

Results of Directional Survey

DD

API number:	30-025-39673		
OGRID:		Operator:	MACK ENERGY CORP
		Property:	B LEE STATE # 60

surface	ULSTR:	L	07	T	18S	R	35E
				2210	FSL	430	FWL

BH Loc	ULSTR:	L	07	T	18S	R	35E
9095	MD	9091.5	TVD	2269	FSL	348	FWL

Top Perf/OH	ULSTR:	L	07	T	18S	R	35E
8174.5	MD	8171.3	TVD	2286	FSL	346	FWL

Bot Perf/OH	ULSTR:	L	07	T	18S	R	35E
8624.5	MD	8621.1	TVD	2278	FSL	350	FWL

	MD	N/S	E/W	VD
	8167	76.34	-84.18	8163.76
TOP PERFS/OH	8174.5	76.14	-84.12	8171.26
	8260	73.85	-83.42	8256.72
	8540	69.69	-79.59	8536.65
BOT PERFS/OH	8624.5	68.46	-80.07	8621.14
	8727	66.96	-80.66	8723.62

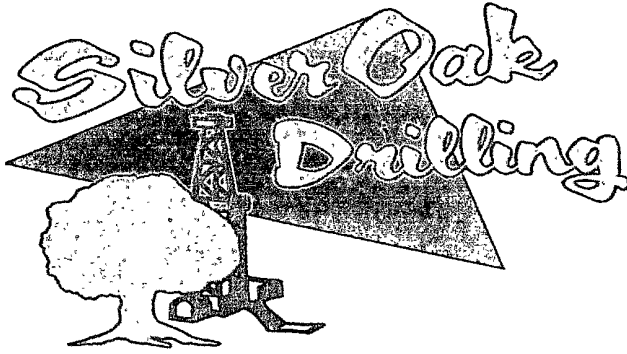
NEXT TO LAST	8913	62.55	-83.36	8909.54
LAST READING	9095	58.74	-82.50	9091.50
TD	9095	58.74	-82.50	9091.50

Surface Location	2210	FS	430	FW
Projected BHL	2269	FS	348	FW
Location of				
Top Perfs/OH	2286	FS	346	FW
Bottom Perfs/OH	2278	FS	350	FW

SUMMARY of Subsurface Locations

Surface Location	L-07-18S-35E	2210	FS	430	FW	Vert. Depth
Top Perfs/OH	L-07-18S-35E	2286	FS	346	FW	8171.26
Bottom Perfs/OH	L-07-18S-35E	2278	FS	350	FW	8621.14
Projected TD	L-07-18S-35E	2269	FS	348	FW	9091.50

FEB 28 2012



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

December 9, 2011

Mack Energy Corporation
PO Box 960
Artesia, NM 88211-0960

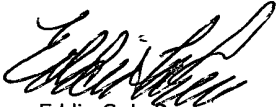
SUR: L-7-18s-35e, Lot 3, 2269/S & 348/W
BHL: L-7-18s-35e, Lot 3, 2269/S & 348/W
API # 30-025-39673

RE: B Lee State #6
2210' FSL & 430' FWL
Sec. 7, T18S, R35E
Lea County, New Mexico

Dear Sir,

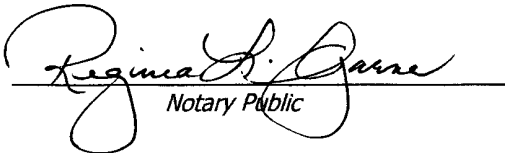
The attached is the Deviation Survey for the above captioned well.

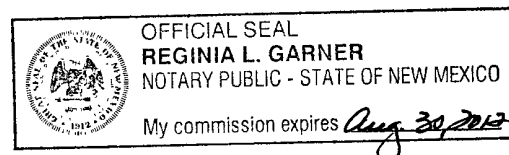
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 9th day of December, 2011.


Regina L. Garner
Notary Public



SCANNED

B Lee State #6

#	Date	Depth	Deviation	Direction	TVD
11/19/2011		147	0.20	327.60	
11/19/2011		299	0.60	17.60	
11/19/2011		477	0.90	25.60	
11/19/2011		654	1.30	43.60	
11/19/2011		831	2.20	45.60	
11/19/2011		1015	2.00	67.60	
11/19/2011		1108	2.00	65.60	
11/19/2011		1202	1.90	43.60	
11/19/2011		1358	1.60	74.60	
11/22/2011		1647	2.02	64.83	1646.46
11/22/2011		1709	1.14	64.75	1708.44
11/22/2011		1771	0.26	357.02	1770.43
11/22/2011		1834	1.67	293.05	1833.42
11/22/2011		1927	1.76	293.62	1926.38
11/22/2011		2021	2.11	297.14	2020.32
11/22/2011		2177	1.58	300.04	2176.24
11/22/2011		2270	2.55	280.47	2269.18
11/22/2011		2426	2.81	307.48	2425.02
11/22/2011		2519	1.67	398.88	2517.95
11/22/2011		2613	1.14	325.84	2611.96
11/22/2011		2706	2.20	312.54	2704.88
11/22/2011		2799	1.49	0.58	2797.83
11/22/2011		2861	2.11	342.68	2859.80
11/22/2011		2924	1.93	310.33	2922.77
11/22/2011		2986	2.55	284.96	2984.72
11/22/2011		3080	2.20	285.15	3078.64
11/23/2011		3266	1.49	308.59	3264.54
11/23/2011		3360	2.73	297.38	3358.48
11/23/2011		3453	2.02	298.17	3451.40
11/23/2011		3640	2.20	320.22	3638.23
11/23/2011		3733	1.67	278.68	3731.18
11/23/2011		3827	1.23	336.82	3825.15
11/23/2011		3920	2.02	325.54	3918.11
11/23/2011		4013	2.99	299.10	4011.03
11/23/2011		4107	2.90	275.09	4104.91
11/23/2011		4200	2.11	285.31	4179.82
11/23/2011		4294	2.90	275.42	4291.73
11/24/2011		4387	2.37	281.90	4384.63
11/24/2011		4481	2.29	290.77	4478.55
11/24/2011		4574	2.29	294.01	4571.48
11/24/2011		4667	2.20	297.27	4664.41
11/24/2011		4854	1.41	275.95	4851.31
11/24/2011		4947	0.62	230.11	4944.29
11/24/2011		5040	0.09	296.66	5037.29
11/24/2011		5227	0.88	324.29	5224.28
11/24/2011		5352	0.62	288.13	5349.27
11/24/2011		5445	0.70	132.54	5442.27
11/24/2011		5632	0.70	30.02	5629.26
11/25/2011		5756	0.53	185.90	5753.26
11/25/2011		5943	0.44	213.34	5940.25

SCANNED

#	Date	Depth	Deviation	Direction	TVD
11/25/2011	6130	0.62	287.17	6127.25	
11/25/2011	6223	1.14	267.90	6220.24	
11/25/2011	6316	1.58	242.46	6313.21	
11/25/2011	6410	0.79	230.82	6407.19	
11/25/2011	6566	1.85	256.63	6563.15	
11/26/2011	6673	0.88	310.50	6670.12	
11/26/2011	6767	1.67	341.27	6764.10	
11/26/2011	6798	1.32	344.59	6795.09	
11/27/2011	6829	0.88	336.17	6826.08	
11/27/2011	6922	0.18	344.44	6919.07	
11/27/2011	7109	1.32	130.41	7106.06	
11/27/2011	7171	1.23	89.64	7168.05	
11/28/2011	7202	0.88	68.70	7199.04	
11/28/2011	7295	0.97	256.42	7292.04	
11/29/2011	7388	0.70	249.06	7385.83	
11/29/2011	7482	1.23	224.67	7479.01	
11/30/2011	7575	2.37	328.28	7571.98	
11/30/2011	7638	2.02	325.12	7634.94	
11/30/2011	7700	1.85	314.46	7696.90	
11/30/2011	7731	1.67	309.47	7727.89	
11/30/2011	7762	1.49	319.79	7758.88	
11/30/2011	7793	2.02	300.27	7789.86	
11/30/2011	7824	1.76	301.03	7820.84	
11/30/2011	7856	1.14	280.49	7852.83	
11/30/2011	7887	0.44	182.24	7883.83	
11/30/2011	7918	0.70	113.28	7914.83	
12/1/2011	7949	1.32	86.93	7945.83	
12/1/2011	8011	1.23	132.97	8007.81	
12/1/2011	8074	1.67	146.46	8070.79	
12/1/2011	8167	1.49	153.15	8163.76	
12/1/2011	8260	1.76	171.29	8256.72	
12/1/2011	8354	1.58	133.54	8350.68	
12/1/2011	8447	0.79	116.92	8443.66	
12/1/2011	8540	0.88	122.01	8536.65	
12/2/2011	8727	1.85	229.25	8723.62	
12/2/2011	8820	1.93	216.52	8816.57	
12/2/2011	8851	1.76	206.75	8847.55	
12/2/2011	8882	1.06	177.37	8878.54	
12/2/2011	8913	1.23	167.21	8909.53	

SCANNED



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

MACK ENERGY

B LEE STATE #6

LEA COUNTY, NEW MEXICO

SUR: L-7-18s-35e, Lot 3, 2269/S & 348/W
BHL: L-7-18s-35e, Lot 3, 2269/S & 348/W
API # 30-025-39673

PREPARED BY: STEVE BIBB

Pathfinder:

6213 WCR 112
Midland Texas 79706
Tel (432)687-1617
Fax (432)687-1544



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) ALEX CASTILLO
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 11-22-11 TO 12-02-11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

MACK ENERGY
B LEE STATE #6
LEA COUNTY, NM
RIG: SILVER OAK 7
9. SURVEY CERTIFIED FROM: 1647 TO 8913 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 101.27 FEET ON A BEARING OF 305.45 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 9095 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

A handwritten signature in black ink, appearing to read "Steve Bibb".

STEVE BIBB
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 11/22/2011
Date Completed: 12/02/2011

MACK ENERGY
B LEE STATE #6
LEA COUNTY, NEW MEXICO
Rig:SILVER OAK 7
PathFinder Office Supervisor: STEVE BIBB
PathFinder Field Engineers:T. PISCIOTTA

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.45.39.9867 N LON:103.30.12.3530 W
GRID Reference:NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 755121.2000 Y: 641601.7000
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.09° EAST TO GRID
Vertical Section Plane: 314.73
Survey Vert. Reference: 19.00' Kelly Bushing To Ground
Altitude:3976.00' Ground To MSL

Measured Depth	9095.00	(feet)
Inclination	1.23	(deg)
Azimuth	167.21	(deg)
True Vertical Depth	9091.50	(feet)
Vertical Section	99.95	(feet)
Survey X cord	755038.70	(feet)
Survey Y cord	641660.44	(feet)
Survey Lat	32.76127065 N	(deg)
Survey Lon	103.50369824 W	(deg)
Rectangular Corr. N/S	58.74 N	(feet)
Rectangular Corr. E/W	82.50 W	(feet)
Closure Distance	101.27	(feet)
Direction of Closure	305.45	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY
B LEE STATE #6
LEA COUNTY, NEW MEXICO
Rig:SILVER OAK 7
PathFinder Office Supervisor: STEVE BIBB
PathFinder Field Engineers: T. PISCIOTTA

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Vertical Section Plane: 314.73
Survey Vert. Reference: 19.00' Kelly Bushing To Ground
Altitude:3976.00' Ground To MSL

Survey Calculations by RX5 V6.03E using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
THE FOLLOWING ARE TELEDRIFT GYRO SURVEYS.										
45.00	0.10	185.00	45.00	0.00	-0.02	0.04 S	0.01 W	0.04@	189.42	0.00
147.00	0.20	327.60	147.00	102.00	0.09	0.02 N	0.11 W	0.11@	280.50	0.28
299.00	0.60	17.60	299.00	152.00	0.71	1.00 N	0.01 W	1.00@	359.34	0.33
477.00	0.90	25.60	476.98	178.00	1.60	3.15 N	0.87 E	3.27@	15.50	0.18
654.00	1.30	43.60	653.95	177.00	2.09	5.86 N	2.86 E	6.52@	26.01	0.30
831.00	2.10	45.60	830.87	177.00	2.08	9.58 N	6.56 E	11.61@	34.40	0.45
1015.00	2.00	67.60	1014.76	184.00	0.78	13.17 N	11.94 E	17.77@	42.20	0.43
1108.00	2.00	65.60	1107.70	93.00	-0.43	14.45 N	14.92 E	20.77@	45.90	0.08
1202.00	1.90	43.60	1201.65	94.00	-0.98	16.26 N	17.49 E	23.88@	47.08	0.80
1358.00	1.60	74.60	1357.58	156.00	-2.01	18.71 N	21.37 E	28.40@	48.79	0.63
** TIE IN TO TELEDRIFT GYRO SURVEYS @ 1543' MD.										
1543.00	1.50	56.60	1542.51	185.00	-3.80	20.73 N	25.88 E	33.16@	51.31	0.27
THE FOLLOWING SURVEYS ARE PATHFINDER MWD SURVEYS										
1647.00	2.02	64.83	1646.46	104.00	-4.71	22.26 N	28.68 E	36.30@	52.18	0.56
1709.00	1.14	64.75	1708.44	62.00	-5.29	22.99 N	30.22 E	37.97@	52.74	1.42
1771.00	0.26	357.02	1770.43	62.00	-5.40	23.39 N	30.77 E	38.65@	52.76	1.72
1834.00	1.67	293.05	1833.42	63.00	-4.44	23.89 N	29.92 E	38.29@	51.39	2.50
1927.00	1.76	293.62	1926.38	93.00	-1.85	25.00 N	27.36 E	37.06@	47.59	0.10
2021.00	2.11	297.14	2020.33	94.00	1.15	26.36 N	24.50 E	35.99@	42.91	0.39
2177.00	1.58	300.04	2176.25	156.00	5.96	28.75 N	20.09 E	35.07@	34.94	0.34
2270.00	2.55	280.47	2269.19	93.00	8.91	29.77 N	16.94 E	34.25@	29.64	1.27
2426.00	2.81	307.48	2425.02	156.00	15.58	32.73 N	10.49 E	34.37@	17.78	0.82
2519.00	1.67	298.88	2517.95	93.00	19.14	34.77 N	7.50 E	35.57@	12.17	1.27
2613.00	1.14	325.87	2611.92	94.00	21.38	36.20 N	5.77 E	36.66@	9.06	0.89
2706.00	2.20	312.54	2704.88	93.00	24.07	38.18 N	3.94 E	38.38@	5.89	1.21
2799.00	1.49	0.58	2797.84	93.00	26.69	40.59 N	2.64 E	40.68@	3.72	1.76

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY
B LEE STATE #6
LEA COUNTY, NEW MEXICO
RIG:SILVER OAK 7

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
2861.00	2.11	342.68	2859.81	62.00	28.26	42.49 N	2.30 E	42.55@	3.10	1.34
2924.00	1.93	310.33	2922.77	63.00	30.35	44.28 N	1.15 E	44.30@	1.49	1.81
2986.00	2.55	284.96	2984.72	62.00	32.58	45.31 N	0.98 W	45.32@	358.76	1.86
3080.00	2.20	285.15	3078.64	94.00	35.97	46.32 N	4.74 W	46.57@	354.16	0.37
3266.00	1.49	308.59	3264.55	186.00	41.48	48.77 N	10.08 W	49.80@	348.33	0.55
3360.00	2.73	297.38	3358.48	94.00	44.83	50.56 N	13.02 W	52.21@	345.56	1.38
3453.00	2.02	298.17	3451.40	93.00	48.51	52.35 N	16.43 W	54.87@	342.57	0.76
3546.00	2.81	304.11	3544.32	93.00	52.33	54.40 N	19.76 W	57.88@	340.03	0.89
3640.00	2.20	320.22	3638.23	94.00	56.39	57.08 N	22.83 W	61.47@	338.20	0.98
3733.00	1.67	278.68	3731.18	93.00	59.26	58.66 N	25.31 W	63.88@	336.66	1.57
3827.00	1.23	336.82	3825.15	94.00	61.30	59.79 N	27.06 W	65.63@	335.65	1.55
3920.00	2.02	325.24	3918.12	93.00	63.84	62.06 N	28.39 W	68.24@	335.42	0.92
4013.00	2.99	299.10	4011.03	93.00	67.79	64.58 N	31.44 W	71.83@	334.04	1.59
4107.00	2.90	275.09	4104.91	94.00	71.98	65.98 N	35.95 W	75.14@	331.42	1.31
4200.00	2.11	285.31	4197.82	93.00	75.28	66.65 N	39.95 W	77.70@	329.06	0.97
4294.00	2.90	275.42	4291.73	94.00	78.63	67.33 N	43.98 W	80.42@	326.85	0.96
4387.00	2.37	281.90	4384.63	93.00	82.06	67.95 N	48.21 W	83.31@	324.65	0.65
4481.00	2.29	290.77	4478.55	94.00	85.41	69.01 N	51.86 W	86.33@	323.07	0.39
4574.00	2.29	294.01	4571.48	93.00	88.85	70.43 N	55.30 W	89.54@	321.86	0.14
4667.00	2.20	297.27	4664.41	93.00	92.29	72.00 N	58.58 W	92.82@	320.87	0.17
4760.00	1.93	305.60	4757.35	93.00	95.54	73.73 N	61.44 W	95.98@	320.19	0.43
4854.00	1.41	275.95	4851.31	94.00	98.00	74.77 N	63.88 W	98.34@	319.49	1.05
4947.00	0.62	230.11	4944.29	93.00	98.94	74.57 N	65.40 W	99.19@	318.75	1.16
5040.00	0.09	296.66	5037.29	93.00	99.06	74.28 N	65.85 W	99.27@	318.44	0.63
5227.00	0.88	324.29	5224.28	187.00	100.62	75.51 N	66.82 W	100.83@	318.49	0.43
5352.00	0.62	288.13	5349.27	125.00	102.17	76.50 N	68.03 W	102.37@	318.36	0.42
5445.00	0.70	132.54	5442.27	93.00	102.05	76.27 N	68.09 W	102.24@	318.25	1.39
5632.00	0.70	30.02	5629.26	187.00	101.20	76.49 N	66.67 W	101.47@	318.92	0.58

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY
B LEE STATE #6
LEA COUNTY, NEW MEXICO
RIG:SILVER OAK 7

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
5756.00	0.53	185.90	5753.26	124.00	101.03	76.57 N	66.35 W	101.32@	319.09	0.97
5943.00	0.44	213.34	5940.25	187.00	100.35	75.11 N	66.84 W	100.55@	318.34	0.13
6130.00	0.62	287.17	6127.25	187.00	101.10	74.81 N	68.20 W	101.23@	317.65	0.35
6223.00	1.14	267.90	6220.24	93.00	102.18	74.93 N	69.60 W	102.27@	317.11	0.64
6316.00	1.58	242.46	6313.21	93.00	103.20	74.30 N	71.66 W	103.23@	316.03	0.79
6410.00	0.79	230.82	6407.19	94.00	103.67	73.29 N	73.32 W	103.67@	314.99	0.87
6566.00	1.85	256.63	6563.15	156.00	105.11	72.03 N	76.60 W	105.15@	313.24	0.76
6673.00	0.88	310.50	6670.12	107.00	106.84	72.17 N	78.91 W	106.93@	312.45	1.41
6767.00	1.67	341.27	6764.10	94.00	108.79	73.93 N	79.89 W	108.85@	312.78	1.08
6798.00	1.32	344.59	6795.09	31.00	109.50	74.70 N	80.13 W	109.55@	312.99	1.16
6829.00	0.88	336.17	6826.08	31.00	110.03	75.27 N	80.32 W	110.08@	313.14	1.51
6922.00	0.18	334.44	6919.08	93.00	110.84	76.05 N	80.68 W	110.87@	313.31	0.75
7109.00	1.32	130.41	7106.06	187.00	108.97	74.92 N	79.16 W	108.99@	313.42	0.79
7171.00	1.23	89.64	7168.05	62.00	107.78	74.46 N	77.95 W	107.80@	313.69	1.44
7202.00	0.88	68.70	7199.04	31.00	107.45	74.55 N	77.40 W	107.46@	313.93	1.66
7295.00	0.97	256.42	7292.04	93.00	107.58	74.62 N	77.50 W	107.59@	313.92	1.99
7388.00	0.70	249.06	7385.03	93.00	108.22	74.24 N	78.80 W	108.26@	313.29	0.31
7482.00	1.23	224.67	7479.02	94.00	108.46	73.31 N	80.04 W	108.54@	312.49	0.70
7575.00	2.37	328.28	7571.98	93.00	110.33	74.24 N	81.75 W	110.43@	312.24	3.13
7638.00	2.02	325.12	7634.94	63.00	112.69	76.26 N	83.07 W	112.77@	312.55	0.59
7700.00	1.85	314.46	7696.90	62.00	114.76	77.85 N	84.41 W	114.83@	312.69	0.64
7731.00	1.67	309.47	7727.89	31.00	115.71	78.49 N	85.12 W	115.79@	312.68	0.76
7762.00	1.49	319.79	7758.88	31.00	116.56	79.09 N	85.73 W	116.64@	312.69	1.08
7793.00	2.02	300.27	7789.86	31.00	117.49	79.67 N	86.46 W	117.57@	312.66	2.55
7824.00	1.76	301.03	7820.85	31.00	118.48	80.19 N	87.34 W	118.57@	312.56	0.84
7856.00	1.14	280.49	7852.84	32.00	119.23	80.50 N	88.07 W	119.32@	312.43	2.50
7887.00	0.44	182.24	7883.83	31.00	119.40	80.44 N	88.38 W	119.51@	312.31	4.13
7918.00	0.70	113.28	7914.83	31.00	119.14	80.25 N	88.21 W	119.25@	312.29	2.19

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY
B LEE STATE #6
LEA COUNTY, NEW MEXICO
RIG:SILVER OAK 7

Page 04/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
7949.00	1.32	86.93	7945.83	31.00	118.73	80.19 N	87.68 W	118.82@	312.44	2.45
8011.00	1.23	132.97	8007.81	62.00	117.58	79.78 N	86.48 W	117.66@	312.69	1.61
8074.00	1.67	146.46	8070.79	63.00	116.01	78.55 N	85.48 W	116.09@	312.58	0.88
8167.00	1.49	153.15	8163.76	93.00	113.53	76.34 N	84.18 W	113.64@	312.20	0.28
8260.00	1.76	171.29	8256.72	93.00	111.24	73.85 N	83.42 W	111.41@	311.52	0.62
8354.00	1.58	133.54	8350.68	94.00	108.78	71.53 N	82.26 W	109.01@	311.01	1.16
8447.00	0.79	116.92	8443.66	93.00	106.89	70.36 N	80.76 W	107.11@	311.06	0.92
8540.00	0.88	122.01	8536.65	93.00	105.58	69.69 N	79.59 W	105.78@	311.21	0.13
8727.00	1.85	229.25	8723.62	187.00	104.42	66.96 N	80.66 W	104.83@	309.70	1.22
8820.00	1.93	216.52	8816.57	93.00	104.32	64.72 N	82.72 W	105.03@	308.04	0.46
8851.00	1.76	206.75	8847.55	31.00	104.09	63.87 N	83.25 W	104.93@	307.50	1.15
8882.00	1.06	177.37	8878.54	31.00	103.74	63.16 N	83.45 W	104.66@	307.12	3.18
8913.00	1.23	167.21	8909.54	31.00	103.25	62.55 N	83.36 W	104.22@	306.88	0.85
STRAIGHT LINE PROJECTION TO BIT @ 9095' MD.										
9095.00	1.23	167.21	9091.50	182.00	99.95	58.74 N	82.50 W	101.27@	305.45	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder Energy Services, Inc. and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET**CLIENT INFORMATION**

CLIENT:	MACK ENERGY		
LEASE / WELL No.:	B LEE STATEE	#6	
WELL LOCATION:	LEA COUNTY, NEW MEXICO		
COUNTY / STATE / COUNTRY:	LEA	NM	USA
RIG:	SILVER OAK 7		
API WELL No:	30-025-39673		
JOB No:	700004367-WT-WT		
P.O. / AFE No.	917006		
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.29	LWD Calculated:	7.09
		Agreed Upon:	7.09
X =	755121.200000	Feet	Y = 641601.700000
			Feet
SITE LATITUDE:	32.761107 N	SITE LONGITUDE:	103.503431 W
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	314.73		
KELLY BUSHING ELEVATION:	19		
ALTITUDE:	3976	Feet	WATER DEPTH: N/A
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	1543		
DRIFT ANGLE:	1.5		
DRIFT DIRECTION:	56.6		
TRUE VERTICAL DEPTH:	1542.51		
VERTICAL SECTION:	-3.8		
RECTANGULAR COORDINATE (N / S) :	20.73		
RECTANGULAR COORDINATE (E / W) :	25.88		
CLOSURE DISTANCE / DIRECTION:	33.16	51.3/	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	TELEDRIIFT		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	1880.2	TOTAL DEPTH:	9000
KICKOFF ANGLE:	1.5	MAX ANGLE:	1.5

PES Engineers: ALEX CASTILLO
TODD PISCIOTTA

**Signature of both field engineers required if applicable

Directional Driller: _____

DATE: 20-Nov-2011



SURVEY REPORT

Page 1 of 1

PROSHOT MWD BY TELEDRIFT
P.O. BOX 94395
OKLAHOMA CITY, OK 73143-4395
TEL: 405-631-4882
FAX: 405-631-8344
WWW.TELEDRIFT.COM

ProView Version 6.00
Report created using job file: Mack Energy B Lee State #6-18NOV11
Report saved on 21 Nov 2011 15:07
Depth in feet

WELL NAME B Lee State #6
NORTH CORRECTION 7.6°
JOB ID Mack Energy B Lee State #6
COMPANY Mack Energy
CONTRACTOR Sliver Oak #7
START DATE 18 NOV 11
API #
LOCATION B Lee State #6

All azimuths are referenced to true north
and corrected with the north correction above.

SURVEY #	SURVEY DEPTH	DATE	TIME	INCLINATION	AZIMUTH
Tie-in	0.0	18-Nov-11	18:51	00.0	0.0
0001	45.0	18-Nov-11	23:57	00.1	185.6
0002	147.0	19-Nov-11	02:18	00.2	327.6
0005	299.0	19-Nov-11	04:23	00.6	17.6
0009	477.0	19-Nov-11	08:33	00.9	25.6
0010	654.0	19-Nov-11	10:26	01.3	43.6
0013	831.0	19-Nov-11	12:57	02.1	45.6
0016	1015.0	19-Nov-11	16:45	02.0	67.6
0018	1108.0	19-Nov-11	18:41	02.0	65.6
0021	1202.0	19-Nov-11	20:30	01.9	43.6
0025	1358.0	19-Nov-11	23:39	01.6	74.6
0028	1543.0	20-Nov-11	04:55	01.5	56.6



A Schlumberger Company

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Mack Energy Corportation
B Lee State #6
Lea County, Nm
Rig:Silver Oak 7

Tue Nov 15 15:30:36 2011

Coordinates

Latitude: 32.761107 N (32 deg. 45 min. 39.9867 sec.)
Longitude: 103.503431 W (-103 deg. 30 min. 12.3530 sec.)
Elevation: 3995.00 feet.
Calculation Date: Nov/15/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.6852 degrees
Total Magnetic Field: 0.48902 gauss
Magnetic Declination: 7.541762 degrees
Horizontal Intensity: 0.239426 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.541762 Degs

Transverse Mercator Grid Calculations NAD27

Grid System: Transverse Mercator: new mexico east
Ellipsoid: Clarke 1866
X: 755121.2000 feet
Y: 641601.7000 feet
True to Grid: (convergence) -0.449114 degrees
Magnetic to Grid: 7.092648 degrees

To Convert a Magnetic Dir. to a GRID dir. Add 7.092648 Degs.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Field Copy

5995
3995
19

Mon Nov 21 13:27:31 2011

Coordinates

Latitude: 32.761107 N (32 deg. 45 min. 39.9867 sec.)
Longitude: 103.503431 W (-103 deg. 30 min. 12.3530 sec.)
Elevation: 3995.00 feet.
Calculation Date: Nov/21/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.6847 degrees
Total Magnetic Field: 0.48900 gauss
Magnetic Declination: 7.539734 degrees
Horizontal Intensity: 0.239421 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.539734 Degss

Transverse Mercator Grid Calculations NAD27

Grid System: Transverse Mercator: new mexico east
Ellipsoid: Clarke 1866
X: 755121.2000 feet
Y: 641601.7000 feet
True to Grid: (convergence) -0.449114 degrees
Magnetic to Grid: 7.090621 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.090621 Degs.