BY-LAW NUMBER 2007/65

BY-LAW NO. 2007/65 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 W ½ of NW 08-46-01-W5M (Moore's Agri Trade LTD c/o Leo and Darleen Fontaine) in accordance with Section 633 of the Municipal Government Act, Chapter M-26.1, Revised Statutes of Alberta 2000, and amendments thereto.

WHEREAS: at the requirements of County Council, as per Policy 6606, an Area Structure Plan has been prepared for W ½ of NW 08-46-01-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, 2000, Chapter M-26.1, and amendments thereto.

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

(a) The document attached to this By-law as "Appendix A", together with accompanying maps, is hereby adopted as the *"Moore's Agri Trade Area Structure Plan W ½ of NW 08-46-01-W5M"*.

2. This by-law comes into effect on the date of third reading.

READ: A First time this 15th day of November, A.D., 2007.

READ: A Second time this 15th day of November, A.D., 2007.

READ: A Third time and finally passed this 15th day of November, A.D., 2007.

REEVE

SECRETARY-TREASURER

Bylaw #2007/65
Appendix A

Area Structure Plan

West Half of NW 8-46-1-W5

To create 4 new parcels

Under current Rural Conservation Zoning

June 4, 2007

Submitted to
County of Wetaskiwin #10
Wetaskiwin, Alberta
on behalf of
Registered Owners
by

Box 67, Alder Flats, AB T0C 0A0
Phone 780-388-3759 Fax 780-388-3788

Proposed Area Structure Plan
West half of NW 8-46-1-W5
(77.66 acres) as described on Title # 032 312 738
Submitted by
Moore's Agri-Trade Ltd.
Agent for registered owners Leo and Darleen Fontaine
And for Bradley Leo Fontaine and Patricia Gay Fontaine,
who have a Caveat supporting an Option to Purchase registered on the title.

Introduction

The subject property lies to the north of Hwy 13 approximately 2 km east of Battle Lake. It is part of an area including most of 5 quarter sections that is zoned "Rural Conservation" under the County of Wetaskiwin Land Use By-Law. The subject quarter section was divided into two parts in 1961. Two additional acreages were created on the east half of the quarter in 1984. The quarter section to the west was subdivided into 15 acreages in 1978

The unsubdivided west half of NW 8-46-1-W5 containing 77.66 acres is the subject of this Area Structure Plan.

A copy of current title and registered owner's consent is attached as Appendix 1

Map 1 shows the location of the subject property relative to surrounding centres in Alberta.

Map 2 shows the location of the subject property in relation to surrounding land in the County of Wetaskiwin

Municipal Jurisdiction

The subject property is located in the County of Wetaskiwin #10. There are no other municipalities (including summer villages) within 5 km of the subject property.

Physical Features

The subject property is predominately tree covered rolling terrain with a general slope to the east. Contour evidence shows there to be an average slope of approximately 2% from the west side to the east side of proposed Lots 1,2, & 3 and a similar slope from south to north on lot 4.

See Map 3 which shows tree cover and Map 4 which shows contours.

Previous Land Uses

Research of current and historical tiles for last 45 years indicates that the land was predominately in a natural treed state with some areas used as pasture and that a residence existed at one time in the north east corner of the subject property. Based on this research and information contained in the balance of this document there is no evidence of a previous land use that may have contaminated the soil.

Present Land Use

The treed portion of land is presently in a natural state. Open area is in perennial forage and used as pasture.

There is presently an oil lease with five wells in the south-east corner and three pipelines in a right of way running from the oil lease to the north across the subject property. The oil lease is operated by Penn West Energy Trust. The pipelines are operated by PetroFund Corp. Two of the pipelines are for oil and one is for produced water. There is no indication of sour gas in the wells or the pipelines.

Conflicting Land Uses

The County of Wetaskiwin's standards for the preparation of area structure plans require the developer to identify any conflicting land uses with specific attention to the following:

(a) Confined Feeding Operations: There are no confined feeding operations within 2 km of the subject land.

(b) Airfields: There are no airfields within proximity of the subject land. The nearest is at Wetaskiwin, approximately 45 km to the east.

(c) Sour Gas Facilities: There do not appear to be any sour gas facilities within a 2 km radius of the subject property. This Area Structure Plan will be referred to the Alberta Energy and Utilities Board to confirm.

(d) Active or abandoned Land Fill sites: Information obtained from West Central Planning Agency included Map 6 which shows "Active and Closed Waste Disposal Sites" in the County of Wetaskiwin. Based on this information the nearest landfill is on NE 15-46-1-W5 which is 4 km from the nearest corner of the subject property. This distance is well beyond any set- back regulations.

In addition to the mandatory requirements discussed above, an investigation was made into the location of pipelines, both on right of ways and by easements. Map 8 was obtained for Elite Line Locating Ltd., a pipeline locating firm. It shows the oil and water lines on the registered right of way as well as the domestic natural gas line (white dash line) which crosses the property and will accommodate service to the new parcels.

Design Concept

The proposed design for the lots to be created is shown on Map 5. The intention is to create 4 Rural Conservation District parcels of 10-19 acres each, leaving the remainder of approximately 25 acres.

The new parcels would meet the requirements stated in the County of Wetaskiwin Land Use By-Law No. 95/54 clause 8.4 (a) minimum parcel size of 10 acres and 8.4 (b) a minimum of 60% tree covered land.

There is a pipeline right of way going from the oil lease on the south to the north boundary of the quarter. The design has been arranged to place property boundaries as close as possible to this right of way. This will minimize the impact of setbacks from the pipeline on future development of the individual parcels. The pipeline right of way is shown on Maps 3,4, and 5.

Special consideration was given to dealing with the area that is shown as the south one third of proposed lot 4. This area is not useful for the creation of a lot on its own as it offers no suitable building sites. This area includes a body of water on a seasonal drainage ravine and a low area. The pipeline right of way and the required set-back from the oil wells to the south also eliminate possible building sites. It was therefore concluded that this portion of land should be attached either to lot 4 or left with the remainder of the parcel. Upon examination of the physical access from this area to the two alternate parcels that it could be joined to it was concluded that access was much easier for the north. Therefore it has been included as a portion of proposed Lot 4.

Consideration is given to provide for future access to the east half of the NW 8-46-1-W5 which lies immediately east of the subject property. The only access to a large portion of this property is from Hwy 13. To provide for the possibility of future access should it be required, a 22 m wide road right of way will be dedicated from Twp Rd 462 south along the east boundary of Lot 4 far enough to gain access to the east half NW 8 -46-1-W5. A 5 m Utility Right of Way can also be provided on the west side of the dedicated roadway.

In any areas of the subject property which border Twp Rd. 462 or Rge. Rd. 15 there will be dedicated a 5 m strip for road widening unless this road widening right of way has already been granted.

Roads

The subject property is bounded on the west by Range Road 15 and on the north by Township Road 462. Both of these are under the jurisdiction of the County of Wetaskiwin. Highway 13 touches the south-east corner of the subject property. There is access from Highway 13 to an oil lease in the south-east corner of the subject property.

Access to Roads and Traffic Patterns

It is proposed that access to Lots 2, 3 and the remainder of the quarter will be from Range Road 15. Access to Lot 4 will be from Township Road 462. Lot 1 has physical access to Range Road 15 as well as to Twp. Rd. 462. In consideration of the likely building site and the amount of trees required to be removed for a driveway to reach the building site it appears that access to Lot 1 may be more appropriate from Twp. Rd. 462. An existing opening could be used for access to the building site from the north whereas a heavy stand of mature spruce would have to be cleared for a driveway from the west. It should be noted that both Range Road 15 and Township Road 462 have access to highway 13 within 1.5 km of the subject property. Since Township Road 462 and Range Road 15 intersect at the NW corner of the subject property, residents of any of the lots will be able to choose either route to access Highway 13. There will be no direct accesses from any of the properties onto Highway 13 and no need for landowners to make use of the oil lease access onto the highway. See Map 5 for details on current and proposed access points to all roads.

An examination of contours on Map 4 and a physical inspection of the roads and approaches from existing properties indicate that there are adequate choices for locations of approaches to all proposed properties which will provide suitable line of vision for oncoming traffic.

Since there are only 4 new lots being created in a Land Use District that only permits residential use, and there are two good access points to Highway 13 it is deemed not necessary to conduct a "Traffic Study".

Road Standards

The only road construction proposed will be access approaches to each of the 4 new parcels and to the remainder of the parcel. It is anticipated that these will be to "rural county standards" and will be specified as a condition of subdivision approval. The developer/applicant will pay a $2,000 per lot road contribution fee to the County for improvements that may be required to any roads providing direct or indirect access to the subdivision.

Water Supply

The Water Act requires that, if a subdivision will result in there being more than six lots on a quarter section, and the resulting lots will depend on groundwater, the subdivision must not be approved until it is proven that there is sufficient groundwater to supply the new lots without depleting the supply to existing users in the area (Water Act, Section 23 and Water Regulations, AR 205/98, section 9).

A report was prepared by Sabatini Earth Technologies Inc. This report indicates that "the 6 igpm needed to service the proposed country residential lots is available from the bedrock aquifer that underlies the subject site". The full report is attached as Appendix B.

Storm Water

The country residential development planned for the lots, together with the Rural Conservation District regulations, will result in the hard surfacing of less than 3% of each lot. The remainder of the land will be in trees or perennial forage, as it is now. This will mean that the storm water run-off will not be measurably different than it was prior to the development. Therefore it is proposed that no special storm water management is required.

This does not preclude the requirement for appropriate sized culverts, sloping, seeding and other erosion control issues in the installation of approaches to each the properties.

Power & Gas

There is a primary power line along both the north and east boundaries of the subject property. Therefore power is available at the property line of each of the parcels to be created.

There is a domestic natural gas line crossing the properties as shown on Map 8.

Historical and Archaeological Resource Impact Assessment

A request was made to Historical Resource Management of Alberta Government regarding the potential for impact on Historical Resources that could be caused by this development.

They have confirmed that "a Historical Resource Impact Assessment is not required". A copy of their letter is attached as Appendix C

Sewer Service

Each of the proposed lots is large enough to accommodate a variety of sewage disposal systems, all of which comply with the Alberta Private Sewage Systems Standards of Practice for on-site sewage disposal. The contours shown on Map 4 indicate level areas on each of the proposed lots to accommodate on-site disposal systems. Soil analysis to determine suitability for installation of fields will be required if owners wish to use this method, however this was not done at this time. The rolling terrain indicates a variety of soil conditions and a suitable soil analysis in randomly selected sites at this time might produce misleading results. It is therefore recommended that (in accordance with provincial regulations) a soil analysis be completed for the specific area where a sewage disposal field is planned, or another provincially approved method of disposal be used.

In the event that any lot owner chooses to use a sewage treatment system that requires off-site treatment of sanitary sewer, the lot owner will be required to pay the sewer off-site levy fee of $2,034.00.

Fire Protection

Fire Protection is provided to the area by the Volunteer Fire Department under the jurisdiction of the County of Wetaskiwin Fire Chief. Prior to application for subdivision the applicant will consult the County Fire Chief to determine if the property has a suitable location with access for a Fire Pond which would be useful to the general area. If such a location is identified on the subject property the requirements for its construction and/or creation of a Public Utilities Lot will be dealt with during the subdivision approval process.

Zoning

The subject land is presently zoned as "Rural Conservation District (RCV)". There is no need to change the zoning for the uses proposed in this Area Structure Plan. The related map and an excerpt for County of Wetaskiwin Land Use By-Law No 95/54, page 61 are attached as Appendix D

Environmental Protection Measures

County of Wetaskiwin Land Use By-Law No. 95/54 section 8.6 specifies the amount of clearing of natural vegetation that can be done on a parcel zoned as Rural Conservation District. At time of subdivision a restrictive covenant can be placed on each new title by the County which restricts clearing of trees to no more than 40% of the total area of each lot.

Public Consultation

The applicant has identified 30 parcels of land which are adjacent, or very close to the subject property. Based on a Land Title search on May 19, 2007 these 30 parcels are owned by a total of 27 different parties. The applicant mailed a letter of explanation of the proposal along with a map to each of these parties prior to submission of this plan to the County of Wetaskiwin for approval. The adjacent landowners were invited to give suggestions and express any concerns. The map showing the adjacent landowners and a copy of the letter that was sent to them is shown on Appendix E.

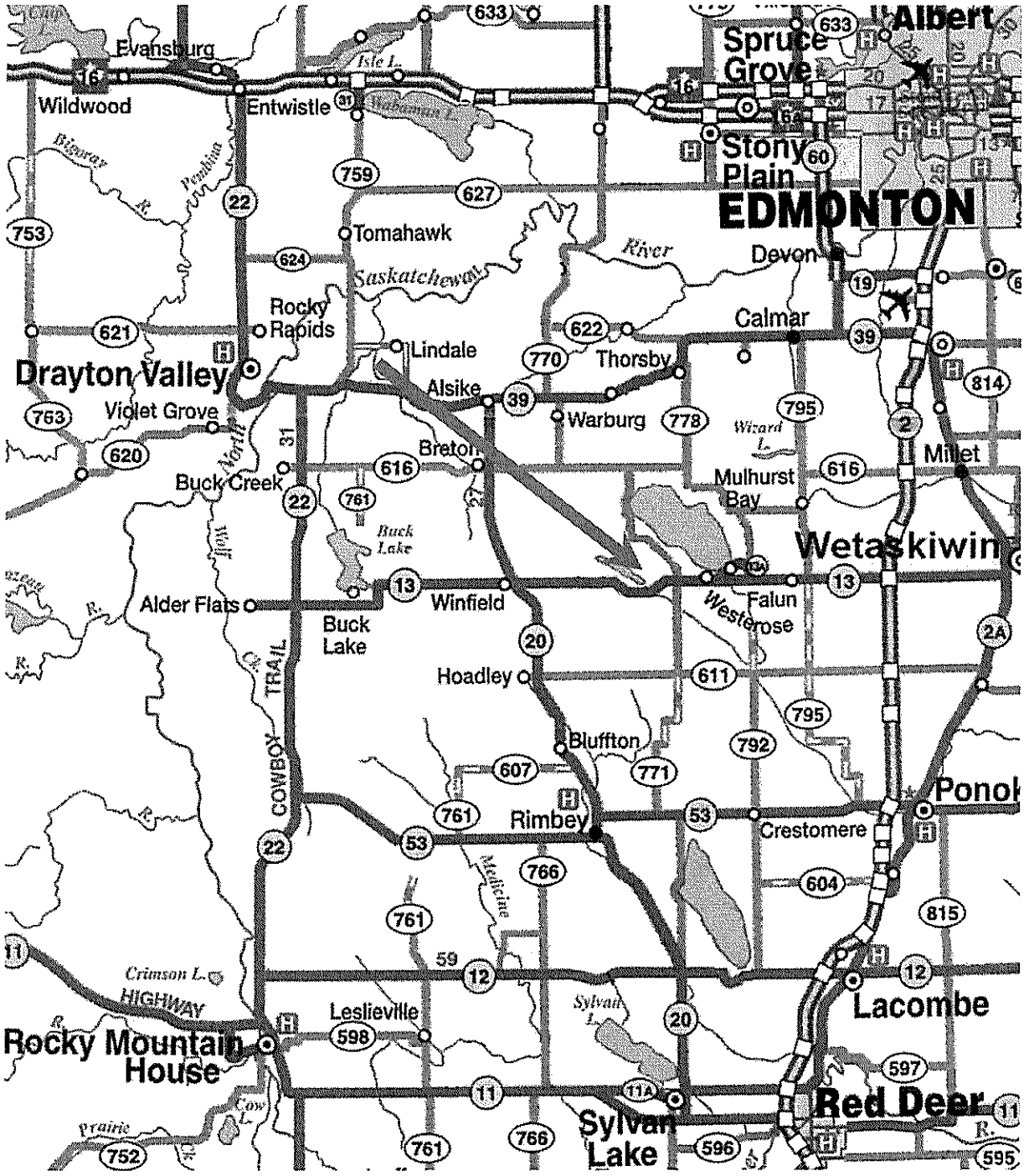
There were two responses form adjacent landowners who replied by telephone. Both requested that they be advised when the lots would be available for sale as they had friends or relatives who would be interested in purchasing.

Municipal Reserves

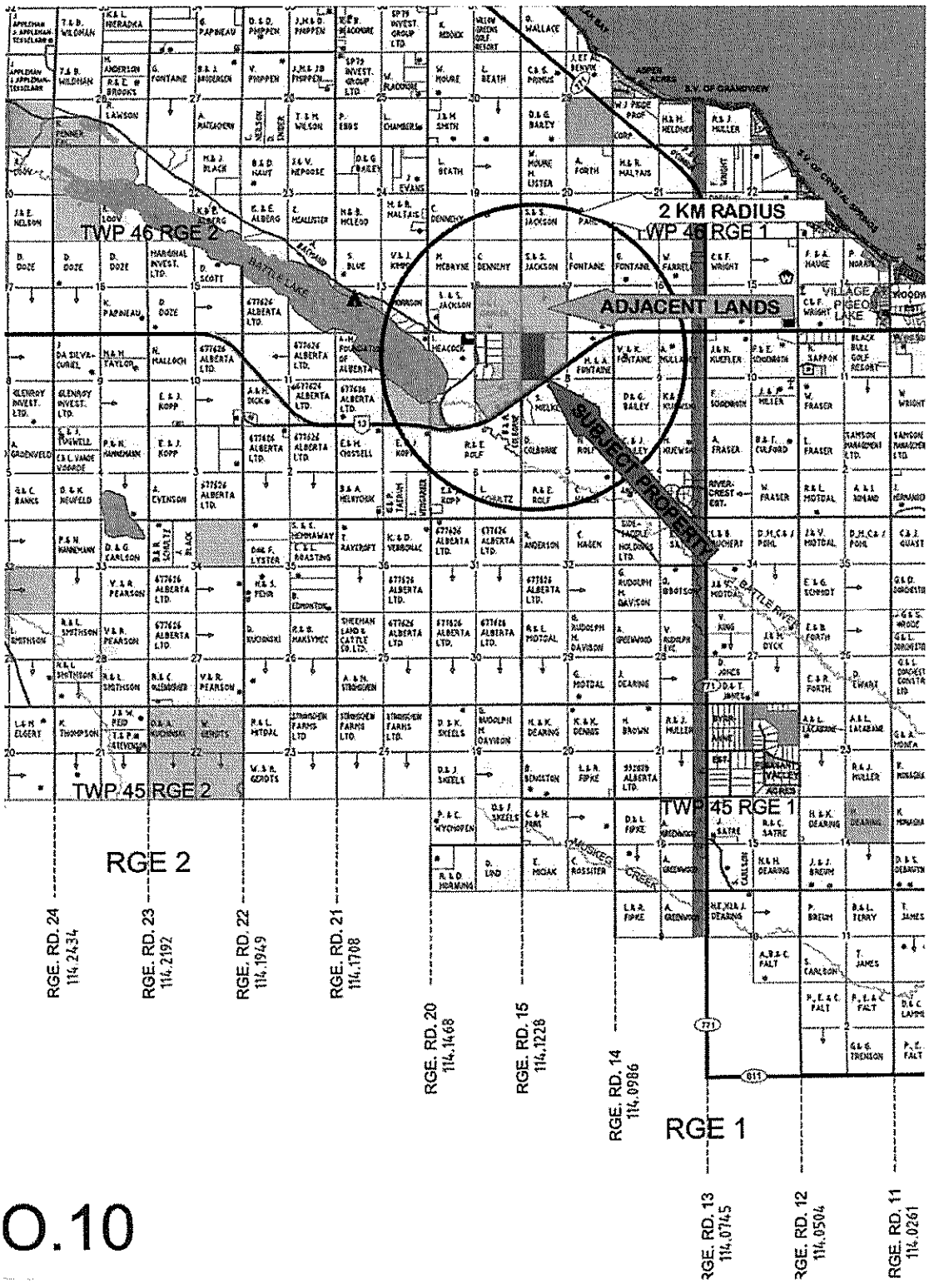
There is no "Deferred Reserve Caveat" registered on the title to the subject lands. Therefore it is assumed that reserves are due. In view of the intent of the "Rural Conservation District" it is appropriate that the opportunity for a reserve land base be maintained. Therefore reserves should be deferred on the remainder of the parcel rather that paying cash in lieu of reserves.

Map 1

Showing Subject Property Relative to major centres in Alberta



Map 2
Subject Property and Adjacent Lands in County of Wetaskiwin



"MAP 3"

CONCEPTUAL PLAN
Showing
Proposed Subdivision within part of the
N.W. 1/4 Sec. 8, Twp. 46, Rge. 1, W5M.
all within the
N.W. 1/4 Sec. 8, Twp. 46, Rge. 1, W5M.

COUNTY OF WETASKIWIN NO. 10

SCALE 1:5000 OCTOBER, 2007.

0 125 250 500metres

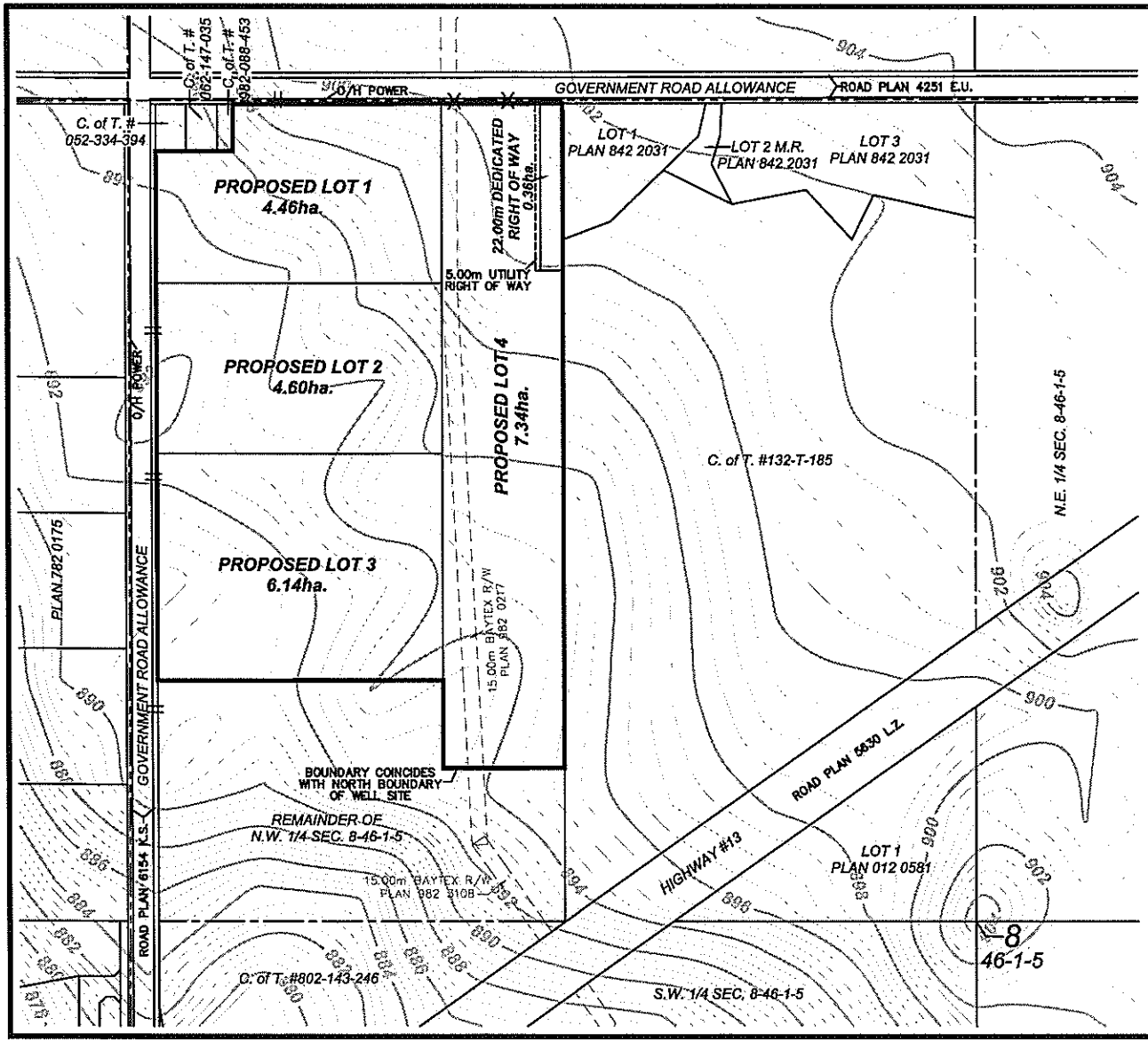
NOTES:

Distances shown are in metres.
Area dealt with by this plan is outlined thus ——— and contains 22.89ha.(56.56ac.)
Existing approaches shown thus ><
Proposed approaches shown thus ><
Contours are shown in 0.50 meter increments

N

DRAWN BY: AR	OLSON SURVEYS LTD.
DATE: October 22, 2007.	SUITE 11, 5033-52ND STREET
SCALE: 1:5000	LACOMBE, AB. T4L 2A6
FILE NO.: 1247-007-07	PHONE:(403)782-5358
DRAWING NO.: 124700707C.DWG	FAX:(403)782-3508

"MAP 4"



CONCEPTUAL PLAN
Showing
Proposed Subdivision within part of the N.W. 1/4 Sec. 8, Twp. 46, Rge. 1, W5M. all within the N.W. 1/4 Sec. 8, Twp. 46, Rge. 1, W5M.

COUNTY OF WETASKIWIN NO. 10

SCALE 1:5000 OCTOBER, 2007.

0 125 250 500metres

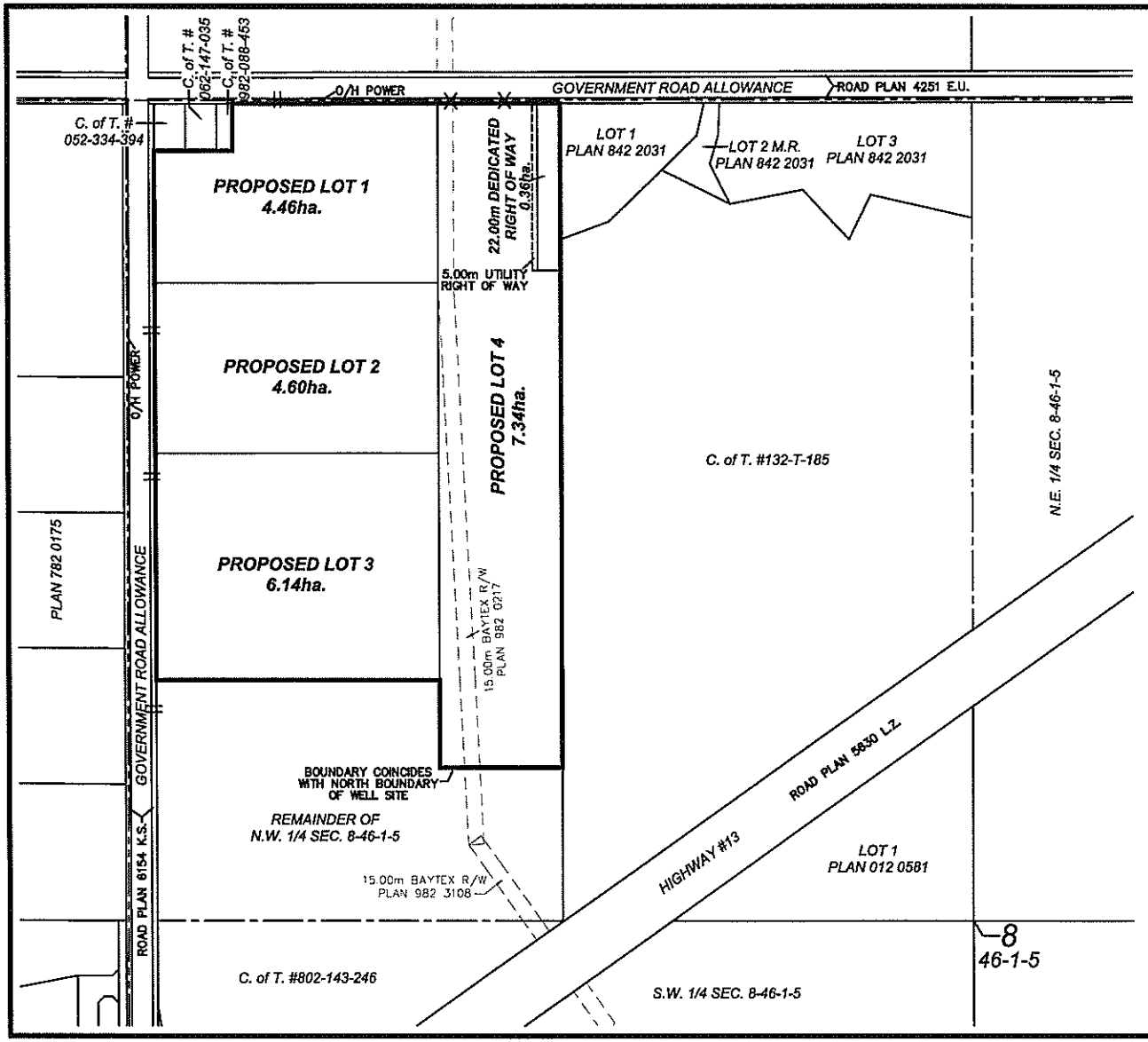
NOTES:

Distances shown are in metres.
Area dealt with by this plan is outlined thus ——— and contains 22.89ha.(56.56ac.)
Existing approaches shown thus)(
Proposed approaches shown thus ||
Contours are shown in 0.50 meter increments

N

DRAWN BY: AR	OLSON SURVEYS LTD.
DATE: October 22, 2007.	SUITE 11, 5033–52ND STREET
SCALE: 1:5000	LACOMBE, AB. T4L 2A6
FILE NO.: 1247–007–07	PHONE:(403)782–5358
DRAWING NO.: 124700707C.DWG	FAX:(403)782–3508

"MAP 5"



CONCEPTUAL PLAN
Showing
Proposed Subdivision within part of the
N.W. 1/4 Sec. 8, Twp. 46, Rge. 1, W5M.
all within the
N.W. 1/4 Sec. 8, Twp. 46, Rge. 1, W5M.

COUNTY OF WETASKIWIN NO. 10

SCALE 1:5000 OCTOBER, 2007.

0 125 250 500metres

NOTES:

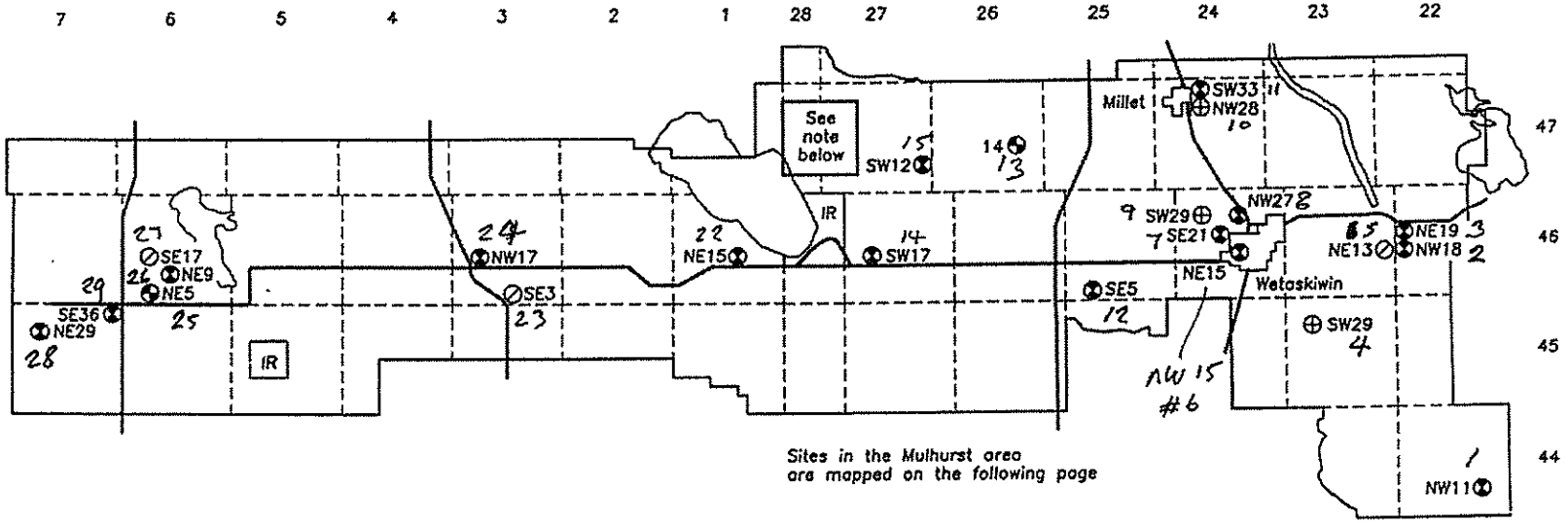
Distances shown are in metres.
Area dealt with by this plan is outlined thus ——— and contains 22.89ha.(56.56ac.)
Existing approaches shown thus
Proposed approaches shown thus
Contours are shown in 0.50 meter increments

N

DRAWN BY: AR	OLSON SURVEYS LTD.
DATE: October 22, 2007.	SUITE 11, 5033–52ND STREET
SCALE: 1:5000	LACOMBE, AB. T4L 2A6
FILE NO.: 1247–007–07	PHONE: (403)782–5358
DRAWING NO.: 124700707C.DWG	FAX: (403)782–3508

Map 6
County of Wetaskiwin - Active and Closed Disposal Sites

County of Wetaskiwin
Active and Closed Waste Disposal Sites



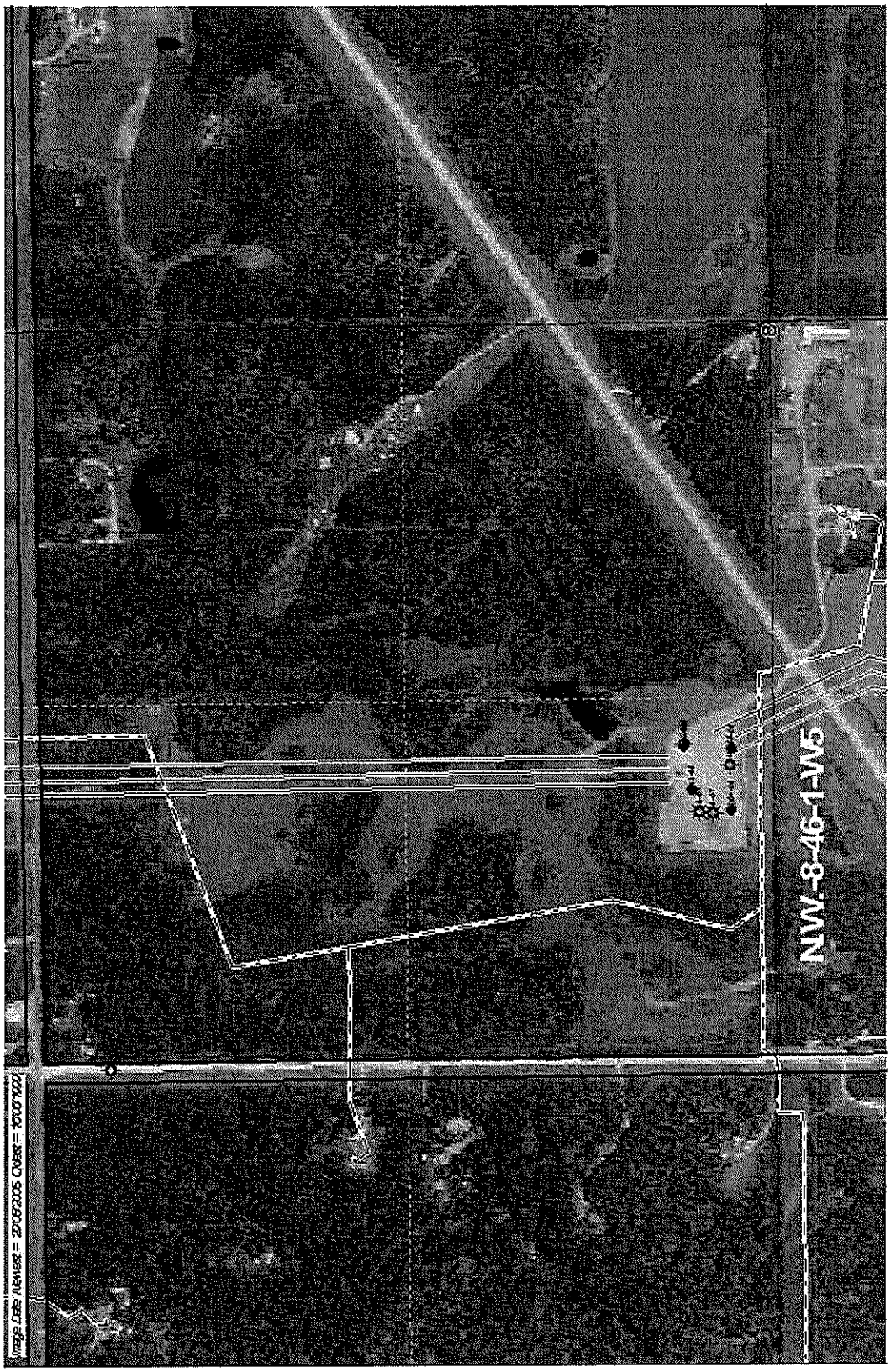
Sites in the Mulhurst area are mapped on the following page

Waste disposal and transfer sites

- Municipal landfill, active or closed
- Municipal transfer station, no on-site disposal
- Private landfill
- Conflicting records

RW/Landfillsc

Map 7
Pipeline Locations



Appendix A

Copy of Owner Consent & Current Title

Leo T. Fontaine and
Darlene May Fontaine
145 Parkview Drive
Wetaskiwin, AB
T9A 3J6

January 3, 2007

To;

Norm Moore
Moore's Agri-Trade Ltd.
Box 67, Alder Flats, AB T0C0A0

Re: NW 8-46-1-W5, 77.66 acres as described on Title # 032 312 738

As registered owners of above property we hereby appoint you to act as agent in obtaining Approval to Subdivide. All costs are to be paid by Bradley Fontaine who holds (or will hold) an Option to Purchase above land. All decisions as to details of subdivision shall be with Bradley Fontaine.

Leo T. Fontaine

Darlene May Fontaine

APPENDIX A

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0015 680 465	5;1;46;8;NW	032 312 738

LEGAL DESCRIPTION

THE NORTH WEST QUARTER OF SECTION EIGHT (8)
TOWNSHIP FORTY SIX (46)
RANGE ONE (1)
WEST OF THE FIFTH MERIDIAN
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:
(A) .364 HECTARES (0.90) OF AN ACRE
MORE OR LESS AS SHOWN ON ROAD PLAN 4251EU
(B) ALL THAT PORTION DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTH WEST CORNER OF THE SAID QUARTER
SECTION THENCE SOUTHERLY ALONG THE WEST BOUNDARY THEREOF
ONE HUNDRED AND SIXTY FIVE (165) FEET, THENCE EASTERLY AND
PARALLEL TO THE NORTH BOUNDARY THEREOF TWO HUNDRED AND SIXTY
FOUR (264) FEET, THENCE NORTHERLY AND PARALLEL TO THE SAID
WEST BOUNDARY TO THE SAID NORTH BOUNDARY,
THENCE WESTERLY ALONG THE SAID NORTH BOUNDARY TO THE
POINT OF COMMENCEMENT CONTAINING .405 HECTARES (1) ACRE MORE OR LESS
(C) .380 HECTARES (0.94) OF AN ACRE MORE OR LESS
AS SHOWN ON ROAD PLAN 6154KS
(D) 32.2 HECTARES (79.50) ACRES MORE OR LESS
AS DESCRIBED IN CERTIFICATE OF TITLE 132T185
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: COUNTY OF WETASKIWIN NO. 10

REFERENCE NUMBER: 161P178

(CONTINUED)

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
032 312 738	25/08/2003	TRANSFER OF LAND	$5,150	SEE INSTRUMENT

OWNERS

LEO T FONTAINE

AND
DARLEEN MAY FONTAINE
BOTH OF:
145 PARKVIEW DRIVE
WETASKIWIN
ALBERTA T9A 3J6
AS JOINT TENANTS

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
822 219 414	05/10/1982	UTILITY RIGHT OF WAY GRANTEE - ICG UTILITIES (PLAINS-WESTERN) LTD.
942 365 534	28/11/1994	CAVEAT RE : SURFACE LEASE CAVEATOR - PENN WEST PETROLEUM LTD.. C/O P.O.BOX 1450 STATION 'M" CALGARY ALBERTA T2P2L6 (DATA UPDATED BY: TRANSFER OF CAVEAT 962018482) (DATA UPDATED BY: CHANGE OF ADDRESS 012208290) (DATA UPDATED BY: TRANSFER OF CAVEAT 022005369) (DATA UPDATED BY: CHANGE OF ADDRESS 032438154) (DATA UPDATED BY: CHANGE OF NAME 052438330)

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		(DATA UPDATED BY: CHANGE OF NAME 072150189)
972 115 839	28/04/1997	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - PENN WEST PETROLEUM LTD.. C/O P.O.BOX 1450 STATION 'M" CALGARY ALBERTA T2P2L6 (DATA UPDATED BY: CHANGE OF ADDRESS 012208889) (DATA UPDATED BY: TRANSFER OF CAVEAT 022005369) (DATA UPDATED BY: CHANGE OF ADDRESS 032437941) (DATA UPDATED BY: CHANGE OF NAME 052438395) (DATA UPDATED BY: CHANGE OF NAME 072154908)
972 214 375	22/07/1997	CAVEAT RE : RIGHT OF WAY AGREEMENT CAVEATOR - PENN WEST PETROLEUM LTD.. C/O P.O.BOX 1450 STATION 'M" CALGARY ALBERTA T2P2L6 (DATA UPDATED BY: CHANGE OF ADDRESS 012208400) (DATA UPDATED BY: TRANSFER OF CAVEAT 012417737) (DATA UPDATED BY: CHANGE OF ADDRESS 032438093) (DATA UPDATED BY: CHANGE OF NAME 052438501) (DATA UPDATED BY: CHANGE OF NAME 072154999)
972 263 008	02/09/1997	CAVEAT RE : RIGHT OF WAY AGREEMENT CAVEATOR - PENN WEST PETROLEUM LTD.. C/O P.O.BOX 1450 STATION 'M" CALGARY ALBERTA T2P2L6 (DATA UPDATED BY: CHANGE OF ADDRESS 012208890) (DATA UPDATED BY: TRANSFER OF CAVEAT 012417737) (DATA UPDATED BY: CHANGE OF ADDRESS 032438087) (DATA UPDATED BY: CHANGE OF NAME 052438553) (DATA UPDATED BY: CHANGE OF NAME 072158962)
072 110 114	24/02/2007	CAVEAT RE : OPTION TO PURCHASE CAVEATOR - BRADLEY LEO FONTAINE

(CONTINUED)

REGISTRATION NUMBER | DATE (D/M/Y) | PARTICULARS

CAVEATOR - PATRICIA GAY FONTAINE
BOTH OF:
C/O VICKERSON & HANKINSON
PO BOX 6600
WETASKIWIN
ALBERTA T9A2G3
AGENT - ROBERT J HANKINSON

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 20 DAY OF MAY, 2007 AT 01:58 P.M.

ORDER NUMBER:8325059

CUSTOMER FILE NUMBER: Fontaine

END OF CERTIFICATE

Appendix B

Groundwater Study by Sabatini Earth Technologies Inc

SABATINI EARTH TECHNOLOGIES INC.

203, 6919 - 32nd AVENUE N.W.
CALGARY, ALBERTA T3B 0K6
TEL: (403) 247-1813
FAX: (403) 247-1814

12323 - 67th STREET
EDMONTON, ALBERTA T5B 1N1
TEL: (780) 436-0844
FAX: (780) 435-1812

Moore's Agri-Trade Ltd.
Box 67
Alder Flats, Alberta
T0C 0A0

April 2, 2007
Our File: E0702-1707

Attention: **Mr. Norm Moore, Broker**

Dear Sir:

Re: Domestic Groundwater Evaluation
Proposed Country Residential Subdivision
Portion of NW 8 – 46 – 1 – W5M
Wetaskiwin County, Alberta

1.0 INTRODUCTION

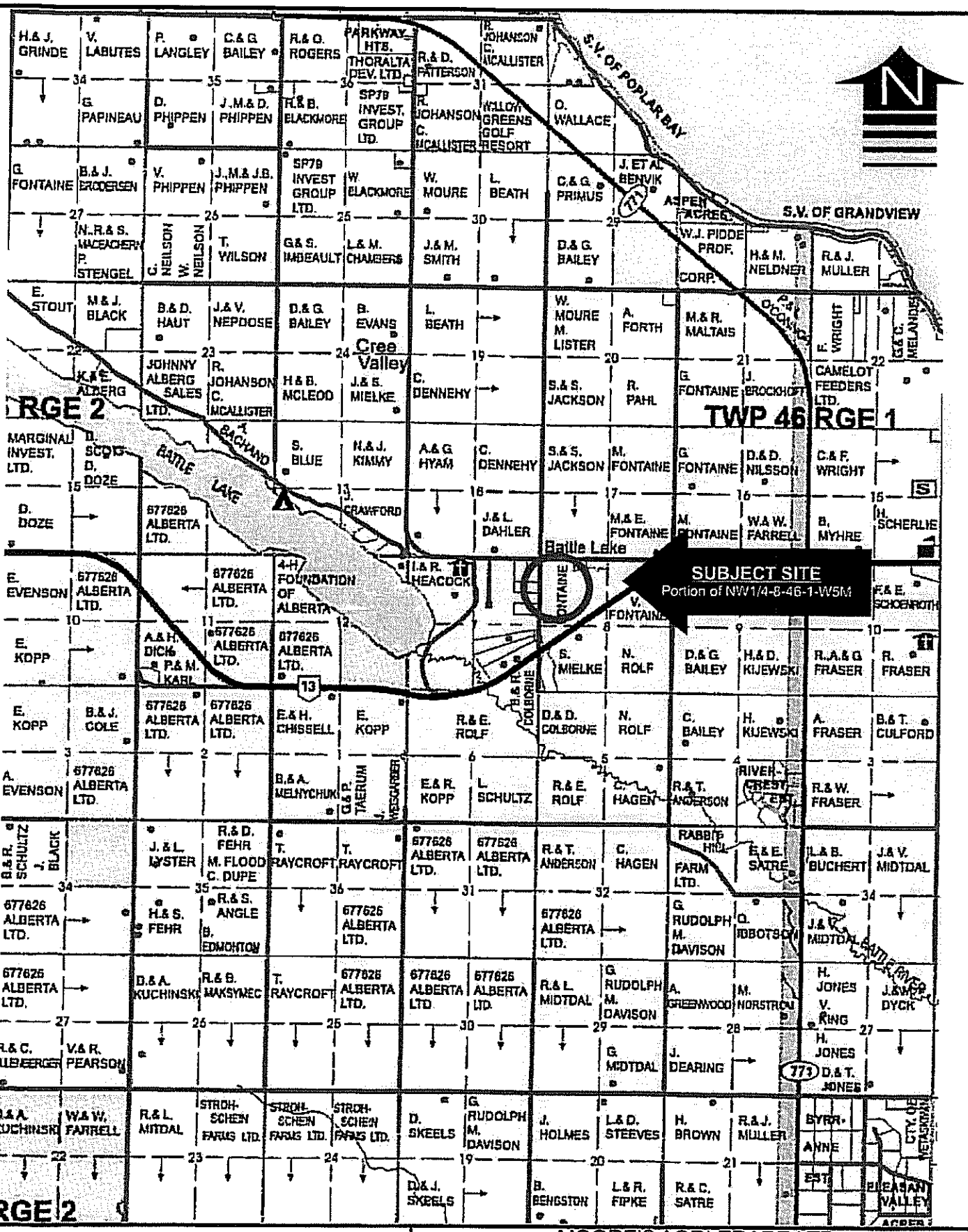
It is our understanding that Wetaskiwin County requires an assessment to determine whether there is sufficient domestic groundwater at the above referenced subdivision to service approximately 4 additional lots. The Alberta Water Act (1999)[1] requires that 0.523 igpm (Imperial gallons per minute) be 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 in the area. Based on the current data, there are 7 existing water wells on the quarter section. Therefore, the total water well yield requirement for the site, based on 4 additional lots and 7 existing wells, is approximately 6 igpm.

A review of water well records available for a 1.5-mile (2.4-kilometer) radius from the site was carried out. 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 site is located near Battle Lake, Alberta. It is legally described as a portion of the northwest quarter of Section 8, Township 46, Range 1, west of the Fifth Meridian within Wetaskiwin County, Alberta (see Figure 1, following). The site is bounded on the west by Range Road 15, on the south

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



SABATINI EARTH TECHNOLOGIES INC.

12323 - 67 Street NW, Edmonton, Alberta
Phone: (780) 438-0844
Fax: (780) 435-1812

MOORE'S AGRI-TRADE LTD.

Proposed Country Residential Subdivision
Portion of NW 8-46-1-W5M, Wetaskiwin County, Alberta
County Map Showing Site Location

Job No: E0702-1707	Date: April 2, 2007	Figure: 1

by a quarter section line, and on the north by Township Road 462. It is understood that the subject property is comprised of approximately 53.0 acres (21.4 hectares) located in the western half, of which all of it will be subdivided into 4 additional country residential lots.

3.0 SURFICIAL GEOLOGY

According to published surficial geology reports[2], the terrain in the area is broadly classified as draped moraine glacial deposits of even thickness with minor amounts of water-sorted material and local bedrock exposures up to 10 meters thick. The region includes areas of undifferentiated subglacially molded deposits with streamlined features. The topography in the general area is flat to undulating reflecting topography of underlying bedrock and other deposits.

4.0 HYDROGEOLOGY

The upper bedrock in the general area of interest is the Paskapoo Formation, which extends to a depth of approximately 1500 feet (450 meters) below ground surface and consists mainly of sandstone and shale units. The projected long term yield for individual water wells completed through the Paskapoo aquifer is mainly 10 to 100 m^3/day (1.5 to 15 igpm). The Paskapoo Formation is underlain by the Edmonton Formation. Water wells completed in the Edmonton Formation are expected to have long-term yields of less than 1 igpm (5 m^3/day).

5.0 REVIEW OF DRILLERS' RECORDS FOR WATER WELLS

The water well data is summarized in Table 1, attached and is based on approximately 118 water well records within a 1.5-mile (2.4-kilometer) radius of the site. The wells range in depth from 32 to 5711 feet and the recorded static water levels in the wells range from less than 4 to 160 feet. The bedrock surface is typically encountered at depths ranging from about 8 to 142 feet. Of the 118 water well records available, approximately 33 percent were abandoned or drilled for chemical and/or test hole purposes. The remaining 79 wells have data on the well completion type and zone of completion. As such, it is determined that approximately 18 percent of the wells were completed with a perforated liner below the outer casing down to depths ranging from 25 to 315 feet. Approximately 48 percent were completed with open hole casings.

The drillers' tests performed to determine short term well yields consisted of bailing, air and/or pump testing for a duration of approximately less than 1 to 16 hours, with the typical test duration ranging from 2 to 4 hours. Transmissivity values of about 50 to 8129 igpd/ft were determined. A majority of the wells were completed in the bedrock aquifer and yielded calculated 20-year yield (Q_{20A}) values of less than 1 to about 134 igpm with an average value of 17 igpm. There are approximately 20 wells with sufficient information for the theoretical apparent yield calculations, of which, only 8 wells, or, approximately 10 percent of wells have calculated 20-year yields of 6 igpm or greater.

---

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

6.0 REVIEW OF GROUNDWATER CHEMISTRY DATA

Available chemical analyses of the water from the wells within a 1.5-mile (2.4-kilometer) 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, Fluoride, and Silica. It is evident from the analyses that water from numerous wells exceeds the Canadian Drinking Water Quality Guidelines (CDWG) (1996)[3] Aesthetic Objective (AO) standards for pH, TDS, and Iron. As well, Fluoride and Sodium 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."*

As noted above, the water still meets the requirements of CDWG. In this case, the water from the bedrock aquifer can be treated with reverse osmosis, iron removal methods, or distillation methods to make it more palatable, if so desired.

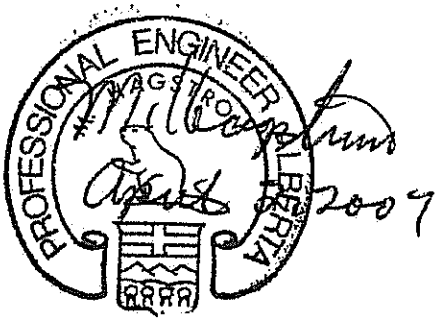
7.0 SUMMARY AND CONCLUSIONS

It is apparent from the above review of the hydrogeology that the Paskapoo Formation bedrock aquifer is the major aquifer underlying the property. The Alberta Water Act (1999) requires that 0.523 igpm (1250 m^3 per year) be available for each household to avoid interfering with existing household users, licenses or traditional agricultural users. It is understood that 4 additional lots are planned for the subdivision. Given that there are 7 existing wells within the quarter section, the total water well yield requirement is approximately 6 igpm. The above data is sufficient to show that the 6 igpm needed to service the proposed country residential lots is available from the bedrock aquifer that underlies the subject site. Therefore, a pump test is not required for this project.

Should you have any questions or concerns regarding our findings and/or recommendations, please contact our office at (780) 438-0844.

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

Respectfully submitted,
Sabatini Earth Technologies Inc.

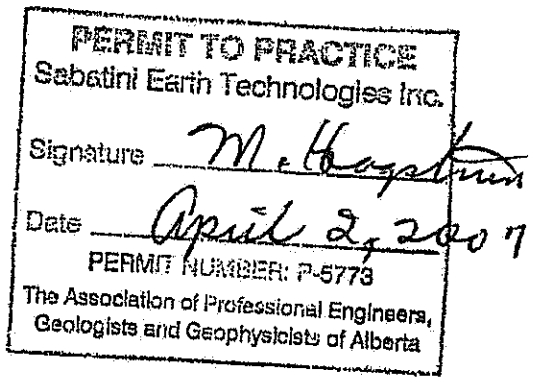


Nathan Shultz, B.A., M.A.
Earth Science Technician
Edmonton Office

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

Distribution: (4) addressee

Attachments: Tables 1 & 2



PORTION OF NW - 8 - 46 - 1 - W5M
Wetaskiwin County, Alberta

TABLE 1: DRILLERS' RECORDS FOR WATER WELLS

No.	Location	Owner	Location Verified	Driller/Year	Well Depth	Water Level	Zone of Completion		Testing				Transmissity	Q_{20A}	Other
							Completion Type /	Lithology	Type	Rate	Duration	Drawdown			
					(ft)	(ft)	Depth (ft)	(permeable zones)		(lgpm)	(h)	(ft)	(lgpd/ft)	(lgpm)	
1	04-04-46-1-W5	#52	Field	Unknown	100	-	Unknown	Clay, Shale	-	-	-	-	-	-	Flowing Shot Hole
2	12-04-46-1-W5	Nilsson, A.	No	Johson Glen/ 1969	120	18	Casing/Open Hole	Clay, Shale	Baller	4	-	-	-	-	Bedrock at 120 ft
3	13-04-46-1-W5	California Std #3E	Field	Structural Test Hole/ 1952	804	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
4	NE-04-46-1-W5	Kijewski, H.	Map	Fraser, Ron/ 1978	135	118	Casing/Open Hole	Clay, Shale, Sandstone	Baller	8	2	-	-	-	Bedrock at 70 ft
5	SW-04-46-1-W5	Anderson, B.	No	Fiveland N/ 1959	140	40	Casing/Open Hole	Sand, Clay, Limestone, Shale	Pump	7	4	-	-	-	Bedrock at 140 ft
6	SW-04-46-1-W5	Unknown	No	Starkey Drilling/ 1979	128	70	Casing	Topsoil, Sandstone	Pump	6	8	57	102.3	-	Bedrock at 128 ft
7	SW-04-46-1-W5	Anderson, B.	Map	Johson Glen/ 1966	140	38	Casing/Open Hole	Clay, Shale	Baller	30	2	-	-	-	Bedrock at 140 ft
8	SW-04-46-1-W5	#617	Field	Unknown	80	-	Unknown	Unknown	-	-	-	-	-	-	Flowing Shot Hole
9	06-05-46-1-W5	Northern Geophysical #813	Field	Unknown	70	-	Unknown	Unknown	-	-	-	-	-	-	Flowing Shot Hole
10	NE-05-46-1-W5	Rolf, C.	Map	Fraser, Ron/ 1990	135	54	Open Hole	Clay, Shale	Baller	3	2	26	93.8	-	Bedrock at 90 ft
11	NE-05-46-1-W5	Christianson, A.	No	Fiveland N/ 1963	82	6	Open Hole	Clay, Sandstone, Shale	Unknown	12	4	-	-	-	Bedrock at 16 ft
12	NE-05-46-1-W5	Rolf, R.	No	Other	-	-	Unknown	Unknown	-	-	-	-	-	-	Spring
13	NW-05-46-1-W5	Midtdal, R.	Map	Fraser, Ron/ 1973	105	30	Casing/Open Hole	Clay, Shale	Unknown	10	1	25	293.4	-	Bedrock at 35 ft
14	NW-05-46-1-W5	Midtdal, R.	Map	Fraser, Ron/ 1971	32	27	Casing/Open Hole	Clay, Sandstone, Shale	Unknown	4	1	-	-	-	Bedrock at 24 ft
15	SE-05-46-1-W5	Hayden, C.	Map	Fiveland N/ 1961	98	60	Casing/Open Hole	Clay, Sand, Sandstone, Shale	Pump	4	2	-	-	-	Bedrock at 18 ft
16	04-06-46-1-W5	California Std #4B	Field	Unknown/ 1953	1000	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
17	06-06-46-1-W5	Petro-Can #38 ATCO	Field	Aiken Basin Drilling Ltd./ 1985	100	20	Casing/Open Hole	Sandstone, Shale	Air	75	2	80	762.1	-	Bedrock at 37 ft
18	16-06-46-1-W5	#X9	Field	Unknown/ 1962	80	-	Unknown	Shale, Sandstone	-	-	-	-	-	-	Flowing Shot Hole
19	SE-06-46-1-W5	Schultz, Lenna	No	Tall Pine Drilling/ 1995	120	52	Casing/Perforated Liner/ 90-120	Sand, Shale, Sandstone	Air	2	10	32	62.3	0.8	Bedrock at 40 ft
20	SE-06-46-1-W5	Torgness, G.	No	Fraser, Ron/ 1975	45	16	Casing/Open Hole	Clay, Shale, Sand	Pump	10	2	2	4064.5	-	Bedrock at 40 ft
21	SW-06-46-1-W5	Midtdol, R.	Map	Fraser, Ron/ 1979	73	48	Casing/Open Hole	Clay, Shale	Baller	8	2	-	-	-	Bedrock at 32 ft
22	02-07-46-1-W5	#225	Field	Unknown/ 1980	60	-	Unknown	Unknown	-	-	-	-	-	-	Flowing Shot Hole
23	NE-07-46-1-W5	Cormack, R.	No	Fraser, Ron/ 1992	90	30	Open Hole	Clay, Shale, Sandstone	Baller/ Pump	10	3	2	4297.0	-	Bedrock at 25 ft
24	NE-07-46-1-W5	Hunter, M.	No	Fiveland N/ 1962	68	29	Casing/Open Hole	Clay, Shale	Pump	5	3	-	-	-	Bedrock at 36 ft

PORTION OF NW - 8 - 46 - 1 - W5M
Wetaskiwin County, Alberta

TABLE 1: DRILLERS' RECORDS FOR WATER WELLS

No.	Location	Owner	Location Verified	Driller/Year	Well Depth	Water Level	Zone of Completion		Testing				Transmissity	Q_{20A}	Other
							Completion Type /	Lithology	Type	Rate	Duration	Drawdown			
					(ft)	(ft)	Depth (ft)	(permeable zones)		(igpm)	(h)	(ft)	(igpd/ft)	(igpm)	
25	NE-07-46-1-W5	Harris, D.	Phone	Unknown	100	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
26	NE-07-46-1-W5	Sharon, D.	No	Fraser, Ron/ 1980	75	30	Casing/Open Hole	Clay, Sandstone, Shale	Baller	10	2	8	1016.1	-	Bedrock at 8 ft
27	NE-07-46-1-W5	Preston, R. W.	Phone	Unknown	143	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
28	NE-07-46-1-W5	Kleman, C.	No	Fraser, Ron/ 1989	75	35	Casing/Open Hole	Clay, Shale, Sandstone	Baller	10	2	7	1161.3	-	Bedrock at 26 ft
29	NE-07-46-1-W5	Harris, D.	No	Fraser, Ron/ 1996	90	30	Perforated Casing/Liner/ 82-90	Clay, Shale	Baller/ Pump	8	2	2	3251.6	55.8	Bedrock at 30 ft
30	NE-07-46-1-W5	Rogocki, Frank	No	Fraser, Ron/ 1995	60	31.3	Perforated Casing/Liner/ 40-60	Clay, Shale, Sandstone	Baller/ Pump	10	2	2	4064.5	11.7	Bedrock at 40 ft
31	NE-07-46-1-W5	Melnyk, J.	No	Inglis Water Well Drilling/ 1987	140	47	Casing/Perforated Liner/ 70-75	Clay, Shale, Sandstone, Coal	Baller	15	2	23	530.2	4.0	Bedrock at 45 ft
32	NW-07-46-1-W5	Heacock, Ian	No	Double H Drilling/ 1977	163	44	Open Hole	Clay, Shale, Sandstone, Bentonite	Baller	2.5	2	-	-	-	Bedrock at 19 ft
33	NW-07-46-1-W5	Battle Lake Church	No	Fraser, Ron/ 1993	70	26	Open Hole	Clay, Shale	Baller/ Pump	10	2	12	677.4	-	Bedrock at 60 ft
34	NW-07-46-1-W5	Heacock, Ian/Lois	No	Bar-K Water Well Drilling Ltd./ 1998	135	46.6	Casing/Perforated Liner/ 105-115	Clay, Shale, Sandstone, Siltstone, Coal	Air	6	2	21	232.3	4.5	Bedrock at 28 ft
35	SE-07-46-1-W5	Treliak, N	No	Fraser, Ron/ 1978	90	66	Casing/Open Hole	Clay, Shale	Unknown	8	2	-	-	-	Bedrock at 70 ft
36	SE-07-46-1-W5	Round, J.	No	Fraser, Ron/ 1970	112	64	Casing/Open Hole	Clay, Sand, Shale	Unknown	6	2	10	487.7	-	Bedrock at 89 ft
37	SE-07-46-1-W5	Colburn, R.	No	Fraser, Ron/ 1988	155	36	Perforated Casing/Liner/ 0-124	Clay, Shale	Baller/ Pump	8	4	4	1784.8	51.8	Bedrock at 60 ft
38	SE-07-46-1-W5	Colburn, Bob	Map	Fraser, Ron/ 1996	60	43	Perforated Casing/Liner/ 40-60	Clay, Sandstone, Shale	Baller/ Pump	5	2	27	150.5	0.8	Bedrock at 35 ft
39	SE-07-46-1-W5	Colborne, David	Map	Warnke Drilling Ltd./ 1998	200	-	Unknown	Clay, Sandstone, Shale	-	-	-	-	-	-	Test Hole
40	04-08-46-1-W5	California Std #4B	Field	Unknown/ 1953	1000	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
41	06-08-46-1-W5	Hudson's Bay Oil & Gas Co. Ltd.	No	Oil Exploratory/ 1978	5711	-	Unknown	Unknown	-	-	-	-	-	-	Oil Exploratory
42	06-08-46-1-W5	Hudson's Bay Oil & Gas Co. Ltd.	Field	W&G Water Wells Ltd./ 1978	80	24	Casing/Open Hole	Shale, Sandstone	Air	80	1	-	-	-	Bedrock at 65 ft
43	08-08-46-1-W5	Rolf, N. A.	Map	Unknown	54	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
44	11-08-46-1-W5	Fontaine	Field	Unknown	250	73.5	Casing/Open Hole	Till, Gravel, Clay, Shale, Sandstone	Pump	20	11	3	6722.4	-	Bedrock at 45 ft
45	12-08-46-1-W5	Fontaine, Leo	Map	Tall Pine Drilling/ 1997	160	73	Casing/Perforated Liner/ 135-160	Clay, Shale, Sandstone	Air	25	2	21	987.7	19.8	Bedrock at 45 ft
46	13-08-46-1-W5	California Std #3C	Field	Unknown/ 1952	800	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole

PORTION OF NW - 8 - 46 - 1 - W5M
Wetaskiwin County, Alberta

TABLE 1: DRILLERS' RECORDS FOR WATER WELLS

No.	Location	Owner	Location Verified	Driller/Year	Well Depth	Water Level	Zone of Completion		Testing				Transmissity	Q_{20A}	Other
							Completion Type /	Lithology	Type	Rate	Duration	Drawdown			
					(ft)	(ft)	Depth (ft)	(permeable zones)		(lgpm)	(h)	(ft)	(lgpd/ft)	(lgpm)	
47	NE-08-46-1-W5	Fontaine, V.	Map	Fraser, Ron/ 1974	82	80	Casing/Open Hole	Clay, Shale, Sandstone	Pump	10	2	-	-	-	Bedrock at 52 ft
48	NE-08-46-1-W5	Doble, M.	No	Unknown/ 1963	85	-	Unknown	Unknown	-	-	-	-	-	-	Unknown
49	NE-08-46-1-W5	Fontaine	Map	Burgess, George Well Drilling Ltd./ 1980	92	38	Casing/Open Hole	Clay, Sand, Sandstone	Baller	12	2	12	812.9	-	Bedrock at 66 ft
50	NE-08-46-1-W5	Fontaine, L.	No	Unknown	110	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
51	NW-08-46-1-W5	Doble, Mary	Map	Warnke Drilling Ltd./ 1990	120	20	Open Hole/ 80-120	Clay, Shale, Sandstone	Pump	8	2.8	50	136.2	2.7	Bedrock at 90 ft
52	NW-08-46-1-W5	McIntosh, A.	No	Fraser, Ron/ 1984	70	54	Casing/Open Hole	Clay, Shale	Baller	5	2	-	-	-	Bedrock at 65 ft
53	NW-08-46-1-W5	Fontain, B.	No	Bob's Drilling & Backhoe Service	120	65	Casing/Open Hole	Clay, Shale, Sandstone	Baller	7	1.3	35	152.7	-	Bedrock at 65 ft
54	NW-08-46-1-W5	Gilbert, B.	No	Fraser, Ron/ 1988	74	33	Casing	Clay, Sand, Sandstone, Shale	Baller	5	2	22	184.8	-	Bedrock at 60 ft
55	NW-08-46-1-W5	Fontaine, M.	Map	Johnson, Glen/ 1967	142	99	Casing/Open Hole	Clay, Shale	Baller	16	2	-	-	-	Bedrock at 142 ft
56	SE-08-46-1-W5	Forsen, R.	No	Unknown	-	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
57	SW-08-46-1-W5	Mielke, Melvin	No	Fraser, Ron/ 1990	120	70	Open Hole	Clay, Shale, Sandstone	Baller	7	2	-	-	-	Bedrock at 41 ft
58	SW-08-46-1-W5	Mielke, Sandra	No	Warnke Drilling Ltd./ 1993	130	88	Casing/Perforated Liner/ 80-130	Clay, Sandstone, Shale	Pump	12	3	6	1718.8	23.8	Bedrock at 35 ft
59	SW-08-46-1-W5	Mielke, Sandra	No	Warnke Drilling Ltd./ 1995	140	30.9	Casing/Open Hole	Clay, Sandstone, Shale	Pump	5	2	-	-	-	Bedrock at 25 ft
60	SW-08-46-1-W5	Bauman, A.	Map	Double H Drilling/ 1977	72	43	Casing/Open Hole	Clay, Shale, Sandstone	Baller	3.5	2	22	129.3	-	Bedrock at 37 ft
61	SW-08-46-1-W5	Legace, C.	No	Fraser, Ron/ 1996	60	20	Perforated Casing/Liner/ 40-60	Clay, Shale, Sandstone	Baller/ Pump	8	2	4	1625.8	10.7	Bedrock at 34 ft
62	12-09-46-1-W5	Baytex Oil Co #Rig	No	Tall Pine Drilling/ 1995	240	160	Perforated Casing/Liner/ 160-240	Topsoil, Clay, Shale, Sandstone	Pump	30	2	-	-	-	Test Hole
63	NE-09-46-1-W5	Mullaney, L.	No	Burgess, George Well Drilling Ltd./ 1980	200	122	Casing/Open Hole	Clay, Sandstone, Shale	Baller/ Pump	10	2	13	625.3	-	Bedrock at 78 ft
64	NW-09-46-1-W5	Fontaine, Mervin	Map	Fraser, Ron/ 1991	148	97	Perforated Casing/Liner/ 100-148	Clay, Shale, Sandstone	Baller/ Pump	8	2	3	2167.7	2.1	Bedrock at 92 ft
65	04-16-46-1-W5	Calif Std Co #30	Field	Unknown/ 1952	840	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
66	13-16-46-1-W5	Calif Std Co #56	Field	Unknown/ 1952	814	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
67	NE-16-46-1-W5	Nilsson, D.	No	Unknown	135	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
68	NE-16-46-1-W5	Nilsson, D.	No	Unknown	358	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
69	NE-16-46-1-W5	#40-74	No	Unknown/ 1974	700	-	Unknown	Clay, Sandstone, Shale, Silt, Coal	-	-	-	-	-	-	Test Hole
70	NE-16-46-1-W5	Nilsson, D.	Map	Fraser, Ron/ 1999	150	95.5	Perforated Casing/Liner/ 120-150	Clay, Sandstone, Shale	Pump/ Air	8	2	21	309.7	2.5	Bedrock at 62 ft

PORTION OF NW - 8 - 46 - 1 - W5M
Wetaskiwin County, Alberta

TABLE 1: DRILLERS' RECORDS FOR WATER WELLS

No.	Location	Owner	Location Verified	Driller/Year	Well Depth	Water Level	Zone of Completion		Testing				Transmissity	Q_{20A}	Other
							Completion Type /	Lithology	Type	Rate	Duration	Drawdown			
					(ft)	(ft)	Depth (ft)	(permeable zones)		(lgpm)	(h)	(ft)	(lgpd/ft)	(lgpm)	
71	NW-16-46-1-W5	Unknown	No	Fiveland N/ 1954	50	22	Casing/Open Hole	Clay, Shale	Unknown	7	4	-	-	-	Bedrock at 50 ft
72	NW-16-46-1-W5	Brunner, A.	No	Fraser, Ron/ 1978	116	41	Casing/Open Hole	Clay, Coal, Shale	Bailer	6	2	2	2438.7	-	Bedrock at 102 ft
73	NW-16-46-1-W5	Fontaine, M.	Map	Double H Drilling/ 1976	106	74	Casing/Open Hole	Clay, Sandstone, Sand, Shale	Bailer/ Pump	10	2	2	4064.5	-	Bedrock at 50 ft
74	SE-16-46-1-W5	Nilsson, G.	Map	Fraser, Ron/ 1971	70	34	Casing/Open Hole	Clay, Sandstone, Shale, Sand	Pump	2	1	24	81.1	-	Bedrock at 24 ft
75	SE-16-46-1-W5	Lakedell School	Field	Unknown	100	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
76	SE-16-46-1-W5	Nilsson, G.	No	Fiveland N/ 1959	170	129	Casing/Open Hole	Clay, Sandstone, Sand	Pump	5	3	-	-	-	Bedrock at 40 ft
77	SE-16-46-1-W5	Nilsson, D.	Map	Unknown	160	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
78	SE-16-46-1-W5	Nilsson, D.	Map	Fraser, Ron/ 1986	200	158	Casing/Perforated Liner	Clay, Shale, Sandstone	Bailer	2	4	22	81.1	-	Bedrock at 52 ft
79	SE-16-46-1-W5	Nilsson, D.	Map	Unknown	240	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
80	SW-16-46-1-W5	McNalley, Ron/Juanita	No	Warnke Drilling Ltd./ 1999	150	83	Casing/Open Hole	Clay, Shale, Sandstone	Pump	10	2	1	8129.0	-	Bedrock at 138 ft
81	13-17-46-1-W5	Calif Std Co #4A	Field	Unknown/ 1953	900	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
82	NE-17-46-1-W5	Fontaine, M.	No	Fraser, Ron/ 1995	70	37.6	Perforated Casing/Liner/ 50-70	Clay, Sandstone, Shale	Bailer/ Pump	8	4	13	549.2	2.2	Bedrock at 45 ft
83	NW-17-46-1-W5	Fontaine, M.	No	Fraser, Ron/ 1977	112	77	Casing/Open Hole	Clay, Sand, Gravel, Sandstone, Shale	Bailer/ Pump	10	2	-	-	-	Bedrock at 63 ft
84	SE-17-46-1-W5	Fontaine, M.	No	Burgess, George Well Drilling Ltd./ 1980	110	90	Casing/Open Hole	Clay, Sand, Shale, Sandstone	Pump	10	2	2	4064.5	-	Bedrock at 90 ft
85	SW-17-46-1-W5	Brunner, Donna	No	Unknown	75	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
86	SW-17-46-1-W5	Jackson, Steve	Map	Fraser, Ron/ 1994	130	47.5	Perforated Casing/Liner/ 110-130	Clay, Shale, Sandstone	Bailer/ Pump	8	2	1	6503.2	134.1	Bedrock at 62 ft
87	SW-17-46-1-W5	Mullaney, L.	Map	Fraser, Ron/ 1979	50	45	Casing/Open Hole	Clay, Shale	Pump	10	2	-	-	-	Bedrock at 48 ft
88	SW-17-46-1-W5	Fontain, L.	No	Fiveland N/ 1957	80	45	Casing/Open Hole	Clay, Sand, Shale	Pump	5	3	-	-	-	Bedrock at 80 ft
89	SW-17-46-1-W5	Morris, W.	No	Bob's Drilling & Backhoe Service/ 1974	120	-	Casing/Open Hole	Clay, Sandstone, Shale	Unknown	3	-	-	-	-	Bedrock at 42 ft
90	SW-17-46-1-W5	Laible, C.	No	Fraser, Ron/ 1983	75	35	Casing/Open Hole	Shale, Clay, Sandstone	Bailer	10	2	5	1625.8	-	Bedrock at 40 ft
91	00-18-46-1-W5	Unknown	No	Fiveland N/ 1955	63	4	Casing/Open Hole	Clay, Sand, Shale	Unknown	6	-	-	-	-	Bedrock at 63 ft
92	SE-18-46-1-W5	Korving, A.	No	Bar-K Water Well Drilling Ltd./ 1991	139	50	Casing/Perforated Liner/ 119-139	Clay, Sand, Shale, Siltstone, Sandstone	Pump	6	2.5	38	132.4	3.0	Bedrock at 57 ft
93	SE-18-46-1-W5	Tribiger, E.	No	Fraser, Ron/ 1974	61	28.5	Open Hole	Clay, Sand, Shale	Pump	12	1	-	-	-	Bedrock at 54 ft
94	SE-18-46-1-W5	Archibald, J.	Map	Unknown	80	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry

PORTION OF NW - 8 - 46 - 1 - W5M
Wetaskiwin County, Alberta

TABLE 1: DRILLERS' RECORDS FOR WATER WELLS

No.	Location	Owner	Location Verified	Driller/Year	Well Depth	Water Level	Zone of Completion		Testing				Transmissivity	Q_{20A}	Other
							Completion Type /	Lithology	Type	Rate	Duration	Drawdown			
					(ft)	(ft)	Depth (ft)	(permeable zones)		(lgpm)	(h)	(ft)	(lgpd/ft)	(lgpm)	
95	SE-18-46-1-W5	Archibald, J.	Map	Bob's Drilling & Backhoe Service/ 1989	120	64	Casing/Open Hole	Clay, Sandstone, Shale	Baller/ Pump	8	4	11	649.0	-	Bedrock at 58 ft
96	SE-18-46-1-W5	Archibald, J.	Map	Unknown	90	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
97	SE-18-46-1-W5	Korving, A.	No	Unknown	50	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
98	SE-18-46-1-W5	Nelson, A.	No	Fraser, Ron/ 1961	91	26	Casing/Open Hole	Clay, Sand, Coal, Shale, Sandstone	Pump	2	2	3	541.9	-	Bedrock at 40 ft
99	SE-18-46-1-W5	Hunter, R.	No	Fiveland N/ 1958	65	42	Casing/Open Hole	Clay, Shale, Sandstone	Pump/ Air	5	3	-	-	-	Bedrock at 38 ft
100	SW-18-46-1-W5	Kimmy, W.	No	Fraser Brothers/ 1969	63	56	Casing/Open Hole	Clay, Shale, Sand	Unknown	8	1.5	-	-	-	Bedrock at 59 ft
101	SW-18-46-1-W5	Hyam, A.	Map	Double H Drilling/ 1979	54	31	Casing/Open Hole	Clay, Shale, Sandstone	Baller	8	2	8	812.9	-	Bedrock at 27 ft
102	SW-18-46-1-W5	Hyam, A. A.	No	Unknown	60	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
103	00-19-46-1-W5	Hall, H.	No	Scott Brothers Drilling/ 1961	90	10	Casing/Open Hole	Sand, Muskeg, Clay, Gravel, Shale, Sandstone	Unknown	6	0.8	40	105.2	-	Bedrock at 75 ft
104	SW-19-46-1-W5	Beath, R.	Map	Fraser, Ron/ 1986	120	92	Casing/Open Hole	Clay, Shale, Sandstone	Baller	5	2	12	338.7	-	Bedrock at 35 ft
105	NE-01-46-2-W5	Kopp, E.	Map	Fraser, Ron/ 1995	315	120	Casing/Perforated Liner/ 260-315	Clay, Shale, Sandstone	Baller/ Pump	3	6	32	88.0	4.1	Bedrock at 28 ft
106	NE-01-46-2-W5	Midtdal, A.	Map	Fiveland N/ 1967	38	25	Casing/Open Hole	Clay, Shale	Pump	6	-	-	-	-	Bedrock at 38 ft
107	NE-01-46-2-W5	Midtdal, A.	Map	Fraser, Ron/ 1971	62	40	Casing/Open Hole	Clay, Shale, Sand	Pump	12	1	-	-	-	Bedrock at 40 ft
108	10-12-46-2-W5	Preisnwk, Dodd/Lewis	No	Inglis Water Well Drilling/ 1998	60	6	Casing/Perforated Liner/ 25-60	Clay, Sand, Shale, Sandstone	Baller	15	16	54	292.0	1.8	Bedrock at 24 ft
109	NE-12-46-2-W5	Fontaine, L.	Map	Unknown	140	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
110	SE-12-46-2-W5	Blue Heron Camp Grounds	Map	Unknown	190	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
111	SE-12-46-2-W5	Fontaine, L.	No	Unknown	160	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
112	NE-13-46-2-W5	Kimmy, R.	Map	Fraser, Ron/ 1983	65	50	Casing/Open Hole	Clay, Shale	Baller	6	2	2	2438.7	-	Bedrock at 65 ft
113	SE-13-46-2-W5	Zurkon, W.	No	Fraser, Ron/ 1983	55	18	Casing/Open Hole	Clay, Shale	Baller	5	2	10	406.5	-	Bedrock at 32 ft
114	SE-13-46-2-W5	Freeman, C.	Map	Other/ 1950	160	-	Unknown	Unknown	-	-	-	-	-	-	Test Hole
115	SE-13-46-2-W5	Freeman, C.	No	Other	-	-	Unknown	Unknown	-	-	-	-	-	-	Spring
116	SE-13-46-2-W5	Henderson, D.	Map	Unknown	140	-	Unknown	Unknown	-	-	-	-	-	-	Chemistry
117	SE-13-46-2-W5	Ruggles, A.	No	Fraser, Ron/ 1998	225	127.8	Perforated Casing/Liner/ 200-225	Clay, Shale, Sandstone	Baller/ Pump	6	2	18	271.0	6.5	Bedrock at 30 ft
118	SE-13-46-2-W5	Tabler, Doug	No	Papley Drilling/ 2000	270	81.5	Casing/Perforated Liner/ 160-260	Clay, Gravel, Shale, Sandstone, Siltstone	Pump	3	2	49	49.8	1.3	Bedrock at 62 ft

Portion of NW ¼ - 8 – 46 – 1 – W5M
Wetaskiwin County, Alberta
TABLE 2 – CHEMICAL ANALYSIS FOR WATER WELLS

No.	Location	Well Owner	Well Depth (ft)	Data of Analysis	pH	Conductivity	Fluoride	TDS	Alkalinity	Silica	Iron	Hardness	Calcium	Magnesium	Potassium	Sodium	Nitrite*	Nitrate* & Nitrite*	Chloride	Sulphate	Bicarbonate
1	NE-04-46-1-W5	Kijewski, H.	135	16-Oct-79	8.3	816	0.13	480	429	10	0.04	258	42	37	1.9	90	-0.05	-0.05	-1	50	523
2	NE-04-46-1-W5	Kijewski, H.	135	16-Feb-83	8.2	803	0.13	442	414	9.3	-0.02	245	44	33	1.8	74	-0.05	-0.05	-1	40	504
3	NE-05-46-1-W5	Rolf, R.	-	6-Feb-86	8.1	699	0.1	-	389	13	-0.02	361	69	46	2.4	46	-0.05	-0.05	-1	22	483
4	NW-05-46-1-W5	Midtdal, R.	105	26-Mar-75	8.5	1200	2.22	638	454	-	1	187	73	1	0.6	185	-0.099	-0.099	8	91	536
5	NW-05-46-1-W5	Midtdal, R.	105	14-Apr-75	8.6	800	2.04	-	411	-	0.1	29	9	1	1	191	-0.099	-0.099	5	58	471
6	SW-06-46-1-W5	Midtdol, R.	73	3-Jul-80	8.2	647	-0.05	317	326	11.6	0.07	304	47	45	2.5	12	-	-0.05	2	13	397
7	NE-07-46-1-W5	Harris, D.	100	4-Oct-85	7.9	550	0.15	301	305	14.9	0.08	280	76	22	2.6	11	-	-0.05	-1	-5	372
8	NE-07-46-1-W5	Preston, R. W.	143	15-Dec-81	8.9	1036	0.46	-	457	6.8	-0.02	-5	-1	-1	0.6	230	-	-0.05	-1	65	510
9	11-08-46-1-W5	Fontaine	250	15-Mar-79	8.9	935	0.4	1	457	7.5	-	24	6.1	1.5	1.2	247	-	-	2	71	517
10	NE-08-46-1-W5	Doble, M.	85	23-Feb-81	7.8	645	0.11	345	346	15	7.87	313	78	28	2.9	14	-	-	1	13	421
11	NE-08-46-1-W5	Doble, M.	85	7-Feb-80	7.8	645	0.11	-	346	15	7.87	313	78	28	2.9	14	0.05	0.111	-1	13	421
12	NE-08-46-1-W5	Fontaine, L.	110	29-Apr-83	8.2	714	0.08	417	390	13.9	0.88	146	37	13	1.9	110	-	-0.05	-1	20	475
13	SE-08-46-1-W5	Forsen, R.	-	9-Aug-67	-	-	-	802	356	-	0.07	424	-	-	-	-	-0.01	-	24	148	-
14	NE-16-46-1-W5	Nilsson, D.	135	18-Dec-79	8.1	700	0.1	353	371	-	0.09	346	64	45	2.1	19	-	-0.099	-1	-	452
15	NE-16-46-1-W5	Nilsson, D.	358	12-Mar-79	8.7	714	0.17	425	365	11.8	0.03	-5	-1	-1	0.4	181	-0.05	0.07	2	21	431
16	NW-16-46-1-W5	Fontaine, M.	106	20-Feb-86	8.1	711	0.12	419	414	11.6	0.38	379	86	40	3	24	-	-0.05	6	11	505
17	SE-16-46-1-W5	Lakedell School	100	20-Jun-74	8.6	1110	1.91	612	460	-	0.4	16	6	-1	0.5	243	-0.099	-	-1	98	501
					6.5-8.5 AO		1.5 MAC	=500 AO			=0.3 AO					=200 AO	0.71 MAC	10.0 MAC	=250 AO	=500 AO	

NOTES:
All constituents reported in mg/L except Conductivity in microsiemens/cm, and pH in pH units.
Alkalinity and Hardness expressed as $CaCO_3$.
Hardness generally considered unacceptable if >500 mg/L.
Underlined values indicate exceedance of Canadian Drinking Water Standards.

TDS = Total Dissolved Solids
AO = Aesthetic Objective
MAC = Maximum Acceptable Concentration
CDWG = Canadian Drinking Water Guidelines
* NO_2 & NO_2+NO_3 are expressed as N

Portion of NW ¼ - 8 – 46 – 1 – W5M
Wetaskiwin County, Alberta
TABLE 2 – CHEMICAL ANALYSIS FOR WATER WELLS

No.	Location	Well Owner	Well Depth (ft)	Date of Analysis	pH	Conductivity	Fluoride	TDS	Alkalinity	Silica	Iron	Hardness	Calcium	Magnesium	Potassium	Sodium	Nitrite*	Nitrate* & Nitrite*	Chloride	Sulphate	Bicarbonate
18	SE-16-46-1-W5	Lakedell School	100	20-Jun-74	8.9	1290	0.6	732	545	-	0.2	18	2	3	0.6	292	-0.099	-	3	100	567
19	SE-16-46-1-W5	Lakedell School	100	29-Nov-76	8.5	1160	1.06	755	522	-	-0.05	14	4	-1	0.7	310	-0.099	-0.099	2	124	615
20	SE-16-46-1-W5	Nilsson, D.	160	13-Aug-79	7.6	847	0.1	488	434	11.1	0.42	400	64	58	1.8	45	-	-0.05	-1	57	529
21	SE-16-46-1-W5	Nilsson, D.	160	6-Feb-86	8	849	0.11	490	440	10.8	6.7	396	70	54	2.3	45	-	-0.05	-1	54	537
22	SE-16-46-1-W5	Nilsson, D.	240	22-Jul-86	8.3	886	0.15	541	436	10	-0.02	239	43	32	2	121	-	-0.05	-1	80	531
23	SE-16-46-1-W5	Nilsson, D.	240	22-Jul-86	8.2	891	0.15	538	435	10	0.05	254	46	34	2	114	-	-0.05	-1	80	530
24	SW-17-46-1-W5	Fontain, L.	80	2-Nov-67	-	-	-	472	385	-	0.97	317	-	-	-	-	0	-	4	35	-
25	SW-18-46-1-W5	Hyam, A.	54	12-Apr-84	7.9	558	0.11	291	299	13	0.5	266	59	29	2.3	11	-	-0.05	2	8	365
26	SW-18-46-1-W5	Hyam, A. A.	60	23-Oct-76	8.4	530	0.09	310	311	-	-0.1	176	43	17	1.9	60	-0.099	0.3	-1	-	367
27	NE-01-46-2-W5	Kopp, E.	110	16-Dec-83	8.6	800	0.11	446	392	7.6	0.03	17	2	3	0.8	171	-	-0.05	-1	33	451
28	NE-01-46-2-W5	Midtdal, A.	38	8-May-75	8.3	730	0.16	425	341	-	-0.1	40	12	2	0.6	166	-	-0.099	-1	36	417
29	SE-12-46-2-W5	Blue Heron Camp Grounds	190	7-Jul-79	9.1	730	5.21	437	396	-	-0.1	-1	-1	-1	0.4	187	-	-0.099	-1	-	424
30	SE-12-46-2-W5	Fontaine, L.	160	8-May-85	9.1	751	4.8	426	390	6.8	0.05	-5	-1	-1	0.5	181	-	-0.05	4	-5	410
31	SE-13-46-2-W5	Freeman, C.	180	28-Nov-69	8.3	-	1.05	504	363	-	-0.02	112	25	12	-	144	-	-	4	55	390
32	SE-13-46-2-W5	Freeman, C.	-	29-Nov-69	8.2	-	0.11	324	232	-	-0.05	190	48	17	-	28	-	-	7	9	256
					6.5-8.5 AO		1.5 MAC	=500 AO			=0.3 AO					=200 AO	0.71 MAC	10.0 MAC	=250 AO	=500 AO	

NOTES:
All constituents reported in mg/L except Conductivity in microsiemens/cm, and pH in pH units.
Alkalinity and Hardness expressed as $CaCO_3$.
Hardness generally considered unacceptable if >500 mg/L.
Underlined values indicate exceedance of Canadian Drinking Water Standards.

TDS = Total Dissolved Solids
AO = Aesthetic Objective
MAC = Maximum Acceptable Concentration
CDWG = Canadian Drinking Water Guidelines
* NO_2 & NO_2+NO_3 are expressed as N

Appendix C

Statement from
Alberta Heritage Resource Management

Alberta
Tourism, Parks, Recreation and Culture
Heritage Resource Management

Old St. Stephen's College
8820 – 112 Street
Edmonton, Alberta T6G 2P8

Tel: (780) 431-2300
Fax (780) 422-3106

March 8, 2007

Project File: 4835-07-035

Mr. Norm Moore
Moore's Agri-Trade Ltd.
Box 67
Alder Flats, Alberta
T0C 0A0

Dear Mr. Moore:

SUBJECT: TITLE # 032 312 738
AGENT BEING MOORE'S AGRI-TRADE LTD.
AREA STRUCTURE PLAN WITHIN THE COUNTY OF WETASKIWIN
NW ¼ OF SECTION 8, TOWNSHIP 46, RANGE 1, W5M
***HISTORICAL RESOURCES ACT* CLEARANCE**

Thank you for providing Alberta Tourism, Parks, Recreation and Culture with information regarding a proposed Area Structure Plan within the NW ¼ of section 8-46-1-W5M. Ministry staff have reviewed the potential for historical resources to be impacted and have concluded that a **Historical Resource Impact Assessment is not required.**

***HISTORICAL RESOURCES ACT* REQUIREMENTS**

Reporting the discovery of historical resources: Pursuant to Section 31 of the *Historical Resources Act*, should any historical resources be encountered during any activities associated with development, please contact Margret Ingibergsson at (780) 431-2374, (Heritage Resource Management Branch, 8820 - 112 Street, Edmonton, Alberta, T6G 2P8), fax (780) 422-3106, or by e-mail at margret.ingibergsson@gov.ab.ca. It may then be necessary for further instructions to be issued regarding the documentation of these resources.

On behalf of Alberta Tourism, Parks, Recreation and Culture, I would like to thank Moore's Agri-Trade Ltd. for their cooperation in our endeavour to conserve Alberta's past

Sincerely,

M. Ingibergsson for

John Brandon
Head, Land Use Planning Section

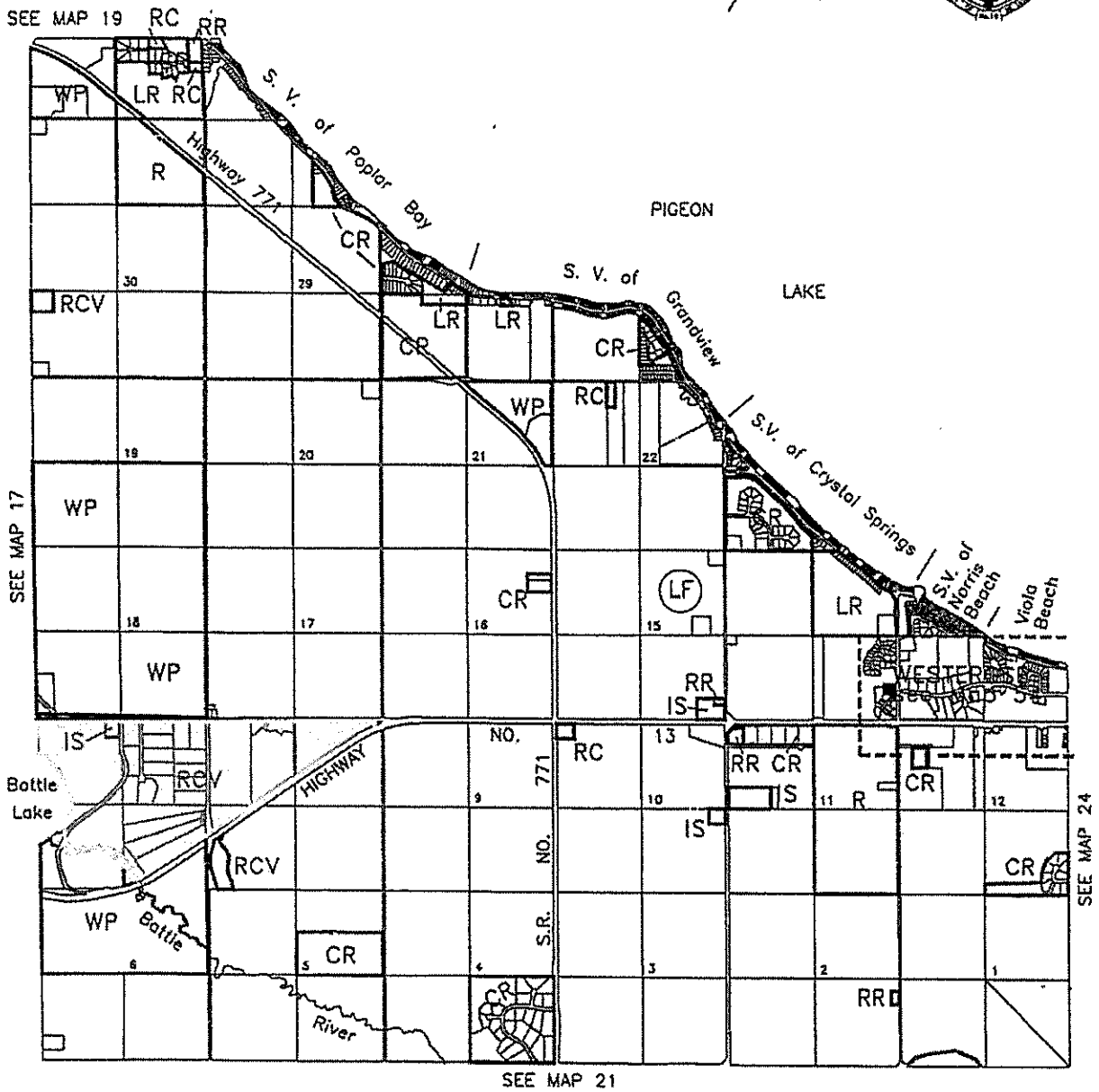
Appendix D

County of Wetaskiwin #10
Zoning Information

APPENDIX D

County of Wetaskiwin No.10

LAND USE BYLAW NO.95/54



Tp.46 – R.1 – W5M

AG	Agricultural	RC	Rural Commercial	LG	Municipal Lagoon
RR	Rural Residential	IS	Institutional	LS	Landfills
CR	Country Residential	LR	Lakeshore Residential	ILF	Inactive Landfill
RCR	Restricted Country Residential	RCV	Rural Conservation	TS	Transfer Station
UR	Urban Residential	R	Recreational		
UC	Urban Commercial	HDR	High Density Residential		
UI	Urban Industrial	WP	Watershed Protection		
UF	Urban Fringe	DC	Direct Control		
I	Industrial	A/ID	Agricultural/Intermunicipal Development Plan District		

All Lands are districted AG unless noted otherwise
– for lands districted RR see Schedule B, Section 2.9 of the bylaw

N

Map 20

Revised Date: March 31, 2003

8. RURAL CONSERVATION DISTRICT (RCV)

8.1 Purpose

The purpose of this district is to preserve existing tree and vegetation cover in the County. The district may be implemented next to significant rivers, streams and lakes, but excluding those lakes classed as Type 3 in the General Municipal Plan. At Council's discretion, the district may also be implemented in other parts of the County where Council is of the opinion that there is an environmental benefit in doing so and where the greater public interest is served. *(Amended by By-law 97/47)*

8.2 Permitted Uses

(a) Detached dwelling
(b) Accessory building or use

8.3 Discretionary Uses

(a) Mobile, modular or moved-in dwelling
(b) Home occupation
(c) Bed and breakfast business
(d) Public utility
(e) Accessory building or use

8.4 Parcel size and Site Standards

(a) The minimum parcel size is 4 hectares (10 acres).
(b) Council may not consider an application for subdivision under this district unless proposed lots are designed to include a minimum of 60% tree covered land.

8.5 Setbacks

(a) No development can be located within 6 metres (19.6 ft.) of the property line or 50 metres (164 ft.) from a water feature, whichever is greater, and as shown in the General Regulations.
(b) Front yard see General Regulations, Section 9.
(c) Side yard: 5 metres (16.5 ft.)
(d) Rear yard: 10 metres (32.8 ft.)

8.6 Environmental protection measures

(a) No more than 40% of the area in a Rural Conservation parcel can be cleared of its natural vegetation.

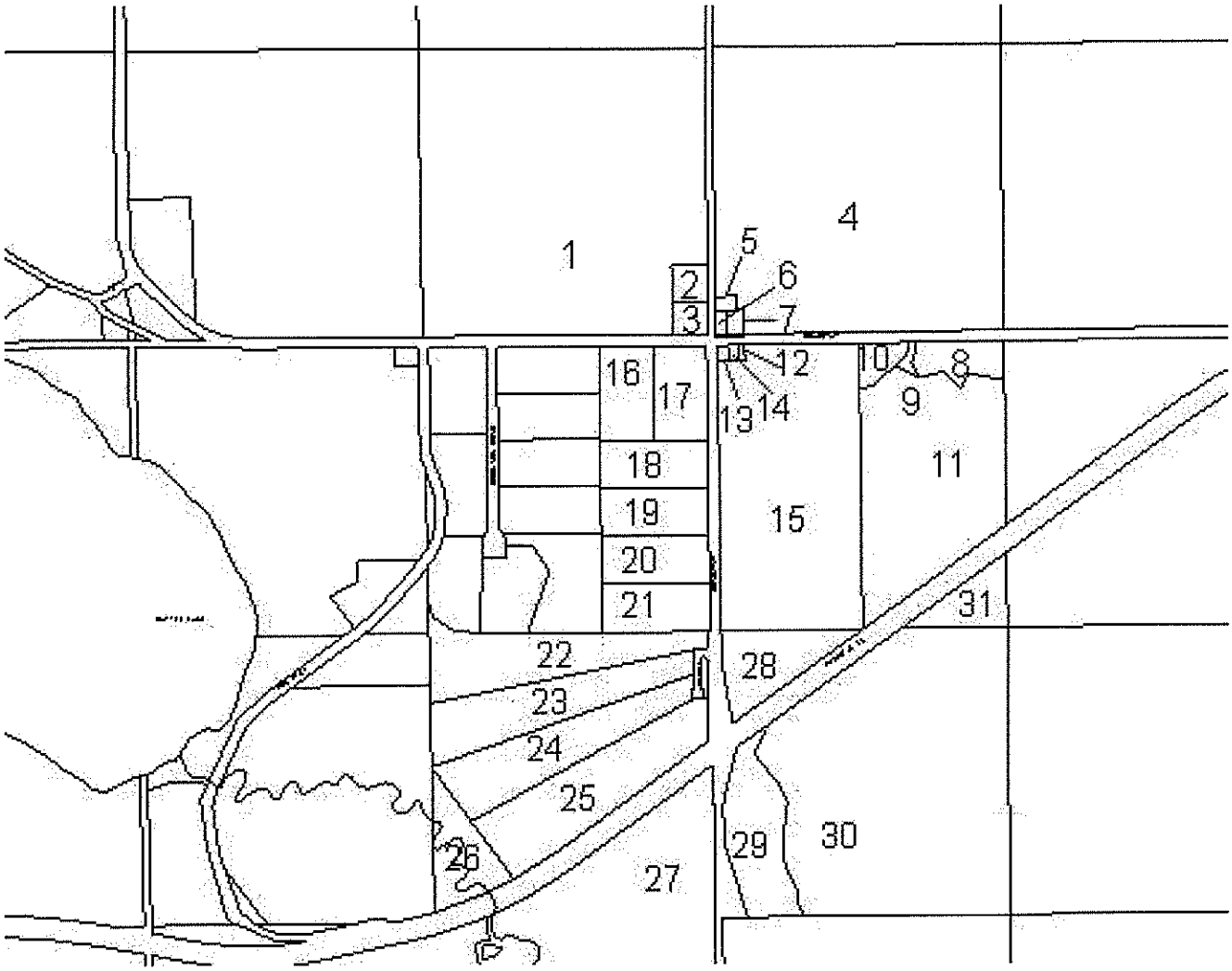
(b) No trees or vegetation can be cleared from with 50 metres (164 ft.) of the edge of a water feature except to provide physical access to the water feature and only to a maximum of 10% of the frontage.

(c) See General Regulations, Section 3.

Appendix E

Map Showing Adjacent Property Owners

APPENDIX E


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31

MOORE'S AGRI-TRADE LTD.

REALTORS **RURAL SOLUTIONS SINCE 1975** **AUCTIONEERS**

Box 67, Alder Flats, Alberta T0C 0A0
Norm Moore, Broker-Auctioneer
Website: www.MooresRealty.ca
email: sold@mooresagritrade.ca

Ph: 780-388-3759 Fax: 780-388-3788
Lorraine Moore, REALTOR – Office Administrator
Cathy Hatt, REALTOR – Advertising Coordinator

June 18, 2007

Re: Area Structure Plan for West portion of NW-8-46-1-W5

We have been asked by Brad & Patricia Fontaine to prepare an Area Structure Plan and Application to Subdivide the above property.
Since you own land nearby we would like to give you some advance notice about the plan and would appreciate hearing from you if you have any suggestions or concerns.

The attached "Conceptual Plan" shows the planned subdivision on the Fontaine's 77 acre parcel.

Highlights of the Area Structure Plan are:

1. The area is presently zoned "Rural Conservation District". This zoning specifies that parcels must be at least 10 acres in size and does not allow commercial or industrial uses. It also specifies that at least 60% of the area must remain in trees. The Fontaines agree with this use of the land and do not want these requirements to be changed.

2. The proposal is to create 4 new parcels of 10 acres or more as shown on the Conceptual Plan that is attached. Lot 1 and Lot 4 would have access to the north to Township Road 462 and Lots 2 and 3 would have access to the west to Range Road 15. The remaining portion of the parcel would also have access to Range Road 15.

As a nearby land owner you will likely get a notice from the County of Wetaskiwin stating when the Area Structure Plan will be dealt with at a "Hearing" at the County Office.
If you have any questions or suggestions please give me a call at Office – 780-388-3759 or on my cell – 780-542-0056.

Yours truly,

Norm Moore