

30015 39635



Job Number: WPD201201
Company: Limerock Resources
Lease/Well: ARCO STATE #1
Location: East Artesia, NM
Rig Name: United Drlg #22
RKB: 11
G.L. or M.S.L.: ☐

State/Country: Eddy County, New Mexico
Declination: ☐
Grid: ☐
File name: C:\WINSERVED201201.SVY
Date/Time: 10-Jan-12 / 15:44
Curve Name: ☐

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NMOCD ARTESIA

WELLPATH SOLUTIONS

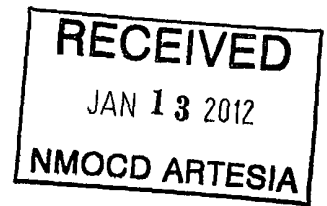
WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 279.37
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
525.00	1.40	1.10	524.95	6.41	.12	.92	6.41	1.10	.27
556.00	1.20	6.00	555.94	7.11	.16	1.00	7.12	1.32	.74
588.00	2.10	329.90	587.93	7.95	-.09	1.39	7.96	359.32	4.17
619.00	2.40	316.60	618.90	8.92	-.83	2.27	8.96	354.71	1.94
651.00	2.50	296.90	650.87	9.72	-1.91	3.47	9.91	348.89	2.64
682.00	2.50	282.90	681.85	10.18	-3.17	4.78	10.66	342.70	1.97
713.00	3.20	272.20	712.81	10.36	-4.69	6.32	11.37	335.63	2.83
745.00	4.00	270.40	744.74	10.40	-6.70	8.31	12.38	327.21	2.52
776.00	4.40	271.00	775.66	10.43	-8.97	10.55	13.76	319.30	1.30
806.00	4.60	269.10	805.57	10.43	-11.33	12.87	15.40	312.65	.83
838.00	5.50	267.10	837.44	10.33	-14.14	15.63	17.51	306.16	2.87
869.00	5.60	266.20	868.30	10.16	-17.13	18.56	19.92	300.67	.43

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
900.00	5.90	265.60	899.14	9.94	-20.23	21.58	22.54	296.16	.99
932.00	6.90	264.70	930.94	9.63	-23.79	25.04	25.66	292.05	3.14
963.00	7.30	264.60	961.70	9.28	-27.60	28.74	29.12	288.58	1.29
995.00	7.30	264.40	993.45	8.89	-31.65	32.67	32.87	285.68	.08
1026.00	7.50	265.00	1024.19	8.52	-35.62	36.53	36.63	283.45	.69
1058.00	8.30	266.70	1055.88	8.20	-40.01	40.81	40.84	281.59	2.60
1089.00	9.20	268.30	1086.52	8.00	-44.72	45.43	45.43	280.14	3.01
1120.00	9.20	268.10	1117.12	7.84	-49.67	50.29	50.29	278.97	.10
1152.00	9.10	268.10	1148.72	7.68	-54.76	55.28	55.30	277.98	.31
1183.00	8.80	269.40	1179.34	7.57	-59.58	60.02	60.06	277.24	1.17
1215.00	8.80	274.50	1210.96	7.74	-64.47	64.87	64.93	276.84	2.44
1245.00	8.80	275.80	1240.61	8.15	-69.04	69.45	69.52	276.73	.66
1276.00	9.50	277.90	1271.21	8.74	-73.93	74.37	74.45	276.74	2.50
1308.00	9.50	278.70	1302.78	9.50	-79.16	79.65	79.73	276.84	.41
1339.00	9.20	278.20	1333.36	10.24	-84.14	84.69	84.76	276.94	1.00
1371.00	9.30	277.60	1364.95	10.95	-89.24	89.83	89.91	277.00	.43
1402.00	9.70	277.10	1395.52	11.60	-94.31	94.94	95.02	277.01	1.32
1434.00	9.70	278.00	1427.07	12.31	-99.66	100.33	100.41	277.04	.47
1465.00	9.20	277.30	1457.64	12.99	-104.70	105.42	105.50	277.07	1.65
1497.00	9.20	276.40	1489.23	13.60	-109.78	110.53	110.62	277.06	.45
1528.00	9.80	274.30	1519.81	14.07	-114.87	115.63	115.73	276.99	2.23
1560.00	9.40	271.90	1551.36	14.37	-120.20	120.94	121.06	276.82	1.77
1591.00	8.90	271.30	1581.96	14.50	-125.13	125.82	125.97	276.61	1.64
1623.00	8.50	270.70	1613.60	14.59	-129.97	130.61	130.78	276.40	1.28
1655.00	8.00	269.80	1645.27	14.61	-134.56	135.14	135.35	276.20	1.61
1686.00	7.70	270.20	1675.97	14.61	-138.79	139.32	139.56	276.01	.98
1717.00	7.30	268.70	1706.71	14.57	-142.84	143.31	143.58	275.82	1.44
1749.00	6.90	265.80	1738.46	14.39	-146.79	147.17	147.49	275.60	1.68
1780.00	6.60	264.80	1769.25	14.09	-150.42	150.71	151.08	275.35	1.04
1812.00	6.60	263.10	1801.04	13.70	-154.08	154.25	154.68	275.08	.61
1843.00	6.40	259.60	1831.84	13.17	-157.54	157.59	158.09	274.78	1.43
1875.00	6.50	255.60	1863.64	12.40	-161.05	160.92	161.53	274.40	1.44
1906.00	6.50	256.60	1894.44	11.56	-164.46	164.15	164.87	274.02	.37
1938.00	6.20	262.70	1926.24	10.92	-167.94	167.47	168.29	273.72	2.31

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1969.00	6.10	264.80	1957.06	10.56	-171.24	170.67	171.56	273.53	.79
2063.00	5.10	280.00	2050.62	10.83	-180.33	179.68	180.65	273.44	1.89
2158.00	2.70	276.40	2145.39	11.81	-186.71	186.14	187.08	273.62	2.54
2253.00	1.40	287.70	2240.33	12.41	-190.04	189.52	190.44	273.74	1.43
2347.00	.20	98.60	2334.32	12.74	-190.97	190.50	191.39	273.82	1.70
2442.00	.30	115.10	2429.32	12.61	-190.58	190.09	191.00	273.79	.13
2536.00	.40	111.90	2523.32	12.38	-190.05	189.53	190.46	273.73	.11
2630.00	.70	127.40	2617.31	11.91	-189.29	188.71	189.67	273.60	.35
2724.00	.70	118.70	2711.31	11.29	-188.33	187.66	188.67	273.43	.11
2819.00	.60	148.50	2806.30	10.58	-187.56	186.78	187.86	273.23	.37
2913.00	.90	45.60	2900.29	10.68	-186.78	186.03	187.08	273.27	1.26
3007.00	.80	42.20	2994.28	11.68	-185.81	185.23	186.18	273.60	.12
3102.00	1.10	49.20	3089.27	12.77	-184.68	184.29	185.12	273.96	.34
3196.00	1.00	36.50	3183.26	14.02	-183.50	183.34	184.04	274.37	.27
3291.00	1.10	40.00	3278.24	15.38	-182.42	182.50	183.07	274.82	.13
3385.00	.90	34.80	3372.23	16.68	-181.42	181.72	182.19	275.25	.23
3479.00	1.00	33.60	3466.21	17.97	-180.55	181.07	181.44	275.68	.11
3574.00	1.00	35.30	3561.20	19.34	-179.61	180.36	180.65	276.15	.03
3668.00	1.10	24.20	3655.18	20.83	-178.77	179.77	179.98	276.65	.24
3762.00	.50	26.40	3749.17	22.02	-178.21	179.42	179.57	277.04	.64
3856.00	.70	9.60	3843.17	22.95	-177.94	179.30	179.41	277.35	.28
3951.00	.80	6.10	3938.16	24.19	-177.77	179.33	179.41	277.75	.12
4045.00	.50	186.70	4032.16	24.43	-177.75	179.35	179.42	277.83	1.38
4139.00	.50	175.40	4126.15	23.62	-177.76	179.24	179.32	277.57	.10
4234.00	.40	163.40	4221.15	22.88	-177.63	178.99	179.10	277.34	.14
4327.00	.40	198.80	4314.15	22.27	-177.65	178.90	179.04	277.14	.26
4422.00	.40	223.10	4409.15	21.71	-177.98	179.14	179.30	276.95	.18
4516.00	.30	205.40	4503.14	21.25	-178.31	179.39	179.57	276.80	.16
4610.00	.30	246.70	4597.14	20.93	-178.64	179.66	179.86	276.68	.23
4705.00	.50	244.40	4692.14	20.65	-179.24	180.21	180.43	276.57	.21
4799.00	.40	226.60	4786.14	20.25	-179.85	180.75	180.99	276.42	.18
4894.00	.40	274.10	4881.14	20.04	-180.42	181.28	181.53	276.34	.34
4988.00	.40	281.40	4975.13	20.13	-181.07	181.93	182.19	276.34	.05
5083.00	.30	340.10	5070.13	20.43	-181.48	182.39	182.63	276.42	.37

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5177.00	.30	284.60	5164.13	20.73	-181.80	182.75	182.98	276.50	.30
5224.00	.10	254.10	5211.13	20.75	-181.96	182.91	183.14	276.50	.47
Projection to BIT									
5264.00	.10	254.10	5251.13	20.73	-182.03	182.97	183.21	276.50	.00



**POWER OF ATTORNEY
DESIGNATION OF AGENT**

LIME ROCK RESOURCES A, L.P. hereby names the following person as its agent:

Name of Agent: Mike Pippin, Pippin LLC

Agent's Address: 3104 N. Sullivan, Farmington, NM 87401-2017

Agent's Telephone Number: (505) 327-4573

GRANT OF SPECIAL AUTHORITY

LIME ROCK RESOURCES A, L.P. grants its agent the authority to act for it with respect to the following only:

1. Executing forms required to be filed with the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.
2. Executive forms required to be filed with the Bureau of Land management of the Department of Interior of the United States of America.

EFFECTIVE DATE

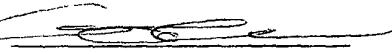
This power of attorney is effective immediately.

RELIANCE ON THIS POWER OF ATTORNEY

Any person, including the agent, may rely upon the validity of this power of attorney or a copy of it unless that person knows it has terminated or is invalid.

SIGNATURE AND ACKNOWLEDGMENT

LIME ROCK RESOURCES A, L.P.

By: 

Name: Charles Adcock

Title: Managing Director

Date: February 9, 2009

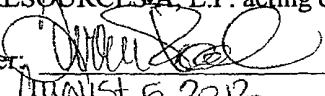
Address: 1111 Bagby Street, Suite 4600, Houston, TX 77002

Telephone Number: (713) 292-9512

State of TEXAS

County of HARRIS

This instrument was acknowledged before me on 11th of February, 2009 by Charles Adcock, Managing Director of LIME ROCK RESOURCES A, L.P. acting on behalf of said limited partnership.

Signature of Notarial Officer: 

My commission expires: AUGUST 5, 2012

