



FISHER ENGINEERING LTD.

40 Fairfield Road
Lower Coverdale, New Brunswick E1J 0A2
Phone: 506. 863. 1991

January 5th, 2021

File: DE154

Mr. David Maguire
Director
Project Assessment Branch
Department of Environment
20 McGloin Street
PO Box 6000
Fredericton, NB E3B 5H1

Attention: Mr. Maguire:

Re: Proposed Apartment Complex Cap Bimet, NB

Enclosed is an electronic copy of the registration document for the above noted undertaking. Once an EIA file number is assigned, the fee will be paid on line.

If you have any questions or require further details, please do not hesitate to contact the undersigned.

A handwritten signature in black ink that reads 'Michael Fisher'. The signature is written in a cursive style and is positioned above a horizontal line.

Michael Fisher, P. Eng.

MJF

Enclosures

cc: Mr. Trevor Ritchie, Brinkley Investments Inc.

**EIA Registration
Brinkley Investments Inc.**

TABLE OF CONTENTS

	<u>Page</u>
1 THE PROPONENT	1
2 THE UNDERTAKING	1
3 DESCRIPTION OF THE EXISTING ENVIRONMENT	4
4 SUMMARY OF ENVIRONMENTAL IMPACTS	5
5 SUMMARY OF PROPOSED MITIGATION	5
6 PUBLIC INVOLVEMENT	7
7 APPROVAL OF THE UNDERTAKING	7
8 FUNDING	7
9 SIGNATURE	7
 APPENDIX	
A FIGURES	
B ADDITIONAL DOCUMENTATION	
C WSSA APPLICATION	

EIA Registration Brinkley Investments Inc.

**Pursuant to Section 5(2) of
The Environmental Impact Assessment Regulation 87-83
Clean Environment Act**

1 The Proponent

Name: Brinkley Investments Inc.

Address: 19 Plaza Blvd. Moncton, NB E1C 0E8

Primary Contact Executive Officer: Trevor Ritchie, (506) 587-0400

Principal Contact Person for Purposes of EIA:

Trevor Ritchie, (506) 857-0400 and
Michael Fisher, Fisher Engineering Ltd. (506) 863-1991.

Property Ownership: Same as Proponent

2 The Undertaking

Name: The Brinkley

Project Overview: The proposed project is the construction of a 92 unit apartment building complete with both underground and above ground parking. Currently the majority of the property is grass landscaped with a portion covered with an asphalt parking lot, pool, and a few outdoor gazebos. The grounds are currently used by the adjacent condominium building located on the adjacent property to the south.

Purpose/Rationale/Need: The subject property was purchased by the proponent in August 2020. The proponent is a developer and intends to develop the property in general conformance to what the overall development vision was that was originally started back in 2008. At that time the previous owners (Denaco Group) had an overall proposal for a development called Le Rivage; which was to have a combined estimated occupancy of 338 persons in four buildings. Three new buildings were proposed along with the conversion of one existing building.

In 2008/2009 a new 66-unit condominium building was constructed on a portion of the original fish plant site. Since the development of the 66-unit condo, one of the original fish plant buildings was subdivided off (PID 70645247), sold and converted into a 2-bedroom rental apartment. Beyond that, the remaining two proposed buildings were never constructed and the land where they were supposed to be constructed has been vacant with the exception of the construction of two swimming pools and a couple

gazebos. This is evident in the attached aerial photos from 2001 (pre development) and 2011 (post condo development).

Project Location: The subject property is located at the end of Cap Bimet Road in Cap Bimet, New Brunswick, see attached Figure 1. The subject property is identified by Service New Brunswick as PID 70497763 and is located within the Beaubassin-est Rural Community planning area. The subject property covers an approximate area of 1.36ha.

Siting Considerations: The project location was chosen because of the previous owners' original plans for the overall development of the former Paturals fish processing site.

The land is currently zoned, ID- Integrated Development. Within the Beaubassin-est Rural Community Rural Plan, section 9.1(1) states: *Inside an integrated development zone, all land must be used and all buildings must be installed, erected, altered, or used solely in compliance with a specific proposal outlined in a resolution passed or an agreement entered into under section 39 of the Act.* A copy of this ID is attached.

The site is easily accessible via the existing driveway off Cap Bitmet Road and there is a portion of the existing asphalt parking for the adjacent condo building that will be shared with the proposed new building on the subject property already.

The proposed development area on the project site does not fall within 30m of a coastal marsh or provincially significant wetland, refer to attached GeoNB figures in appendix A. There is an adjacent regulated wetland located to the southeast; however, there is no proposed work within 30m of this wetland. The project site is located within 30m of the Northumberland Straight, which will require the proponent to obtain a watercourse alteration permit for the proposed soil disturbance. The area is considered Zone B as part of the NB coastal area protection policy. Within the policy, permissible activities within Zone B include:

- Soil disturbance associated with the construction of a new or rebuilt structure if it meets the following conditions:*

- avoidance of impacts is considered and the soil disturbance is as far away as possible from the coastal feature.*

The proposed location of the apartment building takes into consideration this along with the existing structures on the site and the recommendations in the environmental site closure documents/record of site condition for this property.

- in the case of new or rebuilt structures, the habitable portion of the structure is at least 2 metres above the HHWLT (Higher High Water Large Tide) elevation or an elevation determined by the Local Government or Regional Service Commission.*

Since the creation of this policy, Beaubassin-est Rural Community has adapted a new by-law requiring all habitable portions of a structure to be above geodetic elevation of 4.3m. This proposed new apartment building is required to comply with the minimum 4.3m habitable portion.

Physical Components and Dimensions of the Project: The proposed site plan is attached. Currently the development area is flat and landscaped with grass. A portion of the property is covered with an asphalt parking lot that is being used by the adjacent

condominium and also a pool. Pictures of the site are attached. There is also a well on the site (referred to as the shed well by others) that was one of two wells that historically were used by the former processing plant.

Construction Details:

The proponent would like to start construction in the spring/summer of 2021 on the building with the goal to open for tenants late in 2022. Site work (excavation, backfilling, parking lot construction) would be completed in 2021 with the remaining time spent on the building envelope.

The potential sources of pollutants generated during the construction are discussed in Section 4.

Operation and Maintenance Details: Since the proponent will be requiring work within 30m of the Northumberland straight, a watercourse alteration permit will be required. In addition, the proposed apartment building will require a daily groundwater withdrawal rate that exceeds 50m³/day.

A hydrogeological evaluation of the existing production well was identified by NBDELG as being required for this project. There is an existing well (shed well) that was historically used by the fish processing plant and was scheduled to be used by the former owners for the previously approved residential development.

The existing well (Shed Well) coordinates:

E: 2657489.544

N: 7472835.485

The hydrogeological program will follow the NBDELG Water Supply Assessment Guideline. The program will consist of performing a 72 hr pump test on the existing shed well. The pumping test data will be analyzed to determine the long-term sustainability of the aquifer. Pumping test will be conducted as outlined in the guideline and will be performed during February of 2021 when groundwater recharge is minimal. The proposed daily water demand for the proposed apartment building is 82.8m³/day (57.5l/min), which is based on an average of 92, 2-bedroom residential units and each residential unit requiring 900l/day (2 person@ 450l/day). A WSSA application to complete the hydrogeological assessment for this development is attached is Appendix C.

Project Related Documents: The proponent provided the previous hydrogeological assessment that was completed in 2008 by others. In 2008, pump tests were completed on the two former production wells for the fish plant (Plant well and Shed well). The plant well is located on the adjacent property (PID 70497755) which is currently occupied by the 66-unit condo building. The plant well is in use with the Shed well being located on the subject property and currently capped. A copy of the report is attached.

- The findings of the hydrogeological study completed in 2008 were based on a proposed development of 338 persons. This is larger than what the overall development will be once this proposed apartment building is completed. Based on the current 66 unit condo, 2 bedroom apartment and proposed 92 unit

apartment, the over development will have an estimated 318 persons (66+92+1) x 2 persons/unit.

- The report recommended that the maximum pumping rate for the shed well be 672L/min, which is well above the daily average water demand for this apartment building of 57.5l/day. For an apartment building, typically peak water consumption is spread out more over the day than a single family dwelling. If we assume that peak demand occurs over 180minutes of the day, the peak water demand equates to 460l/min. This is still almost less than 2/3 of the recommended maximum pumping rate of the shed well.

3 Description of the Existing Environment

Physical and Natural Features:

- Based on a topographic survey of the site, surface elevation across the site is approximately 4 metres above mean sea level.
- The subject property is located along the banks of the Northumberland Strait. Surface water drainage across the site is expected to drain north and westerly toward the Strait.
- Shallow groundwater flow across the property is expected to follow the local topography, which slopes towards the adjacent Northumberland Strait. Deeper groundwater likely flows in a similar direction toward the Northumberland Strait. The area to the south and east that could potentially contribute groundwater to the study area is occupied by the adjacent condominium development and a large wetland.
- The regional bedrock geology is mapped as late Carboniferous stratified rock belonging to the Pictou Group, which is a subbasin of the Maritimes Carboniferous Basin. Mapping indicates that within the Pictou Group, the site may fall within the Richibucto Formation, which consists mainly of grey sandstone (Rivard et al. 2003).
- The Richibucto Formation has been described as one of the more productive sandstone formations in the province and has been described as a good aquifer throughout the Moncton basin. The majority of the domestic wells drilled in this formation generally yield 20+ igpm (Carr, 1959).
- Surficial geological mapping indicates that the area is underlain by late Wisconsinan age morainal sediments consisting of blankets and plains of Marine sediments, sand, silt, some gravel and clay generally 0.5m to 3m thick.
- There are no municipal wells, municipal wellfields, or protected watersheds within 500 metres of the subject site. Surrounding properties rely on private wells to supply potable water. Within 500 metres of the subject site there are approximately 125 seasonal/permanent residents.
- One regulated wetland was identified on the GEONB mapping near the southwest corner of the property boundary. A copy of the GeoNB mapping is attached (Figure 3). There is no work planned within the existing 30m setback of the wetland.

The NBDELG species at Risk database identified no records on the subject site.

The following are some of the references and personnel that were contacted and used in order to gather information regarding the physical and natural features of the subject and surrounding properties.

1. Environment Canada Species at Risk website - <http://www.sararegistry.gc.ca>
2. Canadian Species at Risk. Committee on the Status of Endangered Wildlife in Canada. Web site: <http://www.cosewic.gc.ca>
3. Canadian Wildlife Service website - <http://www.naturecanada.ca>
4. Department of Environment Government website – designated wellfields - <http://www.gnb.ca/0009/0371/0001/0003.html>, and protected watersheds - <http://www.gnb.ca/0009/0371/0004/0003.html>.

Cultural Features: None observed or reported on the subject site or adjacent properties

Existing and Historic Land Uses: Historical information was obtained through a review of historical aerial photos (1945 through 2011). The site along with several adjacent parcels were once the site of Paturel's fish plant that operated between the early 1950's until the mid 2000's when the plant burnt down.

In 2008/2009 a 66-unit condominium building was constructed on a portion of the original fish plant site.

Since the development of the 66-unit condo, there was one of the original fish plant buildings subdivided off (PID 70645247), sold and converted into a 2-bedroom rental apartment. Beyond that, there has been no further development of the original development with the exception of the swimming pools a couple gazebos and landscaping of the subject property with grass.

The proposed apartment building will house 92 units with an average occupancy of 184 persons. Combining the existing condo building, rental building and the proposed apartment building, the overall development has a proposed occupancy of 318. This is less than the previously approved Le Rivage development at 338 person occupancy.

4 Summary of Environmental Impacts

The activities for this project involve the construction of a five storey apartment building complete with underground parking. Potential Environmental Impacts associated with the construction of the apartment building is soil disturbance, heavy equipment being used on the site for site preparation. There could be an accidental release of hazardous materials such as fuels and lubricants during the construction along with sediment laden runoff. There is no work to occur within 15m of the existing stabilized shoreline bank along the Northumberland Strait.

5 Summary of Proposed Mitigation

The potential environmental impacts listed in Section 4 are discussed further below along with any proposed mitigation.

1. Accidental release of hazardous materials: In order to minimize the risk of a release of hazardous materials the following best management practices will be employed during the drilling.
 - Refuelling of equipment, if required, will take place in designated areas where an impermeable surface will be prepared so that a release of fuel or oil does not enter the surface water. The refuelling areas will be located on level terrain and a minimum of 30 metres from any surface water.
 - Any required maintenance work would be performed offsite.

The latest CSA standard for emergency response planning will be reviewed prior to construction. The following standard emergency spill response measures will be followed.

- During construction activities, absorbent material will be kept on-site at all times for immediate response in the event of a spill.
- In the event of a spill, all work will be stopped and a supervisor notified immediately.
- A record of the incident will be taken which will include the personnel and machinery involved, spill containment measures employed, quantity and type of material spilled, date and time of occurrence, and agencies notified.

All necessary actions will be taken to stop the spread of spilled material. Actions may involve ditching, blocking drainage pathways, and using absorbent materials.

Any spills or leaks, such as those from machinery or fuel storage tanks, will be promptly contained and cleaned up. Actions may involve ditching, blocking drainage pathways, and using absorbent materials. In addition, any spills or leaks will be reported to the 24-hour environmental emergencies reporting system (1-800-565-1633) and to the NBDELG Regional Office in Moncton (506-856-2374).

In addition to the above noted mitigation measures, the following standard NBDTI EMM Mitigative measures will be followed throughout the life of the project:

- 5.3 – Clearing
- 5.6 – Dust Control
- 5.7 – Erosion and Sediment Management
 - 5.8.1 – Excavation
- 5.10 – Fire Prevention and Contingency
 - 5.11 – Grubbing
 - 5.12 – Spill Management
- 5.13 – Storage & handling of Petroleum Products
- 5.14 - Storage and Handling of other Dangerous Materials
- 5.23 – Working Near Environmentally Sensitive Areas.

The proponent will regularly consult Environment Canada's local forecast at <http://www.weatheroffice.ec.gc.ca/> so that construction-related activities can be scheduled accordingly.

6 Public Involvement

The following stakeholders will be contacted directly via a letter in order to obtain input on the project:

- Elected officials, the local service district, Southeast Regional Planning Commission, Residents located off Cap Bimet Road and First Nations representatives.

The letter will outline the scope of the project and will include a schematic of the development. Contact information for any comments will also be provided. The public will be given thirty days to provide comments. Once the comments have been received, a report will be prepared regarding the public's input. The report will be submitted within sixty days of project registration.

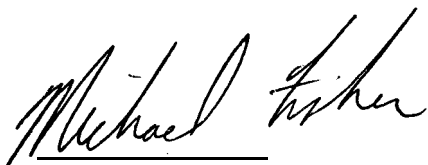
7 Approval of the Undertaking

Approvals will be required from the following authorities: New Brunswick Department of Environment prior to being able to withdrawal more than 50m³/day from the existing onsite well.

8 Funding

No applications for a grant or loan of capital funds from a government agency have or will be submitted. Brinkley Investments Inc. will be funding the project.

9 Signature



Michael Fisher, P.Eng

Jan 5th/2021

Date

APPENDIX A

FIGURES



DRAWING:
 SITE LOCATION PLAN – BRINKLEY INVESTMENTS INC.

LOCATION:
 CAP BIMET ROAD, CAP BIMET, NB

SCALE:
 1: 7500

PROJECT #
 DE154

FIGURE #

1

DATE:
 JAN., 2021

CHECKED BY:
 M.JF

DRAWN BY:
 ACB





SITE PLAN - 5 STORY 92 UNIT W/ U/G PARKING
1" = 30'-0"

SCHEMATIC SUMMARY

LOT INFO	
PID	70497763
Physical Address	-
Lot Area	151406.6 SF
Current Zoning	ID
Proposed Zoning	ID
Required Green Space	-
Proposed Green Space	75917 SF
Parking Lot Ratio (%)	-
Amenity Space Required	-
Amenity Space	42366 SF
PARKING	
Required Parking	115
Required Parking Ratio / Unit	x1.25
Required Bicycle Parking	-
Surface Parking	162
Underground Parking	64
Barrier Free Parking	5
Total Parking	162+64
Total Parking Ratio / Unit	1.76 (NO U/G)
Bicycle Parking	5
Interior Parking Landscape %	-
BUILDING INFO	
Building Footprint	26'693 SQ.FT
Storeys	5
Building Height	18m
Max Allowable Height	18m
Construction	Combustible - Wood
Total Residential Units	92
Total Commercial Units	1
Min. Geodetic Elevation	-
Misc	-
MATERIAL	
Material Requirement 1	-
Material Requirement 2	-
Material Requirement 3	-
REQUIRED VARIANCE	
Variance 1	-
Variance 2	-
Variance 3	-
Variance 4	-

Disclaimer: This preliminary schematic site plan is based on site information provided by the client, or found on a public domain. This site plan is a graphical representation which approximates the size, configuration and location of features. This plan is not intended to be used for legal descriptions or to calculate exact dimensions or areas. Several yet unknown factors may affect the functionality of this site plan, including existing topography, service easements, soil conditions, etc.

SCHEMATIC SUMMARY - 92 UNITS
12" = 1'-0"



Conceptual
"Not For Construction"

ISSUE	DESCRIPTION	DATE
00	--	--

NOTES:
THIS DRAWING MAY NOT BE USED IN WHOLE OR IN PART FOR ANY PROJECT OTHER THAN THAT DESIGNATED HEREIN.
ANY CHANGES TO THIS DESIGN, PRIOR TO OR DURING CONSTRUCTION, MUST BE APPROVED BY THE ARCHITECT & ARCHITECTURAL DESIGNER.
ALL CONTRACTORS MUST CONFORM TO ALL REGULATIONS, MUNICIPAL AND PROVINCIAL BY-LAWS AND "THE NATIONAL BUILDING CODE OF CANADA".
ALL REQUIRED PERMITS MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION.

Rev.#	Description	Date

Stamp:
Architectural Consultant:

Architectural Designer:

spitfire
DESIGN CO.
171 Lutz Street, Moncton, NB E1C 5E8
Bus: (506) 855-3777 Call: (506) 392-2777 eMail: denis@spitfiredesign.ca

Client: **Trevor Ritchie**

Project: **The Brinkley**
Cap-Bimet Rd, Beaubassin Est, NB

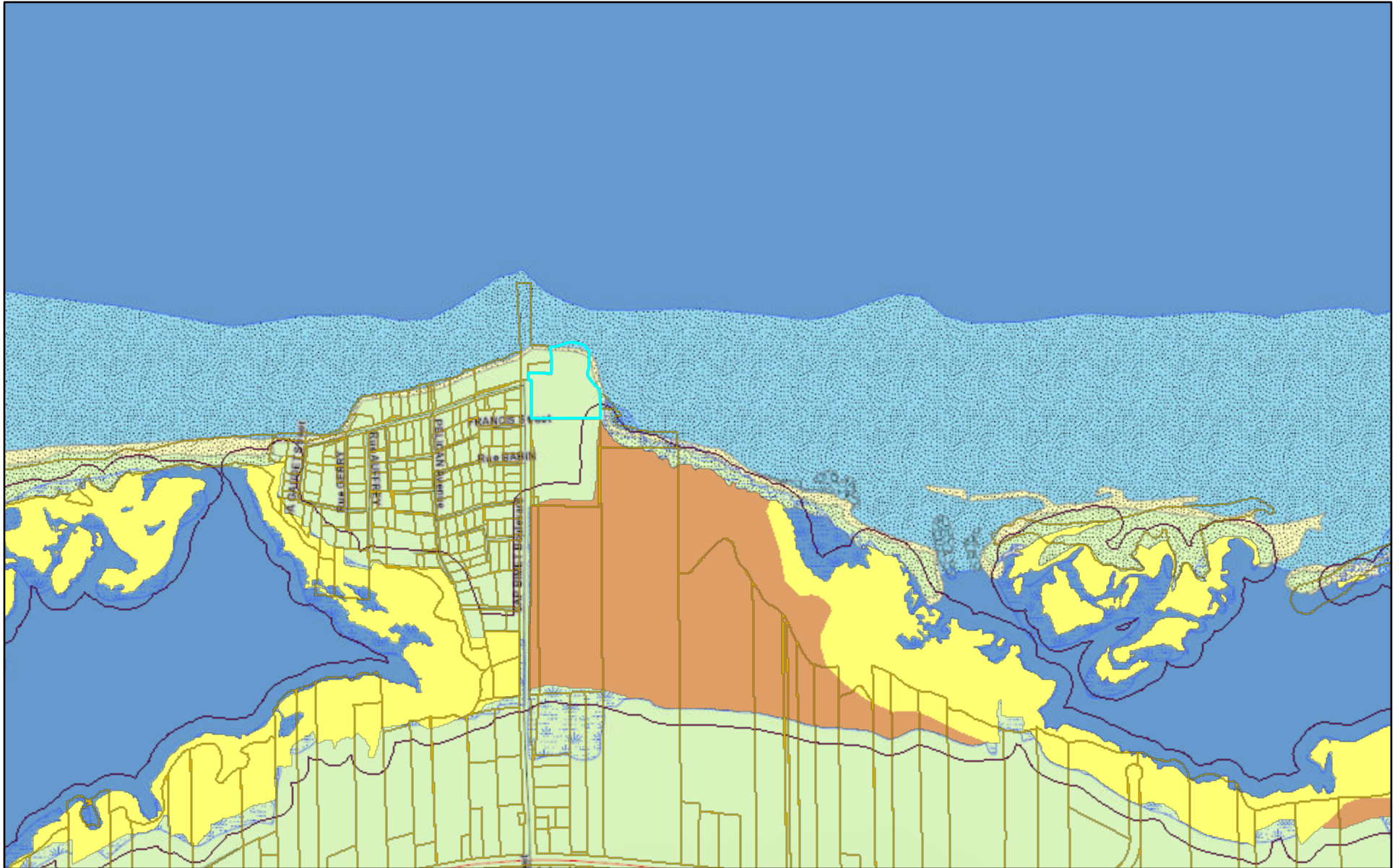
Drawing Title: **SITE PLAN - 92 UNIT**

Date: Nov 24, 2020

Checked by: E.N.M.
Drawn by: E.N.M. Revision: 00

Scale: AS NOTED
Sheet: **ACQ.3** Flight no: 4332

GeoNB Map Viewer



12/31/2020, 9:21:58 AM

parcels

Property Assessment

2018 Flood Extents – Lower Saint John River

2008 Flood Extents – Lower Saint John River

2008 Flood Extents – Upper Saint John River

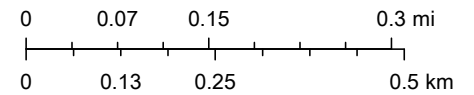
1973 Flood Extents – Fredericton to Gagetown

Flood Hazard Areas

1 in 20 Year Flood

1 in 100 Year Flood

1:10,000



Government of New Brunswick / Gouvernement du Nouveau-Brunswick

GeoNB

This map is a graphical representation which approximates the size, configuration and location of features. This map is not intended to be used for legal descriptions or to calculate exact dimensions or area.

AERIAL PHOTO - 1982



AERIAL PHOTO - 2001





AERIAL PHOTO - 2011

APPENDIX B

ADDITIONAL DOCUMENTATION



NORTH SHERBANK STREET



ALL RIGHTS TO THE PORTION ARE HELD
 A. B. C. D. E. F. G. H. I. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z. AA. AB. AC. AD. AE. AF. AG. AH. AI. AJ. AK. AL. AM. AN. AO. AP. AQ. AR. AS. AT. AU. AV. AW. AX. AY. AZ. BA. BB. BC. BD. BE. BF. BG. BH. BI. BJ. BK. BL. BM. BN. BO. BP. BQ. BR. BS. BT. BU. BV. BW. BX. BY. BZ. CA. CB. CC. CD. CE. CF. CG. CH. CI. CJ. CK. CL. CM. CN. CO. CP. CQ. CR. CS. CT. CU. CV. CW. CX. CY. CZ. DA. DB. DC. DD. DE. DF. DG. DH. DI. DJ. DK. DL. DM. DN. DO. DP. DQ. DR. DS. DT. DU. DV. DW. DX. DY. DZ. EA. EB. EC. ED. EE. EF. EG. EH. EI. EJ. EK. EL. EM. EN. EO. EP. EQ. ER. ES. ET. EU. EV. EW. EX. EY. EZ. FA. FB. FC. FD. FE. FF. FG. FH. FI. FJ. FK. FL. FM. FN. FO. FP. FQ. FR. FS. FT. FU. FV. FW. FX. FY. FZ. GA. GB. GC. GD. GE. GF. GG. GH. GI. GJ. GK. GL. GM. GN. GO. GP. GQ. GR. GS. GT. GU. GV. GW. GX. GY. GZ. HA. HB. HC. HD. HE. HF. HG. HH. HI. HJ. HK. HL. HM. HN. HO. HP. HQ. HR. HS. HT. HU. HV. HW. HX. HY. HZ. IA. IB. IC. ID. IE. IF. IG. IH. II. IJ. IK. IL. IM. IN. IO. IP. IQ. IR. IS. IT. IU. IV. IW. IX. IY. IZ. JA. JB. JC. JD. JE. JF. JG. JH. JI. JJ. JK. JL. JM. JN. JO. JP. JQ. JR. JS. JT. JU. JV. JW. JX. JY. JZ. KA. KB. KC. KD. KE. KF. KG. KH. KI. KJ. KK. KL. KM. KN. KO. KP. KQ. KR. KS. KT. KU. KV. KW. KX. KY. KZ. LA. LB. LC. LD. LE. LF. LG. LH. LI. LJ. LK. LL. LM. LN. LO. LP. LQ. LR. LS. LT. LU. LV. LW. LX. LY. LZ. MA. MB. MC. MD. ME. MF. MG. MH. MI. MJ. MK. ML. MM. MN. MO. MP. MQ. MR. MS. MT. MU. MV. MW. MX. MY. MZ. NA. NB. NC. ND. NE. NF. NG. NH. NI. NJ. NK. NL. NM. NN. NO. NP. NQ. NR. NS. NT. NU. NV. NW. NX. NY. NZ. OA. OB. OC. OD. OE. OF. OG. OH. OI. OJ. OK. OL. OM. ON. OO. OP. OQ. OR. OS. OT. OU. OV. OW. OX. OY. OZ. PA. PB. PC. PD. PE. PF. PG. PH. PI. PJ. PK. PL. PM. PN. PO. PP. PQ. PR. PS. PT. PU. PV. PW. PX. PY. PZ. QA. QB. QC. QD. QE. QF. QG. QH. QI. QJ. QK. QL. QM. QN. QO. QP. QQ. QR. QS. QT. QU. QV. QW. QX. QY. QZ. RA. RB. RC. RD. RE. RF. RG. RH. RI. RJ. RK. RL. RM. RN. RO. RP. RQ. RR. RS. RT. RU. RV. RW. RX. RY. RZ. SA. SB. SC. SD. SE. SF. SG. SH. SI. SJ. SK. SL. SM. SN. SO. SP. SQ. SR. SS. ST. SU. SV. SW. SX. SY. SZ. TA. TB. TC. TD. TE. TF. TG. TH. TI. TJ. TK. TL. TM. TN. TO. TP. TQ. TR. TS. TT. TU. TV. TW. TX. TY. TZ. UA. UB. UC. UD. UE. UF. UG. UH. UI. UJ. UK. UL. UM. UN. UO. UP. UQ. UR. US. UT. UU. UV. UW. UX. UY. UZ. VA. VB. VC. VD. VE. VF. VG. VH. VI. VJ. VK. VL. VM. VN. VO. VP. VQ. VR. VS. VT. VU. VV. VW. VX. VY. VZ. WA. WB. WC. WD. WE. WF. WG. WH. WI. WJ. WK. WL. WM. WN. WO. WP. WQ. WR. WS. WT. WU. WV. WW. WX. WY. WZ. XA. XB. XC. XD. XE. XF. XG. XH. XI. XJ. XK. XL. XM. XN. XO. XP. XQ. XR. XS. XT. XU. XV. XW. XX. XY. XZ. YA. YB. YC. YD. YE. YF. YG. YH. YI. YJ. YK. YL. YM. YN. YO. YP. YQ. YR. YS. YT. YU. YV. YW. YX. YY. YZ. ZA. ZB. ZC. ZD. ZE. ZF. ZG. ZH. ZI. ZJ. ZK. ZL. ZM. ZN. ZO. ZP. ZQ. ZR. ZS. ZT. ZU. ZV. ZW. ZX. ZY. ZZ.

PRELIMINARY DESIGN OF DEVELOPMENT PLAN

LE RIVAGE

SITE PLAN | A

This instrument purports
to be a copy of the original
registered or filed in the
Westmorland County
Registry Office, NB
2560485
number-numéro

Exemplaire présenté comme
copie conforme à l'instrument
enregistré ou déposé au
bureau d'enregistrement du
comté de Westmorland NB
MAY 29 2008
date

ARRÊTÉ 07-1H

Établi en vertu de la LOI SUR L'URBANISME

Arrêté modifiant l'arrêté adoptant le plan rural de la Communauté rurale de Beaubassin-est

En vertu des pouvoirs que leur confèrent les articles 77.2 et 39 de la Loi sur l'urbanisme, le conseil de la Communauté rurale de Beaubassin-est, dûment réuni, adopte ce qui suit :

L'arrêté 07-1 intitulé «Arrêté adoptant le plan rural de la Communauté rurale Beaubassin-est» est modifié en:

- 1) portant de la zone P – Portuaire et de la zone E – Préservation de l'environnement à la zone AI – Aménagement intégré, le zonage des propriétés ayants les numéros d'identification 70198452, 70206933, 00857029, 70199666, 70149877 ainsi que 70199674, lesdites propriétés étant situées le long du ch. Cap Bimet, Grand-Barachois, CRBe, Nouveau-Brunswick, tel qu'indiqué par l'annexe « A », assujetti aux conditions décrites à la résolution indiquée à l'annexe « B » ainsi qu'au plan de site indiqué à l'annexe « C » du présent et en faisant partie, dans le but d'aménager un complexe résidentiel accompagné de commerces de service.

PREMIÈRE LECTURE PAR TITRE:


Le 17 mars, 2008
Date


DEUXIÈME LECTURE EN INTÉGRALITÉ :

Le 26 mai, 2008
Date

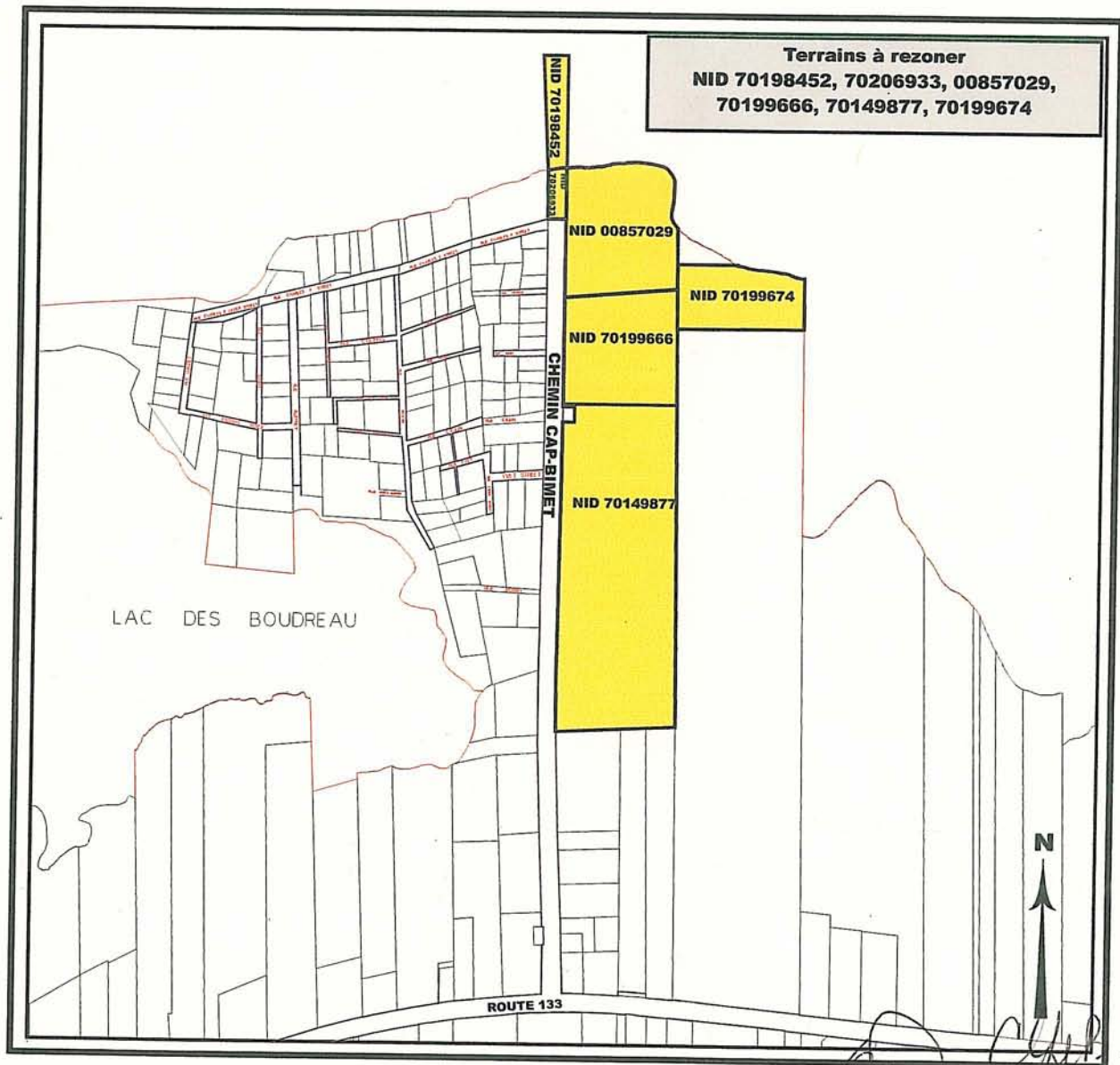
TROISIÈME LECTURE ET ADOPTION:

Le 26 mai, 2008
Date


M. Ola DRISDELLÉ, maire


Mme Christine LeBLANC, greffière trésorière

ANNEXE «A»
Arrêté 07-1H
modifiant l'arrêté 07-1
Étant l'arrêté adoptant le plan rural
de la Communauté rurale de Beaubassin-est
établi en vertu de la
LOI SUR L'URBANISME



Changement de zonage en vertu de l'article 39 de la *Loi sur l'urbanisme*;
de la zone P – Portuaire et de la zone E – Préservation de l'environnement à la
zone AI – Aménagement intégré, le zonage des propriétés ayants les numéros
d'identification 70198452, 70206933, 00857029, 70199666, 70149877 ainsi que 70199674
dans la but d'aménager un complexe résidentiel accompagné de commerce de service.

Annexe B

RÉSOLUTION DU CONSEIL ÉTABLIE
EN VERTU DE L'ARTICLE 39 DE LA LOI SUR L'URBANISME

Proposée par : James LeBlanc

Appuyée de : André Bourque

CONSIDÉRANT QUE le requérant, ayant l'accord des propriétaires ayants les numéros d'identification 70198452, 70206933, 00857029, 70199666, 70149877 ainsi que 70199674, lesdites propriétés étant situées le long du ch. Cap Bimet, Grand-Barachois, CRBe, Nouveau-Brunswick, désire porter lesdites propriétés de la zone P – Portuaire et de la zone E – Préservation de l'environnement à la zone AI – Aménagement intégré dans le but d'aménager un complexe résidentiel accompagné de commerces de service ;

ET CONSIDÉRANT QUE le Conseil municipal a approuvé cette demande sujette à des conditions ;

IL EST RÉSOLU QUE :

1. Nonobstant toutes autres dispositions, les bâtiments, les constructions ainsi que les usages présent actuellement ou dans le futur sur les terrains identifiés à l'annexe «B», sont soumis aux conditions suivantes :

a) Seuls les usages principaux suivant sont permis :

- i. une ou plusieurs résidences multifamiliales de type condos, maison de ville, édifice à logement ou tout autre combinaison de ceux-ci jusqu'à un maximum de 167 unités d'habitation pour l'ensemble du projet;
- ii. sous réserve du paragraphe (b), un spa accompagné d'une ou plusieurs salles de conditionnement physique et/ou de salon esthétique ;
- iii. un ou plusieurs bureaux accompagnés d'une salle de conférence et/ou de rassemblement ;
- iv. un restaurant avec licence d'alcool ou non; et
- v. une marina ;

b) Pour le présent arrêté, le terme « spa » s'entend de l'ensemble des soins esthétiques qu'une personne peut recevoir dans un salon d'esthétique professionnel et peut comprendre également un service de massothérapie avec professionnel certifié ;

c) Seuls les bâtiments accessoires et les usages accessoires suivants seront permis :

- i. une remise;
- ii. un ou plusieurs gazebos ;
- iii. une ou plusieurs piscines ;
- iv. une ou plusieurs aires de jeux et/ou de repos pouvant être munis d'équipement et/ou de mobilier tel que des lampadaires ou des bancs ;
- v. sous réserve du paragraphe d), une ou plusieurs clôtures et/ou barrières ; et
- vi. un ou plusieurs terrains de stationnements ;

d) Le requérant peut aménager sur lesdites propriétés une ou plusieurs clôtures d'une hauteur maximum de 2 mètres, exception faite de la clôture d'un terrain de tennis qui pourra être supérieure à 2 mètres. Toutefois, si le requérant désire ériger une clôture sur l'alignement, seule la partie inférieure pourra être opaque. Entre 1,00 m et 2,00 mètres, la clôture ne doit pas avoir un pourcentage d'opacité de plus de 20%. Le requérant pourra ériger une ou plusieurs barrières afin de contrôler la circulation du site, mais ceux-ci devront être aménagées à 4 mètres ou plus de l'alignement et seulement en conformité avec les recommandations du chef pompiers ;

e) Tous usages, autre que ceux permis en vertu du paragraphe a) et c), seront seulement permis que s'ils reçoivent l'approbation du conseil en vertu de l'article 39 de la *Loi sur l'urbanisme* ;

f) Aucun aménagement à toute phase du projet ne sera permis et aucun permis d'aménagement et/ou de construction ne sera émis avant que les éléments ci-dessous soient fournis par écrit:

- i. la délimitation du marais ainsi que la zone de 30 mètres de protection de celui-ci soit effectué par l'entremise d'un professionnel reconnu par le Ministère de l'Environnement afin d'établir avec précision la superficie aménageable, soit la superficie à l'extérieur de la terre humide et de sa zone de protection ;
- ii. un certificat ou tout autre document d'attestation du Ministère de l'Environnement soit reçu pour confirmer qu'une étude d'impact environnemental a été complétée avec succès pour l'aménagement prévu à moins d'en être dispensé par celui-ci ;

- iii. un permis d'altération des cours d'eaux et/ou des terres humides soit reçu du Ministère de l'Environnement à moins d'en être dispensé par celui-ci ;
- iv. une entente écrite soit signée entre le requérant et la Commission des égouts Shediac et Banlieues pour le branchement au réseau public d'égout de l'ensemble des bâtiments principaux ;
- v. le plan de site du requérant ainsi que les plans de constructions des bâtiments principaux reçoivent l'approbation du département d'incendie et du prévôt des incendies ;
- vi. une entente entre le requérant et la CRBe pour un plan de mesure d'urgence qui comprend entre autre la description des ressources et des équipements qui seront dévoués aux mesures d'urgences et qui lie le requérant et les futures propriétaires au plan des mesures d'urgence de la communauté ;
- vii. un rapport accrédité de la qualité d'eau et la quantité d'eau utilisée pour l'ensemble du projet;
- viii. un plan de drainage effectué par un ingénieur certifié soit fourni à la Commission d'aménagement Beaubassin et si le plan de site est modifié lors d'une phase quelconque, le plan de drainage devra être révisé et re-soumis;
- ix. un rapport de décontamination du site et de stabilité du sol effectué par un ingénieur certifié soit fourni à la Commission d'aménagement Beaubassin ;
- x. l'aménagement reçoit l'approbation de Service Nouveau-Brunswick en vertu de la *Loi sur les condominiums* ;
- xi. le requérant soumet au Conseil un rapport d'ingénieur accompagné des plans de construction démontrant que l'aménagement proposé surpasse les prévisions scientifiques du rapport (R.J. Daigle Enviro) comme présenté par l'expert, pour approbation ou refus du Conseil, puis soumet les plans approuvés par le Conseil à l'agent de la CAB qui démontreront également l'adaptabilité du site pour l'érosion du secteur;
- xii. Aucun entreposage de bateau sur le site en dehors de la saison ;
- xiii. Un droit de passage tel que démontrer sur le plan de site indiqué à l'annexe « C » doit être réservé afin de permettre le déplacement de l'est à l'ouest le long de la plage et si


la marina est construite ce droit de passage doit être maintenu et adapté aux frais du promoteur ;

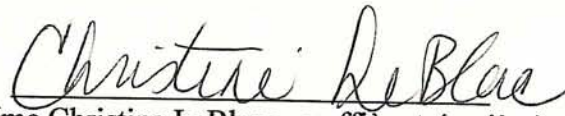
- g) Une passerelle sera permise dans le marais sous l'approbation du Ministère de l'Environnement;
- h) Aucun aménagement ne sera permis dans la zone du 30 mètres de protection du marais sans avoir reçu au préalable, l'approbation écrite ou l'exemption écrite du Ministère de l'Environnement ;
- i) L'aménagement du restaurant ne pourra pas se faire sans l'approbation écrite du Ministère de la Santé et du Département de Sécurité publique à moins d'en être dispensé par ceux-ci;
- j) L'aménagement de la marina ne pourra pas se faire sans l'approbation écrite du Ministère des Ressources naturelles, du Ministère d'Environnement Canada (CEAA), du Ministère d'Environnement du N.-B., du Ministère de Pêches et Océans ainsi que du Ministère du Transport du Canada à moins d'en être dispensé par écrit par ceux-ci;
- k) Le nombre de bâtiments principaux ou de structures principales ne peut pas être supérieur aux 6 bâtiments prévus pour l'ensemble du projet qui sont les quatre bâtiments résidentiels, le bâtiment de la piscine intérieur et la marina ;
- l) Un aménagement paysagé du projet dans son ensemble doit être présenté pour approbation du Conseil avant l'obtention du premier permis de construction pour un bâtiment principal, mais l'aménagement paysager sera construit par phase;
- m) Les bâtiments et les constructions devront être aménagés à l'intérieur des lots démontrés par le plan de site en annexe du présent arrêté. Ce plan de site peut être modifié pour refléter les changements du périmètre associé à la délimitation du marais comme exigé dans l'annexe « B », soit le 1)f)i. Chacun des lots doit avoir un minimum de 4000 m² et une façade minimum de 5 mètres sur le chemin Cap-Bimet. Aucun bâtiment principal ne pourra être à moins de 3 mètres

des limites de propriétés et 5 mètres de l'alignement et aucun bâtiment accessoire ni aucune structure accessoire, exception faite des clôtures, ne pourront être à moins de 3 mètres d'une limite de propriété ou de l'alignement. Le requérant devra recevoir l'approbation du Ministère des Transports quant aux accès ainsi que des retraits de l'alignement.

- n) La hauteur des bâtiments et des constructions principales ne peut être supérieure à 18 mètres ;
- o) La hauteur des bâtiments et des constructions accessoires ne peut être supérieure à 7,5 mètres ;
- p) Il ne pourra être aménagé moins de 167 ni plus de 292 espaces de stationnement hors rue asphalté afin de limiter l'empreinte des terrains de stationnement. Pour ce calcul, les espaces de stationnement à l'intérieur des bâtiments sont exclus ;

2) En cas de violation de l'une des présentes conditions par le propriétaire, ses héritiers ayants droit ou successeurs, ou tout autre propriétaire ou exploitant d'entreprise sur les biens-fonds, la Communauté rurale Beaubassin-est se réserve le droit d'agir en vertu de la *Loi sur l'urbanisme* afin de remédier à la situation.


(M. Ola DRISDELLE, maire)


(Mme Christine LeBlanc, greffière trésorière)



LEGEND	
PROPOSED	EXISTING
Waterman & Gate Valve	Waterman & Gate Valve
Sanitary Manhole & Pipe	Sanitary Manhole & Pipe
Storm Manhole & Pipe	Storm Manhole & Pipe
Utility Pole & Line	Utility Pole & Line
Edge of Pavement	Edge of Pavement
Property Boundary	Property Boundary
Water Lateral	Water Lateral
Sanitary Lateral	Sanitary Lateral
Storm Lateral	Storm Lateral
Flow Section Line	Flow Section Line
Flow Section Valve	Flow Section Valve
Flow Section Gate	Flow Section Gate
Flow Section Valve	Flow Section Valve
Flow Section Gate	Flow Section Gate
Flow Section Valve	Flow Section Valve
Flow Section Gate	Flow Section Gate
Flow Section Valve	Flow Section Valve
Flow Section Gate	Flow Section Gate
Flow Section Valve	Flow Section Valve
Flow Section Gate	Flow Section Gate
Flow Section Valve	Flow Section Valve
Flow Section Gate	Flow Section Gate



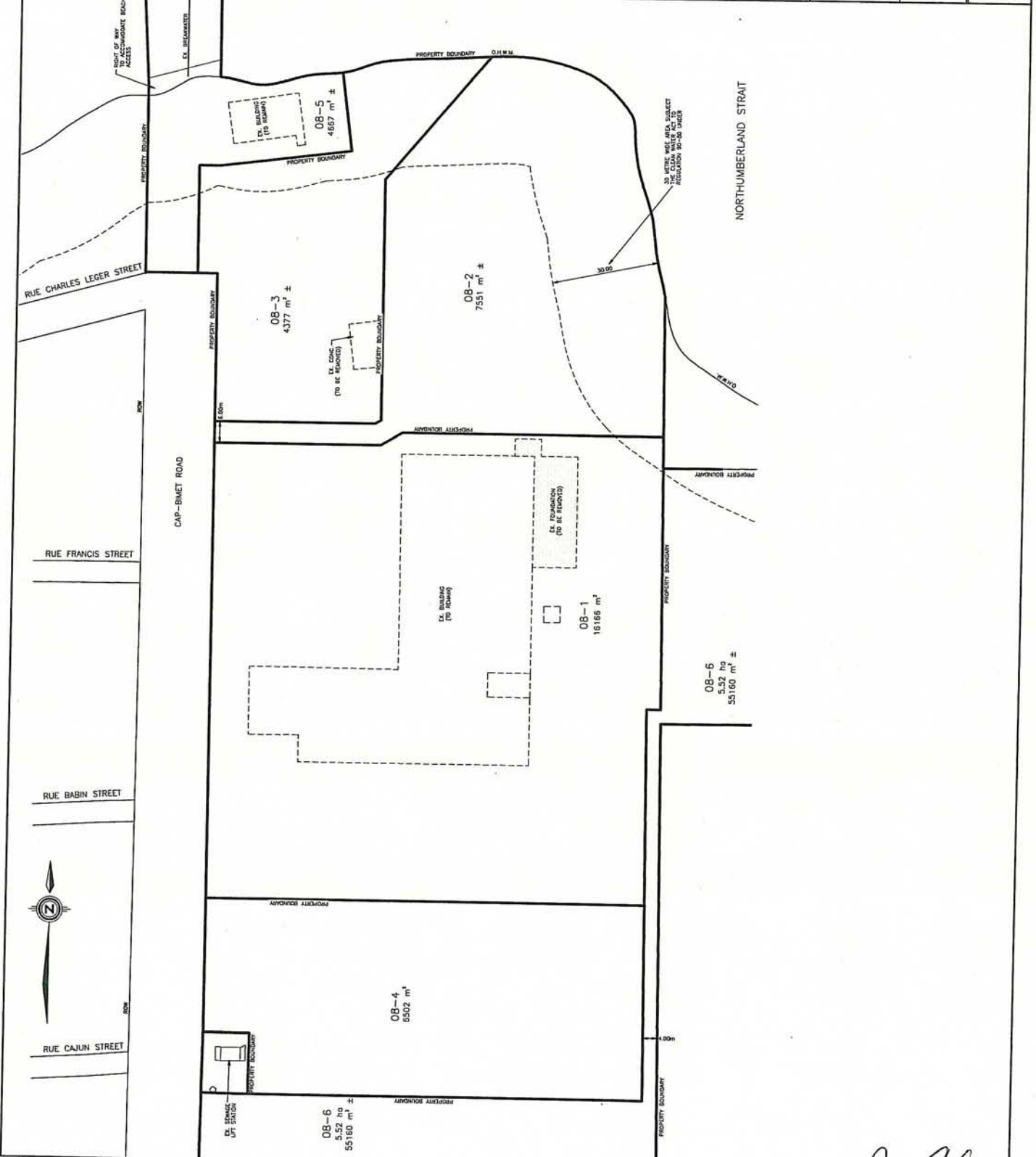
CLIENT: CAP BIMET DEVELOPMENTS LTD.

PROJECT: LE RIVAGE CONDOMINIUM DEVELOPMENT

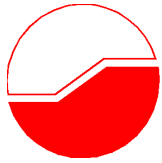
SHEET DESCRIPTION: GRAND BARACHOIS, NEW BRUNSWICK

SERVICING PLAN

DATE	16-JAN-2009
WORK SCALE	1:500
DRAWN	LMACDONALD
CHECKED	JM/JAS
REV. NO.	001/002/003
SHEET 6 of 4	



Annexe C



GEMTEC LIMITED

GROUND ENGINEERING
& MATERIALS TECHNOLOGY

191 Doak Road
Fredericton, NB E3C 2E6

TEL: (506) 453-1025
FAX: (506) 453-9470

February 20, 2008

File: 5742.07
Revised Final

VIA EMAIL: denisa@nb.sympatico.ca

Denaco Group Ltd.
97 Silverwood Crescent
Moncton, NB
E1A 0M4

Attention: Mr. Denis Arsenault

**RE: GROUNDWATER SERVICES- PUMPING TESTS AND WATER QUALITY TESTING
PATUREL'S TOWNHOUSE / CONDO DEVELOPMENT, CAP BIMET ROAD**

Introduction

GEMTEC Limited was retained by Denaco Group Ltd. to assist in evaluating the use of groundwater as a potable water supply for the proposed Paturel's Townhouse / Condo development located at Cap Bimet (former Paturel's fish plant). Two wells are located at the site (Figure 1) and a preliminary review of the water supply situation indicated that only a small portion of the total water used by the former fish plant would be required for the proposed development (GEMTEC letter dated January 8, 2008). Since our initial assessment the water requirements for the development have been revised and groundwater pumping tests were completed on the two existing wells on the property, the Plant well and the Shed well. This letter updates the basic water consumption or demand for the development and compares this demand to the calculated yield (available supply) of the site wells. Groundwater samples were taken during the two pump tests and the data are compared to drinking water guidelines.

Water Demand for Project

Based on sewage flow data provided by the Terrain Group Inc., the total occupancy for the development (all four phases) is 338 persons. The development will include condominiums, town houses, a spa, and swimming pools. The Beaubassin Rural Planning District Commission provides guidance for subdivision serviced by individual private wells as follows:

The per-person requirement shall be 450 litres per day. Peak demand occurs for a period of 120 minutes each day. This is equivalent to a peak demand rate of 3.75 litres/minute for each person. The basic minimum pumping test rate is this rate multiplied by the "likely number of persons per well" which, for a single-family residence, shall be the number of bedrooms plus one.



Based on the above, the water demand can be calculated as follows:

- Average demand:
 - 450 L/day/person x 338 persons = 152,100 L/day (24 igpm)
- Peak demand:
 - 3.75 L/minute/person x 338 persons = 1268 L/minute (280 igpm)

Pumping Test - Plant Well

A 24-hr pump test was carried out on the Plant well starting at 9:15 am on January 30, 2008. The other site well, the Shed well, is located 130 metres from the Plant well and it was used as an observation well. The pump test data are attached and the results are summarized as follows:

- Plant well was pumped using the existing pump operated at full capacity, 1666 L/minute (367 igpm). This rate is lower than the rate reported by the fish plant owner, which was 2452 L/minute (540 igpm).
- Plant well depth is 86.9 m (285 feet), the diameter 0.3048 m (1 foot), and the pump is set at 50.3 m (165 feet).
- Shed well depth and diameter were measured at 67.06 m (220 feet) and 0.152 m (0.5 feet), respectively.
- Maximum drawdown in pumped well (Plant) was 24.33 m at 1440 minutes and 6.05 m in the observation well (Shed) at 1440 minutes.
- The water from the pumping test was discharged overland to the Northumberland Straight via pipe.
- The average transmissivity (T) and storage coefficient (S) of the aquifer were calculated using the pump test data as follows: $T = 222 \text{ m}^2/\text{day}$ (14,689 igal/day/ft) and $S = 3.3 \times 10^{-5}$ (dimensionless).
- The pumped well (Plant well) recovered 92% in 210 minutes after pumping stopped, but GEMTEC could not confirm whether the pump column contained a check valve. If the valve is not present then the pump column could drain into aquifer and skew the recovery rate, i.e. make recovery look better than actual.
- The observation well (Shed well) recovered 68% in 210 minutes.

The aquifer tapped by the Plant well is highly transmissive ($T > 10,000 \text{ igal/day/ft}$) and the low storage coefficient ($S = 3.3 \times 10^{-5}$) indicates confined to semi-confined aquifer conditions. When pumping started in the Plant well, the water level in the Shed well responded almost immediately indicating that the two wells tap the same aquifer. Once the pumping stopped the wells were monitored for 210 minutes and the Plant well recovered 92% during the recovery period. Although the recovery of the Shed well was only 68%, a plot of recovery time (t/t') versus residual drawdown shows close to an ideal aquifer response, indicating that complete recovery will eventually occur.

The available drawdown in a confined well is generally taken as the top of the aquifer. In this case there is no information regarding the geometry of the aquifer system or the main water bearing zones. Based on the reported historic pumping of the well, the available drawdown was assumed conservatively to be 33.5 m (110 feet).

In calculating the long-term capacity of the well, the method outlined by the British Columbia Ministry of Environment (Ground Water Section) was followed. The long-term well capacity is normally estimated by multiplying the well's specific capacity after 100 days of pumping by 70% of the available drawdown in the well. Using this approach the well capacity is 1323 L/minute (290 igpm). This rate is approximately 70% of the pump test rate.

The peak pumping rate (peak water demand) of 1268 L/minute (280 igpm) does not exceed the long-term capacity of the well, 1323 L/minute (290 igpm). Also, the actual long-term average pumping rate is only 109 L/minute (24 igpm), which is less than 10% of the capacity of the Plant well. Under these conditions the long term calculated drawdown in the Plant well is approximately 2 metres.

Pumping Test - Shed Well

A 12-hr pump test was carried out on the Shed well starting at 10:35 am on February 1, 2008. The Plant well was used as an observation well. The pump test data are attached and the results are summarized as follows:

- The Shed well was pumped at 672 L/minute (148 igpm).
- The maximum drawdown in pumped well (Shed) and observation well (Plant) were 9.14 m and 1.73 m, respectively. Both occurred at 540 minutes into the test.
- The average transmissivity (T) and storage coefficient (S) of the aquifer were calculated using the pump test data as follows: $T = 212 \text{ m}^2/\text{day}$ (14,219 igal/day/ft) and $S = 3.4 \times 10^{-5}$ (dimensionless).
- Both wells recovered above their initial static water levels within 540 minutes after pumping stopped.

The pump test on the Shed well indicates that the two site wells intersect the same confined to semi-confined aquifer. The capacity of the Shed well is likely higher than pump test rate of 672 L/minute (148 igpm), however, we do not recommend pumping above this rate without additional pump testing. At the recommended rate, the Shed well can meet the average water demand of the development.

It is important to note that coastal aquifers may be susceptible to salt water intrusion under pumping conditions and the exact conditions leading to such problems are difficult to predict by theoretical means. Given the water demands of the proposed development, salt-water intrusion issues are not anticipated, based on the history of the site (continuous pumping at much higher rates without salt water issues) and based on discussions with local well drillers.

Water Quality

Three groundwater samples were collected during each pump test, one at the start, one in the middle, and one at the end of the test. The samples were submitted to an analytical laboratory for testing of general chemistry parameters, trace metals, petroleum hydrocarbons (Atlantic PIRI method) and bacteria. The analytical data are summarized in the attached table and the Canadian drinking water guidelines are presented for comparison purposes. The turbidity level in the initial sample from each well slightly exceeded the drinking water guideline of 1.0 NTU at 1.3 NTU (both samples). The turbidity level in the remaining samples did not exceed the guideline. Both wells have been inactive for sometime and turbidity levels are likely to decrease with well use. The pH of the initial sample collected from the Shed well was 6.2, which is outside the recommended range of 6.5 to 8.5 for drinking water. However, the two samples collected later in the test fall with the recommended range.

Manganese levels were high in the all samples from both wells and manganese concentrations are approximately 4 times the drinking water guideline. Manganese concentrations in groundwater in the Moncton area commonly exceed drinking water guidelines. It is important to note that the drinking water guideline for manganese is an aesthetic objective based on preventing the staining of plumbing fixtures and laundry and is not a health concern. Treatment systems are readily available to reduce manganese levels.

Benzene, toluene, ethylbenzene, xylenes, and modified Total Petroleum Hydrocarbons (BTEX/TPH) were not detected above the laboratory-reporting limit in any of the samples tested. Similarly, coliform and E. coli bacteria were not detected in any of the groundwater samples tested. Low counts background bacteria were noted in the samples from the Shed well and the bacteria counts decreased over the period of the test. These low counts are not uncommon in samples from wells that have been inactive for a period. Prior to use, the site wells should be video inspected and disinfected by a licensed well driller.

All other parameters met drinking water guidelines.

Summary


Based on the updated water requirements and the pump tests performed on the Plant and Shed wells, the following summary is presented:

- Based on the proposed development (338 persons), the average water demand is 109 L/minute (24 igpm) and the peak demand is estimated at 1268 L/minute (280 igpm).
- The capacity of the Plant well was calculated to be 1323 L/minute (290 igpm), which exceeds the peak water demand and far exceeds the average water demand. The Shed well can also meet the average water demand of the development.
- The pump test rate of 672 L/minute (148 igpm) is recommended as the maximum pumping rate for the Shed well. Although the capacity of this well may be higher, additional testing at a higher pumping rate is recommended before exceeding the rate undertaken during the pump test.

- The proposed development will consume less than 15 percent of the groundwater that was reportedly used by the fish plant. The inclusion of a spa and swimming pools as part of the development will not significantly affect this percentage.
- Other than manganese and minor exceedances of pH and turbidity in initial samples, all groundwater parameters tested (major ions, petroleum, and bacteria) met drinking water guidelines. The guideline for manganese is an aesthetic objective based on preventing the staining of plumbing fixtures and laundry and is not a health concern. Treatment systems are readily available to reduce manganese levels.
- Prior to use, the site wells should be video inspected and disinfected by a licensed well driller.
- Salt water intrusion is not anticipated given the current size of the proposed development, however, GEMTEC recommends that if the future water demands increase by more than 25% of proposed average demand (above 136 L/minute or 30 igpm) then additional evaluation should be undertaken, i.e., close monitoring of the water chemistry, water level measurements, and possibly groundwater modeling.

As noted in previous correspondence our assessment did not include potential requirements for fire protection.

Sincerely,



Shaun Pelkey, P. Eng.

SGP/pb


Attachments

cc: Mr. Danny Stymiest, Engineer, NB Department of Environment, Marysville Place
(Via Email: danny.stymiest@gnb.ca)
Mr. Sylvain Losier (Via Email: sylvain.losier@cabbpc.ca)
Mr. Sebastien Doirion (Via Email: sebastien.doirion@cabbpc.ca)



Project
GROUNDWATER SERVICES

Drawing
LOCATION PLAN



GEMTEC LIMITED
GROUND ENGINEERING
& MATERIALS TECHNOLOGY

Drawn By
AGSD

Date
FEB, 2008

File No.
57420702

Drawing No.
FIGURE 1

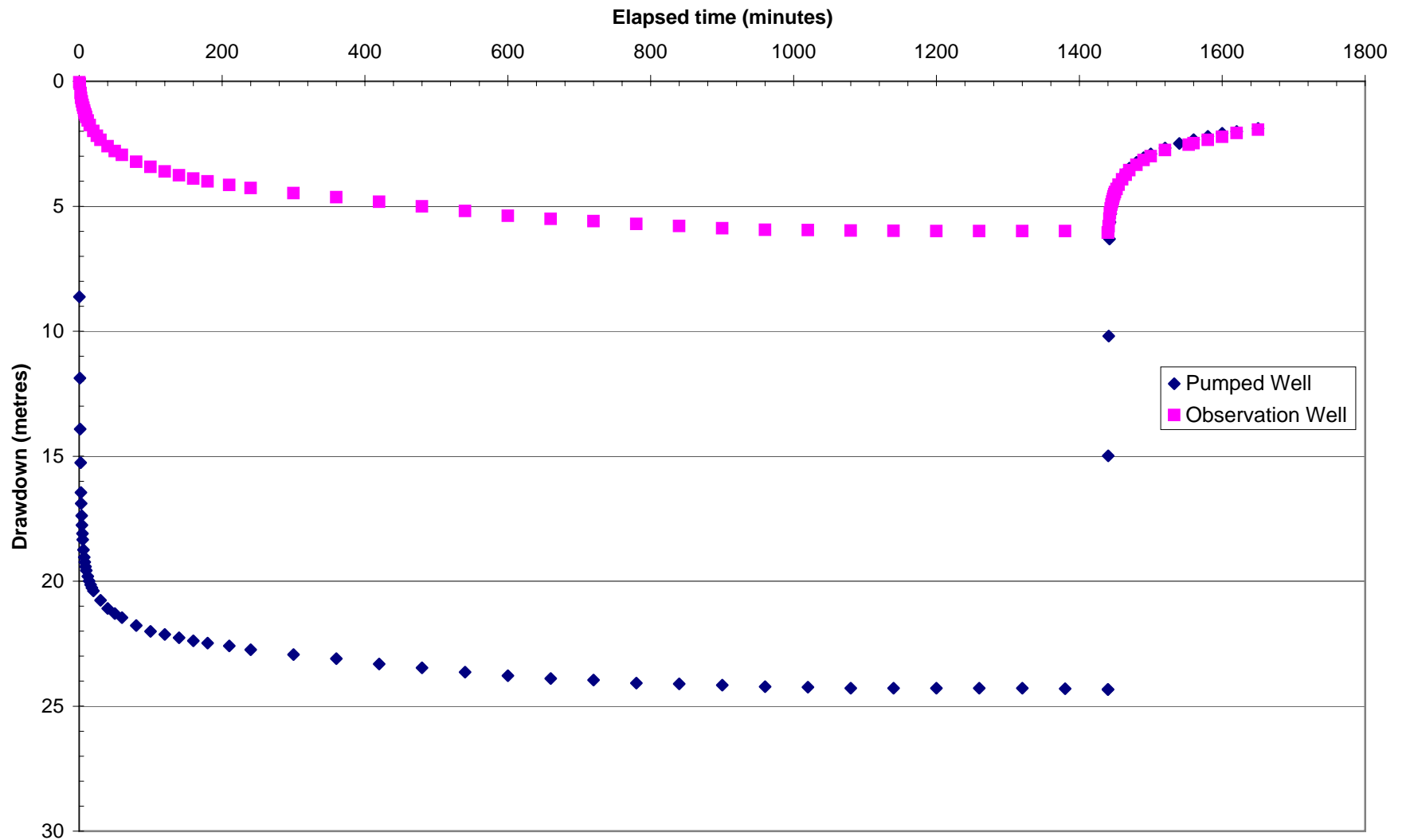
Revision No.
0

TABLE 1: SUMMARY OF PLANT WELL PUMP TEST RESULTS

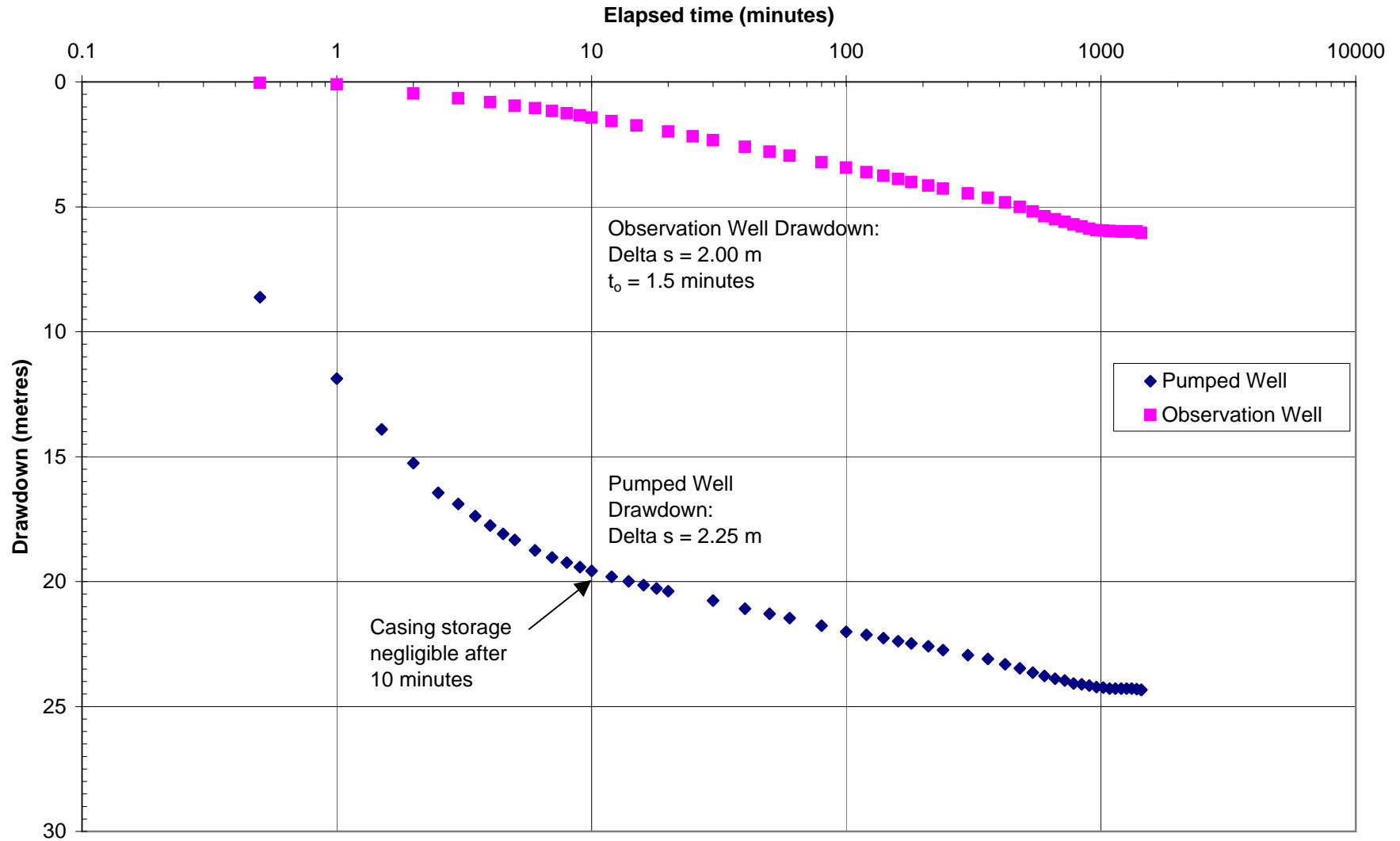
Well	Method of analysis ¹	Transmissivity	Coefficient of Storage
		m ² /day (igpd/ft)	
PLANT WELL (Pumped Well)	drawdown	195 (13079)	-
	residual drawdown	220 (14756)	-
	calculated recovery	227 (15226)	-
OBSERVATION WELL (Shed Well)	drawdown	219 (17627)	3.0 x 10 ⁻⁵
	residual drawdown	231 (15493)	-
	calculated recovery	238 (15963)	3.6 x 10 ⁻⁵
Average		222 (14689)	3.3 x 10 ⁻⁵

1. Cooper Jacob straight-line method used for analysis of drawdown and recovery.

Time vs. Drawdown Plant (Plant Well) and Observation (Shed Well)

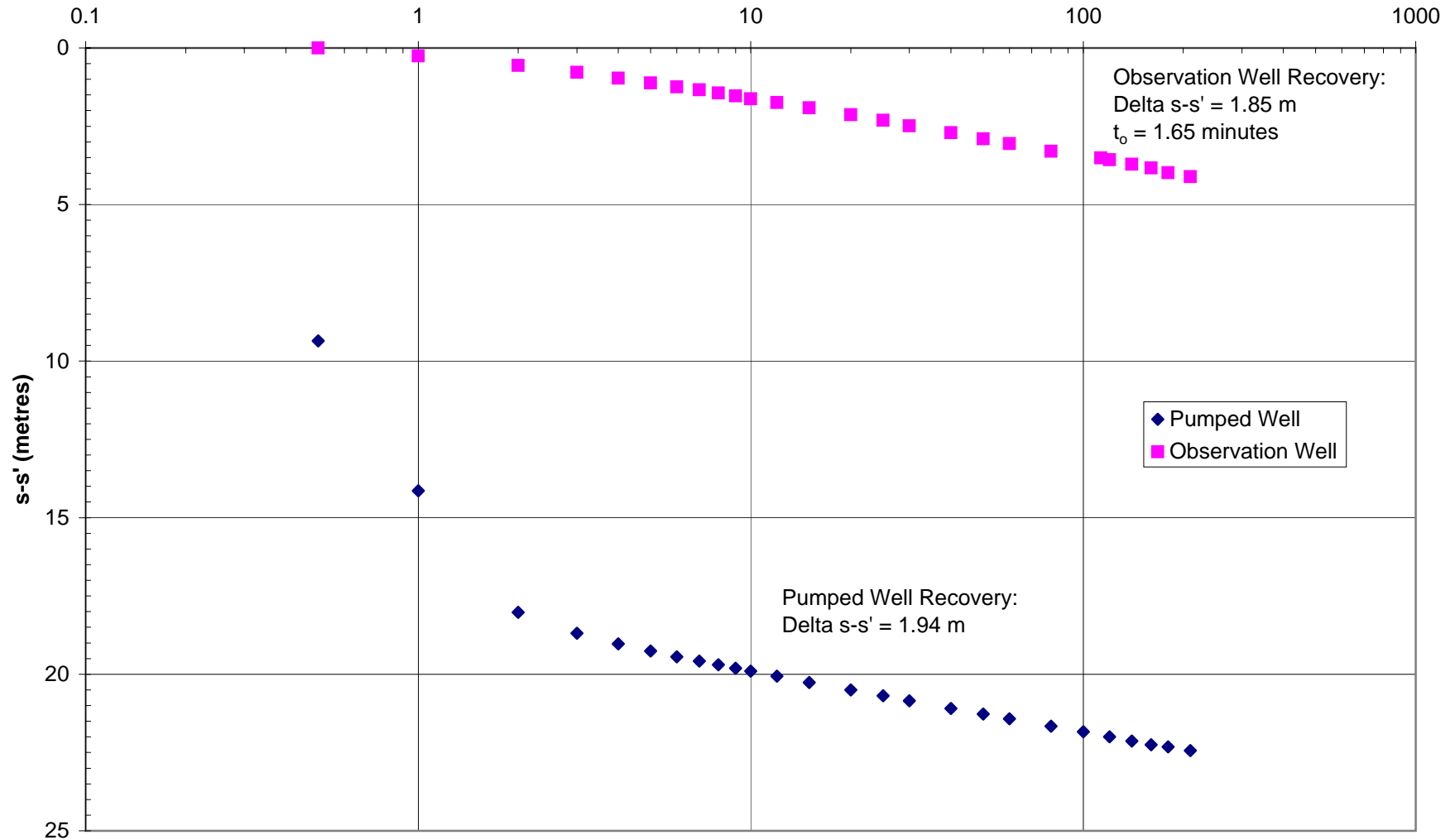


Log Time vs. Drawdown Pumped (Plant Well) and Observation (Shed Well)



Calculated Recovery (t' vs. $s-s'$) Pumped (Plant Well) and Observation (Shed Well)

Time since pumping stopped t' (minutes)



Pumping Well (Plant Well) - Drawdown Data

Time since pumping started (minutes)	Water level (metres)	Drawdown (m)	Comments
0	1.19	0.00	
0.5	9.81	8.62	13" Orifice = 367 igpm
1	13.07	11.88	
1.5	15.10	13.91	
2	16.45	15.26	
2.5	17.64	16.45	
3	18.08	16.89	
3.5	18.57	17.38	
4	18.95	17.76	
4.5	19.28	18.09	
5	19.53	18.34	
6	19.94	18.75	
7	20.23	19.04	
8	20.43	19.24	
9	20.61	19.42	
10	20.76	19.57	13" Orifice = 367 igpm
12	21.00	19.81	
14	21.18	19.99	
16	21.33	20.14	
18	21.46	20.27	
20	21.58	20.39	
25			
30	21.95	20.76	
35			
40	22.28	21.09	
45			
50	22.48	21.29	
55			
60	22.65	21.46	
80	22.96	21.77	
100	23.20	22.01	
120	23.32	22.13	
140	23.45	22.26	
160	23.58	22.39	
180	23.67	22.48	
210	23.78	22.59	
240	23.93	22.74	
300	24.13	22.94	
360	24.29	23.10	
420	24.50	23.31	
480	24.66	23.47	
540	24.83	23.64	
600	24.97	23.78	13" Orifice = 367 igpm
660	25.08	23.89	
720	25.15	23.96	
780	25.27	24.08	
840	25.30	24.11	
900	25.35	24.16	
960	25.41	24.22	
1020	25.43	24.24	
1080	25.47	24.28	
1140	25.47	24.28	
1200	25.47	24.28	
1260	25.47	24.28	
1320	25.47	24.28	
1380	25.49	24.30	13" Orifice = 367 igpm
1440	25.52	24.33	13" Orifice = 367 igpm

Pumping Well (Plant Well) - Recovery Data							
Time since pumping started (minutes)	Time since pumping stopped (minutes)	Ratio (t/t')	Water level (metres)	Drawdown (m)	t'	s-s'	Comments
1440	0	0.00	25.52	24.33	0	0.00	
1440.5	0.5	2881.00	16.17	14.98	1	9.35	
1441	1	1441.00	11.38	10.19	1	14.14	
1441.5	1.5	961.00	-	-	-	-	
1442	2	721.00	7.50	6.31	2	18.02	
1442.5	2.5	577.00	-	-	-	-	
1443	3	481.00	6.83	5.64	3	18.69	
1443.5	3.5	412.43	-	-	-	-	
1444	4	361.00	6.49	5.30	4	19.03	
1444.5	4.5	321.00	-	-	-	-	
1445	5	289.00	6.26	5.07	5	19.26	
1446	6	241.00	6.08	4.89	6	19.44	
1447	7	206.71	5.94	4.75	7	19.58	
1448	8	181.00	5.82	4.63	8	19.70	
1449	9	161.00	5.71	4.52	9	19.81	
1450	10	145.00	5.62	4.43	10	19.90	
1452	12	121.00	5.46	4.27	12	20.06	
1455	15	97.00	5.26	4.07	15	20.26	
1460	20	73.00	5.02	3.83	20	20.50	
1465	25	58.60	4.83	3.64	25	20.69	
1470	30	49.00	4.67	3.48	30	20.85	
1480	40	37.00	4.43	3.24	40	21.09	
1490	50	29.80	4.25	3.06	50	21.27	
1500	60	25.00	4.10	2.91	60	21.42	
1520	80	19.00	3.86	2.67	80	21.66	
1540	100	15.40	3.68	2.49	100	21.84	
1560	120	13.00	3.52	2.33	120	22.00	
1580	140	11.29	3.39	2.20	140	22.13	
1600	160	10.00	3.27	2.08	160	22.25	
1620	180	9.00	3.20	2.01	180	22.32	
1650	210	7.86	3.08	1.89	210	22.44	

Observation Well (Shed Well) - Recovery Data							
Time since pumping started (minutes)	Time since pumping stopped (minutes)	Ratio (t/t')	Water level (metres)	Drawdown (m)	t'	s-s'	Comments
1440	0		7.65	6.05	0	0.00	
1440.5	0.5	2881.00	7.65	6.05	1	0.00	
1441	1	1441.00	7.40	5.80	1	0.25	
1442	2	721.00	7.09	5.49	2.00	0.56	
1443	3	481.00	6.87	5.27	3	0.78	
1444	4	361.00	6.69	5.09	4.00	0.96	
1445	5	289.00	6.53	4.93	5	1.12	
1446	6	241.00	6.41	4.81	6.00	1.24	
1447	7	206.71	6.31	4.71	7	1.34	
1448	8	181.00	6.21	4.61	8.00	1.44	
1449	9	161.00	6.12	4.52	9	1.53	
1450	10	145.00	6.03	4.43	10	1.62	
1452	12	121.00	5.91	4.31	12	1.74	
1455	15	97.00	5.74	4.14	15	1.91	
1460	20	73.00	5.52	3.92	20	2.13	
1465	25	58.60	5.34	3.74	25	2.31	
1470	30	49.00	5.16	3.56	30	2.49	
1480	40	37.00	4.94	3.34	40	2.71	
1490	50	29.80	4.75	3.15	50	2.90	
1500	60	25.00	4.60	3.00	60	3.05	
1520	80	19.00	4.35	2.75	80	3.30	
1553	113	13.74	4.14	2.54	113	3.51	
1560	120	13.00	4.08	2.48	120	3.57	
1580	140	11.29	3.94	2.34	140	3.71	
1600	160	10.00	3.82	2.22	160	3.83	
1620	180	9.00	3.67	2.07	180	3.98	
1650	210	7.86	3.54	1.94	210	4.11	

Observation Well (Shed Well) - Drawdown Data

Time since pumping started (minutes)	Water level (metres)	Drawdown (m)	Comments
0	1.600	0.00	
0.5	1.640	0.04	
1	1.70	0.10	
1.5	-		
2	2.07	0.47	
2.5	-		
3	2.26	0.66	
3.5	-		
4	2.41	0.81	
4.5	-		
5	2.55	0.95	
6	2.66	1.06	
7	2.77	1.17	
8	2.86	1.26	
9	2.94	1.34	
10	3.03	1.43	
12	3.17	1.57	
14	3.35	1.75	
16	-		
18	-		
20	3.59	1.99	
25	3.78	2.18	
30	3.94	2.34	
35	-		
40	4.20	2.60	
45	-		
50	4.39	2.79	
55	-		
60	4.55	2.95	
80	4.82	3.22	
100	5.03	3.43	
120	5.21	3.61	
140	5.36	3.76	
160	5.49	3.89	
180	5.61	4.01	
210	5.75	4.15	
240	5.87	4.27	
300	6.07	4.47	
360	6.24	4.64	
420	6.42	4.82	
480	6.60	5.00	
540	6.79	5.19	
600	6.98	5.38	
660	7.10	5.50	
720	7.20	5.60	
780	7.31	5.71	
840	7.39	5.79	
900	7.48	5.88	
960	7.54	5.94	
1020	7.55	5.95	
1080	7.57	5.97	
1140	7.58	5.98	
1200	7.59	5.99	
1260	7.59	5.99	
1320	7.59	5.99	
1380	7.59	5.99	
1440	7.65	6.05	

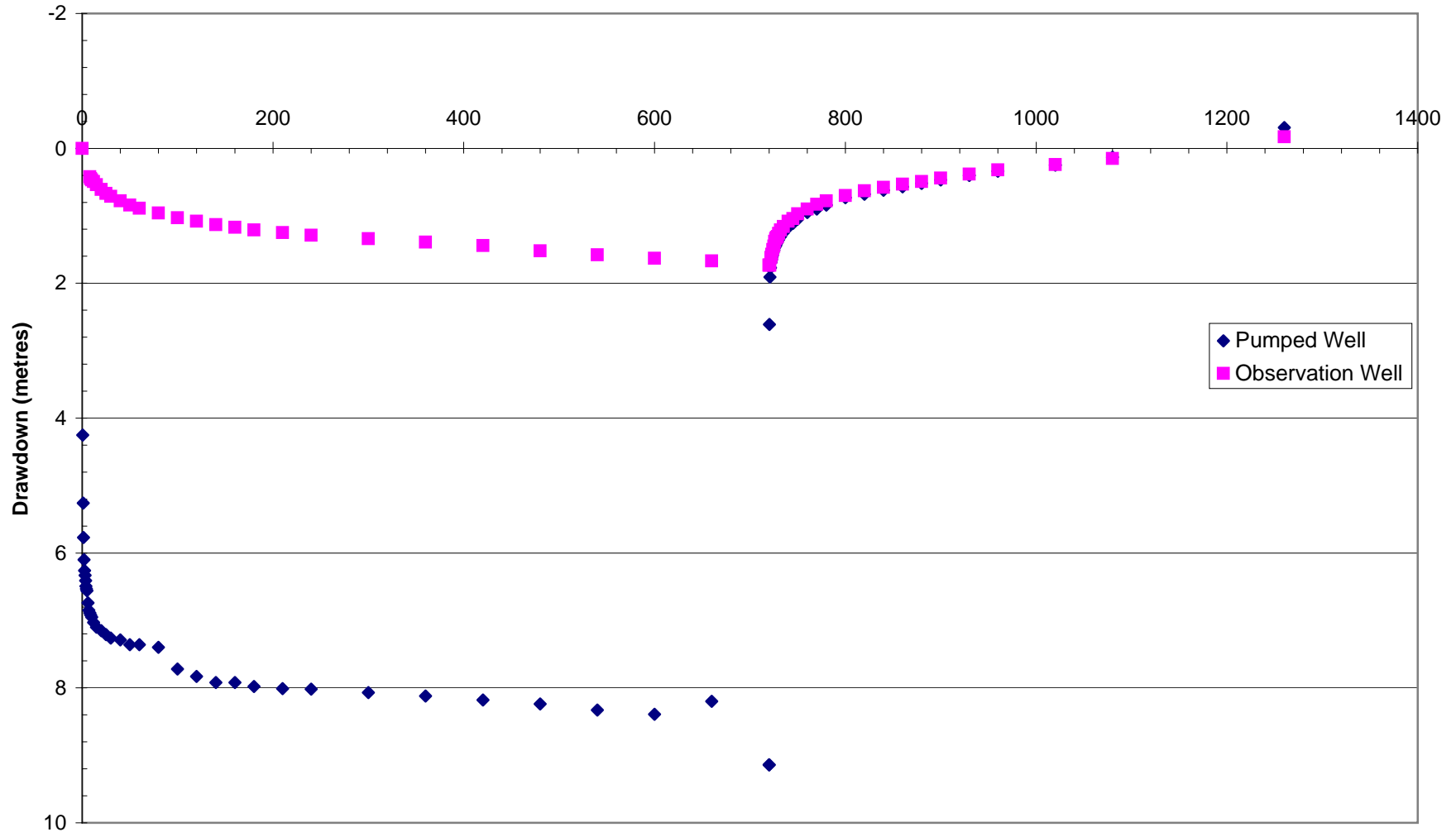
TABLE 2: SUMMARY OF SHED WELL PUMP TEST RESULTS

Well	Method of analysis ¹	Transmissivity m ² /day (igpd/ft)	Coefficient of Storage
SHED WELL (Pumped Well)	drawdown	209 (14018)	-
	residual drawdown	187 (12542)	-
	calculated recovery	237 (15896)	-
OBSERVATION WELL (Plant Well)	drawdown	197 (13213)	3.6 x 10 ⁻⁵
	residual drawdown	222 (14890)	-
	calculated recovery	222 (14890)	3.1 x 10 ⁻⁵
Average		212 (14219)	3.4 x 10 ⁻⁵

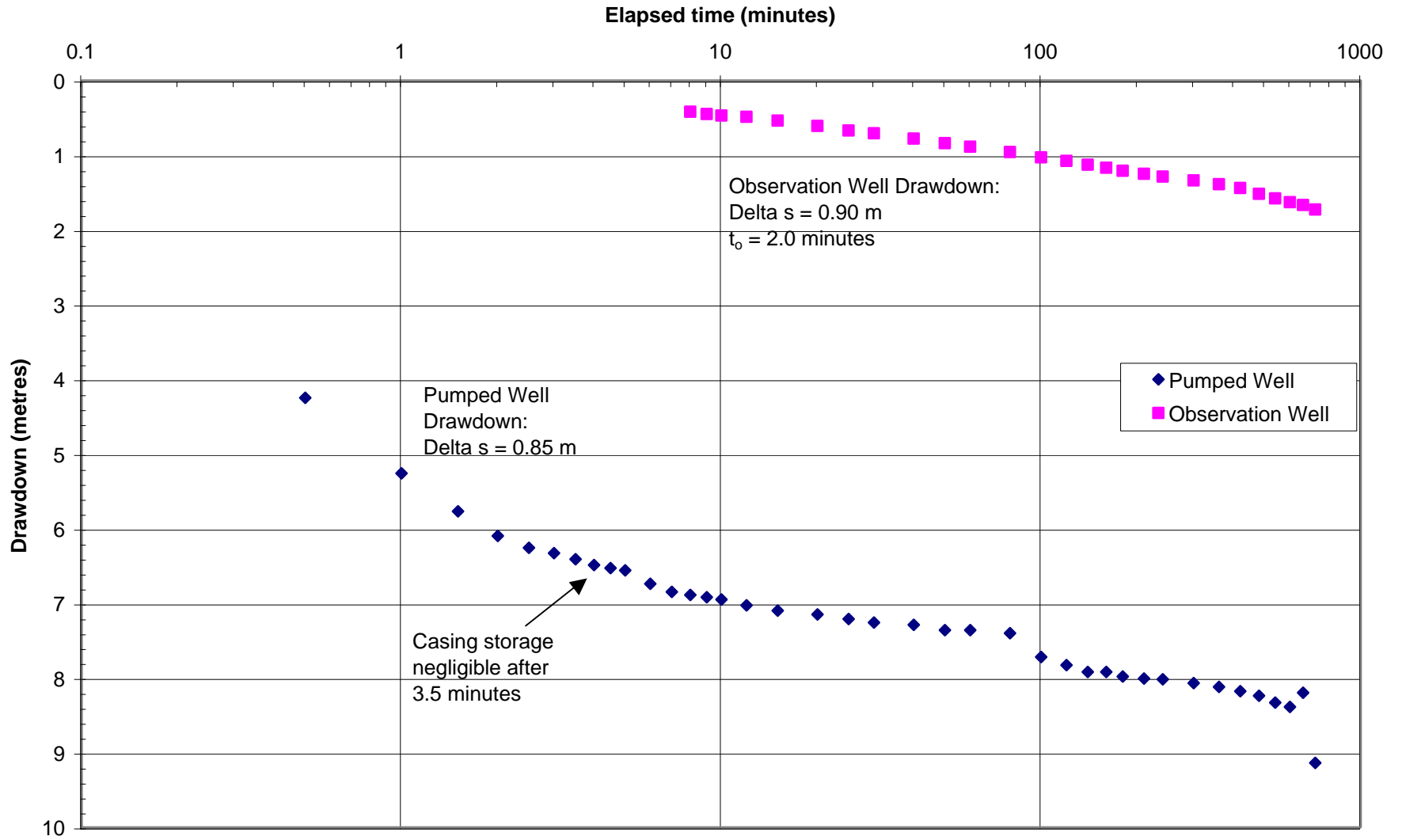
1. Cooper Jacob straight-line method used for analysis of drawdown and recovery.

Time vs. Drawdown Plant (Shed Well) and Observation (Plant Well)

Elapsed time (minutes)

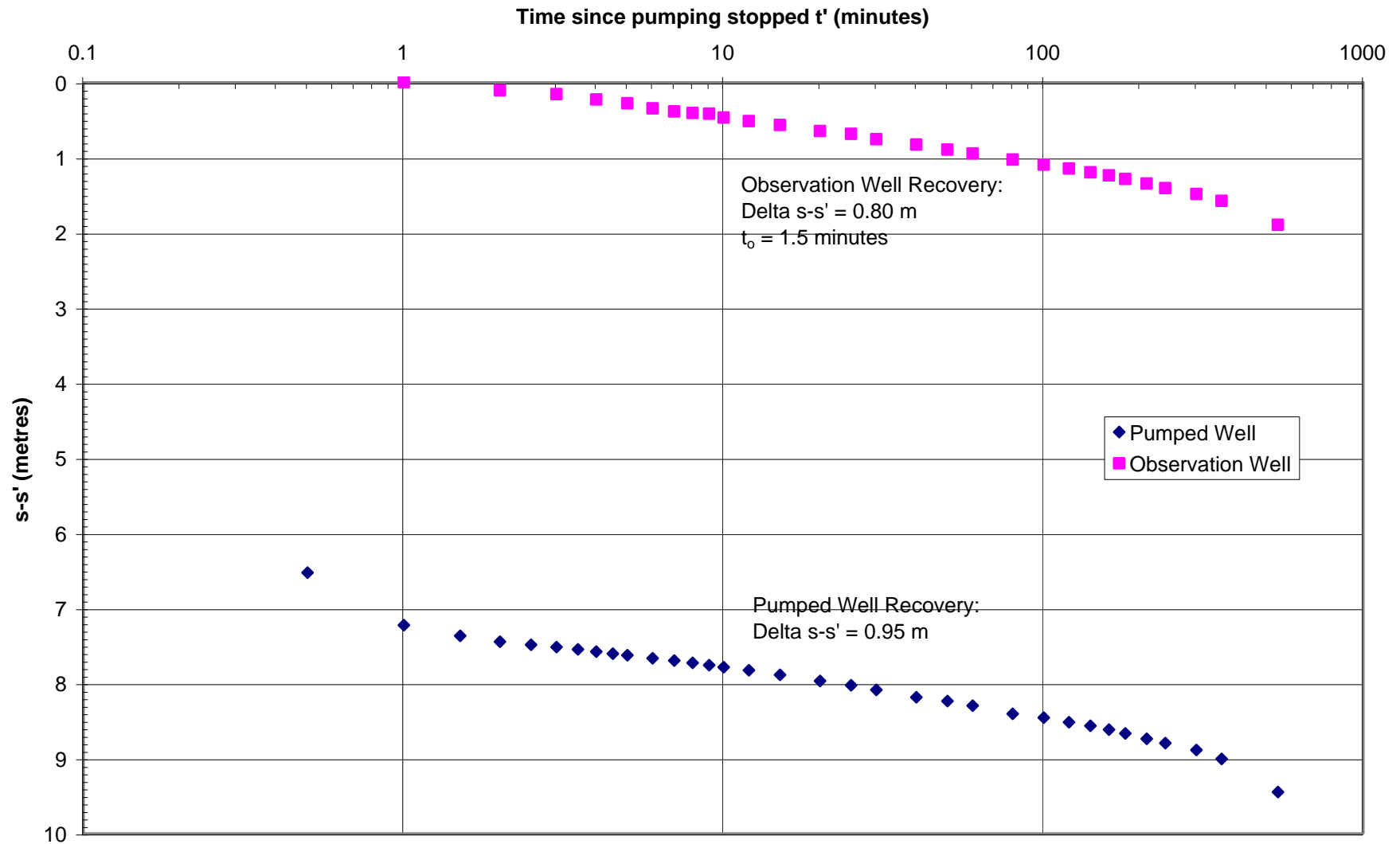


Log Time vs. Drawdown Pumped (Shed Well) and Observation (Plant Well)

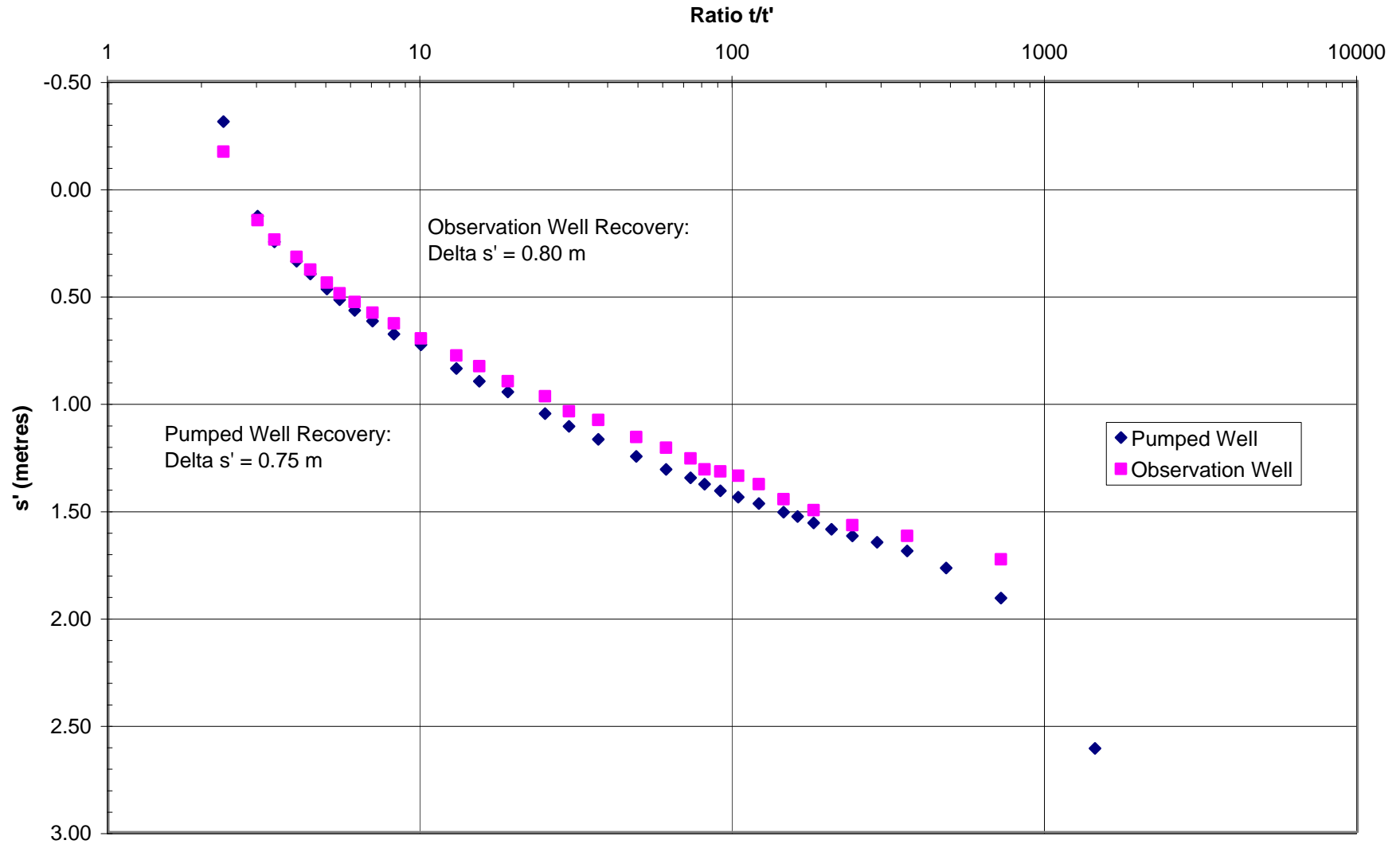


Calculated Recovery (t' vs. s-s')

Pumped (Shed Well) and Observation (Plant Well)



Residual Drawdown (ratio t/t' vs. s') Pumped (Shed Well) and Observation (Plant Well)



Pumping Well (Shed Well) - Drawdown Data

Time since pumping started (minutes)	Water level (metres)	Drawdown (m)	Comments
0	2.12	0	18" Orifice = 148 igpm
0.5	6.37	4.25	
1	7.38	5.26	
1.5	7.89	5.77	
2	8.22	6.1	
2.5	8.38	6.26	
3	8.45	6.33	
3.5	8.53	6.41	
4	8.61	6.49	
4.5	8.65	6.53	
5	8.68	6.56	
6	8.86	6.74	
7	8.97	6.85	
8	9.01	6.89	
9	9.04	6.92	
10	9.07	6.95	
12	9.15	7.03	
15	9.22	7.1	
20	9.27	7.15	
25	9.33	7.21	
30	9.38	7.26	
40	9.41	7.29	
50	9.48	7.36	
60	9.48	7.36	
80	9.52	7.4	
100	9.84	7.72	
120	9.95	7.83	
140	10.04	7.92	
160	10.04	7.92	
180	10.10	7.98	
210	10.13	8.01	
240	10.14	8.02	
300	10.19	8.07	
360	10.24	8.12	
420	10.3	8.18	
480	10.36	8.24	
540	10.45	8.33	
600	10.51	8.39	
660	10.32	8.2	Adjust flow to 148 igpm
720	11.26	9.14	End of pump test

Pumping Well (Shed Well) - Recovery Data							
Time since pumping started (minutes)	Time since pumping stopped (minutes)	Ratio (t/t')	Water level (metres)	Drawdown (m)	t'	s-s'	Comments
720	0	-	11.26	9.14	0	0.00	Began recovery
720.5	0.5	1441.0	4.73	2.61	0.5	6.53	
721	1	721.0	4.03	1.91	1	7.23	
721.5	1.5	481.0	3.89	1.77	1.5	7.37	
722	2	361.0	3.81	1.69	2	7.45	
722.5	2.5	289.0	3.77	1.65	2.5	7.49	
723	3	241.0	3.74	1.62	3	7.52	
723.5	3.5	206.7	3.71	1.59	3.5	7.55	
724	4	181.0	3.68	1.56	4	7.58	
724.5	4.5	161.0	3.65	1.53	4.5	7.61	
725	5	145.0	3.63	1.51	5	7.63	
726	6	121.0	3.59	1.47	6	7.67	
727	7	103.9	3.56	1.44	7	7.70	
728	8	91.0	3.53	1.41	8	7.73	
729	9	81.0	3.50	1.38	9	7.76	
730	10	73.0	3.47	1.35	10	7.79	
732	12	61.0	3.43	1.31	12	7.83	
735	15	49.0	3.37	1.25	15	7.89	
740	20	37.0	3.29	1.17	20	7.97	
745	25	29.8	3.23	1.11	25	8.03	
750	30	25.0	3.17	1.05	30	8.09	
760	40	19.0	3.07	0.95	40	8.19	
770	50	15.4	3.02	0.90	50	8.24	
780	60	13.0	2.96	0.84	60	8.30	
800	80	10.0	2.85	0.73	80	8.41	
820	100	8.2	2.80	0.68	100	8.46	
840	120	7.0	2.74	0.62	120	8.52	
860	140	6.1	2.69	0.57	140	8.57	
880	160	5.5	2.64	0.52	160	8.62	
900	180	5.0	2.59	0.47	180	8.67	
930	210	4.4	2.52	0.40	210	8.74	
960	240	4.0	2.46	0.34	240	8.8	
1020	300	3.4	2.37	0.25	300	8.89	
1080	360	3.0	2.25	0.13	360	9.01	98 % Recovery
1260	540	2.3	1.81	-0.31	540	9.45	End of Recovery

Observation Well (Plant Well) - Drawdown Data			
Time since pumping started (minutes)	Water level (metres)	Drawdown (m)	Comments
0	1.56	0	Eastern personnel missed signal; therefore delayed 8 min
8	1.98	0.42	
9	2.01	0.45	
10	2.03	0.47	
12	2.05	0.49	
15	2.10	0.54	
20	2.17	0.61	
25	2.23	0.67	
30	2.27	0.71	
40	2.34	0.78	
50	2.4	0.84	
60	2.45	0.89	
80	2.52	0.96	
100	2.59	1.03	
120	2.64	1.08	
140	2.69	1.13	
160	2.73	1.17	
180	2.77	1.21	
210	2.81	1.25	
240	2.85	1.29	
300	2.90	1.34	
360	2.95	1.39	
420	3.00	1.44	
480	3.08	1.52	
540	3.14	1.58	
600	3.19	1.63	
660	3.23	1.67	
720	3.29	1.73	End of monitoring

Observation Well (Plant Well) - Recovery Data							
Time since pumping started (minutes)	Time since pumping stopped (minutes)	Ratio (t/t')	Water level (metres)	Drawdown (m)	t'	s-s'	Comments
720	0	-	3.29	1.73	0	0.00	
721	1	721.0	3.29	1.73	1	0.00	
722	2	361.0	3.18	1.62	2	0.11	
723	3	241.0	3.13	1.57	3	0.16	
724	4	181.0	3.06	1.50	4	0.23	
725	5	145.0	3.01	1.45	5	0.28	
726	6	121.0	2.94	1.38	6	0.35	
727	7	103.9	2.90	1.34	7	0.39	
728	8	91.0	2.88	1.32	8	0.41	
729	9	81.0	2.87	1.31	9	0.42	
730	10	73.0	2.82	1.26	10	0.47	
732	12	61.0	2.77	1.21	12	0.52	
735	15	49.0	2.72	1.16	15	0.57	
740	20	37.0	2.64	1.08	20	0.65	
745	25	29.8	2.60	1.04	25	0.69	
750	30	25.0	2.53	0.97	30	0.76	
760	40	19.0	2.46	0.90	40	0.83	
770	50	15.4	2.39	0.83	50	0.90	
780	60	13.0	2.34	0.78	60	0.95	
800	80	10.0	2.26	0.70	80	1.03	
820	100	8.2	2.19	0.63	100	1.10	
840	120	7.0	2.14	0.58	120	1.15	
860	140	6.1	2.09	0.53	140	1.20	
880	160	5.5	2.05	0.49	160	1.24	
900	180	5.0	2.00	0.44	180	1.29	
930	210	4.4	1.94	0.38	210	1.35	
960	240	4.0	1.88	0.32	240	1.41	
1020	300	3.4	1.8	0.24	300	1.49	
1080	360	3.0	1.71	0.15	360	1.58	91 % Recovery
1260	540	2.3	1.39	-0.17	540	1.9	End of monitoring

Table 1 Water quality data from pump test - Plant Well and Shed Well								
Well ID	Units	CDWQG	Plant Well			Shed Well		
			Sample #1 1 hour	Sample #2 12 hour	Sample #3 24 hour	Sample #1 1 hour	Sample #2 6 hour	Sample #3 12 hour
Sodium	mg/L	200	32.6	33.3	34.2	22.9	29.7	31.2
Potassium	mg/L	n.g.	2.14	2.18	2.23	1.78	2.01	2.05
Calcium	mg/L	n.g.	39.2	42.1	43.5	33.7	37.5	38.2
Magnesium	mg/L	n.g.	8.17	8.68	8.91	6.58	7.58	7.79
Iron	mg/L	0.3	0.04	0.04	0.05	0.04	0.04	0.05
Manganese	mg/L	0.05	0.210	0.223	0.229	0.189	0.194	0.197
Copper	mg/L	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Zinc	mg/L	5	0.002	0.001	0.004	0.002	0.001	0.002
Ammonia	mg/L	n.g.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
pH		6.5-8.5	7.6	7.8	7.9	6.2	6.8	7.1
Alkalinity	mg/L	n.g.	99	106	108	113	108	112
Chloride	mg/L	250	64.0	73.6	79.5	28.1	49.1	53.4
Fluoride	mg/L	1.5	0.25	0.25	0.25	0.23	0.23	0.22
Sulfate	mg/L	500	13	14	15	10	13	13
Nitrate + Nitrite (as N)	mg/L	n.g.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
o-Phosphate	mg/L	n.g.	0.01	< 0.01	< 0.01	< 0.01	0.03	< 0.01
r-Silica	mg/L	n.g.	13.4	13.3	13.3	13.9	13.7	13.8
Total Organic Carbon	mg/L	n.g.	0.9	0.9	1.0	0.8	0.8	0.9
Turbidity	NTU	1	1.3	0.3	0.3	1.3	0.3	0.5
Conductivity	uS/cm	n.g.	435	465	480	285	345	363
Calculated Parameters								
Bicarbonate	mg/L	n.g.	98.6	105	107	113	108	112
Carbonate	mg/L	n.g.	0.369	0.625	0.800	0.017	0.064	0.132
Hydroxide	mg/L	n.g.	0.020	0.032	0.040	0.001	0.003	0.006
Cation sum	meq/L	n.g.	4.11	4.33	4.46	3.27	3.85	3.97
Anion sum	meq/L	n.g.	4.05	4.49	4.71	3.26	3.82	4.02
% difference	%	n.g.	0.69	-1.77	-2.76	0.23	0.42	-0.60
Theoretical Conductivity	uS/L	n.g.	407	439	458	312	375	391
Hardness	mg/L	n.g.	132	141	145	111	125	127
Ion Sum	mg/L	n.g.	233	252	263	172	205	214
Saturation pH	Units	n.g.	8.0	8.0	8.0	8.0	8.0	8.0
Langelier			-0.44	-0.18	-0.06	-1.83	-1.21	-0.89
Aluminum	ug/L	100	2	2	12	1	2	5
Antimony	ug/L	6	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Arsenic	ug/L	10	2	2	2	1	1	1
Barium	ug/L	1000	205	219	228	198	224	227
Beryllium	ug/L	n.g.	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bismuth	ug/L	n.g.	< 1	< 1	< 1	< 1	< 1	< 1
Boron	ug/L	5000	16	15	15	14	15	15
Cadmium	ug/L	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Calcium	ug/L	n.g.	39200	42100	43500	33700	37500	38200
Chromium	ug/L	50	1	1	1	1	1	1
Cobalt	ug/L	n.g.	0.1	0.1	0.1	< 0.1	< 0.1	< 0.1
Copper	ug/L	1000	< 1	< 1	< 1	< 1	< 1	< 1
Iron	ug/L	300	40	40	50	40	40	50
Lead	ug/L	10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Lithium	ug/L	n.g.	6.3	6.4	6.5	5.6	6.3	6.4
Magnesium	ug/L	n.g.	8170	8680	8910	6580	7580	7790
Manganese	ug/L	50	210	223	229	189	194	197
Molybdenum	ug/L	n.g.	0.3	0.2	0.2	0.2	0.2	0.2
Nickel	ug/L	n.g.	< 1	< 1	< 1	< 1	< 1	< 1
Potassium	ug/L	n.g.	2140	2180	2230	1780	2010	2050
Rubidium	ug/L	n.g.	0.5	0.5	0.6	0.4	0.5	0.5
Selenium	ug/L	10	< 1	< 1	< 1	< 1	< 1	< 1
Silver	ug/L	n.g.	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sodium	ug/L	200000	32600	33300	34200	22900	29700	31200
Strontium	ug/L	n.g.	463	494	506	490	576	592
Tellurium	ug/L	n.g.	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Thallium	ug/L	n.g.	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Tin	ug/L	n.g.	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Uranium	ug/L	20	0.3	0.4	0.4	< 0.1	0.1	0.1
Vanadium	ug/L	n.g.	< 1	< 1	< 1	< 1	< 1	< 1
Zinc	ug/L	5000	2	1	4	2	1	2

n.g. = no guideline

Result Above CDWQG (2007)

CDWQG - Canadian Council of Ministers of the Environment. 2007. Guidelines for Canadian drinking water quality: Summary table. Updated September, 2007. In: Canadian environmental quality guidelines, 1999, Canadian Council of Ministers of the Environment.

Report ID: 77524-OAS
Report Date: 05-Feb-08
Date Received: 01-Feb-08

Gemtec Limited
191 Doak Road
Fredericton, NB E3C 2E6

rpc

921 College Hill Rd
Fredericton NB
Canada E3B 6Z9
Tel: 506.452.1212
Fax: 506.452.0594
www.rpc.ca

Attention: Vernon Banks
Fax: 506.453.9470
vernon.banks@gemtec.ca

Project #: 5742.07

Hydrocarbon Analysis in Water (Atlantic MUST)

RPC Sample ID:			77524-1	77524-2	77524-3
Client Sample ID:			Plant Well #1	Plant Well #2	Plant Well #3
Date Sampled:			30-Jan-08	30-Jan-08	31-Jan-08
Matrix:			water	water	water
Analytes	Units	RL			
Benzene	mg/L	0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/L	0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	0.001	< 0.001	< 0.001	< 0.001
VPH C6-C10 (Less BTEX)	mg/L	0.01	< 0.01	< 0.01	< 0.01
EPH >C10-C21	mg/L	0.01	< 0.01	< 0.01	< 0.01
EPH >C21-C32	mg/L	0.01	< 0.01	< 0.01	< 0.01
Modified TPH Tier 1	mg/L	0.02	< 0.02	< 0.02	< 0.02
VPH Surrogate (IBB)	%		106	106	105
EPH Surrogate (IBB)	%		122	82	90
EPH Surrogate (C32)	%		131	117	107
Resemblance			ND	ND	ND

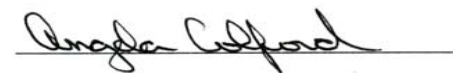
This report relates only to the sample(s) and information provided to the laboratory.

RL = Reporting Limit



Bruce Phillips
Section Manager
Organic Analytical Services

ATL.MUST WATER LEVEL 1
Page 1 of 3



Angela Colford
Lab Supervisor
Organic Analytical Services

Report ID: 77524-OAS
Report Date: 05-Feb-08
Date Received: 01-Feb-08

Gemtec Limited
191 Doak Road
Fredericton, NB E3C 2E6

rpc

921 College Hill Rd
Fredericton NB
Canada E3B 6Z9
Tel: 506.452.1212
Fax: 506.452.0594
www.rpc.ca

Method Summary

Resemblance Legend

<u>Resemblance Code</u>	<u>Resemblance</u>
AG	Aviation Gasoline
COMMENT	See General Report Comments
FO	Fuel Oil Fraction
FO.LO	Fuel Oil and Lube Oil Fraction
G	Gasoline Fraction
LO	Lube Oil Fraction
ND	Not Detected
NR	No Resemblance (not-petrogenic in origin)
NRLR	No Resemblance in the lube oil range (>C21-C32).
OP	One Product (unidentified)

<u>Resemblance Code</u>	<u>Resemblance</u>
PAH	Possible PAHs Detected
PG	Possible Gasoline Fraction
PLO	Possible Lube Oil Fraction
PWFO	Possible Weathered Fuel Oil Fraction
PWG	Possible Weathered Gasoline Fraction
TO	Transformer Oil
UP	Unknown Peaks
WFO	Weathered Fuel Oil Fraction
WG	Weathered Gasoline Fraction

General Report Comments

Report ID: 77524-OAS
 Report Date: 05-Feb-08
 Date Received: 01-Feb-08

Gemtec Limited
 191 Doak Road
 Fredericton, NB E3C 2E6



921 College Hill Rd
 Fredericton NB
 Canada E3B 6Z9
 Tel: 506.452.1212
 Fax: 506.452.0594
 www.rpc.ca

Project #: 5742.07

QA/QC Report

RPC Sample ID:			BLANK8865	BLANK8867	SPIKE8410	SPIKE8412
Type:			VPH	EPH	VPH	EPH
Matrix:			water	water	water	water
Analytes	Units	RL			% Recovery	% Recovery
Benzene	mg/L	0.001	< 0.001	-	103%	-
Toluene	mg/L	0.001	< 0.001	-	100%	-
Ethylbenzene	mg/L	0.001	< 0.001	-	99%	-
Xylenes	mg/L	0.001	< 0.001	-	102%	-
VPH C6-C10 (Less BTEX)	mg/L	0.01	< 0.01	-	98%	-
EPH >C10-C21	mg/L	0.01	-	< 0.01	-	-
EPH >C21-C32	mg/L	0.01	-	< 0.01	-	-
EPH >C10-C32	mg/L		-	-	-	97%
MTBE	mg/L	0.001	< 0.001	-	105%	-

RL = Reporting Limit

Report ID: 77624-OAS
Report Date: 07-Feb-08
Date Received: 05-Feb-08

Gemtec Limited
191 Doak Road
Fredericton, NB E3C 2E6

rpc

921 College Hill Rd
Fredericton NB
Canada E3B 6Z9
Tel: 506.452.1212
Fax: 506.452.0594
www.rpc.ca

Attention: Vernon Banks
Fax: 506.453.9470
vernon.banks@gemtec.ca

Project #: 5742.07

Hydrocarbon Analysis in Water (Atlantic MUST)

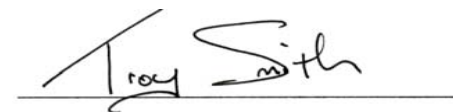
RPC Sample ID:			77624-1	77624-2	77624-3
Client Sample ID:			Shed Well #1	Shed Well #2	Shed Well #3
Date Sampled:			1-Feb-08	1-Feb-08	1-Feb-08
Matrix:			water	water	water
Analytes	Units	RL			
Benzene	mg/L	0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/L	0.001	0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	0.001	< 0.001	< 0.001	< 0.001
VPH C6-C10 (Less BTEX)	mg/L	0.01	< 0.01	< 0.01	< 0.01
EPH >C10-C21	mg/L	0.01	< 0.01	< 0.01	< 0.01
EPH >C21-C32	mg/L	0.01	< 0.01	< 0.01	< 0.01
Modified TPH Tier 1	mg/L	0.02	< 0.02	< 0.02	< 0.02
VPH Surrogate (IBB)	%		100	99	96
EPH Surrogate (IBB)	%		91	112	111
EPH Surrogate (C32)	%		98	118	116
Resemblance			ND	ND	ND

This report relates only to the sample(s) and information provided to the laboratory.

RL = Reporting Limit



Angela Colford
Lab Supervisor
Organic Analytical Services



Troy Smith
Chemist
Organic Analytical Services

Report ID: 77624-OAS
Report Date: 07-Feb-08
Date Received: 05-Feb-08

Gemtec Limited
191 Doak Road
Fredericton, NB E3C 2E6

rpc

921 College Hill Rd
Fredericton NB
Canada E3B 6Z9
Tel: 506.452.1212
Fax: 506.452.0594
www.rpc.ca

Method Summary

Resemblance Legend

<u>Resemblance Code</u>	<u>Resemblance</u>	<u>Resemblance Code</u>	<u>Resemblance</u>
AG	Aviation Gasoline	PAH	Possible PAHs Detected
COMMENT	See General Report Comments	PG	Possible Gasoline Fraction
FO	Fuel Oil Fraction	PLO	Possible Lube Oil Fraction
FO.LO	Fuel Oil and Lube Oil Fraction	PWFO	Possible Weathered Fuel Oil Fraction
G	Gasoline Fraction	PWG	Possible Weathered Gasoline Fraction
LO	Lube Oil Fraction	TO	Transformer Oil
ND	Not Detected	UP	Unknown Peaks
NR	No Resemblance (not-petrogenic in origin)	WFO	Weathered Fuel Oil Fraction
NRLR	No Resemblance in the lube oil range (>C21-C32).	WG	Weathered Gasoline Fraction
OP	One Product (unidentified)		

General Report Comments

Report ID: 77624-OAS
 Report Date: 07-Feb-08
 Date Received: 05-Feb-08

Gemtec Limited
 191 Doak Road
 Fredericton, NB E3C 2E6



921 College Hill Rd
 Fredericton NB
 Canada E3B 6Z9
 Tel: 506.452.1212
 Fax: 506.452.0594
 www.rpc.ca

Project #: 5742.07

QA/QC Report

RPC Sample ID:			BLANK8878	BLANK8882	SPIKE8423	SPIKE8427
Type:			VPH	EPH	VPH	EPH
Matrix:			water	water	water	water
Analytes	Units	RL			% Recovery	% Recovery
Benzene	mg/L	0.001	< 0.001	-	104%	-
Toluene	mg/L	0.001	< 0.001	-	100%	-
Ethylbenzene	mg/L	0.001	< 0.001	-	104%	-
Xylenes	mg/L	0.001	< 0.001	-	105%	-
VPH C6-C10 (Less BTEX)	mg/L	0.01	< 0.01	-	97%	-
EPH >C10-C21	mg/L	0.01	-	< 0.01	-	-
EPH >C21-C32	mg/L	0.01	-	< 0.01	-	-
EPH >C10-C32	mg/L		-	-	-	89%
MTBE	mg/L	0.001	< 0.001	-	107%	-

RL = Reporting Limit

C.O.C.: M00093

REPORT No. B08-03060

Report To:

Gemtec Limited
191 Doak Road
Fredericton, NB, E3C 2E6

Attention: Vernon Banks

Caduceon Environmental Laboratories

150 Lutz Street
Moncton, New Brunswick, E1C 5E9
Tel: 506-855-6472
Fax: 506-855-8294

DATE RECEIVED: 30-Jan-08

JOB/PROJECT NO.: 5742.07

DATE REPORTED: 31-Jan-08

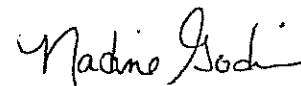
P.O. NUMBER:

SAMPLE MATRIX: Water

WATERWORKS NO.

Parameter:	Total Coliform	E coli			
Units:	cts/100mL	cts/100mL			
M.D.L.:	1	1			
Reference Method:	MOE E3407	MOE E3407			
Date Analyzed:	30-Jan-08	30-Jan-08			

Client I.D.	Sample I.D.	Date Collected				
Plant well S1	B08-03060-1	30-Jan-08	< 1	< 1		



Nadine Godin

Senior Laboratory Analyst

M.D.L. = Method Detection Limit

Accredited by CAEAL for specific tests.

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.

C.O.C.: M22001

REPORT No. B08-03206

Report To:

Gemtec Limited
191 Doak Road
Fredericton, NB, E3C 2E6

Caduceon Environmental Laboratories
150 Lutz Street
Moncton, New Brunswick, E1C 5E9
Tel: 506-855-6472
Fax: 506-855-8294

Attention: Vernon Banks

DATE RECEIVED: 31-Jan-08

JOB/PROJECT NO.: 5742.07

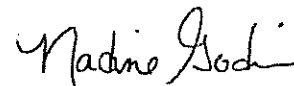
DATE REPORTED: 04-Feb-08

P.O. NUMBER:

SAMPLE MATRIX: Water

WATERWORKS NO.

Parameter:	Total Coliform	E coli	Background		
Units:	cts/100mL	cts/100mL	cts/100mL		
M.D.L.:	1	1	1		
Reference Method:	MOE E3407	MOE E3407	MOE E3407		
Date Analyzed:	31-Jan-08	31-Jan-08	31-Jan-08		
Client I.D.	Sample I.D.	Date Collected			
Plant Well #2	B08-03206-1	30-Jan-08	< 1	< 1	< 1
Plant Well #3	B08-03206-2	31-Jan-08	< 1	< 1	< 1



Nadine Godin

Senior Laboratory Analyst

M.D.L. = Method Detection Limit

Accredited by CAEAL for specific tests.

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.

C.O.C.: M21787

REPORT No. B08-03309

Report To:

Gemtec Limited
 191 Doak Road
 Fredericton, NB, E3C 2E6

Attention: Vernon Banks

Caduceon Environmental Laboratories

150 Lutz Street
 Moncton, New Brunswick, E1C 5E9
 Tel: 506-855-6472
 Fax: 506-855-8294

DATE RECEIVED: 01-Feb-08

DATE REPORTED: 04-Feb-08

SAMPLE MATRIX: Water

JOB/PROJECT NO.: 5742.07

P.O. NUMBER:

WATERWORKS NO.

Parameter:	Total Coliform	E coli	Background		
Units:	cts/100mL	cts/100mL	cts/100mL		
M.D.L.:	1	1	1		
Reference Method:	MOE E3407	MOE E3407	MOE E3407		
Date Analyzed:	01-Feb-08	01-Feb-08	01-Feb-08		
Client I.D.	Sample I.D.	Date Collected			
Shed Well # 1	B08-03309-1	01-Feb-08	< 1	< 1	27



Michael Lawlor
 Lab Manager

M.D.L. = Method Detection Limit

Accredited by CAEAL for specific tests.

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.

C.O.C.: M21788

REPORT No. B08-03332

Report To:

Gemtec Limited
191 Doak Road
Fredericton, NB, E3C 2E6

Attention: Vernon Banks

Caduceon Environmental Laboratories

150 Lutz Street
Moncton, New Brunswick, E1C 5E9
Tel: 506-855-6472
Fax: 506-855-8294

DATE RECEIVED: 02-Feb-08

DATE REPORTED: 04-Feb-08

SAMPLE MATRIX: Water

JOB/PROJECT NO.: 5742.07

P.O. NUMBER:

WATERWORKS NO.

Parameter:	Total Coliform	E coli	Background		
Units:	cts/100mL	cts/100mL	cts/100mL		
M.D.L.:	1	1	1		
Reference Method:	MOE E3407	MOE E3407	MOE E3407		
Date Analyzed:	02-Feb-08	02-Feb-08	02-Feb-08		
Client I.D.	Sample I.D.	Date Collected			
Shed Well #2	B08-03332-1	01-Feb-08	< 1	< 1	3
Shed Well #3	B08-03332-2	01-Feb-08	< 1	< 1	2



Michael Lawlor
Lab Manager

M.D.L. = Method Detection Limit

Accredited by CAEAL for specific tests.

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.

November 26, 2020
File No.: 100-05-R3

Fisher Engineering Ltd.
40 Fairfield Rd.
Lower Coverdale, NB E1J 0A2
Attention: Michael Fisher

RE: PID#: 70497763

In response to your request for property-based environmental information regarding the above noted property, please be advised that a search of related departmental electronic databases has been conducted *with the information provided*, and the following information was found.

There is no record of Ministerial Orders or Remediation Orders related to this PID number, using our current search process.

Petroleum storage tank information related to **PID# 70497763** is attached. These tanks have been registered with the Department, under the Petroleum Product Storage and Handling Regulation.

Our records indicate that there has been contamination found at:

- 1.) **69 Cap Bimet Rd., Shediac, Paturel Seafood Ltd. (PID# 70497763)**. See attached information report.
- 2.) **69 Cap Bimet Rd., Grand Barachois, Barry Group Inc. (PID# 70497763)**. See attached information report, and Record of Site Condition.

This PID number is not registered with the Department as a PCB Storage site.

We have no records of landfill sites or former dumpsites located near this PID number.

The absence of departmental records in this search does not necessarily indicate that the sites have not been subject to environmental incidents. The information is accurate in that it provides a factual reflection of what is contained in departmental databases. The files themselves may or may not be complete.

As an example, in the case of underground petroleum storage tanks, the files accurately reflect all those that were registered with the program; there may be underground storage tanks that were not registered and of which the Department has no knowledge.

Likewise, there may be incidents of spills of which the Department was not informed or which pre-date Departmental records. "Remediation Site Management System" was established in the early 2000's and does not contain a complete history of past spills or remediation efforts. Furthermore, if the properties have been recently altered, the PID#'s provided may not correspond with those contained in departmental files and thus on the databases.

Any persons intending to purchase or occupy the property should make their own independent determination of the environmental condition of the property and the extent of responsibility and liability, if any, that may arise from taking ownership or occupancy.

Authorizations Branch

Enclosures: 4

/lr

SIRS Search Result

Petroleum Storage (PID 70497763)

PID #: 70497763

Site #: 2248

Address:

BARRY GROUP NB INC
69 CAP BIMET ROAD
GRAND BARACHOIS

Tank Information

Current Status Removed
Date Out of Service 1990-06-15
Installation Date 1951
Tank Size 2270 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Furnace Oil

Current Status Removed
Date Out of Service 1990-11-22
Installation Date 1975
Tank Size 4540 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Gasoline

Current Status Removed
Date Out of Service 1990-11-22
Installation Date 1975
Tank Size 9080 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Diesel

Current Status Removed
Date Out of Service 1990-06-15
Installation Date 1950
Tank Size 4540 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Furnace Oil

Current Status Removed
Date Out of Service 1990-06-15
Installation Date 1956
Tank Size 13620 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Bunker

Current Status Removed
Date Out of Service 1997-07-03
Installation Date 1983
Tank Size 13650 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Diesel

Current Status Removed
Date Out of Service 1997-07-03
Installation Date 1983
Tank Size 9080 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Gasoline

Current Status Removed
Date Out of Service 1993-01-01
Installation Date 1980
Tank Size 908 L
Location Above Ground
Constructed Of Single Wall Steel
Substance Stored Diesel

Current Status Removed
Date Out of Service 2000-08-30
Installation Date 1970
Tank Size 29500 L
Location Above Ground
Constructed Of Single Wall Steel
Substance Stored Bunker

Current Status Removed
Date Out of Service 2005-01-01
Installation Date 1986
Tank Size 908 L
Location Above Ground
Constructed Of Steel
Substance Stored Furnace Oil

Current Status Removed
Date Out of Service 2006-01-01
Installation Date 1993
Tank Size 2250 L
Location Above Ground
Constructed Of Single Wall Steel
Substance Stored Diesel

Current Status Removed
Date Out of Service 1994-07-26
Installation Date Unknown
Tank Size 45400 L
Location Above Ground
Constructed Of Single Wall Steel
Substance Stored Bunker

Current Status Removed
Date Out of Service 1994-07-26
Installation Date Unknown
Tank Size 45400 L
Location Above Ground
Constructed Of Single Wall Steel
Substance Stored Bunker

Current Status Removed
Date Out of Service 2006-01-01
Installation Date 1997
Tank Size 2270 L
Location Above Ground
Constructed Of Double Wall Steel
Substance Stored Regular


Current Status	Inactive
Date Out of Service	2007-06-01
Installation Date	2000
Tank Size	53500 L
Location	Above Ground
Constructed Of	Secondary Containment Steel
Substance Stored	Bunker

**Remediation Management
(PID 70497763)**

FILE	6515-3-0156
PID	70497763
SITENAME	Paturel Seafood Ltd.
CIVIC ADDRESS	69 Cap Bimet Rd., Shediac
FILE OPENED	7/22/2000
FILE STATUS	Closed 1999 Limited remedial action taken - no further action necessary.
CONTAMINATION TYPE	Petroleum
PARTY RESPONSIBLE	Property Owner
CONSULTANT	none
ORDERS ISSUED	No
RESULT TYPE	Source PID

Remediation Management (PID 70497763)

FILE	6515-3-1253
PID	70497763
SITENAME	Barry Group Inc.
CIVIC ADDRESS	69 Cap Bimet Rd., Grand Barachois
FILE OPENED	11/26/2007
FILE STATUS	Closed 2003 - RBCA Tier 2 Site Specific Remedial Criteria achieved - Conditional closure.
CONTAMINATION TYPE	Petroleum
PARTY RESPONSIBLE	Cap Bimet Developments Limited
CONSULTANT	GEMTEC Limited
ORDERS ISSUED	No
RESULT TYPE	Source PID



Record of Site Condition

Version 2.1

July 2006

Site Address: 69 CAP BIMET ROAD, CAP BIMET

Site PID: 00857029

DENV File Number: 6515-3-1253

Date: August 8, 2008

Department of Environment



ATLANTIC HARMONIZATION

Record of Site Condition Form

New Brunswick Department of Environment

This form is provided by the New Brunswick Department of Environment (ENV) to facilitate the preparation of the Record of Site Condition in the final stages of remediation of a contaminated site, as presented in the *Guidelines for the Management of Contaminated Sites* (ENV, November 2003).

- This form contains macros. The security level in Word should be set to enable macros to execute. In the **Tools/Options** dialogue box, choose the **Security** tab, click on the **Macros Security** button and choose **Medium**. Following this, you will be invited to activate macros in this and other documents. If your security level is already set to enable macros, you may not see any message.
- Each part of the form, including the cover, contains shaded boxes where information can be entered. The shaded boxes expand as information is added, to a maximum of one page of information. Get help filling out any of the information entry boxes by clicking on the box and then pressing the F1 key.
- You can navigate through the form using the Tab key.
- The **Site Address** or **Project Name** (*entered on a single line with no returns*), the principal project **PID** (Property Identification) number, the **ENV File Number** and the final **Date** of your report, should be entered in the shaded box in Part 1 of the report. This information will appear in the header at the top of each page. The page headers update automatically when new information is entered in the shaded box in Part 1. The same information should be entered on the cover of this report.
- More information about how to fill out any of the Parts of the form can be obtained in the ENV *Instructions for Completing the Record of Site Condition* found on the Atlantic RBCA website www.atlanticrbc.com

If you would like to re-use this form, it is advised that you save your work with a new filename before exiting.

This form can be downloaded from the Atlantic RBCA web site at:
www.atlanticrbc.com.

Hard copies of this form are available by mail from:

Remediation Branch - Environmental Management Division
NB Department of Environment
P.O. Box 6000,
Fredericton N.B.
E3B 5H1

or phone:

(506) 444-5119.

RECORD OF SITE CONDITION

Part 1 of 7: Source Property Information

Data entered in this box will appear in the header at the top of subsequent pages.

Site Address / Project Name: 69 Cap Bimet Road, Cap Bimet, New Brunswick

PID Number: 00857029

ENV File no: 6515-3-1253

Submission Date: August 8, 2008

Additional PIDs

Responsible Party: Barry Group Inc.

Current Owner: Cap Bimet Developments Limited

GPS Co-ordinates: (When only a portion of a PID is addressed)

Attach a site plan showing coordinates and boundaries of portion.

Part 2 of 7: List of Environmental Documentation

A. The following documentation, **prepared by others** (including peer review reports, if any), pertain to the Source Property cited in Part 1 and/or any other impacted Third Party properties:

Title	Company	Date
Additional documentation prepared by others:		

B. The following documentation, including closure documents, pertaining to the Source Property cited in Part 1 and/or other related impacted properties has been **prepared by and/or overseen by the Site Professional**:

Document Title	Date
Phase II Environmental Site Assessment, PID 00857029, 69 Cap Bimet Road, Cap Bimet, New Brunswick, NBENV File # 6515-3-1253	March 2008
Phase I Environmental Site Assessment, 69 Cap Bimet Road and Adjacent Properties, PIDs 00857029, 70149877, 70198452, 70199666, 70199674, and 70206933, Cap Bimet, New Brunswick	December 2007
Groundwater Services, Paturel's Townhouse/Condo Development, Cap Bimet Road	February 2008
Additional documentation prepared by/overseen by Site Professional :	

Part 3 of 7: Tier I-III Environmental Criteria: Source Property

Products/contaminants

(e.g. gasoline, lead, waste oil, etc.) that have been identified at the Source Property:

- Gasoline Diesel #2 #6 Oil Other (Specify)

Current land use:

- Residential Commercial Other (Specify)

Drinking water use:

- On-site potable water Within a wellfield or watershed protected area Non-potable water

Affected soil composition:

- Coarse-grained Fine-grained Bedrock (Specify)

Site closure criteria (Check all that apply):

- Tier I Risk Based Screening Level Criteria
 Tier II Site Specific Target Level Criteria
 Tier III Site Specific Target Level Criteria

Description of methodology and comments:

A Phase II ESA conducted in 2007 indicated that there was petroleum hydrocarbon contamination in the soil and groundwater located on the subject property. Concentrations of BTEX/TPH exceeded the applicable Atlantic RBCA Tier I RBSLs. It was determined that the contamination likely originated from USTs that were historically located on the subject property. NBENV records indicate that there are no longer any USTs located on the subject property.

The subject property is currently zoned for residential land use and is the proposed site for a residential condominium development. The development will receive potable water from two, private potable groundwater wells which are located on the subject property. Water quantity data determined by an assessment completed by GEMTEC Ltd indicates confined to semi-confined potable aquifer conditions. General chemistry analysis confirmed that the shallow groundwater is comprised of brine, which further indicates that there is no direct hydraulic connection between the potable groundwater aquifer and the shallow groundwater system. The petroleum hydrocarbon impacts were detected in the shallow groundwater system and not within the potable groundwater aquifer. The shallow groundwater system is considered a non-potable source of water and therefore the petroleum hydrocarbon impacts were assessed using the "non-potable" screening criteria. The Tier I RBSLs for a residential receptor with non-potable groundwater use, coarse-grained soil were used for screening petroleum hydrocarbon impacts. Analytical results indicate that the petroleum hydrocarbons detected in the on-site soil and groundwater resemble both gasoline and fuel oil. The most conservative fuel type, gasoline, was used for screening Modified TPH. The subject property is not located within a protected wellfield or watershed.

On May 30 and June 5, 2008-290.84 tonnes of petroleum hydrocarbon-impacted soil was removed from the source property. The material was removed along a foundation wall in an area formerly occupied by loading docks. Historical information indicated that a pump island/USTs for fueling trucks was formerly located in this area. Overburden soil in the impacted area was removed down to the shallow weathered, sandstone bedrock (1-2 mbgs). Confirmatory soil samples indicate that residual concentrations of BTEX/TPH in the weathered, sandstone bedrock exceed the applicable Atlantic RBCA Tier I RBSLs.

On July 4, 2008 five boreholes were drilled on the subject property for the collection of subsurface soil. All five boreholes were equipped with monitoring wells for groundwater sampling. Five soil samples and five groundwater samples were submitted for analytical testing for BTEX/TPH as outlined by the Atlantic PIRI committee. RPC Laboratories of Fredericton, New Brunswick performed the analytical testing on all the samples submitted for analysis.

In general, on-site soil consists of 1-2 metres of brown sand and silt overlying weathered, brown, sandstone bedrock. Groundwater was present within the shallow bedrock in all the monitoring wells drilled on the subject property at depths of 1.4-3.1 mbgs. Groundwater data indicates that the shallow groundwater flow is in the northeast direction towards the Shediac Bay at a gradient of less than 1%.

Xylene(s) and Modified TPH were detected in a single soil sample recovered from the source area. Concentrations of Modified TPH exceeded the applicable Tier I RBSL. BTEX and/or TPH were detected in each of the five groundwater samples submitted for analysis. Concentrations of BTEX/TPH did not exceed applicable Atlantic RBCA Tier I RBSLs. Analytical results for the soil and groundwater indicate that the petroleum hydrocarbon contamination resembles both gasoline and fuel oil. Free product was not observed in the soil or groundwater on the subject property during the subsurface investigation or excavation.

A Tier II risk assessment was necessary to assess the residual BTEX/TPH in the soil. The BTEX/TPH concentrations in groundwater do not exceed the applicable Tier I RBSLs. The Tier II assessment concluded that institutional controls could be used to eliminate all the exposure pathways, except for the outdoor air exposure pathway. The PSSLs for outdoor air pathway-specific criteria in soil are >RES for all BTEX compounds and Modified TPH. This indicates that the concentrations on-site do not exceed the PSSL unless there is free product within the soil. Free product was not present in the on-site soil and therefore the concentrations of BTEX/TPH do not exceed the applicable Tier II PSSLs.

Nine groundwater samples were collected for analytical testing for the Phase II ESA conducted in November/December 2007. Groundwater samples were analyzed for the presence of MTBE. MTBE was not detected in any of the groundwater samples submitted for analysis. Following the fire in November 2007, three groundwater samples were collected for analysis of PAHs. PAHs were not detected in any of the groundwater samples submitted for analysis.

Two potential ecological receptors were identified within 150 metres of the subject property: the Shediac Bay and wetlands located south and east of the subject property. The assessment has determined that it is not likely that the petroleum hydrocarbon contamination originating on the subject property has impacted the identified ecological receptors and further assessment is not recommended. There were no third party impacts identified during this assessment.

Conditional site closure is recommended for the subject property. Buildings should not be placed within 30 metres of the impacted area in order to ensure that indoor air exposure pathway is inactive (per the Atlantic RBCA guidelines). See attached figure detailing the area. Digging, excavating and related activities are not permitted to depths greater than 1 metre in the area where there are residual petroleum hydrocarbon impacts to the weathered bedrock (see attached figure).

Part 3 of 7 (continued): Tier I-III Environmental Criteria: Source Property

Tier I-II Criteria						
Chemicals of Concern (COC)	Tier I-II Criteria Applied for Soil	Units	* Reference	Tier I-II Criteria Applied for Groundwater	Units	* Reference
Benzene	>RES	mg/kg	Atlantic RBCA v. 2.0 (Nov. 2003)	1	mg/L	Atlantic RBCA v. 2.0 (Nov. 2003)
Toluene	>RES	mg/kg	Atlantic RBCA v. 2.0 (Nov. 2003)	20	mg/L	Atlantic RBCA v. 2.0 (Nov. 2003)
Ethylbenzene	>RES	mg/kg	Atlantic RBCA v. 2.0 (Nov. 2003)	20	mg/L	Atlantic RBCA v. 2.0 (Nov. 2003)
Xylenes	>RES	mg/kg	Atlantic RBCA v. 2.0 (Nov. 2003)	20	mg/L	Atlantic RBCA v. 2.0 (Nov. 2003)
Modified TPH	>RES	mg/kg	Atlantic RBCA v. 2.0 (Nov. 2003)	12	mg/L	Atlantic RBCA v. 2.0 (Nov. 2003)

Other Chemicals evaluated with criteria for Tiers I and II :

* Provide reference for Screening Level criteria and/or Tier I-II Site Specific Target Level criteria developed using Atlantic RBCA v. 2.1.

Tier III Criteria				
Chemicals of concern (COC)	Medium to which criteria apply	Tier III criteria applied	Units	* Reference

Other Chemicals evaluated with criteria for Tiers III :

* Provide reference for Tier III criteria (when using criteria other than Risk-Based Screening Level criteria or Tier II Atlantic RBCA V.2.1 Site Specific Target Level criteria.)

Part 4 of 7: Tier I-III Environmental Criteria - Third Party Property(s)

Based on the work completed, the following Third Party properties (identified by PID number) were identified as being affected at any concentration by the products/contaminants of the Source Property:

PID Number	Chemicals of Concern (COC)	Land use	Potable or Non-potable	Affected soil type
NA SP A 8/08				
Other Third Party properties :				

Site closure criteria (check all that apply)

- Tier I Risk Based Screening Level Criteria
- Tier II Site Specific Target Level Criteria
- Tier III Site Specific Target Level Criteria

Description of methodology and comments

Part 4 of 7 (continued): Tier I-III Environmental Criteria - Third Party Property(s)

Summary of Clean-up Criteria

PID of Third Party Property(s)

List all PID numbers :

Tier I-II Criteria						
Chemicals of Concern (COC)	Tier I-II Criteria Applied for Soil	Units	* Reference	Tier I-II Criteria Applied for Groundwater	Units	* Reference
Other Chemicals evaluated with criteria for Tiers I and II :						

* Provide reference for Screening Level criteria and/or Tier I-II Site Specific Target Level criteria developed using Atlantic RBCA v. 2.1.

Tier III Criteria

Chemicals of concern (COC)	Medium to which criteria apply	Tier III criteria applied	Units	* Reference
Other Chemicals evaluated with criteria for Tier III :				

* Provide reference for Tier III criteria (when using criteria other than Risk-Based Screening Level criteria or Tier II Atlantic RBCA V.2.1 Site Specific Target Level criteria.)

Part 5 of 7: Corrective Actions

SOURCE PROPERTY

Describe the remedial objectives and the basic corrective actions of the Remedial Action Plan employed for the Source Property.

290.84 tonnes of petroleum hydrocarbon contamination were removed from the source area on the subject property. The soil was disposed of at Elmtree Environmental Limited in Moncton, New Brunswick. Remedial actions successfully removed the majority of remaining source material on the subject property, however was not able to adequately delineate BTEX/TPH concentrations in the soil to meet the applicable Atlantic RCBA Tier I RBSLs. Institutional controls will be used to achieve conditional closure.

Describe the current use of the Source Property (buildings, operations, etc.).

The subject property is currently a construction site for a proposed residential condominium development. The majority of the property is vacant, fill-covered land. A small structure is located in the northwest corner of the property and is used as a model condominium unit and office building. A portion of the building that was destroyed in a fire in 2007 currently remains on the southern portion of the subject property.

Other comments

Based on the work completed, the Source Property (cited in Part 1) is suitable for the following current, or reasonably foreseeable future, site activity(s).

Residential

Commercial

Conditional closure

If site closure is **conditional**, list site-specific engineered or institutional controls that apply to the Source Property complete with a description of the objectives of each control. Attach written agreements to the control(s) from all affected stakeholders and a site plan indicating the limits of the control(s).

Conditional closure is recommended for the subject property. There are two institutional controls that will be necessary to ensure that there isn't unacceptable human health risks associated with the petroleum hydrocarbon contamination on the subject property. Buildings are not permitted to be constructed within 30 metres of the most heavily impacted area as detailed in the attached Figure 1 without additional assessment. This condition is necessary to ensure that the indoor air exposure pathway is not complete as outlined in the Atlantic RBCA guideline. Digging or excavation to depths of more than a metre is not permitted in the area as detailed in the attached Figure 2. This condition is necessary to ensure that the residual contamination within the weathered bedrock is not exposed and there is no risk of exposure through the dermal contact/soil ingestion pathway.

Part 5 of 7 (continued): Corrective Actions

THIRD PARTY PROPERTIES

Describe the remedial objectives and the basic corrective actions of the Remedial Action Plan employed for each of the Third Party Properties.

NA SP Aug 8/08

Other comments

Describe the current use of the Third Party Property(s) (buildings, operations, etc.)

Based on the work completed, the **Third Party properties** (cited in Part 4) are suitable for the following current or reasonably foreseeable future site activity(s).

- Residential (list PID numbers)
- Commercial (list PID numbers)

Conditional Closure

If site closure is **conditional**, list site-specific engineered or institutional controls that apply to the Third Party Property(s) complete with description of the purpose of each control. Attach written agreements to the control(s) from all affected stakeholders and a site plan indicating the limits of the control(s).

Part 6 of 7: Summary Statement of Site Professional

The Minister considers the pre-checked statements below to be mandatory for acknowledging receipt of the Record of Site Condition. The signature of the Site Professional on this form indicates the fulfillment of these mandatory requirements as well as the requirements of all other checked statements.

Please check appropriate statements:

Mandatory Statements

- 1. All work on which this Record of Site Condition is based was prepared, overseen and/or reviewed by the Site Professional.
- 2. The site was managed in accordance with the current version of the New Brunswick Department of Environment *Guideline for the Management of Contaminated Sites*.
- 3. This Record of Site Condition form is identical to the one provided by the ENV and the content of the form has not been altered.

LRA Statement (if LRA process used)

- 4. The Limited Remedial Action Process was applicable for this site as per the current version of the Limited Remedial Action Reference Documentation for Site Professionals.

Source Property Statements

- 5. Based on the results of the environmental site assessment, the applicable Tier I Risk Based Screening Level criteria or Tier II/Tier III Site Specific Target Level criteria were not exceeded on the Source Property (as described in Part I) and therefore, remedial action and/or site-specific engineered or institutional controls are not required for the current or reasonably foreseeable future site activities (as cited in Part 5).
- 6. The Source Property (as described in Part I) has been remediated to an acceptable level for the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *unconditional closure* is recommended.
- 7. The Source Property (as described in Part I) requires site-specific engineered or institutional controls to satisfy the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *conditional closure* is recommended.

Third-Party Property Statements

- 8. Based on the results of the environmental site assessment, the applicable Tier I Risk Based Screening Level criteria or Tier II/Tier III Site Specific Target Level criteria were not exceeded on the Third Party properties (as cited in Part 4) and therefore, remedial action and/or site-specific engineered or institutional controls are not required for the current or reasonably foreseeable future site activities (as cited in Part 5).
- 9. Third Party properties (as cited in Part 4) affected by the contamination of the Source Property (as described in Part I) have been remediated to an acceptable level for the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *unconditional closure* is recommended.
- 10. Third Party properties (as cited in Part 4) affected by the contamination of the Source Property (as described in Part I) require site-specific engineered or institutional controls to satisfy the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *conditional closure* is recommended.

Company: GEMTEC Limited

Address: 191 Doak Road, Fredericton, New Brunswick

Tel: 506.453.1025

Fax: 506.453.9470

E-mail: shaun.pelkey@gemtec.ca



Part 7 of 7: New Brunswick Department of the Environment - Acknowledgement of Receipt

The Minister acknowledges receipt of this Record of Site Condition. The Minister has processed the report(s) cited in Part 2 of this Record of Site Condition for the purpose of ensuring the site has been managed in accordance with the current version of the New Brunswick Department of the Environment *Guideline for the Management of Contaminated Sites*.


Based upon the reports cited in Part 2 and conclusions of the Site Professional stated in Part 6 of this Record of Site Condition, the Site Professional is of the opinion that the stated level of contamination remaining on the property will not adversely affect the quality of the environment. Notwithstanding this, the Minister reserves the right to evaluate the site should site activities change, or should circumstances change, which result in an increase in contamination or changes in site conditions which may pose a risk to the quality of the environment.

The Minister has not supervised the work undertaken at the site and does not assume any responsibility or liability for this work, or for notifying future owners, or present or future occupants of the property, of the work completed. Any persons intending to purchase or occupy the property should make their own independent determination of the environmental condition of the property and the extent of responsibility and liability, if any, which may arise from taking ownership or occupancy.

Unconditional Closure

It is understood from the information provided that the site has been managed in accordance with the current version of the New Brunswick Department of Environment *Guideline for the Management of Contaminated Sites* and that **further remedial action and/or site-specific engineered or institutional controls are not required** to ensure compatibility with the current or reasonably foreseeable future site activities (as cited in Part 5).

Conditional Closure

 It is understood from the information provided that the site has been managed in accordance with the current version of the New Brunswick Department of Environment *Guideline for the Management of Contaminated Sites* and that **site-specific engineered or institutional controls are required** to ensure compatibility with the current or reasonably foreseeable future site activities (as cited in Part 5).


Minister of Environment

August 08, 2008
Date

APPENDIX C

WASA APPLICATION

**Water Supply Source Assessment
Step One Application
Brinkley Investments Inc Apartment Building,
Cap Bimet. NB**

**Pursuant to Section 3(5) of
The Water Quality Regulation 82-126
Clean Environment Act**

Please answer the following questions:

1) Name of proponent: Brinkley Investments Inc.

2) The proposed water supply is to be used for what purpose?

Existing well (former Patural Processing Plant 1950-2005) to be used for proposed new 92-unit apartment building. Well identified by others as Shed Well.

3) Required water quantity (in m³/day):

The estimated water requirement for the proposed apartment building is 82.8 m³/day (12.7igpm), which was based on an average of 2 occupants / unit @ 450L/day/person.

4) List alternate water supply sources in area (including municipal systems):

The surrounding areas rely on individual wells to provide groundwater for their potable water supply. The nearest municipal system (Town of Shediac) infrastructure ends approximately 4km from the site. There are no plans to extend the infrastructure to the area.

5) Outline proposed work schedule:

If conditions permit (i.e. minimal recharge conditions) a 72 hr pump test will be performed in the winter of 2021 on the existing well. The intent is to pump the existing well and monitor the response in three surrounding existing wells. Based on a previous pump test performed the proposed pumping rate for the 72 hr test will be 76-100igpm, which is approximately ½ - 2/3 of the previous rate. This proposed pumping rate will meet the required peak flow for the apartment building. Reporting will be completed once the pumping test is performed.

A map showing the existing well locations is attached.

6) Discuss area hydrogeology as it relates to the project requirements:

The regional bedrock geology is mapped as late Carboniferous stratified rock belonging to the Pictou Group, which is a subbasin of the Maritimes Carboniferous Basin. Mapping indicates that within the Pictou Group, the site falls within the Richibucto Formation, which consists mainly of grey multistoried sandstone interstratified with red-mudrock dominated sequences (Rivard et al. 2003).

The Richibucto Formation has been described as one of the more productive sandstone formations in the province and is the best aquifer within Moncton Map-Area (Carr, 1959). The majority of the domestic wells drilled in this formation generally yield 20+ igpm (Carr, 1959).

Available domestic well logs received from the NBDELG database within a 500m radius of the site are summarized in the attached Table 1. Well yields range from 33.1 to 654 m³/day with a median yield of 108 m³/day. Well depths range from 12.2 to 48.8 m. Details of the two existing wells for the former fish plant (Plant well and shed well) were reported as being 86.9m and 67m deep respectively with reported usages during production of 3530m³/day.

Mr. Jacques Leblanc from Eastern Well Drillers stated that they have drilled numerous wells in the Cap Bimet area with wells typically 120-140' range, especially in an around the subject property are high yielding wells (20igpm +). Mr. Leblanc was also involved with the pumping test activities performed in 2008 and has provided well maintenance to the condo property well (former Plant well). Mr. Leblanc stated that the original submersible well in the Plant well is still located in the well and was not removed due to its size. This pump had the reported capacity of between 500-700igpm is not in use as the current building has its own pump in the well with a reported capacity of 75-80igpm.

As part of the development in 2008, there was a hydraulic evaluation completed by others on the two existing wells that were formally the fish plants production wells (Plant well and Shed Well). Results of that study showed that the proposed development in 2008 was estimated to consume less than 15% of the groundwater reportedly consumed by the fish plant. Both existing wells were found to have more than sufficient capacity to meet the water demand for the originally proposed development (338 persons).

7) Identify any existing pollution or contamination hazards within a (minimum) 500 m radius of the proposed drill targets. If groundwater use problems (quantity or quality) have occurred in the past, then these should be identified. Historical land use that might pose a contamination hazard (i.e. tannery, industrial, disposal, etc.) should also be flagged:

Approximately 125 residential properties (mixed seasonal/permanent) are located within a 500 m radius of the subject property. These properties are all located within 500m of the existing well for this development (Shed Well) and former fish processing plant well (Plant well). The former fish plant property was registered as a contaminated site with remedial work completed in 2008 prior to the existing residential condominium building being constructed. The site was approved for residential land use with conditions on future building placement. The proposed building location for this project adheres to the conditions.

Water quality in the area overall is generally good. Elevated levels of iron, manganese and Turbidity have been encountered at concentrations above their Health Canada drinking water guidelines in groundwater wells within 500m of the subject property. Results of a water samples collected from the well on the subject property and adjacent condo property were provided from the original hydrogeological study. All of the results meet the applicable water guidelines with the exception of manganese. Groundwater samples will be collected during the pumping test and analyzed for the potable water package as recommended in the WSSA guideline. In addition to the potable water package, samples will be collected for petroleum hydrocarbons as well.

The potential for salt water intrusion and reduction of freshwater head will be evaluated as part of the hydraulic testing.

8) Identify any watercourse(s) (stream, brook, river, wetland, etc.) within 30 m of the proposed drill targets.

There are no watercourses or mapped wetlands within 30 m of the existing well location. GeoNB mapping was used to assist in locating the adjacent identified wetlands and the 30metre buffer.

9) Identify site supervisory personnel involved in the source development (municipal officials, consultants and drillers):

The source development consultant is FISHER ENGINEERING LTD.

It is not anticipated that a new well will require drilling as the existing well (Shed Well) will be tested and if all works out used as the domestic supply for the proposed apartment.

10) Attach a 1:10000 map and/or recent air photo clearly identifying the following:

- **proposed drill targets (existing well)**
- **domestic or production wells within a 500 m radius from the existing well to be tested.**
- **any potential hazards identified in question 7**

Refer to the attached Figure.

11) Attach a land use / zoning map of the area (if any). Superimpose drill targets on this map.

The proposed development falls within the Beaubassin West Planning Area within the Southeast Regional Service Commission Planning Area. The subject property is zoned integrated development (ID) with adjacent land to the south also included within the ID zone and the majority of the remaining area currently zoned Costal Residential (Zone CR). The ID zone allows for this proposed apartment as it allows for up to a total of 167 residential units.

12) Contingency plan for open loop earth energy systems

No open loop earth energy systems are proposed for this development, not applicable.

Enclosures

DE154/Water Supply Source Assessment Application.doc



DRAWING:
 SITE LOCATION PLAN – BRINKLEY INVESTMENTS INC.

LOCATION:
 CAP BIMET ROAD, CAP BIMET, NB

SCALE:
 1: 7500

PROJECT #
 DE154

FIGURE #

1

DATE:
 JAN., 2021

CHECKED BY:
 M.JF

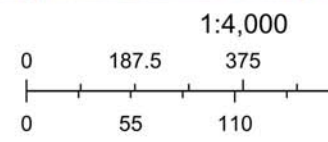
DRAWN BY:
 ACB





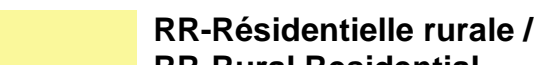
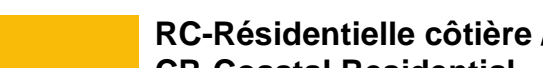








DRAWING: APPROXIMATE LOCATION OF EXISTING WELLS			
LOCATION: CAP BIMET ROAD, CAP BIMET, NB	SCALE: 1: 4000	PROJECT # DE154	FIGURE # 2
DATE: JAN., 2021	CHECKED BY: M.J.F	DRAWN BY: ACB	


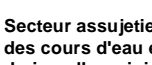
GeoNB Map Viewer



**Carte de zonage
rurale de Beaubassin-est /
Beaubassin East Rural
Community Zoning Map**

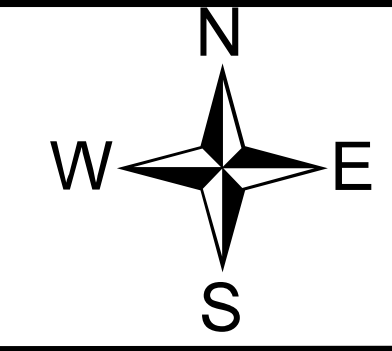
ZONES

-  RR-Résidentielle rurale /
RR-Rural Residential
-  RC-Résidentielle côtière /
CR-Coastal Residential
-  CG-Commerce général /
GC-General Commercial
-  CC-Centre communautaire /
CC-Community Centre
-  I-Industrie / I-Industry
-  E-Préservation de l'environnement /
E-Environment Conservation
-  DR-Développement des ressources /
RD-Resource Development
-  EIR-Exploitation intensive des ressources /
IRE-Intensive Ressource Exploitation Zone
-  AI-Aménagement intégré /
ID-Integrated Development Zone
-  P-Portuaire / P-Harbour

 30m :  30m :
Secteur assujéti au Règlement sur la modification
des cours d'eau et des terres humides
Loi sur l'assainissement de l'eau, 2003-16
Area subject to the Watercourse and
Wetland Alteration Regulation - Clean Water Act, 2003-16

 **C** Rezonage Soumis avec Conditions /
Subject Rezoning with Conditions

 ENM - Élévation du niveau de la mer
SLR - Sea Level Rise



Carte préparée par:


J. Couturier.
Date: janvier 2011 / January, 2011
Print le: 04 avril 2013 / April 04, 2013
Update: septembre 2014 / September 2014

1:15,000
mètre / metre



Table 1 Well Log Summary 500m Radius PID 70497763

Report #	Well	Casing	Rock	Yield	Rock Type
	Depths (m)			l/min	
1674	36.9	23.2	3.0	91	Sandstone
1675	36.9	22.9	3.0	91	Sandstone
6791	27.7	18.3	2.1	68	Sandstone
6795	27.7	18.3	15.2	272	Sandstone
6809	27.7	15.5	0.6	454	Sandstone
12027	36.9	21.3	1.2	50	Conglomerate/Sandstone
13861	26.5	6.1	4.6	23	Sandstone
14331	36.6	20.1	1.2	82	Sandstone
15208	42.7	30.5	7.0	318	Sandstone
17589	36.6	24.4	3.7	91	Sandstone
17972	42.7	29.3	0.9	318	Conglomerate/Sandstone
19194	15.8	6.1	0.0	45	Sandstone
24825	25.3	6.1	5.2	23	Sandstone
25394	24.4	15.5	0.9	272	Sandstone
25653	39.6	22.9	3.0	68	Sandstone
25663	48.8	25.0	10.4	68	Sandstone
25705	30.5	18.3	16.8	182	Sandstone
27190	12.2	6.1	2.1	68	Sandstone
28235	33.5	18.3	7.9	91	Sandstone
29047	32.9	8.5	7.0	45	sand/gravel
30161	19.8	6.1	4.9	68	Sandstone
30185	15.8	6.1	2.4	91	Sandstone
30914	36.6	24.4	3.0	54	Sandstone
33169	22.9	18.3	1.5	68	Sandstone
34793	13.7	6.1	5.5	23	Sandstone
35382	18.3	7.0	1.5	27	Sandstone
36501	15.2	7.3	3.0	68	Sandstone
36507	18.3	7.0	0.0	54	Sandstone
36538	30.5	18.3	2.1	136	Sandstone
36636	36.6	24.4	4.9	182	Sandstone
37040	30.5	18.3	4.6	227	Sandstone
37197	42.7	21.3	0.0	136	Sandstone
38598	19.8	13.1	12.2	68	Sandstone
38993	21.3	12.2	5.8	272	Sandstone
39481	33.5	18.3	2.1	227	Sandstone
90169100	33.8	12.2	11.9	68	Sandstone
90210900	39.6	12.8	12.8	68	Sandstone
90211000	14.3	6.1	3.0	68	Sandstone
90386700	19.5	6.1	2.1	227	Sandstone
90598300	38.4	16.5	4.3	45	Sandstone
90818200	22.6	12.5	4.6	68	Sandstone
91474700	30.5	16.5	14.0	114	Sandstone
91731800	30.5	18.3	14.6	114	Sandstone
91965200	30.5	24.4	1.5	454	Sandstone
92006700	36.6	18.3	1.2	54	Sandstone
92010700	24.4	16.2	11.9	114	Sandstone

Max	48.8	30.5	16.8	454
Min	12.2	6.1	0.0	23
Average	29.1	15.8	5.0	126
Median	30.5	17.4	3.0	75

