

Wellbore Diagram

Lease & Well No.	Crystal State #41-18
Field Name	Wattenberg
Location	660' FNL & 660' FEL; T3N R62W Sec 18

Operator	Crystal Expl. & Prod. Co
County & State	Weld County, Colorado
API No.	05-123-09568

K.B. Elevation	
D.F. Elevation	
Ground Level	4,666'

Surface Casing					
Hole Size	12 1/4"	Csg Wt	24.0#	Depth	449'
Csg Size	8 5/8"	Sx. Cmt.	250 sx	TOC @	Surface

Visual

Intermediate Casing					
Size (OD)	n/a	Weight		Depth	
Grade		Sx. Cmt.		TOC @	

Production Casing					
Hole Size	7 7/8"	Weight	10.5#	Depth	6,954'
Csg Size	4 1/2"	Stg 1 Sx. Cmt.	225 sx	TOC @	5,834'
DV Tool		Stg 2 Sx. Cmt.		TOC @	

Calc

Well History

08/28/78 - Spud well

10/04/78 - Complete well

02/25/81 - P&A well; Set sand plug to 6,870'; Dump 5 sx of cmt on top of sand plug;

Cut Csg @ 5,900'; Set 15 sx cmt 1/2 in, 1/2 out of surface csg; Set 10 sx plug at surface

Current Status: P&A

Tubing Detail:

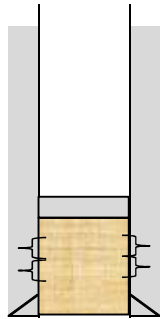
n/a

10 sx Cmt at Surface

8 5/8" Csg Set @ 449'

Set 15 Sx Cmt plug 1/2 In/Out of Shoe

Formation Record	Depth
B/ Fox Hills	410' Est
Sussex	
Niobrara	6,140'
Niobrara 'B'	
Niobrara 'C'	
Ft Hays	
Codell	
J-Sand	6,870'



Cut & pull csg @ 5,900'

Dump 5 Sx cmt on top of Sand
Filled hole to 6,870' with sand
Perfs f/ 6,876 - 84'

4 1/2" Csg Set @ 6,954'

Plug Back Depth	6,933'
Total Depth	6,955'