87

Concho Operating

Lea County, NM (NAD 83)
Music Master 27 Federal
Well #1

Music Master 27 Fed 3H Lateral

Design: Music Master 27 Fed 3H Lateral

Standard Survey Report

15 January, 2017

Survey Report

Company:	Concho Operating	**Local Co-ordinate Reference:**	Site Music Master 27 Federal
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	GL 3193.4 + 27.7 RKB @ 3221.10ft (Noram 23)
Site:	Music Master 27 Federal	**MD Reference:**	GL 3193.4 + 27.7 RKB @ 3221.10ft (Noram 23)
Well:	Well #1	**North Reference:**	Grid
Wellbore:	Music Master 27 Fed 3H Lateral	**Survey Calculation Method:**	Minimum Curvature
Design:	Music Master 27 Fed 3H Lateral	**Database:**	EDM 5000.14 Single User Db

Project Lea County, NM (NAD 83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Music Master 27 Federal

Site Position:		**Northing:**	404,290.37 usft	**Latitude:**	32° 6' 27.676 N
From:	Map	**Easting:**	844,530.03 usft	**Longitude:**	103° 21' 14.868 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13 200 in	**Grid Convergence:**	0 52 °

Well Well #1

Well Position	**+N/-S**	0.00 ft	**Northing:**	404,290.37 usft	**Latitude:**	32° 6' 27.676 N
	+E/-W	0.00 ft	**Easting:**	844,530.03 usft	**Longitude:**	103° 21' 14.868 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,193.40 ft

Wellbore Music Master 27 Fed 3H Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/16/2016	6.90	60.00	47,945.01084954

Design Music Master 27 Fed 3H Lateral

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	8,097.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0.00	0.00	178.86

Survey Program Date 1/15/2017

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
83.88	898 00	Pilot Hole Surveys - VES Gyro (Music Mas	CB_Film_GMS	Camera Based Film Gyro Multi-Shot
957.00	8,097.00	DrilTech MWD (Music Master 27 Fed 3H F	MWD	MWD - Standard
8,191.00	13,363 00	DrilTech MWD (Music Master 27 Fed 3H L	MWD	MWD - Standard

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
83.88	0.19	156.28	83.88	-0.13	0.06	0.13	0 23	0.23	0.00
178.77	0.56	169.01	178.77	-0.73	0 21	0.73	0 40	0.39	13.42
273.66	0.52	143.72	273.65	-1.53	0.55	1.54	0.25	-0.04	-26.65
368 55	0.53	126.17	368.54	-2.14	1.16	2.16	0.17	0.01	-18.50
463 44	0.53	114.19	463.43	-2.57	1.91	2.61	0.12	0.00	-12.63
558.33	0.77	103.81	558.31	-2.91	2.93	2.96	0.28	0.25	-10.94
653 22	0.79	95.30	653.19	-3.12	4.20	3 20	0.12	0.02	-8.97
748.11	0.76	94.12	748.07	-3.22	5.48	3 33	0.04	-0.03	-1.24

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Survey

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843.00	0.84	91.73	842.95	-3.29	6.81	3.43	0.09	0.08	-2.52
898.00	0.94	88.77	897.95	-3.29	7.66	3.44	0.20	0.18	-5.38
957.00	0.97	99.02	956.94	-3.36	8.64	3.53	0.29	0.05	17.37
1,051.00	1.06	89.44	1,050.92	-3.48	10.29	3.68	0.20	0.10	-10.19
1,146.00	1.23	103.85	1,145.90	-3.71	12.16	3.95	0.35	0.18	15.17
1,240.00	1.23	91.90	1,239.88	-3.99	14.15	4.27	0.27	0.00	-12.71
1,334.00	1.14	96.64	1,333.86	-4.13	16.09	4.45	0.14	-0.10	5.04
1,428.00	1.32	83.55	1,427.84	-4.12	18.09	4.47	0.35	0.19	-13.93
1,523.00	1.49	88.03	1,522.81	-3.95	20.41	4.36	0.21	0.18	4.72
1,617.00	1.23	87.85	1,616.79	-3.87	22.64	4.32	0.28	-0.28	-0.19
1,710.00	1.67	83.99	1,709.76	-3.69	24.99	4.19	0.48	0.47	-4.15
1,805.00	1.49	87.77	1,804.72	-3.50	27.60	4.05	0.22	-0.19	3.98
1,899.00	1.67	82.14	1,898.68	-3.26	30.18	3.86	0.25	0.19	-5.99
1,993.00	2.37	80.38	1,992.63	-2.75	33.45	3.42	0.75	0.74	-1.87
2,088.00	2.37	83.90	2,087.54	-2.21	37.34	2.96	0.15	0.00	3.71
2,182.00	2.64	81.44	2,181.45	-1.69	41.41	2.51	0.31	0.29	-2.62
2,276.00	1.58	105.26	2,275.39	-1.70	44.80	2.60	1.44	-1.13	25.34
2,370.00	1.14	140.59	2,369.37	-2.77	46.65	3.70	0.98	-0.47	37.59
2,464.00	1.23	118.62	2,463.35	-3.97	48.13	4.93	0.49	0.10	-23.37
2,558.00	0.44	167.31	2,557.34	-4.81	49.09	5.78	1.06	-0.84	51.80
2,653.00	1.41	262.14	2,652.33	-5.32	48.01	6.28	1.59	1.02	99.82
2,747.00	0.97	264.25	2,746.31	-5.56	46.08	6.48	0.47	-0.47	2.24
2,841.00	0.62	289.65	2,840.30	-5.47	44.81	6.36	0.52	-0.37	27.02
2,935.00	0.70	305.21	2,934.29	-4.97	43.86	5.84	0.21	0.09	16.55
3,029.00	0.44	328.76	3,028.29	-4.33	43.20	5.19	0.37	-0.28	25.05
3,123.00	0.70	6.47	3,122.28	-3.45	43.08	4.31	0.47	0.28	40.12
3,218.00	0.97	308.55	3,217.27	-2.37	42.52	3.22	0.89	0.28	-60.97
3,312.00	0.79	326.83	3,311.26	-1.33	41.54	2.16	0.35	-0.19	19.45
3,407.00	0.70	353.46	3,406.25	-0.21	41.11	1.03	0.37	-0.09	28.03
3,501.00	0.70	302.92	3,500.25	0.67	40.57	0.13	0.64	0.00	-53.77
3,595.00	0.88	264.34	3,594.24	0.91	39.37	-0.13	0.58	0.19	-41.04
3,690.00	0.62	272.34	3,689.23	0.86	38.13	-0.10	0.29	-0.27	8.42
3,784.00	0.97	254.67	3,783.22	0.67	36.85	0.06	0.45	0.37	-18.80
3,879.00	0.97	235.51	3,878.21	0.01	35.41	0.70	0.34	0.00	-20.17
3,973.00	1.06	221.36	3,972.19	-1.10	34.18	1.78	0.28	0.10	-15.05
4,067.00	1.32	162.47	4,066.18	-2.78	33.93	3.46	1.27	0.28	-62.65
4,162.00	0.79	208.09	4,161.16	-4.40	33.96	5.08	1.00	-0.56	48.02
4,256.00	0.88	261.44	4,255.15	-5.08	32.94	5.74	0.80	0.10	56.76
4,351.00	1.06	268.03	4,350.14	-5.22	31.34	5.84	0.22	0.19	6.94
4,445.00	1.41	286.84	4,444.12	-4.92	29.36	5.50	0.57	0.37	20.01
4,539.00	2.02	287.81	4,538.08	-4.08	26.68	4.60	0.65	0.65	1.03
4,633.00	1.06	333.07	4,632.04	-2.79	24.71	3.28	1.57	-1.02	48.15
4,727.00	1.85	22.38	4,726.02	-0.61	24.89	1.11	1.50	0.84	52.46

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Survey

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4,821.00	1.23	44.52	4,819.98	1.51	26.18	-0.99	0.90	-0.66	23.55
4,915.00	1.06	43.73	4,913.96	2.86	27.48	-2.31	0.18	-0.18	-0.84
5,009.00	1.23	32.57	5,007.95	4.33	28.63	-3.76	0.30	0.18	-11.87
5,074.00	1.06	28.44	5,072.93	5.45	29.29	-4.87	0.29	-0.26	-6.35
5,176.00	1.49	36.97	5,174.91	7.34	30.54	-6.73	0.46	0.42	8.36
5,270.00	1.06	331.05	5,268.89	9.08	30.85	-8.46	1.52	-0.46	-70.13
5,364.00	1.76	301.78	5,362.86	10.60	29.20	-10.01	1.05	0.74	-31.14
5,458.00	1.32	309.16	5,456.83	12.04	27.14	-11.50	0.51	-0.47	7.85
5,552.00	1.67	307.67	5,550.79	13.56	25.21	-13.06	0.37	0.37	-1.59
5,646.00	1.41	312.59	5,644.76	15.18	23.28	-14.72	0.31	-0.28	5.23
5,741.00	1.23	301.60	5,739.73	16.51	21.55	-16.08	0.33	-0.19	-11.57
5,835.00	1.14	296.16	5,833.71	17.45	19.85	-17.05	0.15	-0.10	-5.79
5,929.00	1.14	310.13	5,927.70	18.46	18.30	-18.10	0.29	0.00	14.86
6,023.00	0.88	306.17	6,021.68	19.49	17.00	-19.15	0.29	-0.28	-4.21
6,116.00	1.06	298.88	6,114.67	20.33	15.67	-20.01	0.23	0.19	-7.84
6,210.00	0.79	239.38	6,208.66	20.42	14.35	-20.13	1.01	-0.29	-63.30
6,305.00	0.88	253.35	6,303.65	19.88	13.09	-19.61	0.23	0.09	14.71
6,399.00	0.79	257.92	6,397.64	19.53	11.76	-19.30	0.12	-0.10	4.86
6,494.00	0.88	240.08	6,492.63	19.03	10.49	-18.82	0.29	0.09	-18.78
6,588.00	0.97	240.87	6,586.62	18.29	9.17	-18.10	0.10	0.10	0.84
6,682.00	0.70	232.61	6,680.61	17.55	8.02	-17.39	0.31	-0.29	-8.79
6,776.00	0.79	246.06	6,774.60	16.94	6.97	-16.80	0.21	0.10	14.31
6,870.00	0.53	231.12	6,868.59	16.40	6.04	-16.28	0.33	-0.28	-15.89
6,965.00	0.62	203.34	6,963.59	15.65	5.49	-15.54	0.30	0.09	-29.24
7,060.00	0.62	197.37	7,058.58	14.69	5.13	-14.59	0.07	0.00	-6.28
7,154.00	0.26	226.72	7,152.58	14.06	4.83	-13.96	0.44	-0.38	31.22
7,248.00	0.44	190.69	7,246.58	13.56	4.60	-13.47	0.29	0.19	-38.33
7,343.00	0.53	211.87	7,341.57	12.83	4.31	-12.74	0.21	0.09	22.29
7,437.00	0.44	216.17	7,435.57	12.17	3.86	-12.09	0.10	-0.10	4.57
7,532.00	0.35	177.68	7,530.57	11.58	3.66	-11.51	0.29	-0.09	-40.52
7,626.00	0.26	161.42	7,624.57	11.09	3.74	-11.02	0.13	-0.10	-17.30
7,720.00	0.70	106.66	7,718.56	10.73	4.36	-10.64	0.63	0.47	-58.26
7,814.00	0.62	108.25	7,812.56	10.40	5.39	-10.29	0.09	-0.09	1.69
7,909.00	1.23	138.13	7,907.54	9.48	6.56	-9.35	0.80	0.64	31.45
8,003.00	2.02	156.50	8,001.51	7.21	7.89	-7.05	1.00	0.84	19.54
8,097.00	2.73	167.92	8,095.43	3.50	9.02	-3.32	0.90	0.76	12.15
8097'MD: Tie into Pilot Hold Surveys									
8,191.00	3.96	173.02	8,189.26	-1.91	9.88	2.10	1.34	1.31	5.43
8191'MD: Begin Lateral Curve Surveys									
8,285.00	3.69	165.64	8,283.06	-8.06	11.03	8.28	0.60	-0.29	-7.85
8,338.00	13.72	189.72	8,335.39	-15.93	10.39	16.13	19.73	18.92	45.43
8,385.00	19.35	187.17	8,380.43	-29.16	8.47	29.32	12.08	11.98	-5.43
8,432.00	20.49	183.83	8,424.62	-45.09	6.95	45.22	3.43	2.43	-7.11
8,479.00	23.30	180.23	8,468.22	-62.60	6.37	62.71	6.62	5.98	-7.66

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8,526.00	27.87	173.90	8,510.61	-82.83	7.50	82.97	11.32	9.72	-13.47
8,573.00	30.95	170.56	8,551.55	-105.69	10.65	105.88	7.42	6.55	-7.11
8,621.00	33.59	172.76	8,592.14	-131.04	14.35	131.30	6.02	5.50	4.58
8,668.00	37.37	175.13	8,630.41	-158.16	17.20	158.47	8.56	8.04	5.04
8,715.00	40.63	176.10	8,666.93	-187.65	19.45	188.00	7.06	6.94	2.06
8,762.00	43.70	175.57	8,701.76	-219.11	21.74	219.50	6.58	6.53	-1.13
8,809.00	46.17	175.39	8,735.03	-252.20	24.36	252.63	5.26	5.26	-0.38
8,856.00	49.95	175.75	8,766.44	-287.05	27.06	287.53	8.06	8.04	0.77
8,903.00	55.22	175.22	8,794.98	-324.25	30.00	324.78	11.25	11.21	-1.13
8,950.00	60.59	176.62	8,819.95	-363.95	32.82	364.53	11.70	11.43	2.98
8,997.00	67.88	178.73	8,840.36	-406.21	34.51	406.82	16.03	15.51	4.49
9,044.00	74.74	179.00	8,855.42	-450.70	35.39	451.31	14.61	14.60	0.57
9,091.00	80.81	179.17	8,865.36	-496.61	36.12	497.23	12.92	12.91	0.36
9,185.00	89.87	179.96	8,872.99	-590.19	36.83	590.81	9.67	9.64	0.84
9,280.00	90.22	179.79	8,872.92	-685.19	37.04	685.79	0.41	0.37	-0.18
9,375.00	90.48	179.17	8,872.34	-780.19	37.90	780.79	0.71	0.27	-0.65
9,469.00	91.10	180.58	8,871.04	-874.17	38.10	874.76	1.64	0.66	1.50
9,563.00	90.57	181.46	8,869.67	-968.15	36.43	968.68	1.09	-0.56	0.94
9,658.00	89.52	181.46	8,869.60	-1,063.12	34.01	1,063.58	1.11	-1.11	0.00
9,752.00	88.72	181.28	8,871.04	-1,157.08	31.76	1,157.48	0.87	-0.85	-0.19
9,846.00	86.70	180.49	8,874.80	-1,250.99	30.31	1,251.34	2.31	-2.15	-0.84
9,940.00	88.90	179.70	8,878.41	-1,344.91	30.16	1,345.24	2.49	2.34	-0.84
10,034.00	90.22	179.88	8,879.13	-1,438.90	30.50	1,439.23	1.42	1.40	0.19
10,129.00	90.22	178.03	8,878.76	-1,533.88	32.23	1,534.22	1.95	0.00	-1.95
10,223.00	88.55	178.29	8,879.77	-1,627.83	35.25	1,628.21	1.80	-1.78	0.28
10,318.00	86.88	178.91	8,883.56	-1,722.72	37.57	1,723.13	1.87	-1.76	0.65
10,413.00	87.76	179.44	8,888.00	-1,817.60	38.94	1,818.02	1.08	0.93	0.56
10,508.00	90.92	179.52	8,889.09	-1,912.58	39.80	1,912.99	3.33	3.33	0.08
10,601.00	89.78	179.00	8,888.53	-2,005.57	41.00	2,005.99	1.35	-1.23	-0.56
10,696.00	89.52	179.35	8,889.11	-2,100.56	42.37	2,100.99	0.46	-0.27	0.37
10,790.00	89.43	179.00	8,889.97	-2,194.54	43.72	2,194.98	0.38	-0.10	-0.37
10,884.00	89.60	178.21	8,890.76	-2,288.51	46.01	2,288.97	0.86	0.18	-0.84
10,977.00	90.04	178.12	8,891.06	-2,381.46	48.99	2,381.97	0.48	0.47	-0.10
11,071.00	90.31	178.03	8,890.77	-2,475.41	52.15	2,475.96	0.30	0.29	-0.10
11,165.00	90.48	178.03	8,890.12	-2,569.35	55.38	2,569.95	0.18	0.18	0.00
11,260.00	89.69	177.77	8,889.98	-2,664.29	58.86	2,664.93	0.88	-0.83	-0.27
11,354.00	90.04	178.12	8,890.20	-2,758.23	62.23	2,758.92	0.53	0.37	0.37
11,448.00	90.48	178.29	8,889.78	-2,852.18	65.17	2,852.91	0.50	0.47	0.18
11,543.00	91.10	178.73	8,888.47	-2,947.14	67.64	2,947.90	0.80	0.65	0.46
11,637.00	91.10	178.65	8,886.66	-3,041.10	69.79	3,041.88	0.09	0.00	-0.09
11,731.00	89.78	179.00	8,885.94	-3,135.07	71.72	3,135.88	1.45	-1.40	0.37
11,826.00	89.60	179.00	8,886.45	-3,230.06	73.38	3,230.88	0.19	-0.19	0.00
11,920.00	89.69	178.47	8,887.04	-3,324.03	75.45	3,324.87	0.57	0.10	-0.56

Company:	Concho Operating	**Local Co-ordinate Reference:**	Site Music Master 27 Federal
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	GL 3193.4 + 27.7 RKB @ 3221.10ft (Noram 23)
Site:	Music Master 27 Federal	**MD Reference:**	GL 3193.4 + 27.7 RKB @ 3221.10ft (Noram 23)
Well:	Well #1	**North Reference:**	Grid
Wellbore:	Music Master 27 Fed 3H Lateral	**Survey Calculation Method:**	Minimum Curvature
Design:	Music Master 27 Fed 3H Lateral	**Database:**	EDM 5000.14 Single User 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)	Turn Rate (°/100ft)
12,014.00	90.22	178.21	8,887.11	-3,417.99	78.18	3,418.87	0.63	0.56	-0.28
12,108.00	89.43	178.38	8,887.40	-3,511.95	80.97	3,512.86	0.86	-0.84	0.18
12,203.00	89.87	178.82	8,887.98	-3,606.92	83.29	3,607.86	0.65	0.46	0.46
12,297.00	91.19	179.35	8,887.11	-3,700.90	84.79	3,701.85	1.51	1.40	0.56
12,391.00	88.99	179.26	8,886.96	-3,794.89	85.93	3,795.84	2.34	-2.34	-0.10
12,485.00	88.99	179.00	8,888.62	-3,888.86	87.36	3,889.83	0.28	0.00	-0.28
12,580.00	88.90	178.73	8,890.37	-3,983.83	89.24	3,984.81	0.30	-0.09	-0.28
12,673.00	88.46	178.73	8,892.51	-4,076.78	91.30	4,077.79	0.47	-0.47	0.00
12,768.00	88.81	178.38	8,894.77	-4,171.72	93.70	4,172.76	0.52	0.37	-0.37
12,862.00	89.25	178.65	8,896.36	-4,265.67	96.13	4,266.74	0.55	0.47	0.29
12,955.00	89.78	178.21	8,897.15	-4,358.64	98.68	4,359.74	0.74	0.57	-0.47
13,050.00	89.69	177.33	8,897.59	-4,453.56	102.38	4,454.72	0.93	-0.09	-0.93
13,144.00	90.22	177.42	8,897.66	-4,547.46	106.68	4,548.69	0.57	0.56	0.10
13,238.00	90.57	177.06	8,897.01	-4,641.35	111.21	4,642.65	0.53	0.37	-0.38
13,314.00	90.57	176.71	8,896.26	-4,717.24	115.34	4,718.60	0.46	0.00	-0.46
13314'MD: Survey Depth									
13,363.00	90.57	176.71	8,895.77	-4,766.15	118.15	4,767.56	0.00	0.00	0.00
13363'MD: Projection to Total Depth									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
8,097.00	8,095.43	3.50	9.02	8097'MD: Tie into Pilot Hold Surveys
8,191.00	8,189.26	-1.91	9.88	8191'MD: Begin Lateral Curve Surveys
13,314.00	8,896.26	-4,717.24	115.34	13314'MD: Survey Depth
13,363.00	8,895.77	-4,766.15	118.15	13363'MD: Projection to Total Depth

Checked By: _____ Approved By: _____ Date: _____

MUSIC MASTER 27 FEDERAL #3H (30-025-43387)

Perfs	7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
1	2982	310345	328146
2	5964	310613	347886
3	6006	306055	345114
4	5586	311816	335664
5	6048	306955	329490
6	5964	306028	342342
7	5964	308561	354354
8	6006	307664	360612
9	6006	308977	341502
10	6048	307058	336798
11	5964	306390	343728
12	5964	306717	341082
13	5964	306817	340620
14	5964	306415	344358
15	6048	305340	329574
16	6006	303852	337722
Totals	**92,484**	**4,919,603**	**5,458,992**

	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
From Bottom to Top	13,210	89	14	12,945	88	14	12,678	92	14	12,415	86	14	12,145	85	14
	13,121	88	12	12,857	87	12	12,590	89	12	12,324	94	12	12,058	89	12
	13,033		10	12,770		10	12,501		10	12,230		10	11,969		10
	Plug to Plug	264	36	Plug to Plug	249	36	Plug to Plug	264	36	Plug to Plug	277	36	Plug to Plug	267	36
	Frac Plug	13,237	Total Shots	Frac Plug	12,973	Total Shots	Frac Plug	12,724	Total Shots	Frac Plug	12,460	Total Shots	Frac Plug	12,183	Total Shots

	Stage 6	Distance Between Perfs	Shots	Stage 7	Distance Between Perfs	Shots	Stage 8	Distance Between Perfs	Shots	Stage 9	Distance Between Perfs	Shots	Stage 10	Distance Between Perfs	Shots
From Bottom to Top	11,880	89	14	11,615	88	14	11,349	88	14	11,083	88	14	10,817	88	14
	11,792	89	12	11,526	89	12	11,260	89	12	10,994	89	12	10,728	89	12
	11,703		10	11,437		10	11,171		10	10,905		10	10,639		10
	Plug to Plug	257	36	Plug to Plug	266	36	Plug to Plug	266	36	Plug to Plug	266	36	Plug to Plug	266	36
	Frac Plug	11,916	Total Shots	Frac Plug	11,659	Total Shots	Frac Plug	11,393	Total Shots	Frac Plug	11,127	Total Shots	Frac Plug	10,861	Total Shots

	Stage 11	Distance Between Perfs	Shots	Stage 12	Distance Between Perfs	Shots	Stage 13	Distance Between Perfs	Shots	Stage 14	Distance Between Perfs	Shots	Stage 15	Distance Between Perfs	Shots
From Bottom to Top	10,551	88	14	10,285	89	14	10,019	89	14	9,753	89	14	9,491	88	14
	10,462	88	12	10,196	88	12	9,930	88	12	9,664	85	12	9,394	88	12
	10,374		10	10,108		10	9,842		10	9,579		10	9,306		10
	Plug to Plug	266	36	Plug to Plug	264	36	Plug to Plug	266	36	Plug to Plug	264	36	Plug to Plug	278	36
	Frac Plug	10,595	Total Shots	Frac Plug	10,329	Total Shots	Frac Plug	10,065	Total Shots	Frac Plug	9,799	Total Shots	Frac Plug	9,535	Total Shots

	Stage 16	Distance Between Perfs	Shots	Stage 17	Distance Between Perfs	Shots	Stage 18	Distance Between Perfs	Shots	Stage 19	Distance Between Perfs	Shots	Stage 20	Distance Between Perfs	Shots
From Bottom to Top	9,218	88	14		9044			0			0			0	
	9,132	88	12												
	9,044		10												
	Plug to Plug	9257	36	Plug to Plug	0	0	Plug to Plug	0	0	Plug to Plug	0	0	Plug to Plug	0	0
	Frac Plug	9,257	Total Shots	Frac Plug		Total Shots	Frac Plug		Total Shots	Frac Plug		Total Shots	Frac Plug		Total Shots