



800M (1945.0 to 2008.0) Dip: 07.17° Field: 53588.6 mT  
Magnetic North is 9.56 degrees East of True North (at 01/15/07)

To correct azimuth from Magnetic to True add 9.56 degrees

**ENSIGN**  
United States Drilling

noble energy

**BAKER  
HUGHES**  
**INTEQ**

Scale 1 inch = 200

Easting (ft)

-700 -600 -500 -400 -300 -200



Slot #1 Quarter Circle S

SURFACE HOLE LOCATION:  
1227'FNL & 1383'FEL

COGCC

LEGAL BOX: 400' X 400'  
CENTER AT 1715'FNL & 1907'FEL

Quarter Circle S1-7JI Legal Box

Quarter Circle S 1-7JI Target

BOTTOM HOLE LOCATION:  
1800'FNL & 2000'FEL

# NOBLE ENERGY, INC

Location: COLORADO

Field: WELD COUNTY (NOBLE NAD 83)

Facility: SEC.1-T4N-R68W

Slot: Slot #1 Quarter Circle S 1-7JI

Well: Quarter Circle S 1-7JI

Wellbore: Quarter Circle S 1-7JI PWB

## Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	16.00	0.000	224.291	16.00	0.00	0.00	0.00	0.00
End of Tangent	1500.00	0.000	224.291	1500.00	0.00	0.00	0.00	0.00
End of Build (S)	2007.12	10.142	224.291	2004.48	-32.04	-31.26	2.00	44.77
End of Tangent (S)	6061.52	10.142	224.291	5995.52	-543.10	-529.83	0.00	758.73
End of Drop (S)	6568.65	0.000	224.291	6500.00	-575.14	-561.09	2.00	803.50
End of Tangent	7818.65	0.000	224.291	7750.00	-575.14	-561.09	0.00	803.50

## Location Information

Facility Name		Grid East (USft)	Grid North (USft)	Latitude	Longitude
SEC.1-T4N-R68W		3153856.983	1369272.628	40° 20' 44.664"N	104° 56' 52.836"W
Slot	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude
Slot #1 Quarter Circle S 1-7JI	0.00	0.00	3153856.983	1369272.628	40° 20' 44.664"N
Ensign 7 (RT) to Mud line (Facility - SEC.1-T4N-R68W)					4927ft
Mean Sea Level to Mud line (Facility - SEC.1-T4N-R68W)					0ft
Ensign 7 (RT) to Mean Sea Level					4927ft

# ENSIGN 7

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Quarter Circle S 1-7JI Target	6568.65	6500.00	-575.14	-561.09	3153299.51	1368694.03	40° 20' 38.981"N	104° 57' 00.082"W
Quarter Circle S1-7JI Legal Box		6500.00	-490.14	-468.00	3153391.97	1368779.60	40° 20' 39.821"N	104° 56' 58.881"W

Plot reference wellpath is Quarter Circle S 1-7JI PWB

True vertical depths are referenced to Ensign 7 (RT)

Measured depths are referenced to Ensign 7 (RT)

Ensign 7 (RT) to Mean Sea Level: 4927 feet

Mean Sea Level to Mud line (Facility - SEC.1-T4N-R68W): 0 feet

Coordinates are in feet referenced to Slot

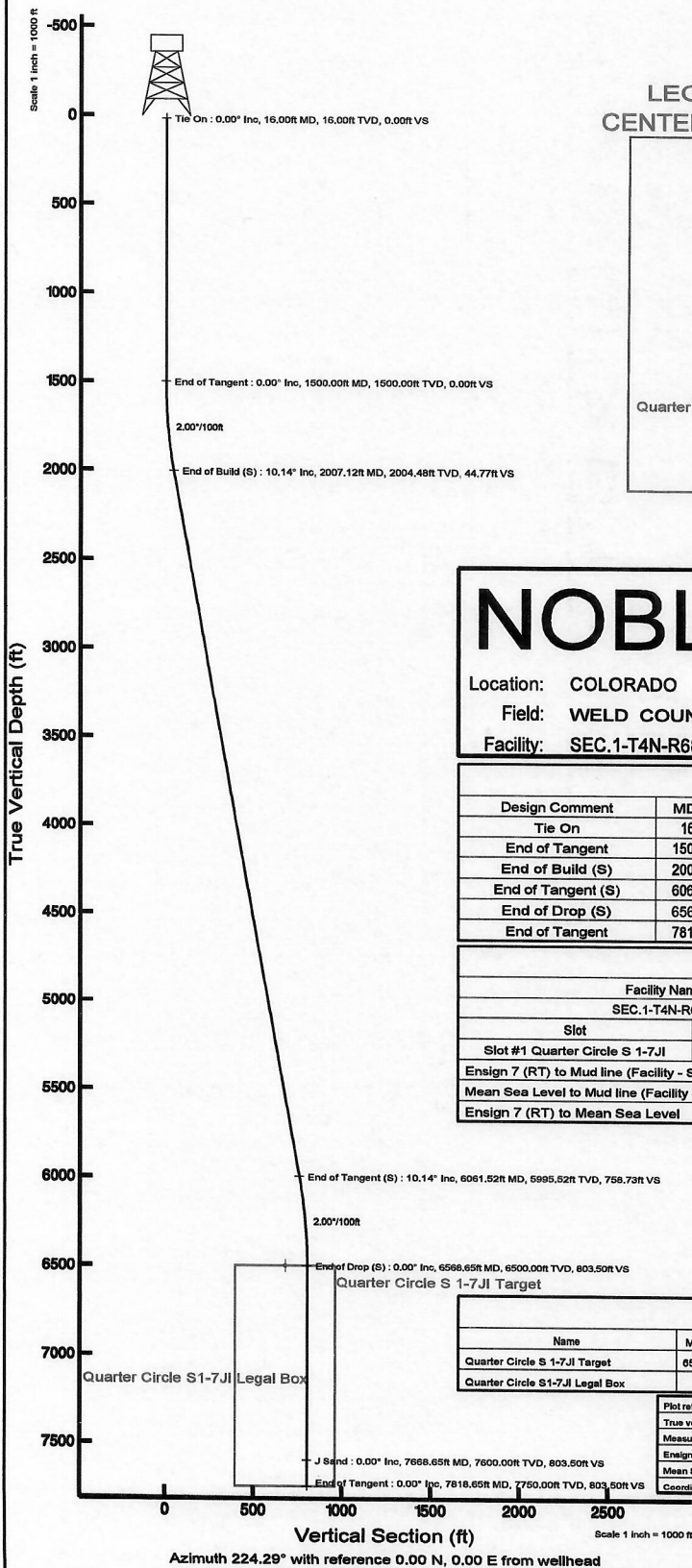
Grid System: NAD83 / Lambert Colorado State Planes, Northern Zone (801), US feet

North Reference: True north

Scale: True distance

Depths are in feet

Created by: Suzanne Thompson on 1/15/2007





# Planned Wellpath Report

Quarter Circle S 1-7JI PWP

Page 1 of 4

RECEIVED

BAKER  
HUGHES

JAN 18 07  
INTEQ

COGCC

## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	Slot #1 Quarter Circle S 1-7JI
Area	COLORADO	Well	Quarter Circle S 1-7JI
Field	WELD COUNTY (NOBLE NAD 83)	Wellbore	Quarter Circle S 1-7JI PWB
Facility	SEC.1-T4N-R68W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet	Software System	WellArchitect™ 1.2
North Reference	True	User	Suzanne Thompson
Scale	0.999958	Report Generated	01/15/07 at 13:57:01
Wellbore last revised	01/15/07	Database/Source file	WA_Denver/Quarter

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	0.00	0.00	3153856.98	1369272.63	40 20 44.664N	104 56 52.836W
Facility Reference Pt			3153856.98	1369272.63	40 20 44.664N	104 56 52.836W
Field Reference Pt			3000000.00	4454105.15	48 46 34.315N	105 30 00.000W

## WELLPATH DATUM

Calculation method	Minimum curvature	Ensign 7 (RT) to Facility Vertical Datum	4927.00 feet
Horizontal Reference Pt	Slot	Ensign 7 (RT) to Mean Sea Level	4927.00 feet
Vertical Reference Pt	Ensign 7 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Ensign 7 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	224.29°



# Planned Wellpath Report

Quarter Circle S 1-7JI PWP  
Page 2 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	Slot #1 Quarter Circle S 1-7JI
Area	COLORADO	Well	Quarter Circle S 1-7JI
Field	WELD COUNTY (NOBLE NAD 83)	Wellbore	Quarter Circle S 1-7JI PWB
Facility	SEC.1-T4N-R68W		

## WELLPATH DATA (85 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
0.00†	0.000	224.291	0.00	0.00	0.00	0.00	0.00
16.00	0.000	224.291	16.00	0.00	0.00	0.00	0.00
116.00†	0.000	0.000	116.00	0.00	0.00	0.00	0.00
216.00†	0.000	0.000	216.00	0.00	0.00	0.00	0.00
316.00†	0.000	0.000	316.00	0.00	0.00	0.00	0.00
416.00†	0.000	0.000	416.00	0.00	0.00	0.00	0.00
516.00†	0.000	0.000	516.00	0.00	0.00	0.00	0.00
616.00†	0.000	0.000	616.00	0.00	0.00	0.00	0.00
716.00†	0.000	0.000	716.00	0.00	0.00	0.00	0.00
816.00†	0.000	0.000	816.00	0.00	0.00	0.00	0.00
916.00†	0.000	0.000	916.00	0.00	0.00	0.00	0.00
1016.00†	0.000	0.000	1016.00	0.00	0.00	0.00	0.00
1116.00†	0.000	0.000	1116.00	0.00	0.00	0.00	0.00
1216.00†	0.000	0.000	1216.00	0.00	0.00	0.00	0.00
1316.00†	0.000	0.000	1316.00	0.00	0.00	0.00	0.00
1416.00†	0.000	0.000	1416.00	0.00	0.00	0.00	0.00
1500.00	0.000	224.291	1500.00	0.00	0.00	0.00	0.00
1516.00†	0.320	224.291	1516.00	0.04	-0.03	-0.03	2.00
1616.00†	2.320	224.291	1615.97	2.35	-1.68	-1.64	2.00
1716.00†	4.320	224.291	1715.80	8.14	-5.83	-5.68	2.00
1816.00†	6.320	224.291	1815.36	17.41	-12.46	-12.16	2.00
1916.00†	8.320	224.291	1914.54	30.15	-21.58	-21.05	2.00
2007.12	10.142	224.291	2004.48	44.77	-32.04	-31.26	2.00
2016.00†	10.142	224.291	2013.22	46.33	-33.16	-32.35	0.00
2116.00†	10.142	224.291	2111.65	63.94	-45.77	-44.65	0.00
2216.00†	10.142	224.291	2210.09	81.55	-58.37	-56.95	0.00
2316.00†	10.142	224.291	2308.53	99.16	-70.98	-69.24	0.00
2416.00†	10.142	224.291	2406.97	116.77	-83.58	-81.54	0.00
2516.00†	10.142	224.291	2505.40	134.38	-96.19	-93.84	0.00
2616.00†	10.142	224.291	2603.84	151.99	-108.79	-106.14	0.00
2716.00†	10.142	224.291	2702.28	169.60	-121.40	-118.43	0.00
2816.00†	10.142	224.291	2800.72	187.21	-134.00	-130.73	0.00
2916.00†	10.142	224.291	2899.15	204.82	-146.61	-143.03	0.00
3016.00†	10.142	224.291	2997.59	222.43	-159.21	-155.32	0.00
3116.00†	10.142	224.291	3096.03	240.04	-171.82	-167.62	0.00
3216.00†	10.142	224.291	3194.46	257.65	-184.42	-179.92	0.00
3316.00†	10.142	224.291	3292.90	275.26	-197.03	-192.21	0.00
3416.00†	10.142	224.291	3391.34	292.87	-209.63	-204.51	0.00
3516.00†	10.142	224.291	3489.78	310.48	-222.24	-216.81	0.00
3616.00†	10.142	224.291	3588.21	328.08	-234.84	-229.10	0.00





# Planned Wellpath Report

Quarter Circle S 1-7JI PWP  
Page 3 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	Slot #1 Quarter Circle S 1-7JI
Area	COLORADO	Well	Quarter Circle S 1-7JI
Field	WELD COUNTY (NOBLE NAD 83)	Wellbore	Quarter Circle S 1-7JI PWB
Facility	SEC.1-T4N-R68W		

## WELLPATH DATA (85 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
3716.00†	10.142	224.291	3686.65	345.69	-247.45	-241.40	0.00
3816.00†	10.142	224.291	3785.09	363.30	-260.05	-253.70	0.00
3916.00†	10.142	224.291	3883.53	380.91	-272.66	-266.00	0.00
4016.00†	10.142	224.291	3981.96	398.52	-285.26	-278.29	0.00
4116.00†	10.142	224.291	4080.40	416.13	-297.87	-290.59	0.00
4216.00†	10.142	224.291	4178.84	433.74	-310.47	-302.89	0.00
4316.00†	10.142	224.291	4277.27	451.35	-323.08	-315.18	0.00
4416.00†	10.142	224.291	4375.71	468.96	-335.68	-327.48	0.00
4516.00†	10.142	224.291	4474.15	486.57	-348.29	-339.78	0.00
4616.00†	10.142	224.291	4572.59	504.18	-360.89	-352.07	0.00
4716.00†	10.142	224.291	4671.02	521.79	-373.50	-364.37	0.00
4816.00†	10.142	224.291	4769.46	539.40	-386.10	-376.67	0.00
4916.00†	10.142	224.291	4867.90	557.01	-398.71	-388.96	0.00
5016.00†	10.142	224.291	4966.34	574.62	-411.31	-401.26	0.00
5116.00†	10.142	224.291	5064.77	592.23	-423.92	-413.56	0.00
5216.00†	10.142	224.291	5163.21	609.84	-436.52	-425.85	0.00
5316.00†	10.142	224.291	5261.65	627.45	-449.13	-438.15	0.00
5416.00†	10.142	224.291	5360.09	645.06	-461.73	-450.45	0.00
5516.00†	10.142	224.291	5458.52	662.67	-474.34	-462.75	0.00
5616.00†	10.142	224.291	5556.96	680.28	-486.94	-475.04	0.00
5716.00†	10.142	224.291	5655.40	697.89	-499.55	-487.34	0.00
5816.00†	10.142	224.291	5753.83	715.50	-512.15	-499.64	0.00
5916.00†	10.142	224.291	5852.27	733.11	-524.76	-511.93	0.00
6016.00†	10.142	224.291	5950.71	750.72	-537.36	-524.23	0.00
6061.52	10.142	224.291	5995.52	758.73	-543.10	-529.83	0.00
6116.00†	9.053	224.291	6049.23	767.81	-549.60	-536.17	2.00
6216.00†	7.053	224.291	6148.24	781.82	-559.63	-545.95	2.00
6316.00†	5.053	224.291	6247.68	792.37	-567.17	-553.32	2.00
6416.00†	3.053	224.291	6347.43	799.43	-572.23	-558.25	2.00
6516.00†	1.053	224.291	6447.36	803.02	-574.80	-560.75	2.00
6568.65	0.000	224.291	6500.00 <sup>1</sup>	803.50	-575.14	-561.09	2.00
6616.00†	0.000	0.000	6547.35	803.50	-575.14	-561.09	0.00
6716.00†	0.000	0.000	6647.35	803.50	-575.14	-561.09	0.00
6816.00†	0.000	0.000	6747.35	803.50	-575.14	-561.09	0.00
6916.00†	0.000	0.000	6847.35	803.50	-575.14	-561.09	0.00
7016.00†	0.000	0.000	6947.35	803.50	-575.14	-561.09	0.00
7116.00†	0.000	0.000	7047.35	803.50	-575.14	-561.09	0.00
7216.00†	0.000	0.000	7147.35	803.50	-575.14	-561.09	0.00
7316.00†	0.000	0.000	7247.35	803.50	-575.14	-561.09	0.00
7416.00†	0.000	0.000	7347.35	803.50	-575.14	-561.09	0.00



# Planned Wellpath Report

Quarter Circle S 1-7JI PWP

Page 4 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	Slot #1 Quarter Circle S 1-7JI
Area	COLORADO	Well	Quarter Circle S 1-7JI
Field	WELD COUNTY (NOBLE NAD 83)	Wellbore	Quarter Circle S 1-7JI PWB
Facility	SEC.1-T4N-R68W		

WELLPATH DATA (85 stations) † = interpolated/extrapolated station							
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
7516.00†	0.000	0.000	7447.35	803.50	-575.14	-561.09	0.00
7616.00†	0.000	0.000	7547.35	803.50	-575.14	-561.09	0.00
7716.00†	0.000	0.000	7647.35	803.50	-575.14	-561.09	0.00
7816.00†	0.000	0.000	7747.35	803.50	-575.14	-561.09	0.00
7818.65 ✓	0.000	224.291	7750.00	803.50	-575.14	-561.09	0.00

TARGETS									
Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) Quarter Circle S 1-7JI Target	6568.65	6500.00	-575.14	-561.09	3153299.51	1368694.03	40 20 38.981N	104 57 00.082W	point
Quarter Circle S1-7JI Legal Box		6500.00	-490.14	-468.09	3153391.97	1368779.60	40 20 39.821N	104 56 58.881W	square

SURVEY PROGRAM Ref Wellbore: Quarter Circle S 1-7JI PWB Ref Wellpath: Quarter Circle S 1-7JI PWP				
Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	7818.65	MTC (Collar, pre-2000) (Standard)		Quarter Circle S 1-7JI PWB

WELLPATH COMMENTS				
MD [feet]	Inclination [degrees]	Azimuth [degrees]	TVD [feet]	Comment
7668.65	0.000	224.291	7600.00	J Sand