

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_XCEL PAD

Xcel 13-27

Xcel 13-27

Plan: Xcel 13-27 (wp01)

Standard Planning Report

09 November, 2011

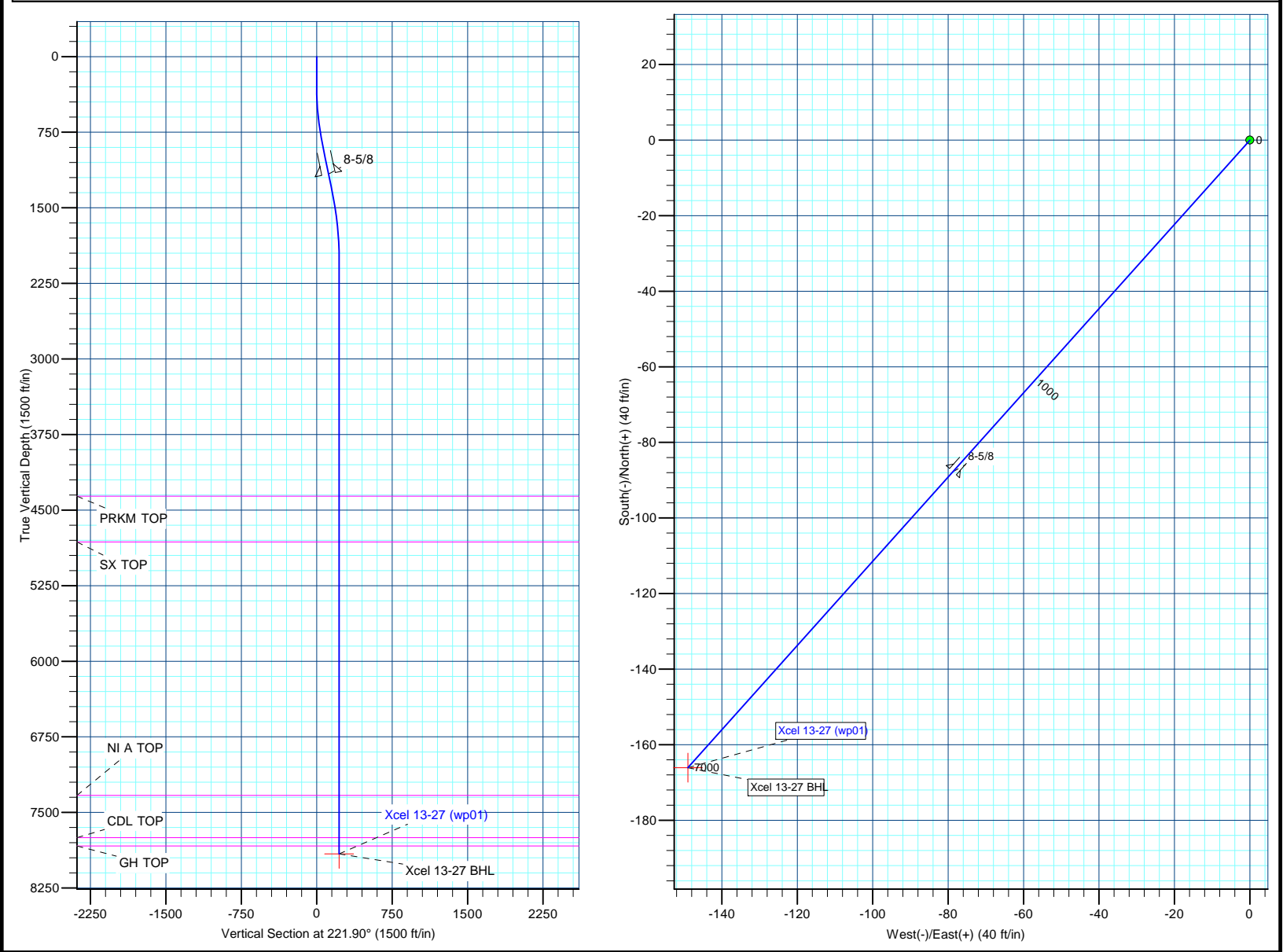
Project: COLORADO NORTHERN ZONE - 83 Site: WELD_XCEL PAD Well: Xcel 13-27 Wellbore: Xcel 13-27 Section: SHL: Design: Xcel 13-27 (wp01) Latitude: 40.016683 Longitude: -104.883695 GL: 5025.00 KB: rkb + gl @ 5040.00ft	FORMATION TOP DETAILS			
	TVDPath	MDPath	Formation	
	4362.00	4380.42	PRKM TOP	
	4816.00	4834.42	SX TOP	
	7330.00	7348.42	NI A TOP	
	7750.00	7768.42	CDL TOP	
	7833.00	7851.42	GH TOP	

WELL DETAILS: Xcel 13-27								<div> <div> T M </div> <div> </div> </div> <div> Azimuths to True North Magnetic North: 8.84° Magnetic Field Strength: 52872.4snT Dip Angle: 66.71° Date: 11/9/2011 Model: IGRF2010 </div>	
+N/-S	+E/-W	Northing	Ground Level: Easting	5025.00 Latitude	Longitude	Slot			
0.00	0.00	1249523.86	3172616.43	40.016683	-104.883695				

CASING DETAILS			
TVD	MD	Name	Size
1165.00	1174.99	8-5/8	8-5/8

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Xcel 13-27 BHL	7910.00	-166.10	-149.01	1249356.74	3172468.58	40.016227	-104.884227

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
880.72	11.61	221.90	876.76	-43.66	-39.17	2.00	221.90	58.66
1364.73	11.61	221.90	1350.85	-116.20	-104.24	0.00	0.00	156.10
2028.42	0.00	0.00	2010.00	-166.10	-149.01	1.75	180.00	223.14
7928.42	0.00	0.00	7910.00	-166.10	-149.01	0.00	0.00	223.14



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Xcel 13-27
Company:	US ROCKIES REGION PLANNING	TVD Reference:	rkb + gl @ 5040.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	rkb + gl @ 5040.00ft
Site:	WELD_XCEL PAD	North Reference:	True
Well:	Xcel 13-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Xcel 13-27		
Design:	Xcel 13-27 (wp01)		

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_XCEL PAD			
Site Position:		Northing:	1,249,555.93 usft	Latitude: 40.016771
From:	Lat/Long	Easting:	3,172,616.21 usft	Longitude: -104.883695
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.40 °

Well	Xcel 13-27			
Well Position	+N/-S	-32.07 ft	Northing:	1,249,523.86 usft
	+E/-W	0.00 ft	Easting:	3,172,616.43 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 5,025.00 ft

Wellbore	Xcel 13-27				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/9/2011	8.84	66.71	52,872

Design	Xcel 13-27 (wp01)			
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	221.90

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
880.72	11.61	221.90	876.76	-43.66	-39.17	2.00	2.00	0.00	221.90	
1,364.73	11.61	221.90	1,350.85	-116.20	-104.24	0.00	0.00	0.00	0.00	
2,028.42	0.00	0.00	2,010.00	-166.10	-149.01	1.75	-1.75	0.00	180.00	
7,928.42	0.00	0.00	7,910.00	-166.10	-149.01	0.00	0.00	0.00	0.00	Xcel 13-27 BHL

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Xcel 13-27
Company:	US ROCKIES REGION PLANNING	TVD Reference:	rkb + gl @ 5040.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	rkb + gl @ 5040.00ft
Site:	WELD_XCEL PAD	North Reference:	True
Well:	Xcel 13-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Xcel 13-27		
Design:	Xcel 13-27 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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	221.90	399.98	-1.30	-1.17	1.75	2.00	2.00	0.00
500.00	4.00	221.90	499.84	-5.19	-4.66	6.98	2.00	2.00	0.00
600.00	6.00	221.90	599.45	-11.68	-10.48	15.69	2.00	2.00	0.00
700.00	8.00	221.90	698.70	-20.75	-18.62	27.88	2.00	2.00	0.00
800.00	10.00	221.90	797.47	-32.40	-29.06	43.52	2.00	2.00	0.00
880.72	11.61	221.90	876.76	-43.66	-39.17	58.66	2.00	2.00	0.00
900.00	11.61	221.90	895.64	-46.55	-41.76	62.54	0.00	0.00	0.00
1,000.00	11.61	221.90	993.59	-61.54	-55.21	82.67	0.00	0.00	0.00
1,100.00	11.61	221.90	1,091.54	-76.52	-68.65	102.80	0.00	0.00	0.00
1,174.99	11.61	221.90	1,165.00	-87.76	-78.73	117.90	0.00	0.00	0.00
8-5/8									
1,200.00	11.61	221.90	1,189.49	-91.51	-82.09	122.94	0.00	0.00	0.00
1,300.00	11.61	221.90	1,287.45	-106.50	-95.54	143.07	0.00	0.00	0.00
1,364.73	11.61	221.90	1,350.85	-116.20	-104.24	156.10	0.00	0.00	0.00
1,400.00	11.00	221.90	1,385.44	-121.34	-108.86	163.02	1.75	-1.75	0.00
1,500.00	9.25	221.90	1,483.88	-134.42	-120.59	180.59	1.75	-1.75	0.00
1,600.00	7.50	221.90	1,582.81	-145.26	-130.32	195.15	1.75	-1.75	0.00
1,700.00	5.75	221.90	1,682.14	-153.85	-138.02	206.68	1.75	-1.75	0.00
1,800.00	4.00	221.90	1,781.77	-160.17	-143.69	215.17	1.75	-1.75	0.00
1,900.00	2.25	221.90	1,881.62	-164.22	-147.33	220.62	1.75	-1.75	0.00
2,000.00	0.50	221.90	1,981.59	-166.00	-148.92	223.02	1.75	-1.75	0.00
2,028.42	0.00	0.00	2,010.00	-166.10	-149.01	223.14	1.75	-1.75	0.00
2,100.00	0.00	0.00	2,081.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,200.00	0.00	0.00	2,181.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,300.00	0.00	0.00	2,281.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,400.00	0.00	0.00	2,381.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,500.00	0.00	0.00	2,481.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,600.00	0.00	0.00	2,581.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,700.00	0.00	0.00	2,681.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,800.00	0.00	0.00	2,781.58	-166.10	-149.01	223.14	0.00	0.00	0.00
2,900.00	0.00	0.00	2,881.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,000.00	0.00	0.00	2,981.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,100.00	0.00	0.00	3,081.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,200.00	0.00	0.00	3,181.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,300.00	0.00	0.00	3,281.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,400.00	0.00	0.00	3,381.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,500.00	0.00	0.00	3,481.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,600.00	0.00	0.00	3,581.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,700.00	0.00	0.00	3,681.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,800.00	0.00	0.00	3,781.58	-166.10	-149.01	223.14	0.00	0.00	0.00
3,900.00	0.00	0.00	3,881.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,000.00	0.00	0.00	3,981.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,100.00	0.00	0.00	4,081.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,200.00	0.00	0.00	4,181.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,300.00	0.00	0.00	4,281.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,380.42	0.00	0.00	4,362.00	-166.10	-149.01	223.14	0.00	0.00	0.00
PRKM TOP									
4,400.00	0.00	0.00	4,381.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,500.00	0.00	0.00	4,481.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,600.00	0.00	0.00	4,581.58	-166.10	-149.01	223.14	0.00	0.00	0.00

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Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	rkb + gl @ 5040.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	rkb + gl @ 5040.00ft
Site:	WELD_XCEL PAD	North Reference:	True
Well:	Xcel 13-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Xcel 13-27		
Design:	Xcel 13-27 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.00	0.00	0.00	4,681.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,800.00	0.00	0.00	4,781.58	-166.10	-149.01	223.14	0.00	0.00	0.00
4,834.42	0.00	0.00	4,816.00	-166.10	-149.01	223.14	0.00	0.00	0.00
SX TOP									
4,900.00	0.00	0.00	4,881.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,000.00	0.00	0.00	4,981.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,100.00	0.00	0.00	5,081.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,200.00	0.00	0.00	5,181.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,300.00	0.00	0.00	5,281.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,400.00	0.00	0.00	5,381.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,500.00	0.00	0.00	5,481.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,600.00	0.00	0.00	5,581.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,700.00	0.00	0.00	5,681.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,800.00	0.00	0.00	5,781.58	-166.10	-149.01	223.14	0.00	0.00	0.00
5,900.00	0.00	0.00	5,881.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,000.00	0.00	0.00	5,981.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,100.00	0.00	0.00	6,081.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,200.00	0.00	0.00	6,181.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,300.00	0.00	0.00	6,281.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,400.00	0.00	0.00	6,381.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,481.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,600.00	0.00	0.00	6,581.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,700.00	0.00	0.00	6,681.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,800.00	0.00	0.00	6,781.58	-166.10	-149.01	223.14	0.00	0.00	0.00
6,900.00	0.00	0.00	6,881.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,000.00	0.00	0.00	6,981.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,100.00	0.00	0.00	7,081.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,200.00	0.00	0.00	7,181.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,300.00	0.00	0.00	7,281.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,348.42	0.00	0.00	7,330.00	-166.10	-149.01	223.14	0.00	0.00	0.00
NI A TOP									
7,400.00	0.00	0.00	7,381.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,500.00	0.00	0.00	7,481.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,600.00	0.00	0.00	7,581.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,700.00	0.00	0.00	7,681.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,768.42	0.00	0.00	7,750.00	-166.10	-149.01	223.14	0.00	0.00	0.00
CDL TOP									
7,800.00	0.00	0.00	7,781.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,851.42	0.00	0.00	7,833.00	-166.10	-149.01	223.14	0.00	0.00	0.00
GH TOP									
7,900.00	0.00	0.00	7,881.58	-166.10	-149.01	223.14	0.00	0.00	0.00
7,928.42	0.00	0.00	7,910.00	-166.10	-149.01	223.14	0.00	0.00	0.00
Xcel 13-27 BHL									

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Xcel 13-27
Company:	US ROCKIES REGION PLANNING	TVD Reference:	rkb + gl @ 5040.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	rkb + gl @ 5040.00ft
Site:	WELD_XCEL PAD	North Reference:	True
Well:	Xcel 13-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Xcel 13-27		
Design:	Xcel 13-27 (wp01)		

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									
Xcel 13-27 BHL	0.00	0.00	7,910.00	-166.10	-149.01	1,249,356.73	3,172,468.58	40.016227	-104.884227
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth	Name		
(ft)	(ft)			
		Casing Diameter	Hole Diameter	
		(")	(")	
1,174.99	1,165.00	8-5/8	11	

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
4,380.42	4,362.00	PRKM TOP				
4,834.42	4,816.00	SX TOP				
7,348.42	7,330.00	NI A TOP				
7,768.42	7,750.00	CDL TOP				
7,851.42	7,833.00	GH TOP				