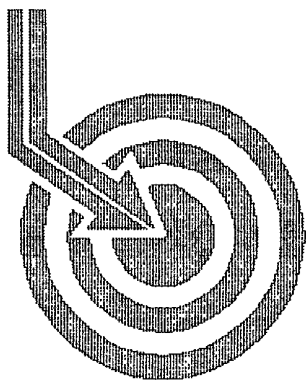




Scientific Drilling

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FEB 23 2010
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APACHE CORPORATION

Field: Penrose Skelly
Site: Lea County, NM
Well: State Land 15 #19
Survey: 01/19/10-01/22/10

SUR: M-16-21s-37e, 895/S & 540/W
BHL: M-16-21s-37e, 944/S & 387/W
API # 30-025-39606

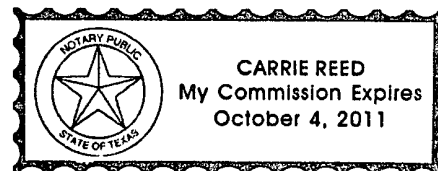
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notorized this date 16 of February, 2010.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.

Survey Report

Company: APACHE CORPORATION	Date: 1/28/2010	Time: 21:58:43	Page: 1
Field: Penrose Skelly	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: State Land 15 #19	Section (VS) Reference:	Well (0.00N,0.00E,311.62Azi)	
Wellpath: VH - Job #32K0110043	Survey Calculation Method:	Minimum Curvature Db: Sybase	

Survey: 01/20/10	Start Date:	1/20/2010
Company: Scientific Drilling Internatio	Engineer:	Madrid w/Gray
Tool: Keeper,Keeper Gyro	Tied-to:	From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	359.38	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.12	158.05	100.0	-0.1	-0.1	0.0	0.12	0.1	158.05
200.0	0.15	309.68	200.0	-0.1	-0.1	0.0	0.26	0.1	191.47
300.0	0.28	327.06	300.0	0.3	0.2	-0.3	0.14	0.3	304.80
400.0	0.36	327.53	400.0	0.8	0.6	-0.6	0.08	0.9	319.29
500.0	0.40	326.31	500.0	1.5	1.2	-0.9	0.04	1.5	322.61
600.0	0.41	343.83	600.0	2.1	1.8	-1.2	0.12	2.2	326.57
700.0	0.34	342.11	700.0	2.7	2.5	-1.4	0.07	2.8	330.32
800.0	0.30	337.67	800.0	3.2	3.0	-1.6	0.05	3.4	331.91
900.0	0.27	341.57	900.0	3.6	3.5	-1.8	0.04	3.9	332.89
1000.0	0.23	44.79	1000.0	3.8	3.8	-1.7	0.26	4.2	335.99
1100.0	0.32	358.84	1100.0	4.0	4.2	-1.6	0.23	4.5	339.74
1200.0	0.42	26.30	1200.0	4.3	4.8	-1.4	0.20	5.0	343.80
1220.0	0.53	22.32	1220.0	4.3	5.0	-1.3	0.57	5.2	344.98



Scientific
Drilling

Scientific Drilling International, Inc.

Survey Report

Company: APACHE CORPORATION
Field: Penrose Skelly
Site: Lea County, NM
Well: State Land 15 #19
Wellpath: DH - Job #32D011044

Date: 1/31/2010 Time: 21:20:35 Page: 1
Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,300.06Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 01/19/10-01/22/10
MWD 1342'-4362'

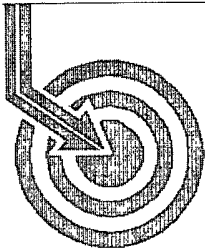
Start Date: 1/19/2010

Company: Scientific Drilling Internatio
Tool: MWD,MWD

Engineer: Smith/Lambert/Glover
Tied-to: From: Definitive Path

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1220.0	0.53	22.32	1220.0	3.7	5.0	-1.3	0.00	5.2	344.98
1342.0	0.61	23.99	1342.0	3.8	6.1	-0.9	0.07	6.2	351.97
1437.0	0.68	33.06	1437.0	3.8	7.1	-0.4	0.13	7.1	357.16
1533.0	0.95	24.73	1533.0	3.9	8.3	0.3	0.31	8.3	2.04
1628.0	0.97	30.49	1627.9	3.9	9.7	1.0	0.10	9.7	6.09
1723.0	1.05	44.87	1722.9	3.7	11.0	2.1	0.28	11.2	10.60
1819.0	1.89	319.47	1818.9	5.0	12.8	1.6	2.17	12.9	7.33
1915.0	1.65	322.98	1914.9	7.8	15.1	-0.2	0.27	15.1	359.18
2010.0	3.07	293.94	2009.8	11.5	17.2	-3.4	1.91	17.6	348.95
2105.0	4.78	276.74	2104.6	17.7	18.7	-9.6	2.17	21.1	332.80
2201.0	6.65	275.26	2200.1	26.4	19.7	-19.1	1.95	27.5	315.85
2298.0	6.37	273.41	2296.5	36.3	20.5	-30.1	0.36	36.4	304.31
2391.0	8.17	276.87	2388.7	47.0	21.6	-41.8	1.99	47.1	297.36
2486.0	7.99	277.72	2482.8	59.3	23.3	-55.1	0.23	59.8	292.97
2582.0	7.11	277.62	2577.9	71.0	25.0	-67.6	0.92	72.0	290.32
2677.0	7.77	282.09	2672.1	82.5	27.1	-79.7	0.92	84.2	288.81
2773.0	8.44	276.19	2767.2	95.2	29.3	-93.0	1.11	97.5	287.46
2868.0	9.32	276.35	2861.0	108.6	30.9	-107.6	0.93	111.9	286.01
2963.0	8.26	275.73	2954.9	121.8	32.4	-122.0	1.12	126.2	284.87
3058.0	6.31	289.49	3049.1	133.2	34.8	-133.7	2.74	138.2	284.59
3153.0	5.71	288.73	3143.6	143.0	38.1	-143.1	0.64	148.1	284.90
3248.0	3.64	283.20	3238.3	150.5	40.3	-150.5	2.23	155.8	284.98
3343.0	1.67	298.50	3333.2	154.7	41.6	-154.7	2.19	160.2	285.06
3439.0	0.47	346.81	3429.2	156.4	42.7	-156.0	1.46	161.7	285.30
3534.0	0.59	350.27	3524.2	157.0	43.5	-156.2	0.13	162.1	285.58
3629.0	0.22	319.60	3619.2	157.5	44.2	-156.4	0.44	162.5	285.77
3725.0	0.35	29.28	3715.2	157.7	44.6	-156.4	0.36	162.6	285.91
3820.0	0.40	349.92	3810.2	157.9	45.1	-156.3	0.27	162.7	286.11
3915.0	0.33	32.15	3905.2	158.1	45.7	-156.2	0.29	162.7	286.31
4010.0	0.40	61.86	4000.2	157.9	46.1	-155.8	0.21	162.4	286.48
4105.0	0.59	57.32	4095.2	157.5	46.5	-155.1	0.20	161.9	286.70
4200.0	0.57	52.16	4190.2	157.1	47.1	-154.3	0.06	161.3	286.96
4295.0	0.53	39.95	4285.2	156.8	47.7	-153.6	0.13	160.8	287.25
4362.0	0.99	18.34	4352.2	156.9	48.5	-153.2	0.80	160.7	287.55



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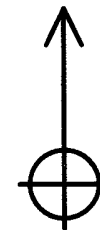
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Field: Penrose Skelly
Site: Lea County, NM
Well: State Land 15 #19
Survey: 01/19/10-01/22/10

G/T/M



Azimuths to Grid North
True North 0.00°
Magnetic North 0.00°
Magnetic Field
Dip Angle 0.00°
Date: 1/31/2010
Model igr2000

