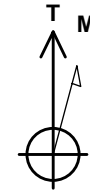




Project: Weld County, CO NAD 83
Site: Johnson Trust
Well: Johnson Trust 7
Wellbore: OH
Design: Plan 3

Plan: Plan 3 (Johnson Trust 7/OH)
Created By: Seth Burstad Date: 2-4-2016



Azimuths to True North
Magnetic North: 8.60°

Magnetic Field
Strength: 52403.1snT
Dip Angle: 66.70°
Date: 12/29/2015
Model: BGGM2015

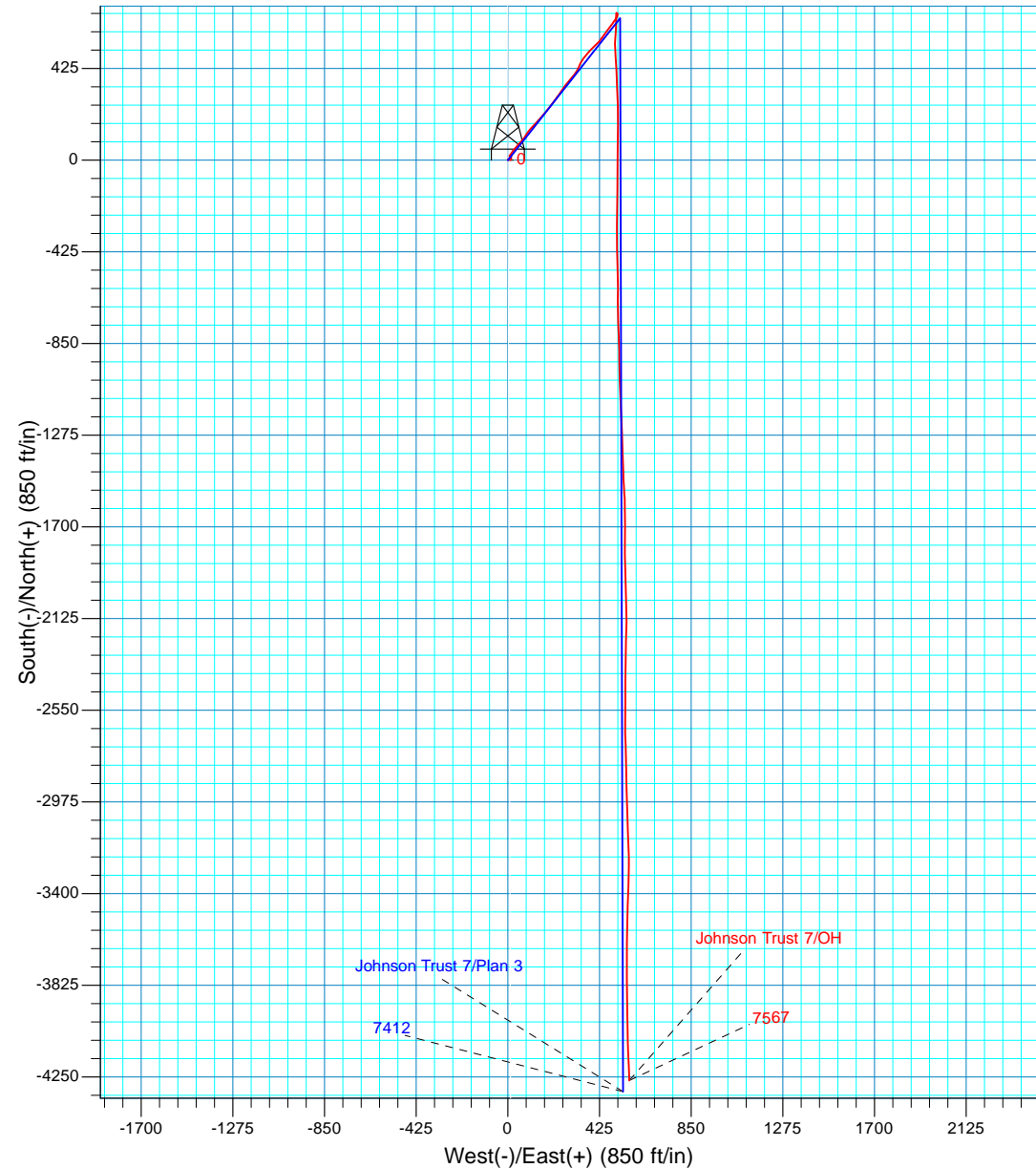
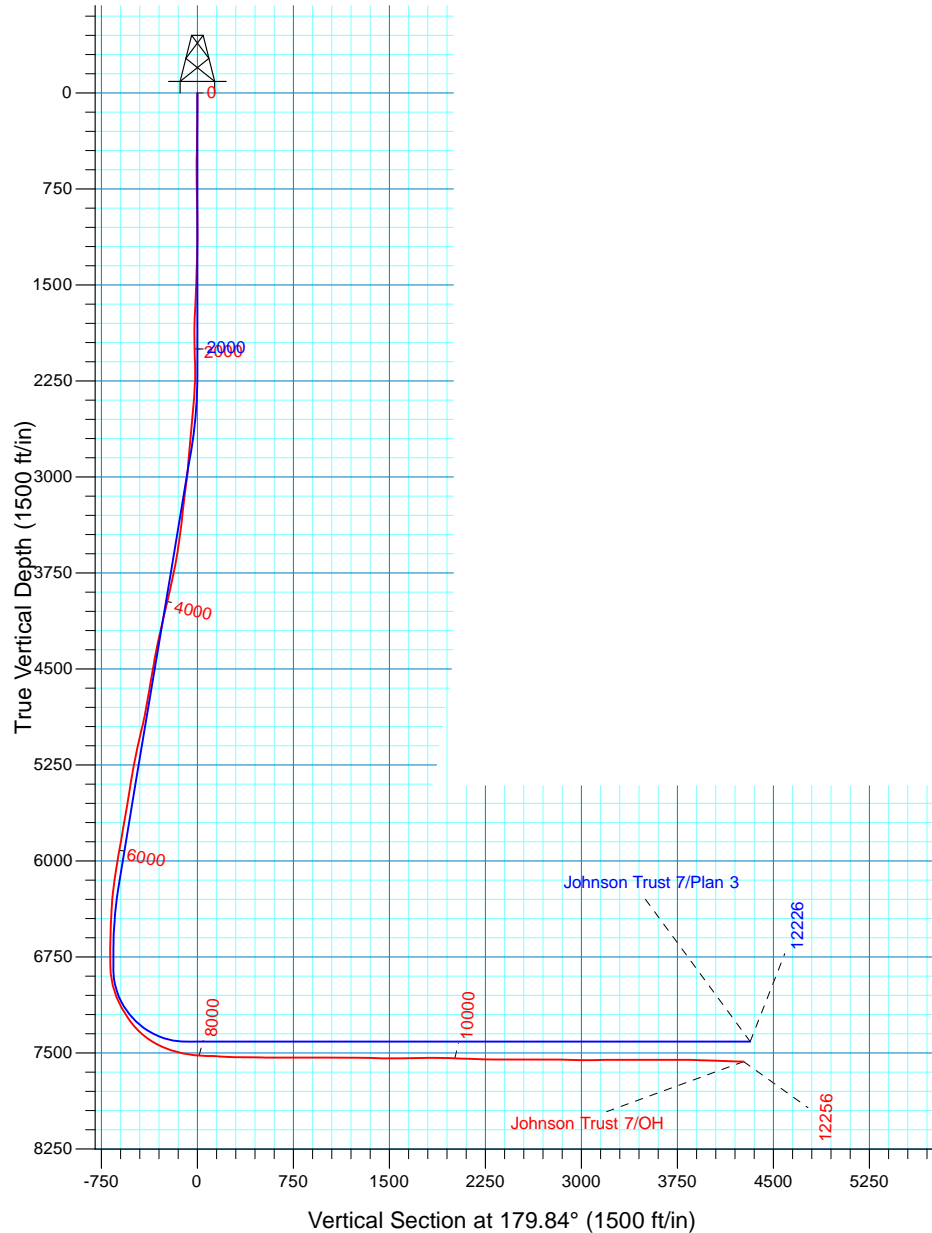
WELL DETAILS: Johnson Trust 7

GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346) 4923.00
Northing Easting Latitude Longitude
1293280.46 3151083.93 40° 8' 13.866 N 104° 57' 34.632 W

PROJECT DETAILS: Weld County, CO NAD 83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level
Local North: True





Extraction Oil & Gas

Weld County, CO NAD 83

Johnson Trust

Johnson Trust 7

OH

Design: OH

Standard Survey Report

04 February, 2016



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Johnson Trust 7
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Site:	Johnson Trust	MD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Well:	Johnson Trust 7	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Project	Weld County, CO NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Johnson Trust, Site Center : Johnson Trust 1				
Site Position:		Northing:	1,293,448.40 usft	Latitude:	40° 8' 15.526 N
From:	Lat/Long	Easting:	3,151,083.18 usft	Longitude:	104° 57' 34.628 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.35 °

Well	Johnson Trust 7, 2097' FSL 388' FWL Sec 13 T2N R68W					
Well Position	+N/-S	0.00 ft	Northing:	1,293,280.46 usft	Latitude:	40° 8' 13.866 N
	+E/-W	0.00 ft	Easting:	3,151,083.93 usft	Longitude:	104° 57' 34.632 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,923.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	12/29/2015	8.60	66.70	52,403

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	179.84	

Survey Program	Date	2/4/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
137.00	1,486.00	Survey #1 - Surface (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
1,664.00	12,256.00	Survey #2 - Production (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

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	
137.00	0.34	351.74	137.00	0.40	-0.06	-0.40	0.25	0.25	0.00	
First SDI MWD Survey										
228.00	0.84	13.94	227.99	1.32	0.06	-1.32	0.59	0.55	24.40	
320.00	0.87	14.22	319.98	2.65	0.40	-2.65	0.03	0.03	0.30	
443.00	0.98	355.75	442.97	4.60	0.55	-4.60	0.26	0.09	-15.02	
538.00	0.64	58.90	537.96	5.69	0.94	-5.68	0.94	-0.36	66.47	
633.00	1.04	112.78	632.95	5.63	2.19	-5.62	0.88	0.42	56.72	

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Johnson Trust 7
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Site:	Johnson Trust	MD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Well:	Johnson Trust 7	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
729.00	1.69	108.25	728.92	4.85	4.34	-4.83	0.69	0.68	-4.72
823.00	1.95	117.79	822.88	3.67	7.07	-3.65	0.42	0.28	10.15
918.00	1.44	150.24	917.84	1.88	9.09	-1.85	1.12	-0.54	34.16
1,013.00	0.62	164.96	1,012.82	0.34	9.82	-0.32	0.90	-0.86	15.49
1,107.00	0.74	56.96	1,106.82	0.18	10.46	-0.15	1.17	0.13	-114.89
1,202.00	1.22	31.89	1,201.80	1.38	11.51	-1.35	0.67	0.51	-26.39
1,297.00	1.60	33.12	1,296.77	3.35	12.77	-3.31	0.40	0.40	1.29
1,391.00	1.88	25.99	1,390.73	5.83	14.16	-5.79	0.38	0.30	-7.59
1,486.00	2.27	9.65	1,485.67	9.09	15.16	-9.04	0.74	0.41	-17.20
Last SDI MWD Surface Survey									
1,664.00	2.64	348.36	1,663.51	16.58	14.92	-16.54	0.55	0.21	-11.96
1,758.00	2.32	337.48	1,757.42	20.46	13.76	-20.42	0.60	-0.34	-11.57
1,853.00	1.68	316.68	1,852.36	23.25	12.07	-23.21	1.01	-0.67	-21.89
1,947.00	1.83	207.77	1,946.34	22.92	10.42	-22.89	3.04	0.16	-115.86
2,042.00	1.91	215.48	2,041.29	20.29	8.79	-20.26	0.28	0.08	8.12
2,136.00	1.88	231.05	2,135.24	18.04	6.69	-18.02	0.55	-0.03	16.56
2,231.00	1.73	39.54	2,230.22	18.17	6.39	-18.15	3.78	-0.16	177.36
2,326.00	4.26	35.07	2,325.08	22.16	9.33	-22.14	2.67	2.66	-4.71
2,421.00	5.95	34.65	2,419.70	29.10	14.16	-29.06	1.78	1.78	-0.44
2,516.00	6.53	37.11	2,514.14	37.46	20.21	-37.40	0.67	0.61	2.59
2,611.00	6.15	35.16	2,608.56	45.93	26.40	-45.86	0.46	-0.40	-2.05
2,706.00	6.33	38.09	2,703.00	54.21	32.56	-54.12	0.39	0.19	3.08
2,800.00	7.51	42.27	2,796.31	62.84	39.89	-62.72	1.36	1.26	4.45
2,895.00	6.69	44.64	2,890.58	71.37	47.96	-71.23	0.92	-0.86	2.49
2,989.00	7.70	41.29	2,983.84	80.00	55.96	-79.84	1.16	1.07	-3.56
3,084.00	10.01	41.11	3,077.70	91.00	65.59	-90.82	2.43	2.43	-0.19
3,179.00	8.67	34.28	3,171.44	103.14	75.05	-102.93	1.83	-1.41	-7.19
3,275.00	7.35	29.55	3,266.51	114.46	82.16	-114.23	1.54	-1.38	-4.93
3,369.00	7.84	39.13	3,359.69	124.66	89.17	-124.41	1.44	0.52	10.19
3,464.00	9.45	36.58	3,453.60	135.95	97.91	-135.68	1.74	1.69	-2.68
3,559.00	11.24	39.15	3,547.06	149.40	108.40	-149.09	1.95	1.88	2.71
3,653.00	14.07	43.08	3,638.76	164.85	121.99	-164.51	3.15	3.01	4.18
3,748.00	16.27	44.82	3,730.45	182.73	139.26	-182.34	2.36	2.32	1.83
3,843.00	14.88	41.45	3,821.96	201.31	156.72	-200.87	1.75	-1.46	-3.55
3,938.00	15.74	39.61	3,913.59	220.38	173.01	-219.90	1.04	0.91	-1.94
4,033.00	17.63	37.31	4,004.59	241.75	189.94	-241.22	2.11	1.99	-2.42
4,127.00	17.82	35.63	4,094.12	264.76	206.95	-264.19	0.58	0.20	-1.79
4,222.00	15.42	37.28	4,185.15	286.63	223.07	-286.01	2.57	-2.53	1.74
4,317.00	13.59	37.95	4,277.12	305.48	237.59	-304.82	1.93	-1.93	0.71
4,411.00	14.08	31.98	4,368.39	323.89	250.44	-323.19	1.60	0.52	-6.35
4,507.00	11.64	36.82	4,461.98	341.55	262.43	-340.82	2.78	-2.54	5.04
4,601.00	13.71	40.78	4,553.69	357.58	275.39	-356.81	2.39	2.20	4.21

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Johnson Trust 7
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Site:	Johnson Trust	MD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Well:	Johnson Trust 7	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
4,697.00	12.54	40.81	4,647.18	374.09	289.63	-373.28	1.22	-1.22	0.03
4,791.00	12.03	36.81	4,739.03	389.65	302.17	-388.81	1.06	-0.54	-4.26
4,885.00	12.83	36.11	4,830.82	405.93	314.19	-405.05	0.87	0.85	-0.74
4,980.00	14.75	24.56	4,923.10	425.45	325.43	-424.54	3.52	2.02	-12.16
5,074.00	14.63	25.94	5,014.03	447.01	335.60	-446.07	0.39	-0.13	1.47
5,169.00	14.77	34.79	5,105.93	467.75	347.76	-466.78	2.37	0.15	9.32
5,263.00	13.37	38.06	5,197.11	486.15	361.30	-485.14	1.71	-1.49	3.48
5,358.00	14.28	42.71	5,289.36	503.41	376.02	-502.35	1.51	0.96	4.89
5,452.00	14.56	46.97	5,380.40	519.99	392.52	-518.89	1.17	0.30	4.53
5,547.00	12.49	45.26	5,472.76	535.37	408.55	-534.23	2.22	-2.18	-1.80
5,642.00	12.57	42.01	5,565.50	550.28	422.76	-549.10	0.75	0.08	-3.42
5,736.00	12.50	34.72	5,657.26	566.24	435.40	-565.03	1.68	-0.07	-7.76
5,831.00	11.75	34.18	5,750.14	582.70	446.69	-581.45	0.80	-0.79	-0.57
5,926.00	11.82	39.01	5,843.14	598.26	458.25	-596.98	1.04	0.07	5.08
6,021.00	12.25	37.36	5,936.06	613.83	470.49	-612.51	0.58	0.45	-1.74
6,116.00	11.66	36.84	6,028.99	629.52	482.36	-628.17	0.63	-0.62	-0.55
6,211.00	10.65	33.72	6,122.20	644.51	492.99	-643.13	1.24	-1.06	-3.28
6,306.00	7.88	29.83	6,215.95	657.46	501.11	-656.06	2.99	-2.92	-4.09
6,400.00	5.02	26.49	6,309.35	666.74	506.15	-665.32	3.07	-3.04	-3.55
6,495.00	3.28	8.61	6,404.10	673.14	508.41	-671.72	2.26	-1.83	-18.82
6,589.00	2.02	349.11	6,498.00	677.43	508.50	-676.01	1.63	-1.34	-20.74
6,684.00	1.57	316.98	6,592.95	680.03	507.29	-678.61	1.14	-0.47	-33.82
6,778.00	1.86	288.26	6,686.91	681.44	504.97	-680.03	0.95	0.31	-30.55
6,874.00	0.69	315.36	6,782.89	682.34	503.08	-680.94	1.34	-1.22	28.23
6,968.00	5.21	185.24	6,876.77	678.49	502.29	-677.09	6.04	4.81	-138.43
7,064.00	14.16	179.74	6,971.30	662.38	501.95	-660.97	9.36	9.32	-5.73
7,159.00	20.75	178.92	7,061.88	633.90	502.32	-632.50	6.94	6.94	-0.86
7,255.00	30.17	186.75	7,148.48	592.84	499.80	-591.44	10.40	9.81	8.16
7,351.00	35.01	181.08	7,229.36	541.31	496.44	-539.92	5.96	5.04	-5.91
7,446.00	41.63	175.39	7,303.88	482.52	498.46	-481.13	7.89	6.97	-5.99
7,540.00	51.40	176.95	7,368.49	414.55	502.94	-413.15	10.46	10.39	1.66
7,635.00	60.98	177.65	7,421.29	335.80	506.63	-334.38	10.10	10.08	0.74
7,731.00	68.33	178.25	7,462.36	249.15	509.71	-247.73	7.68	7.66	0.63
7,826.00	73.89	180.72	7,493.11	159.32	510.49	-157.89	6.35	5.85	2.60
7,921.00	82.38	181.04	7,512.62	66.44	509.06	-65.02	8.94	8.94	0.34
8,015.00	88.22	180.55	7,520.32	-27.19	507.76	28.61	6.23	6.21	-0.52
8,110.00	87.31	180.38	7,524.02	-122.11	506.99	123.53	0.97	-0.96	-0.18
8,204.00	86.30	179.99	7,529.26	-215.97	506.69	217.38	1.15	-1.07	-0.41
8,298.00	89.53	180.54	7,532.68	-309.89	506.25	311.30	3.49	3.44	0.59
8,393.00	89.73	179.91	7,533.30	-404.89	505.88	406.30	0.70	0.21	-0.66
8,488.00	88.22	177.61	7,535.00	-499.84	507.93	501.26	2.90	-1.59	-2.42
8,583.00	90.24	179.70	7,536.27	-594.80	510.16	596.22	3.06	2.13	2.20

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Johnson Trust 7
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Site:	Johnson Trust	MD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Well:	Johnson Trust 7	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
8,678.00	90.50	180.33	7,535.66	-689.79	510.14	691.22	0.72	0.27	0.66
8,773.00	88.96	176.91	7,536.11	-784.75	512.43	786.18	3.95	-1.62	-3.60
8,867.00	90.61	178.96	7,536.46	-878.68	515.81	880.11	2.80	1.76	2.18
8,962.00	90.10	179.35	7,535.87	-973.67	517.21	975.11	0.68	-0.54	0.41
9,057.00	89.13	177.81	7,536.51	-1,068.63	519.57	1,070.08	1.92	-1.02	-1.62
9,152.00	89.77	176.80	7,537.42	-1,163.52	524.03	1,164.98	1.26	0.67	-1.06
9,248.00	89.60	178.18	7,537.95	-1,259.42	528.24	1,260.89	1.45	-0.18	1.44
9,344.00	88.69	177.59	7,539.38	-1,355.35	531.78	1,356.83	1.13	-0.95	-0.61
9,439.00	88.79	178.30	7,541.47	-1,450.26	535.19	1,451.75	0.75	0.11	0.75
9,535.00	90.13	176.46	7,542.38	-1,546.15	539.57	1,547.65	2.37	1.40	-1.92
9,654.00	91.61	180.65	7,540.57	-1,665.07	542.57	1,666.58	3.73	1.24	3.52
9,749.00	91.71	180.42	7,537.82	-1,760.02	541.69	1,761.53	0.26	0.11	-0.24
9,844.00	88.76	178.44	7,537.43	-1,855.00	542.63	1,856.51	3.74	-3.11	-2.08
10,034.00	87.54	178.18	7,543.56	-2,044.82	548.23	2,046.34	0.66	-0.64	-0.14
10,129.00	88.35	180.37	7,546.97	-2,139.74	549.43	2,141.27	2.46	0.85	2.31
10,223.00	89.06	182.04	7,549.09	-2,233.69	547.46	2,235.21	1.93	0.76	1.78
10,318.00	88.66	180.82	7,550.98	-2,328.64	545.09	2,330.16	1.35	-0.42	-1.28
10,413.00	90.24	179.57	7,551.89	-2,423.63	544.76	2,425.15	2.12	1.66	-1.32
10,507.00	91.48	181.12	7,550.48	-2,517.62	544.20	2,519.13	2.11	1.32	1.65
10,602.00	89.43	179.75	7,549.73	-2,612.60	543.48	2,614.11	2.60	-2.16	-1.44
10,697.00	88.79	178.04	7,551.20	-2,707.57	545.31	2,709.08	1.92	-0.67	-1.80
10,792.00	88.96	178.89	7,553.07	-2,802.52	547.85	2,804.04	0.91	0.18	0.89
10,887.00	89.36	178.51	7,554.46	-2,897.48	550.01	2,899.01	0.58	0.42	-0.40
10,982.00	90.00	178.62	7,554.99	-2,992.45	552.39	2,993.98	0.68	0.67	0.12
11,077.00	90.17	178.13	7,554.85	-3,087.41	555.08	3,088.95	0.55	0.18	-0.52
11,172.00	90.10	177.34	7,554.63	-3,182.34	558.84	3,183.88	0.83	-0.07	-0.83
11,266.00	89.97	180.68	7,554.57	-3,276.31	560.46	3,277.86	3.56	-0.14	3.55
11,362.00	90.30	182.05	7,554.34	-3,372.28	558.17	3,373.83	1.47	0.34	1.43
11,457.00	89.93	181.87	7,554.15	-3,467.22	554.92	3,468.76	0.43	-0.39	-0.19
11,648.00	90.13	180.43	7,554.05	-3,658.18	551.09	3,659.70	0.76	0.10	-0.75
11,743.00	90.47	179.03	7,553.56	-3,753.18	551.54	3,754.70	1.52	0.36	-1.47
11,837.00	88.39	179.70	7,554.49	-3,847.16	552.58	3,848.69	2.32	-2.21	0.71
11,932.00	88.42	179.54	7,557.14	-3,942.12	553.21	3,943.65	0.17	0.03	-0.17
12,027.00	88.26	178.87	7,559.89	-4,037.07	554.53	4,038.60	0.72	-0.17	-0.71
12,122.00	87.82	177.45	7,563.14	-4,131.96	557.58	4,133.50	1.56	-0.46	-1.49
12,195.00	88.29	178.22	7,565.61	-4,204.87	560.33	4,206.42	1.24	0.64	1.05
Last SDI MWD Survey									
12,256.00	88.29	178.22	7,567.43	-4,265.81	562.23	4,267.37	0.00	0.00	0.00
Projection to TD									

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Johnson Trust 7
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Site:	Johnson Trust	MD Reference:	GL 4923' & KB 24.5' @ 4947.50ft (Patterson 346)
Well:	Johnson Trust 7	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
137.00	137.00	0.40	-0.06	First SDI MWD Survey
1,486.00	1,485.67	9.09	15.16	Last SDI MWD Surface Survey
12,195.00	7,565.61	-4,204.87	560.33	Last SDI MWD Survey
12,256.00	7,567.43	-4,265.81	562.23	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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