

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Lone Tree Draw "14" State
Well: #1H
Wellbore: OH
Design: Plan #1 Draft 1a



Azimuths to Grid North
True North: -0.10°
Magnetic North: 7.58°

Magnetic Field
Strength: 48430.4nT
Dip Angle: 60.25°
Date: 01/13/2014
Model: BGGM2013



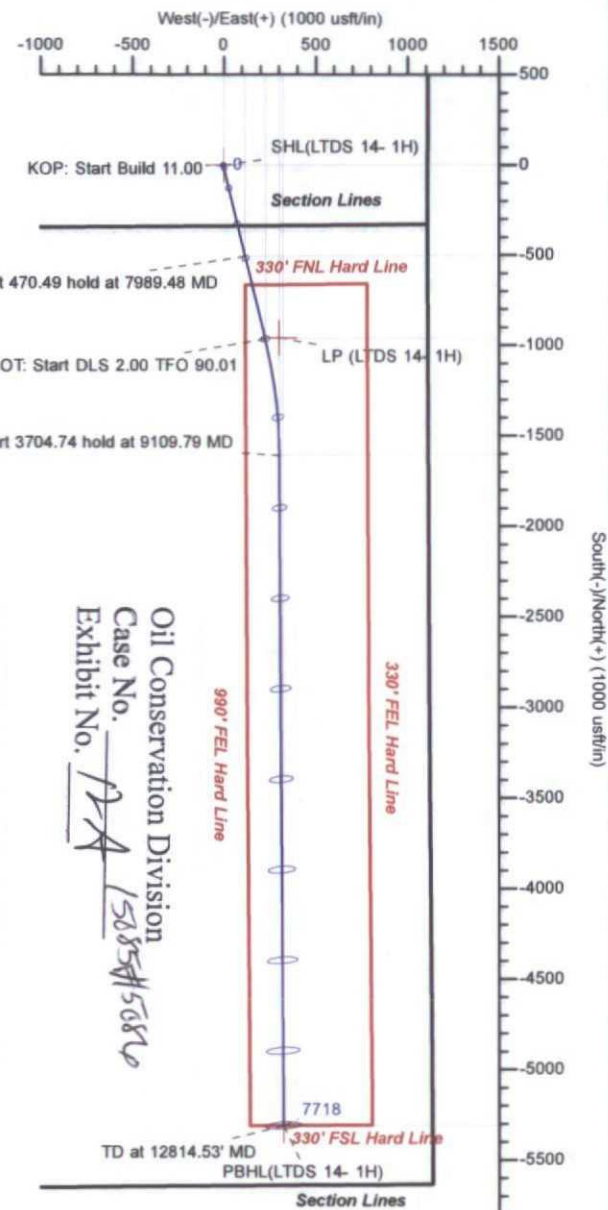
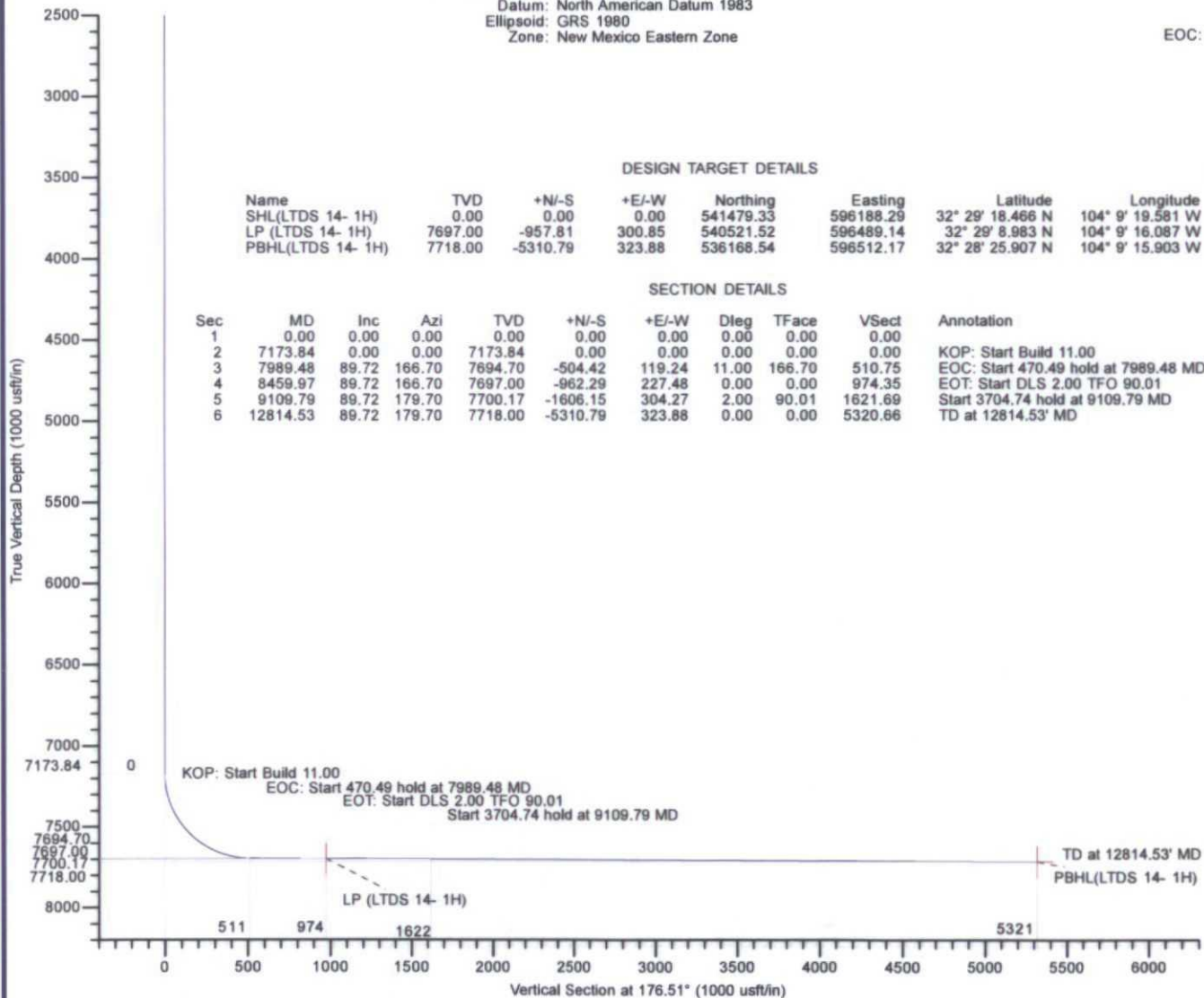
PROJECT DETAILS: Eddy County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(LTDS 14- 1H)	0.00	0.00	0.00	541479.33	596188.29	32° 29' 18.466 N	104° 9' 19.581 W
LP (LTDS 14- 1H)	7697.00	-957.81	300.85	540521.52	596489.14	32° 29' 8.983 N	104° 9' 16.087 W
PBHL(LTDS 14- 1H)	7718.00	-5310.79	323.88	536168.54	596512.17	32° 28' 25.907 N	104° 9' 15.903 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP: Start Build 11.00
2	7173.84	0.00	0.00	7173.84	0.00	0.00	0.00	0.00	0.00	EOC: Start 470.49 hold at 7989.48 MD
3	7989.48	89.72	166.70	7694.70	-504.42	119.24	11.00	166.70	510.75	EOT: Start DLS 2.00 TFO 90.01
4	8459.97	89.72	166.70	7697.00	-962.29	227.48	0.00	0.00	974.35	Start 3704.74 hold at 9109.79 MD
5	9109.79	89.72	179.70	7700.17	-1606.15	304.27	2.00	90.01	1621.69	TD at 12814.53' MD
6	12814.53	89.72	179.70	7718.00	-5310.79	323.88	0.00	0.00	5320.66	



Oil Conservation Division
Case No. 12A 15085/15086
Exhibit No. 12A 15085/15086



LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax 936/756-7595

Plan: Plan #1 Draft 1a (#1H/OH)
Lone Tree Draw "14" State
Created By: Heber Claros Date: 13.52, February 11 2014
Date: _____
Approved: _____ Date: _____

DEVON ENERGY

Eddy County, NM (NAD-83)

Lone Tree Draw "14" State

#1H

OH

Plan: Plan #1 Draft 1a

Standard Planning Report

11 February, 2014

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #1H
Company:	DEVON ENERGY	TVD Reference:	GE 3224' + KB 26' @ 3250.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3224' + KB 26' @ 3250.00usft (Cactus 126)
Site:	Lone Tree Draw "14" State	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Draft 1a		

Project	Eddy County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Lone Tree Draw "14" State			
Site Position:		Northing:	541,480.29 usft	Latitude: 32° 29' 18.473 N
From:	Lat/Long	Easting:	596,338.28 usft	Longitude: 104° 9' 17.829 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.10 "

Well	#1H			
Well Position	+N/-S	-0.95 usft	Northing:	541,479.33 usft
	+E/-W	-149.99 usft	Easting:	596,188.29 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	3,224.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	01/13/14	7.68	60.25	48,430

Design	Plan #1 Draft 1a			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	176.51

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,173.84	0.00	0.00	7,173.84	0.00	0.00	0.00	0.00	0.00	0.00	
7,989.48	89.72	166.70	7,694.70	-504.42	119.24	11.00	11.00	0.00	166.70	
8,459.97	89.72	166.70	7,697.00	-962.29	227.48	0.00	0.00	0.00	0.00	LP (LTDS 14- 1H)
9,109.79	89.72	179.70	7,700.17	-1,606.15	304.27	2.00	0.00	2.00	90.01	
12,814.53	89.72	179.70	7,718.00	-5,310.79	323.88	0.00	0.00	0.00	0.00	PBHL(LTDS 14- 1H)

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #1H
Company:	DEVON ENERGY	TVD Reference:	GE 3224' + KB 26' @ 3250.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3224' + KB 26' @ 3250.00usft (Cactus 126)
Site:	Lone Tree Draw "14" State	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Draft 1a		

Planned 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)
7,173.84	0.00	0.00	7,173.84	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start Build 11.00									
7,200.00	2.88	166.70	7,199.99	-0.64	0.15	0.65	11.00	11.00	0.00
7,250.00	8.38	166.70	7,249.73	-5.41	1.28	5.48	11.00	11.00	0.00
7,300.00	13.88	166.70	7,298.77	-14.80	3.50	14.98	11.00	11.00	0.00
7,350.00	19.38	166.70	7,346.66	-28.71	6.79	29.07	11.00	11.00	0.00
7,400.00	24.88	166.70	7,392.96	-47.04	11.12	47.63	11.00	11.00	0.00
7,450.00	30.38	166.70	7,437.24	-69.59	16.45	70.46	11.00	11.00	0.00
7,500.00	35.88	166.70	7,479.10	-96.17	22.73	97.38	11.00	11.00	0.00
7,550.00	41.38	166.70	7,518.15	-126.54	29.91	128.12	11.00	11.00	0.00
7,600.00	46.88	166.70	7,554.02	-160.40	37.92	162.41	11.00	11.00	0.00
7,650.00	52.38	166.70	7,586.40	-197.46	46.68	199.94	11.00	11.00	0.00
7,700.00	57.88	166.70	7,614.97	-237.37	56.11	240.34	11.00	11.00	0.00
7,750.00	63.38	166.70	7,639.49	-279.75	66.13	283.26	11.00	11.00	0.00
7,800.00	68.88	166.70	7,659.72	-324.23	76.65	328.30	11.00	11.00	0.00
7,850.00	74.38	166.70	7,675.47	-370.39	87.56	375.04	11.00	11.00	0.00
7,900.00	79.88	166.70	7,686.60	-417.81	98.77	423.05	11.00	11.00	0.00
7,950.00	85.38	166.70	7,693.02	-466.05	110.17	471.89	11.00	11.00	0.00
7,989.48	89.72	166.70	7,694.70	-504.42	119.24	510.75	11.00	11.00	0.00
EOC: Start 470.49 hold at 7989.48 MD									
8,000.00	89.72	166.70	7,694.76	-514.66	121.66	521.12	0.00	0.00	0.00
8,100.00	89.72	166.70	7,695.24	-611.98	144.67	619.65	0.00	0.00	0.00
8,200.00	89.72	166.70	7,695.73	-709.30	167.67	718.19	0.00	0.00	0.00
8,300.00	89.72	166.70	7,696.22	-806.61	190.68	816.73	0.00	0.00	0.00
8,400.00	89.72	166.70	7,696.71	-903.93	213.68	915.26	0.00	0.00	0.00
8,459.97	89.72	166.70	7,697.00	-962.29	227.48	974.35	0.00	0.00	0.00
EOT: Start DLS 2.00 TFO 90.01									
8,471.98	89.72	166.94	7,697.06	-973.99	230.22	986.20	2.00	0.00	2.00
LP (LTDS 14- 1H)									
8,500.00	89.72	167.50	7,697.20	-1,001.31	236.41	1,013.85	2.00	0.00	2.00
8,600.00	89.72	169.50	7,697.69	-1,099.30	256.35	1,112.86	2.00	0.00	2.00
8,700.00	89.72	171.50	7,698.18	-1,197.92	272.85	1,212.31	2.00	0.00	2.00
8,800.00	89.72	173.50	7,698.67	-1,297.06	285.90	1,312.06	2.00	0.00	2.00
8,900.00	89.72	175.50	7,699.15	-1,396.59	295.48	1,411.99	2.00	0.00	2.00
9,000.00	89.72	177.50	7,699.64	-1,496.40	301.59	1,511.98	2.00	0.00	2.00
9,109.79	89.72	179.70	7,700.17	-1,606.15	304.27	1,621.69	2.00	0.00	2.00
Start 3704.74 hold at 9109.79 MD									
9,200.00	89.72	179.70	7,700.60	-1,696.36	304.75	1,711.76	0.00	0.00	0.00
9,300.00	89.72	179.70	7,701.08	-1,796.35	305.28	1,811.61	0.00	0.00	0.00
9,400.00	89.72	179.70	7,701.57	-1,896.35	305.81	1,911.45	0.00	0.00	0.00
9,500.00	89.72	179.70	7,702.05	-1,996.35	306.34	2,011.29	0.00	0.00	0.00
9,600.00	89.72	179.70	7,702.53	-2,096.35	306.87	2,111.14	0.00	0.00	0.00
9,700.00	89.72	179.70	7,703.01	-2,196.34	307.39	2,210.98	0.00	0.00	0.00
9,800.00	89.72	179.70	7,703.49	-2,296.34	307.92	2,310.83	0.00	0.00	0.00
9,900.00	89.72	179.70	7,703.97	-2,396.34	308.45	2,410.67	0.00	0.00	0.00
10,000.00	89.72	179.70	7,704.45	-2,496.34	308.98	2,510.52	0.00	0.00	0.00
10,100.00	89.72	179.70	7,704.94	-2,596.33	309.51	2,610.36	0.00	0.00	0.00
10,200.00	89.72	179.70	7,705.42	-2,696.33	310.04	2,710.20	0.00	0.00	0.00
10,300.00	89.72	179.70	7,705.90	-2,796.33	310.57	2,810.05	0.00	0.00	0.00
10,400.00	89.72	179.70	7,706.38	-2,896.33	311.10	2,909.89	0.00	0.00	0.00
10,500.00	89.72	179.70	7,706.86	-2,996.32	311.63	3,009.74	0.00	0.00	0.00

Leam Drilling Systems LLC

Planning Report

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Company:	DEVON ENERGY	TVD Reference:	GE 3224' + KB 26' @ 3250.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3224' + KB 26' @ 3250.00usft (Cactus 126)
Site:	Lone Tree Draw "14" State	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Draft 1a		

Planned 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)	
10,600.00	89.72	179.70	7,707.34	-3,096.32	312.16	3,109.58	0.00	0.00	0.00	
10,700.00	89.72	179.70	7,707.82	-3,196.32	312.69	3,209.43	0.00	0.00	0.00	
10,800.00	89.72	179.70	7,708.30	-3,296.32	313.22	3,309.27	0.00	0.00	0.00	
10,900.00	89.72	179.70	7,708.79	-3,396.31	313.75	3,409.11	0.00	0.00	0.00	
11,000.00	89.72	179.70	7,709.27	-3,496.31	314.28	3,508.96	0.00	0.00	0.00	
11,100.00	89.72	179.70	7,709.75	-3,596.31	314.81	3,608.80	0.00	0.00	0.00	
11,200.00	89.72	179.70	7,710.23	-3,696.31	315.34	3,708.65	0.00	0.00	0.00	
11,300.00	89.72	179.70	7,710.71	-3,796.30	315.86	3,808.49	0.00	0.00	0.00	
11,400.00	89.72	179.70	7,711.19	-3,896.30	316.39	3,908.33	0.00	0.00	0.00	
11,500.00	89.72	179.70	7,711.67	-3,996.30	316.92	4,008.18	0.00	0.00	0.00	
11,600.00	89.72	179.70	7,712.15	-4,096.30	317.45	4,108.02	0.00	0.00	0.00	
11,700.00	89.72	179.70	7,712.64	-4,196.29	317.98	4,207.87	0.00	0.00	0.00	
11,800.00	89.72	179.70	7,713.12	-4,296.29	318.51	4,307.71	0.00	0.00	0.00	
11,900.00	89.72	179.70	7,713.60	-4,396.29	319.04	4,407.56	0.00	0.00	0.00	
12,000.00	89.72	179.70	7,714.08	-4,496.28	319.57	4,507.40	0.00	0.00	0.00	
12,100.00	89.72	179.70	7,714.56	-4,596.28	320.10	4,607.24	0.00	0.00	0.00	
12,200.00	89.72	179.70	7,715.04	-4,696.28	320.63	4,707.09	0.00	0.00	0.00	
12,300.00	89.72	179.70	7,715.52	-4,796.28	321.16	4,806.93	0.00	0.00	0.00	
12,400.00	89.72	179.70	7,716.01	-4,896.27	321.69	4,906.78	0.00	0.00	0.00	
12,500.00	89.72	179.70	7,716.49	-4,996.27	322.22	5,006.62	0.00	0.00	0.00	
12,600.00	89.72	179.70	7,716.97	-5,096.27	322.75	5,106.47	0.00	0.00	0.00	
12,700.00	89.72	179.70	7,717.45	-5,196.27	323.28	5,206.31	0.00	0.00	0.00	
12,800.00	89.72	179.70	7,717.93	-5,296.26	323.81	5,306.15	0.00	0.00	0.00	
12,814.53	89.72	179.70	7,718.00	-5,310.79	323.88	5,320.66	0.00	0.00	0.00	
TD at 12814.53' MD - PBHL(LTDS 14- 1H)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL(LTDS 14- 1H)	0.00	0.00	0.00	0.00	0.00	541,479.33	596,188.29	32° 29' 18.466 N	104° 9' 19.581 W	
- hit/miss target										
- Shape										
- plan misses target center by 7173.84usft at 7173.84usft MD (7173.84 TVD, 0.00 N, 0.00 E)										
- Point										
LP (LTDS 14- 1H)	0.00	0.00	7,697.00	-957.81	300.85	540,521.52	596,489.14	32° 29' 8.983 N	104° 9' 16.087 W	
- plan misses target center by 72.46usft at 8471.98usft MD (7697.06 TVD, -973.99 N, 230.22 E)										
- Point										
PBHL(LTDS 14- 1H)	0.00	0.00	7,718.00	-5,310.79	323.88	536,168.54	596,512.18	32° 28' 25.907 N	104° 9' 15.903 W	
- plan hits target center										
- Point										

Leam Drilling Systems LLC

Planning Report

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Wellbore:	OH		
Design:	Plan #1 Draft 1a		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,173.84	7,173.84	0.00	0.00	KOP: Start Build 11.00
7,989.48	7,694.70	-504.42	119.24	EOC: Start 470.49 hold at 7989.48 MD
8,459.97	7,697.00	-962.29	227.48	EOT: Start DLS 2.00 TFO 90.01
9,109.79	7,700.17	-1,606.15	304.27	Start 3704.74 hold at 9109.79 MD
12,814.53	7,718.00	-5,310.79	323.88	TD at 12814.53' MD