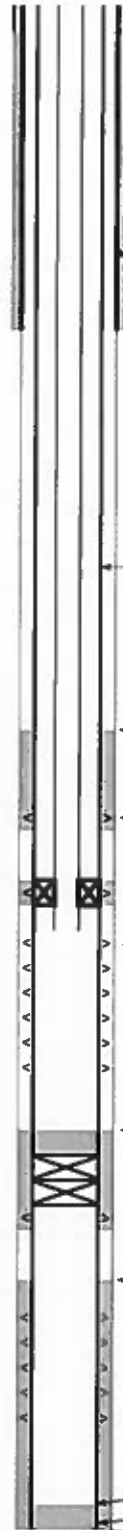


Laramie Energy

SWD Wellbore Schematic

Not to Scale



Well Name Cascade Creek 604-12-13
Diagram Date 2018-May-02
Surface Location 2804 FNL & 396 FWL SEC 4 T6S R97W
Btm Hole Location 2843 FNL & 160 FWL SEC 4 T6S R97W (estimated from gyro dated 5/29/2011)
Field Grand Valley
County Garfield
State Colorado
API 05-045-13465-00
KB Elevation 8653.5
KB Height 25.0
GL Elevation 8628.5

Conductor 16" @ 85
Cement -
Surface Hole 14-3/4"
Surface Casing 9-5/8" 36# K55 @ 2776
Cement Lead: 876 sx Premium Lite II @ 11.6 ppg
 Tail: 250 sx Class G @ 15.8 ppg

Production Hole 8-3/4"
Production Casing 5-1/2" 17# I80 @ 9298
Cement Lead: 689 sx Premium Lite II @ 12 ppg
 Tail: 544 sx 50/50 Poz Class G @ 14.2 ppg

Wellbore Equipment

Description	Length	Depth
KB	25.00	25.00
7-1/16" 5K lbg hanger	0.81	25.81
194 jts 2-7/8" 6.5#	6130.83	6156.64
x-over 2-7/8" x 2-3/8"	0.72	6157.36
2-3/8" on/off	1.58	6158.94
2-3/8" pup	10.25	6169.19
5-1/2" Homel pkr	7.85	6177.04
x-over 2-7/8" x 2-3/8"	0.65	6177.69
2-3/8" pup	10.02	6187.71
2-3/8" X nipple	0.95	6188.66
2-3/8" perf pup	8.10	6196.76
2-3/8" XN	1.04	6197.80
mule shoe	0.77	6198.57
slack off = EOT	-4.10	6194.47

TOC Squeeze 2	6702-5932 per CBL dated 12/6/2005
Squeeze Cement	12/1/2005
	10 bbls Class G @ 15.8 ppg
	10 bbls Poz @ 13.5 ppg
Squeeze Perfs	5920-5922
Squeeze 3	6140-6220 per CBL dated 3/20/2018
Squeeze Cement	7 bbls Poz @ 13.5 ppg
	4 bbls Class G @ 15.8 ppg
Squeeze Perfs	6180
Injection Perfs	6284-6286 Ohio Creek
	6344-6346 Ohio Creek
	6408-6410 Ohio Creek
	6494-6496 Ohio Creek
	6548-6550 Ohio Creek
	6700-6702 Williams Fork

Squeeze 1	6864-7249 per CBL dated 12/6/2005
Squeeze Cement	11/29/2005
	10 bbls Poz @ 13.5 ppg
	30 bbls Class G @ 15.8 ppg
Squeeze Perfs	7210-7212

TOC Primary Completion	7325 per CBL dated 11/6/2005
Stage	Depth
11/23/2005 5	7468-7717
11/23/2005 4	7787-8002
11/22/2005 3	8063-8249
11/21/2005 2	8313-8546
11/21/2005 1	8599-8929

PBTD = FC 9252
SHOE 9298
TD 9320

Geological Tops

Wasatch G	4676
Fort Union	4942
Ohio Creek	6193
Williams Fork	6558
Top Gas	7121
Cameo	8748
Rollins	9079