

**APPRAISAL REPORT OF
SE32-34-4 W5M CONTAINING
SUBSTANTIVE GRAVEL DEPOSITS
IN THE GENERAL VICINITY OF
SUNDRE, ALBERTA**



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August 5, 2011

Attention: Terry Regenwetter

Dear Sir:

RE: APPRAISAL REPORT OF SE32-34-4-W5M CONTAINING SUBSTANTIVE GRAVEL DEPOSITS IN THE GENERAL VICINITY OF SUNDRE, ALBERTA.



As requested, we have prepared an appraisal report on the SE32-34-4-W5M containing substantive gravel deposits in the general vicinity of the Town of Sundre, Alberta.

It is hereby certified that we inspected the subject properties on July 14th, 2011. To the best of our knowledge and belief statements contained in this appraisal report, subject to the limiting conditions set forth, are true and correct. **The reader is advised to review these limiting conditions in detail as outlined in Section C.**

We hereby certify that we have no present or contemplated interest in the subject property, which would in any way affect statements of value expressed. Employment in and compensation for making this appraisal are in no way contingent upon the values reported.

Our findings relative to the physical attributes of the subject property as well as our opinions in respect of the per acre value of the titled unit and total value of the land as a gravel extraction site are included within the following report and are summarized within the executive summary at the beginning of the report.

Yours truly,
CANADIAN RESOURCE VALUATION GROUP INC.


John  smuth, AACI, P.App., P.Ag., CAC
President

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SE32-34-4 W5M CONTAINING
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SUNDRE, ALBERTA**

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August 2011

OUR FILE #11492

**APPRAISAL REPORT OF
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APPENDICES

A. EXECUTIVE SUMMARY

A.1 Legal Description: SE32-34-4-W5M

A.2 Property Owners: **Ralph Charles Thompson**
Diane Patricia Thompson

A.3 Highest and Best Use: Gravel Resource Extraction

A.4 Effective Date of Appraisal: July 14, 2011

A.5 Date of Inspection: July 14, 2011

A.6 Date report Issued: August 5, 2011

A.7 Plottage of Subject Property: 156.71 acres

A.8 Reported Total Gravel Reserves: **2,265,219 m³ 3,624,350 Tonnes**
(See Appendix V(xii) — Associated Eng/AMEC Report)

A.9 Gravel Available for Extraction & Sale: **1,018,647 m³ 1,629,803 Tonnes**
(See Appendix V(iii) — Associated Eng/AMEC Report)

A.10 Estimated Market Value of the Fee Simple Interests in the Bareland
Effective July 14, 2011 is ONE MILLION THREE HUNDRED THOUSAND
DOLLARS (\$1,300,000).

B. PURPOSE, FUNCTION AND SCOPE OF THIS APPRAISAL**Background Information**

B.1 This report has been prepared to present the appraisers' professional opinion as to the market value of the fee simple interest in the subject property. According to gravel volume testing performed by AMEC, the overall subject property contains 2,265,219 m³ of gravel. According to a mining strategy report performed by Associated Engineering, the net amount of gravel available for extraction is 1,018,647 m². It should be noted that this mining strategy accounts for applicable setbacks from both the property boundaries and the various pipeline rights of way which transect the subject property. The property is located approximately 20 kilometers northeast of the Town of Sundre, Alberta. The purpose of this appraisal report is to provide the appraisers' professional opinion as to the current value of the subject property containing substantive gravel deposits. The functions of this appraisal report are to assist ReSol Financial Group in:

1. obtaining financing for the reclamation deposit that is required by Alberta Environment for the operation of a gravel extraction site.
2. establishing the market value of the property for ReSol Financial Group and their partners.

B.2 In the preparation of any appraisal report, there are certain applicable "Assumptions and Limiting Conditions" and these are outlined later within Section C relative to this appraisal. These assumptions and limiting conditions provide the basic foundation of the report and the reader is urged to review them along with the analyses and conclusions within this report.

B.3 For the purposes of valuation, we will be making the "Extraordinary Assumption" that the subject property will be fully permitted for the extraction of gravel by October of 2011. This property already has conditional approvals in place with both Alberta Environment and Clearwater County. Eleanor Pengelly, Development Officer with Clearwater County has advised the appraisers that the subject property is in the process of gaining development permit approval as a gravel pit. Assuming that there are no major concerns brought forward from the recent public consultation and open house, Ms. Pengelly advised estimates that development permits will most likely be granted in October of 2011. Within our analysis we have made the "Extraordinary Assumption" that final approval will be granted in October of 2011 or within a reasonable time thereafter. For every "Extraordinary Assumption" there must also be a "Hypothetical Condition". Under the "Hypothetical Condition" that a development permit is in fact granted by October 2011, or within a reasonable time thereafter, then the value estimate provided within Section I of this report is **considered VALID**. In the

B. PURPOSE, FUNCTION AND SCOPE OF THIS APPRAISAL

alternative, if a development permit is not granted, then the value estimate provided herein is **INVALID.**

DEFINITION OF EXTRAORDINARY ASSUMPTION:

"Refers to the hypothesis — either supposed or unconfirmed — which if not true, could alter the appraiser's opinions and conclusions. Full disclosure of any Extraordinary Assumption must accompany statements of each opinion/conclusion so affected. A hypothetical condition may be used when they are required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison. For every Hypothetical Condition, an Extraordinary Assumption is required."

DEFINITION OF HYPOTHETICAL CONDITION:

"Refers to that which is contrary to what exists, but is supposed for the purpose of analysis. May be used when they are required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison."

B.4 Paraphrasing mining terminology, for purposes of later considering the present value of gravel deposits on the subject:

"The value of a mineral property, whether developed or undeveloped, is the price a potential purchaser would pay to recover his total investment, and obtain a reasonable profit thereon, under anticipated conditions of operation and marketing, during a reasonable number of years, or at most, prior to the ultimate depletion of the mineral deposit."³

The above definition is not substantially different from the typical Income Approach (see Paragraph H.4) utilized to determine the "market value" of income producing properties, with the exception that the net income stream from a gravel deposit, a depleting resource, is not capitalized into perpetuity. The life of the proceeds from the investment (i.e. gravel sales) has a finite term which must be considered.

B.5 For the purposes of this appraisal, "Market Value" is defined per the definition quoted in the Canadian Standards of Professional Appraisal Practice, which was adopted by the Appraisal Institute of Canada on January 1, 2006. The definition is as follows:

"The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting

¹ Canadian Uniform Standards of Professional Appraisal Practice (CUSPAP), Appraisal Institute of Canada, January 2009.

² Canadian Uniform Standards of Professional Appraisal Practice (CUSPAP), Appraisal Institute of Canada, January 2009.

³ The Appraisal of A Gravel Pit, Canadian Appraiser/Winter 1990 by Lloyd R. Manning



B. PURPOSE, FUNCTION AND SCOPE OF THIS APPRAISAL

prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- 1. buyer and seller are typically motivated;*
- 2. both parties are well informed or well advised, and acting in what they consider their best interests;*
- 3. a reasonable time is allowed for exposure in the open market;*
- 4. payment is made in terms of cash in Canadian Dollars or in terms of financial arrangements comparable thereto; and*
- 5. the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."*

B.6 The scope of activities undertaken in the preparation of this report included the following:

- general review of factors relevant to the area of the titled units
- review of all pertinent land use planning documents and/or zoning bylaws that provide information relative to permitted and discretionary uses and insight into the legally permissible use of the titled units
- physical inspection of the titled unit
- analysis of the Highest and Best Use of the titled unit
- general review of legislation and guidelines regarding gravel extraction and/or development as sourced from Clearwater County and Alberta Environment.
- general analysis of potential volume of gravel available for extraction from within the subject titled unit
- market analysis of current bareland values for lands in the Central Alberta Region that have proven gravel deposits
- market analysis of current prices paid for in-situ pit run gravel in the subject area
- market analysis of current demand and supply for pit run gravel in the subject area including estimation of annual depletion volumes
- a review of the current costs associated with getting in-situ gravel to its end user
- estimate of the present value of future net revenues to the end of the productive life of the gravel resource as detailed within Section I of this report

The culmination of this research and analysis resulted in the preparation of this appraisal report.



B. PURPOSE, FUNCTION AND SCOPE OF THIS APPRAISAL**Review of Pertinent Real Estate Appraisal Principles**

B.7 The following are definitions of "real estate" and "real property":

"Real Estate is the physical land and appurtenances affixed to the land, e.g., structures".

"Real Property includes all interests, benefits, and rights inherent in the ownership of physical real estate, a right or interest in real estate is also referred to as an estate. Specifically, an estate in land is the degree, nature, or extent of interest that a person has in it".⁴

B.8 Real Property is considered to include a "bundle of rights" that are inherent in the ownership of real estate. These ownership rights include the right:

- to use real estate
- to sell it
- to lease it
- to enter it
- to give it away
- or to choose to exercise all or none of these rights

B.9 The bundle of rights is often compared to a bundle of sticks, with each stick representing a distinct and separate right or interest. In Canada, the "fee simple estate" is considered to be the greatest interest or estate available in real estate, however private enjoyment of these rights is not absolute but is subject to certain limitations and restrictions due to the powers of government in terms of taxation, expropriation, police power and escheat. These rights of government are defined as follows:

***Taxation** is the right of government to raise revenue through assessments on valuable goods, products, services and rights.*

***Expropriation** is the right of government to take private property for public use. This right can also be exercised by an entity acting under governmental authority such as a housing authority or public utility. All or part of the owner's rights may be acquired, and usually just compensation is paid to the owner.*

***Police Power** is the right of government under which property is regulated to protect public safety, health, morals, and general welfare.*

***Escheat** is the right of government that gives the state titular ownership of a property when its owner dies without a will or any ascertainable heirs.⁵*

⁴ The Appraisal of Real Estate, Second Canadian Edition, 2002, the Appraisal Institute and Appraisal Institute of Canada, Page 1.5.

⁵ Ibid, Page 5.5

B. PURPOSE, FUNCTION AND SCOPE OF THIS APPRAISAL

B.10 The common textbook of both the American "Appraisal Institute" and the "Appraisal Institute of Canada" defines "fee simple estate" as follows:

"Fee Simple Estate is an interest in property involving possession of a title establishing absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, expropriation, police power and escheat"⁶.

⁶ Ibid, Page 5.2



C. ASSUMPTION AND LIMITING CONDITIONS

The following assumptions and limiting conditions were applied in the preparation of this report:

C.1 The values stated within this report are determined considering the Highest and Best Use of the subject property which is reported to contain substantive gravel deposits.

C.2 **We have assumed that:**

- the legal description of the title is correct;
 - the land surveys and acreages, as supplied by Alberta Land Registries are correct. No legal surveys on our part were made, and we assume no responsibility in this connection;
 - the subject titled unit is good and marketable. Charges against the fee simple titled unit are listed in Section E of this report, and detailed on the copy of the Certificate of Title contained in Appendix II of this report;
 - there are no hidden or unapparent conditions of the titled unit;
- all data regarding depths, quantities and quality of gravel deposits, as provided to Canadian Resource Valuation Group Inc. (CRVG) by ReSol Financial Group and performed by AMEC and Associated Engineering, are correct;**

NOTE: THESE GEOTECHNICAL REPORTS WERE COMMISSIONED BY RED DEER COUNTY AND ONLY AVAILABLE EXCERPTS WERE PROVIDED TO CRVG.

C.3 CRVG has not carried out any independent soil tests or tests of subsurface material. Nor have we carried out any type of environmental audit to assess contamination. The appraiser may not be qualified to comment on environmental issues that may affect the market value of the subject property, or more precisely the gravel resource therein, including but not limited to pollution or contamination of land, buildings, water, groundwater or air. Unless expressly stated, the subject property is assumed to be free and clear of pollutants and contaminants, including but not limited to molds or mildews or the conditions that might give rise to either, and in compliance with all regulatory environmental requirements, government or otherwise, and free of any environmental condition, past, present or future, that might affect the market value of the subject property. If the party relying on this report requires information about environmental issues then that party is cautioned to retain an expert qualified in such issues. We expressly deny any legal liability relating to the effect of environmental issues on the market value of the subject property including the in-situ gravel resource addressed herein.



C. ASSUMPTION AND LIMITING CONDITIONS

- C.4 Subject to the above limitations in respect of geo-technical data, information furnished by others and contained in this appraisal has been cross checked wherever possible during the course of the appraisal and is assumed to be accurate.
- C.5 All estimates and/or opinions of value contained herein are stated in terms of Canadian Dollars, and are expressed in terms of cash or in terms of financial arrangements equivalent to cash.
- C.6 Maps, aerial photographs and property sketches are included in the appendix of this report only to act as aids in interpretation of the appraisal, and no attempt has been made by the appraiser to verify the accuracy of these.
- C.7 We reserve the right to review all information, data, assumptions, understandings and calculations included or referred to in this report and, if we consider it necessary, to revise our conclusions and/or opinion(s) in light of any new facts or conditions which, unknown to us, existed at any time prior to or at the date of issuance of this report, but which become known to us subsequent to the date of this report.
- C.8 Because market conditions, including economic, social and political factors change rapidly, and on occasion without warning, the value estimates expressed as of the date of this appraisal cannot be relied upon as of any other date except with further advice from the appraisers and confirmed in writing.
- C.9 Possession of this report, or a copy thereof, does not carry with it the right of publication. All copyright is reserved to CRVG and is considered confidential as between the appraisers and the client. It cannot be disclosed, quoted from or referred to, in whole or in part, or published in any manner, without the express written consent of CRVG. As requested, CRVG Inc. gives permission to ReSol Financial Group to provide a copy of this full narrative appraisal report to its business partners and to lending institutions for financing purposes. **Use of this report by lending institutions must also be accompanied by a separate letter from CRVG authorizing their specific use of this appraisal report.**
- C.10 The use and application of this appraisal report is reserved for ReSol Financial Group, their business partners and subsequently authorized financial institutions and its use is limited to the specific purpose and functions stated within Paragraph B.1.



D. AREA DATA**General Location, Major Centres and Access**

- D.1 The subject property is located within Clearwater County (2006 population of 11,826), northeast of the Town of Sundre (2006 pop. 2,518) and west of the Town of Bowden (2010 population of 1,200). Approximately four kilometres to the south of the subject property is the boundary between Clearwater County and Mountain View County (2007 population of 12,570). Approximately four kilometres to the east of the subject property is the boundary between Clearwater County and Red Deer County (2006 population of 19,108). Appendix II(a) identifies the location of the subject parcel on an area map. There is a mix of agricultural, residential, industrial, commercial and recreational land uses within the County. The subject is located in an area consisting of extensive agricultural lands, hobby farms, country residential development and aggregate extraction. The immediate areas surrounding the subject property are zoned Agricultural District "A" per the Clearwater County Land Use Bylaw No. 714/01.
- D.2 Clearwater County covers an area of 18,692 km² and the area is serviced by paved Primary Highways #11, #12, #22, #53 and #54, as well as paved Secondary Highways #587, #591, #598, #734, #752 and #761. The area is also serviced by a well established grid system of paved and graveled County roads.

Economic Activity

- D.3 Clearwater County has a population of 11,826 (2006). The municipalities of Rocky Mountain House and Caroline are located within the boundary of Clearwater County as well and have populations of 7,231 (2007) and 515 (2006) respectively. Located approximately 80 kilometers east of the Town of Rocky Mountain House is the City of Red Deer (2011 population of 91,877).
- D.4 Clearwater County's economic base is prominently agricultural. The agricultural production ranges from traditional field crop production of wheat, oats, barley and canola to livestock and specialized vegetable and nursery operations. Tourism is also important to the area. The west portions of the County form the east boundary of the Rocky Mountain Range and contains the David Thompson Corridor (Highway #11). Other important industries include petroleum exploration and development, mining of aggregate materials, and forestry.



D. AREA DATA

- D.5 While the subject property is within an area that is presently agricultural in nature, these lands are known to contain deposits of gravel. There are already a number of active pits in the immediate area that are operated by Pidherney's, Rick Martin Trucking, and Clearwater County. In fact, the areas to the northeast of Sundre are known to contain several large deposits of gravel. According to the Alberta Geological Survey, the subject property is part of a larger deposit covering 3244 hectares that is said to contain "dirty gravel".

Climate

- D.6 The climate of the area is described as Continental in nature, with warm summers and cold winters. Climatic statistics⁷ for the area are as follows:

Average Number of Frost Free Days	105 days-115 days
Average Precipitation	450mm - 500mm
Average January Temperature	-12 °C to -14 °C
Average July Temperature	15 °C to 16 °C

Soil and Topography

- D.7 The area is located in the transitional region between what are termed the Great Plains Region and Rocky Mountain Region of North America. The remainder of the farmland in the County is considered relatively marginal farmland. The general area is primarily agricultural in nature and, although areas to the east consist primarily of CLI Class 3 soils which are suitable for growing field crops such as canola, wheat, barley and oats, the area immediately surrounding the subject property consists primarily of CLI Class 4, 5 and 6. As such, the primary agricultural use in this area tends to be as pasture land.
- D.8 The Canada Land Inventory Soil Capability for Agriculture-Calgary Sheet 820, classifies the mineral soils into seven classes on the basis of soil survey information. Soils in Classes 1, 2, 3 and 4 are considered capable of sustained use for cultivated field crops. Those in Classes 5 and 6 are suited only for perennial forage crops, while those in Class 7 are not considered agriculturally productive. Organic soils are also mapped; however, they have not been classified for agricultural capability. The majority of the soils in the area of the subject are rated as C.L.I. Class 4, 5, and 6. There is also an abundance of Organic soils located near various watercourses. The seven classes are further divided into subclasses based on the type

⁷ Source: Agroclimatic Atlas of Alberta



D. AREA DATA

of limitation which affects agricultural productivity. The subclasses are: C - adverse climate, E - erosion damage, I - innundation, P - stoniness, **R** - shallowness to solid bedrock, S - soil limitations, T - adverse topography, W - excess water other than from flooding, and X - cumulative effect.

D.9 Under the CLI mapping system the various soil classes on the Calgary Map Sheet 820 are defined as follows:

- Class 1 - soils in this class have no significant limitations in use for crops. The soils are deep, are well to imperfectly drained, hold moisture well, and in the virgin state were well supplied with plant nutrients. They can be managed and cropped without difficulty, under good management they are moderately high to high in productivity for a wide range of field crops.*
- Class 2 - soils in this class have moderate limitations that restrict the range of crops or may require moderate conservation practices. Overall the soils are deep and hold moisture well. With good management the soils can be cropped without difficulty and will be moderately high to high in productivity for a fairly wide range of crops.*
- Class 3 - soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices. The limitations are more severe than for Class 2, and they may affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. With good management they are fair to moderately high in productivity for a fair range of crops.*
- Class 4 - soils in this class have severe limitations that restrict the range of crops and/or require special conservation practices. The limitations seriously affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. The soils are low to fair in productivity for a fair range of crops but may have high productivity for a specially adapted crop.*
- Class 5 - soils in this class have very severe limitations that restrict the capability to producing perennial forage crops, however improvement practices are considered feasible. The limitations are so severe that the soils are not capable of use for sustained production of annual field crops. The soils are capable of producing native or tame species of perennial forage plants and may be improved by use of farm machinery. The improvement practices may include clearing of bush, cultivation, seeding, fertilizing and/or water control.*
- Class 6 - soils in this class are capable only of producing perennial forage crops, and improvement practices are not considered feasible. The soils provide some sustained grazing for farm animals, but the limitations are so severe that improvement by use of farm machinery is impractical. The terrain may be unsuitable for use of farm machinery, or the soils may not respond to improvement, or the grazing season may be very short.*
- Class 7 - soils in this class have no capability for arable culture or permanent pasture. This class also includes rockland, other non-soil areas, and bodies of water too small to show on the maps.*
- O - Organic soils (not placed in capability classes) contain depths of sphagnum peat moss, commonly known as muskeg. The ability of such soils to be agriculturally productive depends on whether they can or cannot be drained.*



D. AREA DATA

D.10 The main limitations to agricultural production in the area of the subject property are Subclass F - fertility, Subclass D — undesirable soil structures, Subclass T - adverse topography, Subclass P— stoniness and Subclass M — moisture.

D.11 Under the CLI mapping system, various pertinent subclasses on the Calgary Map — Sheet 820 are defined as follows:

Subclass F: adverse climate - the main limitation is low temperature or low or poor distribution of rainfall during the cropping season, or a combination of these.

Subclass D: undesirable soil structure and/or low permeability — the soils are difficult to till, absorb water slowly or the depth of the rooting zone is restricted.

Subclass T: adverse topography - either steepness or the pattern of slopes limits agricultural use.

Subclass P. • stoniness — stones interfere with tillage, planting, and harvesting.

Subclass M: a low moisture holding capacity, caused by adverse inherent soil conditions, limits crop growth (not to be confused with climatic drought).

D.12 The topography throughout the area ranges from undulating to gently rolling to rolling, with the exception of some eroded river and creek banks.

E. SUBJECT TITLED UNIT DATA**General Location**

E.1 The subject property is located within Clearwater County, approximately 50 kilometers west of the Town of Bowden and approximately 30 kilometers northeast of the Town of Sundre. Located approximately four kilometers to the south is the boundary between Clearwater County and the **M.D.** of Mountain View; located approximately 1.6 kilometers to the east is the boundary between Clearwater County and Red Deer County. The City of Red Deer is located approximately 80 kilometers northeast of the subject property.

E.2 Table E.1 summarizes the basic characteristics of the subject property. The current Certificate of Title is exhibited within Appendix II of this report.

Table E1 Subject Property Owned in Fee Simple	
Legal Description	SE32-34-4-W5M
Registered Owners	Ralph Charles Thompson (Farmer) & Diane Patricia Thompson (Housewife)
Certificate of Title #	111 085 936 002
Plottage	156.71 acres
CLI Soil Capability for Agriculture	- 60% Organic; 40% Class 4 _D
Topography:	Undulating land sloping towards a small creek that traverses the southwest corner in a southeastly direction. Mostly cleared with some sparse trees within the central portions of the property.
Access:	Accessed off of gravel Range Road #44. Paved Secondary Highway #587 is located approximately two kilometers to the south.
Improvements	Improved for agricultural use - pasture land. The subject is fully fenced and cross fenced.
Gravel Pit Permit Status:	Development permit has been put through council, public notices have been sent and an open house has been held. Development Officer has stated that if resistance is low permits may be issued as soon as October 2011.
Total Amount of Gravel Per AMEC	3,624,350 tonnes (2,265,219 m ³)
Net Available Gravel as per Associated Engineering Mining Strategy Report	1,629,835 tonnes (1,018,647 m ³)

Plottage, Shape and Topography

E.3 The subject property contains 156.71 titled acres. Based on our inspection of the subject property and review of aerial photos, there is approximately 120 acres of undulating pasture land that has some sparsely treed areas throughout the central portions. The land generally slopes to the southwest towards a small creek that traverses the southwest corner of the property. Approximately 30 acres of low-lying land lies to the southwest of this creek.

E. SUBJECT TITLED UNIT DATA

Encumbrances, Liens & Interests

E.4 The title to the SE32 34-4-W5M has seven encumbrances registered against it as shown on the photocopy of the Certificate of Title contained within Appendix II. These encumbrances registered against the title are summarized within the following table:

Table E.2 Summary Table of Encumbrances SE 32 34-4-W5M			
Registration Number	Date Registered	Type of Encumbrance	Grantee / Caveator
5227HW	April 21, 1960	Caveat	NAL Resources Ltd.
13361(7	January 21, 1969	Utility Right of Way	Hudson's Bay Oil and Gas Co. Ltd.
8559KF	March 6, 1969	Utility Right of Way	Plains Midstream Canada Ulc.
761 101 883	August 13, 1976	Utility Right of Way	Rocky Gas Co-Op Ltd.
841 087 978	May 23, 1984	Utility Right of Way	Hudson's Bay Oil and Gas Co. Ltd.
111 085 934	April 8, 2011	Caveat: Acquisition of Land	Clearwater County
111 099 850	April 27, 2011	Easement	For the Benefit of Lot 1 Block 1 Plan 1111242

E.5 These encumbrances outlined in Table E.2 relate to pipeline agreements, easements, utility rights of way, a county caveat and an access easement. The access easement (Reg#111 099 850) refers to an access easement or right of way across the subject property to provide for access to Subdivided Plan 111 1242, Block 1, Lot 1. This Access Right of Way is located in the northeast corner and runs parallel to the north boundary. The width of this right of way varies from 10.0 meters to 12.91 meters and has an overall length of approximately 206 meters and comprises an overall area of approximately 0.6 acres. The caveat by Clearwater County for the Acquisition of Land is to provide for the future acquisition of the easterly 5.18 meters (17 feet) for the possible widening of Range Road #44 in the future. The caveat provides for possible acquisition of approximately 1.03 acres. We note that the exploration and analysis of the quantity of gravel within the subject properties carried out by Associated Engineering excludes any gravel deposits that **might** be affected by the various pipeline rights of way. As such it is our opinion that these specific encumbrances (pipeline rights of way) will affect the market value of the subject property under the determined "highest and best use" discussed later in Section G as this will directly affect the net amount of gravel that is available for extraction. The author of this report is not qualified to comment on any legal ramifications of the encumbrances, therefore it is recommended that legal counsel be consulted to determine the precise effects of these encumbrances on the owner's legal rights and the marketability (ability to transfer) of the subject land.

E. SUBJECT TITLED UNIT DATA**Sales History and Opinion of Market Exposure Time**

E.6 We understand that the subject property is not currently listed for sale, however, according to Terry Regenwetter, ReSol Financial Group Inc. is currently attempting to purchase the subject property or at least acquire a partial interest therein. One of the functions of this report is to estimate the market value of the subject property for such purchase.

E.7 It is the appraiser's opinion; considering the location, the current land use designation and the probable future uses for the subject property, that the normal market exposure time to consummate a sale of the subject property at fair market value would be approximately six months to greater than one year. Notwithstanding this potential exposure time, the value estimate contained herein is effective July 14, 2011, the date of inspection. Normal market exposure time is defined as:

"the estimated length of time the property interest being appraised would have been offered on the market before the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective estimate based upon an analysis of past events assuming a competitive and open market."


F. LAND USE/ZONING

Land Use

- F.1 Alberta Environment is the primary regulatory agency for aggregate operations in Alberta. Extraction of sand and gravel on private land requires compliance with their *Code of Practice for Pits*, September 2004 (made under the Environmental Protection and Enhancement Act, RSA 2000, c.E-12, as amended and Conservation and Reclamation Regulation (AR 115/93), as amended). The *Code of Practice for Pits* defines the general rules for operating sand, gravel, clay or marl pits that are five hectares (12.5 acres) or larger on private land. For pits smaller than five hectares, the respective municipalities use the *Code of Practice for Pits* as a referral document when processing a Development Application for a new pit. As a support document to the *Code of Practice for Pits*, Alberta Environment has also provided a supporting document titled *A Guide to the Code of Practice for Pits*, October 2004. This guide generally includes:

- Information on the classification of pits
- A description of the registration process
- Guidance on the various sections of the Code of Practice.
- Guidance on developing an Activities Plan
- Guidance on security
- Planning and operating guidance
- A brief discussion of other applicable provincial and federal legislation
- A checklist for applications
- Sample drawings to support the Activities Plan, and
- Other information sources

In addition to the Code of Practice, registration holders must comply with all the requirements of the Environmental Protection and Enhancement Act and its associated regulations and Codes of Practice, the Water Act and its associated regulations and Codes of Practice, and all other applicable Federal and Provincial laws. For pits larger than five hectares, Alberta Environment inspectors will conduct random, unannounced inspections, as well as planned inspections, to determine if registration holders are following the Code of Practice. As pits smaller than five hectares must be re-approved every five years, the local municipality will effectively be responsible for ensuring that a pit is following the Code of Practice for Pits as they have the authority or whether or not to renew gravel pit operating permits.

- F.2 Agriculture is the predominant land use within Clearwater County. Lands near the east boundary of Clearwater County are primarily utilized for the production of field crops, however, as soil conditions relative to agricultural production diminish as one travels west, livestock grazing and forage production tend to be the dominant agricultural use. Equa 

F. LAND USE/ZONING

important are the aesthetic appeal and subsurface aggregate content of lands in Clearwater County. Clearwater County is situated at the geographical intersection of the Great Plains Region and Rocky Mountain Region and provides for rolling topography with views of the Rocky Mountains. According to the Alberta Geological Survey Clearwater County is also known to contain an abundance of scattered aggregate gravel deposits which has resulted in a great number of open gravel pits in the region. Our inspection of the subject property and surrounding areas suggests that these three uses (agriculture, recreational/residential and natural resource extraction) are all significant within this region. This suggests that the highest and best use of a given property would be established by virtue of its physical attributes (ie. agricultural productivity, gravel content, views of mountains or natural water courses).

- F.3 According to the Clearwater County Land Use Bylaw #931-11, Section 13.4(1), the subject property (SE32-34-4-W5M) is zoned AGRICULTURE DISTRICT "A". According to this bylaw:

THE GENERAL PURPOSE OF THIS DISTRICT IS TO ACCOMMODATE AGRICULTURAL LAND USES AND TO CONSERVE GOOD AGRICULTURAL LAND.

A. PERMITTED USES

1. First residence
2. Farming and non-residential farm buildings
3. Second residence on a lot that is 32 hectares (80 acres) or larger

NOTE:

1. In the Agriculture District "A", farming and non-residential farm buildings, are "deemed approved" uses.
2. On a residential parcel in the Agriculture District "A", a minor agricultural pursuit for the exclusive enjoyment of the occupants is "deemed approved".

B. DISCRETIONARY USES

1. Ancillary building or use
2. Cemetery
3. Community hall/centre
4. Drive-in theatre
5. Gravel and sand pit
6. Highway maintenance yard
7. Petroleum refining, gas processing or related installations with a total enclosed or developed building or plant space of less than 930 square metres (10,000 sq. ft.)
8. Public utility: landfill, waste transfer and associated facilities, sewage lagoon and other sewage treatment facilities, water treatment plant and associated facilities, public utility building



F. LAND USE/ZONING

9. *Radio, television and other communications tower and related buildings not exceeding 75 square metres (800 sq. ft.)*
10. *Recreation facility: publicly owned*
11. *Recreation facility or use for a local and/or private clientele or club only and not occupying more than 1 hectare (2.5 acres)*
12. *Sod farm or tree farm*
13. *Greenhouse with a floor area of less than 100 square metres (1,100 sq. ft.) or such larger area subject to the discretion of the Development Officer.*
14. *Guest house*

C. DISCRETIONARY USES allowed in this District ONLY where Incidental or Subordinate to the Principal Use of the lands contained in the current Certificate of Title.

1. *Second and additional residences on a lot on which all of the requirements of Section 6.6 are satisfied*
2. *Abattoir*
3. *Airport or heliport occupying 2 hectares (5 acres) or less*
4. *Agricultural equipment service and sales*
5. *Auto-wreckers providing proper screening is employed*
6. *Dude ranch or vacation farm*
7. *Farm subsidiary occupation*
8. *Game farming or game ranching for viewing, tourism or recreational purposes*
9. *Home occupation*
10. *Kennel*
11. *Market gardening*
12. *Off-parcel drainage works*
13. *Riding or roping and livestock showing stable or arena*
14. *Sawmill or postmill with annual volume of at least 530 cubic metres (1/4 million board feet) of standing timber*
15. *Sod farm*
16. *Top soil stripping and sales*
17. *Tradesperson's business, including contractors for plumbing, heating, electrical carpentry, auto-body, mechanical, masonry, excavation, construction, trucking and the like.*
18. *Unoccupied and unserviced manufactured home storage (one only)*
19. *Veterinary clinic*
20. *Zoo*

D. ACCEPTABLE LOT SIZE

1. *Except as provided for in subsections 2, the acceptable lot size is all of the land contained in an existing lot unless otherwise approved by the Development Officer subject to:*
 - (a) *The new lot being used exclusively for the approved development; and*
 - (b) *The developer entering into an agreement and/or Letter of Undertaking with the Municipality regarding placing the intended use or development on the proposed lot.*
2. *Regarding a first residential parcel out of an unsubdivided quarter section or out of the largest agricultural parcel within a previously subdivided quarter section that does not already contain a residential subdivision:*



F. LAND USE/ZONING

- (a) Where the first residential parcel would include all or part of an existing farmstead, the parcel size shall not be less than 0.91 hectares (2.25 acres) or exceed a maximum of 2.83 hectares (7 acres) unless a larger parcel is deemed necessary by the Subdivision Authority to encompass existing residential amenities and facilities, such as shelter belts, wastewater and water services and driveways; and*
- (b) Where the first residential parcel would not include the removal of an existing farmstead, the parcel size shall not be less than 0.91 hectares (2.25 acres) or exceed a maximum of 2.02 hectares (5.00 acres) and the provisions of Part 8 of this Bylaw.*

E. MINIMUM DEPTH OF FRONT YARD

As required and/or approved pursuant to Section 10.3 and Figures 1 to 7 of the Supplementary Regulations.

F. MINIMUM WIDTH OF SIDE YARD

15 metres (50 feet) except for a corner site where the side yard shall be determined as though it were a front yard.

G. MINIMUM DEPTH OF REAR YARD

15 metres (50 feet) unless otherwise approved by the Development Officer.

NOTE: Lots created prior to this Bylaw coming into effect and not able to comply with the foregoing shall meet setback limits as determined by the Development Officer.

H. LANDSCAPING

- 1. In addition to other provisions of this Bylaw, the Development Officer may require landfill sites, gravel and sand pits, sewage facilities and other visually offensive uses to be screened from view with vegetation and/or other screening of a visually pleasing nature.*
- 2. Reclamation to standards acceptable to the Development Officer may be required following abandonment of all or any portion of a gravel or sandpit, sawmill or other land surface disturbing operation.*

[emphasis added]

- F.4 Part Nine of the Clearwater County LUB No, 914-11 addresses how resource operations within the county are regulated. Excerpts from Part Nine of the LUB that are relevant to this assignment follows:

PART NINE: RESOURCE OPERATIONS AND SETBACKS**9.1 Site Alterations**

- (1) Site alteration activities, generally including stripping, filling, excavating and grading activities, are deemed to be exempt from the requirement for formal development permit application unless forming a part of a specific development*



F. LAND USE/ZONING

proposal for which a permit is required. Typical activities, for which a development permit is not required include:

- (a) contouring of farmland*
- (b) public roads*
- (c) oilfield lease roads and sites*
- (d) private driveways*
- (e) logging roads*
- (f) the first dugout on a parcel of land*
- (g) the first fish pond on a parcel of land*
- (h) recreational trail systems*
- (i) the first borrow excavation on a parcel of land, and*
- (j) drainage ditching*

Definitions In this Part:

Dugout means an excavation or an opening less than one acre in size for the purpose of agricultural use.

Fish Pond means an excavation or an opening less than one acre in size for the purpose of stocking fish.

Borrow Excavation means an opening or excavation in the surface or subsurface of a given parcel of land, not exceeding four acres of total disturbance that is made solely for the purpose of removing sand, gravel, clay, or marl. A borrow excavation shall not remain open or active for a period exceeding 18 months. A borrow excavation does not permit any processing of the material(s) on the land(s).

Borrow excavations are subject to the Environmental Protection and Enhancement Act (EPEA) and the Conservation and Reclamation Regulation (CRR). Operators are cautioned that terms such as borrow and borrow pit may have different meanings in reference to regulatory requirements under other acts (e.g., the Environmental Protection Act or the Public Lands Act) or in common usage in the road construction industry. Operators must be aware of the terms borrow excavation and pit and their regulatory implications under the EPEA or the CRR.

While this exemption is valid only to the extent that there is no requirement to make application for a development permit, any other requirement, provincial or municipal, is the responsibility of the proponent of the activity. Other requirements may include, but are not limited to, licensing, road use agreements, reclamation, setbacks, buffers, etc.

[emphasis added]

2.2 Top Soil Removal and Surface Resource Extraction/Processing

- (1) A development permit is required before the commencement or continuation of the removal of top soil from the property and such permits shall only be granted where it is shown to the satisfaction of the Development Officer that the land will not be adversely affected by the removal of the topsoil. The Development Officer may refer any application for removal of top soil from the property to the Agricultural Services Board and/or the Soil Conservation Officer acting under the Soil Conservation Act for comments.*



F. LAND USE/ZONING

- (2) *Unless exempted under Section 9.1 all surface resource extraction activities require a development permit before the commencement or continuation of the operation.*
- (3) *Surface resource extraction activities are subject to obtaining the proper approvals from all authoritative government agencies.*
- (4) *When issuing a development permit for a new or expanded surface resource extraction operation, including but not limited to sand, gravel or clay pits, the permit shall be conditional upon the developer providing copies of the approvals obtained from all authoritative government agencies.*
- (5) *Among other conditions that may be applied to the approval of a surface resource extraction operation the Development Officer are conditions that provide for. •*
 - (a) *setbacks to the satisfaction of the Development Officer from public roads and highways;*
 - (b) *setbacks from dwellings, existing property boundaries and proposed property boundaries;*
 - (c) *screening of the operation from public view by means of berms, landscaping or other means;*
 - (d) *limitations on the years, months, weeks, days and/or hours of operation;*
 - (e) *specific truck routing and/or roadway improvements;*
 - (f) *requirements to provide and maintain sufficient dust control, both on-site and on haul roads, to the satisfaction of the Municipality; and*
 - (g) *posting of adequate signage, including company name and emergency phone numbers, to warn of possible site or operational hazards and dangers.*
- (6) *The obligation to fulfill the conditions and requirements of any development permit issued pursuant to this Section are deemed to run with the land. The failure of any development permit holder who is not the owner of the site or sites described in the development permit shall not be considered to relieve or release the owner from such or issue a new development permit to the same applicant or to a new applicant or to the same owner or a new owner, unless or until the conditions and requirements of any development permit which has become suspended, lapsed, or voided for any reason, have been fulfilled to the satisfaction of the Municipality.*

G. ANALYSIS OF HIGHEST AND BEST USE

GA "Highest and Best Use" is described in appraisal texts as the foundation on which market value rests. The highest and best use of a parcel of land is not determined through subjective analysis by the property owner, the developer, or the appraiser; but rather, the competitive forces within the market where the property is located shape highest and best use. The analysis and interpretation of highest and best use is therefore an economic study of market forces focused on the subject site, or in this case the gravel resource contained therein.

G.2 The phrase "highest and best use" may be defined as follows:

*"The most probable and legal use of vacant land or an improved property that is physically possible, appropriately supported and financially feasible and that results in the highest value"*⁸

Market forces such as; supply, demand, ability to generate income and costs to reproduce create market value. Therefore, the interaction between market forces and highest and best use is of crucial importance.

G.3 The general data that is collected and analyzed to estimate property or resource values are also utilized by the appraiser to formulate an opinion of the property's highest and best use. The highest and best use of any comparable or index properties relied upon should be the same or similar to that of the subject site being appraised, assuming a Direct Comparison Approach is utilized, as it is land use or utility that influences value. In the subject case we are valuing a gravel resource and therefore the Direct Comparison Approach has been utilized as a method of estimating market value. As the value is represented by the annual revenues anticipated to be produced from future royalties or sales of in-situ gravel, the comparative approach indirectly captures these future benefits.

G.4 If a reasonable forecast of a property's highest and best use indicates a change in the near future, the present highest and best use is considered an interim use. For example, the highest and best use of a farm in the path of urban growth would be for interim use as a farm, with the potential future use being a residential or industrial subdivision. Alternatively if the farm is ready for development at the time of appraisal then there is no interim use as the highest and best use is for residential or industrial development. On the other hand if the farm has no

⁸ **The Appraisal of Real Estate**, Second Canadian Edition, 2002, the Appraisal Institute and Appraisal Institute of Canada, pp. 12.1

G. ANALYSIS OF HIGHEST AND BEST USE

subdivision potential (i.e. multi-parcel subdivision), or low probability of subdivision, then its highest and best use is a farm with no alternative interim use.

G.5 There are four criteria that must typically be considered in the analysis of highest and best use, for both vacant land as well as improved property. **The highest and best use must be:**

- **legally permissible**
- **physically possible**
- **financially feasible**
- **maximally productive**

The tests of physical possibility and legal permissibility must be applied before the remaining tests of financial feasibility and maximal productivity. Financial feasibility and/or productiveness have no relevance to a site if the proposed use is not legally permitted or physically possible. In addition to these factors, the determined highest and best use must be within the realm of probability, not speculative or conjectural; there must be demand for such a use and the use must provide the highest net return for the longest period of time.

Physically Possible

G.6 In order for a use to be considered the highest and best use, the first test it must withstand is that of physical possibility. The site must be physically capable of supporting whatever use might be considered as appropriate. The shape, size, topography and physical make-up of the soils, all combine to enable the creation or continued support of the probable use of the site. In addition, the infrastructure of the area, such as water, sewer, gas and electricity, must support the use as well as desirable location and appropriate access. The highest and best use must be physically attainable and be attainable within expected norms of timeline, design and cost to create or maintain the use being considered.

G.7 The subject parcel exhibits topography that consists primarily of undulating to rolling land that is currently in agricultural use with some low wetland areas located within the southwest corner. Review of the applicable CLI Soil Capability for Agriculture Map indicates that the subject property is comprised of approximately 60% Organic soils and 40% 4D soils. Overall the soils are considered to have severe limitations that restrict their capability to producing perennial forage crops. Gravel Exploration Tests carried out by AMEG and Associat

G. ANALYSIS OF HIGHEST AND BEST USE

Engineering (see Appendix V) indicate that the subject parcel contains a total estimated volume of 2,265,219 m³ of pit run gravel and, after accounting for applicable setbacks from the property boundaries and the various pipelines which transect the property contains an estimated volume of 1,018,627 m³ within +/- 64 mineable acres.

- G.8 Based upon the appraiser's observations, the subject parcel is currently utilized for agricultural purposes including grazing. Considering the physical characteristics of the property discussed above and relying upon the "Gravel Exploration report of Associated Engineering (see Appendix V) **it is the appraisers' opinion that the Highest and Best Use of the subject property is progressive gravel extraction, with continued minor agricultural use (grazing) on those areas not being mined.**

Legally Permissible Use

- G.9 Real estate is subject to various laws, regulations and restrictions, which are designed to protect and support the aspirations of the general society where it is located. In addition there may be private restrictions which are registered against a particular property that impact the permitted use of the property. Zoning bylaws usually define the actual permitted use of a property. However an elected Municipal Council and their appointees administer local bylaws. The elected officials are generally cognizant of the societal pressures that exist within an incorporated municipality. Ideally, the considered use should conform to all zoning restrictions and land use regulations such as the Municipal Development Plan (MDP) and/or the Zoning Bylaw, and comply with any restrictions placed on the title. Any pollution or environmental restrictions that may be in effect must also be considered. It must be recognized that the use permitted under the Zoning Bylaw is not necessarily absolute, due to the fact that zoning bylaws may be amended and override other land use controls such as the MDP. Normally if a considered use is permitted by existing law, and is socially acceptable, it will meet the legally permissive criteria and will meet the probability test. Future trends and direction also have to be considered, to ascertain that a particular use that is legally permissible at the present time, will probably continue to be permissible into the foreseeable future.
- G.10 The subject titled unit is designated "A" (Agriculture District)" under the Clearwater County Bylaw No. 914-11. The permitted and discretionary uses within the area designated "A" have been outlined previously in paragraph F.3. As of the effective date of appraisal the subject



G. ANALYSIS OF HIGHEST AND BEST USE

property was being utilized for agricultural (grazing) purposes with evidence of some gravel extraction occurring in the past.

- G.11 As quoted in Paragraph F.3, "Gravel and sand pit" is listed as a Discretionary Use within the Agriculture District "A" land use designation. A development permit application has been made to Clearwater County for the development of a 12.5 acre gravel pit upon the subject property. . Public notices have been made directly to surrounding landowners as well as advertisements have been posted in the local newspapers. An open house has also been held to address any of the landowners' concerns. This application has been conditionally approved pending the feedback from these public notices and an open house that took place on August 2, 2011.
- G.12 Our discussions with Elenor Pengally, Development Officer with Clearwater County indicate that the Municipal Planning Commission is scheduled to review this application in September of 2011. If there are no substantive changes to be made to the application to address any concerns addressed in response to the open house and public notices, then approval of the development permit could be received as early as October of 2011. If there are justified concerns raised by adjacent landowners as a result of the public notices and open house, then steps to mitigate these concerns would have to be dealt with prior to development permit approval. As it is impossible to predict the types or magnitude of concerns, it is also impossible to determine the likelihood or timeline for an eventual development permit approval. That said, our discussions with Elenor Pengally also indicates that Clearwater County has traditionally taken a supportive stance on gravel extraction within the County. As such, as long as an operator of a gravel extraction site is willing to address the concerns of adjacent landowners, Clearwater County will generally support applications for new gravel extraction sites. Considering this view towards new gravel pit applications, the fact that this application has been made, public notices have been served on local residents, and an open house has been held, it seems that there is a high probability that final approval of this site will be granted within the following year.
- G.13 Considering the above discussion of legally permissible uses, it is the appraiser's opinion that **the highest and best use of the subject property is for aggregate extraction within the short-term future with an interim use for minor agricultural production.**



G. ANALYSIS OF HIGHEST AND BEST USE

Financially Feasible

- G.14 The highest and best use of a site must be financially feasible. Each alternative use must be evaluated in terms of its financial feasibility. There are two steps used to determine financially feasible uses:
- marketability
 - financial analysis
- G.15 In order for a use to be considered the highest and best use, a market must exist for that use. There must be a demand for the use being considered. Such data as demographic statistics, local real estate data and absorption rates must be analyzed, in addition to the planned and proposed developments in a particular area.
- G.16 Data for a financial analysis must be gathered in order to determine if anticipated earnings are large enough to generate a fair and competitive return on its cost of acquisition or on its cost of development. The income must be projected to occur over a finite investment horizon, and discounted using an appropriate rate to show the net present value (NPV) in terms of current dollars. The use that shows the highest NPV of the subject site is normally the highest and best use. These specific tests are applied later in this report.
- G.17 Review of the Clearwater County map and our inspection of area lands indicate the surrounding area lands are utilized for a combination of agriculture, rural residential and aggregate extraction. Our review of land transfers in the immediate area, however, indicate that the market is **NOT** dominated by those involved in aggregate extraction activities. In fact, our review of every land transfer within the past three years within a radius of three townships and three ranges suggest that there have been very few land purchases by those involved in aggregate extraction activities. We could find only three notable transactions in the general area of the subject within the past three years involving those involved in aggregate extraction activities. In all three of these instances the purchaser was aware of the amount and quality of the deposit and paid a price based upon that amount of gravel resource, and the prices paid were significantly above normal market levels for agricultural and recreational land. This is not to say that there is not a demand for gravel, it just demonstrates that operators are not actively purchasing these lands. Our discussions with an array of operators in the area suggest that due to the large amount of capital that is required to purchase lands containing gravel, they typically prefer to enter into a lease agreement (royalty agreement) for the extraction of gravel. In such instances, the landowner is able to retain ownership of the land while getting



G. ANALYSIS OF HIGHEST AND BEST USE

paid by the gravel operator for the gravel extracted over a period of time. These discussions have also indicated that lease rates in the vicinity of the subject property are between \$1.50 to \$2.00 per tonne of gravel extracted.

- G.18 **Considering the increasing demand for aggregate resources in the region, it is the appraiser's opinion that the most financially feasible use of the subject property is considered to be gravel extraction, with interim agricultural production within those areas not being mined.**

Maximally Productive

- G.19 The test of maximum productivity is applied to the uses that have passed the first three tests. Additional analysis of the market forces of supply and demand may aid in the process of elimination. It is the market that determines the price of a particular commodity, based on the demand for, and the supply of, that commodity. When the demand for a particular commodity increases, so does the unit price of that commodity. The increase in price inevitably promotes greater supply, which pushes the unit price down. The point at which the demand for and supply of a product intersect is known as market equilibrium. At this point, any increase in supply results in a lower price per unit, and any decrease in supply results in a higher price per unit.
- G.20 The additional analysis of market forces not only address the value created under the maximally productive use but also the costs to achieve the value, if any, such as development costs, environmental remediation costs, and zoning changes. Of the financially feasible uses, the highest and best use is the use that produces the highest residual land value consistent with the market's acceptance of risk.
- G.21 As outlined within Section E, the subject property contains approximately 3,600,000 tonnes of gravel and has limited productive agricultural qualities. Considering the aggressive acquisition/leasing strategies that are currently being employed by those in the aggregate extraction market, **it is the appraiser's opinion that the most productive use of the majority of the subject property is progressive gravel extraction, with interim agricultural production within those areas not being mined.**



G. ANALYSIS OF HIGHEST AND BEST USE

Conclusion and Opinion as to Highest and Best Use

G.22 As of the effective date of appraisal, the subject parcel is being utilized for agricultural purposes. If a willing seller, as of the effective date of this appraisal, placed the subject parcel on the open market it is most probable that a willing buyer would plan to utilize the majority of the titled unit for gravel extraction purposes. Considering the above and based on local land use patterns and the existing and prospective supply and demand for gravel in the area, **it is the opinion of the appraiser that the highest and best use of the subject property, as at the effective date of appraisal, is for progressive extraction of the gravel reserves upon the property, with interim use for agricultural purposes (grazing) on those areas not being mined. Furthermore, given the reclamation policies enforced by Alberta Environment, in the long-term future subsequent to all mining and reclamation activities, these lands will most likely have a Highest and Best Use that will involve a speculative component based on expansion of the country residential development pattern that is consistent with other lands in the area that do not contain gravel deposits.**



H. APPROACHES TO ESTIMATING MARKET VALUE

- H.1 In estimating the market value of real property there are typically three standard approaches that may be utilized. They are the Cost Approach, the Direct Comparison Approach and the Income Approach.
- H.2 The Cost Approach arrives at a value estimate of land, treated as though vacant, and adds to this the depreciated value of the improvements. The value of the land is ascertained by the Comparative Sales Method, that is, comparing the subject property to other properties of the same type and class which have sold, which have been offered for sale, or on which offers have been made in the same area or similar areas, at or about the same time as the effective date of the appraisal.
- H.3 The Direct Comparison Approach arrives at a value estimate of the subject property (i.e. land and buildings) as a unit. The unit is compared to similar properties of the same type and class which have sold, which have been offered for sale, or on which offers have been made in the same area or similar areas at or about the same effective date. The value is then derived via the Comparative Sales Method as in the Cost Approach, only comparing complete units. In the case of existing bareland, the Direct Comparison Approach is simply applied to the bareland real estate interest. Thus in the case of bareland the methodology is the same under the Cost Approach and the Direct Comparison Approach.
- H.4 The Income Approach arrives at an estimate of value by determining the present value of expected future returns to the subject property. It is therefore the capitalization of the expected net returns over a given period of time. Capitalization of the estimated net returns from an income producing property can provide an accurate estimate of the economic value of such a property. However, the rate at which the annual net income is capitalized must be reflective of the risks and returns associated with investments in the type of property being appraised.
- H.5 In the appraisal task at hand, we have utilized both the Direct Comparison Approach and the Income Approach. The Direct Comparison Approach will be utilized to determine the bareland market value of the subject property by establishing a unit value for the gravel deposit contained within (\$/tonne). This approach to value is summarized within Section I of this report.

H. APPROACHES TO ESTIMATING MARKET VALUE

- H.6 The Income Approach will be utilized to determine the bareland market value of the subject property by determining the present value of expected future returns to the subject property through the anticipated sale of gravel. This approach to value is summarized within Section J of this report.
- H.7 More specifically, the form of Income Approach utilized within Section J will be in the form of a Discounted Cash Flow (DCF) analysis. Given the variable pattern of expected future cash flows, and the terminal nature of the non-renewable resource it is not possible to capitalize a normalized net operating income as is typically applied in most Income Approaches. By utilizing a DCF we are able to independently discount future cash flows that come at irregular times and amounts. The sum of the present value of these cash flows is the present value of all anticipated future cash flows – in this case equal to the market value of the subject property.



I. DIRECT COMPARISON APPROACHReview of Bareland Market Indices in the Subject Area

- I.1 The appraisers carried out an extensive search for sales of land in the proximity of the subject property. Transfer documents were obtained from Alberta Registries for any potential market indices and, subject to availability of the parties, all sales utilized herein were confirmed with at least one of the parties involved in the transaction.
- I.2 All market indices utilized have been investigated and are considered to be "arm's-length" transactions. Where considered necessary, adjustments are applied for differences in motive of the transaction, time of sale, amount of gravel and location. Percentage adjustments are made on the basis of the physical characteristics of the market index relative to the subject property (SE32-34-4-W5M).
- I.3 In the opinion of the appraiser, the market for bareland in close proximity to the subject properties can be divided into three different yet competing markets: agricultural, recreational/country residential and aggregate extraction users. Typically those lands with known gravel deposits tend to have greatest demand from aggregate operators in the area. Conversely, those lands with limited aggregate deposits tend to have greatest demand from those looking to either farm the lands, utilize them for recreational purposes or hold them for future country residential development.
- I.4 In noting the physical attributes of the subject property (SE32-34-4-W5M) we have searched for market indices that are representative of lands with a Highest and Best Use of gravel extraction. In reviewing these types of transactions, it has become clear that a small sample of these transactions do not precisely represent the definition of Market Value. As previously stated within Paragraph B.5, Market Value assumes a fully informed buyer and seller. However, in many instances the vendor and purchaser are not fully informed as to the quantity or quality of the gravel deposits within the respective lands. Our interviews with said vendors and purchasers has indicated that, although they were cognizant of the fact that the respective property contained gravel deposits, they were not knowledgeable in how to accurately value said deposits. As such, their expectations of market value were based primarily on general comparison with land sales in the area. In most cases, this involved valuing their lands on a "per acre" basis and involved making an arbitrary upward adjustment from that of "agricultural" land prices in the area. Based on our review of the applicable market factors, it

I. DIRECT COMPARISON APPROACH

appears that an uninformed vendor has typically expected two to three times that of “agricultural use” land values for lands known to contain gravel deposits. We have made every effort to not include these sales within our analysis as they are not considered to be a fair representation of “Market Value” (fully informed vendor and purchaser) for unpermitted lands containing gravel.

- I.5 When placing value on lands known to contain gravel deposits, a knowledgeable market participant would place the highest consideration on the factors that directly affect the profitability of said lands for the purposes of extracting and selling gravel. As such, the resource itself, not the land, tends to be what contributes to market value. The amount of gravel, quality of gravel, amount of overburden, location of the gravel in relation to the water table and distance to market are typically the most important factors to consider. That said, even considering “knowledgeable” market participants there appears to be varying degrees of sophistication with regard to how this resource is valued. The simplest methodology utilized in the marketplace is to compare properties on a per acre basis and adjust up or down depending on the above factors. Our research indicates that this is the methodology that informed landowners tend to use most. A more refined method, and the one utilized by a number of the larger aggregate operators in the region, applies a market determined dollar value to the amounts of in-situ gravel. This dollar amount is derived based on a comparative basis and may be adjusted up or down based upon the parameters discussed above. This dollar amount per tonne of in-situ gravel is then applied to the known amount of gravel, thereby yielding a total market value for the in-situ gravel resource. This is considered to be the most applicable unit of comparison and, as such, will be utilized within the following Direct Comparison Approach.

Properties Sold With Known Gravel Deposits

- I.6 The following three market indices form the basis for estimating the market value of the subject within SE32-34-4-W5M. Overall, these are considered to be the best available market indices relative to the subject property and, based on the value parameters outlined in Paragraph I.5, demonstrate a value range of between \$0.21/tonne and \$0.51/tonne of in-situ gravel.



I. DIRECT COMPARISON APPROACHMarket Index #1:

Legal Description:	NE13 34-5-W5M;
Municipality:	Clearwater County
Purchaser:	Clearwater County
Vendor:	Joanne M. Overguard
Transfer Date:	September 21, 2010
Sale Price:	\$1,000,000
Plottage:	152.86 acres
Indicated Price Per Acre:	\$6,542/acre
Reported Volume of Gravel:	+/- 1,950,000 tonnes
Indicated Price Per Tonne:	\$0.51/tonne of in-situ gravel
Comments:	

Property holding was purchased by Clearwater County. Property was tested prior to purchasing and volume estimates were provided by Joe Baker, Manager of Planning and Development for Clearwater County. Marshall Morton, Public Works Manager for Clearwater County stated that Clearwater County tries to keep a 50 to 100 year supply of gravel for all regions within the county. Although he refused to comment on this sale specifically, he also stated that in the proximate area of the subject property he would be prepared to pay between \$0.50/tonne and \$0.60/tonne of in-situ gravel. Based on the volume estimates acquired from Mr. Baker, this transaction works out to approximately \$0.51/tonne of in-situ gravel. This property is located approximately five kilometers southwest of the subject property and is considered a very good market indicator. Although this property contains pipeline rights of way, their relative impact on the extraction of aggregate gravel is considered to be minimal (pipeline R/W impacts approximately 11%).



I. DIRECT COMPARISON APPROACHMarket Index #2:

Legal Descriptions:	SE13 36-2-W5M
Municipality:	Red Deer County
Purchaser:	Howell's Excavating Ltd.
Vendor:	Palkot Farms Ltd.
Transfer Date:	January 28, 2010
Sale Price:	\$750,000
Plottage:	135.59 acres
Indicated Price Per Acre:	\$5,531/acre
Reported Volume of Gravel:	+/- 3,500,000 tonnes
Indicated Price Per Tonne:	\$0.21/tonne of in-situ gravel
Comments:	Located approximately 20 kilometers northwest of Innisfail, Alberta, this property was purchased with the intent of operating a gravel pit in the near future. Transaction confirmed with the purchaser. Subsequent to purchase, the purchaser began the process of obtaining a development permit. Volume estimates were taken from original development permit application to Red Deer County. This development permit application is still pending, however, it is currently facing a great deal of resistance from adjacent landowners due to large portions of the gravel deposit being located below the water table. This also suggests that, aside from the environmental concerns voiced by nearby stakeholders, extraction of these deposits will also require a dewatering process, which substantially increases the extraction cost. Although this property contains natural gas pipeline right of way, the relative impact on the extraction of aggregate gravel is considered to be minimal (pipeline gas R/W impacts approximately 4%).



I. DIRECT COMPARISON APPROACHMarket Index #3:

Legal Descriptions:	NW33 40-7-W5M
Municipality:	Clearwater County
Purchaser:	Wetaskiwin County
Vendor:	Elizabeth M. Perry and Graham Arthur Perry
Transfer Date:	October 31, 2008
Sale Price:	\$2,500,000
Plottage:	163 acres
Indicated Price Per Acre:	\$15,337/acre
Reported Volume of Gravel:	+/- 4,900,000 tonnes
Indicated Price Per Tonne:	\$0.51/tonne of in-situ gravel
Comments:	Located approximately five kilometers northwest of the Town of Rocky Mountain House, this property was purchased with the intent of operating a gravel pit in the future. Gravel estimates and price paid were confirmed with Rod Hawken, Assistant CAO, Wetaskiwin County. This gravel reserve is expected to provide Wetaskiwin County with a 75 year gravel supply for servicing the western portion of the county. Although this property contains pipeline rights of way, their relative impact on the extraction of aggregate gravel is considered to be minimal (pipeline R/W impacts approximately 8%).



I. DIRECT COMPARISON APPROACH

Table I.1 - Bareland Market Indices Chart				
SE32 34-4-W5M				
Effective Date: July 14, 2011				
	Subjects	Index #1	Index #2	Index #3
Transfer Date:		Sep-10	Mar-10	October-08
Months Before Effective Date:		11	16	20
Bareland Price:		\$1,000,000	\$750,000	\$2,500,000
Bareland Price/Acre:		\$6,542	\$5,531	\$15,337
Bareland Price/Tonne of Gravel:		\$0.51	\$0.21	\$0.51
Legal Location:	SE32 34-4-W5M	SE13-34-5-W5M	SW13 35-2-W5M	NW33-40-7-W5M
Municipality	Clearwater County	Clearwater County	Red Deer County	Clearwater County
Total Acres:	156.71	152.86	135.59	163
Reported Amount of Gravel (tonnes):	3,624,350	1,957,261	3,533,905	4,893,120
Zoning*:	"A"	"A"	"Ag"	"A"
Topography:	Undulating to rolling land sloping to a wetland area within the southwest corner; mostly cleared as pasture land. Open pit located in southeast corner.	Undulating to rolling land; almost fully treed. Located ~5 Km SW from subject property.	Undulating land that has been cleared for agricultural production of field crops (contains CLI Class 3 soil).	Undulating to gently rolling; cleared for agricultural production
Improvements	None	None	None	None
Comments		Purchased by Clearwater County with the intention of extracting gravel for the County's road maintenance in the region.	extracting gravel. Development Permit application has received resistance from landowners due to large portions of the gravel deposit lying below the water table. Will result in additional extraction costs. Located ~20 km NW of Innisfail	Purchased by Wetaskiwin County with the intention of extracting gravel for the county's road maintenance in the west region.
Bareland Price:		\$1,000,000	\$750,000	\$2,500,000
Motivation:		0%	0%	0%
Motive Adjusted Value:		\$1,000,000	\$750,000	\$2,500,000
Time:		0%	0%	0%
Time /Motive Adjusted Value:		\$1,000,000	\$750,000	\$2,500,000
Other Adjustments				
Dewatering:		0%	30%	0%
Location:		0%	-20%	-20%
Encumbrance:		-11%	-17%	-15%
Size (amount of gravel):		-15%	0%	15%
Total Other Adjustments		-26%	-7%	-20%
Indicated Value (\$/acre):		\$4,841	\$5,144	\$12,270
Indicated Value (\$/tonne):		\$0.38	\$0.20	\$0.48

I. DIRECT COMPARISON APPROACH

Analysis of Market Indices

Time and Motive

- I.7 The market indices consist of three sales which occurred during the period of October 2008 through September 2010. In all instances the transfer date was utilized as the sale date. A review of real estate transactions in Red Deer County and Clearwater County, as well as discussions with local realtors, indicates that sale prices for land in this area have remained fairly stable over the past three years including lands containing gravel deposits. As a result, no time adjustments were applied to the market indices. Confirmation of the respective market indices has also indicated that all three were sold at arm's length.

Dewatering

- I.8 It is documented that a large portion of the gravel deposit contained within Market Index #2 lies below the water table. This presents several additional concerns for a potential operator as environmental engineering costs and processing costs can be dramatically influenced. Furthermore, there tends to be a great deal of resistance from surrounding stakeholders when aquifers are affected by a potential gravel pit, thus presenting additional permitting hurdles. A positive adjustment of 30% has been applied to this market index relative to these additional hard and soft costs that are associated with dewatering. The gravel deposits within Market Indices #1 and #3 are both above the water table and no adjustments are considered necessary.

Location

- I.9 Relative to valuing gravel deposits, location is considered to be one of the most important factors as transporting the gravel from its in-situ location to the end user typically represents the largest cost component. Based on a report on the various input costs prepared by RJ Sanderson, P.Eng, it is estimated that transporting gravel comes at a cost of approximately \$0.10 per tonne per kilometer. Market Index #2 is located approximately 20 kilometers northwest of Innisfail, Alberta and Market Index #3 is located approximately five kilometers northwest of Rocky Mountain House. Both of these indices are closer to their respective markets and, thus, would have reduced trucking costs relative to the subject property. A negative location adjustment of 20% was applied to each of these market indices. Market Index #1 is located approximately five kilometers southwest of the subject property and no location adjustments are considered applicable.



I. DIRECT COMPARISON APPROACH

Encumbrances

- I.10 It is estimated that of the ~ 100 acres that was tested by AMEC that ~ 22 acres cannot be mined due to the location of various pipeline rights of way. As such, these pipeline rights of way effectively inhibit the extraction of approximately 22% of the available gravel (based solely on plottage affected). In comparison, pipeline rights of way within Market Indices #1, #2 and #3 affect only 11%, 5% and 7% of their respective overall plottages. Therefore, considering the relative difference in areas impacted by pipeline rights of way we have applied negative adjustments of 11%, 17% and 15% respectively to Market Indices #1, #2 and #3.

Size of Deposit

- I.11 Although we have reduced the sale price of each of the market indices to a unit value (\$/tonne), due to economies of scale larger deposits tend to sell at lower unit values than smaller ones. Gravel is a depleting resource that must be accessed and sold over a long period of time – often pits are in operation for 30 to 50 years. Although, all things being equal, a larger deposit undoubtedly has more value than a smaller one, the value of each additional unit of gravel diminishes due to the fact that the time to extract additional tonnage also stretches out further into the future assuming the relative demand remains constant. As such, the present value of this additional tonnage is reduced. The three market indices have a range in tonnage from a low of +/- 1,950,000 tonnes to a high of +/- 4,900,000 tonnes, whereas the subject property has a reported tonnage of +/- 3,600,000 tonnes. A positive 15% adjustment relative to size was applied to Market Index #3 (+/- 4,900,000 tonnes). A negative 15% adjustment relative to size was applied to Market Index #1 (+/- 1,950,000 tonnes). Market Index #2 has similar tonnage (+/- 3,600,000 tonnes) as the subject property and therefore no size adjustment is considered applicable.

Quality Comparison of Market Indices

- I.12 Our discussions with market participants coupled with our observations of the gravel extraction patterns in the greater Red Deer Region have demonstrated that, like most markets, it has been manipulated mainly by economics. The Alberta Geological Survey is easily available and demonstrates the location and types of gravel that are located within the Province of Alberta. To date though, the largest proportion of gravel extraction in the Red Deer Region has occurred in close proximity to Red Deer, Lacombe and Rocky Mountain House. Our discussions with several market participants have indicated that it is more economic to extract gravel from these areas relative to the area immediately surrounding the subject property as they are closer to a sizeable market (Red Deer and Edmonton). Although we have made location adjustments, due to the fact that Market Index #1 is in close proximity



I. DIRECT COMPARISON APPROACH

to the subject property we have placed major emphasis on this index. Based on a known gravel deposit (geotechnical reports conducted by AMEC and Associated Engineering) of 3,624,350 tonnes (2,265,219 m³) relative to the subject property and a unit value of \$0.38/tonne, this translates to an overall market value of \$1,375,000 (rounded). Based on the preceding analysis, **it is the appraisers' opinion that "the market value of the subject property" is as follows:**

$$3,624,350 \text{ tonnes} \times \$0.38/\text{tonne} = \$1,375,000 \text{ (rounded)}$$

ONE MILLION THREE HUNDRED AND SEVENTY FIVE THOUSAND DOLLARS



J. INCOME APPROACH

Application of the Income Approach to Bareland Containing Gravel

- J.1 Operators of gravel pits in Central Alberta have two options for securing the rights to extract gravel. They can either own the lands that contain the gravel deposits or enter into a lease allowing them to extract this gravel within a pre-defined period and, in return, pay the landowner a pre-defined price or royalty rate for said gravel extracted.
- J.2 In the case of the leased lands, our research has determined that these leases are structured so that all costs related to the extraction and processing of the gravel and reclamation of the lands are the responsibility of the gravel operator. The landowner's only major responsibility is maintaining ownership of said lands. As such, from a landowner's point of view, lands containing gravel deposits are very much analogous to a typical revenue generating property. The main difference being that the landowners' cash flows are dependent upon the extraction rate of the gravel deposit versus a standard monthly or yearly rental rate. Just as with any revenue generating property, these cash flows may be projected into the future and discounted at an appropriate discount rate within a discounted cash flow analysis, thereby yielding an estimate of the present value of these future benefits and thus the current market value of the subject property.

Estimated Quantities of Gravel Situated Upon the Subject Parcel

- J.3 Our inspection of the subject site and review of aggregate test pit and test hole reports provided by Associated Engineering through ReSol Financial Group indicates there exist considerable gravel deposits located throughout much of the subject parcel. The information provided indicates that the depth of the gravel is not consistent throughout the subject property as proven by the provided test hole and test pit information (see Appendix V). Overall, the property has been found to contain 2,265,219 m³ of gravel.

Royalty Rates for Gravel

- J.4 Our discussions with market participants in the Red Deer area indicate that royalty rates for gravel are in the range of \$1.00/tonne to \$3.00/tonne, depending on the site's proximity to the market and applicable extraction costs. In the vicinity of the subject property, our survey suggests that \$1.50/tonne is fair and reasonable. Although most leases are adjusted upward for inflation, for the purpose of simplicity we will be factoring out the effects of inflation by discounting at a real discount rate. As such, we will be applying a royalty rate of \$1.50/tonne throughout the analysis.



J. INCOME APPROACH

Timing of Cash Flows

J.5 Although the cost of obtaining permitting is not borne by the landowner, the time taken to obtain gravel extraction permits directly affects the present value of the first and subsequent payments that the landowner could expect to receive. Royalty leases are typically conditional upon the required permits being granted and the term of the lease (usually the term of 25 to 40 years does not start until the permits are in place. Our discussions with market participants as well as planning officers from Clearwater County have indicated that, from start to finish, it may take up to a year to obtain a Class II Gravel Pit Permit. For the purposes of implementing our discounted cash flow analysis, we have tended towards the upper end of this range and have utilized one year. It will then be assumed that extraction of gravel will occur after one year and for every year thereafter until the resource is depleted.

Gravel Available for Extraction

J.6 Discussions with various gravel operators in the subject area indicate a percentage of waste must be considered relative to the overall volume of the gravel reserves. Further discussions indicate the percentage of waste can vary significantly, somewhere between 2% and 50%, depending on the depth of overburden, depth to bedrock, water table and variances in overall topography. The aforementioned Associated Engineering Test Pits and Test Holes has accounted for this net available amount of gravel by factoring in setbacks from several pipelines and the property boundaries as well as considering the overall reclamation requirements. This report indicates that there are 1,018,627 m³ of gravel that is available for extraction and sale. Using a typical conversion factor of 1.6 tonnes of gravel per cubic meter indicates a quantity of 1,629,803 tonnes that is available for extraction and sale.

Extraction and Absorption

J.7 Local area demand for gravel determines the rate of absorption of the area gravel reserves. Factors such as location, size, quality, overburden, water table and depth of the reserves as well as local market conditions all affect demand. Our market research indicates that there is a constant, yet cyclical, demand for further extraction of gravel in the Red Deer Region. Discussions with various operators in the area indicate that while gravel demand has fluctuated dramatically over time there has always been a relatively high demand for it. This is demonstrated by examining the demand for gravel over the past five years within the Greater Edmonton Region. In 2007 it is estimated that 16,000,000 tonnes of gravel were absorbed within the Greater Edmonton Region. At this point in time residential and commercial



J. INCOME APPROACH

building permits were at all time high levels for the region. The downturn in the economy has resulted in the annual absorption rate dropping to around 8,000,000 tonnes over the past few years.

- J.8 Our discussions with local gravel operators have indicated that annual extraction from pits in the subject area typically range between 25,000 to 150,000 tonnes per year. We have also surveyed operators regarding lifespans of gravel pits and have found that pits typically have a lifespan of between 10 and 40 years with 15 to 25 years being the most common. A lifespan of 15 years has been utilized within this analysis. The largest users within the region tend to be the various surrounding counties (Westakiwin, Clearwater, Red Deer, Brazeau, Lacombe and Mountain View) as well as the local construction contractors (Pidherney's, Border Paving, Rick Martin Trucking and Howell's Excavating). With the subject property containing an estimated 1,629,803 tonnes of available gravel, a pit lifetime of 15 years predicates an annual extraction amount of 108,654 tonnes. As this represents a relatively small proportion of the overall demand for gravel in the region, we have assumed that it will be fully absorbed by the marketplace. Furthermore, although we understand that the demand for gravel tends to be cyclical, given the impossible nature in forecasting the cyclicity of this demand, for the purposes of this analysis we will assume a constant annual production of 108,654 tonnes throughout the projected 15 year life span of the pit.

Value of Lands at End of Lease

- J.9 As a requirement of Alberta Environment, all gravel extraction sites have to be remediated subsequent to the extraction of the gravel. This is an on-going process that must occur, and therefore at the end of the lease the landowner will have possession of 156.71 acres of remediated lands that do not contain gravel deposits. Based on our general research and recent experience in the immediate area, lands not known to contain gravel deposits have a land value in the range of \$4,000 per acre. These lands are typically utilized for agricultural and recreational purposes. As previously stated, for simplicity we have chosen to factor out the effects of inflation from our discounted cash flow analysis. Assuming that land values over the next 16 years (timeline for analysis) appreciate following the general inflationary pattern, the value of the remediated lands at the end of the extraction period, in the absence of appreciation/inflation, are estimated to be worth approximately \$626,840 (156.71 acres at \$4,000 per acre).



J. INCOME APPROACH

Applicable Discount Rates

- J.10 As the receipt of income from the subject gravel reserves will extend for some period of time into the future, we must discount this anticipated income stream to present (2011) dollars. In order to determine the present value of such an income stream we must apply a relevant discount rate.
- J.11 For the purposes of this valuation, we have considered a discount rate of 12% to be reasonable. This rate has been established by extracting the implied discount rate from the market indices within Section I of this report. By making assumptions regarding these market indices' respective amounts of available gravel, annual extraction volumes and pit lifetimes it is possible to determine the discount rate implied by each of these transactions. Based on this analysis we have determined the applicable discount rate to be 12%. Given the length of the lease term and the long term cyclical nature of the demand for gravel, we will be utilizing a constant discount rate of 12%. This discount rate is representative of what we consider to be a typical investor's expectation of the REAL RETURN from disposing of in-situ gravel to a gravel operator via a royalty lease. In comparison, a brief survey of gravel operators in the Edmonton region has suggested that an applicable NOMINAL rate of return for the extraction of gravel is 15%. In factoring out inflation (estimated to average approximately 3% over the past 20 years) this also indicates a REAL discount rate of 12%.

Present Value of Income Stream

- J.12 The value of a gravel reserve is the present worth of future earnings to the end of its economic or productive life. Periodic royalty payments from the extraction of gravel are converted into present value through discounting, a procedure based on the economic premise that "benefits received in the future are worth less than the same benefits received today". As an investor seeks a total return on investment that exceeds the amount invested, the present value of a prospective benefit must be less than the sum of its expected future values.



J. INCOME APPROACH

J.13 The variables utilized in calculating the net present value of the gravel reserves situated upon the subject property are considered to be as follows:

Reported total Gravel Deposit:	3,624,350 Tonnes
Available Gravel Reserves:	1,629,803 tonnes
Absorption Rate:	108,654 tonnes/year
Gravel Royalty Rate:	\$1.50/ tonne
Time Taken to Fully Permit	
Lands for Gravel Extraction:	1 year
Term of Extraction:	15 years
Discount Rate:	12.0% (Compounded Annually, Real Rate)
Assumed Land Value	
At End of Extraction Term	
(no gravel):	\$4,000/acre
Plottage of "owned" Lands:	156.71 acres

Table J.1 - Present Value of Expected Royalty Payments							
Estimated Bareland Value of the SE32-34-4-W5M							
Year	Volume of Gravel (Tonnes)			Remediated Land Value	Present Value of All Cash Flows		
	Start	End	Extracted		Cash Flow	Discount Factor	PV of CF
1	1629803	1521150	108654		\$162,980	0.8929	\$145,518
2	1521150	1412496	108654		\$162,980	0.7972	\$129,927
3	1412496	1303843	108654		\$162,980	0.7118	\$116,006
4	1303843	1195189	108654		\$162,980	0.6355	\$103,577
5	1195189	1086535	108654		\$162,980	0.5674	\$92,479
6	1086535	977882	108654		\$162,980	0.5066	\$82,571
7	977882	869228	108654		\$162,980	0.4523	\$73,724
8	869228	760575	108654		\$162,980	0.4039	\$65,825
9	760575	651921	108654		\$162,980	0.3606	\$58,772
10	651921	543268	108654		\$162,980	0.3220	\$52,475
11	543268	434614	108654		\$162,980	0.2875	\$46,853
12	434614	325961	108654		\$162,980	0.2567	\$41,833
13	325961	217307	108654		\$162,980	0.2292	\$37,351
14	217307	108654	108654		\$162,980	0.2046	\$33,349
15	108654	0	108654		\$162,980	0.1827	\$29,776
16	0	0		\$626,840	\$626,840	0.1631	\$102,251
Total							\$1,212,288

J.14 Table J.1 summarizes the annual revenue, absorption rates and present values of the projected annual income over the anticipated extraction period for the total gravel reserves upon the subject property SE32-34-4-W5M.



J. INCOME APPROACH

- J.15 By application of the Income Approach we estimate the bareland market value of the subject property effective July 14, 2011 to be \$1,212,000 (rounded):

ONE MILLION TWO HUNDRED TWELVE THOUSAND DOLLARS

- J.16 As with any DCF analysis, the reliability of the results depend heavily on the inputs utilized. Throughout this analysis we have utilized a discount rate of 12% and an extraction timeline of 15 years. Table J.2 summarizes a sensitivity analysis on these two variables and demonstrates the impact that varying these two variables has on the estimated market value of the subject property, all other things being equal. With respect to both of these variables, as the demand for gravel increases, so too should the expected value of lands containing gravel deposits. With heightened demand, it would be expected that annual extraction rates would increase and pit life spans would subsequently decrease. That said, given the long term and cyclical nature of gravel extraction, we consider our estimates of 15 years and 12% to be appropriate. These variables and the resulting present value are supported by the Direct Comparison Approach in the previous Section I.

Table J.2			Sensitivity	
Analysis of Factors within the Discounted Cash Flow Analysis				
Extraction Timeline Sensitivity			Discount Rate Sensitivity	
Extraction Timeline (yrs)	Annual Extraction Amount (tonnes)	Indicated Bareland Market Value	Discount Rate	Indicated Bareland Market Value
5	325,961	\$2,080,687	10%	\$1,376,060
10	162,980	\$1,561,848	11%	\$1,289,999
15	108,654	\$1,212,288	12%	\$1,212,288
20	81,490	\$971,157	13%	\$1,141,936
25	65,192	\$798,155	14%	\$1,078,086
30	54,327	\$674,660	15%	\$1,019,993



K. CERTIFICATION AS TO THIS APPRAISAL

K.1 We certify that, to the best of our knowledge and belief:

- the statements of fact contained in this report are true and correct
- the reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal unbiased professional analyses, opinions and conclusions
- we have no present or prospective interest in the properties that are the subject of this report, and we have no personal interest or bias with respect to the parties involved
- our compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimates, the attainment of a stipulated result, or the occurrence of a subsequent event
- the reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Code of Professional Ethics and the Canadian Uniform Standards of Professional Appraisal Practice

K.2 As of the date of this report the undersigned has fulfilled the requirements of "The Appraisal Institute of Canada Mandatory Re-certification Program" for its members.

K.3 As of the date of this report the undersigned remained licensed, as a real estate appraiser, pursuant to the licensing requirements of the Real Estate Act of the Province of Alberta.

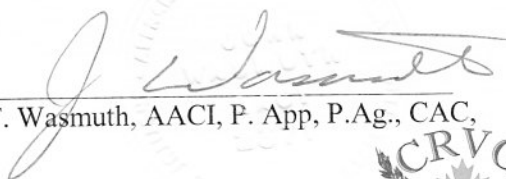

K.4 Ryan D. Archer, AACI, P.App., BComm made a personal inspection of the property that is the subject of this report on July 14, 2011 and conducted all background research and preparation of this report.

K.5 This report was prepared under the direction, supervision and guidance of John F. Wasmuth, AACI, P.App, P.Ag., CAC, and Mr. Wasmuth has reviewed this report and concurs with all opinions expressed herein..

K.6 Within Section I of this report we have utilized the Direct Comparison Approach and estimated the bareland market value of the subject property to be ONE MILLION THREE HUNDRED SEVENTY FIVE THOUSAND DOLLARS (\$1,375,000). Within section J of this report we have utilized the Income Approach and estimated the bareland market value of the subject property to be ONE MILLION TWO HUNDRED TWELVE THOUSAND DOLLARS (\$1,212, 000). In our final reconciliation, we have placed the greatest weighting on the Direct Comparison Approach as this approach to value is considered to be the one that active market participants tend to rely on most. **It is our opinion**, subject to the assumptions and limiting conditions stated herein, **that the bareland market value of SE32 34-4-W5M, as of July 14th, 2011, is ONE MILLION THREE HUNDRED THOUSAND DOLLARS (\$1,300,000).**



Ryan D. Archer, AACI, P.App, B.Comm


John F. Wasmuth, AACI, P. App, P.Ag., CAC,


APPENDICES

AREA MAPS SHOWING LOCATION OF SUBJECT PROPERTY AND MARKET INDICES	I
COPY OF CERTIFICATE OF TITLE	II
AERIAL PHOTOGRAPH OF SUBJECT PROPERTY.....	III
PHOTOGRAPHS OF SUBJECT PROPERTY	IV
ASSOCIATED ENGINEERING & AMEC – GRAVEL EXPLORATION - SE32-34-4-W5M	V
QUALIFICATIONS OF JOHN F. WASMUTH.....	VI
QUALIFICATIONS OF RYAN D. ARCHER.....	VII



APPENDIX I (a)



Market Index #1

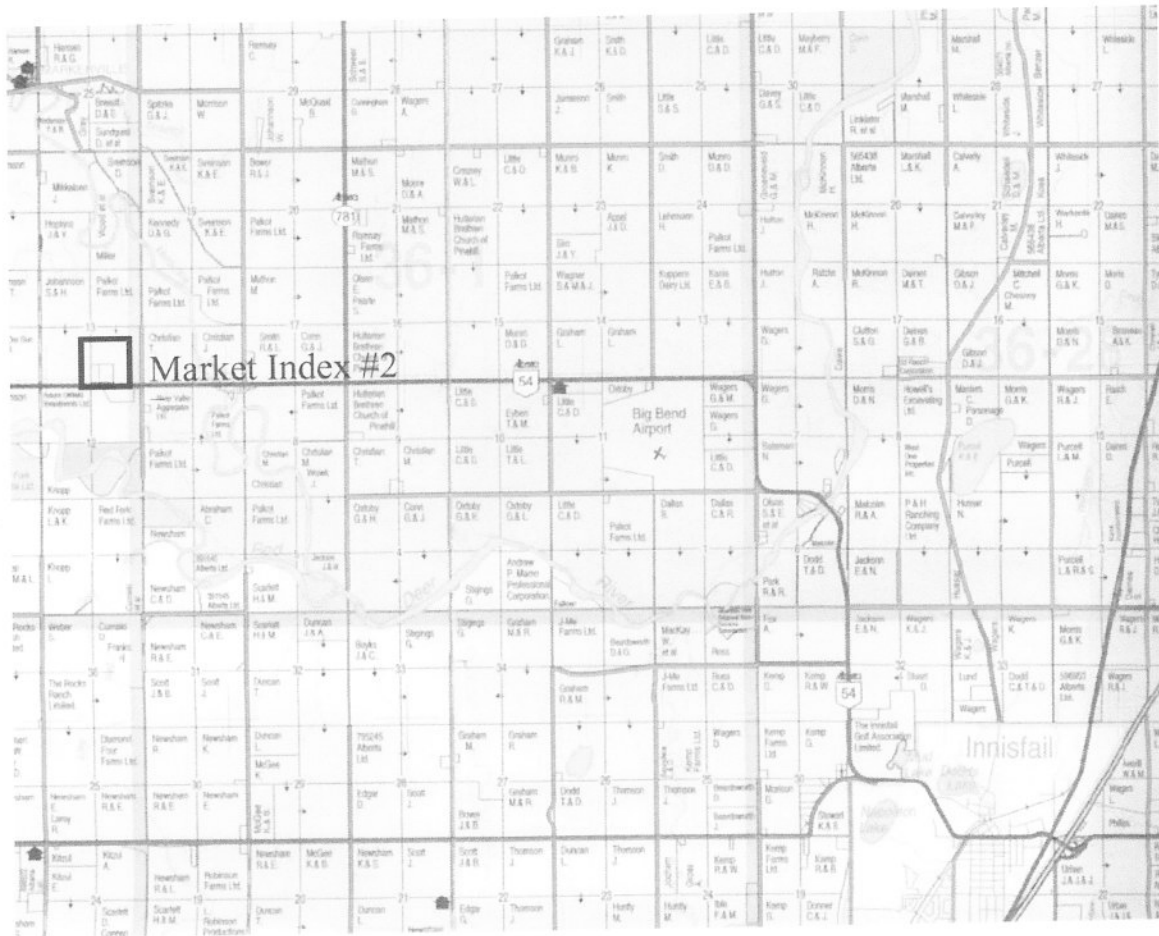


Market Indices



AREA MAPS SHOWING LOCATION OF SUBJECT PROPERTY & MARKET INDICES

APPENDIX I (b)

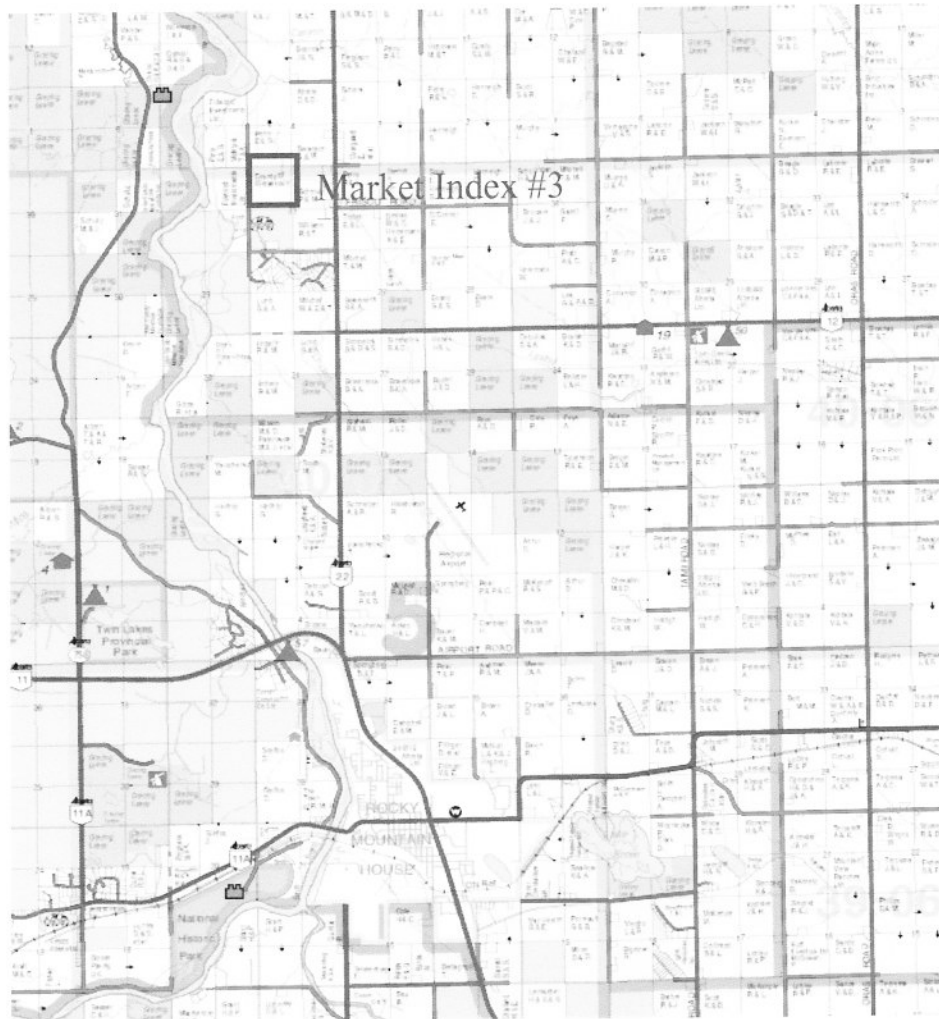


Subject Property



Market Indices

AREA MAPS SHOWING LOCATION OF APPENDIX I (c)
SUBJECT PROPERTY & MARKET INDICES



Subject Property



Market Indices

COPY OF CERTIFICATE OF TITLE

APPENDIX II



LAND TITLE CERTIFICATE

S		
LINC	SHORT LEGAL	TITLE NUMBER
0034 747 162	5:4;34;32;SE	111 085 936 +2

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 4 TOWNSHIP 34
SECTION 32

QUARTER SOUTH EAST

CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS

EXCEPTING THEREOUT:

	HECTARES (ACRES) MORE OR LESS
A) PLAN 1111242 SUBDIVISION	1.33 3.29
EXCEPTING THEREOUT ALL MINES AND MINERALS	

ESTATE: FEE SIMPLE

MUNICIPALITY: CLEARWATER COUNTY

REFERENCE NUMBER: 091 390 106 +1

REGISTERED OWNER(S)				
REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION

111 085 936 08/04/2011 SUBDIVISION PLAN

OWNERS

RALPH CHARLES THOMPSON (FARMER)

AND

DIANE PATRICIA THOMPSON (HOUSEWIFE)

BOTH OF:

BOX 2, SITE 1, RR 1

SUNDRE

ALBERTA

AS JOINT TENANTS

{ CONTINUED }

COPY OF CERTIFICATE OF TITLE

APPENDIX II

ENCUMBRANCES, LIENS & INTERESTS			PAGE 2
			# 111 085 936 +2
REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS	
5227HW .	21/04/1960	CAVEAT CAVEATOR - NAL RESOURCES LIMITED. PO BOX 6359, STN D CALGARY ALBERTA T2P2C9 (DATA UPDATED BY: TRANSFER OF CAVEAT 971094644) (DATA UPDATED BY: TRANSFER OF CAVEAT 021004775) (DATA UPDATED BY: CHANGE OF ADDRESS 021169798) (DATA UPDATED BY: TRANSFER OF CAVEAT 051310128) (DATA UPDATED BY: CHANGE OF ADDRESS 111077009)	
1336KJ .	21/01/1969	UTILITY RIGHT OF WAY GRANTEE - HUDSON'S BAY OIL AND GAS COMPANY LIMITED. AS TO PORTION OR PLAN:5940JK	
8559KF .	06/03/1969	UTILITY RIGHT OF WAY GRANTEE - PLAINS MIDSTREAM CANADA ULC. 1400, 607 8 AVE SW CALGARY ALBERTA T2A0A7 AS TO PORTION OR PLAN:5945JK (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 031207209) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 081083592)	
761 101 883	13/08/1976	UTILITY RIGHT OF WAY GRANTEE - ROCKY GAS CO-OP LTD.	
841 087 978	23/05/1984	UTILITY RIGHT OF WAY GRANTEE - HUDSON'S BAY OIL AND GAS COMPANY LIMITED. "(EXCEPTING FOR PORTION ON PLAN 8410419) TAKES PRIORITY OF CAVEAT 831224975 REGISTERED 09/12/1983"	
111 085 934	08/04/2011	CAVEAT RE : ACQUISITION OF LAND CAVEATOR - CLEARWATER COUNTY. 4340-47TH AVENUE ROCKY MOUNTAIN HOUSE ALBERTA T4T1A4 AGENT - KEITH MCCRAE	
111 099 850	27/04/2011	EASEMENT	

(CONTINUED)

COPY OF CERTIFICATE OF TITLE

APPENDIX II

ENCUMBRANCES, LIENS & INTERESTS

PAGE 3

111 085 936 +2

REGISTRATION

NUMBER

DATE (D/M/Y)

PARTICULARS

"FOR THE BENEFIT OF LOT 1 BLOCK 1 PLAN 1111242"

TOTAL INSTRUMENTS: 007

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE
REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED
HEREIN THIS 6 DAY OF JULY, 2011 AT 05:26 P.M.

ORDER NUMBER: 19279897

CUSTOMER FILE NUMBER: 11492



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE
SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS
SET OUT IN THE PARAGRAPH BELOW.

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INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR
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PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR
THE BENEFIT OF CLIENT(S).

AERIAL PHOTOGRAPH OF SUBJECT PROPERTY APPENDIX III
SE32 34-4-W5M
(Photo Taken 12/06/2010)



PHOTOGRAPHS OF SUBJECT PROPERTY
(Photos Taken July 14, 2011)

APPENDIX IV(i)



LOOKING NORTHWEST FROM SOUTHEAST CORNER OF SE32-34-4-W5M



LOOKING NORTH ALONG RANGE ROAD 4-4 FROM THE SOUTHEAST CORNER OF SE32-34-4-W5M

PHOTOGRAPHS OF SUBJECT PROPERTY
(Photos Taken July 14, 2011)

APPENDIX IV(ii)



LOOKING EAST AT ENTRANCE INTO SE32-34-4-W5M FROM RANGE ROAD 4-4



LOOKING SOUTHWEST AT OPEN PIT WITHIN SOUTHEAST CORNER OF SE32-34-W5M

PHOTOGRAPHS OF SUBJECT PROPERTY
(Photos Taken July 14, 2011)

APPENDIX IV(iii)



LOOKING EAST AT SURFACE WELL LOCATED WITHIN SOUTHEAST QUADRANT OF SE32-34-4W5M



LOOKING NORTH FROM WITHIN SOUTH CENTRAL PORTION OF SE32-34-4-W5M

GRAVEL EXPLORATION, MINING AND RECLAMATION
THOMPSON PROPERTY
SE 32-34-4 W5M
DEVELOPMENT PLAN

AE Project No. 20063963-020
Issued for Review

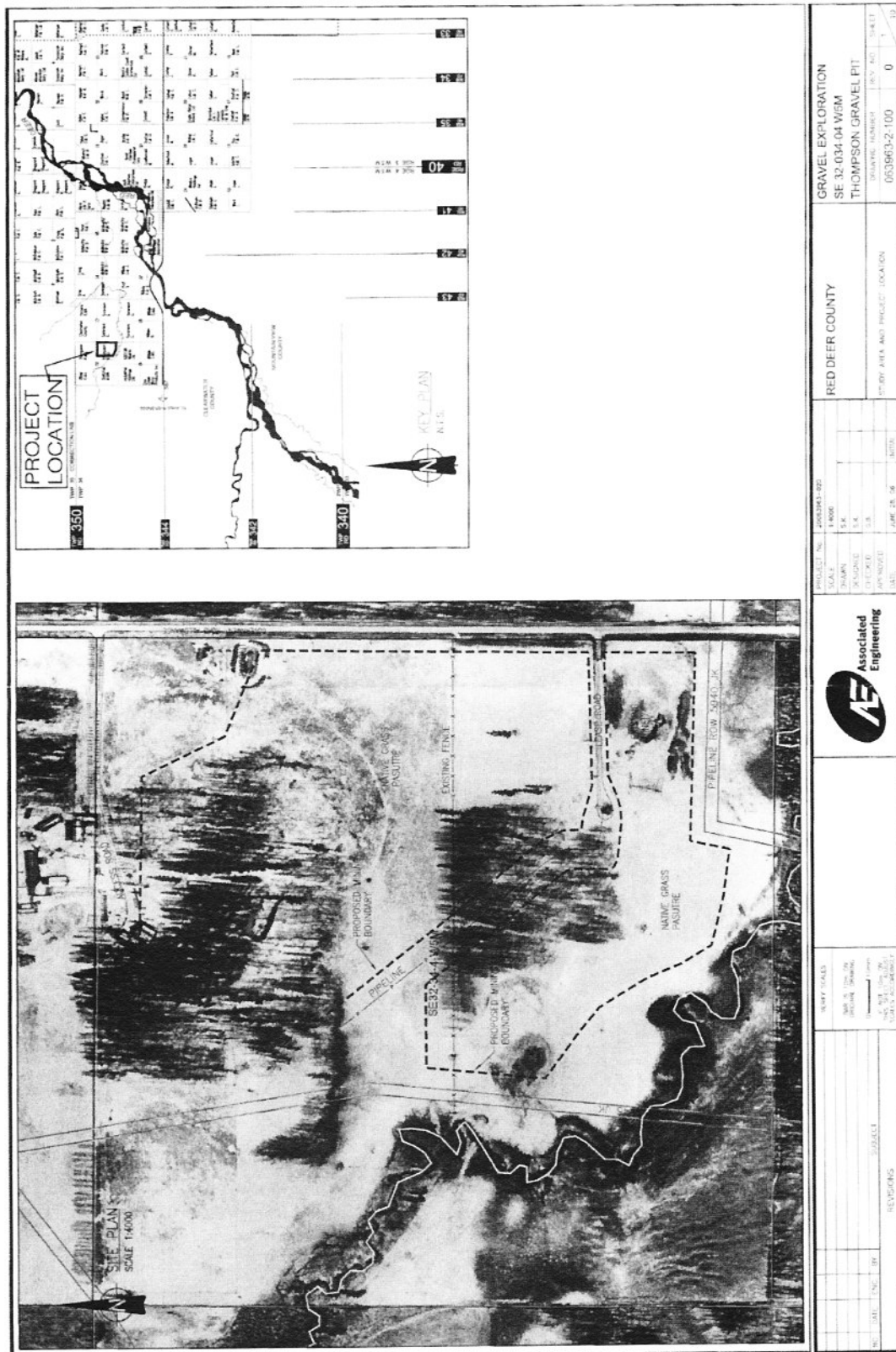
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2	DRAWING TITLE		
3	DATE AND PROJECT LOCATION		
4	DATE AND PROJECT LOCATION		
5	DATE AND PROJECT LOCATION		
6	DATE AND PROJECT LOCATION		
7	DATE AND PROJECT LOCATION		
8	DATE AND PROJECT LOCATION		
9	DATE AND PROJECT LOCATION		
10	DATE AND PROJECT LOCATION		



**Associated
Engineering**

GLOBAL PERSPECTIVE.
LOCAL FOCUS.

APPENDIX V(ii)



ASSOCIATED ENGINEERING & AMEC GRAVEL EXPLORATION - SE32-34-4-W5M

APPENDIX V(iii)



This drawing is for the use of the client and project indicated. No representation of any kind is made by the client and project indicated.

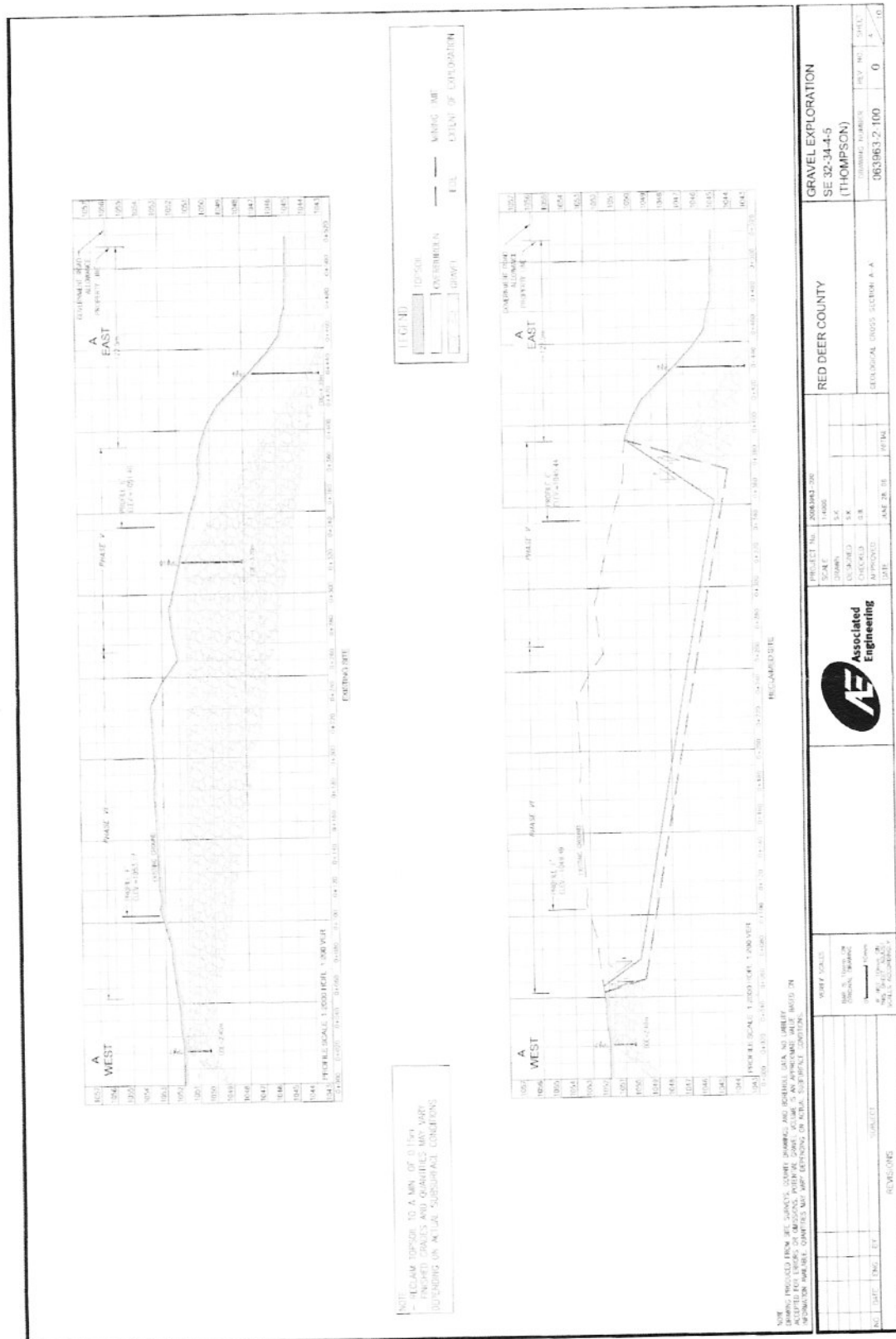
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DESIGNED BY	SK	CHECKED BY	SK	APPROVED BY	063963-2-100
DATE	04/28/06	DATE	04/28/06	DATE	04/28/06

ASSOCIATED ENGINEERING & AMEC GRAVEL EXPLORATION – SE32-34-4-W5M

APPENDIX V(iv)

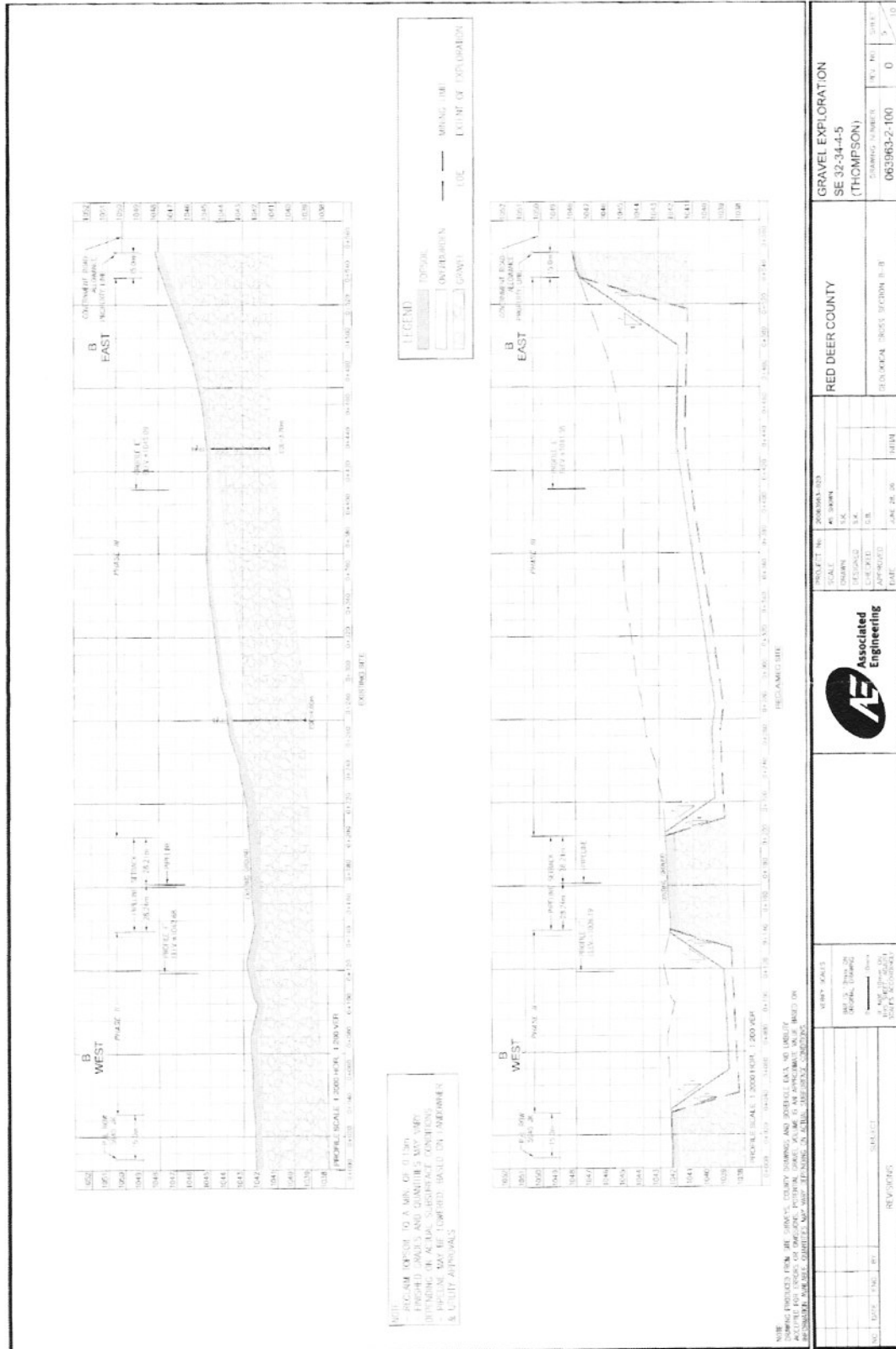


APPENDIX V(v)



ASSOCIATED ENGINEERING & AMEC GRAVEL EXPLORATION – SE32-34-4-W5M

APPENDIX V(vi)

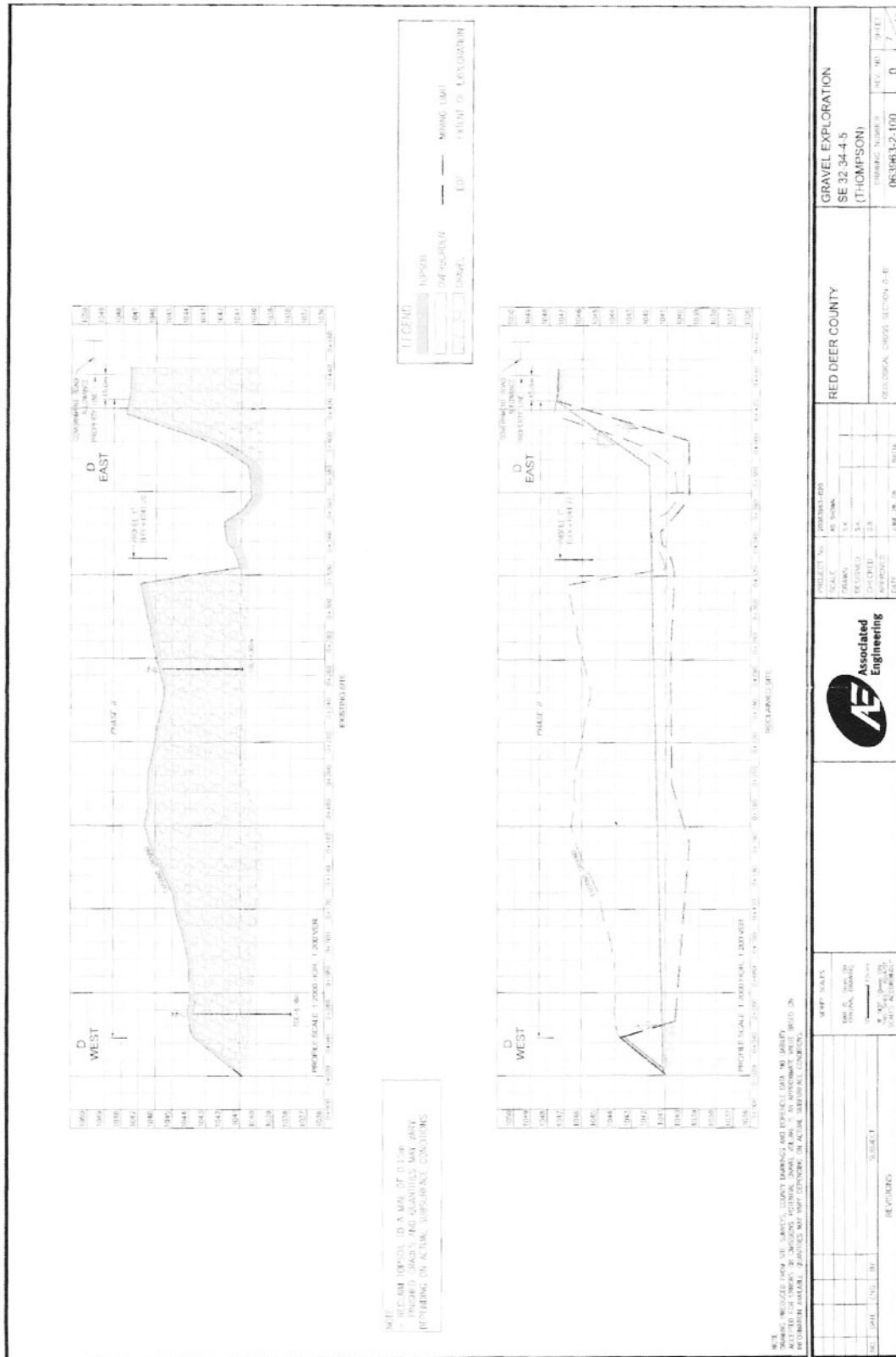


APPENDIX V(vii)



ASSOCIATED ENGINEERING & AMEC GRAVEL EXPLORATION – SE32-34-4-W5M

APPENDIX V(viii)

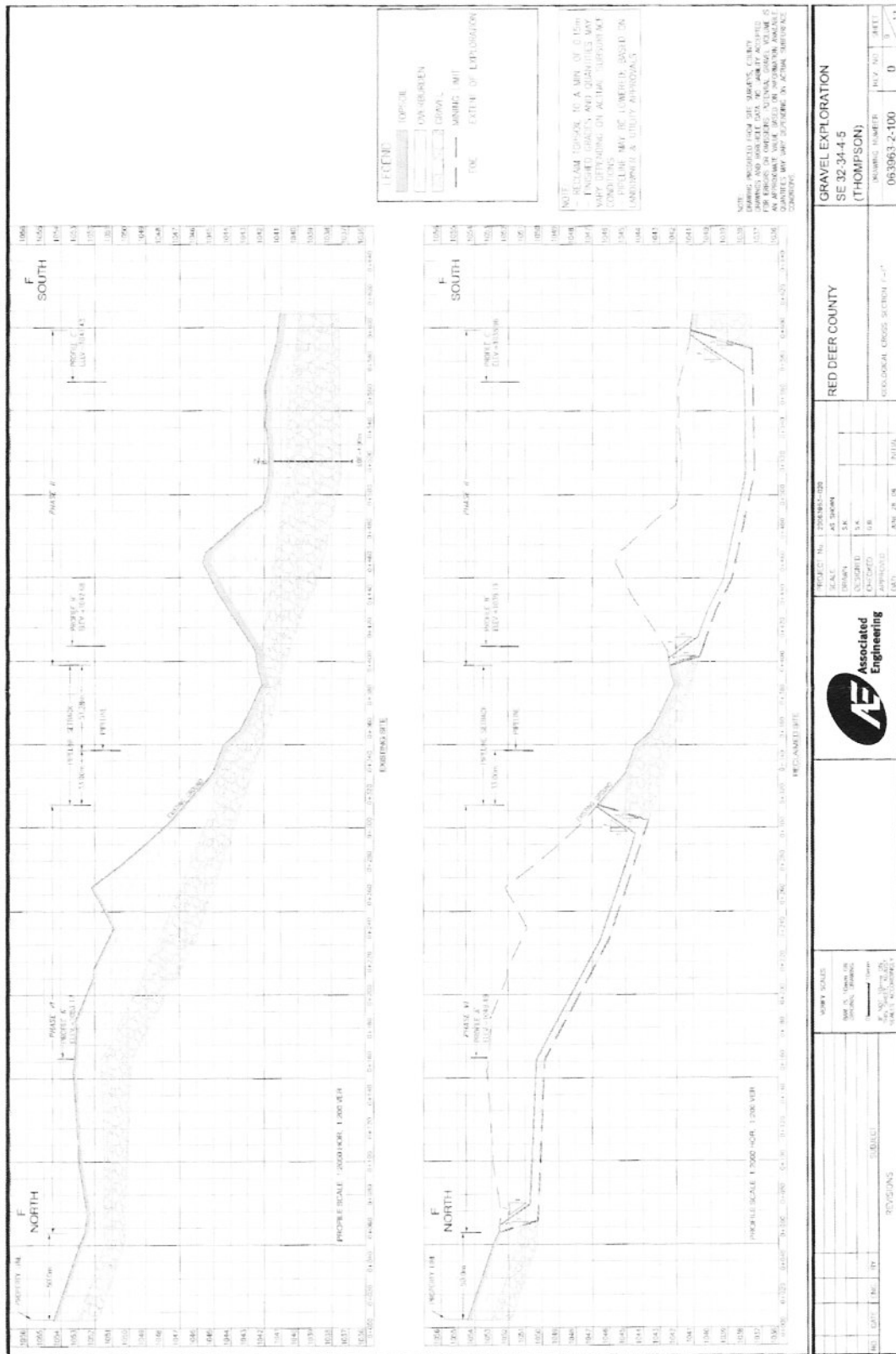


APPENDIX V(ix)

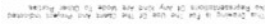


ASSOCIATED ENGINEERING & AMEC GRAVEL EXPLORATION – SE32-34-4-W5M

APPENDIX V(x)



APPENDIX V(xi)



APPENDIX V(xii)



**ASSOCIATED ENGINEERING & AMEC APPENDIX V(xiii)
GRAVEL EXPLORATION – SE32-34-4-W5M**

10:11:07 10:14 FAX 1 403 346 8840

RED DEER COUNTY

0062

SIEVE ANALYSIS REPORT



TO: County of Red Deer c/o
Associated Engineering Ltd.
#212, 4836 Ross Street
Red Deer, AB T4N 1X4

OFFICE: RED DEER
PROJECT No.: RX07447
CLIENT: County of R.D. c/o Associated
COPIES: 1-client

PROJECT SE 32-34-4-W5

904

SAMPLE ID: 3

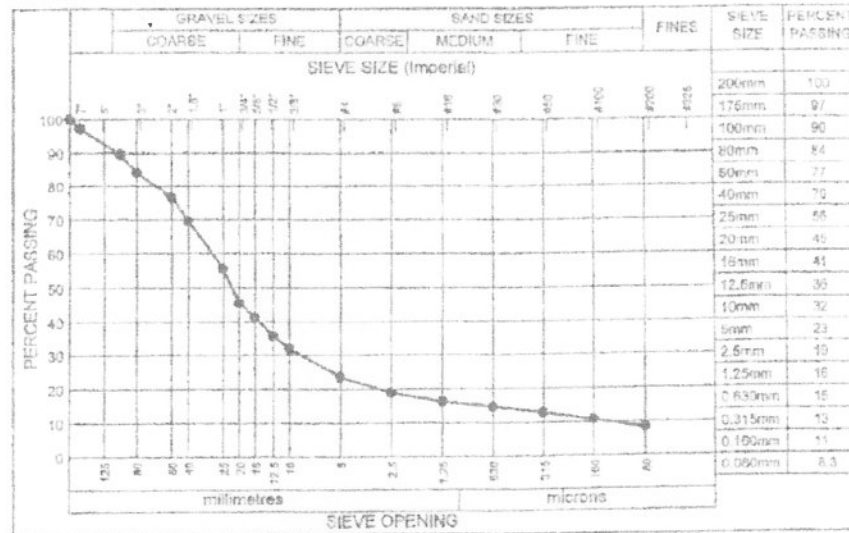
SAMPLE TYPE Pit Run

SAMPLED BY AMEC

DATE SAMPLED 2006-03-29 DATE RECEIVED 2006-03-29

DATE TESTED 2006-03-30

SOURCE TP 2



SAMPLE DESCRIPTION Pit Run

COMMENTS
(Thompson)

AMEC
Earth & Environmental
A Division of AMEC Americas Ltd
Per *[Signature]*

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of the test results is provided only on written request.

**ASSOCIATED ENGINEERING & AMEC
GRAVEL EXPLORATION – SE32-34-4-W5M**

APPENDIX V(xiv)

10/11/07 10:15 FAX 1 402 346 8640

RED DEER COUNTY

2003

SIEVE ANALYSIS REPORT

amec

TO: County of Red Deer c/o
Associated Engineering Ltd.
#212, 4806 Ross Street
Red Deer, AB T4N 1X4

OFFICE: RED DEER
PROJECT No: RX07447
CLIENT: County of R.D. c/o Associated
COPIES: 1-client

PROJECT SE 32-34-4-W5

106

SAMPLE ID: 4

SAMPLE TYPE Pit Run

SAMPLED BY: AMEC

DATE SAMPLED: 2005-03-29 DATE RECEIVED: 2006-03-29

DATE TESTED: 2006-03-30

SOURCE TP 3



SAMPLE DESCRIPTION Pit Run

COMMENTS
(Thompson)

AMEC
Earth & Environmental
A Division of AMEC American, Ltd.
Per *[Signature]*

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of the test results is provided only at written request.

J.F. Wasmuth, AACI, P. App., P. Ag., CAC

Academic Qualifications and Continuing Professional Development (CPD)

- B.Sc. in Agriculture, University of Alberta, 1974
- Professional Agrologist (P.Ag.), Alberta Institute of Agrologists, 1979
- Accredited Appraiser Canadian Institute (AACI), Appraisal Institute of Canada, 1985
- Dale Carnegie course in human relations, 1991
- "Arbitration - The Law and Practice", Alberta Arbitration & Mediation Society, 1992
- Maintain the Continuing Professional Development (CPD) requirements of AIA
- Fulfil the CPD Program of AIC

Memberships

- Appraisal Institute of Canada (AIC)
- Real Estate Council of Alberta (RECA)
- International Right of Way Association (IRWA)
- Agricultural Institute of Canada
- Alberta Agricultural Economics Association
- Alberta Arbitration and Mediation Society
- Alberta Expropriation Association (AEA)
- Alberta Institute of Agrologists (AIA)
- Alberta Association of Surface Land Agents (AASLA)
- Canadian Consulting Agrologists Association
- Economics Society of Northern Alberta

Professional Activities

- **Alberta Institute of Agrologists**
 - Edmonton Branch Past President (1991 - 1992)
 - Edmonton Branch President (1990-1991)
 - Edmonton Branch President Elect (1989-1990)
 - Edmonton Branch Treasurer (1987-88, 1986-87)
- **Alberta Expropriation Association**
 - President (2002-03)
 - Treasurer (1992-93, 1993-94, 1994-95, 1995-96, 1996-97)
- **Alberta Agricultural Economics Association**
 - Membership Committee Chairman (1988-1989)
- **Alberta Association of Surface Land Agents**
 - Treasurer (1992-93, 1993-94)
 - Education Committee Chairman (1990, 1991 and 1992)

Career Experience

- 2001 to Present President, Canadian Resource Valuation Group Inc. involved in real estate appraisal, market analyses, personal injury loss assessments, First Nation Land Claims assessments, agrology, and agricultural litigation support.
- 1991 - 2001 Senior Vice President, Galagan MacAllister Associates Inc., Involved in litigation support, economic analyses, personal injury loss assessments, real property appraisal, land use planning, agrology, farm management and finance and general practice service
- 1979 - 1991 Principal (two years) Manager (seven years) and Consultant (Three years), Deloitte & Touche Management Consultants. Provided specialized business advisory services in the areas of litigation support, economics, real estate valuation, farm and business management and financial management
- 1978 - 1979 Loan Review Officer, Farm Credit Canada. Responsible for all lending, administration and financial services within several Western Canada field offices
- 1974 - 1978 Credit Advisor, Farm Credit Canada. Responsible for all lending, administration and financial services within several Western Canada field offices
- Prior to 1974 Technical Assistant for the Research Council of Alberta. Participated in several soil surveys and laboratory soil analyses.
Spent one year in the Accountant Trainees program with a major Chartered Bank.

Appraisal Assignments

- Real property appraisals of various partial interests involving mineral surface leases, pipeline and powerline rights of way; estimating market value, loss of use and adverse effect compensation assessments under provincial and federal legislation
- Real property appraisals involving expropriated interests including market value, severance damage, injurious affection and incidental damages
- Real property market analysis reports involving pipeline, powerline, highway and communications right of way installations across tens to hundreds of properties in British Columbia, Alberta, Saskatchewan and Manitoba
- Appraisals of multi-family, commercial and industrial properties including retail stores, medical clinics, condominium complexes and medium & heavy industrial properties
- Appraisals of improved and vacant parcels of residential, commercial, recreational and industrial use
- Appraisals of residential, commercial and industrial subdivisions
- Appraisals of urban fringe properties with varying timelines to development
- Agribusiness appraisals including auction barns, greenhouses, dairy farms, poultry farms, food processing plants, feedmills, feedlots, bison ranches and fertilizer/chemical distribution facilities
- Appraisals of market values of agricultural & industrial machinery, equipment and livestock
- Appraisals of in-situ gravel and sand deposits
- Appraisals of timber stands, sawmills and wood product plants
- Appraisals of native tree stands and planted shelterbelts
- Appraisals for mortgage and foreclosure purposes
- Appraisals for insurance purposes
- Current market value, replacement cost new and retrospective historical valuation appraisals
- Appraisals estimating fee simple, leasehold and life estate interests

Assessments of Agricultural Losses

- Misapplication and spray drift of herbicides and/or fertilizers
- Loss of dependency and loss of future capital accumulation
- Cost of household services
- Cost to hire replacement labour, loss of income and changes in earning capacity resulting from personal injury resulting from automobile accidents, farming or industrial accidents
- Introduction of problematic and noxious weeds into conventional and organic farming operations
- Validity and value of claims for damages resulting from farm machinery breakdowns
- Damages payable to pedigreed seed producers as a result of herbicide damage & seed contamination
- Losses due to pedigreed seed contamination and mechanical processing damage
- Loss of farm animals due to poisoning or feed contamination

Selected Studies / Technical Reports

- Completed several comprehensive loss of use and benefit analyses, current day and historical land value appraisals, and natural resource overview studies for various First Nations throughout Western Canada and Ontario, addressing agricultural, tourism/recreation, oil/gas and other land development
- Completed a study for the Modernization of the Agricultural Benefits granted within Treaty 8
- Completed financial reviews, security and viability analyses as well as management capability assessments for various agricultural businesses
- Completed agricultural impact assessments assessing the costs and benefits accruable to the landowner/lesser as a result of proposed development
- Review of government owned/leased housing in the Northwest Territories to derive market based rental rates for the Northwest Territories Housing Corporation
- Evaluation of a proposed industrial park in Northern Alberta and development of a Land Use Policy and Marketing Plan for land use planning and property disposition purposes
- Review of Crown grazing lease rates in Alberta and review of leasing and rental policies in neighbouring provinces/states along with a telephone survey of private lessees/lessors
- Review of lease rates and user fees in the Edmonton and Calgary Transportation Corridors (TUC)
- Developed a "Reference Guide for Determining Adverse Effects Resulting from Petroleum Surface Leases"
- Completed several arbitrations to establish equitable arrangements between parties involving disputes arising from partnership agreements, petroleum and natural gas leases, marketing contracts, crow benefit program, etc.
- Appeared as an expert witness on numerous occasions and been qualified in the areas of real property appraisal, loss of use and loss of income assessments, present value and future value calculation methods, agricultural economics, agrology and soil reclamation before the Alberta Court of Queen's Bench, Alberta Surface Rights Board, the Alberta Land Compensation Board, the Energy Resources Conservation Board, Municipal Development Appeal Boards and the National Energy Board – Pipeline Arbitration Committee

Prepared a number of papers and presentations involving the following topics:

- Real Estate Appraisal
- Income Loss Assessment Methods
- Valuation of Loss of Use on First Nation Land Claims
- Assessment of Agricultural Damage Claims
- Compensation for Fixed Costs in Partial Takings
- Agricultural Real Estate Values and Implications to the Producer
- Contributory Values of Farm Improvements
- Agricultural Real Estate Values in Alberta – Historical and Future Trends
- Valuation Methodologies for Assessing Loss of Use for Specific Land Claims
- Should Utilities Pay Annual Payments for Easements?
- Should Landowners Receive Annual Compensation Payments for Pipelines?
- Assessing Compensation Under the Alberta Surface Rights Act and the Alberta Expropriation Act
- Compensation for Pipelines: Comparison between the National Energy Board Act and Provincial Legislation

Ryan D. Archer, AACI, P. App., B Comm

Academic Qualifications and Continuing Professional Development (CPD)

- Bachelor of Commerce (Finance Major), University of Alberta, 2005
- Post Graduate Certificate in Valuation, University of British Columbia, 2007
- Accredited Appraiser Canadian Institute (AACI), Appraisal Institute of Canada, 2008
- Fulfill the CPD Program of AIC

Memberships

- Appraisal Institute of Canada (AIC)
- Alberta Expropriation Association (AEA)
- Edmonton Real Estate Board (EREB)
- Real Estate Council of Alberta (RECA)
- West Central Alberta Real Estate Board (WCAREB)

Career Experience

- 2010 to Present *Appraiser/Consultant, Canadian Resource Valuation Group Inc.* Involved in real estate appraisal, market analyses, and litigation support.
- 2008 - 2010 *Principal/Appraiser, Archer Appraisals.* Provided commercial and residential real estate appraisal services for financing and litigation support.
- 2006 - 2008 *Appraiser, Frank Bowen & Associates Ltd.* Provided commercial real estate appraisal services for financing and litigation support.
- 2005 - 2009 *Appraiser, Archer Property Appraisals and Land Services.* Provided residential real estate services for financing and litigation support.

Appraisal Assignments

- Real property appraisals of various partial interests involving pipeline and powerline rights of way; estimating market value, loss of use and adverse effect compensation assessments under provincial and federal legislation
- Real property appraisals involving expropriated interests including market value, severance damage, injurious affection and incidental damages
- Appraisals of multi-family, commercial and industrial properties including retail stores, medical clinics, condominium complexes and medium & heavy industrial properties
- Appraisals of improved and vacant parcels of residential, commercial, recreational and industrial use lands
- Appraisals of residential, commercial and industrial subdivisions

- Appraisals of urban fringe properties with varying timelines to development
- Appraisals for mortgage and foreclosure purposes
- Current market value, replacement cost new and retrospective historical valuation appraisals
- Appraisals estimating fee simple, leasehold and life estate interests