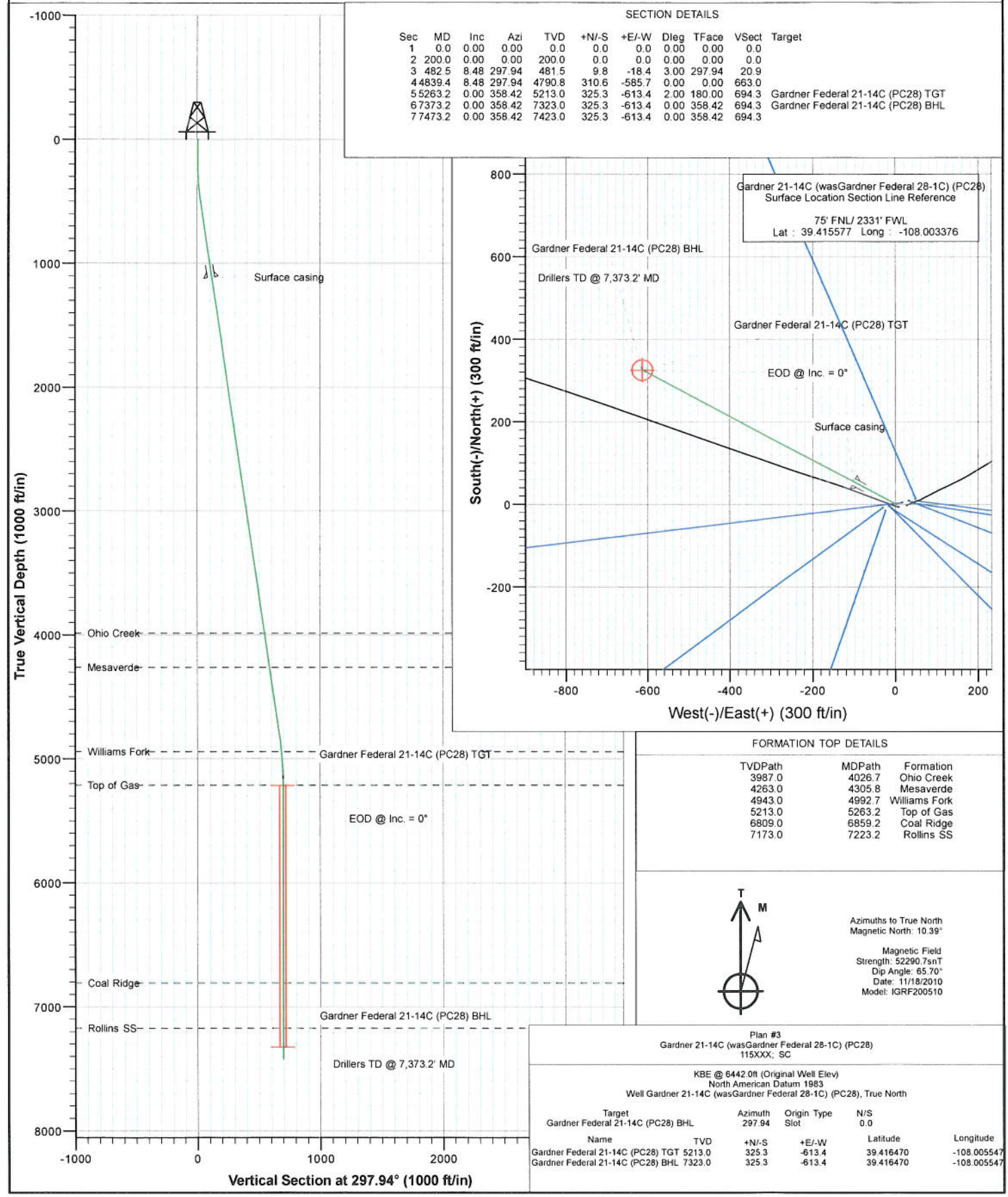
ENCANA

Project: S. Piceance (Parachute)
Site: NENW Sec28-T7S-R95W (PC-28)
Well: Gardner 21-14C (wasGardner Federal 28-1C) (PC28)
Wellbore: DD
Plan: Plan #3

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	482.5	8.48	297.94	481.5	9.8	-18.4	3.00	297.94	20.9	
4	4839.4	8.48	297.94	4790.8	310.6	-585.7	0.00	0.00	663.0	
5	5263.2	0.00	358.42	5213.0	325.3	-613.4	2.00	180.00	694.3	Gardner Federal 21-14C (PC28) TGT
6	7373.2	0.00	358.42	7323.0	325.3	-613.4	0.00	358.42	694.3	Gardner Federal 21-14C (PC28) BHL
7	7473.2	0.00	358.42	7423.0	325.3	-613.4	0.00	358.42	694.3	



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3987.0	4026.7	Ohio Creek
4263.0	4305.8	Mesaverde
4943.0	4992.7	Williams Fork
5213.0	5263.2	Top of Gas
6809.0	6859.2	Coal Ridge
7173.0	7223.2	Rollins SS

Azimuths to True North
Magnetic North: 10.39°

Magnetic Field
Strength: 52290.7snT
Dip Angle: 65.70°
Date: 11/18/2010
Model: IGRF200510

Plan #3
Gardner 21-14C (wasGardner Federal 28-1C) (PC28)
115XXX; SC

KBE @ 6442.0ft (Original Well Elev)
North American Datum 1983
Well Gardner 21-14C (wasGardner Federal 28-1C) (PC28), True North

Target	Azimuth	Origin Type	N/S
Gardner Federal 21-14C (PC28) BHL	297.94	Slot	0.0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Gardner Federal 21-14C (PC28) TGT	5213.0	325.3	-613.4	39.416470	-108.005547
Gardner Federal 21-14C (PC28) BHL	7323.0	325.3	-613.4	39.416470	-108.005547

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Gardner 21-14C (wasGardner Federal 28-1
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KBE @ 6442.0ft (Original Well Elev)
Project:	S. Piceance (Parachute)	**MD Reference:**	KBE @ 6442.0ft (Original Well Elev)
Site:	NENW Sec28-T7S-R95W (PC28)	**North Reference:**	True
Well:	Gardner 21-14C (wasGardner Federal 28-1C) (PC28)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Project	S. Piceance (Parachute), Garfield County, CO		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	NENW Sec28-T7S-R95W (PC28)				
Site Position:		**Northing:**	1,585,994.80 ft	**Latitude:**	39.415560
From:	Lat/Long	**Easting:**	2,292,840.18 ft	**Longitude:**	-108.003350
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	-1.58 °

Well	Gardner 21-14C (wasGardner Federal 28-1C) (PC28)					
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,586,001.18 ft	**Latitude:**	39.415577
	+E/-W	0.0 ft	**Easting:**	2,292,833.00 ft	**Longitude:**	-108.003376
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	6,420.0 ft

Wellbore	DD			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	11/18/2010	10.39	65.70	52,291

Design	Plan #3				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.0	0.0	0.0	297.94	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
482.5	8.48	297.94	481.5	9.8	-18.4	3.00	3.00	0.00	297.94	
4,839.4	8.48	297.94	4,790.8	310.6	-585.7	0.00	0.00	0.00	0.00	
5,263.2	0.00	358.42	5,213.0	325.3	-613.4	2.00	-2.00	0.00	180.00	Gardner Federal 21-1
7,373.2	0.00	358.42	7,323.0	325.3	-613.4	0.00	0.00	0.00	358.42	Gardner Federal 21-1
7,473.2	0.00	358.42	7,423.0	325.3	-613.4	0.00	0.00	0.00	358.42	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Gardner 21-14C (wasGardner Federal 28-1
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KBE @ 6442.0ft (Original Well Elev)
Project:	S. Piceance (Parachute)	**MD Reference:**	KBE @ 6442.0ft (Original Well Elev)
Site:	NENW Sec28-T7S-R95W (PC28)	**North Reference:**	True
Well:	Gardner 21-14C (wasGardner Federal 28-1C) (PC28)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
300.0	3.00	297.94	300.0	1.2	-2.3	2.6	3.00	3.00	
400.0	6.00	297.94	399.6	4.9	-9.2	10.5	3.00	3.00	
482.5	8.48	297.94	481.5	9.8	-18.4	20.9	3.00	3.00	EOB @ Inc. = 8.48°
500.0	8.48	297.94	498.8	11.0	-20.7	23.4	0.00	0.00	
600.0	8.48	297.94	597.7	17.9	-33.7	38.2	0.00	0.00	
700.0	8.48	297.94	696.6	24.8	-46.7	52.9	0.00	0.00	
800.0	8.48	297.94	795.5	31.7	-59.8	67.6	0.00	0.00	
900.0	8.48	297.94	894.4	38.6	-72.8	82.4	0.00	0.00	
1,000.0	8.48	297.94	993.3	45.5	-85.8	97.1	0.00	0.00	
1,100.0	8.48	297.94	1,092.2	52.4	-98.8	111.9	0.00	0.00	
1,120.0	8.48	297.94	1,112.0	53.8	-101.4	114.8	0.00	0.00	Surface casing
1,200.0	8.48	297.94	1,191.1	59.3	-111.8	126.6	0.00	0.00	
1,300.0	8.48	297.94	1,290.0	66.2	-124.9	141.3	0.00	0.00	
1,400.0	8.48	297.94	1,389.0	73.1	-137.9	156.1	0.00	0.00	
1,500.0	8.48	297.94	1,487.9	80.0	-150.9	170.8	0.00	0.00	
1,600.0	8.48	297.94	1,586.8	86.9	-163.9	185.6	0.00	0.00	
1,700.0	8.48	297.94	1,685.7	93.8	-176.9	200.3	0.00	0.00	
1,800.0	8.48	297.94	1,784.6	100.7	-190.0	215.0	0.00	0.00	
1,900.0	8.48	297.94	1,883.5	107.7	-203.0	229.8	0.00	0.00	
2,000.0	8.48	297.94	1,982.4	114.6	-216.0	244.5	0.00	0.00	
2,100.0	8.48	297.94	2,081.3	121.5	-229.0	259.2	0.00	0.00	
2,200.0	8.48	297.94	2,180.2	128.4	-242.1	274.0	0.00	0.00	
2,300.0	8.48	297.94	2,279.1	135.3	-255.1	288.7	0.00	0.00	
2,400.0	8.48	297.94	2,378.0	142.2	-268.1	303.5	0.00	0.00	
2,500.0	8.48	297.94	2,476.9	149.1	-281.1	318.2	0.00	0.00	
2,600.0	8.48	297.94	2,575.8	156.0	-294.1	332.9	0.00	0.00	
2,700.0	8.48	297.94	2,674.8	162.9	-307.2	347.7	0.00	0.00	
2,800.0	8.48	297.94	2,773.7	169.8	-320.2	362.4	0.00	0.00	
2,900.0	8.48	297.94	2,872.6	176.7	-333.2	377.1	0.00	0.00	
3,000.0	8.48	297.94	2,971.5	183.6	-346.2	391.9	0.00	0.00	
3,100.0	8.48	297.94	3,070.4	190.5	-359.2	406.6	0.00	0.00	
3,200.0	8.48	297.94	3,169.3	197.4	-372.3	421.4	0.00	0.00	
3,300.0	8.48	297.94	3,268.2	204.3	-385.3	436.1	0.00	0.00	
3,400.0	8.48	297.94	3,367.1	211.2	-398.3	450.8	0.00	0.00	
3,500.0	8.48	297.94	3,466.0	218.1	-411.3	465.6	0.00	0.00	
3,600.0	8.48	297.94	3,564.9	225.0	-424.3	480.3	0.00	0.00	
3,700.0	8.48	297.94	3,663.8	231.9	-437.4	495.1	0.00	0.00	
3,800.0	8.48	297.94	3,762.7	238.8	-450.4	509.8	0.00	0.00	
3,900.0	8.48	297.94	3,861.7	245.8	-463.4	524.5	0.00	0.00	
4,000.0	8.48	297.94	3,960.6	252.7	-476.4	539.3	0.00	0.00	
4,026.7	8.48	297.94	3,987.0	254.5	-479.9	543.2	0.00	0.00	Ohio Creek
4,100.0	8.48	297.94	4,059.5	259.6	-489.4	554.0	0.00	0.00	
4,200.0	8.48	297.94	4,158.4	266.5	-502.5	568.7	0.00	0.00	
4,300.0	8.48	297.94	4,257.3	273.4	-515.5	583.5	0.00	0.00	
4,305.8	8.48	297.94	4,263.0	273.8	-516.2	584.3	0.00	0.00	Mesaverde
4,400.0	8.48	297.94	4,356.2	280.3	-528.5	598.2	0.00	0.00	
4,500.0	8.48	297.94	4,455.1	287.2	-541.5	613.0	0.00	0.00	
4,600.0	8.48	297.94	4,554.0	294.1	-554.5	627.7	0.00	0.00	
4,700.0	8.48	297.94	4,652.9	301.0	-567.6	642.4	0.00	0.00	

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Site:	NENW Sec28-T7S-R95W (PC28)	**North Reference:**	True
Well:	Gardner 21-14C (wasGardner Federal 28-1C) (PC28)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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)	Comments / Formations
4,800.0	8.48	297.94	4,751.8	307.9	-580.6	657.2	0.00	0.00	
4,839.4	8.48	297.94	4,790.8	310.6	-585.7	663.0	0.00	0.00	Start 2° Drop
4,900.0	7.26	297.94	4,850.8	314.5	-593.0	671.3	2.00	-2.00	
4,992.7	5.41	297.94	4,943.0	319.3	-602.1	681.5	2.00	-2.00	Williams Fork
5,000.0	5.26	297.94	4,950.2	319.6	-602.7	682.2	2.00	-2.00	
5,100.0	3.26	297.94	5,049.9	323.1	-609.2	689.6	2.00	-2.00	
5,200.0	1.26	297.94	5,149.9	324.9	-612.7	693.6	2.00	-2.00	
5,263.2	0.00	358.42	5,213.0	325.3	-613.4	694.3	2.00	-2.00	EOD @ Inc. = 0° - Top of Gas
5,300.0	0.00	358.42	5,249.8	325.3	-613.4	694.3	0.00	0.00	
5,400.0	0.00	358.42	5,349.8	325.3	-613.4	694.3	0.00	0.00	
5,500.0	0.00	358.42	5,449.8	325.3	-613.4	694.3	0.00	0.00	
5,600.0	0.00	358.42	5,549.8	325.3	-613.4	694.3	0.00	0.00	
5,700.0	0.00	358.42	5,649.8	325.3	-613.4	694.3	0.00	0.00	
5,800.0	0.00	358.42	5,749.8	325.3	-613.4	694.3	0.00	0.00	
5,900.0	0.00	358.42	5,849.8	325.3	-613.4	694.3	0.00	0.00	
6,000.0	0.00	358.42	5,949.8	325.3	-613.4	694.3	0.00	0.00	
6,100.0	0.00	358.42	6,049.8	325.3	-613.4	694.3	0.00	0.00	
6,200.0	0.00	358.42	6,149.8	325.3	-613.4	694.3	0.00	0.00	
6,300.0	0.00	358.42	6,249.8	325.3	-613.4	694.3	0.00	0.00	
6,400.0	0.00	358.42	6,349.8	325.3	-613.4	694.3	0.00	0.00	
6,500.0	0.00	358.42	6,449.8	325.3	-613.4	694.3	0.00	0.00	
6,600.0	0.00	358.42	6,549.8	325.3	-613.4	694.3	0.00	0.00	
6,700.0	0.00	358.42	6,649.8	325.3	-613.4	694.3	0.00	0.00	
6,800.0	0.00	358.42	6,749.8	325.3	-613.4	694.3	0.00	0.00	
6,859.2	0.00	358.42	6,809.0	325.3	-613.4	694.3	0.00	0.00	Coal Ridge
6,900.0	0.00	358.42	6,849.8	325.3	-613.4	694.3	0.00	0.00	
7,000.0	0.00	358.42	6,949.8	325.3	-613.4	694.3	0.00	0.00	
7,100.0	0.00	358.42	7,049.8	325.3	-613.4	694.3	0.00	0.00	
7,200.0	0.00	358.42	7,149.8	325.3	-613.4	694.3	0.00	0.00	
7,223.2	0.00	358.42	7,173.0	325.3	-613.4	694.3	0.00	0.00	Rollins SS
7,300.0	0.00	358.42	7,249.8	325.3	-613.4	694.3	0.00	0.00	
7,373.2	0.00	358.42	7,323.0	325.3	-613.4	694.3	0.00	0.00	Drillers TD @ 7,373.2' MD
7,400.0	0.00	358.42	7,349.8	325.3	-613.4	694.3	0.00	0.00	
7,473.2	0.00	358.42	7,423.0	325.3	-613.4	694.3	0.00	0.00	Permit TD @ 7,473.2' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Gardner Federal 21-14C - plan hits target center - Circle (radius 25.0)	0.00	358.42	5,213.0	325.3	-613.4	1,586,343.23	2,292,228.85	39.416470	-108.005547
Gardner Federal 21-14C - plan hits target center - Circle (radius 25.0)	0.00	358.42	7,323.0	325.3	-613.4	1,586,343.23	2,292,228.85	39.416470	-108.005547

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Well:	Gardner 21-14C (wasGardner Federal 28-1C) (PC28)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,120.0	1,112.0	Surface casing	8.625	12.250

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,026.7	3,987.0	Ohio Creek		0.00	
4,305.8	4,263.0	Mesaverde		0.00	
4,992.7	4,943.0	Williams Fork		0.00	
5,263.2	5,213.0	Top of Gas		0.00	
6,859.2	6,809.0	Coal Ridge		0.00	
7,223.2	7,173.0	Rollins SS		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP @ 200'
482.5	481.5	9.8	-18.4	EOB @ Inc. = 8.48°
4,839.4	4,790.8	310.6	-585.7	Start 2° Drop
5,263.2	5,213.0	325.3	-613.4	EOD @ Inc. = 0°
7,373.2	7,323.0	325.3	-613.4	Drillers TD @ 7,373.2' MD
7,473.2	7,423.0	325.3	-613.4	Permit TD @ 7,473.2' MD