

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
June 19, 2008

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. <u>30-025-40339</u>
5. Indicate Type of Lease ☒ STATE ☐ FEE ☐ Fed
6. State Oil & Gas Lease No. NMLC-060199B
7. Lease Name or Unit Agreement Name Brook Federal
8. Well Number <u>4</u>
9. OGRID Number 013837
10. Pool Name or Wildcat WC-025 G-06 S173230A; Wolfcamp
11. Elevation (Show whether DR, RKB, RT, GR etc.) 3907' GR

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR, USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Mack Energy Corporation

3. Address of Operator
P.O. Box 960 Artesia, NM 88210

4. Well Location
Unit Letter A 750 feet from the North line and 1120 feet from the East line
Section 30 Township 17S Range 32E NMPM County Lea

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: Correcting Pool Name & Code ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Mack Energy Corporation is requesting the Brook Federal #4 be placed in the WC-025 G-06 S173230A; Wolfcamp pool.

See attached Directional Survey for correct BHL footages:

988 FNL & 995 FEL
508 1005

OPER. OGRID NO. 13837
PROPERTY NO. 38762
POOL CODE 98039 ★
EFF. DATE 06/13/12
API NO. 30-025-40339

HOBBS OCD

AUG 05 2013

RECEIVED

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Deana Weaver TITLE Production Clerk

DATE 8.2.13

Type or print name Deana Weaver

E-mail address: dweaver@mec.com

PHONE: (575)748-1288

For State Use Only

Petroleum Engineer

APPROVED BY: [Signature]

TITLE

DATE

AUG 06 2013

Conditions of Approval (if any):

AUG 06 2013

Pathfinder

6213 WCR, 112
Midland, Texas, 79706
Tel. (432) 687-1647
Fax (432) 687-1544



April 5, 2012

HOEBS OCD

Mack Energy
P.O. Box 960
Artesia, NM 88211

AUG 05 2013

RE: Mack Energy
Brook Federal #4
Lea County, NM
RIG: Silver Oak 2
FIELD: Maljamar-Yeso West
PES FILE NO.: 12MLD0170

RECEIVED

Dear Sir:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA

- 1 – Original survey report
- 2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 687-1647

Sincerely,

JUAN ALCOCER
M/LWD Service Coordinator
PathFinder Energy Services

SCANNED



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

MACK ENERGY

BROOK FEDERAL #4

LEA COUNTY, NEW MEXICO

HOBBS OCD

AUG 05 2013

RECEIVED

PREPARED BY: JUAN ALCOCER

SCANNED

Pathfinder

6213 WCR, 112
Midland, Texas. 79706
Tel. (432)687-1647
Fax (432)687-1544



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) HUEY SANDIFER
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 4-16-12 TO 5-06-12
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
BROOK FEDERAL #4
LEA COUNTY, NM
RIG: SILVER OAK 2

9. SURVEY CERTIFIED FROM: 780 TO 9,835 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 269.10 FEET ON A BEARING OF 152.29 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 9,937 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


JUAN ALCOCER
M/LWD SERVICE COORDINATOR

SCANNED

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 04/15/2012
Date Completed: 05/06/2012

MACK ENERGY CORPORATION
BROOK FEDERAL #4 / API# 30-025-40339
LEA COUNTY, NM
Rig: Silver Oak 2
PathFinder Office Supervisor: Juan Alcocer
PathFinder Field Engineers: Cody Bundick
Huey Sandifer

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.48.38.6036 N LON: 103.48.1.1984 W
GRID Reference: NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 663758.0000 Y: 659064.9000
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.34° EAST TO GRID
Vertical Section Plane: 151.26
Survey Vert. Reference: 17.50' Rotary Table To Ground
Altitude: 3907.00' Ground To MSL

Measured Depth	9937.00	(feet)
Inclination	3.17	(deg)
Azimuth	250.38	(deg)
True Vertical Depth	9920.52	(feet)
Vertical Section	269.06	(feet)
Survey X cord	663883.06	(feet)
Survey Y cord	658826.54	(feet)
Survey Lat	32.81006635 N	(deg)
Survey Lon	103.79992978 W	(deg)
Rectangular Corr. N/S	238.25 S	(feet)
Rectangular Corr. E/W	125.11 E	(feet)
Closure Distance	269.10	(feet)
Direction of Closure	152.29	(deg)
Dogleg Severity	0.00	(deg/100ft)

SCANNED

PathFinder Energy Services, Inc.

Survey Report

Page 01/04

Tie-in Date: 04/15/2012

Date Completed: 05/06/2012

MACK ENERGY CORPORATION
BROOK FEDERAL #4 / API# 30-025-40339

LEA COUNTY, NM

Rig: Silver Oak 2

PathFinder Office Supervisor: Juan Alcocer

PathFinder Field Engineers: Cody Bundick
Huey Sandifer

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.48.38.6036 N LON: 103.48.1.1984 W

GRID Reference: NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 663758.0000 Y: 659064.9000

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.34° EAST TO GRID

Vertical Section Plane: 151.26

Survey Vert. Reference: 17.50' Rotary Table To Ground

Altitude: 3907.00' Ground To MSL

Survey Calculations by RX4 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 SURVEYS.										
149.00	0.30	34.70	149.00	0.00	-0.17	0.32 N	0.22 E	0.39@	34.66	0.00
285.00	0.50	33.70	285.00	136.00	-0.61	1.10 N	0.75 E	1.33@	34.24	0.15
443.00	0.40	8.70	442.99	158.00	-1.36	2.22 N	1.22 E	2.53@	28.71	0.14
623.00	0.10	13.70	622.99	180.00	-1.98	3.00 N	1.35 E	3.29@	24.25	0.17
**	TIE-IN TO TELEDRIFT SURVEYS AT 733' MD.									
733.00	0.20	101.70	732.99	110.00	-1.92	3.05 N	1.56 E	3.43@	27.09	0.20
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
780.00	0.44	114.40	779.99	47.00	-1.73	2.96 N	1.80 E	3.47@	31.38	0.53
870.00	0.09	342.57	869.99	90.00	-1.52	2.88 N	2.10 E	3.57@	36.04	0.56
965.00	0.09	47.60	964.99	95.00	-1.61	3.00 N	2.13 E	3.68@	35.34	0.10
1156.00	0.18	122.31	1155.99	191.00	-1.38	2.95 N	2.50 E	3.86@	40.27	0.09
1346.00	0.18	204.75	1345.99	190.00	-0.94	2.52 N	2.62 E	3.63@	46.20	0.12
1441.00	0.18	357.51	1440.99	95.00	-0.99	2.53 N	2.55 E	3.59@	45.28	0.37
1632.00	0.97	51.91	1631.98	191.00	-1.52	3.83 N	3.81 E	5.40@	44.90	0.46
1727.00	1.58	57.62	1726.95	95.00	-1.73	5.02 N	5.55 E	7.49@	47.86	0.65
1822.00	1.85	58.50	1821.91	95.00	-1.89	6.53 N	7.97 E	10.30@	50.67	0.29
1867.00	2.20	61.93	1866.88	45.00	-1.92	7.31 N	9.35 E	11.87@	51.96	0.82
1949.00	1.32	61.14	1948.84	82.00	-1.90	8.51 N	11.56 E	14.36@	53.65	1.07
2077.00	1.14	40.75	2076.81	128.00	-2.35	10.18 N	13.69 E	17.06@	53.34	0.37
2187.00	1.32	42.86	2186.79	110.00	-3.13	11.94 N	15.26 E	19.38@	51.96	0.17
2282.00	0.97	192.89	2281.78	95.00	-2.88	11.96 N	15.83 E	19.84@	52.92	2.33
2346.00	2.02	158.96	2345.76	64.00	-1.35	10.38 N	16.11 E	19.16@	57.21	2.08
2409.00	4.04	159.49	2408.67	63.00	1.94	7.26 N	17.29 E	18.75@	67.21	3.21
2473.00	5.89	155.09	2472.42	64.00	7.45	2.17 N	19.46 E	19.58@	83.63	2.95

SCANNED

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY CORPORATION
 BROOK FEDERAL #4 / API# 30-025-40339
 LEA COUNTY, NM
 RIG: Silver Oak 2

Page 02/04

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)
2568.00	7.12	152.90	2566.81	95.00	18.20	7.49 S	24.20 E	25.33@	107.20	1.32
2663.00	5.63	152.37	2661.22	95.00	28.74	16.86 S	29.04 E	33.58@	120.14	1.57
2759.00	6.24	152.19	2756.71	96.00	38.67	25.65 S	33.66 E	42.31@	127.31	0.64
2853.00	4.57	145.60	2850.29	94.00	47.50	33.25 S	38.16 E	50.61@	131.07	1.89
2917.00	5.45	148.41	2914.04	64.00	53.08	37.95 S	41.19 E	56.00@	132.65	1.43
2980.00	6.33	147.01	2976.71	63.00	59.53	43.41 S	44.65 E	62.27@	134.19	1.41
3044.00	7.65	155.09	3040.23	64.00	67.30	50.23 S	48.36 E	69.73@	136.09	2.57
3139.00	6.95	152.99	3134.46	95.00	79.35	61.09 S	53.64 E	81.29@	138.72	0.79
3234.00	6.24	152.63	3228.83	95.00	90.26	70.79 S	58.62 E	91.91@	140.37	0.75
3329.00	7.21	157.47	3323.18	95.00	101.35	80.89 S	63.28 E	102.70@	141.96	1.18
3425.00	6.86	153.78	3418.46	96.00	113.06	91.59 S	68.12 E	114.15@	143.36	0.60
3520.00	6.42	156.06	3512.82	95.00	124.03	101.54 S	72.78 E	124.93@	144.37	0.54
3615.00	6.42	150.08	3607.22	95.00	134.63	111.00 S	77.59 E	135.42@	145.05	0.70
3710.00	6.16	148.68	3701.65	95.00	145.03	119.95 S	82.88 E	145.80@	145.36	0.32
3806.00	6.42	147.36	3797.07	96.00	155.53	128.87 S	88.46 E	156.31@	145.53	0.31
3901.00	5.89	144.46	3891.53	95.00	165.67	137.31 S	94.16 E	166.49@	145.56	0.65
3996.00	7.39	153.95	3985.89	95.00	176.61	146.77 S	99.67 E	177.41@	145.82	1.95
4092.00	7.30	154.65	4081.10	96.00	188.87	157.83 S	104.99 E	189.56@	146.37	0.13
4187.00	7.12	155.27	4175.35	95.00	200.77	168.63 S	110.04 E	201.36@	146.87	0.21
4282.00	7.30	168.37	4269.61	95.00	212.41	179.89 S	113.72 E	212.82@	147.70	1.74
4377.00	7.83	166.52	4363.78	95.00	224.42	192.09 S	116.45 E	224.63@	148.78	0.61
4472.00	7.83	167.22	4457.89	95.00	236.89	204.70 S	119.39 E	236.97@	149.75	0.10
4567.00	5.45	165.11	4552.25	95.00	247.49	215.37 S	121.98 E	247.51@	150.47	2.52
4662.00	5.63	164.15	4646.81	95.00	256.41	224.21 S	124.41 E	256.42@	150.98	0.21
4757.00	3.87	150.35	4741.48	95.00	264.16	231.48 S	127.27 E	264.16@	151.20	2.20
4852.00	2.20	146.39	4836.34	95.00	269.18	235.79 S	129.86 E	269.18@	151.16	1.77
4947.00	0.09	145.51	4931.32	95.00	271.07	237.37 S	130.92 E	271.08@	151.12	2.22

SCANNED

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY CORPORATION
BROOK FEDERAL #4 / API# 30-025-40339
LEA COUNTY, NM
RIG:Silver Oak 2

Page 03/04

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)
5042.00	0.35	159.31	5026.32	95.00	271.44	237.70 S	131.06 E	271.44@	151.13	0.28
5138.00	0.26	226.81	5122.32	96.00	271.78	238.12 S	131.01 E	271.78@	151.18	0.36
5328.00	0.35	144.53	5312.31	190.00	272.46	238.89 S	131.03 E	272.46@	151.26	0.21
5519.00	0.44	109.23	5503.31	191.00	273.59	239.61 S	132.06 E	273.59@	151.14	0.13
5709.00	0.62	145.78	5693.30	190.00	275.15	240.70 S	133.33 E	275.16@	151.02	0.20
5900.00	0.79	141.58	5884.29	191.00	277.48	242.58 S	134.73 E	277.48@	150.95	0.09
6090.00	0.88	141.80	6074.27	190.00	280.21	244.76 S	136.44 E	280.22@	150.86	0.05
6280.00	0.44	69.81	6264.26	190.00	281.76	245.65 S	138.03 E	281.77@	150.67	0.45
6471.00	0.44	22.77	6455.25	191.00	281.41	244.72 S	139.00 E	281.44@	150.40	0.18
6661.00	1.76	22.51	6645.21	190.00	279.13	241.35 S	140.40 E	279.22@	149.81	0.70
6756.00	0.26	52.25	6740.19	95.00	278.18	239.87 S	141.13 E	278.31@	149.53	1.62
6852.00	0.35	323.86	6836.19	96.00	277.86	239.50 S	141.13 E	277.99@	149.49	0.45
6946.00	0.35	355.57	6930.19	94.00	277.31	238.99 S	140.94 E	277.45@	149.47	0.20
7039.00	0.18	8.14	7023.19	93.00	276.94	238.56 S	140.94 E	277.08@	149.43	0.19
7137.00	0.18	15.79	7121.19	98.00	276.70	238.26 S	141.00 E	276.85@	149.38	0.02
7232.00	0.35	341.60	7216.19	95.00	276.31	237.84 S	140.95 E	276.47@	149.35	0.24
7327.00	0.44	320.59	7311.19	95.00	275.67	237.28 S	140.63 E	275.82@	149.35	0.18
7485.00	0.79	323.05	7469.18	158.00	273.99	235.94 S	139.59 E	274.14@	149.39	0.22
7580.00	1.23	338.43	7564.16	95.00	272.33	234.47 S	138.82 E	272.48@	149.37	0.54
7676.00	0.79	321.56	7660.15	96.00	270.66	232.99 S	138.03 E	270.81@	149.36	0.55
7768.00	1.06	309.78	7752.14	92.00	269.24	231.95 S	136.98 E	269.38@	149.44	0.36
7928.00	1.14	3.31	7912.11	160.00	266.52	229.42 S	135.93 E	266.66@	149.35	0.62
8119.00	1.23	9.72	8103.07	191.00	263.30	225.50 S	136.39 E	263.54@	148.83	0.08
8214.00	1.32	12.89	8198.05	95.00	261.68	223.43 S	136.81 E	261.98@	148.52	0.12
8311.00	0.44	8.93	8295.03	97.00	260.55	221.97 S	137.11 E	260.90@	148.30	0.91
8405.00	0.70	16.75	8389.03	94.00	259.87	221.06 S	137.33 E	260.25@	148.15	0.29
8501.00	1.14	22.99	8485.02	96.00	258.86	219.62 S	137.88 E	259.31@	147.88	0.47

SCANNED

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY CORPORATION
 BROOK FEDERAL #4 / API# 30-025-40339
 LEA COUNTY, NM
 RIG: Silver Oak 2

Page 04/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS (dg/100ft)
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/100ft)
8596.00	0.35	113.87	8580.01	95.00	258.51	218.87 S	138.51 E	259.02@	147.67	1.26
8691.00	1.14	176.01	8675.00	95.00	259.60	219.93 S	138.84 E	260.09@	147.74	1.08
8786.00	1.06	184.19	8769.99	95.00	261.19	221.75 S	138.84 E	261.63@	147.95	0.19
8882.00	0.88	176.10	8865.97	96.00	262.61	223.37 S	138.83 E	263.00@	148.14	0.24
8977.00	0.97	166.78	8960.96	95.00	264.04	224.88 S	139.06 E	264.41@	148.27	0.18
9073.00	1.14	175.75	9056.94	96.00	265.70	226.63 S	139.32 E	266.02@	148.42	0.25
9168.00	1.32	183.31	9151.92	95.00	267.48	228.66 S	139.32 E	267.76@	148.65	0.25
9263.00	0.79	156.15	9246.90	95.00	269.06	230.35 S	139.53 E	269.31@	148.80	0.75
9358.00	0.70	162.21	9341.90	95.00	270.29	231.50 S	139.97 E	270.53@	148.84	0.13
9453.00	0.44	175.74	9436.89	95.00	271.19	232.42 S	140.17 E	271.42@	148.91	0.31
9549.00	0.70	238.29	9532.89	96.00	271.55	233.10 S	139.70 E	271.75@	149.06	0.66
9644.00	0.97	271.88	9627.88	95.00	271.17	233.37 S	138.40 E	271.33@	149.33	0.58
9739.00	3.08	245.63	9722.82	95.00	270.57	234.40 S	135.28 E	270.63@	150.01	2.37
9835.00	3.17	250.38	9818.67	96.00	269.95	236.36 S	130.43 E	269.95@	151.11	0.28
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 9937'MD.										
9937.00	3.17	250.38	9920.52	102.00	269.06	238.25 S	125.11 E	269.10@	152.29	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.

SCANNED