

# Noble Energy

Garfield County, CO

Sec. 19-T7S-R94W (Rulison 19I PAD)

Doghead 19-33D

Plan #1

Plan: Plan #1 Proposal

## Sperry Drilling Services

### Proposal Report

02 March, 2009

Well Coordinates: 587,687.03 N, 1,316,413.27 E (39° 25' 19.20" N, 107° 55' 12.09" W)

Ground Level: 8,080.00 ft

Local Coordinate Origin:

Centered on Well Doghead 19-33D

Viewing Datum:

RKB-25' @ 8105.00ft (Original Well Elev)

TVDs to System:

N

North Reference:

Grid

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

**HALLIBURTON**

## Plan Report for Doghead 19-33D - Plan #1 Proposal

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0.00	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	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kickoff at 225.00ft										
300.00	1.50	266.33	299.99	-0.06	-0.98	0.98	2.00	2.00	0.00	266.33
400.00	3.50	266.33	399.89	-0.34	-5.33	5.34	2.00	2.00	0.00	0.00
500.00	5.50	266.33	499.58	-0.84	-13.16	13.19	2.00	2.00	0.00	0.00
600.00	7.50	266.33	598.93	-1.57	-24.46	24.51	2.00	2.00	0.00	0.00
690.00	9.30	266.33	687.96	-2.41	-37.58	37.65	2.00	2.00	0.00	0.00
Build Rate = 2.00°/100ft										
700.00	9.50	266.33	697.83	-2.52	-39.21	39.29	2.00	2.00	0.00	0.00
800.00	11.50	266.33	796.15	-3.68	-57.39	57.51	2.00	2.00	0.00	0.00
900.00	13.50	266.33	893.77	-5.07	-78.99	79.15	2.00	2.00	0.00	0.00
1,000.00	15.50	266.33	990.58	-6.67	-103.98	104.18	2.00	2.00	0.00	0.00
1,100.00	17.50	266.33	1,086.46	-8.49	-132.32	132.58	2.00	2.00	0.00	0.00
1,157.18	18.64	266.33	1,140.82	-9.63	-150.02	150.32	2.00	2.00	0.00	0.00
End Build at 1157.18ft										
1,200.00	18.64	266.33	1,181.39	-10.51	-163.68	164.00	0.00	0.00	0.00	0.00
1,300.00	18.64	266.33	1,276.14	-12.55	-195.58	195.97	0.00	0.00	0.00	0.00
1,400.00	18.64	266.33	1,370.89	-14.60	-227.49	227.94	0.00	0.00	0.00	0.00
1,500.00	18.64	266.33	1,465.65	-16.65	-259.39	259.90	0.00	0.00	0.00	0.00
1,600.00	18.64	266.33	1,560.40	-18.70	-291.29	291.87	0.00	0.00	0.00	0.00
1,700.00	18.64	266.33	1,655.15	-20.74	-323.19	323.83	0.00	0.00	0.00	0.00
1,800.00	18.64	266.33	1,749.90	-22.79	-355.10	355.80	0.00	0.00	0.00	0.00
1,900.00	18.64	266.33	1,844.66	-24.84	-387.00	387.77	0.00	0.00	0.00	0.00
2,000.00	18.64	266.33	1,939.41	-26.89	-418.90	419.73	0.00	0.00	0.00	0.00
2,100.00	18.64	266.33	2,034.16	-28.94	-450.80	451.70	0.00	0.00	0.00	0.00
2,200.00	18.64	266.33	2,128.91	-30.98	-482.71	483.66	0.00	0.00	0.00	0.00
2,300.00	18.64	266.33	2,223.67	-33.03	-514.61	515.63	0.00	0.00	0.00	0.00
2,400.00	18.64	266.33	2,318.42	-35.08	-546.51	547.59	0.00	0.00	0.00	0.00
2,500.00	18.64	266.33	2,413.17	-37.13	-578.41	579.56	0.00	0.00	0.00	0.00
8 5/8" Casing Pt										
2,600.00	18.64	266.33	2,507.92	-39.17	-610.32	611.53	0.00	0.00	0.00	0.00
2,700.00	18.64	266.33	2,602.68	-41.22	-642.22	643.49	0.00	0.00	0.00	0.00
2,800.00	18.64	266.33	2,697.43	-43.27	-674.12	675.46	0.00	0.00	0.00	0.00
2,900.00	18.64	266.33	2,792.18	-45.32	-706.02	707.42	0.00	0.00	0.00	0.00
3,000.00	18.64	266.33	2,886.93	-47.37	-737.93	739.39	0.00	0.00	0.00	0.00
3,100.00	18.64	266.33	2,981.69	-49.41	-769.83	771.35	0.00	0.00	0.00	0.00
3,200.00	18.64	266.33	3,076.44	-51.46	-801.73	803.32	0.00	0.00	0.00	0.00
3,250.00	18.64	266.33	3,123.82	-52.48	-817.68	819.30	0.00	0.00	0.00	0.00
18.64 Inclination										
3,300.00	18.64	266.33	3,171.19	-53.51	-833.63	835.29	0.00	0.00	0.00	0.00
3,400.00	18.64	266.33	3,265.94	-55.56	-865.54	867.25	0.00	0.00	0.00	0.00
3,500.00	18.64	266.33	3,360.70	-57.60	-897.44	899.22	0.00	0.00	0.00	0.00
3,600.00	18.64	266.33	3,455.45	-59.65	-929.34	931.18	0.00	0.00	0.00	0.00
3,700.00	18.64	266.33	3,550.20	-61.70	-961.24	963.15	0.00	0.00	0.00	0.00
3,800.00	18.64	266.33	3,644.95	-63.75	-993.15	995.12	0.00	0.00	0.00	0.00
3,900.00	18.64	266.33	3,739.71	-65.80	-1,025.05	1,027.08	0.00	0.00	0.00	0.00
4,000.00	18.64	266.33	3,834.46	-67.84	-1,056.95	1,059.05	0.00	0.00	0.00	0.00
4,100.00	18.64	266.33	3,929.21	-69.89	-1,088.85	1,091.01	0.00	0.00	0.00	0.00
4,200.00	18.64	266.33	4,023.96	-71.94	-1,120.76	1,122.98	0.00	0.00	0.00	0.00
4,300.00	18.64	266.33	4,118.72	-73.99	-1,152.66	1,154.94	0.00	0.00	0.00	0.00
4,400.00	18.64	266.33	4,213.47	-76.03	-1,184.56	1,186.91	0.00	0.00	0.00	0.00
4,500.00	18.64	266.33	4,308.22	-78.08	-1,216.46	1,218.88	0.00	0.00	0.00	0.00
4,600.00	18.64	266.33	4,402.97	-80.13	-1,248.37	1,250.84	0.00	0.00	0.00	0.00
4,700.00	18.64	266.33	4,497.73	-82.18	-1,280.27	1,282.81	0.00	0.00	0.00	0.00
4,800.00	18.64	266.33	4,592.48	-84.22	-1,312.17	1,314.77	0.00	0.00	0.00	0.00

## Plan Report for Doghead 19-33D - Plan #1 Proposal

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
4,900.00	18.64	266.33	4,687.23	-86.27	-1,344.07	1,346.74	0.00	0.00	0.00	0.00
5,000.00	18.64	266.33	4,781.98	-88.32	-1,375.98	1,378.70	0.00	0.00	0.00	0.00
5,100.00	18.64	266.33	4,876.74	-90.37	-1,407.88	1,410.67	0.00	0.00	0.00	0.00
5,200.00	18.64	266.33	4,971.49	-92.42	-1,439.78	1,442.64	0.00	0.00	0.00	0.00
5,300.00	18.64	266.33	5,066.24	-94.46	-1,471.68	1,474.60	0.00	0.00	0.00	0.00
5,400.00	18.64	266.33	5,160.99	-96.51	-1,503.59	1,506.57	0.00	0.00	0.00	0.00
5,433.68	18.64	266.33	5,192.91	-97.20	-1,514.33	1,517.33	0.00	0.00	0.00	0.00
Begin Drop at 5433.68ft										
5,500.00	17.65	266.33	5,255.93	-98.52	-1,534.94	1,537.99	1.50	-1.50	0.00	180.00
5,600.00	16.15	266.33	5,351.61	-100.39	-1,563.95	1,567.05	1.50	-1.50	0.00	180.00
5,700.00	14.65	266.33	5,448.01	-102.09	-1,590.45	1,593.60	1.50	-1.50	0.00	180.00
5,800.00	13.15	266.33	5,545.08	-103.63	-1,614.42	1,617.62	1.50	-1.50	0.00	180.00
5,900.00	11.65	266.33	5,642.75	-105.00	-1,635.85	1,639.09	1.50	-1.50	0.00	180.00
6,000.00	10.15	266.33	5,740.94	-106.21	-1,654.72	1,658.00	1.50	-1.50	0.00	180.00
6,050.00	9.40	266.33	5,790.22	-106.76	-1,663.19	1,666.48	1.50	-1.50	0.00	-180.00
Drop Rate = 1.50°/100ft										
6,100.00	8.65	266.33	5,839.60	-107.26	-1,671.01	1,674.33	1.50	-1.50	0.00	180.00
6,200.00	7.15	266.33	5,938.65	-108.14	-1,684.73	1,688.07	1.50	-1.50	0.00	180.00
6,300.00	5.65	266.33	6,038.02	-108.85	-1,695.85	1,699.21	1.50	-1.50	0.00	180.00
6,400.00	4.15	266.33	6,137.65	-109.40	-1,704.37	1,707.75	1.50	-1.50	0.00	180.00
6,500.00	2.65	266.33	6,237.47	-109.78	-1,710.29	1,713.68	1.50	-1.50	0.00	180.00
6,600.00	1.15	266.33	6,337.41	-109.99	-1,713.59	1,716.99	1.50	-1.50	0.00	180.00
6,676.59	0.00	0.00	6,414.00	-110.04	-1,714.36	1,717.76	1.50	-1.50	122.30	180.00
End Drop at 6676.59ft - Williams Fork - Doghead 19-33D Plan #1 Driller's TGT										
6,700.00	0.02	243.44	6,437.41	-110.04	-1,714.36	1,717.76	0.08	0.08	-497.93	-116.57
6,800.00	0.10	243.44	6,537.41	-110.09	-1,714.46	1,717.86	0.08	0.08	0.00	0.00
6,900.00	0.18	243.44	6,637.41	-110.20	-1,714.67	1,718.08	0.08	0.08	0.00	0.00
7,000.00	0.26	243.44	6,737.41	-110.37	-1,715.01	1,718.43	0.08	0.08	0.00	0.00
7,100.00	0.34	243.44	6,837.41	-110.60	-1,715.48	1,718.92	0.08	0.08	0.00	0.00
7,200.00	0.42	243.44	6,937.40	-110.90	-1,716.07	1,719.53	0.08	0.08	0.00	0.00
7,300.00	0.50	243.44	7,037.40	-111.25	-1,716.79	1,720.27	0.08	0.08	0.00	0.00
7,400.00	0.58	243.44	7,137.40	-111.67	-1,717.63	1,721.14	0.08	0.08	0.00	0.00
7,494.61	0.65	243.44	7,232.00	-112.13	-1,718.54	1,722.08	0.08	0.08	0.00	0.00
Top of gas										
7,500.00	0.66	243.44	7,237.39	-112.16	-1,718.59	1,722.14	0.08	0.08	0.00	0.00
7,600.00	0.74	243.44	7,337.38	-112.70	-1,719.68	1,723.27	0.08	0.08	0.00	0.00
7,700.00	0.82	243.44	7,437.37	-113.31	-1,720.90	1,724.53	0.08	0.08	0.00	0.00
7,800.00	0.90	243.44	7,537.36	-113.98	-1,722.24	1,725.92	0.08	0.08	0.00	0.00
7,900.00	0.98	243.44	7,637.35	-114.71	-1,723.71	1,727.43	0.08	0.08	0.00	0.00
8,000.00	1.06	243.44	7,737.33	-115.51	-1,725.30	1,729.08	0.08	0.08	0.00	0.00
8,100.00	1.14	243.44	7,837.32	-116.37	-1,727.01	1,730.86	0.08	0.08	0.00	0.00
8,200.00	1.22	243.44	7,937.29	-117.29	-1,728.85	1,732.76	0.08	0.08	0.00	0.00
8,300.00	1.30	243.44	8,037.27	-118.27	-1,730.82	1,734.79	0.08	0.08	0.00	0.00
8,400.00	1.38	243.44	8,137.24	-119.31	-1,732.91	1,736.96	0.08	0.08	0.00	0.00
8,500.00	1.46	243.44	8,237.21	-120.42	-1,735.12	1,739.25	0.08	0.08	0.00	0.00
8,600.00	1.54	243.44	8,337.18	-121.59	-1,737.46	1,741.67	0.08	0.08	0.00	0.00
8,700.00	1.62	243.44	8,437.14	-122.82	-1,739.92	1,744.22	0.08	0.08	0.00	0.00
8,703.94	1.62	243.44	8,441.08	-122.87	-1,740.02	1,744.33	0.08	0.08	0.00	0.00
8,800.00	1.54	243.44	8,537.10	-124.06	-1,742.39	1,746.78	0.08	-0.08	0.00	180.00
8,900.00	1.46	243.44	8,637.07	-125.23	-1,744.73	1,749.20	0.08	-0.08	0.00	180.00
9,000.00	1.37	243.44	8,737.04	-126.33	-1,746.94	1,751.49	0.08	-0.08	0.00	180.00
9,100.00	1.29	243.44	8,837.01	-127.37	-1,749.02	1,753.64	0.08	-0.08	0.00	180.00
9,200.00	1.20	243.44	8,936.99	-128.34	-1,750.96	1,755.65	0.08	-0.08	0.00	180.00
9,268.03	1.15	243.44	9,005.00	-128.96	-1,752.21	1,756.94	0.08	-0.08	0.00	-180.00
Cameo										
9,300.00	1.12	243.44	9,036.97	-129.25	-1,752.77	1,757.53	0.08	-0.08	0.00	180.00
9,400.00	1.03	243.44	9,136.95	-130.09	-1,754.45	1,759.27	0.08	-0.08	0.00	180.00
9,500.00	0.95	243.44	9,236.93	-130.86	-1,756.00	1,760.87	0.08	-0.08	0.00	180.00
9,600.00	0.87	243.44	9,336.92	-131.57	-1,757.42	1,762.34	0.08	-0.08	0.00	180.00



**Plan Report for Doghead 19-33D - Plan #1 Proposal**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
9,700.00	0.78	243.44	9,436.91	-132.21	-1,758.71	1,763.67	0.08	-0.08	0.00	180.00
9,728.09	0.76	243.44	9,465.00	-132.38	-1,759.04	1,764.02	0.08	-0.08	0.00	-180.00
<b>Rollins</b>										
9,800.00	0.70	243.44	9,536.90	-132.79	-1,759.86	1,764.86	0.08	-0.08	0.00	180.00
9,900.00	0.61	243.44	9,636.90	-133.30	-1,760.88	1,765.92	0.08	-0.08	0.00	180.00
10,000.00	0.53	243.44	9,736.89	-133.75	-1,761.77	1,766.84	0.08	-0.08	0.00	180.00
10,067.11	0.47	243.44	9,804.00	-134.01	-1,762.30	1,767.38	0.08	-0.08	0.00	180.00
<b>Cozzette</b>										
10,100.00	0.44	243.44	9,836.89	-134.13	-1,762.53	1,767.63	0.08	-0.08	0.00	-180.00
10,200.00	0.36	243.44	9,936.89	-134.44	-1,763.16	1,768.28	0.08	-0.08	0.00	180.00
10,300.00	0.28	243.44	10,036.88	-134.69	-1,763.66	1,768.79	0.08	-0.08	0.00	180.00
10,346.12	0.24	243.44	10,083.00	-134.78	-1,763.84	1,768.98	0.08	-0.08	0.00	180.00
<b>Corcoran</b>										
10,400.00	0.19	243.44	10,136.88	-134.87	-1,764.02	1,769.17	0.08	-0.08	0.00	-180.00
10,476.12	0.13	243.44	10,213.00	-134.96	-1,764.21	1,769.36	0.08	-0.08	0.00	-180.00
<b>Mancos</b>										
10,500.00	0.11	243.44	10,236.88	-134.98	-1,764.25	1,769.41	0.08	-0.08	0.00	180.00
10,600.00	0.02	243.44	10,336.88	-135.03	-1,764.35	1,769.51	0.08	-0.08	0.00	180.00
10,626.12	0.00	360.00	10,363.00	-135.04	-1,764.36	1,769.52	0.08	-0.08	0.00	180.00
<b>Doghead 19-33D Plan #1 BH TGT</b>										

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
225.00	225.00	0.00	0.00	Kickoff at 225.00ft
690.00	687.96	-2.41	-37.58	Build Rate = 2.00°/100ft
1,157.18	1,140.82	-9.63	-150.02	End Build at 1157.18ft
3,250.00	3,123.82	-52.48	-817.68	18.64 Inclination
5,433.68	5,192.91	-97.20	-1,514.33	Begin Drop at 5433.68ft
6,050.00	5,790.22	-106.76	-1,663.19	Drop Rate = 1.50°/100ft
6,676.59	6,414.00	-110.04	-1,714.36	End Drop at 6676.59ft
10,626.12	10,363.00	-135.04	-1,764.36	Total Depth = 10626.12ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Doghead 19-33D Plan #1 BH TGT	265.62	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	10,626.12	Plan #1 Proposal	MWD

**Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,500.00	2,413.17	8 5/8" Casing Pt	8-5/8	12-1/4

## Plan Report for Doghead 19-33D - Plan #1 Proposal

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,676.59	6,414.00	Williams Fork		0.00	
7,494.61	7,232.00	Top of gas		0.00	
9,268.03	9,005.00	Cameo		0.00	
9,728.09	9,465.00	Rollins		0.00	
10,067.11	9,804.00	Cozzette		0.00	
10,346.12	10,083.00	Corcoran		0.00	
10,476.12	10,213.00	Mancos		0.00	

*Targets associated with this wellbore*

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Doghead 19-33D 100' FSL Hardline	0.00	0.00	0.00	Polygon
Doghead 19-33D Plan #1 Driller's TGT	6,414.00	-110.04	-1,714.36	Rectangle
Doghead 19-33D Plan #1 BH TGT	10,363.00	-135.04	-1,764.36	Point
Doghead 19-33D Plan #1 Zone TGT	6,414.00	-135.04	-1,764.36	Rectangle
Doghead 19-33D 100' FEL Hardline	0.00	0.00	0.00	Polygon

**North Reference Sheet for Sec. 19-T7S-R94W (Rulison 19I PAD) - Doghead 19-33D  
- Plan #1**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB-25' @ 8105.00ft (Original Well Elev). Northing and Easting are relative to Doghead 19-33D

Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is -105.50°, Longitude Origin: 0° 0' 0.000 E°, Latitude Origin: 39° 45' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99995156

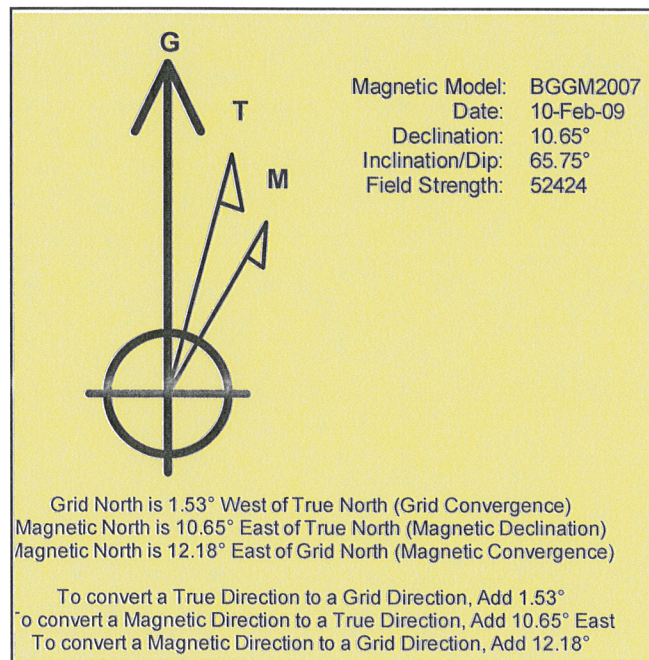
Grid Coordinates of Well: 587,687.03 ft N, 1,316,413.27 ft E

Geographical Coordinates of Well: 39° 25' 19.20" N, 107° 55' 12.09" W

Grid Convergence at Surface is: -1.53°

Based upon Minimum Curvature type calculations, at a Measured Depth of 10,626.12ft  
the Bottom Hole Displacement is 1,769.52ft in the Direction of 265.62° (Grid).

Magnetic Convergence at surface is: -12.18° (10 February 2009, , BGGM2007)





Project: Garfield County, CO  
Site: Sec. 19-T7S-R94W (Rulison 19I PAD)  
Well: Doghead 19-33D  
Wellbore: Plan #1  
Plan: Plan #1 Proposal

Noble Energy

HALLIBURTON

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00
1157.18	18.64	266.33	1140.82	-9.63	-150.02	2.00	266.33	150.32
5433.68	18.64	266.33	5192.90	-97.20	-1514.33	0.00	0.00	1517.33
6676.59	0.00	0.00	6414.00	-110.04	-1714.36	1.50	180.00	1717.76
8703.94	1.62	243.44	8441.08	-122.87	-1740.02	0.08	243.44	1744.33
10626.12	0.00	360.00	10363.00	-135.04	-1764.36	0.08	180.00	1769.52

Doghead 19-33D Plan #1 Driller's TGT

Doghead 19-33D Plan #1 BH TGT

#### WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Doghead 19-33D 100' FEL Hardline	0.00	0.00	0.00	Polygon
Doghead 19-33D 100' FSL Hardline	0.00	0.00	0.00	Polygon
Doghead 19-33D Plan #1 Driller's TGT	6414.00	-110.04	-1714.36	Rectangle (Sides: L25.00 W25.00)
Doghead 19-33D Plan #1 Zone TGT	6414.00	-135.04	-1764.36	Rectangle (Sides: L100.00 W200.00)
Doghead 19-33D Plan #1 BH TGT	10363.00	-135.04	-1764.36	Point

#### WELL DETAILS: Doghead 19-33D

North	East	Ground Level	Latitude	Longitude
587687.03	1316413.27	8080.00	39° 25' 19.200 N	107° 55' 12.086 W

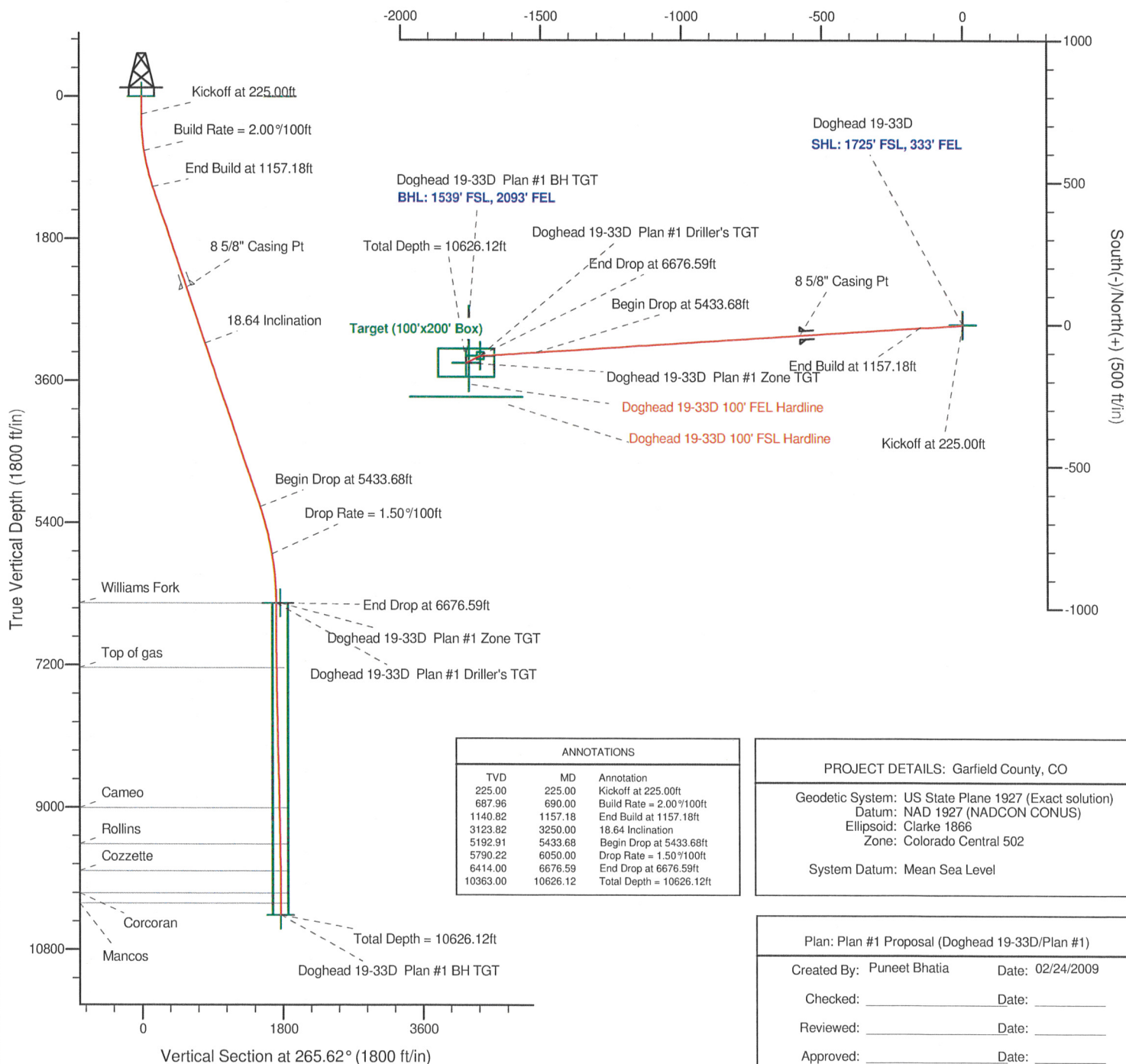
#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6414.00	6676.59	Williams Fork
7232.00	7494.61	Top of gas
9005.00	9268.03	Cameo
9465.00	9728.09	Rollins
9804.00	10067.11	Cozzette
10083.00	10346.12	Corcoran
10213.00	10476.12	Mancos



Azimuths to Grid North  
True North: 1.53°  
Magnetic North: 12.18°  
Magnetic Field  
Strength: 52423.6snT  
Dip Angle: 65.75°  
Date: 2/10/2009  
Model: BGGM2007

West(-)/East(+) (500 ft/in)



#### ANNOTATIONS

TVD	MD	Annotation
225.00	225.00	Kickoff at 225.00ft
687.96	690.00	Build Rate = 2.00%/100ft
1140.82	1157.18	End Build at 1157.18ft
3123.82	3250.00	18.64 Incline
5192.91	5433.68	Begin Drop at 5433.68ft
5790.22	6050.00	Drop Rate = 1.50%/100ft
6414.00	6676.59	End Drop at 6676.59ft
10363.00	10626.12	Total Depth = 10626.12ft

#### PROJECT DETAILS: Garfield County, CO

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: Colorado Central 502

System Datum: Mean Sea Level

Plan: Plan #1 Proposal (Doghead 19-33D/Plan #1)

Created By: Puneet Bhatia Date: 02/24/2009

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_