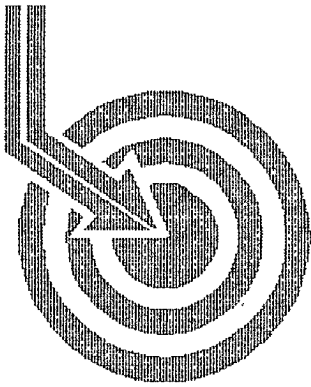




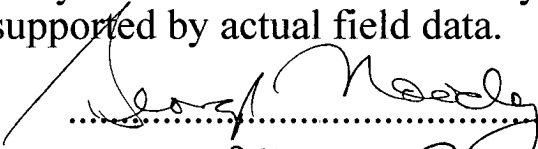
Scientific Drilling

30-015-33413

MACK ENERGY

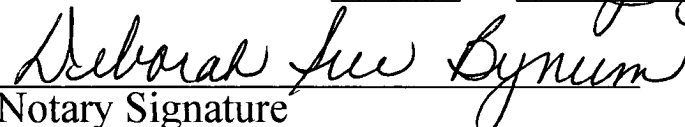
Field: Southern Cross
Site: Eddy County, NM
Well: Southern Cross 15 State #2
Wellpath: DH - Job #32D0605441
Survey: 6/21/05-06/26/05

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

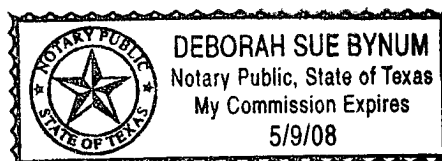

.....Company Representative

Notorized this date 18th of July, 2005.

SCANNED


Notary Signature

County of Midland
State of Texas



Accepted for record
NMOC



Scientific Drilling International

Survey Report

Company: MACK ENERGY Date: 7/17/2005 Time: 18:18:58 Page: 1
Field: Southern Cross Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0.0
Well: Southern Cross 15 State #2 Section (VS) Reference: Well (0 00N,0.00E,90.00Azi)
Wellpath: VH - Job #32K0605404 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 06/07/05 Start Date: 6/7/2005
KSRG 0'-6225'
Company: Scientific Drilling International Engineer: Gonzales/Page
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.21	326.11	100.00	-0.10	0.15	-0.10	0.21	0.18	326.11
200.00	0.69	255.72	200.00	-0.79	0.16	-0.79	0.65	0.80	281.18
300.00	0.70	276.67	299.99	-1.98	0.08	-1.98	0.25	1.98	272.26
400.00	0.96	273.16	399.98	-3.42	0.20	-3.42	0.26	3.43	273.27
500.00	0.86	271.05	499.97	-5.01	0.26	-5.01	0.11	5.01	272.92
600.00	1.06	298.84	599.95	-6.57	0.72	-6.57	0.50	6.61	276.21
700.00	1.38	284.51	699.93	-8.54	1.46	-8.54	0.44	8.67	279.72
800.00	1.70	261.13	799.90	-11.18	1.54	-11.18	0.70	11.28	277.83
900.00	1.69	258.63	899.85	-14.09	1.02	-14.09	0.07	14.12	274.13
1000.00	1.66	259.88	999.81	-16.96	0.47	-16.96	0.05	16.97	271.59
1100.00	1.74	255.78	1099.76	-19.86	-0.16	-19.86	0.15	19.86	269.55
1200.00	1.67	252.03	1199.72	-22.71	-0.98	-22.71	0.13	22.74	267.53
1300.00	1.63	255.25	1299.68	-25.48	-1.79	-25.48	0.10	25.54	265.98
1400.00	1.86	255.69	1399.63	-28.42	-2.55	-28.42	0.23	28.54	264.87
1500.00	1.80	251.13	1499.58	-31.48	-3.46	-31.48	0.16	31.67	263.72
1600.00	1.84	255.78	1599.53	-34.52	-4.36	-34.52	0.15	34.80	262.79
1700.00	1.80	250.49	1699.48	-37.56	-5.28	-37.56	0.17	37.93	261.99
1800.00	1.77	254.54	1799.43	-40.53	-6.22	-40.53	0.13	41.00	261.28
1900.00	1.53	253.05	1899.39	-43.30	-7.02	-43.30	0.24	43.86	260.79
2000.00	1.21	259.73	1999.36	-45.61	-7.60	-45.61	0.36	46.24	260.54
2100.00	1.22	257.21	2099.34	-47.69	-8.02	-47.69	0.05	48.36	260.45
2200.00	0.77	234.36	2199.32	-49.27	-8.65	-49.27	0.59	50.03	260.04
2300.00	0.73	288.41	2299.32	-50.42	-8.84	-50.42	0.68	51.19	260.06
2400.00	0.69	286.98	2399.31	-51.60	-8.46	-51.60	0.04	52.29	260.69
2500.00	0.47	302.06	2499.30	-52.53	-8.07	-52.53	0.27	53.14	261.27
2600.00	0.36	302.70	2599.30	-53.14	-7.68	-53.14	0.11	53.69	261.77
2700.00	0.37	309.40	2699.30	-53.65	-7.31	-53.65	0.04	54.15	262.24
2800.00	0.45	308.89	2799.30	-54.21	-6.86	-54.21	0.08	54.64	262.79
2900.00	0.32	308.85	2899.29	-54.73	-6.43	-54.73	0.13	55.11	263.30
3000.00	0.28	339.27	2999.29	-55.04	-6.03	-55.04	0.16	55.36	263.75
3100.00	0.36	8.27	3099.29	-55.08	-5.49	-55.08	0.18	55.35	264.31
3200.00	0.53	353.49	3199.29	-55.08	-4.72	-55.08	0.20	55.29	265.10
3300.00	0.46	358.84	3299.29	-55.14	-3.86	-55.14	0.08	55.28	266.00
3400.00	0.47	1.40	3399.28	-55.14	-3.05	-55.14	0.02	55.23	266.84
3500.00	0.56	352.44	3499.28	-55.20	-2.15	-55.20	0.12	55.24	267.77
3600.00	0.50	9.03	3599.27	-55.19	-1.24	-55.19	0.16	55.21	268.71
3700.00	0.59	27.81	3699.27	-54.88	-0.35	-54.88	0.20	54.88	269.63
3800.00	0.75	49.42	3799.26	-54.15	0.53	-54.15	0.30	54.15	270.56
3900.00	0.92	57.41	3899.25	-52.97	1.39	-52.97	0.21	52.99	271.50
4000.00	0.77	44.28	3999.24	-51.83	2.30	-51.83	0.24	51.88	272.54
4100.00	0.75	53.51	4099.23	-50.83	3.17	-50.83	0.12	50.93	273.57
4200.00	0.62	54.30	4199.23	-49.87	3.88	-49.87	0.13	50.02	274.44
4300.00	0.95	54.62	4299.22	-48.75	4.67	-48.75	0.33	48.97	275.47
4400.00	1.37	57.78	4399.20	-47.06	5.79	-47.06	0.42	47.42	277.01
4500.00	1.67	49.09	4499.16	-44.95	7.38	-44.95	0.38	45.55	279.32
4600.00	1.78	61.99	4599.11	-42.48	9.06	-42.48	0.40	43.44	282.05
4700.00	1.70	63.76	4699.07	-39.78	10.45	-39.78	0.40	41.13	284.72
4800.00	1.73	65.76	4799.02	-37.07	11.73	-37.07	0.07	38.88	287.55



Scientific Drilling International

Survey Report

Company: MACK ENERGY
Field: Southern Cross
Site: Eddy County, NM
Well: Southern Cross 15 State #2
Wellpath: VH - Job #32K0605404

Date: 7/17/2005 **Time:** 18:18 58 **Page:** 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0 00N,0.00E,90.00Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	1.55	62.54	4898.98	-34.49	12.97	-34.49	0.20	36.85	290.60
5000.00	1.61	65.04	4998.95	-32.02	14.18	-32.02	0.09	35.02	293.89
5100.00	1.46	65.72	5098.91	-29.59	15.30	-29.59	0.15	33.31	297.35
5200.00	1.31	61.12	5198.88	-27.42	16.38	-27.42	0.19	31.94	300.85
5300.00	1.23	58.49	5298.86	-25.51	17.49	-25.51	0.10	30.93	304.44
5400.00	1.11	52.77	5398.83	-23.82	18.64	-23.82	0.17	30.25	308.04
5500.00	1.07	38.57	5498.82	-22.47	19.95	-22.47	0.27	30.05	311.61
5600.00	1.03	44.50	5598.80	-21.26	21.32	-21.26	0.12	30.11	315.09
5700.00	0.95	50.59	5698.78	-19.99	22.49	-19.99	0.13	30.09	318.38
5800.00	0.78	35.29	5798.77	-18.95	23.57	-18.95	0.29	30.25	321.20
5900.00	0.72	13.42	5898.77	-18.41	24.74	-18.41	0.29	30.84	323.34
6000.00	0.60	1.95	5998.76	-18.25	25.88	-18.25	0.18	31.66	324.81
6100.00	0.41	49.57	6098.76	-17.96	26.63	-17.96	0.44	32.12	326.01
6200.00	0.44	6.60	6198.75	-17.64	27.24	-17.64	0.31	32.46	327.07
6225.00	0.51	354.07	6223.75	-17.64	27.45	-17.64	0.50	32.63	327.27



Scientific Drilling International Survey Report

Company: MACK ENERGY Date: 7/17/2005 Time: 18:25:36 Page: 1
Field: Southern Cross Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid: North
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0.0
Well: Southern Cross 15, State #2 Section (VS) Reference: Well (0.00N, 0.00E, 90.00Azi)
Wellpath: DH- Job #32D0605441 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 6/21/05-06/26/05
MWD 6270'-7757'

Start Date: 6/21/2005

Company: Scientific Drilling International
Tool: MWD:MWD

Engineer: Lamb/Smith/Haines
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
6225.00	0.51	354.07	6223.75	-17.64	27.45	-17.64	0.00	32.63	327.27
6270.00	7.30	108.80	6268.63	-14.95	26.73	-14.95	16.73	30.63	330.77
6305.00	13.40	98.30	6303.05	-8.83	25.42	-8.83	18.17	26.91	340.85
6337.00	19.70	98.90	6333.71	0.18	24.05	0.18	19.69	24.05	0.42
6368.00	25.20	100.40	6362.35	11.84	22.05	11.84	17.84	25.03	28.23
6399.00	30.90	102.30	6389.70	26.12	19.16	26.12	18.61	32.40	53.74
6460.00	41.70	94.40	6438.81	61.78	14.25	61.78	19.26	63.40	77.01
6522.00	50.60	87.80	6481.75	106.39	13.59	106.39	16.26	107.26	82.72
6584.00	63.20	87.20	6515.54	158.18	15.87	158.18	20.34	158.97	84.27
6646.00	75.50	91.00	6537.37	216.06	16.70	216.06	20.65	216.71	85.58
6708.00	86.50	94.20	6547.05	277.13	13.90	277.13	18.46	277.48	87.13
6770.00	87.20	94.90	6550.46	338.84	8.99	338.84	1.60	338.96	88.48
6805.00	92.00	94.80	6550.70	373.71	6.03	373.71	13.72	373.76	89.08
6832.00	97.50	94.60	6548.47	400.51	3.83	400.51	20.38	400.53	89.45
6864.00	102.30	90.30	6542.97	431.99	2.47	431.99	20.00	432.00	89.67
6895.00	102.80	90.40	6536.23	462.25	2.29	462.25	1.64	462.25	89.72
6957.00	100.10	90.20	6523.92	523.01	1.97	523.01	4.37	523.01	89.78
7019.00	99.60	91.00	6513.32	584.09	1.33	584.09	1.51	584.09	89.87
7082.00	98.80	90.40	6503.24	646.27	0.57	646.27	1.58	646.27	89.95
7144.00	96.50	90.10	6494.99	707.72	0.30	707.72	3.74	707.72	89.98
7206.00	94.10	89.20	6489.26	769.45	0.68	769.45	4.13	769.45	89.95
7268.00	91.20	88.50	6486.40	831.36	1.92	831.36	4.81	831.36	89.87
7330.00	88.50	89.20	6486.56	893.34	3.17	893.34	4.50	893.35	89.80
7393.00	84.90	89.80	6490.19	956.22	3.72	956.22	5.79	956.23	89.78
7455.00	84.70	90.70	6495.81	1017.97	3.45	1017.97	1.48	1017.97	89.81
7517.00	84.50	91.00	6501.64	1079.69	2.53	1079.69	0.58	1079.69	89.87
7577.00	86.80	91.60	6506.19	1139.49	1.17	1139.49	3.96	1139.49	89.94
7640.00	86.20	92.80	6510.04	1202.33	-1.24	1202.33	2.13	1202.33	90.06
7709.00	88.50	94.40	6513.23	1271.11	-5.57	1271.11	4.06	1271.12	90.25
7757.00	88.50	94.40	6514.48	1318.95	-9.25	1318.95	0.00	1318.99	90.40

SCANNED



Scientific
Drilling

Field: Southern Cross
Site: Eddy County, NM
Well: Southern Cross 15 State #2
Wellpath: DH - Job #32D0605441
Survey: 6/21/05-06/26/05

