

Results of Directional Survey

DD

API number:	30-025-40669		
OGRID:		Operator:	PALADIN ENERGY CORP
		Property:	STATE BTA # 4

surface	ULSTR:	G	02	T 12S	R 33E
				2230 FNL	1980 FEL

BH Loc	ULSTR:	G	02	T 12S	R 33E
10990 MD		10977.3	TVD	2230 FNL	1964 FEL

Top Perf/OH	ULSTR:	G	02	T 12S	R 33E
10704 MD		10694.7	TVD	2219 FNL	1921 FEL

Bot Perf/OH	ULSTR:	G	02	T 12S	R 33E
10840 MD		10829.3	TVD	2224 FNL	1941 FEL

	MD	N/S	E/W	VD
	10684	10.87	61.56	10674.92
TOP PERFS/OH	10704	10.53	58.92	10694.74
	10747	9.81	53.25	10737.36
	10809	7.74	44.23	10798.67
BOT PERFS/OH	10840	6.42	39.45	10829.27
	10864	5.40	35.75	10852.96

NEXT TO LAST	10864	5.40	35.75	10852.96
LAST READING	10914	3.25	27.96	10902.30
TD	10990	-0.02	16.12	10977.30

Surface Location	2230 FN	1980 FE
Projected BHL	2230 FN	1964 FE
Location of		
Top Perfs/OH	2219 FN	1921 FE
Bottom Perfs/OH	2224 FN	1941 FE

SUMMARY of Subsurface Locations

Surface Location	G-02-12S-33E	2230 FN	1980 FE	Vert. Depth
Top Perfs/OH	G-02-12S-33E	2219 FN	1921 FE	10694.74
Bottom Perfs/OH	G-02-12S-33E	2224 FN	1941 FE	10829.27
Projected TD	G-02-12S-33E	2230 FN	1964 FE	10977.30

DEC 13, 2012

PALADIN ENERGY

Bagley
Lea County, NM
State BTA #4
VH - Job #32K09121102

SUR: G-02-12s-33e, 2230/N & 1980/E
BHL: G-02-12s-33e, 2230/N & 1964/E
API # 30-025-40669

Survey: Gyro

SDI Standard Survey Report

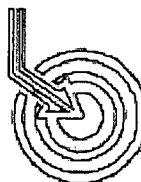
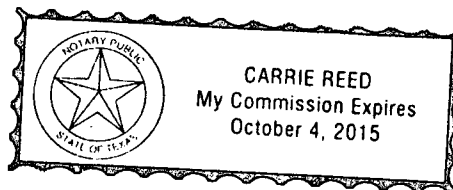
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 8th of October, 2012.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	PALADIN ENERGY	Local Co-ordinate Reference:	Well State BTA #4
Project:	Bagley	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	State BTA #4	North Reference:	Grid
Wellbore:	VH - Job #32K09121102	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K09121102	Database:	EDM-Regulatory

Project	Bagley		
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		Lea County, NM			
Site Position:		Northing:	840,399.24 usft	Latitude:	33° 18' 28.800 N
From:	Lat/Long	Easting:	729,850.76 usft	Longitude:	103° 34' 51.600 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.41 °

Well	State BTA #4, Vertical					
Well Position	+N/-S	0.00 usft	Northing:	840,399.24 usft	Latitude:	33° 18' 28.800 N
	+E/-W	0.00 usft	Easting:	729,850.76 usft	Longitude:	103° 34' 51.600 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	0.00 usft

Wellbore	VH - Job #32K09121102				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/03/12	7.52	61.15	49,170

Design		VH - Job #32K09121102		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	87.65

Survey Program		Date	09/30/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	9,140.00	Gyro (VH - Job #32K09121102)	Keeper	Keeper Gyro	

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.94	145.30	100.00	-0.67	0.47	145.30	0.82
200.00	0.92	137.32	199.98	-1.94	1.48	142.68	2.44
300.00	1.00	123.01	299.97	-3.00	2.75	137.49	4.08
400.00	0.98	124.13	399.95	-3.96	4.19	133.36	5.77
500.00	1.05	118.92	499.94	-4.88	5.70	130.57	7.51
600.00	1.05	121.41	599.92	-5.80	7.29	128.53	9.32
700.00	1.06	122.73	699.90	-6.78	8.85	127.47	11.15
800.00	1.20	117.86	799.88	-7.77	10.55	126.37	13.10
900.00	1.12	122.30	899.86	-8.78	12.30	125.52	15.12
1,000.00	1.17	127.33	999.84	-9.92	13.94	125.44	17.11
1,100.00	1.20	127.52	1,099.82	-11.18	15.58	125.66	19.18

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Site:	Lea County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	State BTA #4	North Reference:	Grid
Wellbore:	VH - Job #32K09121102	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K09121102	Database:	EDM-Regulatory

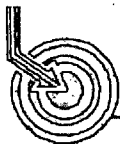
Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,200.00	1.21	128.31	1,199.80	-12.47	17.24	125.88	21.28	
1,300.00	1.10	122.32	1,299.78	-13.64	18.88	125.84	23.29	
1,400.00	1.13	120.50	1,399.76	-14.65	20.54	125.50	25.23	
1,500.00	0.87	132.07	1,499.75	-15.66	21.96	125.50	26.97	
1,600.00	0.85	126.81	1,599.74	-16.62	23.11	125.71	28.47	
1,700.00	0.78	123.12	1,699.72	-17.43	24.28	125.68	29.89	
1,800.00	0.72	118.34	1,799.72	-18.10	25.40	125.48	31.19	
1,900.00	0.69	122.12	1,899.71	-18.72	26.46	125.28	32.42	
2,000.00	0.89	126.75	1,999.70	-19.51	27.60	125.25	33.79	
2,100.00	1.18	109.84	2,099.68	-20.32	29.19	124.85	35.56	
2,200.00	1.53	105.10	2,199.66	-21.02	31.44	123.76	37.82	
2,300.00	1.55	106.38	2,299.62	-21.75	34.03	122.58	40.39	
2,400.00	1.69	96.52	2,399.58	-22.30	36.79	121.21	43.02	
2,500.00	1.68	98.77	2,499.54	-22.69	39.71	119.74	45.73	
2,600.00	1.73	100.35	2,599.49	-23.18	42.64	118.53	48.53	
2,700.00	1.80	96.72	2,699.44	-23.64	45.69	117.36	51.44	
2,800.00	2.15	99.81	2,799.38	-24.14	49.09	116.18	54.71	
2,900.00	2.45	96.16	2,899.30	-24.69	53.07	114.95	58.53	
3,000.00	2.67	93.17	2,999.20	-25.05	57.52	113.53	62.73	
3,100.00	2.74	88.22	3,099.09	-25.10	62.23	111.97	67.10	
3,200.00	2.52	85.89	3,198.99	-24.87	66.81	110.42	71.29	
3,300.00	2.45	78.96	3,298.89	-24.30	71.10	108.87	75.14	
3,400.00	2.20	77.20	3,398.81	-23.47	75.07	107.36	78.66	
3,500.00	2.20	77.25	3,498.74	-22.62	78.82	106.01	82.00	
3,600.00	2.21	78.65	3,598.66	-21.82	82.58	104.80	85.41	
3,700.00	2.16	79.00	3,698.59	-21.08	86.32	103.72	88.86	
3,800.00	2.07	78.44	3,798.52	-20.36	89.94	102.75	92.21	
3,900.00	2.03	79.28	3,898.46	-19.66	93.45	101.88	95.50	
4,000.00	1.99	77.11	3,998.40	-18.95	96.88	101.07	98.72	
4,100.00	2.02	74.38	4,098.34	-18.09	100.27	100.22	101.89	
4,200.00	1.93	74.92	4,198.28	-17.17	103.60	99.41	105.01	
4,300.00	1.89	76.34	4,298.22	-16.34	106.82	98.70	108.07	
4,400.00	1.95	75.18	4,398.16	-15.52	110.07	98.03	111.16	
4,500.00	2.33	80.82	4,498.10	-14.76	113.72	97.40	114.68	
4,600.00	2.40	83.47	4,598.01	-14.20	117.81	96.87	118.66	
4,700.00	2.37	84.85	4,697.92	-13.77	121.95	96.44	122.72	
4,800.00	2.54	84.70	4,797.83	-13.38	126.21	96.05	126.92	
4,900.00	2.38	84.10	4,897.74	-12.97	130.49	95.67	131.13	
5,000.00	2.36	81.87	4,997.65	-12.46	134.59	95.29	135.17	
5,100.00	1.92	85.71	5,097.58	-12.05	138.30	94.98	138.82	
5,200.00	1.40	90.78	5,197.54	-11.94	141.19	94.83	141.69	
5,300.00	0.98	93.77	5,297.52	-12.01	143.27	94.79	143.77	
5,400.00	0.73	101.69	5,397.51	-12.19	144.74	94.82	145.26	
5,500.00	0.60	104.87	5,497.50	-12.46	145.87	94.88	146.40	

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Wellbore:	VH - Job #32K09121102	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K09121102	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.00	0.53	110.57	5,597.50	-12.76	146.81	94.97	147.36
5,700.00	0.44	131.99	5,697.49	-13.17	147.53	95.10	148.12
5,800.00	0.32	142.90	5,797.49	-13.65	147.98	95.27	148.61
5,900.00	0.29	191.67	5,897.49	-14.12	148.10	95.45	148.77
6,000.00	0.47	201.54	5,997.49	-14.75	147.90	95.70	148.63
6,100.00	0.37	202.31	6,097.49	-15.43	147.63	95.97	148.43
6,200.00	0.21	210.09	6,197.48	-15.89	147.41	96.15	148.27
6,300.00	0.20	257.19	6,297.48	-16.09	147.15	96.24	148.03
6,400.00	0.20	253.95	6,397.48	-16.18	146.81	96.29	147.70
6,500.00	0.06	291.40	6,497.48	-16.20	146.60	96.31	147.49
6,600.00	0.14	288.00	6,597.48	-16.15	146.43	96.29	147.32
6,700.00	0.08	91.45	6,697.48	-16.11	146.38	96.28	147.27
6,800.00	0.29	22.20	6,797.48	-15.88	146.55	96.18	147.41
6,900.00	0.25	17.55	6,897.48	-15.44	146.71	96.01	147.52
7,000.00	0.22	9.10	6,997.48	-15.04	146.81	95.85	147.58
7,100.00	0.37	357.86	7,097.48	-14.53	146.82	95.65	147.54
7,200.00	0.71	11.25	7,197.47	-13.60	146.93	95.29	147.56
7,300.00	0.81	27.56	7,297.47	-12.36	147.38	94.79	147.90
7,400.00	0.70	20.21	7,397.46	-11.16	147.92	94.32	148.34
7,500.00	0.73	25.40	7,497.45	-10.01	148.40	93.86	148.74
7,600.00	0.75	36.58	7,597.44	-8.91	149.07	93.42	149.33
7,700.00	0.71	39.86	7,697.43	-7.91	149.85	93.02	150.06
7,800.00	0.81	39.92	7,797.42	-6.89	150.71	92.62	150.86
7,900.00	0.77	39.10	7,897.41	-5.83	151.58	92.20	151.69
8,000.00	0.63	29.13	7,997.41	-4.83	152.27	91.82	152.35
8,100.00	0.54	34.81	8,097.40	-3.96	152.81	91.49	152.86
8,200.00	0.48	24.22	8,197.40	-3.19	153.25	91.19	153.28
8,300.00	0.46	29.75	8,297.39	-2.46	153.62	90.92	153.64
8,400.00	0.45	41.18	8,397.39	-1.82	154.08	90.68	154.09
8,500.00	0.40	34.01	8,497.39	-1.23	154.53	90.46	154.54
8,600.00	0.62	337.93	8,597.38	-0.44	154.53	90.16	154.53
8,700.00	0.69	344.19	8,697.38	0.64	154.16	89.76	154.16
8,800.00	0.88	29.44	8,797.37	1.89	154.37	89.30	154.38
8,900.00	0.85	21.62	8,897.36	3.24	155.02	88.80	155.06
9,000.00	0.84	19.96	8,997.35	4.62	155.55	88.30	155.61
9,100.00	0.86	29.62	9,097.34	5.96	156.17	87.81	156.28
9,140.00	0.68	38.38	9,137.33	6.41	156.46	87.65	156.59

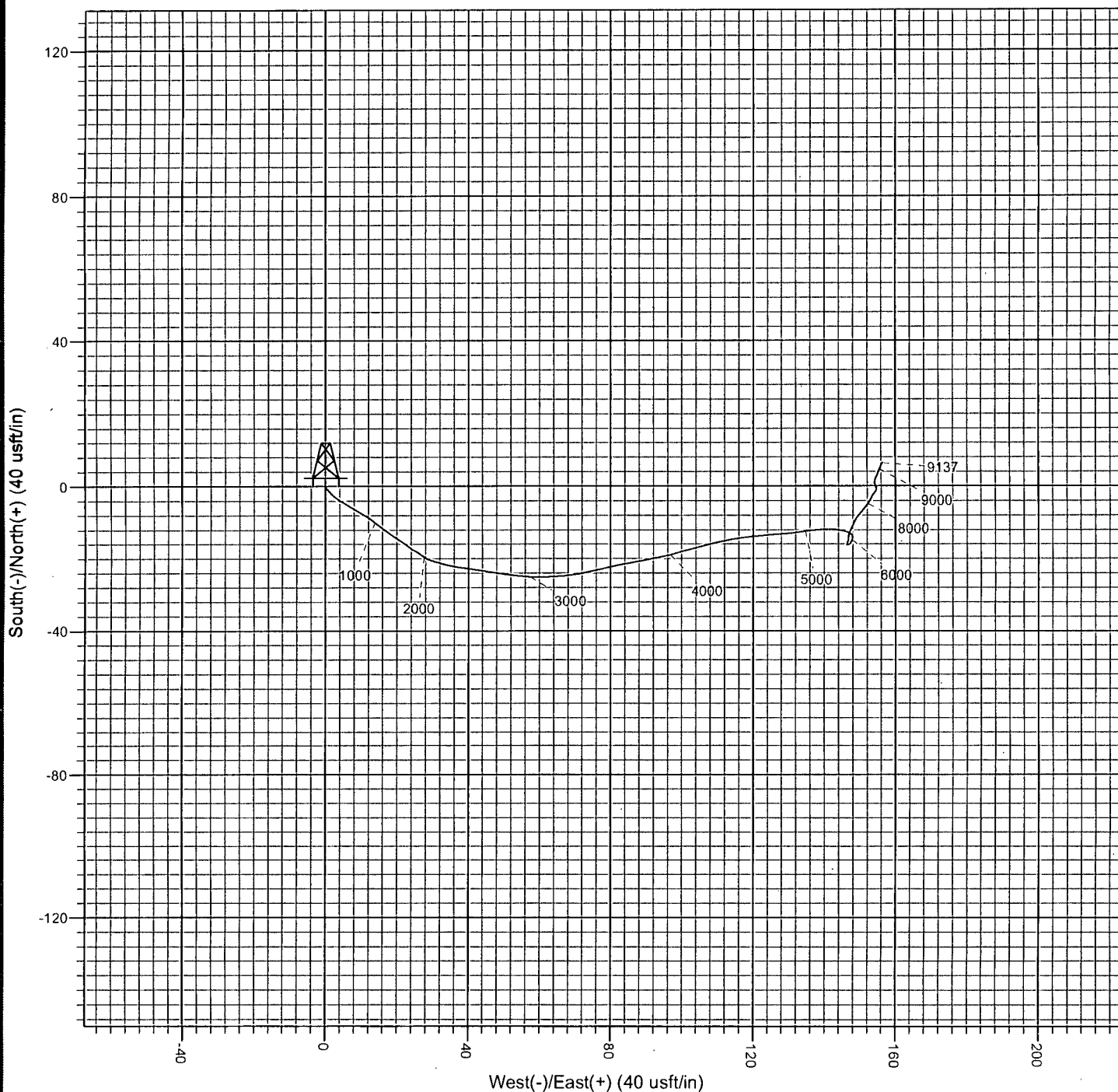


Scientific Drilling

Project: Bagley
Lea County, NM
Well: State BTA #4
Wellbore: VH - Job #32K09121102
Design: VH - Job #32K09121102

WELL DETAILS: State BTA #4
WELL @ 0.00usft (Original Well Elev)
Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	840399.24	729850.76	33° 18' 28.800 N	103° 34' 51.600 W	



PROJECT DETAILS: Bagley	SITE DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 33° 18' 28.800 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 103° 34' 51.600 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.00
Zone: New Mexico East 3001	Convergence: 0.41
System Datum: Mean Sea Level	Local North: Grid