



**NWT Facility
SUNCOR et al BELE 0-35
Abandonment Program**

Bottom Hole Location: 3000356640126150

**Project Name:
IO #:
AFE Amount: \$**

Electronic Wellfile
'O-35 Abandonment Program' can be accessed via the following link:

Rev #0

Corporate Head Office
Suncor Energy Inc.
P.O. Box 2844, 150 - 6 Avenue S.W.
Calgary, Alberta
Canada T2P 3E3
T: 403-296-8000

This program will be updated once all the venders are chosen and specifics are added to ensure all details that are required to a successful execution are included.

I. OBJECTIVE

The objective is to log the production casing to confirm cement top. Wait on OROGO approval to proceed and then run a bridge plug and swab the casing fluids out. Pump in fresh water. Turn over to Logistic for the cut and cap operation.

II. WELL DATA

Well Name: SUNCOR et al BELE 0-35

Permit Number:	1600	U.W.I:	3000356640126150
AFE Number:		Working Interest %	100%
AFE Amount:	\$		
Spud Date:	Feb 14/86	Rig Release:	Apr 2/86
Elevations:	KB: 397.76 m	GL: 393.26 m	CF: N/A
Depths:	TD: 1384.00 mKB	PBTD: ?? mKB	BGWP: m
Directional:	TVD: Vertical	Angle: n/a	KOP: n/a

Latitude: 66° 34' 58.1357" N **Longitude:** 126° 21' 32.1083" W

III. TUBULAR & WELLHEAD DATA

Conductor: 5 jts – 339.7 mm, 101.2 kg/m, K-55, BT&C csg set @ 63.0 mKB
Cemented w/pumped 1.6 m³ of water followed by 8.3 m³ (10.8 tonne) of G + 3.0% CaCl₂ @ 1890 kg/m³ cement, float not holding.

Surface Casing: 3 jts – 244.5 mm, 59.53 kg/m, K-55, LT&C set @ 777.0 mKB
19 jts – 244.5 mm, 59.53 kg/m, T-95, LT&C set @ 739.03 mKB
42 jts – 244.5 mm, 59.53 kg/m, K-55, LT&C set @ 515.66 mKB
ECP & DV toolset at 37.97 mKB

Cemented w/ 1 stage 10 tonne "G" + 2.0% CaCl₂ @ 1895 kg/m³
2 stage 4.4 tonne of "G" + 2.0% CaCl₂ @ 1895 kg/m³.

2.0 m³ good cement returns to surface

Production Casing: 117 jts – 177.8 mm, 43.16 kg/m, MN-80, LT&C csg set @ **1384.33 mKB**

Cemented w/ 4.8 m³ water, lead 30.0 tonne (39.6 m³) of “G” + 0.5% D65 @ 1890 kg/m, bumped plug with 18 MPa. Bleed off float held.

Cement top calculated to be at 500 mKB.

0.0 m3 of cement returns to surface

Wellhead: 279.4 mm x 245 mm Casing Bowl, 21 MPa, McEvoy
279.4 mm x 179.4 mm Tubing Head, 21 MPa Cameron
179.4 mm x 65.1 mm, Tubing Head Adapter Flange, 21 MPa
65.1 mm, 35 MPa, Master Valve, Cameron
65.1 mm x 52.4 mm 21 MPa Flow Tee
52.4 mm, 21 MPa, Wing Valve

IV. ATTACHMENTS

- Wellbore diagram

Well History

Feb 1986 DRILLING HISTORY

This well was spud on February 14, 1986 and drilled as follows

Conductor 1

- Drilled 445 mm conductor hole to 63 mKB with
- Ran 5 joints 340 mm 101 kg/m K-55 BT&C casing
- Landed at 63.0 mKB.
- Cemented in place with 10.8 tonnes G w/ 3% CaCl₂, float did not hold.

Surface Hole

- Tagged cement at 52.0 m drilled out.
- Switched to air drilling at 163.0 m.
- No water inflow encountered at 333.0 m
- 362 m string weight dropped to 12,000 daN. Fished BHA out. Ran in with new DC.
- Finish drilling to 777.00
- Logged (DIL-GR, CHL, LDT- MGR-Dual Caliper, BHCS, HDT-Cal) open hole to 777 mKB; casing shoe at 63 mKB
- Ran 245 mm 60 kg/m K-55 LT&C casing (see casing record attached)
- Cemented with 10 tonnes class G cement (stage 1);
- Cemented with 4.4 tonnes class G + 2% CaCl₂ (stage 2); stage tool at 45 mKB
- 2.0 m³ good cement returns to surface
- Weld on casing bowl (10 3000# x 9 5/8); pressure tested weld to 21 MPa.
- RIH with 216 mm bit and tagged DV closing plug at 37.97 m.
- Drilled out DV tool plug then continued to drill out float with 216 mm bit.

Surface Section

Day 9 started to drill surface hole, drilled to 85 m with water based mud

Day 10 Drilled to 163 m with water/air. Switched to air at 100 m. No fluid inflow, lost circulation problems apparent.

Day 11	Drilled to 270 m with air. Twisted off at collar.
Day 12	Drilled to 333 m with air. Fished BHA. Drilling ahead and noted mist in returns.
Day 13	Drilled to 362 m with air. Twisted off again. Fished BHA again. Waiting on DC inspections.
Day 14	Drilled to 362 m with air. Finished DC and BHA inspection.
Day 15	Drilled to 401 m with air. Changed direction of Blueie line to off lease making 12 m ³ /hr of fresh water with 125 mg/L at 363 m.
Day 16	Drilled to 468 m with air.
Day 17	Drilled to 585 m with air.
Day 18	Drilled to 590 m with air.
Day 19	Drilled to 639 m with air.
Day 20	Drilled to 692 m with air.
Day 21	Drilled to 718 m with air.
Day 22	Drilled to 768 m with air.
Day 23	Drilled to 777 m with air.

Main Hole

- Displaced hole to mud.
- Cored 1330.5-1340.6, 1340.6 – 1353.0, and 34 sidewall cores
- Logged (DLL-MSFL, CNL-LDT-NGT-AMS, BHCS, HDT, MEL, SNL-LDT, WST)
- Performed DSTs over Mt Clark and Mt Cap formations
- Ran 117 joints 178 mm 43.16 kg/m MN-80 LT&C casing
- Casing landed at 1384.33 mKB
- Cemented with 30 tonnes class G with 0.5 % D65
- Displaced cement with drilling mud; Bump Plug w/ 18 MPa.

Sept 2009	Did a lease inspection. Flew to location. Did a bubble test on vent no issues. Serviced the wellhead. Pressure tested the casing to 1.0 MPa for 10 minutes, good. Filled the casing up with 200 l of Nalco R-7390 corrosion inhibitor. Rigged out.
Sept 2013	Did a lease inspection. Flew to location. Did a bubble test on vent no issues. Serviced the wellhead. Rigged out.

Aug 2019 A OROGO inspection report was done by Barlon Engineering. Did a bubble test which was negative and did a gas migration test which was negative. Serviced the wellhead.

Jun 2024 A OROGO inspection report was done. Did a bubble test which was negative. Serviced the wellhead. Pressure tested the well to 5.5 MPa for 15 minutes.

V. TUBULAR PROPERTIES

O.D. (mm)	Weight (kg/m)	Grade	Thread	I.D. (MIN) (Pin) (mm)	Drift Diameter (MIN) (mm)	Coupling O.D. (S&B) (mm)	Capacity (MAX) (m ³ /m)	Collapse (MPa)	Burst Body Connection (MPa)	Tensile (1000daN)
339.7	101.2	K-55	BT&C	315.3	311.4	365.1	0.07726	13.44	23.79	319.4
244.5	59.53	K-55	LT&C	224.4	218.4	269.9	0.039559	17.72	27.23	249.5
244.5	59.53	T-95	LT&C	224.4	218.4	269.9	0.039559	22.96	47.02	326.8
177.8	43.16	L-80	LT&C	157.1	153.9	194.5	0.019569	48.4	56.26	265.6

VI. LANDING DEPTHS

Description	Landing Depth, mKB
Conductor	63.0
Surface Casing	777.0
Production Casing	1384.33

VII. FORMATION TOPS

Formation Top	mSS	mKB	mTVD
Franklin Mountain	393	6.0	
Thrust / Bear Rock	353	46	
Franklin Mountain	277.76	120.0	
Saline River Salt	-364.74	762.5	
Saline River Salt Member	-402.99	800.75	
Shale Marker	-414.24	812.0	
Lower Salt	-419.24	817.0	
Mount Cap	-722.49	1120.25	
Mount Clark	-945.94	1343.7	
Proterozoic	-964.74	1362.5	

RESERVOIR PROPERTIES

Formation: Abandoned / Never Completed
Fluid Type:
Interval (mKB):
Length (m):
TVD (m):
Pressure (kPa):
Temperature (°C):
Max H₂S / CO₂ (%):

VIII. SUNCOR REQUIREMENTS

General:

This well is part of a project which is proprietary to Suncor Energy Inc., Information is to be held strictly confidential, document not to be copied.

Well site Supervisors must ensure that the applicable Suncor Safe Work Practices are observed, including the following:

- Safety Orientation - All Onsite personnel must be oriented to site hazards and signed in on the sign-in log.
- Ground Disturbance deeper than 30 cm (including rig anchors) is not to be carried out without the direction of a Logistics representative.
- Hydrocarbon Exposure LEL monitors will be used by all personnel on any job where hydrocarbon vapors may be present.
- H2S Safe Work Practice will be observed by providing H2S detection equipment, trained personnel, and specified safety equipment when required.
- Ensure a Field Level Hazard Assessments (FLHA) to identify and document site specific hazards are completed prior to commencing work, before all critical tasks and at any change in scope during the task as per the Suncor Completions SWP / MOC / ODN.

Ensure current MSDS sheets are onsite for all controlled products including produced fluids. Ensure that workers are made aware of the Hazards and safeguards.

All unplanned events that occur that cause or could have caused loss are to be reported to the Completions Superintendent immediately. Incidents with or without loss must reports must be utilized as directed by the Completions Superintendent.

Conduct all operations in accordance with applicable IRP's, provincial acts and regulations pertaining to the OROGO.

An Assignment of Supervisor form must be completed and posted at location.

In the event of injured worker they will be transported back to Norman Wells Hospital using the helicopter.

Employees and contractors certification of First Aid, H₂S, WHMIS and TDG etc. must be verified before they are allowed access to work on site.

All contractors' competency must be verified before they are allowed access to work onsite. Frequent, task-specific, on-going competency assessments must also be conducted for the duration of a contractor's term in a specific position.

A site walk inspection must be conducted every day in conjunction with a morning operational / safety meeting outlining all safety hazards and planned procedures for the day. This must be recorded on the daily tour report.

Any operation outlined in this program or otherwise implied by the nature of the work to be conducted that requires clarification shall be discussed with Operations.

Calgary office, Completions Analyst, Completions@Suncor.com will submit required OROGO notifications.

IX. CONTACTS**SUNCOR PRIMARY CONTACTS**

Name	Title/Location	Office	Cellular
Greg Heffel	Completions Engineer	403-296-5549	403-816-2422
Jonathan Koteles	Completions Supt.	403-296-8916	403-510-7217

REGULATORY, HEALTH, & SAFETY AGENCIES

Name	Emergency #	Emergency #	
SEC Calgary	403-296-3000		
Air Ambulance Service	1-800-661-3822		
RCMP – Norman Wells	867-587-1111		
Regional Hospital – Norman Wells	867-587-3333	867-444-4321 (Nurse on call)	
W.C.B.	1-866-922-9221		
FOREST FIRE NWT	1-877-698-3473 (1-877-NWTFIRE)		
GNWT (Office of the Regulator of Oil and Gas Operations)	1-867-920-8130 (24hr) (Spill Response) 1-867-445-8551 (Incident Response) 1-867-767-9097	310-3473 Emergency Reporting Line	
Sathu Land and Water Board (SLWB)	1-867-598-2413		
Mackenzie Valley Land and Water Board (MVLWB)	1-867-669-0506		
NWT – Environment and Natural Resources Sahtu Regional Office	1-867-587-2422 (General) 1-867-587-2422 (Wildfire)	403-297-8311 (24hr) Calgary Office	
NWT – Environment and Natural Resources Decho Regional Office	1-867-695-7450 (General) 1-867-695-7433 (Wildfire)		

SERVICE COMPANY CONTACTS

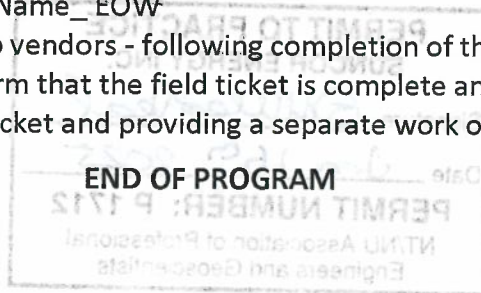
Service Type	Company	Contact Name	Office Number	Cellular	# People
Gas Migration Test	GChem	Walker Duriez	780-871-2299	780-872-4561	1
Logistic Foreman		Tom Grant		780-778-1615	1
Great Slave Lake	Helicopters	Jacob Laba		604-345-8053	1

X. PROCEDURE

Field conditions and engineering decisions may change throughout the course of the job. However, do not change or deviate from this program without following the Wells Management of Change Procedure.

1. Review the previous WellView report for this well. Flag any potential issues and discuss with the Calgary Superintendent.
2. Ensure to have OROGO ACW-2021-SUN-0-35-WID1600 (Alter Well Approval and OROGO OA-2021-003-SUN (Operations Authorization) readily available onsite. These documents are OROGO approvals to perform the abandonment work. Will be supplied in teams work page.
3. Inspect the wellhead valves for signs of damage and report Calgary if there is.
4. Hold a safety orientation with a procedural meeting and conduct a pre-job hazard assessment with all onsite personnel and document in the Daily Report.
5. Monitor LEL and H₂S with personal monitors throughout the program.
6. Perform a 10-minute Surface Casing Vent Flow bubble test as per the outlined procedures in OROGO "Well Suspension and Abandonment Guidelines and Interpretation Notes" Section 4A. Notify the Operations Supervisor of the results and document the results in the Day #1 daily report.
7. Measure and record casing pressure. Notify Calgary operations if pressure exists.
8. Fly in equipment and personal using helicopters.
9. Pressure test the casing to 7 MPa for 15 minutes.
10. Move in rig up portable wireline skid.
11. Stand mast or hang sheave spool and make equipment and tools ready for wireline operations.
12. Run in the hole with bond logging tools to plug back. Log to surface. Wait on interpretation and OROGO approval before proceeding to next steps.
13. Make up and run in the hole with a permanent bridge plug and set depth will be determined based on logging results.

14. Rig in swabbing equipment. Swabbing the wellbore fluid back into surface tanks. Fluid will be transferred from surface tanks to fly bladders to be moved back to storage.
15. Once the wells are swabbed dry then fresh water can be flown in and pumped into the wellbore until it is full. Then swab the well down 3 m to ensure it is winterized.
16. Rig out and release all services. Move all equipment off location.
17. Fill out the attached “Surface Abandonment Handover Form” and turn the well over to logistics for cut and cap. Note the date of the gas migration testing in the document. Send form to Greg & Jon.
18. Rig out and release all services. Move all equipment off location.
19. Finalize Documentation
 - Ensure tubing tallies are entered and correct in Wellview.
 - Ensure WellView schematic is accurate, as built, drawing.
 - Take a picture of final wellhead and add as WellView attachment **and take lease pictures.**
 - Attach electronic copies of well related information to WellView file, if applicable.
 - **Ensure the surface casing vent flow sheet is filled out in wellview.**
 - Well Site Supervisor emails Project Engineer of the end date of the operation in Wellview and files end of well (EOW) documentation in the Completion Microsoft Teams EOW WSS Entry
 - Completion Teams Folder>General> EOW> End of Well WSS Entry
 - License # _ Well Name _ EOW
 - Issue Work Orders to vendors - following completion of the requested work, field operations will confirm that the field ticket is complete and accurate in writing, by signing the field ticket and providing a separate work order.



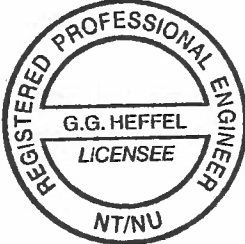
XI. PROGRAM SIGN OFF

Aug 22/24

PREPARED BY:

Greg Heffel
Specialist Completions Engineering

Date



APPROVED BY:
Tier 1:

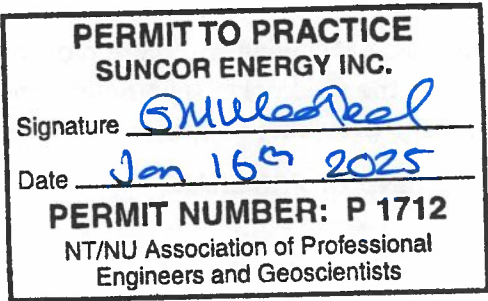
Jonathan Koteles
Superintendent, Completions

Date

APPROVED BY:
Tier 1:

Stephen Weatherhead
Director Completions Engineering

Date





Surface Abandonment of Cased Well - Handover Document

**** For Corehole Abandonment (OSE): see Surface Abandonment OSE Corehole Form**

(Completions) Downhole Abandonment Date: _____
(Logistics) Surface Abandonment Date: _____

Wellsite (Name + UWI): _____

MSL # _____

Completions Supervisor: _____

Logistics Supervisor: _____

- | | | Y | N | N/A |
|----|---|--------------------------|--------------------------|--------------------------|
| 1 | Pressure test passed? Read & record shut-in casing pressure _____ kPa / 15 min's | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Cement depth consistent with D20? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Other D20 consideration explain: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Well head removed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Solar Panels and other hardware removed / deactivated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Safe Work Permit from Operations received by Logistics? | <input type="checkbox"/> | | <input type="checkbox"/> |
| 7 | On-site safety meeting held? | <input type="checkbox"/> | | |
| 8 | Ground Disturbance Authorization received? | <input type="checkbox"/> | | <input type="checkbox"/> |
| 9 | Hot work permits received? | <input type="checkbox"/> | | <input type="checkbox"/> |
| 10 | Personal 4-head gas monitoring in place? | <input type="checkbox"/> | | <input type="checkbox"/> |
| 11 | LEL tested at wellhead?
<i>Note: If reading exceeds 0%, stop work & contact Calgary.</i> | <input type="checkbox"/> | | <input type="checkbox"/> |
| 12 | Surface casing vent flow test was performed.
<i>Note: If flow detected, stop work & contact Calgary.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13 | Other Hazardous material used during down hole abandonment
<i>Explain</i> _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14 | Mitigative measures taken to deal with Hazardous material:
<i>Explain</i> _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15 | Depth to cement: <u>Cement from screen top to surface GL.</u> _____ <i>(Required: Depth or Unknown)</i>
If Unknown - why? (Frozen, etc.) _____
<i>Note: If >8m Stop and review with Calgary office</i>
Fill to 3 meters below ground level with Cement if greater than 8m | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16 | Depth to water: 211.04 mASL _____ <i>(Required: Depth or Unknown)</i> | | | |
| 17 | Nu Wave Technology used? | <input type="checkbox"/> | <input type="checkbox"/> | |
| 18 | Intermediate/production casing(s) capped with steel plate? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19 | Surface casing capped with steel plate? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20 | Welding & venting procedures documented? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21 | Casings cut off and capped greater than 1m* below final contour elevation?
<i>*Note: 2m below final contour elevation if located on peat lands or if within 15km of urban development (50 houses or see survey plan)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22 | Job documented with pictures? See 2nd tab | <input type="checkbox"/> | | |
| 23 | Additional Comments Completions : | | | |

Type of Fluid left above Plug: _____

24 Additional Comments Logistics : _____

25 Completions Supervisor: Fill in Red Highlighted and forward to Completions Superintendent and Logistics Field Representative.

26 Logistics Supervisor: Save Document as PDF including UWI in the document name and within 48 hours of work being completed.
Forward to: LOGISTIC@suncor.com, Logistics Superintendent, gbis@telus.net, sun.jodymccconnell@ddmail.ca
NOTE: cc Tanya Richens (trichens@suncor.com if within Firebag or Mackay River EPEA Boundary)

Greg Heffel

To: Paul Carpentier
Subject: RE: OROGO

From: Paul Carpentier <pcarpentier@suncor.com>
Sent: January 16, 2025 1:03 PM
To: Greg Heffel <gheffel@suncor.com>
Subject: RE: OROGO

As per OROGO's **Well Suspension and Abandonment Guidelines and Interpretation Notes, Section 6E, Surface Abandonment Requirements**, the following shall be completed by Suncor:

1. Cup & Cap : Removal of the Casing String at 1M below the natural ground level using water-jet cutting tool to minimize ground disturbance
2. Capped at surface using approved friction fit bowstring cap, similar to Tathlina N-18 well
3. Acquisition of the coordinated of well center (NAD83, DMS (2 decimal places) or Decimal Degrees (4 decimal places))
4. Marked with a durable post and sign as per signage and post requirements (lettering, angle, color)

Paul Carpentier RPF
Wells - Logistics Superintendent
E&P & In Situ
587-646-9482
pcarpentier@suncor.com



SECW-15-006
150 – 6 Ave S.W, Calgary, Alberta

