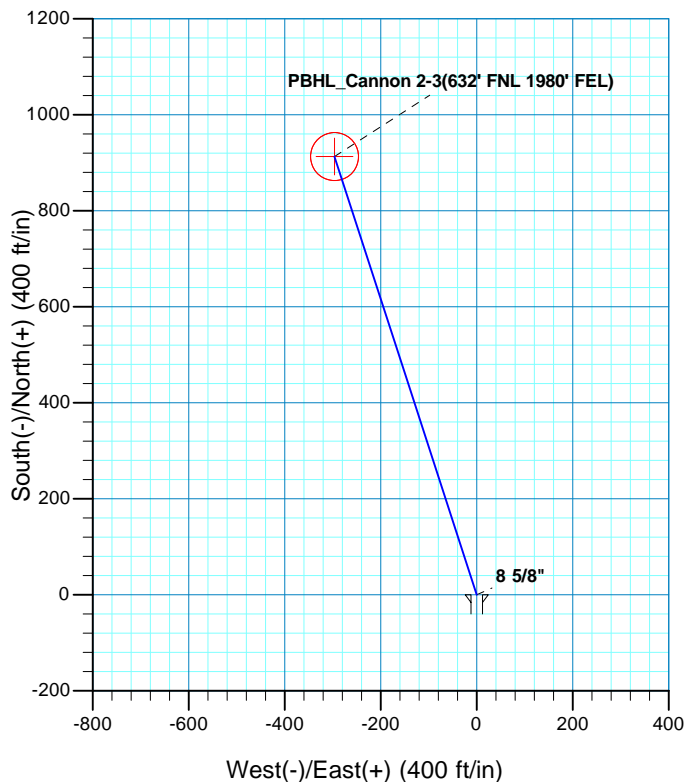
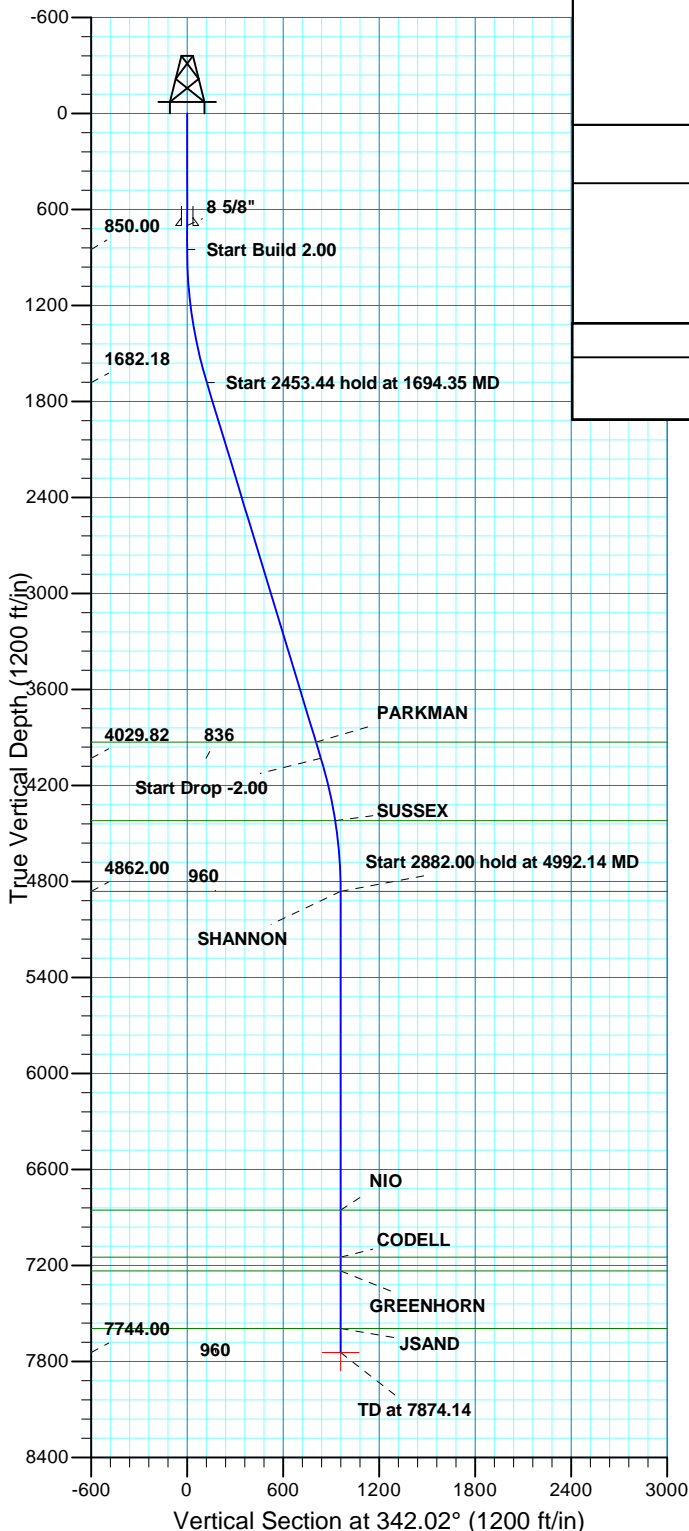


WELL DETAILS: P_Cannon 2-3					
GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1306054.71	3238576.31	40° 10' 13.307 N	104° 38' 46.547 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7744.00	912.89	-296.21	1306964.71	3238271.32	40° 10' 22.328 N	104° 38' 50.363 W
- plan hits target center							
Shape							
Circle (Radius: 50.00)							

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	
1694.35	16.89	342.02	1682.18	117.50	-38.13	2.00	342.02	123.53	
4147.79	16.89	342.02	4029.82	795.39	-258.08	0.00	0.00	836.22	
4992.14	0.00	0.00	4862.00	912.89	-296.21	2.00	180.00	959.75	
7874.14	0.00	0.00	7744.00	912.89	-296.21	0.00	0.00	959.75	PBHL_Cannon 2-3(632' FNL 1980' FEL)
PROJECT DETAILS: COLORADO NORTHERN ZONE - 83							FORMATION TOP DETAILS		
Geodetic System: US State Plane 1983							TVDPath	MDPath	Formation
Datum: North American Datum 1983							3929.00	4042.42	PARKMAN
Ellipsoid: GRS 1980							4420.00	4548.36	SUSSEX
Zone: Colorado Northern Zone							4862.00	4992.14	SHANNON
Location: SECTION 3 T2N R65W							6854.00	6984.14	NIO
System Datum: Mean Sea Level							7148.00	7278.14	CODELL
							7234.00	7364.14	GREENHORN
							7594.00	7724.14	JSAND
CASING DETAILS									
TVD	MD	Name	Size						
700.00	700.00	8 5/8"	8.625						



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CANNON 17-3 PAD

P_Cannon 2-3

P_Cannon 2-3

Plan: PLAN #2 9-13-10 RHS

Standard Planning Report

13 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 2-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Site:	WELD_CANNON 17-3 PAD	North Reference:	True
Well:	P_Cannon 2-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 2-3		
Design:	PLAN #2 9-13-10 RHS		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_CANNON 17-3 PAD, SECTION 3 T2N R65W			
Site Position:		Northing:	1,306,054.71 usft	Latitude:	40° 10' 13.307 N
From:	Lat/Long	Easting:	3,238,576.31 usft	Longitude:	104° 38' 46.547 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.55 °

Well	P_Cannon 2-3, 1543' FSL 1668' FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,306,054.71 usft	Latitude:	40° 10' 13.307 N
	+E/-W	0.00 ft	Easting:	3,238,576.31 usft	Longitude:	104° 38' 46.547 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,844.00 ft

Wellbore	P_Cannon 2-3				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/17/2010	8.89	66.91	53,111

Design	PLAN #2 9-13-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	342.02

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,694.35	16.89	342.02	1,682.18	117.50	-38.13	2.00	2.00	0.00	342.02	
4,147.79	16.89	342.02	4,029.82	795.39	-258.08	0.00	0.00	0.00	0.00	
4,992.14	0.00	0.00	4,862.00	912.89	-296.21	2.00	-2.00	0.00	180.00	
7,874.14	0.00	0.00	7,744.00	912.89	-296.21	0.00	0.00	0.00	0.00	PBHL_Cannon 2-3(63

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 2-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Site:	WELD_CANNON 17-3 PAD	North Reference:	True
Well:	P_Cannon 2-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 2-3		
Design:	PLAN #2 9-13-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
900.00	1.00	342.02	900.00	0.42	-0.13	0.44	2.00	2.00	0.00
1,000.00	3.00	342.02	999.93	3.73	-1.21	3.93	2.00	2.00	0.00
1,100.00	5.00	342.02	1,099.68	10.37	-3.36	10.90	2.00	2.00	0.00
1,200.00	7.00	342.02	1,199.13	20.31	-6.59	21.35	2.00	2.00	0.00
1,300.00	9.00	342.02	1,298.15	33.55	-10.89	35.27	2.00	2.00	0.00
1,400.00	11.00	342.02	1,396.63	50.06	-16.24	52.63	2.00	2.00	0.00
1,500.00	13.00	342.02	1,494.44	69.84	-22.66	73.42	2.00	2.00	0.00
1,600.00	15.00	342.02	1,591.46	92.85	-30.13	97.62	2.00	2.00	0.00
1,694.35	16.89	342.02	1,682.18	117.50	-38.13	123.53	2.00	2.00	0.00
Start 2453.44 hold at 1694.35 MD									
1,700.00	16.89	342.02	1,687.58	119.06	-38.63	125.17	0.00	0.00	0.00
1,800.00	16.89	342.02	1,783.27	146.69	-47.60	154.22	0.00	0.00	0.00
1,900.00	16.89	342.02	1,878.96	174.32	-56.56	183.27	0.00	0.00	0.00
2,000.00	16.89	342.02	1,974.65	201.95	-65.53	212.32	0.00	0.00	0.00
2,100.00	16.89	342.02	2,070.34	229.58	-74.49	241.37	0.00	0.00	0.00
2,200.00	16.89	342.02	2,166.02	257.21	-83.46	270.41	0.00	0.00	0.00
2,300.00	16.89	342.02	2,261.71	284.84	-92.42	299.46	0.00	0.00	0.00
2,400.00	16.89	342.02	2,357.40	312.47	-101.39	328.51	0.00	0.00	0.00
2,500.00	16.89	342.02	2,453.09	340.10	-110.36	357.56	0.00	0.00	0.00
2,600.00	16.89	342.02	2,548.78	367.73	-119.32	386.61	0.00	0.00	0.00
2,700.00	16.89	342.02	2,644.46	395.36	-128.29	415.66	0.00	0.00	0.00
2,800.00	16.89	342.02	2,740.15	423.00	-137.25	444.71	0.00	0.00	0.00
2,900.00	16.89	342.02	2,835.84	450.63	-146.22	473.75	0.00	0.00	0.00
3,000.00	16.89	342.02	2,931.53	478.26	-155.18	502.80	0.00	0.00	0.00
3,100.00	16.89	342.02	3,027.22	505.89	-164.15	531.85	0.00	0.00	0.00
3,200.00	16.89	342.02	3,122.90	533.52	-173.11	560.90	0.00	0.00	0.00
3,300.00	16.89	342.02	3,218.59	561.15	-182.08	589.95	0.00	0.00	0.00
3,400.00	16.89	342.02	3,314.28	588.78	-191.04	619.00	0.00	0.00	0.00
3,500.00	16.89	342.02	3,409.97	616.41	-200.01	648.04	0.00	0.00	0.00
3,600.00	16.89	342.02	3,505.66	644.04	-208.97	677.09	0.00	0.00	0.00
3,700.00	16.89	342.02	3,601.34	671.67	-217.94	706.14	0.00	0.00	0.00
3,800.00	16.89	342.02	3,697.03	699.30	-226.90	735.19	0.00	0.00	0.00
3,900.00	16.89	342.02	3,792.72	726.93	-235.87	764.24	0.00	0.00	0.00
4,000.00	16.89	342.02	3,888.41	754.56	-244.84	793.29	0.00	0.00	0.00
4,042.42	16.89	342.02	3,929.00	766.28	-248.64	805.61	0.00	0.00	0.00
PARKMAN									
4,100.00	16.89	342.02	3,984.10	782.19	-253.80	822.34	0.00	0.00	0.00
4,147.79	16.89	342.02	4,029.82	795.39	-258.08	836.22	0.00	0.00	0.00
Start Drop -2.00									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 2-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Site:	WELD_CANNON 17-3 PAD	North Reference:	True
Well:	P_Cannon 2-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 2-3		
Design:	PLAN #2 9-13-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,200.00	15.84	342.02	4,079.92	809.39	-262.63	850.93	2.00	-2.00	0.00	
4,300.00	13.84	342.02	4,176.58	833.75	-270.53	876.54	2.00	-2.00	0.00	
4,400.00	11.84	342.02	4,274.07	854.89	-277.39	898.77	2.00	-2.00	0.00	
4,500.00	9.84	342.02	4,372.28	872.78	-283.20	917.58	2.00	-2.00	0.00	
4,548.36	8.88	342.02	4,420.00	880.27	-285.62	925.44	2.00	-2.00	0.00	
SUSSEX										
4,600.00	7.84	342.02	4,471.09	887.41	-287.94	932.95	2.00	-2.00	0.00	
4,700.00	5.84	342.02	4,570.37	898.74	-291.62	944.86	2.00	-2.00	0.00	
4,800.00	3.84	342.02	4,670.01	906.77	-294.22	953.31	2.00	-2.00	0.00	
4,900.00	1.84	342.02	4,769.88	911.48	-295.75	958.27	2.00	-2.00	0.00	
4,992.14	0.00	0.00	4,862.00	912.89	-296.21	959.75	2.00	-2.00	0.00	
Start 2882.00 hold at 4992.14 MD - SHANNON										
5,000.00	0.00	0.00	4,869.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,969.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,069.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,169.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,269.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,369.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,469.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,569.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,669.86	912.89	-296.21	959.75	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,769.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,869.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,969.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,069.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,169.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,269.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,369.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,469.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,569.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,669.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,769.86	912.89	-296.21	959.75	0.00	0.00	0.00	
6,984.14	0.00	0.00	6,854.00	912.89	-296.21	959.75	0.00	0.00	0.00	
NIO										
7,000.00	0.00	0.00	6,869.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,969.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,069.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,278.14	0.00	0.00	7,148.00	912.89	-296.21	959.75	0.00	0.00	0.00	
CODELL										
7,300.00	0.00	0.00	7,169.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,364.14	0.00	0.00	7,234.00	912.89	-296.21	959.75	0.00	0.00	0.00	
GREENHORN										
7,400.00	0.00	0.00	7,269.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,369.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,469.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,569.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,724.14	0.00	0.00	7,594.00	912.89	-296.21	959.75	0.00	0.00	0.00	
JSAND										
7,800.00	0.00	0.00	7,669.86	912.89	-296.21	959.75	0.00	0.00	0.00	
7,874.14	0.00	0.00	7,744.00	912.89	-296.21	959.75	0.00	0.00	0.00	
PBHL_Cannon 2-3(632' FNL 1980' FEL)										

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 2-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4844' & 15' RKB @ 4859.00ft (ASSUMED)
Site:	WELD_CANNON 17-3 PAD	North Reference:	True
Well:	P_Cannon 2-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 2-3		
Design:	PLAN #2 9-13-10 RHS		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
PBHL_Cannon 2-3(632'	0.00	0.00	7,744.00	912.89	-296.21	1,306,964.70	3,238,271.33	40° 10' 22.328 N	104° 38' 50.363 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(in)	(in)
700.00	700.00	8 5/8"		8.625	11.000

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,042.42	3,929.00	PARKMAN				
4,548.36	4,420.00	SUSSEX				
4,992.14	4,862.00	SHANNON				
6,984.14	6,854.00	NIO				
7,278.14	7,148.00	CODELL				
7,364.14	7,234.00	GREENHORN				
7,724.14	7,594.00	JSAND				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)		
850.00	850.00	0.00	0.00	Start Build 2.00	
1,694.35	1,682.18	117.50	-38.13	Start 2453.44 hold at 1694.35 MD	
4,147.79	4,029.82	795.39	-258.08	Start Drop -2.00	
4,992.14	4,862.00	912.89	-296.21	Start 2882.00 hold at 4992.14 MD	
7,874.14	7,744.00	912.89	-296.21	TD at 7874.14	