



NWT OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS

Office of the Regulator of Oil and Gas Operations

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John Hawkins  
Director, Asset Management  
MGM Energy  
SUITE 2800, 421 – 7 AVE SW  
CALGARY AB T2P 4K9

April 6, 2023

Dear John Hawkins:

**Information Request No. 2:  
East Mackay I-78 Well Abandonment (ACW-2022-MGM-I-78-WID2078)**

On November 15, 2022, the Office of the Regulator of Oil and Gas Operations (OROGO) received MGM Energy's (MGM) response to Information Request No. 1 associated with its application to Alter the Condition of a Well (ACW) for the abandonment of the East Mackay I-78 well (WID2078) in the Tulita area of the Northwest Territories.

OROGO has reviewed the information provided by MGM in its original application and its response to Information Request No. 1 and requires additional information to complete its review of MGM's ACW application, as set out in the attached Information Request No. 2.

Please send your written responses and any associated correspondence to OROGO at [oro.go@gov.nt.ca](mailto:oro.go@gov.nt.ca) or through OROGO's secure file transfer site, on or before 4:00 pm on April 24, 2023. If you are unable to respond within this timeframe or have any questions, please contact OROGO at 867-767-9097 or by email at [oro.go@gov.nt.ca](mailto:oro.go@gov.nt.ca).

Sincerely,

Michael Martin  
Chief Safety Officer  
Chief Conservation Officer

Encl. Information Request No. 2

**Information Request No. 2**  
**East Mackay I-78 Well Abandonment**  
**ACW-2022-MGM-I-78-WID2078**

## **2.1 Cement Bond Log**

### **Preamble:**

Step 35 of MGM's revised well abandonment program, submitted on November 15, 2022, identifies removing the remaining tubing from approximately 1819 mKB to surface. This step followed by displacing water to prevent freezing and removing the BOP.

It is unclear in which step MGM plans to conduct the cement evaluation behind the casing as required by section 6A of the *Well Suspension and Abandonment Guidelines and Interpretation Notes* (Guidelines) which states:

*'The operator must evaluate the existing cement behind the casing string(s) of a well before beginning abandonment operations. The evaluation must include:*

- Determining the cement top;*
- Evaluating cement bond in the casing annulus; and*
- Assessing any repairs or remedial cementing required to isolate all oil or gas bearing zones, discrete pressure zones and potable water zones, including consideration of any lost circulation zones.'*

### **Request:**

Submit an updated well abandonment program that include steps for cement evaluation as defined in section 6A of the Guidelines.

## **2.2 Isolation of Perforated Zones**

### **Preamble:**

Section 56 of the *Oil and Gas Drilling and Production Regulations* (OGDPR) requires the operator to isolate all oil and gas bearing zones and discrete pressure zones when abandoning a well. Section 6A of the *Well Suspension and Abandonment Guidelines and Interpretation Notes* (Guidelines) states that, for cased hole wells with perforations, *the operator must abandon each perforated zone using one of three options (for a Level II well):*

- Cement squeeze and cement retainer;*
- Cement squeeze and cement / bridge plug; or*

- *Permanent bridge plug.*

The final well completion diagram, included in the revised abandonment program, indicates perforations at five different places in the wellbore, with the Bluefish Shale formation being inaccessible. The revised well abandonment program identifies that ball seats located at 1,845 mKB, 1,871 mKB and 1,883 mKB would need to be drilled out in advance if the tubing was to be cut. However, the revised abandonment program does not provide sufficient information that would identify that these ball seats would prohibit operations from conducting a cement squeeze at each of these perforations.

Additionally, the revised abandonment program does not provide sufficient information to prove that all accessible perforations will be sufficiently isolated as a cement squeeze will be conducted on all perforations at once.

**Request:**

Submit an updated well abandonment program that:

- Provide justification on how the accessible perforations will be independently isolated in compliance with section 6A of the Guidelines if the revised abandonment program submitted November 15, 2022 was utilized; or
- Include abandonment steps to independently isolate the accessible perforations in compliance with section 6A or the Guidelines.