



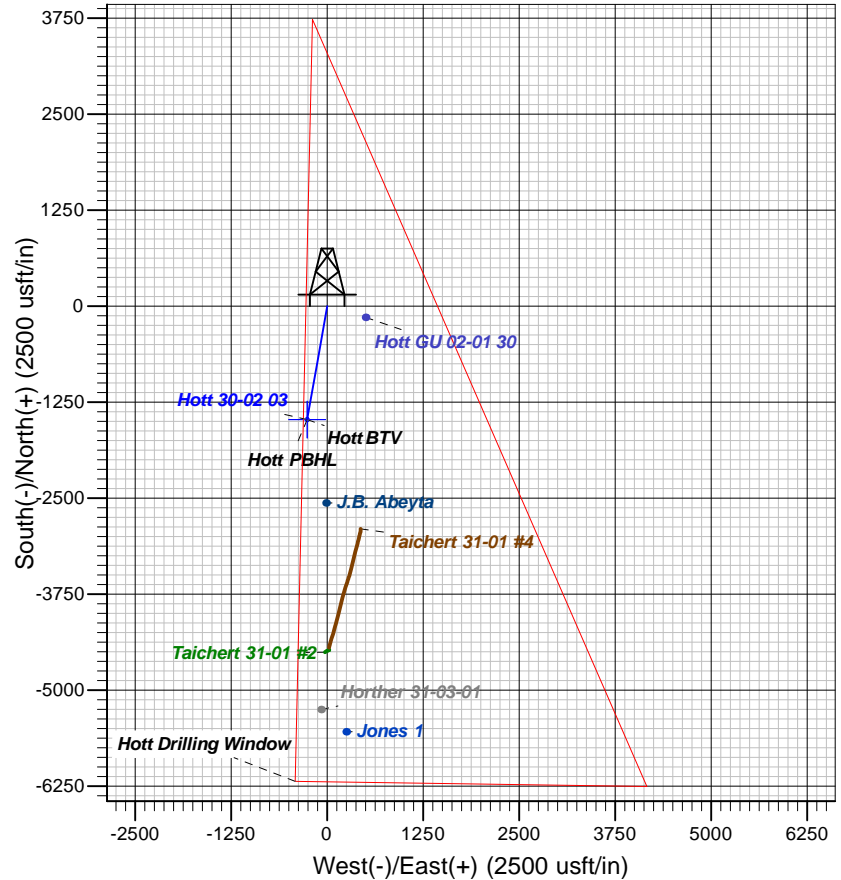
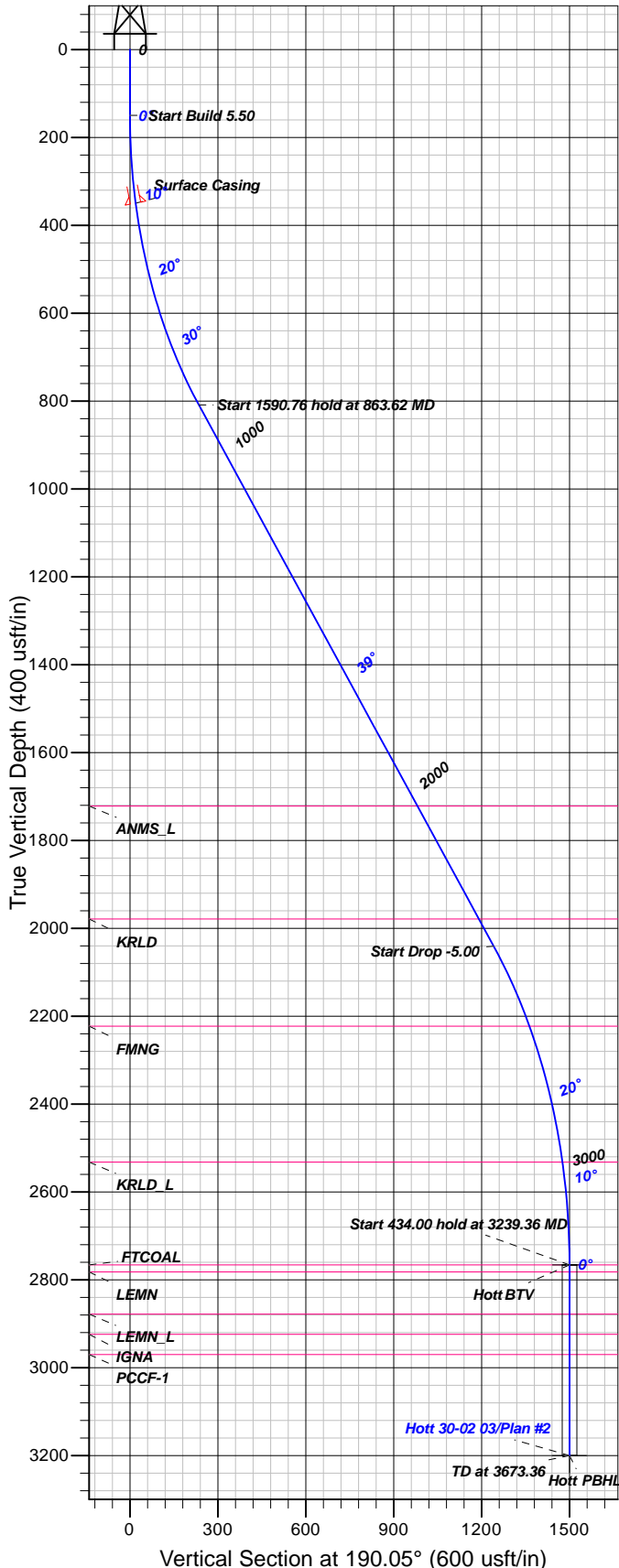
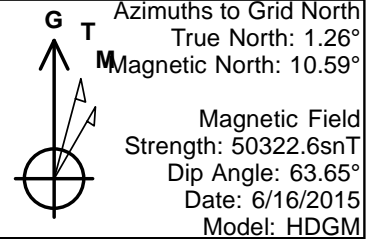
Company: B.P.
Project: La Plata County, CO NAD83
Site: Hott Pad
Well: Hott 30-02 03



Well Details: Hott 30-02 03

GL 6468.88' & RKB 11' @ 6479.88usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1154158.07	2402621.00	37.0720523	-107.5476208	



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
1722.00	2042.46	ANMS_L
1979.00	2374.33	KRLD
2223.00	2673.66	FMNG
2532.00	3003.70	KRLD_L
2766.00	3239.36	FTCOAL
2782.00	3255.36	LEMN
2878.00	3351.36	LEMN_L
2924.00	3397.36	IGNA
2970.00	3443.36	PCCF-1

Plan: Plan #2

12:16, September 28 2015
Created By: Janie Collins

PROJECT DETAILS: La Plata County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone

System Datum: Mean Sea Level

CASING DETAILS

TVD	MD	Name	Size
350.00	351.25	Surface Casing	9.62

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	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	863.62	39.25	190.05	809.10	-231.41	-41.02	5.50	190.05	235.02	
4	2454.38	39.25	190.05	2040.99	-1222.42	-216.70	0.00	0.00	1241.48	
5	3239.36	0.00	0.00	2766.00	-1476.97	-261.83	5.00	180.00	1500.00	Hott BTV
6	3673.36	0.00	0.00	3200.00	-1476.97	-261.83	0.00	0.00	1500.00	Hott PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Hott BTV	2766.00	-1476.97	-261.83	1152681.10	2402359.17	37.0679812	-107.5484069	Circle (Radius: 25.00)
- plan hits target center								
Hott PBHL	3200.00	-1476.97	-261.83	1152681.10	2402359.17	37.0679812	-107.5484069	Point
- plan hits target center								



B.P.

La Plata County, CO NAD83

Hott Pad

Hott 30-02 03

OH

Plan: Plan #2

Standard Planning Report

28 September, 2015





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Hott 30-02 03
Company:	B.P.	TVD Reference:	GL 6468.88' & RKB 11' @ 6479.88usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6468.88' & RKB 11' @ 6479.88usft (Aztec 507)
Site:	Hott Pad	North Reference:	Grid
Well:	Hott 30-02 03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	La Plata County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		

Site	Hott Pad			
Site Position:		Northing:	1,154,158.07 usft	Latitude: 37.0720523
From: Map		Easting:	2,402,621.00 usft	Longitude: -107.5476208
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.26 °

Well	Hott 30-02 03			
Well Position	+N/-S	0.00 usft	Northing:	1,154,158.07 usft
	+E/-W	0.00 usft	Easting:	2,402,621.00 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	6,468.88 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/16/2015	9.33	63.65	50,323

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	190.05

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
863.62	39.25	190.05	809.10	-231.41	-41.02	5.50	5.50	0.00	190.05	
2,454.38	39.25	190.05	2,040.99	-1,222.42	-216.70	0.00	0.00	0.00	0.00	
3,239.36	0.00	0.00	2,766.00	-1,476.97	-261.83	5.00	-5.00	0.00	180.00	Hott BTV
3,673.36	0.00	0.00	3,200.00	-1,476.97	-261.83	0.00	0.00	0.00	0.00	Hott PBHL



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Hott 30-02 03
Company:	B.P.	TVD Reference:	GL 6468.88' & RKB 11' @ 6479.88usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6468.88' & RKB 11' @ 6479.88usft (Aztec 507)
Site:	Hott Pad	North Reference:	Grid
Well:	Hott 30-02 03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	2.75	190.05	199.98	-1.18	-0.21	1.20	5.50	5.50	0.00	
300.00	8.25	190.05	299.48	-10.62	-1.88	10.78	5.50	5.50	0.00	
351.25	11.07	190.05	350.00	-19.08	-3.38	19.38	5.50	5.50	0.00	
Surface Casing										
400.00	13.75	190.05	397.61	-29.40	-5.21	29.85	5.50	5.50	0.00	
500.00	19.25	190.05	493.45	-57.35	-10.17	58.24	5.50	5.50	0.00	
600.00	24.75	190.05	586.14	-94.22	-16.70	95.69	5.50	5.50	0.00	
700.00	30.25	190.05	674.80	-139.67	-24.76	141.85	5.50	5.50	0.00	
800.00	35.75	190.05	758.64	-193.28	-34.26	196.29	5.50	5.50	0.00	
863.62	39.25	190.05	809.10	-231.41	-41.02	235.02	5.50	5.50	0.00	
900.00	39.25	190.05	837.28	-254.07	-45.04	258.03	0.00	0.00	0.00	
1,000.00	39.25	190.05	914.72	-316.37	-56.08	321.30	0.00	0.00	0.00	
1,100.00	39.25	190.05	992.16	-378.67	-67.13	384.57	0.00	0.00	0.00	
1,200.00	39.25	190.05	1,069.60	-440.97	-78.17	447.84	0.00	0.00	0.00	
1,300.00	39.25	190.05	1,147.04	-503.26	-89.22	511.11	0.00	0.00	0.00	
1,400.00	39.25	190.05	1,224.48	-565.56	-100.26	574.38	0.00	0.00	0.00	
1,500.00	39.25	190.05	1,301.92	-627.86	-111.30	637.65	0.00	0.00	0.00	
1,600.00	39.25	190.05	1,379.36	-690.16	-122.35	700.92	0.00	0.00	0.00	
1,700.00	39.25	190.05	1,456.80	-752.46	-133.39	764.19	0.00	0.00	0.00	
1,800.00	39.25	190.05	1,534.24	-814.76	-144.44	827.46	0.00	0.00	0.00	
1,900.00	39.25	190.05	1,611.68	-877.05	-155.48	890.73	0.00	0.00	0.00	
2,000.00	39.25	190.05	1,689.12	-939.35	-166.52	954.00	0.00	0.00	0.00	
2,042.46	39.25	190.05	1,722.00	-965.81	-171.21	980.87	0.00	0.00	0.00	
ANMS_L										
2,100.00	39.25	190.05	1,766.56	-1,001.65	-177.57	1,017.27	0.00	0.00	0.00	
2,200.00	39.25	190.05	1,844.00	-1,063.95	-188.61	1,080.54	0.00	0.00	0.00	
2,300.00	39.25	190.05	1,921.44	-1,126.25	-199.66	1,143.81	0.00	0.00	0.00	
2,374.33	39.25	190.05	1,979.00	-1,172.55	-207.86	1,190.83	0.00	0.00	0.00	
KRLD										
2,400.00	39.25	190.05	1,998.88	-1,188.54	-210.70	1,207.08	0.00	0.00	0.00	
2,454.38	39.25	190.05	2,040.99	-1,222.42	-216.70	1,241.48	0.00	0.00	0.00	
2,500.00	36.97	190.05	2,076.88	-1,250.14	-221.62	1,269.64	5.00	-5.00	0.00	
2,600.00	31.97	190.05	2,159.30	-1,305.85	-231.49	1,326.21	5.00	-5.00	0.00	
2,673.66	28.29	190.05	2,223.00	-1,342.25	-237.95	1,363.18	5.00	-5.00	0.00	
FMNG										
2,700.00	26.97	190.05	2,246.33	-1,354.27	-240.08	1,375.39	5.00	-5.00	0.00	
2,800.00	21.97	190.05	2,337.32	-1,395.04	-247.31	1,416.80	5.00	-5.00	0.00	
2,900.00	16.97	190.05	2,431.58	-1,427.85	-253.12	1,450.11	5.00	-5.00	0.00	
3,000.00	11.97	190.05	2,528.37	-1,452.44	-257.48	1,475.09	5.00	-5.00	0.00	
3,003.70	11.78	190.05	2,532.00	-1,453.19	-257.62	1,475.85	5.00	-5.00	0.00	
KRLD_L										
3,100.00	6.97	190.05	2,626.98	-1,468.64	-260.35	1,491.53	5.00	-5.00	0.00	
3,200.00	1.97	190.05	2,726.65	-1,476.30	-261.71	1,499.32	5.00	-5.00	0.00	
3,239.36	0.00	0.00	2,766.00	-1,476.97	-261.83	1,500.00	5.00	-5.00	0.00	
FTCOAL - Hott BTV										
3,255.36	0.00	0.00	2,782.00	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00	
LEMN										
3,300.00	0.00	0.00	2,826.64	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00	
3,351.36	0.00	0.00	2,878.00	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00	



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Site:	Hott Pad	North Reference:	Grid
Well:	Hott 30-02 03	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
LEMN_L									
3,397.36	0.00	0.00	2,924.00	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00
IGNA									
3,400.00	0.00	0.00	2,926.64	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00
3,443.36	0.00	0.00	2,970.00	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00
PCCF-1									
3,500.00	0.00	0.00	3,026.64	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,126.64	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00
3,673.36	0.00	0.00	3,200.00	-1,476.97	-261.83	1,500.00	0.00	0.00	0.00
Hott PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hott BTV - plan hits target center - Circle (radius 25.00)	0.00	0.00	2,766.00	-1,476.97	-261.83	1,152,681.10	2,402,359.17	37.0679812	-107.5484070
Hott PBHL - plan hits target center - Point	0.00	0.00	3,200.00	-1,476.97	-261.83	1,152,681.10	2,402,359.17	37.0679812	-107.5484070

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
351.25	350.00	Surface Casing	9.63	12.25

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,042.46	1,854.11	ANMS_L		0.00	360.00
2,374.33	2,111.10	KRLD		0.00	360.00
2,673.66	2,355.11	FMNG		0.00	360.00
3,003.70	2,664.11	KRLD_L		0.00	360.00
3,239.36	2,898.11	FTCOAL		0.00	360.00
3,255.36	2,914.11	LEMN		0.00	360.00
3,351.36	3,010.11	LEMN_L		0.00	360.00
3,397.36	3,056.11	IGNA		0.00	360.00
3,443.36	3,102.11	PCCF-1		0.00	360.00