

WELL NAME:	Waag 23				OPERATOR:	Extraction Oil and Gas	
FIELD:	Windsor - Wattenberg				FORMATION:	Niobrara	
SHL:	qtr-qtr	SESW	Section 19	Township 7N	Range 65W		
BHL:	qtr-qtr	SWSE	Section 24	Township 7N	Range 66W		
COUNTY:	Weld		STATE:	CO		API:	05-123-40349

SURFACE CASING	
SIZE:	9 5/8"
WEIGHT:	36#
GRADE:	J-55
CONNECTION:	LTC
HOLE DEPTH:	910
CSG DEPTH:	910
INCL @ SHOE:	0.5°
CEMENT:	390 sx 14.5#
TOC:	Surface
HOLE SIZE:	13 1/2"

INTERMEDIATE CASING	
SIZE:	7"
WEIGHT:	26#
GRADE:	P-110
CONNECTION:	LTC
HOLE DEPTH:	7,585
CSG DEPTH:	7,570
INCL @ SHOE:	89°
CEMENT:	549 sx
	464 sx
TOC:	Surface
HOLE SIZE:	8 3/4"

GROUND LEVEL:	4868'
KELLY BUSHING:	25.0'
SPUD DATE:	6/2/2015
COMP DATE:	11/13/2015

PRODUCTION LINER	
SIZE:	4 1/2"
WEIGHT:	13.5#
GRADE:	P-110
CONNECTION:	TXP/BTC
HOLE DEPTH:	11,939
LINER TOP:	7,439
INCL @ LT:	83°
LINER SHOE:	11,889
CEMENT:	Open hole
TOC:	-
HOLE SIZE:	6 1/8"

PRODUCTION TUBING	
SIZE:	2 3/8"
WEIGHT:	4.7#
GRADE:	J-55
DEPTH:	7,147'
INCL @ EOT:	49°



9 5/8" csg @  
910' (0.5° incl)

KOP - 6580'

EOT @ 7,147" (49° incl)

Liner Top @ 7439' (83° incl)

8 3/4" hole @ 7585'  
7" csg @ 7570' (89° incl)

Stage	Packer Depth	Sleeve Depth	Sleeve ID	Stage Length	Stage	Packer Depth	Sleeve Depth	Sleeve ID	Stage Length
1	11,794	11,889	1.480	145	25	8,094	8,188	3.280	139
2	11,612	11,710	1.535	182	26	7,921	8,015	3.405	173
3	11,474	11,567	1.590	138	27	7,784	7,875	3.530	136
4	11,333	11,428	1.645	141	28	7,612	7,704	3.655	172
5	11,156	11,245	1.700	177	29				
6	11,023	11,118	1.755	133	30				
7	10,851	10,943	1.830	172	31				
8	10,710	10,806	1.905	141	32				
9	10,570	10,665	1.980	140	33				
10	10,392	10,484	2.055	178	34				
11	10,249	10,347	2.130	143	35				
12	10,107	10,203	2.205	142	36				
13	9,931	10,025	2.280	176	37				
14	9,791	9,885	2.355	141	38				
15	9,614	9,708	2.430	177	39				
16	9,470	9,569	2.505	143	40				
17	9,338	9,425	2.580	132	41				
18	9,154	9,251	2.655	184	42				
19	9,009	9,107	2.730	145	43				
20	8,865	8,961	2.805	144	44				
21	8,693	8,787	2.880	172	45				
22	8,550	8,649	2.955	143	46				
23	8,414	8,510	3.030	136	47				
24	8,233	8,327	3.155	181	48				

155' Avg Stage Length

Frac Stimulation	
Total Fluid:	55,255 bbls
Total Sand:	5,607,681 lbs 40/70
	lbs 20/40 white
	lbs 20/40 resin
	5,607,681 lbs
	1284 lbs/ft

Completion Notes  
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Liner Shoe @ 11889'

MD	11,939
TVD	7174'

28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1