

Company: Petroleum Development Corp.		Well Name: Ottenhoff 29U-343	
API: 0512343400		County/Parish: Weld	
State: Colorado		Country: United States	
Job number: 16-1-131		Field: Wabbling	
Rig ID: Ensign 161		Survey Company: Ensign Directional Services	
Operator: Petroleum Development Corp.		Company Man: Brady Sharp / Jean Fallon	
Daylight DD: Zach Gentry		Swim Shift DD: Tony Chelov	
Night DD: Eric Myers		Daylight MWD: Justin Kirt	
Night MWD: Sean Bue		Log measurements Gamma, ROP	
Log measurements Gamma, ROP		Depth: Start: 0 ft End: 14126 ft	
Log measurements Gamma, ROP		Date: 7-13-2018 7-17-2018	
Log measurements Gamma, ROP		Maximum temperature: 205	
Casing	Depth	Size	Mud Type: H2O
Surfaces:	1650 ft	9.56"	Drill: 4885 ft
Intermediate:			Drill: 4885 ft
Run	Bit Size	Gamma	Survey
1	12.25"	DT	7-13-2018
2	8.5"	62.46 ft	57.63 ft
3		1650 ft	14126 ft
4			7-13-2018
5			7-13-2018
6			7-13-2018
7			7-13-2018
8			7-13-2018
9			7-13-2018
10			7-13-2018

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Ensign Directional Services uses its best efforts to provide its customers with accurate information and interpretations in conjunction with services performed but will not be held liable or responsible for the accuracy of such information or interpretation.

