

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CARTER 10 PAD

Carter 23-32

Carter 23-32

Plan: Carter 23-32 (w01)

Standard Planning Report

28 January, 2011



Weatherford®

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_CARTER 10 PAD
Well: Carter 23-32
Wellbore: Carter 23-32
Section:
SHL:
Design: Carter 23-32 (w01)
Latitude: 40.093727
Longitude: -104.797343
GL: 4912.00
KB: WELL @ 4912.00ft (Original Well Elev)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3980.00	4165.57	PK Depth
4482.00	4698.32	SX Depth
7127.00	7368.21	NIO Depth
7452.00	7693.21	CD Depth
7542.00	7783.21	GH Depth
7892.00	8133.21	J Depth

Weatherford®



Azimuths to True North
Magnetic North: 8.93°
Magnetic Field
Strength: 53021.7snT
Dip Angle: 66.81°
Date: 12/4/2010
Model: IGRF2010

WELL DETAILS: Carter 23-32

+N/-S	+E/-W	Northing	Ground Level: Easting	4912.00 Latitude	Longitude	Slot
0.00	0.00	1277768.08	3196579.28	40.093727	-104.797343	

CASING DETAILS

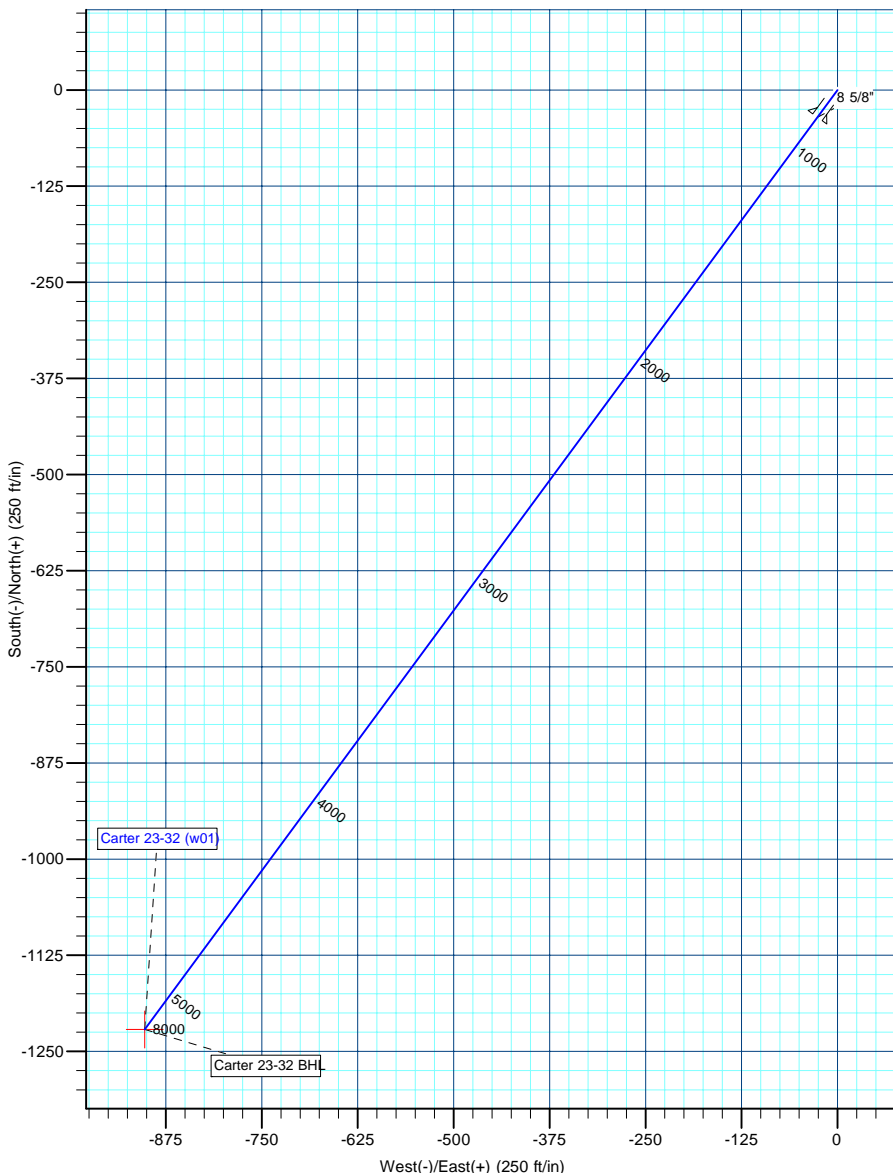
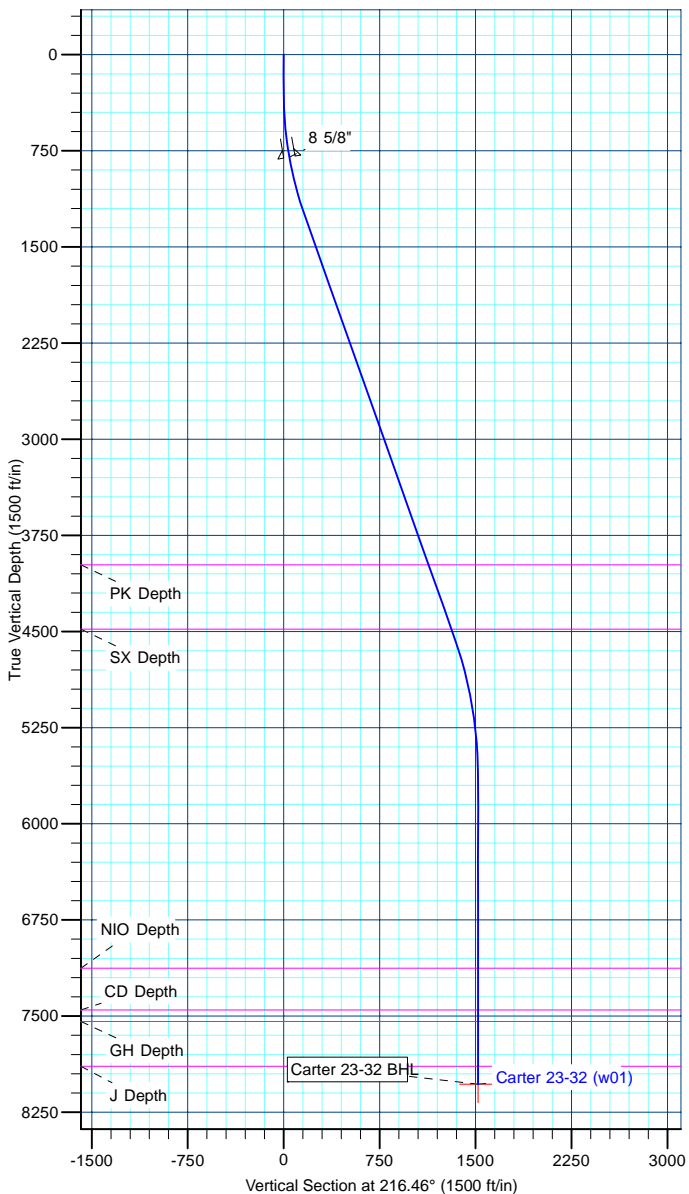
TVD	MD	Name	Size
800.00	802.57	8 5/8"	8-5/8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Carter 23-32 BHL	8032.00	-1221.34	-902.58	1276539.63	3195686.41	40.090374	-104.800569	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	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
1278.13	19.56	216.46	1259.24	-132.99	-98.28	2.00	216.46	165.37
4755.34	19.56	216.46	4535.73	-1069.35	-790.26	0.00	0.00	1329.67
5873.21	0.00	0.00	5632.00	-1221.34	-902.58	1.75	180.00	1518.66
8273.21	0.00	0.00	8032.00	-1221.34	-902.58	0.00	0.00	1518.66



Database:	edm5000p	Local Co-ordinate Reference:	Well Carter 23-32
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4912.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4912.00ft (Original Well Elev)
Site:	WELD_CARTER 10 PAD	North Reference:	True
Well:	Carter 23-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Carter 23-32		
Design:	Carter 23-32 (w01)		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_CARTER 10 PAD			
Site Position: From:	Lat/Long	Northing:	1,277,768.43 ft	Latitude:	40.093728
		Easting:	3,196,569.49 ft	Longitude:	-104.797378
		Position Uncertainty:	0.00 ft	Slot Radius:	0 "

Well	Carter 23-32					
Well Position	+N-S	-0.43 ft	Northing:	1,277,768.08 ft	Latitude:	40.093727
	+E-W	9.79 ft	Easting:	3,196,579.28 ft	Longitude:	-104.797343
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,912.00 ft

Wellbore	Carter 23-32				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/4/2010	8.93	66.81	53,022

Design	Carter 23-32 (w01)				
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	216.46	

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,278.13	19.56	216.46	1,259.24	-132.99	-98.28	2.00	2.00	0.00	216.46	
4,755.34	19.56	216.46	4,535.73	-1,069.35	-790.26	0.00	0.00	0.00	0.00	
5,873.21	0.00	0.00	5,632.00	-1,221.34	-902.58	1.75	-1.75	0.00	180.00	
8,273.21	0.00	0.00	8,032.00	-1,221.34	-902.58	0.00	0.00	0.00	0.00	Carter 23-32 BHL

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4912.00ft (Original Well Elev)
Site:	WELD_CARTER 10 PAD	North Reference:	True
Well:	Carter 23-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Carter 23-32		
Design:	Carter 23-32 (w01)		

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	2.00	216.46	399.98	-1.40	-1.04	1.75	2.00	2.00	0.00
500.00	4.00	216.46	499.84	-5.61	-4.15	6.98	2.00	2.00	0.00
600.00	6.00	216.46	599.45	-12.62	-9.33	15.69	2.00	2.00	0.00
700.00	8.00	216.46	698.70	-22.42	-16.57	27.88	2.00	2.00	0.00
800.00	10.00	216.46	797.47	-35.00	-25.87	43.52	2.00	2.00	0.00
802.57	10.05	216.46	800.00	-35.36	-26.13	43.97	2.00	2.00	0.00
8 5/8"									
900.00	12.00	216.46	895.62	-50.35	-37.21	62.60	2.00	2.00	0.00
1,000.00	14.00	216.46	993.06	-68.44	-50.58	85.10	2.00	2.00	0.00
1,100.00	16.00	216.46	1,089.64	-89.25	-65.96	110.98	2.00	2.00	0.00
1,200.00	18.00	216.46	1,185.27	-112.76	-83.33	140.21	2.00	2.00	0.00
1,278.13	19.56	216.46	1,259.24	-132.99	-98.28	165.37	2.00	2.00	0.00
1,300.00	19.56	216.46	1,279.84	-138.88	-102.63	172.69	0.00	0.00	0.00
1,400.00	19.56	216.46	1,374.07	-165.81	-122.53	206.17	0.00	0.00	0.00
1,500.00	19.56	216.46	1,468.30	-192.74	-142.43	239.66	0.00	0.00	0.00
1,600.00	19.56	216.46	1,562.53	-219.67	-162.33	273.14	0.00	0.00	0.00
1,700.00	19.56	216.46	1,656.75	-246.59	-182.23	306.62	0.00	0.00	0.00
1,800.00	19.56	216.46	1,750.98	-273.52	-202.14	340.11	0.00	0.00	0.00
1,900.00	19.56	216.46	1,845.21	-300.45	-222.04	373.59	0.00	0.00	0.00
2,000.00	19.56	216.46	1,939.44	-327.38	-241.94	407.08	0.00	0.00	0.00
2,100.00	19.56	216.46	2,033.66	-354.31	-261.84	440.56	0.00	0.00	0.00
2,200.00	19.56	216.46	2,127.89	-381.24	-281.74	474.04	0.00	0.00	0.00
2,300.00	19.56	216.46	2,222.12	-408.16	-301.64	507.53	0.00	0.00	0.00
2,400.00	19.56	216.46	2,316.35	-435.09	-321.54	541.01	0.00	0.00	0.00
2,500.00	19.56	216.46	2,410.58	-462.02	-341.44	574.49	0.00	0.00	0.00
2,600.00	19.56	216.46	2,504.80	-488.95	-361.34	607.98	0.00	0.00	0.00
2,700.00	19.56	216.46	2,599.03	-515.88	-381.24	641.46	0.00	0.00	0.00
2,800.00	19.56	216.46	2,693.26	-542.81	-401.14	674.94	0.00	0.00	0.00
2,900.00	19.56	216.46	2,787.49	-569.74	-421.04	708.43	0.00	0.00	0.00
3,000.00	19.56	216.46	2,881.71	-596.66	-440.94	741.91	0.00	0.00	0.00
3,100.00	19.56	216.46	2,975.94	-623.59	-460.84	775.40	0.00	0.00	0.00
3,200.00	19.56	216.46	3,070.17	-650.52	-480.74	808.88	0.00	0.00	0.00
3,300.00	19.56	216.46	3,164.40	-677.45	-500.64	842.36	0.00	0.00	0.00
3,400.00	19.56	216.46	3,258.62	-704.38	-520.54	875.85	0.00	0.00	0.00
3,500.00	19.56	216.46	3,352.85	-731.31	-540.44	909.33	0.00	0.00	0.00
3,600.00	19.56	216.46	3,447.08	-758.23	-560.34	942.81	0.00	0.00	0.00
3,700.00	19.56	216.46	3,541.31	-785.16	-580.24	976.30	0.00	0.00	0.00
3,800.00	19.56	216.46	3,635.53	-812.09	-600.14	1,009.78	0.00	0.00	0.00
3,900.00	19.56	216.46	3,729.76	-839.02	-620.04	1,043.27	0.00	0.00	0.00
4,000.00	19.56	216.46	3,823.99	-865.95	-639.94	1,076.75	0.00	0.00	0.00
4,100.00	19.56	216.46	3,918.22	-892.88	-659.84	1,110.23	0.00	0.00	0.00
4,165.57	19.56	216.46	3,980.00	-910.53	-672.89	1,132.19	0.00	0.00	0.00
PK Depth									
4,200.00	19.56	216.46	4,012.44	-919.80	-679.74	1,143.72	0.00	0.00	0.00
4,300.00	19.56	216.46	4,106.67	-946.73	-699.64	1,177.20	0.00	0.00	0.00
4,400.00	19.56	216.46	4,200.90	-973.66	-719.54	1,210.68	0.00	0.00	0.00
4,500.00	19.56	216.46	4,295.13	-1,000.59	-739.44	1,244.17	0.00	0.00	0.00
4,600.00	19.56	216.46	4,389.35	-1,027.52	-759.34	1,277.65	0.00	0.00	0.00
4,698.32	19.56	216.46	4,482.00	-1,053.99	-778.91	1,310.57	0.00	0.00	0.00

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Site:	WELD_CARTER 10 PAD	North Reference:	True
Well:	Carter 23-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Carter 23-32		
Design:	Carter 23-32 (w01)		

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)
SX Depth									
4,700.00	19.56	216.46	4,483.58	-1,054.45	-779.24	1,311.14	0.00	0.00	0.00
4,755.34	19.56	216.46	4,535.73	-1,069.35	-790.26	1,329.67	0.00	0.00	0.00
4,800.00	18.78	216.46	4,577.91	-1,081.14	-798.97	1,344.33	1.75	-1.75	0.00
4,900.00	17.03	216.46	4,673.06	-1,105.87	-817.24	1,375.08	1.75	-1.75	0.00
5,000.00	15.28	216.46	4,769.11	-1,128.25	-833.78	1,402.90	1.75	-1.75	0.00
5,100.00	13.53	216.46	4,865.96	-1,148.25	-848.57	1,427.78	1.75	-1.75	0.00
5,200.00	11.78	216.46	4,963.53	-1,165.87	-861.59	1,449.69	1.75	-1.75	0.00
5,300.00	10.03	216.46	5,061.72	-1,181.09	-872.83	1,468.61	1.75	-1.75	0.00
5,400.00	8.28	216.46	5,160.44	-1,193.89	-882.29	1,484.52	1.75	-1.75	0.00
5,500.00	6.53	216.46	5,259.60	-1,204.25	-889.95	1,497.41	1.75	-1.75	0.00
5,600.00	4.78	216.46	5,359.11	-1,212.18	-895.81	1,507.26	1.75	-1.75	0.00
5,700.00	3.03	216.46	5,458.88	-1,217.66	-899.86	1,514.08	1.75	-1.75	0.00
5,800.00	1.28	216.46	5,558.80	-1,220.68	-902.09	1,517.84	1.75	-1.75	0.00
5,873.21	0.00	0.00	5,632.00	-1,221.34	-902.58	1,518.66	1.75	-1.75	0.00
5,900.00	0.00	0.00	5,658.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,000.00	0.00	0.00	5,758.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,100.00	0.00	0.00	5,858.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,200.00	0.00	0.00	5,958.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,300.00	0.00	0.00	6,058.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,400.00	0.00	0.00	6,158.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,500.00	0.00	0.00	6,258.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,600.00	0.00	0.00	6,358.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,700.00	0.00	0.00	6,458.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,800.00	0.00	0.00	6,558.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
6,900.00	0.00	0.00	6,658.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,000.00	0.00	0.00	6,758.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,100.00	0.00	0.00	6,858.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,200.00	0.00	0.00	6,958.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,300.00	0.00	0.00	7,058.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,368.21	0.00	0.00	7,127.00	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
NIO Depth									
7,400.00	0.00	0.00	7,158.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,500.00	0.00	0.00	7,258.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,600.00	0.00	0.00	7,358.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,693.21	0.00	0.00	7,452.00	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
CD Depth									
7,700.00	0.00	0.00	7,458.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,783.21	0.00	0.00	7,542.00	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
GH Depth									
7,800.00	0.00	0.00	7,558.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
7,900.00	0.00	0.00	7,658.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
8,000.00	0.00	0.00	7,758.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
8,100.00	0.00	0.00	7,858.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
8,133.21	0.00	0.00	7,892.00	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
J Depth									
8,200.00	0.00	0.00	7,958.79	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
8,273.21	0.00	0.00	8,032.00	-1,221.34	-902.58	1,518.66	0.00	0.00	0.00
Carter 23-32 BHL									

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Site:	WELD_CARTER 10 PAD	North Reference:	True
Well:	Carter 23-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Carter 23-32		
Design:	Carter 23-32 (w01)		

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Carter 23-32 BHL	0.00	0.00	8,032.00	-1,221.34	-902.58	1,276,539.63	3,195,686.41	40.090374	-104.800569
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
802.57	800.00	8 5/8"	8-5/8	11

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,165.57	3,980.00	PK Depth			
4,698.32	4,482.00	SX Depth			
7,368.21	7,127.00	NIO Depth			
7,693.21	7,452.00	CD Depth			
7,783.21	7,542.00	GH Depth			
8,133.21	7,892.00	J Depth			