



STIMULATION TREATMENT REPORT

Page 1

Date 01-MAY-00 District Brighton F.Receipt 225115562 Customer H.S Resources Inc
 Lease HSR-TOOMEY 7-13 Well Name HSR-TOOMEY 7-13 Field WATTENBERG Location 13-3N-67W
 County Weld State Colorado Stage No 1 Well API - API 05123189220000

WELL DATA		Well Type: OLD		Well Class: GAS		Depth TD/PB: 7372		Formation: CODELL			
Geometry Type	Tubular Type	OD	Weight	ID	Grade	Top	Bottom	Perf Intervals			
TUBULAR	CSG	3.5	7.7	3.068	I-70	0	7420	Top	Bottom	SPF	Diameter
								7290	7300	4	.38
								7292	7297	2	.38
								7072	7074	2	.38

Packer Type _____ Packer Depth _____ FT

TREATMENT DATA					LIQUID PUMPED AND CAPACITIES IN BBLs	
Fluid Type	Fluid Desc	Pumped Volume(Gals)	Prop. Description	Volume Pumped(Lbs)		
PAD	Vistar 20	31836	Sand, Sacked, 20/40	5020	Tubing Cap. _____	
TREATMENT FLUID	Vistar 20	88284	Sand, White, 20/40	261160	Casing Cap. <u>66.63</u>	
				Total Prop Qty: <u>266180</u>	Annular Cap. _____	
Previous Treatment _____ Previous Production _____					Open Hole Cap. _____	
Hole Loaded With <u>Vistar 20</u> Treat Via: Tubing <input type="checkbox"/> Casing <input type="checkbox"/> Anul. <input checked="" type="checkbox"/> Tubing & Anul. <input type="checkbox"/>					Fluid to Load <u>50</u>	
Ball Sealers: <u>0</u> In <u>0</u> Stages Type _____					Pad Volume <u>758</u>	
Auxiliary Materials <u>FLO-BACK 30; GBW-23L; CLAYTREAT 3C</u>					Treating Fluid <u>2102</u>	
					Flush <u>67</u>	
					Overflush <u>.4</u>	
					Fluid to Recover <u>2947</u>	

PROCEDURE SUMMARY

Time AM/PM	Treating Pressure-Psi		Surface Slurry BBLs. Pumped		Slurry Rate BPM	Comments
	STP	Annulus	Stage	Total		
08:40				20	10.5	PUMP CLAYTREAT PAD
08:43	2167					START PAD CLEAR COUNTERS
09:00	3160				14.6	START STEP RATE TEST
09:03	2840					SHUT DOWN ISDP 1944
09:08	1529					RESUME PAD
09:20	3360				14.6	START 1 PPG 100 MESH
09:30	3377				14.6	START SPACER
09:52	3493		255	763	14.6	START 1 PPG 20/40
10:10	3379		387	1018	14.6	START 2 PPG 20/40
10:36	3389		1063	1405	14.6	START 3 PPG 20/40
11:48	3742		673	2468	14.5	START 4 PPG 20/40
12:36	4624		67	3141	14.5	START FLUSH
12:41	3883					SHUT DOWN ISDP 3894#

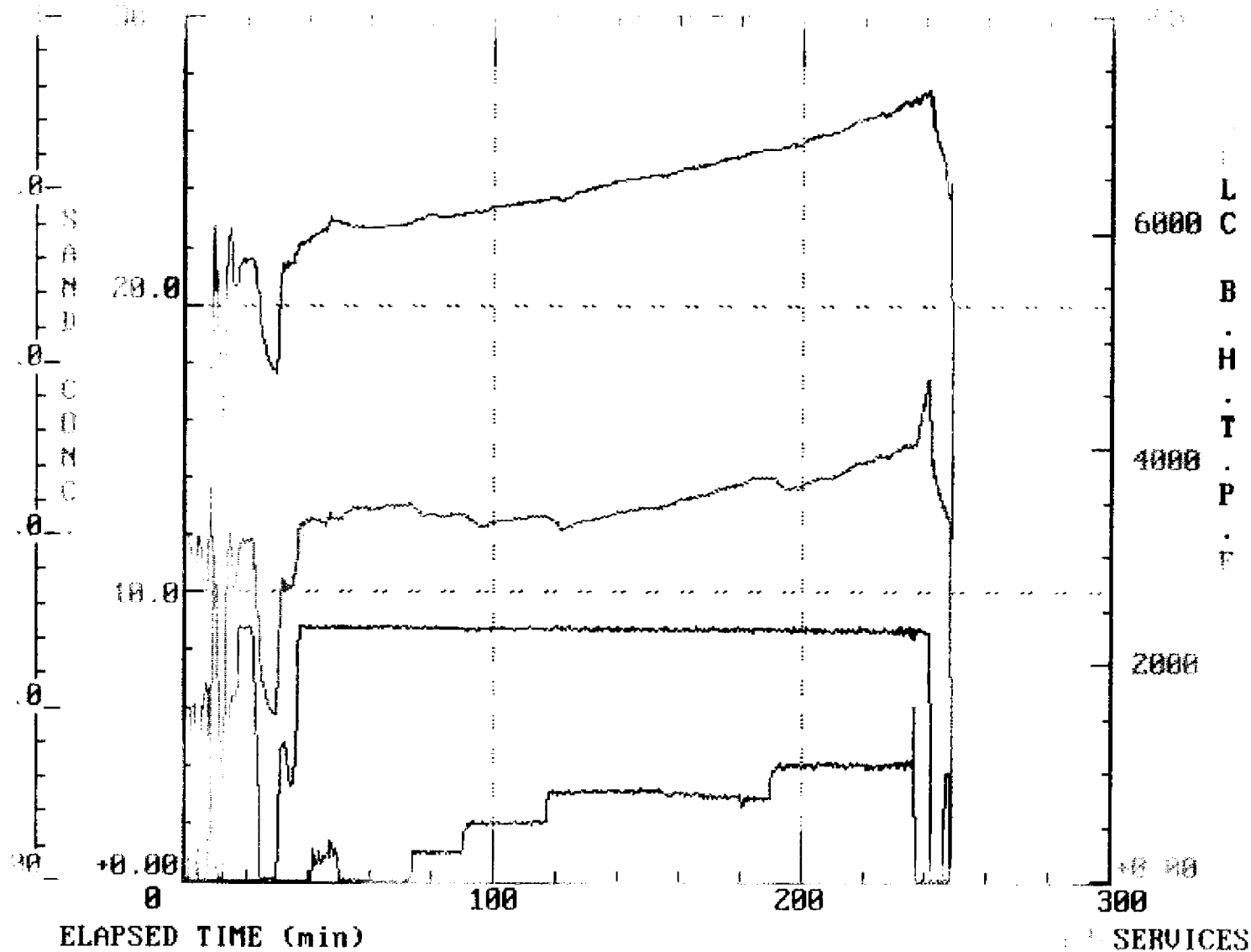
Treating Pressure		Injection Rates		Shut In Pressures		Customer Rep. Bob Sencenbaugh	
Minimum	1505	Treating Fluid	14.5	ISDP	3894	BJ Rep.	Steve Devers
Maximum	4660	Flush	14.5	5 Min.	3366	Job Number	225115562
Average	3475	Average	14.5	10 Min.	0	Rec. ID No.	179952064 A
Operators Max. Pressure 5500				15 Min.	0	Distribution	
				Final	3366 In 5 Min.		
				Flush Dens. lb./gal.	8.34		

JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TOOMEY 7-13

BJ SERVICES - FRAC P.A.C.T.S.

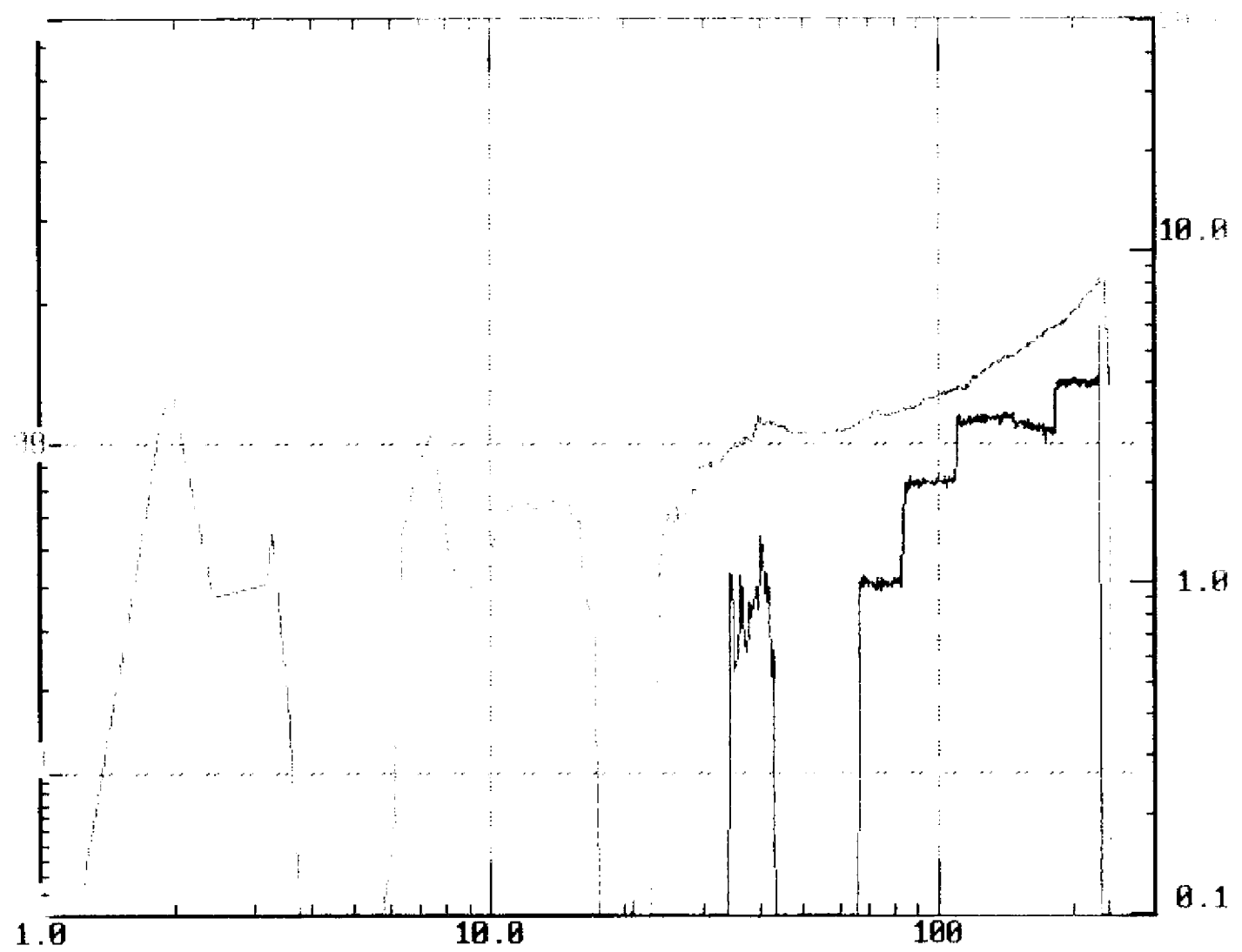
L C B H T P L



JOB TICKET #: 226115-62
DATE OF JOB: 09/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-CYCOMFY 7-13

BJ SERVICES FRAC F.A.C.T.S.



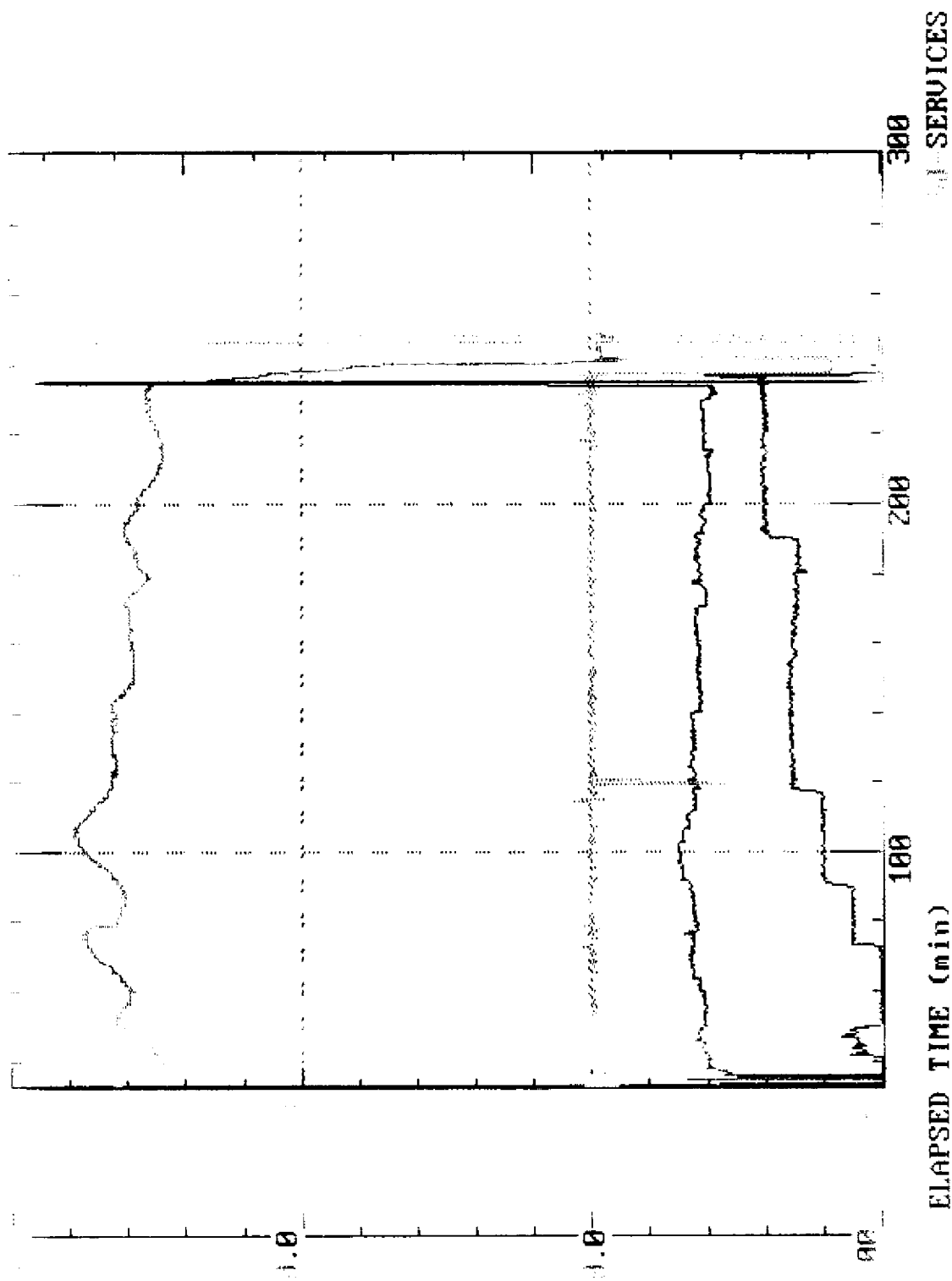
LOG/LOG NET BHP vs TIME (closure=5000 offset=7)

BJ SERVICES

JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TOOMEY 7-13

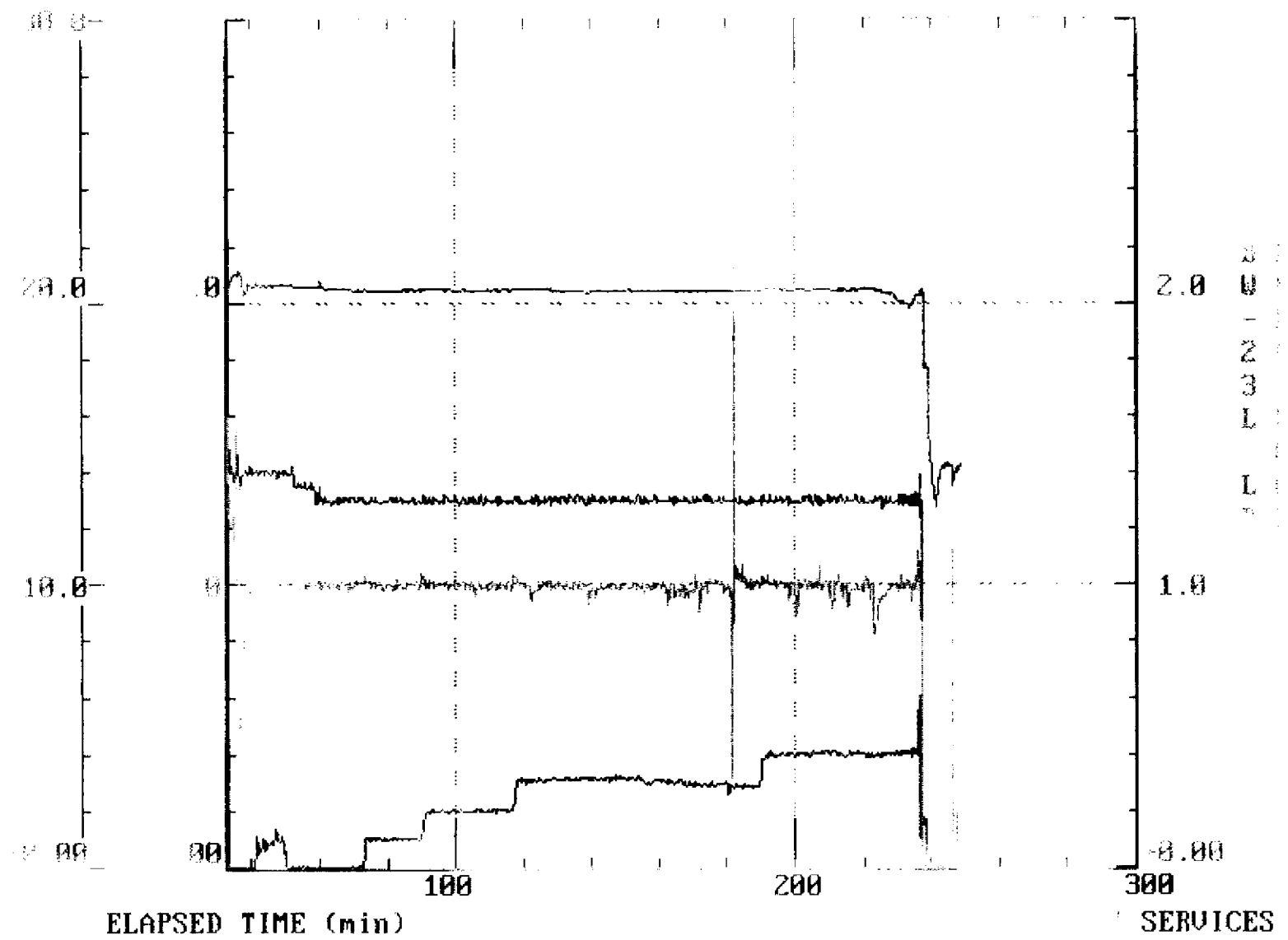
BJ SERVICES - FRAC F.A.C.T.S.



JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TOOMEY 7-13

BJ SERVICES - FRAC F.A.C.T.S.





WATER BASED FRAC FLUID QUALITY CONTROL

(Attachment to Treatment Report)

Page 1 of 4

DATE	May 1, 2000	FIELD RECEIPT NO	225115562
CUSTOMER	H S Resources, Inc	LEASE NAME & WELL NO	HSR-TOOMEY 7-13

Tanks Note: Use additional copies of this report for testing additional material lots or tanks This job will utilize ☐ On-the-Fly Gelling ☐ Batch Mix Gelling

Tank/Transport No	1	2	3	4	5	6	7		
-------------------	---	---	---	---	---	---	---	--	--

Water Quality Date filled 4/29/00 Date water sampled 5-1-00 Source of water ☒ city ☐ well ☐ pond ☐ other (specify)

Clarity, color, odor	OK	OK	OK	OK	OK	OK	OK		
Sample temperature, °F	63°	59°	60°	63°	64°	64°	69°		
Specific gravity	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Initial pH	7.1	7.1	7.1	7.1	7.1	7.1	7.1		
Iron (Fe ²⁺ /Fe ³⁺) ppm	0.1 -	0.1 -	0.1 -	0.1 -	0.1 -	0.1 -	0.1 -	1	1
Reducing agent	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Phosphate, ppm	0	0	0	0	0	0	0		
Chloride, ppm	-	-	-	-	-	-	-		
Calcium, ppm	50	50	50	50	50	50	50		
Magnesium, ppm	-	-	-	-	-	-	-		
Bacteria	Date Biocide Added -			Biocide added before H ₂ O? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no					
Aerobic No. per ml/time	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1	1
Anaerobic No. per ml/time	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1	1

Base Gel Quality ☒ Field Pilot Test ☐ Batch Mixed Gel Quality Test Use additional copies of this form for each series of tests @ 24 hr. intervals and prior to pumping.

Name of product system mixed	Vistar								
Gellant loading (lbs/1000 gal)	20								
Fluid sampling location	CMG								
Sampling time	5-1-00								
Sample temperature, (°F)	65°								
pH (initial/final)	7.1 / 10.25	1	1	1	1	1	1	1	1
Fann reading @ 300 rpm	3 min 17								
	5 min 18								
	7 min 20								
	10 min 21								
X-Link Vortex Closure, min sec	1:30								
X-Link Crown, min sec	2:15								

Break Tests (List breaker loadings pumped) Breaker Test Temp °F

Loadings	min/cP	1	1	1	1	1	1	1	1
	min/cP	1	1	1	1	1	1	1	1
	min/cP	1	1	1	1	1	1	1	1
	min/cP	1	1	1	1	1	1	1	1

Frac Fluid Quality (These measurements are made as the job is pumped)

Stage									
Viscosity (cP)									
pH									
xL time @ blender, sec									
Sample Temperature									
Time fluid pumped									

This test data is considered to be a minimum standard. Additional testing or documentation may be required by the customer or for frac fluid quality assurance. Data recorded electronically with Engineering approved monitoring devices may be substituted for applicable portions of this form. This testing data is considered to be the minimum needed for the well file.

TESTED BY Norman D. White



QUALITY CONTROL OF PROPPANT/GRAVEL/100 MESH SAND
(Attachment to Treatment Report)

Page 2 of 4

DATE	May 1, 2000	CUSTOMER	H S Resources, Inc
FIELD RECEIPT NO	225115562	UNIT/COMPARTMENT	8581
LEASE NAME & WELL NO	HSR-TOOMEY 7-13	DISTRICT PROPPANT SILO	
VENDOR:			

Proppant Gravel, or 100 mesh sand? (circle one)

If proppant? (circle one)

"Brady" type sand

"Ottawa" type sand

Resin Coated sand

Ceramic proppant

Sinter Bauxite

Other (specify) _____

If gravel? (circle one)

Ottawa

Resieved

Curable

Other (specify) _____

20/40

Note Use additional copies of this form for additional trucks, sizes, or vendors.

Truck Number	No	No	No	No
Trucking Company				
Weight Slip Available? Attach All	yes/no	yes/no	yes/no	yes/no
Net Weight Delivered	lb	lb	lb	lb
Nominal Size from list below				
Total Weight, each size	Size	Weight	Size	Weight
Is total weight for each size appropriate for job requirements? <u>yes</u>				
Is the content of the truck proper?	color right	<u>yes</u> /no	yes/no	yes/no
	low dust	<u>yes</u> /no	yes/no	yes/no
	appearance right	<u>yes</u> /no	yes/no	yes/no
	no contamination	<u>yes</u> /no	yes/no	yes/no
Is the manufacturer's sieve analysis proper? Attach all	oversize <0.1%	<u>yes</u> /no	yes/no	yes/no
	finer <1.0% (2.0%†)	<u>yes</u> /no	yes/no	yes/no
	in-size >90% (96%†)	<u>yes</u> /no	yes/no	yes/no
Sample taken?	<u>yes</u> /no	yes/no	yes/no	yes/no
Is the truck content acceptable?	<u>yes</u> /no	<u>yes</u> /no	yes/no	yes/no

Are the above answers appropriate and sufficient as compared to job requirements? yes

If not appropriate, correct problem before sieve analysis If appropriate but insufficient, do sieve analysis

Sieve Analysis	20/40	combine all samples*		combine all samples*	
	Initial sample weight	100 gram		100 gram	
		Amount Retained		Amount Retained	
	Sieve mesh	gram	%	gram	%
	16	0		0	
	20	.9		.7	
	30	39.9	39.9	35.3	35.3
	35	42.2	42.2	44.8	44.8
	40	14.5	14.5	15.2	15.2
	50	2.4		3.6	
	Pan	.1		.4	
	Total wt, gram	100		100	
Cleanliness of proppant/gravel	Turbidity	pass/fail		pass/fail	
	pH	pass/fail		pass/fail	

oversize } total in size 96.6 %

oversize } total in size 95.3 %

finer } total in size 96.6 %

finer } total in size 95.3 %

Recognized proppant or gravel sizes 6/12, 8/16, 12/20, 16/20, 16/30, 20/40, 30/50, 40/70, or 50/70 (40/60 for gravel)

*Recombine all proppant samples to represent 100,000 lb_m or fraction (Gravel samples should represent 2,000 lb_m or fraction)

†Specifications for gravel packing sand

TESTED BY

Norman D. White



QUALITY CONTROL OF PROPPANT/GRAVEL/100 MESH SAND
(Attachment to Treatment Report)

Page 3 of 4

DATE	May 1, 2000	CUSTOMER	H S Resources, Inc
FIELD RECEIPT NO	225115562	UNIT/COMPARTMENT	8581
LEASE NAME & WELL NO	HSR-TOOMEY 7-13	DISTRICT PROPPANT SILO	
VENDOR			

Proppant Gravel, or 100 mesh sand? (circle one)

If proppant? (circle one)

"Brady" type sand

Ottawa type sand

Resin Coated sand

Ceramic proppant

Sinter Baukite

Other (specify) _____

If gravel? (circle one)

Ottawa

Resieved

Curable

Other (specify) _____

20/40

Note Use additional copies of this form for additional trucks, sizes, or vendors

Truck Number	No	No	No	No
Trucking Company				
Weight Slip Available? Attach All	yes/no	yes/no	yes/no	yes/no
Net Weight Delivered	lb	lb	lb	lb
Nominal Size from list below				
Total Weight, each size	Size	Weight	Size	Weight
		lb		lb
Is total weight for each size appropriate for job requirements? <u>yes/no</u>				
Is the content of the truck proper?	color right	<u>yes/no</u>	yes/no	yes/no
	low dust	<u>yes/no</u>	yes/no	yes/no
	appearance right	<u>yes/no</u>	yes/no	yes/no
	no contamination	<u>yes/no</u>	yes/no	yes/no
Is the manufacturer's sieve analysis proper? Attach all	oversize <0.1%	<u>yes/no</u>	yes/no	yes/no
	finer <1.0% (2.0%†)	<u>yes/no</u>	yes/no	yes/no
	in-size >90% (96%†)	<u>yes/no</u>	yes/no	yes/no
Sample taken?	<u>yes/no</u>	yes/no	yes/no	yes/no
Is the truck content acceptable? <u>yes/no</u>	<u>yes/no</u>	yes/no	yes/no	yes/no

Are the above answers appropriate and sufficient as compared to job requirements? yes/no

If not appropriate, correct problem before sieve analysis If appropriate but insufficient, do sieve analysis

Sieve Analysis	20/40	← combine all samples* →		← combine all samples* →	
	Initial sample weight	100 gram		gram	
		Amount Retained		Amount Retained	
	Sieve mesh	gram	%	gram	%
	16	0			
	20	1.4			
	30	33.9	33.4		
	35	39.1	39.7		
	40	21.3	21.3		
	50	3.4			
Pan	1.3				
Total wt, gram	100				
Cleanliness of proppant/gravel	Turbidity	pass/fail		pass/fail	
	pH	pass/fail		pass/fail	

Recognized proppant or gravel sizes 6/12, 8/16, 12/20, 16/20, 16/30, 20/40, 30/50, 40/70, or 50/70 (40/60 for gravel)

*Recombine all proppant samples to represent 100,000 lb_m or fraction Gravel samples should represent 2,000 lb_m or fraction

†Specifications for gravel packing sand

TESTED BY: Norman D. White



Chemical Injection Testing Report

(Attachment to Treatment Report)

Page 4 of 4

DATE:	May 1, 2000	FIELD RECEIPT NO:	225115562
CUSTOMER:	H S Resources, Inc	LEASE NAME & WELL NO:	HSR-TOOMEY 7-13

Chem-Add Unit # H543 Operator: LYLE SJOSTRÖM

Additive	XLW-14	BF-9L	FloBack 30	GBW-23L	Claytreat 3C					
Loading	0.9	1.5	0.75	1	1					
Lowest Clean Rate	11.9	11.9	11.9	11.9	11.9					
Add. Inj Rate	0.450	0.750	0.375	0.500	0.500					
Expected time for (1 gal) = 1/rate	2min 13 sec	1min 20 sec	2min 40 sec	2min 0 sec	2min 0 sec					
Actual time for (1 gal)	2:13	1:20	2:41	1:59	2:00					
% Deviance	0%	0%	.4%	.8%	0%					

TESTS VERIFIED BY: Norman D. White



Rocky Mountain Region Laboratory
Brighton Colorado
Phone (303) 659-7347
Fax (303) 659-7401

Prepared For

HS Resources

HSR-Toomey

7-13

Sec. 13-T3N-R67W

Weld County
Colorado

Codell Formation
Treatment Fluid

Vistar 20 HT

Fann 50c Testing Results
Prepared For

Mr. Bob Sencenbaugh

Laboratory Project No. S04-92-00

Prepared By:

Bob C. Ewing

Rocky Mountain Region Laboratory
Brighton, Colorado

4/29/00



BJ SERVICES
Rocky Mountain Region Laboratory
Water Analysis Report

285 Weld County Road 27
Brighton, Colorado 80601
Phone: (303) 659-7347
Fax: (303) 659-7401

Date: 29-Apr-00 Project #: S04-92-00
Company: HS Resources Well #: 7-13
Lease: HSR-Toomey County: Weld County
State: Colorado Form.: Codell Formation
Depth: 7186 H₂O type: Frac Tank Composite
BJ Representative: Mark Shaefer Analyst: Bob C. Ewing

pH: 7.17
Specific Gravity: 1.000 Temp (F): 65
Specific Gravity (Corrected) 1.001 @ 60 OF.
CATIONS mg/l me/l ppm

Sodium (calc.)	25	1.1	25
Calcium	16	0.8	16
Magnesium	7	0.6	7
Barium	0	0.0	0
Potassium	0	0.0	0
Iron	0.10	0.0	0.10

ANIONS

Chloride	10	0.3	10
Sulfate	20	0.4	20
Carbonate	< 1	----	----
Bicarbonate	110	1.8	110

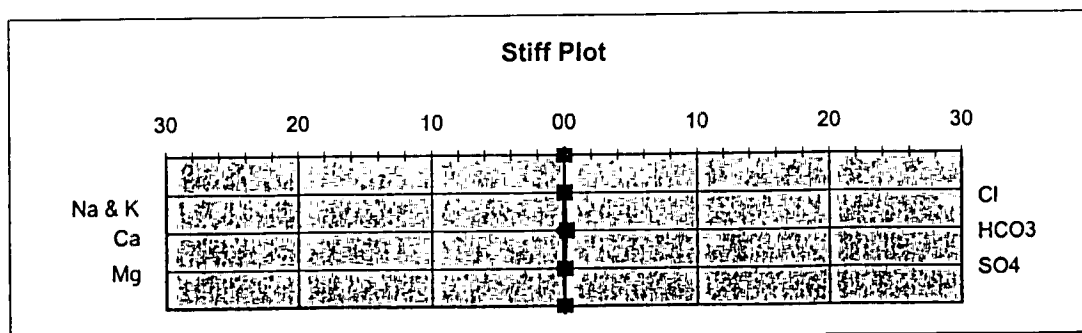
Total Dissolved Solids(calc.) 188 188

Total Hardness as CaCO₃ 70 1.4 70

Comments:

Scale Analysis

CaCO₃ Factor 1761.192 Calcium Carbonate Scale Probability --> REMOTE
CaSO₄ Factor 16040 Calcium Sulfate Scale Probability -----> REMOTE





Rocky Mountain
Region Laboratory
For
HS Resources
HSR-Toomey
7-13
Weld County
Colorado
Codell Formation

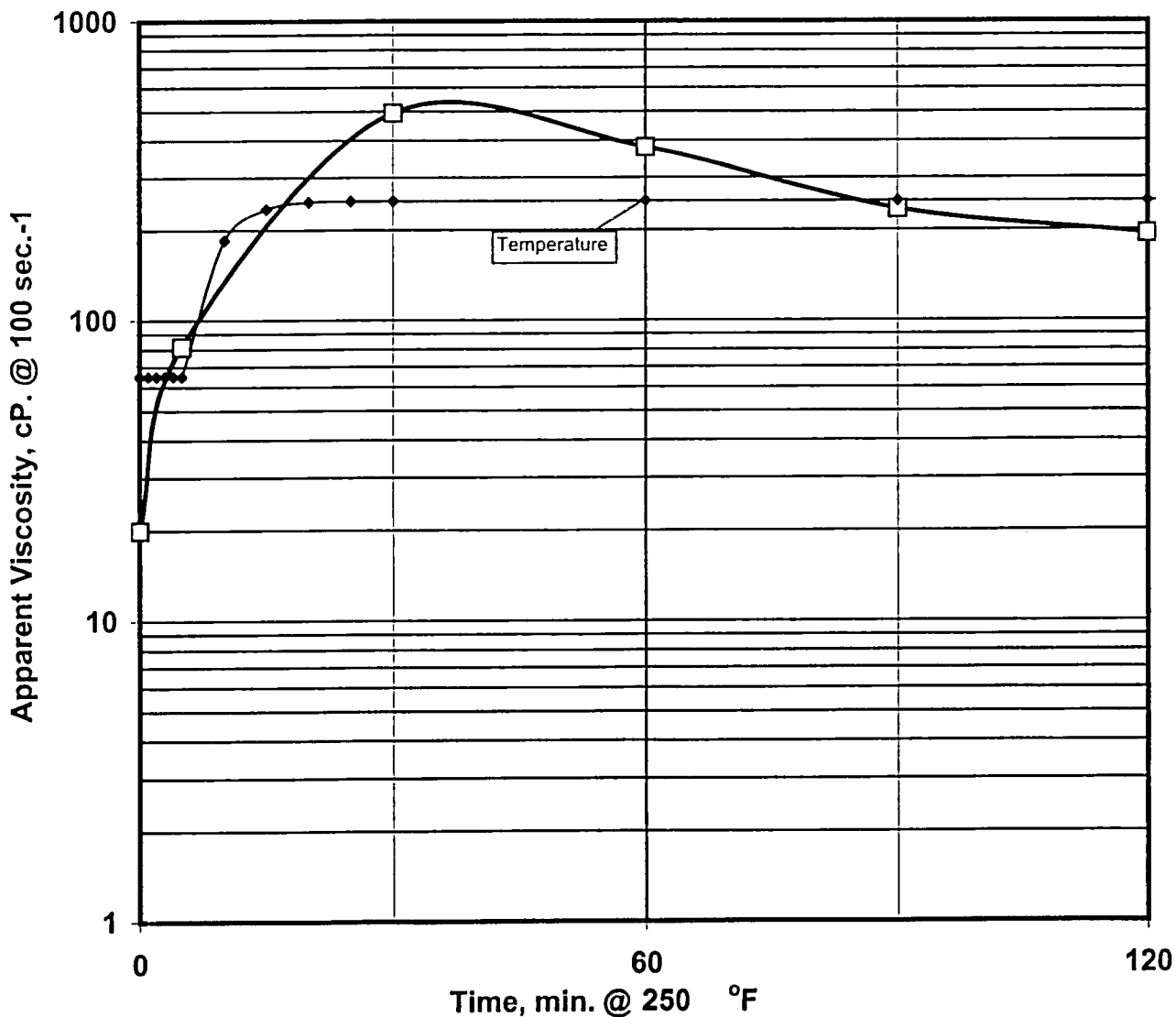
Fluid System

Vistar 20 HT
Containing:

5.0 gpt VSP-1
1.0 gpt XLW-14
BF-9L (80:20) to pH=10.0
1.0 gpt ClayTreat 3c
0.75 gpt FloBack30

1.0 gpt GBW-23L
3.0 ppt GS-1a

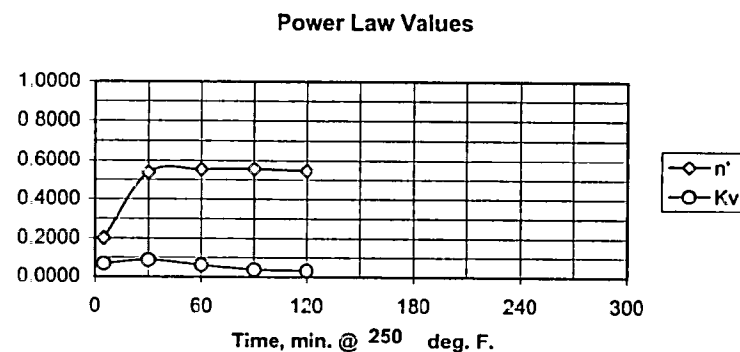
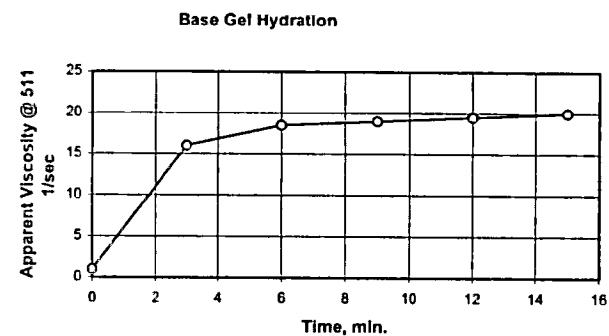
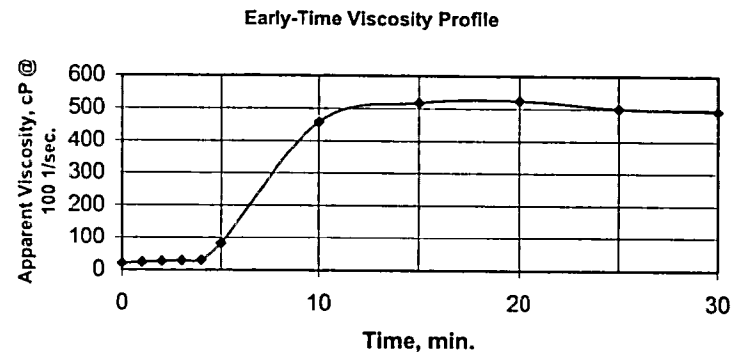
Apparent Viscosity, Fann 50c



Rocky Mountain Region Laboratory
Brighton, Colorado
Date: 4/29/00

Time "0" at Instrument Start
File: S04-92-00
Bob C. Ewing

Customer Name:	HS Resources	Date:	29-Apr-2000
Well Name:	HSR-Toomey 7-13	County, State:	Weld County
Test Type:	Vistar 20 HT	Test Id#:	S04-92-00
Formation:	Codell Formation	Inst Geometry:	R1-B5 0 8503 1/sec Per rpm
Depth:	7186	Test Temperature:	250
Machine RPM settings for shear rate vs shear stress sweep			
Sweep Interval:	30	235	List shear rates to report viscosities:
		176	40
Initial pH		118	100
Final pH		59	170
Calculated Shear Stress Sweep Points:	200	150	100 50
Viscosity at Requested Shear Rates			
Time/Mins.	Temp.	N Prime	K Prime
		Shear Rate	Shear Rate Shear Rate
		40	100 170
0	70	App. Viscosity at 468 1/sec	
5	70	0.2011	0.0675
30	250	0.5370	0.0870
60	250	0.5534	0.0620
90	250	0.5554	0.0381
120	250	0.5465	0.0328
150	250		
180	250		
210	250		
240	250		
	250		
	250		
	250		
	250		
	250		
Early Time Viscosity		Base Gel Hydration @ 65 deg. F.	
Initial 5 min. @ 468 1/sec.			
Time, min.	cP.	Time, (min.)	cP. @ 511 1/sec.
0	20	0	1
1	23	3	16
2	26	6	18.5
3	28	9	19
4	30	12	19.5
5	82	15	20
10	459		
15	518		
20	525		
25	501		
30	494		
Gelling Agent:	5.0 gpt VSP-1	Gel Stabilizer:	3.0 ppt GS-1a
Crosslinker:	1.0 gpt XLW-14	Crosslink Delayer:	
Ph Buffer Agent:	BF-9L (80/20) to pH=10.0	Surfactant:	
Salt or KCL:		Load Recover Agent:	0.75 gpt FloBack30
Other:	1.0 gpt GBW-23L	Clay Protection:	1.0 gpt ClayTreat 3c
Comments:		Other:	
		Other:	



Analyst: Bob C. Ewing

POST FRAC TREATMENT REPORT

**H S RESOURCES, INC
HSR - TOOMEY 7-13
13-03N-67W
Codell Re-Frac**

**Treatment Date - May 1, 2000
Brighton, Colorado
(303) 659-5853**



BJ Services Company

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Please Reply 285 Weld County Road 27
Brighton, Colorado 80601
(303) 659-5853

May 1, 2000

Mr. Bob Sencenbaugh
H S RESOURCES, INC
3939 Carson Avenue
Evans, Colorado 80620

Re:
Treatment Summary
HSR - TOOMEY 7-13
Codell Re-Frac

Dear Mr. Sencenbaugh

This post treatment summary contains information that was gathered through BJ Services's real time data acquisition system. The stimulation treatment on the above reference well was performed by our Brighton district on May 1, 2000.

The information presented consists of the well data, proposed vs. actual treatment, treatment graphs, discussion, and treatment data.

Thank you for the opportunity to evaluate this treatment. If you have any questions or comments, please call me at (303) 659-5853.

Sincerely,

Mike Khachatryan
BJ Services
District Engineer



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SECTION I
WELL DATA



WELL DATA

I - 2

WELL DATA

Operator	H S RESOURCES, INC	
Well Name	HSR - TOOMEY 7-13	
Well Orientation	Vertical	
Formation	Codell Re-Frac	
Location	13-03N-67W	
Total Depth	7420.0	ft
Perforation Interval	7290.0-7300.0	ft
	7292.0-7297.0	ft
	7072.0-7074.0	ft
Depth to Middle Perforation	7186.0	ft
Number of Perforation	56	
Perforation Diameter	0.380	in
Casing/Liner Size	3.500	in
Frac Gradient	0.658	psi/ft
Bottom Hole Fracture Pressure	4731	psi
Bottom Hole Temperature	250.0	°F



SECTION II

PROPOSED & ACTUAL TREATMENT



PROPOSED & ACTUAL TREATMENT

II - 2

TREATMENT PARAMETERS

Parameters	Proposed	Actual	Unit
Treating Conductor	3.500	3.500	in
Injection Rate	14.00	14.50	bpm
Average Surface Treating Pressure	4548	1505	psi

FLUID VOLUME

Treating Fluid Volume	2142.0	2102.0	Bbls
Flush Volume	67.0	67.0	Bbls

PROPPANT

100 mesh Ottawa	5000	5020	lbs
20/40 Ottawa	261000	261160	lbs

ADDITIVES

VSP-1 [Gelling Agent]	610.0	605.0	Gallons
XLW-14 [Crosslinker]	120.0	119.0	Gallons
High perm CRB-LT [Gel Breaker]	10.000	10.000	Lbs
GBW-5 [Gel Breaker]	11.000	11.000	Lbs
GS-1A [Gel Stabilizer]	250.0	250.0	Lbs
Flo-Back 30 [Surface Tension Reducer]	92.000	91.000	Gallons
GBW-23L [Gel Breaker]	122.0	119.0	Gallons
Claytreat 3C [Claytreat 3C]	125.0	122.0	Gallons
BF-9L [pH Control]	43.000	33.000	Gallons



PROPOSED & ACTUAL TREATMENT

II - 3

TREATMENT SCHEDULE

Stage No.	Gel Volume, Bbls		Fluid Type	Proppant Conc., ppg	
	Proposed	Actual		Proposed	Actual
1	285.7	289.0	Vistar 20 LHT	0.0	0.0
2	119.0	136.0	Vistar 20	1.0	1.0
3	357.1	333.0	Vistar 20	0.0	0.0
4	238.1	244.0	Vistar 20	1.0	1.0
5	357.1	353.0	Vistar 20	2.0	2.0
6	928.6	934.0	Vistar 20	3.0	3.0
7	619.0	571.0	Vistar 20	4.0	4.0
8	67.0	67.0	Vistar 20	0.0	0.0



STIMULATION TREATMENT REPORT

Page 1

Date 01-MAY-00 District Brighton F Receipt 225115562 Customer H S Resources Inc
Lease HSR-TOOMEY 7-13 Well Name HSR-TOOMEY 7-13 Field WATTENBERG Location 13-3N-67W
County Weld State Colorado Stage No 1 Well API - API 05123189220000

WELL DATA		Well Type	Well Class	Depth TD/PB:		Formation	
		OLD	GAS	7372		CODELL	
Geometry Type	Tubular Type	OD	Weight	ID	Grade	Top	Bottom
TUBULAR	CSG	3.5	7.7	3.068	I-70	0	7420
				Perf Intervals			
				Top	Bottom	SPF	Diameter
				7290	7300	4	.38
				7292	7297	2	.38
				7072	7074	2	.38

Packer Type _____ Packer Depth _____ FT

TREATMENT DATA

Fluid Type	Fluid Desc	Pumped Volume(Gals)	Prop. Description	Volume Pumped(Lbs)
PAD	Vistar 20	31836	Sand, Sacked, 20/40	5020
TREATMENT FLUID	Vistar 20	88284	Sand, White, 20/40	261160
Total Prop Qty				266180

LIQUID PUMPED AND CAPACITIES IN BBLS

Tubing Cap	_____
Casing Cap	66.63
Annular Cap	_____
Open Hole Cap	_____
Fluid to Load	50
Pad Volume	756
Treating Fluid	2102
Flush	67
Overflush	4
Fluid to Recover	2947

Previous Treatment _____ Previous Production _____
Hole Loaded With Vistar 20 Treat Via: Tubing ☐ Casing ☒ Anul ☐ Tubing & Anul. ☐
Ball Sealers: 0 In 0 Stages Type _____
Auxiliary Materials FLO-BACK 30 GBW-23L CLAYTREAT 3C

PROCEDURE SUMMARY

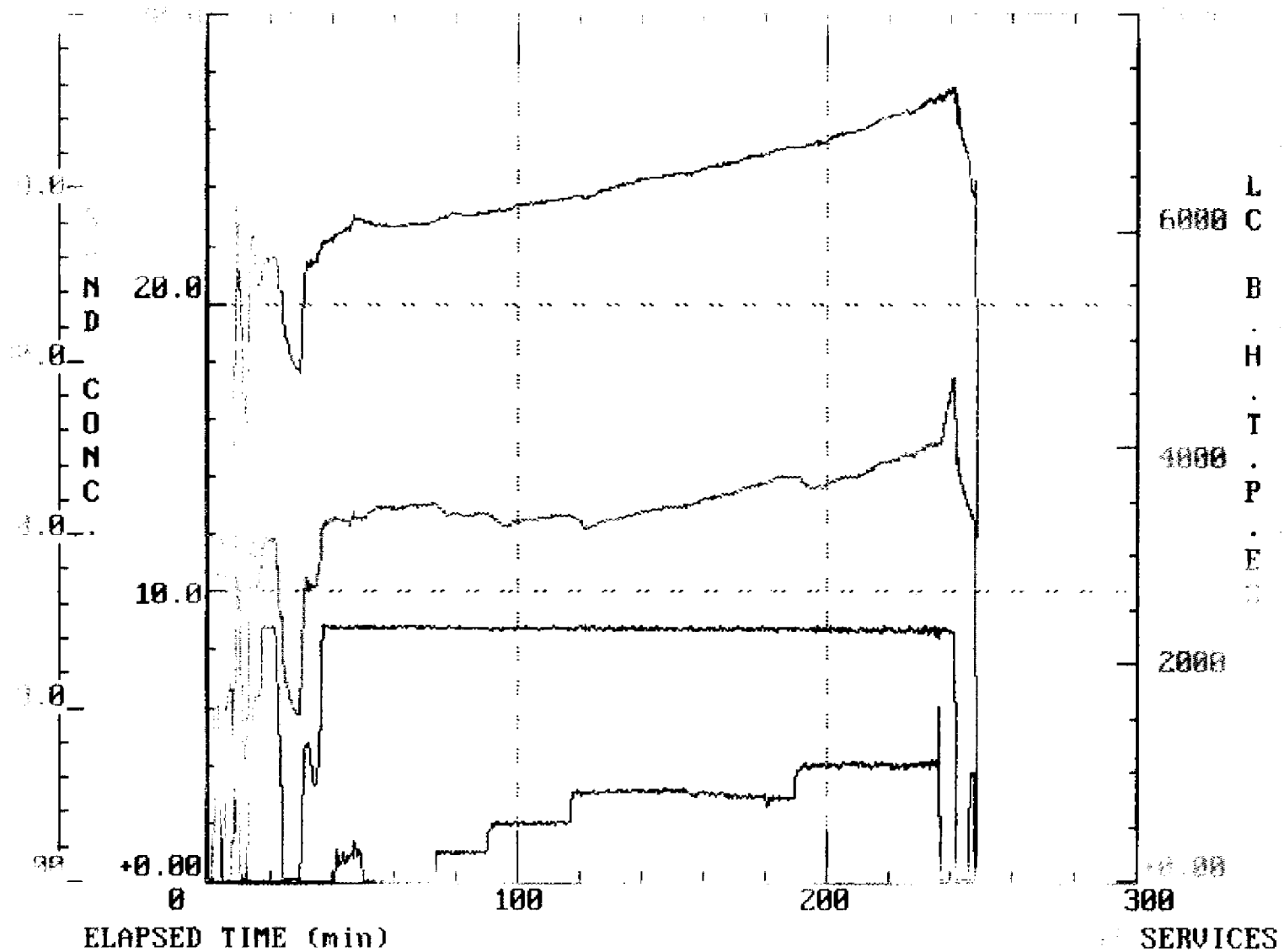
Time AM/PM	Treating Pressure-Psi		Surface Slurry BBLS Pumped		Slurry Rate BPM	Comments
	STP	Annulus	Stage	Total		
08:40				20	10.5	PUMP CLAYTREAT PAD
08:43	2167					START PAD CLEAR COUNTERS
09:00	3160				14.6	START STEP RATE TEST
09:03	2840					SHUT DOWN ISDP 1944
09:08	1529					RESUME PAD
09:20	3360				14.6	START 1 PPG 100 MESH
09:30	3377				14.6	START SPACER
09:52	3493		255	763	14.6	START 1 PPG 20/40
10:10	3379		387	1018	14.6	START 2 PPG 20/40
10:36	3389		1063	1405	14.6	START 3 PPG 20/40
11:48	3742		673	2468	14.5	START 4 PPG 20/40
12:36	4624		67	3141	14.5	START FLUSH
12:41	3883					SHUT DOWN ISDP 3894#

Treating Pressure		Injection Rates		Shut In Pressures		Customer Rep. Bob Sencenbaugh	
Minimum	1505	Treating Fluid	14.5	ISDP	3894	BJ Rep.	Steve Devers
Maximum	4660	Flush	14.5	5 Min	3366	Job Number	225115562
Average	3475	Average	14.5	10 Min	0	Rec. ID No.	179952064 A
Operators Max Pressure 5500				15 Min	0	Distribution	
				Final	3366 In 5 Min		
				Flush Dens. lb./gal.		8.34	

JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TOOMEY 2-13

BJ SERVICES - FRAC F.A.C.T.S.

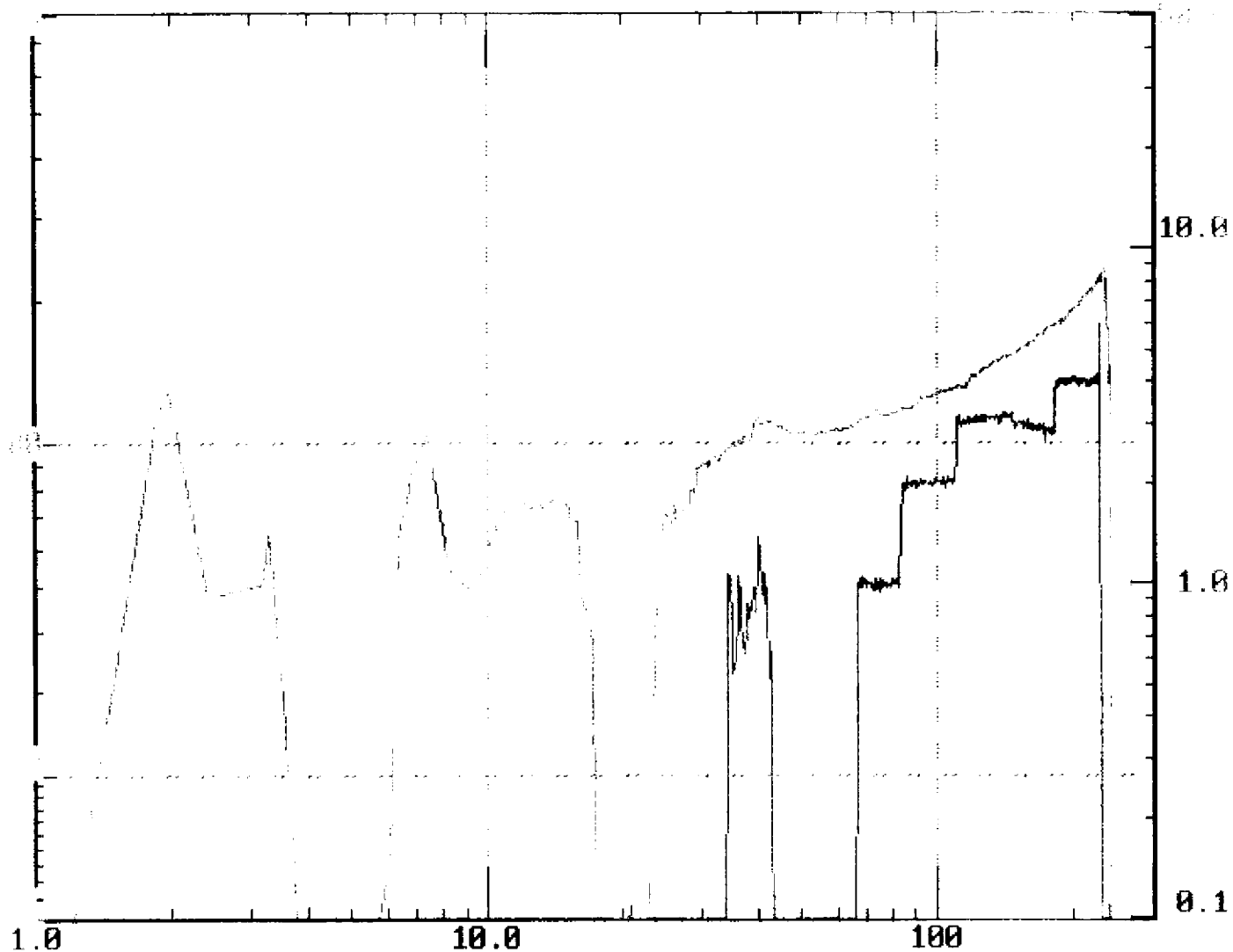


JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TOOMEY 7-13

BJ SERVICES - FRAC F.A.C.T.S.

WATER INJECT



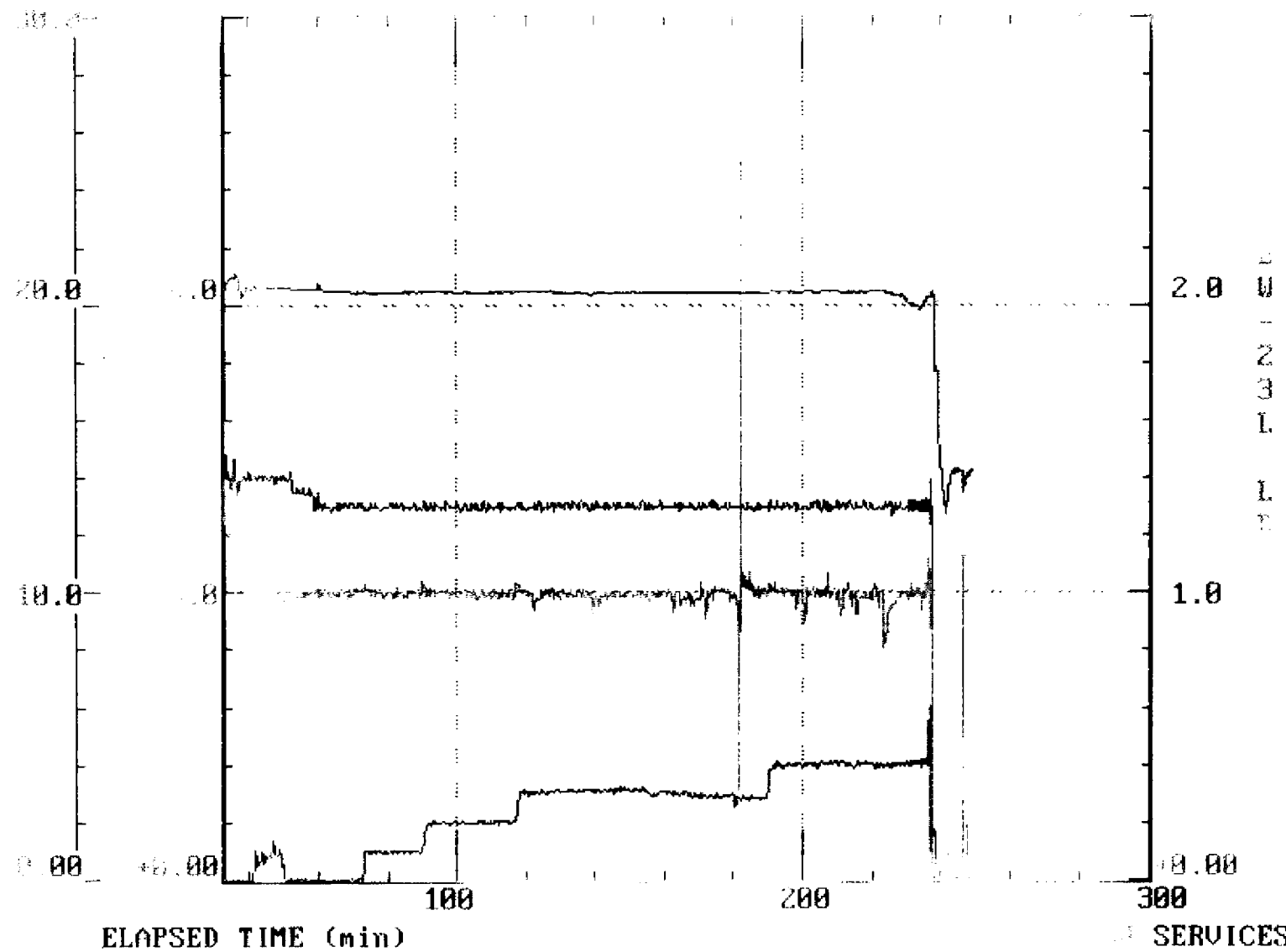
LOG/LOG NET BHP vs TIME (closure=5000 offset=7)

BJ-SERVICES

JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TOOMEY 7-13

BU SERVICES - PRAC P.A.C.T.S.

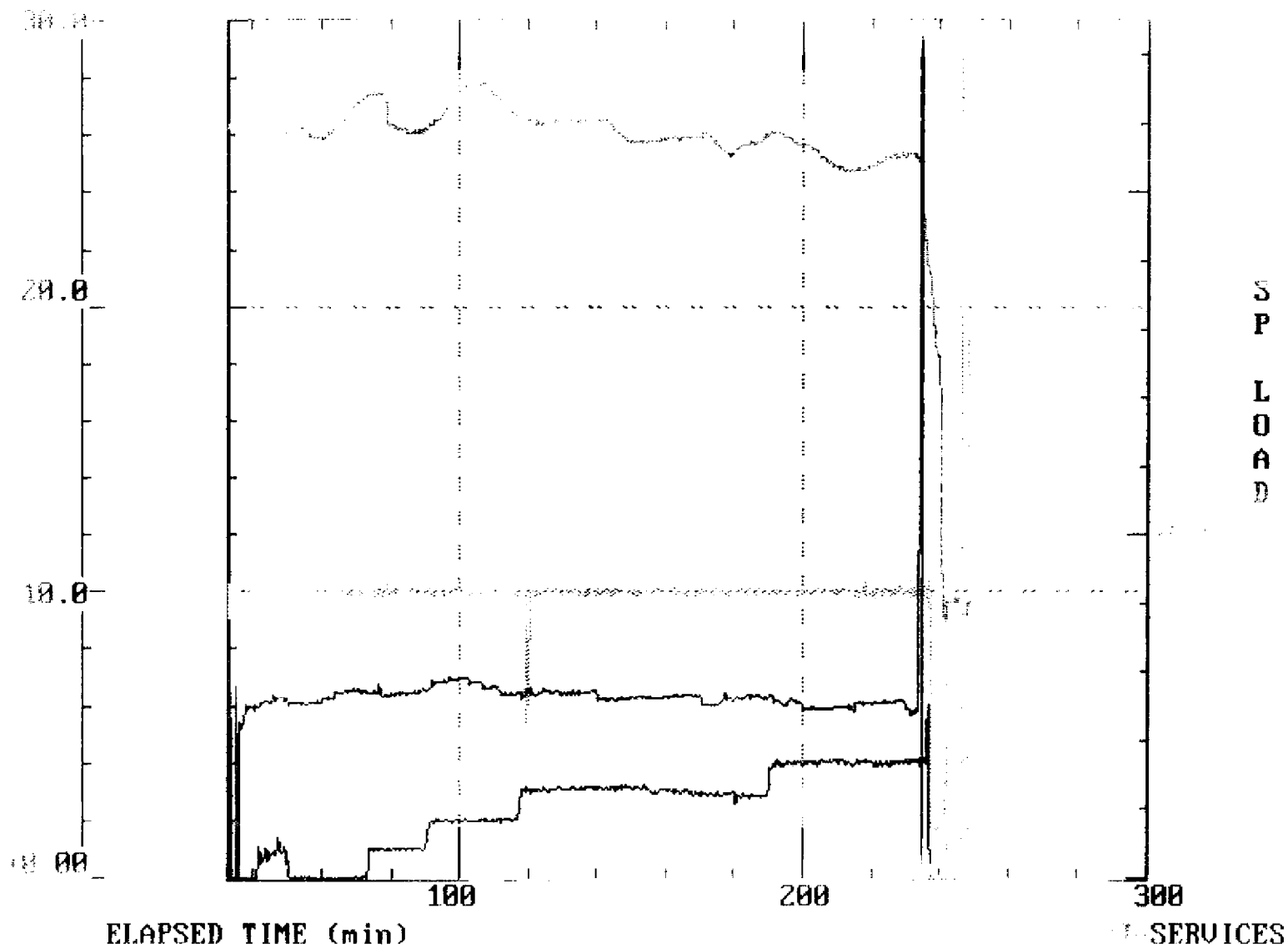


JOB TICKET #: 225115562
DATE OF JOB: 05/01/2000

CUSTOMER: HS RESOURCES
WELL: HSR-TIGNEY 7-23

RT SERVICES - EVAO F.A.O.T.S.

SP LOAD



FIELD RECEIPT NO. 225115562

BJ Services Company



CUSTOMER (COMPANY NAME) H S Resources Inc				CREDIT APPROVAL NO. REQ		PURCHASE ORDER NO.		CUSTOMER NUMBER 20027628 - 20027628		INVOICE NUMBER	
MAIL INVOICE TO:				STREET OR BOX NUMBER 3939 Carson Ave.		CITY Evans		STATE Colorado		ZIP CODE 80620-2505	
DATE WORK COMPLETED		MO. 05	DAY 01	YEAR 2000	BJ SERVICES SUPERVISOR Steve Devers		WELL TYPE: Old Well				
BJ SERVICES DISTRICT Brighton					JOB DEPTH (ft) 7,290		WELL CLASS: Gas				
WELL NAME AND NUMBER HSR-TOOMEY 7-13					TD WELL DEPTH (ft) 7,372		GAS USED ON JOB: No Gas				
WELL LOCATION:		LEGAL DESCRIPTION 13-3N-67W			COUNTY/PARISH Weld		STATE Colorado		JOB TYPE CODE: Fracture 0 - 9,999 PSI		
PRODUCT CODE	DESCRIPTION				UNIT OF MEASURE	QUANTITY	LIST PRICE UNIT	GROSS AMOUNT	PERCENT DISC.	NET AMOUNT	
100002	Sand, White, 20/40				cwt	2611.6	11.480	29,981.17	56%	13,191.71	
100122	Sand, White, 100 mesh				cwt	50.2	11.480	576.30	56%	253.57	
100175	GBW-5				lbs	11	7.900	86.90	56%	38.24	
100214	GS-1A				lbs	250	4.050	1,012.50	56%	445.50	
100377	XLW-14				gals	123	72.050	8,862.15	56%	3,899.35	
398217	GBW-23L				gals	129	66.000	8,514.00	56%	3,746.16	
398226	VSP-1				gals	605	68.900	41,684.50	56%	18,341.18	
488137	Claytreat 3C				gals	122	60.000	7,320.00	56%	3,220.80	
488175	High Perm CRB-LT				lbs	10	32.500	325.00	56%	143.00	
488255	Flo-back 30				gals	92	63.600	5,851.20	56%	2,574.53	
499667	BF-9L				gals	33	16.150	532.95	56%	234.50	
SUB-TOTAL FOR Product Material								104,746.67	56.00%	46,088.54	
F302C	Comp. Sand Proportioning, 11-20 bpm				4hrs	1	2,675.000	2,675.00	56%	1,177.00	
SUB-TOTAL FOR Service Charges								2,675.00	56%	1,177.00	
ARRIVE LOCATION:		MO. 05	DAY 01	YEAR 2000	TIME 05:30	SERVICE ORDER: I AUTHORIZE WORK TO BEGIN PER SERVICE INSTRUCTIONS IN ACCORDANCE WITH THE TERMS AND CONDITIONS PRINTED ON THE LAST PAGE OF THIS FORM AND REPRESENT THAT I HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.			SERVICE RECEIPT: I CERTIFY THAT THE MATERIALS AND SERVICES LISTED WERE RECEIVED AND ALL SERVICES PERFORMED IN A WORKMANLIKE MANNER.		
CUSTOMER REP. Bob Sencenbaugh						CUSTOMER AUTHORIZED AGENT			X CUSTOMER AUTHORIZED AGENT		
SEE LAST PAGE FOR GENERAL TERMS AND CONDITIONS						CUSTOMER AUTHORIZED AGENT			X BJ SERVICES APPROVED		

FIELD RECEIPT NO. 225115562

BJ Services Company



CUSTOMER (COMPANY NAME)				CREDIT APPROVAL NO.	PURCHASE ORDER NO.	CUSTOMER NUMBER	INVOICE NUMBER		
H S Resources Inc				REQ		20027628 - 20027628			
MAIL		STREET OR BOX NUMBER			CITY	STATE	ZIP CODE		
INVOICE TO :		3939 Carson Ave.			Evans	Colorado	80620-2505		
DATE WORK COMPLETED	MO.	DAY	YEAR	BJ SERVICES SUPERVISOR	WELL TYPE :				
	05	01	2000	Steve Devers	Old Well				
BJ SERVICES DISTRICT				JOB DEPTH (ft)	WELL CLASS :				
Brighton				7,290	Gas				
WELL NAME AND NUMBER				TD WELL DEPTH (ft)	GAS USED ON JOB :				
HSR-TOOMEY 7-13				7,372	No Gas				
WELL LOCATION :	LEGAL DESCRIPTION		COUNTY/PARISH	STATE	JOB TYPE CODE :				
	13-3N-67W		Weld	Colorado	Fracture 0 - 9,999 PSI				
PRODUCT CODE	DESCRIPTION			UNIT OF MEASURE	QUANTITY	LIST PRICE UNIT	GROSS AMOUNT	PERCENT DISC.	NET AMOUNT
F201A	Frac HHP, 0- 5000 psi - Slurry			4hrs	1235	7.350	9,077.25	56%	3,993.99
J055	Liquid Additive Pump			job	1	935.000	935.00	56%	411.40
J229	Data Acquisition, Frac/Acid-Enhanced			job	1	3,445.000	3,445.00	56%	1,515.80
J301	Gel Monitoring			day	1	555.000	555.00	56%	244.20
J310	Sand King, less than 300,000 lb			3days	1	1,150.000	1,150.00	56%	506.00
J321	Densimeter			job	1	710.000	710.00	56%	312.40
J336	LFC Hydration Unit			job	1	1,950.000	1,950.00	56%	858.00
J345	3 in Frac Valve			job	1	300.000	300.00	56%	132.00
J381	N2 pressurized pop-off valve			job	1	925.000	925.00	56%	407.00
J390	Mileage, Heavy Vehicle			miles	238	3.800	904.40	56%	397.94
J391	Mileage, Auto, Pick-Up or Treating Van			miles	68	2.300	156.40	56%	68.82
J460A	Proppant Conc Charge/1.0-4.0 lbs			gals	88284	0.060	5,297.04	56%	2,330.70
SUB-TOTAL FOR Equipment							25,405.09	56.00%	11,178.25
ARRIVE LOCATION :	MO.	DAY	YEAR	TIME	SERVICE ORDER: I AUTHORIZE WORK TO BEGIN PER SERVICE INSTRUCTIONS IN ACCORDANCE WITH THE TERMS AND CONDITIONS PRINTED ON THE LAST PAGE OF THIS FORM AND REPRESENT THAT I HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.			SERVICE RECEIPT: I CERTIFY THAT THE MATERIALS AND SERVICES LISTED WERE RECEIVED AND ALL SERVICES PERFORMED IN A WORKMANLIKE MANNER.	
	05	01	2000	05:30					
CUSTOMER REP. Bob Sencenbaugh					X CUSTOMER AUTHORIZED AGENT X BJ SERVICES APPROVED				
SEE LAST PAGE FOR GENERAL TERMS AND CONDITIONS					CUSTOMER AUTHORIZED AGENT				

FIELD RECEIPT NO. 225115562

BJ Services Company[illegible]

BJ SERVICES
285 Weld County Rd 27
Brighton, CO
1 800 888 5853

CUSTOMER NAME: HS RESOURCES INC.

WELL NAME: HSR-TOOMEY 7-13

FIELD: WATTENBERG

FORMATION: CODELL REFRAC

CUSTOMER REP.: BOB SENCENBAUGH

BJ REC. NUMBER: 179952064A

RECEIPT NUMBER: 225115562

DATE: 05/01/100 TIME: 08:38:59

DISTRICT: BRIGHTON

0 VISCOSITY (CPS) 50

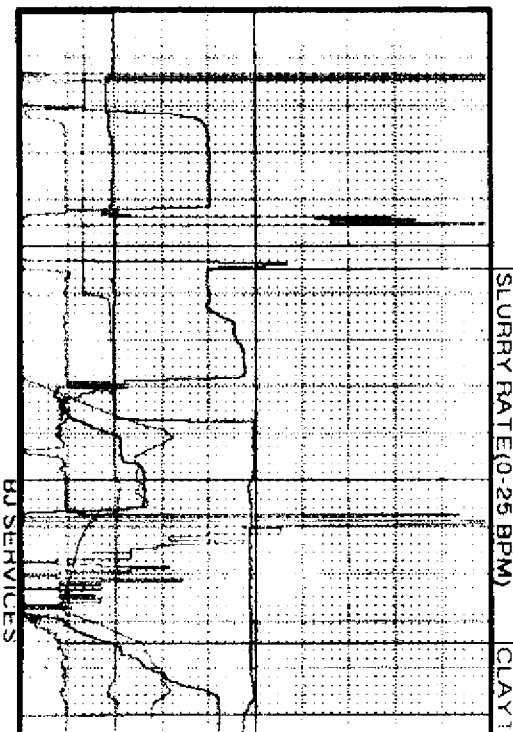
0 GBW-5 LD (PPT) 10

0 CLAYTREAT LD (GPT) 10

0 SLURRY RATE (BPM) 25

0 NE/FLOBAK LD (GPT) 10

0 BUFFER LD (GPT) 10



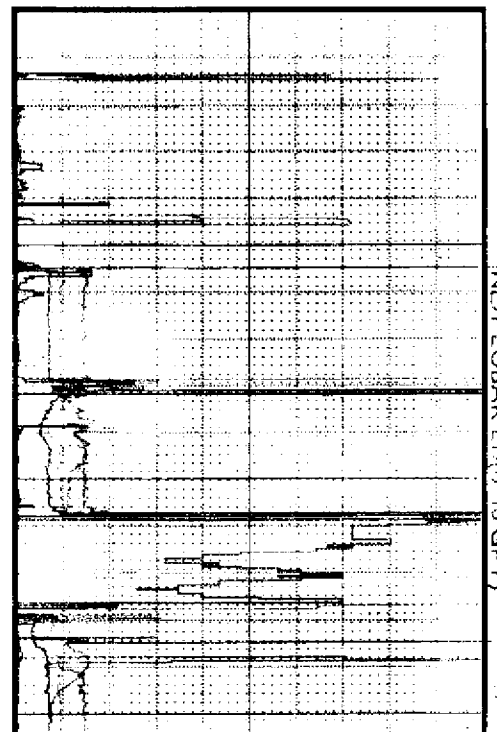
TIME
HH:MM

08:39

00:05

00:10

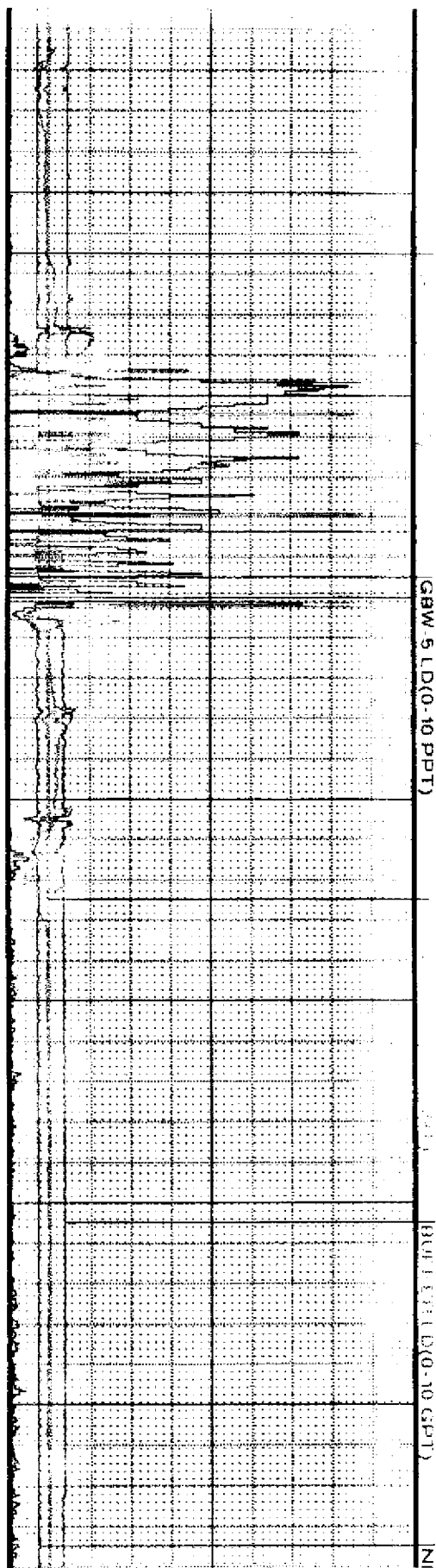
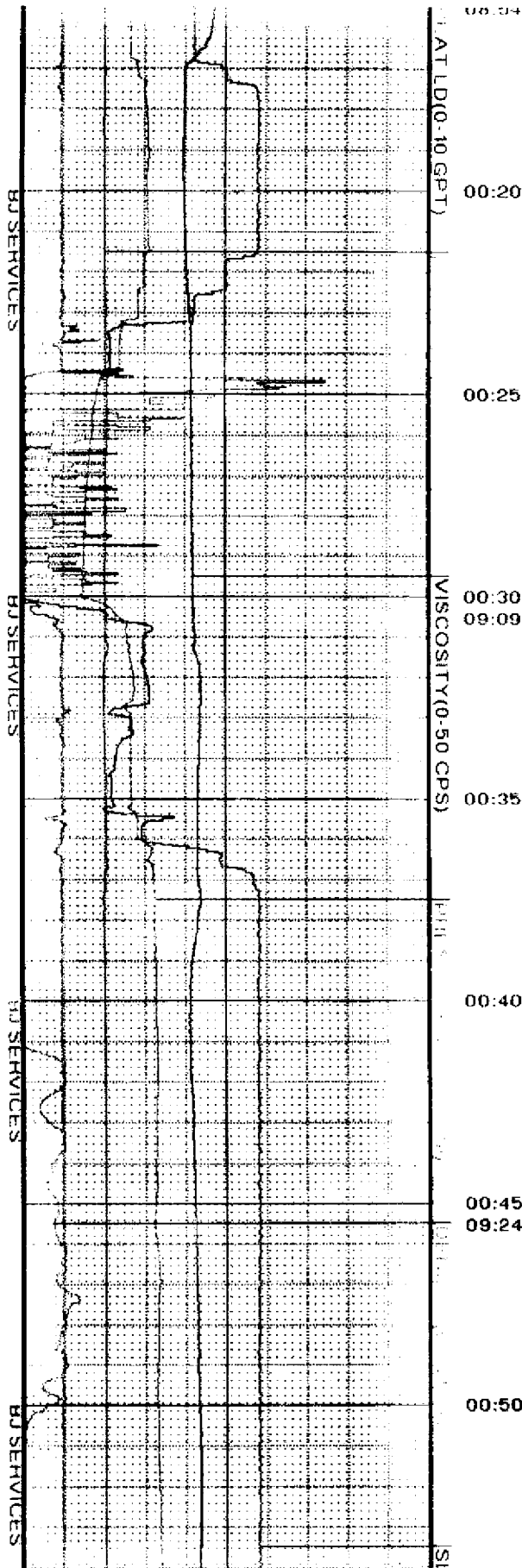
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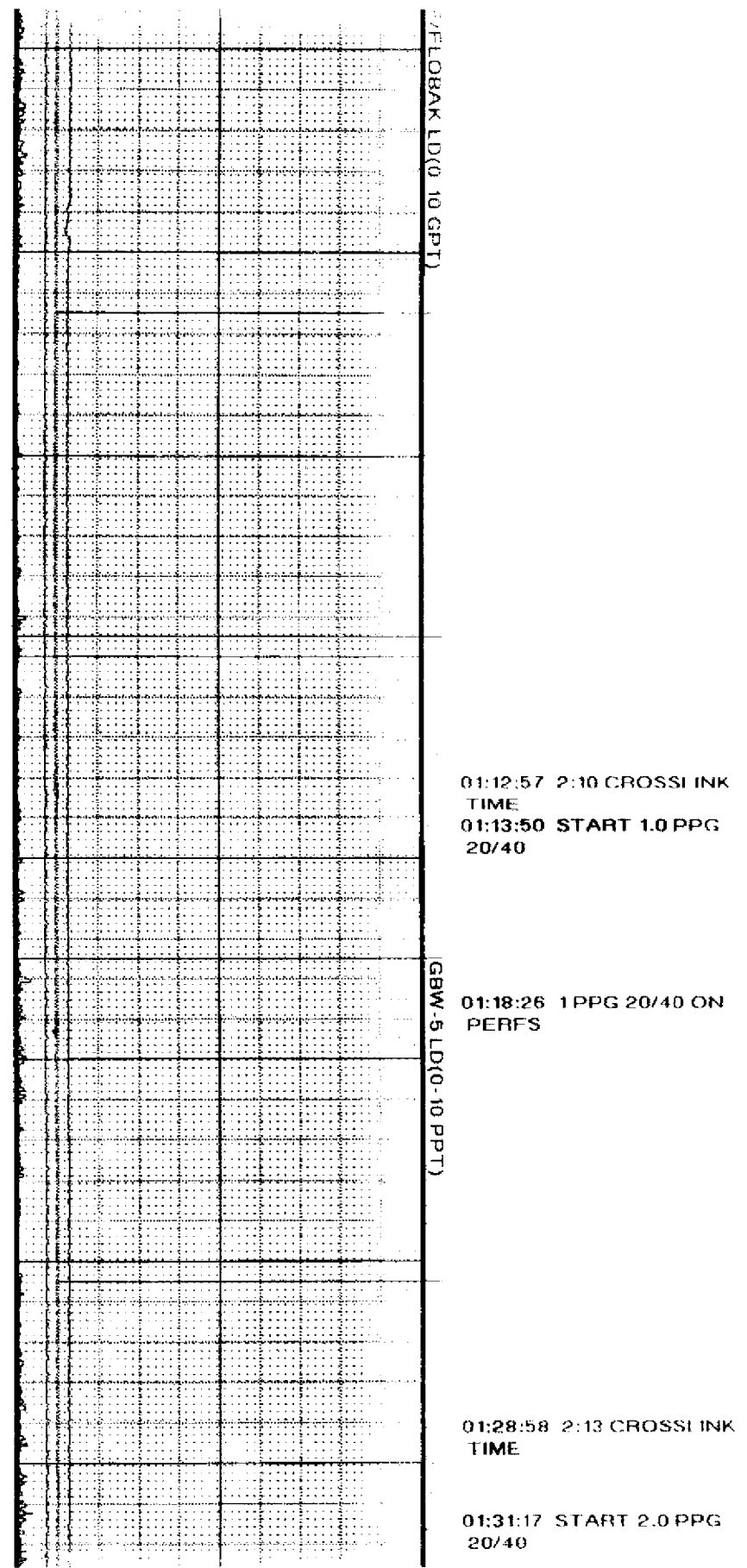
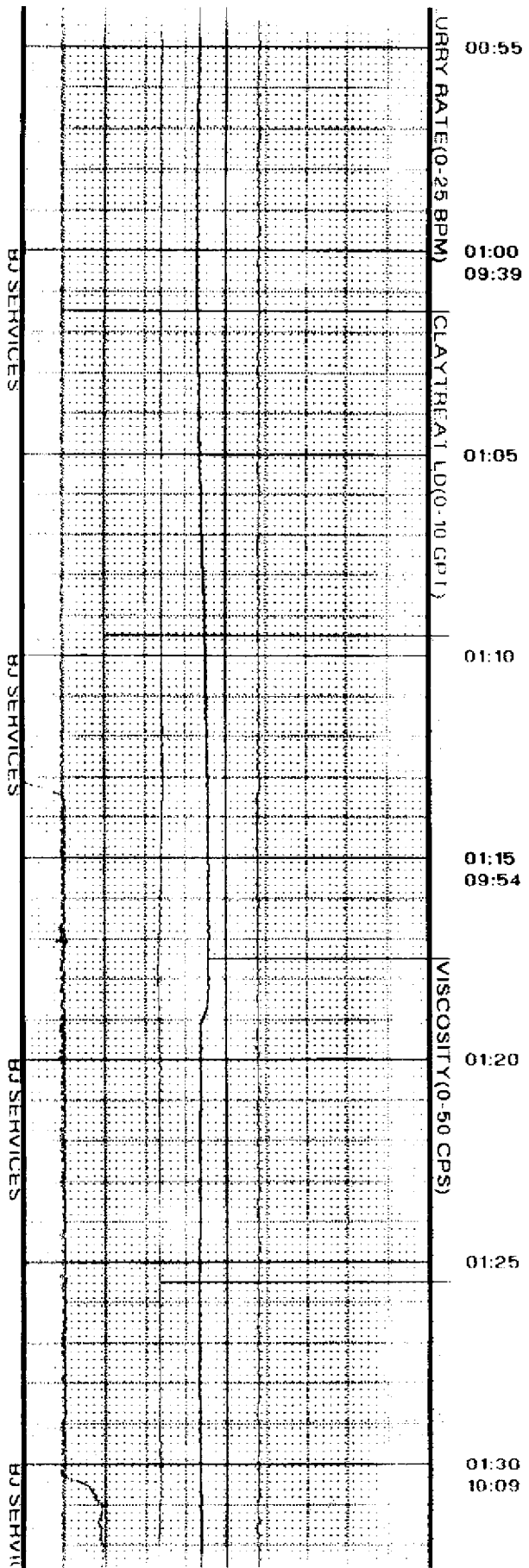


EVENTS AND STAGES

00:01:09 START
CLAYTREAT WATER

00:05:13 START PAD

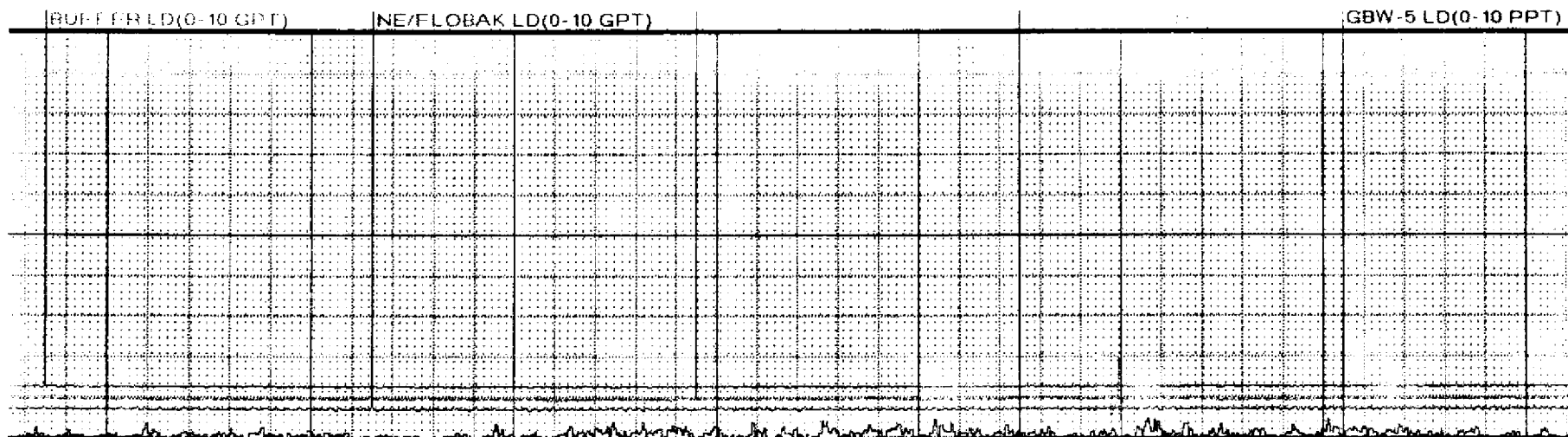




01:36:07 2 PPG 20/40 ON
PERFS

01:57:49 START 3.0 PPG
20/40

02:02:25 3 PPG 20/40 ON
PERFS



01:35

01:40

01:45
10:24

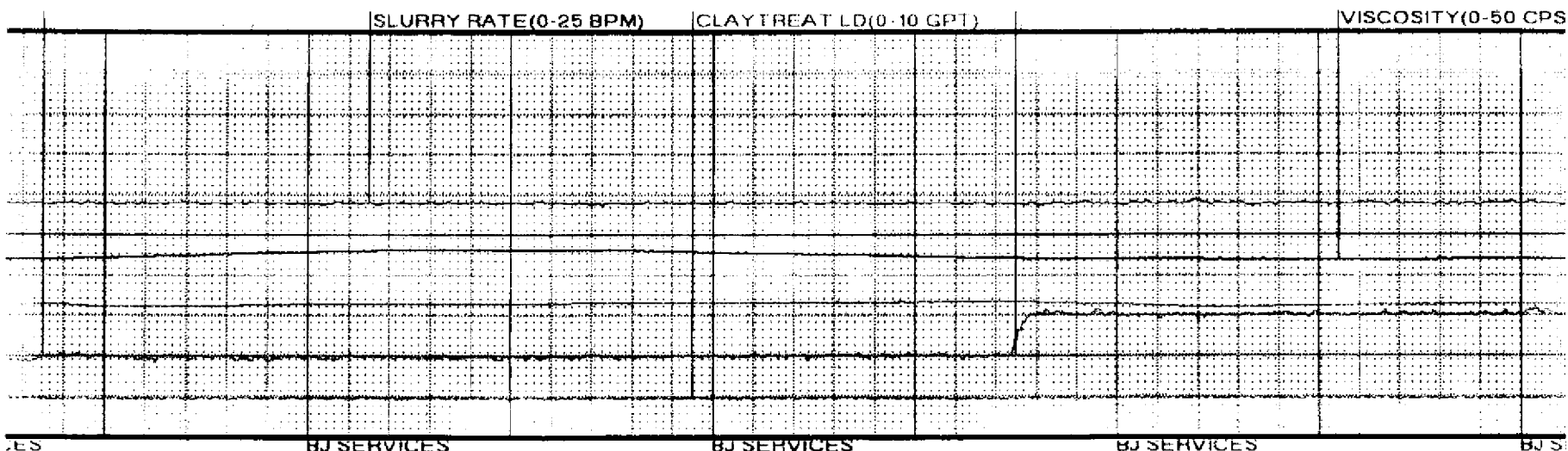
01:50

01:55

02:00
10:39

02:05

02:10



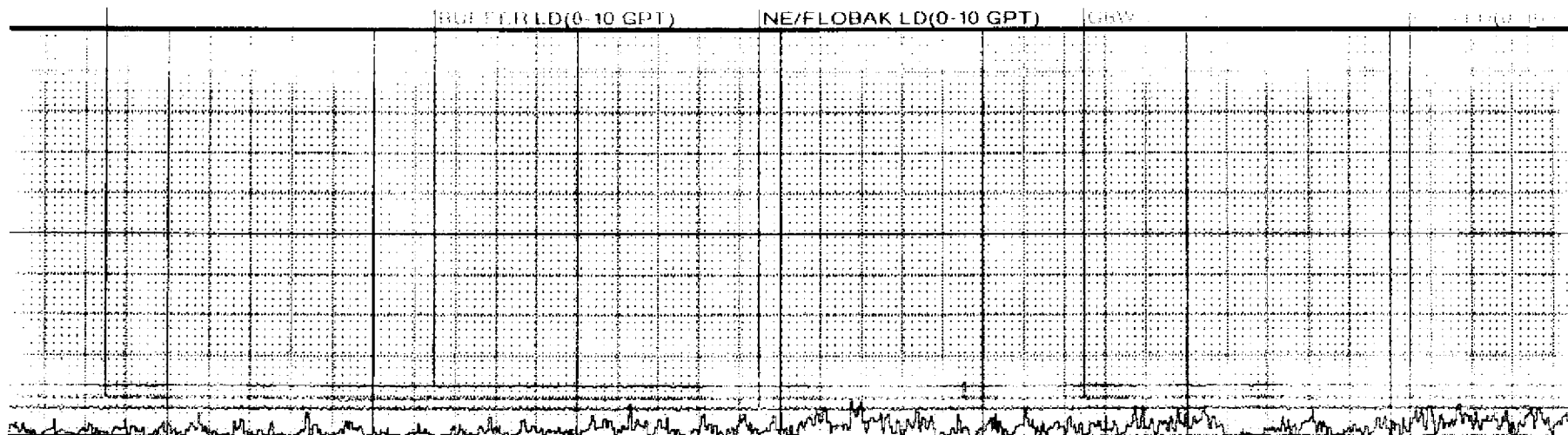
ES

BJ SERVICES

BJ SERVICES

BJ SERVICES

BJ S



02:15
10:54

02:20

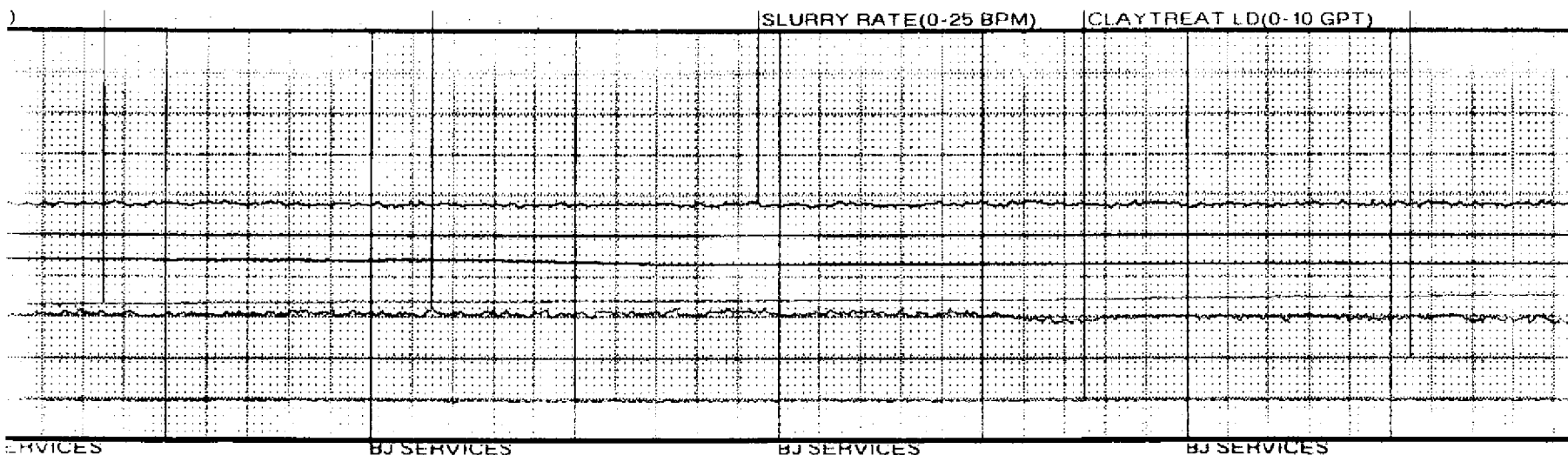
02:25

02:30
11:09

02:35

02:40

02:45
11:24



ERVICES

BJ SERVICES

BJ SERVICES

BJ SERVICES

BU SERVICES

BU SERVICES

BU SERVICES

BU SERVICES

VISCOSITY(0-50 CPS)

SLURRY RATE(0-25 BPM)

CLAYTR

02:50
02:55
03:00
11:39
03:05
03:10
03:15
11:54
03:20
03:25

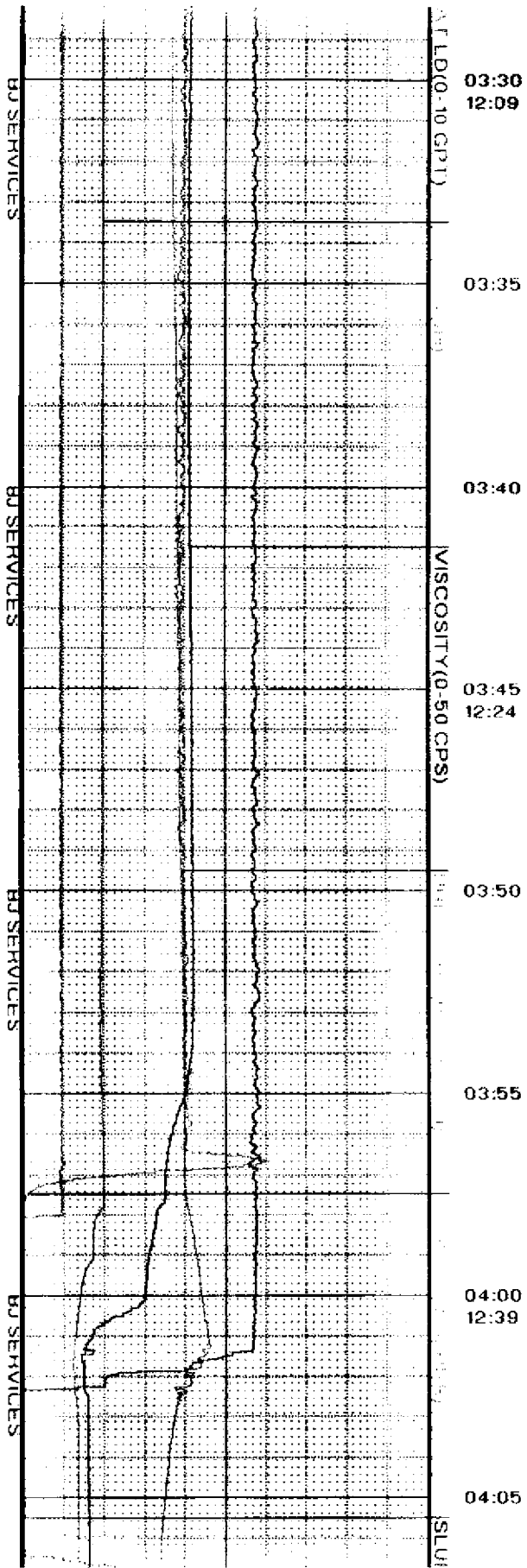
GBW 5 LD(0-10 PPT)

BUET FLID(0-10 GPT)

NE/FLOBAK LD(0-10 GPT)

03:10:48 START 4.0 PPG
20/40

03:15:24 4 PPG 20/40 ON
PERFS
03:16:39 2:10 CROSSLINK
TIME
03:17:06 GS1-A GONE



MISCOSITY(0-50 CPS)

