

Wellbore Diagram

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

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

<u>K.B. Elevation</u>	<u> </u>
<u>D.F. Elevation</u>	<u> </u>
<u>Ground Level</u>	<u>4,666'</u>

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

Visual

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

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

Calc

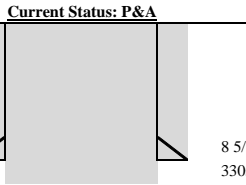
Well History

08/28/78 - Spud well

10/04/78 - Complete well

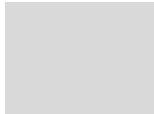
02/25/81 - P&A well; Set sand plug to 6,870'; Dump 5 sx of cmt on top of sand plug;

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

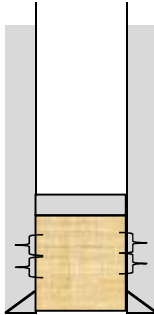


Tubing Detail:
n/a

8 5/8" Csg Set @ 449'
330sks cement from 462 to surface



70 sks cement from 5,193 to 5,439



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'

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

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