



Weatherford®

Drilling Services

Proposal



DOE CANYON 15

DOLORES CO., CO

WELL FILE: **PLAN 2**

MARCH 4, 2013

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

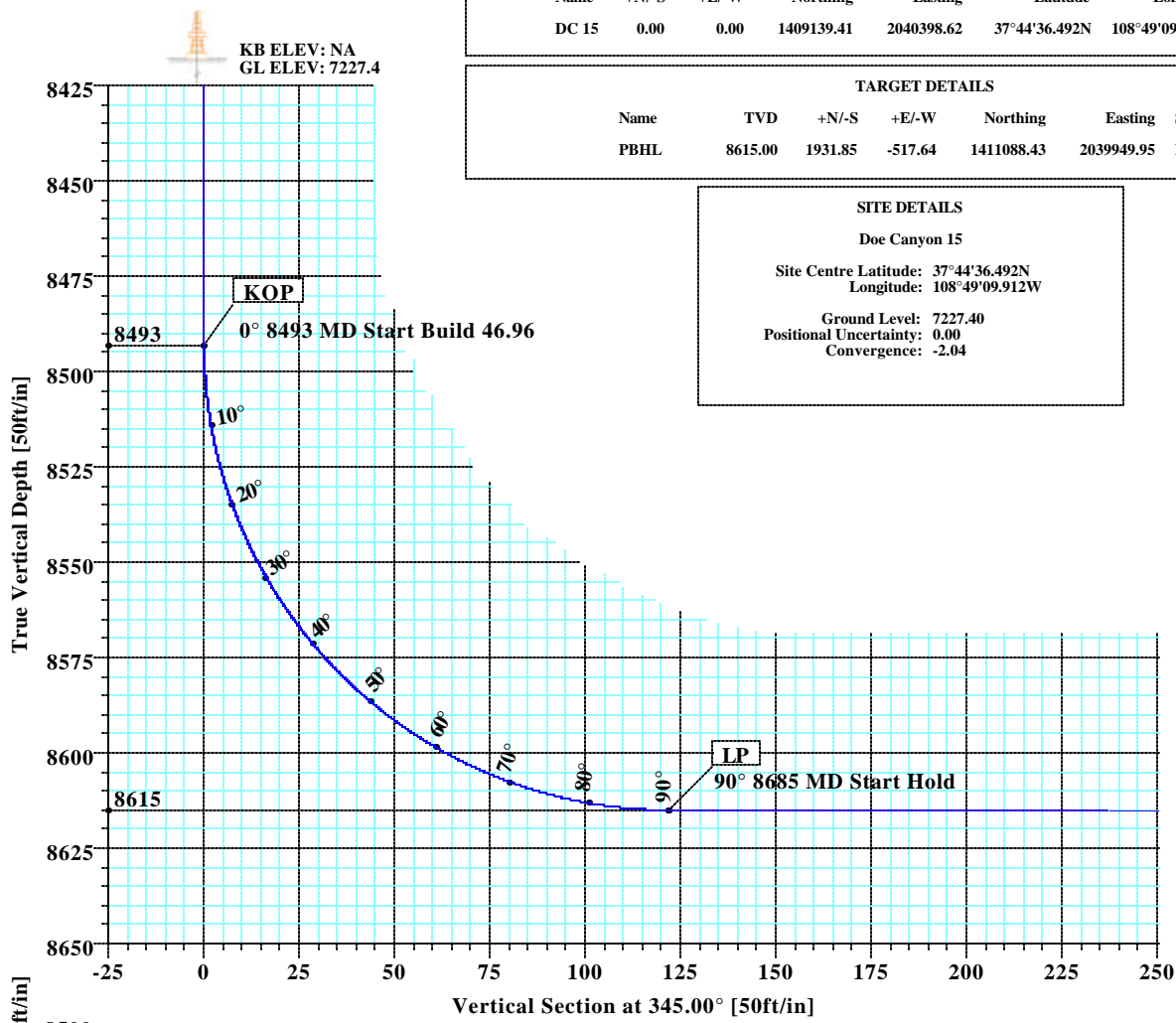
+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com

Doe Canyon 15

Dolores Co., Colorado

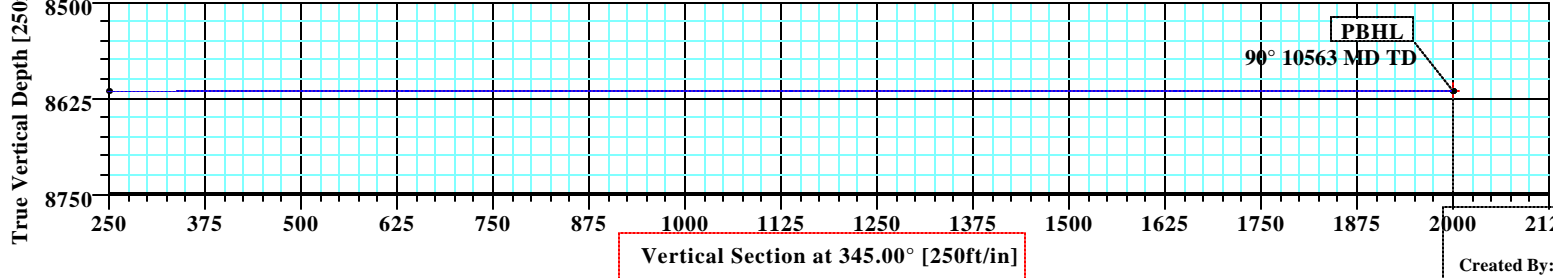
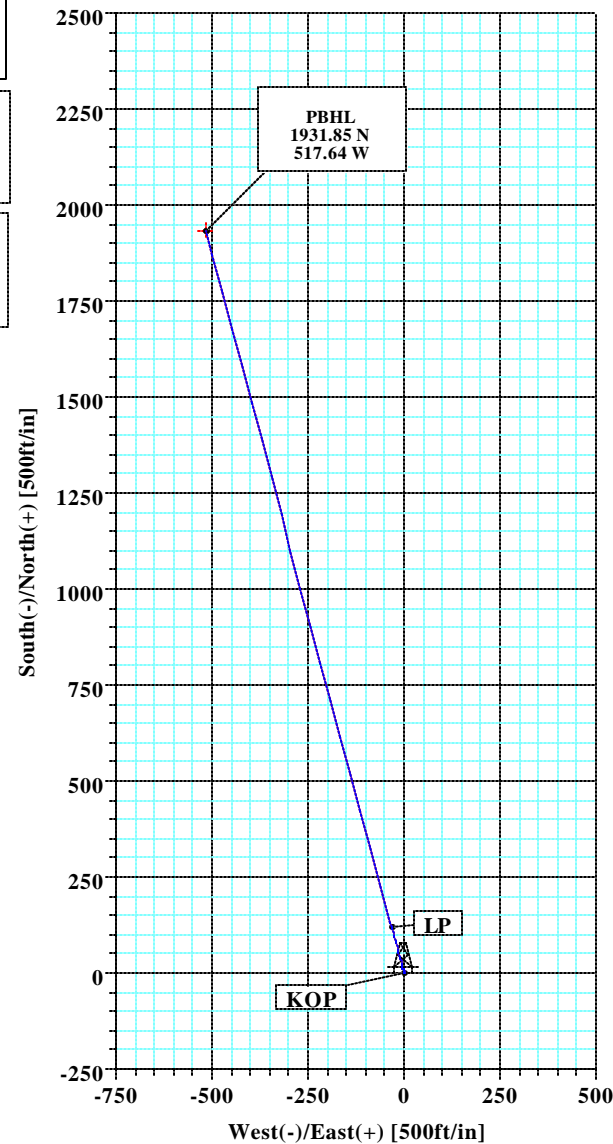


SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	345.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8493.00	0.00	345.00	8493.00	0.00	0.00	0.00	0.00	0.00	
3	8684.64	90.00	345.00	8615.00	117.84	-31.58	46.96	345.00	122.00	
4	10562.64	90.00	345.00	8615.00	1931.85	-517.64	0.00	0.00	2000.00	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
DC 15	0.00	0.00	1409139.41	2040398.62	37°44'36.492N	108°49'09.912W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8615.00	1931.85	-517.64	1411088.43	2039949.95	Point

SITE DETAILS	
Doe Canyon 15	
Site Centre Latitude:	37°44'36.492N
Longitude:	108°49'09.912W
Ground Level:	7227.40
Positional Uncertainty:	0.00
Convergence:	-2.04





Company: Kinder Morgan	Date: 3/4/2013	Time: 09:45:31	Page: 1
Field: Dolores County, CO (NAD 83)	Co-ordinate(NE) Reference: Site: Doe Canyon 15, True North		
Site: Doe Canyon 15	Vertical (TVD) Reference: SITE 7227.4		
Well: DC 15	Section (VS) Reference: Well (0.00N,0.00E,345.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #2	Date Composed: 3/4/2013
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 15

Site Position:	Northing: 1409139.41 ft	Latitude: 37 44 36.492 N
From: Geographic	Easting: 2040398.62 ft	Longitude: 108 49 9.912 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 7227.40 ft		Grid Convergence: -2.04 deg

Well: DC 15**Slot Name:**

Well Position: +N/-S 0.00 ft	Northing: 1409139.41 ft	Latitude: 37 44 36.492 N
+E/-W 0.00 ft	Easting : 2040398.62 ft	Longitude: 108 49 9.912 W
Position Uncertainty: 0.00 ft		

Wellpath: 1

Current Datum: SITE	Height 7227.40 ft	Drilled From: Surface
Magnetic Data: 7/1/2013		Tie-on Depth: 0.00 ft
Field Strength: 51009 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)		Declination: 10.22 deg
ft	+N/-S ft	Mag Dip Angle: 64.07 deg
		+E/-W ft
		Direction deg
8615.00	0.00	0.00 345.00

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	345.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8493.00	0.00	345.00	8493.00	0.00	0.00	0.00	0.00	0.00	0.00	
8684.64	90.00	345.00	8615.00	117.84	-31.58	46.96	46.96	0.00	345.00	
10562.64	90.00	345.00	8615.00	1931.85	-517.64	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
8400.00	0.00	345.00	8400.00	0.00	0.00	0.00	0.00	37	44	36.492	108	49	9.912	KOP
8493.00	0.00	345.00	8493.00	0.00	0.00	0.00	0.00	37	44	36.492	108	49	9.912	
8500.00	3.29	345.00	8500.00	0.19	-0.05	0.20	46.96	37	44	36.494	108	49	9.913	
8510.00	7.98	345.00	8509.95	1.14	-0.31	1.18	46.96	37	44	36.503	108	49	9.916	
8520.00	12.68	345.00	8519.78	2.87	-0.77	2.98	46.96	37	44	36.520	108	49	9.922	
8530.00	17.38	345.00	8529.44	5.38	-1.44	5.57	46.96	37	44	36.545	108	49	9.930	
8540.00	22.07	345.00	8538.85	8.64	-2.31	8.94	46.96	37	44	36.577	108	49	9.941	
8550.00	26.77	345.00	8547.95	12.63	-3.38	13.08	46.96	37	44	36.617	108	49	9.954	
8560.00	31.47	345.00	8556.68	17.33	-4.64	17.94	46.96	37	44	36.663	108	49	9.970	
8570.00	36.16	345.00	8564.99	22.70	-6.08	23.50	46.96	37	44	36.716	108	49	9.988	
8580.00	40.86	345.00	8572.81	28.72	-7.69	29.73	46.96	37	44	36.776	108	49	10.008	
8590.00	45.55	345.00	8580.10	35.33	-9.47	36.57	46.96	37	44	36.841	108	49	10.030	
8600.00	50.25	345.00	8586.80	42.49	-11.39	43.99	46.96	37	44	36.912	108	49	10.054	
8610.00	54.95	345.00	8592.87	50.16	-13.44	51.93	46.96	37	44	36.988	108	49	10.079	
8620.00	59.64	345.00	8598.27	58.29	-15.62	60.34	46.96	37	44	37.068	108	49	10.106	
8630.00	64.34	345.00	8602.97	66.81	-17.90	69.17	46.96	37	44	37.153	108	49	10.135	
8640.00	69.04	345.00	8606.92	75.68	-20.28	78.35	46.96	37	44	37.240	108	49	10.164	



Company: Kinder Morgan
 Field: Dolores County, CO (NAD 83)
 Site: Doe Canyon 15
 Well: DC 15
 Wellpath: 1

Date: 3/4/2013 Time: 09:45:31 Page: 2
 Co-ordinate(NE) Reference: Site: Doe Canyon 15, True North
 Vertical (TVD) Reference: SITE 7227.4
 Section (VS) Reference: Well (0.00N,0.00E,345.00Azi)
 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
8650.00	73.73	345.00	8610.12	84.83	-22.73	87.83	46.96	37	44	37.331	108	49	10.195	
8660.00	78.43	345.00	8612.52	94.21	-25.24	97.53	46.96	37	44	37.423	108	49	10.226	
8670.00	83.13	345.00	8614.12	103.74	-27.80	107.40	46.96	37	44	37.518	108	49	10.258	
8680.00	87.82	345.00	8614.91	113.36	-30.38	117.36	46.96	37	44	37.613	108	49	10.290	
8684.64	90.00	345.00	8615.00	117.84	-31.58	122.00	46.96	37	44	37.657	108	49	10.305	LP
8700.00	90.00	345.00	8615.00	132.68	-35.55	137.36	0.00	37	44	37.804	108	49	10.355	
8800.00	90.00	345.00	8615.00	229.27	-61.43	237.36	0.00	37	44	38.759	108	49	10.677	
8900.00	90.00	345.00	8615.00	325.87	-87.32	337.36	0.00	37	44	39.714	108	49	10.999	
9000.00	90.00	345.00	8615.00	422.46	-113.20	437.36	0.00	37	44	40.669	108	49	11.321	
9100.00	90.00	345.00	8615.00	519.05	-139.08	537.36	0.00	37	44	41.624	108	49	11.644	
9200.00	90.00	345.00	8615.00	615.65	-164.96	637.36	0.00	37	44	42.579	108	49	11.966	
9300.00	90.00	345.00	8615.00	712.24	-190.84	737.36	0.00	37	44	43.534	108	49	12.288	
9400.00	90.00	345.00	8615.00	808.83	-216.73	837.36	0.00	37	44	44.489	108	49	12.610	
9500.00	90.00	345.00	8615.00	905.42	-242.61	937.36	0.00	37	44	45.444	108	49	12.933	
9600.00	90.00	345.00	8615.00	1002.02	-268.49	1037.36	0.00	37	44	46.399	108	49	13.255	
9700.00	90.00	345.00	8615.00	1098.61	-294.37	1137.36	0.00	37	44	47.354	108	49	13.577	
9800.00	90.00	345.00	8615.00	1195.20	-320.25	1237.36	0.00	37	44	48.308	108	49	13.899	
9900.00	90.00	345.00	8615.00	1291.79	-346.14	1337.36	0.00	37	44	49.263	108	49	14.222	
10000.00	90.00	345.00	8615.00	1388.39	-372.02	1437.36	0.00	37	44	50.218	108	49	14.544	
10100.00	90.00	345.00	8615.00	1484.98	-397.90	1537.36	0.00	37	44	51.173	108	49	14.866	
10200.00	90.00	345.00	8615.00	1581.57	-423.78	1637.36	0.00	37	44	52.128	108	49	15.189	
10300.00	90.00	345.00	8615.00	1678.16	-449.66	1737.36	0.00	37	44	53.083	108	49	15.511	
10400.00	90.00	345.00	8615.00	1774.76	-475.54	1837.36	0.00	37	44	54.038	108	49	15.833	
10500.00	90.00	345.00	8615.00	1871.35	-501.43	1937.36	0.00	37	44	54.993	108	49	16.155	
10562.64	90.00	345.00	8615.00	1931.85	-517.64	2000.00	0.00	37	44	55.591	108	49	16.357	PBHL

Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec	<--- Longitude ---> Deg Min Sec
PBHL			8615.00	1931.85	-517.64	1411088.43	2039949.95	37 44 55.591 N	108 49 16.357 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Annotation

MD ft	TVD ft	
8493.00	8493.00	KOP
8684.64	8615.00	LP
10562.63	8615.00	PBHL



Company: Kinder Morgan	Date: 3/4/2013	Time: 09:45:31	Page: 3
Field: Dolores County, CO (NAD 83)	Co-ordinate(NE) Reference: Site: Doe Canyon 15, True North		
Site: Doe Canyon 15	Vertical (TVD) Reference: SITE 7227.4		
Well: DC 15	Section (VS) Reference: Well (0.00N,0.00E,345.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

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

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

GeoDec v5.03

Report Date: February 14, 2013
Job Number: _____
Customer: Kinder Morgan
Well Name: Doe Canyon 15
API Number: _____
Rig Name: _____
Location: Dolores Co., CO (Nad 83)
Block: _____
Engineer: Patrick Rudolph

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 37.7434700 DEG	Latitude 37 44 36.4920000 DMS
Longitude -108.8194200 DEG	Longitude -108 49 9.9120000 DMS

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	37.74347° N	37° 44 min 36.492 sec
Longitude =	108.81942° W	108° 49 min 9.912 sec

Magnetic Declination =	10.25°	[True North Offset]
Local Gravity =	.9993 g	Checksum = 7363
Local Field Strength =	50932 nT	Magnetic Vector X = 21933 nT
Magnetic Dip =	64.05°	Magnetic Vector Y = 3967 nT
Magnetic Model =	bggm2012	Magnetic Vector Z = 45796 nT
Spud Date =	Jul 01, 2013	Magnetic Vector H = 22289 nT

Signed: _____

Date: _____