OPERATOR MEWBOURNE OIL COMPANY 075-0087
WELL/LEASE San Lorenzo 22-27 LE FEE #1H
COUNTY EDDY

STATE OF NEW MEXICO
DEVIATION REPORT 30-015-40398

457	1.25
706	1.86
896	1.15
1,151	0.15
1,692	0 84
3,352	0 98
3,861	0.69
4,704	0 44
4,725	0 29
5,040	0 52
5,454	1.88
5,709	1.75
5,964	1.11
6,281	1.18
6,599	0.45
6,883	2 26
7,181	3 11

RECEIVED
SEP 05 2012
NMOCD ARTESIA

BY: Kyle Hollingsworth

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on 7/30/12, by Kyle Hollingsworth on behalf of Patterson-UTI Drilling Company LLC.

Shawna Sims
Notary Public for Midland County, Texas
My Commission Expires:

SHAWNA K. SIMS
Notary Public, State of Texas
My Commission Expires
March 30, 2016

Company: Mewbourne Oil Company
Lease/Well: San Lorenzo 22 27 Le Fee / No. 001H

Rig Name: Patterson 75
State/County: New Mexico / Eddy
Latitude: 32.11
GRID North is 0.13 Degrees East of True North
VS-Azi: 0.00 Degrees

Depth Reference : RKB = 22'

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: ...-27 le fee #1h gyro survey.ut
Minimum Curvature Method
Report Date/Time: 7/23/2012 / 11:18

Vaughn Energy Services
Gardendale, Texas
(432) 563-5444
Surveyor: Dustin Wedel
San Lorenzo 22 27 Le Fee No. 001H / API 30-015-40398

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	1.13	314.07	99.99	0.69	-0.71	0.69	0.99	314.07	1.13
200.00	1.06	317.64	199.98	2.06	-2.04	2.06	2.90	315.21	0.10
300.00	1.45	317.02	299.95	3.67	-3.53	3.67	5.09	316.10	0.39
400.00	1.93	320.36	399.91	5.89	-5.46	5.89	8.03	317.14	0.48
500.00	1.90	327.81	499.85	8.59	-7.42	8.59	11.35	319.17	0.25
600.00	2.21	326.81	599.79	11.60	-9.36	11.60	14.91	321.11	0.31
700.00	1.77	324.53	699.73	14.47	-11.31	14.47	18.37	321.99	0.44
800.00	1.40	300.94	799.69	16.36	-13.26	16.36	21.06	320.99	0.74
900.00	0.84	296.37	899.67	17.31	-14.96	17.31	22.88	319.18	0.57
1000.00	0.76	298.90	999.66	17.96	-16.19	17.96	24.18	317.96	0.08
1100.00	0.87	276.83	1099.65	18.37	-17.53	18.37	25.39	316.34	0.33
1200.00	0.82	248.19	1199.64	18.20	-18.95	18.20	26.27	313.84	0.42
1300.00	0.90	258.35	1299.63	17.77	-20.38	17.77	27.04	311.08	0.18
1400.00	0.77	229.93	1399.62	17.18	-21.67	17.18	27.66	308.41	0.43
1500.00	0.66	252.62	1499.61	16.58	-22.74	16.58	28.14	306.09	0.30
1600.00	0.56	275.32	1599.61	16.45	-23.78	16.45	28.91	304.67	0.26
1700.00	0.40	190.40	1699.60	16.15	-24.32	16.15	29.20	303.59	0.66
1800.00	0.24	105.47	1799.60	15.75	-24.18	15.75	28.86	303.08	0.44

VES Survey Date: 07/12/2012

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	1.72	95.13	1899.58	15.56	-22.49	15.56	27.35	304.68	1.48
2000.00	2.35	97.21	1999.52	15.17	-18.97	15.17	24.29	308.66	0.63
2100.00	2.93	102.75	2099.41	14.35	-14.45	14.35	20.36	314.82	0.64
2200.00	4.06	97.68	2199.23	13.32	-8.44	13.32	15.77	327.62	1.17
2300.00	4.57	96.11	2298.94	12.42	-0.98	12.42	12.46	355.49	0.52
2400.00	3.95	103.66	2398.67	11.18	6.33	11.18	12.85	29.51	0.83
2500.00	2.86	97.34	2498.49	10.05	12.15	10.05	15.77	50.40	1.16
2600.00	2.30	92.55	2598.39	9.64	16.62	9.64	19.21	59.88	0.60
2700.00	2.29	98.02	2698.31	9.27	20.60	9.27	22.59	65.76	0.22
2800.00	1.91	104.46	2798.24	8.58	24.18	8.58	25.66	70.46	0.44
2900.00	1.65	105.58	2898.19	7.78	27.19	7.78	28.28	74.04	0.26
3000.00	1.41	98.10	2998.16	7.22	29.79	7.22	30.66	76.38	0.32
3100.00	1.54	100.28	3098.12	6.80	32.34	6.80	33.04	78.12	0.15
3200.00	1.37	89.64	3198.09	6.57	34.86	6.57	35.47	79.33	0.32
3300.00	1.07	97.80	3298.07	6.45	36.98	6.45	37.54	80.10	0.35
3400.00	0.60	99.70	3398.06	6.24	38.42	6.24	38.92	80.78	0.47
3500.00	0.63	120.21	3498.05	5.87	39.40	5.87	39.84	81.52	0.22
3600.00	0.62	122.20	3598.05	5.31	40.33	5.31	40.68	82.50	0.02
3700.00	0.39	126.00	3698.04	4.82	41.07	4.82	41.35	83.30	0.22
3800.00	0.10	131.10	3798.04	4.56	41.41	4.56	41.66	83.71	0.30
3900.00	0.28	113.40	3898.04	4.41	41.70	4.41	41.93	83.96	0.19
4000.00	0.24	127.77	3998.04	4.19	42.09	4.19	42.30	84.32	0.08
4100.00	0.41	173.13	4098.04	3.70	42.30	3.70	42.46	85.00	0.30
4200.00	0.42	195.38	4198.04	2.98	42.24	2.98	42.35	85.96	0.16
4300.00	0.42	206.92	4298.03	2.30	41.98	2.30	42.04	86.86	0.09
4400.00	0.54	210.32	4398.03	1.57	41.57	1.57	41.60	87.84	0.12
4500.00	0.46	222.91	4498.03	0.87	41.06	0.87	41.07	88.79	0.14
4600.00	0.60	222.05	4598.02	0.19	40.44	0.19	40.44	89.73	0.14
4700.00	0.86	228.18	4698.01	-0.70	39.54	-0.70	39.54	91.01	0.28
4800.00	1.13	224.08	4798.00	-1.91	38.29	-1.91	38.34	92.85	0.27
4900.00	1.09	227.12	4897.98	-3.26	36.91	-3.26	37.05	95.05	0.07
5000.00	1.32	242.44	4997.96	-4.44	35.19	-4.44	35.47	97.19	0.39
5100.00	1.26	240.56	5097.93	-5.51	33.21	-5.51	33.67	99.43	0.07
5200.00	1.24	247.61	5197.91	-6.47	31.26	-6.47	31.92	101.69	0.16
5300.00	1.17	244.45	5297.89	-7.32	29.34	-7.32	30.24	104.00	0.10
5400.00	1.03	237.90	5397.87	-8.23	27.66	-8.23	28.86	106.58	0.18
5500.00	1.20	231.04	5497.85	-9.37	26.08	-9.37	27.72	109.76	0.21
5600.00	1.36	220.01	5597.83	-10.94	24.51	-10.94	26.84	114.05	0.29
5700.00	1.21	223.45	5697.80	-12.61	23.02	-12.61	26.25	118.71	0.17

VES Survey Date: 07/12/2012

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	1.17	212.73	5797.78	-14.23	21.74	-14.23	25.99	123.21	0.23
5900.00	1.23	217.25	5897.76	-15.95	20.54	-15.95	26.01	127.82	0.11
6000.00	1.12	201.04	5997.74	-17.71	19.54	-17.71	26.38	132.18	0.35
6100.00	1.08	207.70	6097.72	-19.46	18.75	-19.46	27.03	136.06	0.13
6200.00	1.23	210.97	6197.70	-21.22	17.76	-21.22	27.67	140.06	0.16
6300.00	0.50	160.84	6297.69	-22.55	17.36	-22.55	28.45	142.41	0.99
6400.00	0.75	100.69	6397.68	-23.08	18.14	-23.08	29.36	141.83	0.66
6500.00	0.77	135.50	6497.67	-23.68	19.26	-23.68	30.52	140.89	0.46
6600.00	0.46	182.47	6597.67	-24.57	19.71	-24.57	31.50	141.26	0.57
6700.00	0.77	238.27	6697.66	-25.32	19.12	-25.32	31.73	142.94	0.64
6800.00	1.96	272.66	6797.63	-25.60	16.83	-25.60	30.64	146.67	1.40
6900.00	3.33	275.67	6897.52	-25.23	12.23	-25.23	28.04	154.14	1.37
7000.00	3.58	275.55	6997.34	-24.64	6.23	-24.64	25.42	165.80	0.25
7100.00	3.10	267.45	7097.17	-24.46	0.42	-24.46	24.46	179.00	0.67
7200.00	3.03	271.51	7197.03	-24.51	-4.92	-24.51	25.00	191.34	0.23
7300.00	3.14	269.12	7296.89	-24.48	-10.29	-24.48	26.56	202.80	0.17
7400.00	3.19	268.88	7396.73	-24.58	-15.81	-24.58	29.22	212.75	0.05
7500.00	3.41	267.77	7496.57	-24.75	-21.57	-24.75	32.83	221.07	0.23
7563.00	3.21	259.36	7559.46	-25.15	-25.18	-25.15	35.58	225.03	0.84

VES Survey Date: 07/12/2012

Mewbourne Oil Co

Eddy County, New Mexico
Sec 22/27 LE Fee #1H
San Lorenzo 22/27 LE FEE #1H

Wellbore #1

Survey: MWD

DDC Survey Report

25 July, 2012

DDC
The DIRECTIONAL DRILLING COMPANY

DDC
Survey Report

Company:	Mewbourne Oil Co	**Local Co-ordinate Reference:**	Well San Lorenzo 22/27 LE FEE #1H
Project:	Eddy County, New Mexico	**TVD Reference:**	WELL @ 2997 0usft (Patterson #75)
Site:	Sec 22/27 LE Fee #1H	**MD Reference:**	WELL @ 2997 0usft (Patterson #75)
Well:	San Lorenzo 22/27 LE FEE #1H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Project Eddy County, New Mexico

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Sec 22/27 LE Fee #1H

Site Position:		**Northing:**	405,407 81 usft	**Latitude:**	32° 6' 51.599 N
From:	Map	**Easting:**	577,806.04 usft	**Longitude:**	104° 4' 55 307 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0 13 °

Well San Lorenzo 22/27 LE FEE #1H

Well Position	**+N/-S**	0.0 usft	**Northing:**	405,407 81 usft	**Latitude:**	32° 6' 51.599 N
	+E/-W	0.0 usft	**Easting:**	577,806 04 usft	**Longitude:**	104° 4' 55.307 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	2,977.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/26/2012	7.68	59 97	48,393

Design Wellbore #1

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	179.59

Survey Program **Date** 7/25/2012

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,563.0	VES Gyro (Wellbore #1)	Good_gyro	Good Gyro
7,700.0	12,579 0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
TIE IN @ 7563' MD / 7560' TVD									
7,563.0	3.21	259.36	7,559 5	-25 2	-25.1	25.0	0.00	0 00	0 00
7,700.0	3 30	258.00	7,696.2	-26.7	-32.8	26.4	0.09	0.07	-0.99
7,732.0	4.80	210.60	7,728 2	-28 0	-34.4	27.8	11 04	4 69	-148 13
7,764 0	8.00	195.30	7,760.0	-31 3	-35.6	31.1	11.25	10 00	-47 81
7,796.0	11.80	188 60	7,791.5	-36.7	-36 7	36.5	12 39	11 88	-20 94
7,827.0	15.60	184.20	7,821.6	-44.0	-37.5	43.7	12 70	12.26	-14.19
7,859.0	18.90	181 20	7,852.2	-53 5	-37.9	53.2	10 68	10 31	-9 38
7,891.0	22.30	178.20	7,882.1	-64.7	-37.8	64.5	11.12	10.63	-9.38
7,923.0	25.90	176 80	7,911.3	-77.8	-37 2	77.5	11.39	11.25	-4 38

Company:	Mewbourne Oil Co	**Local Co-ordinate Reference:**	Well San Lorenzo 22/27 LE FEE #1H
Project:	Eddy County, New Mexico	**TVD Reference:**	WELL @ 2997 0usft (Patterson #75)
Site:	Sec 22/27 LE Fee #1H	**MD Reference:**	WELL @ 2997 0usft (Patterson #75)
Well:	San Lorenzo 22/27 LE FEE #1H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000 1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,954.0	30 30	176.50	7,938.7	-92 4	-36.4	92.1	14.20	14.19	-0 97
7,987 0	34.10	175.90	7,966 6	-109.9	-35 2	109.6	11.56	11 52	-1.82
8,019 0	37.90	176.60	7,992 5	-128.7	-34 0	128.4	11 94	11 88	2.19
8,051 0	41.00	179.30	8,017.2	-149 0	-33.3	148 7	11 07	9.69	8.44
8,083 0	43.90	179.30	8,040.8	-170.6	-33.0	170 3	9.06	9.06	0 00
8,115 0	47.10	178.90	8,063.2	-193.4	-32 7	193 2	10.04	10.00	-1 25
8,146 0	51.00	178 80	8,083 5	-216 8	-32.2	216.6	12 58	12 58	-0.32
8,179 0	55.20	178 20	8,103.3	-243 2	-31.5	242.9	12 81	12.73	-1.82
8,210.0	59 20	177.20	8,120 1	-269.2	-30.4	269 0	13.18	12.90	-3 23
8,242.0	63.40	176.30	8,135 5	-297.2	-28.8	297 0	13.35	13.13	-2 81
8,274 0	67.60	176.60	8,148.7	-326.3	-27.0	326 1	13 15	13 13	0.94
8,306 0	72.00	177 40	8,159.8	-356 3	-25.5	356.1	13 95	13.75	2.50
8,337 0	76.40	177.50	8,168 2	-386 1	-24.1	385.9	14.20	14.19	0.32
8,369 0	80.60	176.80	8,174 6	-417.4	-22.6	417.2	13 30	13.13	-2 19
8,401 0	84.90	176.10	8,178 6	-449.0	-20 6	448.9	13 61	13 44	-2 19
8,491 0	90 90	176.50	8,181 9	-538.8	-14 8	538 6	6.68	6 67	0.44
8,522.0	91 10	177.00	8,181 4	-569.7	-13.1	569.6	1.74	0 65	1 61
8,554.0	90.90	176 30	8,180.8	-601 6	-11.2	601.5	2.27	-0 63	-2.19
8,586 0	90.70	176.80	8,180.4	-633.6	-9.3	633 5	1.68	-0 63	1.56
8,617.0	90.80	177 00	8,180.0	-664.5	-7 6	664.5	0.72	0 32	0.65
8,649.0	90 60	175.80	8,179 6	-696.5	-5.6	696 4	3 80	-0.63	-3.75
8,712.0	91.40	175.80	8,178.5	-759 3	-1 0	759.3	1.27	1 27	0.00
8,775.0	90 80	175.10	8,177.3	-822 1	4.0	822 1	1.46	-0.95	-1 11
8,839 0	90.40	175 30	8,176.6	-885.8	9.4	885.9	0.70	-0.63	0.31
8,903 0	91.20	177.40	8,175 7	-949.7	13 5	949 8	3.51	1.25	3.28
8,965 0	91.90	178.40	8,174 0	-1,011.6	15.7	1,011 7	1.97	1.13	1.61
9,029 0	91.60	178.40	8,172 1	-1,075 6	17.5	1,075.7	0.47	-0 47	0.00
9,093 0	91 00	178.70	8,170.6	-1,139 5	19.1	1,139 7	1.05	-0 94	0 47
9,156.0	90.60	178.90	8,169 8	-1,202.5	20.5	1,202 6	0 71	-0.63	0 32
9,219.0	90.40	178.90	8,169 2	-1,265.5	21 7	1,265.6	0.32	-0.32	0 00
9,282.0	90.00	179 10	8,169 0	-1,328 5	22 8	1,328.6	0.71	-0.63	0 32
9,345.0	90 70	178 40	8,168.6	-1,391 5	24 1	1,391.6	1.57	1 11	-1.11
9,409 0	90 30	178.40	8,168 0	-1,455.5	25 9	1,455.6	0.63	-0 63	0 00
9,473.0	89.90	177.90	8,167.9	-1,519.4	28.0	1,519 6	1 00	-0 63	-0 78
9,537.0	90.30	177.90	8,167.8	-1,583.4	30.3	1,583 6	0.63	0.63	0.00
9,601.0	91.00	179 60	8,167 1	-1,647.4	31 7	1,647.5	2.87	1.09	2.66
9,665 0	91.10	180.50	8,165 9	-1,711.3	31.7	1,711.5	1.41	0.16	1.41
9,729 0	90 80	179.60	8,164 9	-1,775.3	31.6	1,775 5	1 48	-0.47	-1.41
9,792.0	90.60	181.90	8,164.1	-1,838.3	30.8	1,838.5	3.66	-0.32	3.65
9,856 0	90 40	181.40	8,163.5	-1,902 3	28 9	1,902.5	0.84	-0 31	-0 78
9,920.0	89.90	181.80	8,163.4	-1,966 3	27.2	1,966 4	1.00	-0 78	0.63
9,983.0	89.80	181 10	8,163.5	-2,029.2	25.6	2,029.4	1.12	-0.16	-1.11
10,047.0	89 60	181.90	8,163.9	-2,093 2	23.9	2,093.3	1.29	-0.31	1.25

Company:	Mewbourne Oil Co	**Local Co-ordinate Reference:**	Well San Lorenzo 22/27 LE FEE #1H
Project:	Eddy County, New Mexico	**TVD Reference:**	WELL @ 2997.0usft (Patterson #75)
Site:	Sec 22/27 LE Fee #1H	**MD Reference:**	WELL @ 2997.0usft (Patterson #75)
Well:	San Lorenzo 22/27 LE FEE #1H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,111 0	89 30	181.20	8,164.5	-2,157.2	22.2	2,157.3	1 19	-0.47	-1.09
10,175 0	88.80	181.80	8,165.5	-2,221 2	20.5	2,221 3	1.22	-0 78	0.94
10,238.0	88 20	179.30	8,167 2	-2,284.1	19.9	2,284.2	4.08	-0 95	-3.97
10,302.0	89.20	179.30	8,168 6	-2,348.1	20 7	2,348.2	1.56	1.56	0.00
10,366.0	90 80	178.40	8,168 6	-2,412.1	21 9	2,412.2	2.87	2.50	-1 41
10,429.0	91.00	178.60	8,167.7	-2,475.1	23.6	2,475.2	0.45	0.32	0 32
10,493.0	90.80	178 10	8,166.7	-2,539 0	25.4	2,539.2	0 84	-0.31	-0 78
10,556 0	90 40	178 20	8,166.0	-2,602.0	27.5	2,602 1	0 65	-0 63	0 16
10,620 0	90.40	178.40	8,165 5	-2,666.0	29.4	2,666 1	0.31	0.00	0.31
10,683 0	90.00	177.90	8,165 3	-2,728.9	31 4	2,729 1	1.02	-0.63	-0.79
10,747 0	89.00	177 50	8,165 9	-2,792.9	34 0	2,793 1	1.68	-1.56	-0 63
10,810.0	90.30	180 20	8,166 3	-2,855.9	35.2	2,856.0	4.76	2 06	4.29
10,874.0	91.20	179 50	8,165.4	-2,919 9	35.4	2,920.0	1.78	1 41	-1.09
10,938.0	90.80	179.30	8,164.3	-2,983.8	36 1	2,984.0	0.70	-0 63	-0.31
11,001 0	90.20	178.90	8,163.8	-3,046.8	37.1	3,047 0	1.14	-0.95	-0.63
11,064.0	90.50	179 10	8,163.4	-3,109.8	38 2	3,110.0	0.57	0 48	0.32
11,128.0	90.40	181 80	8,162.9	-3,173 8	37.7	3,174.0	4 22	-0.16	4 22
11,192 0	90.00	182 80	8,162 7	-3,237.8	35.1	3,237 9	1.68	-0.63	1 56
11,256.0	89 30	182.80	8,163.0	-3,301.7	32.0	3,301.8	1.09	-1.09	0 00
11,320.0	88.90	182.30	8,164.0	-3,365.6	29 1	3,365.7	1.00	-0.63	-0 78
11,383 0	88.30	182.40	8,165 6	-3,428.5	26 5	3,428.6	0 97	-0.95	0 16
11,447.0	87.00	182.30	8,168 2	-3,492.4	23.9	3,492 5	2 04	-2.03	-0.16
11,510.0	88.40	180.70	8,170.7	-3,555 3	22.3	3,555.4	3 37	2.22	-2.54
11,574 0	89 60	180.50	8,171.9	-3,619.3	21 6	3,619.4	1.90	1.88	-0.31
11,638.0	91 10	180.00	8,171.5	-3,683 3	21 3	3,683.4	2.47	2 34	-0.78
11,702.0	91.40	179.50	8,170.1	-3,747 3	21 6	3,747.4	0.91	0.47	-0.78
11,765 0	90.70	178 90	8,168 9	-3,810.3	22.5	3,810.4	1 46	-1.11	-0.95
11,828 0	89 80	178.80	8,168.6	-3,873.3	23.7	3,873 4	1 44	-1.43	-0.16
11,892.0	91.30	179.50	8,168.0	-3,937 3	24 7	3,937.3	2.59	2.34	1 09
11,956 0	91 40	178 90	8,166 5	-4,001.2	25.6	4,001.3	0.95	0 16	-0 94
12,020 0	90 80	178 40	8,165 3	-4,065 2	27 1	4,065.3	1.22	-0.94	-0 78
12,084.0	90.40	178.40	8,164.6	-4,129.2	28.9	4,129 3	0 63	-0.63	0 00
12,147.0	90.80	178 40	8,164.0	-4,192.2	30 6	4,192 3	0 63	0.63	0.00
12,211.0	90 50	178.40	8,163 2	-4,256 1	32 4	4,256.3	0.47	-0.47	0 00
12,275.0	89.90	178.60	8,163.0	-4,320.1	34.1	4,320 2	0.99	-0 94	0 31
12,339 0	89.40	178 20	8,163 4	-4,384.1	35.9	4,384 2	1 00	-0.78	-0 63
12,402 0	89.20	178.10	8,164.2	-4,447.0	37.9	4,447.2	0.35	-0.32	-0.16
12,466 0	88 50	177.70	8,165 5	-4,511 0	40 3	4,511.2	1 26	-1.09	-0.63
12,529.0	87.80	177.70	8,167.5	-4,573.9	42.8	4,574.1	1.11	-1 11	0 00
TD @ 12579' MD / 8169' TVD									
12,579.0	87.80	177.00	8,169.4	-4,623.8	45.1	4,624.0	1.40	0.00	-1.40

Company:	Mewbourne Oil Co	**Local Co-ordinate Reference:**	Well San Lorenzo 22/27 LE FEE #1H
Project:	Eddy County, New Mexico	**TVD Reference:**	WELL @ 2997 0usft (Patterson #75)
Site:	Sec 22/27 LE Fee #1H	**MD Reference:**	WELL @ 2997.0usft (Patterson #75)
Well:	San Lorenzo 22/27 LE FEE #1H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000 1 Single User Db

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
7,563 0	7,559.5	-25 2	-25.1	TIE IN @ 7563' MD / 7560' TVD
12,579 0	8,169 4	-4,623.8	45 1	TD @ 12579' MD / 8169' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name Mewbourne Oil Co
San Lorenzo 22/27 LE FEE #1H
Eddy County, New Mexico
Rig: Patterson #75
Created By DINA CHANCE
Date: 7/25/2012

San Lorenzo 22/27 LE FEE #1H
Eddy County, New Mexico
Q120487 & WT-12483
Design #2 Tie-In

Mewbourne Oil Company

DDC
The DIRECTIONAL DRILLING COMPANY

T G M

Azimuths to Grid North

Magnetic North: 7 55°

Magnetic Field
Strength: 48393.4snT
Dip Angle 59.97°
Date: 6/26/2012
Model: IGRF2010

PROJECT DETAILS:	Eddy County, New Mexico
Geodetic System:	US State Plane 1927 (Exact solution)
Datum	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	New Mexico East 3001
System Datum:	Mean Sea Level

WELL DETAILS San Lorenzo 22/27 LE FEE #1H

Ground Level 2977.0

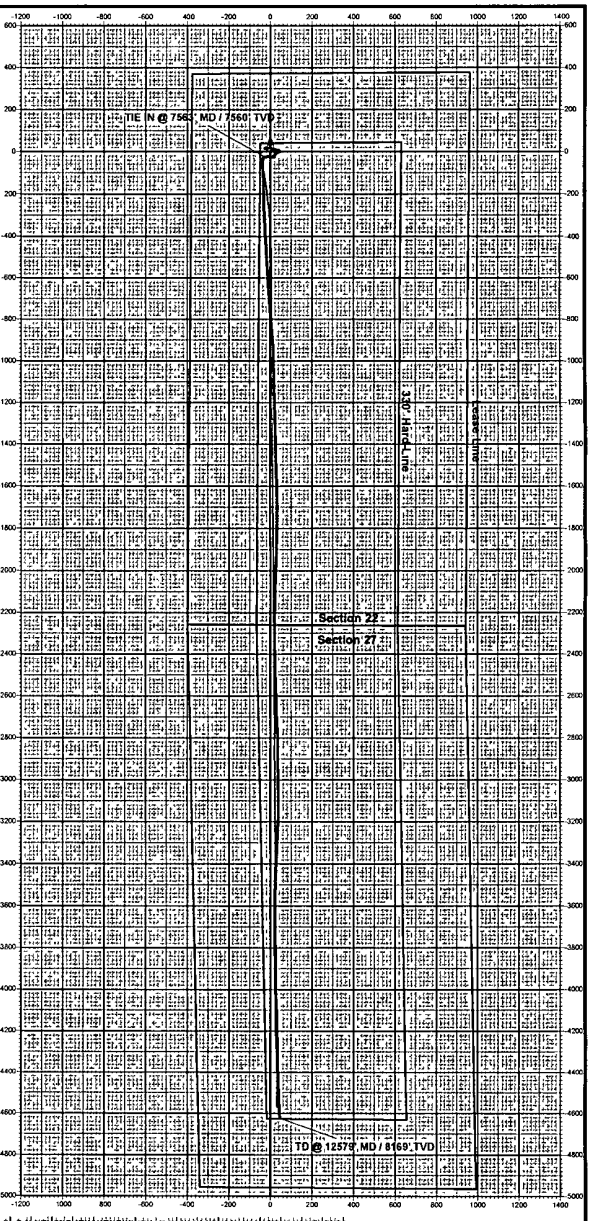
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	405407.81	577806.04	32° 6' 51.599 N	104° 4' 55.307 W

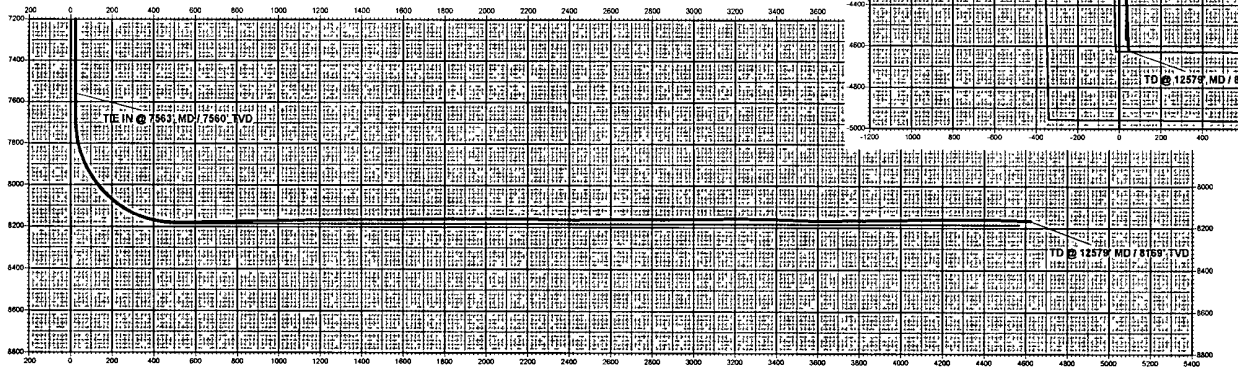
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
7563.0	3.21	259.36	7559.5	-25.2	-25.1	25.0	189.2	TIE IN @ 7563' MD / 7560' TVD
12579.0	87.80	177.00	8169.4	-4623.8	46.1	4624.0	4798.4	TD @ 12579' MD / 8169' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL San Lorenzo 22/27 LE Fee #1H - plan hits target center	8187.0	-4569.7	32.6	400838.11	577838.64	32° 6' 6.374 N	104° 4' 55.052 W





Vertical Section at 179.59° (200 usft/in)

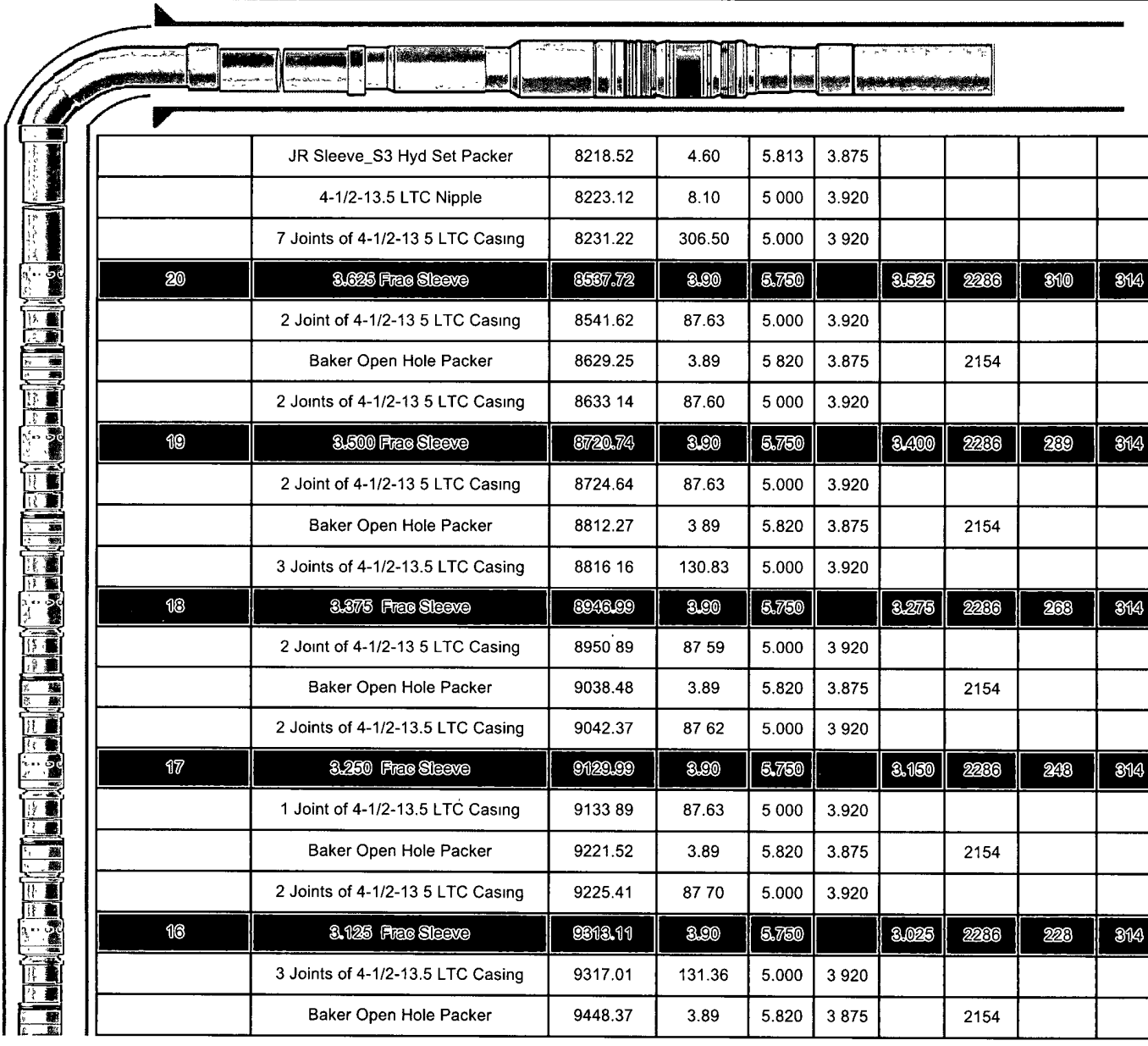
Operating Company	Mewbourne	**Company Rep**	George Berryman		
Well Name & Number	LE FEE 1H	**Field**	Santo Nino		
Sales Ticket Number	4707060	**BOT Service Rep**	John Davis		
Date	7/23/2012	**District Location**	Odessa, Texas, USA		

BAKER HUGHES

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	8,450.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,235.48	12,410	10,680
Bott Liner										

TVD	8,167.00	KOP	7,711.00	Open Hole	6.125	Casing Vol. (bbl)	314.3
Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)				Max Drill Out Size	0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
Liner Top 1		JR Setting Sleeve_RH Profile	8214.52	4.00	5 750					



Zone Length										
	JR Sleeve_S3 Hyd Set Packer	8218.52	4.60	5.813	3.875				
	4-1/2-13.5 LTC Nipple	8223.12	8.10	5 000	3.920				
	7 Joints of 4-1/2-13 5 LTC Casing	8231.22	306.50	5.000	3 920				
20	3.625 Frac Sleeve	8537.72	3.90	5.750		3.525	2286	310	314
	2 Joint of 4-1/2-13 5 LTC Casing	8541.62	87.63	5.000	3.920				
	Baker Open Hole Packer	8629.25	3.89	5 820	3.875		2154		
	2 Joints of 4-1/2-13 5 LTC Casing	8633 14	87.60	5 000	3.920				
19	3.500 Frac Sleeve	8720.74	3.90	5.750		3.400	2286	289	314
	2 Joint of 4-1/2-13 5 LTC Casing	8724.64	87.63	5.000	3.920				
	Baker Open Hole Packer	8812.27	3 89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	8816 16	130.83	5.000	3.920				
18	3.375 Frac Sleeve	8946.99	3.90	5.750		3.275	2286	268	314
	2 Joint of 4-1/2-13 5 LTC Casing	8950 89	87 59	5.000	3 920				
	Baker Open Hole Packer	9038.48	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	9042.37	87 62	5.000	3 920				
17	3.250 Frac Sleeve	9129.99	3.90	5.750		3.150	2286	248	314
	1 Joint of 4-1/2-13.5 LTC Casing	9133 89	87.63	5 000	3.920				
	Baker Open Hole Packer	9221.52	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13 5 LTC Casing	9225.41	87 70	5.000	3.920				
16	3.125 Frac Sleeve	9313.11	3.90	5.750		3.025	2286	228	314
	3 Joints of 4-1/2-13.5 LTC Casing	9317.01	131.36	5.000	3 920				
	Baker Open Hole Packer	9448.37	3.89	5.820	3 875		2154		

Operating Company	Mewbourne	**Company Rep**	George Berryman		
Well Name & Number	LE FEE 1H	**Field**	Santo Nino		
Sales Ticket Number	4707060	**BOT Service Rep**	John Davis		
Date	7/23/2012	**District Location**	Odessa, Texas, USA		

BAKER HUGHES

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	8,450.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,235.48	12,410	10,680
Bott Liner										

TVD	8,167.00	KOP	7,711.00	Open Hole	6.125	Casing Vol (bbl)	314.3
Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0		

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
		2 Joints of 4-1/2-13.5 LTC Casing	9452 26	87.59	5.000	3.920				
15	15	3.000 Frac sleeve	9539.85	3.90	5.750		2.900	2286	210	314
		2 Joint of 4-1/2-13.5 LTC Casing	9543.75	86.56	5 000	3.920				
		Baker Open Hole Packer	9630.31	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13 5 LTC Casing	9634 20	128 32	5.000	3.920				
14	14	2.875 Frac Sleeve	9762.52	3.90	5.750		2.775	2286	192	314
		2 Joints of 4-1/2-13.5 LTC Casing	9766.42	87 59	5.000	3 920				
		Baker Open Hole Packer	9854 01	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13 5 LTC Casing	9857.90	131.35	5.000	3.920				
13	13	2.750 Frac Sleeve	9989.25	3.90	5.750		2.650	2286	175	314
		2 Joint of 4-1/2-13 5 LTC Casing	9993.15	87.64	5 000	3.920				
		Baker Open Hole Packer	10080.79	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10084.68	131.27	5 000	3 920				
12	12	2.625 Frac Sleeve	10215.95	3.90	5.750		2.525	2286	159	314
		2 Joints of 4-1/2-13 5 LTC Casing	10219 85	87 05	5.000	3 920				
		Baker Open Hole Packer	10306.90	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10310 79	131.36	5 000	3.920				
11	11	2.500 Frac Sleeve	10442.15	3.90	5.750		2.400	2286	144	314
		3 Joint of 4-1/2-13.5 LTC Casing	10446.05	131.41	5.000	3.920				
		Baker Open Hole Packer	10577.46	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10581 35	87.59	5.000	3.920				
10	10	2.375 Frac Sleeve	10668.94	3.90	5.750		2.275	2286	129	314
		2 Joints of 4-1/2-13.5 LTC Casing	10672.84	87.57	5.000	3.920				
		Baker Open Hole Packer	10760.41	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	10764.30	87.64	5 000	3.920				
9	9	2.250 Frac Sleeve	10851.94	3.90	5.750		2.150	2286	115	314

Operating Company	Mewbourne	**Company Rep**	George Berryman		
Well Name & Number	LE FEE 1H	**Field**	Santo Nino		
Sales Ticket Number	4707060	**BOT Service Rep**	John Davis		
Date	7/23/2012	**District Location**	Odessa, Texas, USA		

BAKER HUGHES

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	8,450.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,235.48	12,410	10,680
Bott Liner										

TVD	8,167.00	KOP	7,711.00	Open Hole	6.125	Casing Vol. (bbl)	314.3
Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0		

		Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
			2 Joints of 4-1/2-13.5 LTC Casing	10855.84	87 56	5.000	3.920				
			Baker Open Hole Packer	10943.40	3 89	5.820	3 875		2154		
			2 Joint of 4-1/2-13.5 LTC Casing	10947.29	87 57	5.000	3.920				
8		8	2.125 Frac Sleeve	11034.86	3.90	5.750		2.025	2286	102	314
			3 Joints of 4-1/2-13.5 LTC Casing	11038.76	131.39	5.000	3.920				
			Baker Open Hole Packer	11170.15	3.89	5.820	3.875		2154		
			2 Joint of 4-1/2-13.5 LTC Casing	11174.04	87.58	5.000	3.920				
7		7	2.000 Frac Sleeve	11261.62	3.90	5.750		1.900	2286	90	314
			2 Joints of 4-1/2-13.5 LTC Casing	11265.52	87.59	5.000	3.920				
			Baker Open Hole Packer	11353.11	3 89	5.820	3.875		2154		
			2 Joint of 4-1/2-13.5 LTC Casing	11357.00	87 58	5 000	3.920				
6		6	1.875 Frac Sleeve	11444.58	3.90	5.750		1.775	2286	79	314
			2 Joints of 4-1/2-13.5 LTC Casing	11448.48	87.58	5 000	3.920				
			Baker Open Hole Packer	11536.06	3 89	5.820	3.875		2154		
			2 Joints of 4-1/2-13.5 LTC Casing	11539.95	87.60	5.000	3 920				
5		5	1.750 Frac Sleeve	11627.55	3.90	5.750		1.650	2286	68	314
			2 Joint of 4-1/2-13.5 LTC Casing	11631.45	87 62	5 000	3.920				
			Baker Open Hole Packer	11719.07	3.89	5.820	3.875		2154		
			2 Joints of 4-1/2-13 5 LTC Casing	11722.96	87 58	5.000	3 920				
4		4	1.625 Frac Sleeve	11810.54	3.90	5.750		1.525	2286	58	314
			3 Joints of 4-1/2-13.5 LTC Casing	11814.44	131.39	5.000	3.920				
			Baker Open Hole Packer	11945.83	3.89	5.820	3.875		2154		
			2 Joints of 4-1/2-13.5 LTC Casing	11949.72	87.55	5.000	3.920				
3		3	1.500 DBL Ball Frac Sleeve	12037.27	3.90	5.750		1.400	2286	49	314
			3 Joint of 4-1/2-13.5 LTC Casing	12041.17	131 36	5 000	3.920				
			Baker Open Hole Packer	12172.53	3.89	5.820	3.875		2154		

Operating Company	Mewbourne	**Company Rep**	George Berryman	BAKER HUGHES	
Well Name & Number	LE FEE 1H	**Field**	Santo Nino		
Sales Ticket Number	4707060	**BOT Service Rep**	John Davis		
Date	7/23/2012	**District Location**	Odessa, Texas, USA		

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	8,450.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,235.48	12,410	10,680
Bott Liner										

TVD	8,167.00	KOP	7,711.00	Open Hole	6.125	Casing Vol. (bbl)	314.3
Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0		

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
		2 Joints of 4-1/2-13 5 LTC Casing	12176 42	87 56	5 000	3.920				
2	2	1.375 DBL Ball Frac Sleeve	12263.98	3.90	5.750		1.275	2286	41	314
		2 Joints of 4-1/2-13.5 LTC Casing	12267 88	87.58	5.000	3 920				
		Baker Open Hole Packer	12355.46	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13 5 LTC Casing	12359.35	87 65	5.000	3 920				
1	1	Customers Pump Off Sub	12447.00	3.00	5.000	3.920				
		Bottom Depth of Liner	12450 00		5.000	3.920				