NEXTIER

CUSTOMER	PDC ENERGY
DISTRICT	3021
ADDRESS	821 WCR 27, Brighton, CO 80603
PHONE	303-857-7948

AFE #		PO:	
LEASE NAME / NUMBER		API WELL NUMBER	
STROH 24-12		512322367	
SECTION	TOWNSHIP	RANGE	COUNTY, STATE
24	4N	67W	WELD, COLORADO
WELL PERMIT NUMBER			
JOB TYPE		CM-P2A-PERM.	
Vehicle Type		Single	

TICKET	BCO-2005-0037
DATE	5/26/2020
CREW INFORMATION	
SUPERVISOR	Israel Davila
PUMP UNIT NUMBERS	44-5084
ARRIVAL (D&T)	5/26/20 11:30 AM
DEPARTURE (D&T)	5/26/20 2:45 PM

616-JLPjob 1

Service & Equipment Charges

Price Code	Description	Unit	Quantity	Price	Gross Amount	Discount	Net Amount
50001303	BULK CEMENT DELIVERY (PER TON)	TON MILE	141				
50001312	Bulk Blending Service	FT3	100				
50001349	AccuDat Recording System	JOB	1				
50001296	MILEAGE; DOT UNITS	MILE	30				
50001297	MILEAGE; NON-DOT UNITS	MILE	30				
50001288	Environmental Surcharge	EA	1				
50009991	PUMP CHARGE 2001-3000' (4-HRS)	EA	1				

Materials & Products 13

Price Code	Description	Unit	Quantity
10004393	NCM-922 - CEMENT PORTLAND TYPE III NCM-922	SK	100
10004358	NFP-775L - ADDITIVE DEFOAMER ALPHA NFP-775L	GAL	2

Customer Stamp

Customer Name Printed _____

Customer Signature _____

Date Signed _____

NexTier Job Summary

Ticket Number	Ticket Date
TN# BCO-2005-0037	5/26/2020

COUNTY	COMPANY	API Number
WELD	PDC ENERGY	512322367
WELL NAME	**RIG**	**JOB TYPE**
STROH 24-12	Ranger 22	CM-P2A-PERM.
SURFACE WELL LOCATION	**CJES Field Supervisor**	**CUSTOMER REP**
40.29867 104.84669	Israel Davila	Ryan Beam

EMPLOYEES

AJ Staples		
Tony Yates		

WELL PROFILE

Max Treating Pressure (psi):	1000	Bottom Hole Static Temperature (°F):	
Bottom Hole Circulating Temperature (°F):		Well Type:	old

Open Hole

	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
1	10		2500		
2					

Casing/Tubing/Drill Pipe

Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Surface	8.625	24		0	371		
Production	4.5	11.6		2500	2587		
Tubing	2.375	4.7		0	2587		

CEMENT DATA

Stage 1:
Type: **Stub plug**

From Depth (ft): 2300 To Depth (ft): 2587
Volume (sacks): 100 Volume (bbls): 23.5

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.
Type III	14.8	1.33	6.32

Stage 2:
Type:

From Depth (ft): To Depth (ft):
Volume (sacks): Volume (bbls):

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

Stage 3:
Type:

From Depth (ft): To Depth (ft):
Volume (sacks): Volume (bbls):

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

Stage 4:
Type:

From Depth (ft): To Depth (ft):
Volume (sacks): Volume (bbls):

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

SUMMARY

Preflushes: 5 bbls of Fresh Water
bbls of
bbls of

	Stage 1	Stage 2
Calculated Displacement (bbl):	8.9	
Actual Displacement (bbl):	8.5	

TotalPreflush/Spacer Volume (bbl): 5
Total Slurry Volume (bbl): 23.5
Total Fluid Pumped 37
Returns to Surface: bbls

Plug Bump (Y/N): N/A Bump Pressure (psi): N/A
Lost Returns (Y/N): N (if Y, when)

Job Notes (fluids pumped / procedures / tools / etc.): Pumped 100 sx @ 14.8, 1.33 yield from 2300' to 2587'. Displace 8.5 bbls to balance.

Customer Representative Signature:

Thank You For Using NexTier Completion Solutions

Cement Job Log

NEXTIER

Customer:	PDC ENERGY			**Date:**	26-May-20	**Serv. Supervisor:**	Israel Davila		
Cust. Rep.:	Ryan Beam			**Ticket #:**	BCO-2005-0037	**Serv. Center:**	Brighton - 3021		
Well Name:	STROH 24-12	**RTS Date:**	26-May-20	**API Well #:**	**512322367**	**County:**	**WELD**	**State:**	COLORA
Well Type:	Oil	**RTS Time:**	11:30 AM	**Rig:**	**Ranger 22**	Type of Job:	**CM-P2A-PERM.**		

	Date	Time		Date	Time		Date	Time
Left Yard:	26-May-20	7:00 AM	**Left Loc.:**	26-May-20	**2:45 PM**	**Start Pump:**	26-May-20	1:30 PM
Arrived Loc.:	26-May-20	**11:30 AM**	**Returned Yd.:**	26-May-20	3:45 PM	**End Pump:**	26-May-20	2:05 PM

TIME Note: Red boxes indicate bad values!	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Num. Stage #	Stage Details
7:00 AM								Left Yard or Current Location
11:30 AM								ARRIVE ON LOCATION
11:30 AM							1	SPOT EQUIPMENT
11:40 AM							1	RIG UP IRON AND HOSES
1:20 PM							1	PRE JOB SAFETY MEETING
1:36 PM							1	PRESSURE TEST IRON TO 2000 PSI
1:39 PM	1		200		5.0 bbl	5.0 bbl	1	PUMP FRESH AHEAD TO ESTABLISH CIRCULATION
1:44 PM	2		100		23.5 bbl	28.5 bbl	1	PUMP 100 SX @ 14.8, 1.33 YIELD FROM 2300' TO 2587'
1:56 PM	2		150		8.5 bbl	37.0 bbl	1	DISPLACE TO BALANCE
2:00 PM							1	SHUT DOWN/PLUG BALANCED
2:10 PM							1	WASH PUMP
2:30 PM							1	RIG OUT
2:45 PM							1	DEPART LOCATION

Cement Job Log

NEXTIER

Customer:	PDC ENERGY	Date:	26-May-20	Serv. Supervisor:	Israel Davila
Cust. Rep.:	Ryan Beam	Ticket #:	BCO-2005-0037	Serv. Center	Brighton - 3021
Well Name:	STROH 24-12	API Well #:	512322367	County: WELD	State: COLORADO
Well Type:	Oil	Rig:	Ranger 22	Type of Job:	CM-P2A-PERM.

Materials Furnished by NexTier

Plugs	Casing Hardware	Sacks of Cement	Fluid Density (lb/gal)	Excess	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
Spacer - 5 bbl Fresh Water					-	-	5.00	
Balanced Plug	100 % NCM-922	100	14.8		1.33	6.32	23.61	15
0					-	-		
0					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		

Displacement Chemicals:

OPEN HOLE DATA					TUBULAR DATA						
10" o.h. to 2500'		4.5" 11.6# (2500' to 2587')			SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Mix Cemt. Temperature °F	Lead Tmp.	Middle Temp.	Tail Temp.		2.375" 4.7#		2587				

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS	CSG LIFT	MAX PRESS	Total Number of Runs		WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)			
		8.5 bbl	H2O	8.3 ppg			1000	1		110

Bumped Plug	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Top of Cement (ft)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Casing Rotation	Standby Charged(hrs)	Casing Reciprocation	Wireline Co.
					2,300	Yes	2,000.00				0

Comments/Special Customer Instructions

Israel Davila — Service Supervisor

26-May-20 — Date

NEXTIER

Client	PDC	Client Rep	Ryan Beam	Supervisor	Izzy Davila
Ticket No.	20050037	Well Name	Stroh 24-12	Unit No.	445084
Location	24-4N-67W	Job Type	Abandonment Plugs	Service District	Brighton
Comments	See job log			Job Date	05/26/2020

NEXTIER

CUSTOMER	PDC ENERGY
DISTRICT	3021
ADDRESS	821 WCR 27, Brighton, CO 80603
PHONE	303-857-7948

AFE #		PO:	
LEASE NAME / NUMBER		API WELL NUMBER	
STROH 24-12		512322367	
SECTION	TOWNSHIP	RANGE	COUNTY, STATE
24	4N	67W	WELD, COLORADO
WELL PERMIT NUMBER			
JOB TYPE		CM-P2A-PERM.	
Vehicle Type		Single	

TICKET	BCO-2005-0039
DATE	5/27/2020
CREW INFORMATION	
SUPERVISOR	Cody Michel
PUMP UNIT NUMBERS	44-5070
	CPF002
ARRIVAL (D&T)	5/27/20 8:00 AM
DEPARTURE (D&T)	5/27/20 11:30 AM

616-JLPjob 2

Service & Equipment Charges

Price Code	Description	Unit	Quantity	Price	Gross Amount	Discount	Net Amount
50001303	BULK CEMENT DELIVERY (PER TON)	TON MILE	601				
50001312	Bulk Blending Service	FT3	425				
50001349	AccuDat Recording System	JOB	1				
50001296	MILEAGE; DOT UNITS	MILE	30				
50001297	MILEAGE; NON-DOT UNITS	MILE	30				
50001479	PUMP CHARGE 0-2000' (4 HRS)	ea	1				
50001288	Environmental Surcharge	EA	1				
					S		

Materials & Products 13

Price Code	Description	Unit	Quantity	Price	Gross Amount	Discount	Net Amount
10004393	NCM-922 - CEMENT PORTLAND TYPE III NCM-922	SK	333				
10004358	NFP-775L - ADDITIVE DEFOAMER ALPHA NFP-775L	GAL	2				
					S		
					F		
					G		

Customer Stamp

Customer Name Printed _____

Customer Signature _____

Date Signed _____

NexTier Job Summary

Ticket Number	Ticket Date
TN# BCO-2005-0039	5/27/2020

COUNTY	COMPANY	API Number
WELD	PDC ENERGY	512322367
WELL NAME	**RIG**	**JOB TYPE**
STROH 24-12	Ranger 22	CM-P2A-PERM.
SURFACE WELL LOCATION	**CJES Field Supervisor**	**CUSTOMER REP**
40.29867 -104.84669	Cody Michel	Ryan Beam

EMPLOYEES

Jeff Kopp		
Rich Devine		

WELL PROFILE

Max Treating Pressure (psi):	1000	Bottom Hole Static Temperature (°F):	
Bottom Hole Circulating Temperature (°F):		Well Type:	

Open Hole

	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
1	14	371	590	371	590
2	10	371	1441	371	1441

Casing/Tubing/Drill Pipe

Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Surface	8.625	24		0	371	0	371

CEMENT DATA

Stage 1: Type: **Balance Plug**

From Depth (ft): 1061 To Depth (ft): 1441

Volume (sacks): 90 Volume (bbls): 21.3

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.
100% Type III	14.8	1.33	6.32

Stage 2: Type: **Surface Plug**

From Depth (ft): 0 To Depth (ft): 590

Volume (sacks): 236 Volume (bbls): 55.9

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.
100% Type III	14.8	1.33	6.32

Stage 3: Type: **Top Off**

From Depth (ft): 0 To Depth (ft): 27

Volume (sacks): 7 Volume (bbls): 1.7

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.
100% Type III	14.8	1.33	6.32

Stage 4: Type:

From Depth (ft): To Depth (ft):

Volume (sacks): Volume (bbls):

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

SUMMARY

Preflushes:				Stage 1	Stage 2
	5 bbls of	Fresh Water	Calculated Displacement (bbl):	4.7	
	5 bbls of	Fresh Water	Actual Displacement (bbl):	4.1	
	bbls of				

TotalPreflush/Spacer Volume (bbl): 10

Total Slurry Volume (bbl): 78.9

Total Fluid Pumped 93

Plug Bump (Y/N): Bump Pressure (psi):

Lost Returns (Y/N): No (if Y, when)

Returns to Surface: Cement 2 bbls

Job Notes (fluids pumped / procedures / tools / etc.): 2.375" 4.7 ppf tubing at 1441' Established circulation and pumped 5 bbl fresh water spacer then 90 sks (21.3 bbl) of Type III at 14.8 ppg displaced with 4.0 bbl of fresh water caught pressure shut down and let balance for a total displacement of 4.1 bbl with an estimated TOC of 1061'. Shut down and wait on rig to trip out to 590' then pumped 5 bbl fresh water spacer and pumped 236 sks (55.9 bbl) of Type III at 14.8 ppg to surface shut down and toped off well

Customer Representative Signature:

Thank You For Using NexTier Completion Solutions

Cement Job Log

NEXTIER

Customer:	PDC ENERGY	Date:	27-May-20	Serv. Supervisor:	Cody Michel
Cust. Rep.:	Ryan Beam	Ticket #:	BCO-2005-0039	Serv. Center	Brighton - 3021
Well Name:	STROH 24-12	API Well #:	512322367	County: WELD	State: COLORADO
Well Type:	Oil	Rig:	Ranger 22	Type of Job:	CM-P2A-PERM.

Materials Furnished by NexTier

Plugs	Casing Hardware	Sacks of Cement	Fluid Density (lb/gal)	Excess	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
Spacer - 5 bbl Fresh Water					-	-	5.00	
Balanced Plug	100 % NCM-922	15	14.8		1.33	6.32	3.54	2
Surface Squeeze	100 % NCM-922	270	14.8		1.33	6.32	63.74	41
Extra Cement	100 % NCM-922	140	14.8		1.33	6.32	33.05	21
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		

Displacement Chemicals:

OPEN HOLE DATA				TUBULAR DATA						
14 in. O.H. (371 to 1,441 ft)		4.5 in. 11.6#, (0 to 1,441 ft)		SIZE WEIGHT	THRD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Mix Cemt. Temperature °F	Lead Tmp.	Middle Temp.	Tail Temp.	2.375" 4.7 ppf		1441		1.995		

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
8.625 in. 24# (0 to 371 ft)								

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS	CSG LIFT	MAX PRESS	Total Number of Runs		WATER ON LOC
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)			(bbl)
Water	8.3 ppg	4.1 bbl	Water	8.3 ppg			1000	1		110

Bumped Plug	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Top of Cement (ft)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Casing Rotation	Standby Charged(hrs)	Casing Reciprocation	Wireline Co.
			-	2.00	-	Yes	1,000.00				0

Comments/Special Customer Instructions

Cody Michel — Service Supervisor

27-May-20 — Date

Cement Job Log

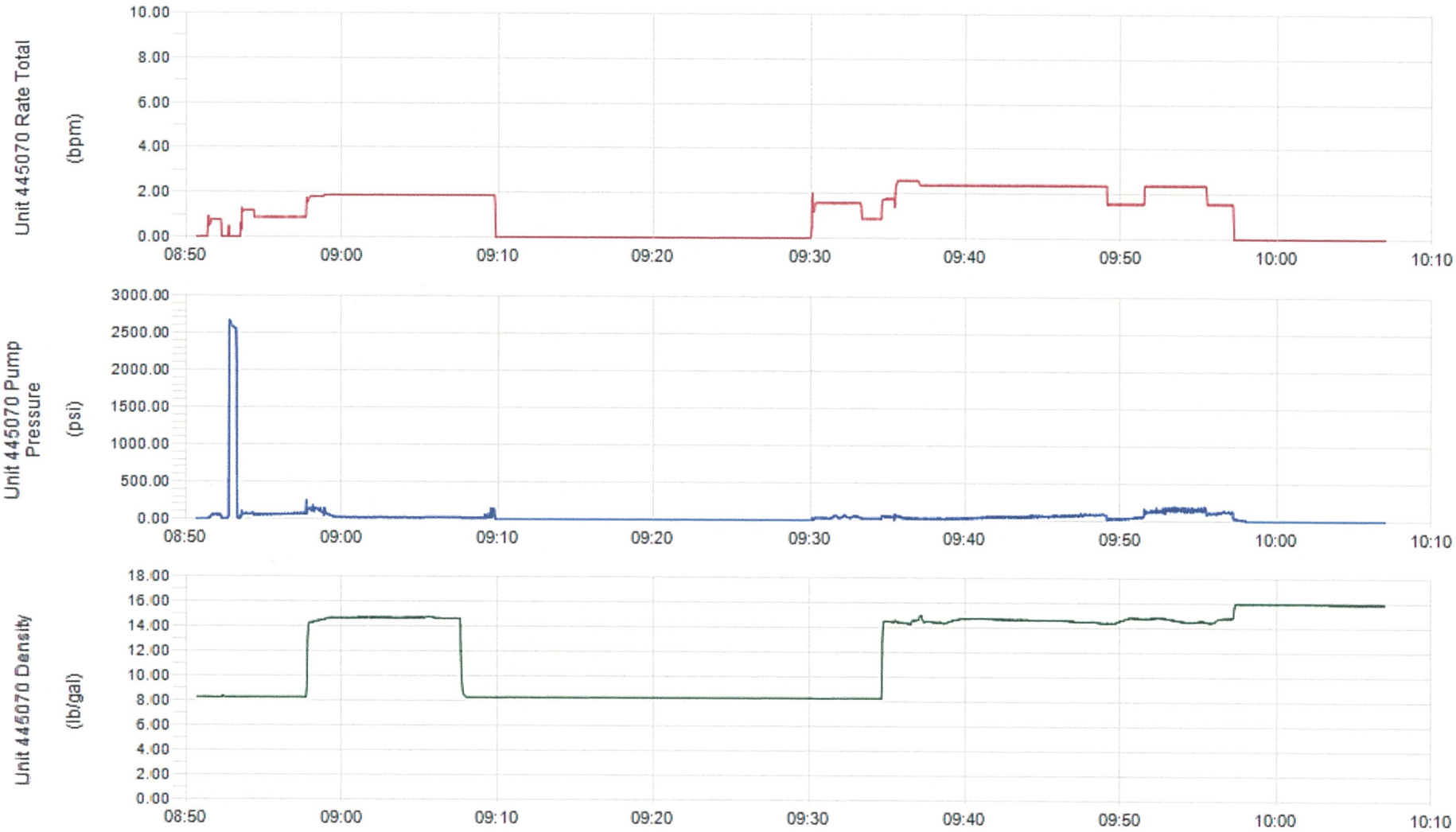
NEXTIER

Customer:	PDC ENERGY			Date:	27-May-20	Serv. Supervisor:	Cody Michel
Cust. Rep.:	Ryan Beam			Ticket #:	BCO-2005-0039	Serv. Center:	Brighton - 3021
Well Name:	STROH 24-12	RTS Date:	27-May-2020	API Well #:	512322367	County: WELD	State: COLORA
Well Type:	Oil	RTS Time:	8:00 AM	Rig:	Ranger 22	Type of Job:	CM-P2A-PERM.

	Date	Time		Date	Time		Date	Time
Left Yard:	27-May-20	7:15 AM	Left Loc.:	27-May-20	11:30 AM	Start Pump:	27-May-20	8:50 AM
Arrived Loc.:	27-May-20	8:00 AM	Returned Yd.:	27-May-20	12:15 PM	End Pump:	27-May-20	10:35 AM

TIME Note: Red boxes indicate bad values!	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Num. Stage #	Stage Details
7:15 AM								Left Yard or Current Location
8:00 AM								ARRIVE ON LOCATION
8:00 AM							1	Tailgate Meeting
8:05 AM							1	Spot Trucks
8:15 AM							1	Rig In
8:35 AM							1	Safety Meeting
8:49 AM					1.5 bbl	1.5 bbl	1	Fill Lines
8:51 AM			2500		0.5 bbl	2.0 bbl	1	Pressure Test 2500 psi
8:53 AM	1		70		5.0 bbl	7.0 bbl	1	Establish Circulation
8:58 AM	2		30		21.3 bbl	28.3 bbl	1	Mix and Pump 90 sks (21.3 bbl) of Type III at 14.8 ppg
9:10 AM	2		30		4.1 bbl	32.4 bbl	1	Displace 4.1 bbl of water to balance
9:18 AM							1	Shut Down wait on rig to trip out to 590'
9:28 AM	1		35		5.0 bbl	37.4 bbl	1	Establish Circulation
9:32 AM	2		60		55.9 bbl	93.3 bbl	1	Mix and Pump 236 sks(55.9 bbl) of Type III @ 14.8 ppg
9:52 AM							1	Shut Down wait on rig to trip out
10:25 AM					1.7 bbl	95.0 bbl	1	Top off well
10:35 AM							1	Shut Down
10:37 AM							1	Wash up and Rig Down
11:25 AM							1	Tailgate Meeting
11:30 AM							1	Leave Location

Client	PDC Energy	Client Rep	Ryan Beam	Supervisor	Cody Michel
Ticket No.	BCO-2005-0039	Well Name	Stroh 24-12	Unit No.	445070
Location	24 4N 67W	Job Type	Abandonment Plugs	Service District	Brighton
Comments	See Job Log			Job Date	05/27/2020



RANGER ENERGY SERVICES, LLC

WIRELINE DIVISION

3333 Center Dr.
Milliken, CO.
80543

Company Name:	Company Address:			Field Ticket Number:
PDC ENERGY, INC.	1775 SHERMAN STREET SUITE 3000 DENVER, CO 80203			70001806
Well Name:	**Field:**	**County:**	**State:**	**Rig Name & Number:**
STROH 24-12	WATTENBERG - 90750	WELD	COLORADO	RANGER ENERGY SERVICES RIG# 5022
API #:			**Date:**	**Wireline Unit #** 233
05-123-22367			5/22/2020	**Engineer:** J. Michael
SERVICE NOTES: (1) 3.625" Gauge Ring to 7010'	(4) Radial Bond Log from 6900' - Surface			**Operator:** A. Kendall
(2) Set STS 4-1/2" 10K CIBP @ 6960'	(5) Set STS 4-1/2" 10K CIBP @ 4680'			**Operator:**
(3) Cement Dump Bail 2sx @ 6960'	(6) Cement Dump Bail 2sx @ 4680'			**Operator:**

RUN	CODE	DESCRIPTIONS	QTY	UNIT PRICE	DISCOUNT	AMOUNT
	3000-001	Packoff Operation Charge0#-1000#	1			
1	8000-009	Junk Catcher / Gauge Ring Depth Charge	7010			
	8000-010	Junk Catcher / Gauge Ring Operation Charge	1			
2	8000-001	Bridge Plug Depth Charge	6960			
	8000-015	Setting Tool Rental, per tool	1			
	8000-002	Bridge Plug Operation Charge	1			
	8000-014	Standard Set Power Charge	1			
3	7000-006	Dump Bailer Depth Charge	6960			
	7000-007	Dump Bailer Operation Charge	1			
4	4000-019	Radial Cement Bond Log Depth Charge	6900			
	4000-020	Radial Cement Bond Log Operation Charge	6900			
	4000-009	Simultaneous Gamma Ray Log Depth Charge	6900			
	4000-010	Simultaneous Gamma Ray Log Operation Charge	6900			
	4000-013	Simultaneous CCL Log Depth Charge	6900			
	4000-014	Simultaneous CCL Log Operation Charge	6900			
5	8000-001	Bridge Plug Depth Charge	4680			
	8000-015	Setting Tool Rental, per tool	1			
	8000-002	Bridge Plug Operation Charge	1			
	8000-014	Standard Set Power Charge	1			
6	7000-006	Dump Bailer Depth Charge	4680			
	7000-007	Dump Bailer Operation Charge	1			

Customer Signature:	Customer Name Printed:	Ranger Energy Services Representative Signature	Ranger Energy Services Representative:
	MR. RYAN BEAM		JOE MICHAEL

The above estimated charges and data shown are subject to change by Ranger Energy Services, LLC. Payment terms are net 30 Days.

5/26/2020 6:49 AM

RANGER ENERGY SERVICES, LLC

WIRELINE DIVISION

3333 Center Dr.
Milliken, CO.
80543

Company Name:	Company Address:			Field Ticket Number:
PDC ENERGY, INC.	1775 SHERMAN STREET SUITE 3000 DENVER, CO 80203			70001807
Well Name:	**Field:**	**County:**	**State:**	**Rig Name & Number:**
STROH 24-12	WATTENBERG - 90750	WELD	COLORADO	RANGER ENERGY SERVICES RIG# 5022
API #:			**Date:**	**Wireline Unit #** 233
05-123-22367			5/26/2020	**Engineer:** J. Michael
SERVICE NOTES: (1) Cut 4-1/2" Casing @ 2500'				**Operator:** A. Kendall
				Operator:
				Operator:

RUN	CODE	DESCRIPTIONS	QTY	UNIT PRICE	DISCOUNT	AMOUNT
	3000-001	Packoff Operation Charge0#-1000#	1			
1	5000-011	Jet Cutter Depth Charge	2500			
	5000-014	Jet Cutter Operation Charge for Casing	1			

Customer Signature:	Customer Name Printed:	Ranger Energy Services Representative Signature	Ranger Energy Services Representative:
	MR. RYAN BEAM		JOE MICHAEL

The above estimated charges and data shown are subject to change by Ranger Energy Services, LLC. Payment terms are net 30 Days.

5/26/2020 6:52 AM