

Results of Directional Survey

API number:	30-025-41376		
OGRID:		Operator:	MEWBOURNE OIL CO
		Property:	YOUNG 16 NC STATE COM # 1H

surface	ULSTR:	N	16	T	18S	R	32E
				330	FSL	2040	FWL

BH Loc	ULSTR:	C	16	T	18S	R	32E
13445	MD	8917.8	TVD	334	FNL	2032	FWL
				4946	FSL		

Top Perf/OH	ULSTR:	N	16	T	18S	R	32E
9591	MD	9123.8	TVD	1099	FSL	2034	FWL

Bot Perf/OH	ULSTR:	C	16	T	18S	R	32E
13421	MD	8919.2	TVD	358	FNL	2032	FWL
				4922	FSL		

	MD	N/S	E/W	VD
	9567	744.80	-6.40	9125.6
TOP PERFS/OH	9591	768.72	-5.70	9123.82
	9598	775.70	-5.50	9123.30
	13397	4568.10	-7.70	8920.60
BOT PERFS/OH	13421	4592.05	-7.90	8919.20
	13445	4616.00	-8.10	8917.80

NEXT TO LAST	13397	4568.10	-7.70	8920.60
LAST READING	13445	4616.00	-8.10	8917.80
TD	13445	4616.00	-8.10	8917.80

Surface Location	330	FS	2040	FW
Projected BHL	4946	FS	2032	FW
Location of				
Top Perfs/OH	1099	FS	2034	FW
Bottom Perfs/OH	4922	FS	2032	FW

SUMMARY of Subsurface Locations

Surface Location	N-16-18S-32E	330	FS	2040	FW	Vert. Depth
Top Perfs/OH	N-16-18S-32E	1099	FS	2034	FW	9123.82
Bottom Perfs/OH	C-16-18S-32E	4922	FS	2032	FW	8919.20
Projected TD	C-16-18S-32E	4946	FS	2032	FW	8917.80

MAR 03 2014

OPERATOR
WELL/LEASE
COUNTY

MEWBOURNE OIL COMPANY
YOUNG 16 MC STATE COM 001H
LEA

075-0100

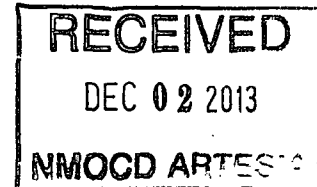
STATE OF NEW MEXICO
DEVIATION REPORT

354	0.89
744	0.42
1,062	1.49
1,161	1.50
1,478	0.80
1,859	0.40
2,176	1.10
2,680	1.44
2,912	2.00
3,701	0.50
4,112	0.20
4,554	0.30
5,031	0.50
5,412	0.60
5,792	1.30
6,202	0.60
6,519	0.50
6,945	1.20
7,327	1.60
7,738	3.20
7,897	3.10
7,992	2.40
8,087	2.70
8,213	2.50
8,245	2.60
8,277	2.10

HOBBS OCD

DEC 04 2013

RECEIVED



STATE OF TEXAS

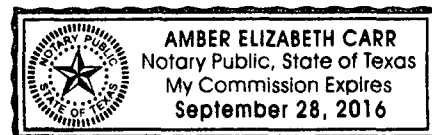
COUNTY OF MIDLAND

BY: *Steve Moore*

The foregoing instrument was acknowledged before me on
Steve Moore on behalf of Patterson-UTI Drilling Company LLC.

11/11/13, by

Amber Elizabeth Carr
Notary Public for Midland County, Texas
My Commission Expires:



HOBBS OCD

DEC 04 2013

RECEIVED



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DEC 02 2013

NMOCD ARTESIA

Company: Mewbourne Oil Company Lease / Well: Young 16 NC State Com #1H County/Parish: Lea County State: NM Date: 10/4/2013 API#: 30-025-41376 Dir. Company: n/a Latitude: N 32 44 27.823 Longitude: W 103 46 22.260	Operator: Landon Sissel Job Number: SVM0-130816 Gyro Serial #: 134 Proposed Direction: 0 Mag. Declination: 7.14 East To Grid North Rig/RKB: Patterson 75 22' ft. Tie-in Company: n/a X: . Y: .
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TIE-IN Survey				
Measured Inclination	Azimuth	Vertical	Coordinates	
Depth (ft.)	Bearing	Depth	(+N/-S)	(+E/-W)

Digital Multi-Shot Survey Report									
Measured Inclination	Azimuth	Vertical	Vertical	Coordinates		Dog-Leg	Closure	Closure	
Depth (ft.)	Bearing	Depth	Section	(+N/-S)	(+E/-W)	/ 100 ft.	Distance	Direction	
100.00	0.13	96.50	100.00	-0.01	-0.01	0.11	0.13	0.11	96.50
200.00	0.33	144.35	200.00	-0.26	-0.26	0.39	0.26	0.47	123.44
300.00	0.38	142.77	300.00	-0.76	-0.76	0.76	0.05	1.07	134.85
400.00	0.43	102.10	399.99	-1.10	-1.10	1.33	0.29	1.73	129.62
500.00	0.44	94.96	499.99	-1.21	-1.21	2.08	0.06	2.41	120.25
600.00	0.42	95.99	599.99	-1.28	-1.28	2.83	0.02	3.10	114.43
700.00	0.52	108.65	699.99	-1.47	-1.47	3.62	0.14	3.91	112.06
800.00	0.51	110.22	799.98	-1.77	-1.77	4.47	0.02	4.80	111.57
900.00	0.49	142.20	899.98	-2.26	-2.26	5.15	0.28	5.62	113.68
1000.00	0.73	142.40	999.97	-3.10	-3.10	5.80	0.24	6.58	118.13
1100.00	0.85	145.82	1099.96	-4.22	-4.22	6.60	0.13	7.84	122.57
1200.00	0.87	141.70	1199.95	-5.43	-5.43	7.49	0.06	9.25	125.93
1300.00	0.69	127.08	1299.94	-6.39	-6.39	8.44	0.27	10.59	127.11
1400.00	0.58	112.55	1399.94	-6.94	-6.94	9.39	0.19	11.68	126.48
1500.00	0.63	96.10	1499.93	-7.20	-7.20	10.40	0.18	12.65	124.67
1600.00	0.58	95.32	1599.92	-7.30	-7.30	11.45	0.05	13.58	122.52
1700.00	0.55	90.43	1699.92	-7.35	-7.35	12.44	0.06	14.45	120.59
1800.00	0.43	87.12	1799.92	-7.34	-7.34	13.29	0.12	15.18	118.90
1900.00	0.38	94.71	1899.91	-7.35	-7.35	14.00	0.07	15.81	117.69
2000.00	0.34	95.22	1999.91	-7.40	-7.40	14.62	0.04	16.39	116.84
2100.00	0.53	83.91	2099.91	-7.38	-7.38	15.38	0.21	17.06	115.63
2200.00	0.60	70.09	2199.90	-7.15	-7.15	16.33	0.15	17.83	113.64
2300.00	1.28	67.61	2299.89	-6.55	-6.55	17.86	0.68	19.02	110.13
2400.00	1.64	67.79	2399.86	-5.58	-5.58	20.21	0.36	20.97	105.43
2500.00	1.59	62.81	2499.82	-4.41	-4.41	22.77	0.15	23.20	100.95
2600.00	1.35	69.28	2599.78	-3.35	-3.35	25.11	0.29	25.33	97.61
2700.00	0.91	67.88	2699.76	-2.64	-2.64	26.95	0.44	27.08	95.59
2800.00	0.47	67.84	2799.76	-2.19	-2.19	28.06	0.44	28.15	94.45
2900.00	0.13	307.95	2899.76	-1.96	-1.96	28.35	0.55	28.42	93.96
3000.00	0.30	296.01	2999.76	-1.78	-1.78	28.03	0.17	28.08	93.63
3100.00	0.80	331.00	3099.75	-1.05	-1.05	27.45	0.58	27.47	92.19
3200.00	0.95	332.00	3199.74	0.29	0.29	26.73	0.15	26.73	89.37
3300.00	0.75	335.58	3299.73	1.62	1.62	26.07	0.21	26.12	86.44

3400.00	0.47	336.96	3399.72	2.59	2.59	25.64	0.28	25.77	84.22
3500.00	0.57	333.67	3499.72	3.42	3.42	25.25	0.10	25.48	82.30
3600.00	0.57	10.21	3599.71	4.35	4.35	25.12	0.36	25.50	80.17
3700.00	0.55	331.16	3699.71	5.26	5.26	24.98	0.37	25.53	78.10
3800.00	0.60	352.56	3799.70	6.20	6.20	24.68	0.22	25.45	75.89
3900.00	0.35	27.45	3899.70	6.99	6.99	24.75	0.37	25.72	74.23
4000.00	0.23	341.46	3999.70	7.45	7.45	24.83	0.25	25.92	73.29
4100.00	0.49	355.41	4099.70	8.07	8.07	24.73	0.27	26.01	71.93
4200.00	0.42	18.92	4199.69	8.84	8.84	24.82	0.20	26.34	70.39
4300.00	0.34	25.47	4299.69	9.46	9.46	25.06	0.09	26.79	69.33
4400.00	0.06	41.40	4399.69	9.76	9.76	25.22	0.28	27.05	68.84
4500.00	0.33	258.62	4499.69	9.75	9.75	24.98	0.38	26.81	68.68
4600.00	0.18	299.47	4599.69	9.77	9.77	24.56	0.23	26.43	68.31
4700.00	0.07	52.66	4699.69	9.88	9.88	24.47	0.22	26.39	68.01
4800.00	0.32	201.94	4799.69	9.66	9.66	24.41	0.38	26.25	68.41
4900.00	0.26	256.01	4899.69	9.35	9.35	24.09	0.27	25.84	68.80
5000.00	0.12	300.87	4999.69	9.34	9.34	23.78	0.19	25.55	68.55
5100.00	0.07	212.91	5099.69	9.35	9.35	23.66	0.14	25.44	68.44
5200.00	0.48	262.43	5199.69	9.24	9.24	23.21	0.44	24.98	68.29
5300.00	0.52	261.79	5299.68	9.12	9.12	22.34	0.04	24.13	67.80
5400.00	0.60	313.00	5399.68	9.41	9.41	21.51	0.49	23.48	66.37
5500.00	0.66	323.73	5499.67	10.23	10.23	20.79	0.13	23.17	63.79
5600.00	0.63	308.46	5599.67	11.04	11.04	20.02	0.17	22.86	61.12
5700.00	1.04	325.00	5699.65	12.13	12.13	19.07	0.47	22.59	57.54
5800.00	0.86	323.99	5799.64	13.48	13.48	18.10	0.18	22.57	53.34
5900.00	0.63	296.29	5899.63	14.33	14.33	17.17	0.42	22.36	50.16
6000.00	0.88	312.49	5999.62	15.09	15.09	16.11	0.33	22.07	46.87
6100.00	0.60	332.31	6099.62	16.07	16.07	15.30	0.38	22.19	43.59
6200.00	0.27	266.18	6199.61	16.52	16.52	14.82	0.55	22.19	41.90
6300.00	0.70	243.90	6299.61	16.23	16.23	14.04	0.46	21.46	40.85
6400.00	0.82	262.57	6399.60	15.87	15.87	12.78	0.27	20.38	38.84
6500.00	0.41	239.63	6499.59	15.60	15.60	11.76	0.47	19.54	37.02
6600.00	0.72	245.18	6599.59	15.16	15.16	10.88	0.31	18.66	35.68
6700.00	0.40	222.87	6699.58	14.64	14.64	10.08	0.38	17.77	34.54
6800.00	0.44	284.64	6799.58	14.48	14.48	9.47	0.43	17.30	33.18
6900.00	0.99	2.57	6899.58	15.44	15.44	9.13	1.00	17.94	30.61
7000.00	0.80	25.80	6999.56	16.93	16.93	9.48	0.41	19.40	29.24
7100.00	0.48	96.26	7099.56	17.51	17.51	10.20	0.78	20.26	30.21
7200.00	0.97	78.87	7199.55	17.63	17.63	11.44	0.53	21.02	32.99
7300.00	1.77	91.67	7299.52	17.75	17.75	13.82	0.85	22.49	37.90
7400.00	2.35	98.37	7399.46	17.40	17.40	17.39	0.63	24.60	44.98
7500.00	2.71	105.78	7499.36	16.46	16.46	21.69	0.49	27.23	52.81
7600.00	1.01	355.30	7599.32	16.70	16.70	23.90	3.21	29.15	55.05
7700.00	2.68	323.42	7699.27	19.45	19.45	22.43	1.90	29.69	49.06
7800.00	3.40	317.45	7799.13	23.52	23.52	19.03	0.79	30.25	38.98
7900.00	2.83	321.37	7898.98	27.63	27.63	15.49	0.61	31.67	29.27
8000.00	2.55	325.10	7998.87	31.38	31.38	12.67	0.33	33.84	21.99
8100.00	2.69	320.87	8098.76	35.03	35.03	9.92	0.24	36.40	15.81
8200.00	2.51	323.17	8198.66	38.60	38.60	7.12	0.21	39.25	10.46
8300.00	2.05	332.48	8298.58	41.94	41.94	4.99	0.59	42.23	6.78
8400.00	1.85	326.34	8398.52	44.87	44.87	3.26	0.29	44.99	4.16
8500.00	1.30	318.87	8498.49	47.07	47.07	1.62	0.59	47.09	1.98

Mewbourne Oil Co

Lea County, NM

Sec16, T18S, R32E

Young 16 NC State Com #1H

Wellbore #1

Design: Wellbore #1

DDC Survey Report

16 October, 2013



DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Young 16 NC State Com #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3792.0usft (Patterson #75)
Site:	Sec16, T18S, R32E	MD Reference:	WELL @ 3792.0usft (Patterson #75)
Well:	Young 16 NC State Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM		
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	Sec16, T18S, R32E		
Site Position:		Northing:	633,765.20 usft
From:	Map	Easting:	672,366.10 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 44' 27.822 N
		Longitude:	103° 46' 21.909 W
		Grid Convergence:	0.30 °

Well	Young 16 NC State Com #1H		
Well Position	+N/-S	0.0 usft	Northing: 633,765.20 usft
	+E/-W	0.0 usft	Easting: 672,366.10 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 44' 27.823 N
		Longitude:	103° 46' 22.260 W
		Ground Level:	3,772.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/12/2013	7.44	60.57	48,678

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	359.62	

Survey Program	Date	10/16/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	8,500.0	Gyro (Wellbore #1)	Good_gyro	Good Gyro	
8,569.0	13,445.0	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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.13	96.50	100.0	0.0	0.1	0.0	0.13	0.13	0.00	
200.0	0.33	144.35	200.0	-0.3	0.4	-0.3	0.26	0.20	47.85	
300.0	0.38	142.77	300.0	-0.8	0.8	-0.8	0.05	0.05	-1.58	
400.0	0.43	102.10	400.0	-1.1	1.3	-1.1	0.29	0.05	-40.67	
500.0	0.44	94.96	500.0	-1.2	2.1	-1.2	0.06	0.01	-7.14	
600.0	0.42	95.99	600.0	-1.3	2.8	-1.3	0.02	-0.02	1.03	
700.0	0.52	108.65	700.0	-1.5	3.6	-1.5	0.14	0.10	12.66	
800.0	0.51	110.22	800.0	-1.8	4.5	-1.8	0.02	-0.01	1.57	
900.0	0.49	142.20	900.0	-2.3	5.1	-2.3	0.28	-0.02	31.98	

DDC
Survey Report



Company: Mewbourne Oil Co	Local Co-ordinate Reference: Well Young 16 NC State Com #1H
Project: Lea County, NM	TVD Reference: WELL @ 3792.0usft (Patterson #75)
Site: Sec16, T18S, R32E	MD Reference: WELL @ 3792.0usft (Patterson #75)
Well: Young 16 NC State Com #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)
1,000.0	0.73	142.40	1,000.0	-3.1	5.8	-3.1	0.24	0.24	0.20
1,100.0	0.85	145.82	1,100.0	-4.2	6.6	-4.3	0.13	0.12	3.42
1,200.0	0.87	141.70	1,200.0	-5.4	7.5	-5.5	0.06	0.02	-4.12
1,300.0	0.69	127.08	1,299.9	-6.4	8.4	-6.4	0.27	-0.18	-14.62
1,400.0	0.58	112.55	1,399.9	-6.9	9.4	-7.0	0.19	-0.11	-14.53
1,500.0	0.63	96.10	1,499.9	-7.2	10.4	-7.3	0.18	0.05	-16.45
1,600.0	0.58	95.32	1,599.9	-7.3	11.5	-7.4	0.05	-0.05	-0.78
1,700.0	0.55	90.43	1,699.9	-7.4	12.4	-7.4	0.06	-0.03	-4.89
1,800.0	0.43	87.12	1,799.9	-7.3	13.3	-7.4	0.12	-0.12	-3.31
1,900.0	0.38	94.71	1,899.9	-7.3	14.0	-7.4	0.07	-0.05	7.59
2,000.0	0.34	95.22	1,999.9	-7.4	14.6	-7.5	0.04	-0.04	0.51
2,100.0	0.53	83.91	2,099.9	-7.4	15.4	-7.5	0.21	0.19	-11.31
2,200.0	0.60	70.09	2,199.9	-7.2	16.3	-7.3	0.15	0.07	-13.82
2,300.0	1.28	67.61	2,299.9	-6.5	17.9	-6.7	0.68	0.68	-2.48
2,400.0	1.64	67.79	2,399.9	-5.6	20.2	-5.7	0.36	0.36	0.18
2,500.0	1.59	62.81	2,499.8	-4.4	22.8	-4.6	0.15	-0.05	-4.98
2,600.0	1.35	69.28	2,599.8	-3.4	25.1	-3.5	0.29	-0.24	6.47
2,700.0	0.91	67.88	2,699.8	-2.6	26.9	-2.8	0.44	-0.44	-1.40
2,800.0	0.47	67.84	2,799.8	-2.2	28.1	-2.4	0.44	-0.44	-0.04
2,900.0	0.13	307.95	2,899.8	-2.0	28.4	-2.1	0.55	-0.34	-119.89
3,000.0	0.30	296.01	2,999.8	-1.8	28.0	-2.0	0.17	0.17	-11.94
3,100.0	0.80	331.00	3,099.8	-1.1	27.5	-1.2	0.58	0.50	34.99
3,200.0	0.95	332.00	3,199.7	0.3	26.7	0.1	0.15	0.15	1.00
3,300.0	0.75	335.58	3,299.7	1.6	26.1	1.4	0.21	-0.20	3.58
3,400.0	0.47	336.96	3,399.7	2.6	25.6	2.4	0.28	-0.28	1.38
3,500.0	0.57	333.67	3,499.7	3.4	25.3	3.2	0.10	0.10	-3.29
3,600.0	0.57	10.21	3,599.7	4.4	25.1	4.2	0.36	0.00	36.54
3,700.0	0.55	331.16	3,699.7	5.3	25.0	5.1	0.37	-0.02	-39.05
3,800.0	0.60	352.56	3,799.7	6.2	24.7	6.0	0.22	0.05	21.40
3,900.0	0.35	27.45	3,899.7	7.0	24.8	6.8	0.37	-0.25	34.89
4,000.0	0.23	341.46	3,999.7	7.5	24.8	7.3	0.25	-0.12	-45.99
4,100.0	0.49	355.41	4,099.7	8.1	24.7	7.9	0.27	0.26	13.95
4,200.0	0.42	18.92	4,199.7	8.8	24.8	8.7	0.20	-0.07	23.51
4,300.0	0.34	25.47	4,299.7	9.5	25.1	9.3	0.09	-0.08	6.55
4,400.0	0.06	41.40	4,399.7	9.8	25.2	9.6	0.28	-0.28	15.93
4,500.0	0.33	258.62	4,499.7	9.7	25.0	9.6	0.38	0.27	-142.78
4,600.0	0.18	299.47	4,599.7	9.8	24.6	9.6	0.23	-0.15	40.85
4,700.0	0.07	52.66	4,699.7	9.9	24.5	9.7	0.22	-0.11	113.19
4,800.0	0.32	201.94	4,799.7	9.7	24.4	9.5	0.38	0.25	149.28
4,900.0	0.26	256.01	4,899.7	9.3	24.1	9.2	0.27	-0.06	54.07
5,000.0	0.12	300.87	4,999.7	9.3	23.8	9.2	0.19	-0.14	44.86
5,100.0	0.07	212.91	5,099.7	9.3	23.7	9.2	0.14	-0.05	-87.96
5,200.0	0.48	262.43	5,199.7	9.2	23.2	9.1	0.44	0.41	49.52

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Young 16 NC State Com #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3792.0usft (Patterson #75)
Site:	Sec16, T18S, R32E	MD Reference:	WELL @ 3792.0usft (Patterson #75)
Well:	Young 16 NC State Com #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)
5,300.0	0.52	261.79	5,299.7	9.1	22.3	9.0	0.04	0.04	-0.64
5,400.0	0.60	313.00	5,399.7	9.4	21.5	9.3	0.49	0.08	51.21
5,500.0	0.66	323.73	5,499.7	10.2	20.8	10.1	0.13	0.06	10.73
5,600.0	0.63	308.46	5,599.7	11.0	20.0	10.9	0.17	-0.03	-15.27
5,700.0	1.04	325.00	5,699.7	12.1	19.1	12.0	0.47	0.41	16.54
5,800.0	0.86	323.99	5,799.6	13.5	18.1	13.4	0.18	-0.18	-1.01
5,900.0	0.63	296.29	5,899.6	14.3	17.2	14.2	0.42	-0.23	-27.70
6,000.0	0.88	312.49	5,999.6	15.1	16.1	15.0	0.33	0.25	16.20
6,100.0	0.60	332.31	6,099.6	16.1	15.3	16.0	0.38	-0.28	19.82
6,200.0	0.27	266.18	6,199.6	16.5	14.8	16.4	0.55	-0.33	-66.13
6,300.0	0.70	243.90	6,299.6	16.2	14.0	16.1	0.46	0.43	-22.28
6,400.0	0.82	262.57	6,399.6	15.9	12.8	15.8	0.27	0.12	18.67
6,500.0	0.41	239.63	6,499.6	15.6	11.8	15.5	0.47	-0.41	-22.94
6,600.0	0.72	245.18	6,599.6	15.2	10.9	15.1	0.31	0.31	5.55
6,700.0	0.40	222.87	6,699.6	14.6	10.1	14.6	0.38	-0.32	-22.31
6,800.0	0.44	284.64	6,799.6	14.5	9.5	14.4	0.43	0.04	61.77
6,900.0	0.99	2.57	6,899.6	15.4	9.1	15.4	1.00	0.55	77.93
7,000.0	0.80	25.80	6,999.6	16.9	9.5	16.9	0.41	-0.19	23.23
7,100.0	0.48	96.26	7,099.6	17.5	10.2	17.4	0.78	-0.32	70.46
7,200.0	0.97	78.87	7,199.6	17.6	11.4	17.6	0.53	0.49	-17.39
7,300.0	1.77	91.67	7,299.5	17.7	13.8	17.7	0.85	0.80	12.80
7,400.0	2.35	98.37	7,399.5	17.4	17.4	17.3	0.63	0.58	6.70
7,500.0	2.71	105.78	7,499.4	16.5	21.7	16.3	0.49	0.36	7.41
7,600.0	1.01	355.30	7,599.3	16.7	23.9	16.5	3.21	-1.70	-110.48
7,700.0	2.68	323.42	7,699.3	19.5	22.4	19.3	1.90	1.67	-31.88
7,800.0	3.40	317.45	7,799.1	23.5	19.0	23.4	0.79	0.72	-5.97
7,900.0	2.83	321.37	7,899.0	27.6	15.5	27.5	0.61	-0.57	3.92
8,000.0	2.55	325.10	7,998.9	31.4	12.7	31.3	0.33	-0.28	3.73
8,100.0	2.69	320.87	8,098.8	35.0	9.9	35.0	0.24	0.14	-4.23
8,200.0	2.51	323.17	8,198.7	38.6	7.1	38.6	0.21	-0.18	2.30
8,300.0	2.05	332.48	8,298.6	41.9	5.0	41.9	0.59	-0.46	9.31
8,400.0	1.85	326.34	8,398.5	44.9	3.3	44.8	0.29	-0.20	-6.14
Tie In @ 8500' MD / 8499' TVD									
8,500.0	1.30	318.87	8,498.5	47.1	1.6	47.1	0.59	-0.55	-7.47
8,569.0	2.50	352.90	8,567.5	49.1	0.9	49.1	2.32	1.74	49.32
8,601.0	6.70	349.90	8,599.3	51.7	0.5	51.7	13.14	13.13	-9.38
8,633.0	9.60	351.50	8,631.0	56.2	-0.2	56.2	9.09	9.06	5.00
8,664.0	11.40	348.90	8,661.5	61.7	-1.2	61.7	6.00	5.81	-8.39
8,696.0	14.80	349.90	8,692.7	68.9	-2.5	68.9	10.65	10.63	3.13
8,728.0	18.00	351.30	8,723.4	77.8	-4.0	77.8	10.08	10.00	4.38
8,760.0	21.30	354.10	8,753.5	88.4	-5.3	88.5	10.72	10.31	8.75
8,792.0	24.00	358.20	8,783.0	100.7	-6.1	100.8	9.77	8.44	12.81
8,824.0	28.00	359.40	8,811.8	114.7	-6.4	114.8	12.61	12.50	3.75

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Young 16 NC State Com #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3792.0usft (Patterson #75)
Site:	Sec16, T18S, R32E	MD Reference:	WELL @ 3792.0usft (Patterson #75)
Well:	Young 16 NC State Com #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)	
8,855.0	31.30	359.40	8,838.7	130.1	-6.6	130.1	10.65	10.65	0.00	
8,887.0	35.30	359.20	8,865.4	147.6	-6.8	147.7	12.50	12.50	-0.63	
8,919.0	38.90	358.40	8,891.0	166.9	-7.2	167.0	11.35	11.25	-2.50	
8,951.0	42.10	358.00	8,915.3	187.7	-7.8	187.8	10.03	10.00	-1.25	
8,982.0	44.70	357.60	8,937.8	209.0	-8.7	209.0	8.43	8.39	-1.29	
9,014.0	47.80	358.20	8,959.9	232.1	-9.5	232.1	9.78	9.69	1.88	
9,046.0	51.30	358.50	8,980.7	256.4	-10.2	256.5	10.96	10.94	0.94	
9,077.0	55.30	358.50	8,999.2	281.3	-10.9	281.3	12.90	12.90	0.00	
9,110.0	58.90	358.40	9,017.1	309.0	-11.6	309.0	10.91	10.91	-0.30	
9,141.0	61.50	357.80	9,032.6	335.8	-12.5	335.9	8.55	8.39	-1.94	
9,173.0	62.20	357.60	9,047.6	364.0	-13.6	364.1	2.26	2.19	-0.63	
9,205.0	64.50	359.40	9,062.0	392.6	-14.4	392.7	8.77	7.19	5.63	
9,237.0	66.80	0.10	9,075.2	421.8	-14.5	421.9	7.46	7.19	2.19	
9,269.0	69.10	0.10	9,087.2	451.4	-14.5	451.5	7.19	7.19	0.00	
9,300.0	72.40	0.60	9,097.4	480.7	-14.3	480.8	10.75	10.65	1.61	
9,332.0	76.20	0.50	9,106.1	511.5	-14.0	511.6	11.88	11.88	-0.31	
9,364.0	78.10	1.30	9,113.2	542.7	-13.5	542.8	6.42	5.94	2.50	
9,396.0	82.70	1.90	9,118.5	574.2	-12.6	574.3	14.49	14.38	1.88	
9,428.0	85.30	1.90	9,121.9	606.0	-11.6	606.1	8.13	8.13	0.00	
9,460.0	86.40	2.00	9,124.2	637.9	-10.5	638.0	3.45	3.44	0.31	
9,535.0	89.90	2.40	9,126.6	712.8	-7.6	712.8	4.70	4.67	0.53	
9,567.0	93.70	1.90	9,125.6	744.8	-6.4	744.8	11.98	11.88	-1.56	
9,598.0	94.70	1.50	9,123.3	775.7	-5.5	775.7	3.47	3.23	-1.29	
9,630.0	95.20	2.20	9,120.6	807.5	-4.4	807.5	2.68	1.56	2.19	
9,693.0	93.80	2.40	9,115.6	870.3	-1.9	870.3	2.24	-2.22	0.32	
9,757.0	93.90	2.80	9,111.3	934.1	1.0	934.0	0.64	0.16	0.63	
9,820.0	92.90	1.70	9,107.6	996.9	3.4	996.9	2.36	-1.59	-1.75	
9,883.0	93.50	1.70	9,104.1	1,059.8	5.3	1,059.7	0.95	0.95	0.00	
9,947.0	94.70	0.60	9,099.5	1,123.6	6.6	1,123.5	2.54	1.88	-1.72	
10,010.0	95.00	358.90	9,094.2	1,186.4	6.3	1,186.3	2.73	0.48	-2.70	
10,074.0	94.10	358.40	9,089.1	1,250.2	4.8	1,250.1	1.61	-1.41	-0.78	
10,137.0	92.00	359.20	9,085.8	1,313.1	3.5	1,313.0	3.57	-3.33	1.27	
10,201.0	92.20	359.40	9,083.4	1,377.0	2.7	1,377.0	0.44	0.31	0.31	
10,264.0	93.40	359.20	9,080.3	1,439.9	1.9	1,439.9	1.93	1.90	-0.32	
10,327.0	92.10	359.20	9,077.3	1,502.8	1.1	1,502.8	2.06	-2.06	0.00	
10,391.0	91.90	359.40	9,075.1	1,566.8	0.3	1,566.8	0.44	-0.31	0.31	
10,454.0	92.60	359.90	9,072.6	1,629.8	-0.1	1,629.7	1.37	1.11	0.79	
10,518.0	90.20	359.00	9,071.0	1,693.7	-0.7	1,693.7	4.00	-3.75	-1.41	
10,581.0	90.80	358.90	9,070.5	1,756.7	-1.9	1,756.7	0.97	0.95	-0.16	
10,644.0	90.80	359.20	9,069.6	1,819.7	-2.9	1,819.7	0.48	0.00	0.48	
10,708.0	92.30	357.80	9,067.9	1,883.6	-4.6	1,883.6	3.21	2.34	-2.19	
10,771.0	93.40	358.00	9,064.7	1,946.5	-6.9	1,946.5	1.77	1.75	0.32	
10,834.0	93.70	357.80	9,060.8	2,009.4	-9.2	2,009.4	0.57	0.48	-0.32	
10,898.0	94.20	357.60	9,056.4	2,073.2	-11.8	2,073.2	0.84	0.78	-0.31	

DDC Survey Report



Company: Mewbourne Oil Co	Local Co-ordinate Reference: Well Young 16 NC State Com #1H
Project: Lea County, NM	TVD Reference: WELL @ 3792.0usft (Patterson #75)
Site: Sec16, T18S, R32E	MD Reference: WELL @ 3792.0usft (Patterson #75)
Well: Young 16 NC State Com #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)
10,961.0	94.70	359.80	9,051.5	2,135.9	-13.2	2,136.0	3.57	0.79	3.49
11,025.0	95.00	0.10	9,046.1	2,199.7	-13.2	2,199.8	0.66	0.47	0.47
11,088.0	93.30	0.10	9,041.6	2,262.6	-13.1	2,262.6	2.70	-2.70	0.00
11,151.0	92.70	359.90	9,038.3	2,325.5	-13.1	2,325.5	1.00	-0.95	-0.32
11,215.0	93.20	1.00	9,035.0	2,389.4	-12.6	2,389.4	1.89	0.78	1.72
11,278.0	93.60	0.80	9,031.3	2,452.3	-11.6	2,452.3	0.71	0.63	-0.32
11,342.0	94.00	0.10	9,027.0	2,516.1	-11.1	2,516.1	1.26	0.63	-1.09
11,405.0	92.40	359.80	9,023.5	2,579.0	-11.2	2,579.0	2.58	-2.54	-0.48
11,469.0	92.20	359.90	9,020.9	2,643.0	-11.4	2,643.0	0.35	-0.31	0.16
11,532.0	92.40	359.60	9,018.4	2,705.9	-11.6	2,705.9	0.57	0.32	-0.48
11,596.0	92.70	0.30	9,015.5	2,769.8	-11.7	2,769.9	1.19	0.47	1.09
11,659.0	93.30	359.40	9,012.3	2,832.8	-11.9	2,832.8	1.72	0.95	-1.43
11,722.0	93.70	359.20	9,008.4	2,895.6	-12.6	2,895.7	0.71	0.63	-0.32
11,786.0	94.20	0.10	9,004.0	2,959.5	-13.0	2,959.5	1.61	0.78	1.41
11,849.0	94.30	359.80	8,999.3	3,022.3	-13.1	3,022.3	0.50	0.16	-0.48
11,913.0	94.20	359.80	8,994.6	3,086.1	-13.3	3,086.2	0.16	-0.16	0.00
11,976.0	94.30	359.80	8,989.9	3,149.0	-13.5	3,149.0	0.16	0.16	0.00
12,040.0	93.30	359.40	8,985.7	3,212.8	-14.0	3,212.8	1.68	-1.56	-0.63
12,103.0	93.50	0.10	8,981.9	3,275.7	-14.2	3,275.7	1.15	0.32	1.11
12,166.0	92.90	0.80	8,978.4	3,338.6	-13.7	3,338.6	1.46	-0.95	1.11
12,230.0	93.50	1.20	8,974.9	3,402.5	-12.6	3,402.5	1.13	0.94	0.63
12,293.0	91.50	0.80	8,972.1	3,465.4	-11.5	3,465.4	3.24	-3.17	-0.63
12,356.0	91.80	1.20	8,970.3	3,528.4	-10.4	3,528.4	0.79	0.48	0.63
12,420.0	91.90	0.80	8,968.2	3,592.3	-9.3	3,592.3	0.64	0.16	-0.63
12,483.0	92.90	1.00	8,965.6	3,655.3	-8.3	3,655.3	1.62	1.59	0.32
12,546.0	93.00	0.60	8,962.3	3,718.2	-7.4	3,718.2	0.65	0.16	-0.63
12,610.0	93.70	0.50	8,958.6	3,782.1	-6.8	3,782.0	1.10	1.09	-0.16
12,673.0	92.10	0.10	8,955.4	3,845.0	-6.5	3,844.9	2.62	-2.54	-0.63
12,736.0	92.00	0.30	8,953.2	3,908.0	-6.3	3,907.9	0.35	-0.16	0.32
12,800.0	92.40	359.90	8,950.7	3,971.9	-6.2	3,971.9	0.88	0.63	-0.63
12,863.0	92.60	359.80	8,948.0	4,034.8	-6.3	4,034.8	0.35	0.32	-0.16
12,926.0	92.80	359.60	8,945.0	4,097.8	-6.7	4,097.7	0.45	0.32	-0.32
12,989.0	93.30	359.40	8,941.6	4,160.7	-7.2	4,160.6	0.85	0.79	-0.32
13,053.0	94.20	0.10	8,937.5	4,224.5	-7.5	4,224.5	1.78	1.41	1.09
13,116.0	92.90	359.90	8,933.5	4,287.4	-7.5	4,287.4	2.09	-2.06	-0.32
13,179.0	92.10	359.80	8,930.8	4,350.4	-7.7	4,350.3	1.28	-1.27	-0.16
13,242.0	92.40	0.50	8,928.3	4,413.3	-7.5	4,413.3	1.21	0.48	1.11
13,306.0	92.90	359.90	8,925.4	4,477.2	-7.3	4,477.2	1.22	0.78	-0.94
13,369.0	92.90	359.60	8,922.2	4,540.2	-7.5	4,540.1	0.48	0.00	-0.48
13,397.0	93.40	359.60	8,920.6	4,568.1	-7.7	4,568.1	1.79	1.79	0.00
TD @ 13445' MD / 8918' TVD									
13,445.0	93.40	359.60	8,917.8	4,616.0	-8.1	4,616.0	0.00	0.00	0.00

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Young 16 NC State Com #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3792.0usft (Patterson #75)
Site:	Sec16, T18S, R32E	MD Reference:	WELL @ 3792.0usft (Patterson #75)
Well:	Young 16 NC State Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations

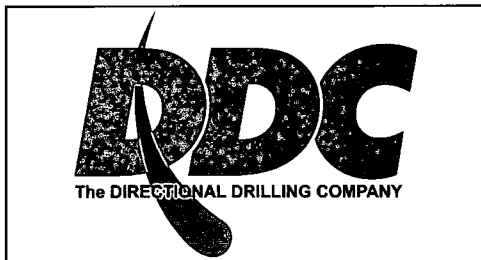
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,500.0	8,498.5	47.1	1.6	Tie In @ 8500' MD / 8499' TVD
13,445.0	8,917.8	4,616.0	-8.1	TD @ 13445' MD / 8918' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name: Mewbourne Oil Co
 Young 16 NC State Com #1H
 Lea County, NM
 Rig: Patterson #75
 Created By: James Dawson
 Date: 10/16/2013

Young 16 NC State Com #1H
 Lea County, NM
Q130786 & WT-13752
 Design #2 (Tie Into Gyro)

Mewbourne Oil Company



Azimuths to Grid North

Correction: 7.14°

Magnetic Field
 Strength: 48678.1snT
 Dip Angle: 60.57°
 Date: 9/12/2013
 Model: IGRF2010

PROJECT DETAILS: Lea County, NM

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: Young 16 NC State Com #1H

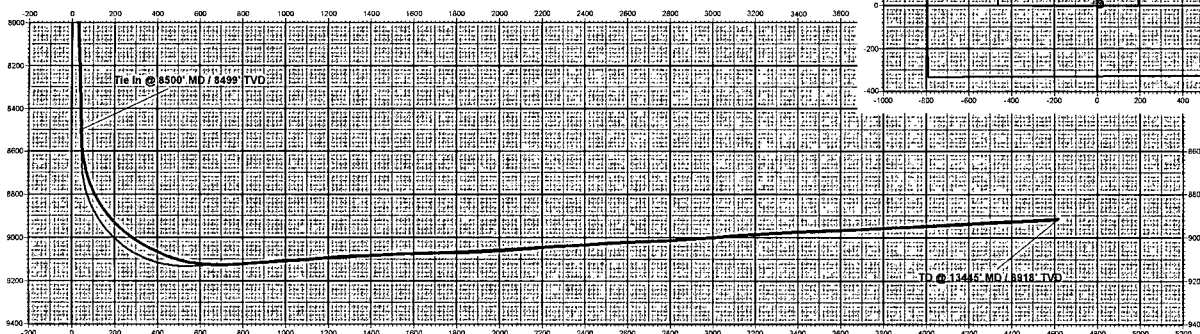
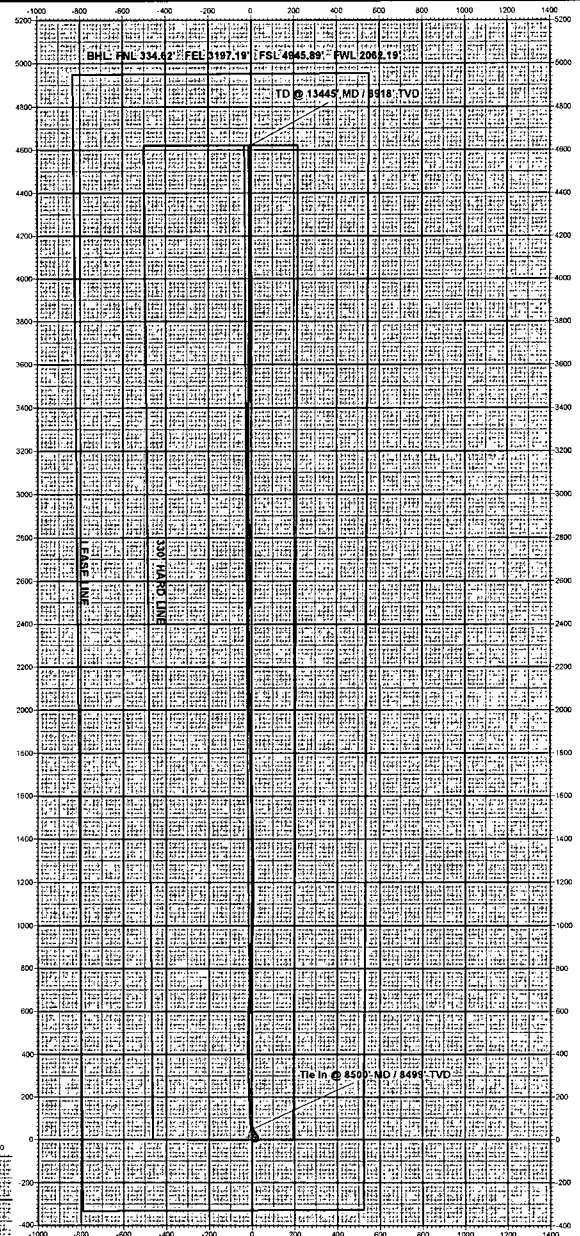
Ground Level: 3772.0		Latitude	Longitude
+N-S	+E-W	32° 44' 27.323 N	109° 46' 22.250 W
0.0	0.0		

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East	Latitude	Longitude
PBHL - Young 16 NC State Com #1H (copy)	8912.0	4620.6	-30.3	638385.77	672305.83	32° 45' 13.546 N	109° 46' 22.928 W
- plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation
8500.0	1.20	318.87	8498.5	47.1	1.4	47.1	123.1	Tie In @ 8500' MD / 8498' TVD
13445.0	53.40	359.60	8917.8	4616.0	-8.1	4616.0	4693.6	TD @ 13445' MD / 8918' TVD



Vertical Section at 359.62° (200 usft/in)

Operating Company Mewbourne
 Well Name & Number Young 16 NC ST Com #1h
 Sales Ticket Number 5863418
 Date 10/16/2013

Company Rep George
 Field
 BOT Service Rep Blake Born
 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	LT&C	0.03826	9,510.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,184.75	12,410	10,680
Bott Liner										

TVD	8,920.00	KOP	8,548.00	Open Hole	6.125	Casing Vol. (bbl)	441.6
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Carry Fluid Weight (ppg)	8.8	Propant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
Liner Top	1	10292414	JR Setting Sleeve_RH Profile	11541.64						

Zone Length										
		JR Sleeve_S3 Hyd Set Packer	9248.25	9.75						
		4-1/2-13.5 LTC Nipple	92.58.00	9.84						
		8 Joints of 4-1/2-13.5 LTC Casing	9550.04	323.19						
20		3.625 EX Frac Sleeve	9591.03	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	9633.48	79.36						
		Baker Open Hole Packer	9672.79	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9755.76	119.30						
19		3.50 EX Frac Sleeve	9795.98	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	9839.00	79.97						
		Baker Open Hole Packer	9878.35	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9961.31	118.12						
18		3.375 EX Frac Sleeve	10000.36	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	10042.46	80.23						
		Baker Open Hole Packer	10082.99	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10167.20	120.50						
17		3.25 EX Frac Sleeve	10207.38	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	10249.22	80.17						
		Baker Open Hole Packer	10289.95	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	13373.83	120.92						
16		3.125 EX Frac Sleeve	10414.76	2.40				2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10498.08	119.37						
		Baker Open Hole Packer	10536.53	3.89				2154		

Operating Company Mewbourne
 Well Name & Number Young 16 NC ST Com #1h
 Sales Ticket Number 5863418
 Date 10/16/2013

Company Rep George
 Field
 BOT Service Rep Blake Born
 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	LT&C	0.03826	9,510.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,184.75	12,410	10,680
Bott Liner										

TVD	8,920.00	KOP	8,548.00	Open Hole	6.125	Casing Vol. (bbl)	441.6
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Carry Fluid Weight (ppg)	8.8	Propan Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
15		3 Joints of 4-1/2-13.5 LTC Casing	10619.47	119.18						
		3.000 EX Frac sleeve	10659.60	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	10702.27	81.02						
		Baker Open Hole Packer	10743.02	3.89				2154		
14		2 Joints of 4-1/2-13.5 LTC Casing	10786.23	80.50						
		2.875 EX Frac Sleeve	10827.41	2.40				2286		
		2 Joints of 4-1/2-13.5 LTC Casing	10868.27	78.13						
		Baker Open Hole Packer	10907.94	3.89				2154		
13		3 Joints of 4-1/2-13.5 LTC Casing	10993.91	122.87						
		2.75 EX Frac Sleeve	11034.70	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	11076.17	79.86						
		Baker Open Hole Packer	11116.96	3.89				2154		
12		3 Joints of 4-1/2-13.5 LTC Casing	11199.89	117.78						
		2.625 EX Frac Sleeve	11238.63	2.40				2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11279.50	77.71						
		Baker Open Hole Packer	11318.74	3.89				2154		
11		3 Joints of 4-1/2-13.5 LTC Casing	11401.53	118.52						
		2.50 EX Frac Sleeve	11441.15	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	11484.25	79.18						
		Baker Open Hole Packer	11522.73	3.89				2154		
10		3 Joints of 4-1/2-13.5 LTC Casing	11604.59	116.39						
		2.375 EX Frac Sleeve	11643.01	2.40				2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11683.91	77.61						
		Baker Open Hole Packer	11723.02	3.89				2154		
9		3 Joint of 4-1/2-13.5 LTC Casing	11805.81	117.50						
		2.25 EX Frac Sleeve	11844.41	2.40				2286		

Operating Company Mewbourne
 Well Name & Number Young 16 NC ST Com #1h
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	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	9,510.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LT&C	0.01492	4,184.75	12,410	10,680
Bott Liner										
TVD	8,920.00		KOP	8,548.00		Open Hole	6.125	Casing Vol. (bbl)	441.6	
Carry Fluid Weight (ppg)	8.8		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)
8		2 Joints of 4-1/2-13.5 LTC Casing	11887.56	80.41						
		Baker Open Hole Packer	11927.22	3.89				2154		
		3 Joint of 4-1/2-13.5 LTC Casing	12009.09	116.43						
		2.125EX Frac Sleeve	12047.54	2.40				2286		
7		2 Joints of 4-1/2-13.5 LTC Casing	12090.73	80.84						
		Baker Open Hole Packer	12130.78	3.89				2154		
		2 Joint of 4-1/2-13.5 LTC Casing	12173.28	77.01						
		2.000 EX Frac Sleeve	12211.68	2.40				2286		
6		2 Joints of 4-1/2-13.5 LTC Casing	12254.69	79.20						
		Baker Open Hole Packer	12293.28	3.89				2154		
		3 Joint of 4-1/2-13.5 LTC Casing	12375.47	118.88						
		1.875 EX Frac Sleeve	12416.05	2.40				2286		
5		3 Joints of 4-1/2-13.5 LTC Casing	12496.44	116.59						
		Baker Open Hole Packer	12535.04	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12617.64	117.84						
		1.75 EX Frac Sleeve	12656.77	2.40				2286		
4		2 Joint of 4-1/2-13.5 LTC Casing	12697.75	77.18						
		Baker Open Hole Packer	12736.35	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12818.44	116.82						
		1.625 DBL Ball Frac Sleeve	12857.06	2.40				2286		
3		3 Joints of 4-1/2-13.5 LTC Casing	12936.70	116.73						
		Baker Open Hole Packer	12976.19	3.89				2154		
		3 Joints of 4-1/2-13.5 LTC Casing	13058.52	117.05						
		1.50 DBL Ball Frac Sleeve	13097.13	2.40				2286		
		2 Joint of 4-1/2-13.5 LTC Casing	13138.14	77.18						
		Baker Open Hole Packer	13176.71	2.40				2154		

Company Rep	George
Field	
BOT Service Rep	Blake Born
District Location	Odessa, Texas, USA

[illegible]