



SEP 10 2008
OCD-ARTESIA

DIRECTIONAL SURVEY REPORT

YATES PETROLEUM 30.015.36027

BIG MIGUEL BKN ST COM #1H

EDDY COUNTY, NEW MEXICO

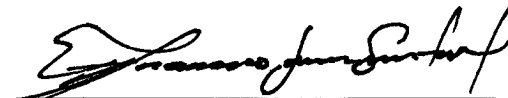
PREPARED BY: FRANCISCO SINISTERRA

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) CHRIS CARSON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 4/6/08 TO 4/21/08
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
BIG MIGUEL BKN ST COM # 1H
EDDY COUNTY, NM
RIG: SILVER OAK 9
9. SURVEY CERTIFIED FROM: 6734 TO 11694 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4756.28 FEET ON A BEARING OF 88.87 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 11770 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



FRANCISCO SINISTERRA
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 04/06/2008
Date Completed: 04/21/2008

YATES PETROLEUM
BIG MIGUEL BKN ST COM #1H
EDDY COUNTY, NM
Rig:SILVER OAK 9
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:CHRIS CARSON

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.56.40.4100 N LON:104.3.12.3900 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 627199.4880 Y: 707479.4900
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.08° EAST TO GRID
Vertical Section Plane: 88.77
Survey Vert. Reference:3721.00' Rotary Table To Ground
Altitude:3278.38' Ground To MSL

Measured Depth	11770.00	(feet)
Inclination	89.52	(deg)
Azimuth	89.85	(deg)
True Vertical Depth	7293.97	(feet)
Vertical Section	4756.27	(feet)
Survey X cord	631954.84	(feet)
Survey Y cord	707573.22	(feet)
Survey Lat	32.94478026 N	(deg)
Survey Lon	104.03793954 W	(deg)
Rectangular Corr. N/S	93.73 N	(feet)
Rectangular Corr. E/W	4755.36 E	(feet)
Closure Distance	4756.28	(feet)
Direction of Closure	88.87	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

Page 01/03
Tie-in Date: 04/06/2008
Date Completed: 04/21/2008

YATES PETROLEUM
BIG MIGUEL BKN ST COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 9
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: CHRIS CARSON

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.56.40.4100 N LON:104.3.12.3900 W
Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 627199.4880 Y: 707479.4900
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.08° EAST TO GRID
Vertical Section Plane: 88.77
Survey Vert. Reference:3721.00' Rotary Table To Ground
Altitude:3278.38' Ground To MSL

Survey Calculations by RX5 V5.11H using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
TIE-IN PROVIDED BY GYRO AT 6700' MD.										
6700.00	2.73	83.41	6699.75	2978.75	0.56	18.77 S	0.96 E	18.79@	177.07	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
6734.00	6.86	84.37	6733.62	3012.62	3.39	18.48 S	3.79 E	18.86@	168.42	12.15
6766.00	11.52	86.69	6765.20	3044.20	8.49	18.11 S	8.88 E	20.17@	153.87	14.60
6797.00	16.18	88.03	6795.29	3074.29	15.91	17.78 S	16.29 E	24.11@	137.50	15.07
6829.00	20.40	90.11	6825.67	3104.67	25.95	17.64 S	26.33 E	31.69@	123.81	13.34
6861.00	23.13	91.76	6855.39	3134.39	37.80	17.84 S	38.19 E	42.15@	115.04	8.74
6892.00	25.68	91.69	6883.62	3162.62	50.59	18.22 S	50.99 E	54.15@	109.67	8.23
6924.00	28.31	91.36	6912.13	3191.13	65.10	18.61 S	65.51 E	68.10@	105.86	8.23
6956.00	30.34	90.70	6940.02	3219.02	80.76	18.89 S	81.18 E	83.35@	103.10	6.42
6987.00	31.30	91.40	6966.65	3245.65	96.63	19.18 S	97.06 E	98.94@	101.18	3.31
7019.00	32.98	91.72	6993.74	3272.74	113.63	19.64 S	114.08 E	115.76@	99.77	5.28
7050.00	33.94	91.26	7019.60	3298.60	130.70	20.09 S	131.16 E	132.69@	98.71	3.20
7082.00	34.29	90.68	7046.10	3325.10	148.64	20.39 S	149.11 E	150.50@	97.79	1.49
7114.00	35.09	90.00	7072.41	3351.41	166.84	20.50 S	167.32 E	168.57@	96.98	2.78
7146.00	36.67	88.89	7098.34	3377.34	185.59	20.31 S	186.07 E	187.18@	96.23	5.34
7177.00	40.36	88.24	7122.59	3401.59	204.89	19.83 S	205.37 E	206.32@	95.51	11.97
7209.00	44.76	88.37	7146.15	3425.15	226.53	19.19 S	227.00 E	227.80@	94.83	13.75
7241.00	49.42	88.88	7167.93	3446.93	249.96	18.63 S	250.42 E	251.11@	94.25	14.61
7272.00	54.34	88.50	7187.06	3466.06	274.34	18.07 S	274.79 E	275.39@	93.76	15.90
7304.00	58.83	88.39	7204.68	3483.68	301.05	17.34 S	301.49 E	301.99@	93.29	14.03
7336.00	63.66	89.00	7220.07	3499.07	329.09	16.71 S	329.53 E	329.95@	92.90	15.19
7367.00	68.50	89.41	7232.64	3511.64	357.42	16.32 S	357.85 E	358.22@	92.61	15.66
7399.00	73.16	89.32	7243.14	3522.14	387.63	15.98 S	388.07 E	388.40@	92.36	14.56
7431.00	77.91	89.44	7251.13	3530.13	418.61	15.65 S	419.04 E	419.33@	92.14	14.85

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
BIG MIGUEL BKN ST COM #1H
EDDY COUNTY, NEW MEXICO
RIG:SILVER OAK 9

Page 02/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
7462.00	82.92	89.38	7256.29	3535.29	449.17	15.33 S	449.60 E	449.86@	91.95	16.16
7494.00	87.76	88.85	7258.89	3537.89	481.05	14.84 S	481.48 E	481.71@	91.77	15.21
7526.00	89.96	88.61	7259.53	3538.53	513.04	14.13 S	513.46 E	513.66@	91.58	6.92
7556.00	90.40	88.74	7259.43	3538.43	543.04	13.44 S	543.45 E	543.62@	91.42	1.53
7652.00	89.52	88.11	7259.50	3538.50	639.04	10.80 S	639.42 E	639.51@	90.97	1.13
7715.00	89.34	88.05	7260.13	3539.13	702.03	8.69 S	702.38 E	702.43@	90.71	0.30
7779.00	88.99	87.44	7261.06	3540.06	766.01	6.17 S	766.32 E	766.35@	90.46	1.10
7842.00	88.81	87.83	7262.27	3541.27	828.99	3.57 S	829.26 E	829.26@	90.25	0.68
7906.00	88.29	88.02	7263.89	3542.89	892.96	1.25 S	893.19 E	893.19@	90.08	0.86
8001.00	89.08	88.29	7266.07	3545.07	987.93	1.80 N	988.12 E	988.12@	89.90	0.88
8064.00	89.25	88.62	7266.99	3545.99	1050.92	3.50 N	1051.09 E	1051.09@	89.81	0.59
8160.00	90.13	88.67	7267.51	3546.51	1146.92	5.77 N	1147.06 E	1147.07@	89.71	0.92
8255.00	90.84	88.87	7266.70	3545.70	1241.92	7.81 N	1242.03 E	1242.06@	89.64	0.78
8318.00	90.75	88.98	7265.83	3544.83	1304.91	8.99 N	1305.02 E	1305.05@	89.61	0.23
8382.00	91.89	88.40	7264.35	3543.35	1368.89	10.46 N	1368.98 E	1369.02@	89.56	2.00
8477.00	91.10	88.71	7261.88	3540.88	1463.86	12.85 N	1463.92 E	1463.97@	89.50	0.89
8509.00	90.92	88.55	7261.31	3540.31	1495.85	13.62 N	1495.90 E	1495.97@	89.48	0.75
8572.00	90.66	88.85	7260.44	3539.44	1558.85	15.05 N	1558.88 E	1558.95@	89.45	0.63
8668.00	89.96	88.25	7259.92	3538.92	1654.84	17.47 N	1654.85 E	1654.94@	89.39	0.96
8763.00	89.52	88.37	7260.36	3539.36	1749.84	20.28 N	1749.81 E	1749.92@	89.34	0.48
8858.00	89.87	88.36	7260.86	3539.86	1844.83	22.99 N	1844.77 E	1844.91@	89.29	0.37
8921.00	89.52	88.10	7261.20	3540.20	1907.83	24.93 N	1907.73 E	1907.90@	89.25	0.69
8985.00	89.43	88.18	7261.78	3540.78	1971.82	27.01 N	1971.70 E	1971.88@	89.22	0.19
9080.00	90.13	88.08	7262.15	3541.15	2066.82	30.11 N	2066.65 E	2066.87@	89.17	0.74
9175.00	89.78	87.95	7262.22	3541.22	2161.81	33.40 N	2161.59 E	2161.85@	89.11	0.39
9270.00	89.60	88.23	7262.74	3541.74	2256.80	36.57 N	2256.54 E	2256.83@	89.07	0.35
9366.00	89.43	88.07	7263.55	3542.55	2352.79	39.67 N	2352.48 E	2352.82@	89.03	0.24
9461.00	89.25	88.22	7264.64	3543.64	2447.78	42.74 N	2447.43 E	2447.80@	89.00	0.25
9556.00	89.08	88.42	7266.03	3545.03	2542.77	45.53 N	2542.37 E	2542.78@	88.97	0.28
9652.00	89.60	88.19	7267.13	3546.13	2638.76	48.37 N	2638.33 E	2638.77@	88.95	0.59
9747.00	89.43	88.37	7267.94	3546.94	2733.75	51.22 N	2733.28 E	2733.76@	88.93	0.26
9842.00	90.31	87.88	7268.15	3547.15	2828.74	54.32 N	2828.23 E	2828.75@	88.90	1.06
9937.00	90.57	87.95	7267.42	3546.42	2923.73	57.78 N	2923.16 E	2923.73@	88.87	0.28
10033.00	90.57	87.85	7266.47	3545.47	3019.71	61.30 N	3019.09 E	3019.71@	88.84	0.10

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
BIG MIGUEL BKN ST COM #1H
EDDY COUNTY, NEW MEXICO
RIG:SILVER OAK 9

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
10064.00	89.87	88.06	7266.35	3545.35	3050.71	62.40 N	3050.07 E	3050.71@	88.83	2.36
10160.00	90.04	88.29	7266.43	3545.43	3146.70	65.46 N	3146.02 E	3146.70@	88.81	0.30
10191.00	89.43	88.07	7266.57	3545.57	3177.70	66.45 N	3177.01 E	3177.70@	88.80	2.09
10287.00	89.87	87.73	7267.16	3546.16	3273.69	69.96 N	3272.94 E	3273.69@	88.78	0.58
10382.00	89.87	87.96	7267.37	3546.37	3368.67	73.54 N	3367.87 E	3368.68@	88.75	0.24
10477.00	88.99	88.50	7268.32	3547.32	3463.67	76.47 N	3462.82 E	3463.67@	88.73	1.09
10509.00	87.85	88.74	7269.20	3548.20	3495.65	77.24 N	3494.80 E	3495.65@	88.73	3.64
10572.00	88.20	88.59	7271.37	3550.37	3558.61	78.71 N	3557.74 E	3558.61@	88.73	0.60
10668.00	88.29	88.86	7274.31	3553.31	3654.57	80.84 N	3653.68 E	3654.57@	88.73	0.30
10763.00	88.55	89.28	7276.93	3555.93	3749.53	82.38 N	3748.63 E	3749.53@	88.74	0.52
10858.00	88.11	88.92	7279.70	3558.70	3844.49	83.88 N	3843.57 E	3844.49@	88.75	0.60
10953.00	88.02	88.79	7282.90	3561.90	3939.43	85.77 N	3938.50 E	3939.43@	88.75	0.17
11048.00	88.90	89.31	7285.46	3564.46	4034.40	87.35 N	4033.45 E	4034.40@	88.76	1.08
11143.00	88.46	89.25	7287.65	3566.65	4129.37	88.54 N	4128.42 E	4129.37@	88.77	0.47
11206.00	89.16	89.56	7288.95	3567.95	4192.35	89.20 N	4191.40 E	4192.35@	88.78	1.22
11270.00	89.78	89.32	7289.55	3568.55	4256.34	89.82 N	4255.40 E	4256.34@	88.79	1.04
11365.00	89.34	89.67	7290.28	3569.28	4351.33	90.66 N	4350.39 E	4351.33@	88.81	0.59
11460.00	89.52	89.14	7291.22	3570.22	4446.32	91.64 N	4445.38 E	4446.32@	88.82	0.59
11555.00	89.43	89.38	7292.09	3571.09	4541.31	92.87 N	4540.37 E	4541.32@	88.83	0.27
11650.00	89.52	89.93	7292.96	3571.96	4636.30	93.44 N	4635.36 E	4636.30@	88.85	0.59
11694.00	89.52	89.85	7293.33	3572.33	4680.29	93.53 N	4679.36 E	4680.29@	88.85	0.18
STRAIGHT LINE PROJECTION TO BIT @ 11770' MD.										
11770.00	89.52	89.85	7293.97	3572.97	4756.27	93.73 N	4755.36 E	4756.28@	88.87	0.00



TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	Yates Petroleum		
LEASE / WELL No.:	Big Miguel BKN	St Com #1H	
WELL LOCATION:	Wildcat Wolfcamp		
COUNTY / STATE / COUNTRY:	Eddy	NM	USA
RIG:	Silver Oak 9		
API WELL No:	30-015-36027		
JOB No:	101007309 WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PES		

WELL SITE INFORMATION

MAGNETIC DECLINATION:			
On Wall Plat:	8.08	LWD Calculated:	8.082081
		Agreed Upon:	8.082081
X =	627199.488000	Feet	Y = 707479.490000
			Feet
SITE LATITUDE:	32.944558	SITE LONGITUDE:	104.053442
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☐	ZONE:	New Mexico East
PROPOSED DRIFT DIRECTION:	88.56		
KELLY BUSHING ELEVATION:			
ALTITUDE:	3721	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	6700		
DRIFT ANGLE:	2.73		
DRIFT DIRECTION:	83.41		
TRUE VERTICAL DEPTH:	6699.75		
VERTICAL SECTION:	0.56		
RECTANGULAR COORDINATE (N / S) :	-18.77		
RECTANGULAR COORDINATE (E / W) :	0.96		
CLOSURE DISTANCE / DIRECTION:	18.79	177.07	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	Scientific Drilling Controls		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	6790	TOTAL DEPTH:	11813.79
KICKOFF ANGLE:	1.61	MAX ANGLE:	89.56

PES Engineers:

**Signature of both field engineers required if applicable

Directional Driller:

DATE:

S C I E N T I F I C D R I L L I N G C O N T R O L S

KEEPER GYRO SURVEY
Directional Survey Report
for

YATES PETROLEUM

Well Number	:	BIG MIGUEL BKN STATE COM #1H
Well Location	:	EDDY COUNTY, NEW MEXICO
Job Number	:	32K0408221
Location Latitude	:	32.945
Survey Date	:	3-APR-2008
S.D.C. Personnel	:	ANGEL MADRID
Length Units	:	Feet
North Reference	:	GRID North
Grid Correction	:	-0.15 Degrees
Survey Depth Zero	:	RKB
Proposal Direction	:	95.42
Calculation Method	:	Minimum Curvature

Remarks : The OUTFIT Survey will be called definitive

S	C	I	E	N	T	I	F	I	C		D	R	I	L	L	I	N	G		C	O	N	T	R	O	L	S
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Outrun Survey
for
YATES PETROLEUM

Page 1

Well No.: BIG MIGUEL BKN STATE C

Date : 3-APR-2008

Job No. : 32K0408221

GRID

Proposal : 95.42

Depth	T.V.D.	V.S.	Inc	Azimuth	Latitude	Departure	D-leg
(Feet)	(Feet)	(Feet)	Deg.	Deg.	(Feet)	(Feet)	/100

0.00	0.00	0.00	0.00	359.85	0.00	0.00	0.00
100.00	100.00	0.40	0.56	59.95	0.24	0.42	0.56
200.00	199.99	1.14	0.58	47.45	0.83	1.22	0.13
300.00	299.99	1.84	0.44	78.26	1.25	1.97	0.30
400.00	399.99	2.30	0.19	150.38	1.19	2.43	0.42
500.00	499.99	2.56	0.32	150.60	0.80	2.65	0.13
600.00	599.98	3.16	0.52	106.63	0.42	3.22	0.37
700.00	699.98	4.00	0.47	109.56	0.16	4.04	0.06
800.00	799.97	5.00	0.73	115.14	-0.25	5.00	0.27
900.00	899.97	6.21	0.71	107.37	-0.70	6.17	0.10
1000.00	999.96	7.26	0.56	120.66	-1.14	7.18	0.21
1100.00	1099.95	8.18	0.58	113.30	-1.59	8.07	0.08
1200.00	1199.95	9.04	0.47	117.05	-1.98	8.90	0.12
1300.00	1299.95	9.86	0.55	119.40	-2.40	9.68	0.08
1400.00	1399.94	10.63	0.46	129.63	-2.89	10.41	0.13
1500.00	1499.94	11.36	0.51	123.60	-3.39	11.09	0.07
1600.00	1599.93	12.12	0.46	119.14	-3.83	11.81	0.06
1700.00	1699.93	12.78	0.35	107.29	-4.12	12.45	0.14
1800.00	1799.93	13.31	0.32	132.04	-4.40	12.95	0.15
1900.00	1899.93	13.67	0.16	109.46	-4.63	13.29	0.18
2000.00	1999.93	13.93	0.29	155.58	-4.91	13.52	0.21
2100.00	2099.93	14.17	0.25	153.78	-5.33	13.72	0.04
2200.00	2199.93	14.37	0.10	110.36	-5.56	13.90	0.19
2300.00	2299.93	14.61	0.24	136.45	-5.74	14.13	0.16
2400.00	2399.93	14.64	0.16	298.24	-5.83	14.15	0.40
2500.00	2499.93	14.25	0.30	285.82	-5.69	13.78	0.15
2600.00	2599.92	13.52	0.58	255.50	-5.75	13.03	0.35
2700.00	2699.92	12.60	0.52	288.74	-5.73	12.12	0.32
2800.00	2799.91	11.72	0.50	272.53	-5.56	11.25	0.15
2900.00	2899.91	10.94	0.40	279.48	-5.49	10.47	0.11
3000.00	2999.91	10.23	0.41	272.22	-5.41	9.77	0.05
3100.00	3099.91	9.73	0.30	220.13	-5.60	9.24	0.33
3200.00	3199.91	9.48	0.28	208.85	-6.01	8.95	0.06
3300.00	3299.90	9.23	0.25	231.24	-6.37	8.67	0.11
3400.00	3399.90	8.92	0.29	221.12	-6.69	8.33	0.06
3500.00	3499.90	8.57	0.37	226.17	-7.11	7.93	0.09
3600.00	3599.90	8.04	0.52	229.69	-7.62	7.35	0.15
3700.00	3699.89	7.48	0.44	223.85	-8.19	6.74	0.09
3800.00	3799.89	6.93	0.48	233.58	-8.72	6.14	0.09
3900.00	3899.89	6.25	0.61	230.14	-9.31	5.39	0.13

S C I E N T I F I C D R I L L I N G C O N T R O L S

Outrun Survey
for
YATES PETROLEUM

Page 2

Well No.: BIG MIGUEL BKN STATE C

Date : 3-APR-2008

Job No. : 32K0408221

GRID

Proposal : 95.42

Depth (Feet)	T.V.D. (Feet)	V.S. (Feet)	Inc Deg.	Azimuth Deg.	Latitude (Feet)	Departure (Feet)	D-leg /100
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4000.00	3999.88	5.56	0.66	217.74	-10.11	4.63	0.15
4100.00	4099.88	4.95	0.53	226.26	-10.88	3.94	0.16
4200.00	4199.87	4.37	0.46	229.62	-11.46	3.30	0.08
4300.00	4299.87	3.73	0.53	237.26	-11.97	2.61	0.10
4400.00	4399.86	3.05	0.45	239.40	-12.42	1.88	0.08
4500.00	4499.86	2.44	0.47	229.89	-12.88	1.23	0.08
4600.00	4599.86	1.91	0.38	232.45	-13.35	0.65	0.09
4700.00	4699.86	1.41	0.34	245.37	-13.68	0.12	0.09
4800.00	4799.85	0.90	0.34	243.58	-13.93	-0.42	0.01
4900.00	4899.85	0.34	0.46	235.72	-14.29	-1.01	0.13
5000.00	4999.85	-0.26	0.43	235.43	-14.73	-1.65	0.03
5100.00	5099.85	-0.87	0.51	233.53	-15.21	-2.32	0.08
5200.00	5199.84	-1.60	0.52	246.00	-15.66	-3.09	0.11
5300.00	5299.84	-2.41	0.50	257.48	-15.94	-3.93	0.10
5400.00	5399.83	-3.15	0.42	247.35	-16.17	-4.70	0.11
5500.00	5499.83	-3.78	0.41	244.67	-16.47	-5.36	0.02
5600.00	5599.83	-4.33	0.34	241.00	-16.76	-5.94	0.07
5700.00	5699.83	-4.74	0.22	241.26	-17.00	-6.37	0.12
5800.00	5799.83	-5.04	0.20	240.02	-17.18	-6.69	0.02
5900.00	5899.82	-5.61	0.59	241.96	-17.51	-7.29	0.39
6000.00	5999.82	-6.05	0.13	193.60	-17.86	-7.78	0.51
6100.00	6099.82	-5.66	0.61	135.21	-18.35	-7.43	0.55
6200.00	6199.81	-4.88	0.43	107.28	-18.84	-6.70	0.31
6300.00	6299.81	-3.91	0.71	104.16	-19.10	-5.74	0.28
6400.00	6399.80	-2.71	0.69	83.11	-19.18	-4.54	0.26
6500.00	6499.79	-1.41	0.81	91.28	-19.12	-3.23	0.16
6600.00	6599.78	0.37	1.26	84.34	-19.03	-1.43	0.47
6700.00	6699.75	2.73	1.50	83.41	-18.77	0.96	0.24
6800.00	6799.71	5.41	1.62	86.57	-18.54	3.67	0.15
6900.00	6899.67	8.21	1.63	85.38	-18.34	6.50	0.04
7000.00	6999.63	11.04	1.69	82.31	-18.03	9.38	0.11
7100.00	7099.59	13.80	1.56	81.63	-17.63	12.19	0.13
7200.00	7199.55	16.43	1.59	76.48	-17.11	14.88	0.14
7300.00	7299.51	19.06	1.61	75.16	-16.42	17.59	0.04
7356.00	7355.49	20.50	1.54	73.94	-16.02	19.07	0.14

The Horizontal Displacement (in Feet) at
Measured Depth 7356.00 is 24.91 in a Direction of 130.01 Degrees

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
BIG MIGUEL BKN STATE COM # 1H
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 9

Fri Apr 04 16:28:25 2008

Coordinates

Latitude: 32.944558 N (32 deg. 56 min. 40.4100 sec.)
Longitude: 104.053442 W (-104 deg. 3 min. 12.3900 sec.)
Elevation: 3721.00 feet.
Calculation Date: Apr/04/2008

Magnetic Calculations

Model: IGRF2005
Dip Angle: 60.8603 degrees
Total Magnetic Field: 0.49338 gauss
Magnetic Declination: 8.234295 degrees
Horizontal Intensity: 0.240249 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.234295 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 627199.4880 feet
Y: 707479.4900 feet
True to Grid: (convergence) -0.152214 degrees
Magnetic to Grid: 8.082081 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.082081 Degr.

District II
1301 W. Grand Ave., Artesia, NM 88210
Phone:(505) 748-1283 Fax:(505) 748-9720

State of New Mexico
Energy, Minerals and Natural Resources

Form C-101
Permit 66400

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

JAN 30 2008
OCD-ARTESIA

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address YATES PETROLEUM CORPORATION 105 S 4TH ST ARTESIA, NM 88210		2. OGRID Number 25575
		3. API Number 30-015-36027
4. Property Code	5. Property Name BIG MIGUEL BKN STATE COM	6. Well No. 001H

7. Surface Location

UL - Lot M	Section 2	Township 16S	Range 29E	Lot Idn P	Feet From 785	N/S Line S	Feet From 150	E/W Line W	County EDDY
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8. Pool Information

Wildcat Wolfcamp	0
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Additional Well Information

9. Work Type New Well	10. Well Type OIL	11. Cable/Rotary	12. Lease Type State	13. Ground Level Elevation 3721
14. Multiple N	15. Proposed Depth 11980	16. Formation Wolfcamp	17. Contractor	18. Spud Date 12/20/2007
Depth to Ground water 110		Distance from nearest fresh water well > 1000		Distance to nearest surface water > 1000
Pit: Liner: Synthetic ☒ 12 miles thick Clay ☐ Pit Volume: 28000 bbls Drilling Method: Closed Loop System ☐ Fresh Water ☒ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐				

19. Proposed Casing and Cement Program

Type	Hole Size	Casing Type	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	11.75	42	400	275	0
Int1	11	8.625	24	2600	750	0
Prod	7.875	5.5	17	11980	1650	2100
Int2	7.875	0	0	7600	0	0

Casing/Cement Program: Additional Comments

Please note 7 7/8" hole to 7600' is Open Hole. Yates Petroleum Corporation proposes to drill and test the Wolfcamp/intermediate formations. Approximately 400' of surface casing will be set and cement circulated to shut off cavings. If commercial, intermediate and production casing will be run and cemented, will perforate and stimulate as needed for production.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
DoubleRam	3000	3000	

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

I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐ a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

Printed Name: Cy Cowan

Title: Regulatory Agent

Email Address: 1/30/08

OIL CONSERVATION DIVISION

Approved By: BRYAN G. ARANT

Title: DISTRICT II GEOLOGIST

Approved Date: JAN 30 2008 Expiration Date: JAN 30 2010

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1381 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Branco Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87508

State of New Mexico
Energy, Minerals and Natural Resources Department

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

To Bureau 11/9/08
Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

Handcarried
by CRM

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-66400	Pool Code	Pool Name Wildcat Wolfcamp
Property Code	Property Name BIG MIGUEL "BKN" STATE COM	Well Number 1H
OCED No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3721'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	16 S	29 E		785	SOUTH	150	WEST	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
P	2	16 S	29 E		330	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Cy Cowan</i> Signature _____ Date _____ Cy Cowan, Regulatory Printed Name Agent	
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. DECEMBER 1, 2007 Date Surveyed _____ <i>Gary L. Jones</i> Signature _____ Professional Surveyor 7977 Certificate No. Gary L. Jones BASIN SURVEYS	

Project Area

Producing Area

SURFACE LOCATION
Lot - N33°58'44.26"
Long - W104°03'13.02"
SPC- N.: 707867.936
E.: 627144.879
(NAD-83)

BOTTOM HOLE LOCATION
Lot - N32°58'39.60"
Long - W104°02'18.48"
SPC- N.: 707410.969
E.: 631964.208
(NAD-83)

W.C. Penetration Point 768'S/330'W

50' 785' 330'