Read and Stevens Inc.

North Lea Prospect T20S-R34E
Section 3
North Lea Federal Com 3 #3H

Survey: Survey #1

MOJO Survey

25 February, 2015

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Project North Lea Prospect T20S-R34E

Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site Section 3

Site Position:		Northing:	583,705.95 usft	Latitude:	32° 36' 7.938 N
From:	Lat/Long	Easting:	783,179.81 usft	Longitude:	103° 32' 52.803 W
Position Uncertainty:	1.0 usft	Slot Radius:	16 "	Grid Convergence:	0.42 °

Well North Lea Federal Com 3 #3H

Well Position	+N/-S	0.0 usft	Northing:	586,150.20 usft	Latitude:	32° 36' 32.150 N
	+E/-W	0.0 usft	Easting:	782,801.05 usft	Longitude:	103° 32' 57.020 W
Position Uncertainty		1.0 usft	Wellhead Elevation:	usft	Ground Level:	3,667.7 usft

Wellbore North Lea Federal Com 3 #3H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/28/12	7.41	60.51	48,695

Design North Lea Federal Com 3 #3H

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.04

Survey Program Date 02/24/15

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
219.0	15,455.0	Survey #1 (North Lea Federal Com 3 #3H)		

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0.0	0.00	0.00	0.0	-3,689.7	0.0	0.0	0.00	0.0	586,150.20	782,801.05
219.0	1.00	131.40	219.0	-3,470.7	-1.3	1.4	0.46	1.3	586,148.93	782,802.48
304.0	1.00	129.90	304.0	-3,385.7	-2.2	2.6	0.03	2.3	586,147.97	782,803.61
366.0	1.40	141.40	366.0	-3,323.7	-3.2	3.4	0.75	3.2	586,147.03	782,804.49
486.0	1.20	139.40	485.9	-3,203.8	-5.3	5.2	0.17	5.4	586,144.93	782,806.23
517.0	1.30	162.10	516.8	-3,172.8	-5.8	5.5	1.62	5.9	586,144.35	782,806.56
610.0	1.40	145.60	609.9	-3,079.8	-7.8	6.5	0.43	7.9	586,142.40	782,807.51
700.0	1.60	166.20	699.9	-2,989.8	-9.9	7.4	0.63	10.0	586,140.27	782,808.43
824.0	1.50	163.80	823.8	-2,865.9	-13.3	8.3	0.05	13.4	586,136.93	782,809.32
944.0	1.80	164.80	943.8	-2,745.9	-16.7	9.2	0.17	16.8	586,133.50	782,810.28
1,032.0	1.70	169.70	1,031.7	-2,658.0	-19.3	9.6	0.20	19.5	586,130.89	782,810.88
1,119.0	1.60	168.10	1,118.7	-2,571.0	-21.8	10.3	0.13	21.9	586,128.43	782,811.36
1,210.0	1.10	168.00	1,209.7	-2,480.0	-23.9	10.8	0.55	24.0	586,126.33	782,811.80
1,297.0	0.60	187.70	1,296.7	-2,393.0	-25.1	10.9	0.66	25.3	586,125.06	782,811.92
1,384.0	0.80	215.50	1,383.6	-2,306.1	-26.1	10.5	0.45	26.3	586,124.12	782,811.50
1,473.0	0.60	187.40	1,472.6	-2,217.1	-27.0	10.0	0.44	27.2	586,123.15	782,811.08
1,560.0	0.80	191.40	1,559.6	-2,130.1	-28.1	9.9	0.24	28.3	586,122.10	782,810.90
1,571.8	0.74	192.95	1,571.4	-2,118.3	-28.3	9.8	0.52	28.4	586,121.95	782,810.87
Rustler										
1,648.0	0.40	213.50	1,647.6	-2,042.1	-29.0	9.6	0.52	29.1	586,121.24	782,810.61
1,690.0	0.50	172.80	1,689.6	-2,000.1	-29.3	9.5	0.78	29.4	586,120.94	782,810.55
1,701.8	0.56	173.88	1,701.4	-1,988.3	-29.4	9.5	0.53	29.5	586,120.83	782,810.57
Top of Salt										
1,707.0	0.59	174.29	1,706.8	-1,983.1	-29.4	9.5	0.53	29.6	586,120.78	782,810.57
13 3/8"										
1,728.0	0.70	175.80	1,727.8	-1,962.1	-29.7	9.5	0.53	29.8	586,120.54	782,810.59
1,816.0	0.40	194.90	1,815.6	-1,874.1	-30.5	9.5	0.40	30.6	586,119.71	782,810.55
1,904.0	0.50	187.80	1,903.6	-1,786.1	-31.2	9.4	0.13	31.3	586,119.03	782,810.42

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Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

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1,991.0	0.20	110.40	1,990.6	-1,699.1	-31.6	9.5	0.57	31.7	586,118.60	782,810.51
2,080.0	0.30	119.10	2,079.6	-1,610.1	-31.8	9.8	0.12	31.9	586,118.44	782,810.86
2,168.0	0.30	140.70	2,167.6	-1,522.1	-32.1	10.2	0.13	32.2	586,118.15	782,811.21
2,265.0	0.00	282.70	2,264.6	-1,425.1	-32.2	10.3	0.31	32.4	586,117.95	782,811.37
2,343.0	0.00	38.30	2,342.6	-1,347.1	-32.2	10.3	0.00	32.4	586,117.95	782,811.37
2,431.0	0.40	70.50	2,430.6	-1,259.1	-32.1	10.8	0.45	32.3	586,118.05	782,811.66
2,519.0	0.40	58.90	2,518.6	-1,171.1	-31.9	11.2	0.09	32.1	586,118.31	782,812.21
2,607.0	0.10	69.10	2,606.6	-1,083.1	-31.7	11.5	0.34	31.9	586,118.50	782,812.55
2,694.0	0.60	96.50	2,693.6	-996.1	-31.7	12.0	0.59	31.9	586,118.47	782,813.07
2,781.0	0.70	57.80	2,780.6	-909.1	-31.5	12.9	0.51	31.7	586,118.71	782,813.97
2,869.0	0.60	151.50	2,868.6	-821.1	-31.7	13.7	1.25	32.0	586,118.45	782,814.72
2,956.0	1.30	69.90	2,955.6	-734.1	-31.9	14.9	1.64	32.2	586,118.26	782,815.94
3,044.0	1.40	87.30	3,043.6	-646.1	-31.2	16.8	0.13	31.5	586,119.02	782,817.87
3,133.0	1.10	66.20	3,132.5	-557.2	-30.4	18.6	0.34	30.7	586,119.78	782,819.66
3,219.0	0.80	27.70	3,218.5	-471.2	-29.6	19.6	0.80	29.9	586,120.64	782,820.69
3,308.0	1.00	53.50	3,307.5	-382.2	-28.5	20.6	0.50	28.9	586,121.66	782,821.60
3,311.9	1.00	53.02	3,311.4	-378.3	-28.5	20.8	0.21	28.8	586,121.70	782,821.65
Base of Salt										
3,395.0	1.00	42.60	3,394.5	-295.2	-27.5	21.7	0.21	27.9	586,122.67	782,822.73
3,486.0	0.90	48.30	3,485.5	-204.2	-26.5	22.8	0.15	26.9	586,123.72	782,823.80
3,521.9	0.73	51.13	3,521.4	-168.3	-26.1	23.1	0.48	26.5	586,124.06	782,824.19
Yates (Capitan Reef)										
3,573.0	0.50	58.40	3,572.5	-117.2	-25.8	23.6	0.46	26.2	586,124.38	782,824.63
3,662.0	0.20	113.40	3,661.5	-28.2	-25.7	24.1	0.47	26.1	586,124.52	782,825.11
3,750.0	0.10	78.20	3,749.5	59.8	-25.7	24.3	0.15	26.1	586,124.47	782,825.32
3,815.9	0.17	112.75	3,815.4	125.7	-25.8	24.4	0.16	26.2	586,124.45	782,825.47
7 Rivers (Capitan Reef)										
3,838.0	0.20	118.20	3,837.5	147.8	-25.8	24.5	0.16	26.2	586,124.42	782,825.53

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3,925.0	0.30	156.90	3,924.5	234.8	-28.1	24.7	0.22	28.5	586,124.14	782,825.76
4,013.0	0.80	175.10	4,012.5	322.8	-26.9	24.9	0.59	27.3	586,123.31	782,825.90
4,100.0	0.80	155.40	4,099.5	409.8	-28.0	25.2	0.31	28.5	586,122.15	782,826.20
4,189.0	0.50	161.40	4,188.5	498.8	-29.0	25.5	0.35	29.4	586,121.22	782,826.59
4,278.0	0.40	143.20	4,278.5	588.8	-29.6	25.8	0.20	30.0	586,120.62	782,826.89
4,363.0	0.20	184.50	4,362.5	672.8	-30.0	26.1	0.26	30.4	586,120.23	782,827.11
4,451.0	0.10	210.00	4,450.5	760.8	-30.2	26.1	0.17	30.6	586,120.01	782,827.11
4,530.0	0.17	75.17	4,529.4	839.7	-30.2	26.1	0.32	30.6	586,119.99	782,827.20
Queen (Capitan Reef)										
4,538.0	0.20	73.10	4,537.5	847.8	-30.2	26.2	0.32	30.6	586,119.99	782,827.22
4,627.0	0.30	67.80	4,626.5	936.8	-30.1	26.5	0.12	30.5	586,120.13	782,827.59
4,715.0	0.40	39.90	4,714.5	1,024.8	-29.7	26.9	0.22	30.2	586,120.45	782,828.00
4,804.0	0.40	66.80	4,803.5	1,113.8	-29.4	27.4	0.21	29.8	586,120.81	782,828.48
4,869.0	0.31	37.85	4,868.4	1,178.7	-29.2	27.7	0.31	29.6	586,121.04	782,828.80
Penrose (Capitan Reef)										
4,891.0	0.30	25.20	4,890.5	1,200.8	-29.1	27.8	0.31	29.5	586,121.13	782,828.86
4,978.0	0.80	75.40	4,977.5	1,287.8	-28.7	28.5	0.75	29.2	586,121.49	782,829.54
5,039.0	0.52	66.75	5,038.4	1,348.7	-28.5	29.2	0.49	29.0	586,121.71	782,830.21
Grayburg(Capitan Reef)										
5,067.0	0.40	58.80	5,066.4	1,376.7	-28.4	29.4	0.49	28.9	586,121.81	782,830.41
5,154.0	0.70	75.90	5,153.4	1,463.7	-28.1	30.1	0.39	28.6	586,122.10	782,831.16
5,291.0	0.70	76.86	5,290.4	1,510.7	-28.0	30.7	0.02	28.5	586,122.23	782,831.74
San Andres										
5,242.0	0.70	77.70	5,241.4	1,551.7	-27.9	31.2	0.03	28.4	586,122.34	782,832.23
5,335.0	0.30	88.40	5,334.4	1,644.7	-27.7	32.0	0.44	28.3	586,122.47	782,833.03
5,346.0	0.40	192.10	5,345.4	1,655.7	-27.8	32.0	5.04	28.3	586,122.43	782,833.05
5,400.0	0.19	102.72	5,399.4	1,709.7	-28.0	32.1	0.82	28.5	586,122.23	782,833.10
9 5/8"										

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5,434.0	0.40	63.70	5,433.4	1,743.7	-27.9	32.2	0.82	28.5	586,122.27	782,833.26
5,521.0	0.30	75.20	5,520.4	1,830.7	-27.7	32.7	0.14	28.3	586,122.46	782,833.75
5,548.0	0.33	100.18	5,547.4	1,857.7	-27.7	32.9	0.52	28.3	586,122.47	782,833.90
Lamar Lime										
5,609.0	0.30	74.40	5,608.4	1,918.7	-27.6	33.2	0.24	28.2	586,122.58	782,834.20
5,645.0	0.30	71.24	5,644.4	1,954.7	-27.6	33.3	0.05	28.1	586,122.64	782,834.38
Delaware/Bell Canyon										
5,696.0	0.30	68.70	5,695.4	2,005.7	-27.5	33.6	0.05	28.0	586,122.74	782,834.63
5,784.0	0.10	74.80	5,783.4	2,093.7	-27.4	33.9	0.23	27.9	586,122.85	782,834.91
5,874.0	0.30	92.10	5,873.4	2,183.7	-27.3	34.2	0.23	27.9	586,122.85	782,835.22
5,961.0	0.20	109.10	5,960.4	2,270.7	-27.4	34.5	0.14	28.0	586,122.80	782,835.59
5,952.0	0.20	109.35	5,961.4	2,271.7	-27.4	34.6	0.18	28.0	586,122.80	782,835.60
Cherry Canyon										
6,048.0	0.10	158.80	6,047.4	2,357.7	-27.5	34.7	0.18	28.1	586,122.68	782,835.77
6,136.0	0.30	186.10	6,135.4	2,445.7	-27.8	34.7	0.25	28.4	586,122.38	782,835.77
6,223.0	0.30	218.20	6,222.4	2,532.7	-28.2	34.6	0.19	28.8	586,121.97	782,835.60
6,311.0	0.30	189.80	6,310.4	2,620.7	-28.6	34.4	0.17	29.2	586,121.57	782,835.42
6,399.0	0.60	187.20	6,398.4	2,708.7	-29.3	34.3	0.34	29.9	586,120.88	782,835.32
6,485.0	0.70	205.60	6,485.4	2,795.7	-30.2	34.0	0.26	30.8	586,119.95	782,835.04
6,575.0	0.90	203.90	6,574.4	2,884.7	-31.4	33.5	0.23	31.9	586,118.82	782,834.52
6,664.0	1.00	211.60	6,663.4	2,973.7	-32.7	32.8	0.18	33.2	586,117.52	782,833.83
6,751.0	0.80	209.80	6,750.4	3,060.7	-33.9	32.1	0.23	34.4	586,116.35	782,833.13
6,839.0	1.00	209.00	6,838.4	3,148.7	-35.1	31.4	0.23	35.6	586,115.14	782,832.45
6,928.0	0.80	190.00	6,927.4	3,237.7	-36.3	30.9	0.40	36.9	586,113.85	782,831.97
7,015.0	1.00	187.70	7,014.4	3,324.7	-37.7	30.7	0.23	38.2	586,112.50	782,831.76
7,103.0	0.90	195.70	7,102.3	3,412.6	-39.1	30.4	0.19	39.6	586,111.07	782,831.47
7,190.0	0.20	225.10	7,189.3	3,499.6	-39.9	30.1	0.84	40.4	586,110.31	782,831.18

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7,278.0	0.10	331.90	7,277.3	3,587.6	-39.9	30.0	0.28	40.4	586,110.27	782,831.03
7,282.1	0.10	331.90	7,281.4	3,591.7	-39.9	30.0	0.11	40.4	586,110.28	782,831.03
Brushy Canyon										
7,366.0	0.00	7.00	7,365.3	3,675.6	-39.9	30.0	0.11	40.4	586,110.34	782,831.00
7,453.0	0.10	119.70	7,452.3	3,762.6	-39.9	30.0	0.11	40.4	586,110.30	782,831.06
7,541.0	0.10	306.20	7,540.3	3,850.6	-39.9	30.0	0.23	40.4	586,110.31	782,831.07
7,628.0	0.10	41.40	7,627.3	3,937.6	-39.8	30.0	0.17	40.3	586,110.41	782,831.06
7,717.0	0.40	16.70	7,716.3	4,026.6	-39.4	30.2	0.35	39.9	586,110.76	782,831.20
7,804.0	0.30	9.40	7,803.3	4,113.6	-38.9	30.3	0.13	39.4	586,111.28	782,831.32
7,892.0	0.30	9.30	7,891.3	4,201.6	-38.5	30.4	0.00	39.0	586,111.73	782,831.40
7,980.0	0.40	359.10	7,979.3	4,289.6	-37.9	30.4	0.13	38.4	586,112.27	782,831.43
8,067.0	0.30	331.70	8,066.3	4,376.6	-37.4	30.3	0.22	37.9	586,112.77	782,831.32
8,155.0	0.50	336.40	8,154.3	4,464.6	-36.9	30.0	0.23	37.4	586,113.32	782,831.05
8,207.1	0.38	334.75	8,206.4	4,516.7	-36.5	29.8	0.23	37.0	586,113.69	782,830.88
Bone Springs Lime										
8,243.0	0.30	334.00	8,242.3	4,552.6	-36.3	29.7	0.23	36.8	586,113.88	782,830.79
8,331.0	0.10	304.70	8,330.3	4,640.6	-36.1	29.6	0.25	36.6	586,114.13	782,830.62
8,419.0	0.30	269.50	8,418.3	4,728.6	-36.0	29.3	0.26	36.5	586,114.17	782,830.33
8,506.0	0.40	277.30	8,505.3	4,815.6	-36.0	28.8	0.13	36.5	586,114.21	782,829.80
8,594.0	0.10	257.90	8,593.3	4,903.6	-36.0	28.4	0.35	36.4	586,114.23	782,829.42
8,681.0	0.30	284.50	8,680.3	4,990.6	-35.9	28.1	0.25	36.4	586,114.27	782,829.13
8,702.1	0.32	269.21	8,701.4	5,011.7	-35.9	28.0	0.41	36.4	586,114.29	782,829.01
Avalon Shale										
8,770.0	0.50	238.60	8,769.3	5,079.6	-36.1	27.5	0.41	36.5	586,114.13	782,828.57
8,858.0	0.90	176.30	8,857.3	5,167.6	-37.0	27.2	0.91	37.4	586,113.24	782,828.29
8,945.0	0.80	179.90	8,944.3	5,254.6	-38.2	27.3	0.13	38.7	586,111.95	782,828.33
9,032.0	0.40	160.80	9,031.3	5,341.6	-39.1	27.4	0.51	39.6	586,111.06	782,828.43

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
9,120.0	0.50	163.50	9,119.3	5,429.6	-39.8	27.6	0.12	40.3	586,110.40	782,828.64
9,207.0	0.60	133.00	9,206.3	5,516.6	-40.5	28.0	0.35	40.9	586,109.72	782,829.08
9,295.0	0.90	121.90	9,294.3	5,604.6	-41.2	29.0	0.38	41.6	586,109.04	782,830.01
9,382.0	1.20	95.70	9,381.3	5,691.6	-41.6	30.4	0.64	42.1	586,108.59	782,831.49
9,394.2	1.07	90.79	9,393.4	5,703.7	-41.6	30.7	1.34	42.1	586,108.58	782,831.73
1st Bone Spring Sand										
9,470.0	0.70	24.40	9,469.3	5,779.6	-41.2	31.6	1.34	41.7	586,108.99	782,832.63
9,558.0	0.70	7.30	9,557.3	5,867.6	-40.2	31.9	0.24	40.7	586,110.01	782,832.92
9,646.0	0.30	33.10	9,645.2	5,955.5	-39.5	32.1	0.51	40.0	586,110.74	782,833.12
9,733.0	0.90	116.90	9,732.2	6,042.5	-39.6	32.8	1.05	40.1	586,110.62	782,833.85
9,822.0	0.80	95.20	9,821.2	6,131.5	-39.9	34.0	0.38	40.5	586,110.25	782,835.08
9,910.0	0.80	211.10	9,909.2	6,219.5	-40.6	34.3	1.64	41.2	586,109.60	782,835.35
9,911.2	0.91	211.67	9,910.4	6,220.7	-40.6	34.3	0.91	41.2	586,109.59	782,835.34
2nd Bone Spring Sand										
9,998.0	1.50	237.40	9,997.2	6,307.5	-41.8	33.0	0.91	42.4	586,108.39	782,834.02
10,085.0	0.80	208.60	10,084.2	6,394.5	-43.0	31.7	1.02	43.5	586,107.24	782,832.77
10,173.0	1.60	192.40	10,172.2	6,482.5	-44.7	31.2	0.98	45.2	586,105.50	782,832.21
10,231.0	2.20	192.90	10,230.1	6,540.4	-46.6	30.7	1.03	47.1	586,103.63	782,831.79
10,270.0	2.30	185.30	10,269.1	6,579.4	-48.1	30.5	0.81	48.6	586,102.12	782,831.55
10,315.0	5.30	193.20	10,314.0	6,624.3	-51.0	29.9	6.75	51.5	586,099.20	782,830.99
10,359.0	11.00	193.00	10,357.5	6,667.8	-57.1	28.5	12.95	57.5	586,093.12	782,829.58
10,403.0	16.10	190.90	10,400.3	6,710.6	-67.2	26.4	11.64	67.6	586,083.03	782,827.48
10,446.0	19.20	190.40	10,441.3	6,751.6	-80.0	24.0	7.22	80.4	586,070.22	782,825.08
10,490.0	23.00	190.70	10,482.3	6,792.6	-95.5	21.1	8.64	95.9	586,054.65	782,822.18
10,534.0	25.50	191.10	10,522.4	6,832.7	-113.3	17.7	5.69	113.6	586,036.91	782,818.76
10,560.7	26.34	192.71	10,546.4	6,856.7	-124.7	15.3	4.11	124.9	586,025.51	782,816.35
3rd Bone Spring Sand										

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
10,572.0	26.71	193.35	10,556.8	6,866.9	-129.6	14.2	4.11	129.8	586,020.58	782,815.21
Cross North HArd Boundary @ 10572ftMD										
10,578.0	26.90	193.70	10,561.9	6,872.2	-132.3	13.6	4.11	132.5	586,017.95	782,814.57
10,622.0	30.50	193.70	10,600.5	6,910.8	-152.8	8.5	8.18	152.9	585,997.42	782,809.57
10,666.0	36.50	192.80	10,637.2	6,947.5	-176.4	3.0	13.68	176.4	585,973.79	782,804.02
10,710.0	42.00	191.20	10,671.2	6,981.5	-203.6	-2.8	12.71	203.6	585,946.57	782,798.26
10,754.0	48.00	188.50	10,702.3	7,012.6	-234.3	-8.1	14.31	234.1	585,915.93	782,792.98
10,799.0	52.50	184.80	10,731.1	7,041.4	-268.6	-12.0	11.83	268.4	585,881.58	782,789.01
10,842.0	58.10	181.30	10,755.6	7,065.9	-303.9	-13.9	14.64	303.6	585,846.30	782,787.17
10,886.0	63.30	178.90	10,777.1	7,087.4	-342.3	-13.9	12.74	342.0	585,807.95	782,787.12
10,908.0	66.60	177.60	10,786.4	7,096.7	-362.2	-13.3	15.93	361.9	585,788.03	782,787.73
10,952.0	71.60	177.10	10,802.1	7,112.4	-403.2	-11.4	11.41	403.0	585,746.98	782,789.64
10,996.0	76.50	177.10	10,814.2	7,124.5	-445.5	-9.3	11.14	445.2	585,704.74	782,791.78
11,040.0	78.90	177.20	10,823.6	7,133.9	-488.4	-7.1	5.46	488.2	585,661.81	782,793.91
11,083.0	83.40	177.70	10,830.2	7,140.5	-530.8	-5.2	10.53	530.7	585,619.38	782,795.80
11,127.0	83.90	177.90	10,835.1	7,145.4	-574.5	-3.6	1.22	574.4	585,575.68	782,797.48
11,172.0	84.20	177.40	10,839.7	7,150.0	-619.2	-1.7	1.29	619.1	585,530.95	782,799.31
11,215.0	84.20	176.90	10,844.1	7,154.4	-662.0	0.4	1.16	661.9	585,488.24	782,801.44
11,259.0	84.40	176.90	10,848.4	7,158.7	-705.7	2.8	0.45	705.6	585,444.52	782,803.81
11,303.0	84.60	176.90	10,852.6	7,162.9	-749.4	5.1	0.91	749.4	585,400.78	782,806.18
11,347.0	84.60	176.80	10,856.6	7,166.9	-793.2	7.5	0.51	793.2	585,357.04	782,808.59
11,391.0	85.10	177.00	10,860.6	7,170.9	-836.9	9.9	1.22	837.0	585,313.28	782,810.95
11,435.0	86.00	178.40	10,864.0	7,174.3	-880.8	11.7	3.77	880.8	585,269.45	782,812.72
11,480.0	86.40	178.20	10,867.0	7,177.3	-925.7	13.0	0.99	925.7	585,224.57	782,814.06
11,524.0	87.40	178.60	10,869.4	7,179.7	-969.6	14.2	2.45	969.7	585,180.65	782,815.27
11,568.0	87.60	178.30	10,871.3	7,181.6	-1,013.5	15.4	0.82	1,013.6	585,136.71	782,816.46
11,611.0	86.10	177.90	10,873.7	7,184.0	-1,056.4	16.8	3.61	1,056.6	585,093.80	782,817.89

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
11,655.0	86.50	179.00	10,876.5	7,186.8	-1,100.3	18.4	0.94	1,100.5	585,049.92	782,819.46
11,744.0	85.70	181.70	10,882.5	7,192.8	-1,189.1	18.6	4.24	1,189.2	584,961.15	782,819.69
11,832.0	86.60	182.50	10,888.1	7,198.4	-1,276.8	15.4	0.91	1,276.9	584,873.45	782,816.48
11,916.0	87.60	182.40	10,893.9	7,204.2	-1,360.6	11.8	2.15	1,360.6	584,789.67	782,812.89
12,006.0	86.40	181.30	10,898.6	7,208.9	-1,450.4	8.9	1.81	1,450.3	584,699.85	782,809.99
12,048.0	86.70	181.60	10,901.1	7,211.4	-1,492.3	7.9	1.01	1,492.2	584,657.94	782,808.93
12,094.0	87.30	181.90	10,903.6	7,213.9	-1,538.2	6.5	1.46	1,538.1	584,612.02	782,807.53
12,138.0	88.30	181.50	10,905.2	7,215.5	-1,582.2	5.2	2.45	1,582.0	584,568.08	782,806.22
12,183.0	90.00	181.90	10,905.9	7,216.2	-1,627.1	3.8	3.88	1,627.0	584,523.11	782,804.89
12,226.0	89.20	180.80	10,906.2	7,216.5	-1,670.1	2.8	3.16	1,669.9	584,480.12	782,803.87
12,270.0	89.70	180.20	10,906.6	7,216.9	-1,714.1	2.4	1.78	1,713.9	584,436.13	782,803.49
12,314.0	90.20	180.40	10,906.7	7,217.0	-1,758.1	2.2	1.22	1,757.9	584,392.13	782,803.28
12,357.0	90.40	179.70	10,906.4	7,216.7	-1,801.1	2.2	1.69	1,800.9	584,349.13	782,803.22
12,401.0	88.90	180.20	10,906.7	7,217.0	-1,845.1	2.2	3.59	1,844.9	584,305.13	782,803.26
12,445.0	88.80	179.40	10,907.6	7,217.9	-1,889.1	2.4	1.83	1,888.9	584,261.14	782,803.41
12,488.0	89.00	179.40	10,908.4	7,218.7	-1,932.1	2.8	0.47	1,931.9	584,218.15	782,803.85
12,533.0	89.10	178.90	10,909.2	7,219.5	-1,977.1	3.5	1.13	1,976.9	584,173.17	782,804.53
12,577.0	89.60	179.00	10,909.7	7,220.0	-2,021.1	4.3	1.16	2,020.9	584,129.18	782,805.34
12,621.0	89.90	179.00	10,909.9	7,220.2	-2,065.1	5.1	0.68	2,064.9	584,085.18	782,806.11
12,664.0	90.20	178.10	10,909.8	7,220.1	-2,108.1	5.8	0.74	2,107.9	584,042.19	782,806.82
12,708.0	90.80	179.30	10,909.4	7,219.7	-2,152.0	6.4	1.44	2,151.9	583,998.20	782,807.43
12,752.0	89.40	179.20	10,909.4	7,219.7	-2,196.0	7.0	3.19	2,195.8	583,954.21	782,808.01
12,796.0	89.70	178.60	10,909.7	7,220.0	-2,240.0	7.8	1.52	2,239.9	583,910.22	782,808.85
12,840.0	89.90	178.60	10,909.9	7,220.2	-2,284.0	8.9	0.45	2,283.8	583,866.23	782,809.93
12,884.0	90.00	178.80	10,909.9	7,220.2	-2,328.0	9.9	0.51	2,327.8	583,822.24	782,810.93
12,928.0	89.20	178.70	10,910.2	7,220.5	-2,372.0	10.8	1.83	2,371.8	583,778.26	782,811.89
12,972.0	89.00	178.50	10,910.9	7,221.2	-2,416.0	11.9	0.64	2,415.8	583,734.28	782,812.96

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
13,015.0	88.70	177.80	10,911.8	7,222.1	-2,458.9	13.3	1.77	2,458.8	583,691.31	782,814.35
13,059.0	88.90	178.10	10,912.7	7,223.0	-2,502.9	14.9	0.82	2,502.8	583,647.35	782,815.92
13,104.0	89.10	178.90	10,913.5	7,223.8	-2,547.9	16.1	1.83	2,547.8	583,602.37	782,817.10
13,147.0	88.90	179.00	10,914.2	7,224.5	-2,590.9	16.8	0.52	2,590.8	583,559.39	782,817.89
13,191.0	89.60	178.60	10,914.8	7,225.1	-2,634.9	17.8	1.83	2,634.8	583,515.40	782,818.81
13,235.0	89.40	179.40	10,915.2	7,225.5	-2,678.8	18.5	1.87	2,678.8	583,471.41	782,819.58
13,279.0	89.70	179.50	10,915.5	7,225.8	-2,722.8	19.0	0.72	2,722.8	583,427.42	782,820.00
13,322.0	90.50	179.80	10,915.4	7,225.7	-2,765.8	19.2	1.99	2,765.8	583,384.42	782,820.26
13,366.0	89.50	180.30	10,915.4	7,225.7	-2,809.8	19.2	2.54	2,809.8	583,340.42	782,820.22
13,410.0	89.80	180.10	10,915.7	7,226.0	-2,853.8	19.0	0.82	2,853.8	583,296.42	782,820.07
13,454.0	88.30	180.20	10,916.4	7,226.7	-2,897.8	18.9	3.42	2,897.7	583,252.43	782,819.95
13,497.0	88.70	180.40	10,917.6	7,227.9	-2,940.8	18.7	1.04	2,940.7	583,209.45	782,819.73
13,541.0	88.90	180.20	10,918.5	7,228.8	-2,984.8	18.5	0.64	2,984.7	583,165.46	782,819.50
13,585.0	89.50	180.60	10,919.1	7,229.4	-3,028.8	18.1	1.60	3,029.7	583,120.47	782,819.19
13,630.0	90.10	180.60	10,919.3	7,229.6	-3,073.8	17.7	1.38	3,073.7	583,076.47	782,818.72
13,674.0	89.00	180.60	10,919.6	7,229.9	-3,117.8	17.2	2.50	3,117.6	583,032.48	782,818.26
13,718.0	89.40	180.60	10,920.2	7,230.5	-3,161.8	16.8	0.91	3,161.6	582,988.48	782,817.80
13,761.0	89.80	180.50	10,920.5	7,230.8	-3,204.8	16.3	0.96	3,204.6	582,945.49	782,817.39
13,805.0	90.40	180.70	10,920.5	7,230.8	-3,248.8	15.9	1.44	3,248.6	582,901.49	782,816.93
13,848.0	89.20	181.60	10,920.6	7,230.9	-3,291.8	15.0	3.49	3,291.6	582,858.50	782,816.07
13,893.0	89.40	180.80	10,921.2	7,231.5	-3,336.8	14.1	1.83	3,336.5	582,813.52	782,815.12
13,936.0	89.60	181.40	10,921.5	7,231.8	-3,379.8	13.3	1.47	3,379.5	582,770.53	782,814.30
13,980.0	90.00	181.10	10,921.7	7,232.0	-3,423.7	12.3	1.14	3,423.5	582,726.54	782,813.34
14,023.0	89.80	181.00	10,921.8	7,232.1	-3,466.7	11.5	0.52	3,466.4	582,683.55	782,812.55
14,067.0	88.00	180.50	10,922.6	7,232.9	-3,510.7	10.9	4.25	3,510.4	582,639.56	782,811.98
14,111.0	86.10	180.30	10,924.9	7,235.2	-3,554.7	10.6	4.34	3,554.3	582,595.53	782,811.67
14,155.0	86.20	180.40	10,927.8	7,238.1	-3,598.6	10.4	0.32	3,598.2	582,551.73	782,811.40

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
WellBore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
14,198.0	86.30	180.80	10,930.6	7,240.9	-3,641.5	10.0	0.52	3,641.1	582,508.82	782,811.03
14,243.0	86.80	180.80	10,933.3	7,243.6	-3,686.4	9.4	1.20	3,686.0	582,463.91	782,810.48
14,287.0	87.30	180.40	10,935.6	7,245.9	-3,730.3	9.0	1.45	3,729.9	582,419.97	782,810.02
14,330.0	87.20	180.20	10,937.7	7,248.0	-3,773.3	8.7	0.52	3,772.9	582,377.02	782,809.79
14,374.0	87.60	180.20	10,939.7	7,250.0	-3,817.2	8.6	0.91	3,816.8	582,333.07	782,809.64
14,418.0	88.10	179.30	10,941.3	7,251.6	-3,861.2	8.8	2.34	3,860.8	582,289.10	782,809.83
14,462.0	89.00	179.20	10,942.4	7,252.7	-3,905.2	9.4	2.06	3,904.8	582,245.12	782,810.41
14,506.0	89.50	179.70	10,943.0	7,253.3	-3,949.2	9.8	1.61	3,948.8	582,201.13	782,810.83
14,549.0	89.80	179.30	10,943.2	7,253.5	-3,992.2	10.2	1.32	3,991.8	582,158.13	782,811.20
14,594.0	90.20	178.80	10,943.2	7,253.5	-4,037.2	10.9	1.30	4,036.8	582,113.14	782,811.95
14,638.0	90.50	178.50	10,942.9	7,253.2	-4,081.1	11.9	0.96	4,080.8	582,069.15	782,812.99
14,682.0	91.10	178.60	10,942.3	7,252.6	-4,125.1	13.1	1.38	4,124.8	582,025.17	782,814.10
14,726.0	90.60	178.30	10,941.7	7,252.0	-4,169.1	14.2	1.33	4,168.8	581,981.19	782,815.29
14,770.0	90.80	178.30	10,941.1	7,251.4	-4,213.1	15.5	0.45	4,212.8	581,937.22	782,816.59
14,814.0	90.40	177.80	10,940.7	7,251.0	-4,257.1	17.0	1.48	4,256.7	581,893.25	782,818.09
14,858.0	89.50	177.10	10,940.7	7,251.0	-4,301.0	19.0	2.59	4,300.7	581,849.29	782,820.05
14,901.0	89.10	176.20	10,941.2	7,251.5	-4,343.9	21.5	2.29	4,343.7	581,806.37	782,822.58
14,945.0	89.20	176.90	10,941.8	7,252.2	-4,387.8	24.2	1.61	4,387.6	581,762.46	782,825.21
14,989.0	89.40	177.20	10,942.4	7,252.7	-4,431.8	26.4	0.82	4,431.6	581,718.52	782,827.47
15,033.0	89.80	177.50	10,942.7	7,253.0	-4,475.7	28.5	1.14	4,475.6	581,674.57	782,829.51
15,076.0	89.80	177.50	10,942.8	7,253.1	-4,518.7	30.3	0.23	4,518.6	581,631.61	782,831.38
15,120.0	90.20	177.40	10,942.8	7,253.1	-4,562.7	32.3	0.72	4,562.6	581,587.66	782,833.34
15,208.0	90.50	176.90	10,942.3	7,252.6	-4,650.5	36.7	0.66	4,650.5	581,499.77	782,837.72
15,251.0	90.90	176.60	10,941.7	7,252.0	-4,693.5	39.1	1.16	4,693.5	581,456.84	782,840.16
15,295.0	90.90	176.10	10,941.0	7,251.3	-4,737.4	41.9	1.14	4,737.4	581,412.94	782,842.95
15,335.0	90.63	175.57	10,940.5	7,250.8	-4,777.3	44.8	1.49	4,777.3	581,373.05	782,845.86

Cross South Hard Boundary @15335ftMD

MOJO Survey

Company:	Read and Stevens Inc.	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3669.7usft
Site:	Section 3	MD Reference:	KB @ 3669.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
15,340.0	90.60	175.50	10,940.5	7,250.8	-4,782.2	45.2	1.49	4,782.3	581,388.06	782,846.25
15,405.0	90.20	175.20	10,940.0	7,250.3	-4,847.0	50.5	0.77	4,847.2	581,303.28	782,851.52
15,455.0	90.20	175.20	10,939.8	7,250.1	-4,896.9	54.7	0.00	4,897.1	581,253.46	782,855.70

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,707.0	1,706.6	13 3/8"	13-3/8	16
5,400.0	5,399.4	9 5/8"	9-5/8	12-1/4

MOJO Survey

Company:	Read and Stevens Inc	Local Co-ordinate Reference:	Well North Lea Federal Com 3 #3H
Project:	North Lea Prospect T20S-R34E	TVD Reference:	KB @ 3689.7usft
Site:	Section 3	MD Reference:	KB @ 3689.7usft
Well:	North Lea Federal Com 3 #3H	North Reference:	Grid
Wellbore:	North Lea Federal Com 3 #3H	Survey Calculation Method:	Minimum Curvature
Design:	North Lea Federal Com 3 #3H	Database:	EDM 5000.1 Single User Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)
8,207.1	8,206.4	Bone Springs Lime	0.00
8,702.1	8,701.4	Avalon Shale	0.00
3,815.9	3,815.4	7 Rivers (Capitan Reef)	0.00
5,962.0	5,961.4	Cherry Canyon	0.00
5,201.0	5,200.4	San Andres	0.00
10,560.7	10,546.4	3rd Bone Spring Sand	0.00
7,282.1	7,281.4	Brushy Canyon	0.00
1,571.8	1,571.4	Rustler	0.00
9,394.2	9,393.4	1st Bone Spring Sand	0.00
4,530.0	4,529.4	Queen (Capitan Reef)	0.00
5,548.0	5,547.4	Lamar Lime	0.00
4,869.0	4,868.4	Penrose (Capitan Reef)	0.00
5,039.0	5,038.4	Grayburg(Capitan Reef)	0.00
3,311.9	3,311.4	Base of Salt	0.00
1,701.8	1,701.4	Top of Salt	0.00
9,911.2	9,910.4	2nd Bone Spring Sand	0.00
3,521.9	3,521.4	Yates (Capitan Reef)	0.00
5,645.0	5,644.4	Delaware/Bell Canyon	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,572.0	10,556.6	-129.6	14.2	Cross North HArd Boundary @ 10572ftMD
15,335.0	10,940.5	-4,777.3	44.8	Cross South Hard Boundary @15335ftMD

Checked By: _____ Approved By: _____ Date: _____