

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WORK OIL WELL ☒ GAS WELL ☒ DRY ☐ Other \_\_\_\_\_  
1b. TYPE OF WELL NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF RESVR. ☐ Other \_\_\_\_\_

2. NAME OF OPERATOR

DJR Operating, LLC

3. ADDRESS AND TELEPHONE NO.

Po Box 156 Bloomfield NM 87413, 505-632-3476

\*REVISED 3-21-18\*

4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.)\*

At Surface

2007' FSL x 2045' FEL

At top prod. Interval reported below

660' FSL X 660' FEL

At total depth

660' FSL X 660' FEL

14. PERMIT NO. \_\_\_\_\_ DATE ISSUED \_\_\_\_\_  
15. DATE SPUNDED 12-8-14 16. DATE T.D. REACHED 12-16-14 17. DATE COMPL. (Ready to prod.) 03-02-18 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 7196' GR 19. ELEV. CASINGHEAD \_\_\_\_\_

20. TOTAL DEPTH, MD & TVD 7939' MD 21. PLUG BACK T.D., MD & TVD 7880' MD 22. IF MULTIPLE COMPL., 5 23. INTERVALS DRILLED BY X 24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*

Gallup Dakota - ( 7380' - 7367' ) & ( 7305' - 7264' )

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Spaced Neutron Spectral Density, high Resolution Induction Log, CBL LOG

23. CASING RECORD (Report all strings set in well)					
CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8 5/8" J-55	24#	556'	12 1/4"	404 sks to surface	40 bbls
5 1/2" J-55	17#	7923'	7 7/8"	913 sks to surface	50 bbls

29. LINER RECORD				30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SIZE	DEPTH SET (MD)	PACKER SET (MD)
				2 3/8" 4.7# J55	7300'	

31. PERFORATION RECORD (Interval, size and number)			32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
INTERVAL	SIZE	NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
7380'-7367' & 7305'-7264'	.46	216		ACID: 6800 gal of 7 1/2% MCA w/additives
				FRAC: Pumped 3,649,817 SCF of N2 followed by
				167,039 gals of 70Q foam. 53,312 gal water.
				Pumped 211,000 #of 20/40 RESIN.

33.\* PRODUCTION  
DATE FIRST PRODUCTION 2-26-18 PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) Flowing IL STATUS (Producing or shut in) Producing Oil/Gas  
DATE OF TEST 3-12-2018 HOURS TESTED 24 CHOKE SIZE 15/32 PROD'N. FLOW TEST PERIOD 102 OIL--BBL. 161 GAS--MCF. 37 WATER--BBL. 48.1 GAS-OIL RATIO  
FLOW. TUBING PRESS 147 CASING PRESS 520 CALCULATE 24-HOUR RATE 102 OIL--BBL. 161 GAS--MCF. 37 WATER--BBL. 48.1 OIL GRAVITY-API (CORR.)  
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Sold TEST WITNESSED BY Wendell Tixier

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Amy Archuleta TITLE Regulatory DATE 3/21/2018

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOC D 14

30

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof, cored intervals, and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

38.

**GEOLOGIC MARKERS**

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
San Jose	Surface					
Nacimiento	1108'					
Ojo Alamo	2391'					
Kirtland	2535'					
Fruitland	2650'					
Pictured cliffs	2793'					
Lewis	2886'					
Mesa Verde	4485'					
Mancos	5215'					
Gallup	6230'					
Dakota	7226'					

RECEIVED

FORM 3160-4  
(July 1992)

MAR 19 2018

SUBMIT IN DUPLICATE\*

(See other in-  
structions on  
reverse side)

FORM APPROVED

OMB NO. 1004-0137

Expires: February 28, 1995

## UNITED STATES

## DEPARTMENT OF THE INTERIOR

## BUREAU OF LAND MANAGEMENT

Farmington Field Office  
Bureau of Land Management

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WORK		OIL WELL <input checked="" type="checkbox"/>	GAS WELL <input checked="" type="checkbox"/>	DRY <input type="checkbox"/>	Other _____
1b. TYPE OF WELL		NEW WELL <input checked="" type="checkbox"/>	WORK OVER <input type="checkbox"/>	DEEPEN <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>
				DIFF RESVR. <input type="checkbox"/>	Other _____
2. NAME OF OPERATOR DJR Operating, LLC					
3. ADDRESS AND TELEPHONE NO. Po Box 156 Bloomfield NM 87413, 505-632-3476					
4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.)* At Surface 2007' FSL x 2045' FEL At top prod. Interval reported below 660' FSL X 660' FEL At total depth 660' FSL X 660' FEL					
14. PERMIT NO.			DATE ISSUED		
15. DATE SPUNDED 12-8-14			16. DATE T.D. REACHED 12-16-14		
17. DATE COMPL. (Ready to prod.) 03-02-18			18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 7196' GR		
20. TOTAL DEPTH, MD & TVD 7934' MD TVD		21. PLUG BACK T.D., MD & TVD 7880' MD TVD		22. IF MULTIPLE COMPL., 5	
				23. INTERVALS DRILLED BY <input checked="" type="checkbox"/>	
				ROTARY TOOLS	
				CABLE TOOLS	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)* Gallup Dakota - (7380' - 7367') & (7305' - 7264')					
25. WAS DIRECTIONAL SURVEY MADE Yes					
26. TYPE ELECTRIC AND OTHER LOGS RUN Duel Spaced Neutron Spectral Density, high Resolution Induction Log, CBL LOG					

23. CASING RECORD (Report all strings set in well)					
CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8 5/8" J-55	24#	556'	12 1/4"	404 sks to surface	40 bbls
5 1/2" J-55	17#	7923'	7 7/8"	913 sks to surface	50 bbls
29. LINER RECORD					
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD
					SIZE DEPTH SET (MD) PACKER SET (MD)
					2 3/8" 7300'
31. PERFORATION RECORD (Interval, size and number)			32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.		
INTERVAL	SIZE	NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED	
7380'-7367' & 7305'-7264'	46	216		ACID: 6800 gal of 7 1/2% MCA w/additives	
				FRAC: Pumped 3,649,817 SCF of N2 followed by	
				167,039 gals of 70Q foam. 53,312 gal water.	
				Pumped 211,000 # of 20/40 RESIN.	

33.*		By. _____						PRODUCTION	
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump)						L STATUS (Producing or shut in)	
2-26-18		Flowing						Producing Oil/Gas	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FO	OIL--BBL.	GAS--MCF.	WATER--BBL.	GAS-OIL RATIO		
3-12-2018	24	15/32	TEST PERIOD	102	161	37			
FLOW. TUBING PRESS	CASING PRESS	CALCULATE	OIL--BBL.	GAS--MCF.	WATER--BBL.	OIL GRAVITY-API (CORR.)			
147	520	24-HOUR RA	102	161	37	48.1			
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)							TEST WITNESSED BY		
Sold							Wendell Tixier		
35. LIST OF ATTACHMENTS									

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED \_\_\_\_\_ Amy Archuleta TITLE \_\_\_\_\_ Regulatory DATE 3/16/2018

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOCD



### 38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
San Jose	Surface					
Nacimiento	1108'					
Ojo Alamo	2391'					
Kirtland	2535'					
Fruitland	2650'					
Pictured cliffs	2793'					
Lewis	2886'					
Mesa Verde	4485'					
Mancos	5215'					
Gallup	6230'					
Dakota	7226'					



**HALLIBURTON**

Start 11:33 am

DJR Operating  
**Bonanza 15**  
*Intervals 1-1*  
Dakota

Sandoval County, NM  
API: 30-043-21187  
*Prepared for: Phil Varty*  
*February 26, 2018*

Stimulation Treatment  
**Post Job Report**

70Q Water Frac

**Prepared By:**  
Rene Guerra  
Justin Floyd  
505 Crew

Notice: Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

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## Engineering Executive Summary

On February 25, 2018 a stimulation treatment was performed in the Dakota formation on the Bonanza 15 well in Sandoval County, NM. The Bonanza 15 was a 216 stage Verticle Plug and Perf Design. The proposed treatment consisted of:

0 gallons of 2% KCL Water  
0 gallons of 7.5% MCA Acid  
59,443 gallons of 30# WaterFrac G  
3,191 gallons of Treated Water  
211,000 pounds of CRC 20/40

The actual treatment fully completed 1 of 216 stages. 0 stages were skipped, and 0 stages screened out or were otherwise cut short of design. The actual treatment consisted of:

0 gallons of 2% KCL Water  
0 gallons of 7.5% MCA Acid  
61,202 gallons of 30# WaterFrac G  
7,110 gallons of Treated Water  
211,000 pounds of CRC 20/40

A more detailed description of the actual treatment can be found in the attached reports. The following comments were provided to summarize events and changes to the proposed treatment:

*BH Rate was change to 45 BPM to not exceed Max Treating Presure with 70 Q.*

Halliburton is strongly committed to quality control on location. Before and after each job all chemicals, proppants, and fluid volumes are measured to assure the highest level of quality control. Tank fluid analysis, crosslink time, and break tests are performed before each job in order to optimize the performance of the treatment fluids.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Thank you,

Matthew Filla  
Technical Professional  
Halliburton Energy Services

Rene Guerra  
Senior Technical Professional  
Halliburton Energy Services



Interval Summary					
Interval 1					
Bonanza 15					
Date:	2/26/2018				
Start Time:	11:33:00 AM				
End Time:	1:21:00 PM				
Initial Rate (Breakdown):	26.7	bpm			
Initial Pressure (Breakdown):	3394	psi			
Max BH Rate:	61.1	bpm			
Max Pressure:	4535	psi			
Max Prop Conc:	4.57	(lbs/gal)			
Average BH Rate:	45.7	bpm			
Average Slurry Rate:	17	bpm			
Average Quality:	70	%			
Total N2:	3649817	scf			
Average Pressure:	4190	psi			
Initial Wellhead Pressure:	424	psi			
Average Visc:	30	cP			
Average N2 Rate:	38199	scfm			
Average pH:	7.1				
ISIP:	2584	psi			
Initial Fracture Gradient:	0.820	psi/ft			
ISDP:	2584	psi			
Final Fracture Gradient:	0.820	psi/ft			
5 min:	2251	psi			
10 min:	2108	psi			
15 min:	2010	psi			
Pad BH Volume:	73273	gal			
Pad Percentage:	37%	%			
CRC 20/40 Pumped	211,000	lbs			
Pumped	0	lbs			
Total Proppant Pumped:	211,000	lbs			
Proppant in Formation:	211,000	lbs			
2% KCL Water Volume	0	gal	0	bbls	
7.5% MCA Acid Volume	0	gal	0	bbls	
30# WaterFrac G Volume	61,202	gal	1,457	bbls	
Total Fluid Volume:	68,312	gal	1,626	bbls	
Pump-In Volume (Wireline Run):	0	gal	0	bbls	
Flush Volume:	7,110	gal	169	bbls	
Interval Status:	Completed				
Comments:					
BH rate was changed to 45 BPM to compensate for high treating pressure. Job pumped to completion, all proppant placed per design. Final ISDP = 2584 psi, FG = 0.820 psi/ft. N2 Pumped to formation 3,649,843 scfs, N2 Total with Cooldown 4,744,796 scfs.			Engineer: Rene Guerra Treater: Stacy Yazzie Supervisor: Jahan Jahan Customer Rep: Lennor Bee		

Customer DJR Operating  
 Formation Dakota  
 Lease Bonanza 15  
 API 30-043-21187  
 Date February 25, 2018



Stage Summaries

Interval	Average						Max		Fluids										Proppants	
	Pressure	Slurry Rate	Visc	Total N2	pH	Pressure	BH Rate	2% KCL Water	7.5% MCA Acid	30# WaterFrac G	Treated Water	Total Clean Fluid	CRC 20/40	Total Proppant						
								gal	bbl	gal	bbl	gal	bbl	gal	bbl	gal	bbl	lbs	lbs	
1	4190	16.6	30	3649817	7.1	4535	61.1	0	0	0	0	61,202	1,457	7,110	169	68,312	1,626	211,000	68,312	

Planned Recorded	Average						Max		Fluids										Proppants	
	Pressure	Rate	Visc	Total N2	pH	Pressure	Rate	2% KCL Water	7.5% MCA Acid	30# WaterFrac G	Treated Water	Total Clean Fluid	CRC 20/40	Total Proppant						
								gal	bbl	gal	bbl	gal	bbl	gal	bbl	gal	bbl	lbs	Total	
	4190	16.6	30	3649817	7.10	4535	61.1	0	0	0	0	59,443	1,415	3,191	76	62,634	1,491	31,703	211,000	
								0	0	0	0	61,202	1,457	7,110	169	68,312	1,626	211,000	68,312	
																		Weight Tickets	211,000	211,000

\*\* IFS numbers for proppant are taken from software calculations  
 \*\* Proppant is billed from Weight Ticket volumes

CUSTOMER  
LEASE  
FORMATION

DJR Operating  
Bonanza 15  
Dakota

API  
SALES ORDER  
DATE

BFD (lb/gal) 8.44  
BHST (°F) 150

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Treatment Interval	Stage Number	Fluid Description	Stage Description	Proppant Description	Surface Prop Conc (ppg)	BH Prop Conc (ppg)	Actual Clean Volume (gal)	Actual Prop Total (lbs)	Actual Slurry Volume (gal)	Actual BH Volume (gal)	Actual N2 Volume (scf)	Actual Clean Volume (bbls)	Actual Slurry Volume (bbls)	Losurf-3000 (gal)	Cla-Web (gal)	HC-2 (gal)	BE-7 (gal)	GBW-30 (lbs)	Optiflo H.T.E (lbs)	WG-35 (gal)	7.5% MCA Acid (gal)
1	1-0																				
	1-1	30W WaterFrac G	Pre-Pad				7,979		8,028	13,721	148,431		191	0.50	0.50	3.50	0.25	1.00	1.00	30.00	
	1-2	30W WaterFrac G	Pad				21,520		21,632	73,273	1,592,281		515	0.50	0.50	3.50	0.25	1.00	1.00	30.00	
	1-3	30W WaterFrac G	PLF	CRC 20/40	3.19	1.00	5,647	18,670	6,989	19,081	391,331	445	152	0.50	0.50	3.50	0.25	1.00	1.00	30.00	
	1-4	30W WaterFrac G	PLF	CRC 20/40	6.12	2.00	11,448	69,260	14,599	38,188	727,313	1,049	848	0.50	0.50	3.50	0.25	1.00	1.00	30.00	
	1-5	30W WaterFrac G	PLF	CRC 20/40	8.81	3.00	8,205	74,500	10,646	25,489	457,652	1,774	253	0.50	0.50	3.50	0.25	1.00	1.00	30.00	
	1-6	30W WaterFrac G	PLF	CRC 20/40	11.30	4.00	6,403	48,570	9,081	19,864	1,062,752	1,156	216	0.50	0.50	3.50	0.25	1.00	1.00	30.00	
	1-7	Treated Water	Flush				7,110		7,110				169	0.50	0.50		0.25				
	1-8	Treated Water	Shut-In																		
							68,312	211,000	77,485	196,726			1,845								

Fluid Type	Design Total (gal)	Actual Total (gal)
2% RCL Water		
7.5% MCA Acid		
30W WaterFrac G	59,443	61,202
Treated Water	3,191	7,110
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

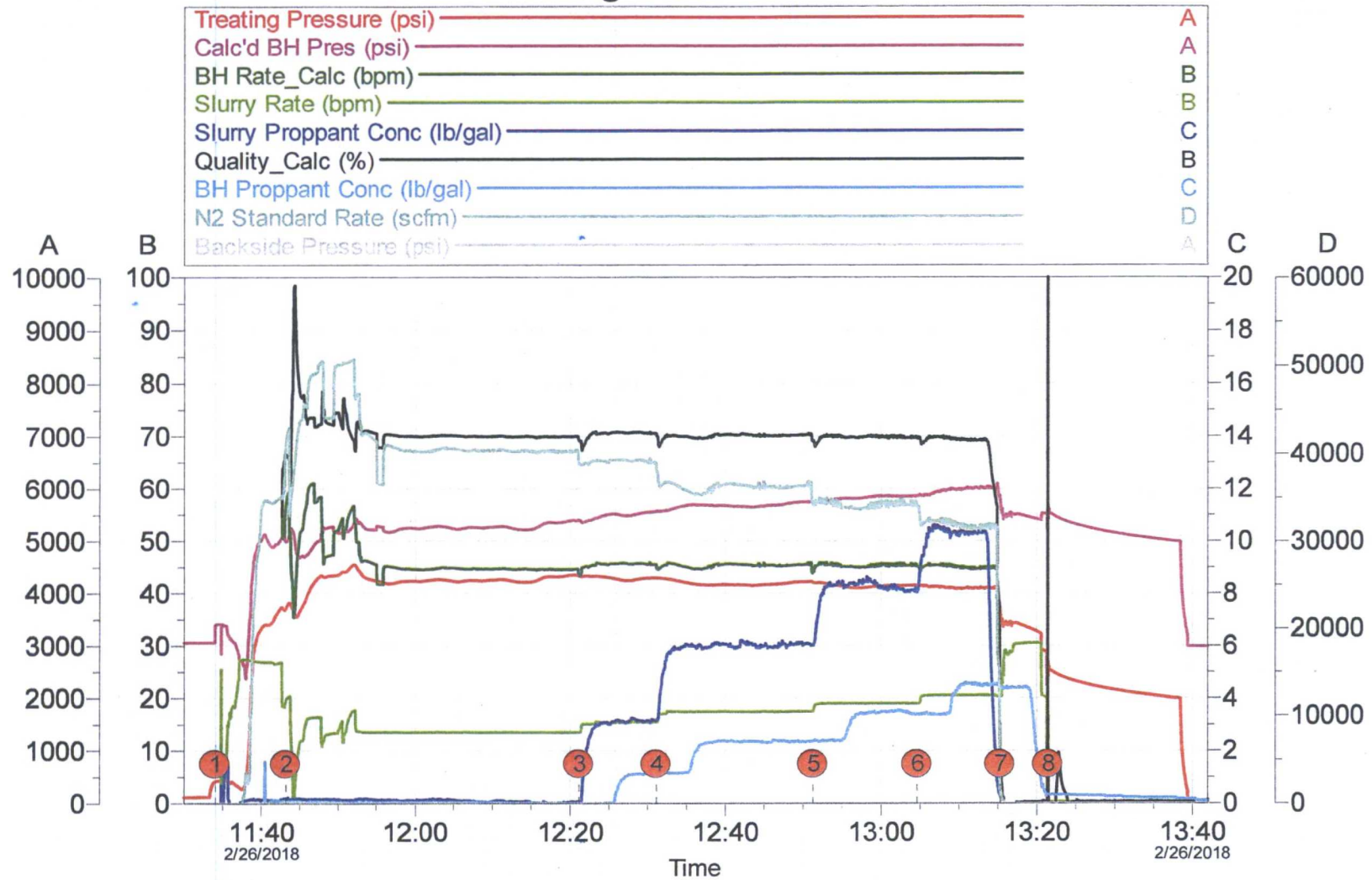
Proppant Type	Calculated Total (lbs)	Ticket Total (lbs)
CRC 20/40	969	211,000
-	-	-
-	-	-
-	-	-
-	-	-

\*\* IFS numbers for proppant are taken from software calculations based on multiple variables  
\*\* Proppant is billed from Weight Ticket volumes

	Losurf-3000 (gal)	Cla-Web (gal)	HC-2 (gal)	BE-7 (gal)	GBW-30 (lbs)	Optiflo H.T.E (lbs)	WG-35 (gal)	7.5% MCA Acid (gal)
Initial Design Material Volume	31	31	208	16	59	59	1,783	
Actual Design Material Volume	34	34	214	17	61	61	1,836	
Physical Material Volume Pumped	29	32	228	14	58	57	1,810	6,800
Physical Material Volume Deviance	-15%	-6%	6%	-18%	-5%	-7%	-1%	#DIV/0!
MicroMotion Volume Pumped	32	32	291	27	59	58	1,836	
MicroMotion Volume Deviance	-6%	-6%	36%	58%	-4%	-5%	0%	



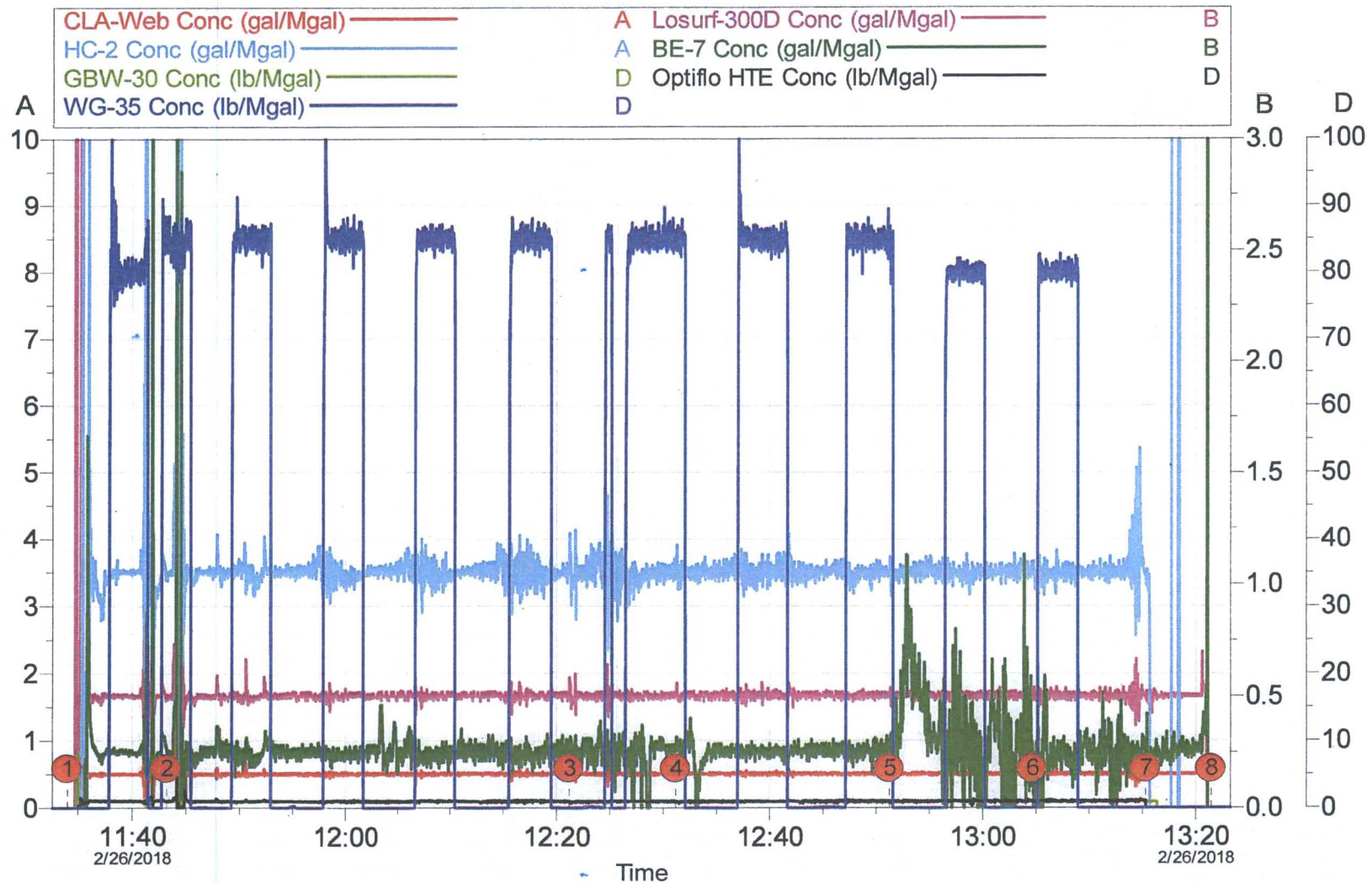
## Treating Chart - Interval 1



Customer: DJ RESOURCES INC	Job Date: 25-Feb-2018	Sales Order #: 0904664457
Well Description: Bonanza 15	UWI: 30-043-21187	SR Engineer: Rene Guerra

HALLIBURTON

## Chemical Chart - Interval 1



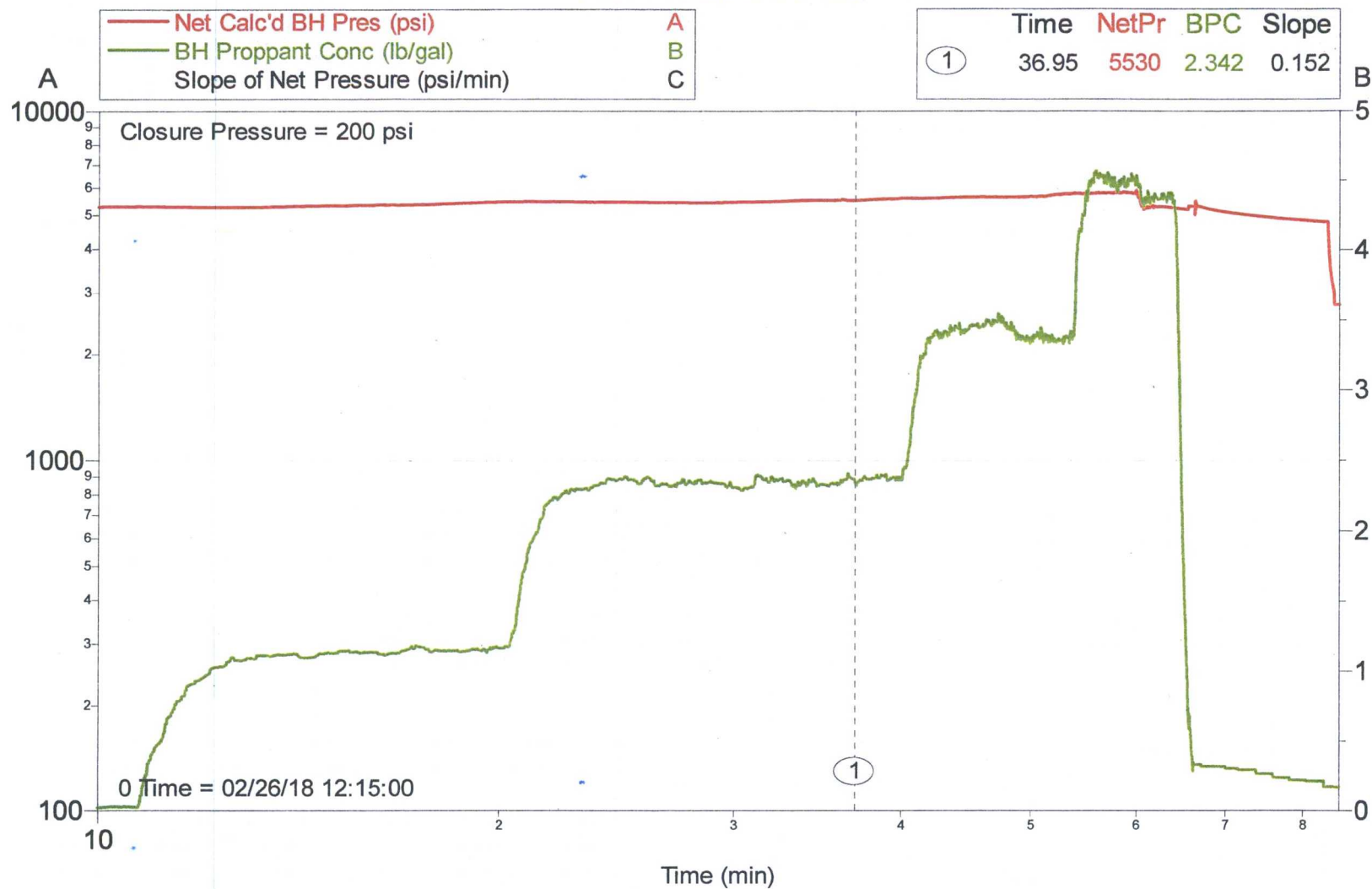
Customer: DJ RESOURCES INC  
Well Description: Bonanza 15

Job Date: 25-Feb-2018  
UWI: 30-043-21187

Sales Order #: 0904664457

HALLIBURTON

# Net Pressure Plot



Customer: DJ RESOURCES INC	Job Date: 25-Feb-2018	Sales Order #: 0904664457
Well Description: Bonanza 15	UWI: 30-043-21187	

HALLIBURTON



DJR Operating  
**Bonanza 15**

Sandoval County, NM

API: 30-043-21187

Stimulation Treatment

**Appendix**

- Planned Design
- Chemical Summary
- Lab Report
- Field QC Report

CUSTOMER  
LEASE  
FORMATION

DJR Operating  
Bonanza 15  
Dakota

API  
SALES ORDER  
DATE

30-043-21187  
904664457  
2/25/2018

8.44  
150

HALLIBURTON

Treatment Interval	Stage Number	Fluid Description	Stage Description	Proppant Description	Prop Conc (lb/gal)	BH Prop Conc (lb/gal)	Surface Clean Rate (lb/min)	Surface Slurry Rate (lb/min)	BH Rate (lb/min)	Design Clean Volume (gal)	Design Slurry Volume (gal)	Design BH Volume (gal)	Design Prop Total (lb)	N <sub>2</sub> /CO <sub>2</sub> Quality (%)	Design N <sub>2</sub> Volume (gal)	Design N <sub>2</sub> Rate (lb/min)	Stage Time (min)	Interval Time (hr:min:sec)	LowpH-3000 (ppm)	Clay-Web (ppm)	HC-2 (ppm)	BE-7 (ppm)	GBW-80 (ppm)	OptiFlow H.T.E. (ppm)	WB-35 (ppm)	7.5% MCA Acid (ppm)	
1	1-1	30W WaterFrac G	Pre-Pad				22.50	22.50	45	8,000	8,000	16,000		50	247,976	29,300	0:08:28	1:43:00									
	1-2	30W WaterFrac G	Pad				13.50	13.50	45	21,600	21,600	72,000		70	1,562,250	41,000	0:38:06	1:34:33	0.50	0.50	3.50	0.25	1.00	1.00	30.00		
	1-3	30W WaterFrac G	PIF	CRC 20/40	3.19	3.00	13.49	15.45	45	5,643	6,460	18,000	18,000	70	882,957	38,500	0:09:57	0:56:27	0.50	0.50	3.50	0.25	1.00	1.00	30.00		
	1-4	30W WaterFrac G	PIF	CRC 20/40	6.12	3.00	13.49	17.74	45	11,443	14,624	35,000	70,000	70	729,848	36,100	0:20:12	0:40:29	0.50	0.50	3.50	0.25	1.00	1.00	30.00		
	1-5	30W WaterFrac G	PIF	CRC 20/40	8.81	3.00	13.48	18.88	45	8,510	11,919	35,000	75,000	70	510,756	34,000	0:15:02	0:26:17	0.50	0.50	3.50	0.25	1.00	1.00	30.00		
	1-6	30W WaterFrac G	PIF	CRC 20/40	11.30	4.00	13.48	20.40	45	4,247	6,428	12,000	48,000	70	240,092	32,000	0:07:30	0:11:15	0.50	0.50	3.50	0.25	1.00	1.00	30.00		
	1-7	Treated Water	Flush				20.25	20.25	45	3,191	3,191	7,092		55	120,907	32,200	0:58:45	0:03:45	0.50	0.50							
	1-8	Treated Water	Shut-In				0.00	0.00	0	0	0	0					0:00:00	0:00:00									
										62,634	72,272	185,092	211,000		3,794,787		0:00:04										

Fluid Type	Design Total (gal)
2% KCl Water	
7.5% MCA Acid	
30W WaterFrac G	59,643
Treated Water	3,191
-	-
-	-
-	-
-	-
-	-

Proppant Type	Design Total (lb)
CRC 20/40	211,000
-	-
-	-
-	-

LowpH-3000 (ppm)	Clay-Web (ppm)	HC-2 (ppm)	BE-7 (ppm)	GBW-80 (ppm)	OptiFlow H.T.E. (ppm)	WB-35 (ppm)	7.5% MCA Acid (ppm)
31	31	208	16	59	59	1,783	

Initial Design Material Volume

LowpH-3000 (ppm)	Clay-Web (ppm)	HC-2 (ppm)	BE-7 (ppm)	GBW-80 (ppm)	OptiFlow H.T.E. (ppm)	WB-35 (ppm)
0.5	0.5	3.3	0.2	0.9	0.9	28.4

Max Additive Rate  
Min Additive Rate

Customer DJR Operating  
 Formation Dakota  
 Lease Bonanza 15  
 API 30-043-21187  
 Date 2/25/2018

**HALLIBURTON**

Production  
 Enhancement

Interval Summary - Chemicals

Interval	Liquid Additives				Dry Additives		
	Losurf-300D	Cla-Web	HC-2	BE-7	GBW-30	Optiflo H.T.E	WG-35
	<i>gal</i>	<i>gal</i>	<i>gal</i>	<i>gal</i>	<i>lbs</i>	<i>Units</i>	<i>lbs</i>
Prime Up	0	0	0	0	0	0	0
1	29	32	228	14	58	57	1810
Total	29	32	228	14	58	57	1810
w/o Prime Up	29	32	228	14	58	57	1810



# HALLIBURTON

## Rockies, Farmington

### Lab Results-PE

#### Job Information

Request/Fluid ID	2056548/1	Rig Name		Date	21/FEB/2018
Submitted By	Rene Guerra	Job Type	Fracturing/Stimulation	Well	
Customer		Location	San Juan	Fluid System	Linear

#### Well Information

Formation	Dakota	Depth MD	7300 ft	BHST	150 degF
Pressure	4000 psi	Depth TVD	6700 ft	Cool Down Temperature	

#### Base Fluid Properties

Viscosity	Polymer Loading	Mix Fluid Amount	1000 ml
-----------	-----------------	------------------	---------

Mix Fluid

#### Fluid Information- Design

Lot No.	Chemical	Conc Unit	Base Fluid	Iteration#1
	WG-35	ppt	30	30
	Lo-Surf 300D	gpt	0.5	0.5
	Cla Web	gpt	0.5	0.5
	BE-7	gpt	0.25	0.25
	HC-2	gpt		3.5
	GBW-30	ppt		1

Iteration Number	Additional Comments
1	Please perform a half life test (following full hydration) using the base fluid with GBW-30 and HC-2

#### Request Comments

DJR Bonanza 15 and Chacon Amigo 17  
Frac is scheduled to begin 2/24/2018  
Water is being brought to the lab 2/22/2018  
Engineer Contact:  
Rene Guerra 970-286-1724,  
Matt Filla 970-250-1978

#### Fluid Results Request ID 2056548/ 1

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### Foam Half Life Testing

	Iteration#1
Test ID	30174650
Initial Fluid Volume (ml)	100
Foam Volume (ml)	220
Foam Half-Life (minutes)	18

### Gel/Hydration Test, Iteration Number:Base Fluid, Request Test ID:30173425

Time (min)	Viscosity (cP)	pH
3	22	8.01
6	23.5	
9	23.5	
12	23.5	

### Water Analysis, Iteration Number:Base Fluid, Request Test ID:30173424

Specific Gravity	pH	Chlorides (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Dissolved Iron (mg/L)	Potassium (mg/L)	Bicarbonates (mg/L)
1.022	8.02	63	168	28.3	1.9	4000	296

Carbonates (mg/L)	Hydroxides (mg/L)	Sulfates (mg/L)	Sodium (mg/L)	TDS (mg/L)	Temperature (°F)	% Water
0	0	1575	0	15170	70.9	100

conductivity 25.7 mS/cm  
color faint brown

### Additional Comments

# HALLIBURTON

## Fann 35 Analysis Data Sheet

Field Test  
Farmington, NM  
505

Customer:	DJR
Location:	Bonanza 15
Interval:	1
Date:	26-Feb-18

Temperature of Test  °F

Fluid:	Linear Gel
--------	------------

Test No: 1  
Submitted By: Rene Guerra

[illegible]

This test was performed in a heat cup on a Fann-35 with an R1-B2 rotor-bob combination at 100 rpm and a Shear rate of 37.7 sec-1.

## Pre Gel

Submitted Location Water			500	mL
Viscosity	WG-35		1.80	grams
	30	cP	75.00	°F

Hydrated

8.1 pH

The following components are mixed in 200.00 mls of hydrated gel.

[illegible]

Buffered

8.0 pH

		Dry Additives			
0.02	gram(s)	GBW-30	1.00	lbs/Mgal	
0.02	gram(s)	Optiflo III	1.00	lbs/Mgal	
				lbs/Mgal	
			--	--	

Lot #

Final

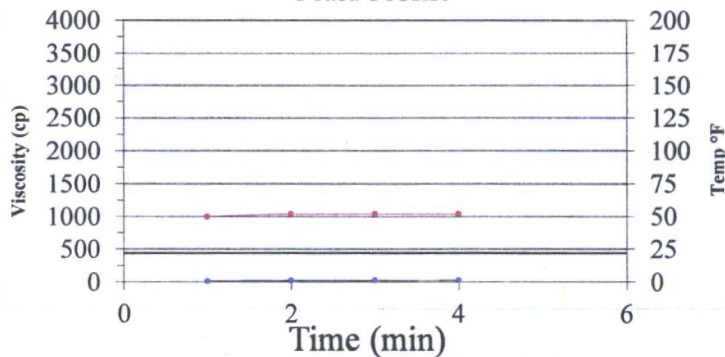
8.0 pH

### Other Additives


### Hydration Test

Time	Visc (cP)	°F
1	15	50
2	22	50
3	28	50
4	30	50

## Fluid Profile



Notes:



**HALLIBURTON**

3:56 pm

DJR Operating  
**Bonanza 15**  
*Intervals 1-1*  
Dakota

Sandoval County, NM  
API: 30-043-21187  
*Prepared for: Phil Varty*  
*February 23, 2018*

Stimulation Treatment  
**Post Job Report**

7.5% MCA Acid Treatment

**Prepared By:**  
Rene Guerra  
Justin Floyd  
505 Crew

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## Engineering Executive Summary

On February 22, 2018 a stimulation treatment was performed in the Dakota formation on the Bonanza 15 well in Sandoval County, NM. The Bonanza 15 was a 216 stage Verticle Plug and Perf Design. The proposed treatment consisted of:

8,150 gallons of 2% KCL Water  
6,800 gallons of 7.5% MCA Acid  
14,950 gallons total fluid

The actual treatment fully completed 1 of 216 stages. 0 stages were skipped, and 0 stages screened out or were otherwise cut short of design. The actual treatment consisted of:

11,765 gallons of 2% KCL Water  
6,800 gallons of 7.5% MCA Acid  
18,565 gallons of Total Fluid

A more detailed description of the actual treatment can be found in the attached reports. The following comments were provided to summarize events and changes to the proposed treatment:

Halliburton is strongly committed to quality control on location. Before and after each job all chemicals, proppants, and fluid volumes are measured to assure the highest level of quality control. Tank fluid analysis, crosslink time, and break tests are performed before each job in order to optimize the performance of the treatment fluids.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Thank you,

Matthew Filla  
Associate Technical Professional  
Halliburton Energy Services

Rene Guerra  
Senior Technical Professional  
Halliburton Energy Services

<u>Interval Summary</u>					
<u>Interval 1</u>					
<b>Bonanza 15</b>					
Date:	2/23/2018				
Start Time:	3:56:00 PM				
End Time:	4:12:00 PM				
Initial Rate (Breakdown):	28.5	bpm			
Initial Pressure (Breakdown):	2365	psi			
Max BH Rate:	53.2	bpm			
Max Pressure:	4108	psi			
Average BH Rate:	45.0	bpm			
Average Slurry Rate:	45	bpm			
Average Pressure:	3070	psi			
Initial Wellhead Pressure:	0	psi			
ISDP:	1549	psi			
Final Fracture Gradient:	0.742	psi/ft			
5 min:	1226	psi			
10 min:	995	psi			
15 min:	843	psi			
Pad BH Volume:	0	gal			
Pad Percentage:	0%	%			
2% KCL Water Volume	11,765	gal	280	bbls	
7.5% MCA Acid Volume	6,800	gal	162	bbls	
Volume	0	gal	0	bbls	
Total Fluid Volume:	18,565	gal	442	bbls	
Pump-In Volume (Wireline Run):	0	gal	0	bbls	
Flush Volume:	7,119	gal	170	bbls	
Interval Status:	Completed				
Comments:					
All acid treatment pumped per design.			Engineer: Rene Guerra		
			Treater: Casey Baggett		
			Supervisor: Jahan Jahan		
			Customer Rep: Lennor Dee		

**Customer** DJR Operating  
**Formation** Dakota  
**Lease** Bonanza 15  
**API** 30-043-21187  
**Date** February 22, 2018



**Stage Summaries**

Interval	Fluids									
	Average		Max		2% KCL Water		7.5% MCA Acid		Total Clean Fluid	
	Pressure	Slurry Rate	Pressure	BH Rate	gal	bbl	gal	bbl	gal	bbl
1	3070	45.0	4108	53.2	11,765	280	6,800	162	18,565	442

	Fluids									
	Average		Max		2% KCL Water		7.5% MCA Acid		Total Clean Fluid	
	Pressure	Rate	Pressure	Rate	gal	bbl	gal	bbl	gal	bbl
Planned					8,150	194	6,800	162	14,950	356
Recorded	3070	45.0	4108	53.2	11,765	280	6,800	162	18,565	442



CUSTOMER  
LEASE  
FORMATION

DJR Operating  
Bonanza 15  
Dakota

30-043-21187  
904664172  
2/22/2018

8.44  
150

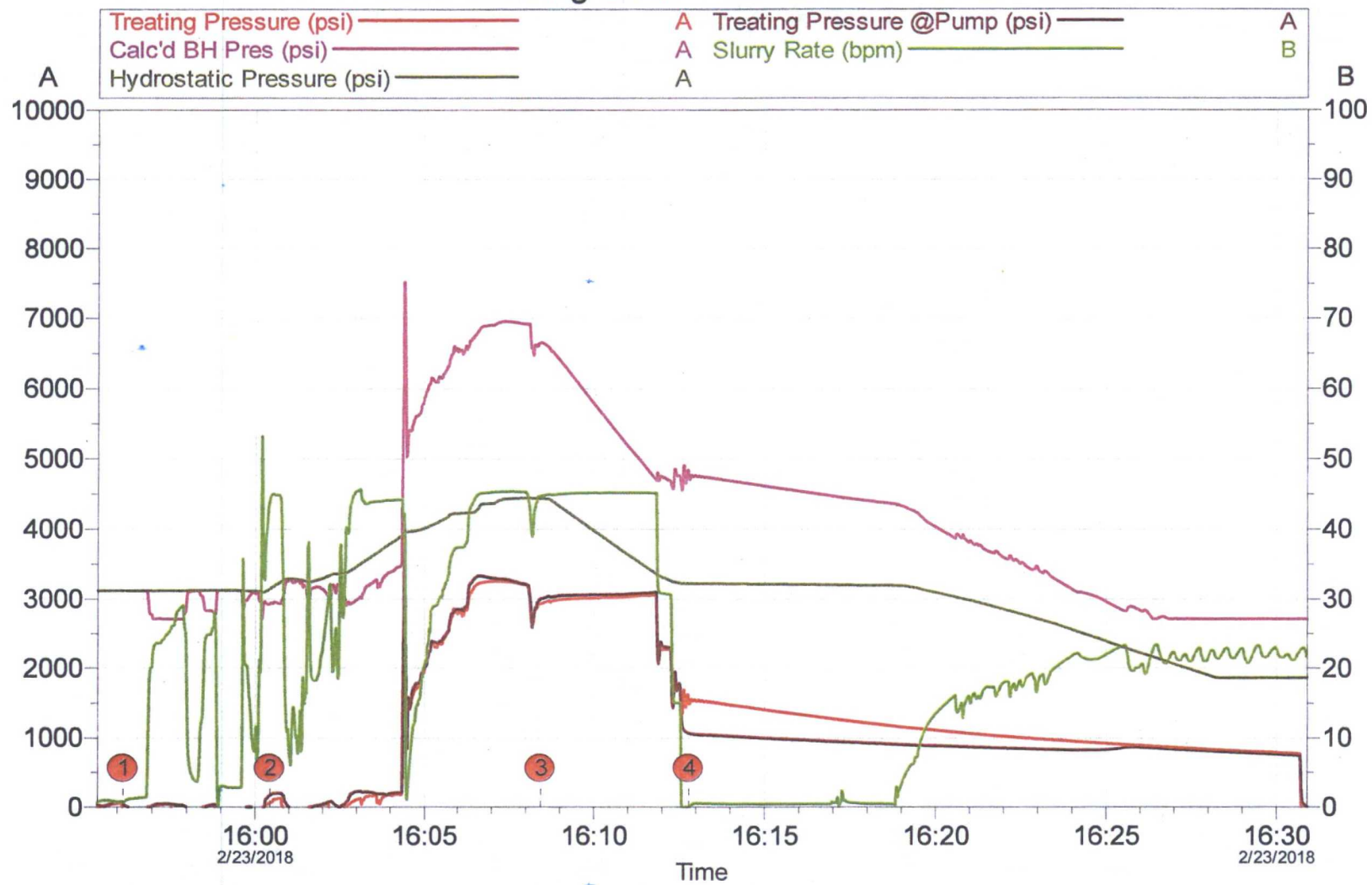
HALLIBURTON

Treatment Interval	Stage Number	Fluid Description	Stage Description	Slurry Rate (bpm)	Surface Slurry Rate (bpm)	BH Rate (bpm)	Design Clean Volume (gal)	Design Slurry Volume (gal)	Design BH Volume (gal)	Actual Clean Volume (gal)	Actual Slurry Volume (gal)	Actual BH Volume (gal)	Actual Slurry Volume (bbls)	Cla-Web (gpt)	FDP-S1176-15 (gpt)	Musol A (gpt)	Fe-1A (gpt)	7.5% MCA Acid (gal)
1	1-0																	
	1-1	2% KCL Water	Load well	50.00	50.00	50	1,000	1,000	1,000	4,646	4,646	4,646	111					
	1-2	7.5% MCA Acid	Acid	50.00	50.00	50	6,800	6,800	6,800	6,800	6,800	6,800	162	2.10	1.18	50.00	10.00	6800.00
	1-3	2% KCL Water	Flush	50.00	50.00	50	7,150	7,150	7,150	7,119	7,119	7,119	170					
							14,950			18,565	18,565	18,565	442					

Fluid Type	Design Total (gal)	Actual Total (gal)	Proppant Type	Design Total (lbs)	Calculated Total (lbs)
2% KCL Water	8,150	11,765	-	-	-
7.5% MCA Acid	6,800	6,800	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

	Cla-Web (gal)	FDP-S1176-15 (gal)	Musol A (gal)	Fe-1A (gal)	7.5% MCA Acid (gal)
Initial Design Material Volume	14	8	340	68	6,800
Actual Design Material Volume	14	8	340	68	6,800
Physical Material Volume Pumped	14	8	340	68	6,800
Physical Material Volume Deviance	-2%	0%			

## Acid Treating Chart - Interval 7264'-7380'



Customer:	DJ RESOURCES INC	Job Date:	23-Feb-2018	Sales Order #:	0904664172
Well Description:	Bonanza 15	UWI:	30-043-21187	Eng	Rene Guerra

HALLIBURTON

**HALLIBURTON**

DJR Operating  
**Bonanza 15**

Sandoval County, NM

API: 30-043-21187

Stimulation Treatment  
**Appendix**

- Wellbore Information
- Planned Design
- Chemical Summary

Customer DJR Operating  
 Formation Dakota  
 Lease Bonanza 15  
 API 30-043-21187  
 Date 2/22/2018  
 Isolation Type Cemented Liner

**HALLIBURTON** | Production  
 Enhancement

Treatment Tubulars					
Size	Description	FUF (gal/ft)	MD Top (ft)	MD Btm (ft)	Volume (gal)
4.5" 11.6#	Casing	0.6528	0	13,350	8,715
			<b>Total</b>	13,350	8,715

Directional Data	
KOP	5025 ft
Avg. TVD	5100 ft
Total MD	13,350 ft

			Sleeve/Perf Depth (ft)		Perforations						
Zone #	Displacement to Top Sleeve/Perf (gal)	(BBLs)	Top	Btm	Zone #	Number of Perf Clusters	Perf Gun Length (ft)	Perf Density (spf)	Total Shots	Phasing (deg)	Overflush Volume (gal)
Toe 1	4742	112.9	7,264	7,380	1	5	1	4	216	120	7,682



CUSTOMER DJR Operating 30-043-21187  
 LEASE Bonanza 15 904664172  
 FORMATION Dakota 2/22/2018

BFD (lb/gal) 8.44  
 BHST (°F) 150

HALLIBURTON  
 Production Services

Treatment Interval	Stage Number	Fluid Description	Stage Description	Surface Clean Rate (bpm)	Surface Slurry Rate (bpm)	BH Rate (bpm)	Design Clean Volume (gal)	Design Slurry Volume (gal)	Design BH Volume (gal)	Stage Time (min)	Interval Time (hh:mm:ss)	Cla-Web (gpt)	FDP-S1176-15 (gpt)	Musol A (gal/Mlbs)	Fe-1A (gpt)	7.5% MCA Acid (gpt)
1											0:07:07					
	1-1	2% KCL Water	Load well	50.00	50.00	50	1,000	1,000	1,000	0:00:29	0:07:07					
	1-2	7.5% MCA Acid	Acid	50.00	50.00	50	6,800	6,800	6,800	0:03:14	0:06:39	2.10	1.18	50.00	10.00	6800
	1-3	2% KCL Water	Flush	50.00	50.00	50	7,150	7,150	7,150	0:03:24	0:03:24					
							14,950	14,950	14,950	0:00:00						

Fluid Type	Design Total (gal)
2% KCL Water	8,150
7.5% MCA Acid	6,800
-	-

Proppant Type	Design Total (lbs)
-	-
-	-
-	-

Cla-Web (gal)	FDP-S1176-15 (gal)	Musol A (gal)	Fe-1A (gal)	7.5% MCA Acid (gal)
14	8	340	68	6,800

Initial Design Material Volume

Customer  
Formation  
Lease  
API  
Date

2/22/2018



Interval Summary - Chemicals

Interval	Liquid Additives				Acid
	Cla-Web	FDP-S1176-15	Musol A	Fe-1A	7.5% MCA Acid
	<i>gal</i>	<i>gal</i>	<i>gal</i>	<i>gal</i>	<i>gal</i>
Prime Up	0	0	0	0	0
1	14	8	340	68	6800
Total	14	8	340	68	6800
w/o Prime Up	14	8	340	68	6800