



May 24, 2021

Industry Guidance Bulletin 21-001
No-Flow Test Guidance

Introduction: Certain production and injection wells are required to be completed with a subsurface safety valve capable of preventing an uncontrolled flow of fluid from the well's tubing. All producing wells capable of unassisted flow must be completed with downhole production equipment consisting of suitable tubing and packer that effectively isolate the tubing-casing annulus from fluids being produced. The purpose of a no-flow test is to demonstrate that a well is incapable of unassisted flow of hydrocarbons to surface. This guidance bulletin clarifies the no-flow test requirements included in regulation that provide for the elimination of a subsurface safety valve and a production packer.¹

Regulations 20 AAC 25.265(k) & (l); 20 AAC 25.200(d)

Test Preparation

- The no-flow test must follow an AOGCC-approved procedure²
- Test must be witnessed by AOGCC. Notify AOGCC using the web-based test notification form (<http://aogweb.state.ak.us/TestWitnessNotification/>)
- Test equipment must be properly sized with suitable range and accuracy for flow rate and pressure measurements³:
 - o Calibrations must be evident with a label and supporting documentation; must be calibrated within the past year
 - o Specify size of the flow line from well through test equipment
 - o 10D straight unobstructed pipe upstream of flow meter; 5D straight unobstructed pipe downstream of flow meter
 - o Same upstream and downstream pipe diameter as the flow meter connections
 - o Low flow meter installed in proper orientation per manufacturer
 - o Low pressure gauge on the flowline with 1 psi increments
 - o Chart recorder or recording pressure gauges for tubing and annuli
 - o Must be no plugs or flow control devices in the wellbore
 - o Flow into an atmospheric tank or vessel, considering safe practice such as mitigating static charges and spill prevention

¹ This guidance bulletin supersedes the no-flow test clarification provided in Guidance Bulletin 10-004

² Submit test procedure to AOGCC for review and approval at least 2 weeks in advance of first performing a no-flow test. No additional reviews are required unless the procedure is revised or specifically requested by AOGCC.

³ Suitable range means the pressure readings are displayed within the center third of the full scale; suitable accuracy means the gauge is capable of measuring pressures that are less than or equal to 1 percent of the gauge's full-scale pressure range

- Artificial lift must be shut down
- Demonstrate that offset injectors have not been shut in prior to the no-flow test (e.g, provide a list of offset injectors with status and injection history for past 6 months)
- The well may be bled down for not more than 48 hours prior to shutting in for the no-flow test
- Tubing and inner annulus must be in communication through test equipment if the well is capable of flow up the tubing-casing annulus (e.g., packerless completion; ESP completion with packer vent valves)

Test Options (20 AAC 25.265(l)(1))

- Option A – Fluid Flow Rate (Flow Meter Procedure)
 - Record tubing (T), inner annulus (IA), and outer annulus (OA) pressures prior to shut in to start the No-Flow Test⁴
 - Shut in well to monitor pressure build up – record T, IA and OA pressures at least every 15 minutes
 - At 1 hour, open to flow through the meter and document flow rates and well pressures (T, IA, OA) at 5-minute increments until the rate declines to less than the acceptance criteria, not to exceed 30 minutes
 - Repeat the shut-in/flow monitoring steps at least 2 times
 - **Test acceptance:** flow rates not exceeding 6.3 gallons per hour liquid and 900 standard cubic feet per hour gas demonstrated by at least 2 consecutive flow monitoring periods
- Option B – Pressure Discharge (Pressure Gauge Procedure)
 - Open the well to flow for at least 1 hour prior to starting the test
 - Record T, IA and OA pressures immediately prior to shutting in the well
 - Shut in the well and chart T, IA and OA pressures at least every 15 minutes for 3 hours
 - Open the flowline to an atmospheric tank or vessel and record pressures at 1-minute increments for 5 minutes
 - **Test acceptance:** pressure discharged (0 psi) within 5 minutes

Please share this Guidance Bulletin with appropriate members of your organizations. Questions regarding this guidance should be directed to James Regg at (907) 793-1236.

Sincerely,

Jeremy Price
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Jeremy Price
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Jeremy M. Price
Commissioner, Chair

⁴ Inner annulus is the space between tubing and casing; outer annulus is the space between casing strings