

**From:** Ken Nikiforuk [mailto:knikiforuk@sogoil.com]  
**Sent:** Friday, January 11, 2019 03:02  
**To:** DST\_JUS\_OROGO  
**Cc:** Ken Nikiforuk; Michael Bolianatz  
**Subject:** FW: ACW-2018-007 - 2M-73 - IR#1 - Revised Program and Statement for 1.4

Good afternoon

Please find attached a revised program for the zonal abandonment of the Sulphur Point zone in the above noted wellbore.

Statement for IR#1 – 1.4 – it is unknown whether the economics in the future will warrant the reactivation of the Cameron Hills field. The well will either be abandoned or brought back on production within 6 years ( Q1 2025 ). A permanent BP with 15 meters of circulated cement will be used by SOG to bring the wellbore into compliance. The rationale being if the well ends up being abandoned in the future, the zonal abandonment work is complete so a service rig will not be required. If the well ends up being reactivated, a service rig will be required regardless of the downhole suspension method.

Thanks

Ken N

# STRATEGIC OIL & GAS LTD.

STRATEGIC ET AL CAMERON

2M-73 60 10N, 117 15W

Sulphur Point Zonal Abandonment

January 11, 2019

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## CONTACTS:

Engineering:	Ken Nikiforuk	403 767-2944	Cell 403 804-2510
Field Consultant:	To be determined		Cell
Production Foreman:	Eric Rever	780 926-7449	Cell 780 836-5060
Production Foreman:	Dave Hetesy	780 926-7449	Cell 780 502-0280
Construction:	Ken Petersen		Cell 403 704-3638
Construction:	Russ Gable		Cell 403 318-4484
Production Mgr:	Kevin Eike	403 767-2942	Cell 403 650-0932
VP, Dev and Ops:	Amanda Reitenbach	403 781-2970	Cell 403 999-8970

## ATTACHMENTS:

## OBJECTIVES:

To abandon the Sulphur Point in the wellbore

## SAFETY:

SOG Completions safety guidelines given in the "Employee Safety Manual", the "Contractor's HSE Pamphlet" and the "SOG Cameron Hills HSE Assurance plan" will be followed during all completion activities. Discuss the contents of the Contractor's HSE Pamphlet with the rig crew plus all service company personnel prior to the commencing work. Conduct a service rig safety inspection. Fill out the "Service Rig Safety Inspection" sheets; discuss and remedy all unsatisfactory comments and document when follow-up is completed on the daily reports. **Safety meetings are to be held with all on site personnel prior to each event. The wellsite supervisor must notify all personnel of potential hazards and ensure workers are aware of the responsibilities and duties in accordance with the SOG and OROGO regulations and that all workers comply with these regulations. A record of all safety meeting minutes and hazard assessments should be kept on site and submitted along with the daily reports to the Calgary Office at the end of the job. All service companies supplying materials will review Material Safety Data Sheets at the safety meetings and keep the MSDS papers posted on site.**

Contact the lead operator 48 hours prior to moving on to the lease. If this is an existing lease with production equipment, one of the operators should provide site-specific safety concerns and isolate the production equipment as required.

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## WELLDATA:

UWI: 302M736010117150

OROGO Well ID: 2026

AFE: 19ABCAM006 (\$165,364)

WORKING INTEREST: 100%

ELEVATIONS: KB: 776.1 m  
GL: 771.8 m

TD: 1522.0 mKB

TVD: 1448.8 mKB

PBTD: 1507.0 mKB ( float collar )

DEVIATION: Directional wellbore. See attached Precision directional survey dated Dec 12, 2005

SURFACE CASING: 219.1 mm, 35.72 kg/m, J-55, ST&C. Landed @ 428.0 m KB. Cemented with 33.1 tonnes 0:1:0 'G' + 1.5% CaCl<sub>2</sub>. 8 m<sup>3</sup> of good cement returns to surface.

PRODUCTION CASING: 139.7 mm, 23.07 kg/m, J-55, LT&C. Landed at 1522.0 mKB. Cemented with 20.0 tonnes Thixlite + 1.0% SMS followed by 13.0 tonnes Expandomix LWL + 0.2% LTR + 0.2% SPC-II + 0.1% CDL-3. 5.6 m<sup>3</sup> cement returns to surface.

## TUBULAR DATA:

	<u>Casing</u>	<u>Tubing</u>
Size (mm)	139.7	73.0
Weight (kg/m)	23.07	9.67
Grade	J-55	J-55
Connections	LT&C	EUE
Drift I.D. (mm)	122.56	59.61
Collapse (kPa)	27860	52950
Burst (kPa)	33160	50060
Capacity (m <sup>3</sup> /m)	0.012416	0.003019

PRODUCTION TUBING: see attached downhole profile dated Feb 5, 2011

PUMP AND RODS: see attached pump and rod report dated Feb 24, 2014

PERFORATIONS: Sulphur Point 1494.0 to 1498.0 mKB (existing)  
Sulphur Point 1488.5 to 1492.0 mKB (existing)  
Sulphur Point 1485.0 to 1488.5 mKB (existing)

RESERVOIR PRESSURE: Apr 16, 2005 – 10001 kPa – 6.7 kPa/m

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## PROCEDURE:

1. Contact the on shift Area Foreman – Eric Rever or Dave Hetesy (780 926-7449) 48 hours prior to moving rig to location.
2. Hold and record a safety and procedural meeting with all personnel on location. Review and confirm safety certificates of all workers. Job hazard analysis is to be performed on all critical tasks. Complete a site specific ERP form and review it at the safety meeting if required.
3. A sweep of the wellsite shall be performed to confirm the presence or absence of LEL and H2S.
4. MIRU service rig complete with pump, tank and Class III BOP's. Rig up all equipment to SOG and OROGO requirements. RU P-tank, safety services and an air trailer. Conduct a walk around lease inspection and hazard assessment. Ensure all necessary safety equipment is strategically positioned on site and tested to ensure proper operating condition prior to commencing the zonal abandonment operations. Document all controls initiated to mitigate identified hazards.
5. Read and record SITP and SICP.
6. Conduct a 10 minute bubble test on the surface casing vent using the procedure found in OROGO's Well Suspension and Abandonment Guidelines section 4B. Ensure that the wellhead and SCV piping is not in a frozen state. Check and monitor LEL and H2S levels at wellhead and investigate for evidence of gas migration at surface. Report the results on the daily report and the Wellman form "Surface Casing Vent Flow FAC-38". Ensure that the vent stays open and clear of obstructions throughout all operations and note any subsequent flows on the daily report. **Contact Ken Nikiforuk with the results of the bubble test.**
7. Tie in circulating lines with a return line tied into P-tank. Properly stake surface lines and pressure test lines and manifold to 1,400 kPa ( low ) and 14,000 kPa ( high ) and hold each for 10 minutes.
8. The reservoir is underpressured ( less than 10 kPa/m ) so inhibited fresh water (0.5% CRW132 ) will suffice to kill the well. Ensure there is at least 1.5 times hole volume on location prior to commencing kill operations.
9. Ensure radigans are closed.
10. Bleed off tubing to P-tank.
11. Strip off stuffing box and strip on rod BOP's.
12. Open ratigans.
13. Unseat the pump.
14. Kill the well following the attached forward circulation procedure from the WSBOP manual.
15. Pull and lay down pump and rods.

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16. Remove rod BOP's
17. Install the working spool and BOP's onto the BOP test stump. If required, warm up the BOP stack with steam. Function test the blind rams and pipe rams on the test stump. Close the blind rams and pressure test the working spool, the blind rams and BOP flange 1400 kPa and 21 MPa for 10 minutes each. Install a ported tubing pup and stabbing valve through the BOP's on the BOP test stump. Pressure test the pipe rams and stabbing valve to 1400 kPa and 21 MPa for 10 minutes each. Pressure test the annular preventer to low of 1400 kPa and high of 7000 kPa.
18. Conduct an accumulator function test as per the attached procedure from the WSBOP manual.
19. Ensure the well is dead and remove wellhead top section.
20. Install a 73.0 mm landing pup with an open stabbing valve. Strip the BOP's over the landing pup and nipple up the stack. Close the pipe rams on the landing pup and pressure test the BOP connection to the wellhead for 1400 kPa and 21 MPa for 10 minutes each.
21. BOP drills will be performed at the start of wellbore operations and then weekly if required and are to be recorded on the daily reports. BOP equipment will be function tested at least once daily and any equipment found defective will be made serviceable before operations are resumed.
22. Unset the anchor. Pull and stand the 73.0 mm tubing. Inspect the 73.0 mm tubing on the way out of the hole.
23. Pick up and RIH with 139.7 mm permanent bridge plug. Position and land at 1481 mKB. Refer to Pure Energy's Perforating log dated January 29, 2011. Ensure the BP is not set within 2 meters of a casing collar. Collars located at 1437.0, 1450.5, 1464.3 and 1477.9 mKB.
24. Fill the tubing with inhibited water and pressure up to 14,000 kPa to set the bridge plug.
25. Fill the annulus with inhibited water.
26. Pressure test the bridge plug to 7000 kPa for 15 minutes.
27. Rotate to release off of the setting tool.
28. Establish circulation with inhibited water.
29. Batch mix 0.5 m<sup>3</sup> Class G cement slurry and pump down tubing to set as a balanced plug.
30. Displace with 4.44 m<sup>3</sup> inhibited water.
31. Slowly pull out and lay down two joints of tubing while rotating pipe.
32. Reverse circulate inhibited water at least two tubing volumes or until returns are clean.
33. Pull and lay down tubing. Prior to pulling the last joint out of the hole, circulate over to 50% methanol and 50% inhibited water.

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34. Ensure the well is dead and remove BOP's.
35. Install wellhead. Ensure that bull plugs and needle valves are installed where required and the wellhead valves have been chained and locked.
36. Ensure a wellhead sign is in place.
37. Rig out service rig. Ensure lease is clean and free of debris.

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Upon completion of field work the Wellsite Supervisor shall complete the following:

- Prepare a complete set of downhole and wellhead diagrams showing all serial numbers, pressure ratings, sizes, setting depths, etc.
- A complete lease clean-up shall be conducted. All garbage shall be picked up from the lease, all surplus material shall be transferred to proper storage locations and all rental equipment shall be returned.
- Ensure a sign has been installed.
- Ensure that all field-generated PO.'s MT's etc. are filled out vendor's name and address, a brief description of the work performed and a rough estimate of the final expected costs involved.

**MORNING REPORTS:** All morning reports are to be e-mailed to the following:

Ken Nikiforuk at [knikiforuk@sogoil.com](mailto:knikiforuk@sogoil.com)

Kevin Eike at [keike@sogoil.com](mailto:keike@sogoil.com)

File Room at [fileclerk@sogoil.com](mailto:fileclerk@sogoil.com)

**FIELD TICKETS/INVOICES:**

Field tickets are to be completed in detail with the **Well Location, AFE Number, Codes** and details of the service work. **Tickets are to be signed by the company representative. These tickets and all invoices must be made out to Strategic Oil & Gas Ltd.**

Invoices are to be mailed to:

**STRATEGIC OIL & GAS LTD.  
#1100, 645 – 7th Avenue SW  
Calgary, AB  
T2P 4G8**

**ATTENTION: KEN NIKIFORUK**

**Prepared By:** Ken Nikiforuk  
Completions Manager: \_\_\_\_\_ Date \_\_\_\_\_

**Approved By:** Amanda Reitenbach  
VP, Dev and Ops: \_\_\_\_\_ Date \_\_\_\_\_