

OPERATOR
WELL/LEASE
COUNTY

CIMAREX ENERGY CO.
LITTLE BEAR 7 FEE 2
LEA

075-0059

STATE OF NEW MEXICO
DEVIATION REPORT

266	0.75
526	0.75
1,078	1.50
1,586	0.50
2,090	2.00
2,602	1.00
3,073	2.00
3,552	1.75
4,066	0.75
4,464	1.00
5,074	1.00
5,520	1.00
6,017	1.00
6,556	1.50
7,066	1.25
7,423	1.25
7,999	1.25
8,603	1.50
9,109	1.75
9,620	1.25
9,761	1.25
9,842	1.25

SUR: N-7-15s-38e, 430/S & 1750/W
BHL: K-7-15s-38e, 2277/S & 1723/W
API # 30-025-38588

STATE OF TEXAS

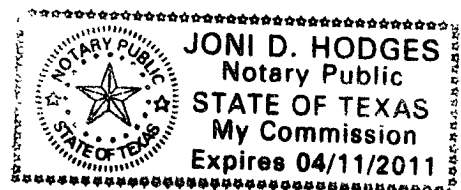
BY: Steve Moore

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Moore on behalf of Patterson-UTI Drilling Company LLC.

January 8, 2008 , by Steve

Joni D. Hodges
Notary Public for Midland County, Texas
My Commission Expires: 4/11/11





SUR: N-7-15s-38e, 430/S & 1750/W
BHL: K-7-15s-38e, 2277/S & 1723/W
API # 30-025-38588

Cimarex Energy Company

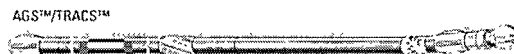
Little Bear "7" Fee No. 2H

Lea County, New Mexico

Sperry Drilling Services

End of Well Report

Prepared For: Cimarex Energy Company



January 15, 2008

Submitted by:

Marcus B. Stack - Well Planner

Phillip D. Smith - Directional Drilling Coordinator

Eric Singleton - Sperry Account Rep.

1-800-332-3992

Houston, TX 77032

HALLIBURTON

Cimarex Energy Co.

**Little Bear “7” Fee No. 2H
Lea County, NM**

End of Well Report

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HALLIBURTON

Sperry Drilling Services

Final Surveys and Plot

Cimarex Energy Company

Lea County, NM

Little Bear "7" Fee

2H

ST01

Design: ST01

Sperry Drilling Services Combo Report

15 January, 2008

Well Coordinates. 738,981 40 N, 907,299 90 E (33° 01' 32.68" N, 103° 08' 21.54" W)
Ground Level 3,772.00 ft

Local Coordinate Origin

Centered on Well 2H

Viewing Datum

3,772' GL+ 23'KB @ 3795 00ft (T&B)

TVDs to System

N

North Reference

Grid

Unit System

API - U.S. Survey Feet

Version. 2003 16 Build 42B

HALLIBURTON

HALLIBURTON

Design Report for 2H - ST01

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
0 00	0.00	0 00	-3,795 00	0 00	0 00 N	0 00 E	738,981 40	907,299 90	0 00	0.00
100 00	0 35	155.99	-3,695 00	100.00	0 28 S	0 12 E	738,981 12	907,300 02	0 35	-0.28
200 00	0 46	136.85	-3,595 00	200.00	0 85 S	0 52 E	738,980.55	907,300 42	0 17	-0.86
300 00	0 50	121 06	-3,495 01	299 99	1.37 S	1 17 E	738,980 03	907,301 07	0.14	-1 38
400.00	0 51	116.62	-3,395 01	399.99	1 79 S	1.94 E	738,979 61	907,301 84	0 04	-1 82
500 00	0.54	91.35	-3,295 01	499 99	2.00 S	2 81 E	738,979 40	907,302 71	0 23	-2.04
600.00	0.70	93 54	-3,195 02	599.98	2 05 S	3 89 E	738,979 35	907,303 79	0.16	-2 10
700 00	0.78	95 82	-3,095.03	699.97	2 16 S	5.18 E	738,979 24	907,305 08	0 09	-2 22
800 00	0 96	113 57	-2,995 04	799 96	2.56 S	6 62 E	738,978 84	907,306 52	0 32	-2 64
900 00	0 83	119 45	-2,895 05	899.95	3.25 S	8 02 E	738,978 15	907,307.92	0 16	-3.35
1,000.00	0.89	123.39	-2,795 06	999 94	4 04 S	9 30 E	738,977 36	907,309 20	0 08	-4.15
1,100 00	0 91	128.72	-2,695.08	1,099 92	4.96 S	10 57 E	738,976 44	907,310.47	0 09	-5 09
1,200 00	0 84	125 29	-2,595.09	1,199 91	5.88 S	11 79 E	738,975.52	907,311 69	0 09	-6.03
1,300 00	0 88	132 33	-2,495 10	1,299.90	6.82 S	12.95 E	738,974 58	907,312 85	0 11	-6.98
1,400 00	1.00	139.23	-2,395 11	1,399 89	8 00 S	14.09 E	738,973 40	907,313 99	0 16	-8.17
1,500 00	0 92	133 43	-2,295.13	1,499 87	9.21 S	15 24 E	738,972.19	907,315 14	0 13	-9.40
1,600 00	1.02	135.79	-2,195 14	1,599.86	10 40 S	16.45 E	738,971 00	907,316.35	0 11	-10 60
1,700 00	1.10	146.00	-2,095 16	1,699 84	11.84 S	17 61 E	738,969 56	907,317 51	0 20	-12 05
1,800 00	1 02	155 60	-1,995 17	1,799.83	13 44 S	18 51 E	738,967 96	907,318 41	0.19	-13 67
1,900.00	0.98	158 17	-1,895 19	1,899 81	15 05 S	19.20 E	738,966 35	907,319.10	0.06	-15 28
2,000 00	1 07	157 30	-1,795 21	1,999.79	16 70 S	19 87 E	738,964.70	907,319 77	0.09	-16.95
2,100 00	1 14	158.55	-1,695.22	2,099 78	18 49 S	20.60 E	738,962 91	907,320.50	0 07	-18 74
2,200 00	1.48	164 37	-1,595.25	2,199 75	20 66 S	21.31 E	738,960 74	907,321 21	0.36	-20 92
2,300 00	1.77	173 57	-1,495 29	2,299 71	23 44 S	21 83 E	738,957.96	907,321 73	0 39	-23 70
2,400 00	1 66	175 67	-1,395 34	2,399 66	26 42 S	22 11 E	738,954.98	907,322 01	0 13	-26.69
2,500 00	1 88	175 72	-1,295 38	2,499.62	29 50 S	22 34 E	738,951 90	907,322 24	0 22	-29.77
2,600 00	1 83	168 19	-1,195.44	2,599 56	32.70 S	22 79 E	738,948 70	907,322 69	0 25	-32.97
2,700 00	2 15	175 06	-1,095 50	2,699 50	36.13 S	23.28 E	738,945 27	907,323.18	0.40	-36 41
2,800.00	1.97	175.32	-995 56	2,799 44	39.71 S	23 58 E	738,941 69	907,323 48	0 18	-40 00
2,900 00	2.25	174 44	-895.63	2,899 37	43 38 S	23 91 E	738,938 02	907,323 81	0 28	-43 67
3,000 00	2.27	173.77	-795.71	2,999.29	47.30 S	24.32 E	738,934 10	907,324 22	0 03	-47.59
3,100 00	2 61	175 10	-695 80	3,099 20	51 54 S	24 73 E	738,929.86	907,324 63	0 34	-51.84
3,200 00	2 76	176 19	-595 91	3,199.09	56 21 S	25 08 E	738,925 19	907,324.98	0 16	-56 51
3,300 00	2 73	176 47	-496 02	3,298 98	60 99 S	25 39 E	738,920 41	907,325 29	0 03	-61.29
3,400.00	2 29	179 16	-396 12	3,398 88	65.36 S	25 57 E	738,916.04	907,325 47	0 46	-65 67
3,500 00	2 04	179.20	-296.19	3,498 81	69 14 S	25 62 E	738,912 26	907,325.52	0.25	-69.45
3,600 00	1.51	178.98	-196 24	3,598 76	72 24 S	25 67 E	738,909 16	907,325 57	0 53	-72.55
3,700 00	1 20	178 41	-96.27	3,698 73	74 60 S	25 72 E	738,906 80	907,325 62	0 31	-74.91
3,800 00	1.11	182 02	3 71	3,798 71	76.61 S	25.72 E	738,904.79	907,325 62	0 12	-76.92
3,900.00	0 73	186.66	103.70	3,898 70	78 22 S	25 61 E	738,903.18	907,325 51	0 39	-78.52
4,000 00	0.64	185.43	203 69	3,998.69	79.40 S	25 48 E	738,902 00	907,325 38	0 09	-79 71
4,100 00	0.42	212 68	303.69	4,098.69	80 27 S	25 23 E	738,901 13	907,325 13	0 33	-80 57
4,200 00	0 26	243.56	403 69	4,198 69	80 68 S	24 83 E	738,900 72	907,324.73	0 24	-80.98
4,300.00	0 19	283.15	503.69	4,298 69	80 74 S	24 46 E	738,900 66	907,324 36	0 17	-81 04
4,400 00	0.38	315 39	603 69	4,398.69	80 47 S	24 07 E	738,900 93	907,323 97	0 24	-80 76

HALLIBURTON

Design Report for 2H - ST01

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
4,500.00	0.37	337.48	703.68	4,498.68	79.93 S	23.71 E	738,901.47	907,323.61	0.14	-80.22
4,600.00	0.60	338.99	803.68	4,598.68	79.15 S	23.40 E	738,902.25	907,323.30	0.23	-79.43
4,700.00	0.77	352.27	903.67	4,698.67	77.99 S	23.12 E	738,903.41	907,323.02	0.23	-78.27
4,800.00	1.04	342.47	1,003.66	4,798.66	76.46 S	22.76 E	738,904.94	907,322.66	0.31	-76.73
4,900.00	1.10	343.68	1,103.64	4,898.64	74.67 S	22.22 E	738,906.73	907,322.12	0.06	-74.94
5,000.00	1.27	344.93	1,203.62	4,998.62	72.68 S	21.66 E	738,908.72	907,321.56	0.17	-72.94
5,100.00	1.49	341.23	1,303.59	5,098.59	70.38 S	20.95 E	738,911.02	907,320.85	0.24	-70.63
5,200.00	1.58	338.64	1,403.56	5,198.56	67.87 S	20.03 E	738,913.53	907,319.93	0.11	-68.11
5,300.00	1.54	342.67	1,503.52	5,298.52	65.30 S	19.13 E	738,916.10	907,319.03	0.12	-65.53
5,400.00	1.53	342.09	1,603.48	5,398.48	62.75 S	18.32 E	738,918.65	907,318.22	0.02	-62.97
5,500.00	1.52	340.82	1,703.45	5,498.45	60.22 S	17.47 E	738,921.18	907,317.37	0.04	-60.43
5,600.00	1.53	340.56	1,803.41	5,598.41	57.71 S	16.59 E	738,923.69	907,316.49	0.01	-57.91
5,700.00	1.45	339.45	1,903.38	5,698.38	55.27 S	15.70 E	738,926.13	907,315.60	0.09	-55.46
5,800.00	1.21	335.83	2,003.35	5,798.35	53.12 S	14.83 E	738,928.28	907,314.73	0.25	-53.30
5,900.00	1.48	328.33	2,103.32	5,898.32	51.06 S	13.72 E	738,930.34	907,313.62	0.32	-51.22
6,000.00	1.32	332.80	2,203.29	5,998.29	48.93 S	12.51 E	738,932.47	907,312.41	0.19	-49.08
6,100.00	1.83	343.63	2,303.26	6,098.26	46.38 S	11.54 E	738,935.02	907,311.44	0.59	-46.52
6,200.00	1.76	353.28	2,403.21	6,198.21	43.32 S	10.91 E	738,938.08	907,310.81	0.31	-43.45
6,300.00	1.49	4.21	2,503.17	6,298.17	40.50 S	10.82 E	738,940.90	907,310.72	0.41	-40.63
6,400.00	1.41	5.52	2,603.14	6,398.14	37.98 S	11.04 E	738,943.42	907,310.94	0.09	-38.11
6,500.00	1.20	7.73	2,703.11	6,498.11	35.72 S	11.30 E	738,945.68	907,311.20	0.22	-35.85
6,600.00	0.98	356.52	2,803.09	6,598.09	33.82 S	11.38 E	738,947.58	907,311.28	0.31	-33.96
6,700.00	1.11	9.25	2,903.08	6,698.08	32.01 S	11.49 E	738,949.39	907,311.39	0.27	-32.15
6,800.00	1.05	5.23	3,003.06	6,798.06	30.15 S	11.73 E	738,951.25	907,311.63	0.10	-30.29
6,900.00	0.96	3.71	3,103.04	6,898.04	28.40 S	11.87 E	738,953.00	907,311.77	0.09	-28.54
7,000.00	0.98	359.02	3,203.03	6,998.03	26.71 S	11.91 E	738,954.69	907,311.81	0.08	-26.85
7,100.00	0.93	2.25	3,303.01	7,098.01	25.04 S	11.92 E	738,956.36	907,311.82	0.07	-25.19
7,200.00	0.97	353.45	3,403.00	7,198.00	23.39 S	11.86 E	738,958.01	907,311.76	0.15	-23.53
7,300.00	0.88	353.97	3,502.99	7,297.99	21.78 S	11.68 E	738,959.62	907,311.58	0.09	-21.93
7,400.00	0.93	355.35	3,602.97	7,397.97	20.21 S	11.53 E	738,961.19	907,311.43	0.05	-20.35
7,500.00	0.94	3.86	3,702.96	7,497.96	18.58 S	11.52 E	738,962.82	907,311.42	0.14	-18.73
7,600.00	0.96	354.99	3,802.95	7,597.95	16.93 S	11.51 E	738,964.47	907,311.41	0.15	-17.07
7,700.00	0.97	358.95	3,902.93	7,697.93	15.25 S	11.42 E	738,966.15	907,311.32	0.07	-15.39
7,800.00	0.91	352.76	4,002.92	7,797.92	13.62 S	11.30 E	738,967.78	907,311.20	0.12	-13.75
7,900.00	0.91	350.58	4,102.91	7,897.91	12.05 S	11.07 E	738,969.35	907,310.97	0.03	-12.18
8,000.00	1.02	353.26	4,202.89	7,997.89	10.38 S	10.84 E	738,971.02	907,310.74	0.12	-10.51
8,100.00	1.13	354.91	4,302.88	8,097.88	8.51 S	10.64 E	738,972.89	907,310.54	0.11	-8.64
8,200.00	1.15	353.75	4,402.86	8,197.86	6.53 S	10.45 E	738,974.87	907,310.35	0.03	-6.66
8,300.00	1.27	352.48	4,502.83	8,297.83	4.44 S	10.19 E	738,976.96	907,310.09	0.12	-4.56
8,400.00	1.52	353.01	4,602.80	8,397.80	2.02 S	9.89 E	738,979.38	907,309.79	0.25	-2.14
8,500.00	1.62	351.16	4,702.77	8,497.77	0.69 N	9.51 E	738,982.09	907,309.41	0.11	0.57
8,600.00	1.67	350.48	4,802.73	8,597.73	3.53 N	9.05 E	738,984.93	907,308.95	0.05	3.41
8,700.00	1.62	350.80	4,902.68	8,697.68	6.36 N	8.58 E	738,987.76	907,308.48	0.05	6.25
8,800.00	1.35	354.25	5,002.65	8,797.65	8.93 N	8.24 E	738,990.33	907,308.14	0.28	8.82
8,900.00	1.25	350.36	5,102.62	8,897.62	11.17 N	7.94 E	738,992.57	907,307.84	0.13	11.07

Design Report for 2H - ST01

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
9,000.00	1.29	350.81	5,202.60	8,997.60	13 36 N	7 58 E	738,994.76	907,307.48	0.04	13.27
9,100.00	1.44	339.10	5,302.57	9,097.57	15.64 N	6 95 E	738,997.04	907,306.85	0.32	15.56
Tie On at 9,100' MD										
9,164.00	1.44	356.00	5,366.55	9,161.55	17.20 N	6.61 E	738,998.60	907,306.51	0.66	17.12
9,190.00	6.62	10.68	5,392.48	9,187.48	19.00 N	6.86 E	739,000.40	907,306.76	20.15	18.91
9,205.00	9.48	14.59	5,407.33	9,202.33	21.04 N	7.33 E	739,002.44	907,307.23	19.40	20.95
9,221.00	12.35	15.84	5,423.04	9,218.04	23.97 N	8.13 E	739,005.37	907,308.03	18.00	23.86
9,236.00	15.78	14.67	5,437.59	9,232.59	27.48 N	9.09 E	739,008.88	907,308.99	22.94	27.37
9,252.00	19.54	11.41	5,452.83	9,247.83	32.21 N	10.17 E	739,013.61	907,310.07	24.29	32.08
9,267.00	22.98	10.21	5,466.81	9,261.81	37.55 N	11.18 E	739,018.95	907,311.08	23.11	37.41
9,283.00	26.96	9.18	5,481.31	9,276.31	44.21 N	12.31 E	739,025.61	907,312.21	25.02	44.06
9,299.00	30.96	7.70	5,495.31	9,290.31	51.87 N	13.45 E	739,033.27	907,313.35	25.40	51.70
9,315.00	34.59	6.53	5,508.76	9,303.76	60.47 N	14.51 E	739,041.87	907,314.41	23.03	60.28
9,329.00	38.31	5.09	5,520.02	9,315.02	68.74 N	15.35 E	739,050.14	907,315.25	27.26	68.55
9,345.00	43.07	2.34	5,532.15	9,327.15	79.15 N	16.01 E	739,060.55	907,315.91	31.78	78.94
9,360.00	47.98	1.52	5,542.65	9,337.65	89.84 N	16.37 E	739,071.24	907,316.27	32.96	89.63
9,376.00	52.97	359.91	5,552.83	9,347.83	102.18 N	16.52 E	739,083.58	907,316.42	32.14	101.96
9,391.00	58.06	359.97	5,561.32	9,356.32	114.54 N	16.51 E	739,095.94	907,316.41	33.93	114.32
9,407.00	63.07	359.87	5,569.18	9,364.18	128.47 N	16.49 E	739,109.87	907,316.39	31.32	128.25
9,423.00	67.82	359.14	5,575.83	9,370.83	143.01 N	16.36 E	739,124.41	907,316.26	29.98	142.80
9,439.00	72.71	357.96	5,581.23	9,376.23	158.06 N	15.98 E	739,139.46	907,315.88	31.34	157.86
9,455.00	77.34	357.22	5,585.36	9,380.36	173.50 N	15.33 E	739,154.90	907,315.23	29.28	173.30
9,471.00	81.65	356.41	5,588.28	9,383.28	189.21 N	14.45 E	739,170.61	907,314.35	27.39	189.01
9,486.00	83.21	356.40	5,590.26	9,385.26	204.05 N	13.52 E	739,185.45	907,313.42	10.40	203.86
9,502.00	85.00	356.46	5,591.90	9,386.90	219.93 N	12.53 E	739,201.33	907,312.43	11.19	219.76
9,518.00	86.82	356.37	5,593.04	9,388.04	235.86 N	11.53 E	739,217.26	907,311.43	11.39	235.70
9,550.00	90.03	356.20	5,593.92	9,388.92	267.77 N	9.46 E	739,249.17	907,309.36	10.05	267.64
9,581.00	90.12	356.23	5,593.88	9,388.88	298.71 N	7.41 E	739,280.11	907,307.31	0.31	298.59
9,612.00	91.02	356.01	5,593.57	9,388.57	329.63 N	5.31 E	739,311.03	907,305.21	2.99	329.54
9,643.00	91.60	356.39	5,592.86	9,387.86	360.56 N	3.26 E	739,341.96	907,303.16	2.24	360.49
9,674.00	90.49	356.22	5,592.30	9,387.30	391.49 N	1.26 E	739,372.89	907,301.16	3.62	391.44
9,706.00	89.66	356.93	5,592.26	9,387.26	423.43 N	0.65 W	739,404.83	907,299.25	3.41	423.40
9,737.00	88.00	358.13	5,592.89	9,387.89	454.39 N	1.99 W	739,435.79	907,297.91	6.61	454.38
9,769.00	87.13	358.64	5,594.25	9,389.25	486.35 N	2.89 W	739,467.75	907,297.01	3.15	486.35
9,801.00	87.54	358.67	5,595.74	9,390.74	518.31 N	3.64 W	739,499.71	907,296.26	1.28	518.31
9,832.00	87.47	358.42	5,597.08	9,392.08	549.27 N	4.42 W	739,530.67	907,295.48	0.84	549.28
9,864.00	87.04	359.53	5,598.62	9,393.62	581.22 N	5.00 W	739,562.62	907,294.90	3.72	581.24
9,895.00	87.25	358.44	5,600.16	9,395.16	612.18 N	5.54 W	739,593.58	907,294.36	3.58	612.20
9,926.00	87.66	358.49	5,601.54	9,396.54	643.14 N	6.37 W	739,624.54	907,293.53	1.33	643.17
9,958.00	87.63	359.07	5,602.85	9,397.85	675.10 N	7.05 W	739,656.50	907,292.85	1.81	675.14
9,989.00	87.78	358.75	5,604.09	9,399.09	706.07 N	7.64 W	739,687.47	907,292.26	1.14	706.11
10,020.00	87.35	359.13	5,605.41	9,400.41	737.04 N	8.22 W	739,718.44	907,291.68	1.85	737.09
10,051.00	88.37	359.24	5,606.57	9,401.57	768.02 N	8.66 W	739,749.42	907,291.24	3.31	768.06
10,083.00	88.27	359.91	5,607.51	9,402.51	800.00 N	8.89 W	739,781.40	907,291.01	2.12	800.05
10,114.00	88.61	359.46	5,608.35	9,403.35	830.99 N	9.06 W	739,812.39	907,290.84	1.82	831.04
10,146.00	88.00	0.41	5,609.30	9,404.30	862.97 N	9.10 W	739,844.37	907,290.80	3.53	863.02

Design Report for 2H - ST01

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
10,178.00	87.44	0.78	5,610.57	9,405.57	894.95 N	8.77 W	739,876.35	907,291.13	2.10	894.99
10,209.00	88.31	0.56	5,611.72	9,406.72	925.92 N	8.41 W	739,907.32	907,291.49	2.89	925.96
10,241.00	88.77	0.25	5,612.54	9,407.54	957.91 N	8.18 W	739,939.31	907,291.72	1.73	957.94
10,273.00	88.70	0.40	5,613.24	9,408.24	989.90 N	8.00 W	739,971.30	907,291.90	0.52	989.93
10,304.00	89.20	0.15	5,613.81	9,408.81	1,020.90 N	7.85 W	740,002.30	907,292.05	1.80	1,020.92
10,336.00	89.81	0.34	5,614.09	9,409.09	1,052.90 N	7.71 W	740,034.30	907,292.19	2.00	1,052.91
10,368.00	89.88	359.53	5,614.17	9,409.17	1,084.90 N	7.75 W	740,066.30	907,292.15	2.54	1,084.91
10,399.00	89.94	359.68	5,614.22	9,409.22	1,115.89 N	7.96 W	740,097.29	907,291.94	0.52	1,115.91
10,431.00	89.72	359.75	5,614.32	9,409.32	1,147.89 N	8.12 W	740,129.29	907,291.78	0.72	1,147.91
10,462.00	90.28	0.38	5,614.32	9,409.32	1,178.89 N	8.09 W	740,160.29	907,291.81	2.72	1,178.90
10,494.00	91.11	359.71	5,613.93	9,408.93	1,210.89 N	8.06 W	740,192.29	907,291.84	3.33	1,210.90
10,526.00	91.91	359.59	5,613.09	9,408.09	1,242.88 N	8.26 W	740,224.28	907,291.64	2.53	1,242.89
10,557.00	92.56	359.33	5,611.88	9,406.88	1,273.85 N	8.55 W	740,255.25	907,291.35	2.26	1,273.86
10,589.00	93.05	359.21	5,610.31	9,405.31	1,305.81 N	8.96 W	740,287.21	907,290.94	1.58	1,305.82
10,620.00	93.05	359.37	5,608.66	9,403.66	1,336.77 N	9.34 W	740,318.17	907,290.56	0.52	1,336.78
10,652.00	92.81	358.50	5,607.03	9,402.03	1,368.72 N	9.93 W	740,350.12	907,289.97	2.82	1,368.74
10,683.00	93.21	358.62	5,605.40	9,400.40	1,399.67 N	10.71 W	740,381.07	907,289.19	1.35	1,399.69
10,715.00	92.47	357.94	5,603.81	9,398.81	1,431.61 N	11.67 W	740,413.01	907,288.23	3.14	1,431.65
10,746.00	92.57	357.68	5,602.45	9,397.45	1,462.56 N	12.86 W	740,443.96	907,287.04	0.90	1,462.61
10,778.00	93.42	357.91	5,600.78	9,395.78	1,494.49 N	14.08 W	740,475.89	907,285.82	2.75	1,494.55
10,809.00	94.14	357.86	5,598.73	9,393.73	1,525.40 N	15.23 W	740,506.80	907,284.67	2.33	1,525.48
10,841.00	94.56	357.64	5,596.31	9,391.31	1,557.29 N	16.48 W	740,538.69	907,283.42	1.48	1,557.37
10,872.00	93.97	358.40	5,594.00	9,389.00	1,588.18 N	17.55 W	740,569.58	907,282.35	3.10	1,588.28
10,904.00	92.56	357.98	5,592.18	9,387.18	1,620.11 N	18.56 W	740,601.51	907,281.34	4.60	1,620.22
10,936.00	92.25	357.90	5,590.84	9,385.84	1,652.06 N	19.71 W	740,633.46	907,280.19	1.00	1,652.18
10,968.00	92.93	358.20	5,589.39	9,384.39	1,684.01 N	20.79 W	740,665.41	907,279.11	2.32	1,684.14
10,999.00	90.90	358.16	5,588.35	9,383.35	1,714.98 N	21.78 W	740,696.38	907,278.12	6.55	1,715.12
11,031.00	89.48	358.12	5,588.25	9,383.25	1,746.96 N	22.82 W	740,728.36	907,277.08	4.44	1,747.11
11,063.00	90.19	358.06	5,588.34	9,383.34	1,778.94 N	23.88 W	740,760.34	907,276.02	2.23	1,779.10
11,095.00	88.92	357.06	5,588.59	9,383.59	1,810.91 N	25.24 W	740,792.31	907,274.66	5.05	1,811.08
Last MWD at 11,095' MD										
11,131.00	88.92	357.06	5,589.27	9,384.27	1,846.86 N	27.09 W	740,828.26	907,272.81	0.00	1,847.05
Projection to TD at 11,131' MD										

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,100.00	9,097.57	15.64	6.95	Tie On at 9,100' MD
11,095.00	9,383.59	1,810.91	-25.24	Last MWD at 11,095' MD
11,131.00	9,384.27	1,846.86	-27.09	Projection to TD at 11,131' MD

HALLIBURTON**Design Report for 2H - ST01****Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	L B. 7 PBHL(P2)	359.30	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
100.00	9,100.00	Gyro Survey	CB-GYRO-MS
9,164.00	11,131.00	Sperry MWD Survey	MWD

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
L.B. 7 PBHL(P2)	0.00	0.00	9,387.00	1,846.26	-22.69	740,827.66	907,277.21	33° 1' 50.946 N	103° 8' 21.555 W
- actual wellpath misses by 5.16ft at 11130.23ft MD (9384.25 TVD, 1846.09 N, -27.05 E)									
- Point									
L.B. 7 PBHL (P1)	0.00	0.00	9,325.00	1,880.14	-21.67	740,861.54	907,278.23	33° 1' 51.282 N	103° 8' 21.539 W
- actual wellpath misses by 68.19ft at 11131.00ft MD (9384.27 TVD, 1846.86 N, -27.09 E)									
- Point									

HALLIBURTON**North Reference Sheet for Little Bear "7" Fee - 2H - ST01**

All data is in US Feet unless otherwise stated Directions and Coordinates are relative to Grid North Reference

Vertical Depths are relative to 3,772' GL+ 23'KB @ 3795 00ft (T&B) Northing and Easting are relative to 2H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0 000 W°, Longitude Origin.0° 0' 0 000 E°, Latitude Origin.0° 0' 0 000 N°

False Easting 541,337 50ft, False Northing 0.00ft, Scale Reduction: 1.00006244

Grid Coordinates of Well: 738,981.40 ft N, 907,299.90 ft E

Geographical Coordinates of Well: 33° 01' 32 68" N, 103° 08' 21 54" W

Grid Convergence at Surface is: 0 65°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,131 00ft
the Bottom Hole Displacement is 1,847 06ft in the Direction of 359 16° (Grid)

Magnetic Convergence at surface is: -7.24° (31 December 2007, , BGGM2007)

