

PHILLIPS
JAMES E WELLS NO.9
slot #1
DELAWARE SAND
EDDY COUNTY, NEW MEXICO

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : JAMES E #9 OHST

Our ref : svy388
License :

Date printed : 6-Dec-94
Date created : 5-Dec-94
Last revised : 6-Dec-94

Field is centred on 0.000,0.000,0.000000,N
structure is centred on 0.000,0.000,0.000000,N

Slot location is n0 0 0.000,w4 29 18.843
Slot Grid coordinates are N 0.000, E 0.000
Slot local coordinates are 0.00 N 0.00 E
Reference North is Grid North

SURVEY LISTING Page 1

Your ref : 6-Dec-94

PHILLIPS
JAMES E WELL NO.9, slot #1
DELAWARE SAND, EDDY COUNTY, NEW MEXICO

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg S Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00
100.00	0.12	316.11	100.00	0.08 N	0.07 W	0.05
200.00	0.11	321.50	200.00	0.23 N	0.20 W	0.15
300.00	0.12	10.07	300.00	0.40 N	0.25 W	0.14
400.00	0.25	9.55	400.00	0.72 N	0.19 W	0.02
500.00	0.27	349.45	500.00	1.17 N	0.20 W	0.09
600.00	0.24	352.06	600.00	1.61 N	0.27 W	0.03
700.00	0.10	173.55	700.00	1.73 N	0.29 W	0.34
800.00	0.22	160.69	800.00	1.46 N	0.22 W	0.12
900.00	0.29	133.13	900.00	1.11 N	0.03 E	0.14
1000.00	0.29	122.07	999.99	0.80 N	0.43 E	0.06
1100.00	0.36	115.79	1099.99	0.53 N	0.93 E	0.08
1200.00	0.36	112.83	1199.99	0.27 N	1.50 E	0.02
1300.00	0.45	105.66	1299.99	0.04 N	2.17 E	0.10
1400.00	0.94	126.11	1399.98	0.55 S	3.21 E	0.54
1500.00	1.74	123.24	1499.95	1.86 S	5.14 E	0.80
1600.00	2.25	123.78	1599.89	3.79 S	8.04 E	0.51
1700.00	2.17	131.35	1699.82	6.13 S	11.10 E	0.30
1800.00	2.31	129.47	1799.74	8.66 S	14.07 E	0.16
1900.00	2.05	129.82	1899.67	11.09 S	17.00 E	0.26
2000.00	1.58	125.02	1999.62	13.02 S	19.50 E	0.49
2100.00	1.34	129.89	2099.58	14.56 S	21.53 E	0.27
2200.00	1.33	125.21	2199.56	15.98 S	23.38 E	0.11
2300.00	1.05	121.76	2299.54	17.14 S	25.10 E	0.29
2400.00	0.91	123.67	2399.52	18.06 S	26.54 E	0.14

All data is in feet unless otherwise stated
Coordinates from structure and TVD from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

PHILLIPS
JAMES E WELL NO.9, slot #1
DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING Page 2
Your ref : JAMES E #9 OHST
Last revised : 6-Dec-94

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
2500.00	1.04	155.15	2499.51	19.32 S	27.58 E	0.54
2600.00	1.10	163.78	2599.49	21.07 S	28.24 E	0.17
2700.00	0.65	166.40	2699.48	22.54 S	28.64 E	0.45
2800.00	1.26	109.97	2799.47	23.47 S	29.80 E	1.05
2900.00	2.90	105.07	2899.40	24.50 S	33.28 E	1.65
3000.00	4.22	104.92	2999.20	26.10 S	39.28 E	1.32
3100.00	3.61	104.51	3098.97	27.84 S	45.88 E	0.61
3200.00	3.53	98.87	3198.77	29.10 S	51.97 E	0.36
3300.00	3.26	97.71	3298.60	29.96 S	57.83 E	0.28
3400.00	2.70	97.55	3398.46	30.65 S	62.98 E	0.56
3500.00	2.73	97.89	3498.35	31.29 S	67.68 E	0.03
3600.00	2.04	88.20	3598.26	31.56 S	71.81 E	0.80
3700.00	1.86	89.25	3698.21	31.48 S	75.22 E	0.18
3800.00	1.68	89.96	3798.16	31.46 S	78.30 E	0.18
3900.00	2.00	89.62	3898.11	31.45 S	81.52 E	0.32
4000.00	1.87	93.22	3998.05	31.53 S	84.89 E	0.18
4100.00	1.89	93.63	4098.00	31.72 S	88.16 E	0.02
4200.00	1.99	89.40	4197.94	31.81 S	91.55 E	0.17
4300.00	2.11	89.57	4297.87	31.78 S	95.12 E	0.12
4400.00	2.14	97.90	4397.81	32.02 S	98.81 E	0.31
4500.00	2.00	99.77	4497.74	32.57 S	102.38 E	0.16
4600.00	1.97	95.52	4597.68	33.03 S	105.81 E	0.15
4700.00	2.02	98.87	4697.62	33.47 S	109.26 E	0.13
4800.00	2.06	101.84	4797.56	34.11 S	112.76 E	0.11
4900.00	1.81	105.70	4897.50	34.91 S	116.04 E	0.28
						-91.86
						-95.09
						-98.34
						-101.59
						-104.59

All data is in feet unless otherwise stated

Coordinates from structure and TVD from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.

Declination is 0.00 degrees, Convergence is 0.00 degrees.

Calculation uses the minimum curvature method.

Presented by Baker Hughes INTEQ

PHILLIPS

JAMES E WELL NO.9, slot #1

DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING

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Your ref :

Last revised : 6-Dec-94

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect	TIE ON TO GYRO SURVEY
5000.00	1.73	100.42	4997.45	35.61 S	119.05 E	0.18	-107.35
5100.00	1.79	101.44	5097.40	36.19 S	122.06 E	0.07	-110.14
5123.00	1.60	112.50	5120.40	36.38 S	122.71 E	1.64	-110.73
5154.00	0.70	163.00	5151.39	36.73 S	123.17 E	4.11	-111.09
5186.00	2.50	238.10	5183.38	37.29 S	122.63 E	7.55	-110.44
5217.00	4.90	251.90	5214.31	38.06 S	120.80 E	8.20	-108.48
5249.00	7.50	258.30	5246.12	38.90 S	117.46 E	8.39	-105.03
5281.00	7.80	245.60	5277.84	40.22 S	113.43 E	5.35	-100.80
5313.00	10.10	244.30	5309.45	42.34 S	108.93 E	7.21	-95.93
5344.00	14.00	249.90	5339.76	44.81 S	102.95 E	13.12	-89.54
5375.00	18.50	254.10	5369.51	47.44 S	94.70 E	14.99	-80.90
5407.00	22.90	255.70	5399.44	50.38 S	83.78 E	13.86	-69.59
5438.00	26.40	255.20	5427.61	53.63 S	71.26 E	11.31	-56.67
5469.00	29.90	256.50	5454.94	57.19 S	57.08 E	11.46	-42.05
5493.00	32.76	256.82	5475.44	60.07 S	44.94 E	11.95	-29.57
5500.00	33.60	256.90	5481.30	60.94 S	41.21 E	11.95	-25.74
5563.00	41.90	258.30	5531.07	69.17 S	3.57 E	13.24	12.79
5594.00	46.30	258.60	5553.32	73.49 S	17.56 W	14.21	34.34
5626.00	50.20	258.80	5574.63	78.16 S	40.97 W	12.20	58.19
5657.00	54.00	258.80	5593.67	82.92 S	64.96 W	12.26	82.63
5690.00	57.70	259.60	5612.19	88.03 S	91.78 W	11.39	109.90
5724.00	60.50	259.60	5629.65	93.29 S	120.48 W	8.24	139.02
5752.00	60.60	259.50	5643.42	97.72 S	144.45 W	0.47	163.37
5783.00	61.70	259.40	5658.37	102.69 S	171.15 W	3.56	190.48
5815.00	63.10	259.40	5673.20	107.90 S	199.02 W	4.38	218.80

TOH F/WASHOUT

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Coordinates from structure and TVD from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.

Declination is 0.00 degrees, Convergence is 0.00 degrees.

Calculation uses the minimum curvature method.

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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
5846.00	65.10	258.60	5686.74	113.22 S	226.39 W	6.86
5878.00	66.40	258.20	5699.88	119.09 S	254.97 W	4.22
5910.00	66.90	257.80	5712.56	125.20 S	283.71 W	1.94
5941.00	67.40	257.30	5724.60	131.36 S	311.60 W	2.19
5974.00	68.70	257.20	5736.94	138.12 S	341.46 W	3.95
6006.00	70.90	256.50	5747.99	144.95 S	370.70 W	7.17
6038.00	73.40	256.00	5757.79	152.19 S	400.28 W	7.95
6069.00	76.50	255.30	5765.84	159.61 S	429.28 W	10.23
6100.00	79.50	254.90	5772.29	167.40 S	458.58 W	9.76
6155.00	82.02	255.19	5781.12	181.41 S	511.02 W	4.61
6196.00	83.90	255.40	5786.14	191.74 S	550.38 W	4.61
6226.00	86.80	254.10	5788.57	199.61 S	579.22 W	10.59
6256.00	89.20	252.20	5789.62	208.30 S	607.92 W	10.20
6287.00	90.20	250.70	5789.78	218.16 S	637.30 W	5.82
6316.00	90.60	250.60	5789.58	227.77 S	664.66 W	1.42
6347.00	91.00	250.40	5789.15	238.11 S	693.88 W	1.44
6379.00	91.40	250.60	5788.48	248.79 S	724.04 W	1.40
6410.00	89.90	249.70	5788.13	259.32 S	753.20 W	5.64
6441.00	88.20	248.90	5788.64	270.28 S	782.19 W	6.06
6472.00	88.10	249.00	5789.64	281.40 S	811.11 W	0.46
6502.00	88.30	249.10	5790.58	292.12 S	839.11 W	0.74
6533.00	89.50	249.40	5791.18	303.11 S	868.09 W	3.99
6565.00	90.30	249.50	5791.24	314.34 S	898.06 W	2.52
6596.00	90.50	249.70	5791.02	325.14 S	927.11 W	0.91
6628.00	89.40	250.00	5791.05	336.17 S	957.15 W	3.56

SET 7th CSG.

All data is in feet unless otherwise stated
Coordinates from structure and TVD from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

PHILLIPS
JAMES E WELL NO.9, slot #1
DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING
Your ref :
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
6658.00	89.20	250.00	5791.41	346.43 S 985.34 W	0.67	1039.15
6689.00	89.20	249.80	5791.84	357.08 S 1014.45 W	0.64	1069.95
6720.00	89.30	249.80	5792.25	367.78 S 1043.54 W	0.32	1100.74
6750.00	90.00	249.80	5792.44	378.14 S 1071.70 W	2.33	1130.54
6780.00	90.40	249.70	5792.33	388.52 S 1099.84 W	1.37	1160.34
6811.00	90.70	249.40	5792.03	399.36 S 1128.88 W	1.37	1191.12
6840.00	90.80	249.30	5791.65	409.58 S 1156.02 W	0.49	1219.89
6871.00	89.00	249.80	5791.71	420.41 S 1185.06 W	6.03	1250.67
6902.00	88.40	250.50	5792.41	430.94 S 1214.22 W	2.97	1281.48
6932.00	88.70	250.50	5793.17	440.95 S 1242.48 W	1.00	1311.31
6999.00	89.37	250.50	5794.30	463.31 S 1305.63 W	1.00	1377.94

Projected to TD

All data is in feet unless otherwise stated.
Coordinates from structure and TVD from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

PHILLIPS
JAMES E WELL NO.9, slot #1
DELANARE SAND, EDDY COUNTY, NEW MEXICO

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Comments in wellpath

MD	TVD	Rectangular Coords.		Comment
5100.00	5097.40	36.19 S	122.06 E	TIE ON TO GYRO SURVEY
5493.00	5475.44	60.07 S	44.94 E	TOH F/WASHOUT
6155.00	5781.12	181.41 S	511.02 W	SET 7" CSG.
Casing positions in string 'A'				
Top MD	Top TVD	Rectangular Coords.		Bot MD Bot TVD Rectangular Coords. Casing
0.00	0.00	0.00N	0.00E	6155.00 5781.12 181.41S 511.02W INTERMEDIATE

All data is in feet unless otherwise stated
Coordinates from structure and TVD from wellhead.
Bottom hole distance is 1385.40 on azimuth 250.46 degrees from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

PHILLIPS
JAMES E WELL NO.9, slot #1
DELAWARE SAND, EDDY COUNTY, NEW MEXICOSURVEY LISTING Page 1
Your ref : JAMES E #9 OHST
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00
100.00	0.12	316.11	100.00	0.08 N	0.07 W	0.05
200.00	0.11	321.50	200.00	0.23 N	0.20 W	0.15
300.00	0.12	10.07	300.00	0.40 N	0.25 W	0.14
400.00	0.25	9.55	400.00	0.72 N	0.19 W	0.02
500.00	0.27	349.45	500.00	1.17 N	0.20 W	-0.08
600.00	0.24	352.06	600.00	1.61 N	0.27 W	-0.11
700.00	0.10	173.55	700.00	1.73 N	0.29 W	-0.12
800.00	0.22	160.69	800.00	1.46 N	0.22 W	-0.13
900.00	0.29	133.13	900.00	1.11 N	0.03 E	-0.29
1000.00	0.29	122.07	999.99	0.80 N	0.43 E	-0.61
1100.00	0.36	115.79	1099.99	0.53 N	0.93 E	-1.03
1200.00	0.36	112.83	1199.99	0.27 N	1.50 E	-1.52
1300.00	0.45	105.66	1299.99	0.04 N	2.17 E	-2.12
1400.00	0.94	126.11	1399.98	0.55 S	3.21 E	-2.99
1500.00	1.74	123.24	1499.95	1.86 S	5.14 E	-4.56
1600.00	2.25	123.78	1599.89	3.79 S	8.04 E	-6.93
1700.00	2.17	131.35	1699.82	6.13 S	11.10 E	-9.34
1800.00	2.31	129.47	1799.74	8.66 S	14.07 E	-11.64
1900.00	2.05	129.82	1899.67	11.09 S	17.00 E	-13.92
2000.00	1.58	125.02	1999.62	13.02 S	19.50 E	-15.90
2100.00	1.34	129.89	2099.58	14.56 S	21.53 E	-17.50
2200.00	1.33	125.21	2199.56	15.98 S	23.38 E	-18.97
2300.00	1.05	121.76	2299.54	17.14 S	25.10 E	-20.37
2400.00	0.91	123.67	2399.52	18.06 S	26.54 E	-21.56

All data is in feet unless otherwise stated
Coordinates from structure and TVD from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

SURVEY LISTING Page 2

PHILLIPS
JAMES E WELL NO.9, slot #1
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
2500.00	1.04	155.15	2499.51	19.32 S	27.58 E	0.54 -22.27
2600.00	1.10	163.78	2599.49	21.07 S	28.24 E	0.17 -22.49
2700.00	0.65	166.40	2699.48	22.54 S	28.64 E	0.45 -22.54
2800.00	1.26	109.97	2799.47	23.47 S	29.80 E	1.05 -23.46
2900.00	2.90	105.07	2899.40	24.50 S	33.28 E	1.65 -26.59
3000.00	4.22	104.92	2999.20	26.10 S	39.28 E	1.32 -32.04
3100.00	3.61	104.51	3098.97	27.84 S	45.88 E	0.61 -38.05
3200.00	3.53	98.87	3198.77	29.10 S	51.97 E	0.36 -43.68
3300.00	3.26	97.71	3298.60	29.96 S	57.83 E	0.28 -49.17
3400.00	2.70	97.55	3398.46	30.65 S	62.98 E	0.56 -54.02
3500.00	2.73	97.89	3498.35	31.29 S	67.68 E	0.03 -58.43
3600.00	2.04	88.20	3598.26	31.56 S	71.81 E	0.80 -62.39
3700.00	1.86	89.25	3698.21	31.48 S	75.22 E	0.18 -65.71
3800.00	1.68	89.96	3798.16	31.46 S	78.30 E	0.18 -68.72
3900.00	2.00	89.62	3898.11	31.45 S	81.52 E	0.32 -71.84
4000.00	1.87	93.22	3998.05	31.53 S	84.89 E	0.18 -75.10
4100.00	1.89	93.63	4098.00	31.72 S	88.16 E	0.02 -78.24
4200.00	1.99	89.40	4197.94	31.81 S	91.55 E	0.17 -81.51
4300.00	2.11	89.57	4297.87	31.78 S	95.12 E	0.12 -84.99
4400.00	2.14	97.90	4397.81	32.02 S	98.81 E	0.31 -88.52
4500.00	2.00	99.77	4497.74	32.57 S	102.38 E	0.16 -91.86
4600.00	1.97	95.52	4597.68	33.03 S	105.81 E	0.15 -95.09
4700.00	2.02	98.87	4697.62	33.47 S	109.26 E	0.13 -98.34
4800.00	2.06	101.84	4797.56	34.11 S	112.76 E	0.11 -101.59
4900.00	1.81	105.70	4897.50	34.91 S	116.04 E	0.28 -104.59

All data is in feet unless otherwise stated
Coordinates from structure and TVD from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
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DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING Page 3
Your ref : JAMES E #9 OHST
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
5000.00	1.73	100.42	4997.45	35.61 S 119.05 E	0.18	-107.35
5100.00	1.79	101.44	5097.40	36.19 S 122.06 E	0.07	-110.14
5123.00	1.60	112.50	5120.40	36.38 S 122.71 E	1.64	-110.73
5154.00	0.70	163.00	5151.39	36.73 S 123.17 E	4.11	-111.09
5186.00	2.50	238.10	5183.38	37.29 S 122.63 E	7.55	-110.44
5217.00	4.90	251.90	5214.31	38.06 S 120.80 E	8.20	-108.48
5249.00	7.50	258.30	5246.12	38.90 S 117.46 E	8.39	-105.03
5281.00	7.80	245.60	5277.84	40.22 S 113.43 E	5.35	-100.80
5313.00	10.10	244.30	5309.45	42.34 S 108.93 E	7.21	-95.93
5344.00	14.00	249.90	5339.76	44.81 S 102.95 E	13.12	-89.54
5375.00	18.50	254.10	5369.51	47.44 S 94.70 E	14.99	-80.90
5407.00	22.90	255.70	5399.44	50.38 S 83.78 E	13.86	-69.59
5438.00	26.40	255.20	5427.61	53.63 S 71.26 E	11.31	-56.67
5469.00	29.90	256.50	5454.94	57.19 S 57.08 E	11.46	-42.05
5500.00	33.60	256.90	5481.30	60.94 S 41.21 E	11.95	-25.74
5563.00	41.90	258.30	5531.07	69.17 S 3.57 E	13.24	12.79
5594.00	46.30	258.60	5553.32	73.49 S 17.56 W	14.21	34.34
5626.00	50.20	258.80	5574.63	78.16 S 40.97 W	12.20	58.19
5657.00	54.00	258.80	5593.67	82.92 S 64.96 W	12.26	82.63
5690.00	57.70	259.60	5612.19	88.03 S 91.78 W	11.39	109.90
5724.00	60.50	259.60	5629.65	93.29 S 120.48 W	8.24	139.02
5752.00	60.60	259.50	5643.42	97.72 S 144.45 W	0.47	163.37
5783.00	61.70	259.40	5658.37	102.69 S 171.15 W	3.56	190.48
5815.00	63.10	259.40	5673.20	107.90 S 199.02 W	4.38	218.80
5846.00	65.10	258.60	5686.74	113.22 S 226.39 W	6.86	246.66

All data is in feet unless otherwise stated

Coordinates from structure and TVD from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.

Declination is 0.00 degrees, Convergence is 0.00 degrees.

Calculation uses the minimum curvature method.

Presented by Baker Hughes INTEQ

PHILLIPS
JAMES E WELL NO.9, slot #1
DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING Page 5

Your ref : JAMES E #9 OHST

Last revised : 6-Dec-94

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100Ft	Vert Sect
6658.00	88.30	246.70	5798.51	351.92 S 982.94 W	3.35	1038.11
6689.00	89.20	246.30	5799.19	364.28 S 1011.36 W	3.18	1068.64
6720.00	89.60	246.80	5799.51	376.62 S 1039.80 W	2.06	1099.18
6751.00	89.80	246.20	5799.68	388.98 S 1068.22 W	2.04	1129.71
6781.00	90.00	246.80	5799.73	400.94 S 1095.74 W	2.11	1159.27
6810.00	90.30	247.00	5799.65	412.32 S 1122.41 W	1.24	1187.87
6841.00	89.70	247.80	5799.65	424.23 S 1151.03 W	3.22	1218.48
6871.00	88.70	249.00	5800.07	435.27 S 1178.92 W	5.21	1248.19
6901.00	88.90	249.60	5800.70	445.87 S 1206.98 W	2.11	1277.95
6932.00	90.20	250.10	5800.94	456.55 S 1236.08 W	4.49	1308.75
6962.00	90.80	250.60	5800.68	466.64 S 1264.33 W	2.60	1338.58
6990.00	90.80	250.40	5800.29	475.99 S 1290.72 W	0.71	1366.43
7021.00	91.30	250.50	5799.72	486.36 S 1319.93 W	1.64	1397.25
7052.00	90.70	252.30	5799.18	496.24 S 1349.30 W	6.12	1428.13
7082.00	89.40	253.20	5799.16	505.14 S 1377.95 W	5.27	1458.07
7114.00	88.90	253.50	5799.63	514.31 S 1408.61 W	1.82	1490.02
7146.00	88.50	254.70	5800.36	523.07 S 1439.37 W	3.95	1521.98
7177.00	87.90	256.30	5801.33	530.83 S 1469.37 W	5.51	1552.96
7209.00	87.90	257.60	5802.50	538.05 S 1500.52 W	4.06	1584.94
7240.00	88.10	258.50	5803.58	544.46 S 1530.83 W	2.97	1615.91
7271.00	89.00	259.10	5804.37	550.48 S 1561.23 W	3.49	1646.87
7301.00	91.20	259.70	5804.32	556.00 S 1590.72 W	7.60	1676.83
7344.00	91.97	259.70	5803.13	563.69 S 1633.01 W	1.79	1719.74

Projection to TD

All data is in feet unless otherwise stated

Coordinates from structure and TVD from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.

Declination is 0.00 degrees, Convergence is 0.00 degrees.

Calculation uses the minimum curvature method.

Presented by Baker Hughes INTEQ

PHILLIPS
JAMES E WELL NO. 9, slot #1
DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING Page 4
Your ref : JAMES E #9 OHST
Last revised : 6-Dec-94

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
5878.00	66.40	258.20	5699.88	119.09 S 254.97 W	4.22	275.82
5910.00	66.90	257.80	5712.56	125.20 S 283.71 W	1.94	305.18
5941.00	67.40	257.30	5724.60	131.36 S 311.60 W	2.19	333.75
5974.00	68.70	257.20	5736.94	138.12 S 341.46 W	3.95	364.35
6006.00	70.90	256.50	5747.99	144.95 S 370.70 W	7.17	394.38
6038.00	73.40	256.00	5757.79	152.19 S 400.28 W	7.95	424.84
6069.00	76.50	255.30	5765.84	159.61 S 429.28 W	10.23	454.77
6100.00	79.50	254.90	5772.29	167.40 S 458.58 W	9.76	485.08
6196.00	83.90	255.40	5786.14	191.74 S 550.38 W	4.61	530.02
6226.00	86.80	254.10	5788.57	199.61 S 579.22 W	10.59	609.91
6256.00	89.20	252.20	5789.62	208.30 S 607.92 W	10.20	639.84
6267.09	90.20	250.70	5789.68	211.82 S 618.43 W	16.25	650.89
6287.00	90.20	250.70	5789.78	218.16 S 637.30 W	0.00	670.72
6316.00	90.60	250.60	5789.58	227.77 S 664.66 W	1.42	699.58
6347.00	91.00	250.40	5789.15	238.11 S 693.88 W	1.44	730.41
6379.00	91.40	250.60	5788.48	248.79 S 724.04 W	1.40	762.23
6410.00	89.90	249.70	5788.13	259.32 S 753.20 W	5.64	793.04
6441.00	88.20	248.90	5788.64	270.28 S 782.19 W	6.06	823.80
6472.00	88.10	249.00	5789.64	281.40 S 811.11 W	0.46	854.52
6473.15	88.12	249.01	5789.68	281.82 S 812.18 W	1.67	855.66
6502.00	88.50	249.30	5790.53	292.08 S 839.13 W	1.67	884.27
6533.00	87.20	248.70	5791.69	303.18 S 868.05 W	4.62	914.98
6565.00	86.00	247.20	5793.59	315.17 S 897.66 W	6.00	946.58
6597.00	86.50	246.50	5795.68	327.72 S 927.02 W	2.68	978.07
6628.00	87.30	246.60	5797.36	340.04 S 955.41 W	2.60	1008.56

All data is in feet unless otherwise stated
Coordinates from structure and TVD from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.

Presented by Baker Hughes INTEQ

PHILLIPS
 JAMES E WELL NO.9, slot #1
 DELAWARE SAND, EDDY COUNTY, NEW MEXICO

SURVEY LISTING Page 6
 Your ref : JAMES E #9 OHST
 Last revised : 6-Dec-94

Casing positions in string 'A'

Top MD	Top TVD	Rectangular Coords.	Bot MD	Bot TVD	Rectangular Coords.	Casing
0.00	0.00	0.00N 0.00E	6155.00	5781.12	181.41S 511.02W	INTERMEDIATE

All data is in feet unless otherwise stated
 Coordinates from structure and TVD from wellhead.
 Bottom hole distance is 1727.56 on azimuth 250.96 degrees from wellhead.
 Vertical section is from N 0.00 E 0.00 on azimuth 256.41 degrees.
 Declination is 0.00 degrees, Convergence is 0.00 degrees.
 Calculation uses the minimum curvature method.
 Presented by Baker Hughes INTEQ