

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
ArtesiaFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NNNM0560353
2. Name of Operator CHI OPERATING INCORPORATED		6. If Indian, Allottee or Tribe Name
Contact: PAM CORBETT E-Mail: pamc@chienergyinc.com		7. If Unit or CA/Agreement, Name and/or No. NNNM126412X
3a. Address MIDLAND, TX 79702	3b. Phone No. (include area code) Ph: 432-685-5001 Fx: 432-687-2662	8. Well Name and No. BENSON DELAWARE FEDERAL UNIT 24
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 11 T19S R30E NENE 1040FNL 125FEL		9. API Well No. 30-015-42567-00-X1
		10. Field and Pool or Exploratory Area BENSON-DELAWARE
		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

9/29/14

Ran 5 1/2" J55 15.5# @ 5265'. 1st STG 480 sxs, 2nd STG 330 sxs.

9/30/14 Rel Rig

Completion: PBTD 5218'; TOC 1070';

run 2 7/8" tbg 6.5# L-80; DV tool at 2787'

1/5/15 ran GR/CCL/CBL logs.

1/6/15 tested 5 1/2 csg, recorded on chart.

Perf: 4862-4925' 2 spf 74 holes and 4540-4550', 2 spf, 40 holes

1/7/15 Acidized all perfs with 6000 gal 7 1/2% NeFe HCL. ND BOP.

1/11/15 RIH w/Packers PlusStakPak assembly on 2 7/8 tbg, tied to kill truck to tbg, pmped 79 bbls

2% KCL to fill tbg and annulus, ND BOP, press to 3500 to set packers

1/12/15

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 27 2016

RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #360562 verified by the BLM Well Information System
For CHI OPERATING INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER SANCHEZ on 12/12/2016 (17JAS00425E)

Name (Printed/Typed) CLIF MANN

Title FIELD SUPERVISOR

Signature (Electronic Submission)

Date 12/09/2016

FEDERAL OR STATE OFFICE USE

Title BUREAU OF LAND MANAGEMENT

Office CARLSBAD FIELD OFFICE

File Frac Report online with NMOCD

Cc
cer
wh.Title
Sta

(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Additional data for EC transaction #360562 that would not fit on the form

32. Additional remarks, continued

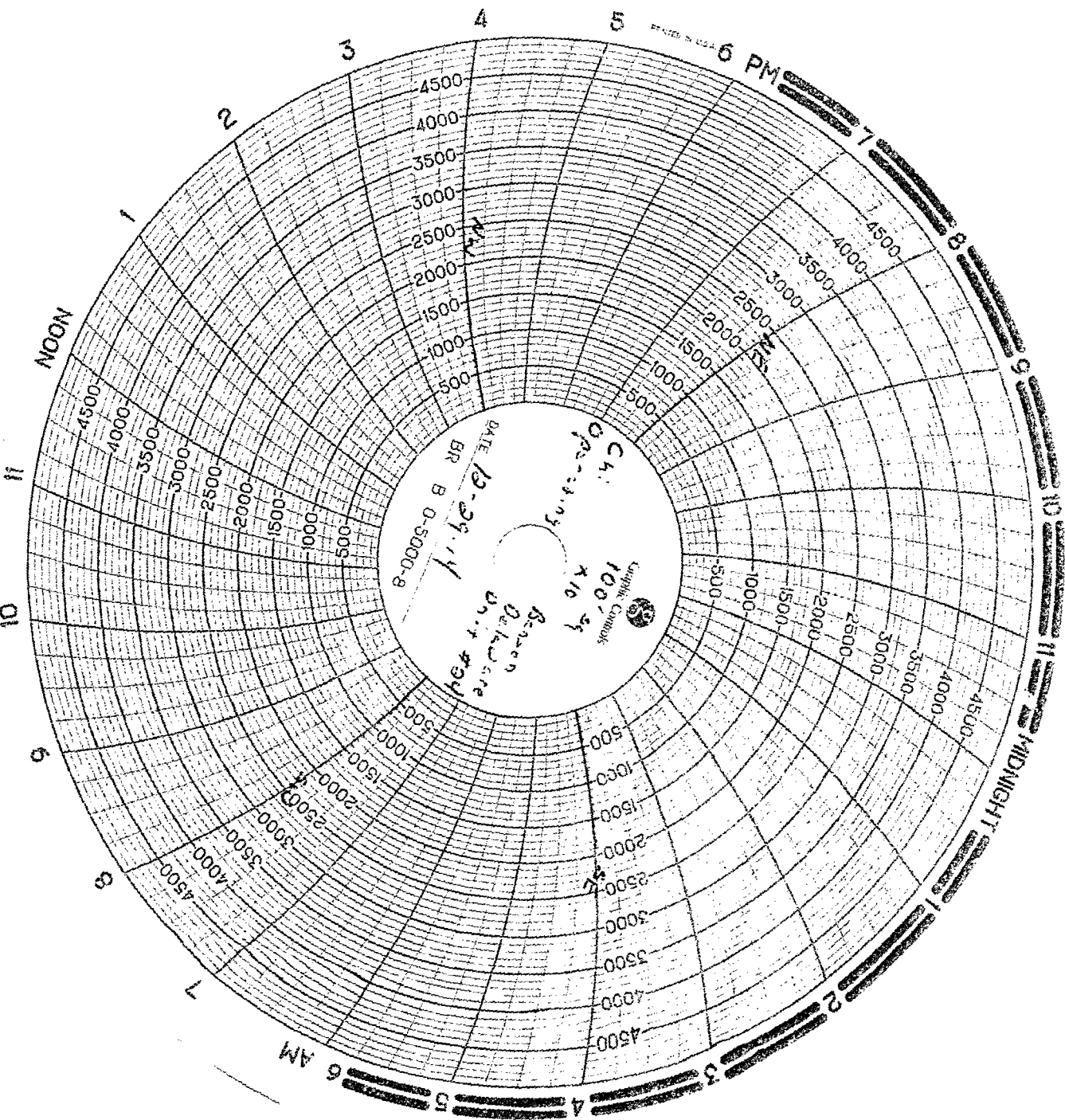
Frac well in 3 STGS:

STG 1 Perfs: 4905-25' Total 173 bbls+6219# 20/40 NW Sand

STG 2 Perfs: 4862-4996' Total 173 bbls+6067# 20/40 NW Sand

STG 3 Perfs: 4540-4570' Total 209 bbls+6157# 20/40 NW Sand

1/15/15 ND BOP and NU well head.



Sheet No.		Anchor Test Daily Log Sheet										 Tank Rental & Anchor Service Corp.		
DATE	COMPANY	LEASE & WELL NO.	ANCHOR LOCATION	PULL PRESSURE LBS	SEAL #	TEST OK	PULLED UP INCHES	EYE BROKE	ROD BROKE	UNABLE TO LOCATE	UNABLE TO TEST	SUCKER ROD PIPE CABLE	MARKER	REMARKS
12-29-14	Ch. Operating	Benson Delaware Unit #24	SE	18,600	0003473	✓							New	New Anchor
			SW	"	0003474	✓							"	"
			NW	"	0003475	✓							"	"
			NE	"	0003476	✓							"	"
ART		PATTERN 100'sg	GERONIMO											
			SE											
			SW											
			NW											
			NE											
ART		PATTERN	GERONIMO											
			SE											
			SW											
			NW											
			NE											
ART		PATTERN	GERONIMO											
			SE											
			SW											
			NW											
			NE											
ART		PATTERN	GERONIMO											
			SE											
			SW											
			NW											
			NE											
ART		PATTERN	GERONIMO											

ART - ANCHOR REPLACEMENT TEST



Frac Treatment Summary

Chi Energy
Benson Delaware Unit #24

1/12/2015
Stage # 1
Eddy Co., NM
Permian Basin

BES Representative: Michael Wright

Yard Location: Midland Tx
Phone Number: (432).687.1994 / Fax Number: (432).687.0066

Surface Traction & Bottom Hole Pressure Over Time

Pressure psi

10000.0
9000.0
8000.0
7000.0
6000.0
5000.0
4000.0
3000.0
2000.0
1000.0
0

10
Time min

20

Wellhead Iron Consolidation Over Time

Loading psi

10.0
8.0
6.0
4.0
2.0
0

10
Time min

20

WHC
DHC

Total Rate Over Time

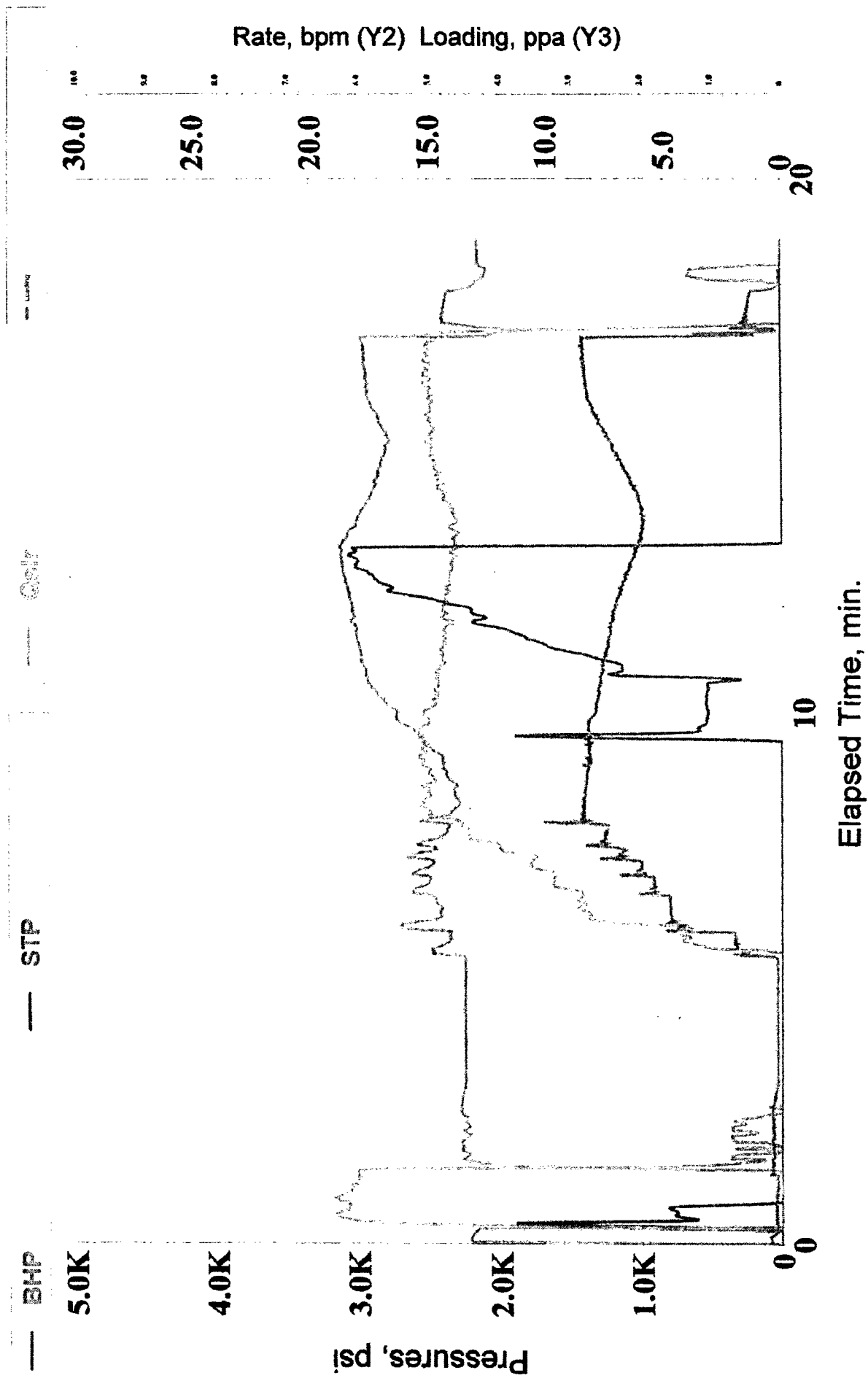
Rate bblm

30.0
20.0
10.0
0

10
Time min

20

Chi Energy Benson Delaware #24 Stage 1 . Mike/November





Treatment Schedule												
Stg. #	Start Time	Fluid	Stg. Type	Avg. Pressure (psi)	Act. Cin. Vol. (bbls)	Act. Slry Vol. (bbls)	Avg. Rate	Proppant	Avg. Prop. Conc. (lbs/gal)	Stage Prop. Total (lbs)	Cum. Prop. Total (lbs)	Stage Time (mins)
1	12:59 PM	Acid	Acid	985	54	54	15			0	0	3.6
2	1:02 PM	20# Linear	Pad	1381	12	12	15			0	0	0.8
3	1:02 PM	20# Linear	Slurry	1373	76	86	15	20/40 Ottawa	3.00	6219	6219	5.1
4	1:10 PM	20# Linear	Flush	1381	28	28	15			0	6219	1.9
ISJP = 267 nsl												



Benson Delaware Unit #24
Stage 1

Treatment Summary

Pump In:

Start Time:	12:59 PM	Pumps	2 Start
Well Open:	vacuum	PSI	2 End
Breakdown:	NA	PSI	15 BPM
			99 Bbls

Fluid:

Volume to Load:	- Bbls
Tubular Volume:	114 Bbls
Total Clean Fluid Pumped:	170 Bbls
Load to Recover:	284 Bbls
Total Slurry Fluid Pumped	180 Bbls
Flush Volume:	28 Bbls
Acid:	15% HCl Acid
	500 gal
Water Temp	
Screened out	no

Proppant:

20/40 Ottawa	6,219	Lbs.
		Lbs.
		Lbs.

Total Proppant Pumped: 6,219 Lbs.

Rate and Pressure Summary

Average Rate:	15 BPM	5 min	psi
Maximum Rate:	15 BPM	10 min	psi
Average Pressure:	1,283 PSI	15 min	psi
Maximum Pressure:	1,695 PSI		
Hydraulic Horsepower Used:	472 HHP		

Top Perf:	4,905 Feet
Bottom Perf:	4,925 Feet
Mid Perf:	4,915 Feet
Total Perforations:	42 Holes
Estimated Hole Diameter:	0.42 Inches

Ending ISIP:	287 PSI
Ending Frac Gradient	0.49 PSI/Ft
Shut in Pressure	221 PSI



BASIC
ENERGY SERVICES

Frac Treatment Summary

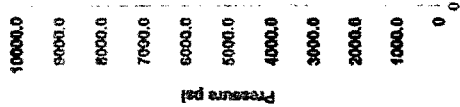
Chi Energy
Benson Delaware Unit #24

1/12/2015
Stage # 2
Eddy Co., NM
Permian Basin

BES Representative: Michael Wright

Yard Location: Midland Tx
Phone Number: (432).687.1994 / Fax Number: (432).687.0066

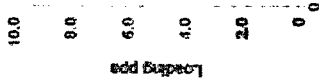
Surface Tension & Surface Free Pressure Over Time



10
Time min

20

Wethead Free Concentration Over Time



10
Time min

20

Total Rate Over Time

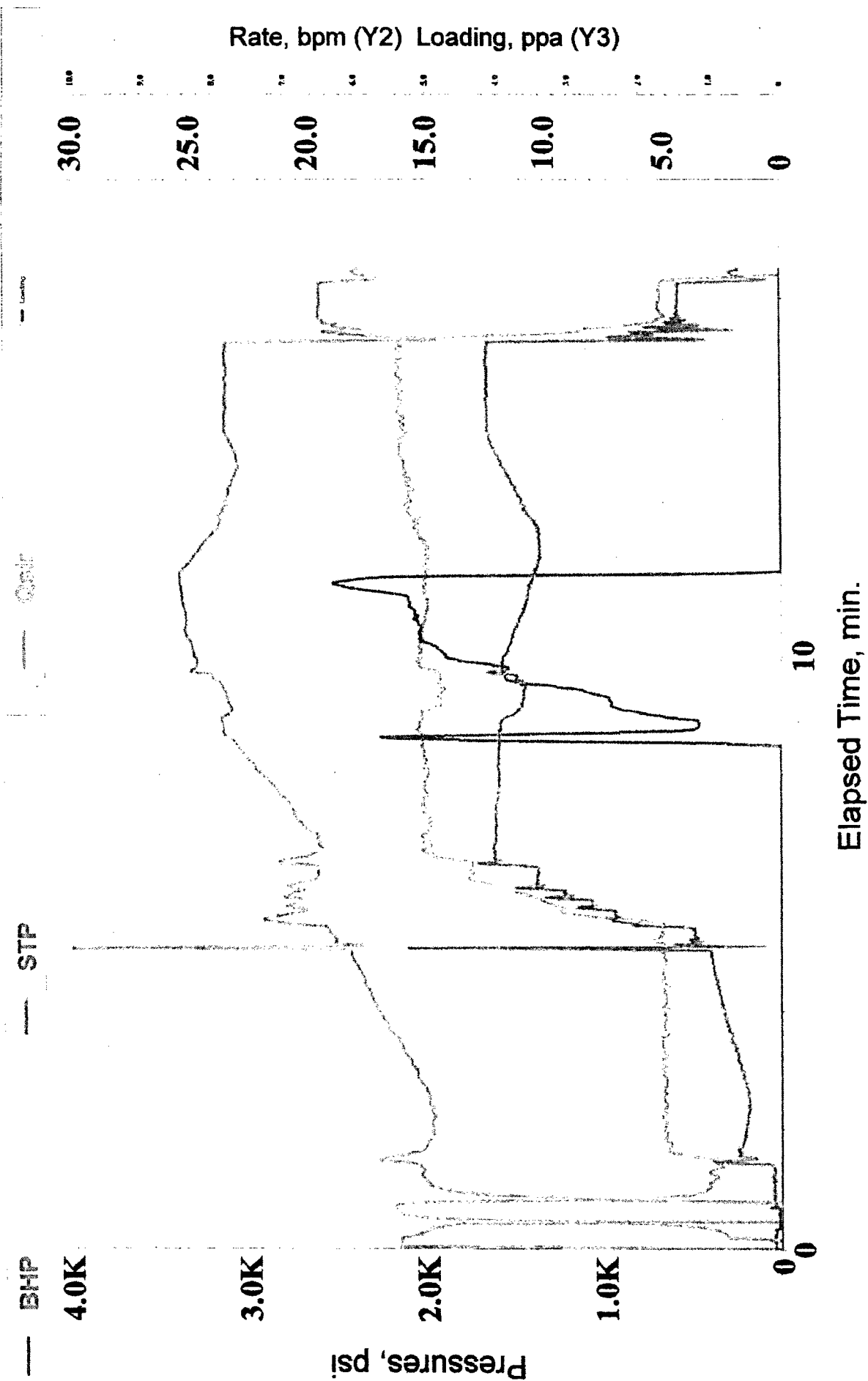


10
Time min

20

- WHC
- DHC

Chi Energy Benson Delaware #24 Stage 2 . Mike/November





Treatment Schedule												
Stg. #	Start Time	Fluid	Stg. Type	Avg. Pressure (psi)	Act. Cin. Vol. (bbls)	Act. Sily Vol. (bbls)	Avg. Rate	Proppant	Avg. Prop. Conc. (lbs/gal)	Stage Prop. Total (lbs)	Cum. Prop. Total (lbs)	Stage Time (mins)
1	1:24 PM	Acid	Acid	1076	43	43	13			0	0	3.3
2	1:31 PM	20# Linear	Pad	1609	15	15	14			0	0	1.1
3	1:32 PM	20# Linear	Slurry	1432	71	81	15	20/40 Ottawa	3.00	6067	6067	4.7
4	1:37 PM	20# Linear	Flush	1653	33	33	12			0	6067	2.8
SIP = 247 psi												



Treatment Summary

Pump In: Start Time: 1:24 PM Pumps 2 Start
Well Open: vacuum PSI 2 End
Breakdown: NA PSI BPM Bbls

Fluid: Volume to Load: Bbls
Tubular Volume: 113 Bbls
Total Clean Fluid Pumped: 162 Bbls
Load to Recover: 275 Bbls
Total Slurry Fluid Pumped 172 Bbls
Flush Volume: 33 Bbls
Acid: 15% HCl Acid 500 gal
Water Temp
Screened out: no

Proppant

20/40 Ottawa	6,067	Lbs.
		Lbs.
		Lbs.

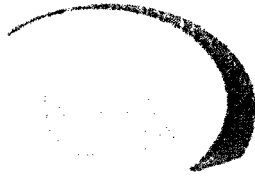
Total Proppant Pumped: 6,067 Lbs.

Rate and Pressure Summary

Average Rate: 14 BPM 5 min psi
Maximum Rate: 15 BPM 10 min psi
Average Pressure: 1,443 PSI 15 min psi
Maximum Pressure: 1,648 PSI
Hydraulic Horsepower Used: 477 HHP

Top Perf: 4,862 Feet
Bottom Perf: 4,870 Feet
Mid Perf: 4,866 Feet
Total Perforations: 40 Holes
Estimated Hole Diameter: 0.42 Inches

Ending ISIP: 247 PSI
Ending Frac Gradient: 0.48 PSI/Ft
Shut in Pressure: 248 PSI



BASIC
ENERGY SERVICES

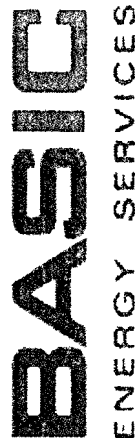
Frac Treatment Summary

Chi Energy
Benson Delaware Unit #24

1/12/2015
Stage # 3
Eddy Co., NM
Permian Basin

BES Representative: Michael Wright

Yard Location: Midland Tx
Phone Number: (432).687.1994 / Fax Number: (432).687.0066



Benson Delaware Unit #24
Stage 3

Treatment Schedule												
Stg. #	Start Time	Fluid	Stg. Type	Avg. Pressure (psi)	Act. Cln. Vol. (bbbls)	Act. Slry Vol. (bbbls)	Avg. Rate	Proppant	Avg. Prop. Conc. (lbs/gal)	Stage Prop. Total (lbs)	Cum. Prop. Total (lbs)	Stage Time (mins)
1	1:50 PM	Acid	Acid	2434	12	12	10			0	0	1.2
2	3:35 PM	20# Linear	Pad	2286	95	95	12			0	0	7.9
3	3:35 PM	20# Linear	Slurry	1959	83	94	15	20/40 Ottawa	3.00	6157	6157	5.5
4	3:41 PM	20# Linear	Flush	2108	31	31	15			0	6157	2.1
ISIP = 7100psi												



Treatment Summary

Pump In: Start Time: 1:50 PM Pumps 2 Start
Well Open: vacuum PSI 2 End
Breakdown: NA PSI BPM Bbls

Fluid: Volume to Load: Bbls
Tubular Volume: 106 Bbls
Total Clean Fluid Pumped: 221 Bbls
Load to Recover: 326 Bbls
Total Slurry Fluid Pumped: 232 Bbls
Flush Volume: 31 Bbls
Acid: 15% HCl Acid 500 gal
Water Temp
Screened out: no

Proppant:

20/40 Ottawa	6,157	Lbs.
		Lbs.
		Lbs.

Total Proppant Pumped: 6,157 Lbs.

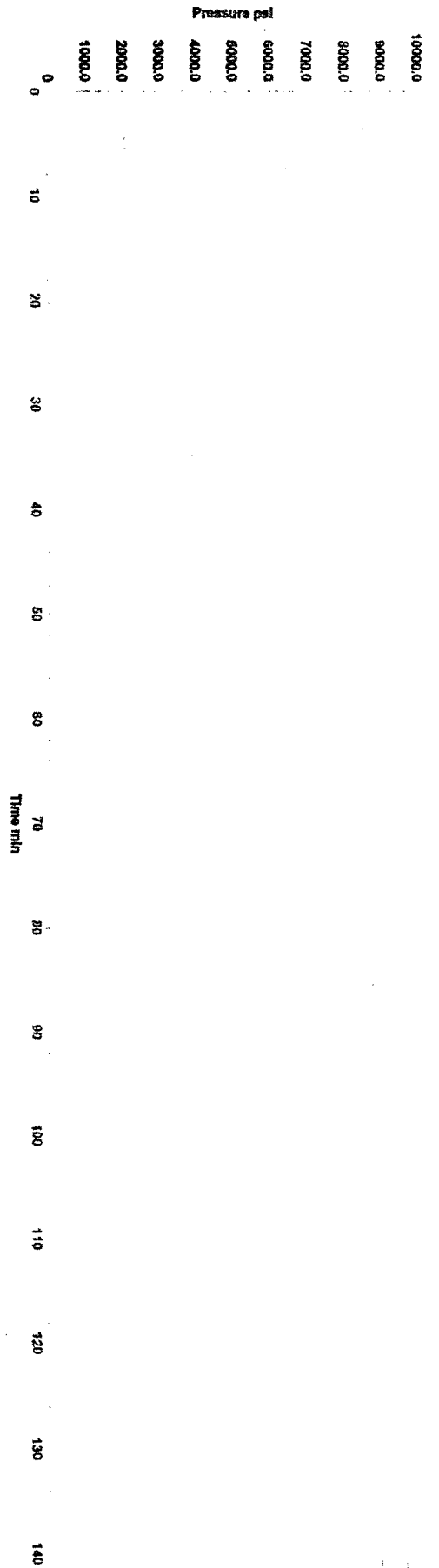
Rate and Pressure Summary

Average Rate: 13 BPM 5 min 346 psi
Maximum Rate: 15 BPM 10 min 116 psi
Average Pressure: 2,200 PSI 15 min 31 psi
Maximum Pressure: 3,762 PSI
Hydraulic Horsepower Used: 701 HHP

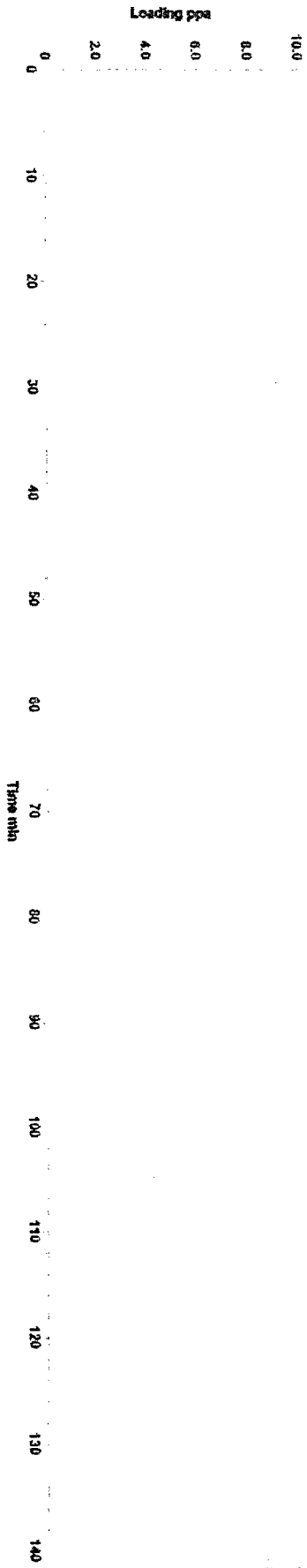
Top Perf: 4,540 Feet
Bottom Perf: 4,570 Feet
Mid Perf: 4,555 Feet
Total Perforations: 44 Holes
Estimated Hole Diameter: 0.42 Inches

Ending ISIP: 710 PSI
Ending Frac Gradient: 0.59 PSI/Ft
Shut in Pressure: 21 PSI

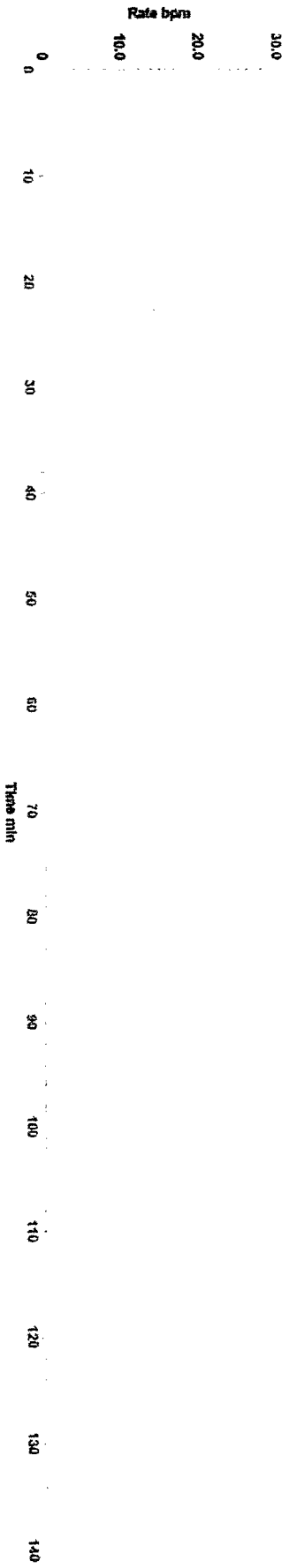
Surface Drilling & Bottom Hole Pressure Over Time



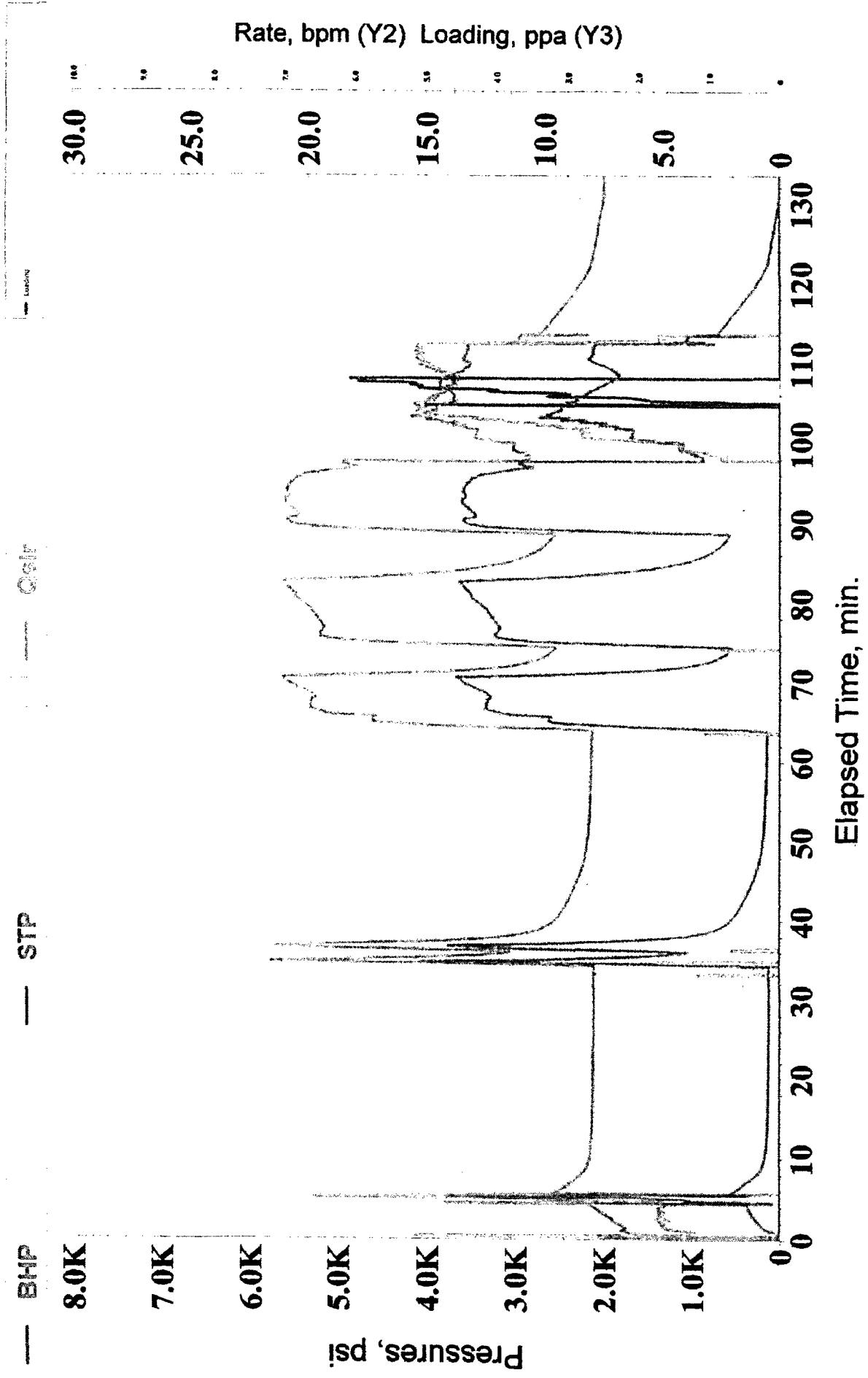
Wellhead Pressure Compensation Over Time



Total Rate Over Time



Chi Energy Benson Delaware #24 Stage 3 . unconformity





PROPOSED WELLBORE SCHEMATIC

LEASE: Benson Delaware Unit WELL NO. 24

DATE: 1/5/2015

OPER: Chi Energy

API 30-015-42567

LOCATION: 1040 FNL 125 FEL SEC 11 19S 30E EDDY CO., NM

TD 5,284'

PBD ~5,247'

KB 3,481'

DF 3,480'

COD

DOD

GL 3,465'

CASING/TBG: DEPTH CMT ID DRIFT BURST TENS

SURF. 13 3/8" 48# J-55 484' CIRC 12.715 12.559 1,730 322.0

INTER. 8 5/8" 32# J-55 2,057' 1070 SX 7.825 7.7 4,460 417.0

PROD. 5 1/2" 15.5# J-55 5,292' T/1070' 4.95 4.825 4,810 329.0

LINER

TBG 2 7/8" 6.5# L-80 2,441 2.347 10,570 145.0

PERFS:

4540-50, 60-70 2 SPF

4862-70, 4877-81, 4890-95, 4905-25 2 SPF

TUBING BREAKDOWN

ROD BREAKDOWN

150 jts 2 7/8" L-80

TAC

2 jts 2 7/8" L-80 (btm jt being IPC)

Standard SN

4' Perf'd Sub

1 jt BPMA

Pony rods as needed

77 - 7/8" Grd "D" Stl Rods

115 - 3/4" Grd "D" Stl Rods

5 - 1.5" K Bars

26k Shear Tool

1 - 1.5" K Bar

1.75" Insert Pump

20' x 1" GA

Wellhead:

7 1/16" 3k

NOTES

DV

2,783'

UNCONFORMITY

4540-50, 60-70 2 SPF

MIKE & NOVEMBER

4862-70, 4877-81, 4890-95, 4905-25 2 SPF

PBTD

5,218'

5,292'

TD: 5,284'

By: LC PAINTER