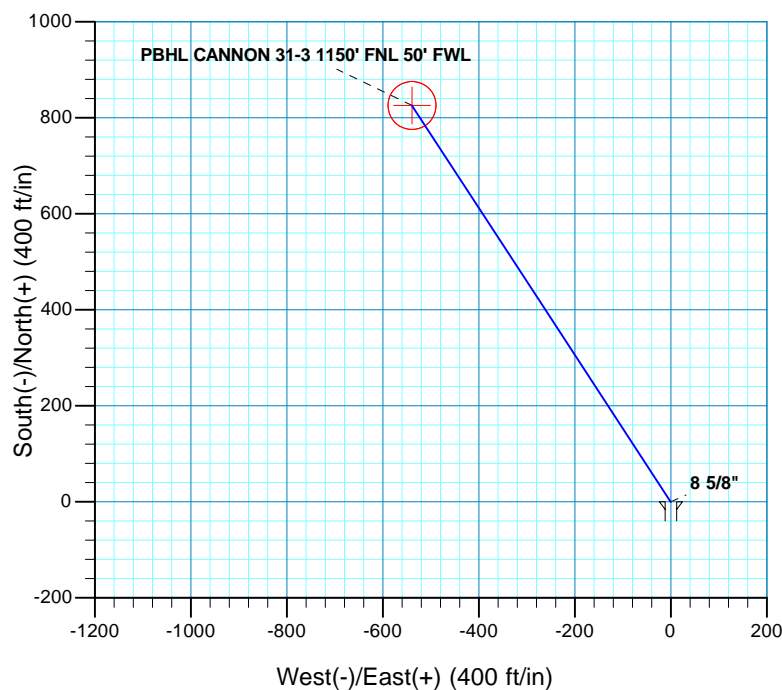
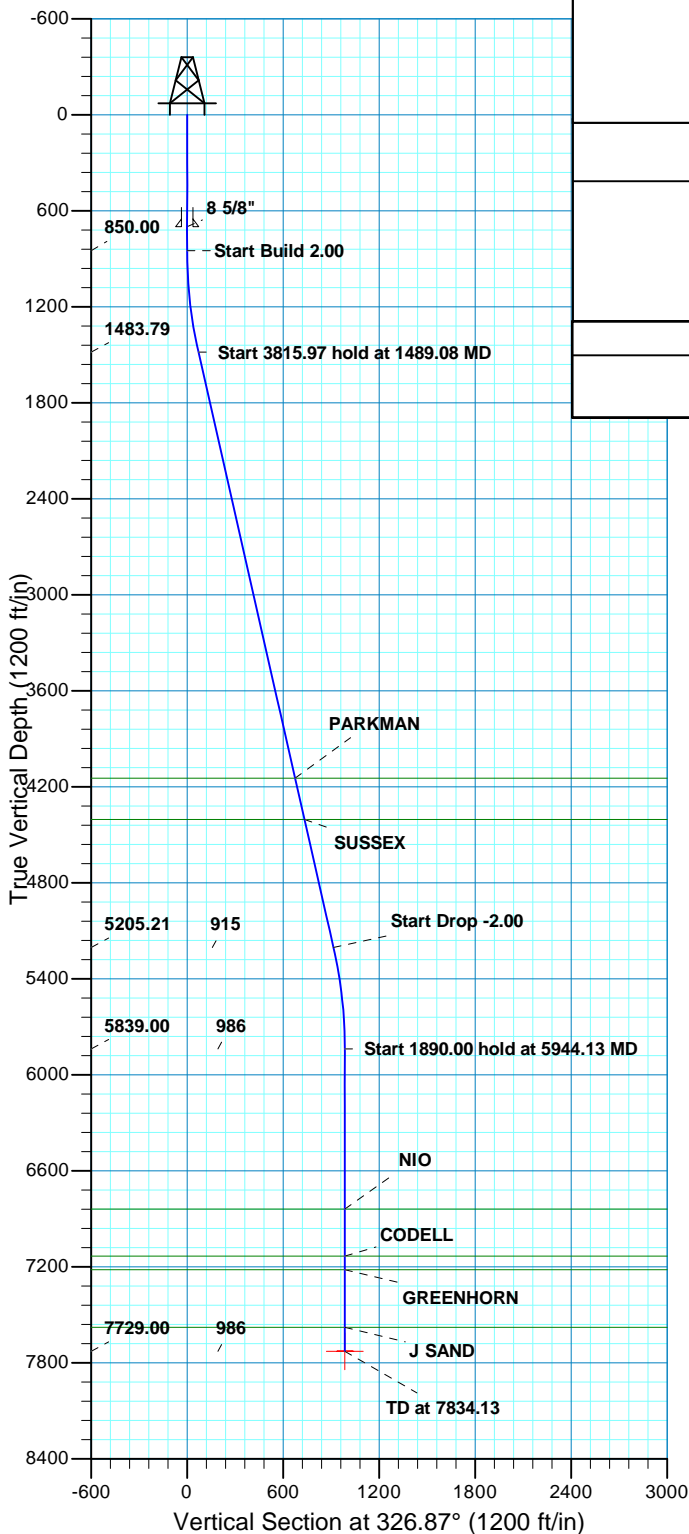


WELL DETAILS: P_CANNON 31-3					
GL 4847' & KB 15' @ 4862.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1305615.63	3235559.17	40° 10' 9.253 N	104° 39' 25.466 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7729.00	825.84	-539.06	1306436.31	3235012.29	40° 10' 17.414 N	104° 39' 32.411 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		
1489.08	12.78	326.87	1483.79	59.45	-38.80	2.00	326.87	70.99		
5305.05	12.78	326.87	5205.21	766.40	-500.26	0.00	0.00	915.22		
5944.13	0.00	0.00	5839.00	825.84	-539.06	2.00	180.00	986.20		
7834.13	0.00	0.00	7729.00	825.84	-539.06	0.00	0.00	986.20	PBHL CANNON 31-3 1150' FNL 50' FWL	
PROJECT DETAILS: COLORADO NORTHERN ZONE - 83 Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone Location: SECTION 3 T 2N R65W System Datum: Mean Sea Level						FORMATION TOP DETAILS				
						TVDPath	MDPath	Formation		
						4147.00	4219.96	PARKMAN		
						4405.00	4484.51	SUSSEX		
						6839.00	6944.13	NIO		
						7133.00	7238.13	CODELL		
						7219.00	7324.13	GREENHORN		
						7579.00	7684.13	J SAND		
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 5-3 PAD

P_CANNON 31-3

P_CANNON 31-3

Plan: PLAN #1 9-13-10 RHS

Standard Planning Report

13 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 31-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 31-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 31-3		
Design:	PLAN #1 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 5-3 PAD, SECTION 3 T 2N R65W			
Site Position:		Northing:	1,305,592.91 usft	Latitude:	40° 10' 9.026 N
From:	Lat/Long	Easting:	3,235,581.75 usft	Longitude:	104° 39' 25.178 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.54 °

Well	P_CANNON 31-3, 1972' FNL 597' FWL					
Well Position	+N/-S	22.94 ft	Northing:	1,305,615.63 usft	Latitude:	40° 10' 9.253 N
	+E/-W	-22.36 ft	Easting:	3,235,559.18 usft	Longitude:	104° 39' 25.466 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,847.00 ft

Wellbore	P_CANNON 31-3				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/13/2010	8.89	66.91	53,101

Design	PLAN #1 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	326.87

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	
1,489.08	12.78	326.87	1,483.79	59.45	-38.80	2.00	2.00	0.00	326.87	
5,305.05	12.78	326.87	5,205.21	766.40	-500.26	0.00	0.00	0.00	0.00	
5,944.13	0.00	0.00	5,839.00	825.84	-539.06	2.00	-2.00	0.00	180.00	
7,834.13	0.00	0.00	7,729.00	825.84	-539.06	0.00	0.00	0.00	0.00	PBHL CANNON 31-3

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 31-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 31-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 31-3		
Design:	PLAN #1 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	326.87	900.00	0.37	-0.24	0.44	2.00	2.00	0.00
1,000.00	3.00	326.87	999.93	3.29	-2.15	3.93	2.00	2.00	0.00
1,100.00	5.00	326.87	1,099.68	9.13	-5.96	10.90	2.00	2.00	0.00
1,200.00	7.00	326.87	1,199.13	17.88	-11.67	21.35	2.00	2.00	0.00
1,300.00	9.00	326.87	1,298.15	29.54	-19.28	35.27	2.00	2.00	0.00
1,400.00	11.00	326.87	1,396.63	44.08	-28.77	52.63	2.00	2.00	0.00
1,489.08	12.78	326.87	1,483.79	59.45	-38.80	70.99	2.00	2.00	0.00
Start 3815.97 hold at 1489.08 MD									
1,500.00	12.78	326.87	1,494.44	61.47	-40.12	73.40	0.00	0.00	0.00
1,600.00	12.78	326.87	1,591.96	79.99	-52.22	95.53	0.00	0.00	0.00
1,700.00	12.78	326.87	1,689.49	98.52	-64.31	117.65	0.00	0.00	0.00
1,800.00	12.78	326.87	1,787.01	117.05	-76.40	139.77	0.00	0.00	0.00
1,900.00	12.78	326.87	1,884.53	135.57	-88.49	161.90	0.00	0.00	0.00
2,000.00	12.78	326.87	1,982.05	154.10	-100.59	184.02	0.00	0.00	0.00
2,100.00	12.78	326.87	2,079.57	172.62	-112.68	206.15	0.00	0.00	0.00
2,200.00	12.78	326.87	2,177.10	191.15	-124.77	228.27	0.00	0.00	0.00
2,300.00	12.78	326.87	2,274.62	209.68	-136.86	250.39	0.00	0.00	0.00
2,400.00	12.78	326.87	2,372.14	228.20	-148.96	272.52	0.00	0.00	0.00
2,500.00	12.78	326.87	2,469.66	246.73	-161.05	294.64	0.00	0.00	0.00
2,600.00	12.78	326.87	2,567.18	265.26	-173.14	316.76	0.00	0.00	0.00
2,700.00	12.78	326.87	2,664.71	283.78	-185.23	338.89	0.00	0.00	0.00
2,800.00	12.78	326.87	2,762.23	302.31	-197.33	361.01	0.00	0.00	0.00
2,900.00	12.78	326.87	2,859.75	320.83	-209.42	383.13	0.00	0.00	0.00
3,000.00	12.78	326.87	2,957.27	339.36	-221.51	405.26	0.00	0.00	0.00
3,100.00	12.78	326.87	3,054.79	357.89	-233.61	427.38	0.00	0.00	0.00
3,200.00	12.78	326.87	3,152.32	376.41	-245.70	449.50	0.00	0.00	0.00
3,300.00	12.78	326.87	3,249.84	394.94	-257.79	471.63	0.00	0.00	0.00
3,400.00	12.78	326.87	3,347.36	413.46	-269.88	493.75	0.00	0.00	0.00
3,500.00	12.78	326.87	3,444.88	431.99	-281.98	515.87	0.00	0.00	0.00
3,600.00	12.78	326.87	3,542.40	450.52	-294.07	538.00	0.00	0.00	0.00
3,700.00	12.78	326.87	3,639.93	469.04	-306.16	560.12	0.00	0.00	0.00
3,800.00	12.78	326.87	3,737.45	487.57	-318.25	582.25	0.00	0.00	0.00
3,900.00	12.78	326.87	3,834.97	506.10	-330.35	604.37	0.00	0.00	0.00
4,000.00	12.78	326.87	3,932.49	524.62	-342.44	626.49	0.00	0.00	0.00
4,100.00	12.78	326.87	4,030.02	543.15	-354.53	648.62	0.00	0.00	0.00
4,200.00	12.78	326.87	4,127.54	561.67	-366.63	670.74	0.00	0.00	0.00
4,219.96	12.78	326.87	4,147.00	565.37	-369.04	675.15	0.00	0.00	0.00
PARKMAN									
4,300.00	12.78	326.87	4,225.06	580.20	-378.72	692.86	0.00	0.00	0.00
4,400.00	12.78	326.87	4,322.58	598.73	-390.81	714.99	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 31-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 31-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 31-3		
Design:	PLAN #1 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)
4,484.51	12.78	326.87	4,405.00	614.38	-401.03	733.68	0.00	0.00	0.00
SUSSEX									
4,500.00	12.78	326.87	4,420.10	617.25	-402.90	737.11	0.00	0.00	0.00
4,600.00	12.78	326.87	4,517.63	635.78	-415.00	759.23	0.00	0.00	0.00
4,700.00	12.78	326.87	4,615.15	654.30	-427.09	781.36	0.00	0.00	0.00
4,800.00	12.78	326.87	4,712.67	672.83	-439.18	803.48	0.00	0.00	0.00
4,900.00	12.78	326.87	4,810.19	691.36	-451.27	825.60	0.00	0.00	0.00
5,000.00	12.78	326.87	4,907.71	709.88	-463.37	847.73	0.00	0.00	0.00
5,100.00	12.78	326.87	5,005.24	728.41	-475.46	869.85	0.00	0.00	0.00
5,200.00	12.78	326.87	5,102.76	746.93	-487.55	891.97	0.00	0.00	0.00
5,300.00	12.78	326.87	5,200.28	765.46	-499.65	914.10	0.00	0.00	0.00
5,305.05	12.78	326.87	5,205.21	766.40	-500.26	915.22	0.00	0.00	0.00
Start Drop -2.00									
5,400.00	10.88	326.87	5,298.13	782.70	-510.90	934.68	2.00	-2.00	0.00
5,500.00	8.88	326.87	5,396.64	797.07	-520.28	951.85	2.00	-2.00	0.00
5,600.00	6.88	326.87	5,495.69	808.55	-527.77	965.56	2.00	-2.00	0.00
5,700.00	4.88	326.87	5,595.16	817.14	-533.38	975.81	2.00	-2.00	0.00
5,800.00	2.88	326.87	5,694.93	822.81	-537.08	982.58	2.00	-2.00	0.00
5,900.00	0.88	326.87	5,794.87	825.56	-538.87	985.86	2.00	-2.00	0.00
5,944.13	0.00	0.00	5,839.00	825.84	-539.06	986.20	2.00	-2.00	0.00
Start 1890.00 hold at 5944.13 MD									
6,000.00	0.00	0.00	5,894.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,100.00	0.00	0.00	5,994.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,200.00	0.00	0.00	6,094.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,300.00	0.00	0.00	6,194.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,400.00	0.00	0.00	6,294.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,500.00	0.00	0.00	6,394.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,600.00	0.00	0.00	6,494.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,700.00	0.00	0.00	6,594.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,800.00	0.00	0.00	6,694.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,900.00	0.00	0.00	6,794.87	825.84	-539.06	986.20	0.00	0.00	0.00
6,944.13	0.00	0.00	6,839.00	825.84	-539.06	986.20	0.00	0.00	0.00
NIO									
7,000.00	0.00	0.00	6,894.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,100.00	0.00	0.00	6,994.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,200.00	0.00	0.00	7,094.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,238.13	0.00	0.00	7,133.00	825.84	-539.06	986.20	0.00	0.00	0.00
CODELL									
7,300.00	0.00	0.00	7,194.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,324.13	0.00	0.00	7,219.00	825.84	-539.06	986.20	0.00	0.00	0.00
GREENHORN									
7,400.00	0.00	0.00	7,294.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,500.00	0.00	0.00	7,394.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,600.00	0.00	0.00	7,494.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,684.13	0.00	0.00	7,579.00	825.84	-539.06	986.20	0.00	0.00	0.00
J SAND									
7,700.00	0.00	0.00	7,594.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,800.00	0.00	0.00	7,694.87	825.84	-539.06	986.20	0.00	0.00	0.00
7,834.13	0.00	0.00	7,729.00	825.84	-539.06	986.20	0.00	0.00	0.00
PBHL CANNON 31-3 1150' FNL 50' FWL									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 31-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 31-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 31-3		
Design:	PLAN #1 9-13-10 RHS		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL CANNON 31-3 11 - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,729.00	825.84	-539.06	1,306,436.31	3,235,012.29	40° 10' 17.414 N	104° 39' 32.411 W

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,219.96	4,147.00	PARKMAN				
4,484.51	4,405.00	SUSSEX				
6,944.13	6,839.00	NIO				
7,238.13	7,133.00	CODELL				
7,324.13	7,219.00	GREENHORN				
7,684.13	7,579.00	J SAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
850.00	850.00	0.00	0.00	Start Build 2.00	
1,489.08	1,483.79	59.45	-38.80	Start 3815.97 hold at 1489.08 MD	
5,305.05	5,205.21	766.40	-500.26	Start Drop -2.00	
5,944.13	5,839.00	825.84	-539.06	Start 1890.00 hold at 5944.13 MD	
7,834.13	7,729.00	825.84	-539.06	TD at 7834.13	