

District I

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35373	² Pool Code 32870	³ Pool Name HORSESHOE GALLUP
⁴ Property Code 38093	⁵ Property Name HORSESHOE GALLUP 18	⁶ Well Number 8H
⁷ OGRID No. 150182	⁸ Operator Name ROBERT L. BAYLESS, PRODUCER LLC	⁹ Elevation 5396

¹⁰ Surface Location

UL or Lot No	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
H	18	30 N	15 W		2420	North	245	East	San Juan

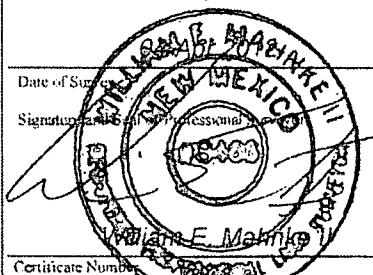
¹¹ Bottom Hole Location If Different From Surface

UL or Lot No	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
1E	18	30 N	15 W	2	1732	North	400 252	West	San Juan

¹² Dedicated Acres 1600	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. NSL 6714
--	-------------------------------	----------------------------------	--

RCVD DEC 6 '12
OIL CONS. DIV.

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. **DIST. 3**

¹⁶ (19.78) N 89°47' W (19.65) 78.72 Ch. (39.29) Lot 1 BHL 1732' FNL & 252' FWL Bottom Hole 1720' FNL & 400' FWL Lot 2 Last Pert 1742' FNL 420' FWL N 83°10'41" W, 4490.3 Sec. 1st Pert 245' Bottom Pilot Hole 2240' FNL & 400' FEL N 41°00'51" W, 239.2 Lot 3 18 2249' FNL 1219' FEL Lat. 36.81469° N Long. 108.45031° W Lot 4 (20.07) N 89°40' W (19.87) 39.94 Ch. N 89°48' W 39.70 Ch.		¹⁷ 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 or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>John D. Thomas</i> Date: 11/2/12 Printed Name: John D. Thomas Email Address: jthomas@rlbayless.com
¹⁸ 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. Date of Survey: _____ Signature: _____  Certificate Number: _____		

Project Area (Lease No. NMNM 121498)

12/05/2012

RCVD DEC 6 '12
OIL CONS. DIV.
DIST. 3

RE: Robert L Bayless Producer LLC
Horseshoe Gallup 18 8H
San Juan County, NM
Rig: D&J #1
API NO: 30-045-35373

We Hereby certify the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

Directional Survey Data

1-Directional Survey Report



John D Thomas
Operations Engineer
Robert L Bayless, Producer LLC

State of New Mexico
County of San Juan

Signed before me on December 5, 2012 by
John D. Thomas.





RCVD DEC 6 '12
OIL CONS. DIV.
DIST. 3

Robert L. Bayless, Producer LLC.

San Juan Co., NM
Sec 18 T30N R15W
Horseshoe Gallup 18-8H

Wellbore #1

Design: Wellbore #1

Standard Survey Report

08 October, 2012

PATHFINDER
A Schlumberger Company



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project	San Juan Co., NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Sec 18 T30N R15W		
Site Position:		Northing:	2,116,451.02 usft
From:	Lat/Long	Easting:	2,542,492.21 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 48' 52.884 N
		Longitude:	108° 27' 1.116 W
		Grid Convergence:	-0.37 °

Well	Horseshoe Gallup 18-8H		
Well Position	+N/-S	0.0 usft	Northing: 2,116,451.02 usft
	+E/-W	0.0 usft	Easting: 2,542,492.21 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36° 48' 52.884 N
		Longitude:	108° 27' 1.116 W
		Ground Level:	5,396.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	2012/09/18	10.04
			Dip Angle (°) 63.37
			Field Strength (nT) 50,567

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°) 278.59
			Tie On Depth: 0.0

Survey Program	Date 2012/10/08		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
331.0	8,405.0	Survey #1 (Wellbore #1)	MWD
			Description MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
331.0	0.88	298.95	331.0	1.2	-2.2	2.4	0.27	0.27	0.00
362.0	0.79	304.49	362.0	1.5	-2.6	2.8	0.39	-0.29	17.87
393.0	0.97	299.58	393.0	1.7	-3.0	3.2	0.63	0.58	-15.84
455.0	1.06	305.78	455.0	2.3	-3.9	4.2	0.23	0.15	10.00
515.0	1.06	300.56	515.0	2.9	-4.9	5.2	0.16	0.00	-8.70
578.0	1.14	304.65	577.9	3.6	-5.9	6.3	0.18	0.13	6.49
641.0	1.32	306.20	640.9	4.4	-7.0	7.6	0.29	0.29	2.46
703.0	1.41	305.66	702.9	5.2	-8.2	8.9	0.15	0.15	-0.87
764.0	1.49	296.52	763.9	6.0	-9.5	10.3	0.40	0.13	-14.98



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
826.0	1.67	296.53	825.9	6.8	-11.0	11.9	0.29	0.29	0.02
888.0	1.67	298.04	887.8	7.6	-12.6	13.6	0.07	0.00	2.44
950.0	1.67	292.70	949.8	8.4	-14.3	15.4	0.25	0.00	-8.61
1,010.0	1.76	296.20	1,009.8	9.1	-15.9	17.1	0.23	0.15	5.83
1,071.0	1.76	296.06	1,070.8	9.9	-17.6	18.9	0.01	0.00	-0.23
1,132.0	1.93	291.79	1,131.7	10.7	-19.4	20.8	0.36	0.28	-7.00
1,195.0	2.11	291.99	1,194.7	11.6	-21.4	22.9	0.29	0.29	0.32
1,257.0	2.11	291.30	1,256.7	12.4	-23.6	25.1	0.04	0.00	-1.11
1,320.0	2.20	291.18	1,319.6	13.3	-25.8	27.5	0.14	0.14	-0.19
1,381.0	2.20	291.88	1,380.6	14.1	-27.9	29.7	0.04	0.00	1.15
1,443.0	0.97	333.41	1,442.5	15.0	-29.3	31.2	2.59	-1.98	66.98
1,472.0	0.88	17.11	1,471.5	15.5	-29.3	31.3	2.39	-0.31	150.69
1,503.0	0.79	18.93	1,502.5	15.9	-29.2	31.2	0.30	-0.29	5.87
1,534.0	0.88	22.06	1,533.5	16.3	-29.0	31.1	0.33	0.29	10.10
1,565.0	1.06	24.19	1,564.5	16.8	-28.8	31.0	0.59	0.58	6.87
1,596.0	0.97	34.97	1,595.5	17.3	-28.6	30.8	0.68	-0.29	34.77
1,627.0	0.79	70.73	1,626.5	17.6	-28.2	30.5	1.83	-0.58	115.35
1,659.0	0.88	101.05	1,658.5	17.6	-27.8	30.1	1.39	0.28	94.75
1,688.0	0.88	97.50	1,687.5	17.5	-27.3	29.6	0.19	0.00	-12.24
1,720.0	0.79	101.68	1,719.5	17.4	-26.9	29.2	0.34	-0.28	13.06
1,751.0	0.79	100.35	1,750.5	17.4	-26.4	28.7	0.06	0.00	-4.29
1,781.0	0.79	102.47	1,780.5	17.3	-26.0	28.3	0.10	0.00	7.07
1,812.0	0.70	119.28	1,811.5	17.1	-25.7	27.9	0.76	-0.29	54.23
1,843.0	0.53	122.85	1,842.5	17.0	-25.4	27.6	0.56	-0.55	11.52
1,874.0	0.35	128.37	1,873.5	16.8	-25.2	27.4	0.60	-0.58	17.81
1,906.0	0.26	133.32	1,905.5	16.7	-25.0	27.3	0.29	-0.28	15.47
1,937.0	0.18	142.37	1,936.5	16.6	-25.0	27.2	0.28	-0.26	29.19
1,968.0	0.26	106.24	1,967.5	16.6	-24.9	27.1	0.50	0.26	-116.55
2,000.0	0.26	108.67	1,999.5	16.5	-24.7	26.9	0.03	0.00	7.59
2,031.0	0.18	116.08	2,030.5	16.5	-24.6	26.8	0.27	-0.26	23.90
2,062.0	0.09	65.30	2,061.5	16.5	-24.6	26.7	0.46	-0.29	-163.81
2,094.0	0.09	134.18	2,093.5	16.5	-24.5	26.7	0.32	0.00	215.25
2,125.0	0.09	13.02	2,124.5	16.5	-24.5	26.7	0.51	0.00	-390.84
2,157.0	0.09	29.15	2,156.5	16.5	-24.5	26.7	0.08	0.00	50.41
2,188.0	0.09	276.37	2,187.5	16.6	-24.5	26.7	0.48	0.00	-363.81
2,219.0	0.09	280.20	2,218.5	16.6	-24.5	26.7	0.02	0.00	12.35
2,251.0	0.18	348.36	2,250.5	16.6	-24.6	26.8	0.53	0.28	213.00
2,282.0	0.09	316.23	2,281.5	16.7	-24.6	26.8	0.37	-0.29	-103.65
2,313.0	0.09	255.99	2,312.5	16.7	-24.6	26.8	0.29	0.00	-194.32
2,345.0	0.18	248.44	2,344.5	16.7	-24.7	26.9	0.29	0.28	-23.59
2,376.0	0.18	248.34	2,375.5	16.6	-24.8	27.0	0.00	0.00	-0.32
2,407.0	0.18	245.04	2,406.5	16.6	-24.9	27.1	0.03	0.00	-10.65
2,438.0	0.18	283.38	2,437.5	16.6	-25.0	27.2	0.38	0.00	123.68
2,469.0	0.26	257.56	2,468.5	16.6	-25.1	27.3	0.40	0.26	-83.29



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,501.0	0.35	258.67	2,500.5	16.5	-25.3	27.4	0.28	0.28	3.47
2,532.0	0.35	279.47	2,531.5	16.5	-25.4	27.6	0.41	0.00	67.10
2,564.0	0.35	263.20	2,563.5	16.5	-25.6	27.8	0.31	0.00	-50.84
2,595.0	0.26	271.89	2,594.5	16.5	-25.8	28.0	0.33	-0.29	28.03
2,626.0	0.35	265.32	2,625.5	16.5	-26.0	28.1	0.31	0.29	-21.19
2,658.0	0.35	282.94	2,657.5	16.5	-26.2	28.3	0.34	0.00	55.06
2,689.0	0.35	267.81	2,688.5	16.6	-26.3	28.5	0.30	0.00	-48.81
2,720.0	0.44	283.87	2,719.5	16.6	-26.6	28.7	0.46	0.29	51.81
2,750.0	0.35	289.82	2,749.5	16.6	-26.8	28.9	0.33	-0.30	19.83
2,781.0	0.44	295.10	2,780.5	16.7	-27.0	29.1	0.31	0.29	17.03
2,812.0	0.44	291.62	2,811.5	16.8	-27.2	29.4	0.09	0.00	-11.23
2,843.0	0.44	293.87	2,842.5	16.9	-27.4	29.6	0.06	0.00	7.26
2,875.0	0.70	291.04	2,874.5	17.0	-27.7	29.9	0.82	0.81	-8.84
2,904.0	0.70	292.58	2,903.5	17.2	-28.0	30.3	0.06	0.00	5.31
2,935.0	0.70	289.32	2,934.5	17.3	-28.4	30.6	0.13	0.00	-10.52
2,966.0	0.79	288.21	2,965.5	17.4	-28.7	31.0	0.29	0.29	-3.58
2,998.0	0.97	281.42	2,997.5	17.6	-29.2	31.5	0.65	0.56	-21.22
3,029.0	1.06	281.56	3,028.5	17.7	-29.8	32.1	0.29	0.29	0.45
3,059.0	0.97	280.40	3,058.5	17.8	-30.3	32.6	0.31	-0.30	-3.87
3,089.0	1.23	275.04	3,088.5	17.8	-30.9	33.2	0.93	0.87	-17.87
3,119.0	1.06	272.74	3,118.5	17.9	-31.5	33.8	0.59	-0.57	-7.67
3,149.0	1.85	271.45	3,148.4	17.9	-32.2	34.5	2.64	2.63	-4.30
3,179.0	3.25	267.19	3,178.4	17.9	-33.5	35.8	4.71	4.67	-14.20
3,209.0	4.66	269.62	3,208.3	17.8	-35.6	37.9	4.73	4.70	8.10
3,239.0	6.24	269.66	3,238.2	17.8	-38.5	40.7	5.27	5.27	0.13
3,270.0	7.83	272.13	3,269.0	17.9	-42.3	44.5	5.22	5.13	7.97
3,300.0	9.32	275.03	3,298.6	18.2	-46.7	48.9	5.17	4.97	9.67
3,331.0	10.99	274.06	3,329.1	18.6	-52.2	54.4	5.42	5.39	-3.13
3,361.0	12.49	273.29	3,358.5	19.0	-58.3	60.4	5.03	5.00	-2.57
3,392.0	14.25	272.35	3,388.7	19.3	-65.4	67.6	5.72	5.68	-3.03
3,422.0	15.83	269.74	3,417.6	19.5	-73.2	75.3	5.73	5.27	-8.70
3,452.0	17.24	269.23	3,446.4	19.4	-81.7	83.7	4.72	4.70	-1.70
3,483.0	19.08	269.85	3,475.9	19.3	-91.4	93.3	5.97	5.94	2.00
3,514.0	21.02	271.87	3,505.0	19.5	-102.0	103.8	6.64	6.26	6.52
3,544.0	23.21	274.06	3,532.8	20.1	-113.3	115.0	7.80	7.30	7.30
3,575.0	25.06	276.26	3,561.1	21.2	-125.9	127.7	6.63	5.97	7.10
3,605.0	26.82	278.37	3,588.0	22.9	-138.9	140.8	6.62	5.87	7.03
3,635.0	28.23	279.51	3,614.6	25.1	-152.6	154.7	5.02	4.70	3.80
3,665.0	29.63	280.57	3,640.9	27.6	-166.9	169.2	4.97	4.67	3.53
3,695.0	31.04	281.27	3,666.8	30.5	-181.8	184.3	4.85	4.70	2.33
3,726.0	32.98	282.41	3,693.1	33.8	-197.9	200.7	6.55	6.26	3.68
3,756.0	35.00	283.56	3,717.9	37.6	-214.2	217.4	7.07	6.73	3.83
3,786.0	36.93	284.26	3,742.2	41.9	-231.3	235.0	6.58	6.43	2.33



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,817.0	39.22	284.61	3,766.6	46.6	-249.8	254.0	7.42	7.39	1.13
3,847.0	41.50	284.70	3,789.5	51.5	-268.6	273.3	7.60	7.60	0.30
3,878.0	43.97	284.79	3,812.3	56.9	-289.0	294.2	7.97	7.97	0.29
3,909.0	46.60	284.52	3,834.1	62.5	-310.3	316.1	8.51	8.48	-0.87
3,939.0	49.33	284.35	3,854.2	68.0	-331.8	338.3	9.11	9.10	-0.57
3,969.0	51.35	284.26	3,873.3	73.7	-354.2	361.3	6.74	6.73	-0.30
4,000.0	53.38	283.03	3,892.2	79.5	-378.1	385.7	7.26	6.55	-3.97
4,030.0	55.31	281.71	3,909.7	84.7	-401.9	410.0	7.36	6.43	-4.40
4,060.0	57.33	281.01	3,926.3	89.6	-426.4	435.0	7.01	6.73	-2.33
4,090.0	59.53	280.92	3,942.1	94.5	-451.5	460.5	7.34	7.33	-0.30
4,120.0	61.55	280.74	3,956.8	99.4	-477.1	486.6	6.75	6.73	-0.60
4,150.0	63.66	280.22	3,970.6	104.3	-503.3	513.2	7.20	7.03	-1.73
4,181.0	65.77	279.78	3,983.9	109.1	-530.9	541.2	6.93	6.81	-1.42
4,212.0	67.44	279.51	3,996.2	113.9	-559.0	569.7	5.45	5.39	-0.87
4,242.0	68.94	278.81	4,007.3	118.3	-586.4	597.5	5.45	5.00	-2.33
4,272.0	70.43	278.37	4,017.7	122.5	-614.3	625.7	5.15	4.97	-1.47
4,303.0	72.28	278.19	4,027.6	126.7	-643.3	655.0	5.99	5.97	-0.58
4,334.0	73.95	277.93	4,036.6	130.9	-672.7	684.7	5.45	5.39	-0.84
4,365.0	75.89	277.40	4,044.7	134.9	-702.4	714.6	6.47	6.26	-1.71
4,397.0	78.17	277.23	4,051.9	138.9	-733.3	745.8	7.14	7.13	-0.53
4,428.0	80.64	277.05	4,057.6	142.7	-763.5	776.3	7.99	7.97	-0.58
4,459.0	82.66	277.14	4,062.1	146.4	-794.0	806.9	6.52	6.52	0.29
4,490.0	84.06	277.32	4,065.7	150.3	-824.5	837.7	4.55	4.52	0.58
4,517.0	85.30	277.58	4,068.2	153.8	-851.2	864.6	4.69	4.59	0.96
4,571.0	86.49	277.99	4,072.0	161.1	-904.5	918.4	2.32	2.20	0.76
7"									
4,609.0	87.32	278.28	4,074.1	166.5	-942.1	956.4	2.32	2.20	0.76
4,641.0	87.85	277.49	4,075.4	170.9	-973.8	988.4	2.97	1.66	-2.47
4,673.0	89.52	276.08	4,076.2	174.6	-1,005.5	1,020.3	6.83	5.22	-4.41
4,704.0	90.57	276.35	4,076.1	178.0	-1,036.3	1,051.3	3.50	3.39	0.87
4,736.0	90.66	276.79	4,075.8	181.7	-1,068.1	1,083.3	1.40	0.28	1.38
4,767.6	91.01	276.61	4,075.3	185.3	-1,099.5	1,114.8	1.25	1.11	-0.57
4,800.0	91.19	277.05	4,074.7	189.2	-1,131.7	1,147.2	1.47	0.56	1.36
4,831.0	90.04	276.70	4,074.4	192.9	-1,162.4	1,178.2	3.88	-3.71	-1.13
4,863.0	90.31	276.61	4,074.3	196.6	-1,194.2	1,210.2	0.89	0.84	-0.28
4,895.0	91.80	276.88	4,073.7	200.4	-1,226.0	1,242.2	4.73	4.66	0.84
4,927.0	92.42	277.58	4,072.5	204.4	-1,257.7	1,274.1	2.92	1.94	2.19
4,958.0	92.51	277.49	4,071.2	208.5	-1,288.4	1,305.1	0.41	0.29	-0.29
4,990.0	92.59	278.02	4,069.8	212.8	-1,320.1	1,337.1	1.67	0.25	1.66
5,022.0	92.07	277.93	4,068.5	217.2	-1,351.8	1,369.1	1.65	-1.63	-0.28
5,054.0	93.21	278.46	4,067.0	221.8	-1,383.4	1,401.0	3.93	3.56	1.66
5,086.0	93.56	278.90	4,065.1	226.6	-1,415.0	1,433.0	1.76	1.09	1.38
5,118.0	93.65	279.16	4,063.1	231.6	-1,446.5	1,464.9	0.86	0.28	0.81
5,150.0	94.53	279.34	4,060.8	236.7	-1,478.0	1,496.8	2.81	2.75	0.56



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,182.0	94.18	279.51	4,058.4	241.9	-1,509.5	1,528.7	1.22	-1.09	0.53
5,212.0	94.09	279.78	4,056.2	247.0	-1,539.0	1,558.6	0.95	-0.30	0.90
5,242.0	94.44	279.60	4,054.0	252.0	-1,568.5	1,588.5	1.31	1.17	-0.60
5,273.0	94.18	279.78	4,051.7	257.2	-1,599.0	1,619.5	1.02	-0.84	0.58
5,304.0	93.74	279.60	4,049.5	262.4	-1,629.5	1,650.4	1.53	-1.42	-0.58
5,336.0	93.30	279.69	4,047.6	267.8	-1,660.9	1,682.3	1.40	-1.38	0.28
5,366.0	92.33	278.72	4,046.1	272.6	-1,690.5	1,712.3	4.57	-3.23	-3.23
5,397.0	91.98	278.19	4,044.9	277.1	-1,721.2	1,743.2	2.05	-1.13	-1.71
5,427.0	92.51	278.19	4,043.7	281.4	-1,750.8	1,773.2	1.77	1.77	0.00
5,458.0	92.95	278.72	4,042.3	285.9	-1,781.5	1,804.2	2.22	1.42	1.71
5,489.0	93.83	278.99	4,040.4	290.7	-1,812.0	1,835.1	2.97	2.84	0.87
5,519.0	93.12	278.46	4,038.6	295.2	-1,841.6	1,865.1	2.95	-2.37	-1.77
5,550.0	92.86	278.46	4,037.0	299.8	-1,872.3	1,896.0	0.84	-0.84	0.00
5,581.0	92.24	278.37	4,035.6	304.3	-1,902.9	1,927.0	2.02	-2.00	-0.29
5,612.0	92.51	278.81	4,034.3	308.9	-1,933.5	1,958.0	1.66	0.87	1.42
5,642.0	91.98	279.07	4,033.2	313.6	-1,963.1	1,988.0	1.97	-1.77	0.87
5,673.0	92.07	279.07	4,032.1	318.5	-1,993.7	2,018.9	0.29	0.29	0.00
5,703.0	91.80	279.43	4,031.0	323.3	-2,023.3	2,048.9	1.50	-0.90	1.20
5,734.0	90.92	279.25	4,030.3	328.3	-2,053.9	2,079.9	2.90	-2.84	-0.58
5,765.0	91.28	279.69	4,029.7	333.4	-2,084.5	2,110.9	1.83	1.16	1.42
5,795.0	91.10	279.60	4,029.1	338.5	-2,114.0	2,140.9	0.67	-0.60	-0.30
5,826.0	91.98	279.78	4,028.3	343.7	-2,144.6	2,171.9	2.90	2.84	0.58
5,857.0	91.89	280.13	4,027.2	349.0	-2,175.1	2,202.8	1.17	-0.29	1.13
5,887.0	91.54	279.95	4,026.3	354.3	-2,204.6	2,232.8	1.31	-1.17	-0.60
5,918.0	90.40	279.07	4,025.8	359.4	-2,235.2	2,263.8	4.65	-3.68	-2.84
5,948.0	91.45	278.81	4,025.3	364.0	-2,264.8	2,293.8	3.61	3.50	-0.87
5,979.0	92.51	279.16	4,024.2	368.9	-2,295.4	2,324.8	3.60	3.42	1.13
6,009.0	92.77	279.51	4,022.9	373.7	-2,325.0	2,354.7	1.45	0.87	1.17
6,040.0	91.98	279.25	4,021.6	378.8	-2,355.6	2,385.7	2.68	-2.55	-0.84
6,070.0	91.71	278.02	4,020.6	383.3	-2,385.2	2,415.7	4.20	-0.90	-4.10
6,101.0	90.75	278.02	4,019.9	387.6	-2,415.9	2,446.7	3.10	-3.10	0.00
6,131.0	90.40	277.93	4,019.6	391.8	-2,445.6	2,476.7	1.20	-1.17	-0.30
6,162.0	91.19	277.84	4,019.2	396.0	-2,476.3	2,507.7	2.56	2.55	-0.29
6,192.0	92.59	278.55	4,018.2	400.3	-2,506.0	2,537.7	5.23	4.67	2.37
6,222.0	92.51	278.02	4,016.9	404.6	-2,535.6	2,567.6	1.78	-0.27	-1.77
6,253.0	92.24	278.28	4,015.6	409.0	-2,566.3	2,598.6	1.21	-0.87	0.84
6,283.0	91.80	277.93	4,014.5	413.2	-2,596.0	2,628.6	1.87	-1.47	-1.17
6,314.0	91.80	278.28	4,013.6	417.6	-2,626.7	2,659.6	1.13	0.00	1.13
6,344.0	92.24	278.28	4,012.5	421.9	-2,656.3	2,689.5	1.47	1.47	0.00
6,375.0	91.89	278.02	4,011.4	426.3	-2,687.0	2,720.5	1.41	-1.13	-0.84
6,406.0	91.80	277.93	4,010.4	430.6	-2,717.7	2,751.5	0.41	-0.29	-0.29
6,437.0	92.33	278.11	4,009.3	434.9	-2,748.4	2,782.5	1.81	1.71	0.58
6,468.0	92.24	278.02	4,008.0	439.3	-2,779.0	2,813.5	0.41	-0.29	-0.29



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,498.0	92.24	277.93	4,006.9	443.4	-2,808.7	2,843.4	0.30	0.00	-0.30
6,529.0	91.89	278.28	4,005.7	447.8	-2,839.4	2,874.4	1.60	-1.13	1.13
6,559.0	91.36	278.11	4,004.9	452.1	-2,869.1	2,904.4	1.86	-1.77	-0.57
6,591.0	93.21	278.81	4,003.6	456.8	-2,900.7	2,936.4	6.18	5.78	2.19
6,623.0	94.18	278.90	4,001.6	461.7	-2,932.2	2,968.3	3.04	3.03	0.28
6,654.0	93.21	278.90	3,999.6	466.5	-2,962.8	2,999.2	3.13	-3.13	0.00
6,686.0	91.63	278.37	3,998.2	471.3	-2,994.4	3,031.2	5.21	-4.94	-1.66
6,717.0	91.63	278.81	3,997.3	475.9	-3,025.0	3,062.2	1.42	0.00	1.42
6,749.0	93.30	279.43	3,996.0	481.0	-3,056.6	3,094.2	5.57	5.22	1.94
6,780.0	93.30	279.34	3,994.2	486.0	-3,087.1	3,125.1	0.29	0.00	-0.29
6,812.0	92.15	278.46	3,992.6	491.0	-3,118.7	3,157.1	4.52	-3.59	-2.75
6,844.0	91.36	278.19	3,991.7	495.6	-3,150.4	3,189.1	2.61	-2.47	-0.84
6,875.0	90.48	278.28	3,991.2	500.1	-3,181.1	3,220.1	2.85	-2.84	0.29
6,907.0	91.10	278.19	3,990.7	504.6	-3,212.7	3,252.1	1.96	1.94	-0.28
6,939.0	91.01	278.02	3,990.1	509.1	-3,244.4	3,284.0	0.60	-0.28	-0.53
6,971.0	90.75	278.02	3,989.6	513.6	-3,276.1	3,316.0	0.81	-0.81	0.00
7,003.0	90.57	277.49	3,989.3	517.9	-3,307.8	3,348.0	1.75	-0.56	-1.66
7,034.0	91.80	277.58	3,988.6	522.0	-3,338.5	3,379.0	3.98	3.97	0.29
7,065.0	91.98	277.76	3,987.6	526.1	-3,369.2	3,410.0	0.82	0.58	0.58
7,097.0	91.63	277.67	3,986.6	530.4	-3,400.9	3,442.0	1.13	-1.09	-0.28
7,129.0	90.66	276.88	3,986.0	534.5	-3,432.6	3,474.0	3.91	-3.03	-2.47
7,160.0	90.92	277.05	3,985.5	538.2	-3,463.4	3,505.0	1.00	0.84	0.55
7,192.0	91.71	277.40	3,984.8	542.3	-3,495.1	3,536.9	2.70	2.47	1.09
7,224.0	92.86	277.67	3,983.5	546.4	-3,526.8	3,568.9	3.69	3.59	0.84
7,255.0	93.21	277.76	3,981.9	550.6	-3,557.5	3,599.9	1.17	1.13	0.29
7,287.0	93.83	278.02	3,979.9	555.0	-3,589.2	3,631.8	2.10	1.94	0.81
7,319.0	94.09	277.93	3,977.7	559.4	-3,620.8	3,663.7	0.86	0.81	-0.28
7,351.0	94.53	278.02	3,975.3	563.8	-3,652.4	3,695.6	1.40	1.38	0.28
7,383.0	95.14	277.84	3,972.6	568.2	-3,684.0	3,727.5	1.99	1.91	-0.56
7,414.0	94.35	277.58	3,970.0	572.4	-3,714.6	3,758.4	2.68	-2.55	-0.84
7,446.0	92.33	277.32	3,968.2	576.5	-3,746.2	3,790.3	6.36	-6.31	-0.81
7,478.0	92.33	276.96	3,966.9	580.5	-3,778.0	3,822.3	1.12	0.00	-1.13
7,510.0	91.28	276.79	3,965.9	584.3	-3,809.7	3,854.3	3.32	-3.28	-0.53
7,541.0	92.86	277.14	3,964.8	588.1	-3,840.5	3,885.2	5.22	5.10	1.13
7,573.0	92.68	276.88	3,963.2	592.0	-3,872.2	3,917.2	0.99	-0.56	-0.81
7,605.0	92.24	276.88	3,961.8	595.8	-3,903.9	3,949.1	1.38	-1.38	0.00
7,637.0	91.89	276.61	3,960.7	599.6	-3,935.7	3,981.1	1.38	-1.09	-0.84
7,669.0	92.07	277.05	3,959.6	603.4	-3,967.4	4,013.1	1.48	0.56	1.38
7,701.0	93.39	277.23	3,958.1	607.3	-3,999.2	4,045.0	4.16	4.13	0.56
7,733.0	93.21	277.14	3,956.2	611.3	-4,030.9	4,077.0	0.63	-0.56	-0.28
7,764.0	92.59	277.32	3,954.6	615.2	-4,061.6	4,107.9	2.08	-2.00	0.58
7,796.0	92.07	277.49	3,953.3	619.4	-4,093.3	4,139.9	1.71	-1.63	0.53
7,828.0	92.95	277.32	3,951.9	623.5	-4,125.0	4,171.8	2.80	2.75	-0.53



Pathfinder Survey Report

PATHFINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 18 T30N R15W
Well: Horseshoe Gallup 18-8H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Horseshoe Gallup 18-8H
TVD Reference: WELL @ 5412.5usft (Original Well Elev)
MD Reference: WELL @ 5412.5usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,859.0	93.39	277.32	3,950.2	627.4	-4,155.7	4,202.8	1.42	1.42	0.00
7,906.0	92.59	276.96	3,947.8	633.3	-4,202.3	4,249.7	1.87	-1.70	-0.77
7,938.0	91.89	277.14	3,946.5	637.2	-4,234.0	4,281.7	2.26	-2.19	0.56
7,969.0	93.03	277.40	3,945.2	641.1	-4,264.7	4,312.6	3.77	3.68	0.84
8,001.0	93.12	277.32	3,943.5	645.2	-4,296.4	4,344.6	0.38	0.28	-0.25
8,033.0	92.42	277.23	3,941.9	649.2	-4,328.1	4,376.5	2.21	-2.19	-0.28
8,065.0	91.80	276.44	3,940.8	653.1	-4,359.9	4,408.5	3.14	-1.94	-2.47
8,097.0	91.71	276.44	3,939.8	656.6	-4,391.6	4,440.5	0.28	-0.28	0.00
8,128.0	92.07	276.44	3,938.7	660.1	-4,422.4	4,471.4	1.16	1.16	0.00
8,160.0	91.63	276.17	3,937.7	663.6	-4,454.2	4,503.4	1.61	-1.38	-0.84
8,191.0	92.51	276.08	3,936.6	666.9	-4,485.0	4,534.3	2.85	2.84	-0.29
8,223.0	91.80	276.08	3,935.4	670.3	-4,516.8	4,566.3	2.22	-2.22	0.00
8,255.0	91.36	275.73	3,934.5	673.6	-4,548.6	4,598.2	1.76	-1.38	-1.09
8,287.0	91.63	275.82	3,933.7	676.8	-4,580.5	4,630.2	0.89	0.84	0.28
8,318.0	91.63	275.91	3,932.8	680.0	-4,611.3	4,661.1	0.29	0.00	0.29
8,343.0	90.75	275.29	3,932.3	682.4	-4,636.2	4,686.1	4.31	-3.52	-2.48
8,405.0	90.75	275.29	3,931.5	688.1	-4,697.9	4,748.0	0.00	0.00	0.00

Straight Line Projection to Bit Depth @ 8405' MD

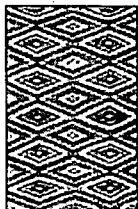
Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
4,571.0	4,072.0	7"	7	8-3/4

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
8,405.0	3,931.5	+N/-S (usft) 688.1 +E/-W (usft) -4,697.9	Straight Line Projection to Bit Depth @ 8405' MD

Checked By: _____ Approved By: _____ Date: _____



Robert L. Bayless, Producer LLC.

Horseshoe Gallup 18-8H
Sec 18 T30N R15W
San Juan Co., NM

PATHFINDER

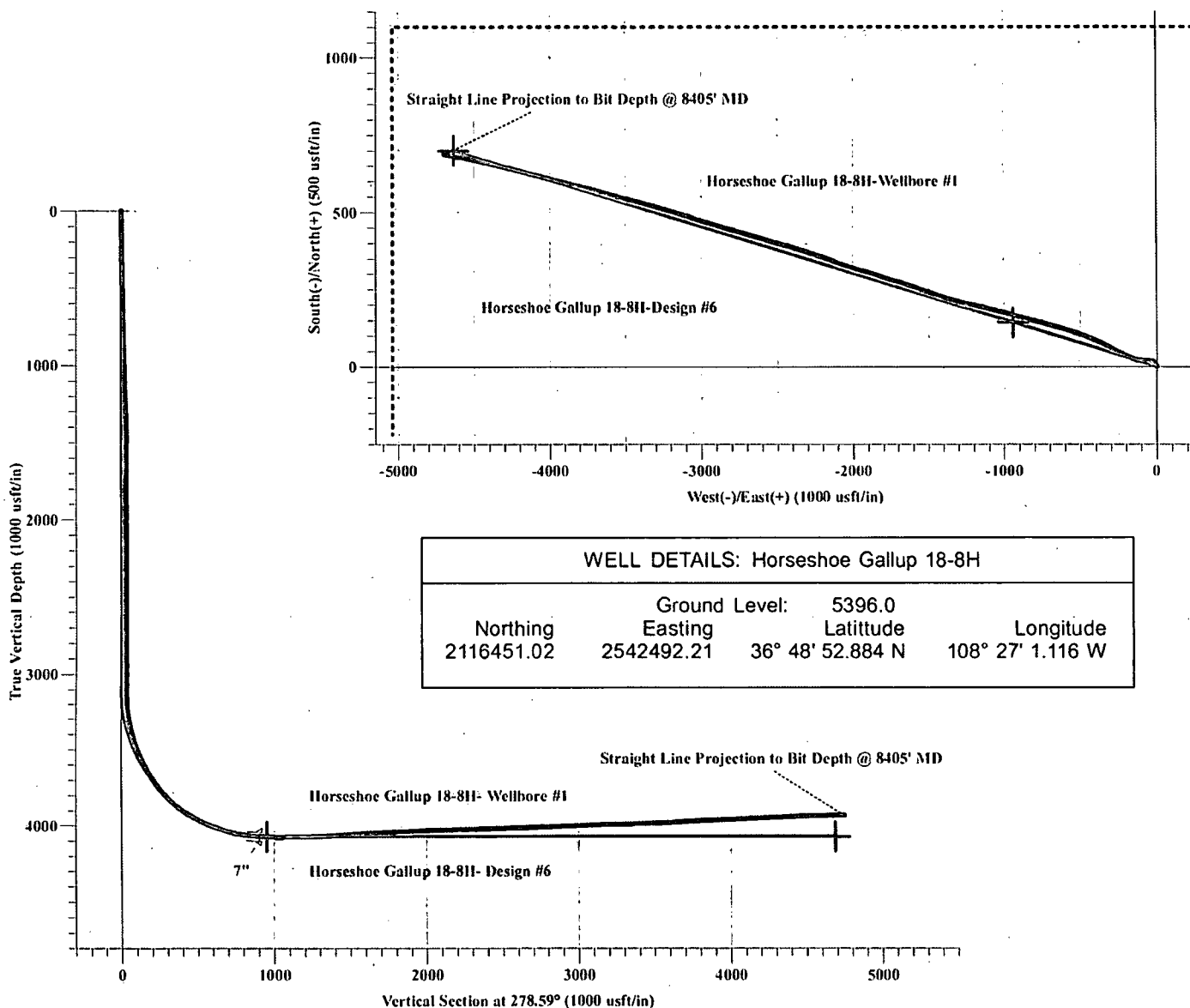
A Schlumberger Company

Ground Level: 5396.0
 KB: 16.5'

EOW
 No. Hardlines
 Crossed

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BHL 18-8H	4071.5	700.0	-4635.0	2117180.92	2537861.82	Point
Land 18-8H	4071.5	142.6	-944.2	2116599.71	2541548.95	Point



WELL DETAILS: Horseshoe Gallup 18-8H

Ground Level: 5396.0		Latitude	
Northing	Easting	Longitude	
2116451.02	2542492.21	36° 48' 52.884 N	108° 27' 1.116 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
3116.6	0.00	0.00	3116.6	0.0	0.0	0.00	0.00	0.0	
4616.6	90.00	278.59	4071.5	142.6	-944.2	6.00	278.59	954.9	
8349.2	90.00	278.59	4071.5	700.0	-4635.0	0.00	0.00	4687.6	BHL 18-8H

Plan: Design #6 (Horseshoe Gallup 18-8H/Wellbore #1)

Created By: Breck Enoch

Date: 08-Oct-2012