



30.045-35376

Robert L. Bayless, Producer LLC.

San Juan Co., NM

Sec 19 T30N R15W

Horseshoe Gallup 19-8H

ST01

Design: ST01

Standard Survey Report

17 September, 2012

PENTAFINDER
A Schlumberger Company



Pathfinder Survey Report

FINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 19 T30N R15W
Well: Horseshoe Gallup 19-8H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well Horseshoe Gallup 19-8H
TVD Reference: WELL @ 5394.0usft (Original Well Elev)
MD Reference: WELL @ 5394.0usft (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 19 T30N R15W		
Site Position:		Northing:	2,112,105.83 usft
From:	Lat/Long	Easting:	2,542,197.74 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 48' 9.900 N
		Longitude:	108° 27' 4.392 W
		Grid Convergence:	-0.37 °

Well	Horseshoe Gallup 19-8H		
Well Position	+N/-S	0.0 usft	Northing: 2,112,105.83 usft
	+E/-W	0.0 usft	Easting: 2,542,197.74 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36° 48' 9.900 N
		Longitude:	108° 27' 4.392 W
		Ground Level:	5,379.0 usft

Wellbore	ST01		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	04/16/12	10.09
			Dip Angle
			(°)
			Field Strength
			(nT)
			63.36
			50,601

Design	ST01		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			267.09
			Tie On Depth:
			3,726.0

Survey Program	Date 09/17/12		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
424.0	3,726.0	Survey #4 (Pilot)	MWD
3,795.0	7,543.0	Survey #2 (ST01)	MWD
			Description
			MWD - Standard
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
424.0	0.62	305.27	424.0	1.3	-1.9	1.8	0.15	0.15	0.00
484.0	0.70	306.19	484.0	1.7	-2.4	2.3	0.13	0.13	1.53
504.0	0.62	307.78	504.0	1.9	-2.6	2.5	0.41	-0.40	7.95
566.0	0.62	303.91	566.0	2.3	-3.2	3.0	0.07	0.00	-6.24
626.0	0.79	299.60	626.0	2.6	-3.8	3.7	0.30	0.28	-7.18
687.0	1.01	298.81	687.0	3.1	-4.6	4.5	0.36	0.36	-1.30
747.0	1.32	301.18	747.0	3.7	-5.7	5.5	0.52	0.52	3.95
809.0	1.58	297.01	808.9	4.5	-7.1	6.8	0.45	0.42	-6.73
872.0	1.80	294.28	871.9	5.3	-8.7	8.5	0.37	0.35	-4.33



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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)
934.0	2.02	292.39	933.9	6.1	-10.6	10.3	0.37	0.35	-3.05
965.0	2.11	292.31	964.9	6.5	-11.7	11.3	0.29	0.29	-0.26
1,027.0	2.02	292.49	1,026.8	7.4	-13.7	13.3	0.15	-0.15	0.29
1,090.0	1.89	291.69	1,089.8	8.2	-15.7	15.3	0.21	-0.21	-1.27
1,152.0	2.02	290.77	1,151.7	9.0	-17.7	17.2	0.22	0.21	-1.48
1,214.0	1.80	290.77	1,213.7	9.7	-19.6	19.1	0.35	-0.35	0.00
1,273.0	1.89	290.77	1,272.7	10.4	-21.4	20.8	0.15	0.15	0.00
1,345.0	1.80	289.41	1,344.6	11.2	-23.6	23.0	0.14	-0.13	-1.89
1,407.0	1.71	289.41	1,406.6	11.8	-25.4	24.7	0.15	-0.15	0.00
1,470.0	1.49	292.00	1,469.6	12.4	-27.0	26.3	0.37	-0.35	4.11
1,532.0	1.41	288.70	1,531.6	13.0	-28.5	27.8	0.19	-0.13	-5.32
1,591.0	1.41	289.67	1,590.5	13.4	-29.9	29.1	0.04	0.00	1.64
1,653.0	1.41	288.40	1,652.5	13.9	-31.3	30.5	0.05	0.00	-2.05
1,675.0	1.32	287.38	1,674.5	14.1	-31.8	31.0	0.42	-0.41	-4.64
1,734.0	1.19	291.91	1,733.5	14.5	-33.0	32.2	0.28	-0.22	7.68
1,794.0	1.19	282.29	1,793.5	14.9	-34.2	33.4	0.33	0.00	-16.03
1,857.0	1.19	281.19	1,856.5	15.1	-35.5	34.7	0.04	0.00	-1.75
1,919.0	1.19	277.89	1,918.5	15.4	-36.7	35.9	0.11	0.00	-5.32
1,981.0	1.19	285.80	1,980.5	15.6	-38.0	37.2	0.26	0.00	12.76
2,013.0	0.88	286.37	2,012.5	15.8	-38.6	37.7	0.97	-0.97	1.78
2,106.0	0.88	285.28	2,105.4	16.2	-39.9	39.1	0.02	0.00	-1.17
2,168.0	0.88	282.38	2,167.4	16.4	-40.9	40.0	0.07	0.00	-4.68
2,230.0	1.01	285.58	2,229.4	16.7	-41.8	41.0	0.23	0.21	5.16
2,280.0	0.88	281.19	2,279.4	16.8	-42.7	41.7	0.30	-0.26	-8.78
2,331.0	0.88	270.51	2,330.4	16.9	-43.4	42.5	0.32	0.00	-20.94
2,393.0	1.10	265.37	2,392.4	16.9	-44.5	43.6	0.38	0.35	-8.29
2,456.0	1.01	266.29	2,455.4	16.8	-45.7	44.7	0.15	-0.14	1.46
2,518.0	1.01	265.59	2,517.4	16.7	-46.7	45.8	0.02	0.00	-1.13
2,580.0	1.01	271.70	2,579.4	16.7	-47.8	46.9	0.17	0.00	9.85
2,643.0	0.88	273.41	2,642.4	16.7	-48.9	48.0	0.21	-0.21	2.71
2,706.0	1.01	272.40	2,705.4	16.8	-49.9	49.0	0.21	0.21	-1.60
2,769.0	1.10	272.18	2,768.3	16.8	-51.1	50.1	0.14	0.14	-0.35
2,830.0	1.19	266.38	2,829.3	16.8	-52.3	51.4	0.24	0.15	-9.51
2,894.0	1.41	262.07	2,893.3	16.7	-53.7	52.8	0.38	0.34	-6.73
2,956.0	1.58	258.21	2,955.3	16.4	-55.3	54.4	0.32	0.27	-6.23
2,991.0	1.71	256.97	2,990.3	16.2	-56.3	55.4	0.39	0.37	-3.54
3,082.0	2.11	249.68	3,081.2	15.3	-59.2	58.3	0.51	0.44	-8.01
3,144.0	2.42	245.59	3,143.2	14.3	-61.5	60.7	0.56	0.50	-6.60
3,206.0	2.68	241.29	3,205.1	13.1	-63.9	63.2	0.52	0.42	-6.94
3,230.0	2.99	238.08	3,229.1	12.5	-64.9	64.2	1.45	-1.29	-13.38
3,291.0	3.21	236.67	3,290.0	10.7	-67.7	67.1	0.38	0.36	-2.31
3,354.0	3.60	231.67	3,352.9	8.5	-70.7	70.2	0.78	0.62	-7.94
3,415.0	3.91	229.07	3,413.8	6.0	-73.8	73.4	0.58	0.51	-4.26



Pathfinder

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3,477.0	4.22	226.78	3,475.6	3.0	-77.1	76.8	0.56	0.50	-3.69
3,540.0	3.91	227.09	3,538.4	0.0	-80.3	80.2	0.49	-0.49	0.49
3,601.0	3.91	225.69	3,599.3	-2.9	-83.4	83.4	0.16	0.00	-2.30
3,663.0	3.60	225.07	3,661.2	-5.7	-86.2	86.4	0.50	-0.50	-1.00
3,726.0	3.78	224.50	3,724.0	-8.6	-89.1	89.4	0.29	0.29	-0.90
Tie-In to Pilot Hole @ 3726' MD									
3,795.0	3.82	262.73	3,792.9	-10.5	-93.0	93.4	3.60	0.06	55.41
Interpolated Survey at Top of Whipstock @ 3795' MD									
3,885.0	19.17	272.94	3,880.8	-10.1	-110.8	111.2	17.14	17.06	11.34
3,917.0	23.65	266.21	3,910.6	-10.3	-122.5	122.8	15.95	14.00	-21.03
3,948.0	28.05	265.79	3,938.5	-11.2	-136.0	136.3	14.21	14.19	-1.35
3,980.0	33.24	268.38	3,966.0	-12.0	-152.2	152.7	16.73	16.22	8.09
4,012.0	40.19	268.70	3,991.7	-12.5	-171.3	171.8	21.73	21.72	1.00
4,043.0	47.84	268.82	4,014.0	-13.0	-192.9	193.3	24.68	24.68	0.39
4,075.0	55.84	269.18	4,033.7	-13.4	-218.0	218.4	25.02	25.00	1.13
4,107.0	63.84	269.02	4,049.8	-13.9	-245.6	246.0	25.00	25.00	-0.50
4,138.0	72.46	268.70	4,061.3	-14.4	-274.4	274.8	27.82	27.81	-1.03
4,179.0	82.83	266.27	4,070.1	-16.2	-314.3	314.8	25.94	25.29	-5.93
4,210.0	88.81	264.92	4,072.3	-18.6	-345.2	345.7	19.77	19.29	-4.35
4,242.0	90.57	264.55	4,072.5	-21.5	-377.0	377.6	5.62	5.50	-1.16
4,273.0	92.15	264.56	4,071.8	-24.5	-407.9	408.6	5.10	5.10	0.03
4,305.0	92.33	264.64	4,070.5	-27.5	-439.7	440.5	0.62	0.56	0.25
4,337.0	93.30	265.26	4,068.9	-30.3	-471.5	472.5	3.60	3.03	1.94
4,369.0	93.12	265.58	4,067.1	-32.8	-503.4	504.4	1.15	-0.56	1.00
4,400.0	91.89	266.11	4,065.8	-35.1	-534.3	535.4	4.32	-3.97	1.71
4,432.0	92.15	266.66	4,064.7	-37.1	-566.2	567.3	1.90	0.81	1.72
4,464.0	91.71	266.06	4,063.6	-39.1	-598.1	599.3	2.32	-1.38	-1.88
4,496.0	91.19	265.63	4,062.8	-41.4	-630.0	631.3	2.11	-1.63	-1.34
4,528.0	91.01	265.21	4,062.2	-44.0	-661.9	663.3	1.43	-0.56	-1.31
4,559.0	91.63	264.81	4,061.4	-46.7	-692.8	694.3	2.38	2.00	-1.29
4,591.0	91.01	264.62	4,060.7	-49.6	-724.6	726.2	2.03	-1.94	-0.59
4,623.0	90.75	264.68	4,060.2	-52.6	-756.5	758.2	0.83	-0.81	0.19
4,654.0	91.01	264.97	4,059.7	-55.4	-787.4	789.2	1.26	0.84	0.94
4,686.0	90.31	264.04	4,059.4	-58.5	-819.2	821.1	3.64	-2.19	-2.91
4,718.0	90.92	264.10	4,059.0	-61.8	-851.0	853.1	1.92	1.91	0.19
4,750.0	91.45	264.46	4,058.4	-65.0	-882.9	885.0	2.00	1.66	1.13
4,781.0	91.28	265.68	4,057.6	-67.6	-913.7	916.0	3.97	-0.55	3.94
4,813.0	91.19	265.88	4,056.9	-70.0	-945.7	948.0	0.69	-0.28	0.63
4,845.0	91.36	265.89	4,056.2	-72.3	-977.6	980.0	0.53	0.53	0.03
4,877.0	91.36	266.01	4,055.5	-74.6	-1,009.5	1,012.0	0.37	0.00	0.38
4,909.0	91.54	265.88	4,054.7	-76.8	-1,041.4	1,043.9	0.69	0.56	-0.41
4,940.0	91.54	265.98	4,053.8	-79.0	-1,072.3	1,074.9	0.32	0.00	0.32
4,972.0	90.84	265.60	4,053.2	-81.4	-1,104.2	1,106.9	2.49	-2.19	-1.19
5,004.0	91.01	265.70	4,052.6	-83.8	-1,136.1	1,138.9	0.62	0.53	0.31



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5,036.0	90.22	265.51	4,052.3	-86.2	-1,168.0	1,170.9	2.54	-2.47	-0.59
5,068.0	90.66	266.24	4,052.1	-88.5	-1,199.9	1,202.9	2.66	1.38	2.28
5,099.0	90.75	266.10	4,051.7	-90.6	-1,230.9	1,233.9	0.54	0.29	-0.45
5,131.0	92.24	267.03	4,050.8	-92.5	-1,262.8	1,265.9	5.49	4.66	2.91
5,163.0	91.80	266.83	4,049.7	-94.2	-1,294.7	1,297.8	1.51	-1.38	-0.63
5,195.0	92.24	267.37	4,048.6	-95.9	-1,326.7	1,329.8	2.18	1.38	1.69
5,225.0	92.07	267.39	4,047.5	-97.2	-1,356.6	1,359.8	0.57	-0.57	0.07
5,257.0	92.15	267.55	4,046.3	-98.6	-1,388.5	1,391.8	0.56	0.25	0.50
5,289.0	91.71	267.56	4,045.2	-100.0	-1,420.5	1,423.7	1.38	-1.38	0.03
5,321.0	91.71	267.42	4,044.2	-101.4	-1,452.5	1,455.7	0.44	0.00	-0.44
5,353.0	91.38	267.75	4,043.4	-102.8	-1,484.4	1,487.7	1.50	-1.09	1.03
5,384.0	91.71	267.59	4,042.6	-104.0	-1,515.4	1,518.7	1.24	1.13	-0.52
5,416.0	92.24	267.62	4,041.4	-105.4	-1,547.3	1,550.7	1.66	1.66	0.09
5,448.0	92.51	267.79	4,040.1	-106.6	-1,579.3	1,582.7	1.00	0.84	0.53
5,480.0	92.59	268.11	4,038.7	-107.8	-1,611.2	1,614.6	1.03	0.25	1.00
5,512.0	92.33	267.71	4,037.3	-108.9	-1,643.2	1,646.6	1.49	-0.81	-1.25
5,543.0	91.28	267.41	4,036.3	-110.3	-1,674.1	1,677.6	3.52	-3.39	-0.97
5,575.0	91.36	267.94	4,035.6	-111.6	-1,706.1	1,709.6	1.67	0.25	1.66
5,607.0	91.45	267.66	4,034.8	-112.8	-1,738.1	1,741.5	0.92	0.28	-0.88
5,639.0	91.28	268.05	4,034.1	-114.0	-1,770.0	1,773.5	1.33	-0.53	1.22
5,671.0	91.54	267.76	4,033.3	-115.2	-1,802.0	1,805.5	1.22	0.81	-0.91
5,703.0	91.71	267.99	4,032.4	-116.3	-1,834.0	1,837.5	0.89	0.53	0.72
5,734.0	91.71	267.99	4,031.4	-117.4	-1,864.9	1,868.5	0.00	0.00	0.00
5,766.0	91.71	268.23	4,030.5	-118.5	-1,896.9	1,900.5	0.75	0.00	0.75
5,798.0	91.10	267.87	4,029.7	-119.6	-1,928.9	1,932.5	2.21	-1.91	-1.13
5,830.0	91.01	267.86	4,029.1	-120.8	-1,960.8	1,964.4	0.28	-0.28	-0.03
5,861.0	91.19	267.99	4,028.5	-121.9	-1,991.8	1,995.4	0.72	0.58	0.42
5,893.0	91.28	268.20	4,027.8	-122.9	-2,023.8	2,027.4	0.71	0.28	0.66
5,925.0	91.10	267.96	4,027.2	-124.0	-2,055.8	2,059.4	0.94	-0.56	-0.75
5,956.0	91.28	268.09	4,026.5	-125.1	-2,086.7	2,090.4	0.72	0.58	0.42
5,988.0	92.07	268.17	4,025.6	-126.1	-2,118.7	2,122.4	2.48	2.47	0.25
6,020.0	91.80	268.36	4,024.5	-127.1	-2,150.7	2,154.4	1.03	-0.84	0.59
6,052.0	92.07	268.53	4,023.4	-128.0	-2,182.7	2,186.3	1.00	0.84	0.53
6,083.0	92.51	268.28	4,022.2	-128.8	-2,213.6	2,217.3	1.63	1.42	-0.81
6,115.0	92.59	268.64	4,020.8	-129.7	-2,245.6	2,249.3	1.15	0.25	1.13
6,146.0	91.98	268.79	4,019.5	-130.4	-2,276.5	2,280.2	2.03	-1.97	0.48
6,178.0	91.63	268.88	4,018.5	-131.0	-2,308.5	2,312.2	1.13	-1.09	0.28
6,210.0	92.51	269.21	4,017.4	-131.6	-2,340.5	2,344.2	2.94	2.75	1.03
6,242.0	92.24	268.98	4,016.0	-132.1	-2,372.5	2,376.1	1.11	-0.84	-0.72
6,274.0	91.71	268.82	4,014.9	-132.7	-2,404.4	2,408.1	1.73	-1.66	-0.50
6,306.0	90.75	268.21	4,014.2	-133.5	-2,436.4	2,440.1	3.55	-3.00	-1.91
6,337.0	91.10	268.52	4,013.7	-134.4	-2,467.4	2,471.0	1.51	1.13	1.00
6,369.0	90.84	268.43	4,013.2	-135.3	-2,499.4	2,503.0	0.86	-0.81	-0.28



Pathfinder Survey Report

FINDER
A Schlumberger Company

Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 19 T30N R15W
Well: Horseshoe Gallup 19-8H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Well Horseshoe Gallup 19-8H
TVD Reference: WELL @ 5394.0usft (Original Well Elev)
MD Reference: WELL @ 5394.0usft (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)
6,401.0	91.71	268.71	4,012.5	-136.0	-2,531.4	2,535.0	2.86	2.72	0.88
6,433.0	91.89	268.55	4,011.5	-136.8	-2,563.3	2,567.0	0.75	0.56	-0.50
6,465.0	91.10	268.45	4,010.7	-137.7	-2,595.3	2,599.0	2.49	-2.47	-0.31
6,496.0	90.48	268.47	4,010.2	-138.5	-2,626.3	2,629.9	2.00	-2.00	0.06
6,528.0	90.04	268.36	4,010.1	-139.4	-2,658.3	2,661.9	1.42	-1.38	-0.34
6,560.0	90.22	268.64	4,010.0	-140.2	-2,690.3	2,693.9	1.04	0.56	0.88
6,592.0	90.04	268.49	4,009.9	-141.0	-2,722.3	2,725.9	0.73	-0.56	-0.47
6,655.0	91.71	269.25	4,009.0	-142.3	-2,785.2	2,788.9	2.91	2.65	1.21
6,687.0	91.63	269.19	4,008.0	-142.7	-2,817.2	2,820.8	0.31	-0.25	-0.19
6,719.0	91.01	269.01	4,007.3	-143.2	-2,849.2	2,852.8	2.02	-1.94	-0.56
6,751.0	90.40	268.65	4,006.9	-143.8	-2,881.2	2,884.8	2.21	-1.91	-1.13
6,782.0	91.01	268.80	4,006.5	-144.5	-2,912.2	2,915.8	2.03	1.97	0.48
6,814.0	93.12	269.15	4,005.4	-145.1	-2,944.2	2,947.7	6.68	6.59	1.09
6,846.0	92.42	269.66	4,003.8	-145.4	-2,976.1	2,979.7	2.71	-2.19	1.59
6,878.0	91.71	269.22	4,002.7	-145.7	-3,008.1	3,011.6	2.61	-2.22	-1.38
6,909.0	91.89	269.42	4,001.7	-146.1	-3,039.1	3,042.6	0.87	0.58	0.65
6,941.0	92.95	269.58	4,000.4	-146.4	-3,071.1	3,074.5	3.35	3.31	0.50
6,973.0	93.21	269.48	3,998.6	-146.7	-3,103.0	3,106.5	0.87	0.81	-0.31
7,005.0	93.30	269.63	3,996.8	-146.9	-3,135.0	3,138.4	0.55	0.28	0.47
7,036.0	92.77	269.09	3,995.2	-147.3	-3,165.9	3,169.3	2.44	-1.71	-1.74
7,068.0	91.98	268.90	3,993.8	-147.8	-3,197.9	3,201.3	2.54	-2.47	-0.59
7,100.0	92.24	269.01	3,992.7	-148.4	-3,229.9	3,233.2	0.88	0.81	0.34
7,131.0	93.03	269.22	3,991.2	-148.9	-3,260.8	3,264.2	2.64	2.55	0.68
7,163.0	92.24	268.88	3,989.8	-149.4	-3,292.8	3,296.1	2.69	-2.47	-1.06
7,195.0	90.92	268.63	3,988.9	-150.1	-3,324.8	3,328.1	4.20	-4.13	-0.78
7,227.0	91.89	268.92	3,988.1	-150.8	-3,356.7	3,360.1	3.16	3.03	0.91
7,259.0	92.86	269.34	3,986.8	-151.3	-3,388.7	3,392.0	3.30	3.03	1.31
7,291.0	92.95	269.43	3,985.2	-151.6	-3,420.7	3,424.0	0.40	0.28	0.28
7,322.0	92.24	269.24	3,983.8	-152.0	-3,451.6	3,454.9	2.37	-2.29	-0.61
7,354.0	93.30	269.64	3,982.2	-152.3	-3,483.6	3,486.8	3.54	3.31	1.25
7,386.0	93.03	269.69	3,980.4	-152.5	-3,515.5	3,518.8	0.86	-0.84	0.16
7,418.0	92.33	269.85	3,978.9	-152.6	-3,547.5	3,550.7	2.24	-2.19	0.50
7,450.0	92.42	269.75	3,977.6	-152.7	-3,579.5	3,582.6	0.42	0.28	-0.31
7,481.0	92.24	269.79	3,976.4	-152.8	-3,610.5	3,613.6	0.59	-0.58	0.13
7,543.0	92.24	269.79	3,973.9	-153.1	-3,672.4	3,675.4	0.00	0.00	0.00

Straight Line Projection to Bit Depth @ 7543' MD



Pathfinder
Survey Report



Company: Robert L. Bayless, Producer LLC.
Project: San Juan Co., NM
Site: Sec 19 T30N R15W
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Design: ST01

Local Co-ordinate Reference: Well Horseshoe Gallup 19-8H
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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,726.0	3,724.0	-8.6	-89.1	Tie-In to Pilot Hole @ 3726' MD
3,795.0	3,792.9	-10.5	-93.0	Interpolated Survey at Top of Whipstock @ 3795' MD
7,543.0	3,973.9	-153.1	-3,672.4	Straight Line Projection to Bit Depth @ 7543' MD

Checked By: _____ Approved By: _____ Date: _____