

NOT TO SCALE

Drill Pipe Depths

LOWER LINER SPECS
4 1/2" 11.6# LTC P-110 GRADE
TUBE ID = 4.000" DRIFT = 3.875"

All Frac Subs are pinned to shear open @ 1876 PSI (with Ball on Seat)

SWELLING PACKER LINER-----for isolated section fracs
with Frac Port Sub sections
Float Equipment

7" Casing Collars near planned Liner Top

DP Tally Depths	Casing Tally Depths
	5513.70
	5557.40

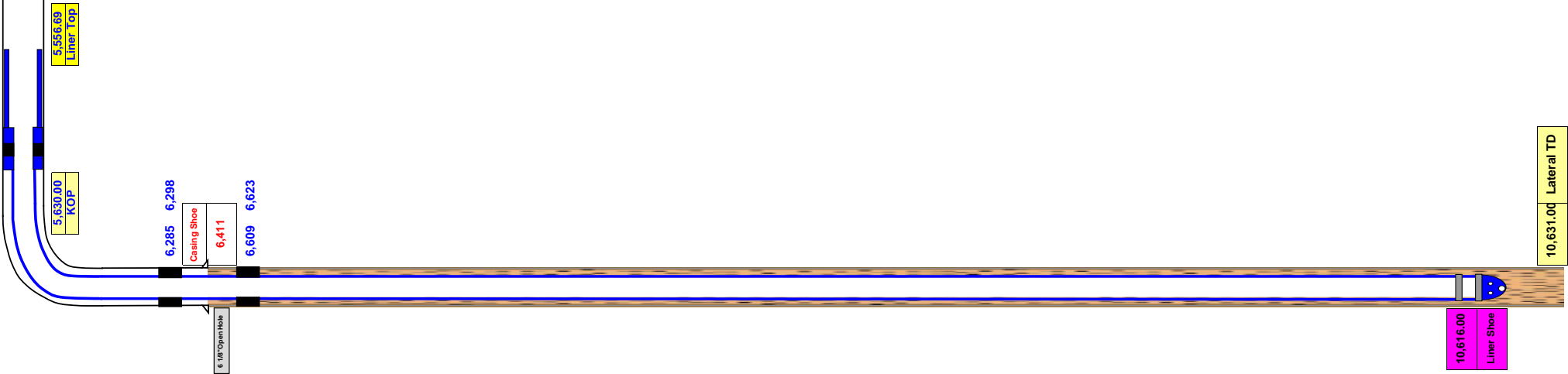
10616.00 Liner Shoe

10631.00' Lateral TD

Carrizo Oil and Gas	
Well Name:	Timbro Ranch 17-11-9-59
County:	Weld
State:	Colorado

Northern
States
Completions

Williston, ND 701-572-5720



Northern States Completions									
Date:		6/25/2013		Carrizo Oil and Gas			Field:		
Well Name:		Timbro Ranch 17-11-9-59					Rig Name & #: Xtreme 17		
County:		Weld		*Item OD's are shown as "maximum OD" *Item ID's are shown as "minimum ID"			NSC Rep: Ryan Daley		
State:		ND					Company Rep: Robert Chamberlin		
4 1/2" LINER-----"AS RUN" DETAIL									
KB = ND'							DRILL PIPE DEPTHS		
ITEM		Centralized Entry Guide on PBR Top	DESCRIPTION	13.93' of 5 1/4" Seal Bore Length	OD	ID	LENGTH	TOP	BOTTOM
1	5 1/4" ID x 15' Polished Bore Receptacle				5.920"	5.250"	14.93	5556.69	5571.62
2	4 1/2" x 7" PPK Liner Hanger Packer w/ 1' Extension				6.000"	4.000"	3.42	5571.62	5575.04
	Centralizer (4 1/2" Buttress Box x LTC Pin)				6.000"	4.000"	0.59	5575.04	5575.63
	16	Jt 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	708.96	5575.63
3	Open Hole Swelling Packer		5.750"			4.000"	13.80	6284.59	6298.39
	7	Jt 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	310.47	6298.39
4	Open Hole Swelling Packer		5.750"			4.000"	13.80	6608.86	6622.66
	4	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	177.04	6622.66
5	Divert-A-Frac Port Sub II		Shifting Ball Size	3.625"	5.625"	3.519"	3.40	6799.70	6803.10
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	132.35	6803.10
6	Open Hole Swelling Packer		5.750"			4.000"	13.80	6935.45	6949.25
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.09	6949.25
7	Divert-A-Frac Port Sub II		Shifting Ball Size	3.500"	5.625"	3.392"	3.40	7082.34	7085.74
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.03	7085.74
8	Open Hole Swelling Packer		5.750"			4.000"	13.80	7218.77	7232.57
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.16	7232.57
9	Divert-A-Frac Port Sub II		Shifting Ball Size	3.375"	5.625"	3.268"	3.40	7365.73	7369.13
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.20	7369.13
10	Open Hole Swelling Packer		5.750"			4.000"	13.80	7502.33	7516.13
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.08	7516.13
11	Divert-A-Frac Port Sub II		Shifting Ball Size	3.250"	5.625"	3.142"	3.40	7649.21	7652.61
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.16	7652.61
12	Open Hole Swelling Packer		5.750"			4.000"	13.80	7785.77	7799.57
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.05	7799.57
13	Divert-A-Frac Port Sub II		Shifting Ball Size	3.125"	5.625"	3.018"	3.40	7932.62	7936.02
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	132.80	7936.02
14	Open Hole Swelling Packer		5.750"			4.000"	13.80	8068.82	8082.62
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	131.24	8082.62
15	Divert-A-Frac Port Sub II		Shifting Ball Size	3.000"	5.625"	2.893"	3.40	8213.86	8217.26
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.22	8217.26
16	Open Hole Swelling Packer		5.750"			4.000"	13.80	8350.48	8364.28
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	132.84	8364.28
17	Divert-A-Frac Port Sub II		Shifting Ball Size	2.875"	5.625"	2.767"	3.40	8497.12	8500.52
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.02	8500.52
18	Open Hole Swelling Packer		5.750"			4.000"	13.80	8633.54	8647.34
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.37	8647.34
19	Divert-A-Frac Port Sub II		Shifting Ball Size	2.750"	5.625"	2.645"	3.40	8780.71	8784.11
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	132.58	8784.11
20	Open Hole Swelling Packer		5.750"			4.000"	13.80	8916.69	8930.49
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.35	8930.49
21	Divert-A-Frac Port Sub II		Shifting Ball Size	2.625"	5.625"	2.518"	3.40	9063.84	9067.24
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.11	9067.24
22	Open Hole Swelling Packer		5.750"			4.000"	13.80	9200.35	9214.15
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.94	9214.15
23	Divert-A-Frac Port Sub II		Shifting Ball Size	2.500"	5.625"	2.393"	3.40	9348.09	9351.49
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	132.21	9351.49
24	Open Hole Swelling Packer		5.750"			4.000"	13.80	9483.70	9497.50
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.25	9497.50
25	Divert-A-Frac Port Sub II		Shifting Ball Size	2.375"	5.625"	2.268"	3.40	9630.75	9634.15
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.08	9634.15
26	Open Hole Swelling Packer		5.750"			4.000"	13.80	9767.23	9781.03
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	133.05	9781.03
27	Divert-A-Frac Port Sub II		Shifting Ball Size	2.250"	5.625"	2.144"	3.40	9914.08	9917.48
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	133.65	9917.48
28	Open Hole Swelling Packer		5.750"			4.000"	13.80	10051.13	10064.93
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	132.49	10064.93
29	Divert-A-Frac Port Sub II		Shifting Ball Size	2.125"	5.625"	2.016"	3.40	10197.42	10200.82
	3	Jts 4 1/2" 11.6# LTC Blank Liner		Water Reactive Elastomer (5 FT)	5.875" Centralizer (Top & Bottom)	5.000"	4.000"	130.02	10200.82
30	Open Hole Swelling Packer		5.750"			4.000"	13.80	10330.84	10344.64
	3	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	129.42	10344.64
31	Divert-A-Frac Port Sub II		Shifting Ball Size	1.250"	5.625"	1.000"	3.40	10474.06	10477.46
	2	Jts 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	88.74	10477.46
32	4 1/2" Float Collar (Single Valve)				5.000"	---	1.00	10566.20	10567.20
	1	Jt 4 1/2" 11.6# LTC Blank Liner				5.000"	4.000"	44.30	10567.20
33	4 1/2" Float Collar (Single Valve)				5.000"	---	1.00	10611.50	10612.50
34	4 1/2" Guide Shoe w/ Aluminum Nose & Side Ports				5.000"	.750"	3.50	10612.50	10616.00
							Lateral TD		10631.00'

Operator	Carrizo Oil & Gas
Well Name	Timbro Ranch 17-11-9-59
Rig Name	Xtreme 17
Run Date	06/25/13

"AS RUN" LINER TALLY

KOP	5630
7" Shoe	6411

Total Joints Tallied	111
Liner Size	4 1/2"
Thread Description	LTC
Lateral TD	10631.00

Original Tally Jt #	Wt	Grade	Actual Run Jt #	Item Description	Length			Shoe--Off Bottom		15.00
								Item Top Depth	Item Bottom Depth	Cumulative Length
Shoe			Shoe	Guide Shoe w/ Side Ports	3.50			10612.50	10616.00	3.50
Float			Float	Float Collar (Single Valve)	1.00			10611.50	10612.50	4.50
	11.6	P-110	1	4 1/2" LTC Liner	44.30	1	44.30	10567.20	10611.50	48.80
Float			Float	Float Collar (Single Valve)	1.00			10566.20	10567.20	49.80
	11.6	P-110	2	4 1/2" LTC Liner	44.29	2	88.74	10521.91	10566.20	94.09
	11.6	P-110	3	4 1/2" LTC Liner	44.45			10477.46	10521.91	138.54
Frac Sub		P110	Frac Sub	Frac Sub 1	3.40			10474.06	10477.46	141.94
	11.6	P-110	4	4 1/2" LTC Liner	44.43	3	129.42	10429.63	10474.06	186.37
	11.6	P-110	5	4 1/2" LTC Liner	40.56		Block Total	10389.07	10429.63	226.93
	11.6	P-110	6	4 1/2" LTC Liner	44.43			10344.64	10389.07	271.36
Pkr	11.6	P110	Pkr	Swelling Packer 1	13.80			10330.84	10344.64	285.16
	11.6	P-110	7	4 1/2" LTC Liner	41.75	3	130.02	10289.09	10330.84	326.91
	11.6	P-110	8	4 1/2" LTC Liner	43.86		Block Total	10245.23	10289.09	370.77
	11.6	P-110	9	4 1/2" LTC Liner	44.41			10200.82	10245.23	415.18
Frac Sub		P110	Frac Sub	Frac Sub 2	3.40			10197.42	10200.82	418.58
	11.6	P-110	10	4 1/2" LTC Liner	44.42	3	132.49	10153.00	10197.42	463.00
	11.6	P-110	11	4 1/2" LTC Liner	43.66		Block Total	10109.34	10153.00	506.66
	11.6	P-110	12	4 1/2" LTC Liner	44.41			10064.93	10109.34	551.07
Pkr	11.6	P110	Pkr	Swelling Packer 2	13.80			10051.13	10064.93	564.87
	11.6	P-110	13	4 1/2" LTC Liner	44.31	3	133.65	10006.82	10051.13	609.18
	11.6	P-110	14	4 1/2" LTC Liner	45.12		Block Total	9961.70	10006.82	654.30
	11.6	P-110	15	4 1/2" LTC Liner	44.22			9917.48	9961.70	698.52
Frac Sub		P110	Frac Sub	Frac Sub 3	3.40			9914.08	9917.48	701.92
	11.6	P-110	16	4 1/2" LTC Liner	44.48	3	133.05	9869.60	9914.08	746.40
	11.6	P-110	17	4 1/2" LTC Liner	44.39		Block Total	9825.21	9869.60	790.79
	11.6	P-110	18	4 1/2" LTC Liner	44.18			9781.03	9825.21	834.97
Pkr	11.6	P110	Pkr	Swelling Packer 3	13.80			9767.23	9781.03	848.77
	11.6	P-110	19	4 1/2" LTC Liner	44.23	3	133.08	9723.00	9767.23	893.00
	11.6	P-110	20	4 1/2" LTC Liner	44.41		Block Total	9678.59	9723.00	937.41
	11.6	P-110	21	4 1/2" LTC Liner	44.44			9634.15	9678.59	981.85
Frac Sub		P110	Frac Sub	Frac Sub 4	3.40			9630.75	9634.15	985.25
	11.6	P-110	22	4 1/2" LTC Liner	44.22	3	133.25	9586.53	9630.75	1029.47
	11.6	P-110	23	4 1/2" LTC Liner	44.51		Block Total	9542.02	9586.53	1073.98
	11.6	P-110	24	4 1/2" LTC Liner	44.52			9497.50	9542.02	1118.50
Pkr	11.6	P110	Pkr	Swelling Packer 4	13.80			9483.70	9497.50	1132.30
	11.6	P-110	25	4 1/2" LTC Liner	44.36	3	132.21	9439.34	9483.70	1176.66
	11.6	P-110	26	4 1/2" LTC Liner	43.92		Block Total	9395.42	9439.34	1220.58
	11.6	P-110	27	4 1/2" LTC Liner	43.93			9351.49	9395.42	1264.51
Frac Sub		P110	Frac Sub	Frac Sub 5	3.40			9348.09	9351.49	1267.91
	11.6	P-110	28	4 1/2" LTC Liner	45.16	3	133.94	9302.93	9348.09	1313.07
	11.6	P-110	29	4 1/2" LTC Liner	44.40		Block Total	9258.53	9302.93	1357.47
	11.6	P-110	30	4 1/2" LTC Liner	44.38			9214.15	9258.53	1401.85
Pkr	11.6	P110	Pkr	Swelling Packer 5	13.80			9200.35	9214.15	1415.65
	11.6	P-110	31	4 1/2" LTC Liner	44.40	3	133.11	9155.95	9200.35	1460.05
	11.6	P-110	32	4 1/2" LTC Liner	44.51		Block Total	9111.44	9155.95	1504.56
	11.6	P-110	33	4 1/2" LTC Liner	44.20			9067.24	9111.44	1548.76
Frac Sub		P110	Frac Sub	Frac Sub 6	3.40			9063.84	9067.24	1552.16
	11.6	P-110	34	4 1/2" LTC Liner	44.47	3	133.35	9019.37	9063.84	1596.63
	11.6	P-110	35	4 1/2" LTC Liner	44.52		Block Total	8974.85	9019.37	1641.15
	11.6	P-110	36	4 1/2" LTC Liner	44.36			8930.49	8974.85	1685.51
Pkr	11.6	P110	Pkr	Swelling Packer 6	13.80			8916.69	8930.49	1699.31
	11.6	P-110	37	4 1/2" LTC Liner	44.17	3	132.58	8872.52	8916.69	1743.48
	11.6	P-110	38	4 1/2" LTC Liner	44.18		Block Total	8828.34	8872.52	1787.66
	11.6	P-110	39	4 1/2" LTC Liner	44.23			8784.11	8828.34	1831.89

Frac Sub		P110	Frac Sub	Frac Sub 7	3.40			8780.71	8784.11	1835.29
	11.6	P-110	40	4 1/2" LTC Liner	44.48	3	133.37	8736.23	8780.71	1879.77
	11.6	P-110	41	4 1/2" LTC Liner	44.47		Block Total	8691.76	8736.23	1924.24
	11.6	P-110	42	4 1/2" LTC Liner	44.42			8647.34	8691.76	1968.66
Pkr	11.6	P110	Pkr	Swelling Packer 7	13.80			8633.54	8647.34	1982.46
	11.6	P-110	43	4 1/2" LTC Liner	44.35	3	133.02	8589.19	8633.54	2026.81
	11.6	P-110	44	4 1/2" LTC Liner	44.39		Block Total	8544.80	8589.19	2071.20
	11.6	P-110	45	4 1/2" LTC Liner	44.28			8500.52	8544.80	2115.48
Frac Sub		P110	Frac Sub	Frac Sub 8	3.40			8497.12	8500.52	2118.88
	11.6	P-110	46	4 1/2" LTC Liner	44.34	3	132.84	8452.78	8497.12	2163.22
	11.6	P-110	47	4 1/2" LTC Liner	44.30		Block Total	8408.48	8452.78	2207.52
	11.6	P-110	48	4 1/2" LTC Liner	44.20			8364.28	8408.48	2251.72
Pkr	11.6	P110	Pkr	Swelling Packer 8	13.80			8350.48	8364.28	2265.52
	11.6	P-110	49	4 1/2" LTC Liner	44.40	3	133.22	8306.08	8350.48	2309.92
	11.6	P-110	50	4 1/2" LTC Liner	44.40		Block Total	8261.68	8306.08	2354.32
	11.6	P-110	51	4 1/2" LTC Liner	44.42			8217.26	8261.68	2398.74
Frac Sub		P110	Frac Sub	Frac Sub 9	3.40			8213.86	8217.26	2402.14
	11.6	P-110	52	4 1/2" LTC Liner	44.41	3	131.24	8169.45	8213.86	2446.55
	11.6	P-110	53	4 1/2" LTC Liner	44.39		Block Total	8125.06	8169.45	2490.94
	11.6	P-110	54	4 1/2" LTC Liner	42.44			8082.62	8125.06	2533.38
Pkr	11.6	P110	Pkr	Swelling Packer 9	13.80			8068.82	8082.62	2547.18
	11.6	P-110	55	4 1/2" LTC Liner	44.38	3	132.80	8024.44	8068.82	2591.56
	11.6	P-110	56	4 1/2" LTC Liner	44.21		Block Total	7980.23	8024.44	2635.77
	11.6	P-110	57	4 1/2" LTC Liner	44.21			7936.02	7980.23	2679.98
Frac Sub		P110	Frac Sub	Frac Sub 10	3.40			7932.62	7936.02	2683.38
	11.6	P-110	58	4 1/2" LTC Liner	44.21	3	133.05	7888.41	7932.62	2727.59
	11.6	P-110	59	4 1/2" LTC Liner	44.43		Block Total	7843.98	7888.41	2772.02
	11.6	P-110	60	4 1/2" LTC Liner	44.41			7799.57	7843.98	2816.43
Pkr	11.6	P110	Pkr	Swelling Packer 10	13.80			7785.77	7799.57	2830.23
	11.6	P-110	61	4 1/2" LTC Liner	44.41	3	133.16	7741.36	7785.77	2874.64
	11.6	P-110	62	4 1/2" LTC Liner	44.37		Block Total	7696.99	7741.36	2919.01
	11.6	P-110	63	4 1/2" LTC Liner	44.38			7652.61	7696.99	2963.39
Frac Sub		P110	Frac Sub	Frac Sub 11	3.40			7649.21	7652.61	2966.79
	11.6	P-110	64	4 1/2" LTC Liner	44.37	3	133.08	7604.84	7649.21	3011.16
	11.6	P-110	65	4 1/2" LTC Liner	44.37		Block Total	7560.47	7604.84	3055.53
	11.6	P-110	66	4 1/2" LTC Liner	44.34			7516.13	7560.47	3099.87
Pkr	11.6	P110	Pkr	Swelling Packer 11	13.80			7502.33	7516.13	3113.67
	11.6	P-110	67	4 1/2" LTC Liner	44.37	3	133.20	7457.96	7502.33	3158.04
	11.6	P-110	68	4 1/2" LTC Liner	44.39		Block Total	7413.57	7457.96	3202.43
	11.6	P-110	69	4 1/2" LTC Liner	44.44			7369.13	7413.57	3246.87
Frac Sub		P110	Frac Sub	Frac Sub 12	3.40			7365.73	7369.13	3250.27
	11.6	P-110	70	4 1/2" LTC Liner	44.42	3	133.16	7321.31	7365.73	3294.69
	11.6	P-110	71	4 1/2" LTC Liner	44.40		Block Total	7276.91	7321.31	3339.09
	11.6	P-110	72	4 1/2" LTC Liner	44.34			7232.57	7276.91	3383.43
Pkr	11.6	P110	Pkr	Swelling Packer 12	13.80			7218.77	7232.57	3397.23
	11.6	P-110	73	4 1/2" LTC Liner	44.40	3	133.03	7174.37	7218.77	3441.63
	11.6	P-110	74	4 1/2" LTC Liner	44.40		Block Total	7129.97	7174.37	3486.03
	11.6	P-110	75	4 1/2" LTC Liner	44.23			7085.74	7129.97	3530.26
Frac Sub		P110	Frac Sub	Frac Sub 13	3.40			7082.34	7085.74	3533.66
	11.6	P-110	76	4 1/2" LTC Liner	44.33	3	133.09	7038.01	7082.34	3577.99
	11.6	P-110	77	4 1/2" LTC Liner	44.38		Block Total	6993.63	7038.01	3622.37
	11.6	P-110	78	4 1/2" LTC Liner	44.38			6949.25	6993.63	3666.75
Pkr	11.6	P110	Pkr	Swelling Packer 13	13.80			6935.45	6949.25	3680.55
	11.6	P-110	79	4 1/2" LTC Liner	44.41	3	132.35	6891.04	6935.45	3724.96
	11.6	P-110	80	4 1/2" LTC Liner	44.33		Block Total	6846.71	6891.04	3769.29
	11.6	P-110	81	4 1/2" LTC Liner	43.61			6803.10	6846.71	3812.90
Frac Sub		P110	Frac Sub	Frac Sub 14	3.40			6799.70	6803.10	3816.30
	11.6	P-110	82	4 1/2" LTC Liner	43.80	4	177.04	6755.90	6799.70	3860.10
	11.6	P-110	83	4 1/2" LTC Liner	44.39		Block Total	6711.51	6755.90	3904.49
	11.6	P-110	84	4 1/2" LTC Liner	44.42			6667.09	6711.51	3948.91
	11.6	P-110	85	4 1/2" LTC Liner	44.43			6622.66	6667.09	3993.34

Pkr	11.6	P110	Pkr	Swelling Packer 14	13.80			6608.86	6622.66	4007.14
	11.6	P-110	86	PLAN---Top OH packer @ 6,579'	44.42			6564.44	6608.86	4051.56
	11.6	P-110	87	4 1/2" LTC Liner	44.35	7	310.47	6520.09	6564.44	4095.91
	11.6	P-110	88	TD of 8 3/4" Open Hole @ 6,518'	44.35		Block Total	6475.74	6520.09	4140.26
	11.6	P-110	89	4 1/2" LTC Liner	44.35			6431.39	6475.74	4184.61
	11.6	P-110	90	4 1/2" LTC Liner	44.32	6,411'	7" Shoe	6387.07	6431.39	4228.93
	11.6	P-110	91	4 1/2" LTC Liner	44.33			6342.74	6387.07	4273.26
	11.6	P-110	92	4 1/2" LTC Liner	44.35			6298.39	6342.74	4317.61
Pkr	11.6	P110	Pkr	Swelling Packer 15	13.80			6284.59	6298.39	4331.41
	11.6	P-110	93	4 1/2" LTC Liner	44.32			6240.27	6284.59	4375.73
	11.6	P-110	94	4 1/2" LTC Liner	44.33			6195.94	6240.27	4420.06
	11.6	P-110	95	4 1/2" LTC Liner	44.33			6151.61	6195.94	4464.39
	11.6	P-110	96	4 1/2" LTC Liner	44.31			6107.30	6151.61	4508.70
	11.6	P-110	97	4 1/2" LTC Liner	44.41	16	708.96	6062.89	6107.30	4553.11
	11.6	P-110	98	4 1/2" LTC Liner	43.75		Block Total	6019.14	6062.89	4596.86
	11.6	P-110	99	4 1/2" LTC Liner	44.44			5974.70	6019.14	4641.30
	11.6	P-110	100	4 1/2" LTC Liner	44.36			5930.34	5974.70	4685.66
	11.6	P-110	101	4 1/2" LTC Liner	44.39			5885.95	5930.34	4730.05
	11.6	P-110	102	4 1/2" LTC Liner	44.37			5841.58	5885.95	4774.42
	11.6	P-110	103	4 1/2" LTC Liner	44.34			5797.24	5841.58	4818.76
	11.6	P-110	104	4 1/2" LTC Liner	44.32			5752.92	5797.24	4863.08
	11.6	P-110	105	4 1/2" LTC Liner	44.36			5708.56	5752.92	4907.44
	11.6	P-110	106	4 1/2" LTC Liner	44.29			5664.27	5708.56	4951.73
	11.6	P-110	107	4 1/2" LTC Liner	44.33	5,630'	KOP	5619.94	5664.27	4996.06
	11.6	P-110	108	4 1/2" LTC Liner	44.31			5575.63	5619.94	5040.37
Ctrlzr	11.6	P110	Ctrlzr	Centralizer	0.59			5575.04	5575.63	5040.96
Packer			Packer	PPK Hanger / Packer	3.42			5571.62	5575.04	5044.38
PBR		P110	PBR	PBR	14.93		LINER TOP	5556.69	5571.62	5059.31
	11.6	P-110	109	4 1/2" LTC Liner	44.39	OUT				
	11.6	P-110	110	4 1/2" LTC Liner	44.34	OUT				
	11.6	P-110	111	4 1/2" LTC Liner	44.41	OUT				

OPERATOR **Carrizo Oil & Gas**

LEASE AND WELL NO. Timbro Ranch 17-11-9-59

DATE CASING TALLIED

COUNTY AND STATE Weld County, CO

		Wt	Thread	Grade	Description
JTS.	1 thru	111	11.6#	LTC	P-110 Blank

**Rack Tally---4 1/2" Liner Pipe Only
(No Accessory Equipment on tally)**

No.	Length of Jt.	No.	Length of Jt.	No.	Length of Jt.	No.	Length of Jt.	No.	Length of Jt.	No.	Length of Jt.	No.	Length of Jt.
1	44.30	51	44.42	101	44.39								
2	44.29	52	44.41	102	44.37								
3	44.45	53	44.39	103	44.34								
4	44.43	54	42.44	104	44.32								
5	40.56	55	44.38	105	44.36								
6	44.43	56	44.21	106	44.29								
7	41.75	57	44.21	107	44.33								
8	43.86	58	44.21	108	44.31								
9	44.41	59	44.43	109	44.39	OUT							
10	44.42	60	44.41	110	44.34	OUT							
11	43.66	61	44.41	111	44.41	OUT							
12	44.41	62	44.37										
13	44.31	63	44.38										
14	45.12	64	44.37										
15	44.22	65	44.37										
16	44.48	66	44.34										
17	44.39	67	44.37										
18	44.18	68	44.39										
19	44.23	69	44.44										
20	44.41	70	44.42										
21	44.44	71	44.40										
22	44.22	72	44.34										
23	44.51	73	44.40										
24	44.52	74	44.40										
25	44.36	75	44.23										
26	43.92	76	44.33										
27	43.93	77	44.38										
28	45.16	78	44.38										
29	44.40	79	44.41										
30	44.38	80	44.33										
31	44.40	81	43.61										
32	44.51	82	43.80										
33	44.20	83	44.39										
34	44.47	84	44.42										
35	44.52	85	44.43										
36	44.36	86	44.42										
37	44.17	87	44.35										
38	44.18	88	44.35										
39	44.23	89	44.35										
40	44.48	90	44.32										
41	44.47	91	44.33										
42	44.42	92	44.35										
43	44.35	93	44.32										
44	44.39	94	44.33										
45	44.28	95	44.33										
46	44.34	96	44.31										
47	44.30	97	44.41										
48	44.20	98	43.75										
49	44.40	99	44.44										
50	44.40	100	44.36										

All joints in
YELLOW are
"out" joints

This version of the
Liner Pipe Only Tally
is shown in "Run
Order"
---Jt # 1 is the 1st
joint in the hole

Total	2211.22	2214.34	487.85	0.00	0.00	0.00	0.00
						GRAND TOTAL	4913.41

Ball & Seat Chart for 14 DAFPS-II Frac Sub System

Actual measured ID NSC Shop	Actual measured ID (Field)	NSC Initials (Field)	Frac Sub #	Requested Ball Seat ID Reference Only	Ball OD	Ball OD over Ball Seat ID	Clearance of ball thru previous ball seat	
3.519"	_____	_____	14	3.518	3.625	0.107	.250 less than 4 1/2" 11.6# Liner Drift	Longer Cast Iron Seat
3.392"	_____	_____	13	3.393	3.500	0.107	-0.018	Longer Cast Iron Seat
3.268"	_____	_____	12	3.268	3.375	0.107	-0.018	Longer Cast Iron Seat
3.142"	_____	_____	11	3.143	3.250	0.107	-0.018	Longer Cast Iron Seat
3.018"	_____	_____	10	3.018	3.125	0.107	-0.018	<div> The NSC shop ID's were taken in a controlled situation with precise measuring devices. A variance of up to .005" could be expected with the field measurements. For accuracy, NSC will report the shop-measured ID's. </div>
2.893"	_____	_____	9	2.893	3.000	0.107	-0.018	
2.767"	_____	_____	8	2.768	2.875	0.107	-0.018	
2.645"	_____	_____	7	2.643	2.750	0.107	-0.018	
2.518"	_____	_____	6	2.518	2.625	0.107	-0.018	
2.393"	_____	_____	5	2.393	2.500	0.107	-0.018	<div> Rates are based on the DAFPS-II being pinned for 1876 PSI </div>
2.268"	_____	_____	4	2.268	2.375	0.107	-0.018	
2.144"	_____	_____	3	2.143	2.250	0.107	-0.018	Max Rate thru this seat = 115 Bbl/min
2.016"	_____	_____	2	2.018	2.125	0.107	-0.018	Max Rate thru this seat = 103 Bbl/min
1.000"	_____	_____	1	1.000	1.250	0.250	-0.768	Won't frac thru seat.....pump out frac-ports

Frac Stage 2 @ less than 115 Bbls/min (due to allowable rate thru Frac Sub #3)

Frac Stage 1 @ less than 103 Bbls/min (due to allowable rate thru Frac Sub #2)

We, the undersigned have verified that the Frac Sub Ball Seat ID's are as shown above.
 We have also verified that Frac Subs were installed in the proper run order in the liner string.

NSC Representative: _____ Oil Company Rep: _____

Date: _____