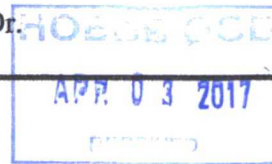


District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Original
to Appropriate
District Office

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



GAS CAPTURE PLAN

Date: 2/20/2017

☐ Original

Operator & OGRID No.: Endurance Resources LLC - 270329

☐ Amended - Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Talco 9 26 35 Fed 3H	30-025-43458	9-T26S-R36E	330' FNL 2320' FEL	1058		

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Targa and will be connected to Targa low/high pressure gathering system located in Lea County, New Mexico. It will require 0 ' of pipeline to connect the facility to low/high pressure gathering system. Endurance Resources LLC provides (periodically) to Targa a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Endurance Resources LLC and Targa have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Eunice Warren (Chevron) Processing Plant located in Sec. NE-3, Twn. 22S, Rng. 33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Targa system at that time. Based on current information, it is Endurance Resources LLC belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



WELL: Talco 9 26 35 Federal #3H

LOCATION: 2440' FNL & 2280' FEL 26S - 35E - Sec. 9 Lea County, New Mexico

API NO: 30-025-43458

1/23/2017

PERF STAGE 1 - 1ST SHOT FIRED W/ 3640 PSI. REMAINING SHOTS FIRED IN 6 MIN INCREMENTS - SHOTS @ 19,643', 19,614', 19,585', 19,556', 19,527', 19,498' - ALL SHOTS 6 SPF, 12 SHOTS PER SETTING, 0.42" EHD, 60* PHASING.

FRAC STAGE 1 - BREAK 8096 PSI @ 3.9 BPM - SPOT 3526 GAL 15% HCL - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 520,020# - STARTED 7 VIS LINEAR GEL ON FLUSH LLTR=13,007 BBL - AR=46.6 BPM - AP=10,464 - ISIP=5838 PSI - FG=0.90 - 5 MIN=5585 PSI

1/24/2017

PERF STAGE 2 - SET PLUG @19,484' - PUH TO NEXT SETTING TEST PLUG 8763 PSI - HELD - SHOOT 19,469', 19,440', 19,411', 19,382', 19,353', 19,324' - PRESS DROP TO 6135 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL WHP 5320 PSI

FRAC STAGE 2 - BREAK 8200 PSI @ 5 BPM - SPOT 2000 GAL 15% HCL - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5 PPG TO 2.0 ppg - TOTAL SAND PUMPED 520,580# - STARTED 7 VIS LINEAR GEL ON FLUSH LLTR=13,962 BBL - AR=66.7 BPM - AP=10,030 - ISIP=6097 PSI - FG=0.92 - 5 MIN=5676 PSI OPEN WHP 5420

1/25/2017

PERF STAGE 3 - RIH PLUG & GUNS STAGE 3 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @19,286' - PUH SHOOT 19,272', 19,266', 19,237', 19,206', 19,179', 19,150, - POOH ALL SHOTS FIRED - ALL SHOTS 0.42", 60*, 6 SPF, 12 PER SETTING, 72 TOTAL.

FRAC STAGE 3 - OWHP 5348 PSI - LEAD 2000 GAL 15% HCL - BREAK 9460 @ 13 BPM - PRESS DROP FROM 10,350 TO 7300 - SHUT DOWN. ISIP 5545 - .87 FG - FLUSH WELL W/ LINEAR GEL - SHUT DOWN - ISIP 6017 - .91 FG

PERF STAGE 4 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 19,130' - PUH TO PERF SETTING TEST PLUG 7953 PSI - HELD - SHOOT 19,120', 19,092', 19,063', 19,034', 19,007', 18,976' - PRESS DROP TO 5667 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 4 - OWHP 5538 PSI - LEAD 2100 GAL 15% HCL - BREAK 7718 PSI @ 8 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 523,460# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=14,591 BBL - AR=42 BPM AP=9,778 - ISIP=6050 PSI - FG=0.91 - 5 MIN=5679 PSI

PERF STAGE 5 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,958' - PUH TO PERF SETTING TEST PLUG 7956 PSI - HELD - SHOOT 18,945', 18,914', 18,889', 18,860', 18,827', 18,802' - PRESS DROP TO 5418 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 5 - OWHP 5385 PSI - LEAD 1913 GAL 15% HCL - BREAK 6810 PSI @ 8.6 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 516,020# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,800 BBL - AR=68.5 BPM AP=10,196 - ISIP=6273 PSI - FG=0.93 - 5 MIN=5781 PSI

KB

1/26/2017

PERF STAGE 6 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,788' - PUH TO PERF DEPTH TEST PLUG 8016 PSI - HELD - SHOOT 18,773', 18,742', 18,715', 18,686', 18,657', 18,628' - PRESS DROP TO 5420 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 6 - OWHP 5338 PSI - PUMP 2100 GAL 15% HCL - BREAK 8044 PSI @ 5 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 513,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,966 BBL - AR=73.7 BPM AP=10,366 - ISIP=6207 PSI - FG=0.92 - 5 MIN=5831 PSI

2/2/2017

PERF STAGE 7 - SET PLUG AT 18,520' - TEST PLUG 7000 PSI - SHOOT 18,505', 18,485', 18,465', 18,445', 18,425', 18,405' - PRESS DROP TO 5928 PSI - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

2/3/2017

FRAC STAGE 7 - WHP 5673 PSI - PUMP 300 BBL PAD - PUMP 0.5 PPG 50 BBL SWEEP - STARTED RAMP - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 515,280# - FLUSH WITH 110 BBL 7 VIS LINEAR GEL & 220 BBL SLICK - LLTR=17,571 BBL - AR=71.5 BPM - AP=10,168 - ISIP=5962 PSI - FG=0.91 - 5 MIN=5659 PSI.

PERF STAGE 8 - RIH PLUG & GUNS - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,391' - PUH TO PERF SETTING - TEST PLUG TO 7472 PSI - HELD - SHOOT 18,376' - PRESS DROP TO 5380 PSI - PUH SHOOT 18,356', 18,336', 18,316', 18,303', 18,280' - WHP=5339 PSI - POOH - ALL SHOTS FIRED - SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL.

FRAC STAGE 8 - OWHP 5261 PSI - LEAD 2000 GAL 15% HCL - BREAK 6741 PSI @ 10.7 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 520,640# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=14,119 BBL - AR=70.1 BPM AP=10,295 PSI - ISIP=6155 PSI - FG=0.92 - 5 MIN=5733 PSI.

PERF STAGE 9 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,266' - PUH TO PERF SETTING TEST PLUG 7481 PSI - HELD - SHOOT 18,251', 18,222', 18,193', 18,164', 18,135', 18,106' - PRESS DROP TO 5672 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL.

2/4/2017

FRAC STAGE 9 - OWHP 5314 PSI - LEAD 2000 GAL 15% HCL - BREAK 7929 PSI @ 7.5 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 516,740# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,743 BBL - AR=69.0 BPM AP=10,234 PSI - ISIP=6167 PSI - FG=0.92 - 5 MIN=5820 PSI

PERF STAGE 10 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,092' - PUH TO PERF SETTING TEST PLUG 7645 PSI - HELD - SHOOT 18,077', 18,048', 18,019', 17,990', 17,961', 17,932' - PRESS DROP TO 5429 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 10 - OWHP 5339 PSI - LEAD 2000 GAL 15% HCL - BREAK 7484 PSI @ 10.7 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 514,900# - FLUSH WITH 7

VIS LINEAR GEL - LLTR=13,580 BBL - AR=70.6 BPM AP=10,217 PSI - ISIP=6159 PSI - FG=0.92 - 5 MIN=5765 PSI

PERF STAGE 11 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @17,918' - PUH TO PERF SETTING TEST PLUG 7519 PSI - HELD - SHOOT 17,903', 17,874', 17,845', 17,816', 17,787', 17,758' - PRESS DROP TO 5406 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 11 - OWHP 5340 PSI - LEAD 2000 GAL 15% HCL - BREAK 7766 PSI @ 15 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 522,800# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,426 BBL - AR=71.3 BPM AP=10,358 PSI - ISIP=6130 PSI - FG=0.92 - 5 MIN=5720 PSI

2/5/2017

PERF STAGE 12 - MU GUNS & PLUG SPOTTING 1500 GAL 15% HCL SET PLUG @17,742' - PUH TO PERF SETTING - TEST PLUG 7834 PSI - HELD - SHOOT 17,729', 17,700', 17,671', 17,642', 17,610', 17,584' - PRESS DROP TO 5324 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 12 - OWHP 5151 PSI - LEAD 2000 GAL 15% HCL - BREAK 7739 PSI @ 8.1 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 516,080# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,841 BBL - AR=70 BPM AP=10,246 PSI - ISIP=6137 PSI - FG=0.92 - 5 MIN=5736 PSI

PERF STAGE 13 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 17,570' - PUH TO PERF SETTING TEST PLUG 7548 PSI - HELD - SHOOT 17,555', 17,523', 17,497', 17,468', 17,437', 17,410' - PRESS DROP TO 5437 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 13 - OWHP 5294 PSI - LEAD 2000 GAL 15% HCL - BREAK 7846 PSI @ 15 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 524,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,050 BBL AR=70.1 BPM AP=10,307 PSI - ISIP=6379 PSI - FG=0.94 - 5 MIN=5891 PSI

PERF STAGE 14 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 17,392' - PUH TO PERF SETTING TEST PLUG 7526 PSI - HELD - SHOOT 17,372', 17,350', 17,323', 17,294', 17,262', 17,236' - PRESS DROP TO 5503 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 14 - OWHP 5376 PSI - LEAD 2000 GAL 15% HCL - BREAK 7913 PSI @ 13 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 524,060# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,785 BBL AR=73.5 BPM AP=10,437 PSI - ISIP=6342 PSI - FG=0.93 - 5 MIN=5980 PSI

2/8/2017

PERF STAGE 15 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 17,220' - PUH TO PERF SETTING TEST PLUG 7527 PSI - HELD - SHOOT 17,202', 17,178', 17,149', 17,120', 17,091', 17,062' - PRESS DROP TO 5552 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 15 - TOTAL SAND PUMPED 525,490# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,749 BBL - AR=71.2 BPM - AP=10,502 PSI - ISIP=6609 PSI - FG=0.95 - 5 MIN=6040 PSI

2/9/2017

PERF STAGE 16 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @17,048' - PUH TO PERF
SETTING TEST PLUG 7549 PSI - HELD - SHOOT 17,033', 17,004', 16,975', 16,946', 16,917', 16,884' - PRESS
DROP TO 5562 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER
SETTING, 72 SHOTS TOTAL

FRAC STAGE 16 - OWHP 5363 PSI - LEAD 2000 GAL 15% HCl - BREAK 8052 PSI @ 10.4 BPM - PUMP NON
SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 532,940# - FLUSH WITH 7 VIS
LINEAR GEL - LLTR=11,272 BBL AR=69.6 BPM AP=10,290 PSI - ISIP=6490 PSI - FG=0.95 - 5 MIN=6044 PSI

PERF STAGE 17 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,874' - PUH TO PERF
SETTING TEST PLUG 7575 PSI - HELD - SHOOT 16,859', 16,830', 16,801', 16,772', 16,743', 16,714' - PRESS
DROP TO 5523 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER
SETTING, 72 SHOTS TOTAL

FRAC STAGE 17 - OWHP 5413 PSI - LEAD 2000 GAL 15% HCl - BREAK 7611 PSI @ 14.6 BPM - PUMP NON
SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 519,660# - FLUSH WITH 7 VIS
LINEAR GEL - LLTR=10,782 BBL AR=71.1 BPM AP=10,387 PSI - ISIP=6397 PSI - FG=0.94 - 5 MIN=5925 PSI

PERF STAGE 18 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,700' - PUH TO PERF
DEPTH. TEST PLUG 7567 PSI - HELD - SHOOT 16,682', 16,656', 16,627', 16,598', 16,569', 16,540' - PRESS
DROP TO 5496 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER
SETTING, 72 SHOTS TOTAL

FRAC STAGE 18 - OWHP 5401 PSI - LEAD 2000 GAL 15% HCl - BREAK 7521 PSI @ 6.2 BPM - PUMP NON
SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 522,960# - FLUSH WITH 7 VIS
LINEAR GEL - LLTR=10,724 BBL AR=72.8 BPM AP=10,329 PSI - ISIP=6394 PSI - FG=0.94 - 5 MIN=5947 PSI

PERF STAGE 19 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,526' - PUH TO PERF
SETTING TEST PLUG 7703 PSI - HELD - SHOOT 16,511', 16,482', 16,453', 16,424', 16,395', 16,366' - PRESS
DROP TO 5780 PSI - POOH. ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER
SETTING, 72 SHOTS TOTAL.

2/10/2017

FRAC STAGE 19 - OWHP 5380 PSI - LEAD 2000 GAL 15% HCl - BREAK 9803 PSI @ 11.1 BPM - PUMP NON
SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 528,760# - FLUSH WITH 7 VIS
LINEAR GEL - LLTR=10,918 BBL - AR=73.9 BPM AP=10,449 PSI - ISIP=6624 PSI - FG=0.96 - 5 MIN=5982 PSI

PERF STAGE 20 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,352' - PUH TO PERF
SETTING. TEST PLUG 7525 PSI - HELD - SHOOT 16,337', 16,308', 16,279', 16,250', 16,221', 16,192' - PRESS
DROP TO 5543 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER
SETTING, 72 SHOTS TOTAL

FRAC STAGE 20 - OWHP 5404 PSI - LEAD 2000 GAL 15% HCl - BREAK 8437 PSI @ 11.7 BPM - PUMP NON
SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 521,620# - FLUSH WITH 7 VIS
LINEAR GEL - LLTR=9,898 BBL AR=73.6 BPM AP=10,467 PSI - ISIP=6436 PSI - FG=0.94 - 5 MIN=5962 PSI

PERF STAGE 21 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,173' - PUH TO PERF
SETTING TEST PLUG 7549 PSI - HELD - SHOOT 16,154', 16,134', 16,105', 16,076', 16,047', 16,018' - PRESS
DROP TO 5478 PSI - POOH. ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER
SETTING, 72 SHOTS TOTAL

FRAC STAGE 21 - OWHP 5335 PSI - LEAD 2000 GAL 15% HCL - BREAK 9048 PSI @ 14.6 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 519,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,474 BBL AR=75.8 BPM AP=10,413 PSI - ISIP=6456 PSI - FG=0.94 - 5 MIN=5991 PSI

2/11/2017

PERF STAGE 22 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,004' - PUH TO PERF SETTING TEST PLUG 7564 PSI - HELD - SHOOT 15,986', 15,960', 15,931', 15,902', 15,873', 15,848' - PRESS DROP TO 5542 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 22 - OWHP 5442 PSI - LEAD 2000 GAL 15% HCL - BREAK 8523 PSI @ 11.2 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 549,240# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,105 BBL AR=73.8 BPM AP=10,483 PSI - ISIP=6558 PSI - FG=0.95 - 5 MIN=5886 PSI

PERF STAGE 23 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,830' - PUH TO PERF SETTING TEST PLUG 7570 PSI - HELD - SHOOT 15,815', 15,786', 15,759', 15,728', 15,699', 15,674' - PRESS DROP TO 5549 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 23 - OWHP 5403 PSI - LEAD 2000 GAL 15% HCL - BREAK 8461 PSI @ 11.4 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 544,120# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,736 BBL AR=71.5 BPM AP=10,489 PSI - ISIP=6401 PSI - FG=0.94 - 5 MIN=5882 PSI

2/12/2017

PERF STAGE 24 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,656' - PUH TO PERF SETTING TEST PLUG 7588 PSI - HELD - SHOOT 15,641', 15,612', 15,582', 15,554', 15,525', 15,496' - PRESS DROP TO 5393 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 24 - OWHP 5311 PSI - LEAD 2000 GAL 15% HCL - BREAK 8876 PSI @ 11.2 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 540,480# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,762 BBL AR=75.8 BPM AP=10,436 PSI - ISIP=6668 PSI - FG=0.96 - 5 MIN=6000 PSI

PERF STAGE 25 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,482' - PUH TO PERF SETTING - PERFORATED 15,362', 15,344', 15,326', 15,309', 15,291', 15,274' PRESS DROP TO 5880 PSI - POOH - ALL SHOTS FIRED - SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SET - 72 TOTAL

FRAC STAGE 25 - OWHP 5427 PSI - LEAD 2000 GAL 15% HCL - BREAK 8929 PSI @ 14.6 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 552,270# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,442 BBL AR=78.9 BPM AP=10,448 PSI - ISIP=6475 PSI - FG=0.95 - 5 MIN=6007 PSI.

PERF STAGE 26 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,260' - PUH TO PERF SETTING TEST PLUG 7636 PSI - HELD - SHOOT 15,240', 15,226', 15,210', 15,188', 15,169', 15,148' - PRESS DROP TO 5561 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 26 - OWHP 5450 PSI - LEAD 2000 GAL 15% HCL - BREAK 7350 PSI @ 15.1 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 539,520# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,528 BBL AR=80.4 BPM AP=10,432 PSI - ISIP=6530 PSI - FG=0.95 - 5 MIN=5974 PSI

2/13/2017

PERF STAGE 27 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @15,134' - PUH TO PERF SETTING TEST PLUG 7592 PSI - HELD - SHOOT 15,114', 15,090', 15,061', 15,026', 15,003', 14,974' - PRESS DROP TO 5432 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 27 - OWHP 5383 PSI - LEAD 2000 GAL 15% HCL - BREAK 8430 PSI @ 12.8 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 547,020# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,411 BBL AR=76.2 BPM AP=10,458 PSI - ISIP=6532 PSI - FG=0.95 - 5 MIN=5962 PSI

PERF STAGE 28 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,960' - PUH TO PERF SETTING TEST PLUG 7995 PSI - HELD - SHOOT 14,942', 14,916', 14,887', 14,858', 14,829', 14,800' - PRESS DROP TO 5473 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 28 - OWHP 5366 PSI - LEAD 2000 GAL 15% HCL - BREAK 8009 PSI @ 13 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 540,780# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,288 BBL AR=79.1 BPM AP=10,258 PSI - ISIP=6551 PSI - FG=0.95 - 5 MIN=6026 PSI

PERF STAGE 29 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,786' - PUH TO PERF SETTING TEST PLUG 7587 PSI - HELD - SHOOT 14,776', 14,742', 14,713', 14,684', 14,655', 14,626' - PRESS DROP TO 5504 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

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FRAC STAGE 29 - OWHP 5312 PSI - LEAD 2000 GAL 15% HCL - BREAK 6895 PSI @ 14.6 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# TOTAL SAND PUMPED 551,660# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=12,050 BBL AR=80.4 BPM AP=10,248 PSI - ISIP=6525 PSI - FG=0.95 - 5 MIN=6021 PSI

PERF STAGE 30 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,595' - PUH TO PERF SETTING. TEST PLUG 7693 PSI - HELD - SHOOT 14,572', 14,548', 14,524', 14,500', 14,480', 14,452' - PRESS DROP TO 5691 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 30 - OWHP 5325 PSI - LEAD 2000 GAL 15% HCL - BREAK 8473 PSI @ 13.3 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# TOTAL SAND PUMPED 552,290# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,837 BBL - AR=79.5 BPM - AP=10,357 PSI - ISIP=5630 PSI - FG=0.95 - 5 MIN=5955 PSI

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PERF STAGE 31 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,438' - PUH TO PERF SETTING DEPTH TEST PLUG 7580 PSI - HELD - SHOOT 14,423', 14,396', 14,365', 14,336', 14,310', 14,278' - PRESS DROP TO 5486 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 31 - OWHP 5360 PSI - LEAD 2000 GAL 15% HCL - BREAK 7749 PSI @ 10.4 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 558,080# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,435 BBL AR=79.9 BPM AP=10,220 PSI - ISIP=6399 PSI - FG=0.94 - 5 MIN=5884 PSI

PERF STAGE 32 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,265' - PUH TO PERF SETTING DEPTH. TEST PLUG 8023 PSI - HELD - SHOOT 14,249', 14,218', 14,191', 14,162', 14,133', 14,104' - PRESS DROP TO 5491 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 32 - OWHP 5424 PSI - LEAD 2000 GAL 15% HCL - BREAK 7480 PSI @ 8.4 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# - AT 1 PPG @ SHIFT CHANGE. COMPLETE STG 32 FRAC - TOTAL SAND PUMPED 552,460# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,894 BBL - AR=80.3 BPM - AP=10,252 PSI - ISIP=6343 PSI - FG=0.93 - 5 MIN=5954 PSI

PERF STAGE 33 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,095' - PUH TO PERF SETTING TEST PLUG 7635 PSI - HELD - SHOOT 14,070', 14,046', 14,017', 13,988', 13,959', 13,930' - PRESS DROP TO 5469 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 33 - OWHP 5482 PSI WELLSIDE & 5550 PSI PUMP SIDE - LEAD 2000 GAL 15% HCL ACID - PUMP PAD - HAD RATE UP TO 80 BPM - PUMPED NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMP 555,760# - FLUSHED WITH 7 VIS LINEAR GEL - LLTR=12,997 BBL - AR=80.5 BPM - AP=9939 PSI - ISIP=6467 PSI - FG=0.94 - 5 MIN=5831 PSI

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PERF STAGE 34 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @13,912' - PUH TO PERF SETTING TEST PLUG 7625 PSI - HELD - SHOOT 13,893', 13,872', 13,843', 13,814', 13,785', 13,756' - PRESS DROP TO 5385 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 34 - OWHP 5325 PSI - LEAD 2000 GAL 15% HCL - BREAK 7726 PSI @ 11.2 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.6# - TOTAL SAND PUMPED 466,840# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,581 BBL - AR=79.8 BPM AP=9,918 PSI - ISIP=6340 PSI - FG=0.94 - 5 MIN=5853 PSI

PERF STAGE 35 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @13,742' - PUH TO PERF SETTING TEST PLUG 7540 PSI - HELD - SHOOT 13,727', 13,698', 13,669', 13,640', 13,611', 13,582' - PRESS DROP TO 5391 PSI - POOH. ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 35 - OWHP 5308 PSI - LEAD 2000 GAL 15% HCL - BREAK 6896 PSI @ 11.2 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# PPG - TOTAL SAND PUMPED 574,820# - FLUSH WITH 7 VIS LINEAR GEL LLTR =12,037 - AR=80.5 BPM AP=9,835 PSI - ISIP=6427 PSI - FG=0.94 - 5 MIN=5944 PSI

PERF STAGE 36 - PUMP DOWN WITH 62 BBLS - SET PLUG @13,553' - PUH TO PERF SETTING SHOOT 13,539', 13,513', 13,487', 13,461', 13,435', 13,408' - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 36 - OWHP 5358 - BALL DROPPED - PUMPED 20 BBL SPACER - 1500 GAL 15% HCL - 100 BBLS SPACER 2000 GAL 15% HCL & FOLLOWED/SLICK WATER - SAW BALL HIT AFTER TOTAL OF 224 BBLS PUMPED BREAK 8621 PSI AT 12 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 577,720# - FLUSHED WITH 7 VIS LINEAR GEL - LLTR=12,201 BBL - AR=80.7 BPM - AP =9833 PSI - ISIP=6400 PSI - FG=0.94 - 5 MIN=5920 PSI

PERF STAGE 37 - PUMP DOWN WITH 182 BBLS - SET PLUG @13,394' - PUH TO PERF SETTING SHOOT 13,379', 13,350', 13,321', 13,292', 13,263', 13,234' - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

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FRAC STAGE 37 - OWHP 5388 PSI - DROP BALL - LEAD 3500 GAL 15% HCL - BALL HIT W/ 218 BBL - BREAK 8150 PSI 15.6 BPM - PUMP NON-SPEC 100 MESH IN SLICK WATER RAMPING 0.5# TO 2# - 577,940#

SAND PUMPED - FLUSH W/ LINEAR GEL - LLTR=11,860 BBL - AR=78.6 BPM - AP=10,217 PSI - ISIP=6399 PSI - FG=.94 - 5 MIN=5818 PSI

PERF STAGE 38 - PUMP DOWN WITH 59 BBLS - SET PLUG @13,220' - PUH TO PERF SETTING SHOOT 13,539', 13,513', 13,487', 13,461', 13,435', 13,408' - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOT PER SET, 72 TOTAL

FRAC STAGE 38 - OWHP 5400 PSI - DROP BALL - LEAD 3500 GAL 15% HCL - BALL HIT W/ 212 BBL - BREAK 7248 PSI 11.7 BPM - PUMP NON- SPEC 100 MESH IN SLICK WATER RAMPING 0.5# TO 2# - 541,160#

SAND PUMPED - FLUSH W/ LINEAR GEL - LLTR=11,059 BBL - AR=80.1 BPM - AP=9,916 PSI - ISIP=6201 PSI - FG=.92 - 5 MIN=5753 PSI

TOTAL FLUID TO RECOVER 464,638 BBL - TOTAL SAND PUMPED 19,743,950#