

Archer

DIRECTIONAL SURVEY REPORT

15-42236

RKI EXPLORATION & PRODUCTION, LLC.

LONGVIEW FEDERAL 12 2H
ORIGINAL HOLE
EDDY COUNTY, NEW MEXICO

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 29 2016

RECEIVED

Fax (432) 563-7966
Archer, DDS

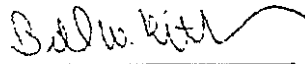
10600 County Road 128 W
Odessa, Texas 79765
Tel. (432) 563-7962

Archer

MWD Survey Certification

State of New Mexico
County of Eddy

I, Bill Kitchens, certify that; I am employed by Archer Directional Drilling Services; that I did on the day(s) of 11/24/15 through 12/09/15, conduct or supervise the taking of MWD surveys from a depth of 119 feet to a depth of 13954 feet; that the data is true, correct, complete, and within the limitations of the tool as set forth by Archer Directional Drilling Services; that I am authorized and qualified to make this report; that these surveys were conducted at the request of RKI Exploration & Production, LLC. for the Longview Federal 12 2H, (API# 30-015-42236), well located in Eddy County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Archer Directional Drilling Services.



Bill Kitchens
MWD Operator

cc. RKI Exploration & Production, LLC.



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10600 County Road 128 W
Odessa, Texas 79765
Tel. (432) 563-7962

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January 18, 2016

RKI Exploration & Production, LLC.
210 Park Avenue, Suite 900
Oklahoma City, Oklahoma 73102

RE: RKI Exploration & Production, LLC.
Longview Federal 12 2H
Eddy County, New Mexico
API Well No. 30-015-42236
Rig: Silver Oak 14

Dear Sir or Madam:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was performed.

Please see the attached Directional Survey Report, and the Directional Survey Certification Letter.

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 563-7962.

Sincerely,



Juan Alcocer
MWD Coordinator
Archer Directional Drilling Services

Fax (432) 563-7966
Archer, DDS

10600 County Road 128 W
Odessa, Texas 79765
Tel. (432) 563-7962

Archer

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: ARCHER DDS
2. NAME OF PERSON(S) PERFORMING SURVEY:
BILL KITCHENS JUSTIN BULT
3. POSITION OF SAID PERSON(S): MWD OPERATOR
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 11/24/15 - 12/09/15
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

RKI EXPLORATION & PRODUCTION, LLC.
LONGVIEW FEDERAL 12 2H
RKI EXPLORATION & PRODUCTION, LLC.
EDDY COUNTY, NEW MEXICO
API WELL NO. 30-015-42236
RIG: SILVER OAK 14
9. SURVEY CERTIFIED FROM: 119 TO 13954 FEET MEASURED DEPTH

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 5766.18 FEET ON A BEARING OF 1.37 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED DEPTH OF 14015 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


Juan Alcocer
MWD Coordinator

North Aligned To: GRID NORTH
 Total Magnetic Correction: 7.27
 Proposed Azimuth: 1.33
 Horizontal Reference: Wellhead
 Vertical Reference: 17' Kelly Bushing To Ground
 Ground Elevation: 3022.8' Ground To MSL
 Grid Reference: NAD 83 New Mexico East Lambert
 Grid Coordinates: X: 632,565.90 Y: 482,199.10
 Ref. Coordinates: LAT: 32° 19' 31.05"N LON: 104° 2' 16.76"W

ARCHER DIRECTIONAL DRILLING SURVEY REPORT

Archer

Archer MWD Operators:
 BILL KITCHENS JUSTIN BULT

RKI EXPLORATION & PRODUCTION, L.L.C.
 LONGVIEW FEDERAL 12 2H / 30-015-42236

Rig: SILVER OAK 14
 EDDY COUNTY, NEW MEXICO

Tie-in Date: 11/24/15
 Date Completed: 12/09/15

Measured Depth (ft)	Incl (deg)	Azimuth (deg)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist (ft)	DLS Dir (deg)	DLS (dg/100ft)
ORIGIN OF WELLBORE AT SURFACE									
0	0.00	0.00	0.00	0.00	0.00	0.00 0.00	0.00	0.00	0.00
THE FOLLOWING ARE ARCHER MWD SURVEYS									
119	0.30	212.90	119.00	119.00	-0.27	0.26 S	0.17 W	0.31	212.80
207	0.30	109.30	88.00	207.00	-0.53	0.53 S	0.08 W	0.54	188.24
403	0.70	147.40	198.00	402.99	-1.68	1.71 S	1.05 E	2.01	148.38
525	0.50	159.80	122.00	524.98	-2.80	2.84 S	1.64 E	3.28	150.00
710	0.50	165.00	185.00	709.98	-4.32	4.37 S	2.13 E	4.86	154.08
892	0.60	233.20	182.00	891.97	-5.67	5.71 S	1.57 E	5.92	164.65
1074	0.40	259.00	182.00	1073.96	-6.40	6.40 S	0.18 E	6.41	178.38
1257	0.30	303.40	183.00	1256.96	-6.28	6.26 S	0.85 W	6.32	187.69
1441	0.30	267.20	184.00	1440.96	-6.06	6.02 S	1.73 W	6.26	196.02
1623	0.10	306.20	182.00	1622.96	-6.00	5.95 S	2.33 W	6.39	201.41
1807	0.50	243.60	184.00	1806.95	-6.28	6.21 S	3.18 W	6.98	207.12
1993	0.40	147.90	186.00	1992.95	-7.20	7.12 S	3.56 W	7.96	206.58
2182	0.70	111.20	189.00	2181.94	-8.15	8.10 S	2.14 W	8.38	194.78
2371	1.00	126.10	189.00	2370.92	-9.49	9.49 S	0.27 E	9.49	178.36
2560	1.00	120.60	188.00	2559.89	-11.23	11.30 S	3.02 E	11.70	165.02
2750	0.70	131.80	190.00	2749.87	-12.79	12.92 S	5.32 E	13.97	157.63
2939	0.50	108.40	189.00	2938.86	-13.78	13.95 S	6.96 E	15.59	153.48
3129	0.50	149.10	190.00	3128.85	-14.73	14.92 S	8.17 E	17.01	151.29
3319	0.40	136.20	190.00	3318.85	-15.90	16.11 S	9.06 E	18.48	150.66
3509	0.40	110.70	190.00	3508.84	-16.58	16.82 S	10.14 E	19.64	148.93
3698	0.40	25.60	189.00	3697.84	-16.20	16.46 S	11.04 E	19.82	146.16
3888	0.10	67.00	190.00	3887.84	-15.53	15.80 S	11.48 E	19.53	144.00
3971	0.20	62.10	83.00	3970.84	-15.43	15.70 S	11.67 E	19.57	143.38
4101	0.30	43.70	130.00	4100.84	-15.07	15.35 S	12.11 E	19.55	141.73
4195	1.50	236.70	94.00	4194.83	-15.58	15.85 S	11.25 E	19.43	144.63
4289	2.40	206.70	94.00	4288.78	-18.06	18.28 S	9.34 E	20.53	152.95
4384	4.30	212.10	95.00	4383.61	-22.92	23.08 S	6.55 E	23.99	164.15
4479	6.20	223.50	95.00	4478.21	-29.78	29.82 S	1.13 E	29.84	177.84
4573	7.40	236.10	94.00	4571.55	-37.04	36.87 S	7.39 W	37.61	191.34
4668	8.70	244.10	95.00	4665.62	-43.85	43.43 S	18.94 W	47.37	203.58
4762	8.80	248.30	94.00	4758.52	-50.15	49.42 S	31.91 W	58.83	212.85
4857	9.00	248.80	95.00	4852.38	-56.07	55.03 S	45.50 W	71.40	219.58
4952	9.20	250.20	95.00	4946.18	-61.65	60.29 S	59.57 W	84.75	224.66
5047	8.20	249.40	95.00	5040.09	-66.92	65.24 S	73.06 W	97.95	228.23
5143	8.10	249.70	96.00	5135.12	-71.97	70.00 S	85.81 W	110.74	230.79
5237	7.80	251.40	94.00	5228.22	-76.59	74.33 S	98.06 W	123.05	232.84
5332	8.20	252.70	95.00	5322.29	-80.95	78.40 S	110.64 W	135.61	234.68
5427	8.10	253.20	95.00	5416.33	-85.20	82.35 S	123.52 W	148.45	236.31
5522	7.70	249.90	95.00	5510.43	-89.60	86.47 S	135.90 W	161.08	237.53
5617	8.00	249.20	95.00	5604.54	-94.42	91.01 S	148.06 W	173.79	238.42
5711	8.10	249.40	94.00	5697.61	-99.38	95.66 S	160.37 W	186.74	239.18
5805	8.20	250.10	94.00	5790.66	-104.26	100.27 S	172.68 W	199.85	239.88
5900	8.40	250.00	95.00	5884.67	-109.24	104.95 S	185.77 W	213.36	240.53
5995	8.80	250.70	95.00	5978.60	-114.32	109.73 S	199.14 W	227.37	241.15
6090	8.50	250.30	95.00	6072.62	-119.40	114.50 S	212.61 W	241.48	241.70
6185	8.60	249.60	95.00	6166.46	-124.55	118.34 S	225.88 W	255.47	242.15
6280	8.80	247.00	95.00	6260.37	-130.17	124.65 S	239.23 W	269.76	242.48
6375	7.30	254.80	95.00	6354.44	-134.88	129.08 S	251.74 W	282.90	242.85
6469	5.10	259.10	94.00	6447.88	-137.47	131.43 S	261.61 W	292.77	243.33
6563	4.50	268.60	94.00	6541.55	-139.10	132.89 S	269.34 W	300.34	243.74
6657	3.60	264.10	94.00	6635.31	-140.22	133.86 S	275.90 W	306.66	244.12
6752	3.20	272.90	95.00	6730.15	-140.53	134.03 S	281.52 W	311.79	244.54
6846	2.50	321.80	94.00	6824.04	-138.87	132.28 S	285.41 W	314.57	245.13
6942	3.10	334.20	96.00	6918.93	-134.95	128.30 S	287.83 W	315.13	245.97
7036	2.00	340.10	94.00	7013.84	-131.16	124.47 S	289.49 W	315.12	246.73
7131	1.80	323.80	95.00	7108.78	-128.43	121.71 S	290.94 W	315.37	247.30
7225	2.10	317.80	94.00	7202.73	-126.01	119.24 S	292.97 W	316.31	247.85
7320	0.80	16.80	95.00	7297.70	-124.11	117.32 S	293.95 W	316.48	248.24
7415	1.10	41.60	95.00	7392.69	-122.77	116.00 S	293.15 W	315.27	248.41
7510	1.00	22.70	95.00	7487.67	-121.31	114.55 S	292.22 W	313.87	248.59
7603	1.10	350.80	93.00	7580.66	-119.67	112.92 S	292.05 W	313.12	248.86
7666	1.40	335.30	63.00	7643.64	-118.39	111.63 S	292.47 W	313.05	249.11
7708	1.50	337.80	42.00	7685.63	-117.42	110.65 S	292.89 W	313.10	249.30
7739	2.60	341.90	31.00	7716.61	-116.39	109.61 S	293.27 W	313.08	249.51
7771	6.00	349.60	32.00	7748.51	-114.06	107.27 S	293.79 W	312.76	249.94
7802	9.70	352.30	31.00	7779.22	-109.90	103.09 S	294.44 W	311.96	250.70
7834	13.00	353.00	32.00	7810.59	-103.67	96.84 S	295.24 W	310.71	251.84
7865	16.30	355.20	31.00	7840.58	-95.89	89.05 S	296.02 W	309.13	253.26

Measured Depth	Incl	Azimuth	Course Length	TVD	Vertical Section	TOTAL		Closure		DLS
						Rectangular Offsets		Dist	Dir	
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/100ft)
7897	19.50	355.30	32.00	7871.02	-86.11	79.25 S	295.84 W	307.23	255.05	10.00
7926	21.60	355.40	31.00	7900.05	-75.29	68.40 S	297.72 W	305.48	257.06	6.78
7960	23.20	356.90	32.00	7928.63	-63.15	56.23 S	298.53 W	303.78	259.33	5.31
7981	25.40	358.20	31.00	7957.89	-50.42	43.49 S	299.07 W	302.22	261.73	7.30
8023	27.10	359.70	32.00	7986.59	-36.28	29.34 S	299.33 W	300.76	264.40	5.70
8055	28.00	2.10	32.00	8014.96	-21.48	14.55 S	299.09 W	299.44	267.22	4.47
8086	29.80	5.90	31.00	8042.10	-6.53	0.39 N	298.03 W	298.03	270.08	8.29
8117	32.90	9.60	31.00	8068.57	9.49	16.36 N	295.83 W	296.29	273.17	11.77
8149	35.00	11.80	32.00	8095.12	27.12	33.92 N	292.54 W	294.50	276.81	7.43
8179	36.70	10.40	30.00	8119.43	44.44	51.17 N	289.19 W	293.68	280.03	6.13
8210	39.00	8.30	31.00	8143.91	63.27	69.93 N	286.11 W	294.53	283.74	8.50
8241	41.90	7.60	31.00	8167.50	83.25	89.85 N	283.33 W	297.24	287.60	9.47
8273	44.10	7.20	32.00	8190.90	104.95	111.49 N	280.52 W	301.87	291.68	6.93
8304	44.20	6.80	31.00	8213.14	126.44	132.92 N	277.89 W	308.05	295.56	0.95
8336	43.00	6.00	31.00	8235.58	147.73	154.17 N	275.51 W	315.71	298.23	4.26
8368	43.80	4.60	33.00	8259.57	170.35	176.74 N	273.41 W	325.57	302.88	3.79
8431	50.80	4.70	31.00	8302.61	216.22	222.54 N	269.83 W	349.60	309.53	13.87
8463	56.00	5.30	32.00	8321.68	241.85	248.12 N	267.39 W	354.77	312.86	16.32
8495	60.40	6.90	32.00	8338.54	268.96	275.18 N	264.73 W	381.85	316.11	13.84
8526	64.00	7.00	31.00	8353.00	296.27	302.42 N	261.65 W	399.80	319.13	12.03
8557	67.10	7.20	31.00	8365.83	324.34	330.42 N	258.16 W	419.31	322.00	10.02
8588	70.30	7.00	31.00	8377.09	353.08	359.08 N	254.59 W	440.18	324.66	10.34
8620	73.70	6.90	32.00	8386.97	383.36	389.29 N	250.91 W	463.14	327.20	10.63
8651	76.70	6.90	31.00	8394.89	413.18	419.04 N	247.31 W	486.57	329.45	9.68
8683	80.40	6.70	32.00	8401.24	444.40	450.18 N	243.59 W	511.85	331.58	11.58
8714	83.80	6.30	31.00	8405.50	474.98	480.68 N	240.12 W	537.32	333.46	11.04
8746	87.00	5.90	32.00	8408.07	506.76	512.39 N	238.73 W	564.43	336.20	10.08
8778	88.90	5.50	32.00	8409.21	538.64	544.21 N	233.55 W	592.21	336.77	6.07
8841	90.40	5.30	63.00	8409.80	601.48	606.93 N	227.63 W	648.21	339.44	2.40
8935	92.50	4.40	94.00	8407.22	695.27	700.56 N	219.68 W	734.19	342.59	2.43
8971	93.90	4.70	36.00	8405.21	731.15	736.39 N	216.83 W	787.64	343.59	3.98
9057	91.90	5.50	96.00	8400.35	826.82	831.88 N	208.31 W	857.56	345.94	2.24
9162	92.30	6.50	95.00	8396.87	921.44	926.29 N	198.38 W	947.30	347.91	1.13
9256	92.80	7.50	94.00	8392.69	1014.88	1019.50 N	186.94 W	1036.49	349.61	1.19
9351	92.10	7.20	95.00	8388.63	1109.27	1113.63 N	174.80 W	1127.26	351.08	0.80
9445	89.20	6.10	94.00	8387.56	1202.85	1206.98 N	163.91 W	1218.06	352.27	3.30
9541	89.00	6.40	96.00	8389.07	1298.48	1302.40 N	153.46 W	1311.41	353.28	0.38
9636	89.80	7.10	95.00	8390.07	1393.05	1396.73 N	142.30 W	1403.96	354.18	1.12
9731	88.20	6.10	95.00	8391.72	1487.63	1491.08 N	131.38 W	1496.86	354.96	1.99
9826	88.40	5.80	95.00	8394.54	1582.28	1585.53 N	121.54 W	1590.18	355.62	0.38
9921	87.60	3.90	95.00	8397.86	1677.04	1680.13 N	113.51 W	1683.96	356.13	2.17
10014	87.40	1.40	93.00	8401.91	1769.92	1772.93 N	109.22 W	1778.29	356.47	2.69
10109	89.20	1.20	95.00	8404.73	1864.87	1867.86 N	107.06 W	1870.93	356.72	1.91
10204	90.30	2.00	95.00	8405.15	1959.87	1962.82 N	104.41 W	1965.60	356.96	1.43
10299	91.00	2.80	95.00	8404.07	2054.65	2057.73 N	100.43 W	2060.18	357.21	1.12
10393	91.60	3.50	94.00	8401.94	2148.77	2151.56 N	95.27 W	2153.67	357.46	0.98
10488	92.10	4.40	95.00	8398.87	2243.62	2246.29 N	88.73 W	2248.04	357.74	1.08
10581	90.50	3.80	93.00	8398.76	2336.49	2339.03 N	82.24 W	2340.48	357.99	1.92
10676	91.20	3.90	95.00	8395.35	2431.40	2433.82 N	76.03 W	2435.01	358.21	0.80
10769	91.70	4.70	93.00	8393.00	2524.24	2526.53 N	69.06 W	2527.47	358.43	1.01
10864	92.30	5.70	95.00	8389.88	2618.97	2621.08 N	60.45 W	2621.77	358.68	1.23
10957	90.30	5.60	93.00	8387.57	2711.67	2713.60 N	51.30 W	2714.08	358.92	2.15
11050	91.00	5.80	93.00	8385.52	2804.40	2806.13 N	42.06 W	2806.44	359.14	0.78
11144	91.30	5.20	94.00	8384.63	2898.13	2899.68 N	33.06 W	2899.87	359.35	0.71
11238	91.30	4.30	94.00	8382.50	2991.94	2993.33 N	25.27 W	2993.44	359.52	0.96
11334	90.60	3.00	96.00	8380.91	3087.84	3089.12 N	19.16 W	3089.18	359.64	1.54
11429	91.40	3.10	95.00	8379.25	3182.78	3183.97 N	14.11 W	3184.00	359.75	0.85
11524	92.20	3.10	95.00	8376.26	3277.69	3278.78 N	8.98 W	3278.79	359.84	0.84
11619	90.80	3.40	95.00	8373.78	3372.60	3373.59 N	3.59 W	3373.60	359.94	1.51
11713	91.60	3.80	94.00	8371.81	3466.51	3467.39 N	2.31 E	3467.39	0.04	0.95
11808	88.80	3.10	95.00	8371.39	3561.43	3562.21 N	8.03 E	3562.21	0.13	2.94
11903	88.30	2.50	95.00	8373.72	3656.37	3657.06 N	12.67 E	3657.08	0.20	0.89
11997	89.00	2.10	94.00	8375.93	3750.33	3750.96 N	16.44 E	3751.00	0.25	0.86
12092	90.90	2.20	95.00	8376.01	3845.32	3845.89 N	20.00 E	3845.94	0.30	2.00
12187	92.00	2.60	95.00	8373.61	3940.27	3940.77 N	23.98 E	3940.85	0.35	1.23
12281	92.10	2.50	94.00	8370.25	4034.19	4034.62 N	28.16 E	4034.72	0.40	0.15
12375	90.50	2.60	94.00	8368.11	4128.14	4128.50 N	32.34 E	4128.63	0.45	1.71
12470	91.00	2.90	95.00	8366.87	4223.10	4223.38 N	36.89 E	4223.54	0.50	0.61
12566	91.30	3.20	96.00	8364.94	4319.04	4319.23 N	42.00 E	4319.43	0.56	0.44
12660	91.80	3.40	94.00	8362.40	4412.95	4413.04 N	47.41 E	4413.29	0.62	0.57
12755	92.20	3.60	95.00	8359.09	4507.82	4507.80 N	53.21 E	4508.11	0.68	0.47
12849	91.20	3.60	94.00	8356.30	4601.71	4601.57 N	59.11 E	4601.95	0.74	1.08
12944	91.90	3.90	95.00	8353.73	4696.58	4696.33 N	65.32 E	4696.79	0.80	0.80
13039	90.00	3.50	95.00	8352.15	4791.49	4791.12 N	71.45 E	4791.65	0.85	2.04
13132	91.20	3.00	93.00	8351.18	4884.43	4883.96 N	76.72 E	4884.56	0.90	1.40
13227	92.00	3.40	95.00	8348.53	4979.34	4978.78 N	82.02 E	4979.45	0.94	0.94
13321	90.10	3.60	94.00	8346.80	5073.25	5072.58 N	87.76 E	5073.34	0.99	2.03
13416	90.10	3.60	95.00	8346.64	5168.18	5167.39 N	93.72 E	5168.24	1.04	0.00
13511	90.70	3.90	95.00	8345.97	5263.09	5262.19 N	99.94 E	5263.14	1.09	0.71
13603	90.80	3.80	92.00	8344.69	5354.99	5353.97 N	106.11 E	5355.02	1.14	0.24
13698	91.40	4.10	95.00	8342.78	5449.87	5448.72 N	112.65 E	5449.89	1.18	0.61
13793	91.90	4.50	95.00	8340.05	5544.70	5543.42 N	119.77 E	5544.71	1.24	0.67

RKI EXPLORATION & PRODUCTION, LLC.
LONGVIEW FEDERAL 12 2H / 30-015-42236

Rig: SILVER OAK 14
EDDY COUNTY, NEW MEXICO

Tie-In Date: 11/24/15
Date Completed: 12/09/15

Measured	Incl	Azimuth	Course	TVD	Vertical	TOTAL		Closure	DLS	
Depth			Length		Section	Rectangular Offsets		Dist	Dir	
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/100ft)
13887	92.10	4.60	94.00	8336.77	5638.50	5637.06 N	127.23 E	5638.50	1.29	0.24
13954	92.30	4.70	67.00	8334.20	5705.34	5703.79 N	132.65 E	5705.34	1.33	0.33
STRAIGHT LINE PROJECTION TO BIT AT 14015' MD										
14015	92.30	4.70	61.00	8331.75	5766.18	5764.54 N	137.65 E	5766.18	1.37	0.00