Operator Guidance for Mechanical Integrity Tests

| e of Contents | 1 |
|--|-----|
| Well Types, Production Methods and Test Frequency | 2 |
| Tests for Oil and Gas Wells | 2 |
| Tests for Monitoring Wells | 2 |
| Tests for Class II UIC Wells | 3 |
| Tests and Exceptions for Wells with Alternative Production Methods | 3 |
| Test Exception for Wells with Open Hole Completions | 4 |
| Documentation and Observation of Tests | 4 |
| Form 42 Notification | 4 |
| Test Observation - Witnessed MITs | 4 |
| Pressure Charts | 5 |
| Form 21 Requirements | 5 |
| Mechanical Integrity Test Procedures | 6 |
| Pre-Test Temperature Stabilization | 6 |
| Test Duration and Allowable Pressure Changes During the Test | 6 |
| Isolation Devices and Test Intervals in the Well | 7 |
| Test Intervals for Wells with Stage Cement or Cement Squeeze Remediation | n 7 |
| Additional Test Requirements for Class II Wells | 8 |
| Offset Well Prep | 10 |
| Mechanical Integrity Failures | 11 |
| Non-Injection Wells | 12 |
| Class II UIC Wells | 12 |
| Examples | 13 |
| Chart with a proper scale | 13 |
| Chart with poor scaling | 14 |
| Graph with no pressure stabilization | 15 |
| Graph with Stable Pressure | 15 |
| Tabular MIT Data | 16 |
| Failed MIT Chart | 16 |
| Additional Guidance to Clarify MIT Timing | 17 |
| Document Change Log | 18 |

Mechanical Integrity Test Guidance

The purpose of this guidance is to explain the key aspects of the Colorado Energy and Carbon Management Commission's (ECMC's) Rules, regulations, policies, practices and procedures pertaining to mechanical integrity tests (MITs) for wells.

Well Types, Production Methods and Test Frequency

Tests for Oil and Gas Wells

Wells will pass an MIT within two years of the initial date when the well status becomes Shut-In (SI), Waiting on Completion (WO), or Suspended Operations (SO). An MIT is required for Temporarily Abandoned (TA) wells within thirty days of temporary abandonment. After the initial MITs described above, subsequent MITs will be performed at five year intervals until the well is returned to production, plugged and abandoned, or designated as Out of Service on a Form 6A.

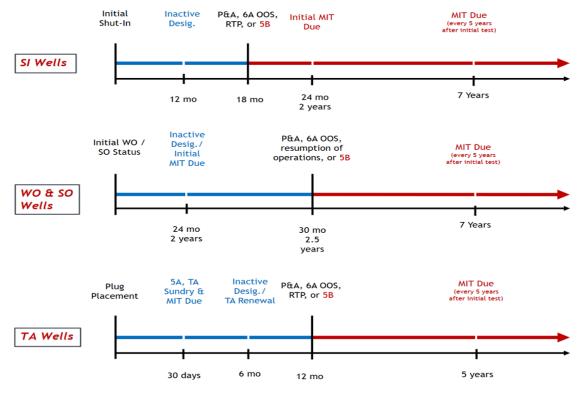


Figure 1: Timeline Requirements for SI, WO, SO and TA wells.

Tests for Monitoring Wells

MITs will be performed on monitoring wells (also known as pressure observation wells) at the initial well set-up prior to being put into service as a monitoring well.

Subsequent MITs will be performed at five year intervals from the date that the well was drilled as a monitoring well or the date that the well was converted to a monitoring status. For a monitoring well that is actively used to monitor pressure or seismic activity an Operator may request for approval by submitting a Form 4 Sundry notice for an alternative method of defining integrity by presenting the pressure or seismic data as evidence of no internal fluid movement.

Tests for Class II UIC Wells

MITs will be performed prior to Form 33-Subsequent approval and prior to commencing initial injection. In most cases, subsequent MITs will be performed on Class II wells at five year intervals.

Tests and Exceptions for Wells with Alternative Production Methods

An Operator may produce some wells using production packers or intermittent swabbing. These production methods make it difficult to determine casing integrity based on production reporting alone.

Except as noted below for gas lift wells, MITs will be performed on wells that are produced with a production packer or alternative method of isolation of the production perforations within two years of the date the well was configured with the packer and then every five years after the initial test.

Tubing-casing annulus packers used for gas lift may or may not seal the casing above the top production perforation. These packers may be used to isolate individual stages of a producing zone (placement below the top perforation), rather than the entire producing zone (placement above the top perforation). MITs are not required for producing wells in this configuration, provided that the Operator has documented monitoring in place to detect tubing leaks, casing leaks, and packer leaks. At a minimum, this would involve monitoring tubing, casing, and all annulus pressures and monitoring production efficiency. Upon request from Staff, the Operator is required to provide monitoring records to demonstrate compliance for this exception. Gas lift wells must remain on production for this exception to apply.

MITs will be performed on wells that are produced by swabbing within two years of the initial swab date, then every five years after the initial test.

Test Exception for Wells with Open Hole Completions

MITs are not required for SI or TA wells that are configured with an open hole completion below the surface casing, provided that the well does not have an open wellbore penetrating other geologic formations underlying the producing zone. Wells with this configuration will be produced or plugged and abandoned. If the operator wants the well to remain SI or TA they must submit a sundry within two years of commencing SI status or within thirty days of commencing TA status.

The sundry will include the following:

- 1. Pressure history for the well. This will be evaluated for the pressure exerted at the surface casing shoe;
- 2. Written evaluation of Operator's rationale and justification for the well remaining in SI or TA status, how the well will remain in compliance with Rule 434.c, including details of the operators financial assurance plan; and,
- 3. Written statement from any other governmental agencies with jurisdiction for the wellbore (for example, Federal Bureau of Land Management for wells with federal minerals) regarding their opinion on the Operator's future plans for the well;

Documentation and Observation of Tests

Form 42 Notification

An Operator will submit a Field Operations Notice, Form 42 to notify ECMC ten days prior to an MIT (Rule 405.n, Rule 417.e). Advance Notices of Field Operations should not be submitted more than a month prior to the scheduled event. If schedule changes are necessary, email the Area Inspector and provide the revised date and time if delaying the MIT by 1-5 days. If delaying the MIT by more than 5 days, submit a Form 42 Update... For a change that moves the test date sooner than the original noticed date, the operator must get approval from the area inspector.

Test Observation - Witnessed MITs

Operators should not commence an MIT for a Class II UIC well unless ECMC staff is present to witness. As it is required by Rule 417.a.(5) that all Class II UIC MITs be witnessed, it is recommended the Operator consult with the area compliance specialist prior to submitting the Field Operations Notice, Form 42.

ECMC Staff observation of Oil and Gas Well and Monitoring Well MITs is at the discretion of ECMC Staff after the Operator provides proper notice on a Form 42. An

Operator should be prepared for ECMC observation of any Well MITs by completing a Form 21, Mechanical Integrity Test, with current wellbore configuration information and providing the completed Form 21 for ECMC Staff in the field prior to performing the test. A complete form will include appropriate information in the "reasons" section of the form and pre-test well configuration information section of the form (for example, injection/producing zone, perforated interval, etc.).

The Operator should review ECMC guidance for completing the Form 21 prior to the test. Form 21 instructions can be found on the ECMC website Regulation Form Instruction section.

If ECMC Staff is present to witness an MIT, the test data results will be filled in on the paper field copy Form 21 by ECMC Staff. The paper field copy Form 21 will be signed by both parties to document the presence of ECMC staff on location, but the signature does not represent ECMC approval of the Form or a passing MIT. ECMC Engineering Staff reviews and approves or denies approval of the Form 21 after it is submitted by the Operator.

Pressure Charts

The chart may be a circular recording set with an appropriate rate (clock rate of one revolution per hour is appropriate) and pressure range. For example, a zero to ten thousand psi pressure range is not appropriate for a three hundred psi pressure test. The chart must include the pressure run up from zero psi, the test itself, and pressure run down to zero psi. Alternatively, the Operator may record test results with a data logger and provide the following to ECMC:

- 1. Pressure versus Time plot of the test including the pressure run up, the test, and the pressure run down, and
- 2. A data table containing pressure values at intervals of no more than one minute and no less than fifteen seconds. The Pressure versus Time plot will have legible axes with scales appropriate for the test pressure and duration of the test.

Form 21 Requirements

The Operator is required to submit a Form 21 for all tests within thirty days of the test per Rule 418. An original copy of the pressure chart should be attached to every Form 21. If the test was witnessed, a scanned copy of the Form 21 original field copy with the signatures must be attached.

Mechanical Integrity Test Procedures

Pre-Test Temperature Stabilization

To minimize the chance of masking the discovery of a leak because of rapid temperature changes causing fluid expansion or contraction, operator will:

- 1. Completely fill the casing-tubing annulus or casing with liquid at least twenty-four hours before the test for temperature to reach equilibrium;
- 2. When possible, pre-test the well before the ECMC Staff arrives on location to avoid unnecessary trips to the field and delays in completing a successful test;
- 3. Conduct the test only after the wellbore fluid has reached an equilibrium temperature; and,
- 4. Allow active injection wells (i.e., UIC wells) to inject continuously or suspend injection for at least twenty-four (24) hours prior to conducting the test.

Test Duration and Allowable Pressure Changes During the Test

The test must be at least fifteen minutes long. The test should commence after any pressure fluctuations stabilize (e.g., pressure changes from bleeding air out of the system, pressure changes resulting from temperature effects, or water hammer evident after opening or closing valves). To pass, the well must not lose or gain more than ten percent of the initial test pressure (Rule 417.g.), and the pressure must stabilize without an increasing or decreasing trend for the last five minutes of the test. A stable pressure reading for a digital data logger is defined as +/- 1% of the initial test pressure. The test may be repeated, or time of the test extended, if the pressure loss or gain is determined to be the result of compression or expansion related to gas dissolution from the fluid column or temperature effects related to the fluid used to load the column. Pressure changes greater than ten percent in the casing-tubing annulus or casing during a test will invalidate the test and result in a failed MIT.

A zero psi initial test pressure is not acceptable. The initial test pressure will be a minimum of three hundred psig, as defined by Rule 417.a.(1).A, Rule 417.b.(3), Rule 417.c.(3), and Rule 417.d.(4). The well must maintain at least three hundred psig after pressure run up. To meet this objective and allow for a ten percent pressure decrease during the test, the initial test pressure should be one hundred ten percent of the nominal test pressure. Therefore it is suggested an Operator run these low pressure tests at a minimum of 330 psig to allow some pressure decline during the test.

Isolation Devices and Test Intervals in the Well

Packers or bridge plugs (isolating devices) must be set one hundred feet or less above the highest injection or production perforation or open hole interval (Rule 417.a.(1).A, Rule 417.b.(3), Rule 417.c.(3), and Form 21 instructions). For horizontal wells the isolation device will be set in the vertical section of the production casing within one hundred vertical feet of the beginning of the curve into the lateral portion of the well. If a production liner is hung off a larger casing string and the hanger is set above the 100-foot distance above the beginning of the lateral curve, then the isolating device will be set within one hundred feet of the liner hanger top. For directional wells, the isolating device will be set within one hundred vertical feet of the top of the perforated or open-hole completion.

If the isolating device is not set as specified above, then the test configuration must be approved by the ECMC Engineer BEFORE submitting a ten-day Form 42 notice for the MIT. A Sundry Notice, Form 4 may be required, and depending on the circumstances, a formal Rule 502 variance approval may be required.

Test Intervals for Wells with Stage Cement or Cement Squeeze Remediation

Wells with stage tools or remedial cement squeezes above injection or production perforations (e.g., cement squeeze of a casing leak) may be required to pass an MIT as specified by COA prior to stimulation and prior to commencing or resuming injection or production. Depending on the expected conditions during stimulation, injection, or production operations, this test pressure may exceed routine MIT pressures.

Perforations or DV tools used for zonal isolation or casing repairs are intended to be sealed with cement, and therefore the repaired casing shall be fully included in the MIT (i.e., repair perforations or squeezed production perforations are not considered production perforations for the purpose of the test and shall be included in the tested interval). If the well is plugged back to a depth above a previously-completed, perforated or open-hole interval, a Completed Interval Report, Form 5A shall be submitted (if not already on file with ECMC) to revise the gross open perforation interval and to abandon a completed formation.

Additional Test Requirements for Class II Wells

Class II injection well MITs shall be performed in the same manner as described in the previous section, except that additional considerations are required for Class II UIC wells, as described below.

The initial MIT test performed to fulfill permitting requirements will be the maximum injection pressure to be approved on the Class II permit after the MIT and prior to commencement of injection. Subsequent tests are required by Rule 417.a.(1).A to have a test pressure that is the greater of either 300 psi or the average injection pressure. The pressure test should never exceed the maximum permitted injection pressure. The average injection pressure is calculated by summing the injection pressure for each of the twelve months prior to the test, eliminating any months where there was no injection (removing zeros), then dividing by the number of months with injection.

At their discretion, prior to or during the test, ECMC Staff may require the casing/tubing annulus to be pressured up to one of the following:

- 1. The maximum approved injection pressure, as shown on the approved Class II permit (Figure 2);
- 2. The maximum reported monthly injection pressure following the previous MIT, based on a review of the monthly reported pressure data, which can be found on ECMC's injection well's Scout Card (Figure 3).

A new mechanical integrity test will be performed after any casing repairs, after resetting the tubing or mechanical isolation device, or whenever the tubing or mechanical isolation device is moved during workover operations. (Rule 417.a.(4).C).

All injection well mechanical integrity tests will be witnessed by ECMC. (Rule 417.a.(5))



Figure 2: Picture of a Class II UIC Scoutcard highlighting the Permitted Maximum Water Injection Pressure

| | | | | | | | OIL | | | | | Water | Water | (psig) | |
|------|-------|-----------|-------------|----------------|----|------------------|------|----------|------|-----------|------|---------------------|----------|----------|------|
| | | | | | | | вом | Produced | Sold | Adj. | ЕОМ | Gravity | Prod | Tbg. | Csg. |
| Year | Month | Formation | n Sidetrack | Well Status | | Product | GAS | | | | | Water Disp. Code | G (ps | ıs g) | |
| | | | | | | | Prod | Flared | Used | Shrinkage | Sold | BTU | | Tbg. | Csg. |
| | | | | | | | | | | | | | | | |
| 1999 | Jan | LYONS | 00 | IJ | 24 | Oil -> Gas -> | | | | | | | 65,627 | 800 | |
| 1999 | Feb | LYONS | 00 | IJ | 28 | Oil -> Gas -> | | | | | | | 81,499 | 980 | |
| 1999 | Mar | LYONS | 00 | IJ | 31 | Oil -> Gas -> | | | | | | | 107,972 | 980 | |
| 1999 | Apr | LYONS | 00 | IJ | 29 | Oil -> Gas -> | | | | | | | 84,032 | 950 | |
| 1999 | | LYONS | 00 | | 31 | Oil -> Gas -> | | | | | | | 82,444 | 950 | Г |
| | May | | | IJ | | Oil -> | | | | | | | 83,241 | 960 | |
| 1999 | Jun | LYONS | 00 | IJ | 30 | Gas -> Oil -> | | | | | | | 71,282 | 960 | |
| 1999 | Jul | LYONS | 00 | IJ | 26 | Gas -> Oil -> | | | | | | - | 87,838 | 960 | |
| 1999 | Aug | LYONS | 00 | IJ | 31 | Gas -> | | | | | | | | | |
| 1999 | Sep | LYONS | 00 | IJ | 28 | Oil -> Gas -> | | | | | | | 76,679 | 950 | |
| 1999 | Oct | LYONS | 00 | IJ | 29 | Oil -> Gas -> | | | | | | | 88,645 | 950 | |
| 1999 | Nov | LYONS | 00 | IJ | 30 | Oil -> Gas -> | | | | | | | 100,563 | 950 | |
| 1999 | Dec | LYONS | 00 | IJ | 31 | Oil -> Gas -> | | | | | | | 111,353 | 950 | |

Figure 3: Production reporting displayed highlighting the column of the reported water injection pressure

PRODUCTION YEAR: All

The test pressure shall have at least three hundred psi differential pressure between the tubing pressure and the casing-tubing annulus pressure during the test, and the differential pressure shall not drop below three hundred psi during the test, as defined by per Rule 417.a.(1).A.

Testing at or above the average operating pressure will not result in a change in the ECMC approved maximum injection pressure.

Any repairs or replacement should be described on Form 21 for Verification of Repairs, and a new Drilling Completion Report, Form 5 may be required by Rule 414.b.(3) for a permanent change of wellbore configuration. A Form 5A, Completed Interval Report, may be required if tubing / packer depths change.

Offset Well Prep

ECMC Staff acknowledges that an Operator may prepare existing offset wells in preparation for stimulation of other adjacent well(s). Prepped wells may be on the same well pad or on a pad in the area. Many of these temporary preparations would be considered placing the well in TA status. Rule 434.b requires wells to have an MIT performed within thirty days when wells are temporarily abandoned. The following provides guidance for wells that are TA for offset stimulation to keep the Operator in compliance with ECMC Rules, and identify these wells in the field to assist ECMC Field Inspectors when determining the correct status of wells during their field inspections.

- When an offset well is temporarily abandoned, pressure test the well and document test pressure, test duration, and the depth of the isolating device in the casing of the TA well. A charted or ECMC-witnessed test is not necessary, unless Item #2 below applies;
- 2. If the well is continuously Shut-In or Temporarily Abandoned for 2 years for adjacent stimulation, perform a charted or ECMC-witnessed MIT and submit the appropriate Form 21 (10-day Form 42 notification required);
- 3. If a well will be TA for a period greater than 6 months file a Sundry Notice, Form 4 with all details required by Rule 434.b. Document that there was a pressure test in lieu of a formal MIT prior to temporarily abandoning the well; include statements regarding future plans for the well and how the well is shut to the atmosphere. If the well will be TA with downhole plugs for longer than 60 days, a Completed Interval Report, Form 5A must be filed so that the

- Operator's Monthly Report of Operations, Form 7 is consistent with the correct wellbore configuration.
- 4. Install signage on the prepped offset wellhead indicating the reason for equipment removal (Figure 4). If an Operator does not place signage on a prepped well to alert ECMC's Field Inspectors, Field Inspection Reports citing MIT corrective actions may result, requiring formal MITs.
- 5. Failure to perform the requirements as set forth in #2 and #3 above may be considered a violation of ECMC Rules.



Figure 4: Example of wellhead signage

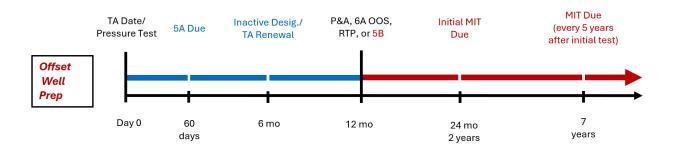


Figure 5: Offset Well Prep timeline. Only wells with a 5B on file are subject to timeline requirements after 12 mo.

Mechanical Integrity Failures

A leak in wellhead seals, casing, tubing, or packer indicates a loss of mechanical integrity, which is a violation of Rule 417.f. All wells lacking integrity must be repaired and have a passing MIT or plugged and abandoned within the time frames discussed below.

Tubing and casing mechanical integrity must be maintained in all Class II UIC wells and wells using Alternate Production Methods. Failure to maintain mechanical integrity is a violation of Rule 417.f.

Non-Injection Wells

The following two scenarios are examples of allowable time frames to fix mechanical integrity issues identified in non-injection wells:

- 1. If the Operator discovered the integrity issue via an MIT or other means within the required testing time frames as outlined in Rules 417.b-d, the Operator will have six months from the date of discovery to make repairs or plug and abandon the well.
 - a. Example:
 - i. MIT is due April 1.
 - ii. MIT is performed March 1 and a mechanical integrity issue is identified.
 - iii. The operator will have until September 1 (6 months from discovery date of March 1) to fix the mechanical integrity issue and successfully test the well for mechanical integrity.
 - iv. If the work is performed within the above time frame, no Warning Letter or NOAV will be issued.
- 2. If the Operator discovered the integrity issue via an MIT or other means beyond the required time frames as outlined in Rules 417.b-d, the Operator will not have six months from the date of discovery to make repairs and successfully test the well for mechanical integrity, or plug and abandon the well. Rather, the Operator will receive either a Warning Letter or NOAV related to Rules 417.b-d, which will contain a corrective action due date. That due date will be a shorter duration than six months.
 - a. Example:
 - i. MIT is due April 1.
 - ii. MIT is performed May 1 and a mechanical integrity issue is identified.
 - iii. Operator will receive a Warning Letter or NOAV for a Rule 417 violation with a corrective action due date of less than six months because the MIT was not timely performed.

Class II UIC Wells

Upon discovery, Class II wells lacking mechanical integrity must be shut in immediately. The Operator shall notify ECMC Staff of any integrity failure as soon as practicable. The Operator must obtain prior ECMC approval for any repair and

successfully complete the repair within six months. If an MIT is overdue at the time a lack of mechanical integrity is discovered, a repair timeframe of less than 6 months may be required. Injection may not start again until the well passes an MIT.

Examples

Chart with a proper scale

This chart shows pressure run up and run down; show a stable pressure for the length of the test.

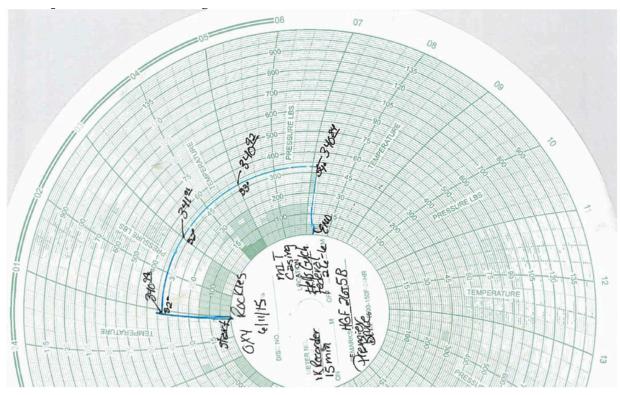
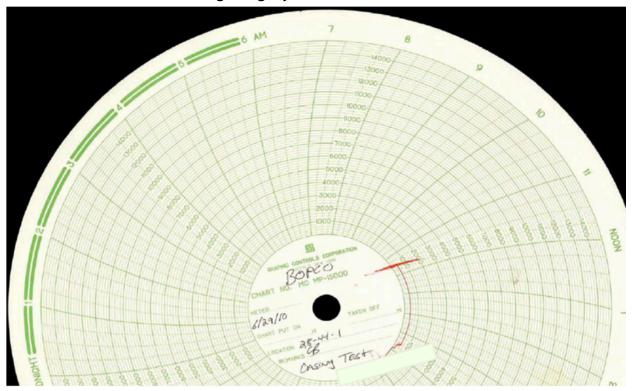


Chart with poor scaling

With a poorly scaled chart (pressure scale and time rotation) it is difficult to validate test results and confirm casing integrity.

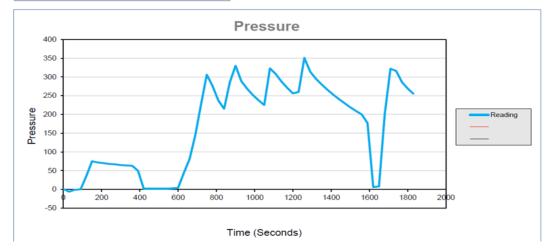


Data Logger Plot with no pressure stabilization

Data Collection Report

| Gauge Information | | | | |
|-------------------|------------|--|--|--|
| Serial Number | 358534 | | | |
| Model | 10KPSIXP2I | | | |
| Message Store | | | | |
| Units | PSI | | | |

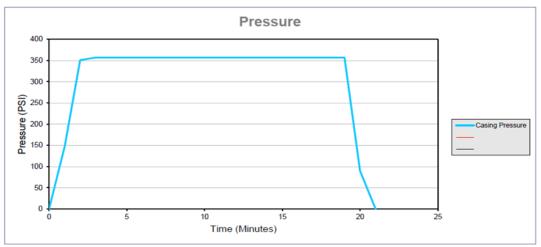
| Run Info | |
|------------------|---------------------|
| Start Time | 4/27/15 9:59:53 AM |
| Stop Time | 4/27/15 10:30:52 AM |
| Logging Interval | 30 |



Data Logger Plot with Stable Pressure



| Run Info | |
|-------------------------|--------------------|
| Start Time | 4/15/23 8:33:53 AM |
| Stop Time | 4/15/23 8:54:54 AM |
| Logging Interval | 60 |
| LEASE: SMITH PC D06-20D | API: 05-123-32322 |

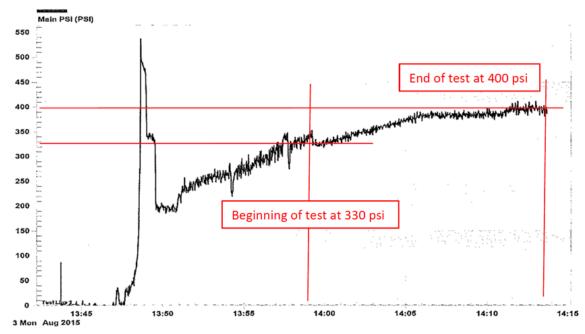


Tabular MIT Data

| Start Time | | 4/15/2023 8:33 | | | | |
|------------|------|-----------------|--------------|----------------|--------------|-----------------|
| Stop Time | | 4/15/2023 8:54 | | | | |
| Time | | Casing Pressure | Time (hours) | Time (minutes) | Elapsed Time | Timestamp |
| | 0 | | 0.00 | 0.00 | 0:00:00 | 4/15/23 8:33:53 |
| | 0 | | 0.00 | 0.00 | 0:00:00 | 4/15/23 8:33:53 |
| | 0 | | 0.00 | 0.00 | 0:00:00 | 4/15/23 8:33:53 |
| | 0 | 0 | 0.00 | 0.00 | 0:00:00 | 4/15/23 8:33:53 |
| | 60 | 147 | 0.02 | 1.00 | 0:01:00 | 4/15/23 8:34:53 |
| | 120 | 351 | 0.03 | 2.00 | 0:02:00 | 4/15/23 8:35:53 |
| | 180 | 357 | 0.05 | 3.00 | 0:03:00 | 4/15/23 8:36:53 |
| | 240 | 357 | 0.07 | 4.00 | 0:04:00 | 4/15/23 8:37:53 |
| | 300 | 357 | 0.08 | 5.00 | 0:05:00 | 4/15/23 8:38:53 |
| | 360 | 357 | 0.10 | 6.00 | 0:06:00 | 4/15/23 8:39:53 |
| | 420 | 357 | 0.12 | 7.00 | 0:07:00 | 4/15/23 8:40:53 |
| | 480 | 357 | 0.13 | 8.00 | 0:08:00 | 4/15/23 8:41:53 |
| | 540 | 357 | 0.15 | 9.00 | 0:09:00 | 4/15/23 8:42:53 |
| | 600 | 357 | 0.17 | 10.00 | 0:10:00 | 4/15/23 8:43:53 |
| | 660 | 357 | 0.18 | 11.00 | 0:11:00 | 4/15/23 8:44:53 |
| | 720 | 357 | 0.20 | 12.00 | 0:12:00 | 4/15/23 8:45:53 |
| | 780 | 357 | 0.22 | 13.00 | 0:13:00 | 4/15/23 8:46:53 |
| | 840 | 357 | 0.23 | 14.00 | 0:14:00 | 4/15/23 8:47:53 |
| | 900 | 357 | 0.25 | 15.00 | 0:15:00 | 4/15/23 8:48:53 |
| | 960 | 357 | 0.27 | 16.00 | 0:16:00 | 4/15/23 8:49:53 |
| | 1020 | 357 | 0.28 | 17.00 | 0:17:00 | 4/15/23 8:50:53 |
| | 1080 | 357 | 0.30 | 18.00 | 0:18:00 | 4/15/23 8:51:53 |
| | 1140 | 357 | 0.32 | 19.00 | 0:19:00 | 4/15/23 8:52:53 |
| | 1200 | 90 | 0.33 | 20.00 | 0:20:00 | 4/15/23 8:53:53 |
| | 1260 | 0 | 0.35 | 21.00 | 0:21:00 | 4/15/23 8:54:53 |

Failed MIT Chart

Chart showing pressure rising with 70 psi increase (greater than 10% of starting pressure)



Additional Guidance to Clarify MIT Timing

Table 1 Well Status Definitions and MIT due date

| Well Type | Definition | MIT Time Frame |
|----------------------------------|--|--|
| Injection Well (IJ) | Any Class II wells used for the exclusive purpose of injecting fluids or gas from the surface for enhanced oil recovery or the disposal of E&P wastes. | Prior to injection, after repairs, periodically as defined in Rule 417.a |
| Shut-In (SI) | A Well which is not currently producing or injecting but is capable of production or injection by opening valves, activating existing equipment, or supplying a power source. | Within 2 years of the shut-in date and every 5 years after that. |
| Suspended Operations (SO) | A Well which has been Spud but drilling operations are suspended prior to reaching total depth, and at least one casing string has been set and cemented in the wellbore. Wells in which only conductor pipe has been set but the surface hole has not been Spud are not Suspended Operations Wells. | Within 2 years of setting any casing string and every 5 years after that. |
| Temporarily Abandoned (TA) | A Well that is neither currently producing nor permanently plugged, but has all downhole completed intervals isolated with a plug set above the highest perforation such that the Well cannot produce without removing a plug; or A Well which is incapable of production or injection without a downhole intervention or the addition of one or more pieces of wellhead or other equipment, including, but not limited to, valves, tubing, rods, pumps, heater-treaters, separators, dehydrators, compressors, piping, or Tanks. Wells that have been TA'd due to nearby new horizontal wells should be discussed with ECMC Engineering. | Within 30 days of TA date and every 5 years after that. |
| Waiting-on Completion (WO) | A Well which has been drilled to total depth, cased, and cemented but the objective formation has not yet been completed or Stimulated. | Within 2 years of setting the production casing string and every 5 years after that. |

Document Change Log

Table 2 Document History

| Change Date | Description of Changes |
|-----------------------|--|
| May 15, 2013 | Document Created and Finalized |
| July 6, 2014 | Added suspended operations and waiting-on-completions well narrative, pressure testing after repaired casing |
| September 15, 2015 | Revised language related to January 2015 Rulemaking to add suspended operations and waiting-on-completions to definitions and Rule 326, plus added Offset Well Safety Shut-In/Temporary Abandonment section. Add the section for Test for Idle Wells with Open Hole Completions |
| May 5, 2016 | Reorganized for clarity and removed duplicate references. Added the Rule reference to Rule 326.a(1), 326.b(3). and 326.c(3) Added the +/-3% psi definition for stable digital pressure measurements. Corrected the wording to page 4 paragraph starting with "Packers or bridge plugs". Included DV tool to the discussion regarding long string squeeze cement. Add examples for reference |
| August 6, 2025 | Updated to new Rule numbers from Mission Change Rule Making. Removed idle well references and updated with new well terminology from to Financial Assurance Rulemaking. Combined Rule 326: Mechanical Integrity Requirements and Enforcement and Mechanical Integrity Tests - Practices and Procedures Guidance documents into this single guidance document |