

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other in-
struction on
reverse side)FOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL:

OIL WELL ☐ GAS WELL ☒ DRY ☐ Other ☐

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other ☐

2. NAME OF OPERATOR

Mack Energy Corporation

3. ADDRESS AND TELEPHONE NO.

P.O. Box 960, Artesia, NM 88211-0960

(505) 748-1288

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface

660 FSL & 1980 FEL

At top prod. interval reported below

1510 FSL & 1957 FEL

At total depth

671 FNL & 1994 FEL

14. PERMIT NO.

DATE ISSUED

12. COUNTY OR
PARISH
Eddy13. STATE
NM15. DATE SPUDDED
11/25/0616. DATE T.D. REACHED
12/24/0617. DATE COMPL. (Ready to prod.)
2/1/0718. ELEVATIONS (DF, RKB, RT, GR, ETC.)*
3910' RKB19. ELEV. CASING HEAD
3894' GR20. TOTAL DEPTH, MD & TVD
838721. PLUG, BACK T.D., MD & TVD
837122. IF MULTIPLE COMPL.,
HOW MANY*23. INTERVALS
DRILLED BY
→ROTARY TOOLS
Yes

CABLE TOOLS

24. PRODUCING INTERVAL (S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*

5275-8194', Wolfcamp

25. WAS DIRECTIONAL
SURVEY MADE

Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN

Gamma Ray, Neutron, Density, Lateralog, Spectral Gamma Ray

27. WAS WELL CORED

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB/FT	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8, H-40	48	475	17 1/2	500sx	None
9 5/8, J-55	36	1481	12 1/4	800sx	None
5 1/2, L-80	17	8387	7 7/8	2100sx	None

29. LINER RECORD

SIZE	T O P (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8	4250	4250

31. PERFORATION RECORD (Interval, size and number)

5275-8194', .41, 186

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5275-8194'	See 3160-5 for detail

33. PRODUCTION

DATE FIRST PRODUCTION 2/20/07		PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) Flowing				WELL STATUS (Producing or shut-in) Shut-in	
DATE OF TEST 3/3/07	HOURS TESTED 24 hours	CHOKE SIZE	PROD'N FOR TEST PERIOD →	OIL-BBL. 0	GAS-MCF. 596	WATER-BBL. 21	GAS-OIL RATIO 0
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL-BBL. 0	GAS-MCF. 596	WATER-BBL. 21	OIL GRAVITY AP. CORR.	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold

35. LIST OF ATTACHMENTS

Deviation Survey and Logs

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

SIGNED

TITLE

Production Clerk

DATE

4/4/07

WESLEY M. INGRAM
PETROLEUM ENGINEER

*(See Instructions and spaces for Additional Data on Reverse Side)

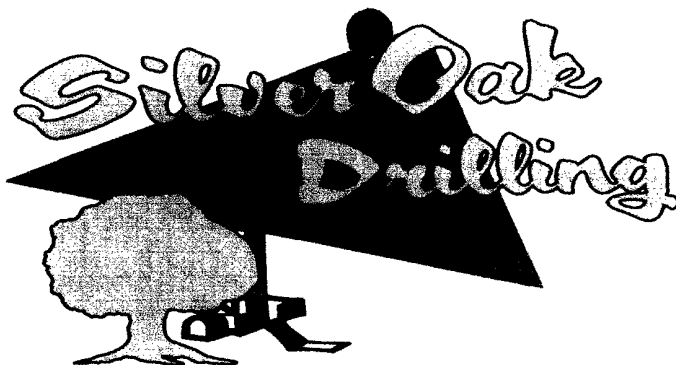
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES- (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38.

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Wolfcamp	5275	8194		Glorietta	1732	
				Tubb	3046	
				Abo	3712	
				Wolfcamp	4770	



PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

December 29, 2006

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

RE: Pecos Federal #1
660' FSL & 980' FEL
Sec. 12, T18S, R23E
Eddy County, New Mexico

Dear Sir,

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

DEPTH	DEVIATION	DEPTH	DEVIATION
189'	1°	1221'	2 3/4°
435'	1°	1360'	2°
703'	5 1/2°	1760'	2 1/4°
762'	5°	2055'	1°
822'	4 3/4°	2555'	3/4°
882'	4 1/2°	2977'	1°
974'	4°	3467'	3/4°
1035'	3°	3949'	3/4°
1096'	3°	4441'	2°
1158'	2 3/4°		

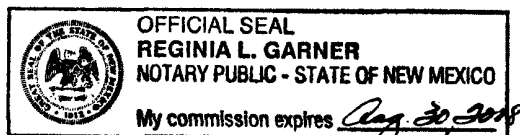
Thereafter, the well was drilled directionally and Pathfinder will supply that information.

Very truly yours,

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 29th day of December, 2006.

Notary Public



Scientific Drilling

MACK ENERGY

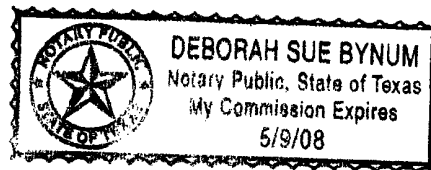
Field: Penasco
Site: Eddy County, NM
Well: Pecos Federal #1
Wellpath: VH - Job #32K12061007
Survey: 12/12/06

This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*R. W. Harts*..... Company Representative

Notorized this date 11th of January, 2007.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: MACK ENERGY
Field: Penasco
Site: Eddy County, NM
Well: Pecos Federal #1
Wellpath: VH - Job #32K12061007

Date: 01/10/2007 Time: 16:18:04 Page: 1
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,24.43Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 12/12/06 Start Date: 12/12/2006
Company: Scientific Drilling Internatio Engineer: Madrid w/P&M
Tool: Keeper;Keeper Gyro Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ChD ft	ChA deg
0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.56	27.36	100.00	0.49	0.43	0.22	0.56	0.49	27.36
200.00	1.08	15.63	199.99	1.91	1.78	0.70	0.54	1.91	21.60
300.00	2.13	16.22	299.95	4.68	4.47	1.48	1.05	4.71	18.28
400.00	3.80	13.41	399.81	9.77	9.48	2.76	1.68	9.87	16.26
500.00	5.10	15.22	499.51	17.41	16.99	4.70	1.31	17.63	15.46
600.00	5.68	20.69	599.06	26.74	25.91	7.61	0.77	27.00	16.38
700.00	5.67	20.90	698.57	36.60	35.15	11.13	0.02	36.87	17.56
800.00	5.07	20.47	798.13	45.94	43.91	14.43	0.60	46.22	18.20
900.00	4.38	20.63	897.79	54.16	51.62	17.32	0.69	54.45	18.55
1000.00	3.68	20.62	997.55	61.17	58.20	19.80	0.70	61.47	18.79
1100.00	2.97	20.52	1097.38	66.96	63.63	21.84	0.71	67.27	18.94
1200.00	2.39	16.49	1197.27	71.61	68.05	23.34	0.61	71.94	18.93
1300.00	2.41	17.26	1297.18	75.76	72.06	24.55	0.04	76.13	18.82
1400.00	2.30	17.92	1397.10	79.84	75.98	25.79	0.11	80.24	18.75
1500.00	2.31	21.15	1497.01	83.85	79.76	27.14	0.13	84.26	18.79
1600.00	2.45	21.01	1596.93	87.99	83.64	28.63	0.14	88.40	18.90
1700.00	2.32	17.32	1696.84	92.13	87.57	30.00	0.20	92.56	18.91
1800.00	1.79	23.94	1796.78	95.71	90.93	31.24	0.58	96.14	18.96
1900.00	1.37	28.22	1896.74	98.46	93.41	32.44	0.44	98.88	19.15
2000.00	1.05	29.62	1996.72	100.57	95.26	33.45	0.32	100.96	19.35
2100.00	0.98	30.73	2096.70	102.33	96.79	34.34	0.07	102.70	19.54
2200.00	0.73	29.39	2196.69	103.81	98.08	35.09	0.25	104.17	19.69
2300.00	0.73	21.69	2296.68	105.08	99.23	35.64	0.10	105.43	19.76
2400.00	0.78	14.79	2396.67	106.39	100.48	36.05	0.10	106.75	19.74
2500.00	0.77	18.22	2496.66	107.73	101.77	36.44	0.05	108.10	19.70
2600.00	0.75	9.16	2596.66	109.03	103.06	36.75	0.12	109.41	19.63
2700.00	0.83	15.96	2696.65	110.38	104.40	37.05	0.12	110.78	19.54
2800.00	0.72	8.72	2796.64	111.70	105.72	37.35	0.15	112.12	19.46
2900.00	0.56	346.15	2896.63	112.69	106.81	37.33	0.30	113.15	19.26
3000.00	0.54	6.85	2996.63	113.52	107.75	37.26	0.20	114.02	19.08
3100.00	0.73	350.84	3096.62	114.50	108.85	37.22	0.26	115.04	18.88
3200.00	0.43	338.56	3196.61	115.29	109.83	36.98	0.32	115.89	18.61
3300.00	0.47	319.61	3296.61	115.73	110.49	36.58	0.15	116.39	18.32
3400.00	0.52	322.24	3396.61	116.11	111.16	36.03	0.05	116.86	17.96
3500.00	0.61	322.37	3496.60	116.57	111.94	35.43	0.09	117.42	17.56
3600.00	0.39	332.70	3596.60	117.03	112.67	34.95	0.24	117.96	17.23
3700.00	0.41	355.40	3696.60	117.56	113.33	34.77	0.16	118.54	17.05
3800.00	0.43	350.21	3796.59	118.18	114.05	34.67	0.04	119.21	16.91
3900.00	0.37	12.84	3896.59	118.81	114.74	34.68	0.17	119.86	16.82
4000.00	0.39	43.07	3996.59	119.45	115.30	34.99	0.20	120.49	16.88
4100.00	0.74	64.13	4096.58	120.27	115.83	35.80	0.40	121.24	17.17
4200.00	1.34	65.51	4196.57	121.64	116.60	37.44	0.60	122.46	17.80
4300.00	1.49	72.99	4296.54	123.39	117.46	39.75	0.24	124.01	18.70
4400.00	1.67	70.00	4396.50	125.27	118.34	42.36	0.20	125.70	19.70
4500.00	1.53	64.22	4496.46	127.31	119.42	44.94	0.21	127.59	20.62
4600.00	1.55	66.85	4596.42	129.34	120.53	47.38	0.07	129.51	21.46
4700.00	1.26	66.65	4696.39	131.15	121.50	49.63	0.29	131.25	22.22
4800.00	1.53	67.00	4796.36	132.95	122.46	51.87	0.27	132.99	22.96



Scientific
Drilling

Scientific Drilling International

Survey Report

Company: MACK ENERGY
Field: Penasco
Site: Eddy County, NM
Well: Pecos Federal #1
Wellpath: VH - Job #32K12061007

Date: 01/10/2007 Time: 16:18:04 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,24.43Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

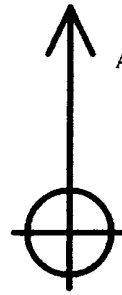
MD ft	Incl deg	Azima deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ChD ft	ChA deg
4900.00	0.97	66.68	4896.34	134.56	123.31	53.88	0.56	134.57	23.60
5000.00	0.79	71.17	4996.33	135.66	123.87	55.31	0.19	135.66	24.06
5092.00	0.84	62.61	5088.32	136.62	124.39	56.51	0.14	136.62	24.43



Scientific
Drilling

Field: Penasco
Site: Eddy County, NM
Well: Pecos Federal #1
Wellpath: VH - Job #32K12061007
Survey: 12/12/06

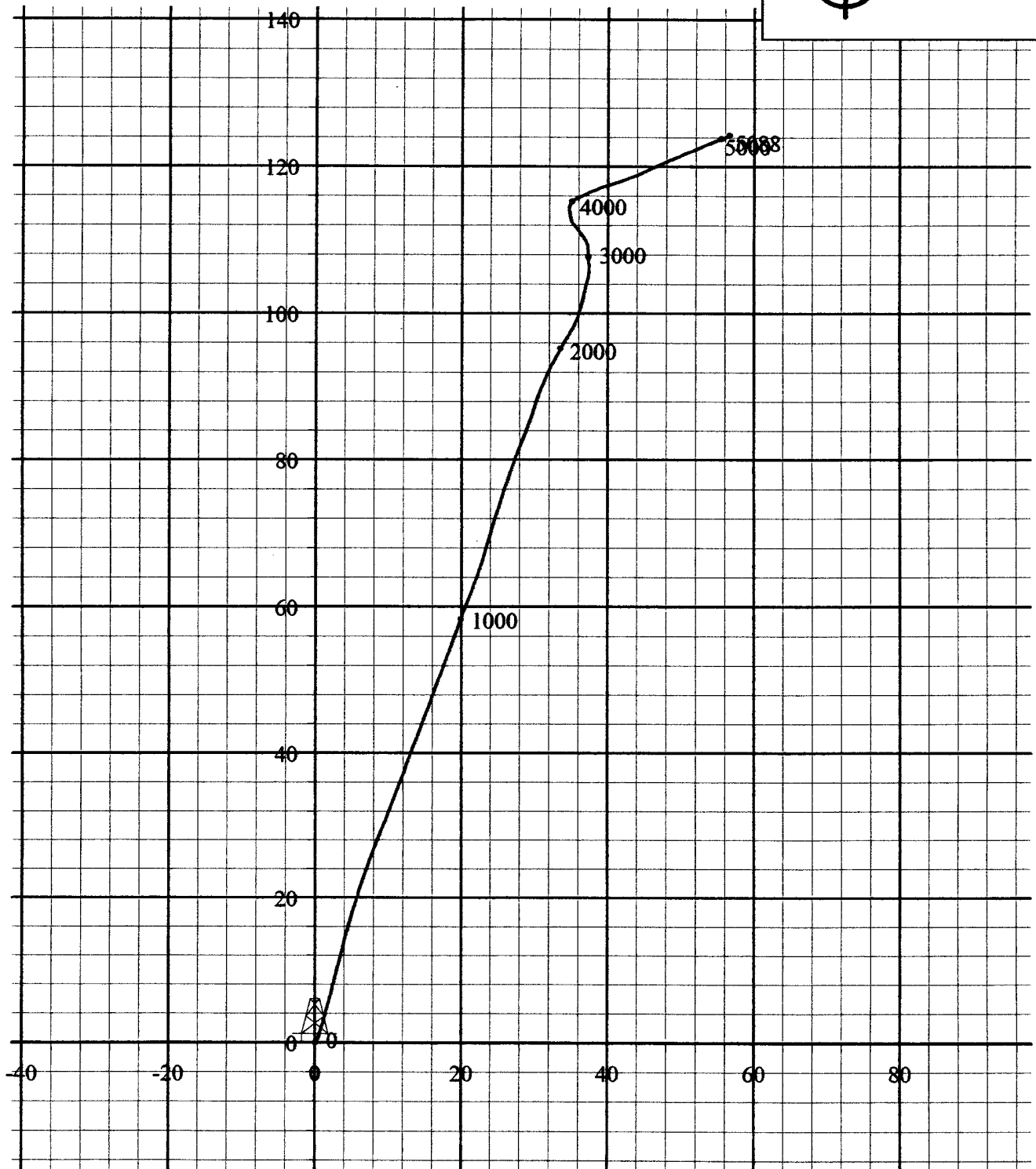
G/T/M



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 01/08/2007
Model: igrf2000

South(-)/North(+) [20ft/in]



West(-)/East(+) [20ft/in]

RECEIVED
APR 03 2007

Record for Survey

Mack Energy Corporation

Pecos Fed #1
Eddy County, New Mexico

Sec. 12, T-18-S, R-23-E
1980' FEL & 660'FSL
API No. 30-015-34075

January 12, 2007



3201 East Loop 250 North
Midland, Texas 79705

January 12, 2007

Phone: 432-687-1647

Fax: 432-687-1544

SURVEY CERTIFICATION SHEET

STATE OF NEW MEXICO
COUNTY OF EDDY

I, Matt Shipp certify that; I am employed by Pathfinder Energy Service; that I did on the days of 12-14-06 to 12-24-06 conduct or supervise the taking of a MWD survey from a depth of 4223 feet to a depth of 8340 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Pathfinder Energy Service; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mack Energy Corporation for the Pecos Federal #1 Well API No. 30-015-34075 in Eddy County, New Mexico and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Pathfinder Energy Service.

A handwritten signature in black ink, appearing to read "Matt Shipp", written over a horizontal line.

Matt Shipp
MWD

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 12/16/2006
Date Completed: 12/16/2006

MAC ENERGY
PECOS FED #1
EDDY County, NEW MEXICO
Rig:SILVER OAK #3
PathFinder Office Supervisor: MARCUS MITCHAM
PathFinder Field Engineers:MATT SHIPP
SHALON HEARD

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.45.25.3512 N LON:104.38.33.4572 W
GRID Reference:NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 404916.5204 Y: 639261.6818
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.80° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 17.00' Kelly Bushing To Ground
Altitude:3894.00' Ground To MSL

Measured Depth	8387.00	(feet)
Inclination	89.96	(deg)
Azimuth	0.01	(deg)
True Vertical Depth	4789.18	(feet)
Vertical Section	3949.87	(feet)
Survey X cord	404902.65	(feet)
Survey Y cord	643211.55	(feet)
Survey Lat	32.76789896 N	(deg)
Survey Lon	104.64270965 W	(deg)
Rectangular Corr. N/S	3949.87 N	(feet)
Rectangular Corr. E/W	13.87 W	(feet)
Closure Distance	3949.89	(feet)
Direction of Closure	359.80	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

MAC ENERGY
 PECOS FED #1
 EDDY County, NEW MEXICO
 Rig:SILVER OAK #3
 PathFinder Office Supervisor: MARCUS MITCHAM
 PathFinder Field Engineers: MATT SHIPP
 SHALON HEARD

Survey Horiz. Reference:WELLHEAD
 Ref Coordinates: LAT:32.45.25.3512 N LON:104.38.33.4572 W
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 Ref GRID Coord: X: 404916.5204 Y: 639261.6818
 North Aligned To:GRID NORTH
 Total Magnetic Correction: 8.80° EAST TO GRID
 Vertical Section Plane: 0.00
 Survey Vert. Reference: 17.00' Kelly Bushing To Ground
 Altitude:3894.00' Ground To MSL

Survey Calculations by PathCalc v1.95 using Radius of Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Retangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
TIE-IN FROM PREVIOUS GYRO SURVEY.										
4200.00	1.34	65.51	4196.57	0.00	116.60	116.60 N	37.44 E	122.46@	17.80	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
4223.00	1.41	65.58	4219.56	23.00	116.83	116.83 N	37.94 E	122.84@	17.99	0.30
4254.00	1.93	43.43	4250.55	31.00	117.35	117.35 N	38.67 E	123.56@	18.24	2.64
4285.00	5.36	14.43	4281.48	31.00	119.06	119.06 N	39.62 E	125.47@	18.41	12.22
4315.00	9.50	8.36	4311.22	30.00	122.86	122.86 N	40.38 E	129.32@	18.20	14.03
4346.00	12.49	8.10	4341.65	31.00	128.71	128.71 N	41.23 E	135.15@	17.76	9.65
4377.00	15.39	7.66	4371.74	31.00	136.10	136.10 N	42.25 E	142.51@	17.25	9.36
4407.00	19.08	6.78	4400.38	30.00	144.92	144.92 N	43.37 E	151.27@	16.66	12.33
4438.00	23.30	5.64	4429.28	31.00	156.06	156.06 N	44.58 E	162.30@	15.94	13.68
4468.00	26.47	4.58	4456.49	30.00	168.63	168.63 N	45.71 E	174.71@	15.17	10.67
4500.00	29.02	4.14	4484.81	32.00	183.48	183.48 N	46.84 E	189.37@	14.32	7.99
4531.00	32.18	2.74	4511.49	31.00	199.23	199.23 N	47.78 E	204.88@	13.49	10.45
4562.00	35.17	2.21	4537.29	31.00	216.40	216.40 N	48.53 E	221.78@	12.64	9.69
4594.00	37.81	2.30	4563.01	32.00	235.42	235.42 N	49.28 E	240.52@	11.82	8.25
4626.00	40.19	2.03	4587.88	32.00	255.54	255.54 N	50.04 E	260.39@	11.08	7.46
4657.00	43.09	1.24	4611.04	31.00	276.13	276.13 N	50.62 E	280.73@	10.39	9.51
4687.00	45.55	0.63	4632.50	30.00	297.08	297.08 N	50.97 E	301.42@	9.73	8.32
4719.00	48.36	0.54	4654.34	32.00	320.46	320.46 N	51.20 E	324.53@	9.08	8.78
4750.00	51.79	359.84	4674.24	31.00	344.23	344.23 N	51.28 E	348.03@	8.47	11.20
4781.00	54.96	358.78	4692.73	31.00	369.11	369.11 N	50.98 E	372.61@	7.86	10.59
4812.00	57.68	357.99	4709.92	31.00	394.89	394.89 N	50.26 E	398.08@	7.25	9.03
4843.00	60.50	357.73	4725.84	31.00	421.47	421.47 N	49.26 E	424.34@	6.67	9.13

PathFinder Energy Services, Inc.

Survey Report

MAC ENERGY
 PECOS FED #1
 EDDY County, NEW MEXICO
 RIG:SILVER OAK #3

Page 02/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Retangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
4874.00	63.93	356.94	4740.29	31.00	448.86	448.86 N	47.99 E	451.42@	6.10	11.29
4905.00	66.65	356.76	4753.25	31.00	476.98	476.98 N	46.44 E	479.23@	5.56	8.79
4936.00	69.38	356.32	4764.85	31.00	505.67	505.67 N	44.71 E	507.64@	5.05	8.90
4967.00	72.80	356.06	4774.90	31.00	534.92	534.92 N	42.76 E	536.63@	4.57	11.06
4999.00	75.27	355.71	4783.70	32.00	565.61	565.61 N	40.55 E	567.06@	4.10	7.79
5030.00	77.21	355.18	4791.07	31.00	595.62	595.62 N	38.16 E	596.84@	3.67	6.47
5061.00	80.11	355.18	4797.16	31.00	625.91	625.91 N	35.61 E	626.92@	3.26	9.35
5092.00	81.69	355.62	4802.07	31.00	656.42	656.42 N	33.15 E	657.25@	2.89	5.29
5123.00	84.24	356.94	4805.86	31.00	687.11	687.11 N	31.16 E	687.82@	2.60	9.25
5154.00	87.23	357.20	4808.17	31.00	717.98	717.98 N	29.58 E	718.59@	2.36	9.68
5185.00	89.08	356.94	4809.17	31.00	748.93	748.93 N	27.99 E	749.45@	2.14	6.03
5216.00	89.69	357.46	4809.50	31.00	779.89	779.89 N	26.48 E	780.34@	1.94	2.59
5247.00	90.04	357.38	4809.57	31.00	810.86	810.86 N	25.08 E	811.24@	1.77	1.16
5339.00	91.80	359.22	4808.10	92.00	902.80	902.80 N	22.35 E	903.07@	1.42	2.77
5369.00	91.36	359.22	4807.27	30.00	932.78	932.78 N	21.94 E	933.04@	1.35	1.47
5400.00	91.45	359.22	4806.51	31.00	963.77	963.77 N	21.52 E	964.01@	1.28	0.29
5431.00	91.10	359.22	4805.82	31.00	994.76	994.76 N	21.10 E	994.98@	1.22	1.13
5492.00	90.92	359.40	4804.74	61.00	1055.74	1055.74 N	20.37 E	1055.94@	1.11	0.42
5523.00	90.57	359.13	4804.34	31.00	1086.74	1086.74 N	19.97 E	1086.92@	1.05	1.43
5554.00	90.40	359.05	4804.08	31.00	1117.73	1117.73 N	19.48 E	1117.90@	1.00	0.61
5615.00	90.40	358.70	4803.65	61.00	1178.72	1178.72 N	18.28 E	1178.86@	0.89	0.57
5677.00	90.84	359.40	4802.98	62.00	1240.71	1240.71 N	17.25 E	1240.83@	0.80	1.33
5738.00	91.19	359.75	4801.90	61.00	1301.70	1301.70 N	16.80 E	1301.81@	0.74	0.81
5800.00	91.36	359.93	4800.52	62.00	1363.68	1363.68 N	16.63 E	1363.78@	0.70	0.40
5861.00	90.31	358.26	4799.63	61.00	1424.66	1424.66 N	15.66 E	1424.75@	0.63	3.23
5923.00	89.87	357.64	4799.53	62.00	1486.62	1486.62 N	13.44 E	1486.68@	0.52	1.23
5984.00	90.84	358.52	4799.16	61.00	1547.59	1547.59 N	11.40 E	1547.63@	0.42	2.15

PathFinder Energy Services, Inc.

Survey Report

MAC ENERGY
 PECOS FED #1
 EDDY County, NEW MEXICO
 RIG:SILVER OAK #3

Page 03/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Retangular Offsets (ft) (ft)		Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
6046.00	90.48	357.90	4798.44	62.00	1609.55	1609.55 N	9.46 E	1609.58@	0.34	1.16
6107.00	91.45	359.05	4797.42	61.00	1670.52	1670.52 N	7.84 E	1670.54@	0.27	2.47
6169.00	91.54	359.05	4795.80	62.00	1732.49	1732.49 N	6.81 E	1732.50@	0.23	0.15
6230.00	90.75	359.05	4794.58	61.00	1793.47	1793.47 N	5.80 E	1793.48@	0.19	1.30
6292.00	89.96	359.13	4794.19	62.00	1855.46	1855.46 N	4.82 E	1855.47@	0.15	1.28
6353.00	89.52	359.40	4794.47	61.00	1916.45	1916.45 N	4.04 E	1916.46@	0.12	0.85
6415.00	89.16	359.22	4795.19	62.00	1978.45	1978.45 N	3.29 E	1978.45@	0.10	0.65
6476.00	88.81	359.31	4796.27	61.00	2039.43	2039.43 N	2.51 E	2039.43@	0.07	0.59
6538.00	87.85	359.13	4798.07	62.00	2101.40	2101.40 N	1.66 E	2101.40@	0.05	1.58
6599.00	87.67	359.13	4800.46	61.00	2162.34	2162.34 N	0.74 E	2162.34@	0.02	0.30
6661.00	87.05	359.05	4803.31	62.00	2224.27	2224.27 N	0.25 W	2224.27@	359.99	1.01
6723.00	88.29	359.57	4805.83	62.00	2286.21	2286.21 N	0.99 W	2286.21@	359.98	2.17
6785.00	89.87	359.93	4806.83	62.00	2348.20	2348.20 N	1.26 W	2348.20@	359.97	2.61
6848.00	91.28	0.28	4806.20	63.00	2411.20	2411.20 N	1.15 W	2411.20@	359.97	2.31
6910.00	91.36	0.54	4804.77	62.00	2473.18	2473.18 N	0.70 W	2473.18@	359.98	0.44
6972.00	91.19	0.28	4803.39	62.00	2535.16	2535.16 N	0.26 W	2535.16@	359.99	0.50
7034.00	91.19	0.36	4802.10	62.00	2597.15	2597.15 N	0.09 E	2597.15@	0.00	0.13
7096.00	91.10	0.19	4800.86	62.00	2659.14	2659.14 N	0.38 E	2659.14@	0.01	0.31
7190.00	91.19	0.45	4798.98	94.00	2753.11	2753.11 N	0.91 E	2753.12@	0.02	0.29
7283.00	91.28	0.19	4796.98	93.00	2846.09	2846.09 N	1.43 E	2846.09@	0.03	0.30
7376.00	90.75	0.10	4795.33	93.00	2939.08	2939.08 N	1.66 E	2939.08@	0.03	0.58
7470.00	89.52	0.36	4795.11	94.00	3033.07	3033.07 N	2.04 E	3033.07@	0.04	1.34
7563.00	90.40	358.70	4795.18	93.00	3126.07	3126.07 N	1.28 E	3126.07@	0.02	2.02
7657.00	90.75	358.34	4794.23	94.00	3220.03	3220.03 N	1.15 W	3220.03@	359.98	0.53
7750.00	90.31	358.61	4793.37	93.00	3312.99	3312.99 N	3.63 W	3312.99@	359.94	0.56
7843.00	89.87	358.78	4793.23	93.00	3405.97	3405.97 N	5.74 W	3405.97@	359.90	0.51
7937.00	91.01	358.61	4792.50	94.00	3499.94	3499.94 N	7.88 W	3499.95@	359.87	1.23

PathFinder Energy Services, Inc.

Survey Report

MAC ENERGY
PECOS FED #1
EDDY County, NEW MEXICO
RIG:SILVER OAK #3

Page 04/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Retangular Offsets		Closure Dist Dir		DLS (dg/100ft)
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/100ft)
8030.00	90.66	358.87	4791.15	93.00	3592.91	3592.91 N	9.93 W	3592.92@	359.84	0.47
8124.00	90.57	358.96	4790.14	94.00	3686.88	3686.88 N	11.71 W	3686.90@	359.82	0.14
8311.00	90.04	359.75	4789.14	187.00	3873.87	3873.87 N	13.81 W	3873.89@	359.80	0.51
8340.00	89.96	0.01	4789.14	29.00	3902.87	3902.87 N	13.87 W	3902.89@	359.80	0.94
STRAIGHT LINE TO BIT PROJECTION.										
8387.00	89.96	0.01	4789.18	47.00	3949.87	3949.87 N	13.87 W	3949.89@	359.80	0.00

DISTRICT I

1026 N. FRENCH DR., HOHNS, NM 88240

DISTRICT II

1301 W. GRAND AVENUE, 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 Department

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form O-

Revised 12/01

Submit to Appropriate District Office

State Lease - 4 Cts

Fee Lease - 3 Cts

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 96316	Pool Name PENASCO DRAW; WOLFCAMP
Property Code	Property Name PECOS FEDERAL	Well Number 1
OGRID No. 013837	Operator Name MACK ENERGY CORPORATION	Elevation 3894'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	12	18-S	23-E		660	SOUTH	1980	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	12	18S	23E		660	NORTH	1980	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

PROJECT AREA BHL PRODUCING AREA GEODETIC COORDINATES NAD 27 NME Y=639261.7 N X=404916.6 E LAT.=32.757042° N LONG.=104.542627° W	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <u>Jerry W. Sherrell</u> 8/7/06 Signature Date Jerry W. Sherrell Printed Name
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. <u>RONALD J. EIDSON</u> JULY 17, 2006 Date Surveyed JR Signature & Seal of Professional Surveyor <u>Ronald J. Eidson</u> 7/24/06 Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239

OPERATOR'S COPY

Form approved.
Budget Bureau No. 1004-0136
Expires: December 31, 1991

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☐

Gas
Well ☒

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Mack Energy Corporation

3. ADDRESS AND TELEPHONE NO.

P.O. Box 960, Artesia, NM 88211-0960

(505) 748-1288

4. LOCATION OF WELL (Report location clearly and in accordance with any state requirement.)*

At surface

660 FSL & 1980 FEL

At proposed prod. zone

660 FNL & 1980 FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

7 miles southeast of Hope, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

660

16. NO. OF ACRES IN LEASE

1120

17. NO. OF ACRES IN LEASE

TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED
OR APPLIED FOR, ON THIS LEASE, FT.

2640

19. PROPOSED DEPTH

8200

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3894' GR

22. APPROX. DATE WORK WILL START*

9/7/2006

23. PROPOSED CASING AND CEMENTING PROGRAM

ROSWELL CONTROLLED WATER BASIN

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	H-40, 13 3/8	48	450	Circ
12 1/4	J-55, 9 5/8	36	1400	Suff to Circ
7 7/8	J-55, 5 1/2	17	8200	Suff to Circ

Mack Energy proposes to drill to a vertical hole to +/- 4900', drill horizontal appr. 3960' north test the Wolfcamp formation. Run 5 1/2" casing and cement. If non-productive, the well will be plugged and abandoned in a manner consistent with federal regulation. Specific programs as per Onshore Oil and Gas Order #1 are outlined in the following attachments:

1. Surveys

Exhibit #1- Well Location Plat

Exhibit #2- Vicinity Map

Exhibit #3- Location Verification Map

4. Certification

5. Hydrogen Sulfide Drilling Operation Plan

Exhibit #7- H2S Warning Sign

Exhibit #8- H2S Safety Equipment

7. Responsibility Statement

2. Drilling Program

3. Surface Use & Operating Plan

Exhibit #4- One Mile Radius Map

Exhibit #5- Production Facilities Layout

Exhibit #6- Location Layout

6. Blowout Preventers

Exhibit #9- BOPE Schematic

Exhibit #10- Blowout Preventer Requirements

Exhibit #11- Choke Manifold

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATION
ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen/give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Jeff W. Sherrell

TITLE

Production Clerk

DATE

8/7/2006

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

1

16

PATHFINDER

ENERGY SERVICES

DIRECTIONAL SURVEY INFORMATION

Prepared By: MARCUS MITCHAM

Name of Client: MACK ENERGY

Attention: _____

☒ Directional Only Job OR ☐ Logging Job

Name(s) of Persons Performing Surveys:

A) MATT SHIPP D) _____
B) _____ E) _____
C) _____ F) _____

Positions of Said Persons: Surveyors / Field Engineers: Other _____

Date(s) Survey was Performed: From 12/14/2006 To 12/24/2006

Type of Survey Performed: (Specify if other than MWD) _____

IDENTIFICATION OF WELL:

Client:	<u>MACK ENERGY CORPORATION</u>	Rig Name:	<u>SILVER OAK #3</u>
Well No.:	<u>PECOS FEDERAL #1</u>	API No.:	<u>30-015-34075</u>
Location:	<u>EDDY COUNTY</u>	Job No.:	<u>101006047-WT-WT</u>
State:	<u>NEW MEXICO</u>		

TEXAS RAILROAD COMMISSION INFORMATION:

Field: PENASCO DRAW; WOLFCAMP

Abstract No.: N/A
Well Plat Survey Co.: RONALD J. EDISON PROFESSIONAL SURVEYOR

Surveys Performed From 4223 Feet TO 8340 Feet

MMS / ASCII / LAS Diskette Filename: _____

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOW THE WELL TO BE DISPLACED AT 3949.89 FEET ON A BEARING OF 359.8 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT 8387 DEPTH OF 4789 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.