

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NORTHGLENN STATE PAD

Northglenn State 10-36

Northglenn State 10-36

Plan: Northglenn State 10-36 (wp01)


Standard Planning Report


25 April, 2011



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_NORTHGLENN STATE PAD
Well: Northglenn State 10-36
Wellbore: Northglenn State 10-36
Section:
SHL:
Design: Northglenn State 10-36 (wp01)
Latitude: 40.004121
Longitude: -104.951438
GL: 5120.00
KB: WELL @ 5120.00ft (Original Well Elev)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4097.00	4210.64	PK Depth
4847.00	4960.64	SX Depth
7457.00	7570.64	NIO Depth
7903.00	8016.64	CD Depth
7973.00	8086.64	GH Depth
8324.00	8437.64	J Depth





Azimuths to True North
Magnetic North: 8.95°

Magnetic Field
Strength: 52916.6snT
Dip Angle: 66.70°
Date: 4/18/2011
Model: IGRF2010

WELL DETAILS: Northglenn State 10-36

+N/-S	+E/-W	Northing	Ground Level: Easting	5120.00 Latitude	Longitude	Slot
0.00	0.00	1244823.35	3153671.26	40.004121	-104.951438	

CASING DETAILS

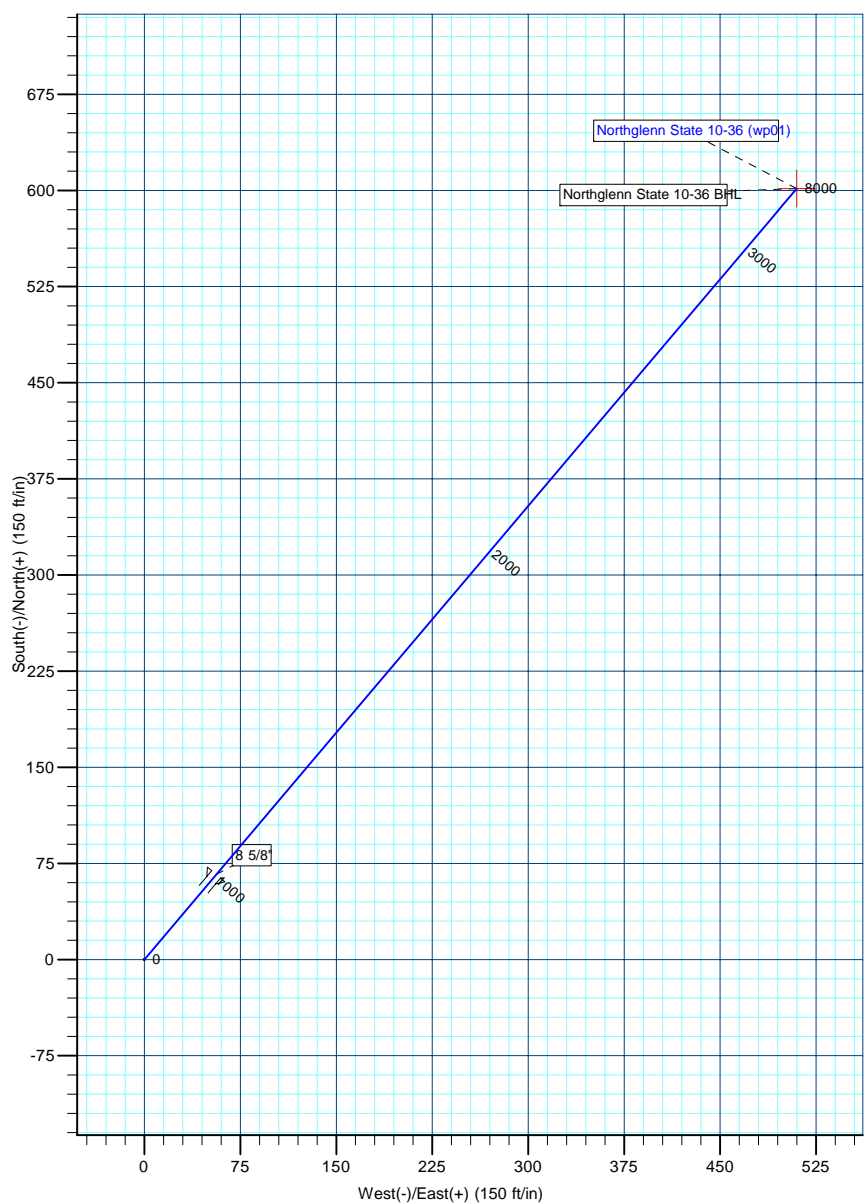
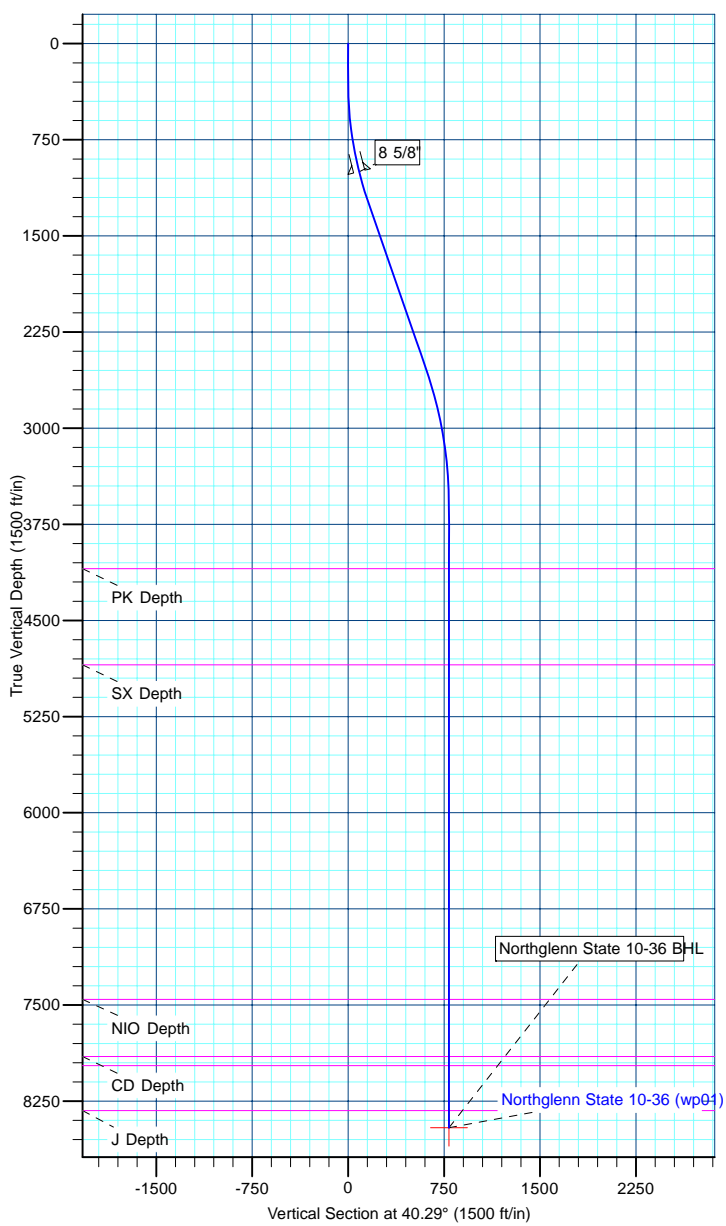
TVD	MD	Name	Size
1000.00	1007.16	8 5/8"	8-5/8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Northglenn State 10-36 BHL	8457.00	601.40	509.92	1245427.89	3154177.45	40.005772	-104.949618	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1256.91	19.14	40.29	1239.21	120.77	102.40	2.00	40.29	158.33
2627.03	19.14	40.29	2533.61	463.38	392.90	0.00	0.00	607.53
3720.64	0.00	0.00	3607.00	601.40	509.92	1.75	180.00	788.48
8570.64	0.00	0.00	8457.00	601.40	509.92	0.00	0.00	788.48



Database:	edm5000p	Local Co-ordinate Reference:	Well Northglenn State 10-36
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5120.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5120.00ft (Original Well Elev)
Site:	WELD_NORTHGLENN STATE PAD	North Reference:	True
Well:	Northglenn State 10-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Northglenn State 10-36		
Design:	Northglenn State 10-36 (wp01)		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_NORTHGLENN STATE PAD			
Site Position:		Northing:	1,244,823.33 ft	Latitude:	40.004121
From:	Lat/Long	Easting:	3,153,671.35 ft	Longitude:	-104.951438
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.35

Well	Northglenn State 10-36					
Well Position	+N-S	0.02 ft	Northing:	1,244,823.35 ft	Latitude:	40.004121
	+E-W	-0.08 ft	Easting:	3,153,671.26 ft	Longitude:	-104.951439
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,120.00 ft

Wellbore	Northglenn State 10-36				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/18/2011	8.95	66.70	52,917

Design	Northglenn State 10-36 (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	40.29

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,256.91	19.14	40.29	1,239.21	120.77	102.40	2.00	2.00	0.00	40.29	
2,627.03	19.14	40.29	2,533.61	463.38	392.90	0.00	0.00	0.00	0.00	
3,720.64	0.00	0.00	3,607.00	601.40	509.92	1.75	-1.75	0.00	180.00	
8,570.64	0.00	0.00	8,457.00	601.40	509.92	0.00	0.00	0.00	0.00	Northglenn State 10

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5120.00ft (Original Well Elev)
Site:	WELD_NORTHGLENN STATE PAD	North Reference:	True
Well:	Northglenn State 10-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Northglenn State 10-36		
Design:	Northglenn State 10-36 (wp01)		

Planned Survey									
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)
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
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	40.29	399.98	1.33	1.13	1.75	2.00	2.00	0.00
500.00	4.00	40.29	499.84	5.32	4.51	6.98	2.00	2.00	0.00
600.00	6.00	40.29	599.45	11.97	10.15	15.69	2.00	2.00	0.00
700.00	8.00	40.29	698.70	21.26	18.03	27.88	2.00	2.00	0.00
800.00	10.00	40.29	797.47	33.20	28.15	43.52	2.00	2.00	0.00
900.00	12.00	40.29	895.62	47.75	40.49	62.60	2.00	2.00	0.00
1,000.00	14.00	40.29	993.06	64.91	55.03	85.10	2.00	2.00	0.00
1,007.16	14.14	40.29	1,000.00	66.23	56.16	86.84	2.00	2.00	0.00
8 5/8"									
1,100.00	16.00	40.29	1,089.64	84.65	71.77	110.98	2.00	2.00	0.00
1,200.00	18.00	40.29	1,185.27	106.95	90.68	140.21	2.00	2.00	0.00
1,256.91	19.14	40.29	1,239.21	120.77	102.40	158.33	2.00	2.00	0.00
1,300.00	19.14	40.29	1,279.92	131.54	111.53	172.46	0.00	0.00	0.00
1,400.00	19.14	40.29	1,374.40	156.55	132.74	205.25	0.00	0.00	0.00
1,500.00	19.14	40.29	1,468.87	181.55	153.94	238.03	0.00	0.00	0.00
1,600.00	19.14	40.29	1,563.34	206.56	175.14	270.82	0.00	0.00	0.00
1,700.00	19.14	40.29	1,657.82	231.57	196.34	303.60	0.00	0.00	0.00
1,800.00	19.14	40.29	1,752.29	256.57	217.54	336.39	0.00	0.00	0.00
1,900.00	19.14	40.29	1,846.76	281.58	238.75	369.17	0.00	0.00	0.00
2,000.00	19.14	40.29	1,941.23	306.59	259.95	401.96	0.00	0.00	0.00
2,100.00	19.14	40.29	2,035.71	331.59	281.15	434.74	0.00	0.00	0.00
2,200.00	19.14	40.29	2,130.18	356.60	302.35	467.53	0.00	0.00	0.00
2,300.00	19.14	40.29	2,224.65	381.60	323.56	500.31	0.00	0.00	0.00
2,400.00	19.14	40.29	2,319.13	406.61	344.76	533.09	0.00	0.00	0.00
2,500.00	19.14	40.29	2,413.60	431.62	365.96	565.88	0.00	0.00	0.00
2,600.00	19.14	40.29	2,508.07	456.62	387.16	598.66	0.00	0.00	0.00
2,627.03	19.14	40.29	2,533.61	463.38	392.90	607.53	0.00	0.00	0.00
2,700.00	17.86	40.29	2,602.81	481.04	407.87	630.68	1.75	-1.75	0.00
2,800.00	16.11	40.29	2,698.44	503.32	426.76	659.89	1.75	-1.75	0.00
2,900.00	14.36	40.29	2,794.92	523.37	443.76	686.17	1.75	-1.75	0.00
3,000.00	12.61	40.29	2,892.16	541.15	458.84	709.49	1.75	-1.75	0.00
3,100.00	10.86	40.29	2,990.07	556.67	471.99	729.83	1.75	-1.75	0.00
3,200.00	9.11	40.29	3,088.55	569.89	483.20	747.17	1.75	-1.75	0.00
3,300.00	7.36	40.29	3,187.51	580.82	492.47	761.50	1.75	-1.75	0.00
3,400.00	5.61	40.29	3,286.87	589.44	499.77	772.79	1.75	-1.75	0.00
3,500.00	3.86	40.29	3,386.52	595.73	505.11	781.05	1.75	-1.75	0.00
3,600.00	2.11	40.29	3,486.38	599.71	508.48	786.26	1.75	-1.75	0.00
3,700.00	0.36	40.29	3,586.36	601.35	509.88	788.42	1.75	-1.75	0.00
3,720.64	0.00	0.00	3,607.00	601.40	509.92	788.48	1.75	-1.75	0.00
3,800.00	0.00	0.00	3,686.36	601.40	509.92	788.48	0.00	0.00	0.00
3,900.00	0.00	0.00	3,786.36	601.40	509.92	788.48	0.00	0.00	0.00
4,000.00	0.00	0.00	3,886.36	601.40	509.92	788.48	0.00	0.00	0.00
4,100.00	0.00	0.00	3,986.36	601.40	509.92	788.48	0.00	0.00	0.00
4,200.00	0.00	0.00	4,086.36	601.40	509.92	788.48	0.00	0.00	0.00
4,210.64	0.00	0.00	4,097.00	601.40	509.92	788.48	0.00	0.00	0.00
PK Depth									
4,300.00	0.00	0.00	4,186.36	601.40	509.92	788.48	0.00	0.00	0.00
4,400.00	0.00	0.00	4,286.36	601.40	509.92	788.48	0.00	0.00	0.00
4,500.00	0.00	0.00	4,386.36	601.40	509.92	788.48	0.00	0.00	0.00
4,600.00	0.00	0.00	4,486.36	601.40	509.92	788.48	0.00	0.00	0.00

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Well:	Northglenn State 10-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Northglenn State 10-36		
Design:	Northglenn State 10-36 (wp01)		

Planned Survey									
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)
4,700.00	0.00	0.00	4,586.36	601.40	509.92	788.48	0.00	0.00	0.00
4,800.00	0.00	0.00	4,686.36	601.40	509.92	788.48	0.00	0.00	0.00
4,900.00	0.00	0.00	4,786.36	601.40	509.92	788.48	0.00	0.00	0.00
4,960.64	0.00	0.00	4,847.00	601.40	509.92	788.48	0.00	0.00	0.00
SX Depth									
5,000.00	0.00	0.00	4,886.36	601.40	509.92	788.48	0.00	0.00	0.00
5,100.00	0.00	0.00	4,986.36	601.40	509.92	788.48	0.00	0.00	0.00
5,200.00	0.00	0.00	5,086.36	601.40	509.92	788.48	0.00	0.00	0.00
5,300.00	0.00	0.00	5,186.36	601.40	509.92	788.48	0.00	0.00	0.00
5,400.00	0.00	0.00	5,286.36	601.40	509.92	788.48	0.00	0.00	0.00
5,500.00	0.00	0.00	5,386.36	601.40	509.92	788.48	0.00	0.00	0.00
5,600.00	0.00	0.00	5,486.36	601.40	509.92	788.48	0.00	0.00	0.00
5,700.00	0.00	0.00	5,586.36	601.40	509.92	788.48	0.00	0.00	0.00
5,800.00	0.00	0.00	5,686.36	601.40	509.92	788.48	0.00	0.00	0.00
5,900.00	0.00	0.00	5,786.36	601.40	509.92	788.48	0.00	0.00	0.00
6,000.00	0.00	0.00	5,886.36	601.40	509.92	788.48	0.00	0.00	0.00
6,100.00	0.00	0.00	5,986.36	601.40	509.92	788.48	0.00	0.00	0.00
6,200.00	0.00	0.00	6,086.36	601.40	509.92	788.48	0.00	0.00	0.00
6,300.00	0.00	0.00	6,186.36	601.40	509.92	788.48	0.00	0.00	0.00
6,400.00	0.00	0.00	6,286.36	601.40	509.92	788.48	0.00	0.00	0.00
6,500.00	0.00	0.00	6,386.36	601.40	509.92	788.48	0.00	0.00	0.00
6,600.00	0.00	0.00	6,486.36	601.40	509.92	788.48	0.00	0.00	0.00
6,700.00	0.00	0.00	6,586.36	601.40	509.92	788.48	0.00	0.00	0.00
6,800.00	0.00	0.00	6,686.36	601.40	509.92	788.48	0.00	0.00	0.00
6,900.00	0.00	0.00	6,786.36	601.40	509.92	788.48	0.00	0.00	0.00
7,000.00	0.00	0.00	6,886.36	601.40	509.92	788.48	0.00	0.00	0.00
7,100.00	0.00	0.00	6,986.36	601.40	509.92	788.48	0.00	0.00	0.00
7,200.00	0.00	0.00	7,086.36	601.40	509.92	788.48	0.00	0.00	0.00
7,300.00	0.00	0.00	7,186.36	601.40	509.92	788.48	0.00	0.00	0.00
7,400.00	0.00	0.00	7,286.36	601.40	509.92	788.48	0.00	0.00	0.00
7,500.00	0.00	0.00	7,386.36	601.40	509.92	788.48	0.00	0.00	0.00
7,570.64	0.00	0.00	7,457.00	601.40	509.92	788.48	0.00	0.00	0.00
NIO Depth									
7,600.00	0.00	0.00	7,486.36	601.40	509.92	788.48	0.00	0.00	0.00
7,700.00	0.00	0.00	7,586.36	601.40	509.92	788.48	0.00	0.00	0.00
7,800.00	0.00	0.00	7,686.36	601.40	509.92	788.48	0.00	0.00	0.00
7,900.00	0.00	0.00	7,786.36	601.40	509.92	788.48	0.00	0.00	0.00
8,000.00	0.00	0.00	7,886.36	601.40	509.92	788.48	0.00	0.00	0.00
8,016.64	0.00	0.00	7,903.00	601.40	509.92	788.48	0.00	0.00	0.00
CD Depth									
8,086.64	0.00	0.00	7,973.00	601.40	509.92	788.48	0.00	0.00	0.00
GH Depth									
8,100.00	0.00	0.00	7,986.36	601.40	509.92	788.48	0.00	0.00	0.00
8,200.00	0.00	0.00	8,086.36	601.40	509.92	788.48	0.00	0.00	0.00
8,300.00	0.00	0.00	8,186.36	601.40	509.92	788.48	0.00	0.00	0.00
8,400.00	0.00	0.00	8,286.36	601.40	509.92	788.48	0.00	0.00	0.00
8,437.64	0.00	0.00	8,324.00	601.40	509.92	788.48	0.00	0.00	0.00
J Depth									
8,500.00	0.00	0.00	8,386.36	601.40	509.92	788.48	0.00	0.00	0.00
8,570.64	0.00	0.00	8,457.00	601.40	509.92	788.48	0.00	0.00	0.00
Northglenn State 10-36 BHL									

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Well:	Northglenn State 10-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	Northglenn State 10-36		
Design:	Northglenn State 10-36 (wp01)		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Northglenn State 10-3	0.00	0.00	8,457.00	601.40	509.92	1,245,427.89	3,154,177.45	40.005772	-104.949618
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)		Name	(")	(")
1,007.16	1,000.00	8 5/8"		8-5/8	11

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)		Name	Lithology	(°)	(°)
4,210.64	4,097.00	PK Depth				
4,960.64	4,847.00	SX Depth				
7,570.64	7,457.00	NIO Depth				
8,016.64	7,903.00	CD Depth				
8,086.64	7,973.00	GH Depth				
8,437.64	8,324.00	J Depth				