

Submit To Appropriate District Office
State Lease - 5 copies
Fee Lease - 5 copies
District I
1625 N. French Dr., Hobbs, 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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form 10-00
Revised June 10, 2003

WELL API NO.

30-015-34803

5. Indicate Type of Lease

STATE ☒ FEE ☐

State Oil & Gas Lease No. VA2592

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:

OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER ☐

b. Type of Completion:

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

2. Name of Operator

MURCHISON OIL & GAS, INC.

7. Lease Name or Unit Agreement Name

HACKBERRY STATE

3. Address of Operator

1100 MIRA VISTA BLVD., PLANO, TX. 75093-4698

8. Well No.

1

9. Pool name or Wildcat

WILDCAT WOLFCAMP

4. Well Location

Unit Letter O : 660 Feet From The SOUTH Line and 1980 Feet From The EAST Line

Section 17 Township 18-S Range 23-E NMPM County EDDY

10. Date Spudded

10/29/06

11. Date T.D. Reached

12/4/06

12. Date Compl. (Ready to Prod.)

4/3/07

13. Elevations (DF& RKB, RT, GR, etc.)

GL 3995' RKB 4008'

14. Elev. Casinghead

3995'

15. Total Depth

8110'

16. Plug Back T.D.

8069'

17. If Multiple Compl. How Many Zones?

18. Intervals Drilled By

Rotary Tools

ALL

Cable Tools

NONE

19. Producing Interval(s), of this completion - Top, Bottom, Name

WOLFCAMP TOP 4430' TVD 4635' TVD

20. Was Directional Survey Made

YES

21. Type Electric and Other Logs Run

COMPENSATED NEUTRON DENSITY, GR, LATEROLOG

22. Was Well Cored

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	68 #/FT	416'	17-1/2"	365	
9-5/8"	47 & 53 #/FT	1332'	12-1/4"	1080	
5-1/2"	17 #/FT	8110'	7-7/8"	1010	

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-7/8	4665'	N/A

26. Perforation record (interval, size, and number)

4770 - 72' 2" 11 HOLES	6150 - 52' 2" 13 HOLES	SEE
5010 - 12' 2" 12 HOLES	6360 - 62' 2" 14 HOLES	ATTACHMENT
5210 - 12' 2" 13 HOLES	6610 - 12' 2" 11 HOLES	FOR
5410 - 12' 2" 14 HOLES	6810 - 12' 2" 12 HOLES	ADDITIONAL
5730 - 32' 2" 11 HOLES	7010 - 12' 2" 13 HOLES	PERFS

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4770 - 8062	FRAC w/ 16,000# 100 SAND + 35,000# LITE
	PROP + 124,000# 30/70 SAND + 142,000#
	20/40 SAND + 253 TONS CO2

28. PRODUCTION

Date First Production 4/3/07		Production Method (Flowing, gas lift, pumping - Size and type pump) FLOWING			Well Status (Prod. or Shut-in) PRODUCING		
Date of Test 4/3/07	Hours Tested 24	Choke Size 16/64	Prod'n For Test Period	Oil - Bbl 0	Gas - MCF 185	Water - Bbl. 30	Gas - Oil Ratio N/A
Flow Tubing Press. 440	Casing Pressure 470	Calculated 24- Hour Rate	Oil - Bbl. 0	Gas - MCF 185	Water - Bbl. 30	Oil Gravity - API - (Corr.) N/A	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

SOLD

Test Witnessed By

TOMMY FOLSOM

30. List Attachments

COMPENSATED NEUTRON DENSITY, GR, LATEROLOG

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature

Michael S. Daugherty

Printed

Name MICHAEL S. DAUGHERTY

Title V P OPERATIONS

Date 4/5/2007

E-mail Address mdaugherty@jdmfi.com

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefee	T. Madison
T. Queen	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	T. Mancos	T. McCracken
T. San Andres	T. Simpson	T. Gallup	T. Ignacio Otzte
T. Glorieta 1480 TVD	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinebry	T. Gr. Wash	T. Morrison	T.
T. Tubb 2823 TVD	T. Delaware Sand	T. Todilto	T.
T. Drinkard	T. Bone Springs	T. Entrada	T.
T. Abo 3466 TVD	T.	T. Wingate	T.
T. Wolfcamp 4430 TVD	T.	T. Chinle	T.
T. Penn	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from.....4430' MD.....to.....8110' MD.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.....

No. 2, from to feet.....

No. 3, from to feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology
2160	3400	1240	DOLOMITE & SAND
3400	4400	1000	DOLOMITE, ANHYDRITE & SHALE
4400	4630	230	DOLOMITE, LIME & SHALE

Murchison Oil & Gas, Inc.
Hackberry St #1
Eddy Co., NM.

Form C-105
Attachment

26. Additional Perforation record:

7245 - 47'	2'	14 HOLES
7460 - 62'	2'	11 HOLES
7550 - 53'	3'	15 HOLES
7650 - 52'	2'	12 HOLES
7760 - 63'	3'	17 HOLES
7860 - 62'	2'	13 HOLES
7960 - 63'	3'	18 HOLES
8060 - 62'	2'	14 HOLES

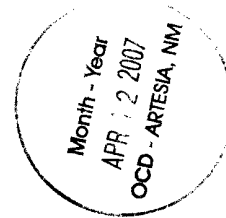
OPERATOR
WELL/LEASE
COUNTY

Murchison Oil & Gas, Inc.
Hackberry State #1
Eddy, NM

510-5078

STATE OF NEW MEXICO
DEVIATION REPORT

207	1.25
313	0.50
612	0.75
840	1.25
986	0.75
1,304	1.00
1,482	0.50
1,960	1.25
2,278	2.25
2,373	2.00
2,469	1.50
2,723	1.50
2,978	1.75
3,232	1.50
3,520	1.00
3,774	1.75
3,996	0.75
4,282	1.00
4,600	1.25



BY: Steve Moore

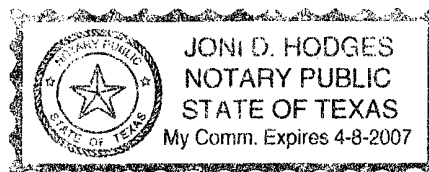
STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Moore on behalf of Patterson-UTI Drilling Company LP, LLLP.

December 8, 2006, by Steve

Joni D. Hodges
Notary Public for Midland County, Texas
My Commission Expires: 4/08/07



Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas	Date: 1/8/2007	Time: 13:21:20	Page: 1
Field: Hackberry State	Co-ordinate(NE) Reference:	Well: Hackberry State #1, Grid North	
Site: Hackberry State #1	Vertical (TVD) Reference:	System: Mean Sea Level	
Well: Hackberry State #1	Section (VS) Reference:	Well (0.00N, 0.00E, 1.68Azi)	
Wellpath: Original Hole	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Field: Hackberry State
Section 17; T18S; R23E

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: igrf2005

Month - Year
APR 12 2007
OCD - ARTESIA, NM

Site: Hackberry State #1

Section 17; T18S; R23E

Site Position:	Northing:	ft	Latitude:	
From: Lease Line	Easting:	ft	Longitude:	
Position Uncertainty: 0.00 ft			North Reference:	Grid
Ground Level: 3996.00 ft			Grid Convergence:	-0.20 deg

Well: Hackberry State #1

Slot Name:

Well Position:	+N/-S	0.00 ft	Northing:	634028.46 ft	Latitude:	32 44 32.891 N
	+E/-W	0.00 ft	Easting:	383865.97 ft	Longitude:	104 42 39.743 W
Position Uncertainty:		0.00 ft				

Wellpath: Original Hole

Drilled From: Surface

Current Datum: Mean Sea Level	Height	0.00 ft	Tie-on Depth:	0.00 ft
Magnetic Data: 10/26/2006			Above System Datum:	Mean Sea Level
Field Strength: 49302 nT			Declination:	8.68 deg
Vertical Section: Depth From (TVD)	+N/-S		Mag Dip Angle:	60.58 deg
ft	ft		+E/-W	Direction
			ft	deg
0.00	0.00		0.00	1.68

Survey: Pathfinder MWD Surveys

Start Date: 11/21/2006

Company: Pathfinder Energy

Engineer: Midwellplan

Tool:

Tied-to: From: Definitive Path

Survey: Pathfinder MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3700.00	1.26	149.25	3699.04	-57.34	-9.64	-57.60	0.00	0.00	0.00	Tie In
3742.00	1.49	151.11	3741.02	-58.21	-9.14	-58.46	0.56	0.55	4.42	
3770.98	0.84	124.36	3770.00	-58.66	-8.79	-58.90	2.87	-2.25	-92.29	KOP @ 3771' MD / 3961' TV
3774.00	0.79	119.29	3773.02	-58.69	-8.75	-58.92	2.87	-1.60	-168.02	
3805.00	2.02	31.05	3804.01	-58.32	-8.28	-58.54	6.92	3.97	-284.65	
3837.00	5.89	17.78	3835.93	-56.27	-7.49	-56.47	12.35	12.09	-41.47	
3869.00	10.46	14.35	3867.59	-51.89	-6.27	-52.06	14.36	14.28	-10.72	
3901.00	14.77	13.56	3898.81	-45.11	-4.59	-45.23	13.48	13.47	-2.47	
3933.00	18.11	17.52	3929.50	-36.40	-2.14	-36.45	11.00	10.44	12.37	
3965.00	21.28	21.39	3959.63	-26.25	1.48	-26.19	10.71	9.91	12.09	
3997.00	24.53	23.41	3989.10	-14.74	6.24	-14.55	10.45	10.16	6.31	
4261.00	44.85	17.74	4205.09	125.73	56.92	127.34	7.79	7.70	-2.15	
4293.00	46.60	14.79	4227.43	147.72	63.33	149.51	8.57	5.47	-9.22	
4325.00	49.24	13.30	4248.88	170.76	69.09	172.71	8.94	8.25	-4.66	
4357.00	51.62	12.42	4269.26	194.80	74.57	196.91	7.73	7.44	-2.75	
4388.00	53.64	11.63	4288.08	218.90	79.70	221.15	6.82	6.52	-2.55	
4420.00	55.84	10.93	4306.55	244.52	84.81	246.91	7.10	6.87	-2.19	
4452.00	57.68	10.57	4324.09	270.81	89.80	273.34	5.83	5.75	-1.12	
4484.00	59.97	9.78	4340.65	297.76	94.64	300.41	7.46	7.16	-2.47	
4515.00	62.43	8.20	4355.59	324.59	98.88	327.36	9.11	7.94	-5.10	
4547.00	65.42	7.23	4369.65	353.07	102.73	355.94	9.73	9.34	-3.03	
4579.00	68.59	6.97	4382.15	382.30	106.37	385.26	9.93	9.91	-0.81	
4611.00	71.31	6.62	4393.12	412.14	109.93	415.20	8.56	8.50	-1.09	
4642.00	74.74	5.57	4402.17	441.62	113.07	444.75	11.53	11.06	-3.39	

Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas	Date: 1/8/2007	Time: 13:21:20	Page: 2
Field: Hackberry State	Co-ordinate(NE) Reference:	Well: Hackberry State #1, Grid North	
Site: Hackberry State #1	Vertical (TVD) Reference:	System: Mean Sea Level	
Well: Hackberry State #1	Section (VS) Reference:	Well (0.00N, 0.00E, 1.68Azi)	
Wellpath: Original Hole	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: Pathfinder MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
4674.00	78.52	4.16	4409.57	472.64	115.71	475.83	12.57	11.81	-4.41	
4706.00	81.34	4.07	4415.16	504.06	117.97	507.31	8.82	8.81	-0.28	
4738.00	83.27	4.33	4419.45	535.68	120.29	538.99	6.08	6.03	0.81	
4768.00	84.50	4.70	4422.64	565.42	122.64	568.78	4.28	4.10	1.23	
4770.00	84.50	4.07	4422.83	567.40	122.79	570.77	31.35	0.00	-31.50	
4799.00	86.70	3.10	4425.06	596.26	124.60	599.67	8.29	7.59	-3.34	
4801.59	86.96	3.04	4425.20	598.84	124.74	602.25	10.14	9.91	-2.19	EOC @ 4802' MD / 4430' TVD Build 3° Turn -3
4802.59	87.06	3.02	4425.25	599.84	124.79	603.25	10.14	9.91	-2.19	
4831.00	89.87	2.40	4426.02	628.21	126.13	631.64	10.14	9.91	-2.19	
4862.00	92.95	1.87	4425.25	659.17	127.29	662.63	10.08	9.94	-1.71	
4894.00	91.89	1.78	4423.90	691.13	128.31	694.60	3.32	-3.31	-0.28	
4926.00	90.84	0.12	4423.14	723.11	128.84	726.58	6.14	-3.28	-5.19	
4958.00	90.66	359.85	4422.72	755.11	128.83	758.57	1.01	-0.56	-0.84	
4990.00	90.04	359.06	4422.53	787.10	128.52	790.54	3.14	-1.94	-2.47	
5021.00	89.52	358.71	4422.64	818.10	127.92	821.51	2.02	-1.68	-1.13	
5053.00	89.78	358.53	4422.84	850.09	127.15	853.46	0.99	0.81	-0.56	
5085.00	90.04	358.80	4422.89	882.08	126.41	885.41	1.17	0.81	0.84	
5117.00	89.60	358.53	4422.99	914.07	125.66	917.37	1.61	-1.37	-0.84	
5149.00	87.85	358.71	4423.70	946.05	124.89	949.31	5.50	-5.47	0.56	
5180.00	86.17	358.71	4425.32	977.00	124.19	980.23	5.42	-5.42	0.00	
5212.00	86.35	358.71	4427.41	1008.93	123.47	1012.12	0.56	-0.56	0.00	
5244.00	87.49	359.15	4429.13	1040.87	122.88	1044.03	3.82	3.56	1.37	
5276.00	88.29	359.68	4430.30	1072.85	122.55	1075.99	3.00	2.50	1.66	
5308.00	88.99	0.12	4431.06	1104.84	122.49	1107.96	2.58	2.19	1.38	
5340.00	88.90	359.68	4431.65	1136.83	122.44	1139.94	1.40	-0.28	-1.38	
5371.00	88.55	359.50	4432.34	1167.83	122.22	1170.91	1.27	-1.13	-0.58	
5403.00	88.64	359.24	4433.13	1199.81	121.87	1202.88	0.86	0.28	-0.81	
5435.00	89.08	359.33	4433.76	1231.81	121.47	1234.84	1.40	1.37	0.28	
5471.00	89.25	359.24	4434.29	1267.80	121.02	1270.81	0.53	0.47	-0.25	
5503.00	88.81	359.15	4434.83	1299.79	120.57	1302.77	1.40	-1.37	-0.28	
5535.00	88.11	359.06	4435.69	1331.77	120.07	1334.73	2.21	-2.19	-0.28	
5567.00	88.29	359.15	4436.70	1363.76	119.57	1366.68	0.63	0.56	0.28	
5599.00	88.72	0.20	4437.53	1395.74	119.39	1398.65	3.54	1.34	3.28	
5631.00	88.90	0.03	4438.20	1427.74	119.45	1430.63	0.77	0.56	-0.53	
5663.00	89.25	0.12	4438.71	1459.73	119.49	1462.61	1.13	1.09	0.28	
5694.00	89.52	0.56	4439.04	1490.73	119.68	1493.60	1.67	0.87	1.42	
5726.00	89.69	0.56	4439.27	1522.73	119.99	1525.60	0.53	0.53	0.00	
5758.00	89.43	0.12	4439.51	1554.73	120.18	1557.59	1.60	-0.81	-1.37	
5790.00	89.34	359.94	4439.85	1586.72	120.20	1589.57	0.63	-0.28	-0.56	
5822.00	89.25	359.94	4440.25	1618.72	120.16	1621.55	0.28	-0.28	0.00	
5853.00	89.43	1.52	4440.61	1649.72	120.56	1652.55	5.13	0.58	5.10	
5889.00	88.81	359.94	4441.16	1685.71	121.02	1688.54	4.71	-1.72	-4.39	
5921.00	88.02	359.85	4442.04	1717.69	120.96	1720.51	2.48	-2.47	-0.28	
5953.00	88.20	0.12	4443.10	1749.68	120.95	1752.48	1.01	0.56	0.84	
5985.00	87.76	0.12	4444.23	1781.66	121.02	1784.44	1.37	-1.37	0.00	
6017.00	88.02	0.38	4445.40	1813.64	121.16	1816.41	1.15	0.81	0.81	
6049.00	88.11	359.94	4446.49	1845.62	121.25	1848.38	1.40	0.28	-1.38	
6080.00	88.20	359.94	4447.48	1876.60	121.21	1879.35	0.29	0.29	0.00	
6112.00	88.46	359.85	4448.42	1908.59	121.15	1911.32	0.86	0.81	-0.28	
6144.00	88.99	0.20	4449.13	1940.58	121.17	1943.30	1.98	1.66	1.09	
6176.00	89.34	359.94	4449.59	1972.58	121.21	1975.29	1.36	1.09	-0.81	
6208.00	89.52	359.59	4449.91	2004.57	121.08	2007.27	1.23	0.56	-1.09	
6240.00	90.04	359.68	4450.04	2036.57	120.87	2039.25	1.65	1.62	0.28	

Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas Field: Hackberry State Site: Hackberry State #1 Well: Hackberry State #1 Wellpath: Original Hole	Date: 1/8/2007 Co-ordinate(NE) Reference: Well: Hackberry State #1, Grid North Vertical (TVD) Reference: System: Mean Sea Level Section (VS) Reference: Well (0.00N, 0.00E, 1.68Azi) Survey Calculation Method: Minimum Curvature	Time: 13:21:20 Page: 3
--	--	---

Survey: Pathfinder MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6271.00	90.57	359.94	4449.87	2067.57	120.77	2070.23	1.90	1.71	0.84	
6303.00	91.19	359.76	4449.38	2099.57	120.69	2102.21	2.02	1.94	-0.56	
6335.00	91.80	359.85	4448.54	2131.56	120.58	2134.18	1.93	1.91	0.28	
6367.00	91.98	0.03	4447.49	2163.54	120.54	2166.15	0.80	0.56	0.56	
6399.00	91.98	359.99	4446.38	2195.52	120.55	2198.11	0.12	0.00	-0.13	
6429.00	90.84	359.50	4445.64	2225.51	120.42	2228.09	4.14	-3.80	-1.63	
6461.00	90.48	359.59	4445.28	2257.51	120.16	2260.06	1.16	-1.12	0.28	
6493.00	90.04	359.41	4445.13	2289.51	119.88	2292.04	1.49	-1.37	-0.56	
6524.00	90.04	359.33	4445.11	2320.50	119.54	2323.01	0.26	0.00	-0.26	
6556.00	88.55	359.85	4445.50	2352.50	119.31	2354.99	4.93	-4.66	1.62	
6587.00	87.23	359.94	4446.64	2383.48	119.26	2385.95	4.27	-4.26	0.29	
6619.00	87.05	359.50	4448.24	2415.44	119.10	2417.89	1.48	-0.56	-1.37	
6650.00	86.79	359.59	4449.91	2446.39	118.85	2448.83	0.89	-0.84	0.29	
6682.00	86.61	359.41	4451.75	2478.34	118.57	2480.75	0.79	-0.56	-0.56	
6713.00	86.35	359.41	4453.65	2509.28	118.26	2511.67	0.84	-0.84	0.00	
6745.00	86.53	359.33	4455.64	2541.21	117.90	2543.58	0.62	0.56	-0.25	
6777.00	86.88	0.03	4457.48	2573.16	117.73	2575.51	2.44	1.09	2.19	
6808.00	86.97	0.03	4459.14	2604.11	117.74	2606.45	0.29	0.29	0.00	
6840.00	87.32	0.03	4460.74	2636.07	117.76	2638.40	1.09	1.09	0.00	
6872.00	87.23	0.29	4462.26	2668.04	117.85	2670.35	0.86	-0.28	0.81	
6904.00	87.05	0.47	4463.85	2700.00	118.06	2702.30	0.79	-0.56	0.56	
6935.00	86.88	0.29	4465.49	2730.95	118.27	2733.25	0.80	-0.55	-0.58	
6967.00	87.05	0.29	4467.19	2762.91	118.43	2765.20	0.53	0.53	0.00	
6998.00	87.05	0.38	4468.78	2793.87	118.61	2796.15	0.29	0.00	0.29	
7029.00	87.23	0.38	4470.33	2824.83	118.81	2827.10	0.58	0.58	0.00	
7061.00	87.49	0.73	4471.80	2856.79	119.12	2859.06	1.36	0.81	1.09	
7093.00	87.58	0.91	4473.18	2888.76	119.58	2891.03	0.63	0.28	0.56	
7125.00	88.20	1.35	4474.36	2920.73	120.21	2923.00	2.38	1.94	1.37	
7157.00	88.99	1.96	4475.14	2952.71	121.14	2954.99	3.12	2.47	1.91	
7188.00	88.72	1.96	4475.76	2983.68	122.20	2985.99	0.87	-0.87	0.00	
7220.00	88.37	1.70	4476.58	3015.66	123.22	3017.98	1.36	-1.09	-0.81	
7252.00	88.46	1.78	4477.46	3047.63	124.19	3049.96	0.38	0.28	0.25	
7283.00	89.52	2.49	4478.01	3078.60	125.34	3080.96	4.12	3.42	2.29	
7315.00	90.22	2.93	4478.08	3110.57	126.86	3112.95	2.58	2.19	1.37	
7347.00	90.13	3.02	4477.98	3142.52	128.52	3144.94	0.40	-0.28	0.28	
7378.00	90.31	2.93	4477.86	3173.48	130.13	3175.93	0.65	0.58	-0.29	
7410.00	91.54	3.37	4477.35	3205.43	131.88	3207.92	4.08	3.84	1.37	
7442.00	92.24	3.37	4476.29	3237.36	133.76	3239.89	2.19	2.19	0.00	
7472.00	92.15	3.54	4475.14	3267.28	135.57	3269.85	0.64	-0.30	0.57	
7504.00	92.15	3.19	4473.94	3299.20	137.45	3301.82	1.09	0.00	-1.09	
7536.00	92.07	3.19	4472.76	3331.13	139.23	3333.78	0.25	-0.25	0.00	
7568.00	91.71	3.10	4471.71	3363.06	140.98	3365.75	1.16	-1.12	-0.28	
7599.00	91.71	2.75	4470.78	3394.01	142.56	3396.73	1.13	0.00	-1.13	
7630.00	91.80	2.40	4469.83	3424.96	143.96	3427.72	1.17	0.29	-1.13	
7662.00	91.80	2.58	4468.83	3456.92	145.34	3459.70	0.56	0.00	0.56	
7693.00	91.80	2.31	4467.86	3487.87	146.67	3490.68	0.87	0.00	-0.87	
7725.00	91.63	2.66	4466.90	3519.83	148.05	3522.66	1.22	-0.53	1.09	
7756.00	91.71	2.58	4465.99	3550.78	149.47	3553.64	0.36	0.26	-0.26	
7787.00	91.54	2.58	4465.11	3581.74	150.86	3584.63	0.55	-0.55	0.00	
7819.00	91.54	2.58	4464.25	3613.70	152.30	3616.61	0.00	0.00	0.00	
7850.00	91.54	2.58	4463.42	3644.65	153.70	3647.60	0.00	0.00	0.00	
7882.00	91.36	2.40	4462.61	3676.61	155.09	3679.58	0.80	-0.56	-0.56	
7914.00	91.36	2.49	4461.85	3708.58	156.45	3711.57	0.28	0.00	0.28	

Pathfinder Energy

Survey Report

Company: Murchison Oil & Gas Field: Hackberry State Site: Hackberry State #1 Well: Hackberry State #1 Wellpath: Original Hole	Date: 1/8/2007	Time: 13:21:20	Page: 4 Co-ordinate(NE) Reference: Well: Hackberry State #1, Grid North Vertical (TVD) Reference: System: Mean Sea Level Section (VS) Reference: Well (0.00N, 0.00E, 1.68Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
--	-----------------------	-----------------------	---

Survey: Pathfinder MWD Surveys

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7945.00	91.36	2.31	4461.12	3739.54	157.75	3742.56	0.58	0.00	-0.58	
7977.00	91.27	2.22	4460.38	3771.51	159.02	3774.55	0.40	-0.28	-0.28	
8008.00	91.19	2.14	4459.72	3802.48	160.20	3805.54	0.36	-0.26	-0.26	
8040.00	91.01	1.87	4459.10	3834.45	161.31	3837.54	1.01	-0.56	-0.84	
8066.00	90.84	1.78	4458.68	3860.43	162.14	3863.53	0.74	-0.65	-0.35	
8110.00	90.84	1.78	4458.04	*3904.41	163.51	3907.53	0.00	0.00	0.00	

Annotation

MD ft	TVD ft	
3770.98	3770.00	KOP @ 3771' MD / 3961' TVD Build 8.83°/100'
4801.59	4425.20	EOC @ 4802' MD / 4430' TVD
4802.59	4425.25	Build 3° Turn -3
3700.00	3699.04	Tie In

1816' FEL / 716' N

Murchison Oil & Gas

Field: Hackberry State

Site: Hackberry State #1

Well: Hackberry State #1

Wellpath: Original Hole

Survey: Pathfinder MWD Surveys

CCD - ARTESA, NM
APR 12 2007
Month - Year

PATHFINDER

Survey: Pathfinder MWD Surveys (Hackberry State #1/Original Hole)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
121	7725.00	91.63	2.66	4466.90	3519.83	148.05	1.22	115.91	3522.66
122	7756.00	91.71	2.58	4465.99	3550.78	149.47	0.36	-44.99	3553.64
123	7787.00	91.54	2.58	4465.11	3581.74	150.86	0.55	180.00	3584.63
124	7819.00	91.54	2.58	4464.25	3613.70	152.30	0.00	0.00	3616.61
125	7850.00	91.54	2.58	4463.42	3644.65	153.70	0.00	0.00	3647.60
126	7882.00	91.36	2.40	4462.61	3676.61	155.09	0.80	-135.01	3679.58
127	7914.00	91.36	2.49	4461.85	3708.58	156.45	0.28	90.00	3711.57
128	7945.00	91.36	2.31	4461.12	3739.54	157.75	0.58	-90.00	3742.56
129	7977.00	91.27	2.22	4460.38	3771.51	159.02	0.40	-135.01	3774.55
130	8008.00	91.19	2.14	4459.72	3802.48	160.20	0.36	-135.01	3805.54
131	8040.00	91.01	1.87	4459.10	3834.45	161.31	1.01	-123.69	3837.54
132	8066.00	90.84	1.78	4458.68	3866.43	162.14	0.74	-152.11	3863.53
133	8110.00	90.84	1.78	4458.04	3904.41	163.51	0.00	0.00	3907.53

COMPANY DETAILS

Murchison Oil & Gas

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

SITE DETAILS

Hackberry State #1
Section 17; T18S; R23E

Ground Level: 3996.00
Positional Uncertainty: 0.00
Convergence: -0.20

ANNOTATIONS

No.	TVD	MD	Annotation
1	3770.00	3770.98	KOP @ 3771' MD / 3961' TVD Build 8.83°/100'
2	4425.20	4801.59	EOC @ 4802' MD / 4430' TVD
3	4425.25	4802.59	Build 3° Turn -3
4	3699.04	3700.00	Tie In

