70	-1374.53	-349.93	1418.37	6.41	-6.06	3.61	
3026.00	32.75	194.92	2497.42	-1391.53	-354.48	1435.97	3.91	-3.91	-0.37	
3058.00	31.69	195.17	2524.49	-1408.01	-358.91	1453.03	3.34	-3.31	0.78	
3089.00	31.31	195.79	2550.92	-1423.62	-363.23	1469.22	1.61	-1.23	2.00	
3121.00	30.69	196.29	2578.35	-1439.46	-367.79	1485.70	2.10	-1.94	1.56	
3153.00	29.25	196.17	2606.07	-1454.80	-372.26	1501.68	4.50	-4.50	-0.37	
3184.00	28.44	195.79	2633.22	-1469.18	-376.37	1516.63	2.68	-2.61	-1.23	
3216.00	27.94	196.54	2661.43	-1483.70	-380.58	1531.73	1.91	-1.56	2.34	
3248.00	27.75	196.54	2689.72	-1498.03	-384.84	1546.67	0.59	-0.59	0.00	
3279.00	26.94	194.54	2717.26	-1511.75	-388.65	1560.91	3.95	-2.61	-6.45	
3311.00	26.31	193.31	2745.87	-1525.66	-392.11	1575.25	2.62	-1.97	-3.84	
3343.00	25.25	192.67	2774.68	-1539.22	-395.24	1589.16	3.42	-3.31	-2.00	
3374.00	24.38	193.67	2802.82	-1551.89	-398.20	1602.16	3.12	-2.81	3.23	
3406.00	22.88	195.67	2832.14	-1564.30	-401.44	1614.99	5.31	-4.69	6.25	
3437.00	21.69	195.67	2860.82	-1575.62	-404.62	1626.74	3.84	-3.84	0.00	
3469.00	21.38	197.04	2890.59	-1586.89	-407.92	1638.48	1.85	-0.97	4.28	
3501.00	20.75	197.04	2920.45	-1597.89	-411.29	1649.97	1.97	-1.97	0.00	
3533.00	19.94	197.54	2950.45	-1608.51	-414.60	1661.08	2.59	-2.53	1.56	
3564.00	19.13	196.17	2979.67	-1618.43	-417.61	1671.44	3.00	-2.61	-4.42	
3596.00	17.38	194.92	3010.05	-1628.08	-420.30	1681.46	5.60	-5.47	-3.91	
3628.00	16.44	194.67	3040.67	-1637.08	-422.67	1690.77	2.95	-2.94	-0.78	
3659.00	16.06	192.54	3070.43	-1645.51	-424.72	1699.44	2.28	-1.23	-6.87	
3691.00	15.25	192.42	3101.25	-1653.94	-426.58	1708.07	2.53	-2.53	-0.37	
3722.00	13.94	190.92	3131.24	-1661.59	-428.17	1715.87	4.40	-4.23	-4.84	
3754.00	13.44	191.29	3162.34	-1669.02	-429.62	1723.43	1.59	-1.56	1.16	
3785.00	12.56	195.42	3192.54	-1675.80	-431.23	1730.40	4.13	-2.84	13.32	
3817.00	12.81	194.42	3223.76	-1682.59	-433.04	1737.42	1.04	0.78	-3.12	
3849.00	12.88	193.79	3254.96	-1689.49	-434.77	1744.54	0.49	0.22	-1.97	
3880.00	12.75	191.04	3285.19	-1696.21	-436.25	1751.41	2.01	-0.42	-8.87	
3912.00	12.00	190.92	3316.44	-1702.94	-437.55	1758.25	2.35	-2.34	-0.37	
3944.00	11.31	190.54	3347.78	-1709.29	-438.76	1764.71	2.17	-2.16	-1.19	
3975.00	10.19	191.29	3378.24	-1714.97	-439.85	1770.48	3.64	-3.61	2.42	
4007.00	9.13	196.42	3409.79	-1720.18	-441.12	1775.84	4.26	-3.31	16.03	
4039.00	8.81	196.42	3441.39	-1724.97	-442.53	1780.83	1.00	-1.00	0.00	
4071.00	8.19	199.92	3473.04	-1729.46	-444.00	1785.54	2.52	-1.94	10.94	
4102.00	6.88	198.29	3503.77	-1733.30	-445.34	1789.59	4.28	-4.23	-5.26	
4134.00	5.56	191.17	3535.59	-1736.64	-446.24	1793.06	4.77	-4.12	-22.25	
4166.00	4.25	179.92	3567.47	-1739.35	-446.54	1795.75	5.06	-4.09	-35.16	
4198.00	2.88	172.29	3599.41	-1741.33	-446.43	1797.64	4.52	-4.28	-23.84	
5853.00	1.00	190.54	5253.40	-1796.73	-443.49	1850.57	0.12	-0.11	1.10	
6725.00	1.00	190.00	6125.26	-1811.71	-446.21	1865.75	0.00	0.00	-0.06	