

**Precision Directional Services, Inc.**27610 Commerce Oaks Drive
Oak Ridge North, TX 77385
713-435-6250**Bringelson Ranch 5-34-9-58****Scale 2":100' - MD****8/14/2014 1:56 PM****Oper. Company:** Carrizo Oil & Gas, Inc.
Well: Bringelson Ranch 5-34-9-58
Field: Niobrara CONZ'83
Rig: Xtreme 19
Well ID: 05-123-39948-00
Job Number: DL2350**State:** Colorado
County: Weld
Country: USA
Location: New Raymer
Start Date: 08/10/2014 00:00:00
End Date: 08/14/2014 13:45:00**Latitude:** 40.7138805555556
Longitude: -103.856352777778**Elev KB:** 4822'
Elev DF: 17'
Elev GL: 4805'**Operator 1:** Paul Brown**Operator 2:** Clayton Fitzpatrick

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	G1299	G2034			
Bit Size	8 3/4	6 1/8			
Cal Factor	3.62	1.35			
Gamma Offset	42.00	44.00			
Resistivity Offset	0.00	0.00			
Start Depth	5245.00	6024.00			
StartDate	8/10/2014	8/12/2014			
StartTime	5:30 PM	12:00 PM			
EndDepth	6024.00	10218.00			
EndDate	8/11/2014	8/14/2014			
EndTime	6:30 PM	1:45 PM			
Mud Type	WBM	WBM			
Mud Weight	9.6 - 9.7	9.6 - 9.7			
Funnel Viscosity	47 - 48	40 - 45			
Plastic Viscosity	9 - 15	15 - 17			
Yield Point	10 - 15	10 - 13			
Gel Strength	25 - 26	23			
Solids Content	6.0 - 6.3	6.3 - 6.7			
Sand Content	0.25 - 0.5	0.25			
Mud Alkalinity	0.3 - 0.4	0.4 - 0.5			
Filtrate Alkalinity	0.2 - 0.9	0.3 - 1.6			
Chlorides	600 - 700	800			
Mud RM	N/A	N/A			
Mud RMF	N/A	N/A			
Mud RMC	N/A	N/A			
Mud RM at BHT	N/A	N/A			

Hole Data			Casing Data		
Size	From	To	Size	From	To
12 1/4	0.00	1470.00	9 5/8	0.00	1450.00
8 3/4	1470.00	6024.00	7	0.00	6003.00
6 1/8	6024.00	10218.00	4.5	6003.00	10218.00

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees.





















