

BY-LAW NUMBER 2003/40

BY-LAW NO. 2003/40 is a by-law of the County of Wetaskiwin No. 10 in the Province of Alberta, to authorize the adoption of an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of the area known as The Gardens at Pigeon Lake in Lots 1 & 2, Block 1, Plan 022 6051 (NW 31-46-1-W5M) in accordance with Section 633 of the Municipal Government Act, Chapter M-26.1, Revised Statutes of Alberta 1994, and amendments thereto.

WHEREAS: at the requirements of County Council, as per Policy 6 of the Pigeon Lake Watershed Management Plan, an Area Structure Plan has been prepared for Lots 1 & 2, Block 1, Plan 022 6051 (NW 31-46-1-W5M).

AND WHEREAS: the proposed Area Structure Plan has been widely circulated and discussed within the County pursuant to Section 230, 606(1), and 633(1) of the Municipal Government Act, 1994, Chapter M-26.1, and amendments thereto.

NOW THEREFORE: the County of Wetaskiwin No. 10, duly assembled, hereby enacts as follows:

- 1) All road concerns indicated from Public Works to be addressed at the Development Agreement stage (during subdivision approval).
- 2) Dedication of 3m MR strip is required along the north boundary of the residential development.
- 3) The centre piece within the cul de sac to be privately owned by community within subdivision.
- 4) The document attached to this By-law as "Appendix A", together with accompanying maps, is hereby adopted as the *"Gardens at Pigeon Lake in Lots 1 & 2, Block 1, Plan 022 6051 (NW 31-46-1-W5M)"*.
- 5) This by-law comes into effect on the date of third reading.

READ: A First time this 8th day of July A.D., 2003

READ: A Second time this 8th day of July, A.D., 2003

READ: A Third time and finally passed this 8th day of July, A.D., 2003

Amended by Bylaw 2005/13


REEVE


SECRETARY-TREASURER

The Gardens at Pigeon Lake Area Structure Plan

**Submitted to the County of Wetaskiwin
on behalf of**

Patterson Meadows Ltd.

May 7, 2003

Prepared by:

REMCO
Land Management



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**Supplement to Area Structure Plan Proposed for
The Gardens at Pigeon Lake
NW 31-46-1-5**

The original proposed ASP was submitted to the County of Wetaskiwin on May 7th, 2003. The purpose of this paper is to augment information supplied.

Storm Water Management

An initial investigation on the part of GPEC indicates that some form of on-site storage may be required in order to control the outlet flow rate for storm water to the parcel to the south. Detailed analysis will not begin until this Area Structure Plan and the associated subdivision plan have been approved, but in any event this is an issue that will be addressed and handled in accordance with Alberta Environment requirements.

Liquid waste Removal

The owner is investigating a contract for vacuum truck services with Johnson Vacuum Trucks. The closest sewage lagoon is the Mulhurst Lagoon.

Solid waste Removal

The closest **solid waste transfer** station is located at Lakedell approximately four miles from the site. Property owners will be responsible to transport their solid waste to transfer station

Fire protection

As indicated in the original submission, the owner will install and maintain a fire suppression pond adjacent to hard standing access. The owner is investigating the installation of sprinkler systems for residences he constructs within the subdivision. The closest Fire Department is the MaMeO Beach Fire Department

R. Paul 15/05/2003

Introduction

Purpose

The purpose of the **Patterson Meadows Area Structure Plan** is to provide an overall land use framework for the area shown in *Figure 1, Locational Plan*. The Area Structure Plan for this 48.9-acre parcel will show proposed land use associations and a proposed residential subdivision on a 9 acre portion of the parcel. The Plan will also describe how the development will be implemented and phased and will also provide engineering information with respect to the provision of potable water, sewage, utilities and storm water management.

Plan Area

The subject parcel (hereafter called the parcel) is a 19.79 Hectare (48.9 Acre) portion of NW 31-46-1-5, lying north of Highway 771. This parcel has been subdivided into two lots under Plan 022 6051. This plan created two lots Lot 1 is 6.98 Hectares (17.25) acres and Lot 2 is 12.8 Hectares (31.65 Acres). *Figure 3* shows the present lot configuration.

Land Ownership

Patterson Meadows Ltd. holds the title to the subject parcels under Certificate of Title Numbers 022404019 and 022404019 +1. Copies of the titles are attached as Appendix B.

Land Use By-law

The entire parcel is currently districted as Lakeshore Mixed Use District (LM). An application to redistrict the balance of the parcel (except the residential subdivision) to agricultural use will be submitted concurrently with this application.

Site Context and Development Considerations

General Location

The parcel is located approximately 1000 metres west of Pigeon Lake and the SV of Poplar Bay in the County of Wetaskiwin. It has the benefit of being adjacent to Highway 771 and access to the shore of Pigeon Lake is readily available through Pigeon Lake Provincial Park. See Figure 2.

Existing Use

The parcel is currently used for residential use and greenhouse operations.

Surrounding Land Use

The parcel is bounded on the south by Highway 771, and on the north by Township Road 470. There is a Provincial Park north of Township Road 470 and residential subdivisions have been developed on the quarter sections directly to the east and west of the parcel.

Topography and Drainage

The parcel generally drains from south to north with a maximum 7.5 metre drop from the Highway to Township Road 470. Topography does not appear to constrain development of this parcel.

Soil and Vegetation

The parcel is of marginal use for agriculture. A detail description of the surface of the parcel is described in the Sabatinni Hydrogeological report at Appendix C.

The 9-acre portion of the site covered with 4-8" dbh poplar trees is intended for residential lotting. This area is set out as Area B on Drawing A.

Development Concept

An Area Structure Plan for the parcel is shown on Figure 4. The land uses and relationships within the Area Structure Plan are described as follows:

Area A Orchard

1.2 hectares 3.21 Acres, more or less

Area A will be developed as an apple orchard and operated in concert with the proposed uses in Area C. A private drive adjacent to the north limit of Highway 771 will provide access between the functionally related Areas A and Area C.

Area B Residential Land Use

4.85 hectares 12.00 Acres, more or less

The attached Tentative Plan of Subdivision for Area B anticipates approximately 25 residential lots. This area was chosen for residential development as it has the least potential for agricultural use. It has an agricultural rating of 12 %, so it is a suitable candidate for subdivision.

Design Brief For Subdivision

The owner wishes to use only the poorer agriculture land for residential development and accordingly, has chosen to limit the residential development to the 9 acres portion of the parcel shown as Area B. Given the lot size requirements set out in Lakeshore Mixed Use District and the fact that Sanitary Sewage Holding Tanks will be used, the decision was

made to develop lots in the two tenths of an acre and up size range. This lot sizing is consistent with the lot/house target market the owner is trying to serve.

A minimum number of trees will be cut from the freehold lots and that should help with creating privacy and with sound attention of traffic noise from Highway 771 and the Township Road to the north.

Where possible, trees will be left on the 0.39-acre Median (Traffic Island). The owner is investigating communal ownership of the land within the traffic island by each of the 25 lot owners.

Area C Residential and Greenhouse Use 13.63 hectares 33.69 acres, more or less

Area C is currently used for residential use and greenhouse operations as allowed in the Municipal Land Use By-law. It is the owner's intention to consolidate all of Area A, Area C and the private drive connecting them into one title. Future development could involve an intensification of the greenhouse and market garden operations with retail sales. It is expected that future development on Parcel C will be handled through the development permit process.

Building Set Back Requirements

Lee Bowman of Alberta Transportation advises that providing the lots proposed for Area B have internal access with a connection to Township Road 470, Alberta Transportation will consider a set back requirement of 30 metres from the Highway ROW limit.

Municipal Reserves

A land provision of Municipal Reserves is not anticipated in conjunction with the residential subdivision. The owner will pay out municipal reserve obligations caveated against title on the creation of Plan 022 6051.

Vehicular Traffic Circulation and Access

Any access to the proposed residential subdivision (Area B) will be denied from Highway 771 and will only be allowed from the road to the north of the subject parcel.

The existing access (driveway approach) to Area C to from the north limit of Highway 771 and the access to Area A and C from Township Road 470 will be maintained.

All roads within Area B will be constructed to the County of Wetaskiwin's standard for rural cross section roads.

Servicing and Utilities

Sanitary sewage

GPEC, Consulting Engineers Ltd. have determined that at this location the most appropriate way to handle sanitary sewage for a multiple lot subdivision is through the use of holding tanks that will be vacuumed and emptied into a municipal sewage system. This decision was based on the proximity to the Pigeon Lake and the nature of the soil at the site.

Potable Water

Sabatini Earth Technologies Inc has completed the ground water evaluation attached as Appendix C. In summary, the quality of the water is acceptable and the expected yield is substantially more than the requirements set out in the Alberta Water Act (1999). Their review took into account the requirements for green house operations at this location.

Storm Water Management

Of the entire 48-acre parcel, only 9 acres will be developed as residential subdivision lots with a resultant change in the storm water run-off coefficient.

Telephone, Power and Natural Gas

No problems are expected with the installation of power, natural gas and telephone companies for this parcel. Power lines will be installed below grade.

Fire Protection

The owner will build and maintain a pond in the northeast quadrant of Area C, adjacent to hard standing access, which can be used to obtain water for fire suppression by the Municipal Fire Fighting Service.

Implementation

Market

There is a strong demand for lots of this nature at this location at this time. The development is needed, appropriate and timely. The residential subdivision will be marketed under the name of **Patterson Estates** as a component of **The Gardens at Pigeon Lake**.

Staging

Tentative Plan of Subdivision

A tentative Plan of subdivision will be submitted concurrently with this Area Structure Plan. It is anticipated that the subdivision will be developed in three stages of approximately 8 lots each. The first stage is scheduled for building permits for the summer of 2003, with subsequent stages as the market warrants.



R. Paul ACP, MCIP REMCO



Pat Sinclair, GPEC

Appendix A

The Garden At Pigeon Lake Land Area Computations*

	Area (Hectares)	Area (Acres)
<i>Area Structure Plan (Gross Areas)</i>		
<i>Area A</i>	<i>1.29</i>	<i>3.2</i>
<i>Area B</i>	<i>3.64</i>	<i>9.0</i>
<i>Area C</i>	<i>14.85</i>	<i>36.7</i>
<i>Total</i>	<i>19.78</i>	<i>48.9</i>
Subdivision (Area B)		
Gross Area	3.64	8.99
Comprised of:		
Roadway	0.80	1.98
Median (Island)	0.16	0.39
Single family lots	2.68	6.62

Note: Areas are approximate only

NORTH ALBERTA LAND REGISTRATION DISTRICT

R E M O T E L A N D T I T L E S E A R C H

SEARCH DATE: 07/05/2003

APPENDIX B

S
LINC SHORT LEGAL TITLE NUMBER
0029 538 189 0226051;1;2 022 404 019 +1

LEGAL DESCRIPTION
PLAN 0226051
BLOCK 1
LOT 2
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 12.81 HECTARES (31.65 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 5;1;46;31;NW

MUNICIPALITY: COUNTY OF WETASKIWIN NO. 10

REFERENCE NUMBER: 022 373 710 +1

REGISTRATION	DATE (DMY)	REGISTERED OWNER(S) DOCUMENT TYPE	VALUE	CONSIDERATION
022 404 019	24/10/2002	TRANSFER OF LAND		SEE INSTRUMENT

INERS

PATTERSON MEADOWS LTD..
OF RR 1
WESTEROSE
ALBERTA

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
802 219 988	22/09/1980	CAVEAT RE : EASEMENT CAVEATOR - ICG UTILITIES (PLAINS-WESTERN) LTD.
012 334 307	19/10/2001	MORTGAGE MORTGAGEE - CEDAR H MORTGAGE CORPORATION. 102,4246-97 STREET

(CONTINUED)

SABATINI EARTH TECHNOLOGIES INC.

6919 - 32nd AVENUE N.W.
CALGARY, ALBERTA T3B 0K6
TEL: (403) 247-1813
FAX: (403) 247-1814

9315 - 35th AVENUE N.W.
EDMONTON, ALBERTA T6E 5R5
TEL: (780) 438-0844
FAX: (780) 435-1812

Patterson Meadows Ltd.
RR1
Westrose, Alberta
T0C 2V0

March 31, 2003
Our File: E0210-955

Attention: Mr. Steve Quast

Dear Sirs:

Re: Domestic Groundwater Evaluation
Proposed Residential Subdivision
Lot 2, Block 1, Plan 022 6051
Portion of NW ¼ - 31 - 46 - 01 - W5M
Wetaskiwin County, Alberta

1.0 INTRODUCTION

It is our understanding that Wetaskiwin County requires a hydrogeological assessment to determine whether there is sufficient domestic groundwater at the above referenced subdivision to service approximately 27 proposed country residential lots. The Alberta Water Act (1999)¹ requires that 0.523 igpm (Imperial gallons per minute) be available for each lot (for example, a long-term capacity of about 1 igpm would be sufficient to supply 2 lots) in order to avoid interfering with existing household or traditional agricultural users.

A review of water well records available for a 2-mile radius from the site was carried out. This letter report summarizes the available information for this part of the quarter section of land and surrounding area. Our evaluation and recommendations are included herein. Please note that all water well data on record is recorded in Imperial units of measurement. Therefore, to avoid confusion and possible errors from conversion to metric units, Imperial units are used for this evaluation.

2.0 PROJECT DESCRIPTION

The parcel of land, consisting of approximately 4.8 hectares (12 acres), is located within the northwest quarter of Section 31, Township 46, Range 1, west of the Fifth Meridian, in Wetaskiwin County, Alberta. The property is bounded on the north by Township Road 470, on the west by

¹ Province of Alberta. Water Act. 1999. Queen's Printer for Alberta.

Range Road 120 and on the south by Secondary Highway 771 (refer to Figure 1, following). It is proposed that the parcel of land be subdivided into approximately 27 lots of different sizes.

3.0 SURFICIAL GEOLOGY

According to published surficial geology reports², the terrain in the area is broadly classified as draped moraine till deposit with minor amounts of water-sorted materials and local bedrock exposures. The terrain includes local areas of undifferentiated subglacially molded deposit with streamlined features. The topography in the area is generally flat to undulating, reflecting the topography of the underlying bedrock and other deposits.

4.0 HYDROGEOLOGY

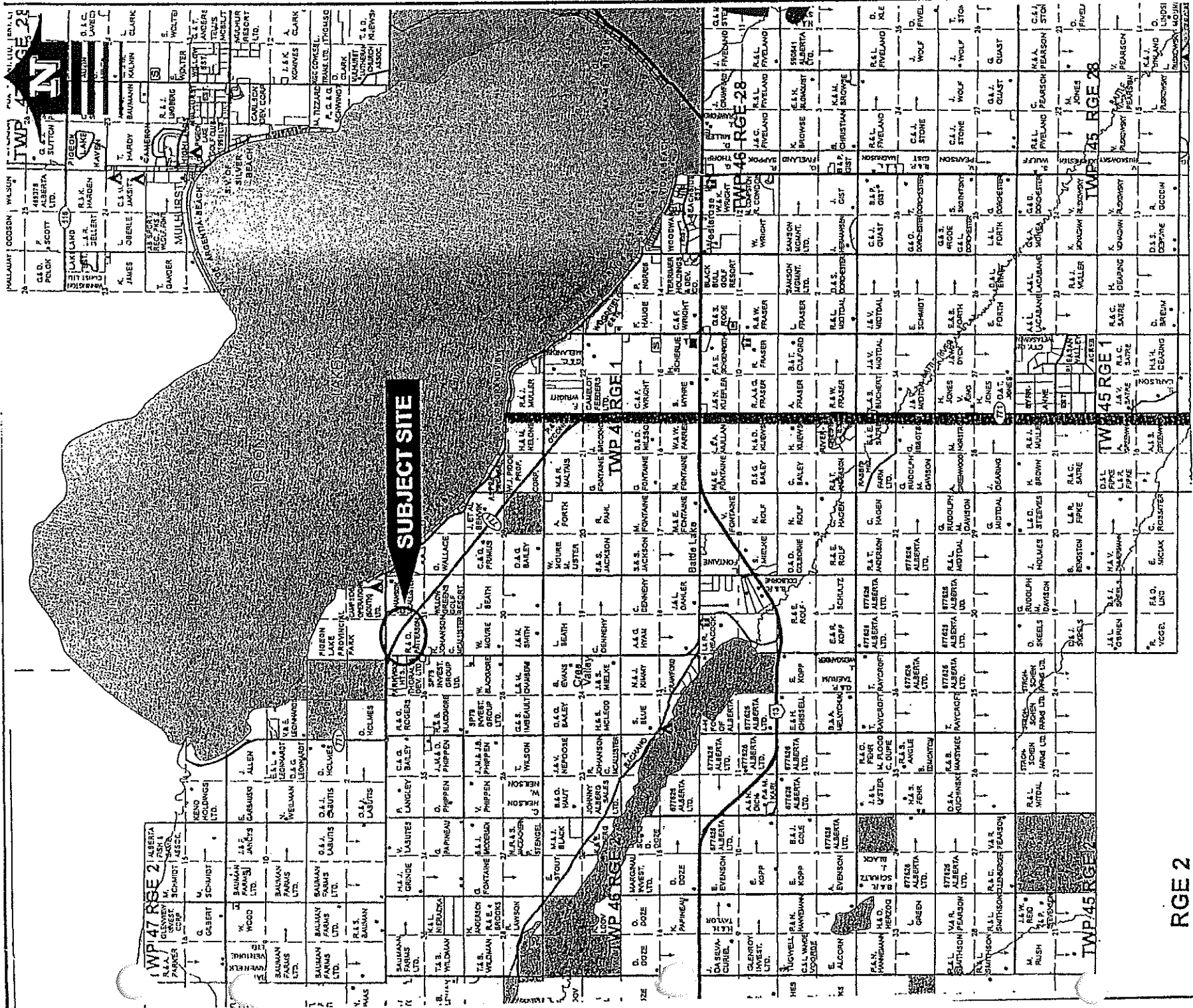
The upped bedrock in the area is the Upper Paskapoo Formation. The Paskapoo Formation generally consists of thick, tabular sandstones, siltstones and mudstone layers. The depth to the top of the Paskapoo Formation, which is generally less than 100 meters thick, is mainly less than 20 meters below ground level. The projected long-term yield for individual water wells completed through the Paskapoo Formation Aquifer is generally 1.5 to 15 igpm. Although available well yield data is rather limited, it is expected that sandstones within the bedrock are the main water yielding zones, which may be encountered at shallow depths.

5.0 REVIEW OF DRILLERS' RECORDS FOR WATER WELLS

The water well data is summarized in Table 1, attached. Based on approximately 290 water well records within a 2-mile radius of the site, over 95 percent of the wells are completed in the Paskapoo Formation bedrock aquifer. The wells range in depths from 25 to 1000 feet with recorded static water levels ranging from 1 to 500 feet. The bedrock surface was typically encountered at depths ranging from 5 to 138 feet. Of the 290 well records available, 220 have data on the well completion type and zone of completion. Approximately 18 percent of the wells in the bedrock aquifer were completed with a perforated liner below the outer casing down to a depth of 32 to 260 feet, approximately 81 percent were completed with an open hole below the outer casing, and less than 1 percent were completed using a well screen.

The drillers' tests performed to determine short term well yields consisted of bailing, air and/or pump testing for a period of approximately 0.5 to 74.5 hours, with the typical test duration being 2 hours. Test rates varied from approximately 0.5 to 77 igpm. Transmissivity values of 3 to greater than 10000 igpd/ft were determined. The calculated theoretical yields (Q_{20A}) ranged from 0.02 to 726 igpm. About half of the wells generally yielded apparent Q_{20A} values greater than 10 igpm.

² Shetsen, I. 1990. Quaternary Geology, Central Alberta, Alberta Research Council. Map Scale 1:500000.



RGE 2

ABATINI EARTH TECHNOLOGIES INC.

9315 - 35 Avenue NW, Edmonton, Alberta
 Phone: (780) 438-0844
 Fax: (780) 435-1812

PATTERSON MEADOWS LTD.
 Proposed Country Residential Subdivision
 Lot 2, Block 1, Plan 022 6051
 Part of NW 1/4 - 31 - 46 - 01 - W5M
 County Map Showing Site Location

Job No: E0210-955

Date: January 27, 2003

Figure: 1

6.0 REVIEW OF GROUNDWATER CHEMISTRY DATA

Available chemical analysis of the water from the wells within a 2-mile radius of the site are summarized in Table 2, attached. Water was tested for the following parameters: Total Dissolved Solids (TDS), Conductivity, pH, Hardness, Alkalinity, Calcium, Magnesium, Sodium, Potassium, Bicarbonate, Sulphate, Chloride, Nitrate & Nitrite, Nitrate, Iron, Flouride, and Silica. It is evident from the analyses that water from a majority of the wells exceed the Canadian Drinking Water Quality Guidelines (CDWG) (1996)³ Aesthetic Objective (AO) standards for TDS, Sodium and Iron. As well, pH and flouride parameters occasionally exceed the recommended limits. These exceedances are considered aesthetic in nature which may affect the appearance and palatability of a water supply, in turn affecting its acceptance by consumers. The CDWG (1996) states that:

"Aesthetic objectives (AO) apply to certain substances or characteristics of drinking water that can affect its acceptance by consumers or interfere with practices for supplying good-quality water. . . . [AO] values are below those considered to constitute a health hazard. However, if a concentration in drinking water is well above an aesthetic objective, there is a possibility of a health hazard."

7.0 SUMMARY AND CONCLUSIONS

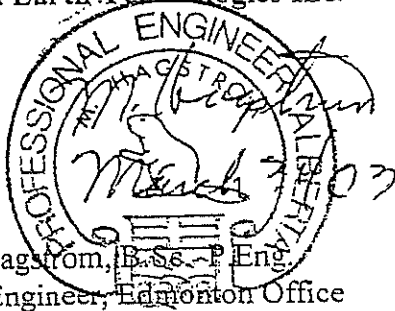
It is apparent from the above review of the hydrogeology that the Paskapoo Formation bedrock aquifer is the major aquifer underlying the property. Generally high yields of 10 igpm or more were calculated from about 50 percent of the wells located in the bedrock aquifer. The Alberta Water Act (1999) requires that 0.523 igpm (1250 m³ per year) be available for each household to avoid interfering with existing household users, licenses or traditional agricultural users.

It is understood that there is two existing households within the quarter section of land as well a green house operation with an annual consumption of 200,000 gallons per year (0.38 igpm). In addition, it is understood that about 27 lots are planned for the new subdivision. The calculated total water well yield requirement is therefore approximately 16 igpm. The above data is sufficient to show that the 16 igpm needed to service the new facilities is available within the bedrock aquifer within the quarter section of land. As such, there should be no negative potential impact on the surrounding wells.

Should you have any questions or concerns regarding our findings and/or recommendations, do not hesitate to contact our office at (780) 438-0844.

³ Health Canada. 1996. Canadian Drinking Water Guidelines, 6th Edition.

Respectfully submitted,
Sabatini Earth Technologies Inc.

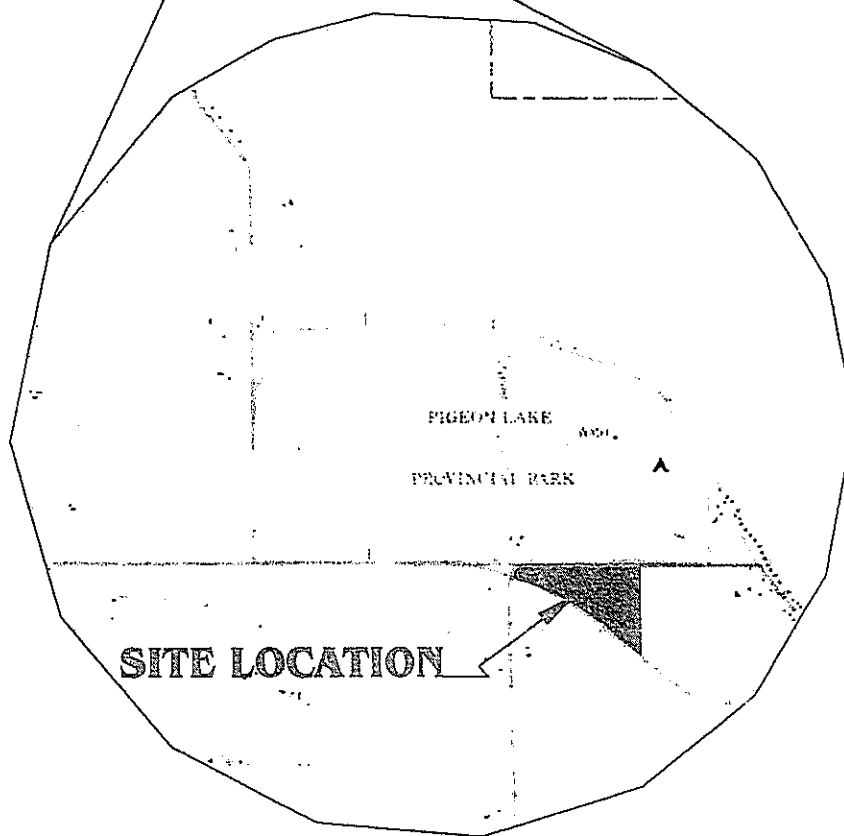
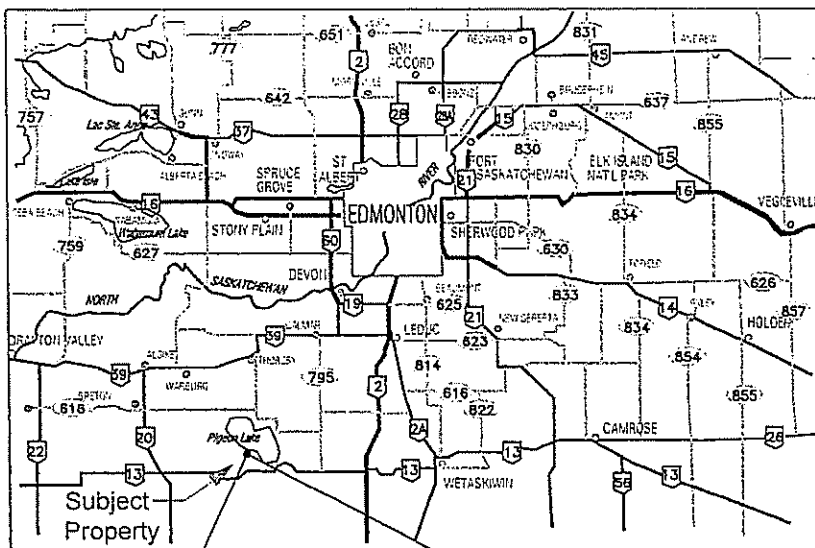


Merle Hagstrom, B.Sc., P.Eng.
Senior Engineer, Edmonton Office

Distribution: (4) addressee

Attachments: Tables 1 & 2

PERMIT TO PRACTICE	
Sabatini Earth Technologies Inc.	
Signature	<i>M. Hagstrom</i>
Date	<i>March 31/03</i>
PERMIT NUMBER: P-5773	
The Association of Professional Engineers, Geologists and Geophysicists of Alberta	

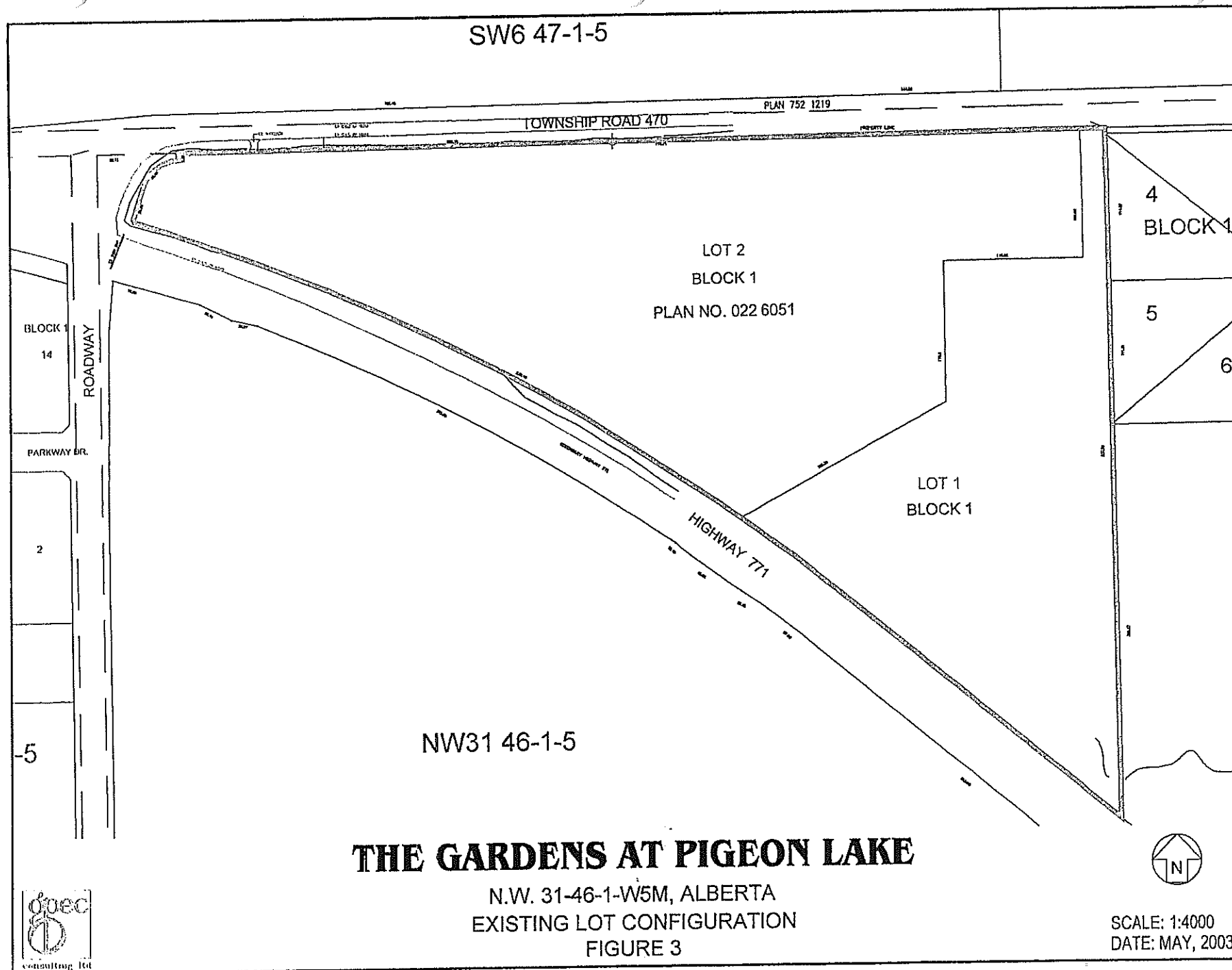


THE GARDENS AT PIGEON LAKE

N.W. 31-46-1-W5M, ALBERTA
LOCATION PLAN - FIGURE 1



SCALE: N.T.S.
DATE: MAY, 2003



THE GARDENS AT PIGEON LAKE

W. 31-46-1-W5M, ALBERTA

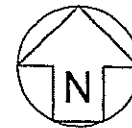


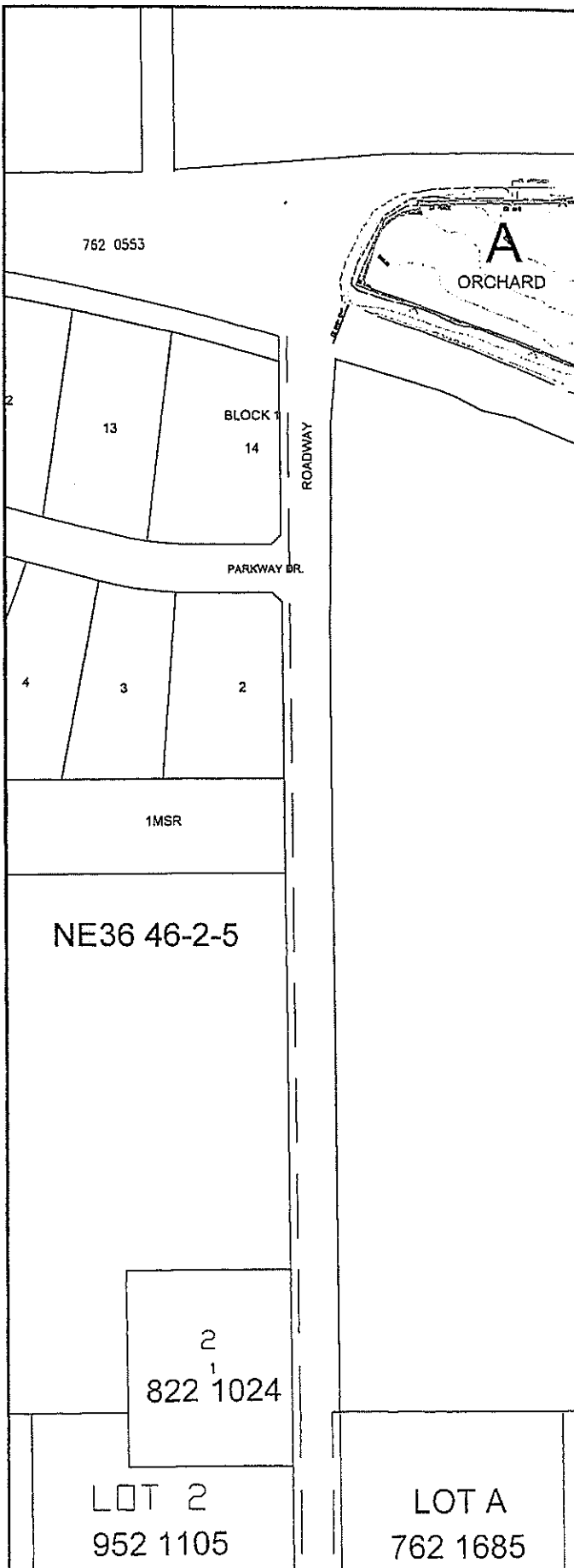
FIGURE 4

AREA STRUCTURE PLAN

A	3.2 AC.	AGRICULTURAL
B	9.0 AC.	RESIDENTIAL LOTS
C	36.7 AC.	AGRICULTURAL RESIDENCE, GREEN HOUSE AND MARKET GARDEN

48.9 AC TOTAL

ALL AREAS ARE APPROXIMATE



MAY, 2003

SCALE: 1:4000