

STRATEGIC OIL & GAS LTD. c/o ALVAREZ & MARSAL CANADA INC

STRATEGIC ET AL CAMERON

C-50 60-10N 117-30W

Wellbore Abandonment

August 9, 2021

CONTACTS:

| | | |
|---------------------|----------------------------|-------------------|
| Engineering: | Ken Nikiforuk | Cell 403 804-2510 |
| Field Consultant: | To be determined | Cell |
| Production Foreman: | To be determined | Cell |
| Construction: | To be determined | Cell |
| Facilities : | Kurt Hewitt | Cell 780 830-8303 |
| Director, A&M: | Duncan MacRae 403 538-7514 | Cell 403 815-0297 |

ATTACHMENTS:

OBJECTIVES:

To perform operations on the previously abandoned Sulphur Point wellbore and cut and cap

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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UWI: 300C506010117300

OROGO Well ID: 1608

AFE: to be determined

WORKING INTEREST: 88%

ELEVATIONS: KB: 692.7 m
GL: 688.4 m

TD: 1569.0 mKB **TVD:** 1569.0 mKB **PBTD:** 1323.5 mKB (BP and 30 m cement)

DEVIATION: Vertical wellbore.

SURFACE CASING: 244.5 mm, 53.57 kg/m, J-55, ST&C. Landed @ 426.0 m KB. Cemented with 26.7 tonnes 0:1:0 G + 3.0% CaCl₂. 2 m³ good cement returns to surface.

PRODUCTION CASING: 139.7 mm, 20.83 kg/m, J-55, LT&C. Landed at 1569.0 mKB. Cemented with 70.0 tonnes 0:1:0 G + 0.75% T-10 + 0.2% R-5 + 3 sacks celloflake. Lost cement returns with 8.5 m³ left until plug down. Logged cement top (CBL dated Feb 7, 1989) at 412 mKB.

TUBULAR DATA:

| | <u>Casing</u> | <u>Tubing</u> |
|------------------------------|---------------|---------------|
| Size (mm) | 139.7 | 73.0 |
| Weight (kg/m) | 20.83 | 9.67 |
| Grade | J-55 | J-55 |
| Connections | ST&C | EUE |
| Drift I.D. (mm) | 124.13 | 59.61 |
| Collapse (kPa) | 21510 | 52950 |
| Burst (kPa) | 29440 | 50060 |
| Capacity (m ³ /m) | 0.012729 | 0.003019 |

PRODUCTION TUBING: none in the hole

PERFORATIONS:

| | |
|---------------|------------------------------------|
| Keg River | 1466.5 to 1467.5 mKB (abandoned) |
| Permanent BP | coe at 1462.0 nKB |
| Keg River | 1459.5 to 1461.0 mKB (abandoned) |
| Permanent BP | coe at 1458.0 mKB |
| Keg River | 1456.0 to 1457.0 mKB (abandoned) |
| BP and cement | 1445.0 to 1450.0 mKB |
| Sulphur Point | 1360.0 to 1362.0 mKB (abandoned) |
| BP and cement | 1323.5 to 1353.3 mKB |

H2S: 1.11% - gas analysis dated Feb 24, 2004

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RESERVOIR PRESSURE: 9815.6 kPa – from static gradient dated March 20, 1991

MAX FLARE VOLUME: 1.5 times wellbore volume at 10 MPa = 2.5 e3m3
Note that any significant flare volume in this operation is unexpected

1. Contact the on shift Area Foreman – to be determined - 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. Read and record SICP.
5. MIRU pressure truck and steamer. 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.
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 AER 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. Pressure test casing to 7000 kPa for fifteen minutes with fresh water.
9. Bleed off casing to P-tank.
10. Remove wellhead top section and install a shop bench tested orbit valve.
11. MIRU combination electric line / slickline truck and picker.
12. Perform guage ring run to PBTD.
13. The cement bond log run performed on Feb 7, 1989 shows good cement over the zone of interest with a probable cement top of 412 mKB.

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14. Perform cement bond log from PBTD to surface. Ensure data is transferred for evaluation communications allow. Evaluation results to be forwarded to Ken Nikiforuk and OROGO as soon as they are available.
15. Casing swab wellbore to PBTD (hole volume is 16.8 m3).
16. Fill the hole with 16.8 m3 fresh water.
17. Rig out and release all equipment and services.
18. Depending on the results of the cement bond log evaluation, the decision will be made to go forward with cut and cap operations (proceed to step 48) or to perform remedial cementing operations (proceed to step 19).
19. 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.
20. The reservoir is underpressured (less than 10 kPa/m) so fresh water will suffice to kill the well. Ensure there is at least 1.5 times hole volume on location prior to commencing kill operations.
21. Pressure test the casing to 7000 kPa for ten minutes.
22. Bleed off casing to P-tank.
23. 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.
24. Conduct an accumulator function test as per the attached procedure from the WSBOP manual.
25. Ensure the well is dead and remove the orbit valve.
26. 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.
27. 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.

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28. MIRU electric line truck. Conduct walk around lease inspection and hazard assessment. Document all controls initiated to mitigate identified hazards. Hold and record safety meeting with all personnel on location.
29. Correlate all perforating operations to the recently performed cement bond log. Pick up and RIH with 101.6 mm ERHSC perf guns loaded with 39 gram charges spaced at 17 spm and 60 degree phasing. Position and perforate 1.0 meters at a depth to be determined. POOH and inspect guns to ensure all shots fired.
30. Rig out electric line.
31. Pick up and RIH with 139.7 mm cement retainer on 73.0 mm tubing.
32. Set cement retainer at a depth to be determined.
33. Sting out of retainer and pressure test to 7000 kPa for fifteen minutes.
34. Sting back in to retainer and establish feed rate.
35. Based on the feed rate, the cement blend and volumes will be determined.
36. Sting out of retainer.
37. MIRU cement pumper. 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. Document all controls initiated to mitigate identified hazards.
38. Establish circulation between tubing and casing.
39. Batch mix a to be determined volume of a to be determined cement blend.
40. Circulate a to be determined volume of cement down the tubing and sting back in to retainer.
41. Squeeze a to be determined volume of cement into the formation and sting out of retainer.
42. Slowly pull and lay down two joints of the 73.0 mm tubing while rotating and ensure 15 lineal meters of cement has been circulated on top of the cement retainer.
43. Reverse circulate fresh water at least two tubing volumes or until returns are clean.
44. Pull and lay down tubing. Prior to pulling the last joint out of the hole, circulate over to fresh water.
45. Ensure the well is dead and remove BOP's.

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46. Install wellhead top section and pressure test to 7000 kPa for fifteen minutes. Ensure that bull plugs and needle valves are installed where required and the wellhead valves have been chained and locked.
47. Rig out service rig. Ensure lease is clean and free of debris.
48. MIRU NuWave Industries and cut and cap wellbore as per attached procedure. Ensure pictures are taken.
49. Install abandoned well sign as per attached OROGO specifications.
50. All facilities must be removed while ice road access exists. This can occur either before or after service rig operations have taken place but shall be done during the same winter season.
51. A complete LEL and H2S sweep shall be performed in all areas of the lease including the high line, separator building, tank, flare stack etc.
52. All vessels, tanks and high line shall be drained and purged with air prior to dismantling operations. Any recovered fluid or solids shall be trucked to an approved disposal facility
53. All surface equipment shall be dismantled and taken to the laydown yard at H-03 facility. Further processing shall occur at the H-03 laydown yard. Any reuseable equipment shall be separated. Unusable equipment shall be shredded and shipped to an approved salvage / disposal facility.
54. All piles are to be jet cutted at a depth one meter.
55. The pipeline has been previously discontinued and has already been pigged and purged.
56. The pipeline shall be jet cutted at a to be determined depth. This depth will be past the transition point where the pipeline goes horizontal.
57. A pipeline cap detailing location, size and date of capping shall be installed.
58. 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 kanikiforuk@icloud.com

Kurt Hewitt at kurtw.hewitt@gmail.com

Duncan MacRae at dmacrae@alvarezandmarsal.com

OROGO at orogo@gov.nt.ca

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 on site representative. These tickets and all invoices must be made out to Strategic Oil & Gas Ltd. c/o Alvarez & Marsal Canada Inc.**

Invoices are to be mailed to:

STRATEGIC OIL & GAS LTD. C/O ALVAREZ & MARSAL CANADA INC

#1110, 250 – 6th Avenue SW

Calgary, AB

T2P 3H7

ATTENTION: KEN NIKIFORUK

Prepared By: Ken Nikiforuk
Operations Consultant: _____ Date _____

Approved By: Duncan MacRae
Director, Alvarez & Marsal: _____ Date _____