

# HALLIBURTON

iCem<sup>®</sup> Service

## **K P KAUFFMAN CO INC-EBUS**

Ft. Lupton District, Colorado

### **For: Rick Ramos**

Date: Wednesday, July 22, 2020

### **State**

Weld, STATE 15

KPK State 15

Job Date: Wednesday, July 22, 2020

Sincerely,

**Nick Peterson**

# HALLIBURTON

## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 303209		Ship To #: 303209		Quote #:		Sales Order #: 0906615997					
Customer: K P KAUFFMAN CO INC-EBUS				Customer Rep: Rick Ramos							
Well Name: State			Well #: 15		API/UWI #: 05-123-09444						
Field: Spindle		City (SAP): Frederick		County/Parish: WELD			State: COLORADO				
Legal Description:											
Contractor: UNKNOWN				Rig/Platform Name/Num: WORKOVER RIG							
Job BOM: 7526 7526											
Well Type: OIL & GAS WELL											
Sales Person: HALAMERICA\HB41307				Srcv Supervisor: Nicholas Peterson							
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type											
BHST											
Job depth MD		1,800'			Job Depth TVD						
Water Depth											
Wk Ht Above Floor 5'											
Perforation Depth (MD)		From			To						
Well Data											
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread		Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		8.625	8.097	24				0	840		
Tubing		2.375	1.995	4.7				0	1800		
Casing		4.5	4.052	10.5				0	1850		
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft				Type	Size in	Qty	Make
Perfs	3/8	6		1850							
Retainer	4.5	1		1800							
Perfs	3/8	6		890							
Retainer	4.5	1		840							
Fluid Data											
Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name			Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Squeeze	Premium Cement			40	sack	15.8	1.15	5.0	2	200
Cement Left In Pipe		Amount		50'			Reason			Customer Request	
Fluid Data											

# HALLIBURTON

## Cementing Job Summary

Stage/Plug #: 2										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
1	Squeeze	Premium Cement	275	sack	15.8	1.15	5.0	2	1,375	
Cement Left In Pipe		Amount	50'		Reason			Customer Request		
Fluid Data										
Stage/Plug #: 3										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
1	Squeeze	Premium Cement	10	sack	15.8	1.15	5.0	2	50	
Cement Left In Pipe		Amount	ft		Reason			Shoe Joint		
Mix Water:		pH 6.9	Mix Water Chloride:		200 ppm		Mix Water Temperature:		70 °F	
Cement Temperature:		## °F	Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		70 °F	
Plug Bumped?		N/A	Bump Pressure:				Floats Held?			
Cement Returns:		2 bbls	Returns Density:				Returns Temperature:		## °F	
<b>Comment:</b> Pumped 40 sks 8.2 bbls for Plug 1. Plug 2 pumped 275 sks 56.32 bbls until we got cement returns. Shutdown and pumped 10 sks 2.04 bbls into 4.5" casing to top off well.										

*Summary Report*

Crew: \_\_\_\_\_  
 Job Start Date: 07/22/2020 09:00 AM

Sales Order #: 0906615997  
 WO #: 0906615997  
 PO #: NA  
 AFE # :

<b>Customer:</b> K P KAUFFMAN CO INC-EBUS	<b>Field:</b> Spindle	<b>Job Type:</b> CMT SQUEEZE PERFORATIONS BOM
<b>UWI / API Number:</b> 05-123-09444	<b>County/Parish:</b> WELD	<b>Service Supervisor:</b> Nicholas Peterson
<b>Well Name:</b> State	<b>State:</b> COLORADO	
<b>Well No:</b> 15	<b>Latitude:</b> 40.093170	<b>Cust Rep Name:</b> Rick Ramos
	<b>Longitude:</b> -104.958810	<b>Cust Rep Phone #:</b>
	<b>Sect / Twn / Rng:</b> 36/2N/68W	

<b>Remarks:</b>		
<i>The Information Stated Herein Is Correct</i>	Customer Representative Signature	Date
	Customer Representative Printed Name	

## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **State 15** cement PTA casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

**Approximately 2 bbls of cement were returned to surface.**

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.

Respectfully,

## 2.0 Job Summary

## 3.0 Real-Time Job Summary

### 3.1 Job Event Log

Event	Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event 1	Call Out		Call Out		7/22/2020	04:00:00	USER					CREW CALLED OUT AT 04:00 07/22/2020, REQUESTED ON LOCATION 08:00 07/22/2020. CREW PICKED UP CHEMICALS FROM FT. LUPTON, CO. PUMP 11645460 AND 660 11566182.
Event 2	Pre-Convoy Safety Meeting		Pre-Convoy Safety Meeting		7/22/2020	06:45:00	USER					DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event 3	Crew Leave Yard		Crew Leave Yard		7/22/2020	07:00:00	USER					STARTED JOURNEY MANAGEMENT.
Event 4	Arrive At Loc		Arrive At Loc		7/22/2020	07:30:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB PLUG 1; TUBING SET @ 1,800', 2.375" 4.7 LB/FT, CASING 4.5", 10.5 LB/FT, OH 7.875". DISPLACE WITH FRESH WATER LEAVING 50' OF CEMENT ON TOP OF RETAINER IN 4.5" CASING. RETAINER SET @ 1,800', PERFS SHOT @ 1,850' 6 SHOTS 3/8" PLUG 2 PERFS SHOT @ 890', RETAINER SET @ 840'.

# HALLIBURTON

Customer: K P KAUFFMAN CO INC-EBUS  
 Job: KPK State 15 PTA  
 Case: KPK State 15 | SO#: .906615997

Event 5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/22/2020	07:45:00	USER							HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event 6	Rig-Up Equipment	Rig-Up Equipment	7/22/2020	07:55:00	USER							CREW STAGED EQUIPMENT RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event 7	Rig-Up Completed	Rig-Up Completed	7/22/2020	08:15:00	USER							ALL EQUIPMENT READY FOR JOB.
Event 8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/22/2020	08:30:00	USER	8:31	0:00	19:00	26:20			MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event 9	Start Job	Start Job	7/22/2020	08:41:13	COM5	8:29	0:00	19:00	0:00			BEGIN RECORDING JOB DATA.
Event 10	Test Lines	Test Lines	7/22/2020	08:42:30	COM5	8:43	0:00	11:00	0:70			PRESSURE TESTED IRON TO 3500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,800 PSI, 5TH GEAR STALL OUT @ 2,200 PSI.
Event 11	Pump Spacer 1	Pump Spacer 1	7/22/2020	08:46:17	COM5	8:28	0:00	21:00	0:00			PUMP 16 BBLs OF FRESH WATER SPACER @ 8.33 LB/GAL. PUMP RATE 1.5 BBLs/MIN @ 380 PSI.
Event 12	Mix Cement	Mix Cement	7/22/2020	08:57:04	USER	8:31	0:10	137:00	12:10			MIXED AND SCALED CEMENT.

# HALLIBURTON

Customer: K P KAUFFMAN CO INC-EBUS

Job: KPK State 15 PTA

Case: KPK State 15 | SO#: 906615997

Event 13	Pump Cement	Pump Cement	7/22/2020	09:00:25	COM5	8.33	0.00	28.00	0.00	PUMP 40 SKS OF G @ 15.8 LB/GAL, 1.15 FT3/SK, 5.0 GAL/SK, 8.2 BBL5. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 1.5 BBL5/MIN @ 207 PSI. CALCULATED TOC INSIDE CASING @ 1,750'. CALCULATED HOC IN OPEN HOLE @ 201.97', CALCULATED TOC IN OPEN HOLE @ 1,648.03'.
Event 14	Pump Displacement	Pump Displacement	7/22/2020	09:05:29	COM5	16.79	2.00	42.00	0.00	BEGIN CALCULATED DISPLACEMENT OF 6.0 BBL5 FRESH WATER. PUMP RATE 2 BBL5/MIN @ 150 PSI. PUMPED 6.0 BBL5 LEAVING 50' OF CEMENT IN TUBING AND 50' CEMENT IN 4.5" CASING ON TOP OF RETAINER.
Event 15	Shutdown	Shutdown	7/22/2020	09:07:46	USER	8.34	0.00	27.00	4.40	WIRELINE TOOK OVER WELL TO SHOOT PERFS.
Event 16	Pump Spacer	Pump Spacer	7/22/2020	12:26:13	USER	8.45	0.00	15.00	0.00	PUMPED 6 BBL5 FRESH WATER TO ESTABLISH CIRCULATION @ SURFACE PRIOR TO CEMENTING.
Event 17	Shutdown	Shutdown	7/22/2020	12:34:29	USER	8.33	0.00	41.00	6.40	WAITED ON CUSTOMER TO GET APPROVAL TO CIRCULATE CEMENT TO SURFACE FROM PERF DEPTH OF 890'.

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Created: Wednesday, July 22, 2020

PUMP 275 SKS OF G @ 15.8 LB/GAL, 1.15 FT3/SK, 5.0 GAL/SK, 56.32 BBLS. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 1.5 BBL/S/MIN @ 20 PSI. CALCULATED TOC INSIDE CASING @ 790'. CALCULATED HOC IN OPEN HOLE @ 890', CALCULATED TOC OPEN HOLE @ SURFACE.

Event 19 Pump Displacement Pump Displacement 7/22/2020 14:33:04 COM5 15.97 1.50 138.00 58.40  
BEGIN CALCULATED DISPLACEMENT OF 2.3 BBLS FRESH WATER. PUMP RATE 2 BBL/S/MIN @ 115 PSI. PUMPED 2.3 BBLS LEAVING 50' OF CEMENT IN TUBING AND 50' CEMENT IN 4.5" CASING ON TOP OF RETAINER.

Event 20 Other Other 7/22/2020 14:35:00 USER 8.54 0.00 78.00 2.00  
RIG PULLED TUBING OUT OF HOLE. REMOVED WELL HEAD AND RAN IN 4 JOINTS OF TUBING IN 4.5" TO TOP OFF WELL.

Event 21 Pump Spacer 1 Pump Spacer 1 7/22/2020 15:30:57 COM5 8.47 0.00 8.00 2.00  
PUMPED 2 BBLS FRESH WATER TO ESTABLISH CIRCULATION.

Event 22 Pump Cement Pump Cement 7/22/2020 15:33:12 COM5 8.16 0.00 19.00 0.00  
PUMP 10 SKS OF G-NEAT @ 15.8 LB/GAL, 1.15 FT3/SK, 5.0 GAL/SK, 2.04 BBLS. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 1.5 BBL/S/MIN @ 87 PSI. CALCULATED @ SURFACE.

Event 23 Pump Displacement Pump Displacement 7/22/2020 15:39:00 COM5 16.58 1.60 84.00 8.30  
DISPLACED .5 BBLS TO CLEAN TUBING.

# HALLIBURTON

Customer: K P KAUFFMAN CO INC-EBUS

Job: KPK State 15 PTA

Case: KPK State 15 | SO#: 906615997

Event	24	Shutdown	Shutdown	7/22/2020	15:40:14	COM5	13.86	0.00	38.00	0.00	RIG REMOVED TUBING.
Event	25	Other	Other	7/22/2020	15:50:07	COM5	17.78	0.00	15.00	0.00	PUMPED .1 BBLs CEMENT TO TOP OFF CASING.
Event	26	End Job	End Job	7/22/2020	15:53:30	COM5	9.83	0.00	12.00	0.60	STOP RECORDING JOB DATA.
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	7/22/2020	16:00:00	USER					DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	28	Rig-Down Equipment	Rig-Down Equipment	7/22/2020	16:05:00	USER					RIG DOWN BULK AND MIXING EQUIPMENT.
Event	29	Rig-Down Completed	Rig-Down Completed	7/22/2020	16:30:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	30	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/22/2020	16:45:00	USER					DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	31	Crew Leave Location	Crew Leave Location	7/22/2020	17:00:00	USER					THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

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(v. 5.1.101.0)

Created: Wednesday, July 22, 2020

# HALLIBURTON

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**K P KAUFFMAN CO INC-EBUS**

Ft. Lupton District, Colorado

**For: Rick Ramos**

Date: Friday, July 24, 2020

**State**

Weld, STATE 15

KPK State 15

Job Date: Wednesday, July 22, 2020

Sincerely,

**Nick Peterson**

## Legal Notice

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### Disclaimer:

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. iCem 3D Displacement results are used to understand how fluids intermix during a cement job. Simulation and 3D displacement results are not intended as and should not be used as a replacement for bond logs in determining top of cement. Current 3D model calculations are known to model more volume than the input volume for standard cases due to known calculation improvements required. For rotational cases, the modeled volume will be impacted by the same calculations impacting the standard cases, as well as additional constraints imposed to make the calculation time required operationally feasible. Therefore, until further notice, 3D displacement results should not be used for replacement of a bond log, or used as an identifier of top of cement. HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

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    KPK State 15 Plug 3.png..... **Error! Bookmark not defined.**

    KPK State 15- Plug 1.png..... **Error! Bookmark not defined.**

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    KPK State 15-Plug 2&3.png..... **Error! Bookmark not defined.**

    KPK State 15-Plug 3.png ..... **Error! Bookmark not defined.**

Custom Graphs..... **Error! Bookmark not defined.**

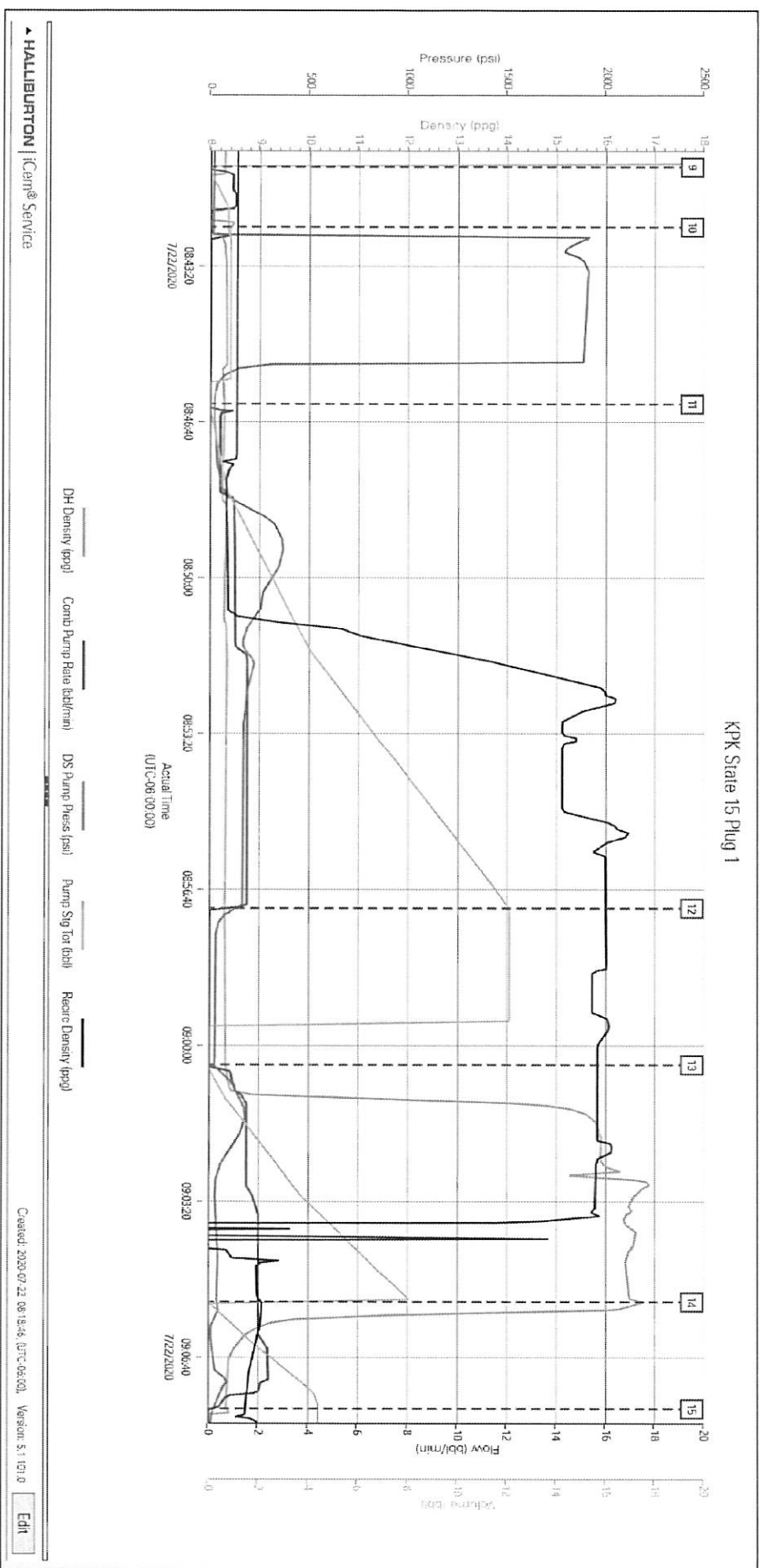
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    Custom Graph..... **Error! Bookmark not defined.**

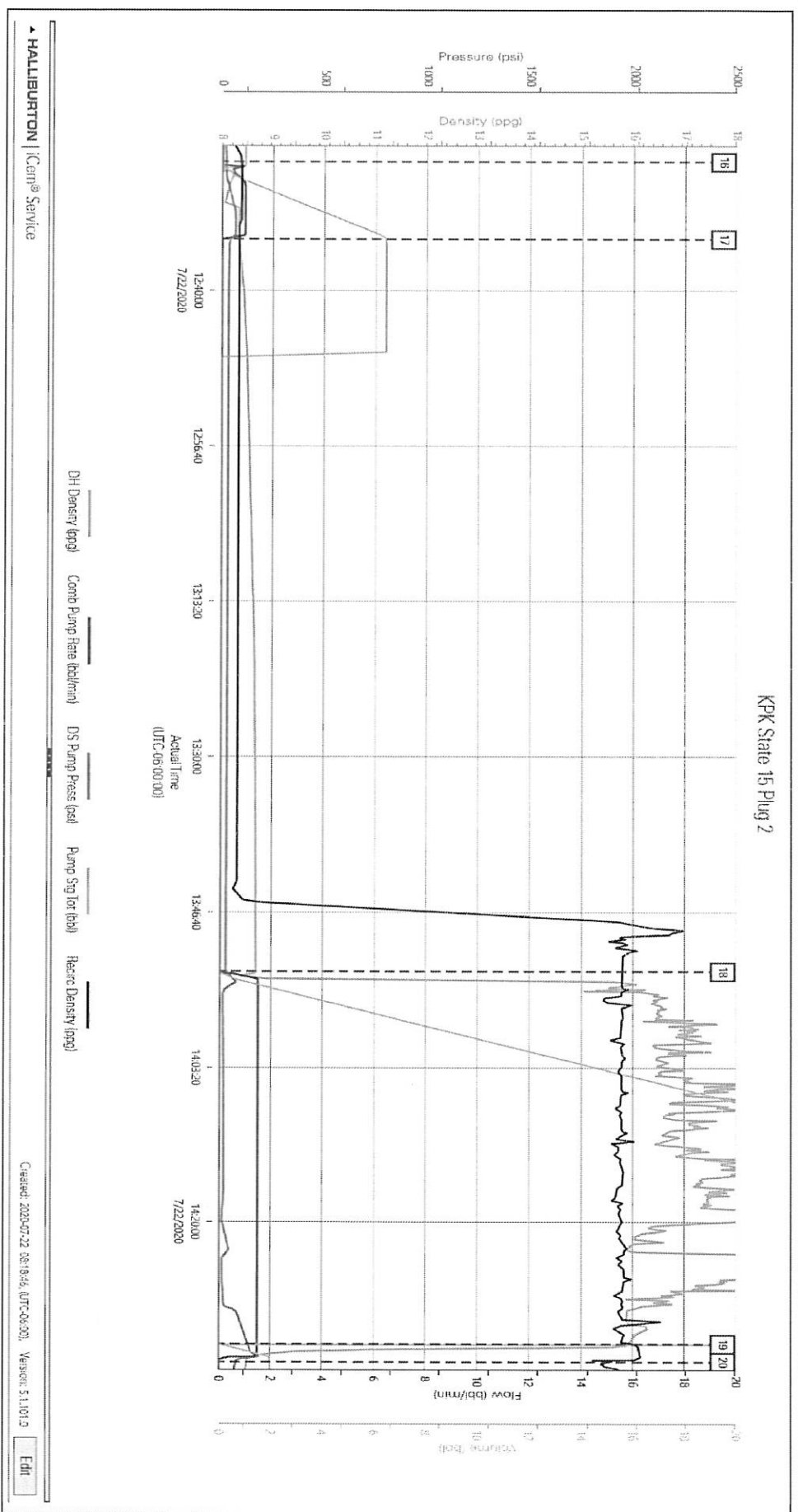
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## 1.0 Attachments

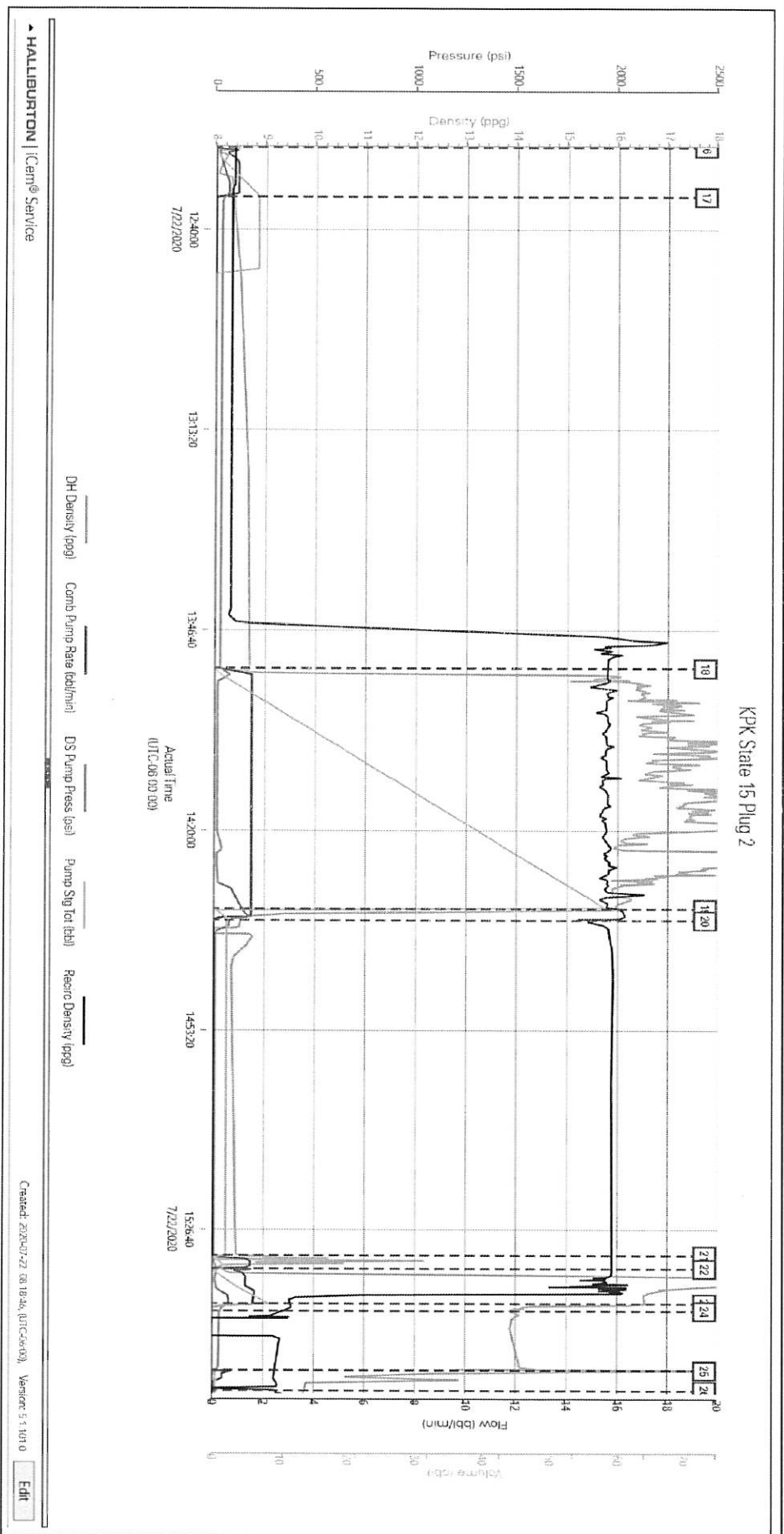
### 1.1 KPK State 15- Plug 1.png



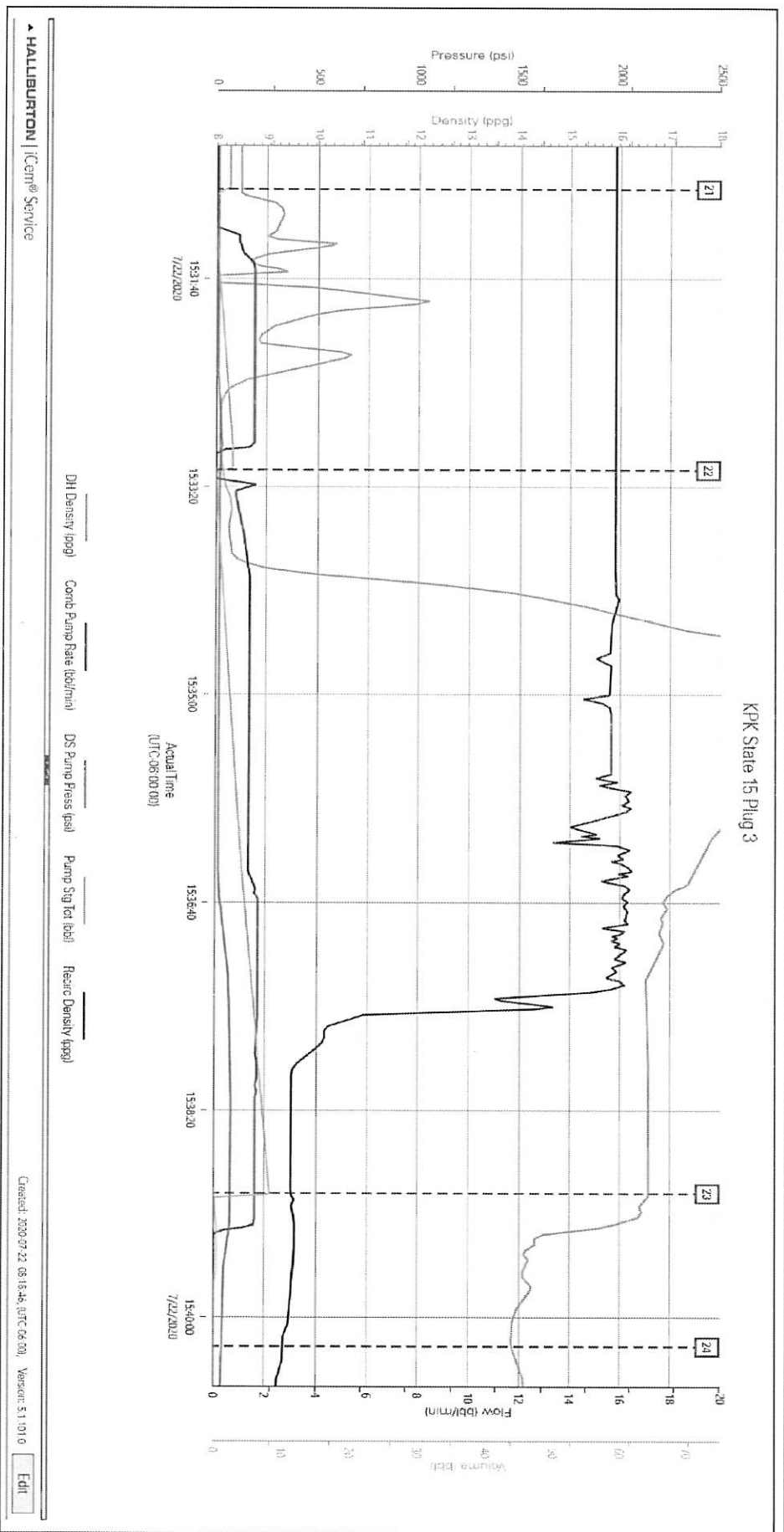
1.2 KPK State 15-Plug 2.png



1.3 KPK State 15-Plug 2&3.png



1.4 KPK State 15-Plug 3.png



# HALLIBURTON

2.0

Customer: K P KAUFFMAN CO INC-EBUS  
Job: KPK State 15 PTA  
Case: KPK State 15 | SO#: 906615997

<b>Field Ticket Number:</b> 906615997		<b>Field Ticket Date:</b> Wednesday, July 22, 2020		<b>Planning Order #:</b> NA	
<b>Bill To:</b> K P KAUFFMAN CO INC-EBUS DONOTMAIL-1675 BRDWAY STE 2800 DENVER CO 80202		<b>Job Name:</b> KPK State #15 PTA <b>Order Type:</b> ZOH <b>Well Name:</b> State 15 <b>Company Code:</b> 1100 <b>Customer PO No.:</b> NA <b>AFE:</b> <b>Shipping Point:</b> Fort Lupton, CO Shipping Point <b>Sales Office:</b> ROCKY MOUNTAINS BD <b>Well Type:</b> OIL & GAS WELL <b>Well Category:</b> Exploration <b>Rig Name/#:</b> WORKOVER RIG			
<b>Ship To:</b> State					

Material	Description	QTY	UOM	Unit Amount	Gross Amount	Discount	Net Amount
7526	CMT SQUEEZE PERFORATIONS BOM 7526	1	JOB		0.00		0.00
1	ZI-MILEAGE FROM NEAREST HES BASE,/UNIT Number of Units	24 1	MI	9.79 USD / 1.00 MI	234.96	\$ 152.72	82.24
16097	SQUEEZE PUMPING CHARGE,ZI FEET/METERS (FT/M) DEPTH	1 1800	EA	7,270.00 USD / 1.00 EA	7,270.00	\$ 4,725.50	2,544.50
3965	HANDLE&DUMP SVC CHRГ, CMT&ADDITIVES,ZI NUMBER OF EACH Unit of Measurement	325 1 EA	CF	5.49 USD / 1.00 CF	1,784.25	\$ 1,159.76	624.49
76400	MILEAGE,CMT MTLs DEL/RET MIN NUMBER OF TONS  SubTotal	12 15.275	MI	3.35 USD / 1.00 MI	614.06	\$ 399.14	214.92
					9,903.27	6437.12	3,466.15
100003685	CEM,CLASS G / PREMIUM, BULK Premium Cement	40	SK	44.26 USD / 1.00 SK	1,770.40	\$ 1,150.76	619.64
100008028	CHEM, SUGAR,GRANULATED, 50LB BAG	100	LB	6.96 USD / 1.00 LB	696.00	\$ 452.40	243.60
2	MILEAGE FOR CEMENTING CREW Number of Units	24 1	MI	5.76 USD / 1.00 MI	138.24	\$ 89.86	48.38
100003685	CEM,CLASS G / PREMIUM, BULK Premium Cement	275	SK	44.26 USD / 1.00 SK	12,171.50	\$ 7,911.48	4,260.02
100003685	CEM,CLASS G / PREMIUM, BULK Premium Cement	10	SK	44.26 USD / 1.00 SK	442.60	\$ 287.69	154.91
<b>Totals</b>					<b>USD</b>		
					<b>\$ 25,122.01</b>	<b>\$ 16,329.31</b>	<b>\$ 8,792.70</b>

Field Ticket Signature

Field Ticket Number: 906615997 Field Ticket Date: Wednesday, July 22, 2020 Planning Order #: NA

Bill To: K P KAUFFMAN CO INC-EBUS DONOTMAIL-1675 BRDWAY STE 2800 DENVER CO 80202

Job Name: KPK State #15 PTA Order Type: ZOH Well Name: State 15 Company Code: 1100 Customer PO No.: NA AFE : Shipping Point: Fort Lupton, CO Shipping Point Sales Office: ROCKY MOUNTAINS BD Well Type: OIL & GAS WELL Well Category: Exploration Rig Name/#: WORKOVER RIG

Ship To: State

THIS OUTPUT DOES NOT INCLUDE TAXES. APPLICABLE SALES TAX WILL BE BILLED ON THE FINAL INVOICE. CUSTOMER ACKNOWLEDGES RECEIPT OF THE MATERIALS AND SERVICES DESCRIBED ABOVE, ON ANY PRECEDING PAGES, AND ATTACHED

Gross Amount Total: \$ 25,122.01 Item Discount Total: \$ 16,329.31 Net Amount Total: \$ 8,792.70 USD

Customer Representative Signature: Rick Ramos Customer Representative

Date: Nicholas Peterson Halliburton Representative

Was our HSE performance satisfactory? (Health, Safety, Environment) Were you satisfied with our equipment? Were you satisfied with our equipment? Yes No Yes No Yes No

Comments:

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