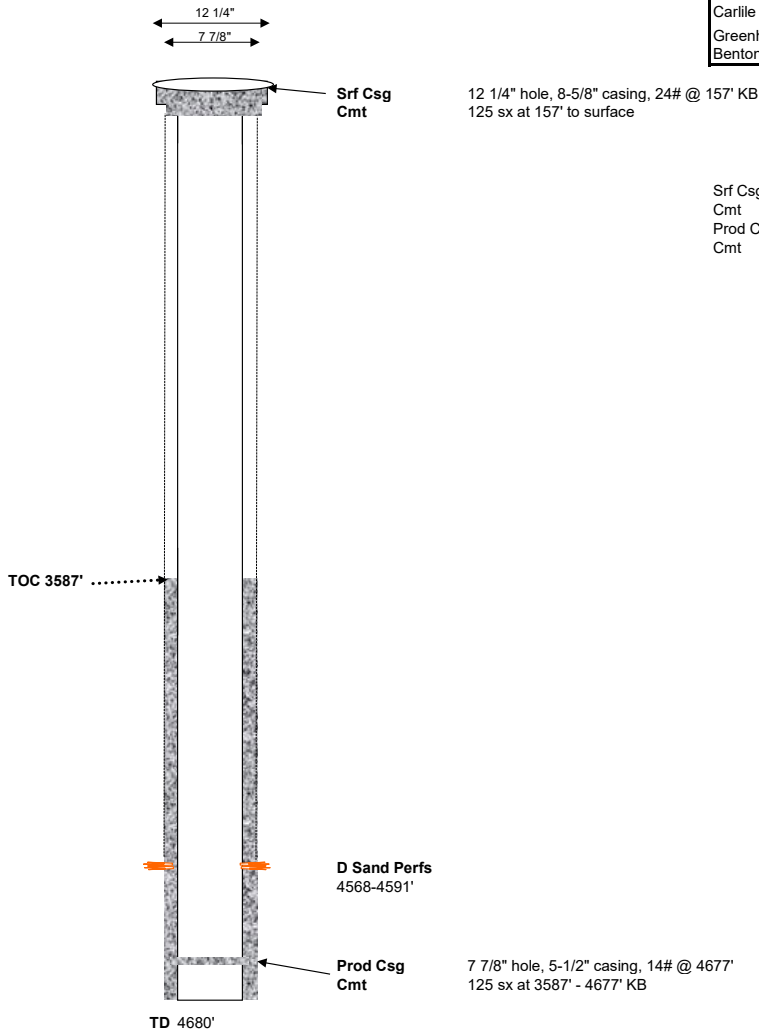


Western Operating Company

General Well Info			
Well Name:	Knutzen #3	Field:	Redwing
Diagram Date:	1/22/2025	County:	Washington
Srf Location:	NENE 3 2N52W 6	State:	CO
Spud Date:	5/8/1968	API #:	05-121-08103
GL Elev:	4578'		
Formation Tops			
Zone	Depth	Zone	Depth
Niobrara	3666'	D Sand	4528'
Fort Hays	4062'	J Sand	4618'
Carlile	4121'		
Greenhorn	4270'		
Bentonite	4437'		



Srf Csg 12 1/4" hole, 8-5/8" casing, 24# @ 157' KB  
Cmt 125 sx at 157' to surface  
Prod Csg 7 7/8" hole, 5-1/2" casing, 14# @ 4677'  
Cmt 125 sx at 3587' - 4677' KB

TOC Calculation		
15# cement	1.51	cuft/sx
slurry density	125	sx
Volume of cement	188.75	cuft
Piping	5.7737	ft/cuft
Cement height	1089.7859	ft
Casing Set Depth	4677	ft
Calculated TOC	3587	ft