

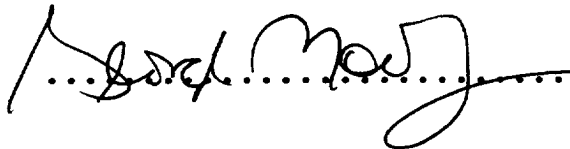
SCIENTIFIC DRILLING INTERNATIONAL

MIDLAND, TEXAS

PHILLIPS PETROLEUM

WELL NAME	: HALE UNIT #8	
Location	: LEA COUNTY, NEW MEXICO	
SHL	: 1120' FNL & 660' FEL	Unit A
BHL	: 1444.60' FNL & 650.40' FEL	Unit H
ACTUAL BHL	:	
Date Surveyed	: 16 AUGUST 1996	35-17s-34e
Job Number	: 32K0796273/32M0896303	
Survey Performed By	: COSSEY/DESPAIN	30-025-33489

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

..... COMPANY REPRESENTATIVE

SCIENTIFIC DRILLING INTERNATIONAL

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WELL NAME : HALE UNIT #8
Location : LEA COUNTY, NEW MEXICO
SHL : 1120' FNL & 660' FEL
BHL : 1444.60' FNL & 650.40' FEL

Page 1 of 2
Date 16 AUGUST 1996
Filename : HALE#8

ACTUAL BHL : No Interpolation
Height Of WELLSITE Datum Above Field Datum 0.00 ft

MD ft	INC deg	DIR deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	D'LEG °/100
0.0	0.00	N 0.00°E	0.00	0.00	0.00	0.00	0.0
100.0	0.29	N13.88°E	100.00	0.25	0.06	-0.25	0.3
200.0	0.43	N19.72°E	200.00	0.84	0.25	-0.84	0.1
300.0	0.47	N 6.19°E	299.99	1.61	0.42	-1.61	0.1
400.0	0.37	N 7.54°E	399.99	2.33	0.51	-2.33	0.1
500.0	0.45	N 1.96°W	499.99	3.05	0.53	-3.05	0.1
600.0	0.32	N13.64°W	599.99	3.71	0.46	-3.71	0.2
700.0	0.33	N10.71°W	699.99	4.26	0.34	-4.26	0.0
800.0	0.28	N 8.72°E	799.98	4.79	0.32	-4.79	0.1
900.0	0.31	N23.00°E	899.98	5.28	0.46	-5.28	0.1
1000.0	0.17	N47.63°E	999.98	5.63	0.68	-5.63	0.2
1100.0	0.24	N48.49°E	1099.98	5.87	0.94	-5.87	0.1
1200.0	0.25	N13.46°E	1199.98	6.22	1.15	-6.22	0.1
1300.0	0.28	N 1.92°E	1299.98	6.67	1.21	-6.67	0.1
1400.0	0.32	N25.78°E	1399.98	7.17	1.34	-7.17	0.1
1500.0	0.53	N32.35°E	1499.97	7.81	1.71	-7.81	0.2
1600.0	0.80	N39.85°E	1599.97	8.74	2.40	-8.74	0.3
1700.0	0.92	N39.71°E	1699.96	9.89	3.36	-9.89	0.1
1800.0	0.73	N22.84°E	1799.95	11.10	4.12	-11.10	0.3
1900.0	0.81	N35.17°E	1899.94	12.26	4.78	-12.26	0.2
2000.0	1.14	N65.65°E	1999.92	13.25	6.09	-13.25	0.6
2100.0	1.50	N64.55°E	2099.90	14.22	8.18	-14.22	0.4
2200.0	1.69	N69.40°E	2199.86	15.30	10.74	-15.30	0.2
2300.0	1.62	N67.53°E	2299.82	16.36	13.43	-16.36	0.1
2400.0	1.70	N71.38°E	2399.77	17.38	16.14	-17.38	0.1
2500.0	2.11	N67.67°E	2499.72	18.55	19.25	-18.55	0.4
2600.0	2.41	N63.64°E	2599.64	20.18	22.84	-20.18	0.3
2700.0	2.24	N62.99°E	2699.56	22.00	26.46	-22.00	0.2
2800.0	2.10	N61.86°E	2799.49	23.76	29.82	-23.76	0.1
2900.0	1.80	N53.80°E	2899.43	25.55	32.70	-25.55	0.4
3031.0	4.16	S 8.87°W	3030.33	22.06	33.63	-22.06	4.3
3094.0	6.09	S 8.47°W	3093.07	16.50	32.78	-16.50	3.1
3157.0	7.88	S 0.16°W	3155.60	8.88	32.28	-8.88	3.3
3220.0	8.98	S 0.61°W	3217.92	-0.36	32.22	0.36	1.7
3283.0	9.33	S 0.30°W	3280.12	-10.38	32.14	10.38	0.6
3346.0	9.14	S 1.01°W	3342.30	-20.49	32.02	20.49	0.4
3409.0	8.95	S 0.79°W	3404.52	-30.40	31.87	30.40	0.3
3471.0	8.80	S 1.56°W	3465.78	-39.96	31.67	39.96	0.3
3534.0	8.38	S 2.42°W	3528.07	-49.36	31.35	49.36	0.7
3597.0	7.93	S 2.98°W	3590.43	-58.29	30.93	58.29	0.7

SCIENTIFIC DRILLING INTERNATIONAL

Client	: PHILLIPS PETROLEUM	Page	2 of 2
WELL NAME	: HALE UNIT #8	Date	16 AUGUST 1996
Location	: LEA COUNTY, NEW MEXICO	Filename	: HALE#8
SHL	: 1120' FNL & 660' FEL		
BHL	: 1444.60' FNL & 650.40' FEL		
ACTUAL BHL	:	No Interpolation	
Height Of WELLSITE Datum Above Field Datum		0.00 ft	

MD ft	INC deg	DIR deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	D'LEG °/100
3660.0	7.57	S 2.61°W	3652.86	-66.77	30.51	66.77	0.6
3723.0	7.31	S 2.31°W	3715.33	-74.92	30.16	74.92	0.4
3786.0	7.59	S 5.19°W	3777.80	-83.07	29.62	83.07	0.7
3849.0	7.99	S 5.47°W	3840.22	-91.57	28.83	91.57	0.6
3911.0	8.40	S 5.38°W	3901.58	-100.37	27.99	100.37	0.7
3974.0	8.83	S 5.95°W	3963.87	-109.76	27.06	109.76	0.7
4037.0	9.40	S 7.67°W	4026.07	-119.67	25.87	119.67	1.0
4100.0	10.00	S 8.06°W	4088.17	-130.19	24.42	130.19	1.0
4163.0	10.69	S 6.53°W	4150.15	-141.41	22.99	141.41	1.2
4226.0	11.43	S 6.06°W	4211.98	-153.42	21.66	153.42	1.2
4289.0	12.23	S 5.34°W	4273.64	-166.27	20.38	166.27	1.3
4351.0	13.02	S 4.57°W	4334.14	-179.77	19.22	179.77	1.3
4414.0	13.42	S 3.95°W	4395.47	-194.14	18.15	194.14	0.7
4477.0	13.52	S 3.48°W	4456.74	-208.78	17.20	208.78	0.2
4540.0	13.54	S 4.33°W	4517.99	-223.49	16.19	223.49	0.3
4603.0	13.52	S 4.45°W	4579.24	-238.18	15.06	238.18	0.1
4666.0	13.56	S 2.96°W	4640.49	-252.90	14.11	252.90	0.6
4729.0	13.58	S 3.20°W	4701.73	-267.66	13.32	267.66	0.1
4791.0	13.64	S 4.22°W	4761.99	-282.22	12.37	282.22	0.4
4854.0	13.23	S 3.61°W	4823.27	-296.82	11.37	296.82	0.7
4917.0	12.75	S 3.76°W	4884.65	-310.96	10.46	310.96	0.8
4980.0	12.36	S 3.47°W	4946.15	-324.62	9.60	324.62	0.6

Origin of Bottom Hole Closure WELLSITE CENTRE
 Bottom Hole Closure 325 ft S 1.69°E

KSRG 0'-2900' BY COSSEYN
 MS 3031'-4980' BY DESPAIN



SCIENTIFIC DRILLING INTERNATIONAL
FOR
PHILLIPS PETROLEUM
STATE "35" 80
IN
LEA COUNTY, NEW MEXICO

