

# ENCANA OIL & GAS (USA) INC

Location: COLORADO Slot: Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL  
 Field: GARFIELD COUNTY (NEW) Well: Federal 25-1BB  
 Facility: SEC.25-T7S-R96W Wellbore: Federal 25-1BB PWB

Plot reference wellbore is Federal 25-1BB PWP Rev-A.0		Grid System: NAD83 / Lambert Colorado State Planes, Central Zone (502), US feet
True vertical depths are referenced to Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT)		North Reference: True north
Measured depths are referenced to Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT)		Scale: True distance
Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT) to Mean Sea Level: 6086 feet		Depths are in feet
Mean Sea Level to Mud line (Facility: SEC.25-T7S-R96W): 0 feet		Created by: thomsuzc on 10/16/2009
Coordinates are in feet referenced to Slot		

## Location Information

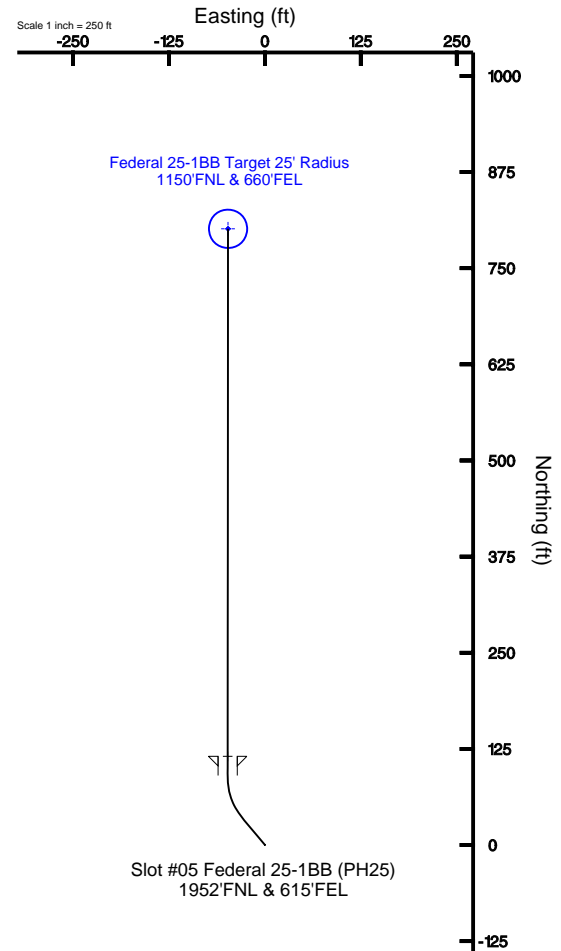
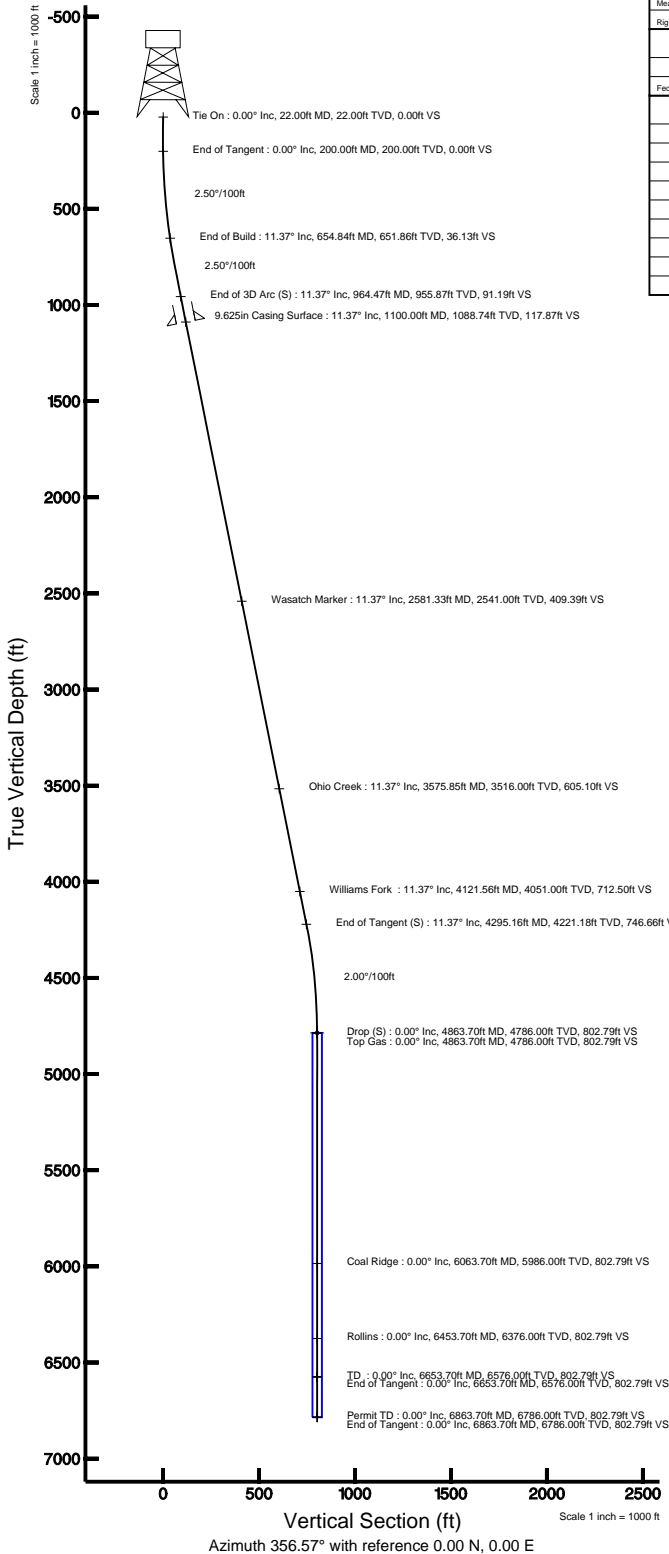
Facility Name	Grid East (USft)	Grid North (USft)	Latitude	Longitude
SEC.25-T7S-R96W	2279388.355	1584500.194	39°24'37.584"N	108°03'02.808"W
Slot	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)
Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL	3.64	-22.60	2279365.862	1584504.469
Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT) to Mud line (Facility: SEC.25-T7S-R96W)				6086ft
Mean Sea Level to Mud line (Facility: SEC.25-T7S-R96W)				0ft
Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT) to Mean Sea Level				6086ft

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Federal 25-1BB Target 25' Radius 1150'FNL & 660'FEL	4863.70	4786.00	801.35	-48.03	2279340.35	1585306.81	39°24'45.540"N	108°03'03.708"W

## Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	22.00	0.000	320.000	22.00	0.00	0.00	0.00	0.00
End of Tangent	200.00	0.000	320.000	200.00	0.00	0.00	0.00	0.00
End of Build	654.84	11.371	320.000	651.86	34.46	-28.92	2.50	36.13
End of 3D Arc (S)	964.47	11.371	0.041	955.87	88.45	-48.54	2.50	91.19
End of Tangent (S)	4295.16	11.371	0.041	4221.18	745.12	-48.07	0.00	746.66
Drop (S)	4863.70	0.000	0.041	4786.00	801.35	-48.03	2.00	802.79
End of Tangent	6653.70	0.000	0.041	6576.00	801.35	-48.03	0.00	802.79
End of Tangent	6863.70	0.000	0.041	6786.00	801.35	-48.03	0.00	802.79



BOGM (1945 to 2011) @ Dip 65.73° Field 52426.9 nT  
 Magnetic North is 10.59 degrees East of True North (at 10/13/2009)  
 To correct azimuth from Magnetic to True add 10.59 degrees



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## REFERENCE WELLPATH IDENTIFICATION

Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL
Area	COLORADO	Well	Federal 25-1BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal 25-1BB PWB
Facility	SEC.25-T7S-R96W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado State Planes, Central Zone (502), US feet	Software System	WellArchitect® 2.0
North Reference	True	User	Thomsuzc
Scale	0.99995	Report Generated	10/16/2009 at 9:47:54 PM
Convergence at slot	1.61° West	Database/Source file	Denver/Federal_25-1BB_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	3.64	-22.60	2279365.86	1584504.47	39°24'37.620"N	108°03'03.096"W
Facility Reference Pt			2279388.36	1584500.19	39°24'37.584"N	108°03'02.808"W
Field Reference Pt			3000000.01	4560984.48	47°34'21.070"N	105°30'00.000"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT) to Facility Vertical Datum	6086.00ft
Horizontal Reference Pt	Slot	Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT) to Mean Sea Level	6086.00ft
Vertical Reference Pt	Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	356.57°



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Area	COLORADO	Well	Federal 25-1BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal 25-1BB PWB
Facility	SEC.25-T7S-R96W		

## WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	320.000	0.00	0.00	0.00	0.00	0.00
22.00	0.000	320.000	22.00	0.00	0.00	0.00	0.00
122.00†	0.000	320.000	122.00	0.00	0.00	0.00	0.00
200.00	0.000	320.000	200.00	0.00	0.00	0.00	0.00
222.00†	0.550	320.000	222.00	0.08	0.08	-0.07	2.50
322.00†	3.050	320.000	321.94	2.61	2.49	-2.09	2.50
422.00†	5.550	320.000	421.65	8.63	8.23	-6.91	2.50
522.00†	8.050	320.000	520.94	18.14	17.30	-14.52	2.50
622.00†	10.550	320.000	619.62	31.12	29.68	-24.90	2.50
654.84	11.371	320.000	651.86	36.13	34.46	-28.92	2.50
722.00†	10.920	328.375	717.76	47.05	44.95	-36.51	2.50
822.00†	10.705	341.682	816.00	64.38	61.83	-44.39	2.50
922.00†	11.058	354.822	914.21	82.94	80.21	-48.18	2.50
964.47	11.371	0.041	955.87	91.19	88.45	-48.54	2.50
1022.00†	11.371	0.041	1012.28	102.52	99.79	-48.54	0.00
1122.00†	11.371	0.041	1110.31	122.20	119.51	-48.52	0.00
1222.00†	11.371	0.041	1208.35	141.88	139.22	-48.51	0.00
1322.00†	11.371	0.041	1306.39	161.56	158.94	-48.49	0.00
1422.00†	11.371	0.041	1404.42	181.24	178.65	-48.48	0.00
1522.00†	11.371	0.041	1502.46	200.91	198.37	-48.47	0.00
1622.00†	11.371	0.041	1600.50	220.59	218.09	-48.45	0.00
1722.00†	11.371	0.041	1698.54	240.27	237.80	-48.44	0.00
1822.00†	11.371	0.041	1796.57	259.95	257.52	-48.42	0.00
1922.00†	11.371	0.041	1894.61	279.63	277.23	-48.41	0.00
2022.00†	11.371	0.041	1992.65	299.31	296.95	-48.40	0.00
2122.00†	11.371	0.041	2090.68	318.99	316.66	-48.38	0.00
2222.00†	11.371	0.041	2188.72	338.67	336.38	-48.37	0.00
2322.00†	11.371	0.041	2286.76	358.35	356.10	-48.35	0.00
2422.00†	11.371	0.041	2384.80	378.03	375.81	-48.34	0.00
2522.00†	11.371	0.041	2482.83	397.71	395.53	-48.32	0.00
2622.00†	11.371	0.041	2580.87	417.39	415.24	-48.31	0.00
2722.00†	11.371	0.041	2678.91	437.07	434.96	-48.30	0.00
2822.00†	11.371	0.041	2776.95	456.75	454.68	-48.28	0.00
2922.00†	11.371	0.041	2874.98	476.43	474.39	-48.27	0.00
3022.00†	11.371	0.041	2973.02	496.11	494.11	-48.25	0.00
3122.00†	11.371	0.041	3071.06	515.79	513.82	-48.24	0.00
3222.00†	11.371	0.041	3169.09	535.47	533.54	-48.23	0.00
3322.00†	11.371	0.041	3267.13	555.15	553.25	-48.21	0.00
3422.00†	11.371	0.041	3365.17	574.83	572.97	-48.20	0.00
3522.00†	11.371	0.041	3463.21	594.51	592.69	-48.18	0.00
3622.00†	11.371	0.041	3561.24	614.19	612.40	-48.17	0.00
3722.00†	11.371	0.041	3659.28	633.87	632.12	-48.15	0.00
3822.00†	11.371	0.041	3757.32	653.55	651.83	-48.14	0.00
3922.00†	11.371	0.041	3855.35	673.23	671.55	-48.13	0.00
4022.00†	11.371	0.041	3953.39	692.90	691.26	-48.11	0.00



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## REFERENCE WELLPATH IDENTIFICATION

Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #05 Federal 25-1BB (PH25) 1952'FNL & 615'FEL
Area	COLORADO	Well	Federal 25-1BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal 25-1BB PWB
Facility	SEC.25-T7S-R96W		

## WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
4122.00†	11.371	0.041	4051.43	712.58	710.98	-48.10	0.00
4222.00†	11.371	0.041	4149.47	732.26	730.70	-48.08	0.00
4295.16	11.371	0.041	4221.18	746.66	745.12	-48.07	0.00
4322.00†	10.834	0.041	4247.53	751.82	750.29	-48.07	2.00
4422.00†	8.834	0.041	4346.05	768.87	767.37	-48.06	2.00
4522.00†	6.834	0.041	4445.11	782.47	781.00	-48.05	2.00
4622.00†	4.834	0.041	4544.59	792.62	791.16	-48.04	2.00
4722.00†	2.834	0.041	4644.36	799.29	797.85	-48.04	2.00
4822.00†	0.834	0.041	4744.31	802.49	801.05	-48.03	2.00
4863.70	0.000	0.041	4786.00 <sup>1</sup>	802.79	801.35	-48.03	2.00
4922.00†	0.000	0.041	4844.30	802.79	801.35	-48.03	0.00
5022.00†	0.000	0.041	4944.30	802.79	801.35	-48.03	0.00
5122.00†	0.000	0.041	5044.30	802.79	801.35	-48.03	0.00
5222.00†	0.000	0.041	5144.30	802.79	801.35	-48.03	0.00
5322.00†	0.000	0.041	5244.30	802.79	801.35	-48.03	0.00
5422.00†	0.000	0.041	5344.30	802.79	801.35	-48.03	0.00
5522.00†	0.000	0.041	5444.30	802.79	801.35	-48.03	0.00
5622.00†	0.000	0.041	5544.30	802.79	801.35	-48.03	0.00
5722.00†	0.000	0.041	5644.30	802.79	801.35	-48.03	0.00
5822.00†	0.000	0.041	5744.30	802.79	801.35	-48.03	0.00
5922.00†	0.000	0.041	5844.30	802.79	801.35	-48.03	0.00
6022.00†	0.000	0.041	5944.30	802.79	801.35	-48.03	0.00
6122.00†	0.000	0.041	6044.30	802.79	801.35	-48.03	0.00
6222.00†	0.000	0.041	6144.30	802.79	801.35	-48.03	0.00
6322.00†	0.000	0.041	6244.30	802.79	801.35	-48.03	0.00
6422.00†	0.000	0.041	6344.30	802.79	801.35	-48.03	0.00
6522.00†	0.000	0.041	6444.30	802.79	801.35	-48.03	0.00
6622.00†	0.000	0.041	6544.30	802.79	801.35	-48.03	0.00
6653.70	0.000	0.041	6576.00	802.79	801.35	-48.03	0.00
6722.00†	0.000	0.041	6644.30	802.79	801.35	-48.03	0.00
6822.00†	0.000	0.041	6744.30	802.79	801.35	-48.03	0.00
6863.70	0.000	0.041	6786.00	802.79	801.35	-48.03	0.00

## HOLE & CASING SECTIONS Ref Wellbore: Federal 25-1BB PWB Ref Wellpath: Federal 25-1BB PWP Rev-A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	22.00	1100.00	1078.00	22.00	1088.74	0.00	0.00	115.17	-48.53
9.625in Casing Surface	22.00	1100.00	1078.00	22.00	1088.74	0.00	0.00	115.17	-48.53



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Area	COLORADO	Well	Federal 25-1BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal 25-1BB PWB
Facility	SEC.25-T7S-R96W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) Federal 25-1BB Target 25' Radius 1150'FNL & 660'FEL	4863.70	4786.00	801.35	-48.03	2279340.35	1585306.81	39°24'45.540"N	108°03'03.708"W	circle

## SURVEY PROGRAM Ref Wellbore: Federal 25-1BB PWB Ref Wellpath: Federal 25-1BB PWP Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	6863.70	MTC (Collar, post-2000) (Standard)		Federal 25-1BB PWB



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Field	GARFIELD COUNTY (NEW)	Wellbore	Federal 25-1BB PWB
Facility	SEC.25-T7S-R96W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]		Azimuth [°]		TVD [ft]	Comment
2581.33		11.371		0.041	2541.00	Wasatch Marker
3575.85		11.371		0.041	3516.00	Ohio Creek
4121.56		11.371		0.041	4051.00	Williams Fork
4863.70		0.000		0.041	4786.00	Top Gas
6063.70		0.000		0.041	5986.00	Coal Ridge
6453.70		0.000		0.041	6376.00	Rollins
6653.70		0.000		0.041	6576.00	TD
6863.70		0.000		0.041	6786.00	Permit TD