



Well History

Well Name: Emily 24-19

API 05123217630000	Surface Legal Location SESW 19 5N 64W			Field Name Wattenberg	State CO	Well Configuration Type Vertical
Ground Elevation (ft) 4,829.00	Original KB Elevation (ft) 4,839.00	KB-Ground Distance (ft) 10.00	Spud Date 4/12/2004 00:00	Rig Release Date 4/18/2004 00:00	On Production Date	

Job

Drilling - original, 4/12/2004 00:00

Job Category Drilling	Primary Job Type Drilling - original	Start Date 4/12/2004	End Date	Objective Codell New Drill, DJ Basin
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Daily Operations

Start Date	Summary	End Date
4/11/2004	MIRU PATTERSON UTI DRLG RIG #189. DRILL RODENT HOLES. DRILL SURFACE TO 170'	4/12/2004
4/12/2004	DRILL SURFACE TO 412'. CIRC. POOH. RUN 8 5/8" CSG. LAND CSG @ 374' CEMENT CSG W/ 375 SCKS 15.2 PPG NEAT CEMENT. CIRCULATED TO SURFACE. WOC. PU BHA. TIH. DRILL OUT UNDER SURFACE. DRILL TO 856'.	4/13/2004
4/13/2004	DRILL FROM 856' TO 3760'. SURVEYS. 1480' 1 DEGREE /// 2000' 1 DEGREE /// 2464' 1 DEGREE /// 3202' 1 DEGREE /// 3628' 2 DEGREE	4/14/2004
4/14/2004	DRILL FROM 3760- TO 6137'. SURVEYS; 3790' 1 DEGREE /// 5000' 1 DEGREE /// 5500' 1 DEGREE /// 5672' 1 DEGREE /// 6106' 1.5 DEGREE	4/15/2004
4/15/2004	DRILL FROM 6137 TO 7161'.TD. CIRC. & CONDITION MUD. 10 STND WIPER TRIP. CIRCULATE 1.5 HRS. POOH LAYING DOWN DRILLPIPE. SURVEYS; 6574' 1 DEGREE	4/16/2004
4/16/2004	LD DRILL COLLARS. RU PSI E-LINE. RUN LOGS. TAG @ 7149'. TOP OF CODELL 6873' TOP OF NIOBRARA 6570' RU CSG CREW. RUN CASING.CEMENT CSG WITH 185 SCKS 14.6# 50-50 POZ 450 SCKS 10.6# LIGHT CEMENT.LAND CSG @ 7148' KB. PBTD 7135'. 154JTS NEW 4.5" 11.6# M-80 14' MARKER JT. 14 JTS FC 10' SHOE JT. SHOE. PLUG DOWN @ 18:30 RIG RELEASED @ 19:30. RDMO PATTERSON RIG.	4/17/2004

Completion, 4/13/2004 00:00

Job Category Wellwork	Primary Job Type Completion	Start Date 4/13/2004	End Date	Objective Codell New Drill, DJ Basin
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Daily Operations

Start Date	Summary	End Date
4/19/2004	MIRU ACTION RIG #4. RU E-LINE. RUN CBL GR CCL. TOP OF HEAVY CEMENT 6050'. TOP OF LIGHT CEMENT - SURFACE. SDFN	4/20/2004
4/20/2004	NU WELL HEAD. TIH WITH BIT & SCRAPER. TAG @ 7140'. FLANGE UP WELLHEAD. CIRCULATE HOLE WITH 2% KCL. PRESSURE TEST CSG TO 5K FOR 15 MIN. HELD. POOH.NU BOP RU E-LINE. PERFORATE CODELL. 6872-88' 4 SPF 60 DEGREE PHASE .42" ENTRY HOLES WITH 3 1/8" SLICK GUNS. RD E-LINE. TIH W/ PRODUCTION STRING. ND BOP. FLANGE UP WELLHEAD. SDFN. TBG; SN NC 220 JTS 2 3/8" 4.7# J-55 EUE 8rnd TBG. 3' BLAST JT. LANDED @ 6814'KB. SDFN	4/21/2004
4/21/2004	RDMO ACTION RIG #4	4/22/2004
4/26/2004	MIRU HALIBURTON FOR FRAC. FRAC CODELL. SCREENED OUT WITH 168K 20/40 SAND INTO FORMATION. AVERAGES; PRESSURE 4746# RATE 16.4BBLs/MIN VISC. 24.5cp MAX PRES. 5318# LOAD TO RECOVER 2090 BBLs TO RECOVER. RECOVERED 725 BBLs ON FLOWBACK BEFORE SI. TP 2600# on a 18/64" choke. Changed choke to a 16/64" @ 12 pm.	4/27/2004
4/27/2004	In approx 27 3/4 hrs produced 249 bbls. TLLTR - 1445 TLR - 645. TP - 550#.	4/28/2004

Completion, 2/7/2005 00:00

Job Category Wellwork	Primary Job Type Completion	Start Date 2/7/2005	End Date	Objective Niobrara Recompletion
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Daily Operations

Start Date	Summary	End Date
2/6/2005	Move Action rig #4 to location, rig got stuck on lease road, waited to be pulled out, SDFD, move in on frost.	2/7/2005
2/7/2005	MIRU Action rig #4, 90#s both tbgs csg, blow well down, kill well w/2% KCL, 30 bbls csg/30 bbls tbgs, ND WH, NU BOPs, PU tag jts, tagged w/184' in, LD tag jts, POOH w/tbg standing back tallying (POOH w/ 3.5' blast jt - 226 jts - sn/nc - landed @ 6795' KB), tag depth of 6979' KB, PU 4 1/2" csg scraper w/ 3 7/8" blade bit, TIH w/production tbgs to 6950' KB, POOH laying down tbgs & tools, ND BOPs & WH, NU Merit frac valve, SI well, SDFN	2/8/2005
2/8/2005	0# csg, RU Nue X Wireline, RIH w/Halliburton composite BP & set @ 6820', RU B&J Hot Oil, load csg (79 bbls) & pressure tested csg/BP to 4800#, held 15 minutes, test good, RD B&J, RIH w/3 1/8" slickgun (3 gun runs) & perforated Niobrara "C" 6760-6770' - "B" 6680-6700' & "A" 6570-6580' all 4 spf (160 holes total) - 60 deg phasing - .42" entry holes, RD e-line, SI well, RDMO	2/9/2005
2/14/2005	MIRU Halliburton Services to stimulate Niobrara, pumped 1000 gal 15% HCL, formation break @ 4052 psi & 5.1 bpm, spotted acid across perms & shut down 5 minutes, ISDP = 3367 psi & IFG = .945 psi/ft, leakoff = 350 psi/5 min, well was stimulated w/238,020#s 30/50 Ottawa & 12,000#s 12/20 SB Excel sands, pumped 2337 bbls SilverStim fluid, total load to recover 4130 bbls, ISDP = 3556 psi & FFG = .974 psi/ft, Averages 4535 psi - rate 48.3 bpm - Visc 23.9 Cp - temp 69 deg, well was flowed back 12 minutes after shut down on a 20/64" choke, opening csg pressure 3250 psi, RDMO Halliburton	2/15/2005
2/16/2005	Well was flowed back 44 hours continuously on a 20/64" choke, starting csg pressure 3250 psi, recovered 1088 bbls water & 110 bbls oil, load left to recover 2932 bbls, ending csg pressure 500 psi, well was tied into sales flowing up csg @ 7:00 am, turned well over to pumper.	2/17/2005



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Daily Operations

Start Date	Summary	End Date
2/22/2005	350#s csg flowing to sales, MIRU Action rig #4, blew well down, killed well w/60 bbls 2% KCL, ND frac valve, install WH, NU BOPs, PU 3 7/8" cone bit, TIH picking up tallying 2 3/8" production tbg, 212 jts in (above perfs), SI well, SDFN	2/23/2005
2/23/2005	400#s tbg/450#s csg, blew well down, finish TIH picking up tallying production tbg, tagged @ 6780' KB w/220 jts, RU to circulate & drill up composite BP, broke circulation, cleaned & drilled up BP, pushed BP to 7058' KB w/229 jts, rolled hole clean, POOH laying down 17 jts - standing back remainder, LD bit, PU seatnipple/notched collar, TIH w/production tbg, ND BOPs, land tbg, NU WH, SI well, RDMO Tbg detail: 212 jts (new) 2 3/8" 4.7# J-55 EUE 8rd Seatnipple/notched collar	2/24/2005
	10' KB 6533' 1.50'	10' 6543' 6544.5' EOT

Wellbore Integrity, 4/9/2014 06:00

Job Category Completion/Workover	Primary Job Type Wellbore Integrity	Start Date 4/9/2014	End Date	Objective Well bore Integrity
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Daily Operations

Start Date	Summary	End Date
4/9/2014	ITP 250 psi, ICP 350 psi, ISCP 0 psi, well was on blow down through production equipment, MIRU Ensign Rig 339, blow down well to the work tank, function test BOP, control well with 60 bbl. of Clay treat/Biocide water, ND master valve and production tree, NU BOP, PU tag jts, ran 5 jts 160 ft and no tag, LD tag jts, MIRU Pick testers, POOH 2 3/8 production pipe to derrick, testing out, RD the tester, come out with 212 jts total, 209 good jts and 3 holes, PU STS's 3 7/8 blade bit and 4 1/2 scraper, tally in the hole with production pipe, ran 212 jts down to 6532.94, TOO H to derrick, LD bit and scraper, PU STS's 4 1/2 TC RBP, RIH with production pipe, set RBP at 6512.70 KB with 211 jts, LD 1 jt, circulated oil and gas out, pressure tested csg and plug up to 2000 psi, held good for 15 min, LD 4 jts, spot 2 sacks of sand on top of the plug, LD 5 more jts, land well with 201 jts in the hole at 6196.83, ND BOP and 3 K well head, install 5K well head and master valve, SI and secure well, drain pump and lines, rack pump and tank, RDMOL. 8 good jts on the ground left on location.	4/9/2014
11/21/2014	ITP 0 psi, ICP 0 psi, ISCP 0 psi, well was shut in, MIRU Bayou Rig 22, open the well to work tank, function tested BOP, ND top flange and master valve, NU BOP, PU 10 jts of 2 3/8 J-55 4.7 8rd from the ground, RU circulating equipment with TIW valve and tubing swivel, pressure tested BOP and pump lines up to 2500 psi, no leaks, tag sand at 6500 with 211 jts, circulated sand down to the plug at 6512 with 211 jts, roll the hole clean, released the plug, TOO H with production pipe to the derrick, LD RBP, MIRU Pick testers, PU 2 3/8 seat nipple, RIH with production pipe from the derrick testing in, RD hydro tester, got 4 holes, re pleased them with tag jts, SI and secure well with 221 jts in the hole, drain pump and lines, SD.	11/21/2014
11/24/2014	ITP 0 psi, ICP 0 psi, ISCP 0 psi, open the well, PU 1jt and tag at 6845.23 with 222 jts, RU circulating equipment, circulated oil and gas out, cleaned out down to 7009.15 with 227 jts, circulated the hole clean, LD 6 jts on the ground, land the tubing at 6857.15 KB with 221 jts of 2 3/8 J-55 4.7 8rd 1-10', 1-8', 1-4' subs and NC/SN (14.85' above perfs), ND BOP, NU 5K top flange and master valve, RU swab lubricator, made a broach run down to seat nipple (1.901"), LD broach, PU 2" swab cups, RIH with sand line, tag fluid at 600 ft, made 9 swab runs, recovered 64 bbls of water, final fluid level at 4400 ft, final pressures, tbg strong blow, csg 0 psi, LD swab lubricator, close the well, rack pump and tank, RDMOL, SD. Tubing details KB 8.00 Sub 2 3/8 J-55 8rd 10.00 Sub 2 3/8 J-55 8rd 8.00 Sub 2 3/8 J-55 8rd 4.00 221 jts 2 3/8 J-55 4.7 8rd 6825.55 NC/SN 1.60 Total 6857.15 IFL at 600 ft FFL at 4400 ft Made 64 BBL of water final tbg psi- strong blow final csg psi- 0 psi	11/24/2014

Mechanical Integrity Test, 4/11/2016 06:00

Job Category Completion/Workover	Primary Job Type Mechanical Integrity Test	Start Date 4/11/2016	End Date 4/12/2016	Objective TEST TUBING, SET CIBP ABOVE THE TOP PERFS, TAST CASING, LAND TUBING WITH PUMP OFF BIT SUB.
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Daily Operations

Start Date	Summary	End Date
4/11/2016	ITP 700 PSI, ICP 700 PSI, ISCP 0 PSI, WELL WAS SHUT IN, MIRU ENSIGN RIG 339, BLOW DOWN WELL TO RIG TANK, FUNCTION TESTED BOP, CONTROLLED WELL WITH 50 BBL OF CLAYTREAT/BIOCIDE WATER, ND PRODUCTION TREE AND MASTER VALVE, NU BOP, PU TAG JTS, TAGGED WITH 5 JTS 144', LD TAG JTS, POOH WITH 2 3/8 PRODUCTION PIPE TO THE DERRICK, TUBING WAS LANDED AT 6857.15 KB WITH 221 JTS 1-10', 1-8', 1-6' SUBS AND NC/SN OF 2 3/8 J-55, MIRU PICK TESTERS, PU 3 7/8 BLADE BIT AND 4 1/2 SCRAPER, RIH WITH 2 3/8 PRODUCTION PIPE FROM THE DERRICK DOWN TO 6846' WITH 221 JTS, RD HYDRO TESTER, FOUND 2 HOLES THE REST TESTED GOOD, CIRCULATED THE HOLE FOR 1 HOUR, POOH WITH PRODUCTION PIPE TO THE DERRICK, LD BIT AND SCRAPER, MIRU NABORS WIRE LINE, PU 3 7/8 CIBP, RIH WITH WIRE LINE, SET CIBP AT 6520' CORRELATED WITH LOGS, POOH, LD SETTING TOOL, PU DUMP BAILER, SPOTTED 2 SACKS OF CEMENT ON TOP OF THE PLUG, POOH, RD WIRE LINE, LOADED THE HOLE, PRESSURE TESTED CASING AND PLUG UP TO 500 PSI, HELD GOOD FOR 15 MINUTES, SI AND SECURE WELL FOR THE NIGHT, SD.	4/11/2016
4/12/2016	NO PRESSURES, OPEN THE WELL, MIRU PICK TESTERS, PRESSURE TESTED CASING AND PLUG UP TO 500 PSI, RECORDED THE TEST FOR 15 MINUTES, GOT A 10 PSI LOSS, RD HYDRO TESTER, PU 3 7/8 CONE BIT AND PUMP OFF BIT SUB WITH FLOAT, RIH WITH PRODUCTION PIPE, LANDED TUBING AT 6397.76 KB WITH 207 JTS SEAT NIPPLE AND PUMP OFF BIT SUB, ND BOP, INSTALLED 5K TOP FLANGE AND MASTER VALVE, RACK PUMP AND LINES, RDMOL.	4/12/2016

Pick Testers
Sterling, CO 80751

Guy Dove
970-580-0873

PDC Energy

Eduardo Chavez

Emily 24-19

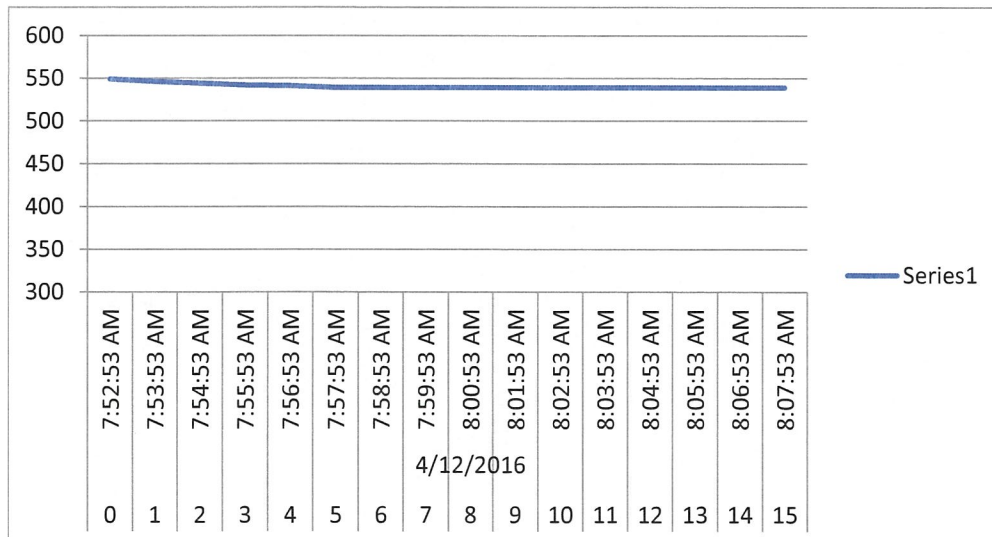
MIT

API# 05-123-21763

SE SW SEC. 19, 5N, 64W

Interval: 30 sec
DataPoint LogDate LogTime 1-P PSI

0		7:52:53 AM	549
1		7:53:53 AM	546
2		7:54:53 AM	544
3		7:55:53 AM	542
4		7:56:53 AM	541
5		7:57:53 AM	539
6		7:58:53 AM	539
7		7:59:53 AM	539
8	4/12/2016	8:00:53 AM	539
9		8:01:53 AM	539
10		8:02:53 AM	539
11		8:03:53 AM	539
12		8:04:53 AM	539
13		8:05:53 AM	539
14		8:06:53 AM	539
15		8:07:53 AM	539





State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax: (303) 894-2109



FOR OGCC USE ONLY

MECHANICAL INTEGRITY TEST

Fill out Part II of this form if well tested is a permitted or pending injection well. Send original plus one copy.

1. Duration of the pressure test must be a minimum of 15 minutes.
2. A pressure chart must accompany this report if this test was not witnessed by a OGCC representative.
3. For production wells, test pressures must be at a minimum of 300 psig.
4. For injection wells, test pressures must be at 300 psig or minimum injection pressure, whichever is greater.
5. A minimum 300 psi differential pressure must be maintained between the tubing and tubing/casing annulus pressure.
6. Do not use this form if submitting under provisions of Rule 328 a. (1) B. or C.
7. OGCC notification must be provided prior to the test.
8. Packers or bridge plugs, etc., must be set within 250 feet of the perforated interval to be considered a valid test.

OGCC Operator Number: 69175

Name of Operator: PDC Energy Inc.

Address: 3801 Carson Ave.

City: Evans

State: CO

Zip: 80620

Contact Name and Telephone

Travis Yenne

No: 970-506-9272

Fax: 970-506-9276

API Number: 05-123-21763

Field Name:

Field Number:

Well Name: Emily

Number: 24-19

Location (Qtr, Sec, Twp, Rng, Meridian): SESEW, Sec 19, 5N, 64W

Complete the Attachment Checklist

	Open	OGCC
Pressure Chart		
Cement Bond Log		
Tracer Survey		
Temperature Survey		

☒ SHUT-IN PRODUCTION WELL

☐ INJECTION WELL

Facility No.: _____

Part I Pressure Test

☐ 5 -Year UIC Test

☐ Test to Maintain SI/TA Status

☐ Reset Packer

☐ Verification of Repairs

☐ Tubing/Packer Leak

☐ Casing Leak

☐ Other (Describe): _____

Describe Repairs: _____

NA - Not Applicable

Wellbore Data at Time Test

Injection/Producing Zone(s)

Perforated Interval:

☐ NA

Open Hole Interval:

☐ NA

6570-6580

Casing Test

☐ NA

Use when perforations or open hole is isolated by bridge plug or cement plug
Bridge Plug or Cement Plug Depth

6520

Tubing Casing/Annulus Test

☐ NA

Tubing Size:

Tubing Depth:

Top Packer Depth:

Multiple Packers?

☐ YES

☐ NO

Test Data

Test Date

Well Status During Test

Date of Last Approved MIT

Casing Pressure Before Test

Initial Tubing Pressure

Final Tubing Pressure

4-12-16

Starting Casing Test Pressure

Casing Pressure - 5 Min.

Casing Pressure - 10 Min.

Final Casing Test Pressure

Pressure Loss or Gain During Test

549

539

539

539

10psi loss

Test Witnessed by State Representative?

☐ YES

☒ NO

OGCC Field Representative: _____

Part II Wellbore Channel Test

Complete only if well is or will be an injection well.

Indicate method used for cement integrity test, attach appropriate records, charts, or logs unless previously submitted.

☐ Tracer Survey

☐ CBL or Equivalent

☐ Temperature Survey

Run Date: _____

Run Date: _____

Run Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Eduardo Chavez

Signed: Eduardo Chavez

Title: Rig Supervisor

Date: 4-12-16

OGCC Approval: _____

Title: _____

Date: _____

Conditions of Approval, if any: _____



FIELD TICKET No.

- 32838

DELIVERED FROM 45

DATE 4-11-16

[illegible]

CALLED OUT		ON LOCATION		COMPLETED		TOTAL SERVICE & MATERIALS			
_____ Time		_____ Time		_____ Time		DISCOUNT			
_____ Date		_____ Date		_____ Date		TAX			
*ACCIDENT REPORT MUST BE ATTACHED WHEN NOT SIGNED						TOTAL CHARGES		A2220	

WITH MY INITIALS, I CONFIRM THAT THE TIME SHOWN IN THE "HOURS" COLUMN, ACCURATELY REFLECTS MY COMPENSABLE TIME.

I was not injured, involved in or witness to an accident during the performance of this work. If injury or accident occurred a signature is not to be provided. The injury or accident is to be reported to the supervisor so that a report can be prepared.

I hereby attest that my employer NCPS, did permit me to eat while working.

Employee Name (Print)	Hours	Initials	Employee Number	provided. The injury or accident is to be reported to the supervisor so that a report can be prepared.	me to eat while working.
<i>John M. Shaw R. Zink</i>					

CUSTOMER AGREES to pay Nabors Completion & Production Services Co. (the "Company") on a net 30 day basis from date of invoice. If Customer disputes any item invoiced, Customer shall, within 20 days after receipt of invoice, notify the Company of the item(s) disputed, specifying the reason(s) therefor; payment of the disputed item(s) may be withheld until settlement of dispute, but payment of undisputed portion of invoice shall be made without delay. All payments shall be made at the address shown on the reverse side of this document. In the absence of a separate written contract, CUSTOMER REPRESENTATIVE REPRESENTS AND WARRANTS THAT HE/SHE IS AUTHORIZED TO ENTER INTO THIS AGREEMENT ON BEHALF OF CUSTOMER AND ACCEPTS ALL TERMS AND CONDITIONS AS PRINTED ON THE REVERSE SIDE OF THIS DOCUMENT (WHICH INCLUDES INDEMNITY LANGUAGE THAT ALLOCATES RISKS RELATED TO THE ABOVE DESCRIBED SERVICES). Pricing and extensions, if shown above, are subject to verification and correction at time of invoicing.

X

NABORS COMPLETION & PRODUCTION SERVICES CO.

X

CUSTOMER REPRESENTATIVE

P.O. BOX 341
STERLING, CO 80751
970-522-8387

PICK TESTERS
HYDRO

TICKET
NO. DH - 8960

Customer Name <u>PDC</u>			On Location: <u>7:30 AM</u>
Address			On Stand By:
City	State	Zip	Off Stand By:
Customer Order No. <u>BERNIE</u>			Off Location: <u>8:30 AM</u>

Purpose of Work MIT Pressure Used 500 PSI

Date 4/12/16 Lease EMILY Well No 24-19

Field County Weld State CO Location

Casing Size & Wt. 4 Tubing Size & Wt. 2 3/4

Contractor & # ENGIN # 339 Round Trip Miles From

Directions: N.P.I. # 05-113-21763
SE SW SEC 19, 5N, 64W

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	Joints		
	Mileage		
	Test Cups		
	Hours		
1	Methanol <u>NET. COM</u>	<u>FK</u>	<u>25.00</u>
1	Casing Test <u>MIT</u>	<u>FK</u>	<u>360.00</u>
1	Computer Pressure Log <u>RENTAL</u>	<u>FK</u>	<u>175.00</u>
		Sub Total	<u>560.00</u>
		Sales Tax	<u>NA</u>
		Labor	<u>-84.00</u>

REPRESENTATIVE BY: <u>Guy Durr</u>	TOTAL CHARGES <u>15% Disc</u>	Subject to Correction in accordance with Latest Published Price Schedules	<u>476.00</u>
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Holes	
Rod Cuts	
Bad Pins	
Collar Leaks	
Split Joints	

Remarks:

I certify that the above material and/or services has been delivered and/or used: that the basis for charges are correctly stated: and that I am authorized to sign this agreement as agent of customer.

Company By Edna Durr Date