

INVOICE

INVOICE NUMBER: 13280

Mud Master Drilling Fluid Services Ltd.

1000, 639 - 5th Ave. SW

Calgary, AB T2P 0M9

Phone: 403.237.8900

Fax:

403.265.6199

www.mudmaster.ca

info@mudmaster.ca

GST# 103797080

SOLD TO:	
Surge Energy Inc.	
2100, 635 - 8th Ave SW	
Calgary, AB	
T2P 3M3	
VIA: Open Invoice	

INVOICE DATE:	August 19, 2021
PAYMENT TERMS:	Net 30
WELL NAME:	Surge Energy Inc Provost
AFE:	21DR0695
COST CODE:	9310.326
SURFACE:	08-20-039-02 W4M
UWI:	103/08-21-039-02 W4M
RIG:	Star Valley 102

FIELD SUPERVISOR:

Shawn Schuster/Wade Zakaluzny

FLUID SUPERVISOR:

Brian Mielke

SALESPERSON:

Rob Nieuwesteeg

DESCRIPTION	UOM	QTY	UNIT PRICE	AMOUNT
Barite	40 kg	18	\$22.00	\$396.00
Bleach	20 L	6	\$65.00	\$390.00
Calcium Nitrate/Envirofloc	36.28 kg	13	\$44.00	\$572.00
Caustic Soda	22.68 kg	5	\$46.00	\$230.00
Caustic Potash	25 kg	4	\$100.00	\$400.00
Desco II CF	11.34 kg	14	\$100.00	\$1,400.00
Drispac Super Lo	22.68 kg	29	\$210.00	\$6,090.00
Gypsum	25 kg	62	\$11.00	\$682.00
Hyperdrill AF204RD	25 kg	2	\$195.00	\$390.00
Lignite/Humalite	22.68 kg	8	\$12.00	\$96.00
M & D Lube	205 I	1	\$1,400.00	\$1,400.00
Op-T-Con CS 3001	20 L	17	\$135.00	\$2,295.00
Polyxan	25 kg	13	\$250.00	\$3,250.00
Sawdust	6.8 kg	75	\$4.75	\$356.25
Sun Burst Beads	22.7 kg	10	\$107.00	\$1,070.00
Ultra Pac LV	22.68 kg	19	\$167.00	\$3,173.00
Ultra Pac R	22.68 kg	9	\$189.00	\$1,701.00
Walnut Med	22.68 kg	7	\$22.00	\$154.00
Mud Check	each	4	\$500.00	\$2,000.00
Travel Charge	km	150	\$1.00	\$150.00

SUBTOTAL:

\$26,195.25

5% GST:

\$1,309.76

Thank you for your business.

INVOICE TOTAL:

\$27,505.01

If you have any questions regarding this invoice please call 403.237.8900 or email accounting@mudmaster.ca



 Surge Energy Inc.

 Delivery Ticket Summary

 AFE:
 21DR0695

 CC:
 9340-326

 Surface:
 08-20-039-02 W4M

 UWI:
 103/08-21-039-02 W4M

 Rig:
 Star Valley 102

 Spud Date:
 August 13, 2021

 End Date:
 August 13, 2021

 Invoice:
 13280

1000, 639 - 5th Ave SW, Calgary, AB, T2P 0M9 Phone: 403.237.8900 Fax: 403.265,6199 Mud Master Drilling Fluid Services Ltd.

			Mud	Master Su	ummary of T	Mud Master Summary of Transfer, Delivery ar	ery and Credit Tickets	Tickets			ш.	Field Summary			Difference and Co	nd Co
	Transfer Tick	Transfer Ticket Delivery Ticket				Transfer Ticket		Product						Consumption Difference MIM	Value of Consumption Difference for MM	
Description	TT-210809-BJ	TT-210809-BJM DT-210812-BJM			Total Product Received	TT-210813-BJM Out		Consumption per Tickets	Product Pricing	Total for invoicing	Field Summary FT- 20210813-BIM	Product Pricing per Field Summary	Total per Field	Ticketing vs Field	Ticketing vs Field	
Barite	36				36	-18		18	\$22.00	396,00	18	\$19.00	\$342.00	0	\$54.00	
Bleach	13				13	-1		9	\$65.00	390.00	9	\$68,00	\$408.00	0	-\$18.00	
Calcium Nitrate / Envirofloc	23				23	-10		13	\$44.00	572,00	13	\$44.00	\$572.00	0	\$0.00	
Caustic Soda	ហ				2			25	\$46.00	230,00	ın	\$46.00	\$230.00	0	\$0.00	
Caustic Potash	30				30	-26		4	\$100,00	400.00	4	\$110.00	\$440.00	0	-\$40.00	
Desco II CF	26				56	-42		14	\$100,00	1,400.00	14	\$100.00	\$1,400.00	0	\$0.00	
Drispac Super Lo	40				40	Ħ		59	\$210.00	6,090.00	29	\$210.00	\$6,090.00	0	\$0.00	
Gypsum	86				86	96-		62	\$11.00	682.00	62	\$11.00	\$682,00	0	\$0.00	
Hyperdrill AF204RD	Ħ				Ħ	6,		2	\$195.00	390.00	2	\$195.00	\$390.00	0	\$0.00	
Lignite / Humalite	15				15	-1		00	\$12.00	96.00	∞0	\$12.00	\$96.00	0	\$0.00	
M&D Lube	en				6	-5		₽	\$1,400.00	1,400.00	н	\$1,450.00	\$1,450.00		-\$50,00	
Op-T-Con CS-3001	29			- - - - - -	. 67	-50		17	\$135.00	2,295.00	17	\$135,00	\$2,295.00	0	\$0.00	
Polyxan	∞	13	314		21	œρ		13	\$250.00	3,250.00	13	\$250.00	\$3,250.00	0	\$0.00	
Sawdust	225				225	-150		75	\$4.75	356,25	75	\$4.75	\$356,25	0	\$0.00	
Sun Burst Beads	42				42	-32		10	\$107.00	1,070,00	10	\$107.00	\$1,070.00	0	\$0.00	
Ultra Pac LV	24				24	rċ		19	\$167.00	3,173.00	19	\$167.00	\$3,173.00	0	\$0.00	
Ultra Pac R	33				33	-24	-	6	\$189.00	1,701.00	6	\$174.00	\$1,566.00	0	\$135.00	
Walnut Med	66				66	-92	_	7	\$22.00	154.00		\$22.00	\$154.00	0	\$0.00	
Mud Man Travel Charge/km								150	\$1.00	150.00	150	\$1.00	\$150.00	0	\$0.00	
										24,195.25			\$24,114,25		\$81,00	
Mud Check (<4 hours)		8 - 47 - 4 - 4 - 4						4	\$500.00	2.000.00	4	\$500.00	\$2,000.00		00.05	
Mud Check (>4 hours)									\$650.00	0.00		\$650.00	\$0.00		\$0.00	
										2,000.00			\$2,000.00		\$0.00	
Internal Reference BC																
Internal Reference DC																
Internal Reference SUP											·					
Grand Total			_			_				101			-			

FIELD TICKET
TICKET #:

FT-20210813 BJM



1000, 639 - 5th Ave. SW, Calgary, Alberta, T2P 0M9 Telephone (24hour): (403) 237-8500 Fax: (403) 265-6199

AFE / PO NUMBER:	21DR0695
DATE ISSUED:	August 13, 2021
WAREHOUSE:	Blackfalds, Ab
TRUCKER:	FORMULA POWELL
PHONE:	(403) 885-5151

WELL NAME:	Surge 103 Hz Provost
LSD:	8-21-39-2w4m
U.W.L:	
OPERATOR / INVOICE TO:	
RIG NUMBER:	Star Valley Drig #102

Product	Unit Size	Unit Price	Total Received	Total Credited	Total Units Used	Total U (Weig Volun	ht j	End of Well Balance		Price of Received Product	Cre Pr	ice of edited oduct	Price of Used Product	R	Price of emaining Product
Barite	45.5		<u></u>						. ∟	Sub-Total	Sut	-Total	Sub-Total	S	iub-Total
	40 kg	\$ 19.00	36.0	18.0	18.0	720.0	kg	1	5	584,DQ	\$	342.00		\$	*
Bleach	20 L	\$ 68.00	13.0	7.8	5.0	120.0	L)	5	884.00	\$	476.00	\$ 408.00	S	-
Calcium Nitrate	36.29 kg	\$ 44.00	23.0	10.0	13.0	471.8	kg	I	15	1,012,00	5	440.00			
Caustic Potash	25 kg	\$ 110.00	30.0	26,0	4.0	100.0	kg	1	\$	3,300,00		2,860.00			<u>, , , , , , , , , , , , , , , , , , , </u>
Caustic Soda	22.68 kg	\$ 45,00	5.0		5.0	113.4	kg	 	\$	230.00		_,000,00	\$ 230.00		<u>-</u> -
Desco II	11.34 kg	\$ 100.00	56.0	42.0	14.0	158.8	kg		İ						
Gypsum	25 kg	\$ 11.00	98.0	36,0	52.0	1550,0		 	l farmer	5,600.00		4,200.00			-
Humalite / Lignite	45.45 kg	\$ 12.00	15.0				kg		S	1,078.00		396.00			
Hyperdnii AF 204RD				7.0	0.8	363.6	kg		5	180.00		84,00		\$	~
	25 kg	\$ 195,00	11.0	9.0	2.0	50.0	kg	<u> </u>	5	2,145,00	\$	1,755.00	\$ 390,00	S	~
M&D Lube	205 L	\$1,450.00	3.0	2.0	1.0	205.0	L	1	S	4,350.00	\$	2,900,00	\$ 1,450,00	\$	
Nut Shell M	22.68 kg	\$ 22.00	99.0	92.0	7.0	158.8	kg		Is	2,178.00	\$	2,024.00	\$ 154.00		
OptiCan	20 L	\$ 135.00	67,0	50,0	17.0	340.0	L		S	9,045,00		6,750.00			······································
Poly Xan	25 kg	\$ 250.00	21.0	8.0	13.0	325.0	kg	i	1 5	5,250.00		2,000.00			
Sawdust	7.3 kg	\$ 4.75	225.0	150.0	75.0	547.5	kg		5	1,068.75					
Sunburst Beads	22.7 kg	\$ 107.00	42.0	32.0	10.0			<u> </u>	1 1			712.50			-
Ultra Pac Lo						227,0	kg		\$	4,494.00		3,424.00		\$	
	25 kg	\$ 167.00	24.0	5.0	19.0	475.0	ikg		5	4,008.00		835.00	\$ 3,173.00	5	•
Ultra Pac Reg	25 kg	\$ 174.00	33.0	24.0	9.0	225.0	kg		S	5,742.00	\$	4,176.00			*
Drispac Super Lo	22.68 kg	\$ 210,00	40.0	11.0	29.0	657.7	kg		\$	8,400.00		2,310,00			
Travel Charge		\$ 1.00	150.0		150.0				5	150,00			\$ 150.00		······································
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									Γ	Total I	T	otal	Total		Total

Product Total:	\$ 24,114,25
Trucking and Product Handling Total:	<u>s</u> -
Engineering / Supervision Total:	\$ 1,500.00
Combined Drilling Fluids Total:	\$ 25,614,25

	Brian Mielke

Shawn Schusti	er / Wade Zakaluzny	
	······	-

STAMP/COMMENTS:

SURGE ENERGY INC Provost 103/08-21-039-02W4
Surface 8-20-39-2W4 (459.6m N, 245.6m W)
UIW 103/08-21-039-02W4
License #0500717 AFE 21DR0895
Star Valley 102
Billing.oiffield.clean@gmail.com
Rep: Shawn Schuster 306-830-5903
Rep Wade Zakaluzny 403-928-4882
CODE 9310-326 / DRILLING MUD & CHEMICALS



X/



TRANSFER TICKET

T- 210809

BJM - IN

103

1000, 639 - 5th Ave. SW Calgary, Alberta T2P 0M9

Date Shipped:

Origin:

Well Name:

Location: U.W.I.

Operator: Rig Number: Surge 103 Hz Provost 2-17-39-2w4m

103 Surge Energy Inc

Star Valley Drlg #102

Destination:

Well Name:

Rig Number:

Location:

8-21-39-2w4m

U.W.I. Operator:

Surge Energy Inc

Star Valley Drlg #102

Surge 103 Hz Provost

PRODUCT	QUANTITY	UNIT WEIGHT	TOTAL WEIGHT
Barite	36	40.0 kg	1440 kg
Bleach	13	20.0 kg	260 kg
Calcium Nitrate	23	36.4 kg	836.28 kg
Caustic Potash	30	25.0 kg	750 kg
Caustic Soda	5	22.7 kg	113.4 kg
Desco II	56	11.3 kg	635.04 kg
Gypsum	98	25.0 kg	2450 kg
Humalite / Lignite	15	45.5 kg	681.75 kg
Hyperdrill AF 204RD	11	25.0 kg	275 kg
M&D Lube	3	175.0 kg	525 kg
Nut Shell M	99	22.7 kg	2245.32 kg
OptiCon	67	20.0 kg	1340 kg
Poly Xan	8	25.0 kg	200 kg
Sawdust	225	7.3 kg	1642.5 kg
Sunburst Beads	42	22.7 kg	953.4 kg
Ultra Pac Lo	24	25.0 kg	600 kg
Ultra Pac Reg	33	25.0 kg	825 kg
Drispac Super Lo	40	22.7 kg	907.2 kg

	TOTAL WEIGHT: 16679.89 kg
Issued by:	Received / Released by:
Brian Mielke	Sharm Settuster / Bryan Walsh
BM.	



DELIVERY TICKET

DT- 210812

BJM - IN

1000, 639 - 5th Ave. SW Calgary, Alberta T2P 0M9

Date Shipped:

Origin:

Well Name:

Location:

U.W.I.

Operator: Rig Number:

29

31

40

Surge 103 Hz Provost

8<mark>-21-39-2w4m</mark>

103

Surge Energy Inc Star Valley Drlg #102 Destination:

Well Name:

Location:

Mud Master Drilling Fluids Calgary

Ca

U.W.I.

Operator: Rig Number:

PRODUCT	QUANTITY	JNIT WEIGHT	TOTAL WEIGHT
Barite		40.0 kg	kg
2 Bleach		20.0 kg	kg
Calcium Nitrate		36.4 kg	kg
4 Caustic Potash		25.0 kg	kg
Caustic Soda		22.7 kg	kg
Desco II		11.3 kg	kg
Gypsum		25.0 kg	kg
Humalite / Lignite		45.5 kg	kg
Hyperdrill AF 204RD		25.0 kg	kg
M&D Lube		175.0 kg	kg
1 Nut Shell M		22.7 kg	kg
2 OptiCon		20.0 kg	kg
Poly Xan	13	25.0 kg	325 kg
Sawdust		7.3 kg	kg
Sunburst Beads		22.7 kg	kg
Ultra Pac Lo		25.0 kg	kg
7 Ultra Pac Reg		25.0 kg	kg
8 Drispac Super Lo		22.7 kg	kg
9			

TOTAL WEIGHT: 325 kg

Issued by: Received / Released by:

Brian Mielke	Shawn Schuster / Wade Zakaluzny
SIGNATURE	SIGNATURE



TRANSFER TICKET

T- 210813

BJM -OUT

1000, 639 - 5th Ave. SW Calgary, Alberta T2P 0M9

Date Shipped:

Origin:

Well Name:

Location:

U.W.I.

Operator: Rig Number: Surge 103 Hz Provost 8-21-39-2w4m

103

Surge Energy Inc Star Valley Drlg #102 Destination:

Well Name:

Location:

Surge 10 Hz Provost

₫-11-39-2w4m

U.W.I.

Operator: Rig Number: Surge Energy Inc Star Valley Drlg #102 106

PRODUCT	QUANTITY	UNIT WEIGHT	TOTAL WEIGHT
Barite	18	40.0 kg	720 kg
Bleach	7	20.0 kg	140 kg
Calcium Nitrate	10	36.4 kg	363.6 kg
Caustic Potash	26	25.0 kg	650 kg
Caustic Soda		22.7 kg	kg
Desco II	42	11.3 kg	476.28 kg
Sypsum	36	25.0 kg	900 kg
lumalite / Lignite	7	45.5 kg	318.15 kg
lyperdrill AF 204RD	9	25.0 kg	225 kg
1&D Lube	2	175.0 kg	350 kg
lut Shell M	92	22.7 kg	2086.56 kg
OptiCon	50	20.0 kg	1000 kg
Poly Xan	8	25.0 kg	200 kg
Sawdust	150	7.3 kg	1095 kg
Sunburst Beads	32	22.7 kg	726.4 kg
Jitra Pac Lo	5	25.0 kg	125 kg
Jitra Pac Reg	24	25.0 kg	600 kg
Orispac Super Lo	11	22.7 kg	249.48 kg

TOTAL WEIGHT: 10225.47 kg

Shawn Schuster / Wade Zakaluzny

DTV



DELIVERY TICKET

DT-210812 BJM

1000, 639 - 5th Ave. SW Calgary, Alberta T2P 0M9

Surge 103 Hz Provost

8-21-39-2w4m

Date Shipped:

Origin:

Location:

U.W.I.

Operator: Rig Number:

Well Name:

103

Surge Energy Inc Star Valley Drig #102 Destination:

Well Name:

Location:

Mud Master Drilling Fluids Calgary

U.W.I.

Operator:

Rig Number:

PRODUCT	QUANTITY	UNIT WEIGHT	TOTAL WEIGHT
Barite Sarite		40.0 kg	kg
Bleach		20.0 kg	kg
Calcium Nitrate		36.4 kg	kg
Caustic Potash		25.0 kg	kg
Caustic Soda		22.7 kg	kg
Desco II		11.3 kg	kg
Sypsum	·	25.0 kg	kg
lumalite / Lignite		45.5 kg	kg
łyperdrili AF 204RD		25.0 kg	kg
M&D Lube		175.0 kg	kg
Nut Shell M		22.7 kg	kg
OptiCon		20.0 kg	kg
Poly Xan	13	25.0 kg	325 kg
Sawdust		7.3 kg	kg
Sunburst Beads		22.7 kg	kg
Jitra Pac Lo		25.0 kg	kg
Jitra Pac Reg		25.0 kg	kg
Prispac Super Lo		22.7 kg	kg



TOTAL WEIGHT: 325 kg Issued by: Received / Released by: Brian Mielke Shawn Schuster / Wade Zakaluzny

DRILLING FLUIDS REPORT (WBM) REPORT NUMBER:

WELL NAME: U.W.L: OPERATOR: OPERATOR REP: PHONE NUMBER: RIG NUMBER: RIG MANAGER: PHONE NUMBER:

Surge 103 Hz Provost 103 Surge Energy Inc Shawn Schuster / Wade Zakaluzzny (306) 830-5903 Star Valley Dfig #102 Daryl Johnson

B.H.L: 8-21-39-2w4m
LSD: 8-20-39-2w4m
DATE: August 11, 2021
SPUD DATE: August 9, 2021
DAYS FROM SPUD: 2
WAREHOUSE: BLACKFALDS, AB
TRUCKER: Formula Powell
PHONE: (403) 885-5151



1000, 639 - 5th Ave. SW, Calgary, Alberta, T2P 0M9 Telephone (24hour): (403) 237-8900 Fax: (403) 265-6199

Interval Ho	1-1	**				CS ANALY		1				PRESSURE			PUMP DATA		#1	#2
HWDP	ole (mm) \ 205	Wash (vol %)	Hole (Adjusted 205.00	OD (mr 102	n)	ID (mm) 63	Length (m) 103	A.Vel.(m/min) C. Vel (m/min) 87	Flow Pro		nn,kPa 26	Pipe,kPa 843	Make Model	-		Grixmax 1200	Emsco
HWDP	200	10,00%	209.76	102	\pm	63	458	65	85	LAMI		103	3747	Liner (1300	F-1000 139,7
DP DUA	200	10.00%	209.76	102	T	83	409	65	85	LAMI		92	988	Stroke	(mm)		304.8	254
BHA	200	10.00%	209,76	102	-	83	40	65	85	LAMI		9	97		t (L/stk)		14.01	11.67
				+-	+			1		-			-	SPM Output	t (m³/min)		61 1.	73 707
														Pressu	ure (kPa)		11	1800
				<u> </u>			 	CASING	DESIGN		l DEVI	ATION SUR	N/EV	Press.i	loss@bit		kPa √m³	1159 1102
FLUID MAN		AND VOLU	ME SUMMA	RY (VOLU	JMES	IN m*)	Туре	OD(mm)	ID(mm)	Set @ (m)		ey (deg)	83		e to Bit		nin)	2.4
ACTIVE SYST ank Volume;		-		<u> </u>			Surf	219	206	103		th (deg.)	83,0	Bottorr			nin)	15.5
ank volume; lole Volume;	37.0						Inter						739,00 1010,00		ne to Suction ation time		nin) nin)	21.7 39.6
Annular Volume:	26,5			 			Inter				Бери	(ITAVIO).	1010.00		FORMATION		1111)	39,0
ipe Capacity:	4.2										Number:	1	Hou		11 '		Nozzk	
otal Active: FLUID ADDIT	67,7	FLUID LO	SSES	 			Liner top Liner	1			Make: Type:	Ulterra C513S			165 2-9	11.1 1		11.1 11
revious Addition	is: F	Previous Los	ses:								Size(mm):	200		el. m/s:	41.91	17.1		
Daily Additions:		Daily Hole Lo					O.H.	200		907	Depth In:	103	TFA	(mm²)	678,60			
Total Additions:		Daily Surf. Lo Daily Total Lo		-				RESSURE S (kPa)		PRODUCT		UNITSI	ATERIAL	USAGE	USAGE	BALANG	TE 61	UB-TOTAL
		Accum. Int. Lo						063	CALCIUM N			36.3 kg		THOL	13	10	1	OBTIOIAL
31T 41.4		DLIDS CONT						HRS				25 kg			62	36		
Shaker#1 Shaker#2	Derrick Derrick	SCRE		230	230			230	OPTICON	L AF 204RD		25 kg 20 L	<u> </u>		3	9 64		
Shaker#3	Domoit	SCRE		-50		<u>-</u>			SAWDUST			7.3 kg			75	150		
Shaker#4		SCR	EENS		-				ULTRA PAC			25 kg			1	32		
Centrifuge #1 Centrifuge #2		Precision Precision		kg/m³) kg/m³)	1060			740 740	TRAVEL CH	ARGE		1	_		50		-	
		. 1000011		kg/m³)			kg/m³)	, -70	1					-				
			OF(kg/m³)		UF (kg/m³)		1								_	
	CHE	WE RENT WELL	LL DESIGN				ONTAL JILD		<u> </u>			1	\perp			-		
	COR	CURRENT F	ORMATION	:			KY (SS)											
			TACTIVITY		RIШ	NG AHEAD	- BUILD SE	CTION	T									
	ACTIVE	SYSTEM F	LUID TYPE ID PROPER		-k-I	#1	OLYMER #2	#3	ļ			ļ						
PRESENT DE	PTH	FLOI			VD	739	π∠	#3	1			+	+			1		
					MD	1010			1									
TIME SAMPLE SAMPLE POIL					-	11:00 SHAKER	-		<u> </u>		-	+		-T			_	
FLOWLINE TE	EMPERATI	JRE		de		33	 		 -			DA	ALY PRO	DUCTC	OST	\$	-	2,629,2
FUNNEL VISC	COSITY				s/L	50						EN	NGINEER	ING COS		\$		500.0
PRESSURE O				kg ve-		1070 10.50		ļ					REVIOUS		770.02	\$		
pH PRESSURE G	NOUS IN			kPa	m111	9.5	 	1	 		DAILY AC				T TO DATE			3,129.2
RHEOMETER	READING	is		600 :		50		İ	ACTIVIT	v.	2							
				300 1		32		1	1	pud at 2300) bec							
				200 r		26 20				Drill surface		03 m rur	י רכם רו	ement =	at 0630 br	s Ninnia	un nres	ccura
				60 r	man					k up tools.								
				30 г	pm			1	1									
)		m.									
					mgm	3				Drill to 787	m with fl	oc water.	Mud u	on the	e fly, drill b	ouild sect	ion.	
GEL STRENG	STHS			3 r 10 sec. (1	pm Pa)	3 1.5			Aug 11;			oc water.	Mud u	on the	e fly, drill b	ouild sect	ion.	
GEL STRENG	THS			3 r 10 sec. (1 10 min. (1	rpm Pa) Pa)	3 1.5 3			Aug 11;	Drill to 787 MENDATIO		oc water.	Mud u	on the	e fly, drill b	ouild sect	ion.	
				3 r 10 sec. (1 10 min. (1 30 min. (1	pm Pa) Pa) Pa)	3 1.5 3 5			Aug 11;	MENDATIO	NS:							
PV @ 32 de YP @ 32 de	g.C			3 r 10 sec. (1 10 min. (1 30 min. (1 mP	pm Pa) Pa) Pa)	3 1.5 3 5 18 7.0			Aug 11; RECOM Maintai	VIENDATIO n Visc at 40	NS: - 43 s/l w	ith PolyXa	ın mixe	dat1s	xs over 1 c	circulatio	n.	
PV @ 32 de YP @ 32 de n	g.C			3 r 10 sec. (1 10 min. (1 30 min. (1	rpm Pa) Pa) Pa) 'a*s	3 1.5 3 5 18 7.0 0.643			Aug 11; RECOMI Maintair IF VISC 6	MENDATIO n Visc at 40 limbs from	NS: - 43 s/l w drilling sł	ith PolyXa ales to 45	ın mixe	dat1s	xs over 1 c	circulatio	n.	over 1
PV @ 32 de YP @ 32 de	eg.C			3 r 10 sec. (1 10 min. (1 30 min. (1 mP	Pa) Pa) Pa) Pa) Pa's Pa	3 1.5 3 5 18 7.0 0.643 2,956			Aug 11; RECOMI Maintair IF VISC 6	VIENDATIO n Visc at 40	NS: - 43 s/l w drilling sł	ith PolyXa ales to 45	ın mixe	dat1s	xs over 1 c	circulatio	n.	over1
PV @ 32 de YP @ 32 de n k API FLUID LO FILTER CAKE	eg.C eg.C	SS		3 r 10 sec. (I 10 min. (I 30 min. (I mP	Pa) Pa) Pa) Pa) Pa) Pa's Pa Dise min	3 1.5 3 5 18 7.0 0.643			Aug 11; RECOMI Maintair IF VISC of circ thru	MENDATIO n Visc at 40 limbs from chem bbl a	NS: - 43 s/l w drilling sh as require	ith PolyXa ales to 45 d.	an mixe 5 s/I or	d at 1 s over, lo	xs over 1 c	circulatio ixing Des	n. co, 2 sxs	
PV @ 32 de YP @ 32 de n k API FLUID LO FILTER CAKE SAND	eg.C eg.C	ss		3 r 10 sec. (I 10 min. (I 30 min. (I mP	Pa) Pa) Pa) Pa) Pa) Pa Pa bise min mm	3 1.5 3 5 18 7.0 0.643 2,956 5.6			Aug 11; RECOMI Maintain IF VISC of circ thru Maintain	MENDATIO	NS: - 43 s/l w drilling sh as require	ith PolyXa ales to 45 d.) cc with [an mixe 5 s/I or	d at 1 s over, lo Super L	exs over 1 converted to the second se	circulatio ixing Des ver 1 circ	n. co, 2 sxs as requ	ired.
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PV@ 32 de YP@ 32 de n k API FLUID LO FILTER CAKE SAND OIL WATER RETC	eg.C eg.C SS THICKNE	SS		3 r 10 sec. (l 10 min. (l 30 min. (l mP	Pa) Pa) Pa) Pa) Pa) Pa's Pa bise min mm % % %	3 1.5 3 5 18 7.0 0.643 2.956 5.6 1.6			Aug 11; RECOMI Maintain IF VISC of circ thru Maintain We will	MENDATIO	NS: - 43 s/l w drilling sl as require at 5.0 - 6.0	ith PolyXa vales to 45 d.) cc with E velf until it	an mixe 5 s/l or Orispac t is gone	d at 1 s over, lo Super L e, then	exs over 1 conver by mi Lo, 2 sxs ov switch bac	circulatio ixing Des ver 1 circ ck to Ultr	n. co, 2 sxs as requ aPac LV	ired.
PV @ 32 de YP @ 32 de n k API FLUID LO FILTER CAKE SAND OIL WATER RETC TOTAL SOLID MBT	eg.C eg.C SS THICKNES	SS		3 r 10 sec. (I 10 min. (I 30 min. (I mP mL/30 r mL/30 r mL/30 r mL/30 r mL/30 r mL/30 r kg	rpm Pa) Pa) Pa) Pa) Pa) Pa's Pa Pa pisse min mm % % % /m³	3 1.5 3 5 18 7.0 0.643 2.956 5.6 1.6			Aug 11; RECOMI Maintain IF VISC of circ thru Maintain We will Maintain	MENDATIO n Visc at 40 limbs from chem bbl a n fluid loss a use the Dris	NS: - 43 s/l w drilling sl as require at 5.0 - 6.0 spac by its	ith PolyXa vales to 45 d. Occ with E velf until it th Caustic	en mixe 5 s/l or Orispac t is gone	d at 1 st over, lo Super L e, then:	exs over 1 conver by mi Lo, 2 sxs over switch back circ as requ	circulatio ixing Des ver 1 circ ck to Ultr	n. co, 2 sxs as requ aPac LV	ired.
PV @ 32 de YP @ 32 de n k API FLUID LO FILTER CAKE SAND OIL WATER RETC TOTAL SOLID MBT HIGH GRAVIT	eg.C eg.C SS THICKNES DRT SS			3 r 10 sec. (l 10 min. (l 30 min. (l mP Pc mL/30 r l	pm Pa) Pa) Pa) Pa) Pa) Pa Pa Pa Dise min mm % %	3 1.5 3 5 18 7.0 0.643 2.956 5.6 1.6			Aug 11; RECOMI Maintain IF VISC of circ thru Maintain We will Maintain	MENDATIO n Visc at 40 limbs from chem bbl a n fluid loss a use the Dris n pH at 10.0	NS: - 43 s/l w drilling sl as require at 5.0 - 6.0 spac by its	ith PolyXa vales to 45 d. Occ with E velf until it th Caustic	en mixe 5 s/l or Orispac t is gone	d at 1 st over, lo Super L e, then:	exs over 1 conver by mi Lo, 2 sxs over switch back circ as requ	circulatio ixing Des ver 1 circ ck to Ultr	n. co, 2 sxs as requ aPac LV	ired.
PV @ 32 de YP @ 32 de n k API FLUID LO FILTER CAKE SAND OIL WATER RETC TOTAL SOLID MBT HIGH GRAVIT HIGH GRAVIT LOW GRAVIT	eg.C sss: THICKNE: DRT ss: Y SOLIDS Y SOLIDS Y SOLIDS			3 r 10 sec. (i 10 min. (i 30 min. (i mP Pc mL/30 i i 1 m	pm Pa) Pa) Pa) Pa) Pa's Pa Pa Dise min mm % % %	3 1.5 3 5 18 7.0 0.643 2.956 5.6 1.6			Aug 11; RECOMI Maintain IF VISC of circ thrue Maintain We will Maintain on your	MENDATIO n Visc at 40 limbs from chem bbl a n fluid loss a use the Dris n pH at 10.0	NS: - 43 s/l w drilling sh as require at 5.0 - 6.6 spac by its 0 - 10.5 wi ch are con	ith PolyXa vales to 45 d. Occ with D elf until it th Caustic sistantly	on mixe os/l or Orispac t is gone t 1 sxs 1.0 low	d at 1 st over, lo Super L e, then s over 1 c er than	exs over 1 conver by midels, 2 sxs over switch backering as required as requir	circulatio ixing Des ver 1 circ ck to Ultr uired, W	n. co, 2 sxs as requ aPac LV e need p	ired. • oH higher
PV @ 32 de YP @ 32 de n k API FLUID LO FILTER CAKE SAND OIL WATER RETC TOTAL SOUID MBT HIGH GRAVIT HIGH GRAVIT LOW GRAVIT LOW GRAVIT	eg.C eg.C SS THICKNES OPRT SS Y SOLIDS Y SOLIDS Y SOLIDS Y SOLIDS Y SOLIDS			3 r 10 sec. (I 10 sec. (I 10 sec. (I 10 min. (I 30 min. (I 10 min.	Pm Pa) Pa) Pa) Pa) Pa's Pa Dise min mm % % % /m³ Ime /m³ Ime /m³	3 1.5 3 5 18 7.0 0.643 2.956 5.6 1.6 95.7 4.3 21.0			Aug 11; RECOMI Maintaii IF VISC c circ thru Maintaii We will Maintaii on your	MENDATIO To Visc at 40 alimbs from them bbl at 110 and the Dris To Fill at 10.0 papers while	NS: - 43 s/l w drilling sh as require at 5.0 - 6.6 spac by its 0 - 10.5 wi ch are con	ith PolyXa vales to 45 d. Occ with D elf until it th Caustic sistantly	on mixe os/l or Orispac t is gone t 1 sxs 1.0 low	d at 1 st over, lo Super L e, then s over 1 c er than	exs over 1 conver by midels, 2 sxs over switch backering as required as requir	circulatio ixing Des ver 1 circ ck to Ultr uired, W	n. co, 2 sxs as requ aPac LV e need p	ired. • oH higher
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PV ② 32 de PV ② 32 de R R R API FLUID LO FILTER CAKE SAND OIL WATER RETK TOTAL SAUD HIGH GRAVIT LOW GRAVIT BICARBONAT FREE LIME TOTAL HARD CALCIUM ION MAKE UP WATE MAKE UP WAT	SS THICKNESS Y SOLIDS Y SOLIDS Y SOLIDS Y SOLIDS Y SOLIDS Y SOLIDS IDS IDS IDS IDS IDS IDS IDS IDS IDS	Pf Mf Mf Strine/silicate A Str		10 Sec. (1) 10 Sec. (1)	PPA) Pa) Pa) Pa) Pa) Pa) Pa) Pa) Pa's Pa Pa's Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa	3 1.5 3 5 18 7.0 0.643 2.956 5.6 1.6 1.6 95.7 4.3 21.0 4.28 111.28 90.28 0.20 0.60 244 40 40 40 1400	ENT		Aug 11; RECOMI Maintail IF VISC of circ thru Maintail On your **** Fc over 60 Tourly, 2 Density, Run wat *** Not Today; A NOTE: C TH BEREAKDO 19 STUC 20 DIREC 21 SAFE 22 MIXL 23 TIGHT 24 CIRC 25 MISC.	MENDATIO In Visc at 40 Illimbs from chem bbl a fluid loss a use the Dris in pH at 10.0 papers while revery 100 minutes. And 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as require; Please readd 1 pail of low as posser as required to the low as posser as required to the low as posser as read as rea	NS: - 43 s/l w drilling st as require at 5.0 - 6.6 spac by its 0 - 10.5 wich are cool of m of new feet to main cord all m f Opticon slim hole of the state of th	ith PolyXa hales to 45 d. Occ with E elf until it th Caustic sistantly I hole drill wenly over entrifuges entrifuges to used f	on mixe 5 s/l or 1 sxs 1 1 sxs 1 1 olow 1 led, add 1 circ. 1 ran at 1 me. Ac 1 or cutt 1 circ. 2 8	d at 1 s. over, lo Super Le, then over 1 c at 1 pail time all time ald waterings clearly seed to the seed of the s	exs over 1 conver by mit of the converted of the converte	ver 1 circulation Des ver 1 circulation Des	as required as req	ired. OH highenction

The information contained in this report represents our best judgment based on industry experience, it is solely intended to aid our customer without risk of liability for any loss which may result from its use, in addition, nothing contained herein shall be construed as a recommendation to use any product with existing patents covering any material or its applications.

DRILLING FLUIDS REPORT (WBM) REPORT NUMBER: 3

WELL NAME: U.W.L: OPERATOR: OPERATOR REP: PHONE NUMBER: RIG NUMBER: RIG MANAGER: PHONE NUMBER:

Surge 103 Hz Provost 103 Surge Energy Inc P: Shawn Schuster / Wade

103 Surge Energy Inc Shawn Schuster / Wade Zakaluzny (306) 830-5903 Star Valley Drig #102 Daryl Johnson B.H.L.: 8-1 LSD: 8-2 DATE: AL SPUD DATE: AL DAYS FROM SPUD: WAREHOUSE: BL TRUCKER: FO PHONE: (44

8-21-39-2w4m 8-20-39-2w4m August 12, 2021 6: August 9, 2021 4 SPUD: 3 8: BLACKFALDS, AB Formula Powell (403) 885-5151



1000, 639 - 5th Ave. SW, Calgary, Alberta, T2P 0M9 Telephone (24hour): (403) 237-8900 Fax: (403) 265-6199

PHONE INC	OMBLIK.	_			PHO		(403) 885-5	101									
Interval	Wola (mm)	Mach (rel 0)			ULICS ANALY				1		RESSURE			PUMP DATA		¥1	#2
HWDP	205	vvasii (VOI %)	Hole (Adjuste 205.00	on) OD (mm) 102	63	Length (m) 103	A.Vel.(m/min 48) C. Vel (m/min) 54	Flow Pro		1,kPa 1	Pipe,kPa 679	Make Model			xmax 300	F-1000
HWDP	200	10.00%	209.76	102	63	458	46	53	TRANS		51	3021	Liner (mm)		39,7	139,7
DP	200	10.00%	209.76	102	83	481	46	53	TRANS		53	913	Stroke	(mm)	31	04.8	254
DP BHA	159 159	10.00%	166,76 166,76	102 121	83 63	483	88 116	71 87	TURB		85	917		t (L/stk)	1.	4.01	11,67
		.0.0070	,55,70	121	 ~	70	110	- 07	TURB		57	264	SPM	t (m³/min)		1.2	103
														ure (kPa)		169	
		L	J.		!		CACINI	G DESIGN]	- I	HON OUR			loss @ bit	kPa		894
FLUID M	ANAGEME	NT AND VOLU	JME SUMM	IARY (VOLUM	ES IN m³)	Туре	OD(mm)	ID(mm)	Set @ (m)		TION SUR y (deg)	90	ECD @	e to Bit	kg/m² (min		1183 5.9
ACTIVE SY						Surf	219	206	103	Azimuth		88.0	Botton		(min		28.6
Tank Volume:						Inter				Depth (r	nTVD):	742.00		ne to Suction	(min)	30,8
Hole Volume: Annular Volum	47,2 ne: 34,3					Inter		 		Depth (mMD):	1565,00		ation time	(min)	65.2
Pipe Capacity:						arrei	1	1	1	Number:	2	Hours		FORMATION 10		Nozzies	
Total Active:	78.4				:	Liner top		1		Make:	Ulterra			165	11.9 11.9		
FLUID ADI Previous Addit		FLUID LO				Liner		1		Type:	C513S	WOB		2-9			
Daily Additions		Previous Los Daily Hole Lo		-		O.H.	159	T	1462	Size(mm): Depth In:	159 1042	N Vel		35.96 557.04		\vdash	
Total Additions		Daily Surf. Lo					RESSURE	<u> </u>	1 1402	Ворини.		TERIAL I					
		Daily Total L					(kPa)		PRODUCT			E UNIT	PRICE	USAGE	BALANCE	SUI	3-TOTAL
		Accum. Int. L		PMENT DESC	PIDTION	7	146 HRS	BLEACH CAUSTIC S	ODA		20 L	_		1 2	12		
Shaker#1	Derric		EENS			230 2	30	DESCO II	ODA		22.7 kg 11.3 kg	-		2	54		
Shaker#2	Derric		EENS				30	HUMALITE	LIGNITE		45.5 kg	_		8	7	 	
Shaker#3			EENS					OPTICON			20 L			4	60		
Shaker # 4 Centrifuge #1		Precision	EENS	F(kg/m³) 1	110 UF	(kg/m³) 18	320	ULTRA PAC			25 kg 25 kg			12 8	12 24		
Centrifuge #2		Precision					320	TRAVEL CH			23 1,9			50	24		
			0	F(kg/m³)	UF	kg/m³)					ļ						
		JAAC	OI ELL DESIG	F(kg/m³)		kg/m³) CONTAL		4									
	CU	RRENT WELL				ZONTAL		 			 	-			_	-	
		CURRENT F			SPAR	KY (SS)					L]				
	***		T ACTIVITY			- HZNTL SEC	CTION										
	ACI	VE SYSTEM I		EI RTIES CHECK		OLYMER #2	#3	1	-0-			-			+		
PRESENT	DEPTH			mTVI	743	772						\pm			<u> </u>	l	
THE	0.5			Mm													
SAMPLE P	PLE TAKEN				10:30 SHAKER			ļ									
	E TEMPERA	TURE		deg.0							DA	ILY PROD	DUCTO	OST	s		4,442,00
FUNNEL V				s/	44						EN	GINEERI	NG COS		\$		500.00
FLUID DEN		_		kg/m							PR	EVIOUS	COST		\$		3,129,25
pH	E GRADIEN	11		kPa/r	10.99	 				DAIL V ACT				T TO DATE			8,071_25
	ER READIN	IGS		600 rpr						DAILI AC	IVIIII	COMINE	IDAIL	NAS L COMM	ICM10	-	
				300 rpr				ACTIVIT									
				200 rpr					Drill surface								
				100 rpr 60 rpr				1	ck up tools.	Kun in. Dri	i out. Dri	ii startir	ng at 1	.645 hrs to	496 m. KO	P was a	it 398
				30 rpr				m.	D-ill to 797	na seriah filos	awatar l	Mud us	+	با التال باك		10	42
				6 rpr		ļ			Drill to 787 s, circ, trip f								42 m -
GEL STRE	MOTHS			3 rpr 10 sec. (Pa					Drill lateral		= Dila, ui	in lacera	1 10 11	131 III 3(d)	Ling at 225	7111.5.	
OLLOTTE	1101110			10 min. (Pa		1		1 ~~~	Dini laccial	Scotion							
				30 min, (Pa) 5			RECOM	MENDATIO	NS:							
	deg.C			mPa*		<u> </u>		1									
т п	deg.C			P:	0.737			Maintai	n Visc at 40	- 43 s/l wit	h PolyXa	n mixed	at 1 s	xs over 1 o	irculation.		
k				Pois	1.086			IF VISC o	climbs from	drilling sha	les to 45					, 2 sxs c	ver 1
API FLUID				mL/30 mi				circ thru	ı chem bbl a	s required							
SAND	KE THICKN	ESS		mr.		-	-	1									
OIL				9					n fluid loss a								ed.
WATER RE				9				We will	use the Dris	pac by itse	lf until it	is gone	, then	switch bad	ck to UltraP	ac LV.	
TOTAL SO	LIDS			% kg/m				1.			_						
	VITY SOLID	s		% by volume					n pH at 10.0						uired. We r	eed pl	l higher
HIGH GRA	VITY SOLIC	s		kg/m	3			on your	papers which	ch are cons	istantly :	L.0 lowe	rthan	mine.			
LOW GRAV				% by volume													
DRILLED S	VITY SOLID SOLIDS	٥		kg/m kg/m		<u> </u>			or every 100	m of new	nole drill	ed, add	⊥ paíl	of UptiCo	n. i rickle in	at suc	ion
ALKALINIT		Pf		m)				over 60	minutes.								
		Mf		m	0,70			Tours.	add 1 pail of	Blooch	anly aver	· 1 ai=a					
HYDROXYI				mg/l				- Journy, a	and T ball of	Dieach eV	erny over	± CIFC.					
CARBONA BICARBON				mg/l				Density.	low as poss	ible w/ Car	trifuee-	ran at a	II time	s & annd a	creens on	shaker	
Pm ALKA	LINITY			mg/l	-				ter as requir							ancı	
FREE LIME				kg/m	3				e; Please re							mud in	Pason.
TOTAL HAI				mg/L mg/L		 			TD, increase								
MAGNESIL				mg/L					lume at 35								
CHLORIDE	ES ION			mg/L	1800			1									
POTASSIU		6 = b = - / **		mg/L	 			Prior to	pooh to run	casing, mi	x 1 bbl N	1&D Lub	e and	10 sxs Sur	nBurst Bead	is into	+/ -1 5
FILTRATE Make Up W		for brine/silical	(e)	S,G	4				and spot in								
	Vater Alkalin	ity				t			tting stroke.								
Make Up W	Vater Ca++			mg/l]									
PHPA Exce				kg/m				Thanks									
Amine Exce	eng .		-	L/m:	0.50			1									
					<u></u>												
							RIG TIM	E BREAKDO						,			
	AND TEAR	NOWN			ATION SURV	ΞY			K/FISHING	DK		28	_				
2 DRILL A 3 REAMN			-		ELINE LOGS CASE & CEM	ENT			CTIONAL WOR TY MEETING	M.		29 30					
4 CORING	G			13 WAF	ON CEMENT			22 MIXL	.CM			T					
5 CONDIT	TION MUD 8	CIRC		14 NIPP	LE UP B.O.P.			23 TIGHT	THOLE / WAS								
6 TRIPS 7 RIG SEI	RVICE		+	15 TEST	B,O.P. LSTEM TEST			24 CIRC 25 MISC	GAS/WELL F	-LOW	-	+	TOTAL	HOURS			
8 REPAIR	RIG			17 PLUG	BACK			26 Other			-+	+		ative Drilling	Hours:		
9 CUT OF		3 LINE			EEZE CEMEN	T		27					Total N				
Fie	eld Repre	sentative:	Brian Mi	elke			E	mail: mud	man78@tel	us.net			Mo	bîle: (780	753-0374		_

The information contained in this report represents our best judgment based on industry experience. It is solely intended to aid our customer without risk of liability for any loss which may result from its use. In addition, nothing contained herein shall be construed as a recommendation to use any product with existing patents covering any material or its applications.

DRILLING FLUIDS REPORT (WBM) REPORT NUMBER:

WELL NAME: U.W.I.: OPERATOR: OPERATOR REP: PHONE NUMBER: RIG NUMBER: RIG MANAGER: PHONE NUMBER:

Surge 103 Hz Provost 103

103 Surge Energy Inc Shawn Schuster / Wade Zakaluzny (305) 830-5903 Star Valley Drig #102 Daryl Johnson

B.H.L.: 8-21-39-2w4m
LSD: 8-2D-39-2w4m
DATE: August 13, 2021
DAYS FROM SPUD: 4
WAREHOUSE: BLACKFALDS, AB
TRUCKER: Formula Powell
PHONE: (403) 885-5151



1000, 639 - 5th Ave. SW, Calgary, Alberta, T2P 0M9 Telephone (24hour): (403) 237-8900 Fax: (403) 265-6199

Interval Hole (mm) Wash (vol 50) Nate (passed) DO (mm)					н	DRAII	LICS ANALY	sis				- I	RESSURE I	oss i	PUMP DATA	1 #-	1 1	#2
MANUAL DESIGNATION 1.00			Wash (vol %)		ted) OD	(mm)	ID (mm)	Length (m)				file An	n,kPa P	ipe,kPa Ma	ake	Grixr	nax	Emsco
Part			10.00%										25	369 M		130	00	F-1000
Dec 193 193 193 193 193 193 193 193 194 194 194 194 195																		
Big 10,000 10,0	DP	159	10.00%	166.76	1	02	83	1230	94									
Commonwealth Comm	BHA	159	10.00%	166.76	6 1:	21	63	40	124					143 S	PM			110
## ADMINISTRATION OF COLUMN SYMPHOTY OF COLUMN SYMP																		
Part Part																kPa	14800	
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Page Page					+-				219	206	103							
Part					- 1													
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The Control The Control								12										
Proceed and Content Proceed Procede Procede Procede Procede Procede Proceed Procede Pr			FLUID LO	SSES	_								C513S			11.9 11.9	11.9 1	1.9 11.5
Day March Day March Day March Day					\neg			2.102		l							_	
Design Color Control Color Color Color Color Color Color Color Col											2209		1042	TFA (mr	r²) 557.04			
Month Losse Month Security Securit	Total Additions:										DDADUAT							
SOLIDE CONTINUES COMMENT RESORMENT NO. 1988 RESORMENT NO. 5 5 5 5 5 5 5 5 5					_					DADITE	PRODUCT			E JUNIT PR		BALANCE	SUB-1	TOTAL
State of 1		S			JIPMENT	DESC	RIPTION							-				
Secretary Secr	Shaker#1							30 2			OTASH							
Second Company Compa	Shaker#2	Derrick			230	23	30 2	30 2	30		ODA							
Committing PR Processon Organ 1130 urr pym) 1820 Orl PCKN 3 t 3 s																		
Company Comp					DF(kg/m ³)	11	30 UF A	(g/m³) 15	320		_ M							
Well Disposed Processor	Centrifuge #2													+				
CURRENT WELL INTERNAL CURRENT WELL INTERNAL CURRENT ATMITY ACTUAL SYSTEM ILL DY PROPERTIES CHEENED CURRENT ATMITY ACTUAL SYSTEM ILL DY PROPERTIES CHEENED THE SAURE SYSTEM ILL DY PROPERT					OF(kg/m³)	L.	UF ((g/m³)		POLY XAN			25 kg		13			
CONTINUED CONT										SUNBURS	TBEADS							
CURRENT ACTIVE STATES SPARON (SS)		CUI												+				
CRUMANT STATE FLOW TO PROPERTIES CHEESE CH		551	CURRENT F	ORMATIC	ON:								ac. Ny					
PRESIDENT 100						CIF	RCULATE / C	ONDITION H	DLE				1					
PRESENTER PRIVED 100		ACTI\				,,,,,								-				
MID 2312	PRESENTING	-ртн	FLUI	D PROPE				#2	#3				1	+	+	 		
MARCH PAYON 1300	I INCOENT DE												 	-		 		
FLAMEL MESORITY M. 50							13:00											
FILTER SECORTY Sept Second Se			7.00						_									0.05- :
PRESSURE GRADENT Pubm 11.18 DRAILY GOOT \$ 6.071.2			UKE		·					-							1	
PRESENCE GRADIENT				-														8,071,25
### COLUMN STATE OF THE COLUMN STATE OF THE SECURIAL SHOWN	PRESSURE (T				11.18						CUI	MULATIVE (COST TO DATE	\$		
300 ppm 33			-									DAILY AC	IVITY / RE	COMMEND	ATIONS / COMM	ENTS		
200 pm 27	RHEOMETER	READIN	IGS							ACTIVI	ΓY:							
100 ppm 21										Aug 12	Drill lateral	section to	1919 m. d	irc, trip fo	or pipe swap.			
0.500	PV @ 37 de	eg.C			10 mi 30 mi	c. (Pa) n. (Pa) n. (Pa) mPa*s	3.5 7 10.5 15			Visc at	53 - 58 s/l w	rith PolyXa	n for runn	ing casing	. When back o	irculating af	ter wipe	er trip,
RAPIFLUID LOSS		eg.C				Pa												
API FLUID CLOSS						Poise			-	Prior to	pooh to ru	n casing m	ix 1 bbl M	&D Lube :	and 10 sys Sur	Burst Reads	into+/	-15
FILTER CAKE THICKNESS mm 1.6	API FLUID LO				mU.													
To thin mud to 45 s/l for cementing casing, circ thru suction tank only with volume at 3—TO TAL SOLIDS % 8.9 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT kgmt 28.0 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT kgmt 28.0 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT kgmt 28.0 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT kgmt 28.0 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT kgmt 28.0 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT kgmt 28.0 5 m3 - when volume climbs from adding water, lower it back down. Mix 3 sxs Desco thru MBT 28.0 28.0 29.0		THICKN	ESS				1.6											
WATER RETORT							0.5		-		J							
TOTAL SOLIDS		ORT								To thin	mud to 45 s	/l for ceme	enting cas	ing, circ th	ru suction tar	k only with	volume	at 3 -
MST	TOTAL SOLID					%	8.6											
HIGH GRAVITY SOLIDS Kg/m²		TV 00110			0/ L-		28.0		_									
LOW GRANTY SOLIDS % by volume 8.53					% by v				1									
DOWN GRAVITY SOLIDS kg/m² 224.38					% by v		8.63		 	1								
ALKALINITY			S			kg/m³	224.38			ļ								
MT			Of .						1									
HYDROXYL ION	ALKALINITY								<u> </u>	i								
CARBONATE (ON mg/L 488 mg/L 488 mg/L 488 mg/L mg/L 488 mg/L mg]	Thanks							
Pm ALKALINITY																		
FREE LIME							488		-	ł								
TOTAL HARDNESS		17414								1								
MARCESIUM ION mgfL 1800 mgfL 1800 mgfL 1800 mgfL 1800 mgfL 1800 mgfL 1800 mgfL						mg/L]								
CHURIDES ION		N _					20											
POTASSIUM ION	CALCIUM ION						1800			1								
FILTRATE DENSITY (for bine/silicate) S.G.	CALCIUM ION MAGNESIUM	ION				,,,y		 		1								
Make Up Water Ca++ mg/L PHPA Excess kg/m3 Amine Excess L/m3 0.20 1 RIG UP AND TEAR DOWN 10 DEVIATION SURVEY 19 STUCK / FISHING 28 2 DRILL ACTUAL 11 WRELINE LOGS 20 DIRECTIONAL WORK 29 3 REAMING 12 RIN CASE & CEMENT 21 SAFETY MEETING 30 4 CORING 13 WAIT ON CEMENT 22 MIX LCM 5 CONDITION MUD & CIRC 14 NIPPLE UP B.O.P. 23 TIGHT HOLE / WASH 6 TRIPS 15 TEST B.O.P. 24 CIRC GAS / WELL FLOW 7 RIG SERVICE 16 DRILLISTEM TEST 25 MISC TOTAL HOURS 8 REPAR RIG 17 PLUG BACK 26 Other Cumulative Drilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES	ION ION				mg/L												
Make Up Water Cs++ mg/L PHPA Excess kg/m3 Annine Excess L/m3 0.20 RIG TIME BREAKDOWN RIG UP AND TEAR DOWN 10 DEVIATION SURVEY 19 STUCK / FISHING 28 2 DRILL ACTUAL 11 WIRELINE LOGS 20 DIRECTIONAL WORK 29 3 REAMING 12 RUN CASE & CEMENT 21 * SAFETY MEETING 30 4 CORING 13 WAIT ON CEMENT 22 MIX LCM 5 CONDITION MUD & CIRC 14 NIPPLE UP B.O.P. 23 TIGHT HOLE / WASH 6 TRIPS 15 TEST B.O.P. 24 CIRC GAS / WELL FLOW 7 RIG SERVICE 16 DRILLSTEM TEST 25 MISC TOTAL HOURS 8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Orilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI	ION ION ION ENSITY (f	or brine/silicat	e)														
PHPA Excess Kg/m3	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat	ION ION ION ENSITY (fi ter pH		e)														
Amine Excess	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DE Make Up Wat Make Up Wat	I ION ION ION ENSITY (f ter pH ter Alkalini		e)		S.G.												
RIG UP AND TEAR DOWN 10 DEVIATION SURVEY 19 STUCK/FISHING 28	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat	ION ION ION ENSITY (for pH ter pH ter Alkalini ter Ca++		e)		S.G.												
RIG UP AND TEAR DOWN 10 DEVIATION SURVEY 19 STUCK/FISHING 28	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat PHPA Excess	ION ION ION ENSITY (for pH ter Alkalini ter Ca++ s		e)		S.G. mg/L kg/m3												
RIG UP AND TEAR DOWN 10 DEVIATION SURVEY 19 STUCK/FISHING 28	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat PHPA Excess	ION ION ION ENSITY (for pH ter Alkalini ter Ca++ s		e)		S.G. mg/L kg/m3												
2 DRILL ACTUAL 11 WRELINE LOSS 20 DIRECTIONAL WORK 29 3 REAMING 12 RUIL CASE & CEMENT 21 SAFETY MEETING 30 4 CORING 13 WAIT ON CEMENT 22 MIX LCM 5 CONDITION MUD & CIRC 14 NIPPLE UP B.O.P. 23 TIGHT HOLE? WASH 6 TRIPS 15 TEST B.O.P. 24 CIRC GAS? WELL FLOW 7 RIG SERVICE 16 DRILLSTEM TEST 25 MISC TOTAL HOURS 8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Drilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat PHPA Excess	ION ION ION ENSITY (for pH ter Alkalini ter Ca++ s		e)		S.G. mg/L kg/m3			DIC TIME	BDEAVA	naa.							
4 CORING 6 CORING 13 WAIT ON CEMENT 22 MIX.LCM 23 TIGHT HOLE / WASH 6 TRIPS 15 TEST B.O.P. 24 CIRC GAS / WELL FLOW 7 RIG SERVICE 16 DRILLSTEM TEST 25 MISC TOTAL HOURS 8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Drilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat PHPA Excess Amine Excess	I ION ION ION ENSITY (fi ter pH ter Alkalini ter Ca++ s	ty	e)		s.G. mg/L kg/m3 L/m3	0.20	Y	RIGTIM					28				
5 CONDITION MUD & CIRC 14 NIPPLE UP B.O.P. 23 TIGHT HOLE / WASH 6 TRIPS 15 TEST B.O.P. 24 CIRC QAS / WELL FLOW 7 RIG SERVICE 16 DRILLISTEM TEST 25 MSC TOTAL HOURS 8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Oriting Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat Amine Excess 1 RIG UP A7 2 DRILL AC	ION ION ION ENSITY (fi ter pH ter Alkalini ter Ca++ s s ND TEAR	ty	e)	10 11	s.g. mg/L kg/m3 L/m3	0.20 TION SURVE		RIG TIM	19 STU 20 DIRE	CK/FISHING CTIONAL WO			29				
6 TRIPS 15 TEST B.O.P. 24 CIRC GAS/WELL FLOW 7 RIG SERVICE 16 DRILLISTEM TEST 25 MSC TOTAL HOURS 8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Drilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat Make Up Wat PHPA Excess Amine Excess 1 RiG UP AT 3 REAMING	ION ION ION ENSITY (fi ter pH ter Alkalini ter Ca++ s s ND TEAR	ty	e)	10 11 12	s.g. mg/L kg/m3 L/m3 DEVIA WIREI	0.20 TION SURVE LINE LOGS CASE & CEM	ENT	RIG TIM	19 STU 20 DIRE 21 SAF	CK / FISHING CTIONAL WO ETY MEETING			29				
7 RIG SERVICE 16 DRILLSTEM TEST 25 MISC TOTAL HOURS 8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Drilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make UP Wat Make UP Wat Make UP Wat Make UP Wat PHPA Excess Amine Excess 1 RIG UP A1 2 DRILL AC 3 REAMING REAMING 4 CORINIG	ION ION ION ENSITY (fi ter pH ter Ca++ s s ND TEAR	DOWN	e)	10 11 12 13	s.g. mg/L kg/m3 L/m3 L/m3 WiRel RUN C	0.20 ITION SURVE LINE LOGS CASE & CEMI ON CEMENT	ENT	RIGTIM	19 STU 20 DIRE 21 SAF 22 MIX	CK/FISHING CTIONAL WO ETY MEETING LCM	i		29				
8 REPAIR RIG 17 PLUG BACK 26 Other Cumulative Drilling Hours: 9 CUT OFF DRILLING LINE 18 SQUEEZE CEMENT 27 Total N.P.T.	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat PHPA Excess Amine Excess 1 RIG UP AT 2 DRILL AC 3 REAMING 4 CORING 5 CONDITIC	ION ION ION ENSITY (fi ter pH ter Ca++ s s ND TEAR	DOWN	e)	10 11 12 13 14	mg/L kg/m3 L/m3 DEVIA WIREI RUN (0.20 ITION SURVE LINE LOGS CASE & CEMI ON CEMENT E UP B.O.P.	ENT	RIG TIM	19 STU 20 DIRE 21 SAF 22 MIX 23 TIGH	CK/FISHING CTIONAL WO ETY MEETING LCM TT HOLE / WA	SH		29				
	CALCIUM SIM MAGNESIM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat GERMAN MAKE UP WAT MAKE U	I ION ION ION ION ENSITY (# ter pH ter Alkalini ter Ca++ s s ND TEAR TUAL ON MUD 8	DOWN	e)	10 11 12 13 14 15	mg/L kg/m3 L/m3 L/m3 WiREI RUN (WAIT NIPPL TEST DRILL	0.20 ITION SURVE LINE LOGS CASE & CEMI ON CEMENT E UP B.O.P. B.O.P. STEM TEST	ENT	RIG TIM	19 STU 20 DIRE 21 SAF. 22 MIX 23 TIGE 24 CIRC	CK/FISHING CTIONAL WO ETY MEETING LCM IT HOLE / WA CGAS / WELL	SH		29 30				
Field Representative: Brian Mielke Email: <u>mudman78@telus.net</u> Mobile: (780) 753-0374	CALCIUM ION MAGNESIUM CHLORIDES POTASSIUM FILTRATE DI Make Up Wat Make Up Wat Make Up Wat Make Up Wat Make Up Wat On Make Up Wat Make Up W	I ION ION ION ENSITY (fi ter pH ter Alkalini ter Ca++ s s ND TEAR TUAL ON MUD &	DOWN	a)	10 11 12 13 14 15 16	mg/L kg/m3 1/m3 1/m3 DEVIA WIRE RUN C WAIT NIPPL TEST DRILL PLUG	0.20 ITION SURVE LINE LOGS CASE & CEMI ON CEMENT E UP B.O.P. B.O.P. STEM TEST BACK	ENT	RIG TIM	19 STU 20 DIRE 21 SAF 22 MIX 23 TIGH 24 CIRC 25 MISC 26 Othe	CK/FISHING COTIONAL WO ETY MEETING LCM IT HOLE / WA CGAS / WELL	SH		29 30	mulative Drilling	Hours:		
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