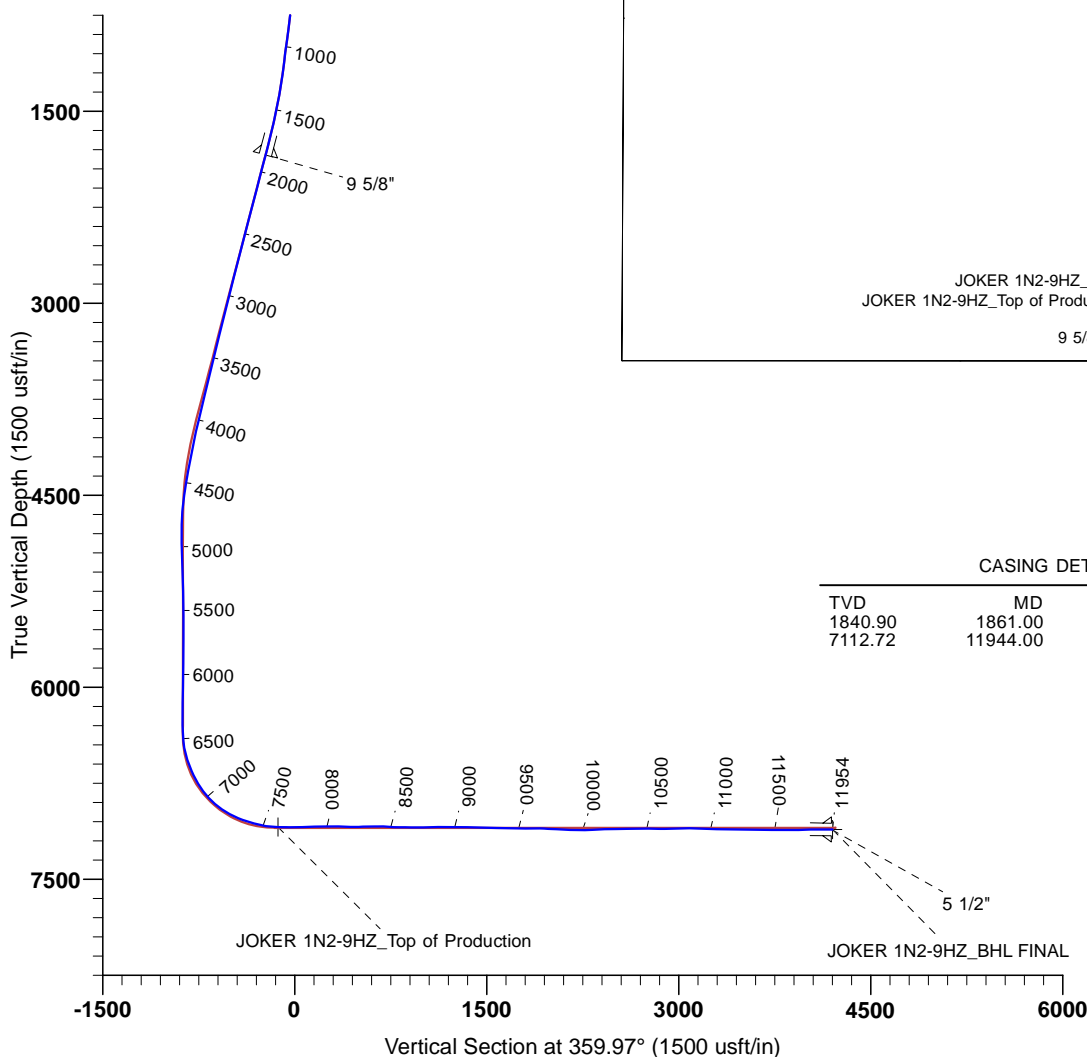
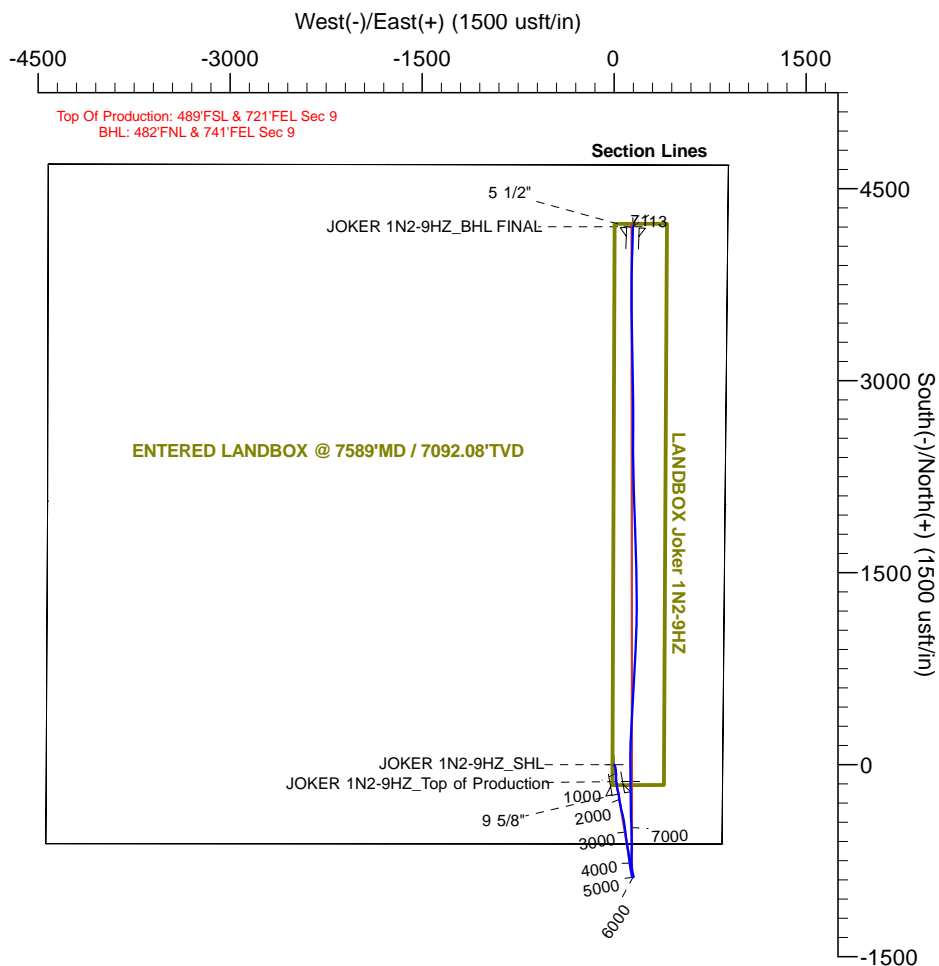


US ROCKIES WATTENBERG PLANNING



Project: WELD-NAD83-UTMFT13N
Site: 1N-65W-09 Joker Pad
Well: JOKER 1N2-9HZ
Wellbore: Plan A
Design: PDD Actual Surveys



CASING DETAILS

TVD	MD	Name	Size
1840.90	1861.00	9 5/8"	9-5/8
7112.72	11944.00	5 1/2"	5-1/2

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
JOKER 1N2-9HZ_SHL	0.00	0.00	0.00	14548921.83	1734814.75	40.060442	-104.662628	Point
1N-R65W-Sec. 9_Section lines	38.00	0.37	-710.71	14548919.51	1734104.05	40.060443	-104.665168	Polygon
JOKER 1N2-9HZ_Top of Production	7093.40	-130.72	127.83	14548791.60	1734943.08	40.060083	-104.662171	Point
JOKER 1N2-9HZ_BHL FINAL	7112.84	4202.97	147.86	14553125.33	1734946.68	40.071984	-104.662099	Point



Premier

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well JOKER 1N2-9HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4969+25 @ 4994.00usft (hp311)
Site:	1N-65W-09 Joker Pad	MD Reference:	4969+25 @ 4994.00usft (hp311)
Well:	JOKER 1N2-9HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM multiuser DB

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	1N-65W-09 Joker Pad, centered on 1N1				
Site Position:		Northing:	14,548,921.72 usft	Latitude:	40.060442
From:	Lat/Long	Easting:	1,734,784.81 usft	Longitude:	-104.662735
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well		JOKER 1N2-9HZ				
Well Position	+N/-S	0.00 usft	Northing:	14,548,921.83 usft	Latitude:	40.060442
	+E/-W	0.00 usft	Easting:	1,734,814.75 usft	Longitude:	-104.662628
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,969.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/23/2014	8.33	66.68	52,609

Design	PDD Actual Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.97	

Survey Program	Date	7/27/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
105.00	1,812.00	Cathedral MWD Surface (Plan A)	APC_ISCWSA REV 2 MWD	Fixed:v2:standard declination	
1,947.00	11,902.00	PDD MWD+IFR1 Curve/Lateral (Plan A)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	
11,954.00	11,954.00	PDD Projection to Bit (Plan A)	APC_BLIND	OWSG BLIND	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
105.00	0.20	119.84	105.00	-0.09	0.16	-0.09	0.19	0.19	0.00	
194.00	1.08	155.36	193.99	-0.93	0.64	-0.93	1.04	0.99	39.91	
286.00	1.03	154.76	285.98	-2.47	1.36	-2.47	0.06	-0.05	-0.65	
382.00	2.80	143.30	381.92	-5.13	3.13	-5.13	1.88	1.84	-11.94	
477.00	4.43	153.64	476.73	-10.28	6.14	-10.28	1.84	1.72	10.88	
572.00	5.49	166.84	571.38	-17.99	8.81	-17.99	1.63	1.12	13.89	
667.00	5.88	171.05	665.91	-27.22	10.60	-27.23	0.60	0.41	4.43	
762.00	6.49	170.45	760.36	-37.32	12.25	-37.33	0.65	0.64	-0.63	

Premier

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well JOKER 1N2-9HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4969+25 @ 4994.00usft (hp311)
Site:	1N-65W-09 Joker Pad	MD Reference:	4969+25 @ 4994.00usft (hp311)
Well:	JOKER 1N2-9HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM multiuser DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
857.00	7.47	175.30	854.65	-48.77	13.64	-48.78	1.20	1.03	5.11	
952.00	7.74	175.38	948.82	-61.30	14.66	-61.31	0.28	0.28	0.08	
1,047.00	7.90	179.81	1,042.93	-74.21	15.20	-74.22	0.66	0.17	4.66	
1,141.00	7.18	181.38	1,136.12	-86.54	15.08	-86.55	0.80	-0.77	1.67	
1,237.00	7.39	180.52	1,231.34	-98.71	14.88	-98.72	0.25	0.22	-0.90	
1,332.00	9.02	175.66	1,325.37	-112.25	15.39	-112.26	1.86	1.72	-5.12	
1,490.00	12.07	173.37	1,480.68	-141.01	18.23	-141.02	1.95	1.93	-1.45	
1,585.00	13.23	172.13	1,573.38	-161.65	20.87	-161.66	1.25	1.22	-1.31	
1,680.00	13.90	166.74	1,665.73	-183.53	24.98	-183.54	1.51	0.71	-5.67	
1,775.00	14.76	167.52	1,757.77	-206.45	30.21	-206.46	0.93	0.91	0.82	
1,812.00	14.83	168.88	1,793.55	-215.70	32.14	-215.71	0.96	0.19	3.68	
1,947.00	15.20	171.70	1,923.94	-250.16	38.03	-250.18	0.61	0.27	2.09	
2,135.00	13.70	169.40	2,105.99	-296.44	45.68	-296.46	0.85	-0.80	-1.22	
2,325.00	15.70	167.90	2,289.76	-343.69	55.21	-343.72	1.07	1.05	-0.79	
2,513.00	15.10	166.70	2,471.01	-392.39	66.17	-392.43	0.36	-0.32	-0.64	
2,702.00	14.60	168.70	2,653.70	-439.71	76.51	-439.75	0.38	-0.26	1.06	
2,891.00	13.40	174.50	2,837.09	-484.87	83.27	-484.92	0.98	-0.63	3.07	
3,080.00	14.90	171.00	3,020.35	-530.68	89.17	-530.72	0.91	0.79	-1.85	
3,269.00	14.00	173.10	3,203.37	-577.37	95.72	-577.42	0.55	-0.48	1.11	
3,458.00	14.10	170.00	3,386.72	-622.74	102.47	-622.80	0.40	0.05	-1.64	
3,647.00	14.20	171.70	3,569.99	-668.35	109.81	-668.41	0.23	0.05	0.90	
3,836.00	13.00	173.00	3,753.69	-712.39	115.75	-712.45	0.66	-0.63	0.69	
4,025.00	13.70	173.50	3,937.58	-755.73	120.87	-755.79	0.38	0.37	0.26	
4,214.00	11.20	170.00	4,122.12	-796.05	126.59	-796.12	1.38	-1.32	-1.85	
4,403.00	10.60	168.30	4,307.71	-831.15	133.31	-831.22	0.36	-0.32	-0.90	
4,592.00	9.00	163.50	4,493.95	-862.35	141.03	-862.42	0.95	-0.85	-2.54	
4,781.00	2.50	166.90	4,681.90	-880.56	146.17	-880.63	3.44	-3.44	1.80	
4,970.00	1.50	336.70	4,870.85	-882.30	146.12	-882.38	2.11	-0.53	89.84	
5,159.00	1.50	355.10	5,059.79	-877.56	144.93	-877.64	0.25	0.00	9.74	
5,348.00	2.20	349.60	5,248.69	-871.53	144.07	-871.61	0.38	0.37	-2.91	
5,537.00	1.00	120.40	5,437.65	-868.80	144.84	-868.87	1.56	-0.63	69.21	
5,725.00	0.50	79.10	5,625.63	-869.47	147.06	-869.55	0.38	-0.27	-21.97	
5,914.00	0.90	169.30	5,814.62	-870.77	148.14	-870.85	0.55	0.21	47.72	
6,103.00	1.70	125.30	6,003.58	-873.85	150.71	-873.93	0.65	0.42	-23.28	
6,292.00	0.50	280.90	6,192.55	-875.32	152.18	-875.40	1.15	-0.63	82.33	
6,481.00	1.10	330.30	6,381.54	-873.59	150.48	-873.66	0.46	0.32	26.14	
6,575.00	11.50	350.80	6,474.84	-863.52	148.52	-863.60	11.15	11.06	21.81	
6,670.00	18.20	351.10	6,566.62	-839.49	144.71	-839.57	7.05	7.05	0.32	
6,765.00	23.80	350.50	6,655.27	-805.90	139.25	-805.97	5.90	5.89	-0.63	
6,859.00	30.60	358.90	6,738.86	-763.21	135.65	-763.28	8.29	7.23	8.94	
6,954.00	36.40	2.50	6,818.05	-710.82	136.42	-710.89	6.45	6.11	3.79	
7,049.00	46.50	0.70	6,889.17	-648.05	138.07	-648.12	10.70	10.63	-1.89	
7,143.00	54.70	358.70	6,948.79	-575.48	137.62	-575.55	8.88	8.72	-2.13	

Premier Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well JOKER 1N2-9HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4969+25 @ 4994.00usft (hp311)
Site:	1N-65W-09 Joker Pad	MD Reference:	4969+25 @ 4994.00usft (hp311)
Well:	JOKER 1N2-9HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM multiuser DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,238.00	62.50	358.10	6,998.24	-494.49	135.34	-494.56	8.23	8.21	-0.63
7,333.00	69.70	359.20	7,036.71	-407.71	133.32	-407.78	7.65	7.58	1.16
7,427.00	75.30	358.80	7,064.96	-318.11	131.75	-318.18	5.97	5.96	-0.43
7,522.00	80.90	358.30	7,084.55	-225.22	129.39	-225.29	5.92	5.89	-0.53
7,617.00	88.40	359.80	7,093.40	-130.72	127.83	-130.79	8.05	7.89	1.58
7,712.00	90.20	359.80	7,094.56	-35.73	127.50	-35.80	1.89	1.89	0.00
7,806.00	92.40	359.70	7,092.43	58.24	127.09	58.17	2.34	2.34	-0.11
7,901.00	91.20	1.80	7,089.44	153.18	128.34	153.11	2.54	-1.26	2.21
7,996.00	90.50	4.10	7,088.03	248.03	133.22	247.96	2.53	-0.74	2.42
8,091.00	88.40	3.40	7,088.94	342.82	139.44	342.74	2.33	-2.21	-0.74
8,185.00	89.50	2.90	7,090.67	436.66	144.60	436.58	1.29	1.17	-0.53
8,280.00	91.60	2.80	7,089.75	531.53	149.32	531.45	2.21	2.21	-0.11
8,374.00	90.50	2.50	7,088.03	625.41	153.67	625.33	1.21	-1.17	-0.32
8,469.00	87.20	3.10	7,089.94	720.27	158.31	720.18	3.53	-3.47	0.63
8,564.00	88.20	3.20	7,093.75	815.05	163.52	814.96	1.06	1.05	0.11
8,658.00	90.00	3.00	7,095.23	908.89	168.61	908.80	1.93	1.91	-0.21
8,753.00	89.70	1.90	7,095.48	1,003.80	172.67	1,003.71	1.20	-0.32	-1.16
8,848.00	91.30	1.80	7,094.65	1,098.75	175.73	1,098.66	1.69	1.68	-0.11
8,942.00	91.40	0.20	7,092.43	1,192.70	177.37	1,192.61	1.70	0.11	-1.70
9,036.00	88.50	359.40	7,092.51	1,286.69	177.05	1,286.60	3.20	-3.09	-0.85
9,131.00	89.50	359.30	7,094.17	1,381.67	175.97	1,381.58	1.06	1.05	-0.11
9,225.00	88.70	358.40	7,095.65	1,475.64	174.08	1,475.55	1.28	-0.85	-0.96
9,320.00	87.10	358.80	7,099.13	1,570.54	171.76	1,570.45	1.74	-1.68	0.42
9,414.00	88.10	358.90	7,103.07	1,664.44	169.88	1,664.35	1.07	1.06	0.11
9,509.00	90.40	358.30	7,104.31	1,759.40	167.56	1,759.31	2.50	2.42	-0.63
9,603.00	90.60	358.30	7,103.49	1,853.35	164.77	1,853.27	0.21	0.21	0.00
9,698.00	88.30	357.90	7,104.40	1,948.29	161.62	1,948.20	2.46	-2.42	-0.42
9,793.00	86.10	358.00	7,109.04	2,043.11	158.22	2,043.03	2.32	-2.32	0.11
9,887.00	87.30	357.70	7,114.45	2,136.89	154.70	2,136.80	1.32	1.28	-0.32
9,982.00	90.70	358.90	7,116.11	2,231.81	151.89	2,231.73	3.80	3.58	1.26
10,077.00	92.90	358.30	7,113.13	2,326.73	149.57	2,326.65	2.40	2.32	-0.63
10,171.00	91.70	0.10	7,109.35	2,420.64	148.26	2,420.56	2.30	-1.28	1.91
10,266.00	89.80	0.60	7,108.11	2,515.63	148.84	2,515.55	2.07	-2.00	0.53
10,360.00	91.70	0.50	7,106.88	2,609.61	149.74	2,609.53	2.02	2.02	-0.11
10,455.00	90.40	359.50	7,105.14	2,704.59	149.74	2,704.51	1.73	-1.37	-1.05
10,550.00	88.70	359.30	7,105.89	2,799.58	148.74	2,799.50	1.80	-1.79	-0.21
10,644.00	90.30	359.00	7,106.71	2,893.56	147.35	2,893.49	1.73	1.70	-0.32
10,739.00	92.50	358.90	7,104.38	2,988.51	145.61	2,988.44	2.32	2.32	-0.11
10,834.00	89.80	359.30	7,102.48	3,083.47	144.12	3,083.40	2.87	-2.84	0.42
10,929.00	87.70	359.20	7,104.55	3,178.44	142.88	3,178.36	2.21	-2.21	-0.11
11,023.00	89.00	359.50	7,107.26	3,272.39	141.81	3,272.32	1.42	1.38	0.32
11,118.00	87.10	359.00	7,110.49	3,367.32	140.57	3,367.25	2.07	-2.00	-0.53
11,213.00	88.70	358.90	7,113.97	3,462.24	138.83	3,462.17	1.69	1.68	-0.11

Premier

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well JOKER 1N2-9HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4969+25 @ 4994.00usft (hp311)
Site:	1N-65W-09 Joker Pad	MD Reference:	4969+25 @ 4994.00usft (hp311)
Well:	JOKER 1N2-9HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM multiuser DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,308.00	90.90	358.70	7,114.30	3,557.21	136.84	3,557.14	2.33	2.32	-0.21	
11,402.00	89.50	359.80	7,113.97	3,651.20	135.61	3,651.13	1.89	-1.49	1.17	
11,497.00	91.30	0.50	7,113.31	3,746.19	135.86	3,746.12	2.03	1.89	0.74	
11,592.00	88.60	1.40	7,113.39	3,841.17	137.43	3,841.10	3.00	-2.84	0.95	
11,687.00	90.00	1.70	7,114.55	3,936.13	140.00	3,936.05	1.51	1.47	0.32	
11,782.00	91.90	1.60	7,112.98	4,031.07	142.74	4,030.99	2.00	2.00	-0.11	
11,876.00	89.40	1.80	7,111.91	4,125.01	145.52	4,124.94	2.67	-2.66	0.21	
11,902.00	89.30	1.70	7,112.21	4,151.00	146.32	4,150.92	0.54	-0.38	-0.38	
11,954.00	89.30	1.70	7,112.84	4,202.97	147.86	4,202.89	0.00	0.00	0.00	