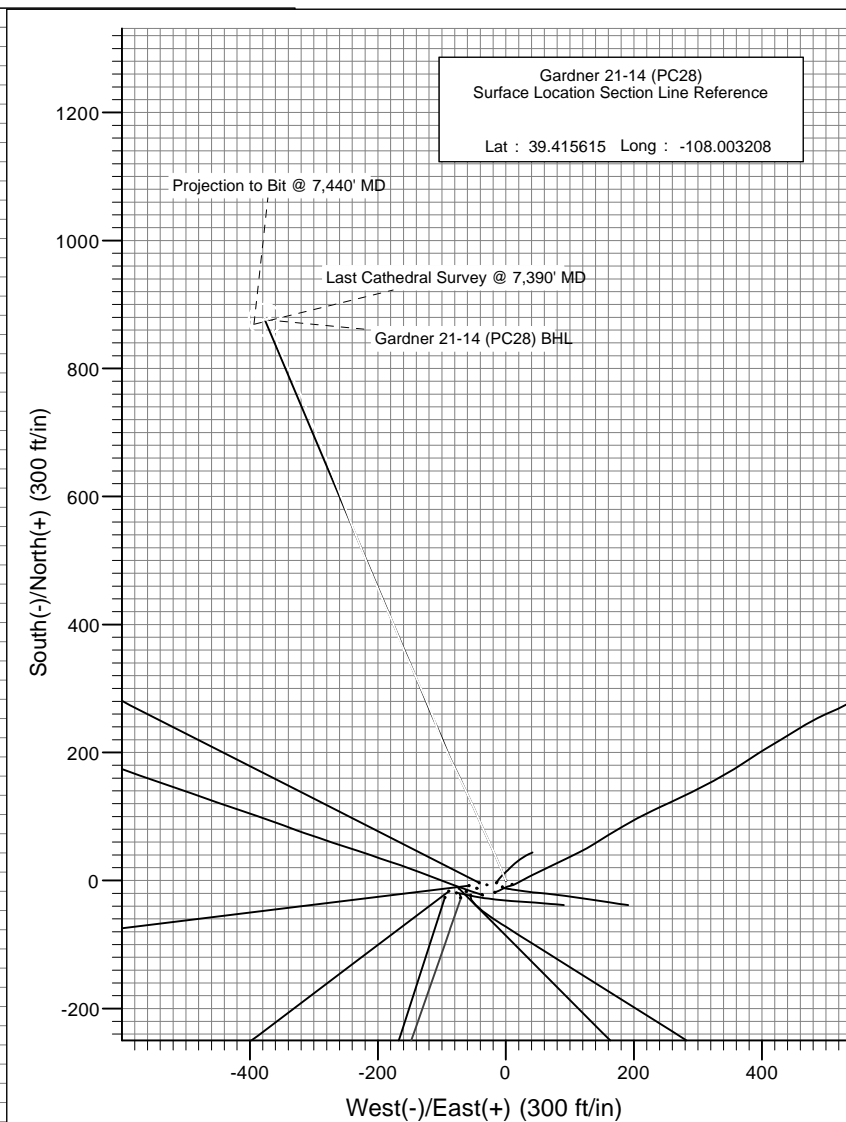
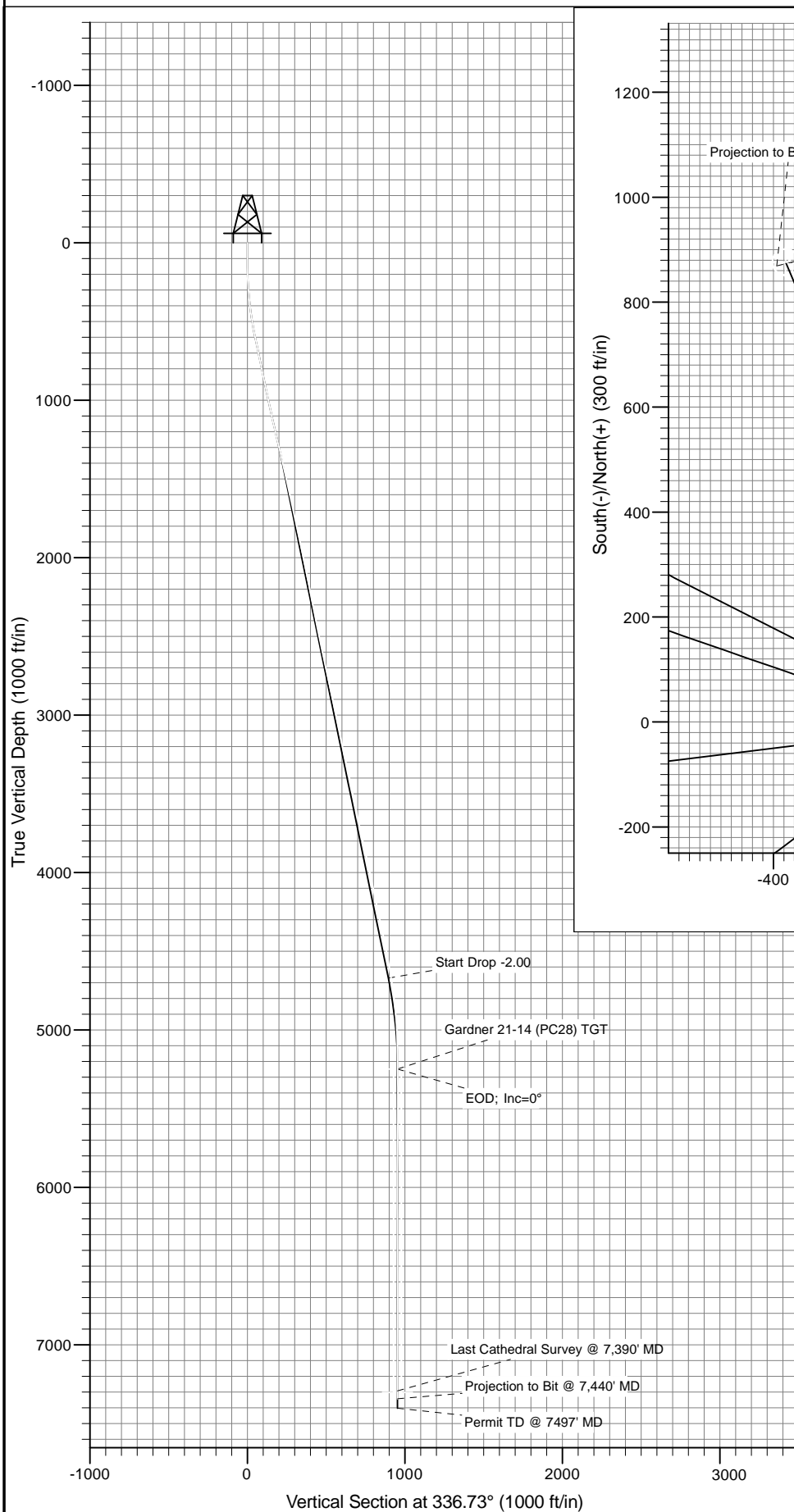
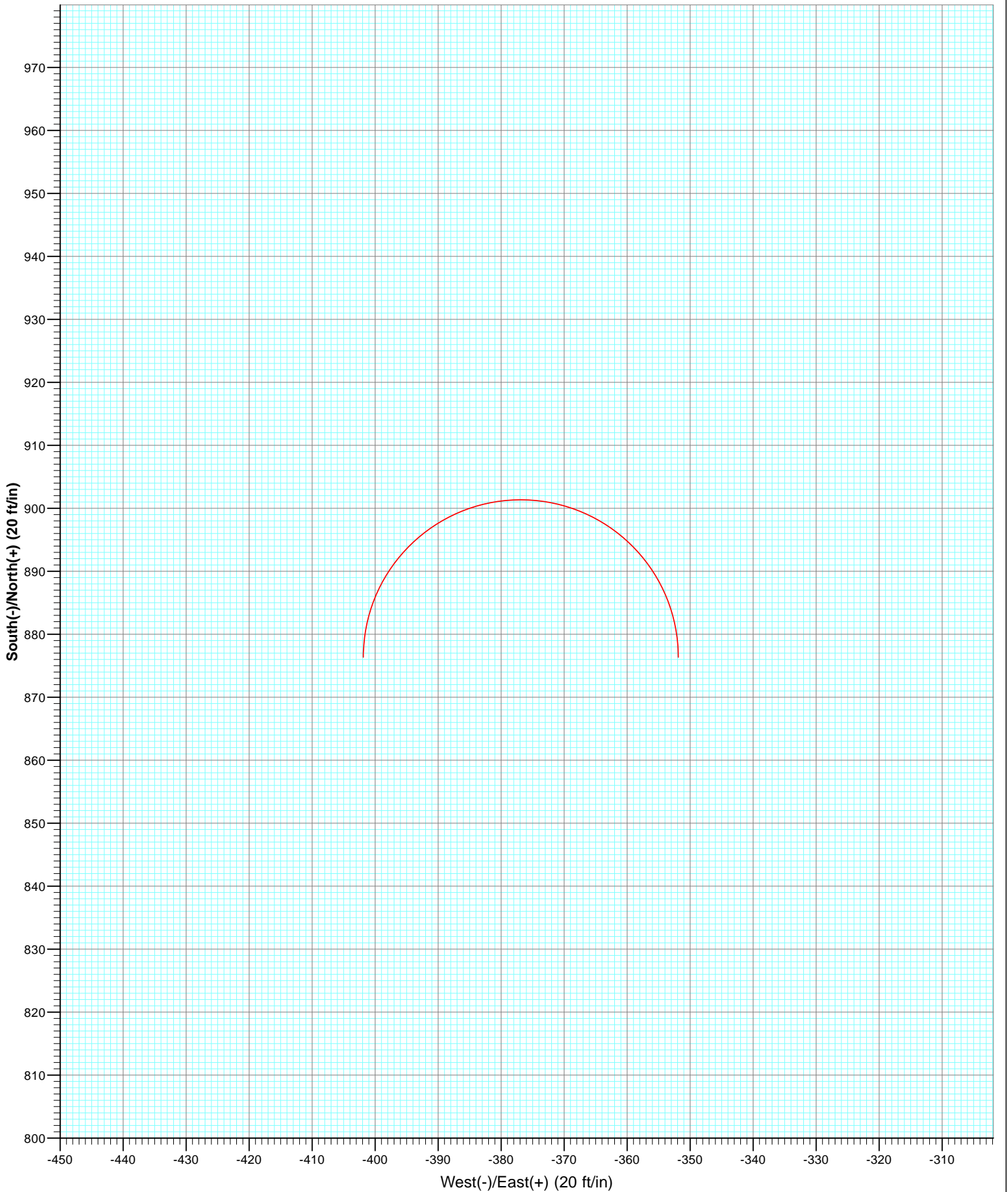


Project: S. Piceance (Parachute)
 Site: NENW Sec28-T7S-R95W (PC-28)
 Well: Gardner 21-14 (PC28)
 Wellbore: DD
 Plan: Final Survey



Azimuths to True North
 Magnetic North: 10.23°

Magnetic Field
 Strength: 52108.4snT
 Dip Angle: 65.65°
 Date: 5/18/2012
 Model: IGRF2010



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gardner 21-14 (PC28)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 6442.0ft (Nabors M13)
Site:	NENW Sec28-T7S-R95W (PC-28)	MD Reference:	KBE @ 6442.0ft (Nabors M13)
Well:	Gardner 21-14 (PC28)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

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 (PC-28)			
Site Position:		Northing:	1,585,994.78 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 21-14 (PC28)			
Well Position	+N/-S	0.0 ft	Northing:	1,586,013.70 ft
	+E/-W	0.0 ft	Easting:	2,292,880.83 ft
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)
	IGRF2010	5/18/2012	10.23	65.65	52,108

Design	DD			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	336.73

Survey Program	Date	5/23/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
111.0	1,130.0	Survey #1 (DD)	MWD	Geolink MWD	
1,264.0	7,440.0	Survey #2 (DD)	MWD	Geolink MWD	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
111.0	0.00	222.80	111.0	0.0	0.0	0.0	0.00	0.00	
203.0	2.00	334.60	203.0	1.5	-0.7	1.6	2.17	2.17	
296.0	4.20	339.80	295.8	6.1	-2.6	6.6	2.38	2.37	
388.0	6.40	337.30	387.4	14.0	-5.7	15.1	2.40	2.39	
481.0	8.80	335.50	479.6	25.3	-10.7	27.4	2.59	2.58	
573.0	10.80	336.30	570.3	39.6	-17.0	43.1	2.18	2.17	
666.0	11.70	336.10	661.5	56.2	-24.4	61.2	0.97	0.97	
758.0	12.50	334.70	751.4	73.7	-32.4	80.5	0.93	0.87	
789.0	12.90	335.30	781.7	79.9	-35.3	87.3	1.36	1.29	
880.0	11.40	335.90	870.6	97.3	-43.2	106.5	1.65	-1.65	
971.0	11.90	336.00	959.8	114.1	-50.7	124.8	0.55	0.55	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gardner 21-14 (PC28)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 6442.0ft (Nabors M13)
Site:	NENW Sec28-T7S-R95W (PC-28)	MD Reference:	KBE @ 6442.0ft (Nabors M13)
Well:	Gardner 21-14 (PC28)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,066.0	12.50	335.40	1,052.6	132.4	-58.9	144.9	0.65	0.63	
1,130.0	12.80	334.30	1,115.1	145.1	-64.9	158.9	0.60	0.47	
1,264.0	13.00	333.50	1,245.7	171.9	-78.1	188.8	0.20	0.15	
1,360.0	12.90	334.90	1,339.2	191.3	-87.4	210.3	0.34	-0.10	
1,455.0	13.30	334.90	1,431.8	210.8	-96.6	231.8	0.42	0.42	
1,550.0	12.30	339.80	1,524.4	230.2	-104.7	252.8	1.55	-1.05	
1,646.0	12.30	341.00	1,618.2	249.5	-111.6	273.2	0.27	0.00	
1,741.0	12.70	337.10	1,711.0	268.6	-118.9	293.8	0.98	0.42	
1,836.0	12.40	336.00	1,803.7	287.6	-127.1	314.4	0.40	-0.32	
1,931.0	11.50	336.80	1,896.6	305.6	-135.0	334.1	0.96	-0.95	
2,026.0	11.50	335.80	1,989.7	322.9	-142.6	353.0	0.21	0.00	
2,122.0	11.60	334.60	2,083.8	340.4	-150.7	372.2	0.27	0.10	
2,217.0	11.50	336.70	2,176.9	357.7	-158.5	391.2	0.45	-0.11	
2,311.0	11.50	338.20	2,269.0	375.0	-165.7	410.0	0.32	0.00	
2,406.0	10.90	338.90	2,362.2	392.2	-172.5	428.4	0.65	-0.63	
2,501.0	11.50	335.20	2,455.3	409.2	-179.7	446.9	0.99	0.63	
2,596.0	11.50	336.60	2,548.4	426.5	-187.4	465.8	0.29	0.00	
2,692.0	12.50	337.50	2,642.3	444.8	-195.2	485.8	1.06	1.04	
2,787.0	12.40	336.00	2,735.1	463.7	-203.3	506.2	0.36	-0.11	
2,882.0	12.10	337.10	2,827.9	482.2	-211.3	526.4	0.40	-0.32	
2,977.0	11.50	337.80	2,920.9	500.1	-218.7	545.8	0.65	-0.63	
3,072.0	12.20	338.00	3,013.9	518.2	-226.1	565.3	0.74	0.74	
3,168.0	12.00	339.10	3,107.8	536.9	-233.4	585.4	0.32	-0.21	
3,263.0	11.60	339.60	3,200.8	555.1	-240.3	604.8	0.43	-0.42	
3,358.0	12.50	338.20	3,293.7	573.6	-247.4	624.7	1.00	0.95	
3,454.0	12.00	339.10	3,387.5	592.5	-254.8	645.0	0.56	-0.52	
3,547.0	11.90	338.10	3,478.5	610.5	-261.9	664.3	0.25	-0.11	
3,642.0	11.50	338.70	3,571.5	628.4	-269.0	683.5	0.44	-0.42	
3,738.0	12.30	339.00	3,665.4	646.8	-276.1	703.3	0.84	0.83	
3,833.0	12.60	338.70	3,758.2	665.9	-283.5	723.8	0.32	0.32	
3,929.0	12.30	340.10	3,851.9	685.3	-290.8	744.4	0.44	-0.31	
4,024.0	12.70	338.30	3,944.7	704.5	-298.1	765.0	0.59	0.42	
4,119.0	12.50	337.70	4,037.4	723.7	-305.8	785.7	0.25	-0.21	
4,214.0	12.20	338.70	4,130.2	742.6	-313.4	806.0	0.39	-0.32	
4,309.0	12.00	335.10	4,223.1	760.9	-321.2	825.9	0.82	-0.21	
4,404.0	11.20	332.10	4,316.2	778.0	-329.7	845.0	1.05	-0.84	
4,500.0	11.70	335.30	4,410.2	795.1	-338.1	864.0	0.84	0.52	
4,595.0	11.30	336.60	4,503.3	812.4	-345.8	882.9	0.50	-0.42	
4,690.0	10.20	336.90	4,596.7	828.7	-352.8	900.7	1.16	-1.16	
4,785.0	8.70	340.40	4,690.4	843.2	-358.5	916.2	1.69	-1.58	
4,880.0	7.30	341.40	4,784.5	855.7	-362.9	929.4	1.48	-1.47	
4,974.0	5.60	340.60	4,877.9	865.7	-366.3	940.0	1.81	-1.81	
5,069.0	3.60	346.20	4,972.5	872.9	-368.6	947.5	2.16	-2.11	
5,164.0	1.70	16.40	5,067.4	877.2	-368.9	951.6	2.42	-2.00	
5,260.0	1.20	20.20	5,163.4	879.5	-368.1	953.4	0.53	-0.52	
5,345.5	0.75	8.01	5,248.9	880.9	-367.7	954.5	0.58	-0.53	Gardner 21-14 (PC28) TGT
5,355.0	0.70	5.70	5,258.4	881.0	-367.7	954.6	0.58	-0.49	
5,450.0	0.40	329.50	5,353.4	881.9	-367.8	955.5	0.47	-0.32	
5,545.0	0.60	241.50	5,448.4	881.9	-368.4	955.7	0.75	0.21	
5,639.0	0.60	216.80	5,542.4	881.3	-369.2	955.4	0.27	0.00	
5,734.0	1.00	242.80	5,637.4	880.5	-370.2	955.1	0.56	0.42	
5,829.0	0.80	183.80	5,732.4	879.5	-371.0	954.5	0.95	-0.21	
5,925.0	0.50	203.50	5,828.4	878.4	-371.2	953.6	0.39	-0.31	

Cathedral Energy Services

Survey Report

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Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 6442.0ft (Nabors M13)
Site:	NENW Sec28-T7S-R95W (PC-28)	MD Reference:	KBE @ 6442.0ft (Nabors M13)
Well:	Gardner 21-14 (PC28)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,020.0	0.80	218.20	5,923.4	877.5	-371.8	953.0	0.36	0.32	
6,115.0	1.00	248.00	6,018.3	876.7	-372.9	952.7	0.53	0.21	
6,210.0	1.20	251.50	6,113.3	876.1	-374.7	952.8	0.22	0.21	
6,305.0	0.30	331.50	6,208.3	876.0	-375.7	953.1	1.25	-0.95	
6,401.0	0.80	269.70	6,304.3	876.2	-376.5	953.7	0.74	0.52	
6,496.0	1.60	258.10	6,399.3	875.9	-378.5	954.2	0.88	0.84	
6,591.0	1.50	254.50	6,494.3	875.3	-381.0	954.6	0.15	-0.11	
6,686.0	0.80	241.60	6,589.2	874.7	-382.7	954.7	0.78	-0.74	
6,781.0	1.80	248.40	6,684.2	873.8	-384.7	954.7	1.06	1.05	
6,876.0	1.70	242.90	6,779.2	872.6	-387.4	954.6	0.21	-0.11	
6,971.0	0.70	196.50	6,874.1	871.4	-388.8	954.1	1.39	-1.05	
7,067.0	0.30	232.90	6,970.1		0.51	953.6	0.51		

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