CEMENT TREATMENT REPORT

Customer:	Black Oak Expl.	Well:	Ryan #1-29	Ticket:	ICT2261
City, State:	Denver, CO	County:	Rawlins, KS	Date:	8/20/2019
Field Rep:	Arturo	S-T-R:	Sec 29 - T5S - R31W	Service:	Surface

Downhole Information	
Hole Size:	12.25 in
Hole Depth:	237 ft
Casing Size:	8.625 in
Casing Depth:	235 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	13.7 bbls

Calculated Slurry	
Weight:	14.8 # / sx
Water / Sx:	6.88 gal / sx
Yield:	1.41 ft^3 / sx
Bbls / Ft.:	0.0735
Depth:	237 ft
Annular Volume:	17.42 bbls
Excess:	150%
Total Slurry:	43.6 bbls
Total Sacks:	175 sx

Cement Blend		
Product	%	#
Class A	100.0	16450
Gel	2.0	329
CaCl	3.0	494
Metso		
KolSeal		
PhenoSeal	0.3	41
Salt		
	Total	17,314

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
19:30				Called for job					
21:30				Depart Oakley yard					
22:15				Arrive on locn, Rig TOH w/ DP					
22:20				JSA, discuss moving, spotting & rig-u					
22:25				Moveon, spot & rig-up					
22:40				Rig-up complete					
22:45				Start to RIH w/ csg					
23:27				Casing @ setting depth					
23:33		175.0		Circulate & condition hole					
23:43	3.5	100.0	5.0	Pump H2O ahead					
23:46	4.1	270.0	44.0	Mix & pump 175sx @ 14.8ppg					
				Y - 1.41cuft/sk; MR - 6.88g/sk					
0:03	3.5	150.0	13.7	Displ. w/ H2O					
0:09				Shutdown. End Job.					
				5bbls of cement to surface					
0:15				JSA, discuss racking up & moving off					
0:20				Rig down & rack up equip					
0:50				Rig down complete					
0:55				JSA, discuss journey management					
1:00				Depart locn					
				Note: Circulated 5bbls / 20sx cement t					
				surface					
				Thanks for calling Hurricane Svcs Inc					

	CREW	UNIT
Cementer:	Scott Green	74
Pump Operator:	Michael Rebarchek	231
Bulk #1:	John Polley	242
Bulk #2:		

SUMMARY		
Average Rate	Average Pressure	Total Fluid
3.7 bpm	173.75 psi	62.70 bbls

Hurricane Services, Inc.
250 N. Water
Wichita, KS 67202