DRAFT OF NEW REGULATIONS FOR CASING PRESSURE

2008 ASME / API / ISO

GAS-LIFT WORKSHOP

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My Goal

- To Share With You What The Future MMS Regulations May Look Like
- Why Did I Say May Look Like?

API RP 90

- Incorporate into MMS Regulation as 30 CFR 250.198

- Single Biggest Change From Current Practice in API RP 90 is “Maximum Allowable Wellhead Operating Pressure” (MAWOP)

Monitoring Frequency

- Fixed Platform Wells - Once per Month with One Data Point per Month Recorded
- Subsea Wells - Continuously with One Data Point per Day Recorded
- Hybrid Wells - Continuously with One Data Point per Day Recorded

Required Casing Diagnostic Test

- Diagnostic Test Required within 30 Days of First Noting Casing Pressure Greater than 100 psig

- Diagnostic Test Required for Production Casing on any Gas-Lift Well Shutin or Flowing for more than 180 Days

Maximum Fluid Allowed to Bleed During Diagnostic Test

- B, C, D and etc. Annuli - Do Not Bleed more than 3 bbls of Oil and/or 2 bbls of Mud
- It is Acceptable to Replace the Bled Fluid with a Weighted Fluid to a Maximum of the Prebleed Pressure
- Production Casing (A Annulus) – Stop Bleed Down at a Liquid Volume of 20% of the Casing Volume

Repeat Diagnostic Test

- Fixed Platform Wells B, C, D & ect. Annuli – Once Every 5 Years if the Pressure is Greater than 20% of the MIYP

- Fixed Platform Wells Production Casing (A Annulus) – Once per Year if the Pressure is Greater than 10% of the MIYP

Repeat Diagnostic Test

- When a Departure Expires or Becomes Invalid
- When the Casing or Riser Pressure Increases by More than 200 psig over Previous Diagnostic Test Pressure

Repeat Diagnostic Test

- After Corrective Action Has Been Taken as a Result of a Departure Request Denial

Where & How Long Do I Keep Records?

- Casing Pressures and Diagnostic Tests must be Maintained at the Nearest Field Office for 2 Years

- The Last Diagnostic Test will be Maintained at the Nearest Field Office until the Well is Abandoned

Casing Pressure Departures Required

- **Fixed Platform Wells**
  - For any Casing Pressure Greater than its MAWOP
  - For Casing Pressure that cannot Bleed to Zero in 24 Hours or is not Bled to Zero

Casing Pressure Departures Required

- Any Well that has Tubing/Casing, Tubing/Riser, Casing/Casing or Riser/Riser Communication

- Any Well that has SCP that is Bled Down to Prevent it from Exceeding its MAWOP

Casing Pressure Departures Required

- Any Hybrid Well with Casing Pressure Greater than 100 psig
- Any Subsea Well with a Casing Pressure 100 psig Greater than the External Hydrostatic Pressure

To Whom & When Do I Make a Departure Request?

- Submit Request to MMS Regional Supervisor of Field Operations
- Departure Request must be Submitted within 14 Days of Pressure Data or Diagnostic Test Indicating a Departure is Required

Departure Request Data

- Generally Same as Currently Required

- Type of Diagnostic Test Described in API RP 90:
  - Bleed Down/Buildup Test
  - Shutin and Monitor the Pressure Drop Test
  - Constant Production Rate and Decrease or Increase the Annulus Pressure Test
  - Change the Production Rate and Monitor the Casing Pressure Test
  - Casing Pressure and Tubing Pressure History Plot

How Long Are Departures?

- The Length of Time for a Departure is Granted on a Case-by-Case Basis
- The Regional Supervisor may Impose Additional Restrictions or Requirements to Allow Continued Production

What Do I Do if My Departure Request is Denied?

- **Departure Denied** – The Operating Company Must Submit Plans for Corrective Action to the MMS District Manager within 30 Days

- MMS District Manager will Establish a Specific Time Period for the Corrective Action

When Does a Departure Become Invalid?

- When the Casing/Riser Pressure Increases by 200 psig Over Current Granted Departure Pressure
- When the Departure Term Expires
- When a Different Casing or Riser on a Well with a Existing Departure Requires a Departure

When Does a Departure Become Invalid?

- When a Well with a Departure is Worked Over, Sidetracked, Redrilled, Recompleted or Acid Stimulated

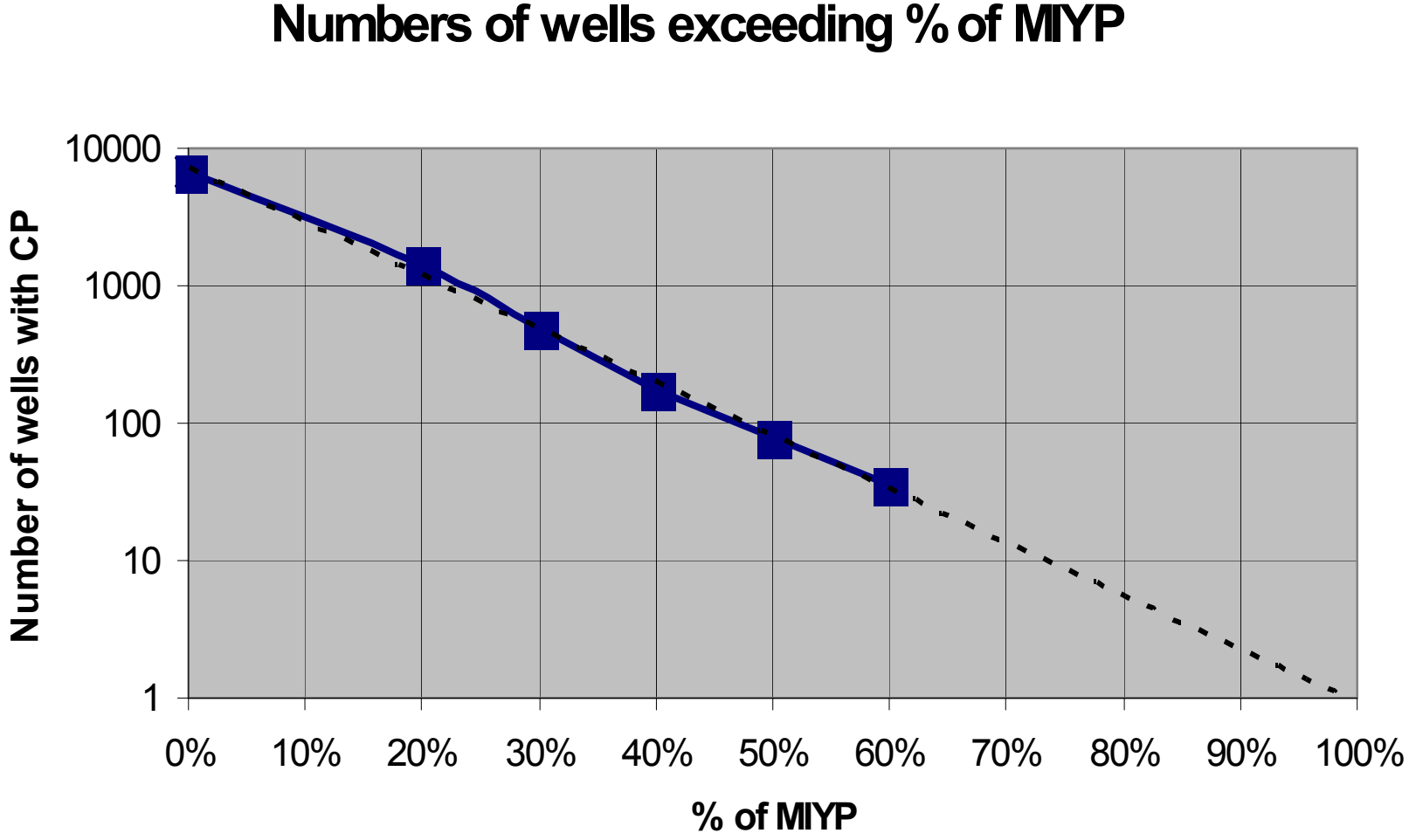
- When a Well has more than One Casing with a Departure and if One of these Departures Become Invalid, then all Departures for that Well Become Invalid

Questions?

Wells with Casing Pressure 08/29/06

- 7,211 Prod, SI and TA wells reporting CP
- 15,521 Prod, SI and TA wells in the Gulf

How Many Wells



Requirements for Gas Lifting Subsea Wells

- There will be a minimum of one actuated annulus isolation valve on a subsea tree or tubing head. The actuated valve will act as the gas lift shut down (SDV) for the gas lift line. The gas lift SDV shall close concurrent with the USV on the well. Therefore, any action in the valve closure schedule that results in the closure of the USV on the well will also result in the closure on the AMV and/or AWV as the gas lift SDV.

Requirements for Gas Lifting Subsea Wells

- A Flow Safety Valve (FSV) shall be required for the gas lift supply line located on the platform to prevent back flow to the platform. PSHL shall be required located upstream of the FSV. The gas lift supple line requirements described in API 14C shall apply to the gas lift supple lines located on the platform.

Requirements for Gas Lifting Subsea Wells

- The gas lift line will be pressure rated for the highest anticipated pressure exposure.
- Production casing pressure must be monitored continuously on all subsea wells.
- All subsea wells with casing pressure greater than the external hydrostatic pressure + 100 psig operate under a casing pressure departure.

Requirements for Gas Lifting Subsea Wells

- A casing pressure evaluation will be required before the well is placed on gas lift. You will need to show the casing pressure response when the well is shutin. If the casing pressure rises with the tubing pressure, then a communication problem exists.

Requirements for Gas Lifting Subsea Wells

- Once the well is placed on gas lift, no casing pressure diagnostic testing will be required. The well will operate under a departure granted for the operating gas lift pressure as long as the well is on gas lift.
- When the well is shutin, casing pressure evaluation testing will be required again for a casing pressure departure if the shut-in casing pressure is greater than the external hydrostatic pressure + 100 psig.

Requirements for Gas Lifting Subsea Wells

- The requirements to apply gas lift gas to a production/flow line riser or production manifold are different than the requirements to apply gas lift gas to a subsea well.
- Receiving approval to gas lift a subsea well does not also grant approval to gas lift a riser or manifold.