INTRAGAZ ASSET USEFULNESS

ANALYSIS REPORT

PREPARED BY GRB ENGINEERING LTD.

A Division of GENIVAR Inc.

GRB PROJECT # 2102

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

Intragaz has requested GRB Engineering Ltd. (GRB) to review the assets and prepare a report in response to the 2011 Régie de l'énergie (Régie) request for additional information and support of the usefulness of all of Intragaz assets required for operations. Another application will be made in June 2012 to the Régie for rates to be effective May 1, 2013. This report is to be filed as part of the evidence supporting the application.

The definition of "useful" in this report is understood to apply to the assets contributing to the operation of the gas storage facilities at Pointe-du-Lac and Saint-Flavien. Included in the report is an examination of all assets related to the continued safe operation of the storage reservoirs as well as maintenance equipment and spare parts.

The writer of this report is limited in capacity for the review of the geological assets including the reservoir characteristics, wells and cushion gas. Mr. Frank Sorensen from Sproule Associates Ltd. (Sproule) was engaged by Intragaz to review these assets as he has been modeling both storages for many years. Evidence of the usefulness of these assets is included within the body of the report, but has been delineated by footnotes where appropriate.

We established the usefulness criteria presented in Section 4 of the document in order to objectively evaluate the assets usefulness. To determine if the assets included in the rate application are useful, GRB also performed a technical review by examining how the equipment and assets contribute to the provision of storage services by Intragaz. This was completed by examining pressures, temperatures, flow rates through the equipment, maintenance records, and whether the equipment is spare and required to ensure reliability. The detailed analysis is presented in the Appendix Section which is presented in a separate document to facilitate the reader's work.

1.2 FINDINGS AND CONCLUSION

Upon finalizing the site visit report and investigation we (GRB and Sproule) acknowledge the overall usefulness of the assets at both facilities. Both underground storage facilities have proven their usefulness as a whole for their respective operation and the majority of all assets have been found useful. During the investigation, however, it was noted that some portions of Intragaz assets are not currently useful and additional commentary was required. The minor findings that were discussed and required further explanation from Intragaz are detailed in Section 6.0 and include compressor C-2 at Pointe-du-Lac, a 270 m of 6 inch line from the well SF-13 in Saint-Flavien, a methanol skid at the well SF-13, an electrical distribution feed in Saint-Flavien, and a coalescing filter at the Saint-Flavien wellsite #1.

2.0 STORING NATURAL GAS

It is a common practice in the natural gas industry to use former gas or oil reservoirs for storage uses. These natural gas storage sites are a key component of natural gas transportation and distribution networks, since they facilitate the balancing of supply, which is relatively stable and limited by transportation network capabilities, and varying demand. To ensure gas network efficiency and reliability, natural gas is stored during periods of low demand (e.g. summer) in order to be able to meet the needs during periods of high demand (e.g. winter).

The demand for natural gas fluctuates from one day to the next for a variety of reasons, including weather. As such, storage sites are tools that make it possible to efficiently offset seasonal and daily imbalances between supply and demand.

Storing natural gas near consumption centers also increases security of supply and operational flexibility.

2.1 POINTE-DU-LAC STORAGE SITE DESCRIPTION

The Pointe-du-Lac storage site is located approximately 100 km northeast of Montreal on the north shore of the St. Lawrence River, 12 km west of Trois-Rivières. The reservoir is oval shaped with the long axis oriented NE/SW. It is approximately 3 km long and 1 km wide. This depleted gas reservoir situated in an aquifer is primarily used for peak shaving but can also be used to balance seasonal volumes. It is connected to the TQM Pipeline (TQM) transportation system located 3 km north of the compressor station. The working gas volume within the reservoir can be cycled up to 3.5 times per year. The overall working gas capacity is 22,700,000 m^3 with a maximum withdrawal rate of 1,200,000 m^3/day and a maximum injection rate of 2,400,000 m^3/day.

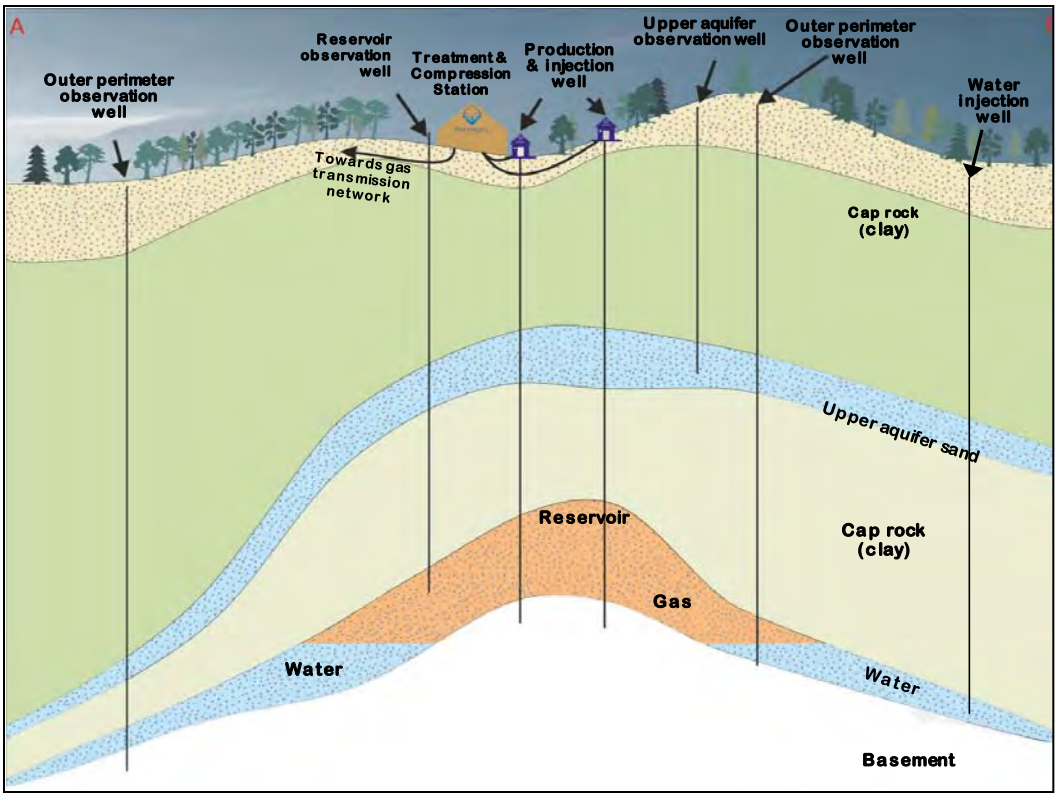
The Pointe-du-Lac site is unique for its high porosity and permeability and geological homogeneity. The equipment listed below is used to exploit the site's injection and withdrawal capacities:

- Thirteen (13) injection/withdrawal wells equipped with 2-phase gas/water separators
- Fourteen (14) peripheral observation wells
- Four (4) upper aquifer observation wells
- One (1) water reinjection well and a collection system for withdrawn water
- Collection basin and pumping station for withdrawn water
- 2.5 km of low pressure gathering line for natural gas injection/withdrawal
- 2.9 km of high pressure gas pipeline connecting the storage site to the TQM transportation system

- Three (3) natural gas powered compressors:
  - One (1) 2587 BHP, and
  - Two (2) 2650 BHP
- Gas dehydration and dewatering equipment
- Heating and natural gas decompression equipment

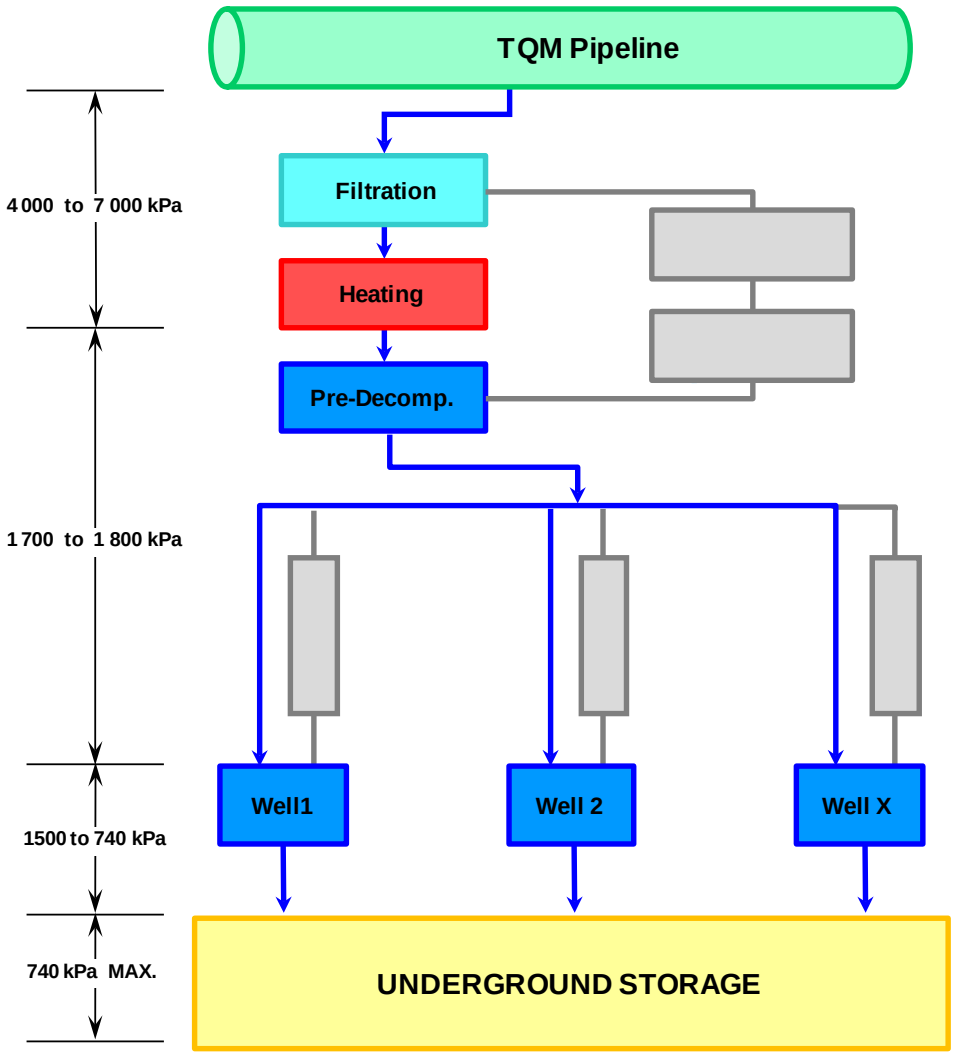
The reservoir is composed of unconsolidated sand deposited after the next-to-last glaciation approximately 120,000 years ago. Its thickness ranges from a few meters to more than 10 meters, and it is only 60 to 120 meters deep. The structure was created by the presence of a structural elevation in geological basement formations covered by glaciofluvial sand deposits with an impermeable clay layer serving as cap rock. The exceptionally high permeability and porosity of the sand, resulting in high injection and withdrawal rates, make the storage site ideal for peak shaving.

Pointe-du-Lac Storage (cross section)



2.1.1 POINTE-DU-LAC INJECTION

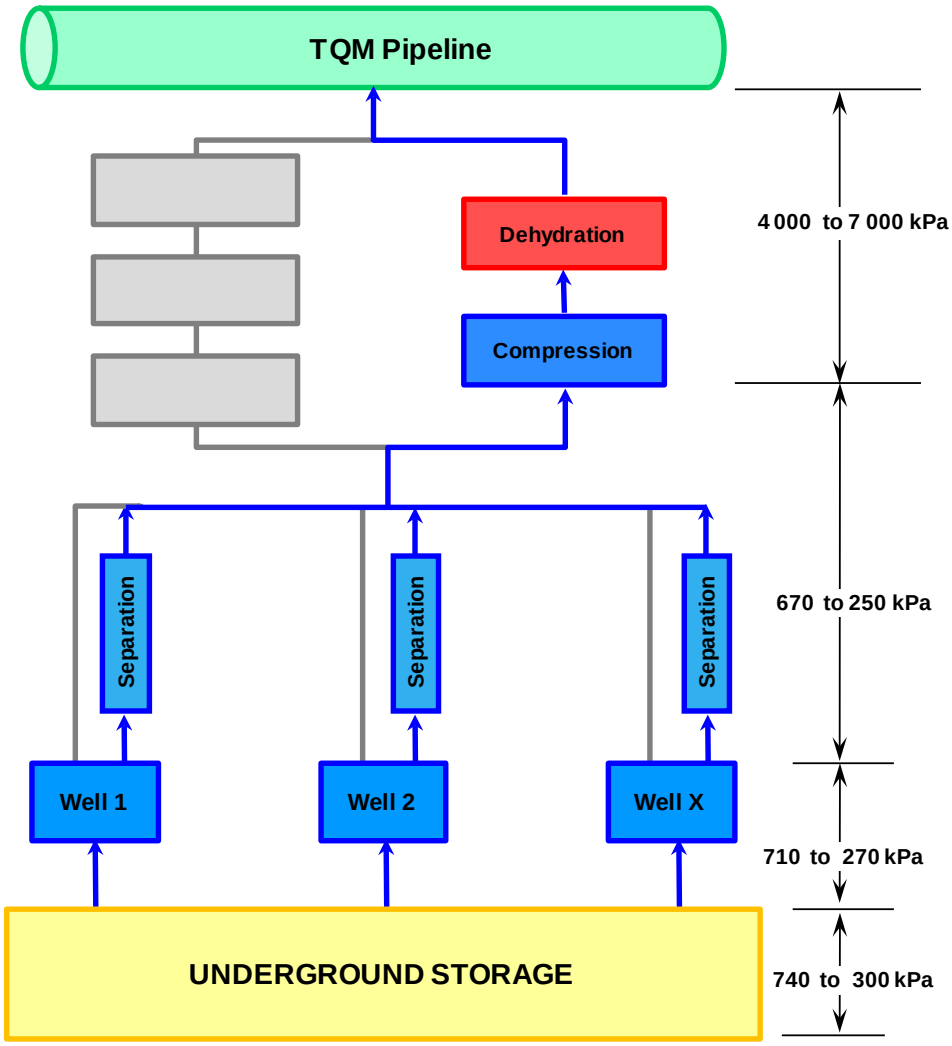
The operating pressure in the reservoir is relatively low (740 to 300 kPa) and in particular much lower than the operating pressure of the pipeline it is connected to (7,000 kPa operating pressure). This means that the gas must be compressed during withdrawal and, conversely, pressure must be reduced prior to injection into the reservoir.



When the gas enters the facility from the TQM pipeline it is filtered to remove particulate and other foreign matter. It is then heated to reduce the risk of the Joule-Thomson effect (JT effect) that occurs when the gas pressure is reduced. The gas is then initially decompressed to around 1,700 kPa to feed the gathering system, and then decompressed further at each well prior to injection into the reservoir.

2.1.2 POINTE-DU-LAC WITHDRAWAL

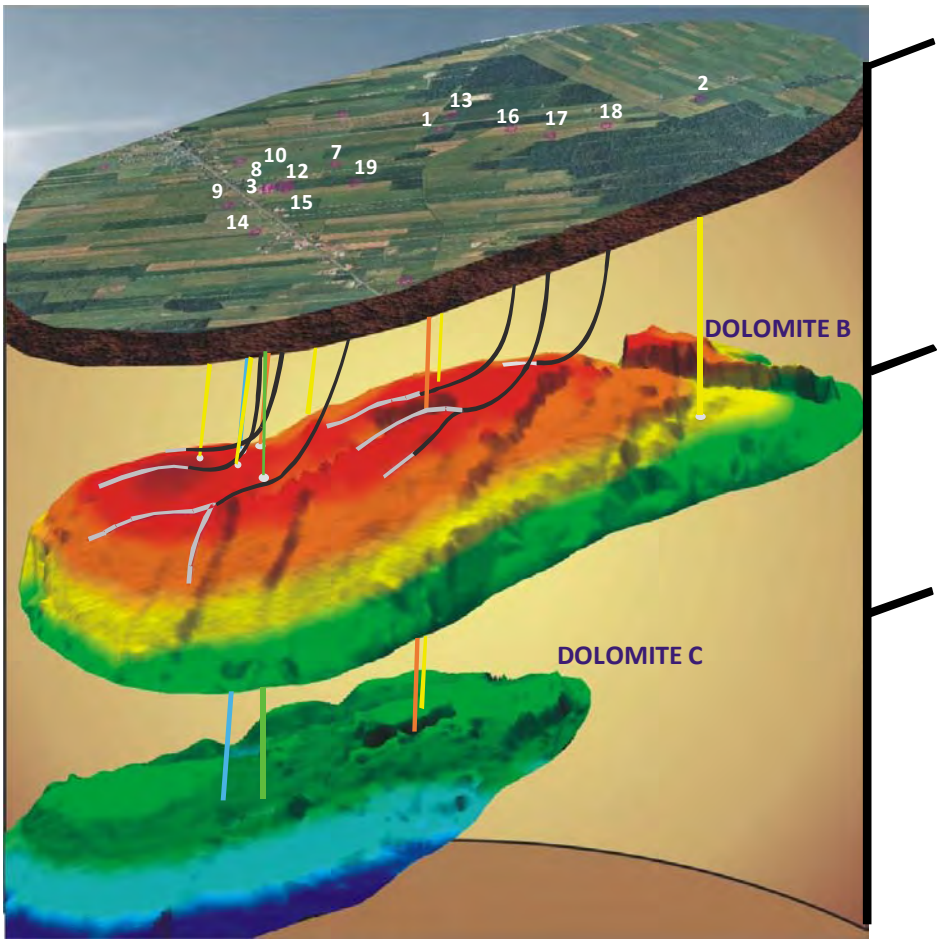
The withdrawal process utilizes the same pipeline and equipment infrastructure utilized during the injection process. The free water generated during withdrawal is separated from the gas by a two phase separator at each well and reinjected in the reservoir. The water saturated gas from the wells is transferred to the compressor station via the gathering/injection pipeline system, where it is compressed through three compressor units operating in parallel and then dehydrated for transport. The dehydration is required to satisfy the water content specification of the gas prior to entering the TQM system.



2.2 SAINT-FLAVIEN STORAGE SITE DESCRIPTION

The Saint-Flavien storage site is located 40 km southwest of Quebec City near Laurier-Station, approximately 10 km south of Highway 20. The facility is connected to the TQM Pipeline system located 24 km away at Saint-Nicolas. This facility is primarily used to balance seasonal volumes but can be utilized for meeting the winter peak gas consumption. The overall working gas capacity is 120,000,000 m^3 with a maximum withdrawal rate of 1,920,000 m^3/day and a maximum injection rate of 900,000 m^3/day. The following equipment is used for injection and withdrawal:

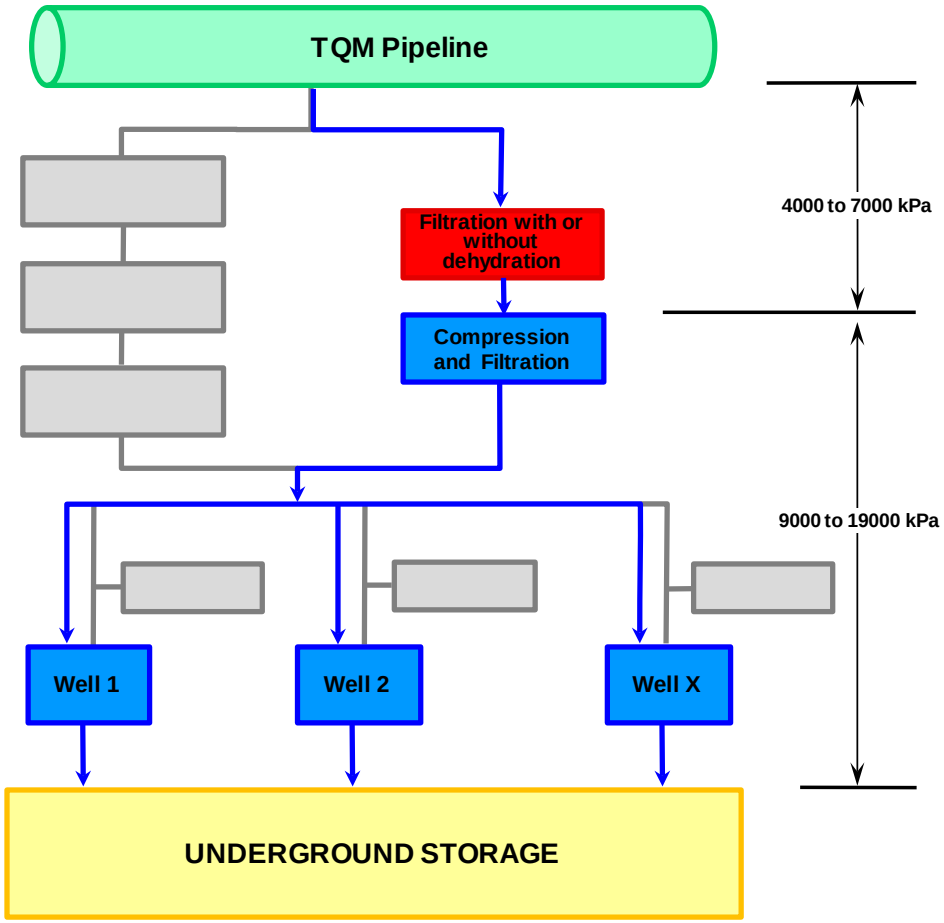
- Eleven (11) injection/withdrawal wells, including six (6) wells with horizontal wellbores totalling nearly 8 km
- Four (4) observation wells
- 4 km of gathering/injection lines
- 24 km of high pressure pipeline linking the storage site to TQM facilities in Saint-Nicolas
- Two (2) natural gas powered compressors: 1,600 BHP and 2,400 BHP
- Gas dehydration and dewatering equipment
- Heating and natural gas decompression equipment



The Saint-Flavien reservoir is located at a depth of around 1,500 meters in a geological zone that was overthrust when the Appalachians were formed some 440 million years ago during Taconian orogeny. It is composed of dolomite that formed there around 470 million years ago and is part of the Beekmantown formation. It is covered by nonporous carbonate, which serves as cap rock. The reservoir's thickness ranges from 1 to 8 meters, with porosity ranging from 2.5% to over 10% but on average between 3% and 5%. The porosity is of secondary origin, meaning that pre-existing porosity was improved by way of hydrothermal fluids and natural fracturing.

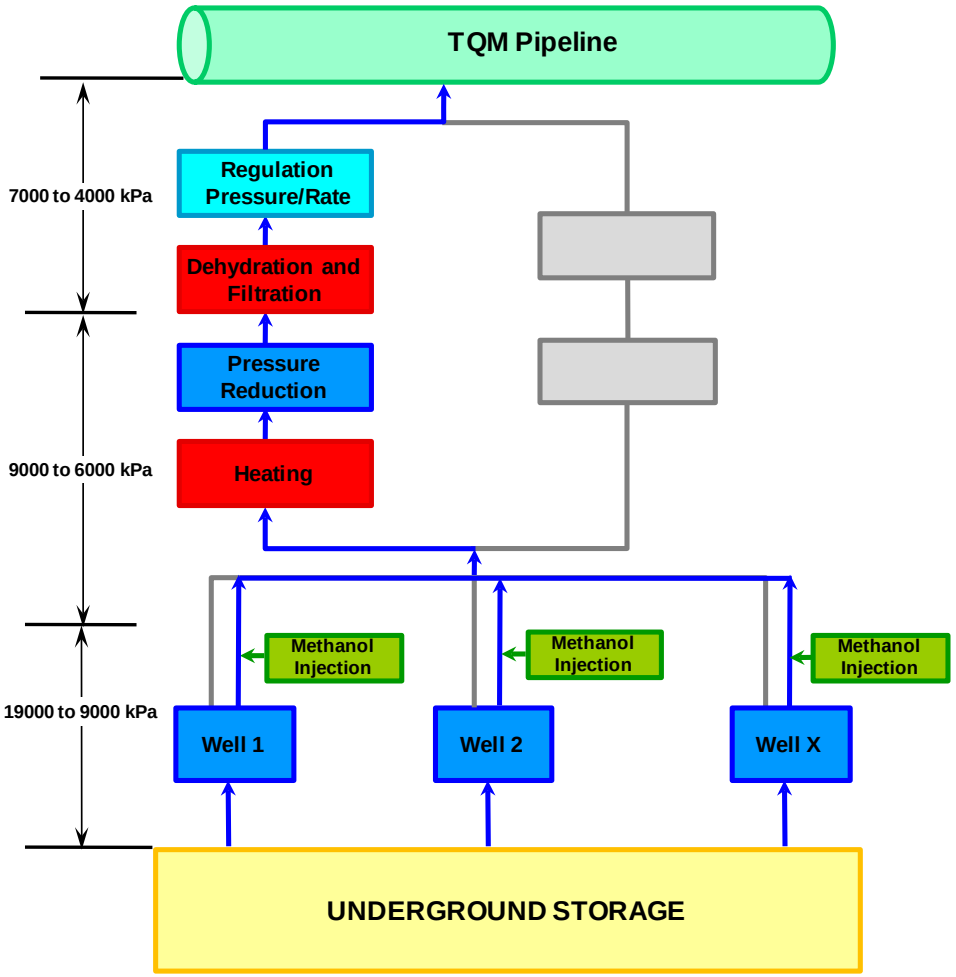
2.2.1 SAINT-FLAVIEN INJECTION

During injection, gas coming from the TQM pipeline is first filtered and compressed as high as 19,000 kPa before being transferred to the wells by a gathering system. At each well, the gas is measured and injected into the reservoir. Filtration is required after compression to remove entrained lubricants and other deleterious matter that would be harmful to the reservoir.



2.2.2 SAINT-FLAVIEN WITHDRAWAL WITHOUT COMPRESSION

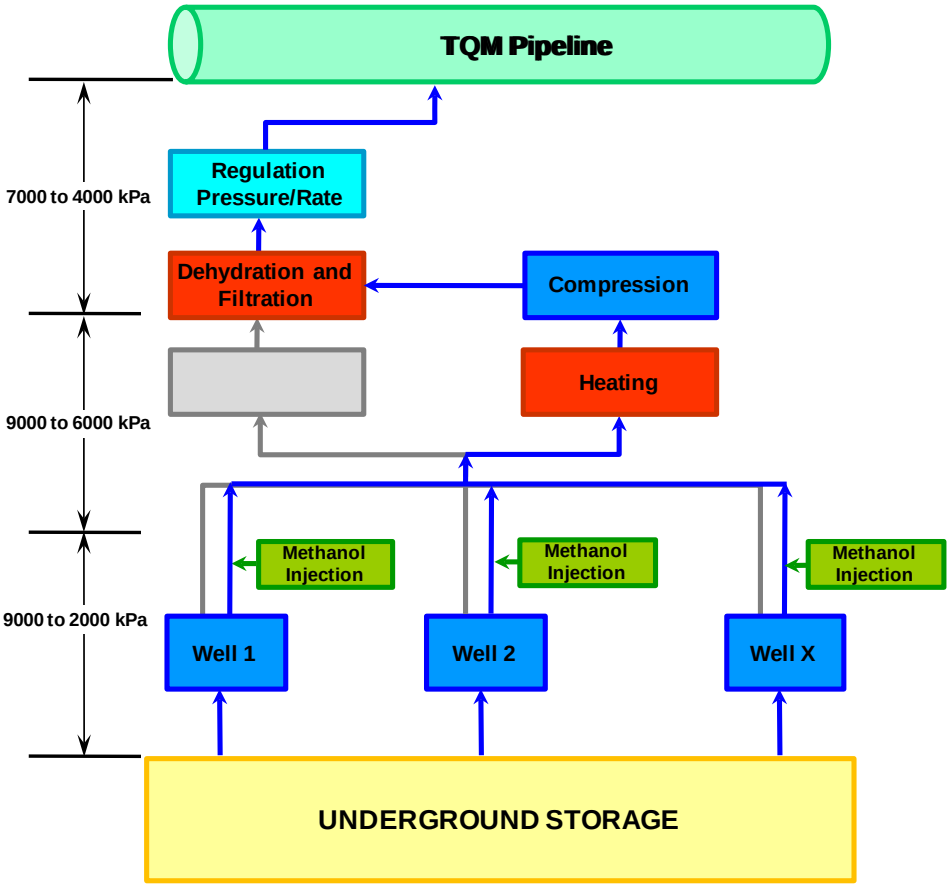
At the beginning of the withdrawal season, the pressure differential between the reservoir and gas pipeline moves the gas out of each well. A methanol injection system located at the wells prevents hydrates[1] from forming in the gas. The gas is then transferred over the gathering system, heated, decompressed to the required pressure, and dehydrated prior to entering the pipeline at the desired flow and pressure tying the site to the TQM system. Free water is collected in the facility inlet separator prior to disposal.



[1] Hydrates: A hydrate is formed when natural gas turns to the solid phase in presence of specific water saturation, temperature and pressure conditions.

2.2.3 SAINT-FLAVIEN WITHDRAWAL WITH COMPRESSION

When the pressure drops in the reservoir during the withdrawal season and becomes less than the TQM system pressure, compression is required to increase the gas pressure to the flowing pressure within the TQM system. Dehydration is required to maintain minimum water content of the gas prior to entering the TQM system.



3.0 TECHNICAL DESCRIPTION OF ASSETS

3.1 LAND

3.1.1 POINTE-DU-LAC

(See Appendix 1A)

The storage facilities are located at about 12 km from Trois-Rivières on both sides of Highway 40 between Rang Saint-Charles and Road 138 in the district of Pointe-du-Lac.

The majority of the assets are located on lands acquired by Intragaz to ensure safe operational distance from residential areas. Intragaz is the owner of lots 1307250, 1306968, and 1309037 covering approximately 426,440 square meters.

3.1.2 SAINT-FLAVIEN

(See Appendix 1B)

The Saint-Flavien storage site is located approximately 40 km southwest of Quebec City on the south shore of the St-Lawrence River in the municipality of Saint-Flavien.

The majority of the assets are located on lands acquired by Intragaz including lots 288 and 292 covering approximately 162,000 square meters.

3.2 CUSHION GAS

3.2.1 POINTE-DU-LAC

(See Appendix 2A)

No gas belonging to Intragaz has been injected into the storage reservoir as cushion gas. Gaz Métro owns the 35.7 10^3 m^3 of cushion gas injected to this day.

3.2.2 SAINT-FLAVIEN

(See Appendix 2B)

161.7 10^3 m^3 of gas was injected into the storage reservoir as cushion gas throughout the development phase of the project. Intragaz has increased the ratio of working gas to cushion gas from 35% to approximately 75% by increasing the working gas portion with a successful horizontal drilling program. This increased the effectiveness of the cushion gas.

3.3 RIGHT-OF-WAY AND PIPELINE

3.3.1 POINTE-DU-LAC

(See Appendix 3A)

The construction and operation of the storage project required agriculture and environmental studies to satisfy the regulatory process for the pipeline and facility installation.

The right-of-way acquired is 3 km long and 18 meters wide in order to link the storage facility to the TQM transportation line.

A 2.9 km long pipeline has been installed between the TQM main line and the facility. The line has a diameter of ten inches and is operated at 7067 kPa maximum operating pressure. It is important to note that TQM performs the storage metering for injection and withdrawal. All data is transmitted to both Intragaz and Gaz Métro.

3.3.2 SAINT-FLAVIEN

(See Appendix 3B)

The construction and operation of the storage project required agriculture and environmental studies to satisfy the regulatory process for the pipeline and facility installation.

The right-of-way acquired is 24 km long and 18 meters wide in order to link the storage facility to the TQM transportation line.

Several wells located on private properties are also subject to right-of-way agreements with the land owners.

A 24 km long pipeline has been installed between the TQM main line and the facility. The line has a diameter of eight inches and a maximum operating pressure of 9900 kPa. It is important to note that an ultrasonic custody approved meter installed at the site inlet/outlet monitors gas flow for injection and withdrawal. All data is transmitted to both Intragaz and Gaz Métro.

3.4 SITE PREPARATION AND ROAD ACCESS

3.4.1 POINTE-DU-LAC

(See Appendix 4A)

The storage facilities total about 3.5 km of access roads to different well locations and to the main compressor station (150 m X 100 m). This asset includes:

- Fencing
- Gates
- Site preparation
- Access roads (3.5 km)
- One (1) Fiberglass buried tank
- One (1) concrete manhole for water collection

3.4.2 SAINT-FLAVIEN

(See Appendix 4B)

The storage facilities total about 2.5 km of access roads to different well locations and to the main compressor station (60 m X 80 m). This asset includes:

- Fencing
- Gates
- Site preparation
- Access roads (2.5 km)
- Four (4) Fiberglass buried tanks

3.5 UNDERGROUND STORAGE, WELLS AND COMPLETION (WORK-OVER)

3.5.1 POINTE-DU-LAC

(See Appendix 5A)

This asset includes all the geological studies and maps, geophysical surveys as well as the reservoir modeling.

These different reports and mapping contributed to the original development of the storage project, and continue its optimization which contributes to the efficient and safe operation of the site.

Thirteen (13) gas injection/withdrawal wells were drilled and completed or re-entered by Intragaz as part of the development of the Pointe-du-Lac site. Fourteen (14) wells are used for monitoring pressure and water levels to ensure the integrity of the storage reservoir.

Four (4) other wells are used to monitor the upper aquifer (pressure and water levels) to ensure that the seal is not breached.

It is noted that well assets also include the completion (work-over) which is of the same nature.

3.5.2 SAINT-FLAVIEN

(See Appendix 5B)

This asset includes all the geological studies and maps, geophysical surveys, and the reservoir modeling.

These different reports and mapping contributed to the original development of the storage project, and continue its optimization which contributes to the efficient and safe operation of the site.

Eleven (11) gas injection/withdrawal wells were drilled and completed or re-entered by Intragaz as part of the development of the Saint-Flavien site. Four (4) wells are used for monitoring pressure levels.

It is noted that well assets also include the completion (work-over) which is of the same nature.

3.6 WELL EQUIPMENT

3.6.1 POINTE-DU-LAC

(See Appendix 6A)

Each of the thirteen (13) injection/withdrawal wells is equipped with a water separator installed between the well head and the gathering system in order to prevent any free water from flooding the gas gathering system.

3.6.2 SAINT-FLAVIEN

(See Appendix 6B)

Methanol injection systems are installed at each well for hydrate prevention, due to operation conditions (water saturation, pressure and temperature).

3.7 GAS GATHERING SYSTEM

3.7.1 POINTE-DU-LAC

(See Appendix 7A)

The 2.5 km gas gathering system is split into two different zones:

3.7.1.1 North Section

- A 10 inch line is used to connect wells B-264, B-277 and B-302 to the main compressor station. Each well is tied-in to the 10 inch line with a 4 inch line.

3.7.1.2 South Section

- A 16 inch line is used to bring the gas from the south to the north main compressor station. Wells B-285, B-288 and B-286 are tied with a 4 inch line to the 16 inch line.
- One (1) 10 inch line is tied to the 16 inch main gathering line to connect wells B-291, B-283, B-279 and B-281. One (1) 10 inch line is tied to the 16 inch main gathering line to connect wells B-284, B-293 and B-287. Note that all the wells have a separate 4 inch tie to their respective 10 inch line.

3.7.2 SAINT-FLAVIEN

(See Appendix 7B)

The 4 km gas gathering system is split into two different zones. Three (3) satellite wellsites were installed and equipped to monitor, measure and control gas flow to reduce gathering system cost and centralise operations.

3.7.2.1 East Section

- A 6 inch line is used to connect wells SF-16, SF-17 and SF-18 to the main compressor station through wellsite #3.

3.7.2.2 South West Section

- A 6 inch line is used to bring the gas to the main compressor station through wellsites #1 and #2. These wells are: SF-03, SF-09, SF-10, SF-12, SF-14, SF-15 and SF-19.
- Well SF-07 is tied to an existing 2 inch line.

3.8 WATER REINJECTION

3.8.1 POINTE-DU-LAC

(See Appendix 8A)

The water produced from the withdrawal of the gas from storage is separated at each production well and flows through a 2 inch polyethylene gathering system,

bringing all the water to a concrete pumping station. Two (2) pumps are used to inject the water into a reinjection well (B-294) using a 4 inch polyethylene pipeline of 1.2 km long.

3.8.2 SAINT-FLAVIEN

Any water produced from the wells is collected at the site by the V-200 slug catcher and stored in the underground fiberglass tanks for later disposal. Produced water is not reinjected into the reservoir.

3.9 MECHANICAL AND STATION PIPING

3.9.1 POINTE-DU-LAC

(See Appendix 9A)

This asset includes the regulation station and all the process and auxiliary piping and valves installed between each piece of equipment at the main compressor station.

3.9.2 SAINT-FLAVIEN

(See Appendix 9B)

This asset includes the metering and all the process and auxiliary piping and valves installed between each piece of equipment at the main compressor station.

3.10 BUILDINGS

3.10.1 POINTE-DU-LAC

(See Appendix 10A)

The Pointe-du-Lac storage facility has twenty-six (26) separate buildings for its operation, composed of:

- Three (3) compressor buildings
- One (1) office/workshop/control room building
- One (1) dehydration building
- One (1) fuel gas metering building
- One (1) boiler heater building
- Thirteen (13) wellhead and separator buildings
- One (1) water pumping station
- One (1) water injection building
- Three (3) observation well buildings
- One (1) barrel shelter

3.10.2 SAINT-FLAVIEN

(See Appendix 10B)

The Saint-Flavien storage facility has seven (7) separate buildings for its operation, as follows:

- One (1) compressor building
- One (1) office/workshop/control room building including utility and boiler heater annexes
- One (1) process building including dehydration package, fuel gas metering and inlet separation
- Two (2) gas metering buildings (wellsites #1 & #2)
- One (1) south-west section utility building
- One (1) barrel shelter

3.11 ELECTRICAL

3.11.1 POINTE-DU-LAC

(See Appendix 11A)

The storage facility is mainly powered by natural gas but is also powered and linked to Hydro-Québec's 13.6 kW distribution line with a 600-volt feed. The electricity is distributed from the compressor station to the north and south of Highway 40 by a buried Teck cable. Each well is linked to a private buried electrical network. A generator is used for back-up power in case of a power grid failure.

3.11.2 SAINT-FLAVIEN

(See Appendix 11B)

The storage facility is mainly powered by natural gas but is also powered and linked to Hydro-Québec's 13.6 kW distribution line with a 600-volt feed. Three (3) sections are connected individually to Hydro-Québec: the main compressor station, wellsite #1, and wellsite #3. Each well is then linked to a private electrical network via buried Teck cable. Three back-up generator installations are used for back-up power in case of a power grid failure. These are installed at the main compressor station, wellsite #1, and wellsite #3.

3.12 COMPRESSORS

3.12.1 POINTE-DU-LAC

(See Appendix 12A)

The compressor asset represents 7,887 BHP installed at the main station.

The compressors are:

- Unit C-1 – 2587 BHP Waukesha 12VAT
- Unit C-3 – 2650 BHP White Superior Cooper 16STB
- Unit C-4 – 2650 BHP White Superior Cooper 16STB

3.12.2 SAINT-FLAVIEN

(See Appendix 12B)

The compressor asset represents 4000 BHP installed at the main station.

The compressors are:

- Unit C-1 – 1600 BHP White Superior Cooper 2408G
- Unit C-2 – 2400 BHP Caterpillar 3608 TALE

3.13 DEHYDRATION

3.13.1 POINTE-DU-LAC (SEE APPENDIX 13A) AND SAINT-FLAVIEN (SEE APPENDIX 13B)

The dehydration asset includes all the triethylene glycol process piping and pumps, dehydration tower, filters, reboiler and thermal oxidizer.

3.14 BOILER AND HEATER

3.14.1 POINTE-DU-LAC

(See Appendix 14A)

A 6,000,000 BTU indirect fire heater is installed and composed of two (2) burners and one (1) glycol bath.

3.14.2 SAINT-FLAVIEN

(See Appendix 14B)

Two (2) boilers are installed and composed of two (20 glycol baths and two (2) heat exchangers one (1) 4,000,000 BTU atmospheric heater and one (1) 5,000,000 BTU forced air heater).

3.15 INSTRUMENTATION

3.15.1 POINTE-DU-LAC

(See Appendix 15A)

The storage facility is completely automated and all wells and process equipment are connected to an instrumentation network, gathering all data for operations (pressure, level, flow rate, etc.). The instrumentation network follows the same path as the electrical distribution network on each side of Highway 40. A complete communication system and uninterruptible power supply (UPS) battery back-up are used to ensure 100% reliability.

3.15.2 SAINT-FLAVIEN

(See Appendix 15B)

The storage facility is completely automated and all wells and process equipment are connected to an instrumentation network, gathering all data for operations (pressure, level, flow rate, etc.). The instrumentation network generally follows the same path as the electrical distribution network. A complete communication system and UPS back-up are used to ensure 100% reliability. Air instrument compressors are also used to activate all pneumatic devices.

3.16 ELECTRONICS

3.16.1 POINTE-DU-LAC

(See Appendix 16A)

This asset includes all the gas and fire detection systems and alarms. It also includes all wellsite control panels and the water pumping station control panel.

3.16.2 SAINT-FLAVIEN

(See Appendix 16B)

This asset includes all the gas and fire detection systems and alarms and also includes the three (3) wellsite control panels.

3.17 TOOLS

3.17.1 POINTE-DU-LAC (SEE APPENDIX 17A) AND SAINT-FLAVIEN (SEE APPENDIX 17B)

Intragaz owns the tools required for safe operation and maintenance of the compressor station and the wells.

3.18 OPERATION COMPUTERS

3.18.1 POINTE-DU-LAC (SEE APPENDIX 18A) AND SAINT-FLAVIEN (SEE APPENDIX 18B)

This asset includes all the computers and software in the main control room.

3.19 FURNITURE

3.19.1 POINTE-DU-LAC AND SAINT-FLAVIEN

This asset covers the furniture used in the office/workshop and control room building.

3.20 VEHICLES

3.20.1 POINTE-DU-LAC (SEE APPENDIX 19A) AND SAINT-FLAVIEN (SEE APPENDIX 19B)

Two (2) pick-up trucks at each site are included in this asset.

3.21 SPARE PARTS

3.21.1 POINTE-DU-LAC

(See Appendix 20A)

Based on no back-up for the compression, Intragaz keeps required spare parts for its operation in inventory.

3.21.2 SAINT-FLAVIEN

(See Appendix 20B)

Based on partial back-up for the compression, Intragaz keeps required spare parts for its operation in inventory .

4.0 USEFULNESS ANALYSIS CRITERIA

The criteria described below are shown across the top row of the Usefulness Check-list spreadsheets at the beginning of the Appendix Section. The usefulness of each asset was analyzed based on these criteria. The sections below describe the overall intent of each of the criteria.

As noted on the check-list, these are the "primary" usefulness criteria that were selected. Other criteria could possibly be identified, but it was determined that not much would be gained and would potentially make the check-list overly crowded.

Similarly, although an asset could possibly meet several criteria, we limited our analysis to a maximum of two criteria in most cases.

The criteria are combined in two groups. The first group being criteria related to the reservoir and the second group being criteria related to operation.

Although the objective of this report is to verify the usefulness of the individual assets, it must be stressed that it is the combination of these assets that allow the operation of a storage site. From this perspective, the successful operation of the Pointe-du-Lac site during the last twenty-one (21) years and the Saint-Flavien site during the last thirteen (13) years clearly demonstrates that the sum of the assets is producing the desired result.

4.1 RESERVOIR USEFULNESS CRITERIA

4.1.1 INTEGRITY

This criterion covers any asset that allows Intragaz to ensure the overall safe and reliable operation of the reservoir itself. For example, modelling, geology, seismic campaign and observation wells.

4.1.2 PERFORMANCE

This criterion covers any asset allowing Intragaz to achieve its contract obligations in terms of reservoir performance. For example, production wells.

4.1.3 MONITORING

This criterion covers any asset allowing Intragaz to control and measure the movement of gas in the reservoir throughout its lifetime. For example, observation and control wells.

4.2 OPERATION USEFULNESS CRITERIA

4.2.1 SAFETY/ENVIRONMENT

This criterion covers any asset allowing Intragaz to maintain a safe operation and/or protect the environment. For example, fire and gas detection systems.

4.2.2 INTEGRITY

This criterion covers any asset that allows or has allowed Intragaz to maintain its operation despite the elements. For example, the buildings at the Pointe-du-Lac site requirement to avoid water freezing in the gas stream.

4.2.3 DAILY OPERATION

This criterion covers any asset contributing to the day to day storage operations. For example, the land and access roads.

4.2.4 REQUIRED FOR THE PROCESS

This criterion covers any asset that is required by the injection and withdrawal process. For example, the methanol injection skid at each of the Saint-Flavien wellsites.

4.2.5 CONTROL

This criterion covers any asset allowing Intragaz to control the storage operation mode and pertaining facilities as to start, stop, inject, withdraw, etc. For example, the ultrasonic metering station at the Saint-Flavien site.

4.2.6 MAINTENANCE AND REPAIRS

This criterion covers any asset allowing Intragaz to perform the necessary repairs or maintenance activities to the storage facilities. For example, the tools at both sites.

5.0 ASSESSMENT OF ASSET USEFULNESS

In order to confirm the usefulness of the Intragaz assets, GRB[2] has reviewed each one in detail. The fact that an asset is used does not make it automatically useful. However, the first step towards determining usefulness is often linked to fact that the asset is used. The opposite is also true; an asset not currently being used does not make it automatically useless.

Keeping this in mind, GRB established and verified the following investigation parameters to assess the usefulness of the assets during a site visit held at Pointe-du-Lac on April 11, 2012 and Saint-Flavien on April 12, 2012:

- Runtime hours
- Gas flow rates
- Maintenance reports
- Daily, monthly and annual operation reports
- Pressure monitoring reports
- Water level monitoring reports
- Methanol records
- Historical data list reports
- Fuel gas consumption

GRB also physically verified that every asset was both existing and tied electrically and mechanically for operation.

The usefulness check-list presented at the beginning of the Appendix Section has been filled and checked with comments, maps or pictures for all Intragaz assets.

5.1 LAND

5.1.1 POINTE-DU-LAC

Intragaz is the owner of about 430,000 square meters of land acquired for its storage activity.

The three lots have been and are still useful for Intragaz. They allowed the construction phase of all the assets from the drilling program to the permanent equipment installation.

By the geology of the storage itself, the production wells were to be drilled in a specific zone crossed by a railroad and Highway 40 thus forcing Intragaz to buy enough space for the drilling program on both sides of these obstacles.

[2] And Sproule for identified assets.

The land purchased by Intragaz matches with the reservoir perimeter which shows the evident usefulness of its acquisition.

Finally, Intragaz has taken the opportunity to protect the operational phase of the project from any future residential or industrial development on both sides of Highway 40 and doing so maintained a safe, effective and efficient operation of the storage project. This is particularly important considering the shallowness of the reservoir.

5.1.2 SAINT-FLAVIEN

Intragaz is the owner of about 162,000 square meters of land acquired for its storage activity. The land is located in two lots.

These lots allowed the construction phase of the assets from the drilling program to the permanent equipment installation.

The geology of the storage reservoir itself has allowed Intragaz to use as little land as possible for the project. In fact, the initial phase of the project could not have been done with less land.

The storage reservoir was primarily developed using directional and horizontal drilling, allowing Intragaz to reduce its operational surface area to a rental lease of 50 x 50 meters for each additional well while optimising the surface area in the reservoir.

The usefulness of the sole two lots of the St-Flavien storage project is obvious considering the large use made of them by Intragaz in its operations.

5.2 CUSHION GAS[3]

5.2.1 POINTE-DU-LAC

None of the gas injected as cushion gas in the Pointe-du-Lac storage reservoir belongs to Intragaz. The 35.7 10^3 m^3 of cushion gas belongs to Gaz Métro and is vital and necessary to keep a minimum pressure and a basic volume in the storage.

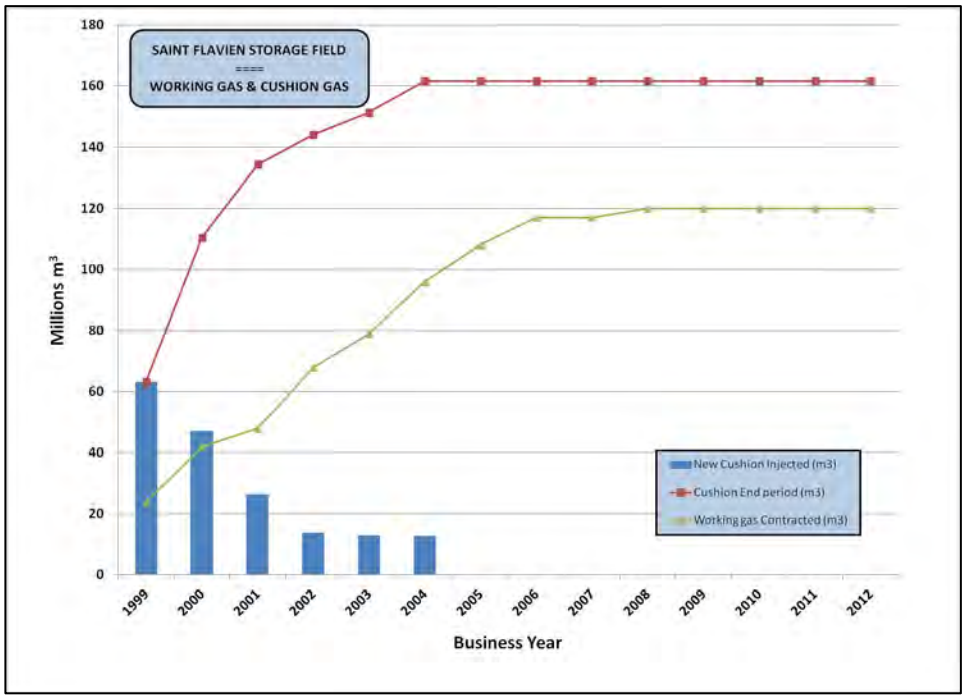
5.2.2 SAINT-FLAVIEN

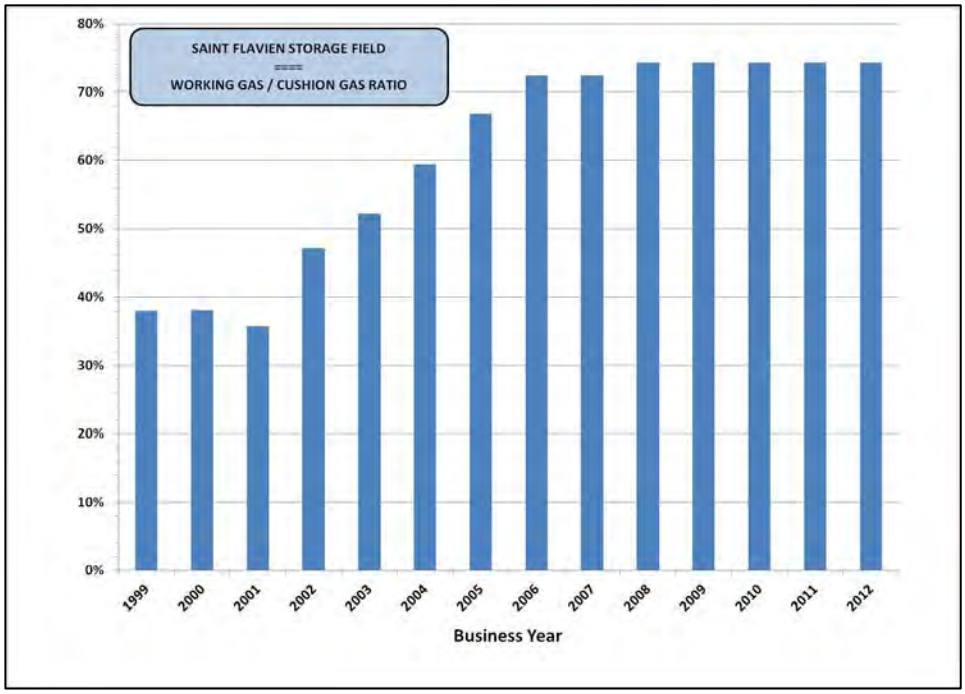
The 161.7 10^3 m^3 of cushion gas injected by Intragaz at St-Flavien is a necessary asset for the feasibility of the project itself. Cushion gas establishes the pressure needed in the reservoir in order for the wells to have optimal

[3] The Cushion Gas assessment has been provided by Mr. Frank Sorensen of Sproule.

deliverability. Much of the cushion gas flows into tighter parts of the reservoir, so it takes time to establish the cushion.

The following charts representing the Intragaz development phase show the optimization of these assets through the years and the effect on its performance.





5.3 RIGHT-OF-WAY AND PIPELINE

5.3.1 POINTE-DU-LAC AND SAINT-FLAVIEN

The right-of-ways were required for the original installation of the pipelines and are regularly maintained. The right-of-way is considered an important safety and operational asset as it is required to clearly delineate where the Intragaz pipelines are located, preventing egress from other parties wishing to install a pipeline or perform other works within the right-of-way. The right-of-ways are considered useful with respect to the safety of the operation as well as to its link to the pipeline thus the reservoir performance.

5.4 SITE PREPARATION AND ROAD ACCESS

5.4.1 POINTE-DU-LAC AND SAINT-FLAVIEN

The overall site at the compressor station is kept maintained with a gravel base, free from deleterious materials. The station is fenced to prevent entry from animals and people. This is required for the safety of the area residents as well as safety for the continued operation of the facility. Access roads are required for operational access of each wellsite and the pump station. The access roads are maintained to ensure continued access in all weather conditions. These assets are all considered useful and required for safety and the daily operation of the storage.

5.5 UNDERGROUND STORAGE, WELLS AND COMPLETIONS[4] (WORK-OVER)

5.5.1 POINTE-DU-LAC

More than 4 years of geological, geophysical and reservoir modeling was required to confirm and establish the feasibility of the Pointe-du-Lac project. These studies have been useful and updated throughout the years. Without this information, it would have been impossible to carry out the project and it would be impossible to maintain and operate the underground storage.

In addition, these studies have been useful in the process of land acquisition prior to the drilling program. They were also vital in identifying effective well locations throughout the project development.

The observation wells are constantly useful to ensure the overall integrity and safe operation of the storage project through tracking of the gas movement.

[4] The assessment of the Underground storage, wells and completions has been completed by Mr. Frank Sorensen of Sproule.

The injection/withdrawal wells usefulness is obvious as they are the connection to the reservoir from which Intragaz takes its revenue. Each well has contributed and has been useful.

The observation wells usefulness may be less evident to non-industry people, but is important for the storage operation. Those wells were drilled either to confirm the physical limits of the storage reservoir or to enable continuous monitoring of the gas movement in the reservoir. They are all used by Intragaz on a continuous basis for monitoring of the reservoir pressure and/or the depth of the water table.

In addition, in the Pointe-du-Lac case certain observation wells are very important in order to monitor gas movements in the northeast part of the reservoir, which is in contact with the main storage area but is not operated.

The data collected by observation wells throughout the years are essential for calibrating mathematical models of the reservoir operation.

5.5.2 SAINT-FLAVIEN

More than five (5) years of geological, geophysical and reservoir modeling was required to confirm and establish the feasibility of the St-Flavien project. These studies have been useful and have been updated throughout the years. Without this information, it would have been impossible to carry out the project and it would be impossible to maintain and operate the underground storage.

In addition, these studies have been useful in the process of land acquisition before the drilling program. The specificity of the St-Flavien storage geology has made each of those different studies even more valuable. For example, the geological and geophysical studies were useful during directional drilling to make sure that the target zones were reached and followed and that the wells did not go outside the top or bottom of the reservoir which in certain area is only one meter thick.

Finally, the reservoir modeling is the key to understanding cause and effect in the system. It provides a tool for monitoring past and current performance to ensure that the system is not diverging from expected behaviour. It is also a tool for planning different usage patterns or future development.

The injection/withdrawal wells usefulness is obvious as they are the connection to the reservoir from which Intragaz takes its revenue. Saint-Flavien is generally operated with a fixed production and injection profile each year. Recently, modeling has been increasingly used as a tool to manage the injection and withdrawal strategy throughout the year, thus making optimal use of each well.

The observation wells usefulness may be less evident to non-industry people, but is important for the storage operation. Those wells were drilled either to confirm the physical limits of the storage reservoir or to enable continuous monitoring of the gas movement in the reservoir. They are all used by Intragaz on a continuous basis for monitoring of reservoir pressures.

5.6 WELL EQUIPMENT

5.6.1 POINTE-DU-LAC

Each production well has a two-phase separator and individual meters to monitor the injection rates, the withdrawal rates and the water produced during the withdrawal season. The equipment at each wellsite is required under the description noted under Section 3.6. The equipment at each site is useful for the continuation of the injection and withdrawal process.

5.6.2 SAINT-FLAVIEN

Each wellsite has a methanol injection skid including an injection pump and methanol storage tank. This is useful as it is required for the continuation of the withdrawal process to prevent hydrate formation as the gas is saturated with water. Free water is not produced, but the gas is saturated with water and hydrates will form above 2000 kPa and below 18 °C. Note that wellsite # SF-13 has a methanol skid that is not in use and the injection pump is no longer installed on the skid. (See Section 6.3 for additional comments.) Also, the coalescing filter F-100 installed in the wellsite #1 building is not in use. (See Section 6.5 for additional comments.)

5.7 GAS GATHERING SYSTEM

5.7.1 POINTE-DU-LAC

Review of the data reports for injection and withdrawal and water reinjection shows that the entire gathering system is useful and required for the storage operation.

5.7.2 SAINT-FLAVIEN

Review of the data reports for injection and withdrawal and water reinjection shows that the entire gathering system is useful and required for the storage operation. However, the 6 inch buried line from the well SF-13 to the station is not in service and has been mechanically disconnected from the process. (See Section 6.2 for additional comments.)

5.8 WATER REINJECTION

5.8.1 POINTE-DU-LAC

The pump station is mechanically tied to the water gathering system which is required for the separation process at each wellsite. The produced water is transported through a buried gathering system and collected in an underground concrete tank and then pumped through another buried line to the water reinjection well. The gathering system and pump station are useful and required for the process.

5.8.2 SAINT-FLAVIEN

There is no method or process requirement for water removal or reinjection at the wellsites. Any produced water is stored in a buried fibreglass tank at the station for subsequent disposal.

5.9 MECHANICAL AND STATION PIPING

5.9.1 POINTE-DU-LAC

The above ground and buried piping system is required to convey gas and other fluids as part of the overall injection and withdrawal process. The regulation station is required as part of the process to reduce the pressure of the injection gas to the reservoir. The fuel gas is metered separately from the process gas as a means to capture the consumption rates utilized by the compressor engines, boilers, thermal oxidizer and ancillary equipment. The piping system observed is useful and required for the continued storage operation for safety, performance, process and control.

5.9.2 SAINT-FLAVIEN

The above ground and buried piping system is required to convey gas and other fluids as part of the overall injection and withdrawal process. The piping system observed is useful and required for the continued storage operation for safety, performance, process and control. Much of the piping is installed on the pipe rack that runs between the process building and the compressor buildings. The switching valves are required to maintain the process through the station. It was noted that the line from SF-13 is not mechanically tied to the station piping system. (See Section 6.2 for additional comments.) It was also noted that a coalescing filter F-100 was not mechanically tied to the wellsite #1 piping. (See Section 6.5 for additional comments.)

5.10 BUILDINGS

5.10.1 POINTE-DU-LAC

Each process within the station is housed in separate buildings. Each production wellsite is housed in a heated building offering safety and protection from the elements. The production from this reservoir contains free water, which would freeze in the separator without the heated enclosure. The office/control room is required for maintenance and operation of the facility. The pump station building is also required and useful because freeze protection is required for the continued operation. All of the buildings listed under Section 3.10.1 are useful and required for integrity and operation/maintenance. Although compressor C-2 was not in service, the building is currently useful for protecting the spare engine and other spare parts taken from this decommissioned compressor. The building is also used for warehousing other spare parts for the station. The barrel dock is required for storage of spare chemicals and lubricants.

5.10.2 SAINT-FLAVIEN

Each process within the station is housed in separate buildings. The production from this reservoir does not contain free water, and hence only the methanol skid is required for this area. The office/control room is required for maintenance and operation of the facility. The barrel dock is required for storage of spare chemicals and lubricants. All of the buildings listed under Section 3.10.2 are useful and required for integrity and operation/maintenance.

5.11 ELECTRICAL

5.11.1 POINTE-DU-LAC

The Motor Control Center (MCC) is the main power distribution and control for each of the electric motors within the station. In case of power outages, there is an emergency generator. Each of the wellsites is connected to the station via 24 VDC to provide power to the instrumentation required at each wellsite (used for injection/withdrawal and monitoring). The entire electrical system is both required for operation and is useful.

5.11.2 SAINT-FLAVIEN

The MCC is the main power distribution and control for each of the electric motors within the station. In case of power outages, there is an emergency generator. Power is also delivered to each production wellsite for operation of the methanol pumps. Each of the wellsites is connected via 600 VAC to provide power to the methanol pumps as well as for the instrumentation required at each wellsite (used for injection/withdrawal and monitoring). The back-up

generators located at wellsites #1 and #3 are required for continued safe operation in the case of power grid failure. The entire electrical system is both required for operation and is useful. It was noted that although SF-13 was connected to the power distribution, the methanol pump was not installed and therefore not connected. (See Sections 6.3 and 6.4 for additional comments.)

5.12 COMPRESSORS

5.12.1 POINTE-DU-LAC

There are three operational compressors located at this station and are all required for the process of withdrawal of the storage gas as the reservoir pressure is much lower than that of the TQM line. It was noted that compressor C-2 was removed from service in 1994, but is currently utilized for spare parts. All three operational compressors are required by the process and useful for the performance. Furthermore there is no back-up unit at this storage site.

5.12.2 SAINT-FLAVIEN

There are two compressors installed at this station. Compressor C-2 is used approximately 5000 hours annually while compressor C-1 is used 1500 hours. Both compressors are required to achieve the full station capacity. The compressors are also used alternatively to extend service life of both compressors and engines. In this respect, both compressors are required for the main process and meeting performance requirements and therefore useful.

5.13 DEHYDRATION

5.13.1 POINTE-DU-LAC

The dehydration unit is required to remove the saturated water from the gas during the withdrawal mode and prior to the gas entering the TQM system. TQM has explicit water content specifications in the gas and this station is a feed for Trois-Rivières. In this respect wet gas cannot be tolerated. The water content of the gas is continuously measured to ensure compliance with the TQM specifications. The thermal oxidizer is required to eliminate the odours that arise from the regeneration of the triethylene glycol that is used in the dehydration process. All components of the dehydration system are required for the process and are therefore useful.

5.13.2 SAINT-FLAVIEN

The dehydration unit is required to remove the saturated water from the gas during the withdrawal mode and prior to the gas entering the TQM system. TQM has explicit water content specifications in the gas and this station is feeding the east end of the TQM system. In this respect wet gas cannot be tolerated. The water content of the gas is continuously measured to ensure compliance with

the TQM specifications. The thermal oxidizer is required to eliminate the odours that arise from the regeneration of the triethylene glycol that is used in the dehydration process. All components of the dehydration system are required for the process and are therefore useful.

5.14 BOILER AND HEATER

5.14.1 POINTE-DU-LAC

The boiler is required for the process as the cool gas is circulated through the hot glycol bath to increase the temperature of the gas prior to entering the reservoir. The gas entering the reservoir must be close to the same temperature of the reservoir temperature. The boiler is required for the process and is therefore useful.

5.14.2 SAINT-FLAVIEN

The pressure differential in the process requires gas heating for the withdrawal. There are two boilers at this station, with one of the boilers acting as a partial back-up. However, both boilers are required to maintain process temperatures at times of maximum throughput. The boilers are essential and required for the withdrawal process and are therefore useful.

5.15 INSTRUMENTATION

5.15.1 POINTE-DU-LAC AND SAINT-FLAVIEN

The instrumentation in the station and at the wellsites is required for process control, monitoring and safety. This is both required and useful.

5.16 ELECTRONICS

5.16.1 POINTE-DU-LAC

The electronics described in this section refer to the gas and fire detection as well as the control panels in the station, wellsite control panels and the pumping station control panel. All are required for the process and are useful for the process and safety.

5.16.2 SAINT-FLAVIEN

The electronics described in this section refer to the gas and fire detection as well as the control panels in the station and the wellsite control panels. All are required for the process and are useful for the process and safety.

5.17 TOOLS

5.17.1 POINTE-DU-LAC AND SAINT-FLAVIEN

It is obvious that the tools are required and useful for daily operation and maintenance.

5.18 OPERATION COMPUTERS

5.18.1 POINTE-DU-LAC AND SAINT-FLAVIEN

It is obvious that the operation computers are required and useful for the safety of the station as well as for daily operation and for process control.

5.19 FURNITURE

5.19.1 POINTE-DU-LAC AND SAINT-FLAVIEN

The furniture is required and useful for daily operation.

5.20 VEHICLES

5.20.1 POINTE-DU-LAC AND SAINT-FLAVIEN

The pickup trucks are used for daily operation, maintenance and safety. They are required and useful.

5.21 SPARE PARTS

5.21.1 POINTE-DU-LAC

The warehousing facilities at this station contain spare parts for maintenance of the facilities. Of note here is that the C-2 compressor was previously decommissioned and is now utilized to provide spare parts for the operational compressor C-1 which is an identical unit. All of these spare parts are useful, especially since there are no back-up compressors. (See Section 6.1 for additional comments.)

5.21.2 SAINT-FLAVIEN

The warehousing facilities at this station contain spare parts for maintenance of the facilities. All of the spare parts are useful.

6.0 FINDINGS AND CONCLUSIONS

Upon finalizing the site visit report and investigation, we (GRB and Sproule) acknowledge the overall usefulness of the assets at both facilities. Both underground storage facilities have proven their usefulness as a whole for their respective operation and the vast majority of all assets have been found useful at both sites. However, during the investigation it was noted that some portions of Intragaz assets are not currently in use and additional commentary is required as to their usefulness. The following are the minor findings that were discussed and required further explanation from Intragaz.

6.1 POINTE-DU-LAC COMPRESSOR C-2

(See picture in Appendix 20A)

This compressor unit C-2 is no longer in operation, having been decommissioned in 1994. At this time, the compressor suffered a major failure and was replaced by unit C-4 in the same year. The unit has been partially dismantled with the remaining engine, cooler, and three compressor cylinders being kept by Intragaz as spare parts for the identical adjacent unit C-1. The usefulness of this asset is confirmed by the effective use of the spare parts to maintain the reliability of the engine of C-1. This is critical to the operation as this facility operates without compression back-up or redundancy.

6.2 SAINT-FLAVIEN SF-13 GATHERING LINE

During the site visit conducted on April 12, 2012, we found that the north branch of the gathering system going from well SF-13 to the station (6 inch) was not mechanically tied into the station piping. Upon further examination, it was noted that this 270 m long line was put in place during the original development phase in 1998. The goal was to put a larger line in place to allow for further expansion to the north and to tie-in the

observation well at SF-13. Intragaz has stopped the future expansion at SF-13. SF-13 was tied in for two seasons but without success. This well was producing far too much water during initial production and additional capital investment (a separator package with building) would have been required to continue operation. The well SF-13 remains utilized for reservoir monitoring purposes. The 6 inch, 270 m line from SF-13 to the station is not currently utilized and we cannot support this asset as being considered useful except as an investment for future development. The line has been maintained with this future purpose in mind.

6.3 SAINT-FLAVIEN SF-13 METHANOL INJECTION SKID

During the site visit on April 12, 2012, it was noted that the methanol skid at SF-13 was neither tied mechanically nor electrically to the remainder of the system. The methanol pump had been removed and was not in place at the time of the visit. We cannot support this asset as being considered useful except as an investment for future development.

6.4 SAINT-FLAVIEN NORTH ELECTRICAL DISTRIBUTION

During the site visit on April 12, 2012, it was noted that the electrical distribution feed to the north expansion (to SF-13) was not powered nor was it connected to any equipment as the methanol pump was not in place on the methanol skid. The electrical power cables were installed in 1998 with the 6 inch gathering line from SF-13 to the station. We cannot support this asset as being considered useful except as an investment for future development.

6.5 SAINT-FLAVIEN WELLSITE #1 COALESCING FILTER F-100

During the Saint-Flavien site visit of April 12, 2012, it was noted that a filter installed at wellsite #1 was neither electrically nor mechanically connected to the system. The filter was installed to remove particulate matter in the gas stream before entering the gathering system. However, the filter was decommissioned in 2005 and is no longer required for the process. This filter has been purged and maintained but we cannot support the usefulness of this piece of equipment.

6.6 CONCLUSION

In conclusion, GRB and Sproule have conducted a thorough review of the assets and a review of the operational data and confirm the usefulness of the assets as noted in Sections 3 and 5. The twenty-one (21) years of operation at PDL and thirteen (13) years of operation at Saint-Flavien has been documented by cumulative equipment run-time hours, maintenance reports, and a historical injection and withdrawal database.

Based on the physical review of the assets, available data and detailed inquiry, GRB and Sproule conclude that all of the Intragaz assets, with the exception of the minor findings noted above, are useful and required for the continued operation of both storage facilities.

7.0 CONSULTANTS' EXPERIENCE

Following is the resume of each consultant who took part in the present report.

- Steve Huitema (GRB Engineering Ltd.)
- Frank Sorensen (Sproule Associates Ltd.)

EDUCATION

BSc. Mechanical Engineering
University of Calgary 1990

Journeyman Finishing Carpenter
Southern Alberta Inst. of Tech. 1986

PROFESSIONAL AFFILIATIONS

Association of Professional Engineers, Geologist and Geophysicists of Alberta (APEGGA) Professional member since 1992; Responsible Member for GRB Engineering

Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)

Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS)

Association of Professional Engineers and Geoscientists of Manitoba (APEGM)

Ordre des ingénieurs du Québec – Temporary Licence 2012

Gas Processing Association of Canada (GPA)

Canadian Heavy Oil Association (CHOA)

KEY ACCOMPLISHMENTS

Mechanical engineer and exceptional leader with 20+ years experience in the Petro-Chemical industry - refineries, gas plants, sulphur plants, gas gathering and compression with 15 years facility, pipeline project engineering and project management experience. Proven leadership skills as a Manager, Team Leader and General Manager. Increasing levels of responsibility. Demonstrated ability to lead a diverse group of individuals. Steve strives to maintain a successful level of communication, respect and collaboration with staff and clients alike. Initial career direction in the trades provides a unique perspective.

WORK EXPERIENCE

Aug. 2010 – Present **GRB Engineering Ltd., A Division of Genivar Inc.**

General Manager

Direct supervision of several client-based Group Leads, engineering disciplines and procurement. Responsible for day-to-day operations, personnel administration including manpower planning, recruitment, retention evaluation, and compensation. Maintaining a balanced workforce to meet client's needs as well as profitability; Part of management team responsible for long term planning, business development including preparing and delivering engineering proposals; Assist project managers or project leaders with technical issues and project direction. Maintaining client relationships, and developing new business opportunities. Responsible for the technical direction of the Engineering Group within GRB Engineering Ltd.

Nov. 2001 – Jul. 2010 **Gemini Engineering**

General Manager / Manager of Engineering

Direct supervision of several client-based Team Leads, engineering discipline leads, administration lead and procurement lead. Responsible for day-to-day operations as well as for the overall profitability of this engineering division. Personnel administration including manpower planning, recruitment, retention evaluation, and compensation. Maintaining a balanced workforce to meet client's needs as well as corporate profitability; Prepare and administer annual division budgets; Part of management team responsible for long term planning, business development including preparing and delivering engineering proposals; Assist project managers or project leaders with technical issues and project direction. Maintaining client relationships, and developing new business opportunities. Responsible for the technical direction of the Engineering Group within Gemini and providing technical support of the fabrication and construction business units. Spearheaded the development of an internal cost control system to replace existing software.

Team Lead/Project Leader

Direct supervision of all employees of a client based team. This team was responsible for approximately 50,000 man-hours per year. Personnel administration including manpower planning, recruitment, retention evaluation, and input to compensation changes within the team; Provided leadership and mentoring to junior, intermediate and other senior personnel within the team. Ensured client satisfaction by maintaining and developing relationships with existing client base. Assisted and directed project managers and assigned technical staff with all issues pertaining to the client group. Determine technical requirements and project direction for projects

Project Manager

Project Management for oil and gas projects including pipeline gathering systems, compressor stations and gas plant modifications. Provide mentoring to junior engineers and technologists within the client based project team.Other responsibilities include meeting with clients to determine scope of projects, developing Design Basis Memorandums, cost estimates, design and design supervision, preparation of plans, tender and award of contracts, contract administration, cost and schedule control, progress reporting, preparation of operating and maintenance manuals, preparation and submission of regulatory application in BC and Alberta. Projects ranged in complexity from sour gas gathering systems, modifications to existing gas plants, compression projects, and finger style slug catchers.

May 2001 – Nov. 2001	**BP Canada Energy**

Facilities Engineer

Provided project management for oil and gas projects including pipeline gathering systems, compressor station and gas plants. Provided engineering and facilities support to the asset teams in regards to proposals and long range planning.

Administered management of change in area.

Mar. 1998 – May 2001	**Gemini Engineering Inc.**

Senior Project Engineer

Provided project management for oil and gas projects including pipeline gathering systems, compressor station and gas plants. Projects included: 150 well/135 km gathering system in southern Alberta, Grass roots compressor station with 2300 Hp of compression with dehydration facilities. Installation of propane refrigeration facility at an existing compressor station, 180 shallow gas well tie in program into an established field. Expansion of a sour gas plant in central Alberta Single and multiple gas well tie-ins.

Provided mentoring to junior engineers and technologists within the client based project team. Other responsibilities included meeting with clients to determine scope of projects, developing design basis memorandums, design and design supervision, preparation of plans, tender and award of contracts, contract administration, cost and schedule control, progress reporting, preparation of operating and maintenance manuals, preparation and submission of regulatory applications.

Sep. 1996 – Mar. 1998	**Enerflex Manufacturing Ltd.**

Project Manager

Design of the process, utilities and instrumentation for engine and motor driven gas compression packages. Successful management of multiple compression projects; including the project cost reporting, scheduling, communication and technical issues to the customer and production personal. Provided supervision and support to technologists and junior engineers on both a technical basis and project basis. Co-ordination with all trades and shop personnel during the construction phase of the projects.Expedited material and design efforts on projects with relatively short lead times.

Jun. 1996 – Sep. 1996	**Beck Engineering (1992) Ltd.**

Heavy Lift Engineer (short-term contract)

Contract assignment at a local operating fertilizer plant consisting of the design, execution and supervision of all of the heavy lifts including a 400,000 lb. contactor tower.

Nov. 1994 – May 1996	**Premay Equipment Ltd.**

Project Engineer & Heavy Lift Engineer

Coordinated engineering activities of in-house and consulting engineers for the design/build of specialty haul equipment to transport major pieces of equipment. Responsible for the complete project execution for an EPC firm consisting of the ocean, rail and highway transport of major refinery equipment to a Petrochemical plant in Eastern Canada. This included bid preparation, load scheduling, costing and progress payment applications and co-ordination of subcontractors. Design and implementation of information systems to monitor quotations, bids and client information. Maintained a peer-to-peer multi-user network and provided computer support.

Sep. 1990 – Oct. 1994	**GWIL Industries Inc., Crane Service**

Heavy Life Engineer & Project Engineer

Project Engineer responsible for the design, preparing lift studies and on-site engineering supervision for all heavy lifts including the following major contracts. Subcontractor to a major EPC firm for the construction of the compressor sites for a large sour gas plant. Project responsibilities included equipment elevation surveys, scheduling, job costing, applications for progress payments, contract administration as well as the coordination of sub-subcontractors and site-specific safety. Provided technical input as part of a constructability analysis for a major sour gas plant shutdown. Designed and built lifting and rigging devices for use in daily hoisting operations and specialty lift applications.

Jun. 1990 – Sep. 1990	**Partec Lavalin**

Senior Project Engineer (short term contract position)

Responsible for rewriting the mechanical engineering specifications for the general use of Partec Lavalin.

ADDITIONAL COURSES

- Developing Effective Leadership Skills
  Canadian Professional Management Services
- Basics of Writing Policies and Procedures
  National Seminar Training
- Work Face Planning Seminar
  Southern Alberta Institute of Technology
- Business Essentials Program
  University of Calgary, Haskayne School of Business
- Faculty of Civil Engineering - Structural Steel Design in Limit States
  University of Calgary
- Faculty of Continuing Education - Fundamentals of Project Management
  University of Calgary

- Faculty of Graduate Studies/Civil Engineering - Construction Project Management
  U of C
- Faculty of Graduate Studies/Civil Engineering - Law for Project Managers
  University of Calgary
- Faculty of Graduate Studies/Chemical Engineering - Natural Gas Processing Principles
  U of C
- Faculty of Graduate Studies/Chemical Engineering - Natural Gas Processing Technology
  U of C
- The Dale Carnegie Course
  John F. Fisher and Associates
- Collision Avoidance and Defensive Driving
  C.A.E Safety Consultants
- H_2S Alive (Expires Jan 2012)
- WHIMIS
- Supervisory Training

Senior Petroleum Engineer

Phone: 403-294-5543
Fax: 403-294-5590
E-Mail: frank.sorensen@sproule.com

Frank has been a Sproule professional since 2012. He brings 30 years of experience in domestic and international oil and gas exploration and development, carrying out reservoir engineering studies and performing gas and oil reservoir simulations. With PHH Petroleum Consultants Ltd. since 1986 and President since 2006, he supervised and participated in many of the studies performed by PHH. In addition, he contributed to software development. Frank has worked on projects in Algeria, Brazil, Canada, Kazakhstan, Libya, the United States and Yemen.

Diplomas and Degrees

- B.A.Sc. Mechanical Engineering (1982), University of British Columbia

Memberships

- Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA)
- Society of Petroleum Engineers (SPE)

Work Responsibilities

- Conduct reservoir simulation studies.
- Maintain reservoir and surface network models of gas storage projects and assist
- clients in optimization and regulatory reporting.
- Prepare oral and written reports on reservoir study results.
- Oversee Libyan reservoir studies, prepare progress reports, maintain client contact.

Previous Employers

- 1982-1983 **Petro-Canada Inc**., Calgary, Alberta — Junior Engineer
  - Worked in Operations Engineering group of Heavy Oil Division. Investigated solutions to sand-oil-water separation problems, performed feasibility studies on projects such as supplying steam generation fuel from local gas reservoirs, prepared comprehensive monthly pilot plant operations reports.
- 1984-1985 **University of Calgary**, Calgary, Alberta — Research Engineer
  - Documented discoveries regarding the effects of viscosity ratios, viscous instabilities and connate water saturation on residual oil saturation and trapping mechanisms. Compiled semi-annual technical reports based on experimental data and literature studies.
- 1986-2012 **PHH Petroleum Consultants Ltd**., Calgary, Alberta — Reservoir Engineer
  - Participated in well over 150 Canadian and International reservoir engineering studies involving the use of black-oil, fully compositional, pseudo-miscible and chemical reservoir simulators along with gas reservoir/surface network models. Performed several follow-up studies, which proved a good success rate in generating accurate performance forecasts. Trained and assisted clients and junior engineers in performing gas and oil reservoir simulations. Developed/maintained in-house graphics applications.
  - Developed modelling techniques and visualization/design software to streamline the optimization of large gas fields with very complex surface networks. The main objectives of the many large studies performed were to de-bottleneck, optimize compression and/or identify infill drilling opportunities.
  - Conducted, supervised or assisted in ongoing reservoir management of ten gas storage projects. Performed scoping studies for several other potential storage projects.
  - Many additional engineering studies were conducted on oil fields with varied GOR and watercut histories, the usual objectives being waterflood optimization or waterflood evaluations. Several fully compositional studies evaluated or optimized gas cycling and blowdown.

Publications

- Sorensen, Frank, A 3-Dimensional Approach to the Modelling of the Hoadley–Westerose Gas Reservoir / Surface Pipeline Network, presented at the SPE Gas Technology Symposium in Calgary, Alberta, Canada, June 28-30, 1993.
- Scholz, Jason; Sorensen, Frank; Hamp, Tom, Evaluating Crossflow Migration Drainage, presented at the CIPC/SPE Gas Technology Symposium 2008 Joint Conference held in Calgary, Alberta, Canada, June 16-19, 2008.

Expert Witness Testimony

- Texas Railway Commission Hearing, Pacificorp Power Marketing vs Western Gas Resources, 2002.

APPENDICES

The following appendices are all linked to the usefulness check-list hereafter. More than 250 pictures were taken during the April 11 and 12, 2012 site visits. In order to minimize the report format, only some of them are included and marked for the reader's understanding benefit.

The check-list covers all of the assets included in Intragaz' rate application to the Régie.

For reference, each appendix is noted in the right column of the usefulness check-list.

LIST OF APPENDICES

POINTE-DU-LAC STORAGE
USEFULNESS CHECK - LIST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	PRIMARY USEFULNESS CRITERIA [1]									WITNESSING THE ASSETS		REPORT REFERENCE			
	RESERVOIR			OPERATION											
ASSET DESCRIPTION	INTEGRITY	PERFORMANCE	MONITORING	SAFETY/ ENVIRONMENT	INTEGRITY	DAILY OPERATION	REQUIRED FOR THE PROCESS	CONTROL	MAINTENANCE & REPAIRS	APRIL 11, 2012 - SITE VISIT	COMMENTS	DESCRIPTION	ASSESSMENT	APPENDIX NUMBER	PHOTOGRAPH NO.
LAND	X					X				✓		**3.1**	**5.1**	**1A**	
CUSHION GAS		X									This section has been completed by Mr. Frank Sorensen of Sproule and Associates. The cushion gas belongs to Gaz Métro.	**3.2**	**5.2**	**2A**	
RIGHT-OF-WAY AND PIPELINE												**3.3**	**5.3**	**3A**	
3KM PIPELINE		X		X						✓	Access and right-of way reviewed at PDL Station and at TQM tie-in.				
SITE PREPARATION AND ROAD ACCESS												**3.4**	**5.4**	**4A**	
Fencing and gates				X						✓	Station fenced entirely, wellsites fenced entirely.				**1**
Buried disposal tanks						X				✓	Above ground portions of risers visable only.				
Landscaping and access road				X		X				✓	Roads and landscaping clearly maintained.				
UNDERGROUND STORAGE, WELLS AND COMPLETION (WORK-OVER)											This section has been completed by Mr. Frank Sorensen of Sproule and Associates.	**3.5**	**5.5**	**5A**	
Geophysic, geology, mapping & modeling	X	X								✓					
B-260 storage monitoring			X							✓					
B-261 storage monitoring			X							✓					
B-262 storage monitoring			X							✓					
B-263 upper aquifer monitoring	X		X							✓					
B-264 storage production		X								✓					
B-265 storage monitoring			X							✓					
B-277 storage production		X								✓					
B-278 storage monitoring			X							✓					
B-279 storage production		X								✓					
B-280 storage monitoring			X							✓					
B-281 storage production		X								✓					**3**
B-282 storage monitoring			X							✓					
B-283 storage production		X								✓					
B-284 storage production		X								✓					
B-285 storage production		X								✓					
B-286 storage production		X								✓					
B-287 storage production		X								✓					
B-288 storage production		X								✓					
B-289 upper aquifer monitoring	X		X							✓					
B-290 upper aquifer monitoring	X		X							✓					**4**
B-291 storage production		X								✓					
B-292 storage monitoring			X							✓					
B-293 storage production		X								✓					
B-294 water reinjection							X			✓					**5**
B-295 upper aquifer monitoring	X		X							✓					
B-296 storage monitoring			X							✓					
B-297 storage monitoring			X							✓					
B-298 storage monitoring			X							✓					
B-300 storage monitoring			X							✓					
B-301 storage monitoring			X							✓					
B-302 storage production		X								✓					
B-306 storage monitoring			X							✓					**6**
WELL EQUIPMENT												**3.6**	**5.6**	**6A**	
B-264 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-277 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-279 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-281 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				**9-10**
B-283 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-284 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-285 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-286 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-287 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-288 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-291 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-293 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-302 injection/withdrawal skid							X			✓	Skid complete and mechanical tied-in.				
B-294 water reinjection skid							X			✓	Reinjection pump package complete and tied-in.				

[1] See Section 4 of the Report.

POINTE-DU-LAC STORAGE
USEFULNESS CHECK - LIST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ASSET DESCRIPTION	PRIMARY USEFULNESS CRITERIA [1]									WITNESSING THE ASSETS		REPORT REFERENCE			
	RESERVOIR			OPERATION											
	INTEGRITY	PERFORMANCE	MONITORING	SAFETY/ ENVIRONMENT	INTEGRITY	DAILY OPERATION	REQUIRED FOR THE PROCESS	CONTROL	MAINTENANCE & REPAIRS	APRIL 11, 2012 - SITE VISIT	COMMENTS	DESCRIPTION	ASSESSMENT	APPENDIX NUMBER	PHOTOGRAPH NO.
GAS GATHERING SYSTEM												**3.7**	**5.7**	**7A**	
10 inch line south leg # 1		X								✓					
10 inch line south leg # 2		X								✓					
16 inch main line south		X								✓					
8 inch line north		X								✓					
4 inch tie-in line at each well		X								✓	Riser visible at each well location.				
WATER REINJECTION												**3.8**	**5.8**	**8A**	
Pumping station							X			✓	Pump station complete.				**12**
Water injection 4 inch plastic line							X			✓	Riser visible at station.				
Pumping gathering system							X			✓					
MECHANICAL AND STATION PIPING												**3.9**	**5.9**	**9A**	
Compressor station yard piping		X								✓	All piping systems appear to be complete. Much of the piping between building is buried, with only the risers visible.				
Compressor station yard valves				X			X	X		✓	All valves appear to be complete. Only one buried valve.				
Regulation station							X			✓	Regulator station complete.				**13**
Fuel gas metering station						X				✓	Meter station complete.				**14**
BUILDINGS												**3.10**	**5.10**	**10A**	
B-264 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-277 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-279 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-281 well & separator					X					✓	Building for wellhead and separator skid complete.				**22**
B-283 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-284 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-285 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-286 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-287 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-288 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-291 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-293 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-302 well & separator					X					✓	Building for wellhead and separator skid complete.				
B-294 well & pump					X					✓	Building for wellhead and separator skid complete.				
Water reinjection pumping station					X					✓	Pump building complete.				
Dehydration					X					✓	Dehydration building complete.				
Compressor # 1					X	X				✓	Compressor building complete.				**23**
Compressor # 2					X				X	✓	Compressor building complete. See Section 6.1 of the report.				
Compressor # 3					X	X				✓	Compressor #3 & #4 in same building.				
Compressor # 4					X	X				✓	Compressor #3 & #4 in same building.				
Barrel shelter										✓					**24**
Indirect fire heater shelter									X	✓	Shelter around piping and valves only.				
Fuel gas metering station					X					✓					
Office / control room / workshop					X				X	✓	Office/control Room/workshop complete.				**25**
ELECTRICAL												**3.11**	**5.11**	**11A**	
South distribution						X				✓					
North distribution						X				✓					
MCC compressor station						X				✓	Station MCC complete.				**30**
Genset electrical failure back-up						X				✓	Generator and diesel tank complete.				**31**
COMPRESSORS												**3.12**	**5.12**	**12A**	
UNIT C-1		X					X			✓	Compressor complete, though not operating during site visit.				**36**
UNIT C-3		X					X			✓	Compressor complete, though not operating during site visit.				**37**
UNIT C-4		X					X			✓	Compressor complete, though not operating during site visit.				**38**
DEHYDRATION												**3.13**	**5.13**	**13A**	
Dehydration unit							X			✓	Dehydrator boiler and other process vessels complete.				**42**
Thermal oxidizer							X			✓	Thermal oxidizer complete.				**43**
BOILER AND HEATER												**3.14**	**5.14**	**14A**	
Burner & heat exchanger							X			✓					**46**

[1] See Section 4 of the Report.

POINTE-DU-LAC STORAGE
USEFULNESS CHECK - LIST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	PRIMARY USEFULNESS CRITERIA [1]									WITNESSING THE ASSETS		REPORT REFERENCE			
	RESERVOIR			OPERATION											
ASSET DESCRIPTION	INTEGRITY	PERFORMANCE	MONITORING	SAFETY/ ENVIRONMENT	INTEGRITY	DAILY OPERATION	REQUIRED FOR THE PROCESS	CONTROL	MAINTENANCE & REPAIRS	APRIL 11, 2012 - SITE VISIT	COMMENTS	DESCRIPTION	ASSESSMENT	APPENDIX NUMBER	PHOTOGRAPH NO.
INSTRUMENTATION												**3.15**	**5.15**	**15A**	
South loop network								X		✓	Electrically tied in.				
North loop network								X		✓	Electrically tied in.				
Compressor station main control panel				X				X		✓	Tied in and functional.				
Compressor # 1 control panel				X				X		✓	Adjacent to compressor.				**49**
Compressor # 3 control panel				X				X		✓	Adjacent to compressor.				**50**
Compressor # 4 control panel				X				X		✓	Adjacent to compressor.				**51**
ELECTRONICS												**3.16**	**5.16**	**16A**	
Gas detection system				X						✓	Active in each process building.				**54**
Fire detection system				X						✓	Active in each process building.				
B-264 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-277 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-279 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-281 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-283 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-284 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-285 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-286 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-287 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-288 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-291 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-293 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
B-302 RTU Control panel				X				X		✓	Mounted on exterior of wellsite building.				
Water pumping station control panel				X				X		✓	Mounted on exterior of pump building.				
TOOLS						X			X	✓	Maintenance tools visible in workshop.	**3.17**	**5.17**	**17A**	**56**
OPERATION COMPUTERS				X		X		X		✓	Computers tied to Station Control system.	**3.18**	**5.18**	**18A**	**58**
FURNITURE						X				✓	General office furnishings as wells as control room furnishings.	**3.19**	**5.19**		
VEHICLES				X		X			X	✓	Two pick up trucks witnessed.	**3.20**	**5.20**	**19A**	**60**
SPARE PARTS									X	✓	Spare parts noted in compressor building, in C-2 building and in workshop. See Section 6.1 of the report.	**3.21**	**5.21**	**20A**	**62**

[1] See Section 4 of the Report.

ST-FLAVIEN STORAGE
USEFULNESS CHECK - LIST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ASSET DESCRIPTION	PRIMARY USEFULNESS CRITERIA [1]									WITNESSING THE ASSETS		REPORT REFERENCE			
	RESERVOIR			OPERATION											
	INTEGRITY	PERFORMANCE	MONITORING	SAFETY/ ENVIRONMENT	INTEGRITY	DAILY OPERATION	REQUIRED FOR THE PROCESS	CONTROL	MAINTENANCE & REPAIRS	APRIL 12, 2012 - SITE VISIT	COMMENTS	DESCRIPTION	ASSESSMENT	APPENDIX NUMBER	Photograph Number
LAND	X					X				✓		**3.1**	**5.1**	**1B**	
CUSHION GAS		X									This section has been completed by Mr. Frank Sorensen of Sproule and Associates.	**3.2**	**5.2**	**2B**	
RIGHT-OF-WAY AND PIPELINE												**3.3**	**5.3**	**3B**	
23.5 km pipeline		X		X						✓	Access and right-of way viewed at Saint-Flavien station.				
SITE PREPARATION AND ROAD ACCESS												**3.4**	**5.4**	**4B**	
Fencing and gates				X						✓	Station fenced entirely, wellsites fenced entirely.				**2**
Buried disposal tanks						X				✓	Above ground portions of risers visable only.				
Landscaping and access road				X		X				✓	Roads and landscaping clearly maintained.				
UNDERGROUND STORAGE ,WELLS AND COMPLETION (WORK-OVER)											This section has been completed by Mr. Frank Sorensen of Sproule and Associates.	**3.5**	**5.5**	**5B**	
Geophysic, geology, mapping & modeling	X	X								✓					
SF-01 Storage production		X								✓					
SF-03 Storage production		X								✓					
SF-07 Storage monitoring			X							✓					
SF-08 Storage monitoring			X							✓					**7**
SF-09 Storage production		X								✓					
SF-10 Storage production		X								✓					
SF-11 Storage monitoring			X							✓					
SF-12 Storage production		X								✓					
SF-13 Storage monitoring			X							✓					
SF-14 Storage production		X								✓					
SF-15 Storage production		X								✓					
SF-16 Storage production		X								✓					
SF-17 Storage production		X								✓					
SF-18 Storage production		X								✓					
SF-19 Storage production		X								✓					**8**
WELL EQUIPMENT												**3.6**	**5.6**	**6B**	
Filter F-100										✓	Filter not conected nor operated. See Section 6.5 of the report.				
SF-01 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-03 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-09 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-10 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-12 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-13 Methanol injection skid										✓	Methanol skid not in operation. See Section 6.3 of the report.				
SF-14 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				**11**
SF-15 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-16 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-17 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-18 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
SF-19 Methanol injection skid				X			X			✓	Methanol skid and tank complete.				
GAS GATHERING SYSTEM												**3.7**	**5.7**	**7B**	
3 inch line to SF-18		X								✓	Riser visible and connected.				
6 inch line to SF-17		X								✓	Riser visible and connected.				
6 inch line to SF-13										✓	Riser visible but connection is blinded off at the station. See Section 6.2 of the report.				
6 inch line to SF-15		X								✓	Riser visible and connected.				
6 inch line to SF-14		X								✓	Riser visible and connected.				
3 inch line to SF-01		X								✓	Riser visible and connected.				
3 inch line to SF-03		X								✓	Riser visible and connected.				
3 inch line to SF-09		X								✓	Riser visible and connected.				
3 inch line to SF-10		X								✓	Riser visible and connected.				
3 inch line to SF-12		X								✓	Riser visible and connected.				
6 inch main from station to well site # 1		X								✓	Riser visible and connected.				
6 inch main from well site #1 to well site # 2		X								✓	Riser visible and connected.				
6 inch main from station to well site # 3		X								✓	Riser visible and connected.				
6 inch line to SF-19		X								✓	Riser visible and connected.				

[1] See Section 4 of the Report.

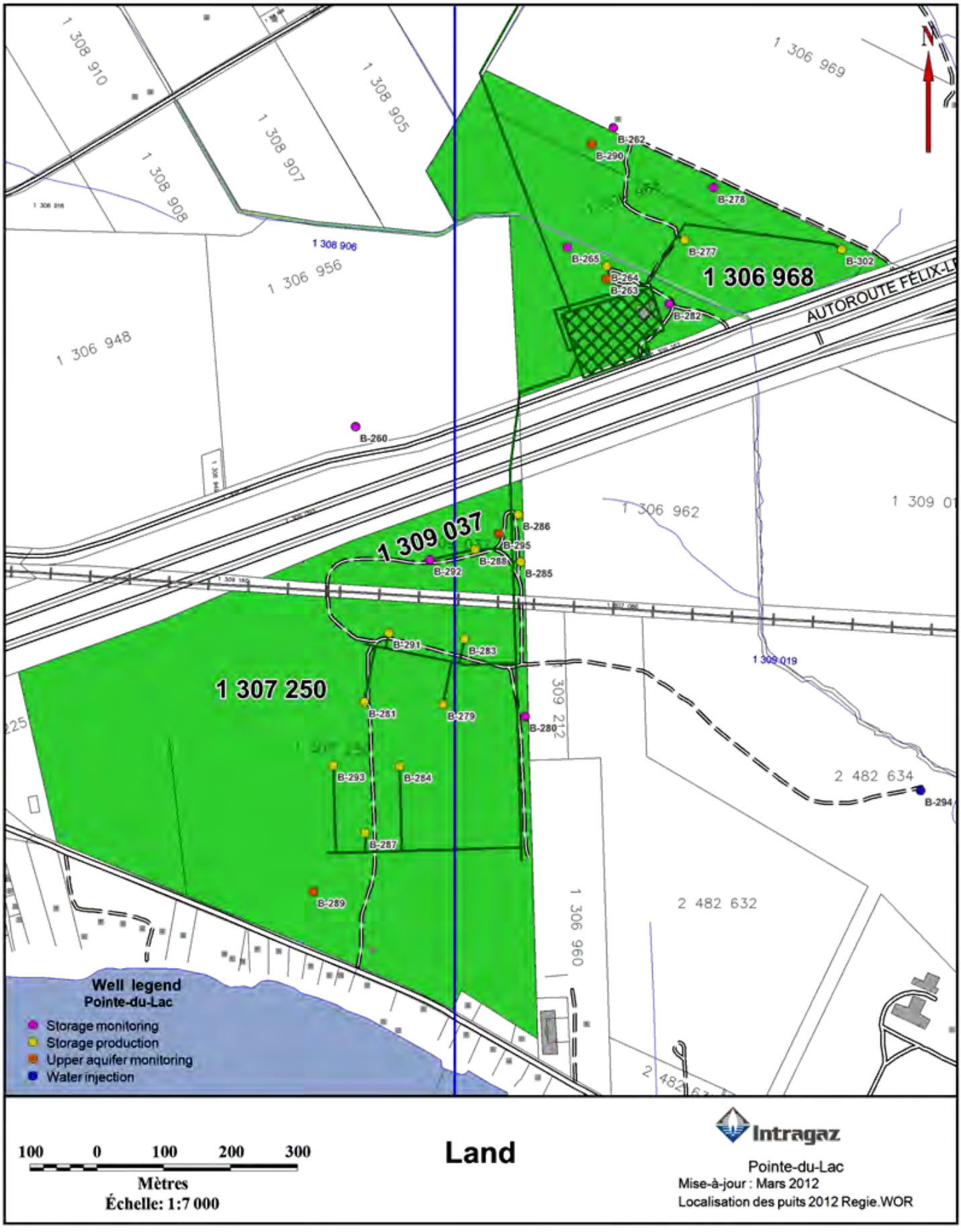
ST-FLAVIEN STORAGE
USEFULNESS CHECK - LIST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	PRIMARY USEFULNESS CRITERIA [1]									WITNESSING THE ASSETS		REPORT REFERENCE			
	RESERVOIR			OPERATION											
ASSET DESCRIPTION	INTEGRITY	PERFORMANCE	MONITORING	SAFETY/ ENVIRONMENT	INTEGRITY	DAILY OPERATION	REQUIRED FOR THE PROCESS	CONTROL	MAINTENANCE & REPAIRS	APRIL 12, 2012 - SITE VISIT	COMMENTS	DESCRIPTION	ASSESSMENT	APPENDIX NUMBER	Photograph Number
MECHANICAL AND STATION PIPING												**3.9**	**5.9**	**9B**	
Regulation System				X				X		✓					**15**
Well site #3 piping				X			X	X		✓	All valves appear to be complete.				**16**
Ultrasonic global metering station		X						X		✓	Meter in place.				**17**
Process pipe rack		X					X			✓	Pipe rack complete.				**18**
Process skid		X					X			✓	Process skid complete with separator, dehydration and switching valves.				**19-20-21**
BUILDINGS												**3.10**	**5.10**	**10B**	
Dehydration					X	X				✓	Included with process building.				
Compressor # 1					X	X				✓	C-1 and C-2 in same building.				
Compressor # 2					X	X				✓	C-1 and C-2 in same building.				
Utility well site # 1					X	X				✓	Complete.				
Well site # 1 Metering Building					X	X				✓	Complete with gas and fire detection. Coalescing filter not mechanically tied-in. See Section 6.5 of the report.				**26**
Well site # 2 Metering Building					X	X				✓	Complete with gas and fire detection.				**27**
Barrel dock and shelter					X				X	✓	Located on east side of station.				**28**
Office / control room / workshop					X	X			X	✓	Complete and occupied.				**29**
ELECTRICAL											See Section 6.4 of the report.	**3.11**	**5.11**	**11B**	
MCC compressor station						X				✓	Complete and inside control room/workshop.				**32**
MCC well site # 1 & 2						X				✓	Inside installation at well site #1.				**33**
MCC well site # 3						X				✓	Exterior installation, not inside a building.				**34**
Genset electrical failure back-up # 2						X				✓	Complete. Interior installation, includes diesel tank.				
Genset electrical failure back-up # 3						X				✓	Complete. Exterior installation, includes diesel tank.				**35**
Genset electrical failure back-up station #1						X				✓	Inside control room/workshop.				
COMPRESSORS												**3.12**	**5.12**	**12B**	**39**
UNIT C-1		X					X			✓	Complete, but not operating on site visit day.				**40**
UNIT C-2		X					X			✓	Complete, but not operating on site visit day.				**41**
DEHYDRATION												**3.13**	**5.13**	**13B**	
Dehydration unit							X			✓	Complete with reboiler and process piping.				**44**
Thermal oxidizer							X			✓	Exterior installation.				**45**
BOILER AND HEATER												**3.14**	**5.14**	**14B**	
H-800 static heater							X			✓	Complete and inside control room/workshop building.				**47**
H-840 forced air heater							X			✓	Complete and inside control room/workshop building.				**48**
INSTRUMENTATION												**3.15**	**5.15**	**15B**	
Main station control panel				X				X		✓	Installation complete, inside control room/workshop.				**52**
Well site # 1 control panel				X				X		✓	Exterior installation.				
Well site # 2 control panel				X				X		✓	Exterior installation.				
Well site # 3 control panel				X				X		✓	Exterior installation.				
SF-17&18 control panel				X				X		✓	Exterior installation.				
SF-19 control panel				X				X		✓	Exterior installation.				
Instrument air compressor #1				X				X		✓	Complete and installed inside control room/workshop.				**53**
Instrument air compressor #2				X				X		✓	Complete and installed inside control room/workshop.				**60**
Compressor # 1 control panel				X				X		✓	Adjacent to compressor.				
Compressor # 2 control panel				X				X		✓	Adjacent to compressor.				
ELECTRONICS												**3.16**	**5.16**	**16B**	
Gas detection system				X						✓	Operational in all buildings.				
Fire detection system				X						✓	Operational in all buildings.				**55**
TOOLS						X			X	✓	Maintenance tools visible in workshop.	**3.17**	**5.17**	**17B**	**57**
OPERATION COMPUTERS				X		X		X		✓	Computers tied to Station control system.	**3.18**	**5.18**	**18B**	**59**
FURNITURE						X				✓	General office furnishings as well as control room furnishings.	**3.19**	**5.19**		
VEHICLES				X		X			X	✓	Two pick up trucks witnessed.	**3.20**	**5.20**	**19B**	**61**
SPARE PARTS									X	✓	Spare parts noted in compressor building and in workshop.	**3.21**	**5.21**	**20B**	**63**

[1] See Section 4 of the Report.

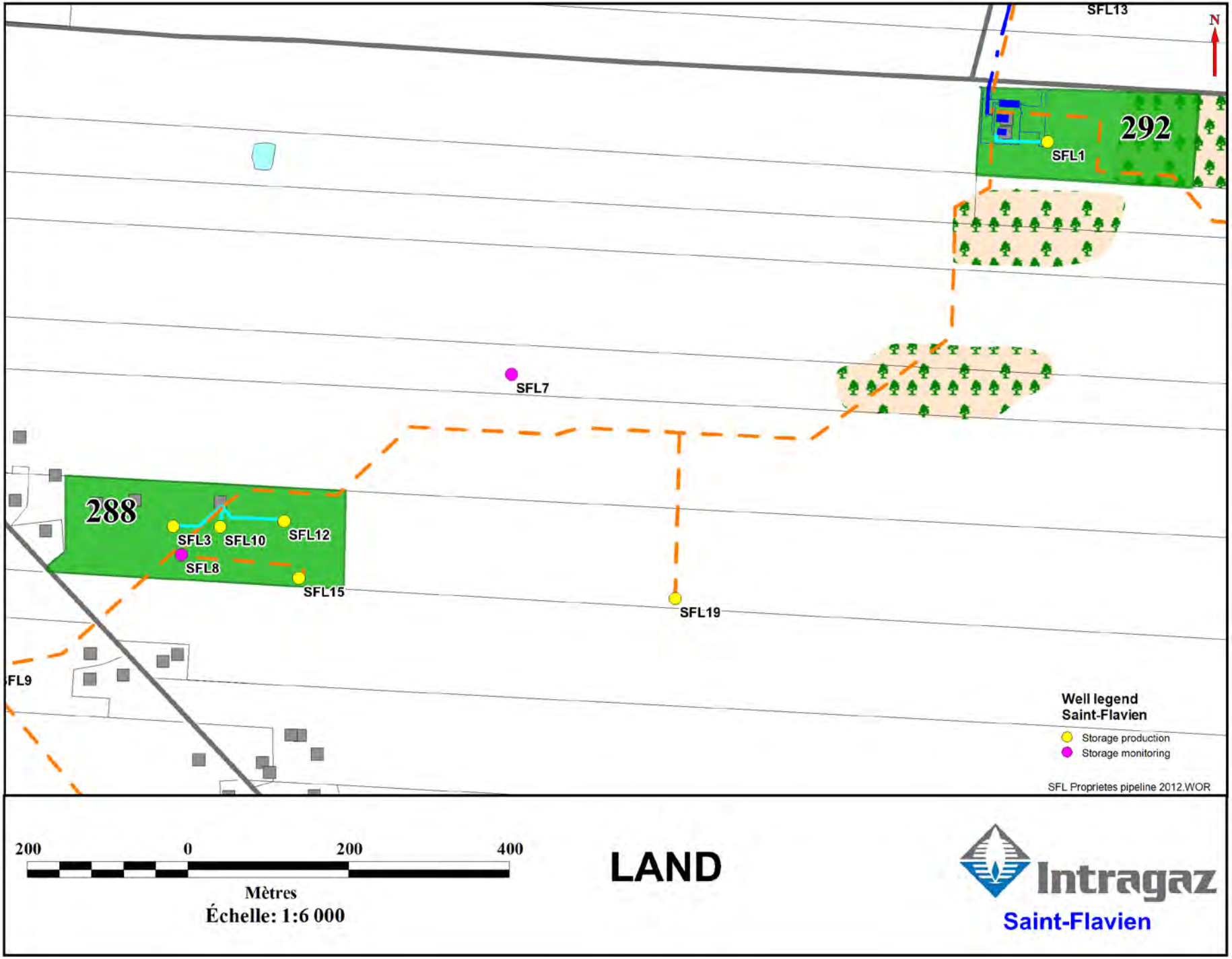
APPENDIX 1A

LAND
POINTE-DU-LAC


1 308 910
1 308 905
1 308 907
1 308 908
1 308 906
1 306 956
1 306 948
1 306 969
1 306 968
1 309 037
1 307 250
1 306 962
1 309 019
1 309 212
1 306 960
2 482 634
2 482 632
AUTOROUTE FÉLIX-L
B-260
B-262
B-290
B-278
B-265
B-277
B-302
B-264
B-263
B-282
B-286
B-295
B-288
B-292
B-285
B-291
B-283
B-281
B-279
B-280
B-293
B-284
B-287
B-289
B-294
Well legend
Pointe-du-Lac
Storage monitoring
Storage production
Upper aquifer monitoring
Water injection
100 0 100 200 300
Mètres
Échelle: 1:7 000
Land
Intragaz
Pointe-du-Lac
Mise-à-jour : Mars 2012
Localisation des puits 2012 Regie.WOR

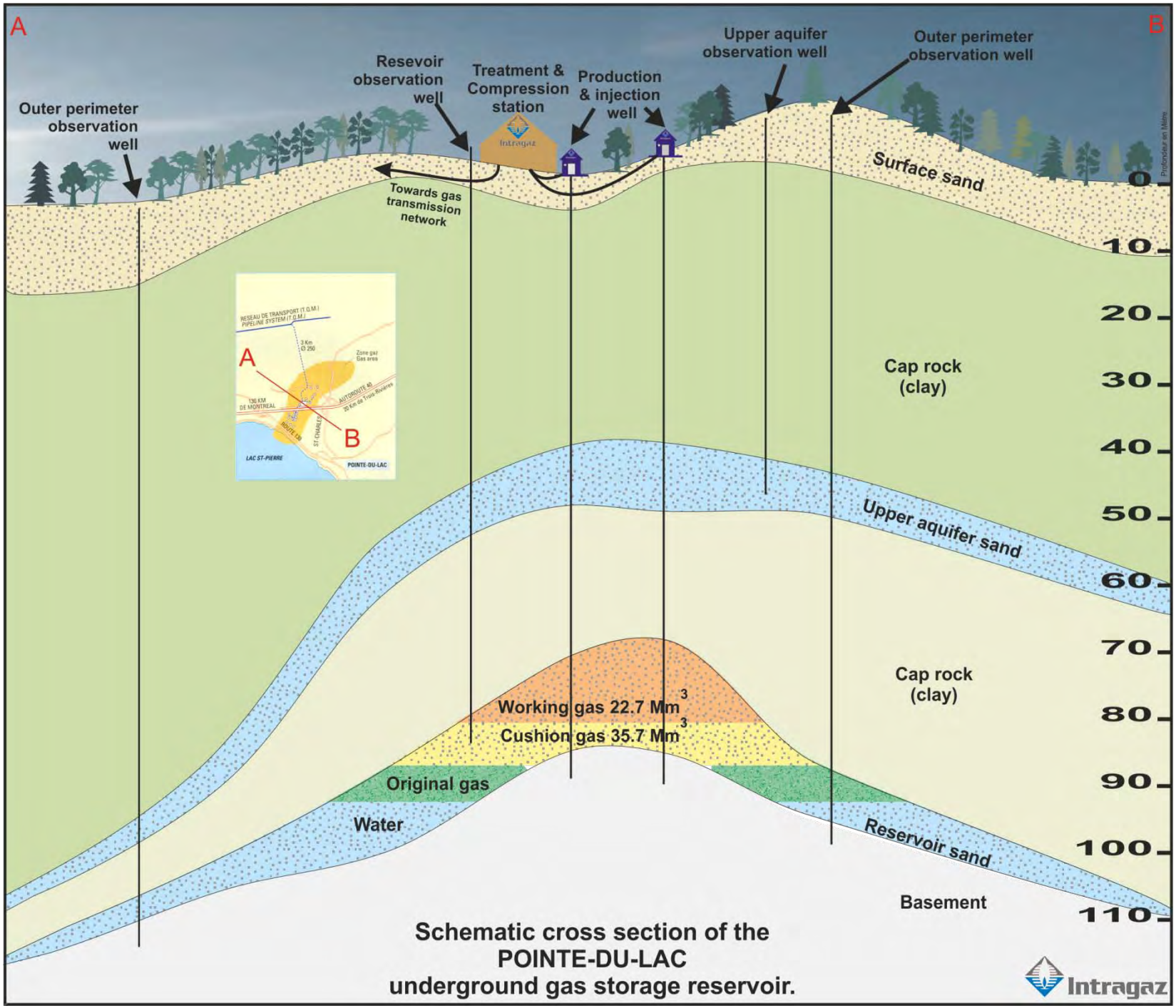
APPENDIX 1B

LAND
SAINT-FLAVIEN


SFL13
N
292
SFL1
SFL7
288
SFL3
SFL10
SFL12
SFL8
SFL15
SFL19
FL9
Well legend
Saint-Flavien
Storage production
Storage monitoring
SFL Proprietes pipeline 2012.WOR
200
0
200
400
Mètres
Échelle: 1:6 000
LAND
Intragaz
Saint-Flavien

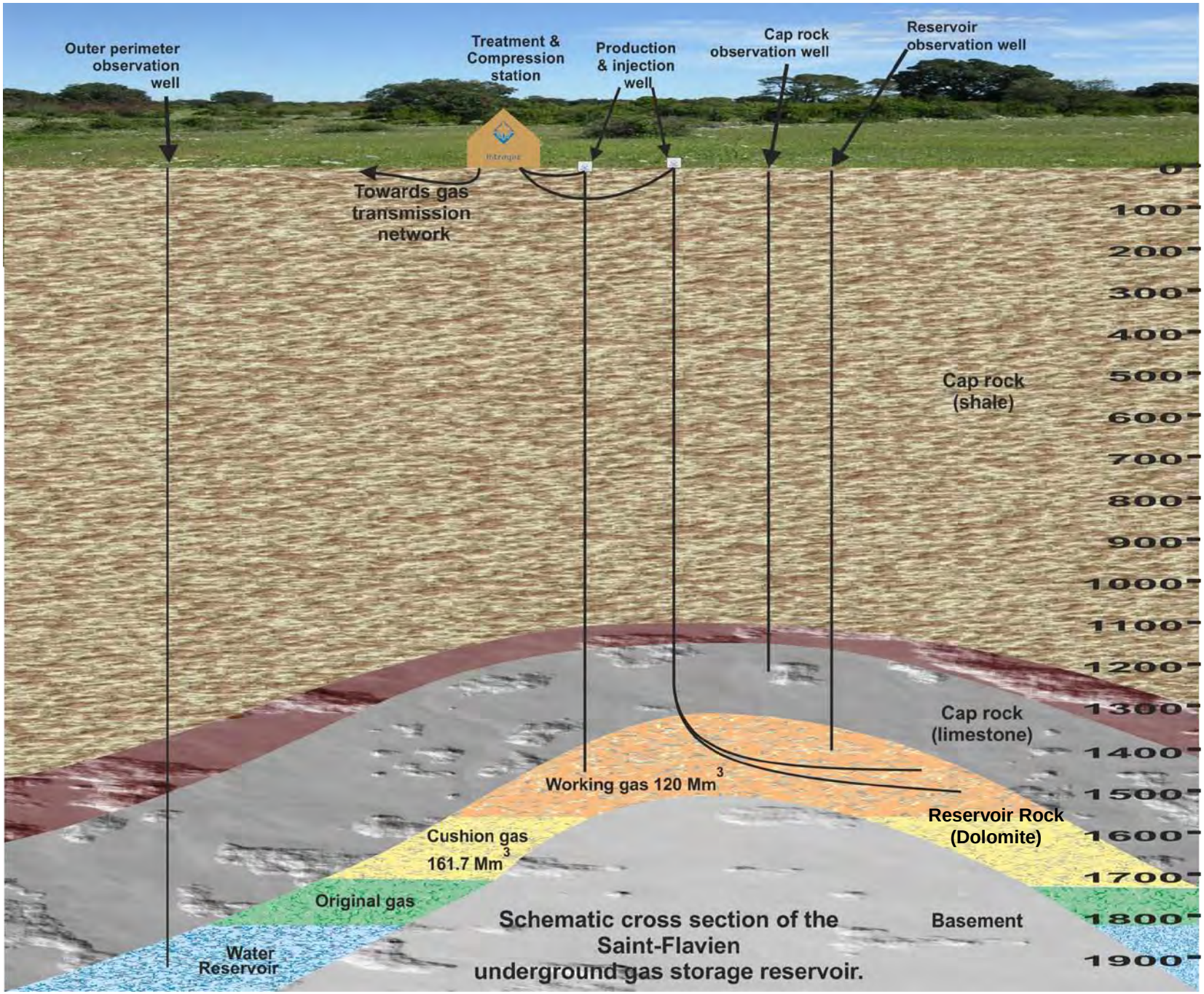
APPENDIX 2A

CUSHION GAS
POINTE-DU-LAC


A
B
Outer perimeter observation well
Resevoir observation well
Treatment & Compression station
Production & injection well
Upper aquifer observation well
Outer perimeter observation well
Towards gas transmission network
Surface sand
Cap rock (clay)
Upper aquifer sand
Cap rock (clay)
Working gas 22.7 Mm3
Cushion gas 35.7 Mm3
Original gas
Water
Reservoir sand
Basement
0
10
20
30
40
50
60
70
80
90
100
110
meter
Schematic cross section of the POINTE-DU-LAC underground gas storage reservoir.
Intragaz

APPENDIX 2B

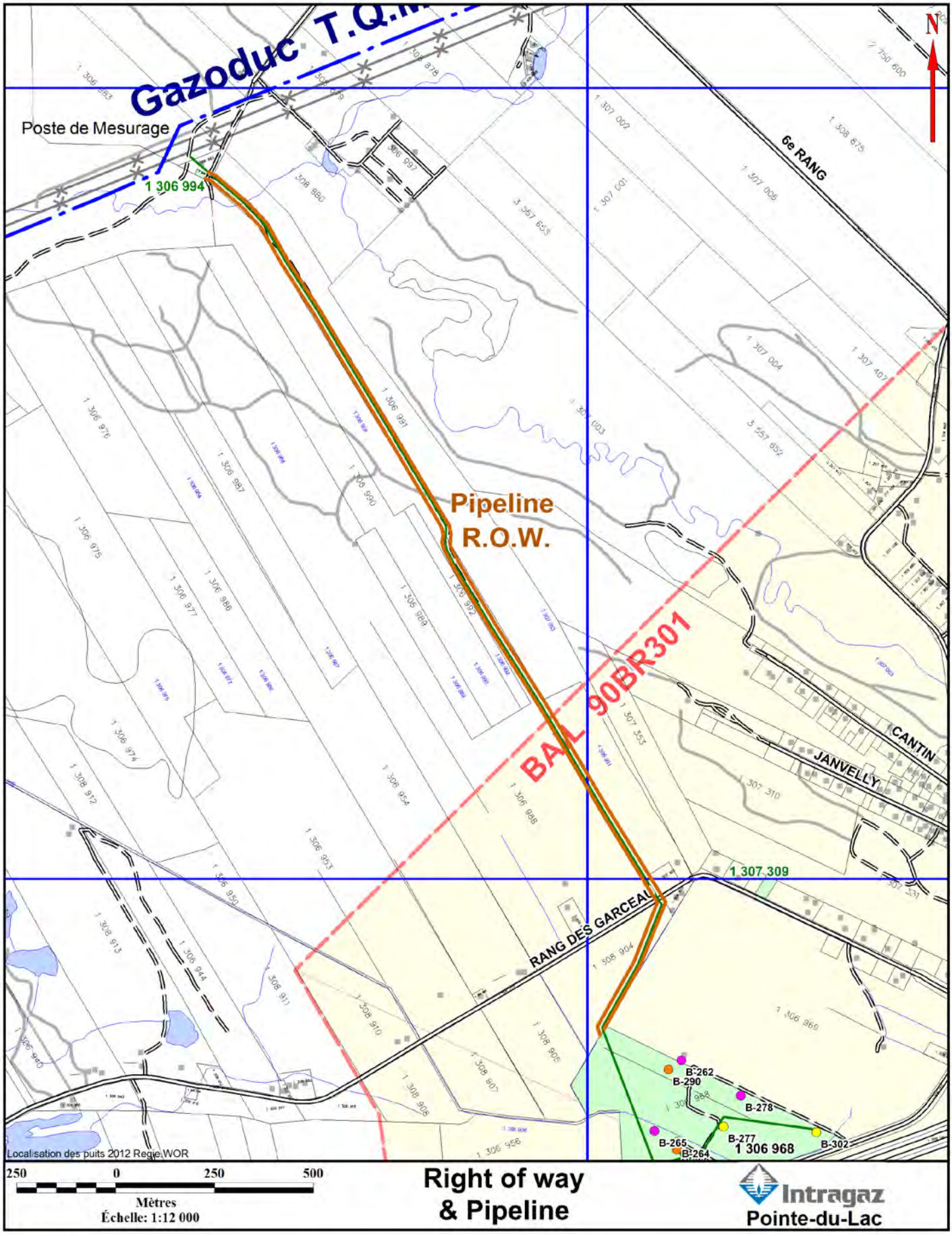
CUSHION GAS
SAINT-FLAVIEN



Schematic cross section of the Saint-Flavien underground gas storage reservoir.

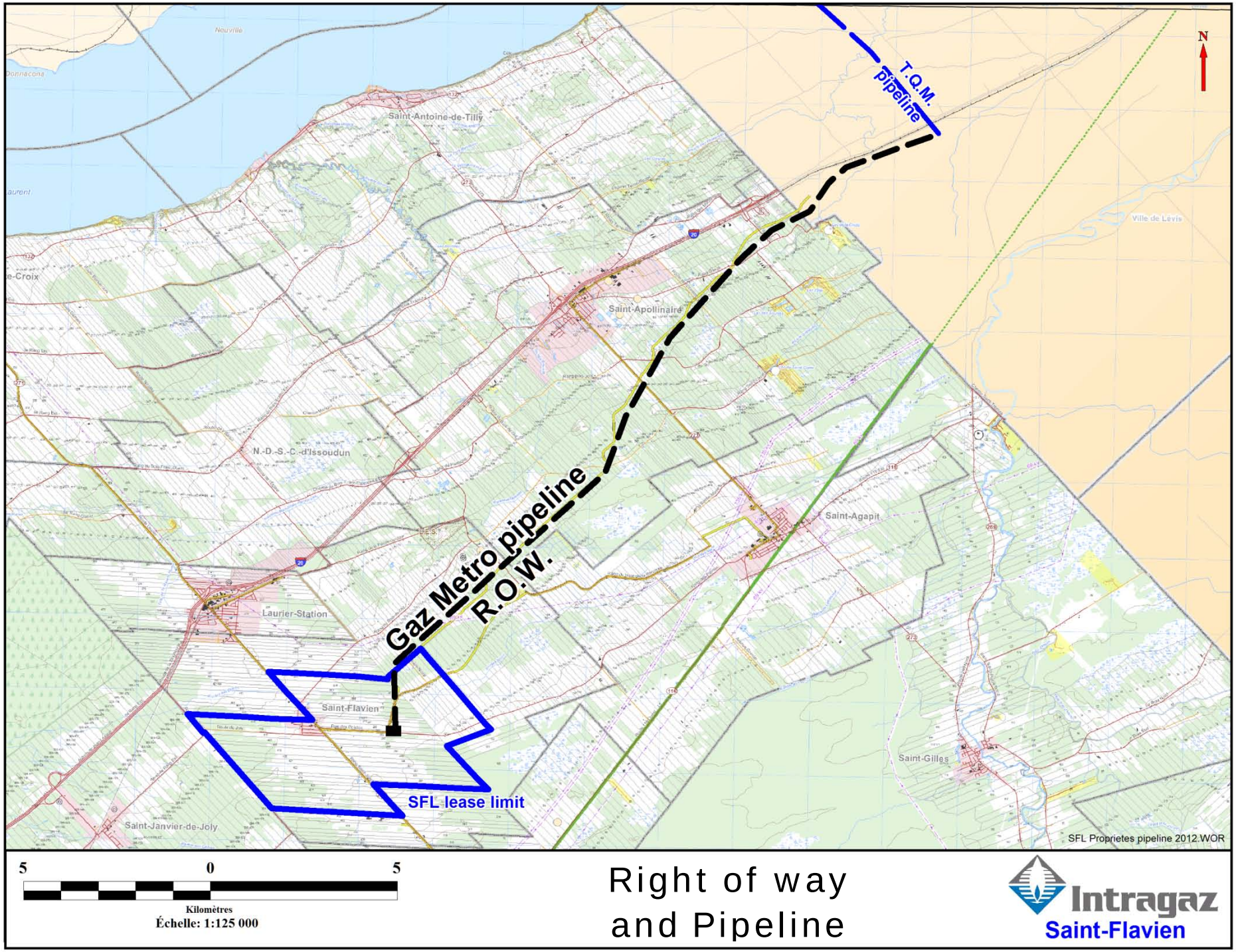
APPENDIX 3A

RIGHT-OF-WAY AND PIPELINE
POINTE-DU-LAC


Gazoduc T.Q.
Poste de Mesurage
1 306 994
6e RANG
Pipeline
R.O.W.
BAL 90BR301
CANTIN
JANVELLY
1 307 309
RANG DES GARCEAU
B-262
B-290
B-278
B-277
1 306 968
B-302
B-265
B-264
Localisation des puits 2012 Regie WOR
250 0 250 500
Mètres
Échelle: 1:12 000
Right of way
& Pipeline
Intragaz
Pointe-du-Lac

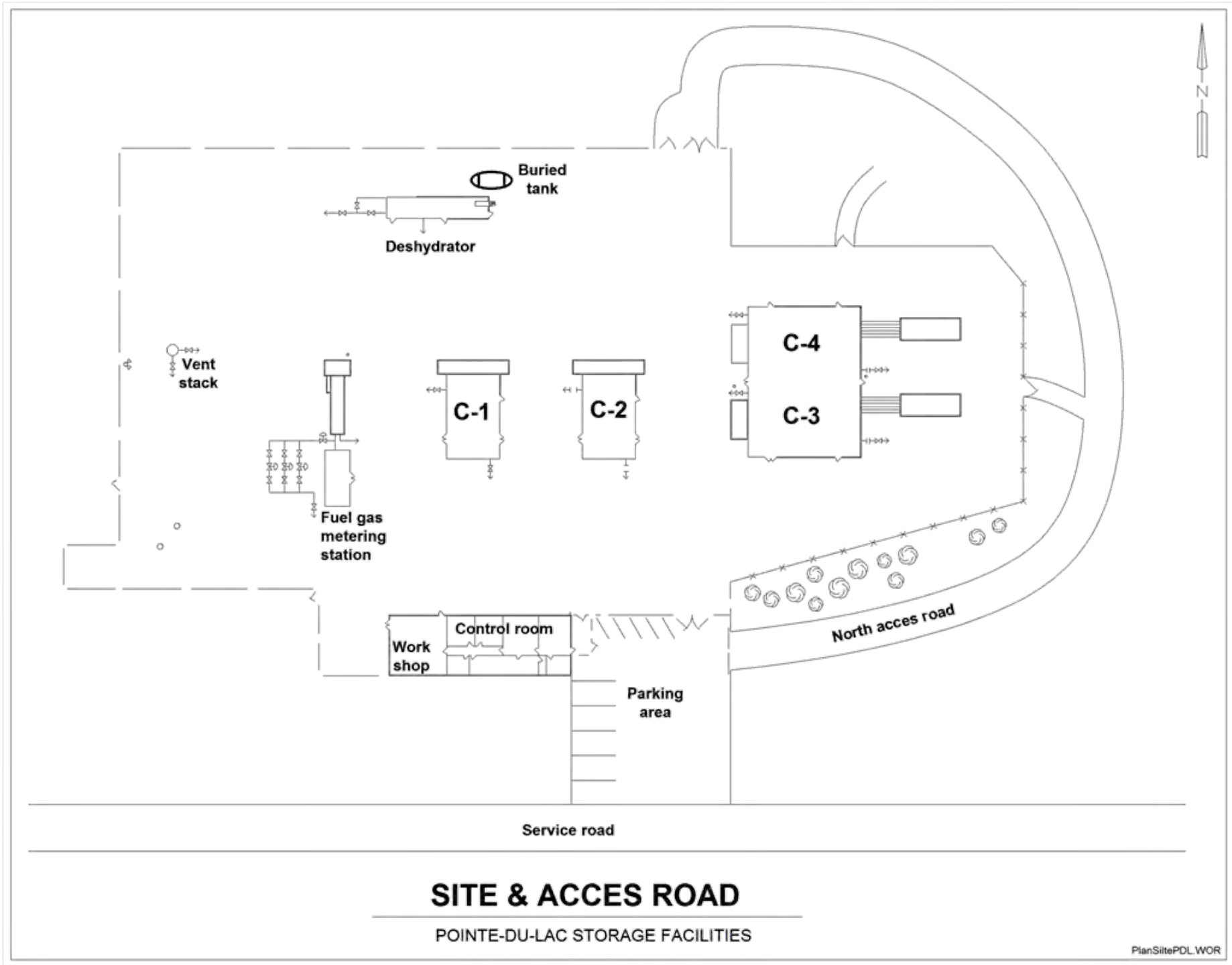
APPENDIX 3B

RIGHT-OF-WAY AND PIPELINE
SAINT-FLAVIEN


T.Q.M. pipeline
N
Saint-Antoine-de-Tilly
Saint-Apollinaire
Ville de Lévis
N.-D.-S.-C.-d'Issoudun
Saint-Agapit
Laurier-Station
Gaz Metro pipeline
R.O.W.
Saint-Flavien
Saint-Gilles
SFL lease limit
Saint-Janvier-de-Joly
SFL Proprietes pipeline 2012.WOR
5
0
5
Kilomètres
Échelle: 1:125 000
Right of way
and Pipeline
Intragaz
Saint-Flavien

APPENDIX 4A

SITE PREPARATION AND ROAD ACCESS
POINTE-DU-LAC



SITE & ACCES ROAD

POINTE-DU-LAC STORAGE FACILITIES

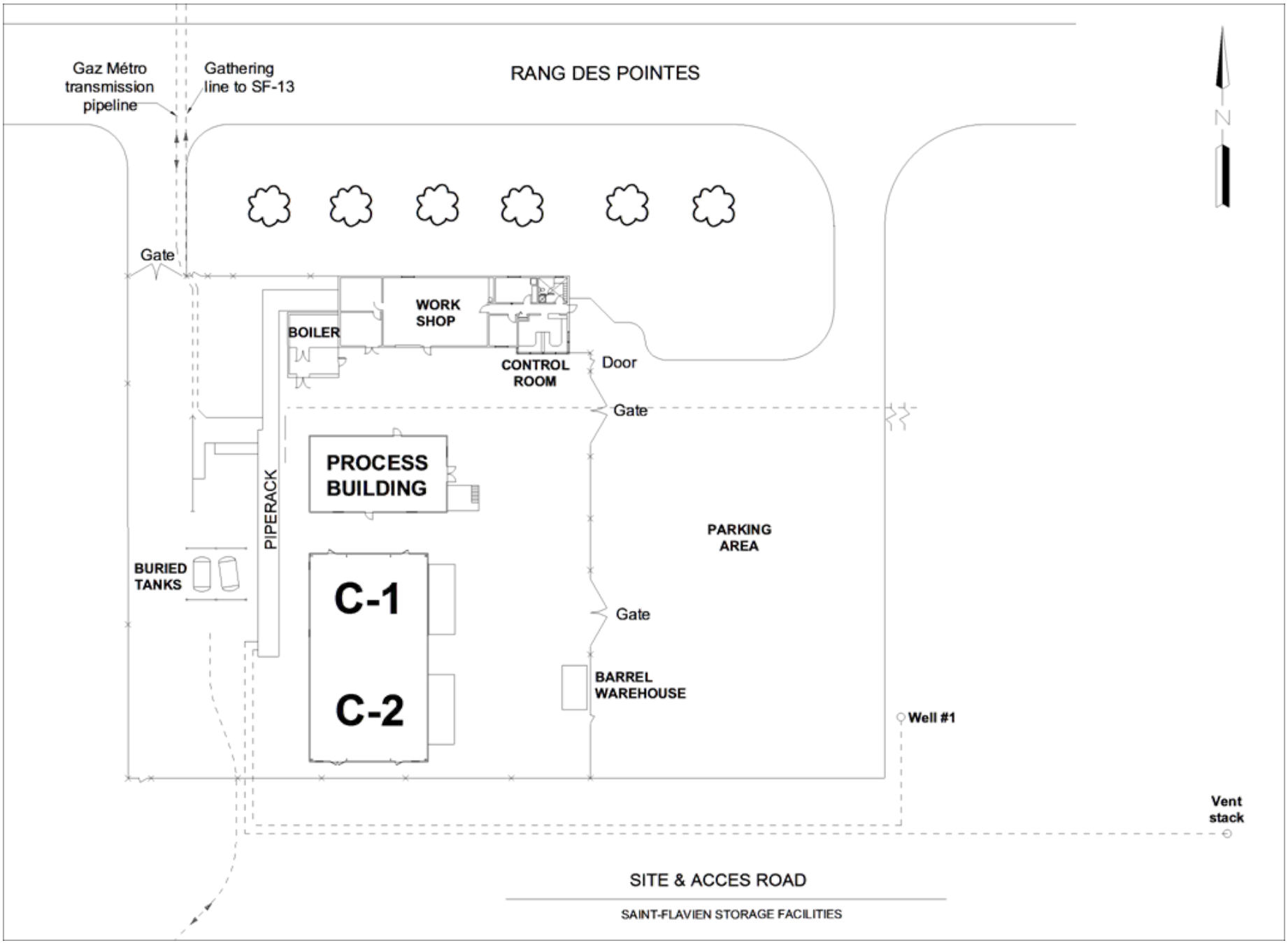
PlanSitePDL.WOR

Photograph No. 1

Station B

APPENDIX 4B

SITE PREPARATION AND ROAD ACCESS
SAINT-FLAVIEN

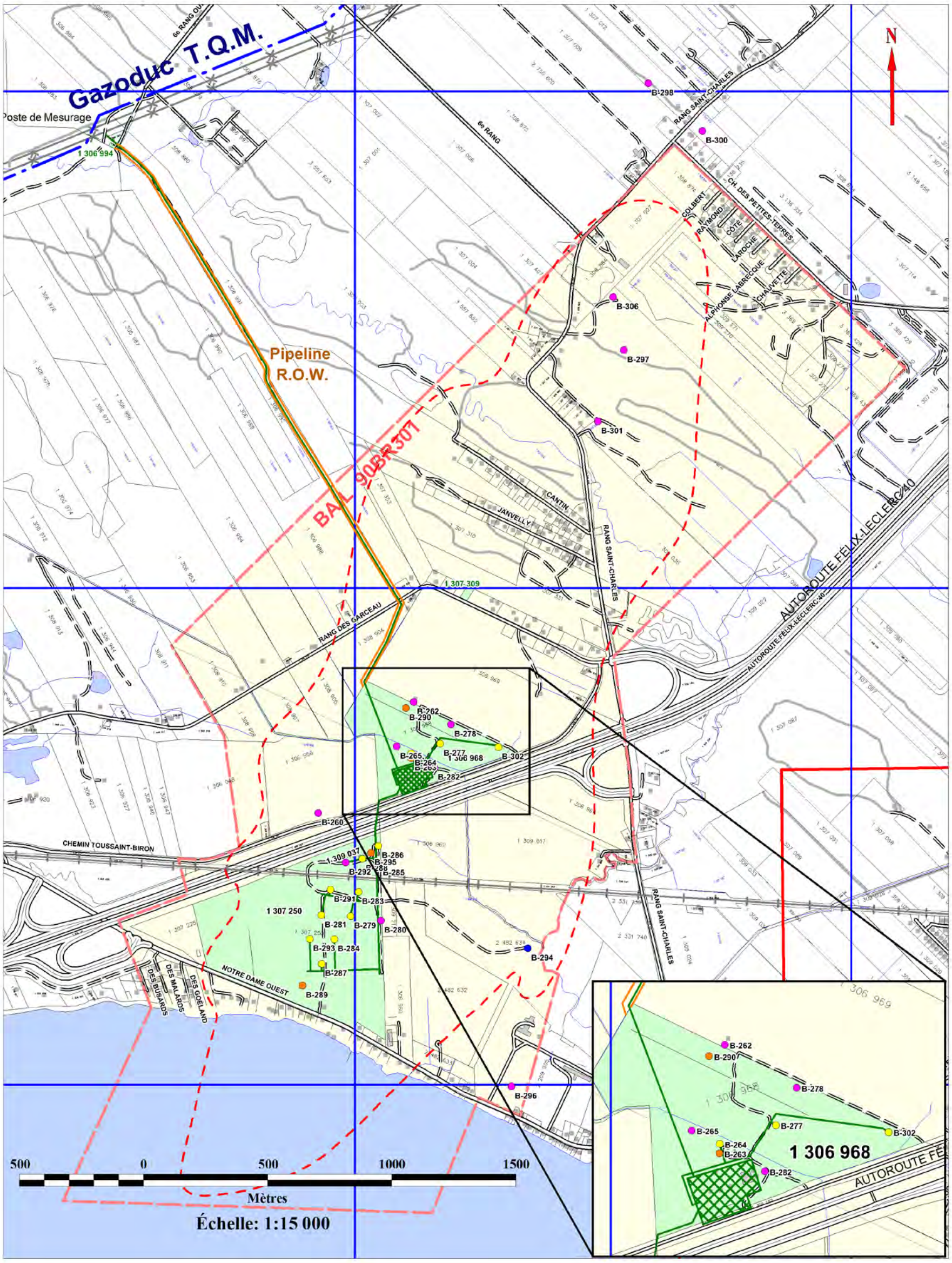

Gaz Métro transmission pipeline
Gathering line to SF-13
RANG DES POINTES
N
Gate
WORK SHOP
BOILER
CONTROL ROOM
Door
Gate
PROCESS BUILDING
PIPERACK
PARKING AREA
BURIED TANKS
C-1
C-2
Gate
BARREL WAREHOUSE
Well #1
Vent stack
SITE & ACCES ROAD
SAINT-FLAVIEN STORAGE FACILITIES

Photograph No. 2

Compressor Station

APPENDIX 5A

UNDERGROUND STORAGE, WELLS AND COMPLETION (WORK-OVER) POINTE-DU-LAC



Well legend
Pointe-du-Lac

- Storage monitoring
- Storage production
- Upper aquifer monitoring
- Water injection

Underground storage, wells & completion

Intragaz
Pointe-du-Lac

Mise-à-jour : Mars 2012
Localisation des puits 2012 Regie.WOR

Photograph No. 3

Well B-281

Photograph No. 4

Well B-290

Photograph No. 5

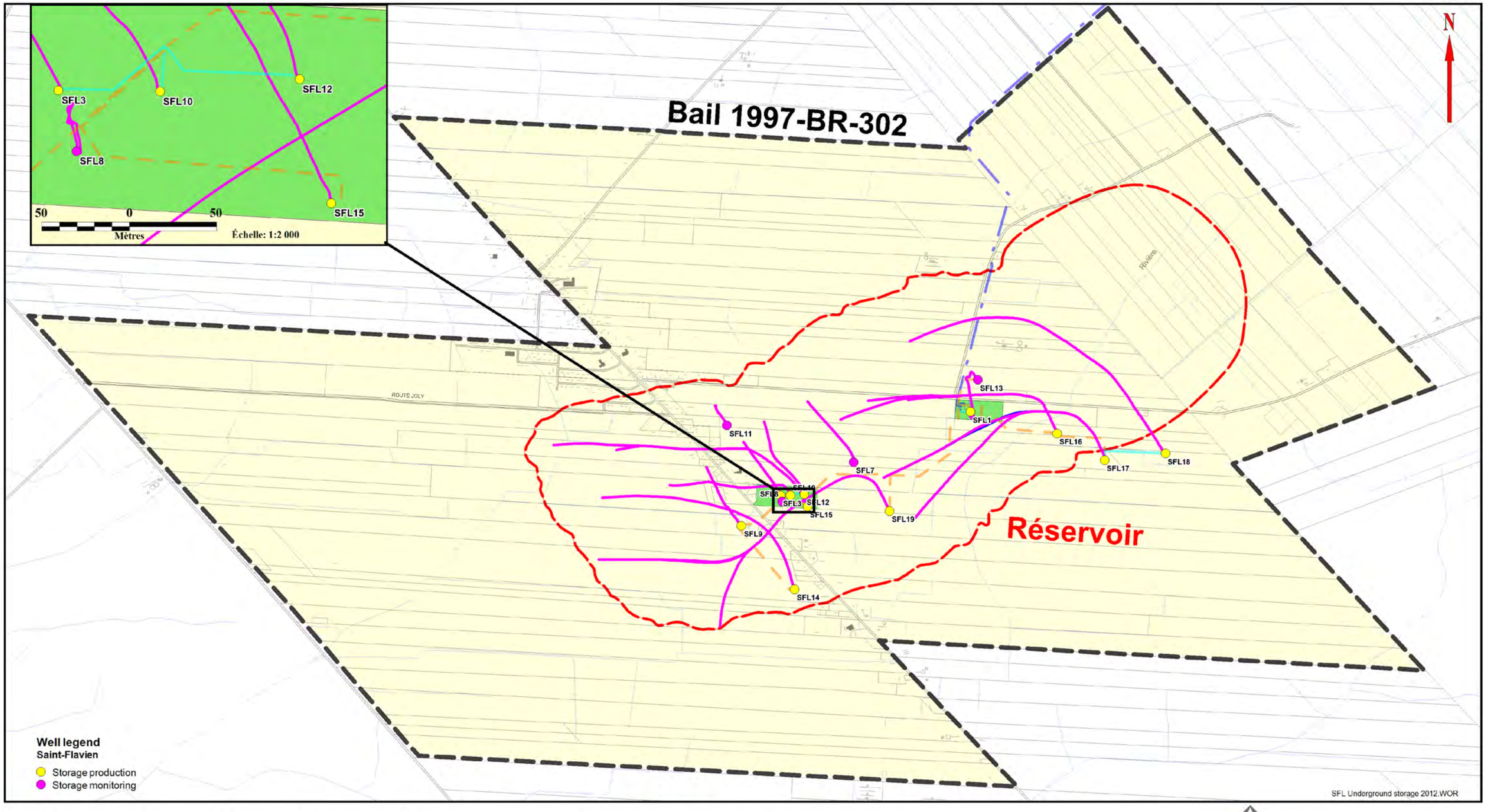
Well B-294

Photograph No. 6

Well B-306

APPENDIX 5B

UNDERGROUND STORAGE, WELLS AND COMPLETION (WORK-OVER) SAINT-FLAVIEN



Underground storage, wells & completion

Intragaz
Saint-Flavien

Photograph No. 7

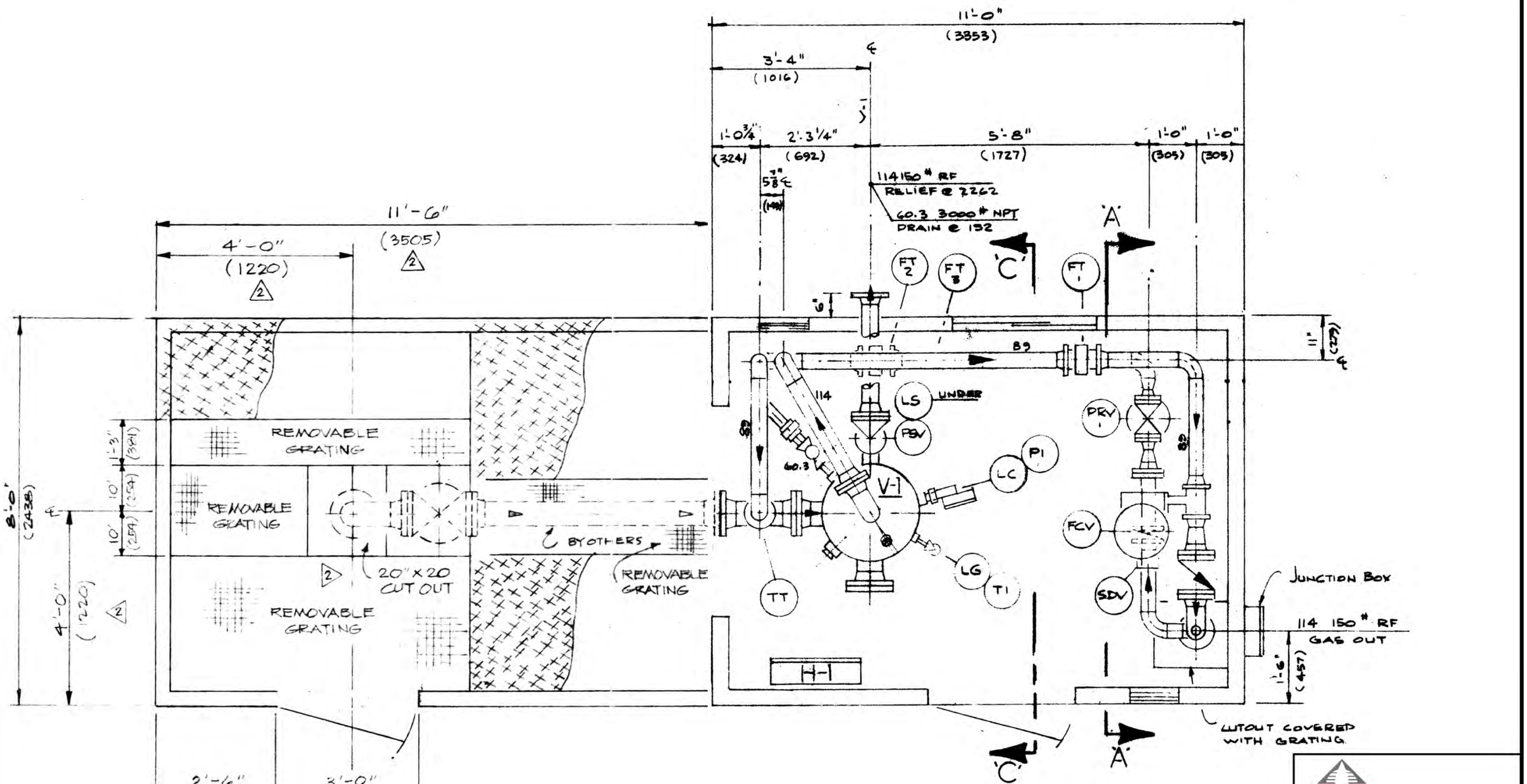
Well SF-08

Photograph No. 8

Well SF-19

APPENDIX 6A

WELL EQUIPMENT
POINTE-DU-LAC



WELL EQUIPMENT

POINTE-DU-LAC SITE STORAGE FACILITIES

Intragaz

POINTE-DU-LAC STORAGE	
TITRE **SEPARATOR SKID**	
DESSINÉ PAR GAÉTAN CAYOUETTE	
PROJETÉ PAR SYLVAIN LACOMBE	
VÉRIFIÉ PAR SYLVAIN LACOMBE	
APROUVER PAR SYLVAIN LACOMBE	
ÉCHELLE AUCUNE	No. DESSIN

Photograph No. 9

B-281 Instrument

Photograph No. 10

B-281 Separator

APPENDIX 6B

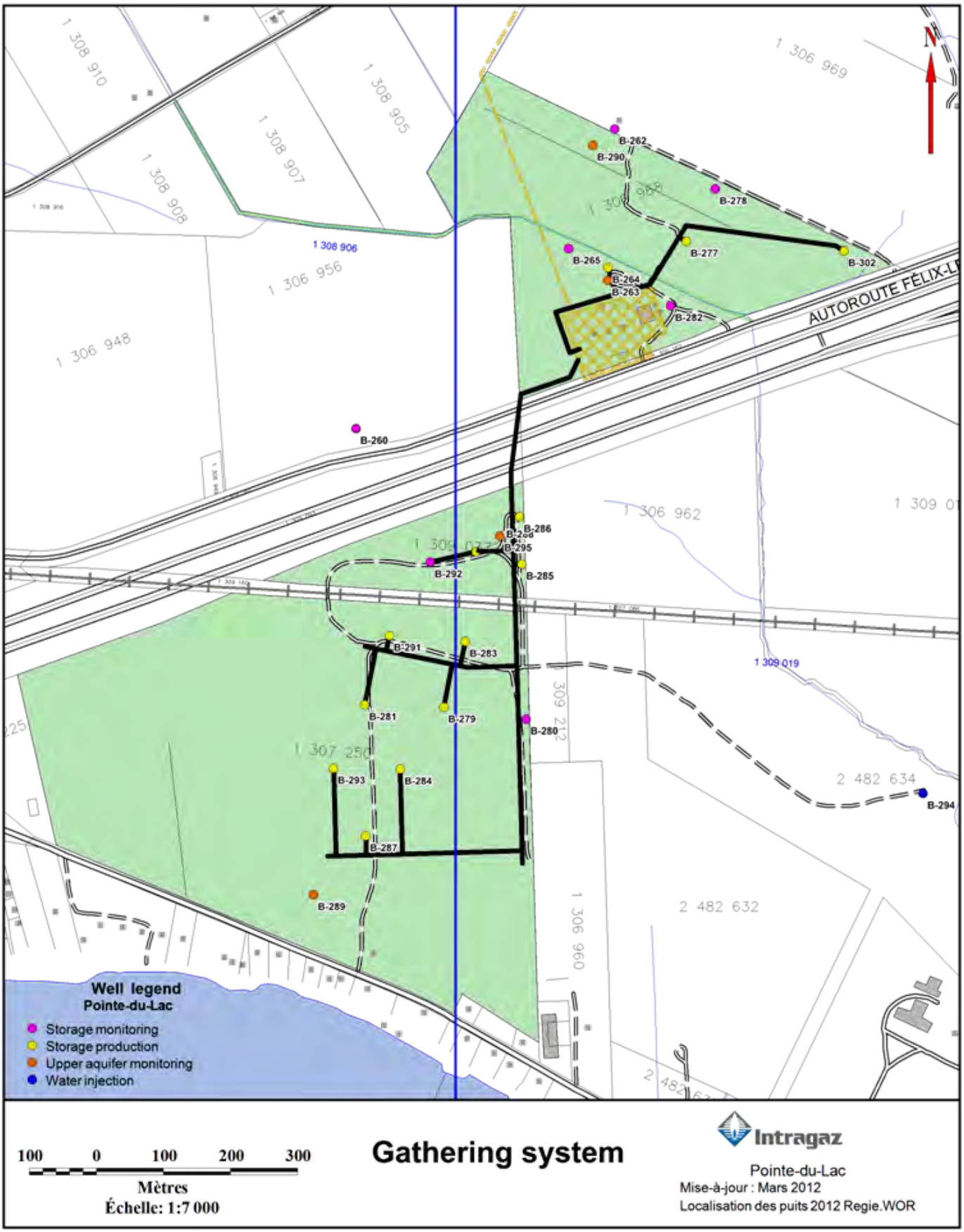
WELL EQUIPMENT
SAINT-FLAVIEN

Photograph No. 11

Well SF-14
Methanol Skid

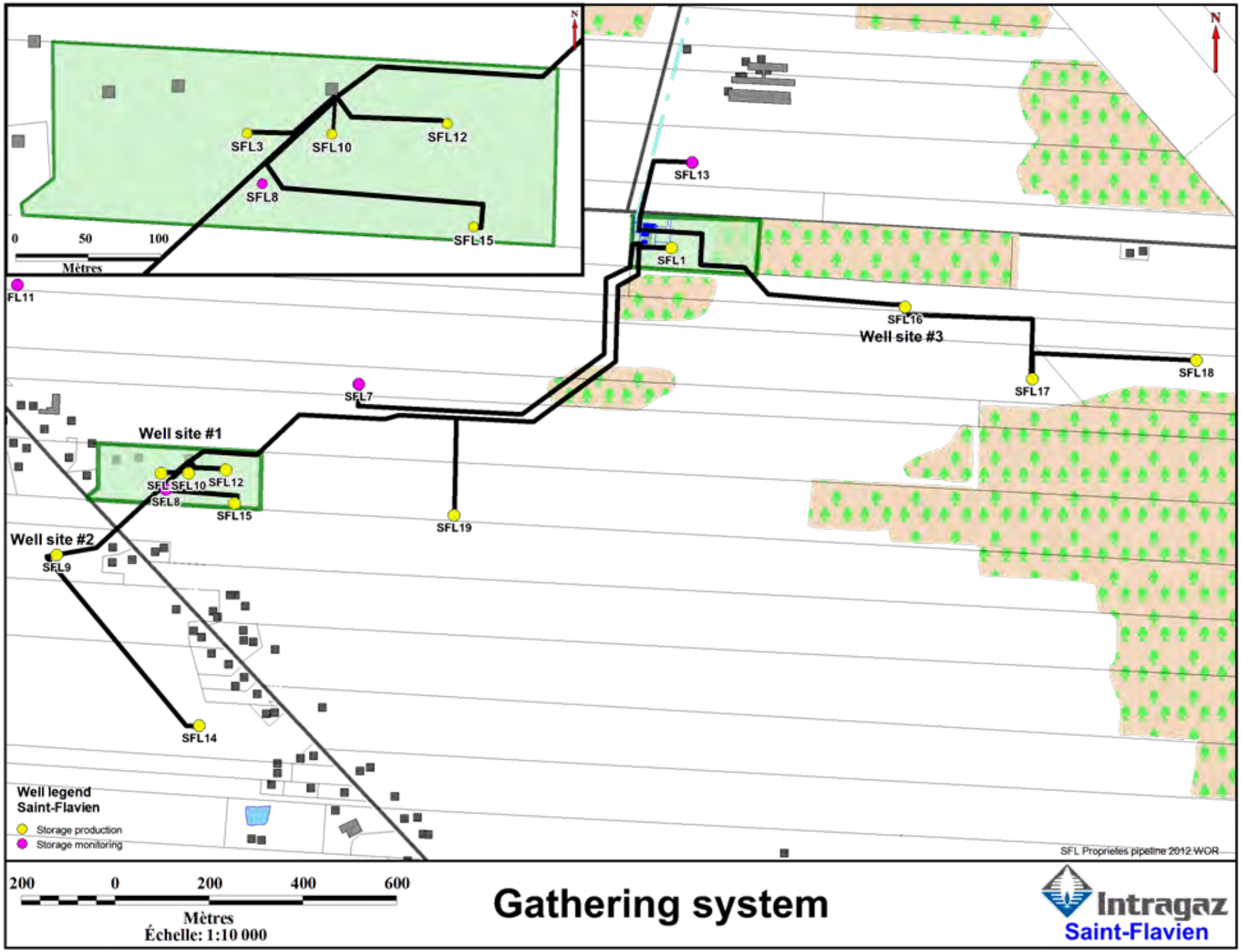
APPENDIX 7A

GAS GATHERING SYSTEM
POINTE-DU-LAC


N
B-262
B-290
B-278
B-277
B-302
B-265
B-264
B-263
B-282
AUTOROUTE FÉLIX-L
B-260
B-286
B-295
B-292
B-285
B-291
B-283
B-281
B-279
B-280
B-293
B-284
B-287
B-289
B-294
1 306 906
1 306 956
1 306 948
1 306 962
1 309 019
2 482 634
2 482 632
1 306 960
Well legend
Pointe-du-Lac
Storage monitoring
Storage production
Upper aquifer monitoring
Water injection
100 0 100 200 300
Mètres
Échelle: 1:7 000
Gathering system
Intragaz
Pointe-du-Lac
Mise-à-jour : Mars 2012
Localisation des puits 2012 Regie.WOR

APPENDIX 7B

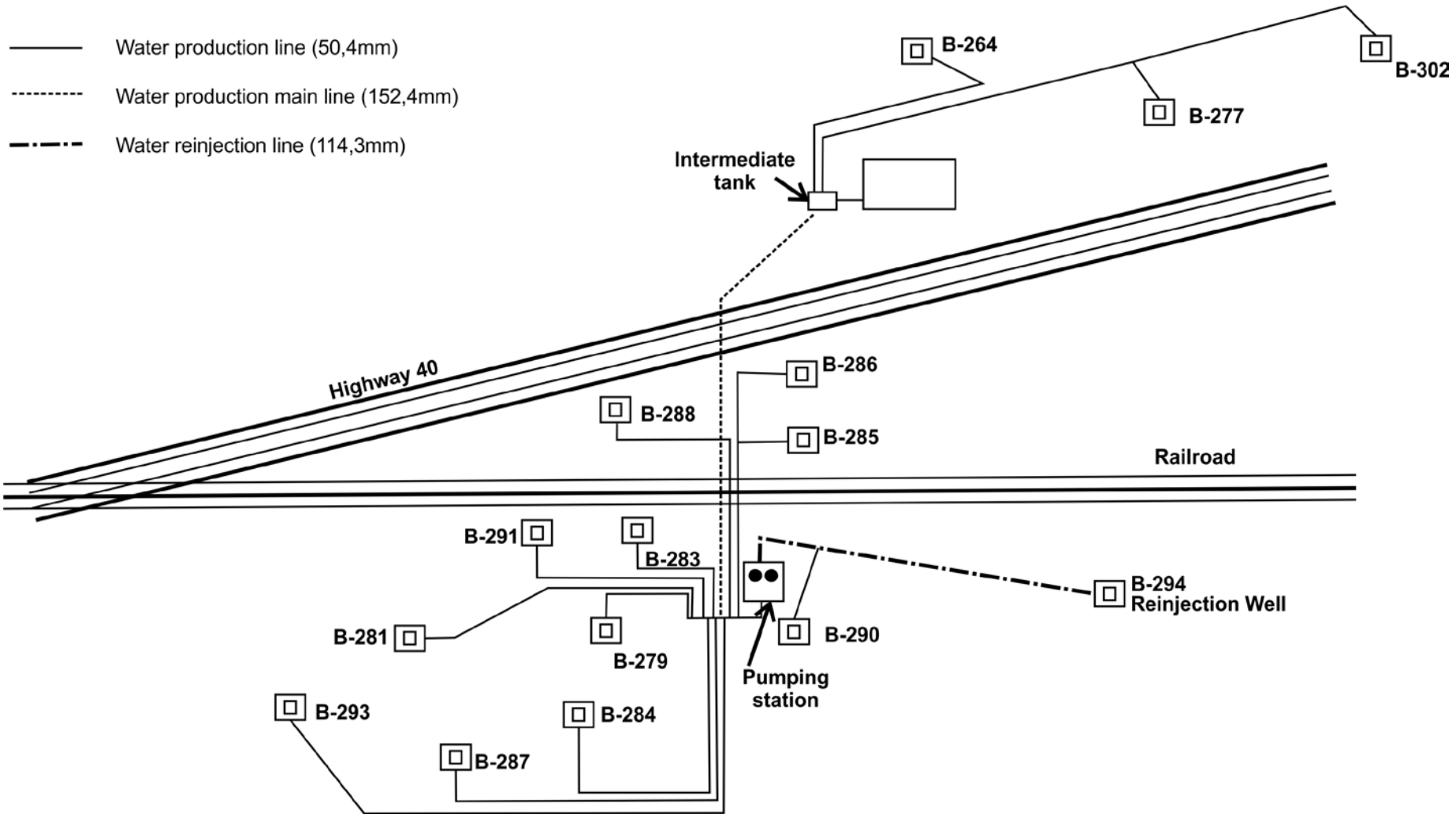
GAS GATHERING SYSTEM
SAINT-FLAVIEN


N
SFL3
SFL10
SFL12
SFL8
SFL15
0
50
100
Mètres
FL11
SFL13
SFL1
SFL16
Well site #3
SFL17
SFL18
SFL7
Well site #1
SFL
SFL10
SFL12
SFL8
SFL15
SFL19
Well site #2
SFL9
SFL14
Well legend
Saint-Flavien
Storage production
Storage monitoring
SFL Proprietes pipeline 2012.WOR
200
0
200
400
600
Mètres
Échelle: 1:10 000
Gathering system
Intragaz
Saint-Flavien

APPENDIX 8A

WATER REINJECTION
POINTE-DU-LAC

WATER REINJECTION

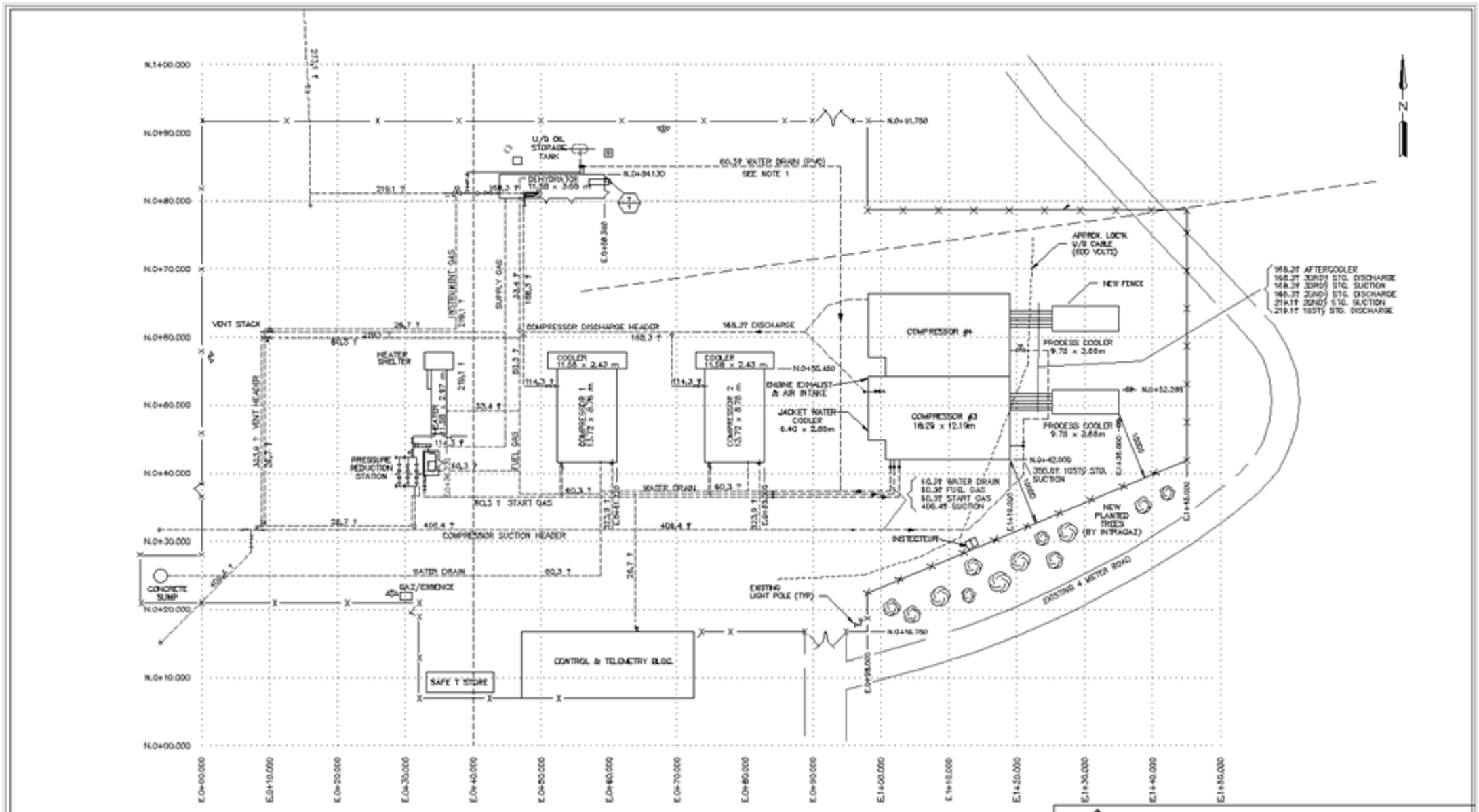


Photograph No. 12

Water Reinjection Pumping Station C

APPENDIX 9A

MECHANICAL AND STATION PIPING
POINTE-DU-LAC



Intragaz
6565, boul. JEAN XXIII
TROIS-RIVIERES-OUEST (Qc)
G9A 5C9
TEL.: (819) 377-8080
FAX.: (819) 377-8888

NOTES:

PLOTTED BY: https://www.autodesk.com/autoCAD
PLOT DATE: 2012.04.04 15:20

REV.	DATE	REVISION	No. PROJ.	DESS.	VER.	APPR.	APPR. CLIENT
2	10-06-08	STAGAIRE-ETE-08	01-I-201	REVU	REVU	REVU	REVU

SCEAU:

POINTE-DU-LAC STORAGE
MECHANICAL PIPING

No PROJET:	No DESSIN:	REVISION:
01-I-201	PLD-AME-DES-004	2

Photograph No. 13

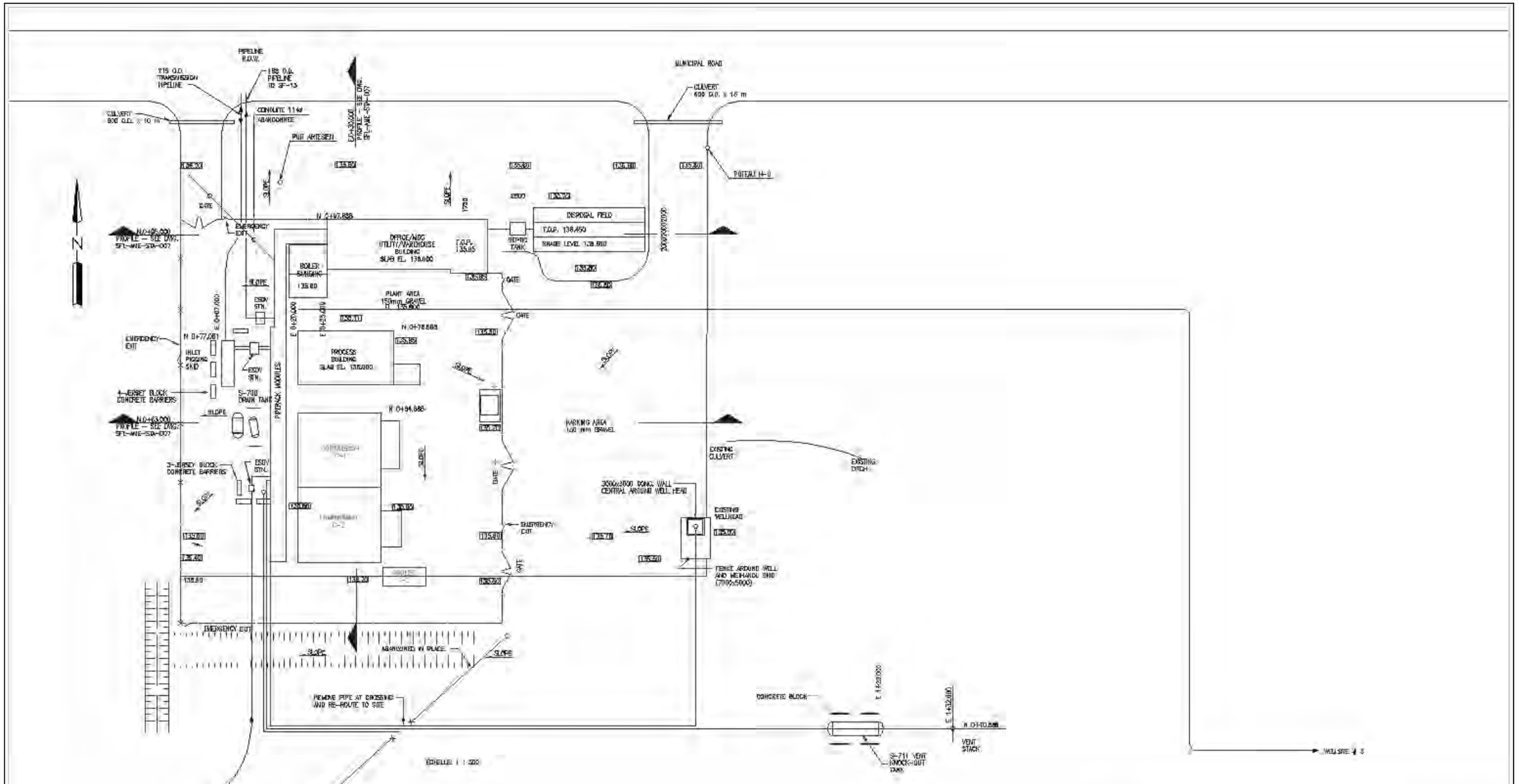
Regulation System

Photograph No. 14

Fuel Gas Metering System

APPENDIX 9B

MECHANICAL AND STATION PIPING
SAINT-FLAVIEN



REV.	DATE	REVISION	No. PROJ.	DESS.	VER.	APPR.	APPR. CLIENT
9	07-05-01	TQG	02-D-607	FD			DSP
8	06-04-01	EXTENSION OF BOILER BUILDING	02-D-607	FD			DSP
7	05-04-21	ADDITION OF D-2 COMPRESSOR	02-D-222	AC			DSP
6	04-10-19	AJOUT CDN, D-2 MODIF, CLÔTURE ET AJOUT KNOCK-OUT TANK		DJB	DSP	DSP	
5	02-10-02	TEL QUE CONSTRUIT	02-1-198	SR	DSP		
4	99-05-27	AS BUILT PER CLIENT MARK-UPS	697-112	GDN			
3	98-06-26	AS BUILT PER FIELD COMMENTS	697-117	SJH			
2	97-12-22	BUILDINGS LOCATION, SLAB & GRADE ELEVATIONS	697-117	SJP			
1	97-10-16	GENERAL REVISION	697-117	SJP	MT.	JJB.	
0	97-10-10	ISSUED FOR CONSTRUCTION	697-117	SJP	MT.	JJB.	
B	97-08-22	ISSUED FOR GOVERNMENT APPROVAL	697-117	SJP			
A	97-08-15	ISSUED FOR EIS	697-117	SJP			

SIGN.:

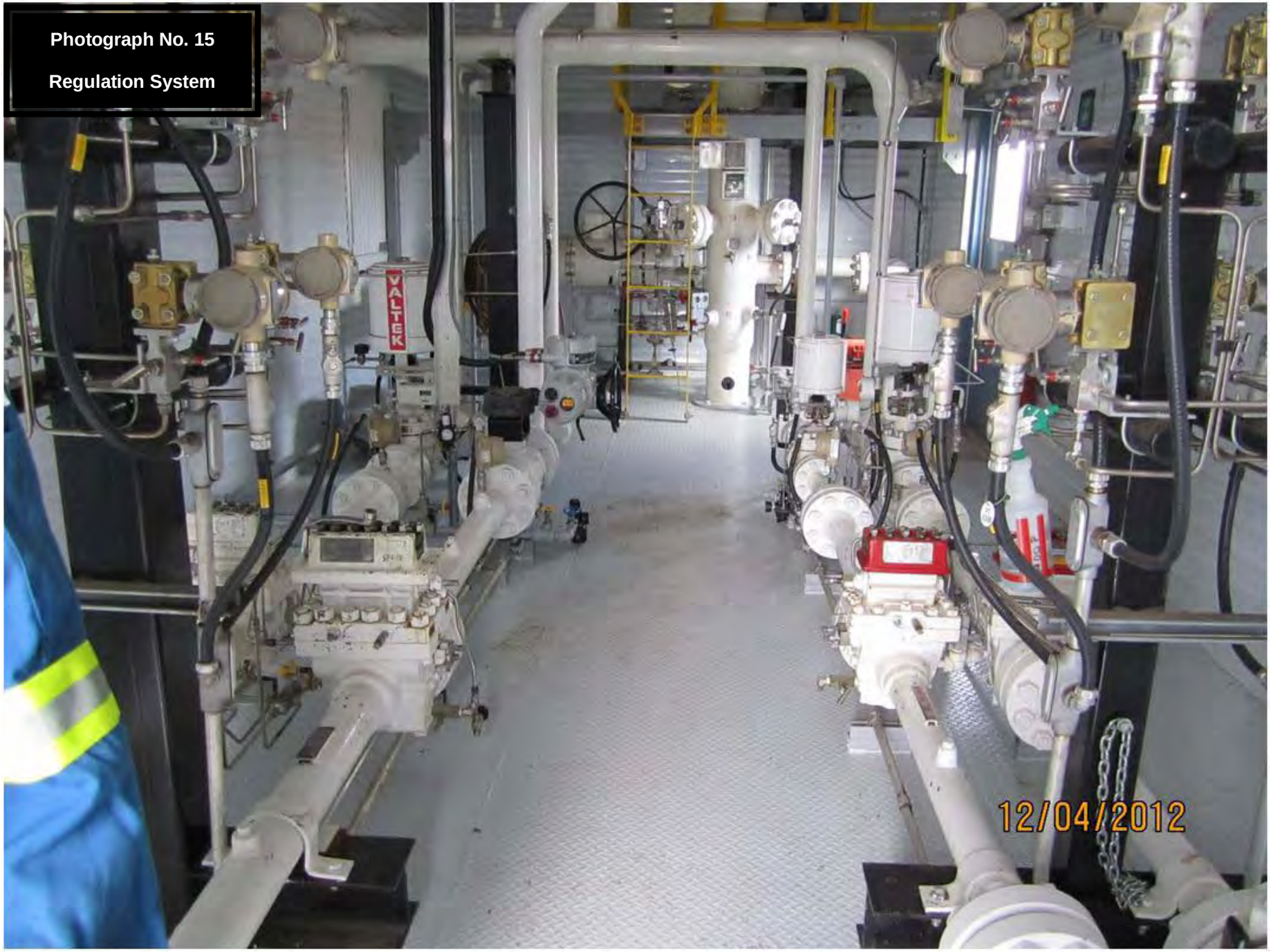
Intragaz
6565, boul. JEAN XXIII
TROIS-RIVIERES-OUEST (Qc)
G9A 5C9
TEL.: (819) 377-5080
FAX.: (819) 377-2888

STOCKAGE DE ST-FLAVIEN
SITE D'OPERATION
PLAN D'AMÉNAGEMENT

No. PROJET:	No. DESSIN:	REVISION:
02-D-607	SFL-AME-STA-005	9

Photograph No. 15

Regulation System



Photograph No. 16

Well #3 Metering Station

Photograph No. 17

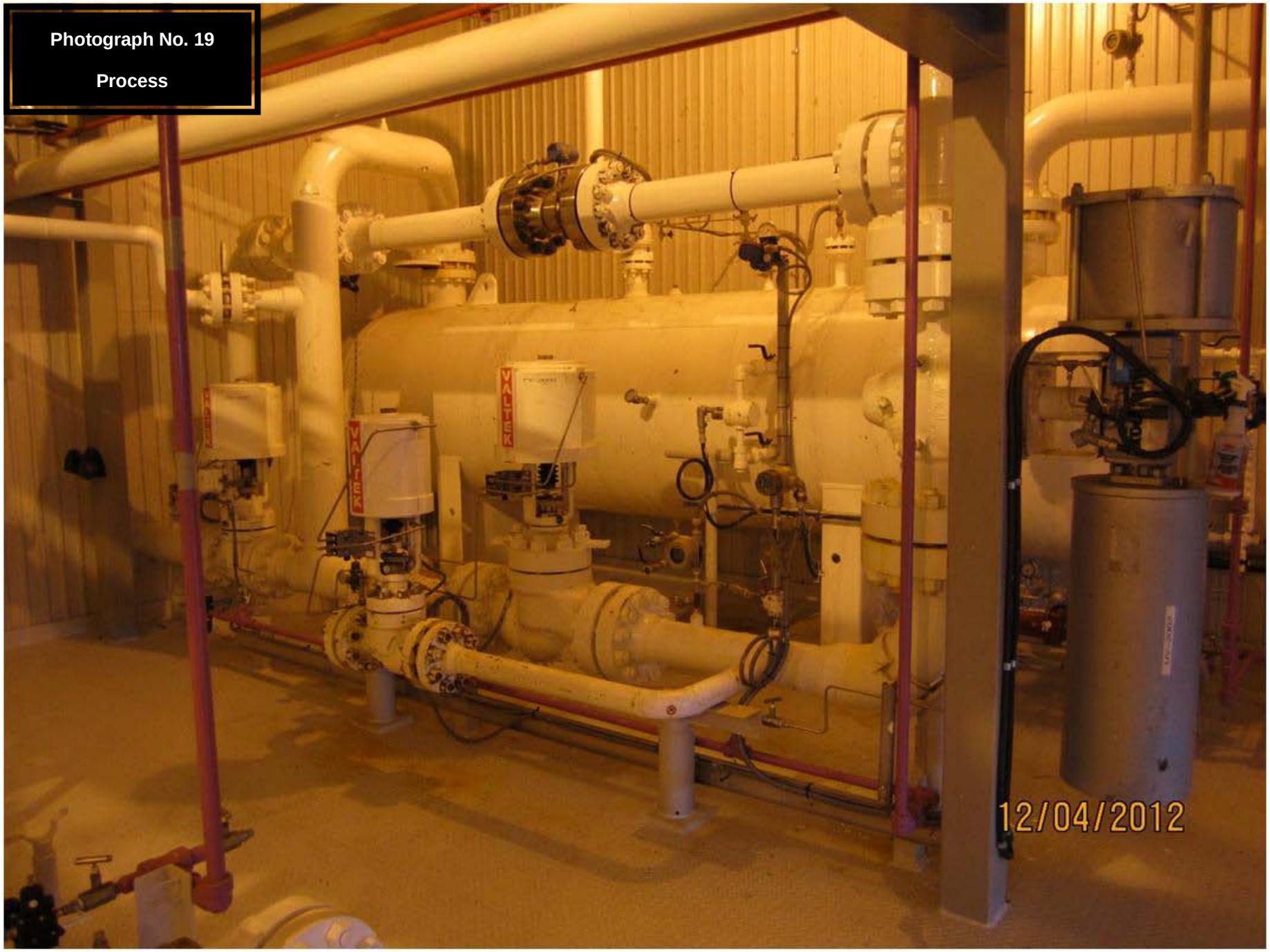
Ultrasonic Global Metering Station

Photograph No. 18

Process Pipe Rack

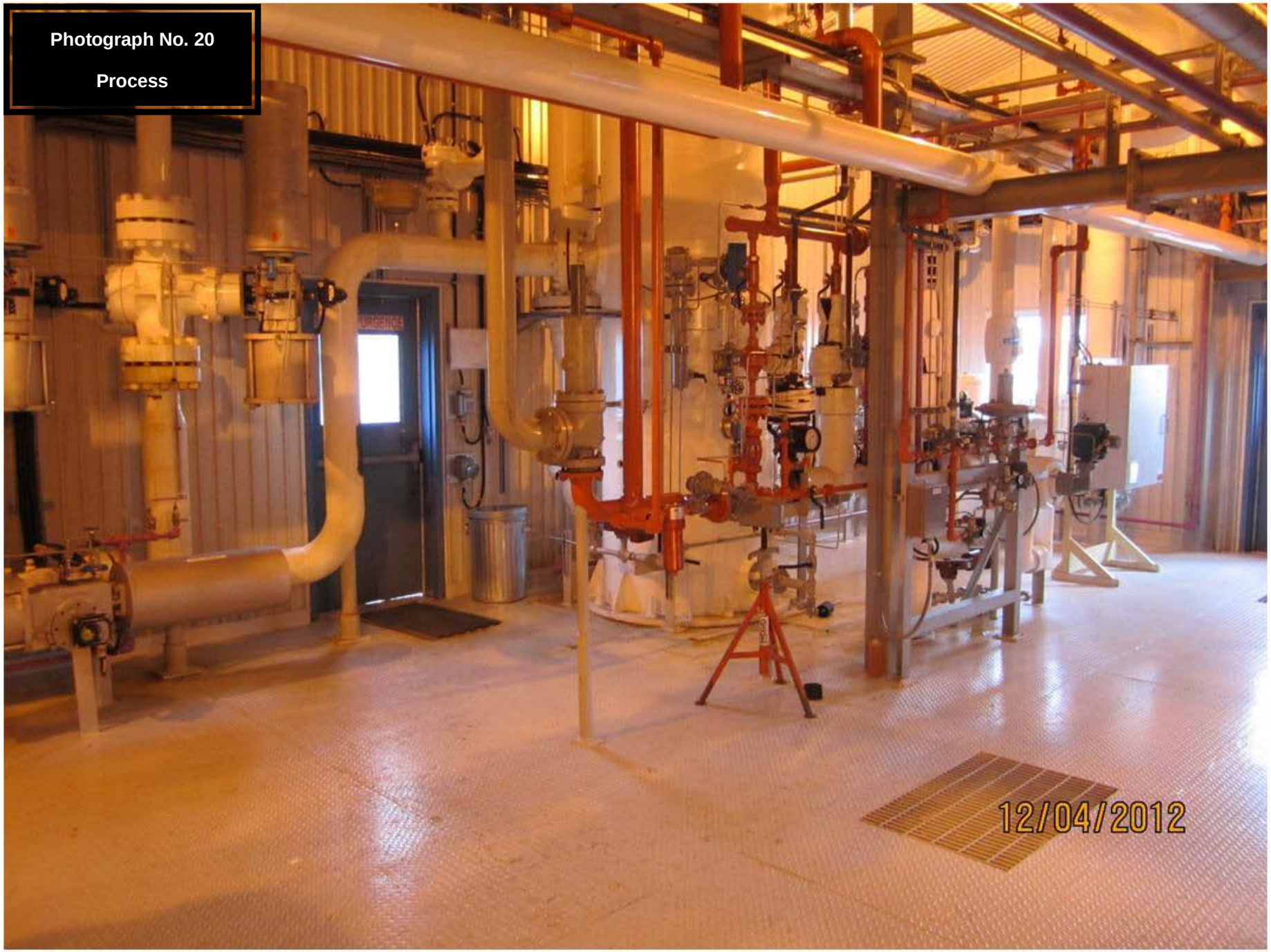
Photograph No. 19

Process



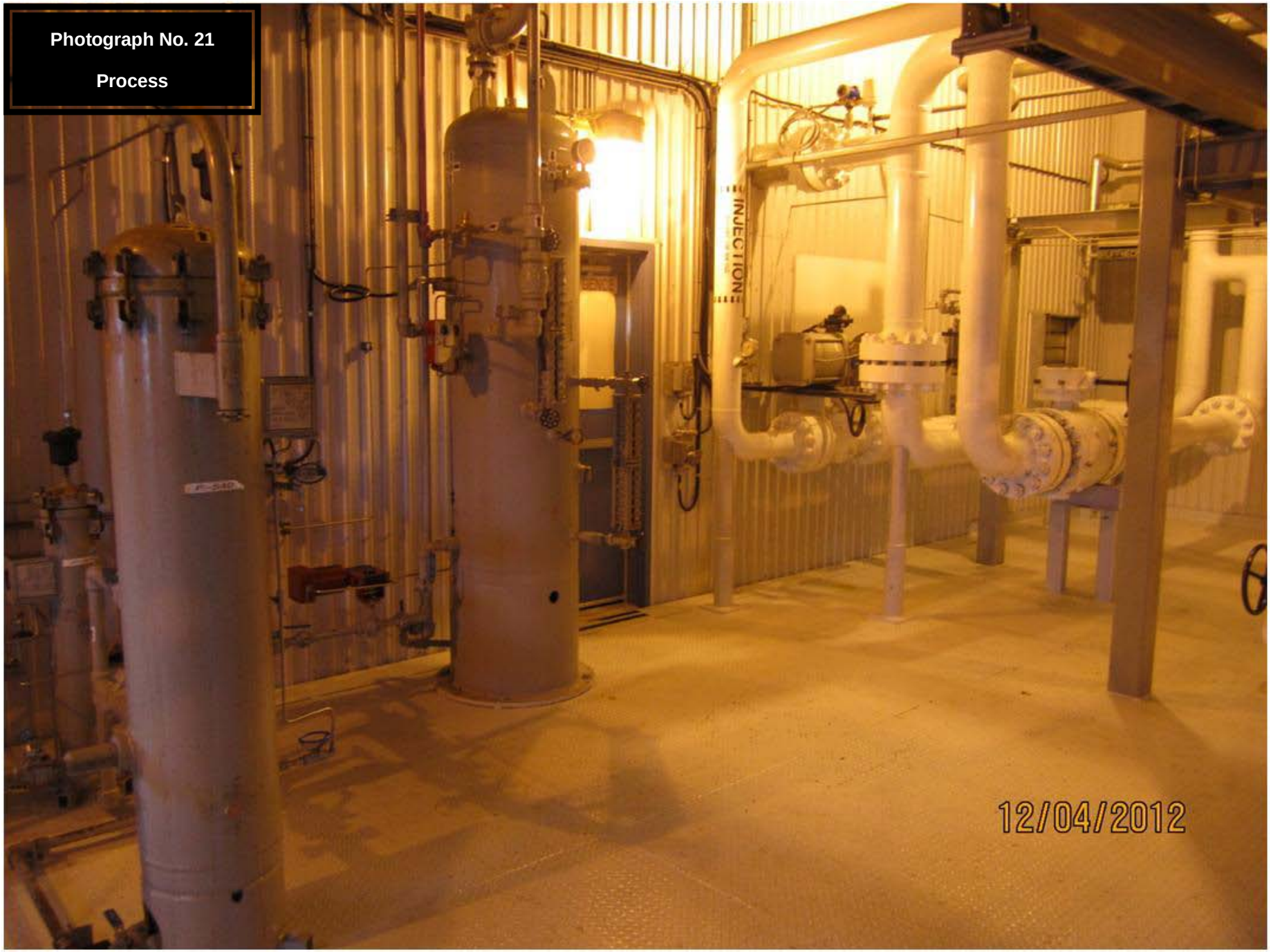
Photograph No. 20

Process



Photograph No. 21

Process



APPENDIX 10A

BUILDINGS
POINTE-DU-LAC

Buildings

Pointe-du-Lac

Buildings
Pointe-du-Lac

Photograph No. 22

B-281

Photograph No. 23

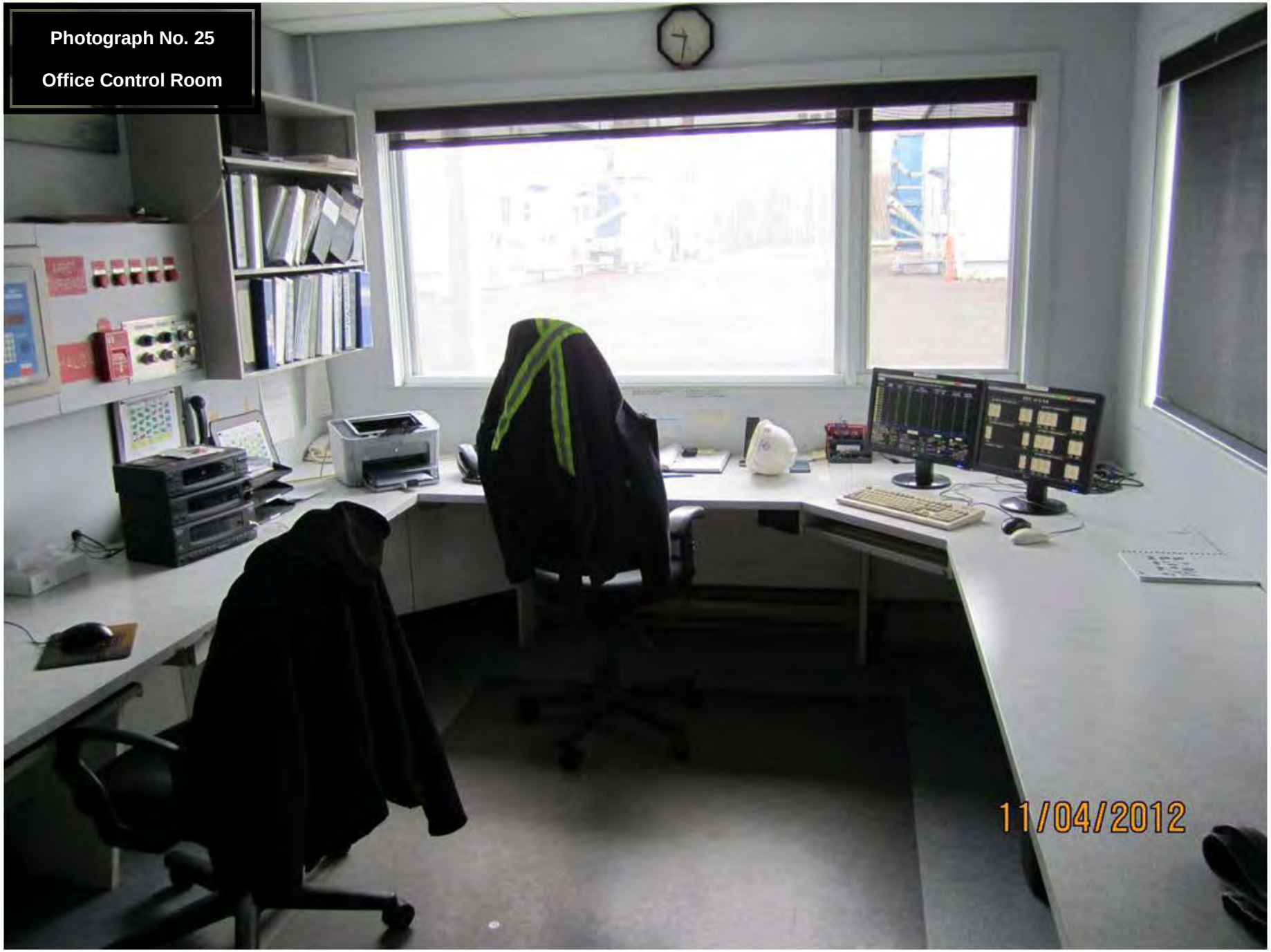
Compressor #1 Buiilding

Photograph No. 24

Barrel Shelter

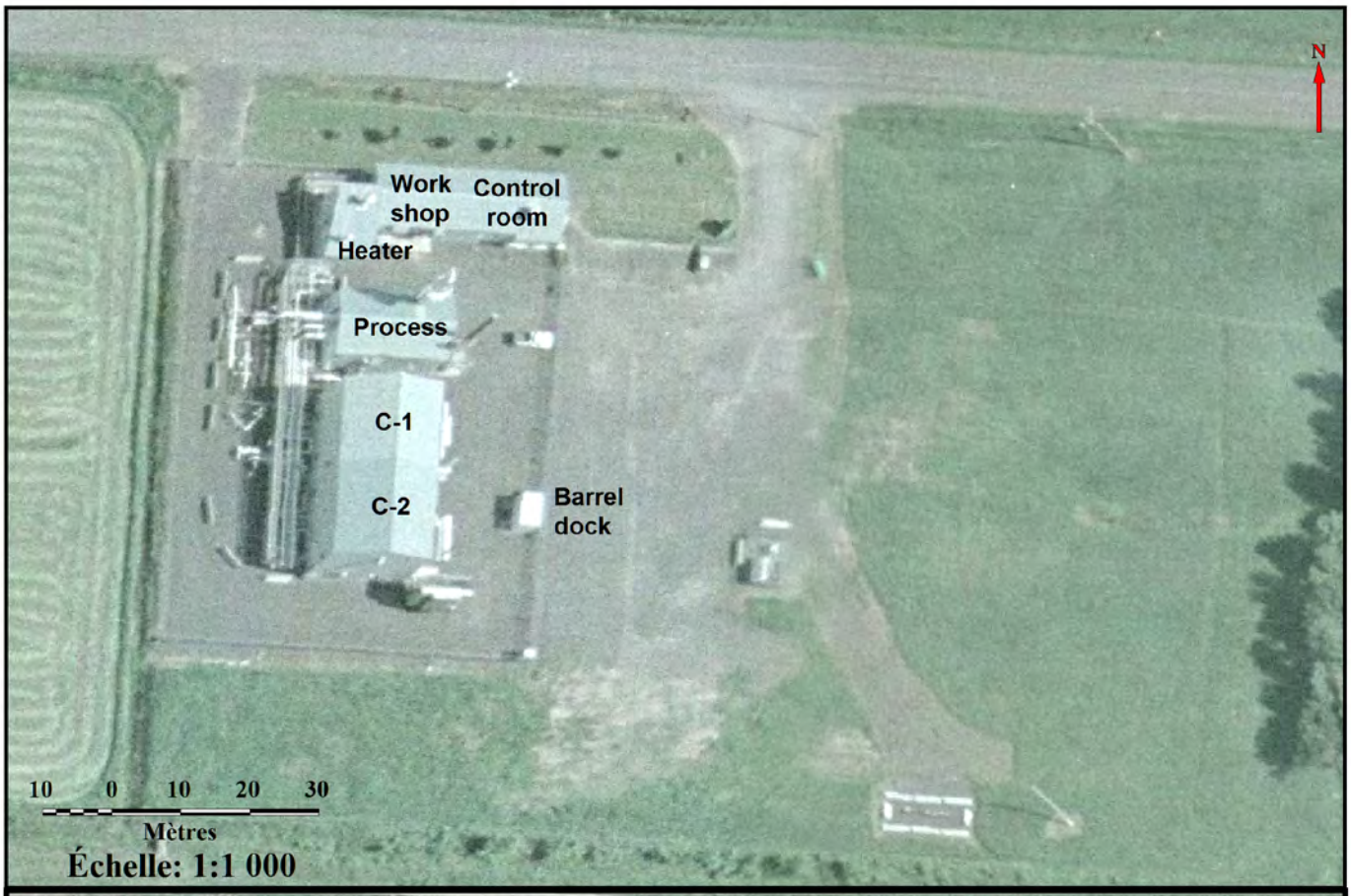
Photograph No. 25

Office Control Room



APPENDIX 10B

BUILDINGS
SAINT-FLAVIEN



Buildings

Intragaz Saint-Flavien

Photograph No. 26

Well Site #1
Metering Building

Photograph No. 27

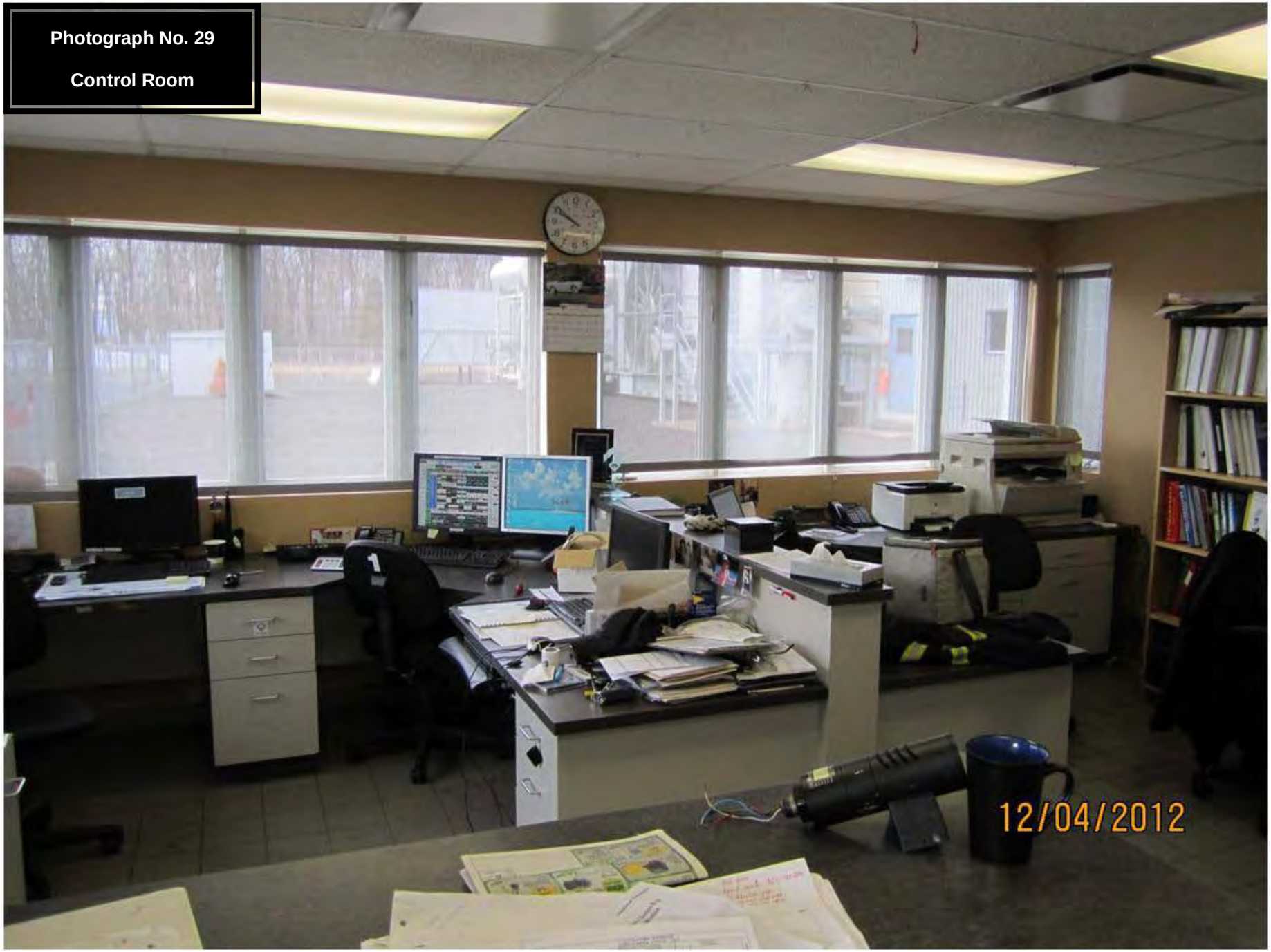
Well Site #2
Metering Building

Photograph No. 28

Barrel Dock and Shelter

Photograph No. 29

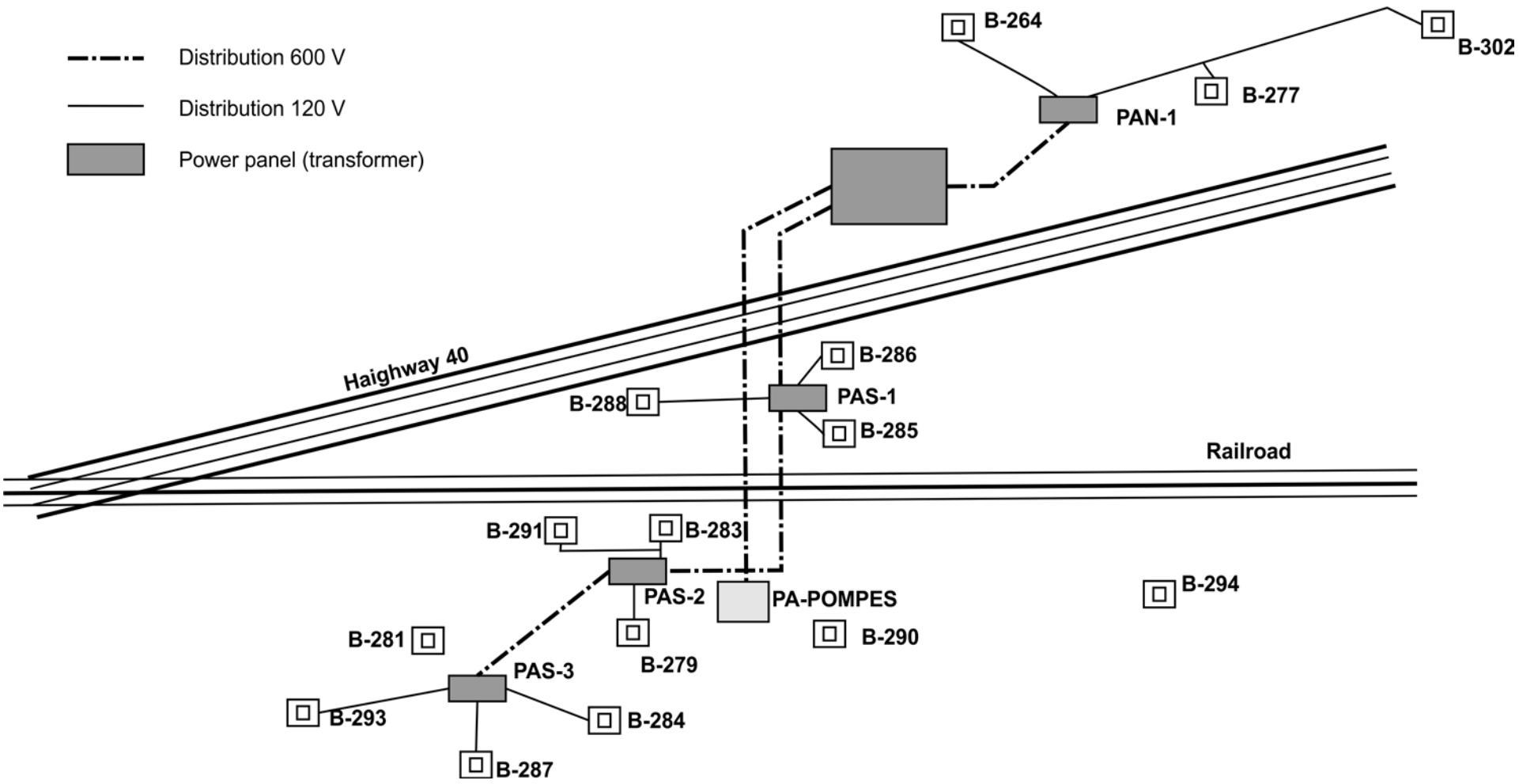
Control Room



APPENDIX 11A

ELECTRICAL
POINTE-DU-LAC

ELECTRICAL


Distribution 600 V
Distribution 120 V
Power panel (transformer)
B-264
B-302
B-277
PAN-1
Haighway 40
B-286
B-288
PAS-1
B-285
Railroad
B-291
B-283
PAS-2
PA-POMPES
B-294
B-281
B-279
B-290
PAS-3
B-293
B-284
B-287

Photograph No. 30

Motor Control Center
Compressor Station

Photograph No. 31

Emergency Generator

APPENDIX 11B

ELECTRICAL
SAINT-FLAVIEN

Photograph No. 32

Motor Control Center
Compressor Station

Photograph No. 33

Motor Control Center
Well Site #1

Photograph No. 34

Well Site #3
Control Panel

Photograph No. 35

Well Site #3
Emergency Generator

APPENDIX 12A

COMPRESSORS
POINTE-DU-LAC

Photograph No. 36

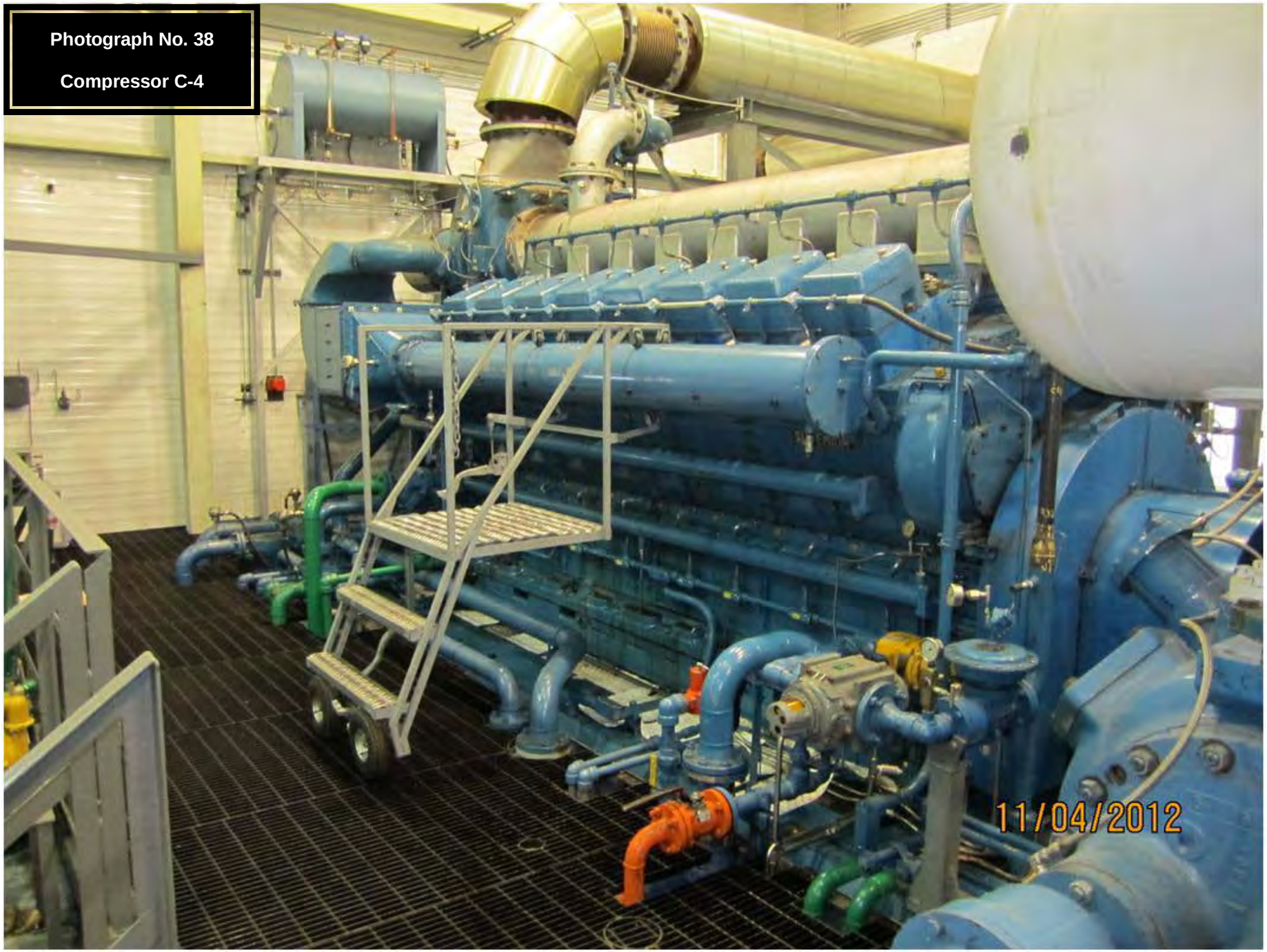
Compressor C-1

Photograph No. 37

Compressor C-3

Photograph No. 38

Compressor C-4



APPENDIX 12B

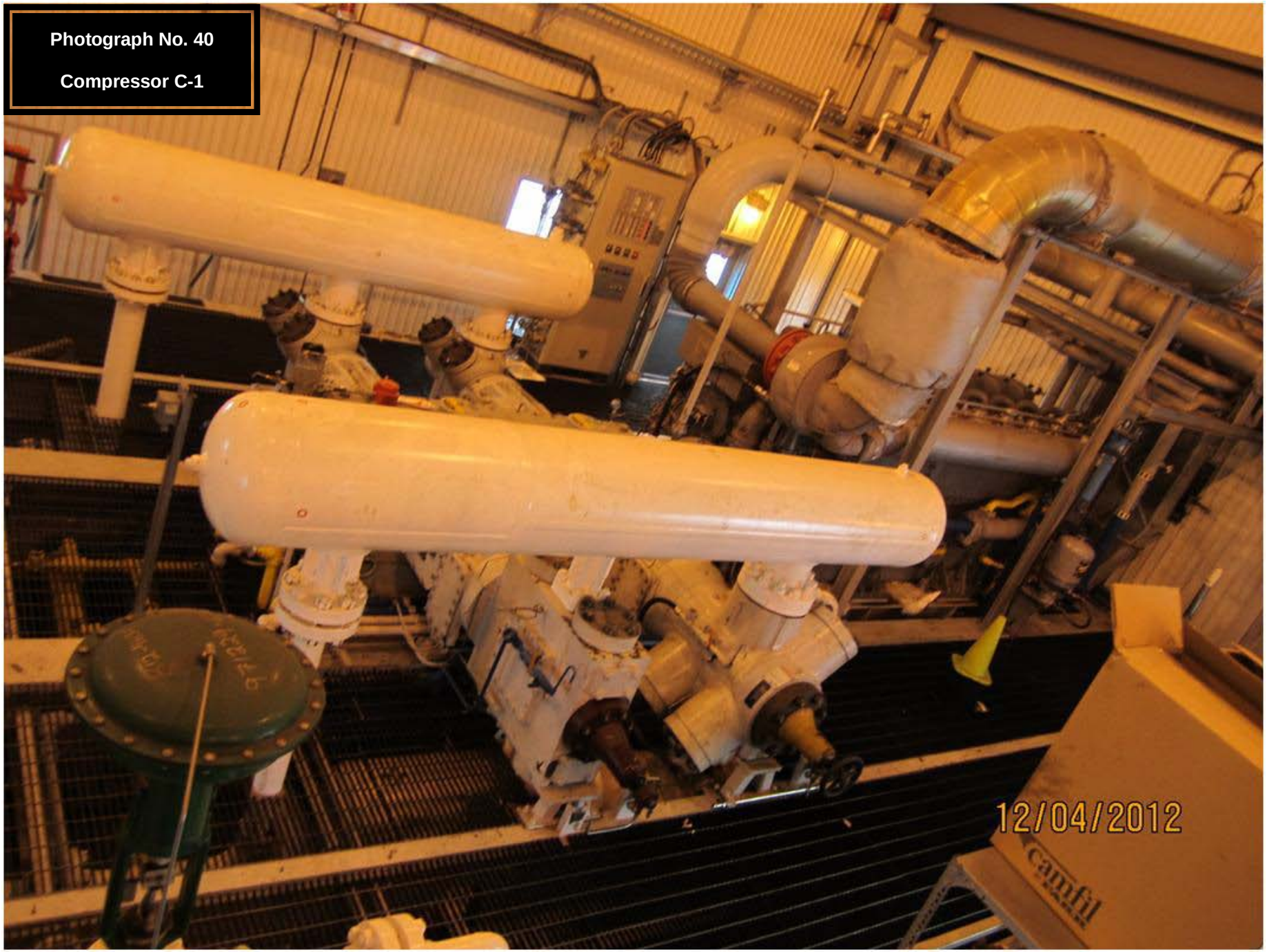
COMPRESSORS
SAINT-FLAVIEN

Photograph No. 39

Compressor Coolers

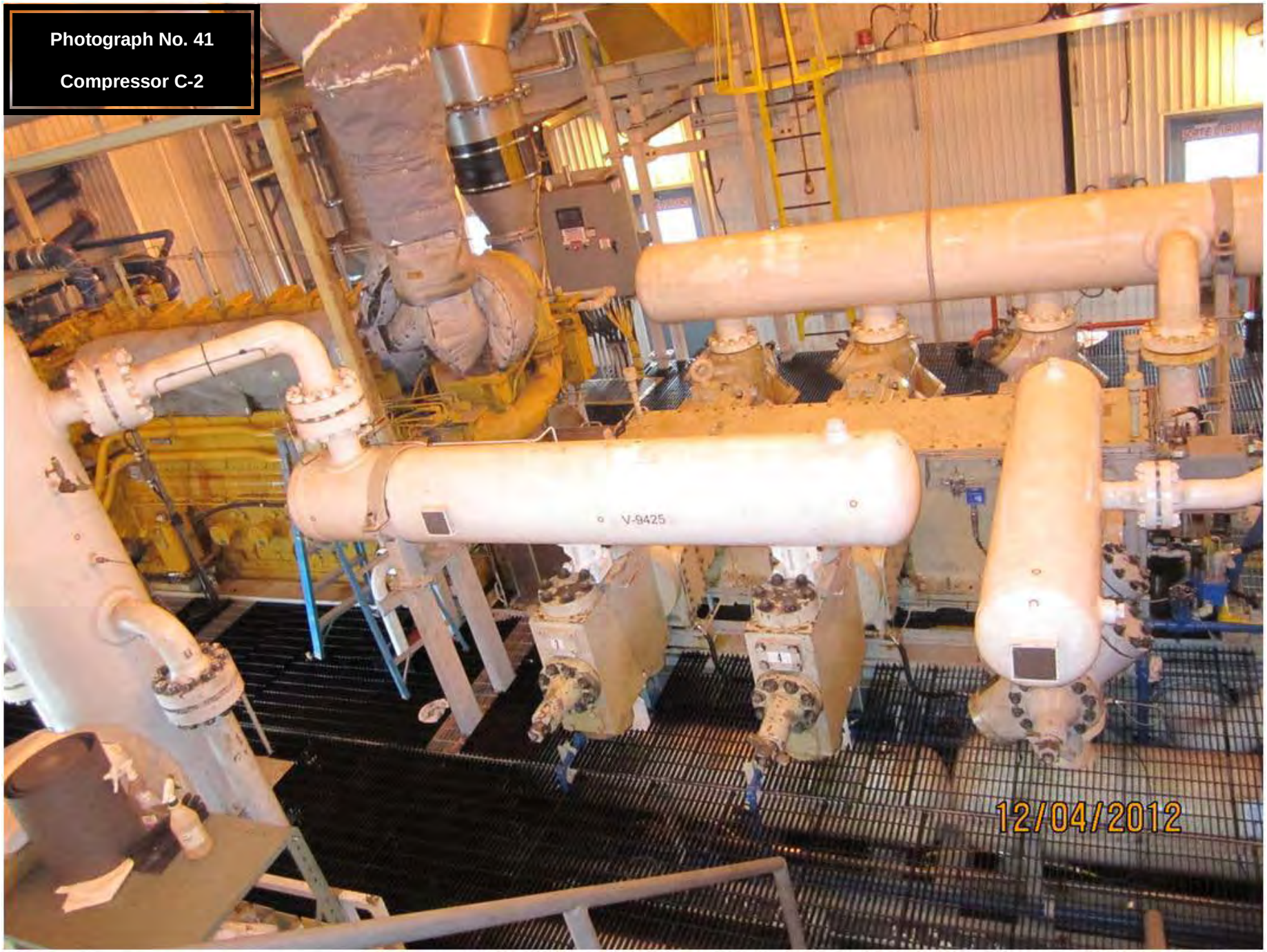
Photograph No. 40

Compressor C-1



Photograph No. 41

Compressor C-2



APPENDIX 13A

DEHYDRATION
POINTE-DU-LAC

Photograph No. 42

Dehydration Unit

Photograph No. 43

Thermal Oxidizer

APPENDIX 13B

DEHYDRATION
SAINT-FLAVIEN

Photograph No. 44

Dehydration Unit

Photograph No. 45

Thermal Oxidizer

APPENDIX 14A

BOILER AND HEATER
POINTE-DU-LAC

Photograph No. 46

Burner and Heat Exchanger

APPENDIX 14B

BOILER AND HEATER
SAINT-FLAVIEN

Photograph No. 47

H-800 Static Heater

Photograph No. 48

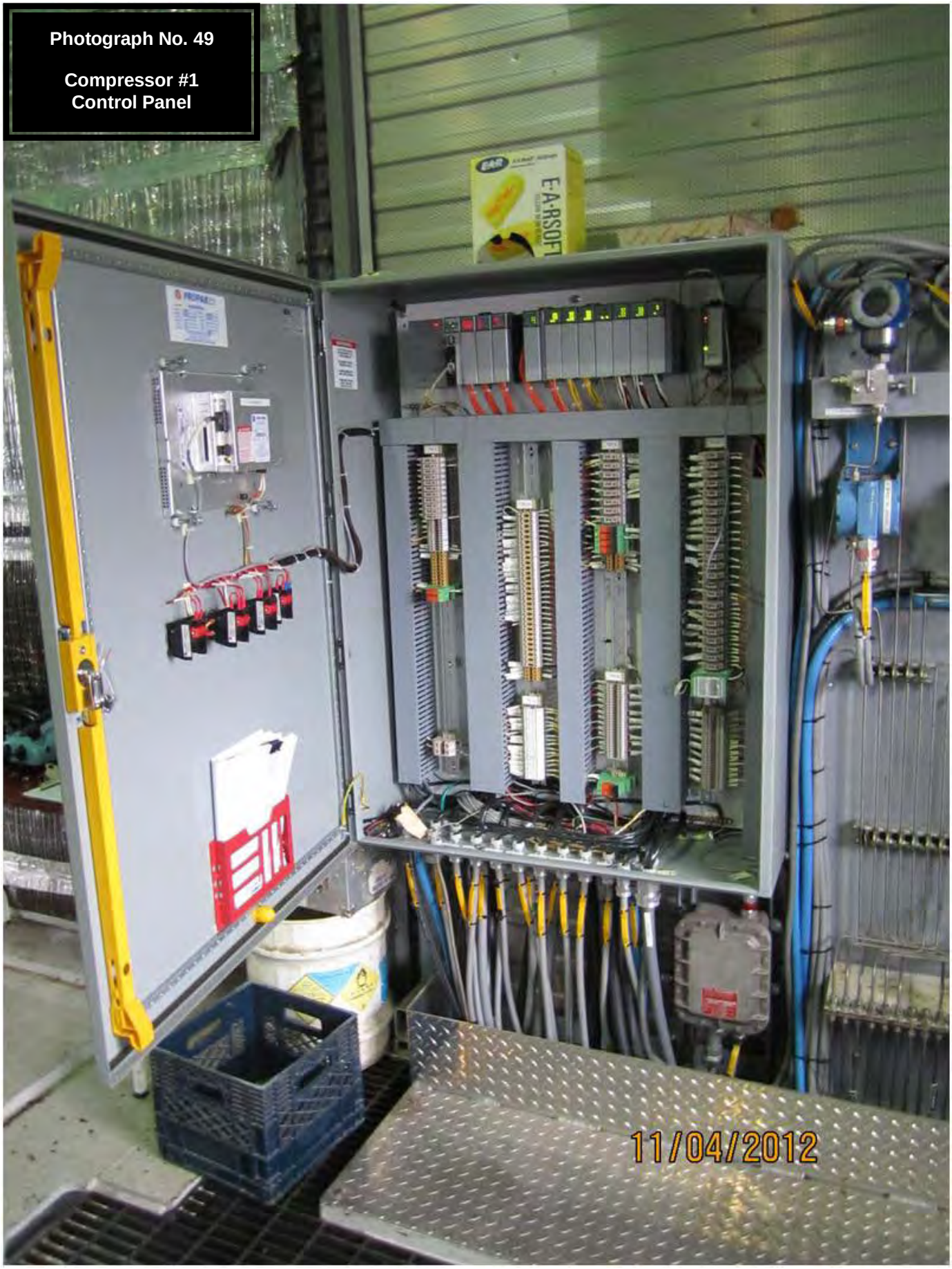
H-840 Forced Air Heater

APPENDIX 15A

INSTRUMENTATION
POINTE-DU-LAC

Photograph No. 49

Compressor #1
Control Panel

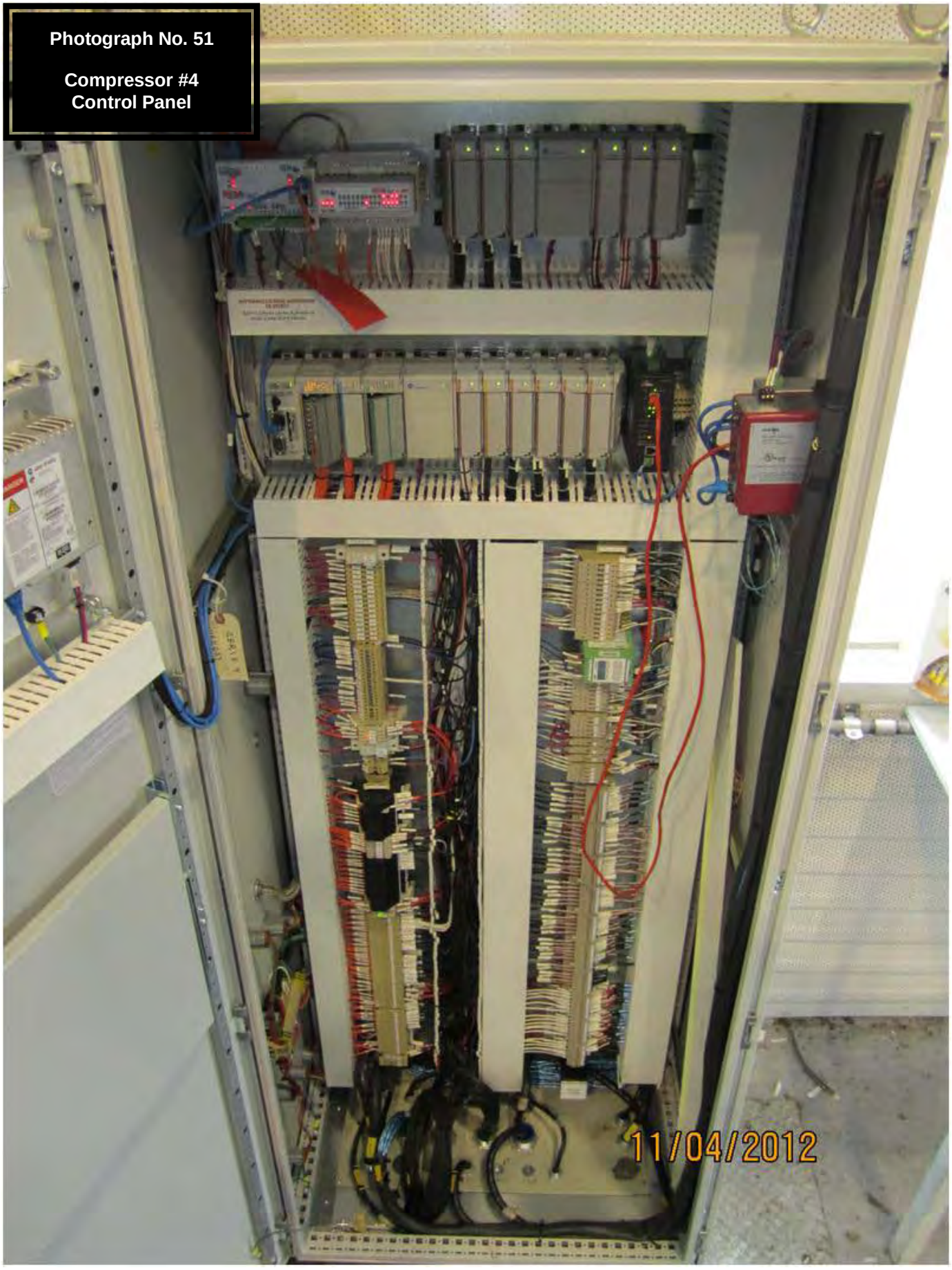


Photograph No. 50

Compressor #3 Control Panel

Photograph No. 51

Compressor #4
Control Panel

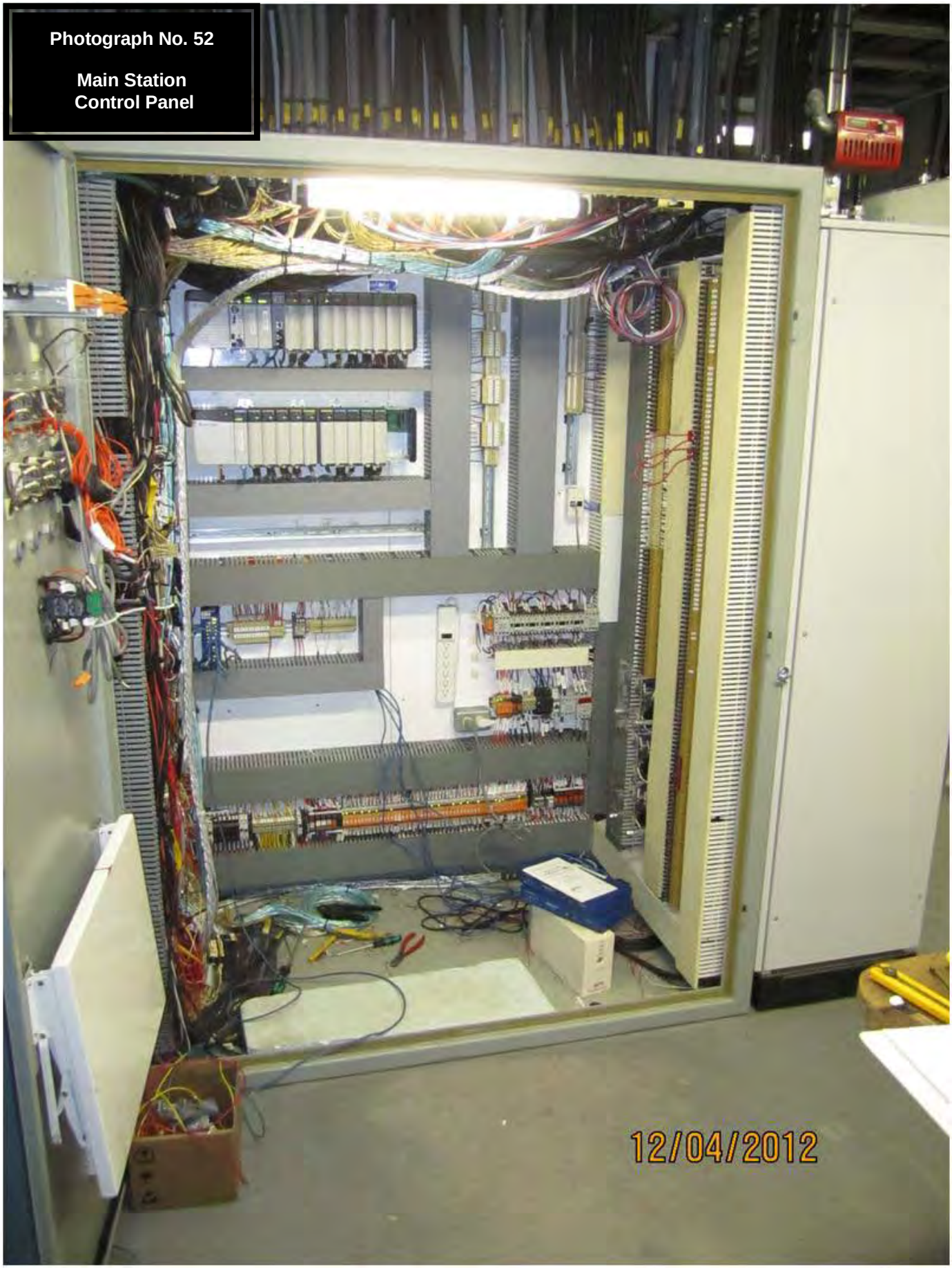


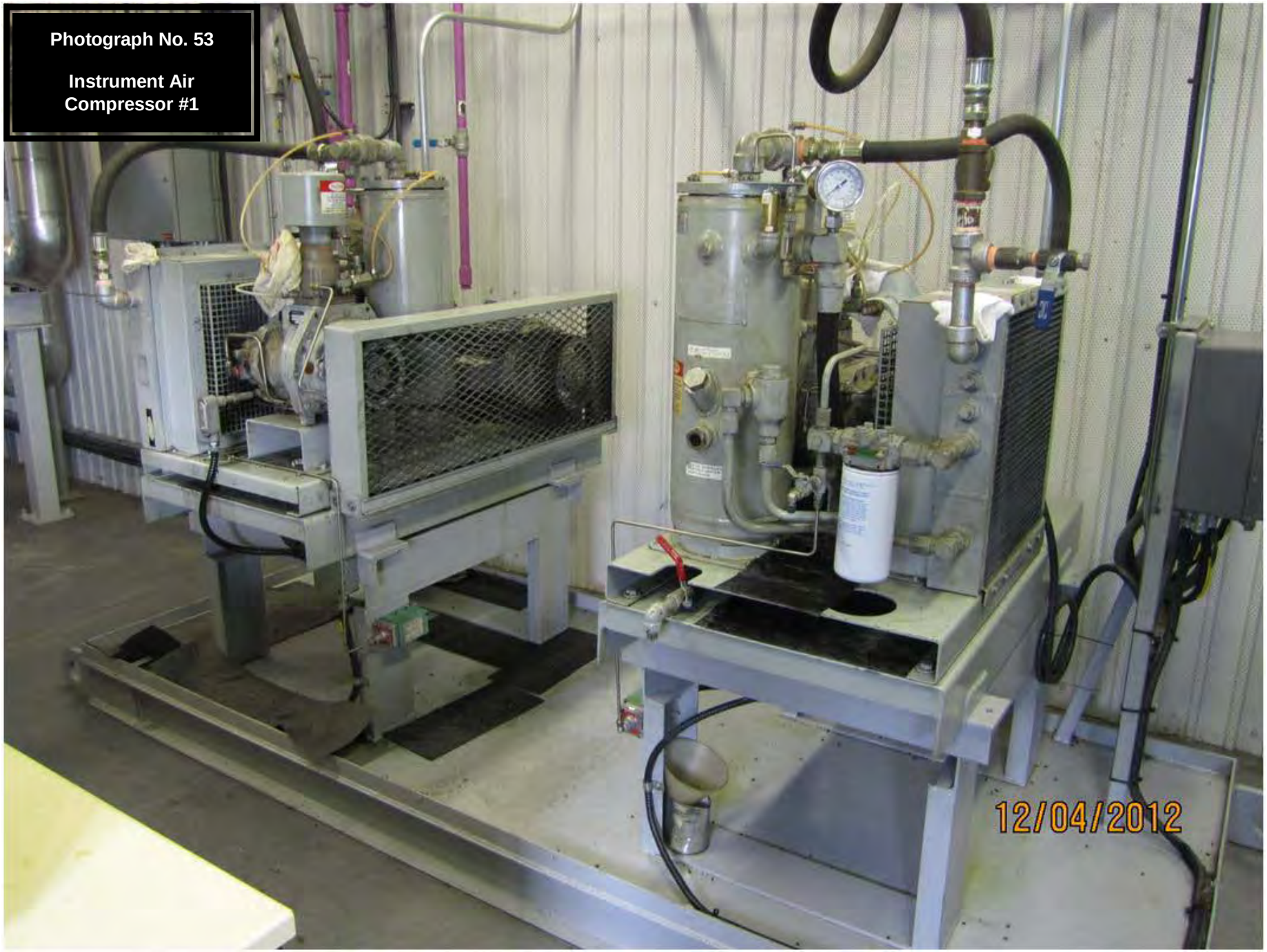
APPENDIX 15B

INSTRUMENTATION
SAINT-FLAVIEN

Photograph No. 52

Main Station Control Panel




Photograph No. 53
Instrument Air
Compressor #1
12/04/2012

APPENDIX 16A

ELECTRONICS
POINTE-DU-LAC

Photograph No. 54

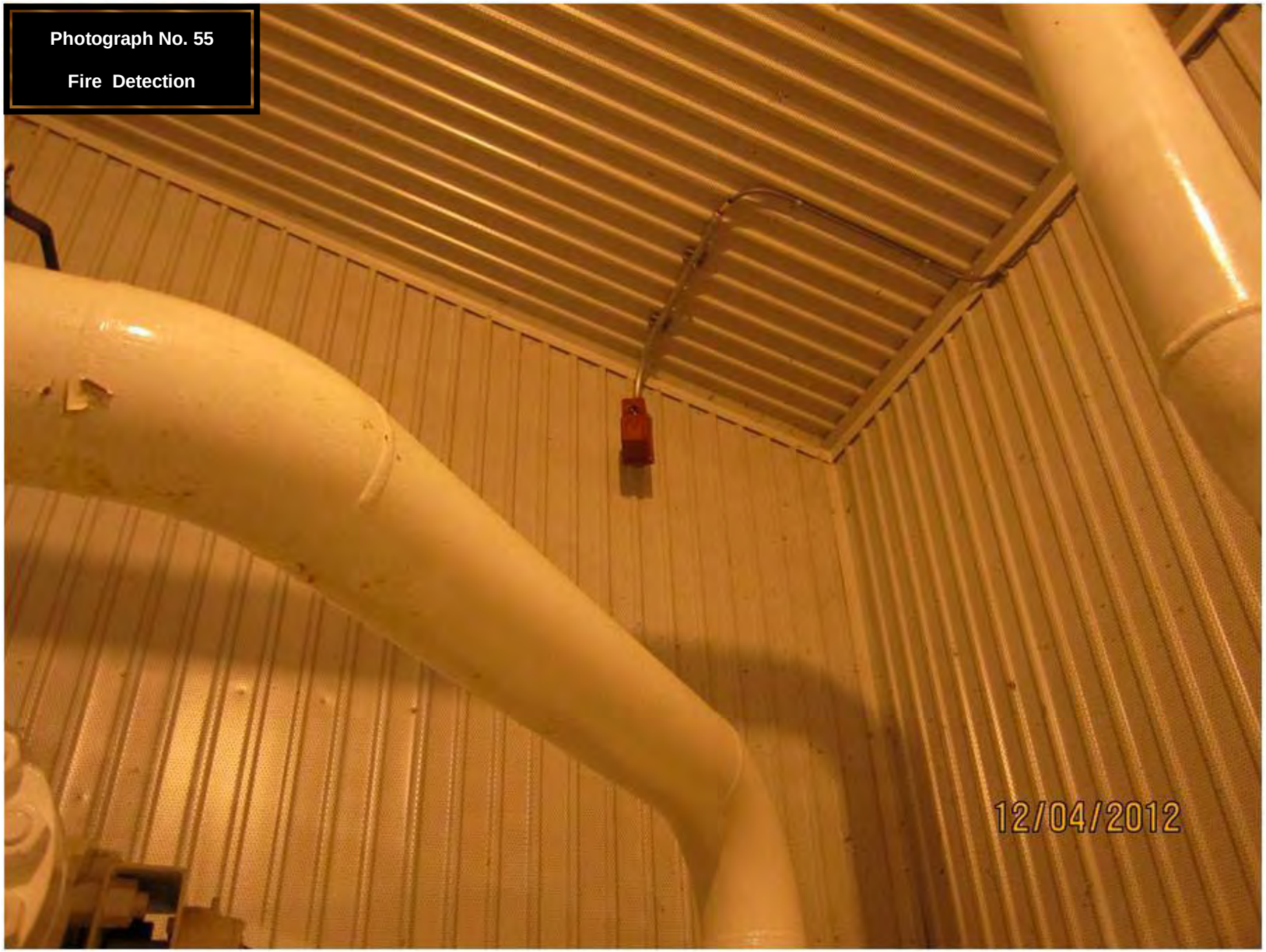
Gas Detection System

APPENDIX 16B

ELECTRONICS
SAINT-FLAVIEN

Photograph No. 55

Fire Detection

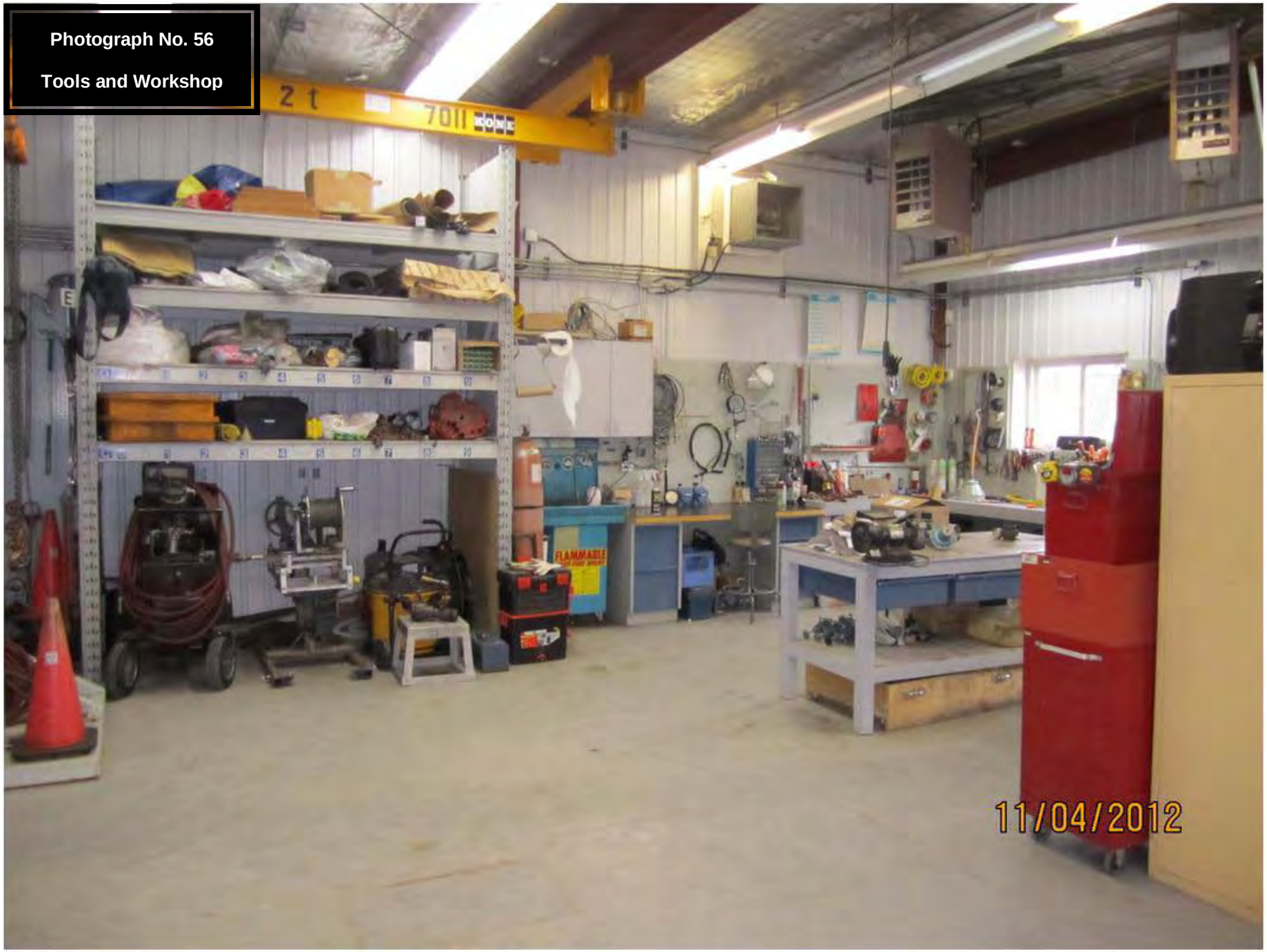


APPENDIX 17A

TOOLS
POINTE-DU-LAC

Photograph No. 56

Tools and Workshop

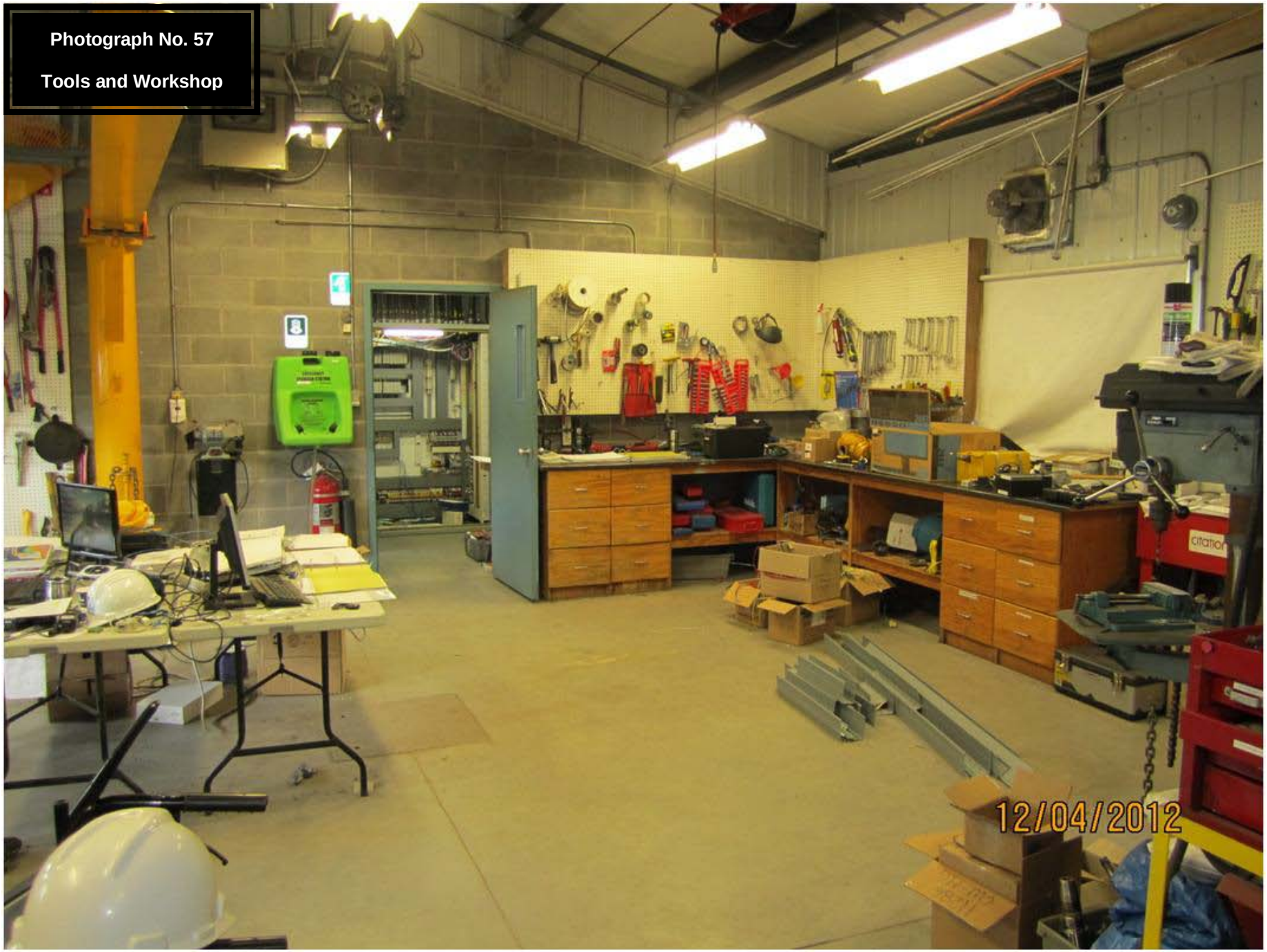


APPENDIX 17B

TOOLS
SAINT-FLAVIEN

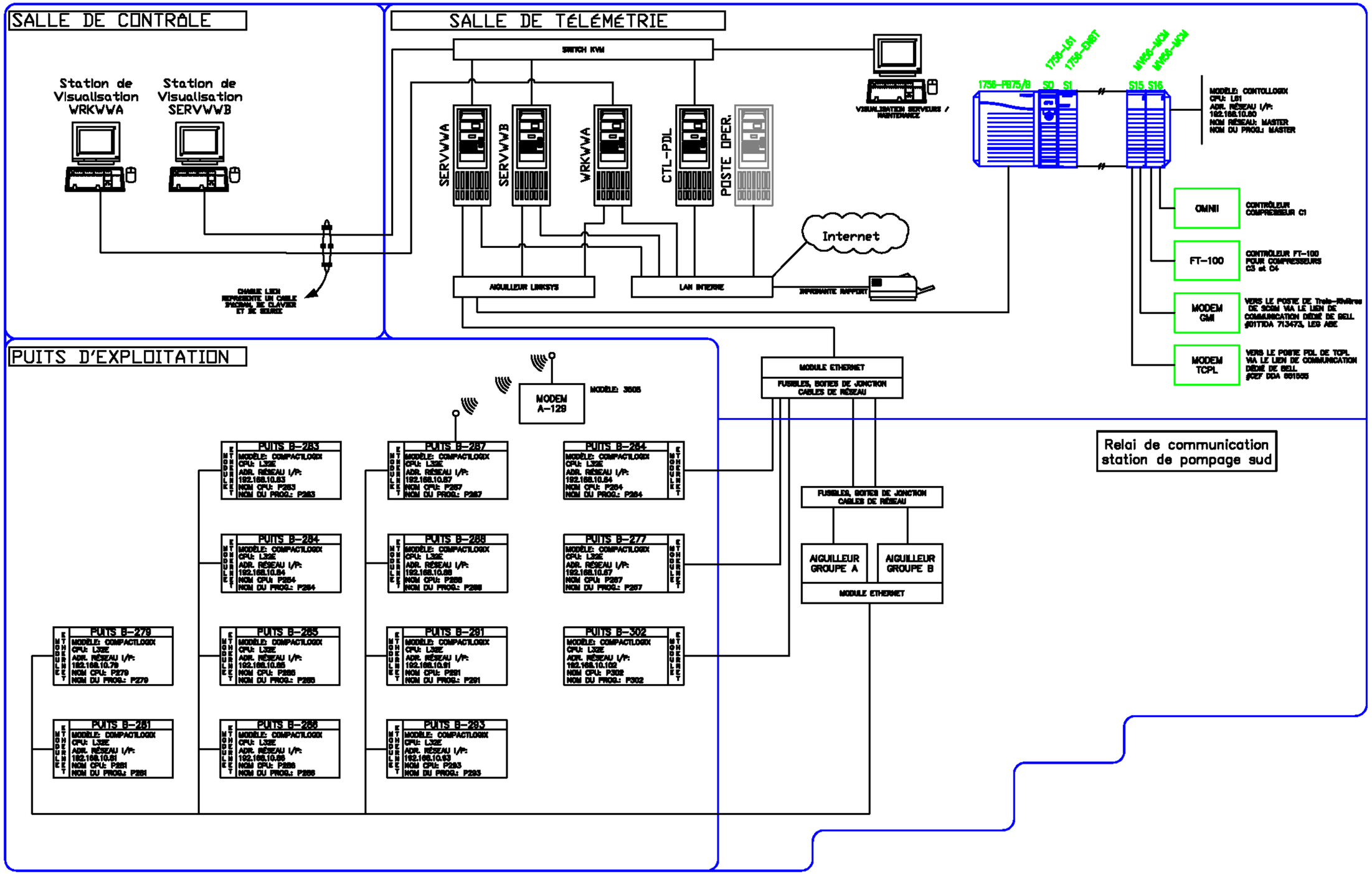
Photograph No. 57

Tools and Workshop



APPENDIX 18A

OPERATION COMPUTERS
POINTE-DU-LAC


SALLE DE CONTRÔLE
Station de Visualisation WRKWWA
Station de Visualisation SERVWWB
CHAQUE LIEN REPRÉSENTE UN CABLE D'ACRAN, DE CLAVIER ET DE SOURIS
SALLE DE TÉLÉMÉTRIE
SWITCH KVM
SERVWWA
SERVWWB
WRKWWA
CTL-PDL
POSTE OPER.
VISUALISATION SERVEURS / MAINTENANCE
AIGUILLEUR LINKSYS
LAN INTERNE
IMPRIMANTE RAPPORT
Internet
1756-L61
1756-ENBT
MVI56-MCM
MVI56-MPM
1756-PB75/B
S0 S1
S15 S16
MODÈLE: CONTROLOGIX
CPU: L61
ADR. RÉSEAU I/P:
192.168.10.60
NOM RÉSEAU: MASTER
NOM DU PROG.: MASTER
OMNI
CONTRÔLEUR COMPRESSEUR C1
FT-100
CONTRÔLEUR FT-100 POUR COMPRESSEURS C3 et C4
MODEM GM
VERS LE POSTE DE Trois-Rivières DE 300M VIA LE LIEN DE COMMUNICATION DÉDIÉ DE BELL #011TRDA 713473, LEG ABE
MODEM TCPL
VERS LE POSTE PDL DE TCPL VIA LE LIEN DE COMMUNICATION DÉDIÉ DE BELL #CEF DDA 661555
PUITS D'EXPLOITATION
MODEM A-129
MODÈLE: 3608
MODULE ETHERNET
FUSIBLES, BOITES DE JONCTION CABLES DE RÉSEAU
Relai de communication station de pompage sud
PUITS B-283
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.63
NOM CPU: P283
NOM DU PROG.: P283
PUITS B-287
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.67
NOM CPU: P287
NOM DU PROG.: P287
PUITS B-284
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.64
NOM CPU: P284
NOM DU PROG.: P284
PUITS B-284
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.64
NOM CPU: P284
NOM DU PROG.: P284
PUITS B-288
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.68
NOM CPU: P288
NOM DU PROG.: P288
PUITS B-277
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.57
NOM CPU: P277
NOM DU PROG.: P277
FUSIBLES, BOITES DE JONCTION CABLES DE RÉSEAU
AIGUILLEUR GROUPE A
AIGUILLEUR GROUPE B
MODULE ETHERNET
PUITS B-279
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.79
NOM CPU: P279
NOM DU PROG.: P279
PUITS B-285
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.65
NOM CPU: P285
NOM DU PROG.: P285
PUITS B-291
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.91
NOM CPU: P291
NOM DU PROG.: P291
PUITS B-302
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.102
NOM CPU: P302
NOM DU PROG.: P302
PUITS B-281
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.81
NOM CPU: P281
NOM DU PROG.: P281
PUITS B-286
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.66
NOM CPU: P286
NOM DU PROG.: P286
PUITS B-293
MODÈLE: COMPACTLOGIX
CPU: L32E
ADR. RÉSEAU I/P:
192.168.10.93
NOM CPU: P293
NOM DU PROG.: P293

Photograph No. 58

Main Control Panel and Computer

APPENDIX 18B

OPERATION COMPUTERS
SAINT-FLAVIEN

Photograph No. 59

Operation Computer

APPENDIX 19A

VEHICLES
POINTE-DU-LAC

Photograph No. 60

Pick-up Truck

APPENDIX 19B

VEHICLES
SAINT-FLAVIEN

Photograph No. 61

Pick-up Trucks

APPENDIX 20A

SPARE PARTS
POINTE-DU-LAC

Photograph No. 62

Spare Parts

APPENDIX 20B

SPARE PARTS
SAINT-FLAVIEN

Photograph No. 63

Spare Parts