



Weatherford®

Drilling Services

Proposal



DOE CANYON 12

DOLORES CO., CO

WELL FILE: **PLAN 1**

OCTOBER 19, 2011

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Doe Canyon 12
Dolores Co., Colorado



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8451.00	0.00	0.00	8451.00	0.00	0.00	0.00	0.00	0.00	
3	8645.78	90.00	0.00	8575.00	124.00	0.00	46.21	0.00	124.00	
4	10520.84	90.00	0.00	8575.00	1999.06	0.00	0.00	0.00	1999.06	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
DC 12	0.00	0.00	1412150.71	2035648.30	37°45'04.572N	108°50'10.356W	N/A

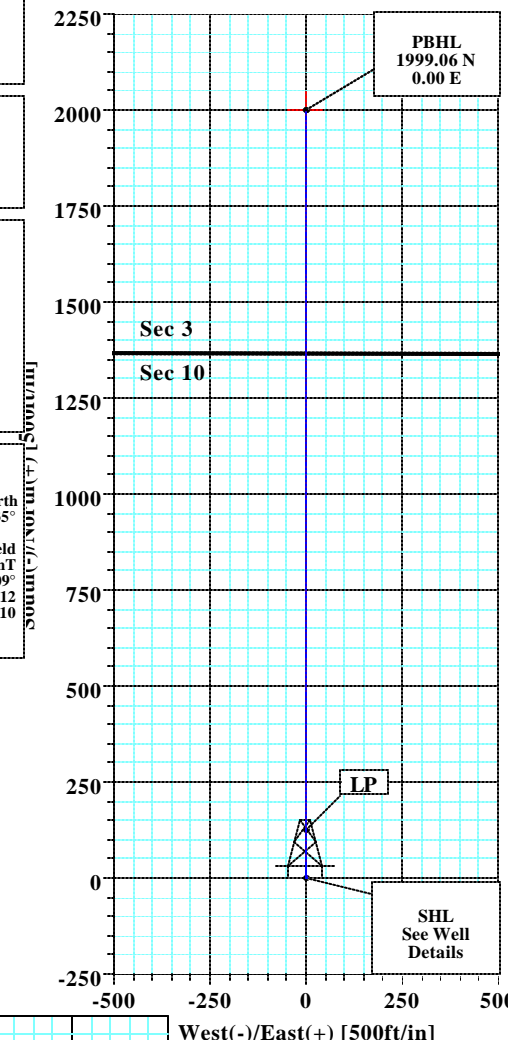
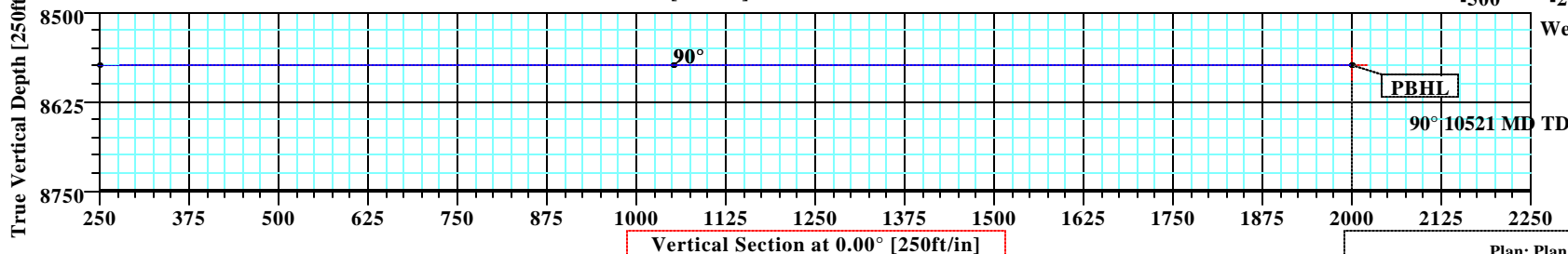
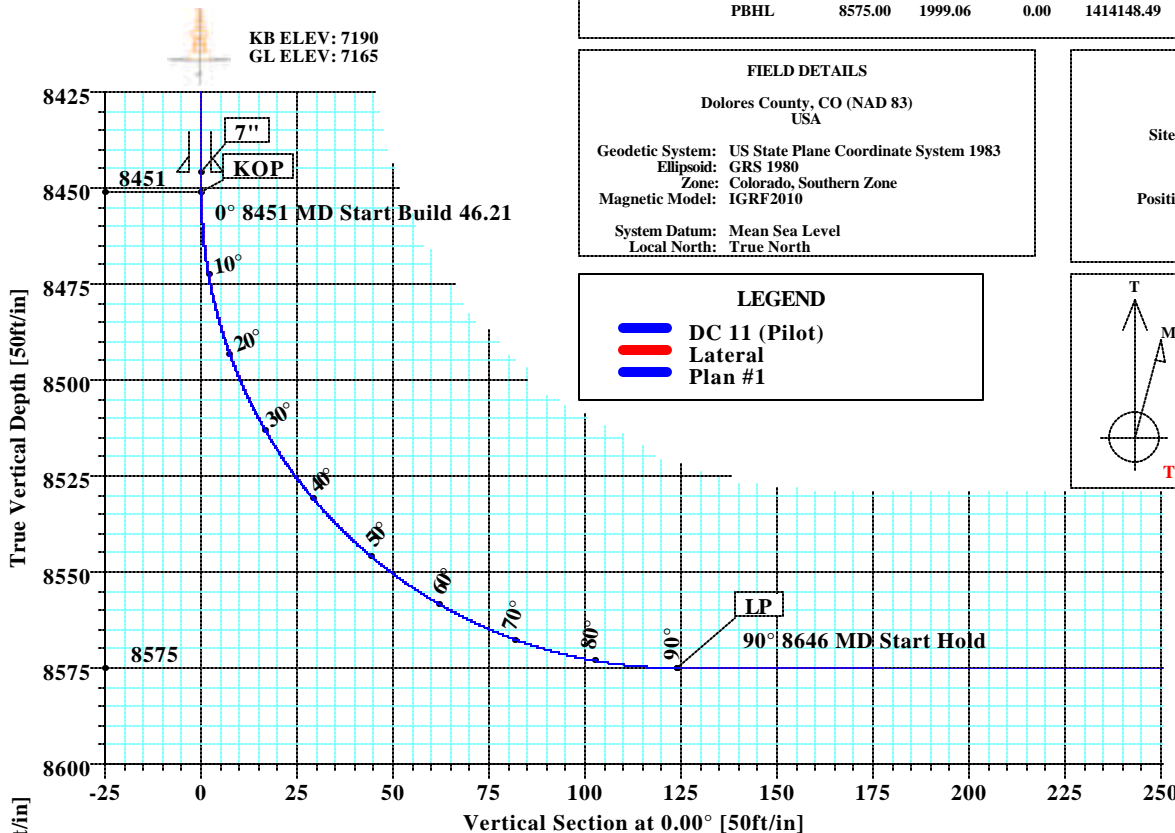
TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8575.00	1999.06	0.00	1414148.49	2035719.68	Point

FIELD DETAILS	
Dolores County, CO (NAD 83) USA	
Geodetic System:	US State Plane Coordinate System 1983
Ellipsoid:	GRS 1980
Zone:	Colorado, Southern Zone
Magnetic Model:	IGRF 2010
System Datum:	Mean Sea Level
Local North:	True North

SITE DETAILS	
Doe Canyon 12	
Site Centre Latitude:	37°45'04.572N
Longitude:	108°50'10.356W
Ground Level:	7165.00
Positional Uncertainty:	0.00
Convergence:	-2.05

LEGEND	
—	DC 11 (Pilot)
—	Lateral
—	Plan #1

Azimuths to True North Magnetic North: 10.35°	
Magnetic Field Strength: 51109nT Dip Angle: 64.09° Date: 7/1/2012 Model: IGRF2010	
Total Correction to True North: 10.35°	





Company: Kinder Morgan	Date: 10/20/2011	Time: 08:13:21	Page: 1
Field: Dolores County, CO (NAD 83)	Co-ordinate(NE) Reference:	Site: Doe Canyon 12, True North	
Site: Doe Canyon 12	Vertical (TVD) Reference:	SITE 7190.0	
Well: DC 12	Section (VS) Reference:	Well (0.00N,0.00E,0.00Azi)	
Wellpath: Lateral	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Plan: Plan #1	Date Composed: 10/20/2011
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Dolores County, CO (NAD 83)

USA

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980

Sys Datum: Mean Sea Level

Map Zone: Colorado, Southern Zone

Coordinate System: Site Centre

Geomagnetic Model: IGRF2010

Site: Doe Canyon 12

Site Position:	Northing: 1412150.71 ft	Latitude: 37 45 4.572 N
From: Geographic	Easting: 2035648.30 ft	Longitude: 108 50 10.356 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 7165.00 ft		Grid Convergence: -2.05 deg

Well: DC 12

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 1412150.71 ft	Latitude: 37 45 4.572 N
+E/-W 0.00 ft	Easting : 2035648.30 ft	Longitude: 108 50 10.356 W
Position Uncertainty: 0.00 ft		

Wellpath: Lateral

Drilled From: Pilot

Current Datum: SITE	Height 7190.00 ft	Tie-on Depth: 0.00 ft
Magnetic Data: 7/1/2012		Above System Datum: Mean Sea Level
Field Strength: 51109 nT		Declination: 10.35 deg
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 64.09 deg
ft	ft	+E/-W
		ft
		Direction
		deg
0.00	0.00	0.00

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8451.00	0.00	0.00	8451.00	0.00	0.00	0.00	0.00	0.00	0.00	
8645.78	90.00	0.00	8575.00	124.00	0.00	46.21	46.21	0.00	0.00	
10520.84	90.00	0.00	8575.00	1999.06	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	MapN ft	MapE ft	Comment
8400.00	0.00	0.00	8400.00	0.00	0.00	0.00	0.00	1412150.71	2035648.30	
8446.00	0.00	0.00	8446.00	0.00	0.00	0.00	0.00	1412150.71	2035648.30	7"
8451.00	0.00	0.00	8451.00	0.00	0.00	0.00	0.00	1412150.71	2035648.30	KOP
8460.00	4.16	0.00	8459.99	0.33	0.00	0.33	46.21	1412151.03	2035648.31	
8470.00	8.78	0.00	8469.93	1.45	0.00	1.45	46.21	1412152.16	2035648.35	
8480.00	13.40	0.00	8479.74	3.38	0.00	3.38	46.21	1412154.08	2035648.42	
8490.00	18.02	0.00	8489.36	6.08	0.00	6.08	46.21	1412156.78	2035648.51	
8500.00	22.64	0.00	8498.73	9.56	0.00	9.56	46.21	1412160.26	2035648.64	
8510.00	27.26	0.00	8507.80	13.77	0.00	13.77	46.21	1412164.47	2035648.79	
8520.00	31.88	0.00	8516.49	18.71	0.00	18.71	46.21	1412169.40	2035648.96	
8530.00	36.50	0.00	8524.76	24.33	0.00	24.33	46.21	1412175.02	2035649.17	
8540.00	41.12	0.00	8532.55	30.59	0.00	30.59	46.21	1412181.28	2035649.39	
8550.00	45.74	0.00	8539.81	37.47	0.00	37.47	46.21	1412188.15	2035649.63	
8560.00	50.36	0.00	8546.50	44.90	0.00	44.90	46.21	1412195.58	2035649.90	
8570.00	54.99	0.00	8552.56	52.85	0.00	52.85	46.21	1412203.52	2035650.18	
8580.00	59.61	0.00	8557.96	61.26	0.00	61.26	46.21	1412211.93	2035650.48	
8590.00	64.23	0.00	8562.66	70.08	0.00	70.08	46.21	1412220.74	2035650.80	



Company: Kinder Morgan	Date: 10/20/2011	Time: 08:13:21	Page: 2
Field: Dolores County, CO (NAD 83)	Co-ordinate(NE) Reference:	Site: Doe Canyon 12, True North	
Site: Doe Canyon 12	Vertical (TVD) Reference:	SITE 7190.0	
Well: DC 12	Section (VS) Reference:	Well (0.00N,0.00E,0.00Azi)	
Wellpath: Lateral	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	MapN ft	MapE ft	Comment
8600.00	68.85	0.00	8566.65	79.25	0.00	79.25	46.21	1412229.91	2035651.13	
8610.00	73.47	0.00	8569.87	88.72	0.00	88.72	46.21	1412239.36	2035651.46	
8620.00	78.09	0.00	8572.33	98.41	0.00	98.41	46.21	1412249.05	2035651.81	
8630.00	82.71	0.00	8574.00	108.26	0.00	108.26	46.21	1412258.90	2035652.16	
8640.00	87.33	0.00	8574.87	118.22	0.00	118.22	46.21	1412268.85	2035652.52	
8645.78	90.00	0.00	8575.00	124.00	0.00	124.00	46.21	1412274.63	2035652.72	LP
8700.00	90.00	0.00	8575.00	178.22	0.00	178.22	0.00	1412328.81	2035654.66	
8800.00	90.00	0.00	8575.00	278.22	0.00	278.22	0.00	1412428.75	2035658.23	
8900.00	90.00	0.00	8575.00	378.22	0.00	378.22	0.00	1412528.69	2035661.80	
9000.00	90.00	0.00	8575.00	478.22	0.00	478.22	0.00	1412628.62	2035665.37	
9100.00	90.00	0.00	8575.00	578.22	0.00	578.22	0.00	1412728.56	2035668.94	
9200.00	90.00	0.00	8575.00	678.22	0.00	678.22	0.00	1412828.49	2035672.51	
9300.00	90.00	0.00	8575.00	778.22	0.00	778.22	0.00	1412928.43	2035676.09	
9400.00	90.00	0.00	8575.00	878.22	0.00	878.22	0.00	1413028.37	2035679.66	
9500.00	90.00	0.00	8575.00	978.22	0.00	978.22	0.00	1413128.30	2035683.23	
9600.00	90.00	0.00	8575.00	1078.22	0.00	1078.22	0.00	1413228.24	2035686.80	
9700.00	90.00	0.00	8575.00	1178.22	0.00	1178.22	0.00	1413328.18	2035690.37	
9800.00	90.00	0.00	8575.00	1278.22	0.00	1278.22	0.00	1413428.11	2035693.94	
9900.00	90.00	0.00	8575.00	1378.22	0.00	1378.22	0.00	1413528.05	2035697.51	
10000.00	90.00	0.00	8575.00	1478.22	0.00	1478.22	0.00	1413627.98	2035701.08	
10100.00	90.00	0.00	8575.00	1578.22	0.00	1578.22	0.00	1413727.92	2035704.65	
10200.00	90.00	0.00	8575.00	1678.22	0.00	1678.22	0.00	1413827.86	2035708.22	
10300.00	90.00	0.00	8575.00	1778.22	0.00	1778.22	0.00	1413927.79	2035711.79	
10400.00	90.00	0.00	8575.00	1878.22	0.00	1878.22	0.00	1414027.73	2035715.36	
10500.00	90.00	0.00	8575.00	1978.22	0.00	1978.22	0.00	1414127.67	2035718.94	
10520.84	90.00	0.00	8575.00	1999.06	0.00	1999.06	0.00	1414148.49	2035719.68	PBHL

Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->				
	Dip.							Deg	Min	Sec	Deg	Min	Sec		
PBHL			8575.00	1999.06	0.00	1414148.49	2035719.68	37	45	24.336	N	108	50	10.356	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
2526.00	2526.00	9.625	0.000	9 5/8"
8446.00	8446.00	7.000	0.000	7"

Annotation

MD ft	TVD ft	
8451.00	8451.00	KOP
8645.78	8575.00	LP
10520.83	8575.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

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

GeoDec v5.03

Report Date: October 19, 2011
Job Number: _____
Customer: Kinder Morgan
Well Name: Doe Canyon 12
API Number: _____
Rig Name: _____
Location: Dolores Co., CO (Nad 83)
Block: _____
Engineer: KRN

Geodetic Latitude / Longitude	Geodetic Latitude / Longitude
System: Latitude / Longitude	System: Latitude / Longitude
Projection: Geodetic Latitude and Longitude	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
Latitude 37 45 4.5720000 DMS	Latitude 37.7512700 DEG
Longitude -108 50 10.3560000 DMS	Longitude -108.8362100 DEG

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	37.75127° N	37° 45 min 4.572 sec
Longitude =	108.83621° W	108° 50 min 10.356 sec

Magnetic Declination =	10.36°	[True North Offset]	
Local Gravity =	.9993 g	Checksum =	7454
Local Field Strength =	51065 nT	Magnetic Vector X =	21947 nT
Magnetic Dip =	64.09°	Magnetic Vector Y =	4011 nT
Magnetic Model =	bggm2011	Magnetic Vector Z =	45934 nT
Spud Date =	Jul 01, 2012	Magnetic Vector H =	22311 nT

Signed: _____

Date: _____