



WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

|                                   |                 |   |
|-----------------------------------|-----------------|---|
| Spud Date or<br>Recompletion Date | Date Reached TD | Completion Date or<br>Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1102183

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

|   |   |
|---|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(Attach Additional Sheets)</i><br><br>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(If no, Submit Copy)</i><br><br>List All E. Logs Run: | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample<br><br>Name Top Datum |
|---|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used  |                   |                           |                   |               |                |              |                            |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. |                   |                           |                   |               |                |              |                            |
| Purpose of String   | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |

| ADDITIONAL CEMENTING / SQUEEZE RECORD  |                  |                |              |                            |
|--|------------------|----------------|--------------|----------------------------|
| Purpose:   | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| _____ Perforate<br>_____ Protect Casing<br>_____ Plug Back TD<br>_____ Plug Off Zone |                  |                |              |                            |
|  |                  |                |              |                            |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br><i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

|                                   |           |         |             |               |         |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|-----------------------------------|-----------|---------|-------------|---------------|---------|

|  |   |   |
|--|---|---|
| <b>DISPOSITION OF GAS:</b><br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br><i>(If vented, Submit ACO-18.)</i> | <b>METHOD OF COMPLETION:</b><br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled<br><i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____<br><input type="checkbox"/> Other <i>(Specify)</i> _____ | <b>PRODUCTION INTERVAL:</b><br>_____<br>_____ |
|--|---|---|





**CROSS-LINKED POLYMER GEL  
WATER REDUCTION TREATMENT  
JOB LOG AND SUMMARY PREPARED FOR:**



**McCLELLAN #9  
COOPER FIELD  
GRAHAM COUNTY, KANSAS**

**November 9, 2012**



improved oil & gas recovery

## BULK POLYMER GEL TREATMENT

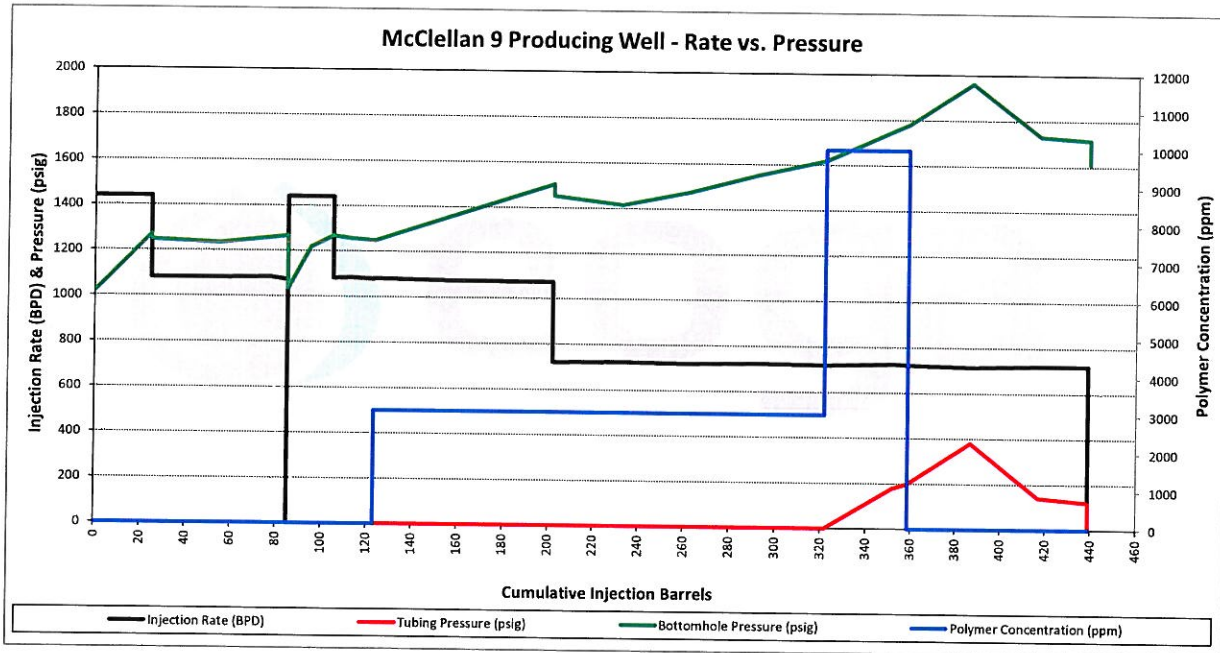
### Morning Progress Report

Company Name: Citation Oil & Gas Corp.  
 Field Name: Cooper  
 Well Name: McClellan #9

Location: Graham Co., KS  
 Date: 11/9/2012  
 Est. Cum. Cost: \$10,500

The following is the most recent information available for the bulk polymer gel treatment that is in progress at the above captioned well.

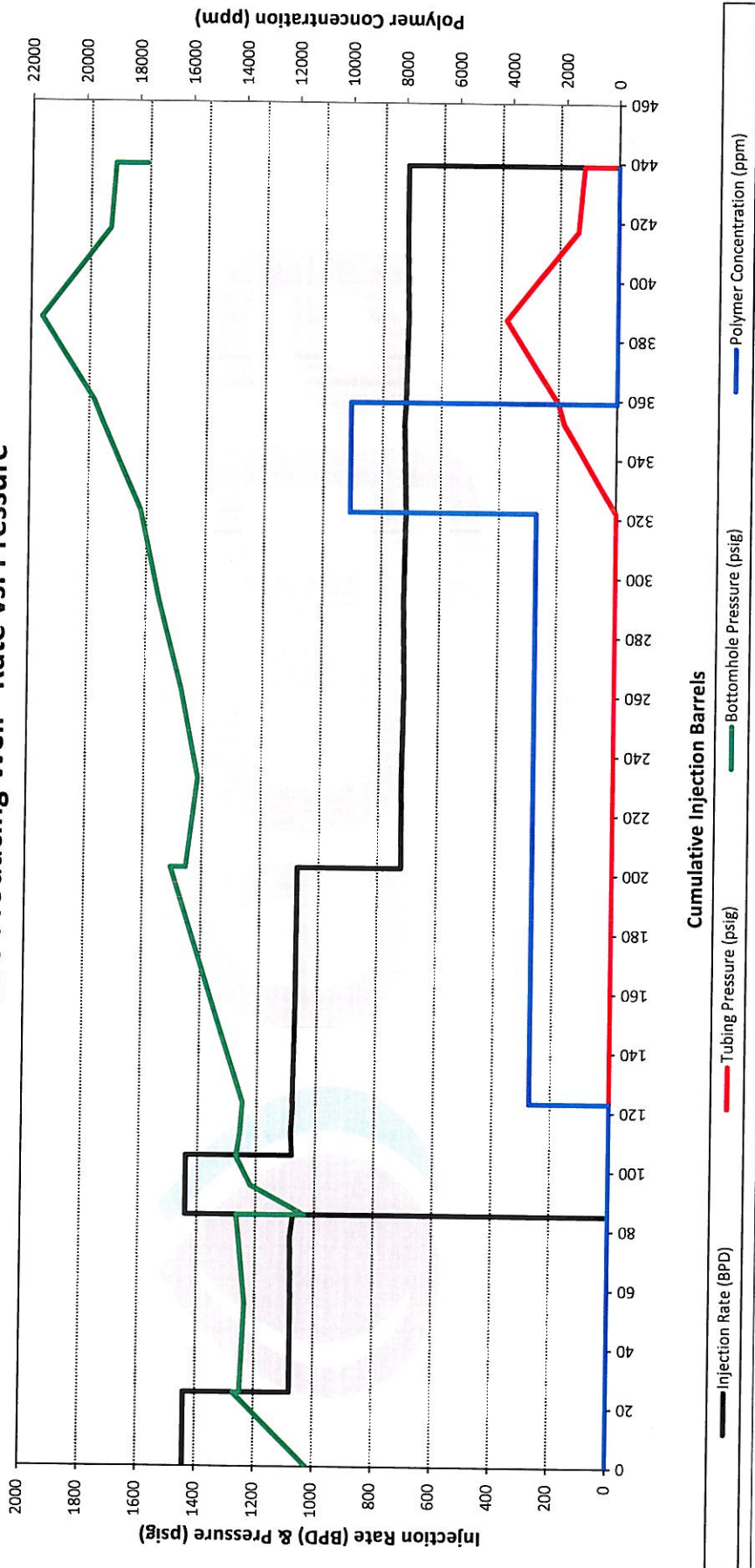
| Stage No.     | Begin Date | Begin Time | End Date   | End Time | BG-100 Polymer |      | XL-100 Cross-linker |      | Gel Bbls. | WHP (psi) |     | BHP (psi) |      | Rate (BPM) |      | Comments         |
|---------------|------------|------------|------------|----------|----------------|------|---------------------|------|-----------|-----------|-----|-----------|------|------------|------|------------------|
|               |            |            |            |          | Ppm            | Lbs. | Ratio               | Lbs. |           | Begin     | End | Begin     | End  | Begin      | End  |                  |
| 1             | 10/29/2012 | 10:25 AM   | 10/29/2012 | 10:45 AM | 0              | 0    |                     | 0    | 0         | 0         | 0   | 1017      | 1266 | 1.00       | 0.75 | 85 barrels water |
| 2             | 11/9/2012  | 3:30 PM    | 11/9/2012  | 4:14 PM  | 0              | 0    |                     | 0    | 0         | 0         | 0   | 1033      | 1249 | 1.00       | 0.75 | 38 barrels water |
| 3             | 11/9/2012  | 4:14 PM    | 11/9/2012  | 10:00 PM | 3000           | 209  | 40                  | 45   | 199       | 0         | 0   | 1249      | 1620 | 0.75       | 0.50 |                  |
| 4             | 11/9/2012  | 10:00 PM   | 11/9/2012  | 11:13 PM | 10000          | 129  | 40                  | 28   | 37        | 0         | 200 | 1620      | 1782 | 0.50       | 0.50 |                  |
| 5             | 11/9/2012  | 11:13 PM   | 11/10/2012 | 1:44 AM  | 0              | 0    |                     | 0    | 0         | 200       | 120 | 1782      | 1716 | 0.50       | 0.50 | 80 barrels water |
| <b>Totals</b> |            |            |            |          |                | 338  |                     | 74   | 236       |           |     |           |      |            |      |                  |





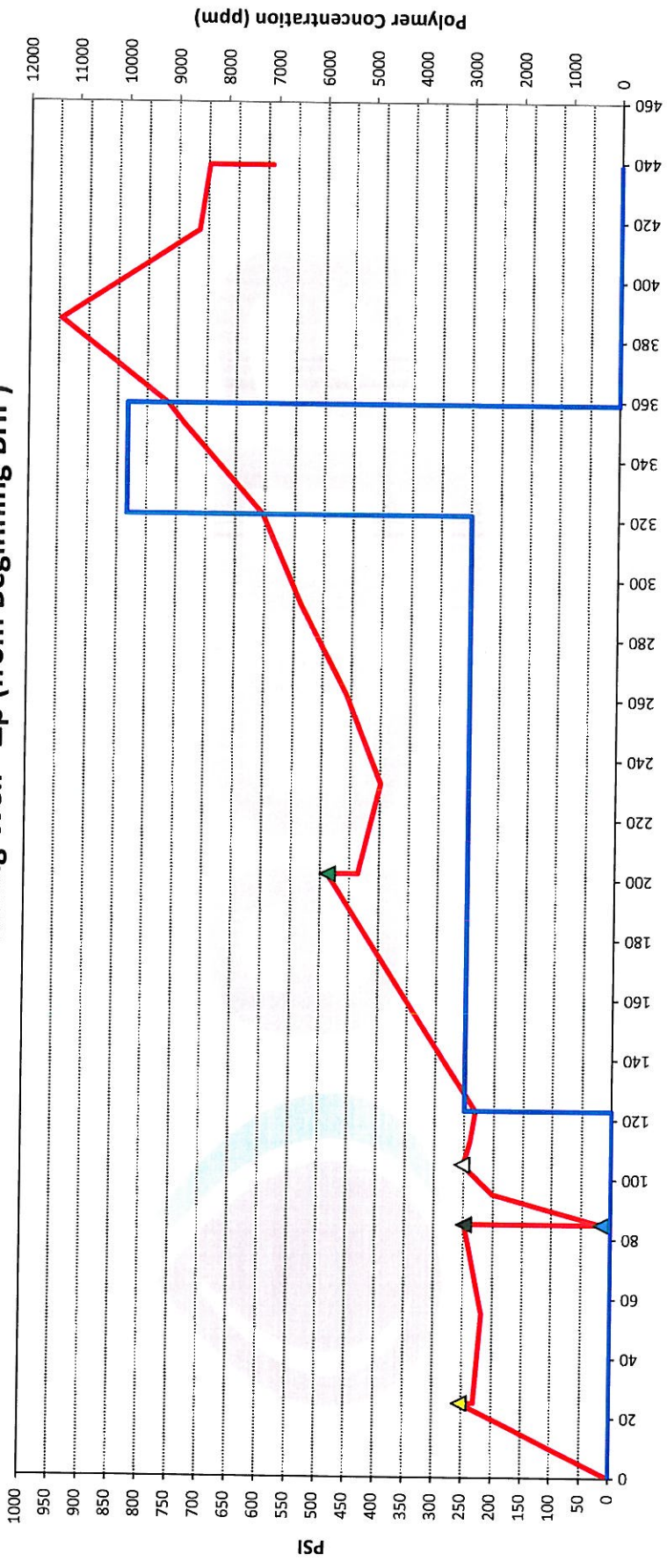


# McClellan 9 Producing Well - Rate vs. Pressure





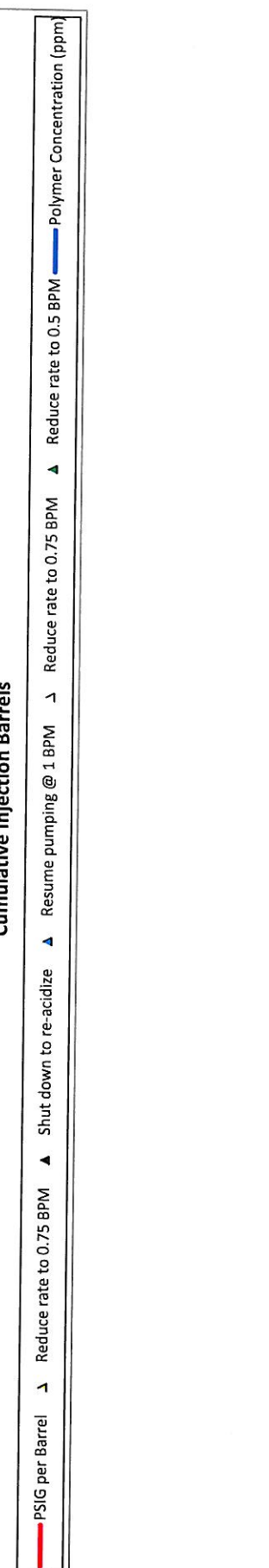
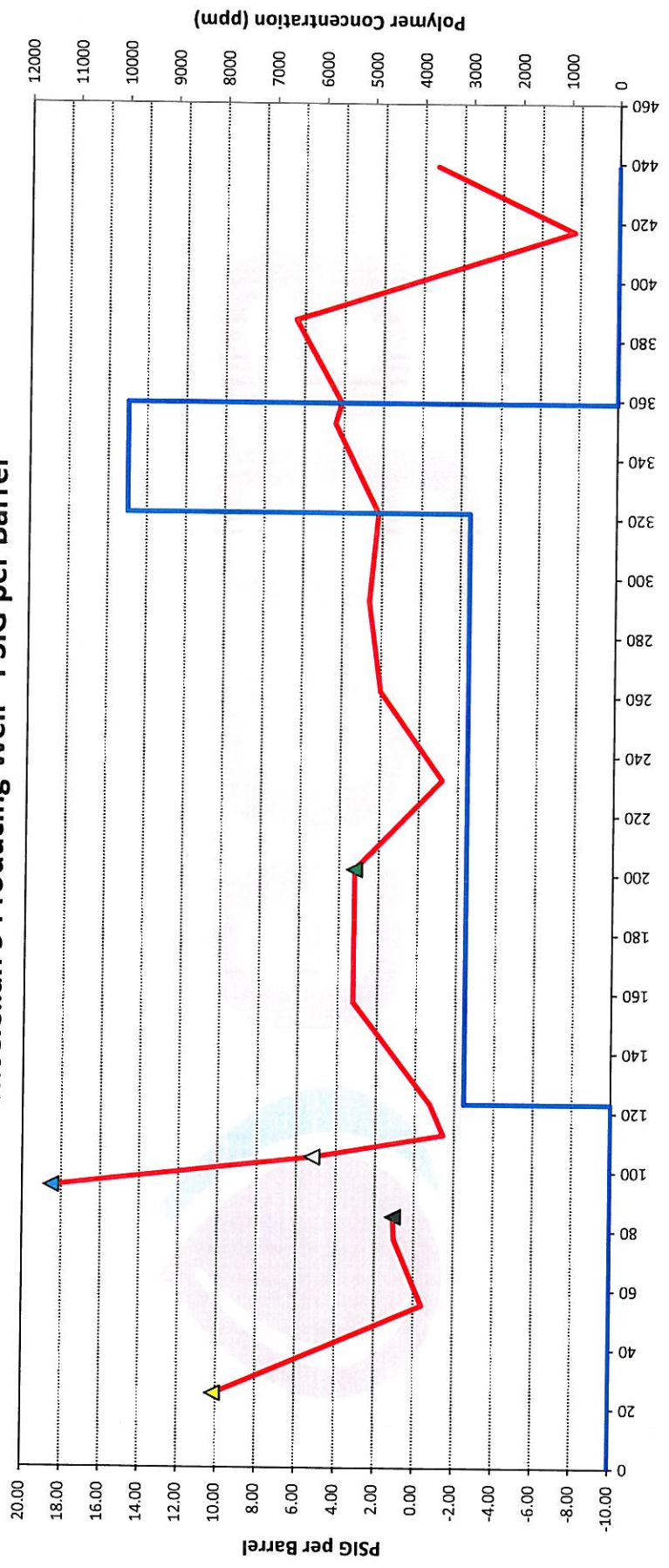
# McClellan 9 Producing Well - $\Delta p$ (from Beginning BHP)



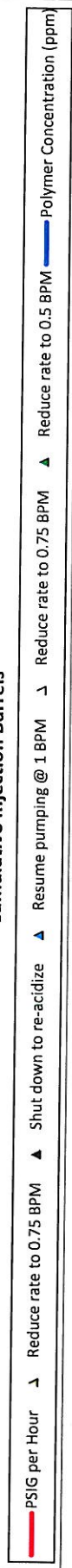
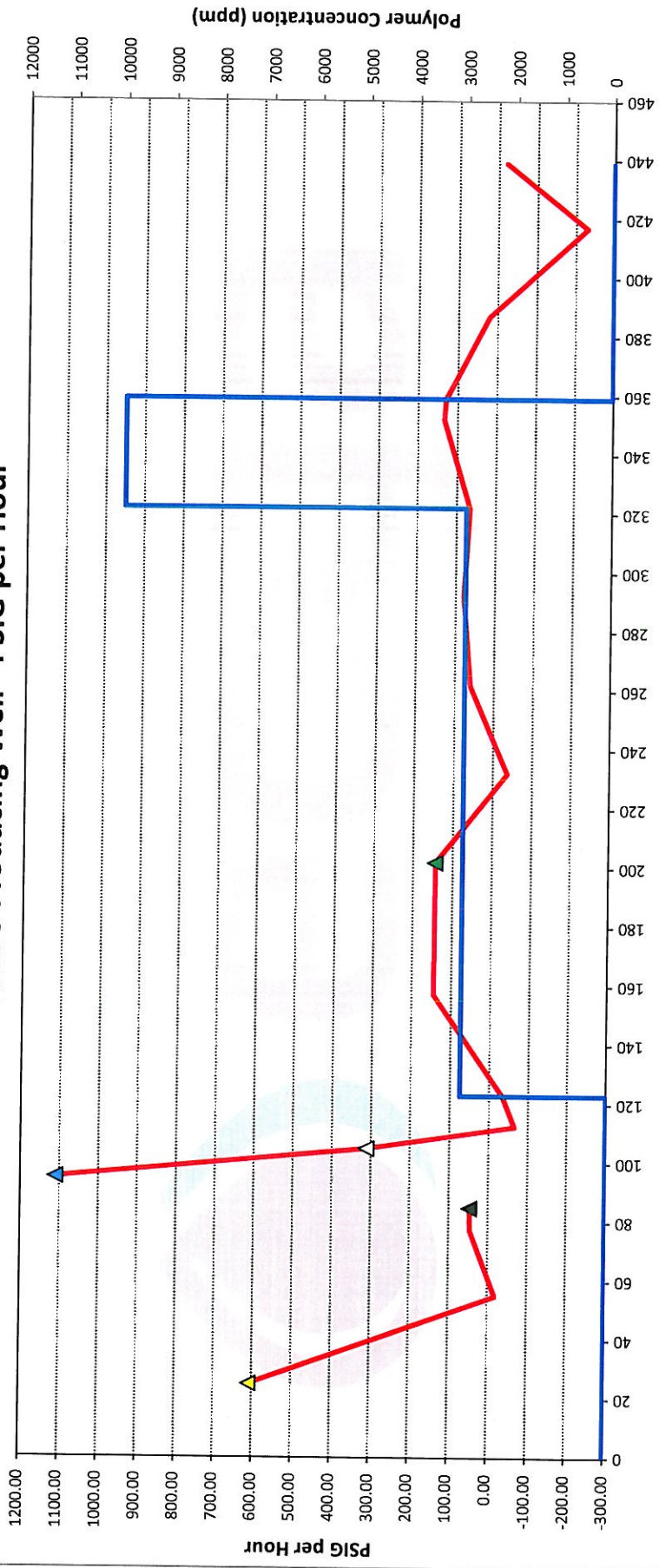
— Differential Pressure  
— Polymer Concentration (ppm)  
▲ Reduce rate to 0.75 BPM  
▲ Shut down to re-acidize  
▲ Reduce rate to 0.5 BPM  
▲ Resume pumping @ 1 BPM



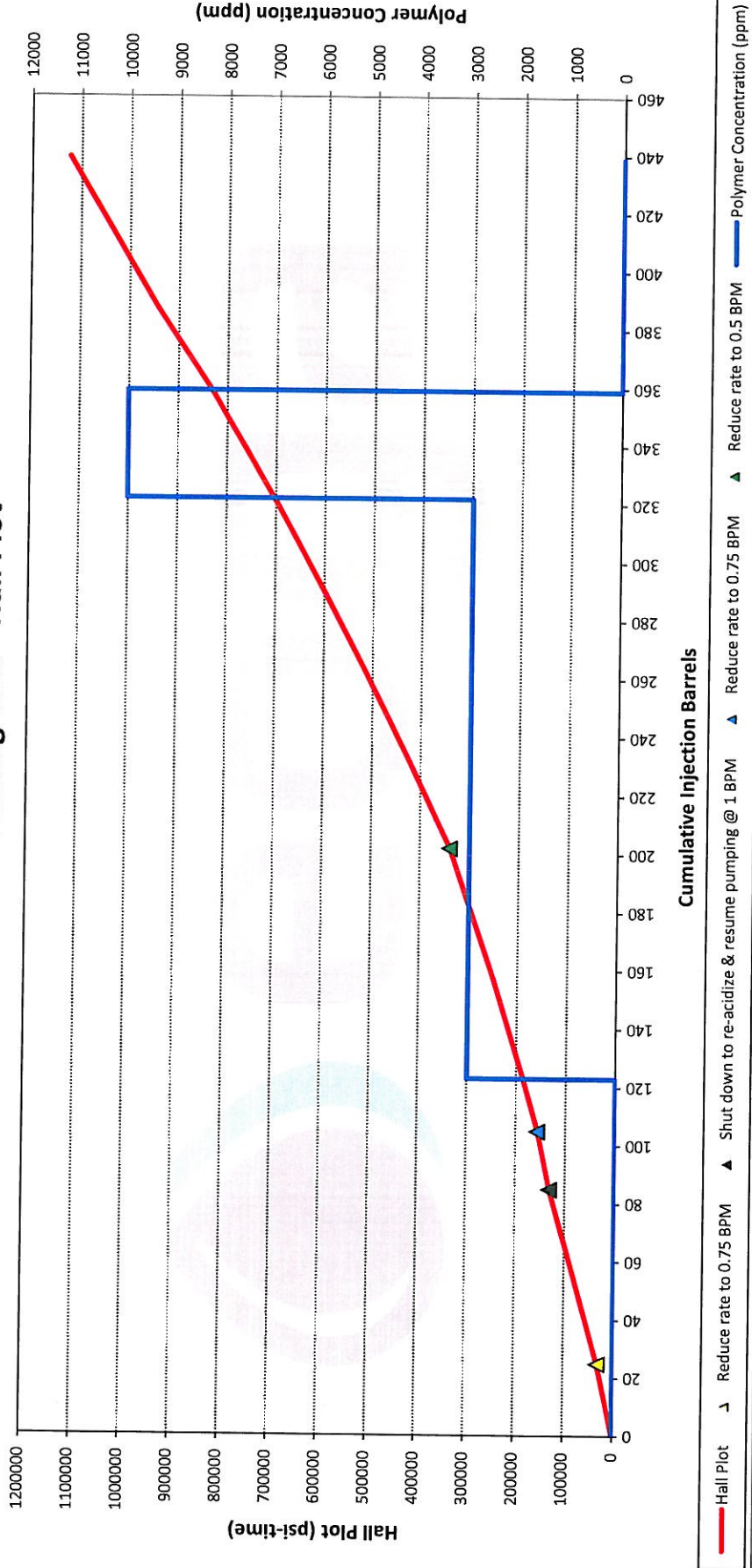
# McClellan 9 Producing Well - PSIG per Barrel



# McClellan 9 Producing Well - PSIG per Hour

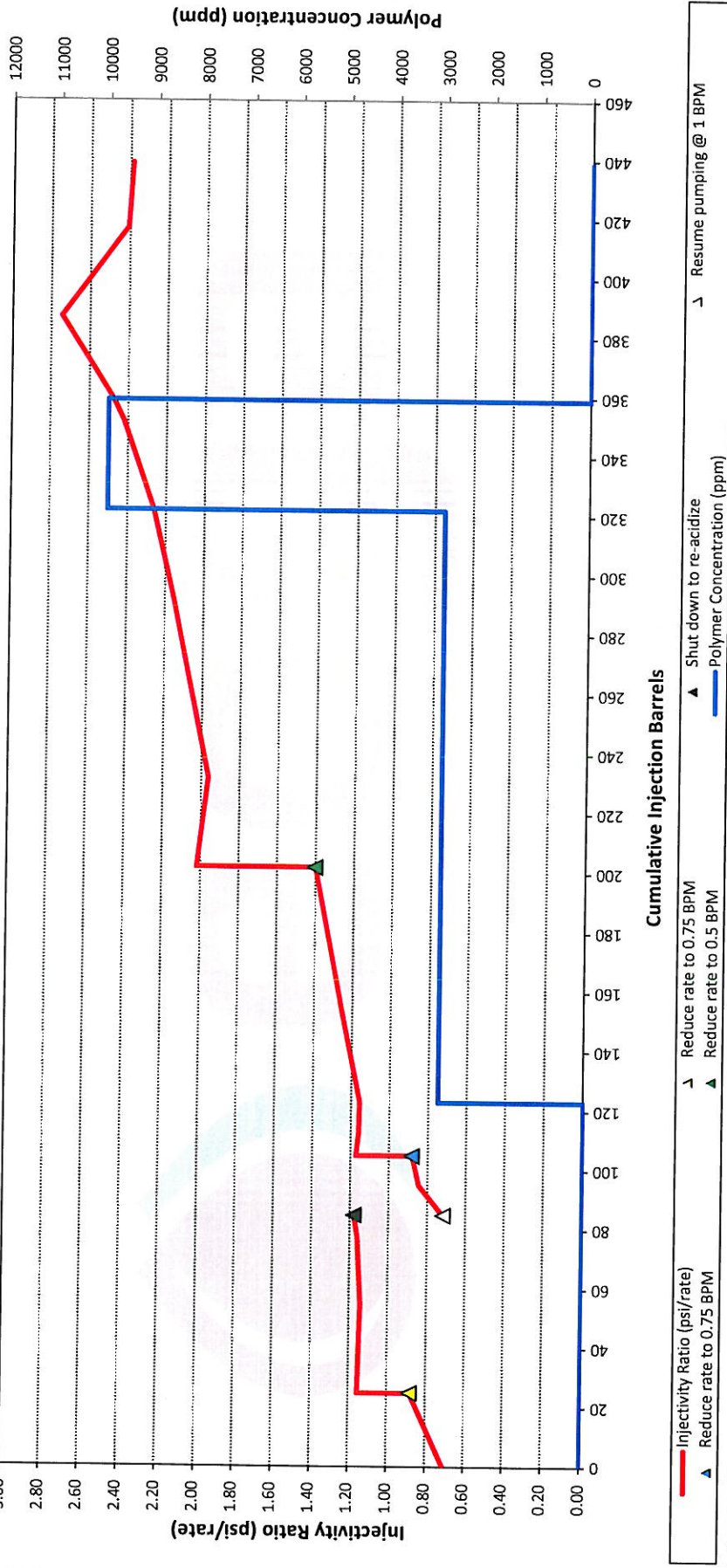


# McClellan 9 Producing Well - Hall Plot



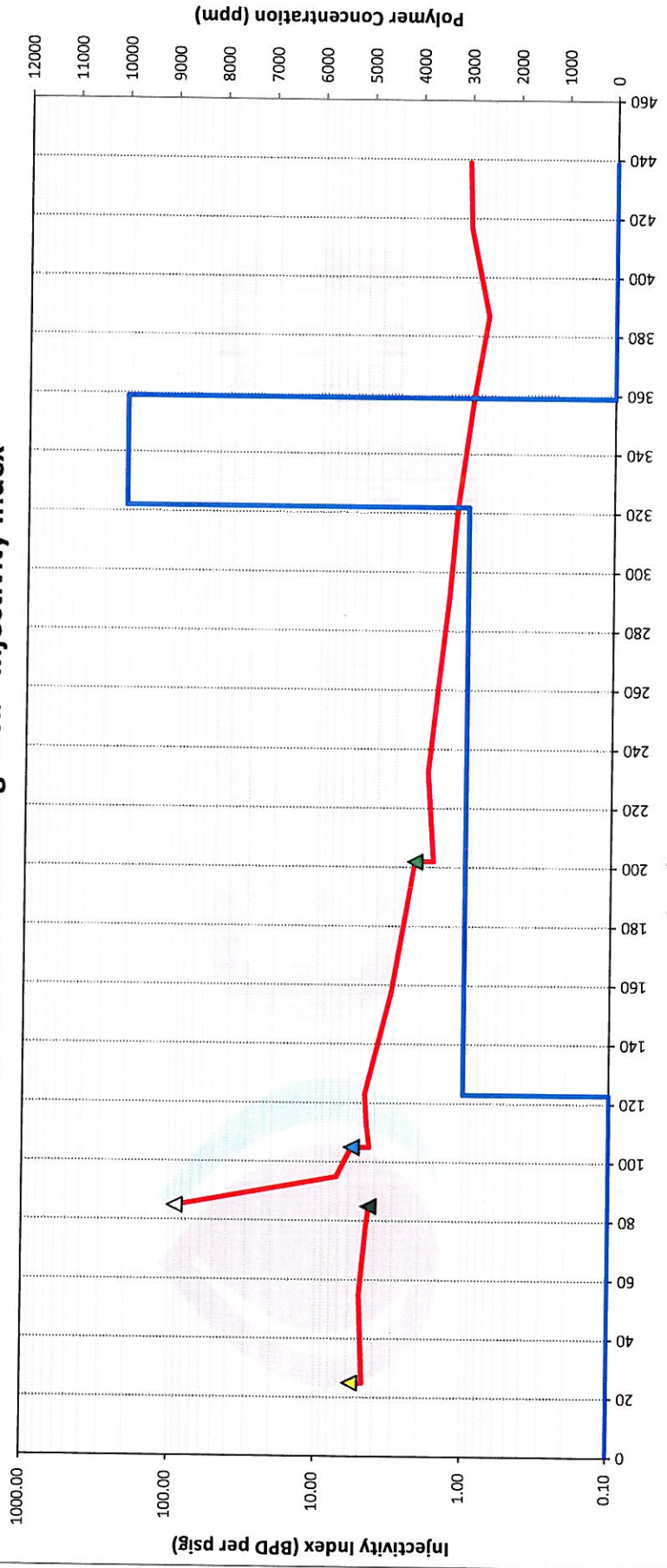


# McClellan 9 Producing Well - Injectivity Ratio (PSI/Rate)





# McClellan 9 Producing Well - Injectivity Index



**Legend:**

- Injectivity Index
- Polymer Concentration (ppm)
- ▲ Reduce rate to 0.75 BPM
- ▲ Reduce rate to 0.5 BPM
- ▲ Shut down to re-acidize
- ▲ Resume pumping @ 1 BPM

# McClellan 9 Producing Well - Pressure Gradient

