| Submit 1 Copy To Appropriate District Office<br>District I – (575) 393-6161<br>1625 N. French Dr., Hobbs, NM 88240<br>District II – (575) 748-1283<br>811 S. First St., Artesia, NM 88210<br>District III – (505) 334-6178<br>1000 Rio Brazos Rd., Aztec, NM 87410<br>District IV – (505) 476-3460<br>1220 S. St. Francis Dr., Santa Fe, NM 87505 | State of New Mexico<br>Energy, Minerals and Natural Resources<br><br>OIL CONSERVATION DIVISION<br>1220 South St. Francis Dr.<br>Santa Fe, NM 87505 | Form C-103<br>Revised August 1, 2011<br>WELL API NO.<br>30-025-38576 AND 30-025-42139<br>5. Indicate Type of Lease<br>STATE ☒ FEE ☐<br>6. State Oil & Gas Lease No.<br>V07530-0001 |
|---|---|---|
| SUNDRY NOTICES AND REPORTS ON WELLS<br>(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)<br>1. Type of Well: Oil Well ☐ Gas Well ☒ Other | | 7. Lease Name or Unit Agreement Name<br>Linam AGI<br>8. Wells Number 1 and 2 |
| 2. Name of Operator<br>DCP Midstream LP | | 9. OGRID Number 36785 |
| 3. Address of Operator<br>370 17th Street , Suite 2500, Denver CO 80202 | | 10. Pool name or Wildcat<br>Wildcat |
| 4. Well Location<br>Unit Letter K; 1980 feet from the South line and 1980 feet from the West line<br>Section 30 Township 18S Range 37E NMPM County Lea | | |
| | 11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*<br>3736 GR | |

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|---|---|---|---|
| PERFORM REMEDIAL WORK ☐ | PLUG AND ABANDON ☐ | REMEDIAL WORK ☐ | ALTERING CASING ☐ |
| TEMPORARILY ABANDON ☐ | CHANGE PLANS ☐ | COMMENCE DRILLING OPNS. ☐ | P AND A ☐ |
| PULL OR ALTER CASING ☐ | MULTIPLE COMPL ☐ | CASING/CEMENT JOB ☐ | |
| DOWNHOLE COMMINGLE ☐ | | | |
| OTHER: ☐ | | OTHER: Annual Summary Report and Notification parameter review pursuant to NMOCC R12546-K ☒ | |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

**Annual Summary for 2020 Pursuant to NMOCC R-12546-K and ACO-275 C-103 for Linam AGI#1 and AGI#2 and Request to Continue with Approved Immediate Notification Parameters for Operation of Both Wells**

This is annual summary submittal of data as agreed to between DCP and OCD relative to injection pressure, TAG temperature and casing annulus pressure for Linam AGI#1 until the well is worked over, which occurred in June 2017 and for Linam AGI#2 (API #30-025-42139) which was brought online in October 2015.

The analyses of data from both wells has been submitted monthly as required until the workover of the AGI#1 well and has also been submitted monthly for the AGI#2 well. The AGI#1 well was successfully worked over as planned in June 2017 and has been in use almost exclusively through 2018. In 2020 both wells were used and the effects are noted in the attached annual summary of the data. The purpose of this submittal is to provide OCD with the required summary of data for the 2020 calendar year for the operation of the Linam Ranch AGI Facility and to request to keep the approved immediate notification parameters in place for calendar year 2021.

The summary of the data and supporting tables and figures are attached.

SIGNATURE________________________ TITLE Consultant to DCP Midstream/ Geolex, Inc. DATE 1/21/2021
Type or print name Alberto A. Gutierrez, RG E-mail address: aag@geolex.com PHONE: 505-842-8000

**For State Use Only**
APPROVED BY:______________________ TITLE______________________ DATE______________
Conditions of Approval (if any):

**ANALYSIS OF 2020 ANNUAL TRENDS AND REQUEST TO CONTINUE WITH APPROVED IMMEDIATE NOTIFICATION PARAMETERS FOR OPERATION OF LINAM AGI #1 AND LINAM AGI #2 (API #s 30-025-38576 AND 30-025-42139) UNDER R-12546-all**

This document presents the results from the analyses of the injection parameter data collected from the Linam AGI #1 and #2 Wells which serve the Linam Ranch Gas Processing Facility near Hobbs, NM. Data from the Linam AGI #1 have been collected continuously since 2012 and have been analyzed on a monthly basis by Geolex and transmitted to DCP for reporting to NMOCD as required by ACO 275 and the approved post-workover C-103. In addition, the Linam AGI #2 well was completed and brought online in October 2015. The AGI #2 well was completed in the same injection zone as the AGI#1 approximately 450 feet to the southwest of AGI #1. From the time that AGI #2 was brought online, injection has been either into both wells simultaneously or solely into one of the two wells. AGI#2 was operated in conjunction with AGI #1 from October 2015 to January 2016 when a switch was made to operate only AGI#1 for the remainder of 2016. In May 2017, DCP switched over to injecting into AGI#2 to allow for the workover of AGI#1. The workover was completed on June 8, 2017 and AGI #1 was brought back online in July 2017 with bottom hole sensors installed. These sensors are now serving to monitor downhole and reservoir conditions since the downhole sensors in AGI #2 failed due to a lightning strike shortly after installation (2015) and will not be able to be repaired until sometime in the future when AGI #2 is worked over. In the meantime, in order to obtain reservoir data which would have been provided by the downhole PT sensors in AGI #2, a slick line with a pressure recorder was placed into AGI #2 and downhole pressure data were collected under both injection and non-injection conditions for the AGI #2 and AGI #1. Since that time the downhole sensors in AGI#1 provide the necessary reservoir data needed to evaluate the performance of the two wells. The system continued operating through 2018 with only AGI #1 active while waiting for independent flow meters to be installed/repaired in both wells so that reliable flow information would be available for each well independently. This operational mode (utilizing only AGI #1) continued through April 2019, and to date separate volume meters have not been installed/repaired. In May 2019, however, DCP began dividing the flow of acid gas between the two wells by using one or the other well exclusively (see Figure 3). Presently, surface data from both wells is being collected relative to the following parameters:

- Treated Acid Gas (TAG) surface injection pressure (both wells),
- TAG injection temperature (both wells),
- Annular pressure (both wells)
- Bottom Hole pressure and temperature (AGI#1 only beginning 7/2017)
- Overall total TAG flow rate from compressors

The above are the key parameters which are currently being measured in both wells in order to monitor the operations of the wells, prevent hydrate formation and reduce corrosion potential following the workover of AGI#1. While improvements have been implemented in the placement of temperature controls, dehydration of TAG during compression and other systems improvements at the AGI facility, there continue to be variations in the desired and normal operating levels of the above-referenced parameters. Since these parameters are useful indicators and predictors of potential operational or mechanical problems in the well, various levels of alarms have been established for each of these parameters. These parameters include three which are measured directly (TAG injection pressure, TAG injection temperature and annular pressure) and one (differential pressure) which is a calculated value (the difference between the two measured parameters of injection and annular pressure). The analyses of the long-term trends in these values have been useful in smoothing out shorter-term variations which can be observed from detailed inspection of hourly data and in the development of appropriate alarm bands for each parameter.

The Linam AGI #1 experienced a tubing leak in late 2011 which was partially addressed in a workover conducted in April/May 2012. The leak was detected in the end of 2011, and beginning of 2012 (until the time of the workover) the injection parameters were reviewed, analyzed and reported weekly to the NMOCD. Following the workover in which the tubing leak was repaired, some compromised production casing was detected immediately above the packer depth. At that time, we recommended keeping only approximately 250 psig on the annular space between the tubing and casing in AGI #1 since with annular pressure at this level, under normal operating conditions, this parameter can serve as a useful indicator of when activity should be initiated to prevent damage to the well or trigger a NMOCD shutdown and/or immediate notification requirements. Concern about this compromised casing was eliminated by stacking packers when the well was worked over again in June 2017. All of the data from January 2012 through December 2015 are included in our analysis, but only the post-workover data have been used to develop the recommended alarm and emergency shutdown (ESD) levels in conjunction with the requirements of NMOCD Order 12546-all, ACO-275 and the post-workover C-103.

Furthermore, a similar process has been employed on the Linam AGI#2 since it was brought online in October 2015. As described above, this well is equipped with bottom hole (just at top of packer) P/T measurement capability both inside and outside the tubing. In general, the immediate notification parameters for both wells were developed from this long-term analysis of the injection data. Initial testing of the Linam AGI#2 indicates that the pressure variations induced by flow rate and temperature fluctuations in the Linam AGI#1 are influencing the reservoir as measured in the AGI #2 location. This is to be expected as the new well is completed in the same zone at a distance away from the initial well which we predicted would see the edge of the plume in about 7 years. The Linam AGI #1 has been injecting for approximately 13 years.

Data from AGI #1 were continuously collected and analyzed weekly prior to the original workover in April/May 2012 and then monthly after the workover from June 2012 through December 2017 (see Figure 1). These data collection, analysis and reporting functions continue as required by NMOCD on a monthly basis. Furthermore, since it is necessary to evaluate the data from both wells to know how the system is operating overall, the surface data from AGI #2 are also being collected, analyzed and reported monthly. The reporting requirement for the AGI #2 is only quarterly and now that AGI #1 has been successfully worked over, the reporting for both wells will shift to quarterly as soon as independent reliable volume measurement is available for each well.

The NMOCD also requires that immediate notification parameters and levels be discussed and agreed upon with the agency, and that these be periodically reviewed and updated as needed based on operational or regulatory changes. The immediate notification parameters for both wells have been approved by NMOCD, and DCP requests no changes in these approved values. With this requirement in mind and for the purpose of protecting the mechanical integrity and safety of both wells and the overall AGI facility, Geolex monitors these data under contract to DCP to prevent damage to the wells or violation of regulatory requirements or permit constraints.

After 9.5 years (113 months) of carefully analyzing the performance of AGI #1 on a continuous basis, Geolex has assembled the data and has analyzed observed trends for the post-workover period of June 2012 – December 2020 as can be seen on Figure 2. Several important observations can be made from analyzing these data and taking into consideration important system modifications that have occurred during this time period. These include the following:

1. AGI #1Post-Workover MIT completed in May 2012
2. AGI #1MIT test completed November 14, 2012
3. Bleeding of diesel from casing annular space immediately after the November 2012 AGI #1 MIT test.
4. AGI #1MIT test completed April 30, 2013
5. Addition of diesel in annular space after April 2013 AGI #1MIT and May 2013 plant shutdown
6. AGI #1MIT test completed October 30, 2013
7. Failure of the VFD for the cooler on the AGI compressor from February 4 through 9, 2014.
8. AGI #1MIT test completed April 30, 2014
9. Addition of diesel in annular space after April 2014 AGI#1MIT
10. AGI #1MIT test completed September 19, 2014
11. AGI #1MIT test completed March 19, 2015
12. AGI #1MIT test completed September 15, 2015
13. AGI #2 brought online with startup in October-November 2015 and operated until January 2016
14. AGI #1MIT test completed March 22, 2016
15. AGI #2 MIT test completed April 1, 2016
16. AGI #2 TAG lines bled to flare on June 13, 2016 to remove static TAG in line when well is not operating.
17. AGI #1 MIT test completed September 14, 2016
18. AGI #1 Workover completed June 8, 2017 including stacked packer, bottom hole PT gauges
19. AGI #1 MIT test completed June 7, 2017 after workover completion
20. AGI #2 MIT test completed February 16, 2017
21. AGI #2 MIT test completed February 15, 2018
22. AGI #1 MIT test completed June 19, 2018
23. AGI #2 MIT test completed February 15, 2019
24. AGI #1 MIT test completed February 15, 2019
25. AGI #1 MIT test completed February 4, 2020
26. AGI #2 MIT test completed February 4, 2020

The following trends have been observed in the AGI well data and are reflected on Figures 1 & 2:

1. TAG injection pressure which was on a slight increasing trend due to slightly increasing average temperature of injected TAG but began to level off due to temperature decreases in 2017. This trend continued over the last six months of 2018 and all of 2019. The TAG injection pressure and rate has been more variable since 2016 due to inlet flow variations, and AGI#1 was used exclusively from time of the workover in June 2017 through April 2019.
2. Flow of TAG has been split between the two wells since April of 2019 with either one or the other being used exclusively but not simultaneously (see Figure 3).
3. The TAG injection temperature increased slightly with an arithmetic mean of 95°F in 2020 up from 92°F in 2019, 98°F in 2018, 106°F in 2017 and 113°F in 2016.
4. The TAG injection temperature is significantly lower during periods of low flow into either AGI well when the other well one is being used.
5. Pressure in the casing annulus has been consistently tracked; the correlative nature of variable injection temperature, pressure and flowrate, and its arithmetic mean for the period ending 12-31-20 has been approximately 190 psig essentially the same as 191 in 2019. The injection temperature is the largest influencer of this parameter under normal conditions.
6. The pressure differential between the casing annulus and the TAG injection pressure clearly indicates that no communication currently exists between the tubing and casing annulus.
7. The generally low annular pressures observed indicate that the production casing/cement still has good integrity.
8. TAG injection temperatures can now be lower due to the improvement of water reduction in compression which reduces the potential for hydrate formation at lower temperatures. This has allowed for lower injection temperatures throughout the 2018-2020 period.

Given the observations of the trends in the graphs and the competing influence of average injection temperature decrease and that injection volumes have been more variable since 2018, the observed TAG injection pressure changes are predictable and normal. There is no current indication of the reservoir being pressured up to any significant degree by the injection from Linam AGI #1. This was confirmed during the drilling and testing of AGI #2. Upon startup from any shutdown that lasts more than 6-8 hours it is critical to inject methanol along with the TAG for the initial startup period to prevent the formation of hydrates. While this may no longer be necessary due to the changes which were made in the water removal efficiency of the AGI compressor system, it is a good preventative measure. Prior to the increased water removal efficiency, this effect was observed in the period of March 2013 when hydrate formation during one of these events caused a spike in TAG injection pressure of approximately 35% over normal pressures due to partial blockage of the injection line and tubing created by the hydrate formation. This persisted for several hours until the situation was alleviated by the stabilization of the compressor and the simultaneous injection of methanol to cause the hydrates to be reabsorbed into the TAG. Injection pressures and temperatures then returned to normal.

It is also critical to maintain the temperature control on the injected TAG and to avoid rapid temperature or pressure fluctuations during periods when power failures or other mechanical failures may occur. The extensive and wide variation in TAG injection temperatures observed prior to the failure of the tubing in late 2011, resulted in the formation of free water within the tubing and corrosion resulting in a tubing leak which had to be repaired in April/May 2012. Temperature control changes were implemented and helped to significantly control downward swings in temperature and prevent the formation of hydrates. However, in February 2014, there was a failure in the VFD for the cooler on the AGI compressor which persisted for five days. During this period of time, the TAG temperature increased to at least 150 °F, and the annular pressure increased dramatically due to the heating of the diesel fluid in the annular space as a result of the elevated TAG injection temperature. TAG temperature as well as annular pressure returned to the normal range once the VFD on the cooler was repaired. The significant spread between TAG injection pressure and the annular pressure maintained even during this heating episode proves the continued integrity of the well, packer, casing and tubing. However, the rise in annular pressure has a potential to damage the integrity of the compromised casing in the well and should be avoided during all subsequent operations. In response to these issues, DCP undertook and successfully completed a project in 2015 to address the temperature fluctuations resulting from compression controls and to increase the efficiency of water removal to the point where all free water is removed from the TAG prior to injection. This significantly reduces hydrate formation potential in the entire system regardless of temperature variations. This has allowed for the lower average injection temperatures observed throughout 2018 and 2019 to not have caused any hydrate formation.

In October 2015, AGI #2 was started up and operated in a startup mode switching back and forth from AGI #1. This effect is reflected in the trend data shown in Figure 2. Due to a volume meter sensor failure and configuration issues which are currently being addressed, only total flow to the AGI system can be reliably measured through 2019. Flow has been split between the two wells since April of 2019, but each well is used exclusively when that is done. For 2020 AGI#2 only operated until July 16, 2020 at 9am when flow was switched to AGI#1 and only AGI#1 was used for the balance of 2020. They are not used simultaneously. See Figure 3 for total flow rate and flow rate to AGI #1 and AGI #1.

## REVIEW OF STATISTICAL ANALYSIS OF INJECTION PARAMETERS, DEVELOPMENT OF AND REQUEST TO CONTINUE WITH APPROVED IMMEDIATE NOTIFICATION PARAMETERS (API #s 30-025-38576 AND 30-025-42139) UNDER R-12546-all

The statistical analyses of the injection parameter data were initially conducted for the purpose of establishing normal operating levels for these parameters which are automatically monitored. Several data filtering steps were accomplished to take the hourly data which forms the basis of the analysis in order to smooth out variability and to account for the physical changes in the well and its operation after the repair of the tubing leak in the workover completed in May 2012. Because the configuration of the well changed dramatically after the workover, only data after the well had stabilized post-workover were used in this analysis. Furthermore, the subsequent stacked packer workover of the AGI#1 in June 2017 was completed and essentially only the AGI #1 has been used since then. The bottom hole PT sensors installed during the 2017 workover of AGI #1 have been providing excellent data throughout 2020 and these data are shown on the graph attached here as Figure 4. During 2018 we resolved some communication issues between the Halliburton BHPT panel and the plant DCS system and corrected some BHPT readings which had been inaccurately reported from 11/2017 to 6/2018 until this issue was detected. In 2018 for the period affected, we downloaded the data directly from the Halliburton panel and corrected the values. A C-103 was submitted with these corrections in July 2018. The corrected values are used in this analysis. No problems with BHPT readings occurred in 2019 or 2020. It is clear from the variation in these parameters when flow is switched between wells that the conditions measured in the BHPT gauge in AGI#1 reflect the values in the reservoir which would be very similar in AGI #2 if the BHPT gauges in the well were operational.

All the data are summarized in Table 1, and the calculated statistical parameters of arithmetic mean and standard deviation were used to establish base levels and variability for each parameter. The results of these analyses resulted in the immediate notification parameters which were approved both for AGI #2 and the parameters required under ACO 275 for AGI#1.

Based on the analysis of observed trends, the immediate notification parameters which were approved for AGI #1 and the parameters previously approved for AGI# 2 and continued through 2020 remain appropriate to continue through 2021. This is DCPs request and the approved immediate notification parameters are detailed below:

The approved immediate notification parameters for Linam AGI #1 are summarized below:

1. Exceedance of the approved MAOP of 2644 psig surface for a period greater than two hours.
2. Failure of a mechanical integrity test (MIT) of the well.
3. Confirmation of any condition that indicates a tubing, packer or casing leak.
4. Any increase of the annular pressure to a value that is greater than 1200 psig
5. Any instance in which differential pressure between the injection tubing and injection tubing annulus is less than 100 psig.
6. Any release of $H_2S$ at the well which results in an activation of the facility's approved Rule 11 $H_2S$ contingency plan.
7. Any workover or maintenance activity that requires intrusive work in the well.

The approved immediate notification parameters for the Linam AGI #2 are summarized below:

1. Exceedance of the approved MAOP of 2644 psig surface for a period greater than two hours.
2. Failure of a mechanical integrity test (MIT) of the well.
3. Confirmation of any condition that indicates a tubing, packer or casing leak.
4. Any increase of the annular pressure to a value that is more than 80% of the injection pressure.
5. Any release of $H_2S$ at the well which results in an activation of the facility's approved Rule 11 $H_2S$ contingency plan.
6. Any workover or maintenance activity that requires intrusive work in the well.

**TABLE 1** SUMMARY DATA ANALYSIS OF LINAM AGI #1 TRENDS FOR JANUARY 2012 THROUGH DECEMBER 2020 (3 PAGES)

# DCP MIDSTREAM LINAM RANCH AGI #1 AND #2 CUMULATIVE INJECTION DATA

| Month Ended | | | | | AGI #1 TAG Injection Temperature (°F) | AGI #1 Surface TAG Injection Pressure (psig) | AGI #1 Surface Casing Annulus Pressure (psig) | AGI #1 Surface Injection/Casing Annular Pressure Differential (psig) | AGI #1 Average Bottom Hole Pressure (psig) | AGI #1 Average Bottom Hole Temperature (°F) | Total Flowrate (MSCFPH) | AGI #1 Flowrate (MSCFPH) | AGI #2 Flowrate (MSCFPH) | AGI #2 Surface TAG Injection Temperature (°F) | AGI #2 Surface TAG Injection Pressure (psig) | AGI #2 Surface Casing Annulus Pressure (psig) | AGI #2 Surface Injection/Casing Annular Pressure Differential (psig) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 2012 | Jan-12 | Jan-12 | Jan-12 | 114 | 1385 | 989 | 393 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| February | 2012 | Feb-12 | Feb-12 | Feb-12 | 116 | 1448 | 1036 | 412 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| March | 2012 | Mar-12 | Mar-12 | Mar-12 | 118 | 1475 | 1046 | 429 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| April | 2012 | Apr-12 | Apr-12 | Apr-12 | 121 | 1474 | 1010 | 468 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| May | 2012 | May-12 | May-12 | May-12 | 122 | 1419 | 555 | 864 | | | 120 | 120 | 0 | | | | | Plant Workover and Shutdown |
| June | 2012 | Jun-12 | Jun-12 | Jun-12 | 118 | 1394 | 368 | 1025 | | | 113 | 113 | 0 | | | | | Plant Workover and Shutdown |
| July | 2012 | Jul-12 | Jul-12 | Jul-12 | 121 | 1450 | 420 | 1030 | | | 148 | 148 | 0 | | | | | |
| August | 2012 | Aug-12 | Aug-12 | Aug-12 | 122 | 1449 | 401 | 1048 | | | 137 | 137 | 0 | | | | | |
| September | 2012 | Sep-12 | Sep-12 | Sep-12 | 122 | 1472 | 478 | 995 | | | 152 | 152 | 0 | | | | | |
| October | 2012 | Oct-12 | Oct-12 | Oct-12 | 118 | 1482 | 447 | 1035 | | | 167 | 167 | 0 | | | | | |
| November | 2012 | Nov-12 | Nov-12 | Nov-12 | 121 | 1539 | 376 | 1163 | | | 191 | 191 | 0 | | | | | November 14, 2012 MIT Test |
| December | 2012 | Dec-12 | Dec-12 | Dec-12 | 117 | 1446 | 48 | 1398 | | | 155 | 155 | 0 | | | | | |
| January | 2013 | Jan-13 | Jan-13 | Jan-13 | 120 | 1445 | 49 | 1397 | | | 151 | 151 | 0 | | | | | |
| February | 2013 | Feb-13 | Feb-13 | Feb-13 | 121 | 1515 | 203 | 1311 | | | 174 | 174 | 0 | | | | | |
| March | 2013 | Mar-13 | Mar-13 | Mar-13 | 120 | 1550 | 209 | 1340 | | | 179 | 179 | 0 | | | | | |
| April | 2013 | Apr-13 | Apr-13 | Apr-13 | 121 | 1544 | 240 | 1304 | | | 178 | 178 | 0 | | | | | April 30, 2013 MIT Test |
| May | 2013 | May-13 | May-13 | May-13 | 116 | 1516 | 515 | 1001 | | | 154 | 154 | 0 | | | | | |
| June | 2013 | Jun-13 | Jun-13 | Jun-13 | 120 | 1541 | 449 | 1092 | | | 166 | 166 | 0 | | | | | |
| July | 2013 | Jul-13 | Jul-13 | Jul-13 | 120 | 1560 | 182 | 1375 | | | 177 | 177 | 0 | | | | | |
| August | 2013 | Aug-13 | Aug-13 | Aug-13 | 121 | 1565 | 94 | 1472 | | | 171 | 171 | 0 | | | | | |
| September | 2013 | Sep-13 | Sep-13 | Sep-13 | 121 | 1575 | 74 | 1500 | | | 179 | 179 | 0 | | | | | |
| October | 2013 | Oct-13 | Oct-13 | Oct-13 | 123 | 1594 | 91 | 1503 | | | 174 | 174 | 0 | | | | | October 30, 2013 MIT Test |
| November | 2013 | Nov-13 | Nov-13 | Nov-13 | 121 | 1576 | 70 | 1506 | | | 171 | 171 | 0 | | | | | |
| December | 2013 | Dec-13 | Dec-13 | Dec-13 | 124 | 1607 | 69 | 1538 | | | 175 | 175 | 0 | | | | | |
| January | 2014 | Jan-14 | Jan-14 | Jan-14 | 121 | 1574 | 8 | 1566 | | | 166 | 166 | 0 | | | | | |
| February | 2014 | Feb-14 | Feb-14 | Feb-14 | 126 | 1639 | 111 | 1528 | | | 182 | 182 | 0 | | | | | |
| March | 2014 | Mar-14 | Mar-14 | Mar-14 | 121 | 1579 | 11 | 1568 | | | 162 | 162 | 0 | | | | | |
| April | 2014 | Apr-14 | Apr-14 | Apr-14 | 123 | 1615 | 67 | 1547 | | | 175 | 175 | 0 | | | | | April 30, 2014 MIT Test |
| May | 2014 | May-14 | May-14 | May-14 | 123 | 1625 | 344 | 1280 | | | 170 | 170 | 0 | | | | | |
| June | 2014 | Jun-14 | Jun-14 | Jun-14 | 121 | 1603 | 325 | 1277 | | | 162 | 162 | 0 | | | | | |
| July | 2014 | Jul-14 | Jul-14 | Jul-14 | 123 | 1636 | 393 | 1243 | | | 167 | 167 | 0 | | | | | |
| August | 2014 | Aug-14 | Aug-14 | Aug-14 | 122 | 1624 | 348 | 1275 | | | 161 | 161 | 0 | | | | | |
| September | 2014 | Sep-14 | Sep-14 | Sep-14 | 122 | 1620 | 293 | 1327 | | | 158 | 158 | 0 | | | | | September 19, 2014 MIT Test |
| October | 2014 | Oct-14 | Oct-14 | Oct-14 | 123 | 1648 | 364 | 1284 | | | 170 | 170 | 0 | | | | | |
| November | 2014 | Nov-14 | Nov-14 | Nov-14 | 123 | 1610 | 146 | 1464 | | | 158 | 158 | 0 | | | | | |
| December | 2014 | Dec-14 | Dec-14 | Dec-14 | 124 | 1660 | 211 | 1450 | | | 168 | 168 | 0 | | | | | |
| January | 2015 | Jan-15 | Jan-15 | Jan-15 | 125 | 1631 | 180 | 1451 | | | 151 | 151 | 0 | | | | | |
| February | 2015 | Feb-15 | Feb-15 | Feb-15 | 123 | 1649 | 242 | 1407 | | | 161 | 161 | 0 | | | | | |
| March | 2015 | Mar-15 | Mar-15 | Mar-15 | 124 | 1627 | 270 | 1357 | | | 161 | 161 | 0 | | | | | March 19, 2015 MIT Test |
| April | 2015 | Apr-15 | Apr-15 | Apr-15 | 124 | 1647 | 393 | 1254 | | | 163 | 163 | 0 | | | | | |
| May | 2015 | May-15 | May-15 | May-15 | 122 | 1645 | 358 | 1287 | | | 159 | 159 | 0 | | | | | |
| June | 2015 | Jun-15 | Jun-15 | Jun-15 | 121 | 1629 | 259 | 1370 | | | 152 | 152 | 0 | | | | | |
| July | 2015 | Jul-15 | Jul-15 | Jul-15 | 120 | 1620 | 241 | 1378 | | | 154 | 154 | 0 | | | | | |
| August | 2015 | Aug-15 | Aug-15 | Aug-15 | 123 | 1613 | 287 | 1327 | | | 131 | 131 | 0 | | | | | |
| September | 2015 | Sep-15 | Sep-15 | Sep-15 | 124 | 1654 | 318 | 1336 | | | 163 | 163 | 0 | | | | | September 15, 2015 MIT Test |
| October | 2015 | Oct-15 | Oct-15 | Oct-15 | 124 | 1662 | 191 | 1471 | | | 160 | 160 | 0 | | | | | AGI #2 Operations Began October 2015 |
| November | 2015 | Nov-15 | Nov-15 | Nov-15 | 73 | 1280 | 7 | 1273 | | | 164 | 164 | 0 | 109 | 1430 | 394 | 1035 | AGI #1 & #2 both in use |
| December | 2015 | Dec-15 | Dec-15 | Dec-15 | 102 | 1457 | 32 | 1425 | | | 151 | | 0 | 111 | 1498 | 494 | 1004 | AGI #1 & #2 both in use |
| January | 2016 | Jan-16 | Jan-16 | Jan-16 | 121 | 1587 | 159 | 1428 | | | 117 | 117 | 0 | 77 | 1094 | 0 | 1094 | AGI #2 not in use |
| February | 2016 | Feb-16 | Feb-16 | Feb-16 | 121 | 1645 | 201 | 1444 | | | 191 | 191 | 0 | 49 | 1603 | 0 | 1603 | AGI #2 not in use |
| March | 2016 | Mar-16 | Mar-16 | Mar-16 | 118 | 1675 | 264 | 1411 | | | 158 | 158 | 0 | 58 | 1679 | 1 | 1678 | AGI #2 not in use |
| April | 2016 | Apr-16 | Apr-16 | Apr-16 | 116 | 1682 | 279 | 1400 | | | 144 | 144 | 0 | 63 | 1688 | 1 | 1687 | AGI #2 not in use |
| May | 2016 | May-16 | May-16 | May-16 | 116 | 1678 | 250 | 1428 | | | 185 | 185 | 0 | 70 | 1685 | 1 | 1684 | AGI #2 not in use |
| June | 2016 | Jun-16 | Jun-16 | Jun-16 | 108 | 1624 | 70 | 1554 | | | 191 | 191 | 0 | 81 | 2 | 1 | 1 | AGI #2 not in use. TAG trapped in blocked off section of AGI #2 pipe blown down |
| July | 2016 | Jul-16 | Jul-16 | Jul-16 | 114 | 1693 | 226 | 1467 | | | 196 | 196 | 0 | 88 | 2 | 1 | 1 | AGI #2 not in use |
| August | 2016 | Aug-16 | Aug-16 | Aug-16 | 111 | 1715 | 168 | 1547 | | | 213 | 213 | 0 | 78 | 3 | 1 | 2 | AGI #2 not in use |
| September | 2016 | Sep-16 | Sep-16 | Sep-16 | 101 | 1657 | 337 | 1320 | | | 188 | 188 | 0 | 73 | 3 | 1 | 2 | AGI #2 not in use |
| October | 2016 | Oct-16 | Oct-16 | Oct-16 | 101 | 1666 | 400 | 1266 | | | 223 | 223 | 0 | 68 | 2 | 0 | 2 | AGI #2 not in use |
| November | 2016 | Nov-16 | Nov-16 | Nov-16 | 117 | 1743 | 862 | 881 | | | 185 | 185 | 0 | 54 | 1 | 0 | 1 | AGI #2 not in use |
| December | 2016 | Dec-16 | Dec-16 | Dec-16 | 117 | 1698 | 809 | 889 | | | 153 | 153 | 0 | 43 | 1 | 0 | 1 | AGI #2 not in use |
| January | 2017 | Jan-17 | Jan-17 | Jan-17 | 118 | 1730 | 934 | 796 | | | 179 | 179 | 0 | 45 | 8 | 0 | 8 | AGI #2 not in use |
| February | 2017 | Feb-17 | Feb-17 | Feb-17 | 119 | 1750 | 958 | 791 | | | 186 | 186 | 0 | 54 | 10 | 278 | -267 | AGI #2 not in use |
| March | 2017 | Mar-17 | Mar-17 | Mar-17 | 114 | 1708 | 782 | 927 | | | 186 | 175 | 11 | 104 | 1701 | 373 | 1327 | Both wells used; #2 flow meter not functioning. AGI #1 for entire month and AGI #2 only from 3-13 to 3-16 and 3-21 to 3-31 |
| April | 2017 | Apr-17 | Apr-17 | Apr-17 | 105 | 1651 | 418 | 1234 | | | 194 | 153 | 41 | 100 | 1862 | 296 | 1566 | Both wells used. Flow meter for #2 not working. TAG routed to #1 well exclusively, both wells simultaneously and #2 well exclusively. All TAG routed to #2 from 4-26 onward in anticipation of workover of #1 well. |
| May | 2017 | May-17 | May-17 | May-17 | 103 | 1596 | 203 | 1390 | | | 155 | 49 | 150 | 104 | 1842 | 66 | 1772 | Both wells used. #2 Flow Meter not working. TAG Routed to AGI #2 save for 19 hour period from 5-17 to 5-18 when it was routed to AGI #1. AGI #1 workover 5-22 thru 6-8. AGI #2 experienced mechanical blockage resulting in both wells being shut down from 5-25 to 5-31. |
| June | 2017 | Jun-17 | Jun-17 | Jun-17 | 99 | 1439 | 429 | 1010 | | | 147 | 40 | 107 | 113 | 1838 | 1 | 1837 | Both wells used. #2 used from 6-2 through 6-15. Workover of #1 completed 6-8 and sucessful MIT performed 6-8; #1 back online 6-15. #1 and #2 used simultaneously from 6-15 to 6-30. Mechanical Problem with flow meter for #2 well. Only total flow can be measured; no way to differentiate between #1 and #2 when they are used together. |
| July | 2017 | Jul-17 | Jul-17 | Jul-17 | 91 | 1409 | 302 | 1108 | 4392 | 137 | 171 | | 0 | 102 | 1810 | sensor error | n/a | Both wells used. Annular Pressure Meter for AGI #2 malfunctioning for month of July. Mechanical problem with flow meter for #2 well persists. Bottomhole sensors added to #1 Well as part of workover completed in June and began recording data on 7-20-17 |
| August | 2017 | Aug-17 | Aug-17 | Aug-17 | 99 | 1572 | 621 | 950 | 4514 | 134 | 187 | 187 | 0 | 83 | 1400 | 192 | 1064 | Both wells used. Mechanical problem with flow meter for #2 well persists. Only total flow data available. Annular Pressure meter for AGI #2 back in service 8-11-17. Annular Pressure and differential pressure readings are for period 8-11-17 through 8-31-17. |
| September | 2017 | Sep-17 | Sep-17 | Sep-17 | 109 | 1685 | 482 | 1203 | 4578 | 135 | 197 | 197 | 0 | 77 | 1267 | 134 | 1132 | Only AGI #1 used. Entire plant shut down from Sept 19 to Sept 30th for a scheduled turnaround. Data available only for first 19 days of September |

| Month Ended | | | | | AGI #1 TAG Injection Temperature (°F) | AGI #1 Surface TAG Injection Pressure (psig) | AGI #1 Surface Casing Annulus Pressure (psig) | AGI #1 Surface Injection/Casing Annular Pressure Differential (psig) | AGI #1 Average Bottom Hole Pressure (psig) | AGI #1 Average Bottom Hole Temperature (°F) | Total Flowrate (MSCFPH) | AGI #1 Flowrate (MSCFPH) | AGI #2 Flowrate (MSCFPH) | AGI #2 Surface TAG Injection Temperature (°F) | AGI #2 Surface TAG Injection Pressure (psig) | AGI #2 Surface Casing Annulus Pressure (psig) | AGI #2 Surface Injection/Casing Annular Pressure Differential (psig) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| October | 2017 | Oct-17 | Oct-17 | Oct-17 | 102 | 1531 | 211 | 1321 | 4250 | 136 | 152 | 152 | 0 | 63 | 872 | 97 | 776 | Plant shutdown 9-19 through 10-3 for a turnaround. Only AGI #1 used during remainder of month. Major software upgrade in DCS. BH sensors not yet integrated into DCS. |
| November | 2017 | Nov-17 | Nov-17 | Nov-17 | 101 | 1589 | 428 | 1161 | 4080 | 136 | 189 | 189 | 0 | 56 | 1013 | 82 | 931 | Only AGI #1 in use in November. BH sensors not reconnected to DCS until 11-29. |
| December | 2017 | Dec-17 | Dec-17 | Dec-17 | 107 | 1707 | 456 | 1252 | 4080 | 136 | 191 | 191 | 0 | 44 | 1102 | 84 | 1017 | Only AGI #1 in use. |
| January | 2018 | Jan-18 | Jan-18 | Jan-18 | 99 | 1557 | 160 | 1397 | 4416 | 133 | 120 | 120 | 0 | 41 | 704 | 177 | 528 | Only AGI #1 in use. |
| February | 2018 | Feb-18 | Feb-18 | Feb-18 | 110 | 1551 | 110 | 1441 | 4458 | 131 | 196 | 196 | 0 | 48 | 785 | 199 | 527 | Only AGI #1 in use. |
| March | 2018 | Mar-18 | Mar-18 | Mar-18 | 107 | 1635 | 300 | 1335 | 4503 | 133 | 188 | 188 | 0 | 58 | 938 | 264 | 673 | Only AGI #1 in use. |
| April | 2018 | Apr-18 | Apr-18 | Apr-18 | 95 | 1618 | 95 | 1523 | 4576 | 131 | 223 | 223 | 0 | 63 | 1158 | 224 | 934 | Only AGI #1 in use. |
| May | 2018 | May-18 | May-18 | May-18 | 99 | 1668 | 141 | 1527 | 4646 | 131 | 226 | 226 | 0 | 79 | 1120 | 198 | 921 | Only AGI #1 in use. |
| June | 2018 | Jun-18 | Jun-18 | Jun-18 | 100 | 1667 | 267 | 1401 | 4615 | 132 | 202 | 202 | 0 | 84 | 1062 | 189 | 873 | Only AGI #1 in use. |
| July | 2018 | Jul-18 | Jul-18 | Jul-18 | 101 | 1690 | 475 | 1215 | 4627 | 132 | 204 | 204 | 0 | 83 | 1080 | 179 | 901 | Only AGI #1 in use. |
| August | 2018 | Aug-18 | Aug-18 | Aug-18 | 98 | 1614 | 321 | 1293 | 4565 | 131 | 157 | 157 | 0 | 82 | 1043 | 169 | 874 | Only AGI #1 in use. |
| September | 2018 | Sep-18 | Sep-18 | Sep-18 | 97 | 1581 | 237 | 1345 | 4534 | 130 | 155 | 155 | 0 | 72 | 898 | 154 | 744 | Only AGI #1 in use. |
| October | 2018 | Oct-18 | Oct-18 | Oct-18 | 92 | 1564 | 206 | 1358 | 4525 | 130 | 160 | 160 | 0 | 61 | 830 | 134 | 696 | Only AGI #1 in use. |
| November | 2018 | Nov-18 | Nov-18 | Nov-18 | 91 | 1531 | 115 | 1416 | 4529 | 129 | 166 | 166 | 0 | 64 | 1143 | 108 | 1036 | Only AGI #1 in use. |
| December | 2018 | Dec-18 | Dec-18 | Dec-18 | 89 | 1483 | 55 | 1428 | 4480 | 128 | 133 | 133 | 0 | 69 | 1152 | 85 | 1067 | Only AGI #1 in use. |
| January | 2019 | Jan-19 | Jan-19 | Jan-19 | 95 | 1500 | 133 | 1367 | 4457 | 129 | 143 | 143 | 0 | 69 | 925 | 68 | 858 | |
| February | 2019 | Feb-19 | Feb-19 | Feb-19 | 98 | 1547 | 185 | 1362 | 4484 | 129 | 169 | 169 | 0 | 73 | 936 | 194 | 724 | |
| March | 2019 | Mar-19 | Mar-19 | Mar-19 | 100 | 1577 | 222 | 1362 | 4511 | 131 | 182 | 182 | 0 | 78 | 442 | 238 | 161 | |
| April | 2019 | Apr-19 | Apr-19 | Apr-19 | 106 | 1689 | 473 | 1217 | 4577 | 133 | 216 | 216 | 0 | 92 | 14 | 229 | -215 | |
| May | 2019 | May-19 | May-19 | May-19 | 110 | 1753 | 673 | 1080 | 4516 | 136 | 225 | 115 | 110 | 111 | 1616 | 166 | 1450 | |
| June | 2019 | Jun-19 | Jun-19 | Jun-19 | 110 | 1680 | 513 | 1167 | 4433 | 136 | 199 | 87 | 112 | 112 | 1595 | 68 | 1528 | |
| July | 2019 | Jul-19 | Jul-19 | Jul-19 | 88 | 1292 | 5 | 1228 | 4279 | 138 | 207 | 0 | 207 | 113 | 1600 | 113 | 1487 | |
| August | 2019 | Aug-19 | Aug-19 | Aug-19 | 91 | 1240 | 6 | 1234 | 4224 | 138 | 182 | 5 | 176 | 113 | 1554 | 136 | 1419 | |
| September | 2019 | Sep-19 | Sep-19 | Sep-19 | 93 | 1251 | 38 | 1211 | 4171 | 137 | 169 | 50 | 118 | 111 | 1484 | 112 | 1371 | |
| October | 2019 | Oct-19 | Oct-19 | Oct-19 | 78 | 1202 | 11 | 1191 | 4156 | 137 | 231 | 54 | 177 | 106 | 1486 | 35 | 1451 | |
| November | 2019 | Nov-19 | Nov-19 | Nov-19 | 69 | 1179 | 19 | 1160 | 4143 | 137 | 204 | 0 | 204 | 110 | 1512 | 116 | 1396 | |
| December | 2019 | Dec-19 | Dec-19 | Dec-19 | 64 | 1156 | 15 | 1142 | 4116 | 138 | 195 | 0 | 195 | 111 | 1494 | 135 | 1359 | |
| January | 2020 | Jan-20 | Jan-20 | Jan-20 | 63 | 1128 | 17 | 1111 | 4096 | 138 | 188 | 0 | 188 | 110 | 1481 | 54 | 1427 | |
| February | 2020 | Feb-20 | Feb-20 | Feb-20 | 63 | 1116 | 262 | 854 | 4085 | 138 | 191 | 0 | 191 | 107 | 1462 | 137 | 1324 | Perfrom MIT on both wells adjust backside pressure |
| March | 2020 | Mar-20 | Mar-20 | Mar-20 | 72 | 1111 | 300 | 811 | 4085 | 138 | 217 | 0 | 217 | 109 | 1509 | 59 | 1450 | |
| April | 2020 | Apr-20 | Apr-20 | Apr-20 | 74 | 1117 | 294 | 823 | 4095 | 138 | 228 | 0 | 228 | 109 | 1519 | 35 | 1485 | |
| May | 2020 | May-20 | May-20 | May-20 | 82 | 1126 | 300 | 825 | 4098 | 138 | 212 | 0 | 212 | 108 | 1501 | 10 | 1491 | |
| June | 2020 | Jun-20 | Jun-20 | Jun-20 | 88 | 1140 | 323 | 817 | 4109 | 138 | 226 | 0 | 226 | 117 | 1500 | 127 | 1373 | |
| July | 2020 | Jul-20 | Jul-20 | Jul-20 | 109 | 1412 | 302 | 1109 | 4212 | 139 | 219 | 100 | 119 | 109 | 1409 | 103 | 1307 | Switch flow from #2 to #1 16 July 9am |
| August | 2020 | Aug-20 | Aug-20 | Aug-20 | 119 | 1658 | 293 | 1364 | 4332 | 141 | 227 | 227 | 0 | 98 | 1113 | 181 | 932 | |
| September | 2020 | Sep-20 | Sep-20 | Sep-20 | 123 | 1737 | 123 | 1613 | 4389 | 143 | 241 | 241 | 0 | 87 | 1125 | 217 | 909 | |
| October | 2020 | Oct-20 | Oct-20 | Oct-20 | 121 | 1715 | 30 | 1683 | 4403 | 142 | 219 | 219 | 0 | 79 | 1153 | 181 | 973 | |
| November | 2020 | Nov-20 | Nov-20 | Nov-20 | 114 | 1692 | 17 | 1673 | 4447 | 140 | 232 | 232 | 0 | 73 | 1189 | 157 | 1032 | |
| December | 2020 | Dec-20 | Dec-20 | Dec-20 | 113 | 1696 | 16 | 1680 | 4488 | 138 | 212 | 212 | 0 | 63 | 1225 | 141 | 1085 | |
| **Average for 2020** | | | | | **95** | **1387** | **190** | **1197** | **4237** | **139** | **218** | **103** | **115** | **97** | **1349** | **117** | **1232** | |
| **Standard Deviation 2020** | | | | | **23** | **276** | **130** | **365** | **155** | **2** | **15** | **108** | **101** | **17** | **163** | **62** | **219** | |
| **Average for Entire Period** | | | | | **109.3** | **1545.1** | **297.4** | **1247.1** | **4363.7** | **135.1** | **177.3** | **148.7** | **27.7** | **82.9** | **1099.6** | **124.4** | **959.2** | |
| **Standard Deviation Entire Period** | | | | | **15.7** | **161.2** | **246.5** | **267.2** | **188.1** | **3.8** | **27.8** | **60.6** | **65.1** | **22.6** | **565.3** | **107.0** | **555.6** | |

**OPERATING CONSTRAINTS BASED ON NMOCC ORDER AND ACO 275**

**MAOP in NMOCC Order is 2644 psig**

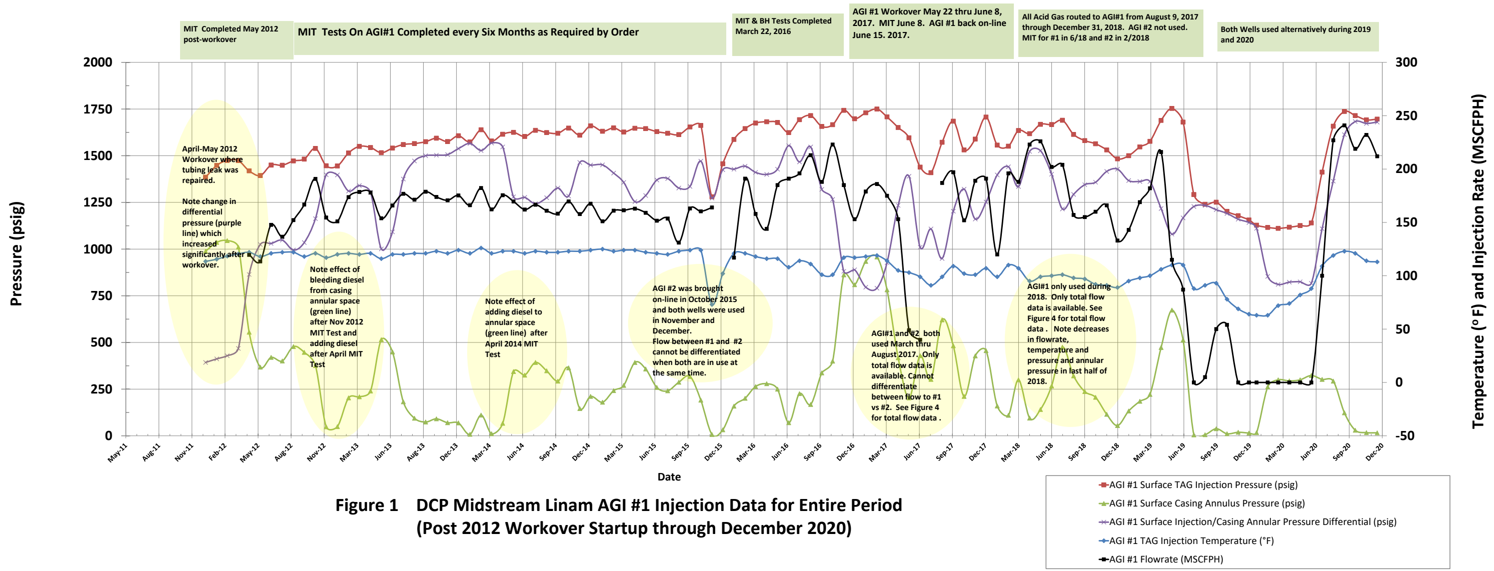



**Figure 1 DCP Midstream Linam AGI #1 Injection Data for Entire Period (Post 2012 Workover Startup through December 2020)**

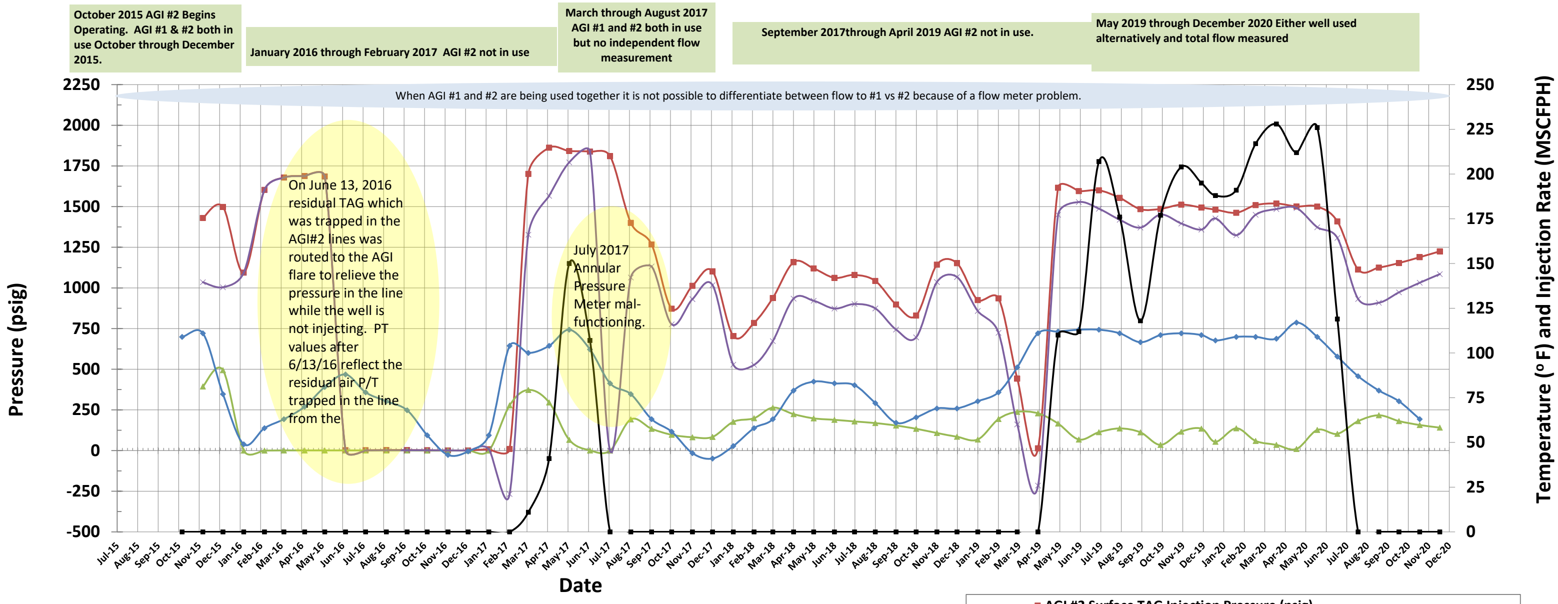
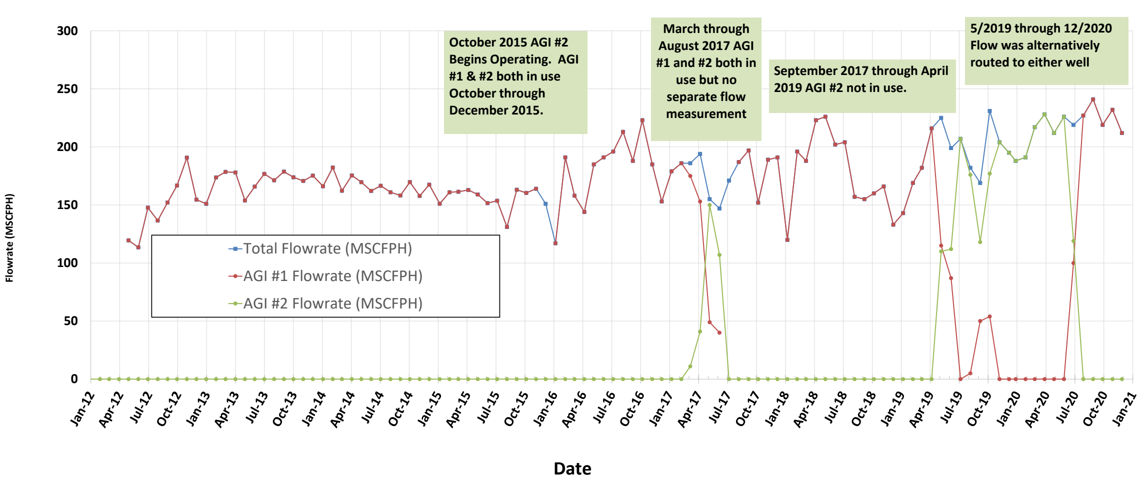



**Figure 2 DCP Midstream Linam AGI #2 All Injection Data (Startup through December 2017)**

Figure 3 DCP Midstream Linam AGI #1 and #2 Combined Total Flowrate (MSCFPH) (May 2012 through December 2020)



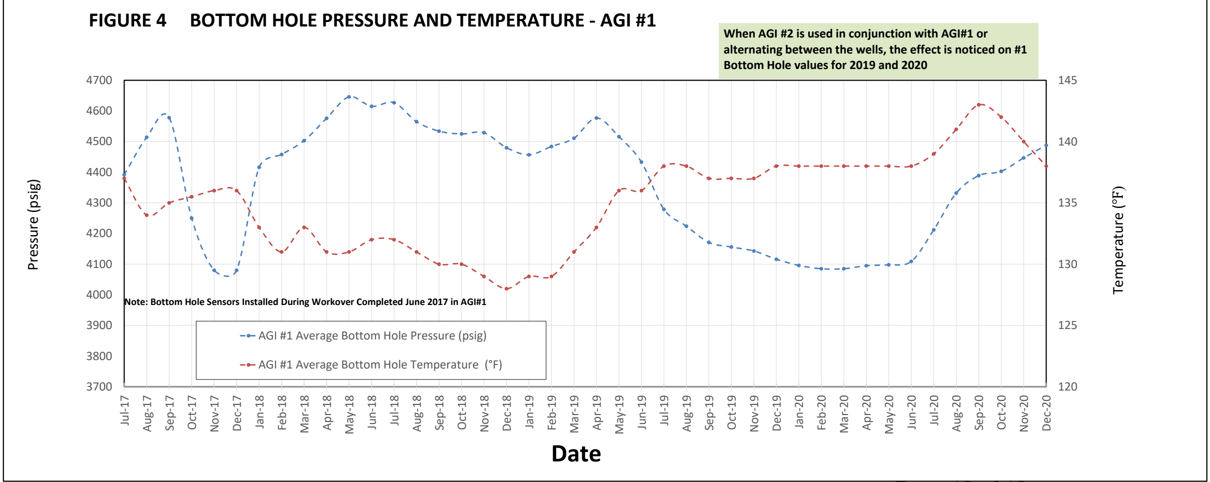


FIGURE 4 BOTTOM HOLE PRESSURE AND TEMPERATURE - AGI #1
When AGI #2 is used in conjunction with AGI#1 or alternating between the wells, the effect is noticed on #1 Bottom Hole values for 2019 and 2020
Pressure (psig)
Temperature (°F)
4700
4600
4500
4400
4300
4200
4100
4000
3900
3800
3700
145
140
135
130
125
120
Note: Bottom Hole Sensors Installed During Workover Completed June 2017 in AGI#1
AGI #1 Average Bottom Hole Pressure (psig)
AGI #1 Average Bottom Hole Temperature (°F)
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
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Nov-19
Dec-19
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Date

GEOLEX® INCORPORATED

dcp Midstream℠

**ANALYSIS OF 2020 ANNUAL TRENDS AND REQUEST TO CONTINUE WITH APPROVED IMMEDIATE NOTIFICATION PARAMETERS FOR OPERATION OF LINAM AGI #1 AND LINAM AGI #2 (API #s 30-025-38576 AND 30-025-42139) UNDER R-12546-all**

This document presents the results from the analyses of the injection parameter data collected from the Linam AGI #1 and #2 Wells which serve the Linam Ranch Gas Processing Facility near Hobbs, NM. Data from the Linam AGI #1 have been collected continuously since 2012 and have been analyzed on a monthly basis by Geolex and transmitted to DCP for reporting to NMOCD as required by ACO 275 and the approved post-workover C-103. In addition, the Linam AGI #2 well was completed and brought online in October 2015. The AGI #2 well was completed in the same injection zone as the AGI#1 approximately 450 feet to the southwest of AGI #1. From the time that AGI #2 was brought online, injection has been either into both wells simultaneously or solely into one of the two wells. AGI#2 was operated in conjunction with AGI #1 from October 2015 to January 2016 when a switch was made to operate only AGI#1 for the remainder of 2016. In May 2017, DCP switched over to injecting into AGI#2 to allow for the workover of AGI#1. The workover was completed on June 8, 2017 and AGI #1 was brought back online in July 2017 with bottom hole sensors installed. These sensors are now serving to monitor downhole and reservoir conditions since the downhole sensors in AGI #2 failed due to a lightning strike shortly after installation (2015) and will not be able to be repaired until sometime in the future when AGI #2 is worked over. In the meantime, in order to obtain reservoir data which would have been provided by the downhole PT sensors in AGI #2, a slick line with a pressure recorder was placed into AGI #2 and downhole pressure data were collected under both injection and non-injection conditions for the AGI #2 and AGI #1. Since that time the downhole sensors in AGI#1 provide the necessary reservoir data needed to evaluate the performance of the two wells. The system continued operating through 2018 with only AGI #1 active while waiting for independent flow meters to be installed/repaired in both wells so that reliable flow information would be available for each well independently. This operational mode (utilizing only AGI #1) continued through April 2019, and to date separate volume meters have not been installed/repaired. In May 2019, however, DCP began dividing the flow of acid gas between the two wells by using one or the other well exclusively (see Figure 3). Presently, surface data from both wells is being collected relative to the following parameters:

- Treated Acid Gas (TAG) surface injection pressure (both wells),
- TAG injection temperature (both wells),
- Annular pressure (both wells)
- Bottom Hole pressure and temperature (AGI#1 only beginning 7/2017)
- Overall total TAG flow rate from compressors

The above are the key parameters which are currently being measured in both wells in order to monitor the operations of the wells, prevent hydrate formation and reduce corrosion potential following the workover of AGI#1. While improvements have been implemented in the placement of temperature controls, dehydration of TAG during compression and other systems improvements at the AGI facility, there continue to be variations in the desired and normal operating levels of the above-referenced parameters. Since these parameters are useful indicators and predictors of potential operational or mechanical problems in the well, various levels of alarms have been established for each of these parameters. These parameters include three which are measured directly (TAG injection pressure, TAG injection temperature and annular pressure) and one (differential pressure) which is a calculated value (the difference between the two measured parameters of injection and annular pressure). The analyses of the long-term trends in these values have been useful in smoothing out shorter-term variations which can be observed from detailed inspection of hourly data and in the development of appropriate alarm bands for each parameter.

The Linam AGI #1 experienced a tubing leak in late 2011 which was partially addressed in a workover conducted in April/May 2012. The leak was detected in the end of 2011, and beginning of 2012 (until the time of the workover) the injection parameters were reviewed, analyzed and reported weekly to the NMOCD. Following the workover in which the tubing leak was repaired, some compromised production casing was detected immediately above the packer depth. At that time, we recommended keeping only approximately 250 psig on the annular space between the tubing and casing in AGI #1 since with annular pressure at this level, under normal operating conditions, this parameter can serve as a useful indicator of when activity should be initiated to prevent damage to the well or trigger a NMOCD shutdown and/or immediate notification requirements. Concern about this compromised casing was eliminated by stacking packers when the well was worked over again in June 2017. All of the data from January 2012 through December 2015 are included in our analysis, but only the post-workover data have been used to develop the recommended alarm and emergency shutdown (ESD) levels in conjunction with the requirements of NMOCD Order 12546-all, ACO-275 and the post-workover C-103.

Furthermore, a similar process has been employed on the Linam AGI#2 since it was brought online in October 2015. As described above, this well is equipped with bottom hole (just at top of packer) P/T measurement capability both inside and outside the tubing. In general, the immediate notification parameters for both wells were developed from this long-term analysis of the injection data. Initial testing of the Linam AGI#2 indicates that the pressure variations induced by flow rate and temperature fluctuations in the Linam AGI#1 are influencing the reservoir as measured in the AGI #2 location. This is to be expected as the new well is completed in the same zone at a distance away from the initial well which we predicted would see the edge of the plume in about 7 years. The Linam AGI #1 has been injecting for approximately 13 years.

Data from AGI #1 were continuously collected and analyzed weekly prior to the original workover in April/May 2012 and then monthly after the workover from June 2012 through December 2017 (see Figure 1). These data collection, analysis and reporting functions continue as required by NMOCD on a monthly basis. Furthermore, since it is necessary to evaluate the data from both wells to know how the system is operating overall, the surface data from AGI #2 are also being collected, analyzed and reported monthly. The reporting requirement for the AGI #2 is only quarterly and now that AGI #1 has been successfully worked over, the reporting for both wells will shift to quarterly as soon as independent reliable volume measurement is available for each well.

The NMOCD also requires that immediate notification parameters and levels be discussed and agreed upon with the agency, and that these be periodically reviewed and updated as needed based on operational or regulatory changes.  The immediate notification parameters for both wells have been approved by NMOCD, and DCP requests no changes in these approved values.  With this requirement in mind and for the purpose of protecting the mechanical integrity and safety of both wells and the overall AGI facility, Geolex monitors these data under contract to DCP to prevent damage to the wells or violation of regulatory requirements or permit constraints.

After 9.5 years (113 months) of carefully analyzing the performance of AGI #1 on a continuous basis, Geolex has assembled the data and has analyzed observed trends for the post-workover period of June 2012 – December 2020 as can be seen on Figure 2.  Several important observations can be made from analyzing these data and taking into consideration important system modifications that have occurred during this time period.  These include the following:

1. AGI #1Post-Workover MIT completed in May 2012
2. AGI #1MIT test completed November 14, 2012
3. Bleeding of diesel from casing annular space immediately after the November 2012 AGI #1 MIT test.
4. AGI #1MIT test completed April 30, 2013
5. Addition of diesel in annular space after April 2013 AGI #1MIT and May 2013 plant shutdown
6. AGI #1MIT test completed October 30, 2013
7. Failure of the VFD for the cooler on the AGI compressor from February 4 through 9, 2014.
8. AGI #1MIT test completed April 30, 2014
9. Addition of diesel in annular space after April 2014 AGI#1MIT
10. AGI #1MIT test completed September 19, 2014
11. AGI #1MIT test completed March 19, 2015
12. AGI #1MIT test completed September 15, 2015
13. AGI #2 brought online with startup in October-November 2015 and operated until January 2016
14. AGI #1MIT test completed March 22, 2016
15. AGI #2 MIT test completed April 1, 2016
16. AGI #2 TAG lines bled to flare on June 13, 2016 to remove static TAG in line when well is not operating.
17. AGI #1 MIT test completed September 14, 2016
18. AGI #1 Workover completed June 8, 2017 including stacked packer, bottom hole PT gauges
19. AGI #1 MIT test completed June 7, 2017 after workover completion
20. AGI #2 MIT test completed February 16, 2017
21. AGI #2 MIT test completed February 15, 2018
22. AGI #1 MIT test completed June 19, 2018
23. AGI #2 MIT test completed February 15, 2019
24. AGI #1 MIT test completed February 15, 2019
25. AGI #1 MIT test completed February 4, 2020
26. AGI #2 MIT test completed February 4, 2020

The following trends have been observed in the AGI well data and are reflected on Figures 1 & 2:

1. TAG injection pressure which was on a slight increasing trend due to slightly increasing average temperature of injected TAG but began to level off due to temperature decreases in 2017. This trend continued over the last six months of 2018 and all of 2019. The TAG injection pressure and rate has been more variable since 2016 due to inlet flow variations, and AGI#1 was used exclusively from time of the workover in June 2017 through April 2019.
2. Flow of TAG has been split between the two wells since April of 2019 with either one or the other being used exclusively but not simultaneously (see Figure 3).
3. The TAG injection temperature increased slightly with an arithmetic mean of 95°F in 2020 up from 92°F in 2019, 98°F in 2018, 106°F in 2017 and 113°F in 2016.
4. The TAG injection temperature is significantly lower during periods of low flow into either AGI well when the other well one is being used.
5. Pressure in the casing annulus has been consistently tracked; the correlative nature of variable injection temperature, pressure and flowrate, and its arithmetic mean for the period ending 12-31-20 has been approximately 190 psig essentially the same as 191 in 2019. The injection temperature is the largest influencer of this parameter under normal conditions.
6. The pressure differential between the casing annulus and the TAG injection pressure clearly indicates that no communication currently exists between the tubing and casing annulus.
7. The generally low annular pressures observed indicate that the production casing/cement still has good integrity.
8. TAG injection temperatures can now be lower due to the improvement of water reduction in compression which reduces the potential for hydrate formation at lower temperatures. This has allowed for lower injection temperatures throughout the 2018-2020 period.

Given the observations of the trends in the graphs and the competing influence of average injection temperature decrease and that injection volumes have been more variable since 2018, the observed TAG injection pressure changes are predictable and normal. There is no current indication of the reservoir being pressured up to any significant degree by the injection from Linam AGI #1. This was confirmed during the drilling and testing of AGI #2. Upon startup from any shutdown that lasts more than 6-8 hours it is critical to inject methanol along with the TAG for the initial startup period to prevent the formation of hydrates. While this may no longer be necessary due to the changes which were made in the water removal efficiency of the AGI compressor system, it is a good preventative measure. Prior to the increased water removal efficiency, this effect was observed in the period of March 2013 when hydrate formation during one of these events caused a spike in TAG injection pressure of approximately 35% over normal pressures due to partial blockage of the injection line and tubing created by the hydrate formation. This persisted for several hours until the situation was alleviated by the stabilization of the compressor and the simultaneous injection of methanol to cause the hydrates to be reabsorbed into the TAG. Injection pressures and temperatures then returned to normal.

It is also critical to maintain the temperature control on the injected TAG and to avoid rapid temperature or pressure fluctuations during periods when power failures or other mechanical failures may occur. The extensive and wide variation in TAG injection temperatures observed prior to the failure of the tubing in late 2011, resulted in the formation of free water within the tubing and corrosion resulting in a tubing leak which had to be repaired in April/May 2012. Temperature control changes were implemented and helped to significantly control downward swings in temperature and prevent the formation of hydrates. However, in February 2014, there was a failure in the VFD for the cooler on the AGI compressor which persisted for five days. During this period of time, the TAG temperature increased to at least 150 °F, and the annular pressure increased dramatically due to the heating of the diesel fluid in the annular space as a result of the elevated TAG injection temperature. TAG temperature as well as annular pressure returned to the normal range once the VFD on the cooler was repaired. The significant spread between TAG injection pressure and the annular pressure maintained even during this heating episode proves the continued integrity of the well, packer, casing and tubing. However, the rise in annular pressure has a potential to damage the integrity of the compromised casing in the well and should be avoided during all subsequent operations. In response to these issues, DCP undertook and successfully completed a project in 2015 to address the temperature fluctuations resulting from compression controls and to increase the efficiency of water removal to the point where all free water is removed from the TAG prior to injection. This significantly reduces hydrate formation potential in the entire system regardless of temperature variations. This has allowed for the lower average injection temperatures observed throughout 2018 and 2019 to not have caused any hydrate formation.

In October 2015, AGI #2 was started up and operated in a startup mode switching back and forth from AGI #1. This effect is reflected in the trend data shown in Figure 2. Due to a volume meter sensor failure and configuration issues which are currently being addressed, only total flow to the AGI system can be reliably measured through 2019. Flow has been split between the two wells since April of 2019, but each well is used exclusively when that is done. For 2020 AGI#2 only operated until July 16, 2020 at 9am when flow was switched to AGI#1 and only AGI#1 was used for the balance of 2020. They are not used simultaneously. See Figure 3 for total flow rate and flow rate to AGI #1 and AGI #1.

**REVIEW OF STATISTICAL ANALYSIS OF INJECTION PARAMETERS, DEVELOPMENT OF AND REQUEST TO CONTINUE WITH APPROVED IMMEDIATE NOTIFICATION PARAMETERS (API #s 30-025-38576 AND 30-025-42139) UNDER R-12546-all**

The statistical analyses of the injection parameter data were initially conducted for the purpose of establishing normal operating levels for these parameters which are automatically monitored. Several data filtering steps were accomplished to take the hourly data which forms the basis of the analysis in order to smooth out variability and to account for the physical changes in the well and its operation after the repair of the tubing leak in the workover completed in May 2012. Because the configuration of the well changed dramatically after the workover, only data after the well had stabilized post-workover were used in this analysis. Furthermore, the subsequent stacked packer workover of the AGI#1 in June 2017 was completed and essentially only the AGI #1 has been used since then. The bottom hole PT sensors installed during the 2017 workover of AGI #1 have been providing excellent data throughout 2020 and these data are shown on the graph attached here as Figure 4. During 2018 we resolved some communication issues between the Halliburton BHPT panel and the plant DCS system and corrected some BHPT readings which had been inaccurately reported from 11/2017 to 6/2018 until this issue was detected. In 2018 for the period affected, we downloaded the data directly from the Halliburton panel and corrected the values. A C-103 was submitted with these corrections in July 2018. The corrected values are used in this analysis. No problems with BHPT readings occurred in 2019 or 2020. It is clear from the variation in these parameters when flow is switched between wells that the conditions measured in the BHPT gauge in AGI#1 reflect the values in the reservoir which would be very similar in AGI #2 if the BHPT gauges in the well were operational.

All the data are summarized in Table 1, and the calculated statistical parameters of arithmetic mean and standard deviation were used to establish base levels and variability for each parameter. The results of these analyses resulted in the immediate notification parameters which were approved both for AGI #2 and the parameters required under ACO 275 for AGI#1.

Based on the analysis of observed trends, the immediate notification parameters which were approved for AGI #1 and the parameters previously approved for AGI# 2 and continued through 2020 remain appropriate to continue through 2021. This is DCPs request and the approved immediate notification parameters are detailed below:

The approved immediate notification parameters for Linam AGI #1 are summarized below:

1. Exceedance of the approved MAOP of 2644 psig surface for a period greater than two hours.
2. Failure of a mechanical integrity test (MIT) of the well.
3. Confirmation of any condition that indicates a tubing, packer or casing leak.
4. Any increase of the annular pressure to a value that is greater than 1200 psig
5. Any instance in which differential pressure between the injection tubing and injection tubing annulus is less than 100 psig.
6. Any release of $H_2S$ at the well which results in an activation of the facility's approved Rule 11 $H_2S$ contingency plan.
7. Any workover or maintenance activity that requires intrusive work in the well.

The approved immediate notification parameters for the Linam AGI #2 are summarized below:

1. Exceedance of the approved MAOP of 2644 psig surface for a period greater than two hours.
2. Failure of a mechanical integrity test (MIT) of the well.
3. Confirmation of any condition that indicates a tubing, packer or casing leak.
4. Any increase of the annular pressure to a value that is more than 80% of the injection pressure.
5. Any release of $H_2S$ at the well which results in an activation of the facility's approved Rule 11 $H_2S$ contingency plan.
6. Any workover or maintenance activity that requires intrusive work in the well.

**TABLE 1** SUMMARY DATA ANALYSIS OF LINAM AGI #1 TRENDS FOR JANUARY 2012 THROUGH DECEMBER 2020 (3 PAGES)

# DCP MIDSTREAM LINAM RANCH AGI #1 AND #2 CUMULATIVE INJECTION DATA

| Month Ended | | | | | AGI #1 TAG Injection Temperature (°F) | AGI #1 Surface TAG Injection Pressure (psig) | AGI #1 Surface Casing Annulus Pressure (psig) | AGI #1 Surface Injection/Casing Annular Pressure Differential (psig) | AGI #1 Average Bottom Hole Pressure (psig) | AGI #1 Average Bottom Hole Temperature (°F) | Total Flowrate (MSCFPH) | AGI #1 Flowrate (MSCFPH) | AGI #2 Flowrate (MSCFPH) | AGI #2 Surface TAG Injection Temperature (°F) | AGI #2 Surface TAG Injection Pressure (psig) | AGI #2 Surface Casing Annulus Pressure (psig) | AGI #2 Surface Injection/Casing Annular Pressure Differential (psig) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 2012 | Jan-12 | Jan-12 | Jan-12 | 114 | 1385 | 989 | 393 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| February | 2012 | Feb-12 | Feb-12 | Feb-12 | 116 | 1448 | 1036 | 412 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| March | 2012 | Mar-12 | Mar-12 | Mar-12 | 118 | 1475 | 1046 | 429 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| April | 2012 | Apr-12 | Apr-12 | Apr-12 | 121 | 1474 | 1010 | 468 | | | N/A | N/A | 0 | | | | | No Flow Data Available |
| May | 2012 | May-12 | May-12 | May-12 | 122 | 1419 | 555 | 864 | | | 120 | 120 | 0 | | | | | Plant Workover and Shutdown |
| June | 2012 | Jun-12 | Jun-12 | Jun-12 | 118 | 1394 | 368 | 1025 | | | 113 | 113 | 0 | | | | | Plant Workover and Shutdown |
| July | 2012 | Jul-12 | Jul-12 | Jul-12 | 121 | 1450 | 420 | 1030 | | | 148 | 148 | 0 | | | | | |
| August | 2012 | Aug-12 | Aug-12 | Aug-12 | 122 | 1449 | 401 | 1048 | | | 137 | 137 | 0 | | | | | |
| September | 2012 | Sep-12 | Sep-12 | Sep-12 | 122 | 1472 | 478 | 995 | | | 152 | 152 | 0 | | | | | |
| October | 2012 | Oct-12 | Oct-12 | Oct-12 | 118 | 1482 | 447 | 1035 | | | 167 | 167 | 0 | | | | | |
| November | 2012 | Nov-12 | Nov-12 | Nov-12 | 121 | 1539 | 376 | 1163 | | | 191 | 191 | 0 | | | | | November 14, 2012 MIT Test |
| December | 2012 | Dec-12 | Dec-12 | Dec-12 | 117 | 1446 | 48 | 1398 | | | 155 | 155 | 0 | | | | | |
| January | 2013 | Jan-13 | Jan-13 | Jan-13 | 120 | 1445 | 49 | 1397 | | | 151 | 151 | 0 | | | | | |
| February | 2013 | Feb-13 | Feb-13 | Feb-13 | 121 | 1515 | 203 | 1311 | | | 174 | 174 | 0 | | | | | |
| March | 2013 | Mar-13 | Mar-13 | Mar-13 | 120 | 1550 | 209 | 1340 | | | 179 | 179 | 0 | | | | | |
| April | 2013 | Apr-13 | Apr-13 | Apr-13 | 121 | 1544 | 240 | 1304 | | | 178 | 178 | 0 | | | | | April 30, 2013 MIT Test |
| May | 2013 | May-13 | May-13 | May-13 | 116 | 1516 | 515 | 1001 | | | 154 | 154 | 0 | | | | | |
| June | 2013 | Jun-13 | Jun-13 | Jun-13 | 120 | 1541 | 449 | 1092 | | | 166 | 166 | 0 | | | | | |
| July | 2013 | Jul-13 | Jul-13 | Jul-13 | 120 | 1560 | 182 | 1375 | | | 177 | 177 | 0 | | | | | |
| August | 2013 | Aug-13 | Aug-13 | Aug-13 | 121 | 1565 | 94 | 1472 | | | 171 | 171 | 0 | | | | | |
| September | 2013 | Sep-13 | Sep-13 | Sep-13 | 121 | 1575 | 74 | 1500 | | | 179 | 179 | 0 | | | | | |
| October | 2013 | Oct-13 | Oct-13 | Oct-13 | 123 | 1594 | 91 | 1503 | | | 174 | 174 | 0 | | | | | October 30, 2013 MIT Test |
| November | 2013 | Nov-13 | Nov-13 | Nov-13 | 121 | 1576 | 70 | 1506 | | | 171 | 171 | 0 | | | | | |
| December | 2013 | Dec-13 | Dec-13 | Dec-13 | 124 | 1607 | 69 | 1538 | | | 175 | 175 | 0 | | | | | |
| January | 2014 | Jan-14 | Jan-14 | Jan-14 | 121 | 1574 | 8 | 1566 | | | 166 | 166 | 0 | | | | | |
| February | 2014 | Feb-14 | Feb-14 | Feb-14 | 126 | 1639 | 111 | 1528 | | | 182 | 182 | 0 | | | | | |
| March | 2014 | Mar-14 | Mar-14 | Mar-14 | 121 | 1579 | 11 | 1568 | | | 162 | 162 | 0 | | | | | |
| April | 2014 | Apr-14 | Apr-14 | Apr-14 | 123 | 1615 | 67 | 1547 | | | 175 | 175 | 0 | | | | | April 30, 2014 MIT Test |
| May | 2014 | May-14 | May-14 | May-14 | 123 | 1625 | 344 | 1280 | | | 170 | 170 | 0 | | | | | |
| June | 2014 | Jun-14 | Jun-14 | Jun-14 | 121 | 1603 | 325 | 1277 | | | 162 | 162 | 0 | | | | | |
| July | 2014 | Jul-14 | Jul-14 | Jul-14 | 123 | 1636 | 393 | 1243 | | | 167 | 167 | 0 | | | | | |
| August | 2014 | Aug-14 | Aug-14 | Aug-14 | 122 | 1624 | 348 | 1275 | | | 161 | 161 | 0 | | | | | |
| September | 2014 | Sep-14 | Sep-14 | Sep-14 | 122 | 1620 | 293 | 1327 | | | 158 | 158 | 0 | | | | | September 19, 2014 MIT Test |
| October | 2014 | Oct-14 | Oct-14 | Oct-14 | 123 | 1648 | 364 | 1284 | | | 170 | 170 | 0 | | | | | |
| November | 2014 | Nov-14 | Nov-14 | Nov-14 | 123 | 1610 | 146 | 1464 | | | 158 | 158 | 0 | | | | | |
| December | 2014 | Dec-14 | Dec-14 | Dec-14 | 124 | 1660 | 211 | 1450 | | | 168 | 168 | 0 | | | | | |
| January | 2015 | Jan-15 | Jan-15 | Jan-15 | 125 | 1631 | 180 | 1451 | | | 151 | 151 | 0 | | | | | |
| February | 2015 | Feb-15 | Feb-15 | Feb-15 | 123 | 1649 | 242 | 1407 | | | 161 | 161 | 0 | | | | | |
| March | 2015 | Mar-15 | Mar-15 | Mar-15 | 124 | 1627 | 270 | 1357 | | | 161 | 161 | 0 | | | | | March 19, 2015 MIT Test |
| April | 2015 | Apr-15 | Apr-15 | Apr-15 | 124 | 1647 | 393 | 1254 | | | 163 | 163 | 0 | | | | | |
| May | 2015 | May-15 | May-15 | May-15 | 122 | 1645 | 358 | 1287 | | | 159 | 159 | 0 | | | | | |
| June | 2015 | Jun-15 | Jun-15 | Jun-15 | 121 | 1629 | 259 | 1370 | | | 152 | 152 | 0 | | | | | |
| July | 2015 | Jul-15 | Jul-15 | Jul-15 | 120 | 1620 | 241 | 1378 | | | 154 | 154 | 0 | | | | | |
| August | 2015 | Aug-15 | Aug-15 | Aug-15 | 123 | 1613 | 287 | 1327 | | | 131 | 131 | 0 | | | | | |
| September | 2015 | Sep-15 | Sep-15 | Sep-15 | 124 | 1654 | 318 | 1336 | | | 163 | 163 | 0 | | | | | September 15, 2015 MIT Test |
| October | 2015 | Oct-15 | Oct-15 | Oct-15 | 124 | 1662 | 191 | 1471 | | | 160 | 160 | 0 | | | | | AGI #2 Operations Began October 2015 |
| November | 2015 | Nov-15 | Nov-15 | Nov-15 | 73 | 1280 | 7 | 1273 | | | 164 | 164 | 0 | 109 | 1430 | 394 | 1035 | AGI #1 & #2 both in use |
| December | 2015 | Dec-15 | Dec-15 | Dec-15 | 102 | 1457 | 32 | 1425 | | | 151 | | 0 | 111 | 1498 | 494 | 1004 | AGI #1 & #2 both in use |
| January | 2016 | Jan-16 | Jan-16 | Jan-16 | 121 | 1587 | 159 | 1428 | | | 117 | 117 | 0 | 77 | 1094 | 0 | 1094 | AGI #2 not in use |
| February | 2016 | Feb-16 | Feb-16 | Feb-16 | 121 | 1645 | 201 | 1444 | | | 191 | 191 | 0 | 49 | 1603 | 0 | 1603 | AGI #2 not in use |
| March | 2016 | Mar-16 | Mar-16 | Mar-16 | 118 | 1675 | 264 | 1411 | | | 158 | 158 | 0 | 58 | 1679 | 1 | 1678 | AGI #2 not in use |
| April | 2016 | Apr-16 | Apr-16 | Apr-16 | 116 | 1682 | 279 | 1400 | | | 144 | 144 | 0 | 63 | 1688 | 1 | 1687 | AGI #2 not in use |
| May | 2016 | May-16 | May-16 | May-16 | 116 | 1678 | 250 | 1428 | | | 185 | 185 | 0 | 70 | 1685 | 1 | 1684 | AGI #2 not in use |
| June | 2016 | Jun-16 | Jun-16 | Jun-16 | 108 | 1624 | 70 | 1554 | | | 191 | 191 | 0 | 81 | 2 | 1 | 1 | AGI #2 not in use. TAG trapped in blocked off section of AGI #2 pipe blown down |
| July | 2016 | Jul-16 | Jul-16 | Jul-16 | 114 | 1693 | 226 | 1467 | | | 196 | 196 | 0 | 88 | 2 | 1 | 1 | AGI #2 not in use |
| August | 2016 | Aug-16 | Aug-16 | Aug-16 | 111 | 1715 | 168 | 1547 | | | 213 | 213 | 0 | 78 | 3 | 1 | 2 | AGI #2 not in use |
| September | 2016 | Sep-16 | Sep-16 | Sep-16 | 101 | 1657 | 337 | 1320 | | | 188 | 188 | 0 | 73 | 3 | 1 | 2 | AGI #2 not in use |
| October | 2016 | Oct-16 | Oct-16 | Oct-16 | 101 | 1666 | 400 | 1266 | | | 223 | 223 | 0 | 68 | 2 | 0 | 2 | AGI #2 not in use |
| November | 2016 | Nov-16 | Nov-16 | Nov-16 | 117 | 1743 | 862 | 881 | | | 185 | 185 | 0 | 54 | 1 | 0 | 1 | AGI #2 not in use |
| December | 2016 | Dec-16 | Dec-16 | Dec-16 | 117 | 1698 | 809 | 889 | | | 153 | 153 | 0 | 43 | 1 | 0 | 1 | AGI #2 not in use |
| January | 2017 | Jan-17 | Jan-17 | Jan-17 | 118 | 1730 | 934 | 796 | | | 179 | 179 | 0 | 45 | 8 | 0 | 8 | AGI #2 not in use |
| February | 2017 | Feb-17 | Feb-17 | Feb-17 | 119 | 1750 | 958 | 791 | | | 186 | 186 | 0 | 54 | 10 | 278 | -267 | AGI #2 not in use |
| March | 2017 | Mar-17 | Mar-17 | Mar-17 | 114 | 1708 | 782 | 927 | | | 186 | 175 | 11 | 104 | 1701 | 373 | 1327 | Both wells used; #2 flow meter not functioning. AGI #1 for entire month and AGI #2 only from 3-13 to 3-16 and 3-21 to 3-31 |
| April | 2017 | Apr-17 | Apr-17 | Apr-17 | 105 | 1651 | 418 | 1234 | | | 194 | 153 | 41 | 100 | 1862 | 296 | 1566 | Both wells used. Flow meter for #2 not working. TAG routed to #1 well exclusively, both wells simultaneously and #2 well exclusively. All TAG routed to #2 from 4-26 onward in anticipation of workover of #1 well. |
| May | 2017 | May-17 | May-17 | May-17 | 103 | 1596 | 203 | 1390 | | | 155 | 49 | 150 | 104 | 1842 | 66 | 1772 | Both wells used. #2 Flow Meter not working. TAG Routed to AGI #2 save for 19 hour period from 5-17 to 5-18 when it was routed to AGI #1. AGI #1 workover 5-22 thru 6-8. AGI #2 experienced mechanical blockage resulting in both wells being shut down from 5-25 to 5-31. |
| June | 2017 | Jun-17 | Jun-17 | Jun-17 | 99 | 1439 | 429 | 1010 | | | 147 | 40 | 107 | 113 | 1838 | 1 | 1837 | Both wells used. #2 used from 6-2 through 6-15. Workover of #1 completed 6-8 and sucessful MIT performed 6-8; #1 back online 6-15. #1 and #2 used simultaneously from 6-15 to 6-30. Mechanical Problem with flow meter for #2 well. Only total flow can be measured; no way to differentiate between #1 and #2 when they are used together. |
| July | 2017 | Jul-17 | Jul-17 | Jul-17 | 91 | 1409 | 302 | 1108 | 4392 | 137 | 171 | | 0 | 102 | 1810 | sensor error | n/a | Both wells used. Annular Pressure Meter for AGI #2 malfunctioning for month of July. Mechanical problem with flow meter for #2 well persists. Bottomhole sensors added to #1 Well as part of workover completed in June and began recording data on 7-20-17 |
| August | 2017 | Aug-17 | Aug-17 | Aug-17 | 99 | 1572 | 621 | 950 | 4514 | 134 | 187 | 187 | 0 | 83 | 1400 | 192 | 1064 | Both wells used. Mechanical problem with flow meter for #2 well persists. Only total flow data available. Annular Pressure meter for AGI #2 back in service 8-11-17. Annular Pressure and differential pressure readings are for period 8-11-17 through 8-31-17. |
| September | 2017 | Sep-17 | Sep-17 | Sep-17 | 109 | 1685 | 482 | 1203 | 4578 | 135 | 197 | 197 | 0 | 77 | 1267 | 134 | 1132 | Only AGI #1 used. Entire plant shut down from Sept 19 to Sept 30th for a scheduled turnaround. Data available only for first 19 days of September |

| Month Ended | | | | | AGI #1 TAG Injection Temperature (°F) | AGI #1 Surface TAG Injection Pressure (psig) | AGI #1 Surface Casing Annulus Pressure (psig) | AGI #1 Surface Injection/Casing Annular Pressure Differential (psig) | AGI #1 Average Bottom Hole Pressure (psig) | AGI #1 Average Bottom Hole Temperature (°F) | Total Flowrate (MSCFPH) | AGI #1 Flowrate (MSCFPH) | AGI #2 Flowrate (MSCFPH) | AGI #2 Surface TAG Injection Temperature (°F) | AGI #2 Surface TAG Injection Pressure (psig) | AGI #2 Surface Casing Annulus Pressure (psig) | AGI #2 Surface Injection/Casing Annular Pressure Differential (psig) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| October | 2017 | Oct-17 | Oct-17 | Oct-17 | 102 | 1531 | 211 | 1321 | 4250 | 136 | 152 | 152 | 0 | 63 | 872 | 97 | 776 | Plant shutdown 9-19 through 10-3 for a turnaround. Only AGI #1 used during remainder of month. Major software upgrade in DCS. BH sensors not yet integrated into DCS. |
| November | 2017 | Nov-17 | Nov-17 | Nov-17 | 101 | 1589 | 428 | 1161 | 4080 | 136 | 189 | 189 | 0 | 56 | 1013 | 82 | 931 | Only AGI #1 in use in November. BH sensors not reconnected to DCS until 11-29. |
| December | 2017 | Dec-17 | Dec-17 | Dec-17 | 107 | 1707 | 456 | 1252 | 4080 | 136 | 191 | 191 | 0 | 44 | 1102 | 84 | 1017 | Only AGI #1 in use. |
| January | 2018 | Jan-18 | Jan-18 | Jan-18 | 99 | 1557 | 160 | 1397 | 4416 | 133 | 120 | 120 | 0 | 41 | 704 | 177 | 528 | Only AGI #1 in use. |
| February | 2018 | Feb-18 | Feb-18 | Feb-18 | 110 | 1551 | 110 | 1441 | 4458 | 131 | 196 | 196 | 0 | 48 | 785 | 199 | 527 | Only AGI #1 in use. |
| March | 2018 | Mar-18 | Mar-18 | Mar-18 | 107 | 1635 | 300 | 1335 | 4503 | 133 | 188 | 188 | 0 | 58 | 938 | 264 | 673 | Only AGI #1 in use. |
| April | 2018 | Apr-18 | Apr-18 | Apr-18 | 95 | 1618 | 95 | 1523 | 4576 | 131 | 223 | 223 | 0 | 63 | 1158 | 224 | 934 | Only AGI #1 in use. |
| May | 2018 | May-18 | May-18 | May-18 | 99 | 1668 | 141 | 1527 | 4646 | 131 | 226 | 226 | 0 | 79 | 1120 | 198 | 921 | Only AGI #1 in use. |
| June | 2018 | Jun-18 | Jun-18 | Jun-18 | 100 | 1667 | 267 | 1401 | 4615 | 132 | 202 | 202 | 0 | 84 | 1062 | 189 | 873 | Only AGI #1 in use. |
| July | 2018 | Jul-18 | Jul-18 | Jul-18 | 101 | 1690 | 475 | 1215 | 4627 | 132 | 204 | 204 | 0 | 83 | 1080 | 179 | 901 | Only AGI #1 in use. |
| August | 2018 | Aug-18 | Aug-18 | Aug-18 | 98 | 1614 | 321 | 1293 | 4565 | 131 | 157 | 157 | 0 | 82 | 1043 | 169 | 874 | Only AGI #1 in use. |
| September | 2018 | Sep-18 | Sep-18 | Sep-18 | 97 | 1581 | 237 | 1345 | 4534 | 130 | 155 | 155 | 0 | 72 | 898 | 154 | 744 | Only AGI #1 in use. |
| October | 2018 | Oct-18 | Oct-18 | Oct-18 | 92 | 1564 | 206 | 1358 | 4525 | 130 | 160 | 160 | 0 | 61 | 830 | 134 | 696 | Only AGI #1 in use. |
| November | 2018 | Nov-18 | Nov-18 | Nov-18 | 91 | 1531 | 115 | 1416 | 4529 | 129 | 166 | 166 | 0 | 64 | 1143 | 108 | 1036 | Only AGI #1 in use. |
| December | 2018 | Dec-18 | Dec-18 | Dec-18 | 89 | 1483 | 55 | 1428 | 4480 | 128 | 133 | 133 | 0 | 69 | 1152 | 85 | 1067 | Only AGI #1 in use. |
| January | 2019 | Jan-19 | Jan-19 | Jan-19 | 95 | 1500 | 133 | 1367 | 4457 | 129 | 143 | 143 | 0 | 69 | 925 | 68 | 858 | |
| February | 2019 | Feb-19 | Feb-19 | Feb-19 | 98 | 1547 | 185 | 1362 | 4484 | 129 | 169 | 169 | 0 | 73 | 936 | 194 | 724 | |
| March | 2019 | Mar-19 | Mar-19 | Mar-19 | 100 | 1577 | 222 | 1362 | 4511 | 131 | 182 | 182 | 0 | 78 | 442 | 238 | 161 | |
| April | 2019 | Apr-19 | Apr-19 | Apr-19 | 106 | 1689 | 473 | 1217 | 4577 | 133 | 216 | 216 | 0 | 92 | 14 | 229 | -215 | |
| May | 2019 | May-19 | May-19 | May-19 | 110 | 1753 | 673 | 1080 | 4516 | 136 | 225 | 115 | 110 | 111 | 1616 | 166 | 1450 | |
| June | 2019 | Jun-19 | Jun-19 | Jun-19 | 110 | 1680 | 513 | 1167 | 4433 | 136 | 199 | 87 | 112 | 112 | 1595 | 68 | 1528 | |
| July | 2019 | Jul-19 | Jul-19 | Jul-19 | 88 | 1292 | 5 | 1228 | 4279 | 138 | 207 | 0 | 207 | 113 | 1600 | 113 | 1487 | |
| August | 2019 | Aug-19 | Aug-19 | Aug-19 | 91 | 1240 | 6 | 1234 | 4224 | 138 | 182 | 5 | 176 | 113 | 1554 | 136 | 1419 | |
| September | 2019 | Sep-19 | Sep-19 | Sep-19 | 93 | 1251 | 38 | 1211 | 4171 | 137 | 169 | 50 | 118 | 111 | 1484 | 112 | 1371 | |
| October | 2019 | Oct-19 | Oct-19 | Oct-19 | 78 | 1202 | 11 | 1191 | 4156 | 137 | 231 | 54 | 177 | 106 | 1486 | 35 | 1451 | |
| November | 2019 | Nov-19 | Nov-19 | Nov-19 | 69 | 1179 | 19 | 1160 | 4143 | 137 | 204 | 0 | 204 | 110 | 1512 | 116 | 1396 | |
| December | 2019 | Dec-19 | Dec-19 | Dec-19 | 64 | 1156 | 15 | 1142 | 4116 | 138 | 195 | 0 | 195 | 111 | 1494 | 135 | 1359 | |
| January | 2020 | Jan-20 | Jan-20 | Jan-20 | 63 | 1128 | 17 | 1111 | 4096 | 138 | 188 | 0 | 188 | 110 | 1481 | 54 | 1427 | |
| February | 2020 | Feb-20 | Feb-20 | Feb-20 | 63 | 1116 | 262 | 854 | 4085 | 138 | 191 | 0 | 191 | 107 | 1462 | 137 | 1324 | Perfrom MIT on both wells adjust backside pressure |
| March | 2020 | Mar-20 | Mar-20 | Mar-20 | 72 | 1111 | 300 | 811 | 4085 | 138 | 217 | 0 | 217 | 109 | 1509 | 59 | 1450 | |
| April | 2020 | Apr-20 | Apr-20 | Apr-20 | 74 | 1117 | 294 | 823 | 4095 | 138 | 228 | 0 | 228 | 109 | 1519 | 35 | 1485 | |
| May | 2020 | May-20 | May-20 | May-20 | 82 | 1126 | 300 | 825 | 4098 | 138 | 212 | 0 | 212 | 108 | 1501 | 10 | 1491 | |
| June | 2020 | Jun-20 | Jun-20 | Jun-20 | 88 | 1140 | 323 | 817 | 4109 | 138 | 226 | 0 | 226 | 117 | 1500 | 127 | 1373 | |
| July | 2020 | Jul-20 | Jul-20 | Jul-20 | 109 | 1412 | 302 | 1109 | 4212 | 139 | 219 | 100 | 119 | 109 | 1409 | 103 | 1307 | Switch flow from #2 to #1 16 July 9am |
| August | 2020 | Aug-20 | Aug-20 | Aug-20 | 119 | 1658 | 293 | 1364 | 4332 | 141 | 227 | 227 | 0 | 98 | 1113 | 181 | 932 | |
| September | 2020 | Sep-20 | Sep-20 | Sep-20 | 123 | 1737 | 123 | 1613 | 4389 | 143 | 241 | 241 | 0 | 87 | 1125 | 217 | 909 | |
| October | 2020 | Oct-20 | Oct-20 | Oct-20 | 121 | 1715 | 30 | 1683 | 4403 | 142 | 219 | 219 | 0 | 79 | 1153 | 181 | 973 | |
| November | 2020 | Nov-20 | Nov-20 | Nov-20 | 114 | 1692 | 17 | 1673 | 4447 | 140 | 232 | 232 | 0 | 73 | 1189 | 157 | 1032 | |
| December | 2020 | Dec-20 | Dec-20 | Dec-20 | 113 | 1696 | 16 | 1680 | 4488 | 138 | 212 | 212 | 0 | 63 | 1225 | 141 | 1085 | |
| **Average for 2020** | | | | | **95** | **1387** | **190** | **1197** | **4237** | **139** | **218** | **103** | **115** | **97** | **1349** | **117** | **1232** | |
| **Standard Deviation 2020** | | | | | **23** | **276** | **130** | **365** | **155** | **2** | **15** | **108** | **101** | **17** | **163** | **62** | **219** | |
| **Average for Entire Period** | | | | | **109.3** | **1545.1** | **297.4** | **1247.1** | **4363.7** | **135.1** | **177.3** | **148.7** | **27.7** | **82.9** | **1099.6** | **124.4** | **959.2** | |
| **Standard Deviation Entire Period** | | | | | **15.7** | **161.2** | **246.5** | **267.2** | **188.1** | **3.8** | **27.8** | **60.6** | **65.1** | **22.6** | **565.3** | **107.0** | **555.6** | |

**OPERATING CONSTRAINTS BASED ON NMOCC ORDER AND ACO 275**

**MAOP in NMOCC Order is 2644 psig**

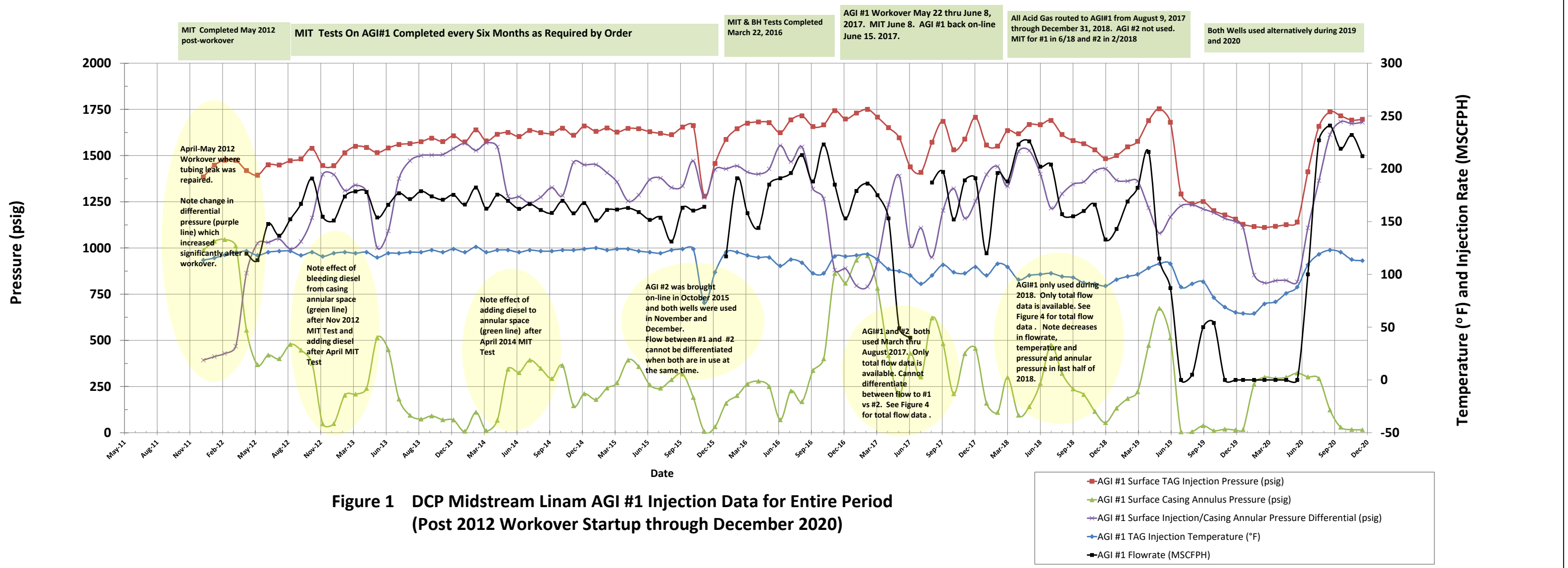



**Figure 1 DCP Midstream Linam AGI #1 Injection Data for Entire Period (Post 2012 Workover Startup through December 2020)**

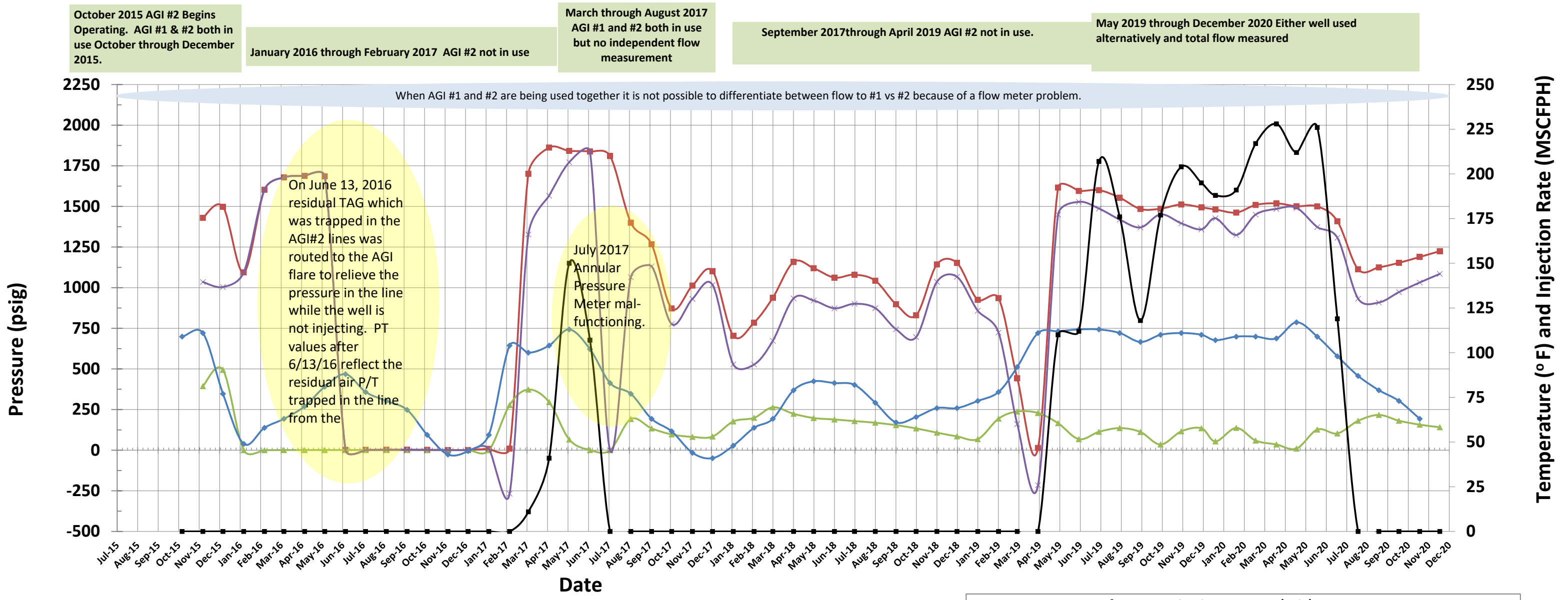
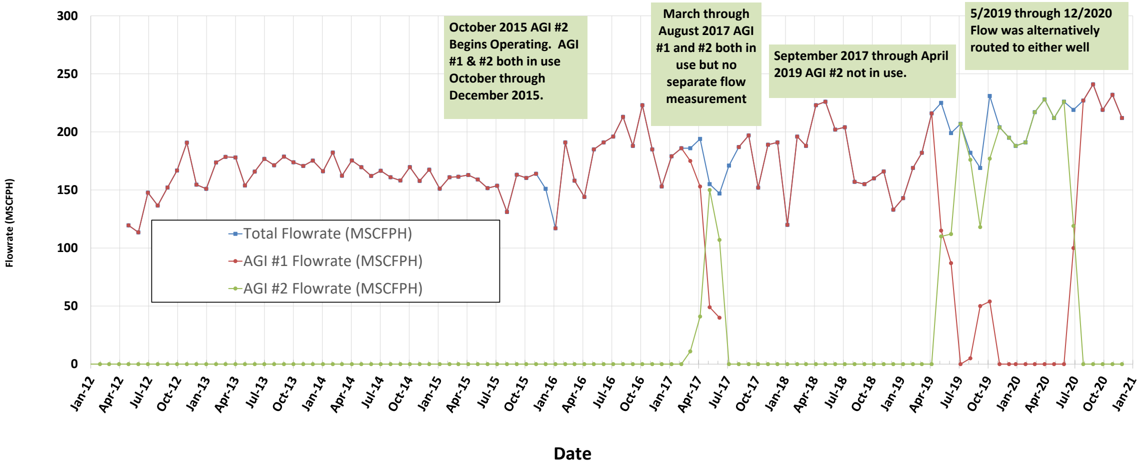



**Figure 2 DCP Midstream Linam AGI #2 All Injection Data (Startup through December 2017)**

**Figure 3 DCP Midstream Linam AGI #1 and #2 Combined Total Flowrate (MSCFPH) (May 2012 through December 2020)**



## FIGURE 4 BOTTOM HOLE PRESSURE AND TEMPERATURE - AGI #1