

GYRO SUR: G-35-18s-35e, 1750/N & 1610/E
BHL: G-35-18s-35e, 1802/N & 1968/E
API #30-025-36789

Leam Drilling Systems
Survey Report

Company: PALADIN OIL & GAS
Time: 11:03:52 Page: 1
Field: LEA COUNTY, NEW MEXICO
Reference: Well: D-3855-MD, Grid North
Site: South Vacuum Unit #35-1
Reference: SITE 0.0
Well: D-3855-MD
Reference: Well (0.00N,0.00E,16.12Azi)
Wellpath: 35-4
Method: Minimum Curvature Db: Adapti

Date: 10/18/2004
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Survey: GYRO
10/18/2004

Start Date:

Company: Leam Drilling Systems
Nora Twohy
Tool:
From Surface

Engineer:

Tied-to:

Well: D-3855-MD

Slot Name:

Well Position: +N/-S 0.00 ft Northing:
+E/-W 0.00 ft Easting :
Position Uncertainty: 0.00 ft

ft Latitude:
ft Longitude:

Wellpath: 35-4
Surface

Drilled From:

Tie-on Depth:

0.00 ft
Current Datum: SITE
Datum: Mean Sea Level
Magnetic Data: 10/18/2004
-6.64 deg
Field Strength: 31405 nT
-28.65 deg

Height 0.00 ft Above System

Declination:

Mag Dip Angle:

Vertical Section:Depth From (TVD)
Direction

+N/-S

+E/-W

deg ft

ft

ft

16.12

0.00

0.00

0:00

Annotation

MD TVD
ft ft

12045.00 12041.99
13542.00 0.00
Survey

TIED INTO GYRO
PROJECTION TO BIT

ClSA	MD ft	DLS deg/100ft	Incl deg	Azim deg	TVD Comment ft	N/S ft	E/W ft	VS ft	ClSD ft
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				GYRO				
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00							
200.00	0.75	264.27	199.99	-0.13	-1.30	-0.49	1.31	
264.27	0.37							
400.00	1.37	279.43	399.96	0.13	-4.96	-1.25	4.97	
271.50	0.34							
600.00	1.47	277.54	599.90	0.86	-9.87	-1.91	9.90	
274.97	0.06							
800.00	1.43	281.14	799.83	1.68	-14.86	-2.51	14.95	
276.44	0.05							
1000.00	1.55	281.04	999.77	2.68	-19.96	-2.97	20.14	
277.64	0.06							
1200.00	1.49	278.64	1199.70	3.59	-25.19	-3.55	25.44	
278.10	0.04							
1400.00	1.52	276.59	1399.63	4.28	-30.39	-4.33	30.69	
278.02	0.03							
1600.00	1.46	280.23	1599.56	5.04	-35.53	-5.03	35.89	
278.07	0.06							
1800.00	1.34	282.76	1799.50	6.01	-40.32	-5.43	40.77	
278.47	0.07							
2000.00	0.82	291.18	1999.46	7.04	-43.94	-5.44	44.50	
279.10	0.27							
2200.00	0.85	303.92	2199.44	8.39	-46.50	-4.86	47.25	
280.22	0.09							
2400.00	0.86	299.88	2399.42	9.96	-49.04	-4.05	50.04	
281.48	0.03							
2600.00	0.86	297.85	2599.40	11.41	-51.66	-3.38	52.91	
282.45	0.02							
2800.00	0.64	320.66	2799.38	12.98	-53.70	-2.45	55.24	
283.58	0.18							
3000.00	0.60	320.72	2999.37	14.65	-55.07	-1.22	56.99	
284.90	0.02							
3200.00	0.66	320.28	3199.36	16.35	-56.47	0.02	58.79	
286.14	0.03							
3400.00	0.57	299.04	3399.35	17.72	-58.08	0.89	60.72	
286.96	0.12							
3600.00	0.60	306.30	3599.34	18.82	-59.79	1.48	62.68	
287.47	0.04							
3800.00	0.45	309.19	3799.33	19.93	-61.24	2.14	64.40	
288.03	0.08							
4000.00	0.46	293.06	3999.32	20.75	-62.59	2.55	65.94	
288.34	0.06							
4200.00	0.47	289.10	4199.31	21.33	-64.10	2.69	67.56	
288.40	0.02							
4400.00	0.40	285.98	4399.31	21.79	-65.55	2.73	69.08	
288.39	0.04							
4600.00	0.58	284.82	4599.30	22.24	-67.20	2.71	70.78	
288.31	0.09							
4800.00	0.57	310.11	4799.29	23.14	-68.94	3.09	72.72	
288.55	0.13							
5000.00	0.61	308.32	4999.28	24.44	-70.53	3.89	74.65	
289.11	0.02							
5200.00	0.61	304.85	5199.27	25.71	-72.24	4.64	76.68	
289.59	0.02							
5400.00	0.58	299.56	5399.26	26.82	-74.00	5.21	78.71	
289.92	0.03							
5600.00	0.61	306.54	5599.25	27.95	-75.73	5.82	80.73	
290.26	0.04							

				GYRO			
5800.00	0.63	295.81	5799.24	29.06	-77.58	6.38	82.84
290.54 0.06							
6000.00	0.68	296.35	5999.22	30.07	-79.63	6.77	85.12
290.69 0.03							

Leam Drilling Systems
Survey Report

Company: PALADIN OIL & GAS
Time: 11:03:52 Page: 2
Field: LEA COUNTY, NEW MEXICO
Reference: Well: D-3855-MD, Grid North
Site: South Vacuum Unit #35-1
Reference: SITE 0.0
Well: D-3855-MD
Reference: Well (0.00N,0.00E,16.12Azi)
Wellpath: 35-4
Method: Minimum Curvature Db: Adapti

Date: 10/18/2004
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Survey MD	Incl	Azim	TVD	N/S	E/W	VS	clsD
clsA deg	DLS deg/100ft	deg	Comment ft	ft	ft	ft	ft
6200.00	0.81	295.95	6199.21	31.21	-81.97	7.23	87.71
290.85 0.07							
6400.00	0.83	299.78	6399.19	32.55	-84.50	7.81	90.55
291.07 0.03							
6600.00	0.77	306.57	6599.17	34.07	-86.83	8.62	93.28
291.42 0.06							
6800.00	0.63	306.76	6799.15	35.53	-88.79	9.48	95.64
291.81 0.07							
7000.00	0.66	301.84	6999.14	36.80	-90.65	10.18	97.83
292.09 0.03							
7200.00	0.86	313.05	7199.12	38.43	-92.73	11.17	100.37
292.51 0.12							
7400.00	1.08	312.93	7399.09	40.74	-95.20	12.70	103.55
293.17 0.11							
7600.00	1.09	312.62	7599.06	43.31	-97.98	14.40	107.13
293.85 0.01							
7800.00	1.08	311.04	7799.02	45.83	-100.80	16.04	110.74
294.45 0.02							
8000.00	1.16	311.22	7998.98	48.41	-103.75	17.69	114.49
295.01 0.04							
8200.00	1.29	301.45	8198.94	50.91	-107.19	19.15	118.67
295.41 0.12							
8400.00	1.17	296.90	8398.89	53.01	-110.93	20.12	122.95
295.54 0.08							
8600.00	1.16	306.73	8598.85	55.15	-114.38	21.22	126.98

GYRO

295.74 0.10							
8800.00	1.06	301.98	8798.81	57.34	-117.57	22.44	130.81
296.00 0.07							
9000.00	1.07	302.95	8998.78	59.33	-120.71	23.48	134.50
296.18 0.01							
9200.00	1.06	307.54	9198.74	61.48	-123.74	24.70	138.17
296.42 0.04							
9400.00	1.14	309.37	9398.71	63.87	-126.74	26.16	141.93
296.74 0.04							
9600.00	0.85	318.41	9598.68	66.24	-129.27	27.74	145.25
297.13 0.16							
9800.00	1.03	326.52	9798.65	68.85	-131.24	29.69	148.20
297.68 0.11							
10000.00	1.50	340.62	9998.60	72.81	-133.10	32.99	151.72
298.68 0.28							
10100.00	1.52	319.49	10098.57	75.06	-134.40	34.79	153.94
299.18 0.55							
10200.00	1.22	314.84	10198.54	76.82	-136.02	36.03	156.21
299.46 0.32							
10400.00	0.81	351.55	10398.51	79.72	-137.73	38.34	159.14
300.06 0.37							
10600.00	1.00	11.90	10598.48	82.82	-137.58	41.36	160.59
301.05 0.19							
10800.00	1.67	16.38	10798.43	87.33	-136.40	46.02	161.96
302.63 0.34							
11000.00	1.91	19.75	10998.33	93.26	-134.45	52.26	163.63
304.75 0.13							
11200.00	2.19	26.37	11198.20	99.82	-131.63	59.34	165.20
307.17 0.18							
11400.00	2.77	23.53	11398.01	107.67	-128.00	67.90	167.27
310.07 0.30							
11600.00	3.00	27.33	11597.76	116.75	-123.67	77.82	170.08
313.35 0.15							
11800.00	3.07	24.99	11797.48	126.26	-119.00	88.25	173.50
316.69 0.07							
12000.00	3.97	42.87	11997.11	136.19	-112.03	99.72	176.35
320.56 0.70							
12045.00	4.14	42.64	12041.99	138.52	-109.87	102.57	176.81
321.58 0.38							

MWD

Leam Drilling Systems
Survey Report

Company: PALADIN OIL & GAS
Time: 11:05:55 Page: 1
Field: LEA COUNTY, NEW MEXICO
Reference: Well: D-3855-MD, Grid North
Site: South Vacuum Unit #35-1
Reference: SITE 0.0
Well: D-3855-MD
Reference: Well (0.00N,0.00E,16.12Azi)
Wellpath: 35-4
Method: Minimum Curvature Db: Adapti

Date: 10/18/2004
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Survey: MWD
10/18/2004

Start Date:

Company: Leam Drilling Systems
Nora Twohy
Tool:
From: GYRO

Engineer:

Tied-to:

Well: D-3855-MD

Slot Name:

Well Position: +N/-S 0.00 ft Northing:
+E/-W 0.00 ft Easting :
Position Uncertainty: 0.00 ft

ft Latitude:
ft Longitude:

Wellpath: 35-4
Surface

Drilled From:

Tie-on Depth:

0.00 ft
Current Datum: SITE
Datum: Mean Sea Level
Magnetic Data: 10/18/2004
-6.64 deg
Field Strength: 31405 nT
-28.65 deg

Height 0.00 ft

Above System

Declination:

Mag Dip Angle:

Vertical Section:Depth From (TVD)
Direction

+N/-S

+E/-W

deg ft

ft

ft

16.12

0.00

0.00

0.00

Annotation

MD TVD
ft ft

12045.00 12041.99
13542.00 13476.41
Survey

TIED INTO GYRO
PROJECTION TO BIT

ClsA	MD ft	Incl deg	Azim deg	TVD Comment ft	N/S ft	E/W ft	VS ft	ClsD ft
deg	DLS ft	deg/100ft						

			MWD				
12045.00	4.14	42.64	12041.99	138.52	-109.87	102.57	176.81
321.58 0.00							
12214.00	9.10	27.10	12209.83	154.92	-99.64	121.16	184.20
327.25 3.09							
12308.00	13.70	358.60	12302.02	172.69	-96.52	139.09	197.83
330.80 7.60							
12404.00	12.80	323.20	12395.61	192.60	-103.18	156.37	218.50
331.82 8.37							
12498.00	15.50	290.40	12486.90	205.34	-121.23	163.60	238.45
329.44 8.86							
12593.00	18.00	258.60	12578.05	206.87	-147.57	157.75	254.11
324.50 9.87							
12687.00	20.20	245.50	12666.91	197.26	-176.59	140.47	264.76
318.16 5.11							
12782.00	19.70	236.60	12756.23	181.64	-204.89	117.60	273.81
311.56 3.24							
12877.00	20.80	230.40	12845.36	162.07	-231.26	91.48	282.40
305.02 2.54							
12972.00	22.10	223.50	12933.80	138.35	-256.56	61.67	291.49
298.34 2.99							
13076.00	18.20	212.70	13031.45	110.47	-278.82	28.71	299.91
291.61 5.17							
13171.00	17.70	214.10	13121.82	86.03	-294.93	0.75	307.22
286.26 0.70							
13265.00	18.40	202.10	13211.23	60.44	-308.53	-27.61	314.39
281.08 4.02							
13360.00	18.00	202.30	13301.47	32.97	-319.74	-57.11	321.44
275.89 0.43							
13454.00	15.90	204.00	13391.39	7.77	-330.49	-84.31	330.58
271.35 2.30							
13486.00	15.20	204.60	13422.22	-0.05	-334.02	-92.80	334.02
269.99 2.24							
13542.00	14.00	205.60	13476.41	-12.84	-340.00	-106.74	340.24
267.84 2.19							