



Weatherford[®]

Drilling Services

Proposal



YA-8

MONTEZUMA CO., CO

WELL FILE: **PLAN 1**

APRIL 10, 2013

Weatherford International, Ltd.

P.O. Box 61028

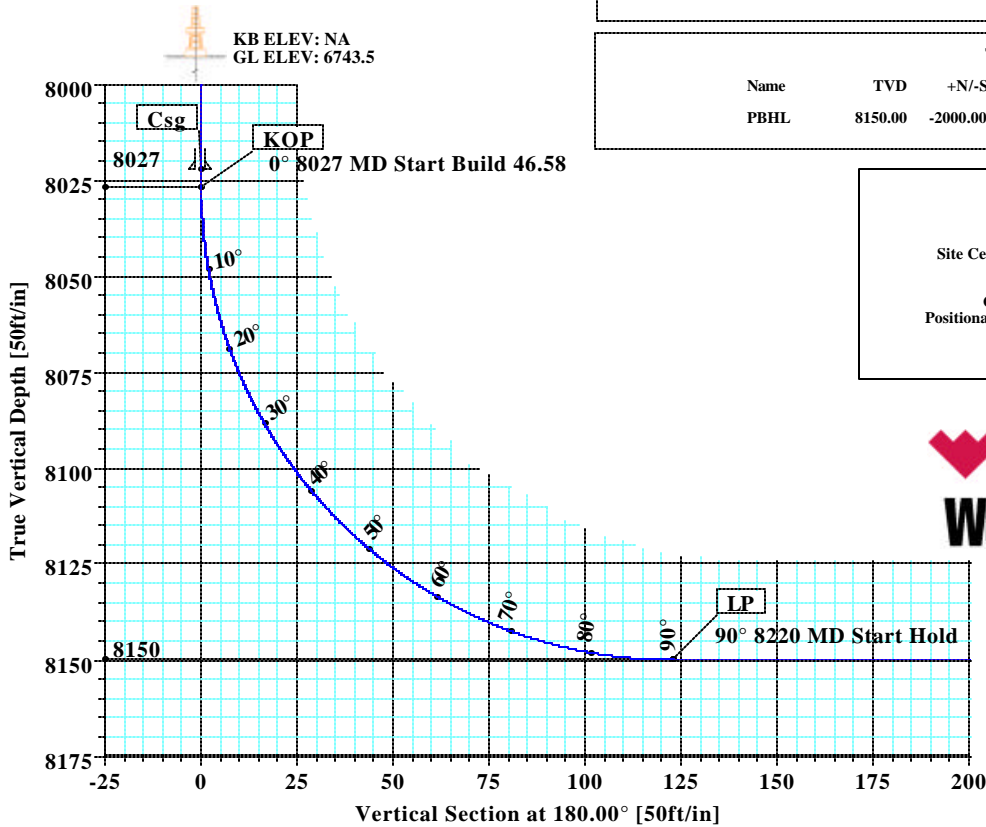
Midland, TX 79711 USA

+1.432.561.8892 Main

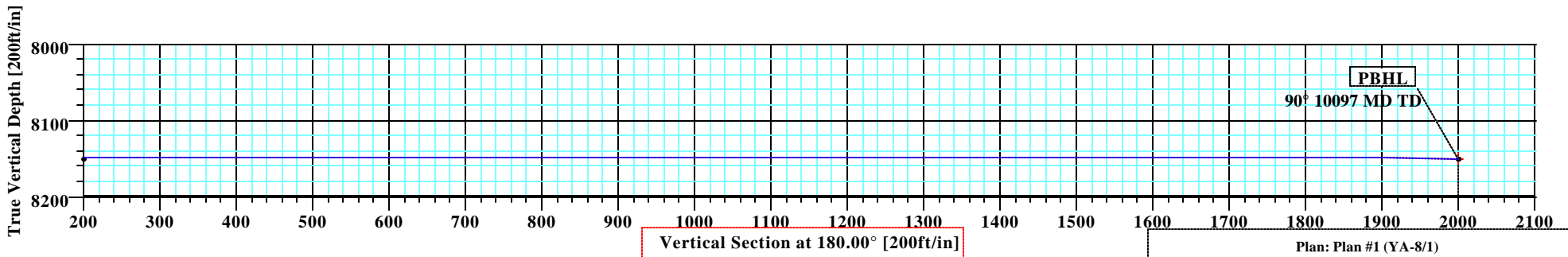
+1.432.561.8895 Fax

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YA-8 Montezuma Co., Colorado



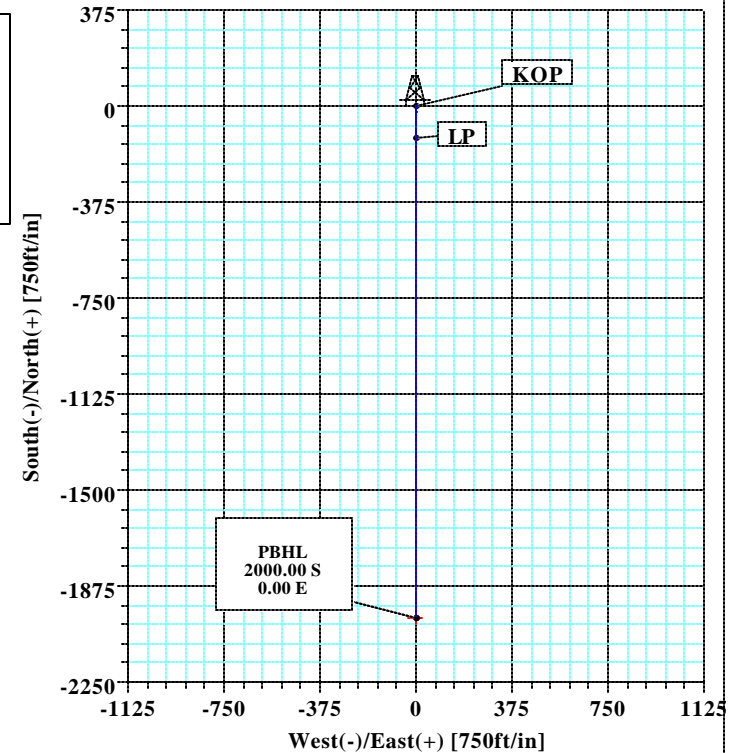
SITE DETAILS						
YA-8						
Site Centre Latitude:	37°29'00.240N					
Longitude:	108°48'09.360W					
Ground Level:	6743.50					
Positional Uncertainty:	0.00					
Convergence:	-2.03					



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8027.00	0.00	180.00	8027.00	0.00	0.00	0.00	0.00	0.00	
3	8220.21	90.00	180.00	8150.00	-123.00	0.00	46.58	180.00	123.00	
4	10097.21	90.00	180.00	8150.00	-2000.00	0.00	0.00	0.00	2000.00	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
YA-8	0.00	0.00	1314329.33	2041911.67	37°29'00.240N	108°48'09.360W	N/A

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	
PBHL	8150.00	-2000.00	0.00	1312330.58	2041840.97	Point	





Company: Kinder Morgan	Date: 4/10/2013	Time: 08:06:48	Page: 1
Field: Montezuma Co., CO (NAD83)	Co-ordinate(NE) Reference: Well: YA-8, True North		
Site: YA-8	Vertical (TVD) Reference: SITE 6743.5		
Well: YA-8	Section (VS) Reference: Well (0.00N,0.00E,180.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 4/10/2013
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Montezuma Co., CO (NAD83)
Colorado

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: Colorado, Southern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: YA-8

Site Position:	Northing: 1314329.33 ft	Latitude: 37 29 0.240 N
From: Geographic	Easting: 2041911.67 ft	Longitude: 108 48 9.360 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 6743.50 ft		Grid Convergence: -2.03 deg

Well: YA-8	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 37 29 0.240 N
+E/-W 0.00 ft	Longitude: 108 48 9.360 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 8/1/2013	Above System Datum: Mean Sea Level
Field Strength: 50856 nT	Declination: 10.17 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 63.85 deg
ft	+E/-W
	Direction
	deg
8150.00	0.00
0.00	180.00

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8027.00	0.00	180.00	8027.00	0.00	0.00	0.00	0.00	0.00	0.00	
8220.21	90.00	180.00	8150.00	-123.00	0.00	46.58	46.58	0.00	180.00	
10097.21	90.00	180.00	8150.00	-2000.00	0.00	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
8000.00	0.00	180.00	8000.00	0.00	0.00	0.00	0.00	37	29	0.240	108	48	9.360	
8022.00	0.00	180.00	8022.00	0.00	0.00	0.00	0.00	37	29	0.240	108	48	9.360	
8027.00	0.00	180.00	8027.00	0.00	0.00	0.00	0.00	37	29	0.240	108	48	9.360	
8030.00	1.40	180.00	8030.00	-0.04	0.00	0.04	46.58	37	29	0.240	108	48	9.360	
8040.00	6.06	180.00	8039.98	-0.69	0.00	0.69	46.58	37	29	0.233	108	48	9.360	
8050.00	10.71	180.00	8049.87	-2.14	0.00	2.14	46.58	37	29	0.219	108	48	9.360	
8060.00	15.37	180.00	8059.61	-4.40	0.00	4.40	46.58	37	29	0.196	108	48	9.360	
8070.00	20.03	180.00	8069.13	-7.44	0.00	7.44	46.58	37	29	0.166	108	48	9.360	
8080.00	24.69	180.00	8078.38	-11.24	0.00	11.24	46.58	37	29	0.129	108	48	9.360	
8090.00	29.35	180.00	8087.28	-15.78	0.00	15.78	46.58	37	29	0.084	108	48	9.360	
8100.00	34.00	180.00	8095.79	-21.03	0.00	21.03	46.58	37	29	0.032	108	48	9.360	
8110.00	38.66	180.00	8103.84	-26.96	0.00	26.96	46.58	37	28	59.973	108	48	9.360	
8120.00	43.32	180.00	8111.39	-33.52	0.00	33.52	46.58	37	28	59.909	108	48	9.360	
8130.00	47.98	180.00	8118.38	-40.66	0.00	40.66	46.58	37	28	59.838	108	48	9.360	
8140.00	52.64	180.00	8124.76	-48.36	0.00	48.36	46.58	37	28	59.762	108	48	9.360	
8150.00	57.30	180.00	8130.50	-56.54	0.00	56.54	46.58	37	28	59.681	108	48	9.360	
8160.00	61.95	180.00	8135.56	-65.17	0.00	65.17	46.58	37	28	59.596	108	48	9.360	



Company: Kinder Morgan	Date: 4/10/2013	Time: 08:06:48	Page: 2
Field: Montezuma Co., CO (NAD83)	Co-ordinate(NE) Reference: Well: YA-8, True North		
Site: YA-8	Vertical (TVD) Reference: SITE 6743.5		
Well: YA-8	Section (VS) Reference: Well (0.00N,0.00E,180.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
8170.00	66.61	180.00	8139.89	-74.17	0.00	74.17	46.58	37	28	59.507	108	48	9.360	
8180.00	71.27	180.00	8143.49	-83.50	0.00	83.50	46.58	37	28	59.414	108	48	9.360	
8190.00	75.93	180.00	8146.31	-93.09	0.00	93.09	46.58	37	28	59.320	108	48	9.360	
8200.00	80.59	180.00	8148.34	-102.88	0.00	102.88	46.58	37	28	59.223	108	48	9.360	
8210.00	85.24	180.00	8149.58	-112.80	0.00	112.80	46.58	37	28	59.125	108	48	9.360	
8220.21	90.00	180.00	8150.00	-123.00	0.00	123.00	46.58	37	28	59.024	108	48	9.360	LP
8300.00	90.00	180.00	8150.00	-202.79	0.00	202.79	0.00	37	28	58.235	108	48	9.360	
8400.00	90.00	180.00	8150.00	-302.79	0.00	302.79	0.00	37	28	57.246	108	48	9.360	
8500.00	90.00	180.00	8150.00	-402.79	0.00	402.79	0.00	37	28	56.258	108	48	9.360	
8600.00	90.00	180.00	8150.00	-502.79	0.00	502.79	0.00	37	28	55.269	108	48	9.360	
8700.00	90.00	180.00	8150.00	-602.79	0.00	602.79	0.00	37	28	54.280	108	48	9.360	
8800.00	90.00	180.00	8150.00	-702.79	0.00	702.79	0.00	37	28	53.291	108	48	9.360	
8900.00	90.00	180.00	8150.00	-802.79	0.00	802.79	0.00	37	28	52.303	108	48	9.360	
9000.00	90.00	180.00	8150.00	-902.79	0.00	902.79	0.00	37	28	51.314	108	48	9.360	
9100.00	90.00	180.00	8150.00	-1002.79	0.00	1002.79	0.00	37	28	50.325	108	48	9.360	
9200.00	90.00	180.00	8150.00	-1102.79	0.00	1102.79	0.00	37	28	49.337	108	48	9.360	
9300.00	90.00	180.00	8150.00	-1202.79	0.00	1202.79	0.00	37	28	48.348	108	48	9.360	
9400.00	90.00	180.00	8150.00	-1302.79	0.00	1302.79	0.00	37	28	47.359	108	48	9.360	
9500.00	90.00	180.00	8150.00	-1402.79	0.00	1402.79	0.00	37	28	46.371	108	48	9.360	
9600.00	90.00	180.00	8150.00	-1502.79	0.00	1502.79	0.00	37	28	45.382	108	48	9.360	
9700.00	90.00	180.00	8150.00	-1602.79	0.00	1602.79	0.00	37	28	44.393	108	48	9.360	
9800.00	90.00	180.00	8150.00	-1702.79	0.00	1702.79	0.00	37	28	43.405	108	48	9.360	
9900.00	90.00	180.00	8150.00	-1802.79	0.00	1802.79	0.00	37	28	42.416	108	48	9.360	
10000.00	90.00	180.00	8150.00	-1902.79	0.00	1902.79	0.00	37	28	41.427	108	48	9.360	
10097.21	90.00	180.00	8150.00	-2000.00	0.00	2000.00	0.00	37	28	40.466	108	48	9.360	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->			
Deg	Min	Sec						Deg	Min	Sec		Deg	Min	Sec
PBHL			8150.00	-2000.00	0.00	1312330.58	2041840.97	37	28	40.466	N	108	48	9.360 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
8022.00	8022.00	0.000	0.000	Csg

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Annotation

MD ft	TVD ft	
8027.00	8027.00	KOP
8220.21	8150.00	LP
10097.20	8150.00	PBHL

Company: Kinder Morgan	Date: 4/10/2013	Time: 08:06:48	Page: 3
Field: Montezuma Co., CO (NAD83)	Co-ordinate(NE) Reference: Well: YA-8, True North		
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Field: Montezuma Co., CO (NAD83)
Colorado

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: Colorado, Southern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

**Weatherford®****Weatherford Drilling Services**

GeoDec v5.03

Report Date: April 10, 2013

Job Number: _____

Customer: Kinder Morgan

Well Name: YA-8

API Number: _____

Rig Name: _____

Location: Montezuma Co., CO

Block: _____

Engineer: Patrick Rudolph

Geodetic Latitude / Longitude

System: Latitude / Longitude

Projection: Geodetic Latitude and Longitude

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Latitude 37.4834000 DEG

Longitude -108.8026000 DEG

Geodetic Latitude / Longitude

System: Latitude / Longitude

Projection: Geodetic Latitude and Longitude

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Latitude 37 29 0.2400000 DMS

Longitude -108 48 9.3600000 DMS

Geodetic Location WGS84

Elevation = 0.0 Meters

Latitude = 37.48340° N 37° 29 min .240 sec

Longitude = 108.80260° W 108° 48 min 9.360 sec

Magnetic Declination = 10.20° [True North Offset]

Local Gravity = .9993 g CheckSum = 7428

Local Field Strength = 50778 nT Magnetic Vector X = 22043 nT

Magnetic Dip = 63.83° Magnetic Vector Y = 3967 nT

Magnetic Model = bggm2012 Magnetic Vector Z = 45571 nT

Spud Date = Aug 01, 2013 Magnetic Vector H = 22397 nT

Signed: _____

Date: _____