



DIRECTIONAL SURVEY REPORT

30-005-64033

***YATES PETROLEUM
GRID IRON BLI FED COM #1H
CHAVES COUNTY, NEW MEXICO***

PREPARED BY: MIKE EVANS

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) RAFAEL DONARUMMA
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 11/06/08 TO 12/22/08
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: CHAVES COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
GRID IRON BLI FED COM #1H
CHAVES COUNTY, NM
RIG: SILVER OAK #10
9. SURVEY CERTIFIED FROM: 3,935 TO 5,438 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 831.64 FEET ON A BEARING OF 91.67 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 5,511 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


MIKE EVANS
MWD ENGINEER

PathFinder Energy Services, Inc.

BHL Report

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Tie-in Date: 11/07/2008
Date Completed: 11/16/2008

YATES PETROLEUM
GRID IRON BLI FED COM#1H
CHAVES COUNTY, NM
Rig:SILVER OAK #10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:H. DONARUMMA
R. GARDNER

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:33.18.17.8306 N LON:104.17.9.0102 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 555848.7210 Y: 838492.2830
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.28° EAST TO GRID
Vertical Section Plane: 89.59
Survey Vert. Reference: 18.50' Rotary Table To Ground
Altitude:3748.00' Ground To MSL

Measured Depth	5511.00	(feet)
Inclination	71.84	(deg)
Azimuth	89.68	(deg)
True Vertical Depth	5112.25	(feet)
Vertical Section	831.09	(feet)
Survey X cord	556680.01	(feet)
Survey Y cord	838468.05	(feet)
Survey Lat	33.30488527 N	(deg)
Survey Lon	104.28311528 W	(deg)
Rectangular Corr. N/S	24.23 S	(feet)
Rectangular Corr. E/W	831.29 E	(feet)
Closure Distance	831.64	(feet)
Direction of Closure	91.67	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
GRID IRON BLI FED COM#1H
CHAVES COUNTY, NM
RIG:SILVER OAK #10
PathFinder Office Supervisor: FRANCISCO SINISTERA
PathFinder Field Engineers: H. DONARUMMA
R. GARDNER

Survey Calculations by PathCalc v1.97j using Minimum Curvature

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:33.18.17.8306 N LON:104.17.9.0102 W
Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 555848.7210 Y: 838492.2830
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.28° EAST TO GRID
Vertical Section Plane: 89.59
Survey Vert. Reference: 18.50' Rotary Table To Ground
Altitude:3748.00' Ground To MSL

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
TIE IN TO SCIENTIFIC GYRO.								
3910.00	0.49	222.96	3909.76	0.00	-29.16	12.51 N 29.25 W	31.81@ 293.16	0.00
THE FOLLOWING ARE PATHFINDER SURVEYS.								
3935.00	0.70	250.35	3934.76	25.00	-29.38	12.38 N 29.47 W	31.96@ 292.79	1.39
3947.00	0.79	245.97	3946.76	12.00	-29.52	12.32 N 29.61 W	32.07@ 292.59	0.89
3979.00	0.18	189.09	3978.76	32.00	-29.73	12.18 N 29.82 W	32.21@ 292.22	2.21
4011.00	1.49	102.49	4010.75	32.00	-29.34	12.04 N 29.42 W	31.79@ 292.26	4.66
4043.00	2.81	99.74	4042.73	32.00	-28.16	11.82 N 28.24 W	30.62@ 292.71	4.14
4074.00	4.40	97.98	4073.67	31.00	-26.23	11.53 N 26.32 W	28.73@ 293.65	5.14
4106.00	6.16	95.40	4105.53	32.00	-23.31	11.19 N 23.39 W	25.93@ 295.57	5.55
4138.00	8.18	95.10	4137.28	32.00	-19.34	10.83 N 19.41 W	22.23@ 299.16	6.31
4169.00	10.38	95.87	4167.87	31.00	-14.36	10.35 N 14.44 W	17.76@ 305.63	7.11
4201.00	12.22	96.37	4199.25	32.00	-8.14	9.68 N 8.20 W	12.69@ 319.71	5.76
4232.00	13.81	95.71	4229.45	31.00	-1.20	8.95 N 1.26 W	9.03@ 351.97	5.15
4264.00	15.39	95.66	4260.42	32.00	6.82	8.15 N 6.76 E	10.59@ 39.70	4.94
4296.00	17.32	92.52	4291.12	32.00	15.80	7.52 N 15.75 E	17.45@ 64.48	6.63
4328.00	18.82	93.60	4321.54	32.00	25.71	6.99 N 25.66 E	26.59@ 74.77	4.80
4360.00	19.70	92.87	4351.75	32.00	36.24	6.39 N 36.20 E	36.76@ 79.99	2.85
4391.00	20.40	92.24	4380.87	31.00	46.86	5.92 N 46.82 E	47.19@ 82.79	2.36
4423.00	21.02	91.99	4410.80	32.00	58.16	5.50 N 58.12 E	58.38@ 84.59	1.96
4455.00	21.90	92.15	4440.59	32.00	69.86	5.08 N 69.82 E	70.01@ 85.84	2.76
4486.00	22.77	93.54	4469.26	31.00	81.62	4.49 N 81.59 E	81.71@ 86.85	3.28
4518.00	23.65	94.05	4498.67	32.00	94.20	3.66 N 94.17 E	94.24@ 87.78	2.82
4550.00	24.97	93.73	4527.83	32.00	107.33	2.76 N 107.32 E	107.35@ 88.53	4.15
4582.00	27.08	93.74	4556.59	32.00	121.34	1.85 N 121.32 E	121.34@ 89.13	6.59

PathFinder Energy Services, Inc. Survey Report

YATES PETROLEUM
GRID IRON BLT FED COM#1H
CHAVES COUNTY, NM
RIG:SILVER OAK #10

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
4613.00	29.55	93.87	4583.87	31.00	136.00	0.87 N 136.00 E	136.00@ 89.63	7.97
4645.00	31.57	95.02	4611.43	32.00	152.21	0.39 S 152.21 E	152.22@ 90.15	6.57
4677.00	32.54	95.81	4638.55	32.00	169.10	2.00 S 169.12 E	169.13@ 90.68	3.30
4708.00	32.71	96.84	4664.66	31.00	185.70	3.84 S 185.73 E	185.77@ 91.18	1.87
4740.00	34.12	96.32	4691.37	32.00	203.19	5.86 S 203.24 E	203.32@ 91.65	4.50
4772.00	36.49	94.92	4717.48	32.00	221.58	7.66 S 221.64 E	221.77@ 91.98	7.83
4803.00	40.10	93.92	4741.81	31.00	240.72	9.14 S 240.79 E	240.97@ 92.17	11.82
4835.00	43.70	93.26	4765.62	32.00	262.04	10.47 S 262.12 E	262.33@ 92.29	11.33
4867.00	45.46	93.10	4788.41	32.00	284.45	11.71 S 284.54 E	284.78@ 92.36	5.51
4899.00	46.17	93.13	4810.72	32.00	307.36	12.96 S 307.46 E	307.73@ 92.41	2.22
4930.00	46.87	93.87	4832.05	31.00	329.80	14.34 S 329.91 E	330.22@ 92.49	2.85
4962.00	48.19	93.89	4853.65	32.00	353.33	15.93 S 353.46 E	353.82@ 92.58	4.13
4994.00	49.68	93.89	4874.67	32.00	377.39	17.57 S 377.53 E	377.94@ 92.66	4.66
5025.00	50.91	94.31	4894.48	31.00	401.17	19.28 S 401.32 E	401.78@ 92.75	4.10
5057.00	51.88	94.09	4914.44	32.00	426.09	21.11 S 426.25 E	426.78@ 92.83	3.08
5085.80	52.14	94.09	4932.17	28.80	448.72	22.73 S 448.89 E	449.47@ 92.90	0.90
5089.00	52.41	93.87	4934.13	3.20	451.24	22.90 S 451.42 E	452.00@ 92.90	10.04
5121.00	53.90	92.58	4953.32	32.00	476.80	24.34 S 476.99 E	477.61@ 92.92	5.66
5152.00	56.10	91.87	4971.10	31.00	502.16	25.32 S 502.36 E	503.00@ 92.89	7.34
5184.00	59.44	90.70	4988.16	32.00	529.22	25.92 S 529.42 E	530.05@ 92.80	10.89
5216.00	62.70	89.85	5003.64	32.00	557.22	26.06 S 557.42 E	558.03@ 92.68	10.45
5248.00	64.46	89.91	5017.88	32.00	585.87	26.00 S 586.08 E	586.65@ 92.54	5.50
5279.00	65.69	89.06	5030.94	31.00	613.99	25.74 S 614.19 E	614.73@ 92.40	4.68
5311.00	66.83	89.51	5043.83	32.00	643.28	25.38 S 643.48 E	643.98@ 92.26	3.79
5343.00	67.44	89.41	5056.26	32.00	672.76	25.10 S 672.96 E	673.43@ 92.14	1.93
5374.00	68.50	89.83	5067.89	31.00	701.50	24.91 S 701.70 E	702.14@ 92.03	3.64
5406.00	70.35	89.69	5079.13	32.00	731.46	24.78 S 731.65 E	732.07@ 91.94	5.80
5438.00	71.84	89.68	5089.50	32.00	761.73	24.62 S 761.93 E	762.32@ 91.85	4.66
5511.00	71.84	89.68	5112.25	73.00	831.09	24.23 S 831.29 E	831.64@ 91.67	0.00

STRAIGHT LINE PROJECTION TO BIT @ 5511' MD.

SCIENTIFIC DRILLING CONTROLS

KEEPER GYRO SURVEY
Directional Survey Report
for

YATES PETROLEUM

Well Number	:	GRID IRON "BLI" FED COM NO.1H
Well Location	:	CHAVEZ COUNTY, NEW MEXICO
Job Number	:	32K1105878
Location Latitude	:	33.305
Survey Date	:	5-NOV-2008
S.D.C. Personnel	:	VICTOR MELENDEZ JR.
Length Units	:	Feet
North Reference	:	GRID North
Grid Correction	:	-0.03 Degrees
Survey Depth Zero	:	RKB
Proposal Direction	:	89.60
Calculation Method	:	Minimum Curvature

Remarks : The OUTRUN 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

Outrun Survey
for
YATES PETROLEUM

Page 1

Well No.: GRID IRON "BLI" FED CO

Date : 5-NOV-2008

Job No. : 32K1105878

GRID

Proposal : 89.60

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	359.97	0.00	0.00	0.00
100.00	100.00	-0.01	0.07	193.04	-0.06	-0.01	0.07
200.00	200.00	0.14	0.20	77.65	-0.08	0.14	0.24
300.00	300.00	0.48	0.24	51.39	0.09	0.48	0.11
400.00	400.00	0.41	0.45	323.96	0.54	0.41	0.50
500.00	500.00	0.16	0.06	213.30	0.81	0.15	0.47
600.00	599.99	0.43	0.56	37.58	1.15	0.42	0.62
700.00	699.99	0.75	0.56	2.35	2.03	0.74	0.34
800.00	799.99	0.56	0.33	310.05	2.70	0.54	0.44
900.00	899.99	0.44	0.13	110.61	2.85	0.42	0.45
1000.00	999.98	0.15	0.46	274.83	2.84	0.13	0.59
1100.00	1099.98	-0.50	0.45	320.37	3.18	-0.52	0.35
1200.00	1199.98	-0.87	0.22	319.91	3.63	-0.90	0.23
1300.00	1299.98	-1.25	0.36	305.21	3.95	-1.28	0.16
1400.00	1399.97	-1.80	0.40	302.31	4.32	-1.83	0.04
1500.00	1499.97	-2.53	0.51	281.31	4.59	-2.56	0.20
1600.00	1599.96	-3.67	0.86	287.89	4.91	-3.71	0.36
1700.00	1699.95	-4.94	0.89	314.64	5.69	-4.98	0.41
1800.00	1799.94	-5.96	0.56	284.06	6.35	-6.00	0.50
1900.00	1899.93	-7.07	0.97	310.61	7.02	-7.12	0.53
2000.00	1999.92	-8.50	1.17	308.55	8.21	-8.56	0.20
2100.00	2099.90	-10.16	1.22	305.47	9.46	-10.23	0.08
2200.00	2199.87	-12.01	1.31	299.81	10.65	-12.09	0.15
2300.00	2299.85	-13.58	0.75	297.58	11.52	-13.66	0.56
2400.00	2399.84	-15.02	1.10	295.35	12.24	-15.11	0.35
2500.00	2499.83	-16.35	0.53	267.24	12.62	-16.43	0.68
2600.00	2599.82	-17.23	0.64	310.53	12.96	-17.32	0.44
2700.00	2699.82	-18.04	0.45	266.55	13.30	-18.14	0.44
2800.00	2799.82	-18.85	0.60	307.74	13.60	-18.94	0.40
2900.00	2899.81	-19.48	0.25	272.54	13.93	-19.57	0.42
3000.00	2999.81	-20.10	0.60	308.64	14.27	-20.20	0.42
3100.00	3099.80	-21.02	0.59	269.96	14.60	-21.13	0.39
3200.00	3199.80	-22.11	0.66	270.74	14.60	-22.22	0.07
3300.00	3299.79	-23.05	0.41	266.99	14.59	-23.15	0.25
3400.00	3399.79	-23.78	0.43	277.77	14.62	-23.88	0.08
3500.00	3499.78	-24.77	0.73	255.54	14.51	-24.87	0.37
3600.00	3599.78	-25.83	0.61	237.25	14.07	-25.93	0.24
3700.00	3699.77	-26.98	0.81	260.22	13.66	-27.08	0.34
3800.00	3799.76	-28.14	0.61	239.56	13.27	-28.23	0.32
3900.00	3899.76	-29.09	0.73	229.59	12.59	-29.18	0.17

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

Page 2

YATES PETROLEUM

Well No.: GRID IRON "BLI" FED CO

Date : 5-NOV-2008

Job No. : 32K1105878

GRID

Proposal : 89.60

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

3910.00	3909.76	-29.16	0.49	222.96	12.51	-29.25	2.50
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The Horizontal Displacement (in Feet) at
Measured Depth 3910.00 is 31.82 in a Direction of 293.16 Degrees
