

Results of Directional Survey

API number:	30-025-39508		
OGRID:		Operator:	CAZA OPERATING, LLC
		Property:	BADA BING 23 STATE # 1H

surface	ULSTR:	M	23	T 10S	R 33E
				660 FSL	660 FWL

BH Loc	ULSTR:	D	23	T 10S	R 33E
12870	MD	8854.5	TVD	4786 FSL	583 FWL
				494 FNL	

Top Perf/OH	ULSTR:	M	23	T 10S	R 33E
4618	MD	4617.8	TVD	666 FSL	676 FWL

Bot Perf/OH	ULSTR:	D	23	T 10S	R 33E
4630	MD	4629.8	TVD	666 FSL	675 FWL

	MD	N/S	E/W	VD
	4600	5.87	15.57	4599.75
TOP PERFS/OH	4618	5.91	15.50	4617.75
	4700	6.11	15.16	4699.75
	4600	5.87	15.57	4599.75
BOT PERFS/OH	4630	5.94	15.45	4629.75
	4700	6.11	15.16	4699.75

NEXT TO LAST	12785	4041.16	-69.00	8856.10
LAST READING	12803	4059.08	-70.72	8855.77
TD	12870	4125.78	-77.12	8854.54

Surface Location	660 FS	660 FW
Projected BHL	4786 FS	583 FW
Location of		
Top Perfs/OH	666 FS	676 FW
Bottom Perfs/OH	666 FS	675 FW

SUMMARY of Subsurface Locations

Surface Location	M-23-10S-33E	660 FS	660 FW	Vert. Depth
Top Perfs/OH	M-23-10S-33E	666 FS	676 FW	4617.75
Bottom Perfs/OH	D-23-10S-33E	666 FS	675 FW	4629.75
Projected TD	D-23-10S-33E	4786 FS	583 FW	8854.54

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Gyroscopic Survey Report
for
CAZA OPERATING

SUR: M-23-10s-33e, 660/S & 660/W
BHL: D-23-10s-33e, 4786/S & 583/W
API # 30-025-39508

Well Location	LEA COUNTY, NEW MEXICO
Well Name	BADA BING 23 ST. NO.1H
Rig Name	NABORS 783
Survey Date	10/31/2009
Latitude	33.43 deg
North Reference	Grid North
Grid Correction	-0.43 deg
Depth Reference	RIG FLOOR
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 359.78Azim (deg)
Definitive Survey	FINAL SURVEY
Operator	VICTOR MELENDEZ JR

Comments



Scientific Drilling

Survey Report

Well Name: BADA BING 23 ST. NO.1H
Survey: FINAL SURVEY
Survey Date: 10/31/2009

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.20	101.19	100.00	-0.03	-0.03	0.17	0.20	0.17	101.19
200.00	0.12	344.10	200.00	0.03	0.04	0.31	0.28	0.32	83.49
300.00	0.25	244.00	300.00	0.04	0.04	0.09	0.30	0.10	63.54
400.00	0.29	230.44	400.00	-0.21	-0.21	-0.30	0.08	0.37	234.80
500.00	0.36	226.84	500.00	-0.58	-0.59	-0.72	0.07	0.93	230.97
600.00	0.33	228.29	599.99	-0.99	-0.99	-1.17	0.03	1.53	229.63
700.00	0.48	205.08	699.99	-1.56	-1.56	-1.56	0.22	2.21	224.93
800.00	0.50	196.63	799.99	-2.36	-2.36	-1.86	0.08	3.01	218.24
900.00	0.61	184.68	899.98	-3.31	-3.32	-2.03	0.16	3.89	211.49
1000.00	0.59	176.84	999.98	-4.36	-4.37	-2.05	0.08	4.82	205.12
1100.00	0.40	113.26	1099.98	-5.02	-5.02	-1.69	0.55	5.30	198.64
1200.00	0.50	97.98	1199.97	-5.22	-5.22	-0.94	0.15	5.31	190.16
1300.00	0.53	86.08	1299.97	-5.25	-5.25	-0.04	0.11	5.25	180.44
1400.00	0.49	67.56	1399.96	-5.06	-5.06	0.82	0.17	5.12	170.84
1500.00	0.27	29.39	1499.96	-4.69	-4.69	1.32	0.32	4.87	164.22
1600.00	0.15	217.34	1599.96	-4.59	-4.58	1.36	0.42	4.78	163.45
1700.00	0.17	291.93	1699.96	-4.64	-4.63	1.15	0.19	4.77	166.06
1800.00	0.43	236.27	1799.96	-4.79	-4.79	0.70	0.36	4.84	171.64
1900.00	0.55	235.94	1899.96	-5.26	-5.26	0.00	0.12	5.26	180.03
2000.00	0.36	186.48	1999.95	-5.84	-5.84	-0.43	0.42	5.86	184.25
2100.00	0.36	156.80	2099.95	-6.44	-6.44	-0.35	0.18	6.45	183.07
2200.00	0.39	165.45	2199.95	-7.06	-7.06	-0.14	0.07	7.06	181.11
2300.00	0.38	177.86	2299.95	-7.72	-7.72	-0.04	0.08	7.72	180.29
2400.00	0.26	169.61	2399.95	-8.27	-8.27	0.01	0.12	8.27	179.90
2500.00	0.28	197.17	2499.94	-8.73	-8.73	-0.02	0.13	8.73	180.11
2600.00	0.23	207.69	2599.94	-9.14	-9.14	-0.18	0.07	9.14	181.14
2700.00	0.07	259.47	2699.94	-9.33	-9.33	-0.34	0.19	9.33	182.07
2800.00	0.16	238.01	2799.94	-9.41	-9.41	-0.52	0.10	9.43	183.16
2900.00	0.39	13.76	2899.94	-9.15	-9.16	-0.56	0.52	9.17	183.48
3000.00	0.73	46.98	2999.94	-8.39	-8.39	-0.01	0.46	8.39	180.05
3100.00	0.77	45.14	3099.93	-7.48	-7.47	0.94	0.04	7.53	172.85
3200.00	1.02	39.08	3199.92	-6.32	-6.31	1.97	0.27	6.61	162.63
3300.00	1.14	41.89	3299.90	-4.89	-4.88	3.20	0.14	5.83	146.74
3400.00	1.80	50.82	3399.87	-3.17	-3.15	5.08	0.69	5.98	121.76
3500.00	1.12	51.64	3499.83	-1.58	-1.55	7.06	0.68	7.23	102.38
3600.00	1.00	48.03	3599.82	-0.39	-0.36	8.48	0.13	8.49	92.42
3700.00	1.04	50.72	3699.80	0.76	0.80	9.83	0.06	9.86	85.34
3800.00	1.03	56.40	3799.78	1.83	1.87	11.28	0.10	11.43	80.59



Well Name: BADA BING 23 ST. NO.1H
 Survey: FINAL SURVEY
 Survey Date: 10/31/2009

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
3900.00	1 00	62.64	3899.77	2 72	2.77	12.80	0.11	13.09	77.81
4000.00	0 58	73.30	3999.76	3.26	3.31	14.06	0.44	14.44	76.74
4100.00	0 38	44.77	4099.76	3.64	3.69	14.77	0.31	15.23	75.97
4200.00	0 33	41.97	4199.75	4.08	4.14	15.20	0.06	15.75	74.77
4300.00	0 37	35.83	4299.75	4 55	4.61	15.58	0.06	16.24	73.51
4400.00	0 29	10.63	4399.75	5.06	5.12	15.81	0.16	16 62	72.05
4500.00	0 21	348 27	4499.75	5.49	5.55	15.82	0.13	16 77	70.66
4600.00	0 29	303.88	4599.75	5.81	5 87	15 57	0.20	16.64	69.34
4700.00	0 26	295 04	4699.75	6.05	6 11	15.16	0.05	16.34	68.05
4800.00	0 24	286.74	4799.75	6 21	6.27	14.75	0.04	16.03	66.99
4900.00	0 35	320.86	4899.74	6.51	6.56	14.36	0.21	15.79	65.43
5000.00	0 36	305.35	4999.74	6.93	6.98	13.91	0.10	15.57	63.34
5100.00	0 46	289.06	5099.74	7 25	7.30	13 27	0 16	15.15	61.20
5200.00	0 47	305.99	5199.74	7.62	7 67	12.56	0.14	14.72	58.60
5300.00	0 44	298.67	5299.73	8.05	8.09	11.89	0.06	14.39	55.77
5400.00	0 38	288.09	5399.73	8.34	8 38	11 24	0 10	14.02	53.27
5500.00	0 35	260 77	5499.73	8.40	8.44	10.62	0.18	13.56	51.52
5600.00	0 35	209.36	5599.73	8.09	8 13	10.17	0.30	13.02	51.37
5700.00	0 47	212.18	5699.73	7.48	7.52	9.80	0 12	12 36	52.51
5800.00	0 49	192.81	5799.72	6 72	6.76	9.49	0.16	11.65	54.55
5900.00	0 55	175.88	5899.72	5.82	5 86	9.43	0.16	11.10	58.14
6000.00	0 46	189.17	5999.71	4.95	4.99	9.40	0.15	10.64	62 06
6100.00	0 50	176.02	6099.71	4.12	4 15	9.37	0.12	10.25	66.09
6200.00	0 36	170.81	6199.71	3.37	3.41	9.45	0.15	10 05	70.17
6300.00	0 51	209 91	6299.70	2.68	2.72	9 28	0.32	9.67	73.69
6400.00	0 69	172 88	6399.70	1.70	1.74	9.13	0 42	9.30	79.23
6500.00	0 65	177.27	6499.69	0.54	0.57	9.23	0 06	9 25	86.45
6600.00	0 60	232.35	6599.69	-0.35	-0.31	8.85	0 58	8.85	92.04
6700.00	0 70	242.62	6699.68	-0.95	-0.92	7.89	0.16	7.94	96 63
6800.00	0 60	214.02	6799.67	-1 66	-1 63	7.05	0.34	7.24	103.03
6900.00	0 53	222.36	6899.67	-2.43	-2.40	6.45	0.11	6.88	110.44
7000.00	0 57	208.88	6999.67	-3 20	-3 18	5.90	0 14	6.70	118.33
7100.00	0 60	209.17	7099.66	-4.09	-4 07	5.40	0.02	6.77	127.00
7200.00	0 57	212.22	7199.66	-4.97	-4.95	4 88	0.04	6 95	135.38
7300.00	0 40	211.97	7299.65	-5.68	-5.67	4.43	0.17	7.19	141.97
7400.00	0 42	218.73	7399.65	-6 26	-6.25	4.02	0.05	7 43	147 25
7500.00	0 58	219.19	7499.65	-6.94	-6.93	3 47	0.17	7.75	153.42
7600.00	0 44	220.69	7599.64	-7.63	-7.62	2.89	0 14	8.15	159.19



Well Name: BADA BING 23 ST. NO 1H
Survey: FINAL SURVEY
Survey Date: 10/31/2009

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
7700.00	0.45	209.02	7699.64	-8.26	-8.25	2.45	0.09	8.61	163.46
7800.00	0.54	201.60	7799.63	-9.04	-9.04	2.09	0.10	9.27	166.99
7900.00	0.53	237.39	7899.63	-9.72	-9.72	1.53	0.33	9.84	171.06
8000.00	0.67	217.33	7999.62	-10.44	-10.43	0.78	0.26	10.46	175.70
8100.00	0.60	221.19	8099.62	-11.30	-11.30	0.08	0.09	11.30	179.58
8200.00	0.55	220.55	8199.61	-12.05	-12.05	-0.57	0.05	12.07	182.72
8300.00	0.53	222.41	8299.61	-12.76	-12.76	-1.20	0.03	12.82	185.36
8400.00	0.48	208.20	8399.61	-13.46	-13.47	-1.71	0.13	13.58	187.22
8500.00	0.45	212.80	8499.60	-14.16	-14.17	-2.12	0.05	14.33	188.50
8600.00	0.38	272.84	8599.60	-14.47	-14.48	-2.66	0.42	14.73	190.42
8700.00	0.28	233.18	8699.60	-14.60	-14.62	-3.19	0.24	14.96	192.32
8800.00	0.32	284.73	8799.60	-14.68	-14.69	-3.66	0.27	15.14	193.99
8890.00	0.57	318.89	8889.59	-14.28	-14.29	-4.20	0.39	14.90	196.36



Scientific Drilling

Survey Graph Report

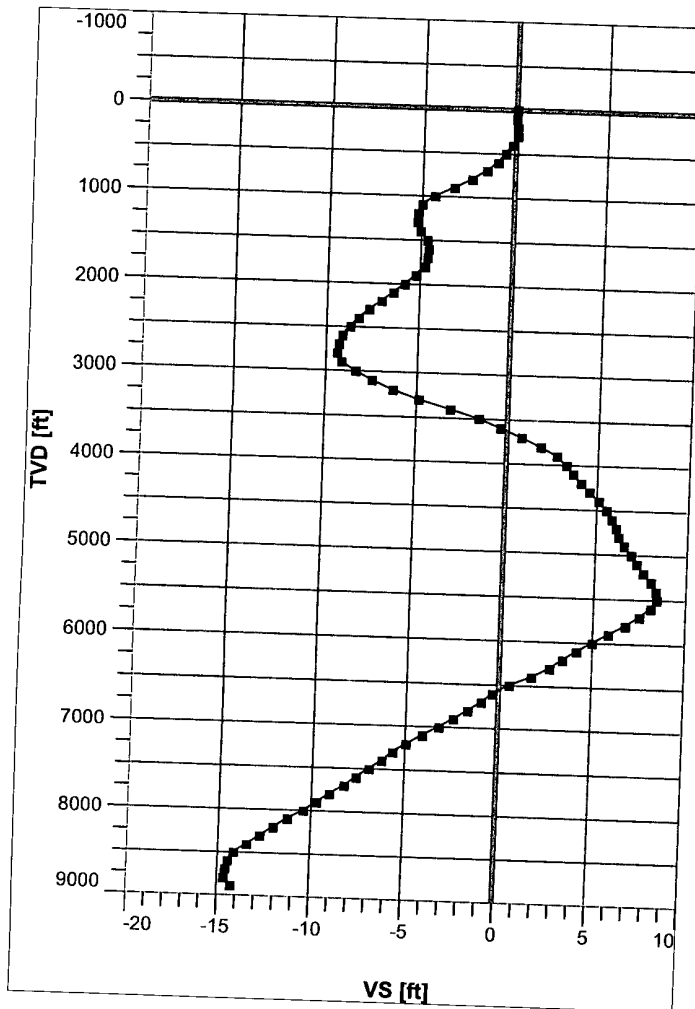
Name :

FINAL SURVEY

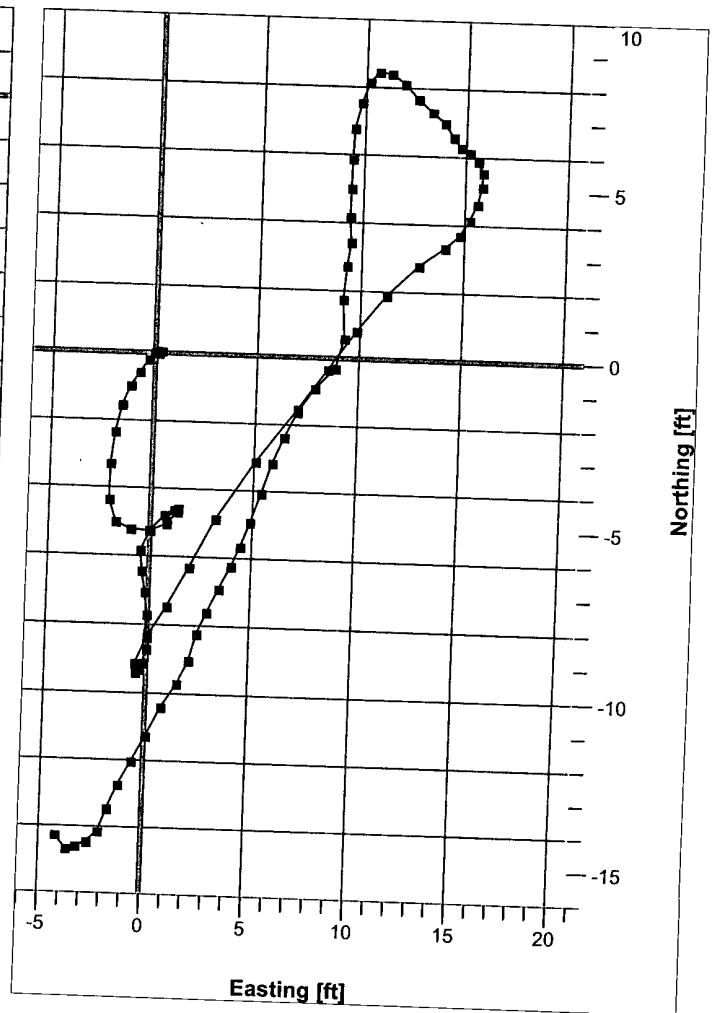
Generated :

11/1/2009 00:29.08 Central Daylight Time

VS View



Plan View





Caza Petroleum

Lea County

Bada Bing "23" State

#1H

ST1

HOBBS OCD

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Survey: Survey #1 MWD

Pathfinder X & Y Survey Report

18 November, 2009

SUR: M-23-10s-33e, 660/S ^8 660/W
BHL: D-23-10s-33e, 4786/S & 583/W
API # 30-025-39508

PATHFINDER



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Caza Petroleum		Local Co-ordinate Reference: Well #1H	
Project: Lea County		TVD Reference: WELL @ 4236.50ft (Original Well Elev)	
Site: Bada Bing "23" State		MD Reference: WELL @ 4236.50ft (Original Well Elev)	
Well: #1H		North Reference: Grid	
Wellbore: ST1		Survey Calculation Method: Minimum Curvature	
Design: ST1		Database: Midland Database	

Project Lea County			
Map System: US State Plane 1927 (Exact solution)		System Datum: Mean Sea Level	
Geo Datum: NAD 1927 (NADCON CONUS)			
Map Zone: New Mexico East 3001			

Site Bada Bing "23" State			
Site Position:			
From: Map	Northing: 883,630.030 ft	Latitude: 33° 25' 35.725 N	
Position Uncertainty: 0.00 ft	Easting: 740,582.590 ft	Longitude: 103° 32' 41.298 W	
	Slot Radius: "	Grid Convergence: 0.43 °	

Well #1H			
Well Position +N/-S	0.00 ft	Northing: 883,630.030 ft	Latitude: 33° 25' 35.725 N
+E/-W	0.00 ft	Easting: 740,582.590 ft	Longitude: 103° 32' 41.298 W
Position Uncertainty	0.00 ft	Wellhead Elevation: ft	Ground Level: 4,210.00 ft

Wellbore ST1					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	10/20/2009	(°) 7.85	(°) 61.36	(nT) 49,530

Design ST1				
Audit Notes:				
Version: 1.0	Phase: ACTUAL	Tie On Depth: 8,500.00		
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	0.00



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Caza Petroleum
Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Design: ST1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 4236.50ft (Original Well Elev)
MD Reference: WELL @ 4236.50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey Program Date 11/18/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	8,500.00	Survey #1 Gyro (Pilot Hole)	CB-GYRO-MS	Camera based gyro multishot
8,655.00	12,870.00	Survey #1 MWD (ST1)	MWD	MWD - Standard

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,500.00	0.45	212.80	8,499.60	4,263.10	-14.19	-2.12	-14.19	0.00	883,615.84	740,580.47
8,655.00	19.08	357.89	8,651.81	4,415.31	10.86	-3.40	10.86	12.55	883,640.89	740,579.19
8,687.00	25.32	357.68	8,681.42	4,444.92	22.94	-3.87	22.94	19.50	883,652.97	740,578.72
8,719.00	31.39	0.17	8,709.57	4,473.07	38.12	-4.12	38.12	19.32	883,668.15	740,578.47
8,750.00	36.58	358.10	8,735.27	4,498.77	55.44	-4.40	55.44	17.15	883,685.47	740,578.19
8,780.00	41.68	357.65	8,758.53	4,522.03	74.35	-5.11	74.35	17.03	883,704.38	740,577.48
8,812.00	46.96	356.99	8,781.42	4,544.92	96.68	-6.16	96.68	16.56	883,726.71	740,576.43
8,844.00	52.85	355.98	8,802.02	4,565.52	121.10	-7.67	121.10	18.56	883,751.13	740,574.92
8,875.00	58.04	356.44	8,819.59	4,583.09	146.56	-9.35	146.56	16.79	883,776.59	740,573.24
8,907.00	62.70	357.81	8,835.41	4,598.91	174.34	-10.74	174.34	15.03	883,804.37	740,571.85
8,939.00	67.62	357.65	8,848.85	4,612.35	203.34	-11.89	203.34	15.38	883,833.37	740,570.70
8,971.00	72.81	357.61	8,859.68	4,623.18	233.42	-13.14	233.42	16.22	883,863.45	740,569.45
9,002.00	78.70	357.71	8,867.30	4,630.80	263.43	-14.36	263.43	19.00	883,893.46	740,568.23
9,049.00	87.20	358.02	8,873.07	4,636.57	310.00	-16.10	310.00	18.10	883,940.03	740,566.49
9,081.00	89.38	1.23	8,874.02	4,637.52	341.98	-16.31	341.98	12.12	883,972.01	740,566.28
9,113.00	90.06	5.08	8,874.18	4,637.68	373.92	-14.55	373.92	12.22	884,003.95	740,568.04
9,143.00	90.06	7.59	8,874.15	4,637.65	403.74	-11.24	403.74	8.37	884,033.77	740,571.35
9,175.00	89.72	6.98	8,874.21	4,637.71	435.48	-7.18	435.48	2.18	884,065.51	740,575.41
9,206.00	89.38	6.73	8,874.45	4,637.95	466.26	-3.48	466.26	1.36	884,096.29	740,579.11
9,238.00	89.22	6.50	8,874.84	4,638.34	498.04	0.21	498.04	0.88	884,128.07	740,582.80
9,270.00	88.71	6.27	8,875.42	4,638.92	529.84	3.77	529.84	1.75	884,159.87	740,586.36



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Caza Petroleum
Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Design: ST1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #1H
WELL @ 4236.50ft (Original Well Elev)
WELL @ 4236.50ft (Original Well Elev)
Grid
Minimum Curvature
Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,301.00	87.81	5.06	8,876.36	4,639.86	560.67	6.82	560.67	4.86	884,190.70	740,589.41
9,333.00	87.59	4.77	8,877.64	4,641.14	592.53	9.56	592.53	1.14	884,222.56	740,592.15
9,365.00	87.43	3.39	8,879.04	4,642.54	624.41	11.84	624.41	4.34	884,254.44	740,594.43
9,396.00	87.15	1.67	8,880.50	4,644.00	655.35	13.21	655.35	5.62	884,285.38	740,595.80
9,428.00	87.76	1.28	8,881.92	4,645.42	687.31	14.03	687.31	2.26	884,317.34	740,596.62
9,460.00	89.78	0.42	8,882.61	4,646.11	719.29	14.50	719.29	6.86	884,349.32	740,597.09
9,491.00	90.28	0.20	8,882.59	4,646.09	750.29	14.67	750.29	1.76	884,380.32	740,597.26
9,523.00	90.73	0.45	8,882.31	4,645.81	782.29	14.85	782.29	1.61	884,412.32	740,597.44
9,554.00	91.12	0.68	8,881.81	4,645.31	813.28	15.16	813.28	1.46	884,443.31	740,597.75
9,586.00	91.46	0.34	8,881.09	4,644.59	845.28	15.44	845.28	1.50	884,475.31	740,598.03
9,617.00	91.51	0.21	8,880.29	4,643.79	876.26	15.59	876.26	0.45	884,506.29	740,598.18
9,649.00	91.63	0.32	8,879.41	4,642.91	908.25	15.74	908.25	0.51	884,538.28	740,598.33
9,681.00	91.23	359.64	8,878.61	4,642.11	940.24	15.73	940.24	2.46	884,570.27	740,598.32
9,713.00	91.06	357.84	8,877.97	4,641.47	972.23	15.02	972.23	5.65	884,602.26	740,597.61
9,744.00	91.18	357.71	8,877.37	4,640.87	1,003.20	13.82	1,003.20	0.57	884,633.23	740,596.41
9,776.00	91.01	357.88	8,876.75	4,640.25	1,035.17	12.59	1,035.17	0.75	884,665.20	740,595.18
9,808.00	90.67	357.85	8,876.28	4,639.78	1,067.14	11.40	1,067.14	1.07	884,697.17	740,593.99
9,840.00	90.11	357.96	8,876.07	4,639.57	1,099.12	10.23	1,099.12	1.78	884,729.15	740,592.82
9,871.00	89.78	358.19	8,876.10	4,639.60	1,130.10	9.19	1,130.10	1.30	884,760.13	740,591.78
9,903.00	89.94	358.00	8,876.17	4,639.67	1,162.08	8.12	1,162.08	0.78	884,792.11	740,590.71
9,934.00	90.17	357.89	8,876.15	4,639.65	1,193.06	7.01	1,193.06	0.82	884,823.09	740,589.60
9,966.00	90.45	358.28	8,875.97	4,639.47	1,225.05	5.94	1,225.05	1.50	884,855.08	740,588.53
9,997.00	90.67	358.46	8,875.67	4,639.17	1,256.03	5.06	1,256.03	0.92	884,886.06	740,587.65
10,029.00	90.56	358.00	8,875.33	4,638.83	1,288.01	4.07	1,288.01	1.48	884,918.04	740,586.66
10,061.00	90.17	358.17	8,875.12	4,638.62	1,320.00	3.00	1,320.00	1.33	884,950.03	740,585.59
10,093.00	89.89	357.67	8,875.10	4,638.60	1,351.97	1.84	1,351.97	1.79	884,982.00	740,584.43
10,124.00	90.50	357.59	8,875.00	4,638.50	1,382.95	0.56	1,382.95	1.98	885,012.98	740,583.15



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Caza Petroleum
Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Design: ST1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #1H
 WELL @ 4236.50ft (Original Well Elev)
 WELL @ 4236.50ft (Original Well Elev)
 Grid
 Minimum Curvature
 Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
10,156.00	90.95	358.01	8,874.59	4,638.09	1,414.92	-0.67	1,414.92	1.92	885,044.95	740,581.92
10,187.00	90.73	357.48	8,874.14	4,637.64	1,445.89	-1.89	1,445.89	1.85	885,075.92	740,580.70
10,219.00	90.45	357.47	8,873.81	4,637.31	1,477.86	-3.30	1,477.86	0.88	885,107.89	740,579.29
10,251.00	90.22	357.36	8,873.62	4,637.12	1,509.83	-4.74	1,509.83	0.80	885,139.86	740,577.85
10,283.00	90.22	357.33	8,873.50	4,637.00	1,541.79	-6.22	1,541.79	0.09	885,171.82	740,576.37
10,314.00	90.67	357.61	8,873.26	4,636.76	1,572.76	-7.59	1,572.76	1.71	885,202.79	740,575.00
10,346.00	91.01	357.97	8,872.79	4,636.29	1,604.73	-8.83	1,604.73	1.55	885,234.76	740,573.76
10,378.00	90.73	358.55	8,872.30	4,635.80	1,636.72	-9.80	1,636.72	2.01	885,266.75	740,572.79
10,409.00	89.78	359.61	8,872.17	4,635.67	1,667.71	-10.30	1,667.71	4.59	885,297.74	740,572.29
10,441.00	89.55	0.30	8,872.35	4,635.85	1,699.71	-10.32	1,699.71	2.27	885,329.74	740,572.27
10,473.00	89.55	0.34	8,872.61	4,636.11	1,731.71	-10.14	1,731.71	0.12	885,361.74	740,572.45
10,504.00	89.66	0.82	8,872.82	4,636.32	1,762.71	-9.83	1,762.71	1.59	885,392.74	740,572.76
10,536.00	89.78	1.35	8,872.98	4,636.48	1,794.70	-9.22	1,794.70	1.70	885,424.73	740,573.37
10,568.00	90.06	0.69	8,873.02	4,636.52	1,826.69	-8.65	1,826.69	2.24	885,456.72	740,573.94
10,599.00	90.78	0.67	8,872.79	4,636.29	1,857.69	-8.28	1,857.69	2.32	885,487.72	740,574.31
10,631.00	90.84	1.16	8,872.34	4,635.84	1,889.68	-7.77	1,889.68	1.54	885,519.71	740,574.82
10,662.00	90.90	1.72	8,871.87	4,635.37	1,920.67	-6.99	1,920.67	1.82	885,550.70	740,575.60
10,694.00	90.73	2.26	8,871.41	4,634.91	1,952.65	-5.88	1,952.65	1.77	885,582.68	740,576.71
10,726.00	90.73	2.53	8,871.01	4,634.51	1,984.62	-4.55	1,984.62	0.84	885,614.65	740,578.04
10,758.00	90.62	2.66	8,870.63	4,634.13	2,016.58	-3.10	2,016.58	0.53	885,646.61	740,579.49
10,789.00	90.84	2.85	8,870.23	4,633.73	2,047.54	-1.61	2,047.54	0.94	885,677.57	740,580.98
10,821.00	90.89	2.90	8,869.75	4,633.25	2,079.50	0.00	2,079.50	0.22	885,709.53	740,582.59
10,853.00	90.84	2.98	8,869.27	4,632.77	2,111.45	1.64	2,111.45	0.29	885,741.48	740,584.23
10,884.00	90.78	2.33	8,868.83	4,632.33	2,142.42	3.07	2,142.42	2.11	885,772.45	740,585.66
10,916.00	89.55	1.05	8,868.74	4,632.24	2,174.40	4.02	2,174.40	5.55	885,804.43	740,586.61
10,948.00	88.32	0.61	8,869.33	4,632.83	2,206.39	4.48	2,206.39	4.08	885,836.42	740,587.07
10,979.00	88.65	0.08	8,870.15	4,633.65	2,237.38	4.67	2,237.38	2.01	885,867.41	740,587.26



Pathfinder Energy Services

Pathfinder X & Y Survey Report

PATHFINDER

Company: Caza Petroleum
Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Design: ST1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #1H
 WELL @ 4236.50ft (Original Well Elev)
 WELL @ 4236.50ft (Original Well Elev)
 Grid
 Minimum Curvature
 Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
11,011.00	89.10	0.06	8,870.78	4,634.28	2,269.38	4.71	2,269.38	1.41	885,899.41	740,587.30
11,043.00	89.33	0.05	8,871.22	4,634.72	2,301.37	4.74	2,301.37	0.72	885,931.40	740,587.33
11,074.00	89.78	359.90	8,871.46	4,634.96	2,332.37	4.72	2,332.37	1.53	885,962.40	740,587.31
11,106.00	89.94	358.71	8,871.54	4,635.04	2,364.37	4.34	2,364.37	3.75	885,994.40	740,586.93
11,138.00	90.22	358.65	8,871.49	4,634.99	2,396.36	3.60	2,396.36	0.89	886,026.39	740,586.19
11,169.00	90.39	358.59	8,871.33	4,634.83	2,427.35	2.85	2,427.35	0.58	886,057.38	740,585.44
11,201.00	90.73	358.22	8,871.02	4,634.52	2,459.34	1.96	2,459.34	1.57	886,089.37	740,584.55
11,233.00	90.50	358.04	8,870.67	4,634.17	2,491.32	0.92	2,491.32	0.91	886,121.35	740,583.51
11,264.00	90.62	357.96	8,870.37	4,633.87	2,522.30	-0.16	2,522.30	0.47	886,152.33	740,582.43
11,296.00	90.50	357.85	8,870.06	4,633.56	2,554.27	-1.33	2,554.27	0.51	886,184.30	740,581.26
11,328.00	90.78	358.03	8,869.70	4,633.20	2,586.25	-2.48	2,586.25	1.04	886,216.28	740,580.11
11,359.00	90.73	357.95	8,869.29	4,632.79	2,617.23	-3.57	2,617.23	0.30	886,247.26	740,579.02
11,391.00	90.45	358.44	8,868.96	4,632.46	2,649.21	-4.58	2,649.21	1.76	886,279.24	740,578.01
11,423.00	89.94	358.45	8,868.85	4,632.35	2,681.20	-5.45	2,681.20	1.59	886,311.23	740,577.14
11,454.00	89.78	357.62	8,868.93	4,632.43	2,712.18	-6.51	2,712.18	2.73	886,342.21	740,576.08
11,486.00	89.78	358.30	8,869.05	4,632.55	2,744.16	-7.65	2,744.16	2.12	886,374.19	740,574.94
11,518.00	89.44	358.96	8,869.27	4,632.77	2,776.15	-8.41	2,776.15	2.32	886,406.18	740,574.18
11,550.00	89.33	358.97	8,869.61	4,633.11	2,808.14	-8.99	2,808.14	0.35	886,438.17	740,573.60
11,582.00	89.33	359.45	8,869.99	4,633.49	2,840.14	-9.43	2,840.14	1.50	886,470.17	740,573.16
11,613.00	90.11	359.76	8,870.14	4,633.64	2,871.14	-9.65	2,871.14	2.71	886,501.17	740,572.94
11,645.00	90.06	359.79	8,870.09	4,633.59	2,903.14	-9.77	2,903.14	0.18	886,533.17	740,572.82
11,677.00	89.72	359.41	8,870.15	4,633.65	2,935.14	-10.00	2,935.14	1.59	886,565.17	740,572.59
11,709.00	90.11	358.61	8,870.20	4,633.70	2,967.13	-10.55	2,967.13	2.78	886,597.16	740,572.04
11,740.00	90.78	358.72	8,869.96	4,633.46	2,998.12	-11.27	2,998.12	2.19	886,628.15	740,571.32
11,772.00	91.06	359.09	8,869.44	4,632.94	3,030.11	-11.88	3,030.11	1.45	886,660.14	740,570.71
11,804.00	91.12	359.48	8,868.84	4,632.34	3,062.10	-12.28	3,062.10	1.23	886,692.13	740,570.31
11,836.00	91.34	358.99	8,868.15	4,631.65	3,094.09	-12.71	3,094.09	1.68	886,724.12	740,569.88



Pathfinder Energy Services

Pathfinder X & Y Survey Report



Company: Caza Petroleum
Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Design: ST1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 4236.50ft (Original Well Elev)
MD Reference: WELL @ 4236.50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
11,867.00	91.57	358.87	8,867.36	4,630.86	3,125.08	-13.29	3,125.08	0.84	886,755.11	740,569.30
11,899.00	91.57	358.34	8,866.49	4,629.99	3,157.05	-14.07	3,157.05	1.66	886,787.08	740,568.52
11,931.00	91.62	358.18	8,865.59	4,629.09	3,189.03	-15.04	3,189.03	0.52	886,819.06	740,567.55
11,963.00	91.85	357.57	8,864.63	4,628.13	3,220.99	-16.22	3,220.99	2.04	886,851.02	740,566.37
11,994.00	92.24	357.10	8,863.52	4,627.02	3,251.94	-17.67	3,251.94	1.97	886,881.97	740,564.92
12,026.00	91.57	357.11	8,862.46	4,625.96	3,283.88	-19.28	3,283.88	2.09	886,913.91	740,563.31
12,058.00	90.95	356.66	8,861.75	4,625.25	3,315.82	-21.02	3,315.82	2.39	886,945.85	740,561.57
12,089.00	90.90	356.17	8,861.25	4,624.75	3,346.76	-22.96	3,346.76	1.59	886,976.79	740,559.63
12,121.00	90.78	355.90	8,860.78	4,624.28	3,378.68	-25.17	3,378.68	0.92	887,008.71	740,557.42
12,152.00	90.67	355.73	8,860.39	4,623.89	3,409.59	-27.43	3,409.59	0.65	887,039.62	740,555.16
12,184.00	90.78	355.91	8,859.99	4,623.49	3,441.51	-29.76	3,441.51	0.66	887,071.54	740,552.83
12,216.00	90.50	356.57	8,859.63	4,623.13	3,473.43	-31.86	3,473.43	2.24	887,103.46	740,550.73
12,248.00	90.50	356.60	8,859.35	4,622.85	3,505.38	-33.77	3,505.38	0.09	887,135.41	740,548.82
12,280.00	90.00	356.10	8,859.21	4,622.71	3,537.31	-35.81	3,537.31	2.21	887,167.34	740,546.78
12,311.00	89.61	355.81	8,859.31	4,622.81	3,568.23	-37.99	3,568.23	1.57	887,198.26	740,544.60
12,343.00	90.00	356.25	8,859.42	4,622.92	3,600.16	-40.21	3,600.16	1.84	887,230.19	740,542.38
12,375.00	90.73	356.83	8,859.22	4,622.72	3,632.10	-42.14	3,632.10	2.91	887,262.13	740,540.45
12,406.00	91.29	356.44	8,858.67	4,622.17	3,663.04	-43.96	3,663.04	2.20	887,293.07	740,538.63
12,438.00	91.40	356.75	8,857.92	4,621.42	3,694.97	-45.86	3,694.97	1.03	887,325.00	740,536.73
12,469.00	91.18	357.22	8,857.22	4,620.72	3,725.92	-47.49	3,725.92	1.67	887,355.95	740,535.10
12,501.00	90.45	356.74	8,856.77	4,620.27	3,757.87	-49.17	3,757.87	2.73	887,387.90	740,533.42
12,532.00	89.78	356.56	8,856.71	4,620.21	3,788.82	-50.99	3,788.82	2.24	887,418.85	740,531.60
12,563.00	90.17	356.33	8,856.72	4,620.22	3,819.76	-52.91	3,819.76	1.46	887,449.79	740,529.68
12,595.00	90.06	356.58	8,856.66	4,620.16	3,851.70	-54.89	3,851.70	0.85	887,481.73	740,527.70
12,627.00	89.50	356.42	8,856.78	4,620.28	3,883.64	-56.84	3,883.64	1.82	887,513.67	740,525.75
12,659.00	89.83	355.68	8,856.97	4,620.47	3,915.56	-59.04	3,915.56	2.53	887,545.59	740,523.55
12,690.00	90.06	355.75	8,857.00	4,620.50	3,946.48	-61.36	3,946.48	0.78	887,576.51	740,521.23



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Pathfinder X & Y Survey Report

PATHFINDER

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Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
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Local Co-ordinate Reference:
TVD Reference:
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Survey Calculation Method:
Database:

Well #1H
WELL @ 4236.50ft (Original Well Elev)
WELL @ 4236.50ft (Original Well Elev)
Grid
Minimum Curvature
Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
12,722.00	90.45	355.88	8,856.85	4,620.35	3,978.39	-63.70	3,978.39	1.28	887,608.42	740,518.89
12,754.00	90.62	355.12	8,856.55	4,620.05	4,010.29	-66.21	4,010.29	2.43	887,640.32	740,516.38
12,785.00	91.06	354.52	8,856.10	4,619.60	4,041.16	-69.00	4,041.16	2.40	887,671.19	740,513.59
12,803.00	91.01	354.51	8,855.77	4,619.27	4,059.08	-70.72	4,059.08	0.28	887,689.11	740,511.87
12,870.00	91.01	354.51	8,854.59	4,618.09	4,125.76	-77.13	4,125.76	0.00	887,755.79	740,505.46
Proj To TD-12870.00°MD,91.01°INC,354.51°AZI, 8854.59°TVD, 4125.76°VS, 4125.76°N, -77.13°E										

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(#1HBada) - survey misses by 70.49ft at 12870.00ft MD (8854.59 TVD, 4125.76 N, -77.13 E) - Point	0.00	0.00	8,876.00	4,155.32	-16.83	887,785.348	740,565.764	33° 26' 16.837 N	103° 32' 41.125 W

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,870.00	8,854.59	4,125.76	-77.13	Proj To TD-12870.00°MD,91.01°INC,354.51°AZI, 8854.59°TVD, 4125.76

Checked By: _____

Approved By: _____

Date: _____



Azimuths to Grid North
True North: -0.43°
Magnetic North: 7.42°

Magnetic Field
Strength: 49530.2snT
Dip Angle: 61.36°
Date: 10/20/2009
Model: IGRF200510

PATHFINDER

Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Plan: Plan #6 (#1H/ST1)

WELL DETAILS #1H

Ground Elevation: 4210.00
RKB Elevation: WELL @ 4236.50ft (Original Well Elev)
Rig Name: Original Well Elev

+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	883630.030	740582.590	33° 25' 35.725 N	103° 32' 41.298 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	9002.00	78.70	357.71	8867.30	263.43	-14.36	0.00	0.00	263.48	
2	9037.00	85.35	357.81	8872.16	298.04	-15.72	19.00	0.86	298.11	
3	9131.80	90.00	357.81	8876.00	392.67	-19.34	4.90	0.00	392.75	
4	9244.91	90.00	0.07	8876.00	505.76	-21.43	2.00	90.00	505.84	
5	12894.48	90.00	0.07	8876.00	4155.32	-16.83	0.00	0.00	4155.35	PBHL(#1HBada)

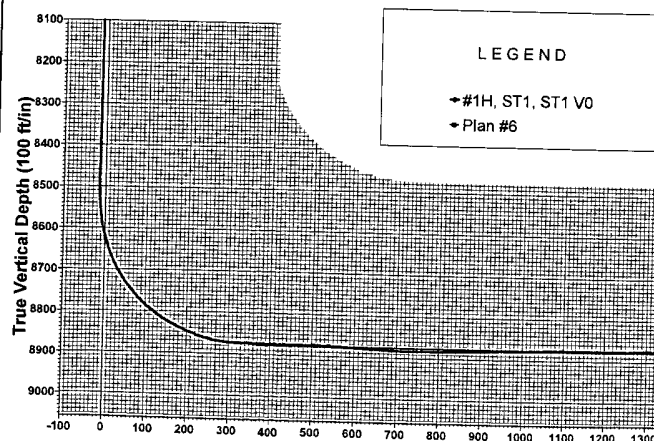
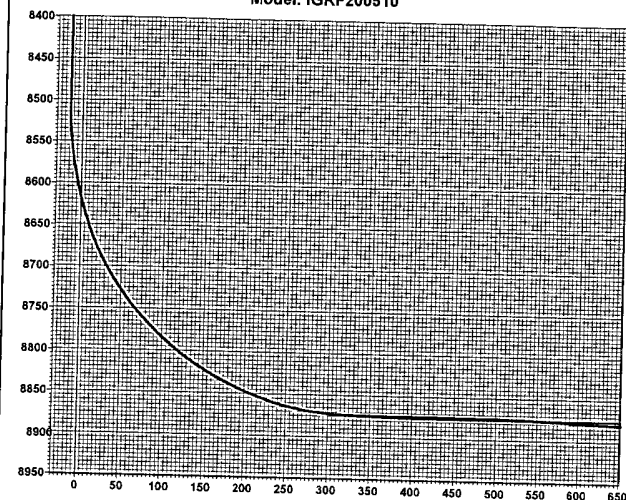
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
PBHL(#1HBada)	8876.00	4155.32	-16.83	887785.348	740565.764	Point

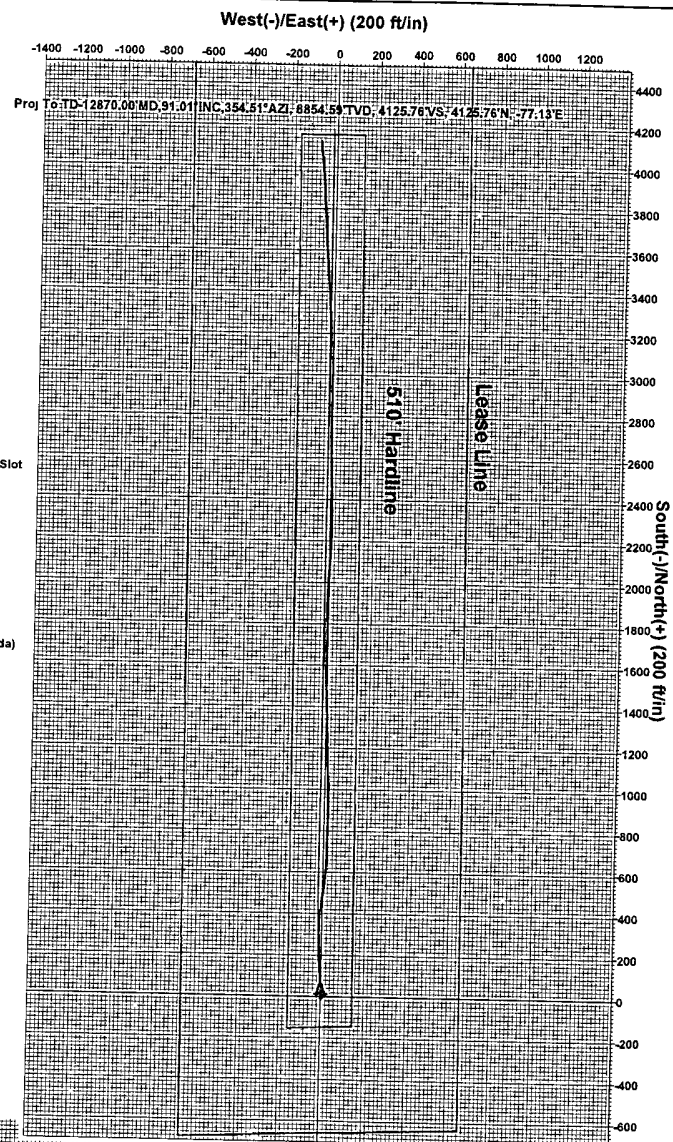
PROJECT DETAILS: Lea County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

LEGEND

- #1H, ST1, ST1 V0
- Plan #6



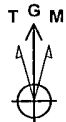
Vertical Section at 359.77° (100 ft/in)



Proj: To: TD: 12870.00' MD: 91.01' INC: 354.51' AZI: 8854.59' TVD: 4125.76' VS: 4125.76' N: -77.13° E

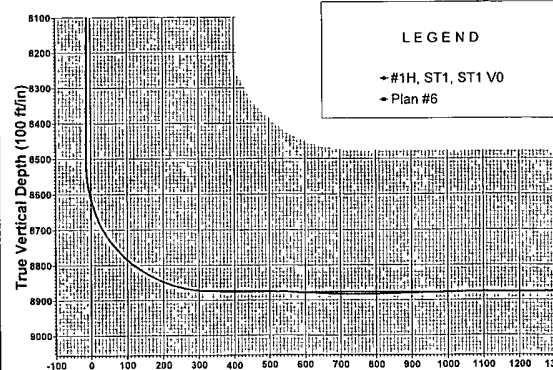
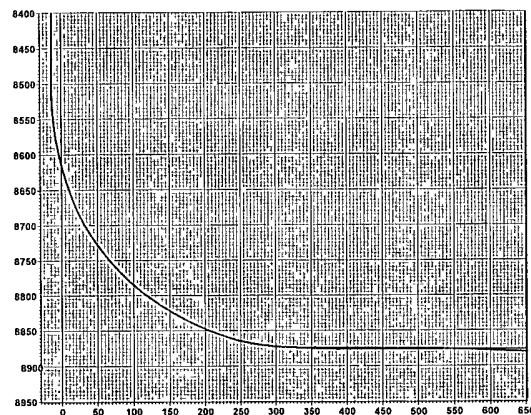
Plan Plan #6 (#1H/ST1)

Created By: John Walker Date: 8/18, November 18 2009



Azimuths to Grid North
True North: -0.43°
Magnetic North: 7.42°

Magnetic Field
Strength: 49530.2nT
Dip Angle: 61.36°
Date: 10/20/2009
Model: IGRF200510



LEGEND

- #1H, ST1, ST1 V0
- Plan #6

PATHFINDER

Project: Lea County
Site: Bada Bing "23" State
Well: #1H
Wellbore: ST1
Plan: Plan #6 (#1H/ST1)

WELL DETAILS #1H

Ground Elevation: 4210.00
RKB Elevation: WELL @ 4236.50 ft (Original Well Elev)
Rig Name: Original Well Elev

+N-S	+E-W	North	East	Latitude	Longitude	Slot
0.00	0.00	883630.030	740582.590	33° 25' 35.725 N	103° 32' 41.298 W	

SECTION DETAILS

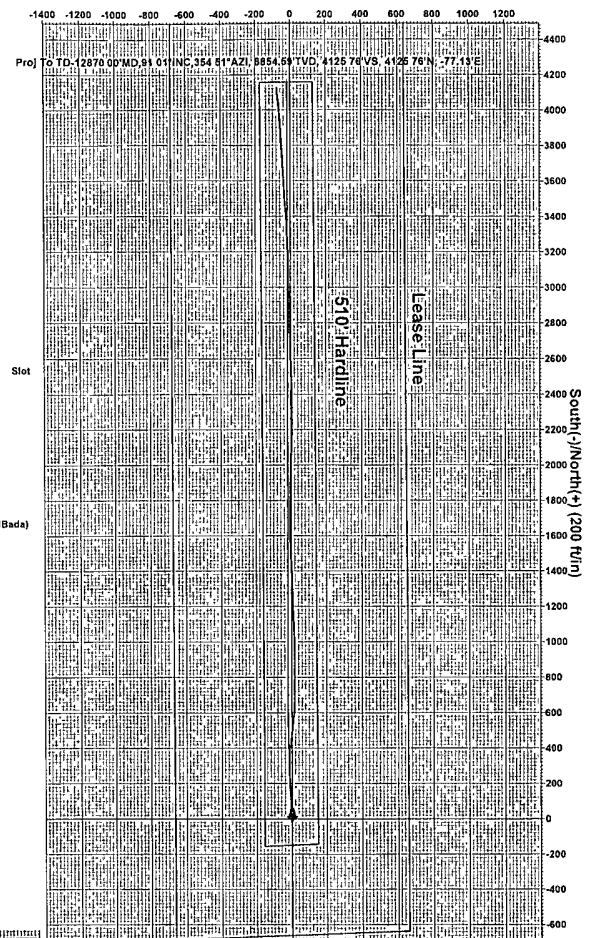
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	CLag	TFace	V6cc	Target
1	9002.00	78.70	357.71	8867.30	263.43	-14.36	0.00	0.00	263.48	
2	9037.00	85.35	357.81	8872.16	298.04	-15.72	19.00	0.86	298.11	
3	9131.80	90.00	357.81	8876.00	392.67	-19.34	4.90	0.00	392.75	
4	9244.91	90.00	0.07	8876.00	505.76	-21.43	2.00	90.00	505.84	
5	12894.48	90.00	0.07	8876.00	4155.32	-16.83	0.00	0.00	4155.35	PBHL(#1HBada)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	North	East	Shape
PBHL(#1HBada)8876.00	4155.32	-16.83	887785.348	740585.764		Point

PROJECT DETAILS: Lea County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

West(-)/East(+) (200 ft/m)



Proj To TD: -12870.00 MD: 91.01 INC: 354.51 AZI: 8854.59 TVD: 4125.76 VS: 4125.76 N: -77.13 E

Vertical Section at 359.77° (100 ft/m)

Plan Plan #6 (#1H/ST1)

Created By: John Walker Date: 8/18/2009

SUR: M-23-10s-33e, 660/S x 8, 660/W
BHL: D-23-10s-33e, 4786/S & 583/W
API #: 30-025-39508