IMPACT OF HIGH VOLTAGE TRANSMISSION LINES ON RURAL PROPERTY VALUES

# DRAFT

# PREPARED FOR ATCO ELECTRIC LTD.

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# **EXECUTIVE SUMMARY**

### PURPOSE

The purpose of this report is to evaluate the effects of high voltage transmission lines (HVTLs) on rural property values. For this study we have researched a variety of property types, including agricultural, country residential and recreational uses, along specific ATCO Electric Ltd. (ATCO) transmission lines. The research has included both bareland and improved properties.

As is well known, rural property values are affected by many factors. These factors all revolve around the overall Highest and Best Use of the property. The Highest and Best Use of a property is defined as *"The reasonably 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".*<sup>1</sup> Based on the Highest and Best Use, additional factors such as location, access, current land use, soil quality and topography all affect property values. Each of these factors can have a different influence on the value of a property, depending on the Highest and Best Use. The analysis in this report is designed to isolate the effects that a 144 kV or 240 kV transmission line has on property values.

### Approach

With the numerous factors that may affect property values in play, and with many being difficult to measure or quantify, it is hard to determine the effect of any one factor on property values. In this report, two approaches are considered in evaluating the effects of a transmission line on rural property values. The first of these is a "Paired Sales Analysis", and the second is a "Regression Analysis".

**Paired Sales Analysis:** A Paired Sales Analysis is typically what would be used to determine the market value of the property that is to be offered for sale. Characteristics of the property in question will be compared to other properties that have recently sold in the same area and the selling prices of those other properties will be used to arrive at a market value for the property that is about to be offered for sale, with some positive or negative price adjustments being made for differences in location, soil and topography, access, etc., as well as for the amount of time that has elapsed since the other properties ware sold, depending on market conditions. By comparing the subject property to other properties that sold in the same area, with the only difference being a HVTL, the analysis does not necessitate having to put dollar values on characteristics that are difficult to measure.

In the context of determining the effects of a 144 kV or 240 kV transmission line on property values, the Paired Sales Analysis takes a similar form. Specifically, within a particular area, selling prices are



<sup>&</sup>lt;sup>1</sup> Source: <u>The Appraisal of Real Estate</u>, Third Canadian Edition, The Appraisal Institute of Canada (2010).

compared for two properties that were of the same or similar Highest and Best Use, had similar physical characteristics, and were sold at a similar time, where the only significant difference between the properties is that one contained a HVTL and the other did not. In this way, any difference in the selling price, and therefore the difference in the property value, can be attributed to the presence of the transmission line. One of the difficulties with this approach is finding pairs of properties that have matching characteristics except for the transmission line being present on one of the two properties. As a result, it is usually necessary to find a pair of properties that are similar in many characteristics, and to make adjustments to the selling price for any small differences in selling prices for other pairs of properties which are similar except for that particular characteristic. For example, if two otherwise similar properties are sold, neither of which contains a HVTL, but one property has a better soil rating (CLI Class 2 vs. Class 3), and the property with the superior soil rating (Class 2) sells for \$10,000.00 more than the other property, then the value of having a Class 2 soil versus a Class 3 soil would be \$10,000.00 or \$62.50 per acre for a full quarter section (\$10,000/160), and this adjustment would be used to make adjustments for soil quality in other paired sales comparisons.

The Paired Sales Analysis, which involved sales where one sale of each pair contained a HVTL and the other did not, was conducted separately for eight 144 kV transmission lines and five 240 kV transmission lines across Alberta. These transmission lines are considered to represent a broad cross-section of market areas and land uses within ATCO's service area in the province. Along each transmission line, attempts were made to pair each sale of a property during the period from January, 2004 to December, 2011 that sold and contained a HVTL, with the sale of an otherwise similar property that did not contain a transmission line.

Due to strict selection criteria, outlined further in the report, in some cases, no pairing could be made, while in other cases it was possible to determine several pairings. Only comparisons of fairly similar properties were made in order to keep adjustments to a minimum. In each case, adjustments were made, as necessary, for some differences in property characteristics (other than for the HVTL), and then the difference in the selling prices was calculated. Statistical analysis of these differences was conducted to determine whether the difference between the selling price of a property containing a HVTL and an otherwise similar property that does not contain a HVTL, was statistically significant.

It is noted that as a result of the strict pairing criteria outlined further in the report, our research included an analysis of many more properties than were included in the report. It is also noted that for some types of properties there was very limited subject and comparable sale data that could be used in the analysis. Therefore, there are a limited number of paired sales for some property types.

**Regression Analysis:** The second approach used in this report to evaluate the effect of a 144 kV or 240 kV transmission line on property values is a Multiple Regression Analysis, which is commonly referred to as a Regression Analysis. This is a statistical methodology in which a variable of interest,



here the property value as measured by the selling price, is specified to depend on a set of explanatory variables that jointly determine the selling price. The mathematical equation that links the property value to the values of the explanatory variables, known as a regression equation, involves a set of unknown parameters or coefficients as well as an unknown random error term. The purpose of Regression Analysis is to use data on property values and the values of the explanatory variables to determine estimates of these unknown coefficients, and then to conduct statistical testing to assess whether the individual and joint effects of the explanatory variables on property values are statistically significant or just reflect underlying randomness. The estimates themselves indicate the effects of a change in a particular explanatory variable on property values, holding the effects of all other variables constant. Hence, by including a variable or variables that indicate the proximity of a property to a HVTL among the explanatory variables that determine the selling price, the effect on property values of such proximity can be isolated.

The study area traverses a large part of the province of Alberta and location variables have been applied to individual properties based on the municipality in which the property is located. Although this methodology does not necessarily isolate all micro variations due to location of individual properties, it is expected to account for broad locational differences.

A similar selection criteria was used for the Regression Analysis utilizing sales along the same eight 144 kV and five 240 kV transmission lines across Alberta. Sales during the January, 2004 to December, 2011 were used to compile a robust data set. Additional property characteristics were then gathered for all properties in the data set to help uncover as many significant explanatory variables as possible to ensure an accurate model.

#### RESULTS

The two approaches utilized in this study yielded similar results. Both the Paired Sales and Regression Analysis indicated similar mathematical and statistically insignificant results. The study indicated that when doing a statistical analysis of all rural properties included in the study, there was no statistically significant effect of the presence of a HVTL on property values.

Bareland: From a strictly mathematical standpoint, the results are very similar. When analyzing average differences of on-line and off-line properties on both a value per acre and percentage term, results show differences near zero with some being positive and some negative. No calculable pattern existed when the paired sales data was broken down in minimal adjustments, 144 kV line and 240 kV line mini-data sets. Overall, mathematical analysis mirrored the statistical and Regression Analysis in their conclusion of "insignificance". Based on the findings, 144 kV and 240 kV HVTLs in the ATCO service areas have no impact on rural property values.



Improved Properties: Due to a lack of sufficient volume and thorough information, no analysis was possible on improved rural properties. A lack of on-line sales and the difficulty of obtaining suitable pairs, makes the analysis of improved large parcels nearly impossible and certainly unreliable or unsubstantiated.



# **1.0 INTRODUCTION**

# **1.1 OBJECTIVE AND SCOPE**

Serecon Valuations Inc. has been asked to determine, if possible, if there is any impact on the value of rural properties throughout Alberta, resulting from the presence of a 144 kV or 240 kV transmission line on, or in a road allowance adjacent to the property. This request is summarized into the following study objective:

To determine if there is an impact from existing 144 kV and 240 kV transmission lines on the market value of the rural properties where the transmission line is located thereon or is immediately adjacent in the road allowance.

Serecon completed the study based on the following assumptions and scope.

To address the objective, the study included various areas throughout ATCO's service area in Alberta, where 144 kV and 240 kV transmission lines are currently located, that provided a broad cross section of market areas and land uses. Eight 144 kV lines and five 240 kV lines were identified and utilized.

The transmission lines studied included areas in northern, eastern and southern Alberta, specifically throughout ATCO's service area. Although the data included in the report may be limited for some types of properties, and specific locations, attempts were made to include as much variety in the range of property types and locations studied as reasonably possible.

### **1.2 Study Approaches**

In addressing the question of impact on property values, the following scope of activities was undertaken:

 <u>Paired Sales Analysis</u>: To determine the impact (if any) on existing rural properties which contain a HVTL or are adjacent to a road allowance ("on-line") which contains an HVTL, we analyzed sales of properties which contain a 144 kV or 240 kV transmission line and compared these sales with similar properties with similar features that did not contain a transmission line ("off-line"). The comparable property located off-line was adjusted to the on-line subject for noticeable differences to determine if there was a difference in values between on-line and off-line properties.

The data indicates our findings for each line studied. The data collected for the Paired Sales Analysis was then analyzed statistically, through the use of a statistical t-test, to determine whether the difference in values was statistically significant.

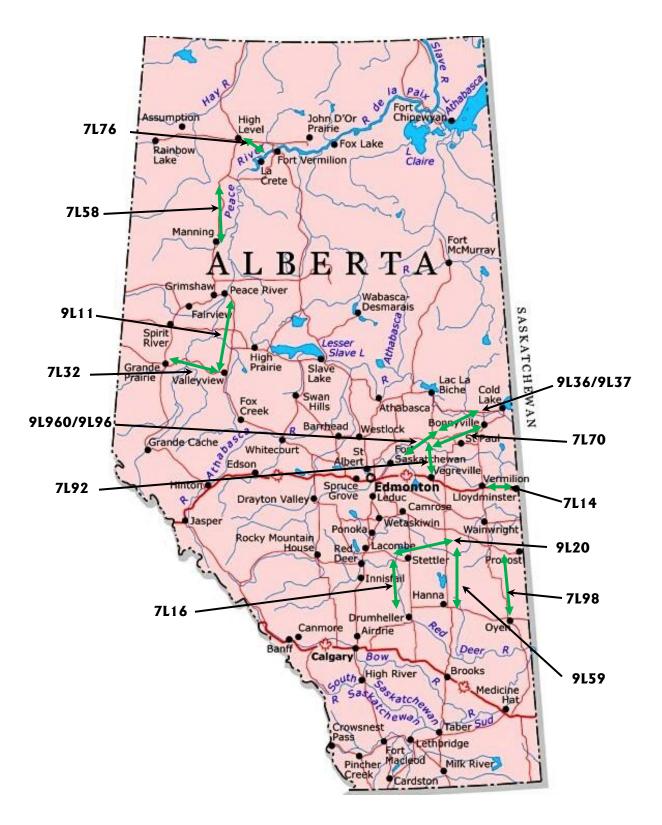


2. <u>Regression Analysis</u>: A second approach for determining the potential impact on rural properties containing or adjacent to a HVTL utilizes a Regression Analysis. With this approach, all sales for the January 2004 to December 2011 time period, across the same lines used in the Paired Sales Analysis, were used to evaluate the effect on property values of proximity to the HVTL while holding the effects of other factors constant. Regression analysis is not limited to similar properties with similar features, since characteristics of the properties – including those used to compare properties in the Paired Sales Analysis are explicitly included in the analysis. This is outlined in more detail later in this report.

#### **1.3 Study Area And Lines**

The following map identifies the location of the lines studied:

- ➡ 7L14 Vermilion Hill
- ➡ 7L16 Three Hills Nevis
- ➡ 7L32 Little Smoky Kleskun
- ➡ 7L58 Meikle Keg River
- ➡ 7L70 Whitby lake Bonnyville
- ➡ 7L76 High Level Blumenort
- ➡ 7L92 Vegreville Vilna Whitby Lake
- ⇒ 7L98 Monitor Oyen
- ➡ 9L11 Little Smoky Wesley Creek
- ⇒ 9L20 Nevis Battle River
- ➡ 9L36/9L37 Whitefish Lake Marguerite Lake
- ➡ 9L59 Battle River Sheerness
- ➡ 9L960/9L961 Deerland Whitefish Lake



# **2.0 STUDY METHODOLOGIES**

The study methodology is based on approaches utilized by Serecon in undertaking similar land use and impact studies that utilize large amounts of raw data. The methodologies chosen must be appropriate to address the impact or influence of any one market factor or feature on the market value of rural properties. In our opinion, the applicable approaches are the two utilized in this study, namely the Paired Sales Analysis and the Regression Analysis. Detailed analysis using both of these approaches is reported in the following sections of this report.

The following section outlines our approach to Paired Sales Analysis, while the Regression Analysis approach is subsequently described.

#### **2.1 PAIRED SALES ANALYSIS**

This approach, in many cases, is utilized as part of a quantitative or statistical study. This approach takes "like properties", one with a HVTL located on or adjacent to it, and compares it to another sale in a "control" area, or one without a transmission line. The properties must have similar market features, including: Highest and Best Use, time of sale, physical and locational features, access, buildings and improvements, etc. The properties are compared and this comparison should identify any difference in value between the properties. If the only major difference between the properties is the presence of a transmission line, then one should be able to identify the impact of the HVTL and its influence on the market value of the property.

The criteria utilized for the Paired Sales Analysis data collection and analysis, in the appraisers' opinion, provides the basis for reliability in the results regarding an indication of any impact of the transmission line on market values. If the lands are truly comparable with the exception of the one factor, the powerline, this should be a reliable approach that reflects market participants' opinions. The criteria in establishing the comparable off-line or control zone sales were as follows:

- ➤ an arm's-length sale: exposed to the open market;
- the same or similar date of sale
   (within 6 months of the date of sale for the subject property);
- ➡ same Highest and Best Use;
- ➤ a similar parcel size;
- ➡ similar land use;
- ➡ similar location; and
- ➡ similar physical features (including soil and topography).

To reduce the potential of including non-arm's length properties in the analysis, transfer documents were obtained for each of the on-line and off-line sales. As well, all of the on-line and off-line properties were inspected by way of adjacent municipal roads where possible.

To reduce the variability attributed to location, only comparables within one township around the online sale were researched. However, due to the potential for changes in value within a relatively small area, especially for properties in close proximity to towns and cities, the appraisers also used personal experience and discretion to limit the comparables to those considered to have similar locational influences.

Due to the strict selection criteria described above, many more on-line and off-line sales were searched and analyzed than were included in the report. Properties with unique characteristics that significantly limited the direct comparability between the subject and comparable properties were removed from the analysis. The sales included in the Paired Sales Analysis include only those that are considered to be the most comparable and thus best indicators of the possible impact that the transmission line would have on market value.

#### 2.1.1 Paired Sales Statistical Analysis

The sample size by specific line is too limited, but for the province, the sample size is adequate for a valid comparison and a statistical analysis. A statistical analysis of the paired sales data was carried out comparing the sale prices of on-line versus off-line sales. This analysis determined if there are any statistically significant differences in the values between the on-line and off-line sales.

#### **2.2 REGRESSION ANALYSIS**

An alternative approach to determining the effect of a 144 kV or 240 kV transmission line on property values is by way of a Regression Analysis. By regressing property values on property characteristics, the effect of a transmission line on property values can be isolated. The main advantage of this approach relative to a Paired Sales Analysis is that the estimated regression coefficients show the effect of particular characteristics on property values holding the effects of all other variables in the regression equation constant. This means that it is not necessary to try to identify properties that have similar characteristics where one is adjacent to the HVTL and an otherwise similar property is located away from the line. Since two properties are never exactly the same, in the Paired Sales Analysis this may necessitate adjustments to the selling price to account for differences in time of sale, physical features, location, access, etc., and in some cases sales must be excluded because the differences are too great. In addition, this need to find matched pairs limits the sample size that can be used for the Paired Sales Analysis requires information on all relevant characteristics that might affect the property value, and in practice much of this information is simply not collected or readily accessible. Thus,



Regression Analysis is best viewed as being complementary to the Paired Sales Analysis. In particular, it should be kept in mind that a form of paired analysis – based on comparisons of one particular property with various other properties and making price adjustments for particular differences – is generally the approach used by realtors to determine a reasonable selling price for a property.

Data used in the Regression Analysis was extracted from provincial transfer data for the period January, 2004 to December, 2011. Only transfers with sufficient information available were used to reduce the likelihood of non-arm's-length transactions. However, it is likely that the Regression dataset may include some non-arm's-length transactions due to the volume of data and the less rigorous data analysis. In general, the Regression was estimated using data on all transfers that occurred within a township which contains a 144 kV or 240 kV transmission line where some sales contained or were adjacent to the transmission line, while others occurred elsewhere in the township.

The Regression Analysis that is described in this report focuses on the same 13 HVTLs studied in the Paired Sales Analysis section of the report.

In addition to price, other characteristics of the property that were available from various sources were also collected and utilized in the Regression Analysis. These include such information as land use, CLI soil classification, the number of surface leases if any, the presence of improvements etc. Complete details on all these variables are provided in Section 4 of this report.



# **3.0 PAIRED SALES COMPARISON**

#### 3.1 METHODOLOGY

As previously indicated, the basic premise behind this approach is the process of comparing the sale prices of like properties that have the same physical characteristics and locational features; one considered an on-line sale due to the fact it contains, or is adjacent to a road allowance which contains, a 144 kV or 240 kV transmission line, with the comparable being an off-line sale without a transmission line. In the appraisers' opinion, if adequate "true comparables" are utilized and the comparison is made based on sound appraisal principles, this approach provides supportable conclusions based on the reactions of market participants, with respect to any impact of the transmission line on rural values.

In the appraisers' opinion, a determination had to be made as to whether it was possible to complete a Paired Sales Analysis on sales where there are significant building improvements. The major limitation would be whether truly comparable properties with similar Highest and Best Uses, and buildings and improvements could be found. The premise behind the Paired Sales Analysis is to analyze like sales, and to complete adjustments for different features between the properties, leaving the only unadjusted difference to be the transmission line on or adjacent to the subject property. The land characteristics, including Highest and Best Use, as well as building and improvement characteristics, must be similar to conduct a true paired comparison. In rural settings, it is difficult to find an identical or very close compliment of buildings and improvements on two different properties. Therefore, significant adjustments are often required to equate the two sales. Where significant adjustments are required for differences, the properties are deemed to be too different to use for purposes of a reliable comparison. Where a sale occurred on-line but no truly comparable sale off-line could be found, the on-line sale was excluded from our analysis. The inclusion of paired sales requiring substantial adjustment was thought to compromise the integrity of the study, and such sales were therefore excluded from the analysis. Due to the restrictions described above, improved properties and their inclusion within this study are discussed separately following the analysis of bareland properties.

The following steps provide the process undertaken in completing the Paired Sales Analysis:

All 144 kV and 240 kV transmission lines were identified throughout the ATCO service area in Alberta. Eight 144 kV lines and five 240 kV lines were then selected to be included in the study to provide a cross section of different regions and land uses across the ATCO service area. Sales of properties 70 acres and greater in size, which contain these lines, were researched. We researched those sales that occurred between January, 2004 and December, 2011.



- Data was researched through provincial transfer records by searching all properties containing a portion of the determined transmission lines or located adjacent to the transmission line which is in a road allowance to determine whether they had transferred during the above time period.
- On-line sales were then researched through obtaining a copy of the respective transfer document from Alberta Land Titles to identify if the transfer may have occurred between related parties. Multiple Listing Services (MLS) was also searched to identify if the identified property had sold through the relevant real estate board.
- Aerial photographs were obtained for each of the on-line properties identified above, including a historic aerial search for sales that occurred prior to the date of the photograph.
- Based on the aerial photographs, the assessment departments of the relevant municipalities were contacted to request assessment information for properties that appeared to have improvements.
- To strengthen the reliability of the study, improved properties that did not have either MLS or assessment data were removed from the analysis.
- Once on-line sales were identified, all sales were researched through MLS and provincial records throughout these same areas to identify comparable off-line sales. These comparable sales were reduced to only those that provided the best direct comparison to the on-line sales.
- As indicated, we attempted to identify comparables with the same Highest and Best Use, size, land use and similar physical characteristics, all within the same location and time period. However, some adjustments were still required for any differences.

Our search process yielded 201 original on-line transfers within the January, 2004 to December, 2011 time period. From these, 86 were deemed to be arm's-length transactions based on transfer documents. On-line sales were further reduced with the exclusion of 10 improved properties and a further 23 properties for which no suitable comparables could be found. This left a dataset of 53 on-line properties.

#### Adjustments

Although the desired outcome of the Paired Sales Analysis is to find on-line and comparable properties which are identical, it is unrealistic to think that a large number of these perfect matches are available. Therefore, comparable off-line sales were chosen which were as similar as possible to the on-line sales. Small adjustments were then made to these comparables to account for any differences in order to make the properties a matched pair. Adjustments for time, location, land use, soil and topography, size, access, severance, and aesthetics were all considered. Only properties requiring minimal adjustments were utilized in the Paired Sales Analysis.

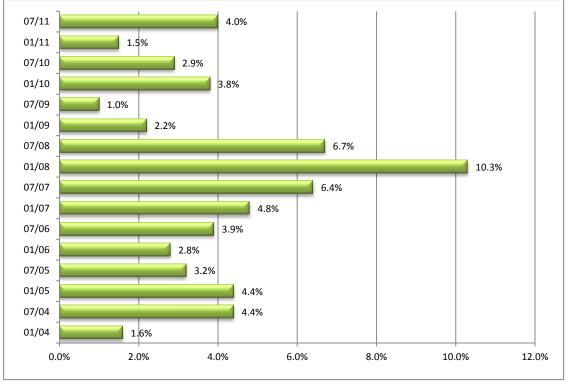
Serecon is completing rural appraisals across Alberta on a continuous basis and has an extensive land sales database that goes back to 1968. Extensive experience affords us the opportunity to witness



market participants and the various influences on market values that different factors have. The following explains how various factors were considered and addressed for purposes of this study.

**Time:** Time is one of the most important factors to take into consideration in any Paired Sales Analysis. The relevant time period (January, 2004 to December, 2011) was a time of great fluctuation in real estate prices throughout Alberta, and the rural real estate market was not immune to these fluctuations. This time period saw significant increases in value throughout most of rural Alberta. The following graph shows semi-annual percent change in Alberta farmland values based on data provided by Farm Credit Canada (FCC).

This chart shows typical semi-annual gains between 1.5% and 4.5%, with more robust value increases occurring in 2007 and 2008 and then a subsequent levelling-off in 2009. Unlike urban property values, rural values have seen increases throughout the study period. However, farmland closer to urban centers which is influenced by urban values and speculation would have seen price patterns more like the urban property values which would have included a more dramatic increase in values throughout the 2006 and 2007 period, with a significant decrease in 2008 and into 2009, followed by a levelling off during later 2009 and into 2010. This market has been relatively stable with some minor increases since early 2010.



#### Semi-Annual Percent Change in Alberta Farmland Values

Source: Farm Credit Canada



Time adjustments throughout the study areas are quite variable depending on the area, distance to urban development, degree of speculation and Highest and Best Use. Therefore, there is no one guide to follow when determining individual time adjustments in specific areas. In this study, time adjustments were kept to a minimum by using comparable sales which sold at a similar time to the sale date of the on-line properties. For paired-sales in which this was not possible, time adjustments were determined using the FCC data as well as supplemental municipal specific data from the Alberta Agriculture and Rural Development and the appraisers' knowledge and experience of the specific location and its prevailing market factors. A monthly percentage change was then applied to estimate the change in values between the sale dates of the subject and comparable properties.

**Location:** The location of a rural property is very important when estimating the overall value of that property. This factor was considered when determining the 'best' comparable because proximity to urban centers has a significant effect on land values. The Paired Sales Analysis is performed in such a way as to eliminate any need to do location adjustments regarding large general areas throughout the province. This is completed by only utilizing comparables which are within the same general area (generally within a 16.0 km radius of the subject (on-line) property. Therefore the only locational adjustments that need to be made are based on particular smaller scale issues such as location with respect to distance to major highways, distance to major urban centers, etc. These adjustments however, are far less in magnitude due to the on-line and off-line sales already being within the same market area.

Location adjustments were made to some of the off-line sales to account for these particular locational differences. These adjustments were based, where possible, on paired sales comparison, or if a paired sale isolating the value was not available, the adjustment was based on the experience of the appraisers involved.

**Land Use:** The term "land use" in the Paired Sales Analysis refers to the type and quantity of various agricultural land uses. For example in many areas annually cultivated land sells for more on a per acre basis than hay or pasture land, because this type of land is typically of lower quality. Similarly, a parcel with a larger percentage of cultivated land would sell for more per acre than one with a smaller percentage. Once again this adjustment was minimized by attempting to find comparable properties with a similar land use to that of the subject. Nevertheless, adjustments were necessary in some circumstances and in this instance, were based on the appraisers' knowledge and experience to determine the appropriateness and magnitude of the adjustments.

**Soil and Topography:** Soil and topography adjustments were made where necessary to adjust for differences in soil quality and topography in terms of their effect on the Highest and Best Use of the property. Soil suitability for agricultural purposes is rated through two different systems in Canada:

- i) the Canadian Land Inventory (CLI) system; and
- ii) the Land Suitability Rating System (LSRS).



The LSRS is the most current rating system; however, most people involved with agriculture, especially rural landowners, are more familiar with the older CLI system. Therefore, soil data was based on the ratings on the Canadian Land Inventory (CLI) Soil Capability for Agriculture Maps.

The <u>Canada Land Inventory Soil Capability for Agriculture Maps</u>, rates soils based on their capability for agricultural production.

This study encompassed lands with the following CLI Classes, the explanations for which are included in the CLI rating system.

#### **CLI Classes**

Class 1 soils have no significant limitations in use for crops.

Class 2 soils have moderate limitations that restrict the range of crops or require moderate conservation practices.

Class 3 soils have moderately severe limitations that restrict the range of crops or require special conservation practices.

Class 4 soils have severe limitations that restrict the range of crops or require special conservation practices, or both.

Class 5 soils have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible.

Class 6 soils are capable only of producing perennial forage crops, and improvement practices are not feasible.

Class 7 soils have no capability for arable culture or permanent pasture.

Organic soils are not placed in any capability class.

#### CLI Sub-Classes

The subclasses are based on the kinds of limitations.

Subclass C: 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: soil structure – 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 M: moisture holding capacity – Low moisture holding capacity caused by adverse inherent soil characteristics which limits crop growth.

Subclass S: soil limitations – A combination of two or more subclasses D, F, M, and N.



Subclass T: adverse topography – Either steepness or the pattern of slopes limits agricultural use.

Subclass W: excess water – Excess water other than from flooding limits use for agriculture. The excess water may be due to poor drainage, a high water table, seepage or runoff from surrounding areas.

Subclass "X" refers to minor cumulative limitations which have a moderate limiting affect on the soil capability.

Topography was determined by way of CLI rating, mapping program, and/or visual inspection of the properties.

Adjustments under this category were based on municipal specific data supplied by Alberta Agriculture and Rural Development. This data shows price value differences within municipalities between the different soil ratings. In addition to this data, paired sales and the appraisers' knowledge and experience were used to determine adjustments for soil and topography.

**Size:** Size adjustments were eliminated if at all possible; however, in some instances an adjustment was required in order to retain as many paired sales as possible. Generally, smaller parcels sell for more per acre than larger parcels. Adjustments for size were made under this assumption and applied where determined to be necessary by the appraisers.

**Access:** Access is another issue that must be addressed in the rural marketplace. Properties which are located with highway frontage or which have superior access are likely to sell for a higher value than those properties without such characteristics. Properties with limited or no access were only compared to like properties with similar access. For all other properties, adjustments were made regarding the quality of the access where determined by the appraisers to be necessary.

**Severance:** Adjustments for severance were made in the event that either the on-line or off-line sale was severed by a road, a railroad or similar infrastructure.. Generally, properties with some form of severance sell for less than those properties without any severance issues. Severance is adjusted based on the type and severity of the severance with respect to the market value of the property.

**Aesthetics:** Aesthetic characteristics were considered for those properties which were determined to be in an area in which general desirability in terms of non-agricultural characteristics were determined to be important.



## **3.2 HIGHEST AND BEST USE**

The most important component in real estate valuation is the determination of the property's Highest and Best Use.

The principle of Highest and Best Use is defined by the Appraisal Institute of Canada as being:

The reasonably 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.

Source: The Appraisal of Real Estate, Third Canadian Edition, The Appraisal Institute of Canada (2010).

When determining the Highest and Best Use, appraisers always need to consider the following criteria:

- $\Rightarrow$  the use must be legal;
- → the use must be probable and possible within a reasonable period of time;
- → there must be a demand for the use; and
- the use must be profitable and provide the highest net returns in the foreseeable future.

Most of the properties utilized in this study have an agricultural Highest and Best Use. However, some larger, treed or aesthetically pleasing parcels may have a greater recreational or large parcel country residential use rather than an agricultural use. For this study, the appraisers have considered the above listed criterion as well as professional judgement and experience to determine the Highest and Best Use of a property. The appraisers have only utilized comparable properties which have the same Highest and Best Use as the given subject on-line property.

There can be confusion between the Highest and Best Use and the current use, as well, how those uses impact on the current market value. Lands in a considerable portion of the province, specifically areas around urban centres in particular, have for the foreseeable future an agricultural Highest and Best Use. Due to the distance from these urban centres, there is limited current potential for more intensive development. The returns from the land are exclusively from agricultural uses. These returns support the productive capacity of the land, but do not support the current market value. Demand from buyers not dependent on agricultural returns and large farmers wanting to expand their land base and willing to pay more for the single quarter, has driven the value of the land to a higher level than can be supported by agriculture. However, the Highest and Best Use still remains agriculture as there are no other potential alternative uses within the foreseeable future.

The buyer of land, which due to location and zoning has no alternative use potential, is purchasing the land as a long-term investment with a marginal annual return on investment, but speculative long-term return on capital appreciation. Therefore the lands being purchased for \$3,000.00 to \$4,000.00 per acre in some areas only have annual returns supporting a \$1,500.00 to \$2,000.00 per acre value; the market



is anticipating capital gains to make up the difference. However, the land's Highest and Best Use remains agriculture, with continued demand from the hobby use/investment buyer to support the current market value.

# **3.3** FINDINGS

The following is a summary of the sales utilized, the overall adjustments made to those sales and the price differences for each of the paired sales utilized. Maps indicating the location of the subject (on-line) and comparable (off-line) properties for each transmission line utilized are located in the Appendix to the report.



#### Serecon Valuations Inc.

				<b>T</b>	C-1-						Adjustm	nents		Price Diff	erence	
	Subject/Comparable	Land Use	Size	Transfer Date	Sale Price	Imp	ECV	Inferi	or/Superior Characteristics	Time	-/+ Ch	aracteristics	Adj. Price	Price/ Acre	(Subj- Comp)	% Diff.
	Line 7L16 (Single Pole)													71010	comp,	
1	NW & E ½ 30-33-23-W4	DC	455.25	31/03/2004	500,000	4 leases	\$42,000						458,000	1,006		
1A	SW 24-33-23-W4	DC	160	04/09/2004	160,000					-3.50%			154,400	965	41	4.25%
1B	W ½ 1-34-23-W4	DC	320	13/05/2004	322,000	1 lease	\$10,500	Inferior Soil		-0.70%	5%		324,785	1,015	-9	-0.88%
2	SW 18-34-23-W4	OP, DC	158.84	21/06/2007	210,000	2 leases	\$21,000						189,000	1,190		
2A	SW 11-35-24-W4	OP, DC	148.67	07/11/2007	210,000	1 lease	\$10,500			-5.60%			188,328	1,267	-77	-6.07%
2B	SE 11-35-24-W4	DC, OP	160	09/01/2007	202,000	3 leases	\$31,500			7.00%			182,435	1,140	50	4.36%
3	SW 14-37-23-W4	DC, OP	160	17/08/2004	167,500	2 leases	\$21,000						146,500	916		
3A	SE 21-37-22-W4	OP, DC	160	22/05/2004	153,280	1 lease	\$10,500	Inferior Land Use		2.10%	10%		160,356	1,002	-87	-8.64%
	Line 7L32 (Single Pole)															
4	SW 14-72-4-W6	DC	144.3	02/09/2011	380,000								380,000	2,633		_
4A	NW 13-72-5-W6	DC	155.11	31/08/2011	400,000			Superior Soil	Inferior Land Use	0.00%	-5%	10%	420,000	2,708	-74	-2.75%
5	NE 8-71-25-W5	BU, DC	118.72	02/11/2004	76,000								76,000	640		
5A	NW 4-72-26-W5	BU, DC	64.3	10/08/2004	52,500	1 lease	\$7,500	Size		2.10%	-10%		41,351	643	-3	-0.45%
6	SE 29-72-4-W6	DC	160	09/06/2005	185,000								185,000	1,156		
6A	NW 3-72-4-W6	DC	146.2	31/05/2005	178,000			Superior Soil		0.00%	-10%		160,200	1,096	60	5.52%
7	SE 16-72-3-W6	DC, OP	126.64	17/10/2005	110,000								110,000	869		
7A	NE 6-72-3-W6	DC	156.02	19/10/2005	145,000			Superior Land Use	Superior Soil	0.00%	-10%	-5%	123,250	790	79	9.96%
8	NE 4-71-25-W5	DC	146.24	14/02/2007	100,000								100,000	684		
8A	NW 24-71-26-W5	DC	78.89	14/02/2007	75,000			Superior Soil	Size	0.00%	-10%	-10%	60,000	761	-77	-10.09%
9	NE 4-72-1-W6	DC	127.03	17/01/2008	170,000								170,000	1,338		
9A	SW 32-72-1-W6	DC	160	28/05/2008	160,000			Inferior Soil	Inferior Access	-2.80%	15%	5%	186,624	1,166	172	14.73%
10	SW 16-69-22-W5	OP, BU	100.18	18/06/2009	74,500								74,500	744		
10A	SE 4-70-22-W5	BU, OP	108.86	04/12/2009	125,000			Superior Access	Superior Location	-2.40%	-10%	-10%	97,600	897	-153	-17.05%
10B	SE 36-70-23-W5	DC, BU	157.98	12/03/2009	100,000			Superior Land Use	Size	1.20%	-5%	10%	106,260	673	71	10.56%
11	SE 21-70-24-W5	BU	76.63	27/08/2009	60,000								60,000	783		
11A	SE 4-71-25-W5	BU, DC	167.17	27/03/2009	100,000			Superior Land Use	Size	2.00%	-5%	10%	107,100	641	142	22.21%
12	SW 21-70-24-W5	DC, BU	143.97	27/08/2009	120,000								120,000	834		
12A	SE 36-70-23-W5	DC, BU	157.98	12/03/2009	100,000			Inferior Land Use		2.00%	10%		112,200	710	123	17.36%
12B	NW 7-71-25-W5	DC, BU	161.24	22/06/2009	145,000					0.80%			146,160	906	-73	-8.05%
	Line 7L58 (Steel Lattice)															
13	NW 25-93-23-W5	DC	114.46	02/10/2009	107,500								107,500	939		
13A	SE 24-92-24-W5	DC, BU	160	19/02/2010	125,000			Size		-1.40%	5%		129,413	809	130	16.12%

#### Serecon Valuations Inc.

				Transfer	Sale					Adjustments		Price Diff	erence	
	Subject/Comparable	Land Use	Size	Date	Price	Imp	ECV	Inferior/Superior Characteristics	Time	-/+ Characteristics	Adj. Price	Price/ Acre	(Subj- Comp)	% Diff.
14	Line 7L70 (Single Pole) NE 5 & SE 8-60-13-W4	BU, DC	316	17/05/2010	180,000	1 lease	\$7,500				172,500	546		
14A	N ½ 18-59-14-W4	BU, DC	322.48	15/01/2010	205,200	1 lease	\$7,500	Superior Access	1.20%	-10%	186,896	540 580	-34	-5.81%
<b>15</b> 15A	<b>N ½ 4-60-13-W4</b> N ½ 18-59-14-W4	<b>BU, DC</b> BU, DC	<b>314</b> 322.48	<b>21/09/2010</b> 15/01/2010	<b>170,000</b> 205,200	2 leases	<b>\$15,000</b>	Superior Access	2.40%	-10%	<b>155,000</b> 189,112	<b>494</b> 586	-93	-15.82%
134	N /2 10 35 14 W4	50,50	522.40	13/01/2010	203,200			Superior Access	2.4070	10/0	105,112	500	55	15.0270
16	NW 2 & SE 10-60-12-W4	OP, DC	320	23/04/2005	145,000						145,000	453		
16A	NW 27-60-11-W4	OP, BU	157.81	26/05/2005	70,000			Inferior Land Use	-0.50%	10%	76,615	485	-32	-6.67%
16B	SE 22-59-12-W4	OP, BU	160	17/05/2005	60,000			Inferior Land Use	-0.50%	10%	65,670	410	43	10.40%
17	NW 20-61-7-W4	DC, OP, BU	157.97	08/06/2004	78,000						78,000	494		
17A	SW 9-60-7-W4	DC, BU	149.99	04/02/2004	82,000			Superior Land Use	2.10%	-10%	75,350	502	-9	-1.71%
17B	SW 33-61-8-W4	OP, BU	150.03	03/08/2004	95,000	1 lease	\$5,000		-1.40%		88,740	591	-98	-16.52%
18	NW 1-60-13-W4	BU	150.25	21/06/2006	76,000						76,000	506		
18A	SE 36-59-13-W4	BU	158.98	06/06/2006	70,000				0.00%		70,000	440	66	14.88%
18B	NE 9-60-13-W4	BU	157.03	19/12/2006	72,000				-4.20%		68,976	439	67	15.16%
19	NE 5 & SE 8-60-13-W4	BU, DC	316	09/08/2007	155,000	1 lease	\$5,000				150,000	475		
19A	SE 6-60-12-W4	BU, DC	159.78	08/05/2007	85,000		+-,	Superior Access	4.20%	-10%	79,713	499	-24	-4.85%
19B	NE 10-60-13-W4	BU, DC	147.02	19/06/2007	80,000	1 lease	\$5 <i>,</i> 000	Superior Access	2.80%	-10%	69,390	472	3	0.57%
20	NW 6-60-12-W4	OP, BU	158	13/02/2007	75,000						75,000	475		
20A	NE 10-60-13-W4	BU, DC	147.02	19/06/2007	80,000	1 lease	\$5,000		-5.60%		70,800	482	-7	-1.43%
21	SE 24-61-10-W4	DC	158.97	08/04/2009	158,000						158,000	994		
	S ½ 31-61-9-W4	DC, BU	295.22	02/12/2008	320,000			Inferior Land Use	1.60%	5%	341,376	1,156	-162	-14.05%
	Line 7L76 (Single Pole excer	nt #22: H-Frame)												
22	SW 30-109-15-W5	DC, BU	160	26/08/2004	30,000						30,000	188		
22A	NE 34-109-14-W5	DC, BU	156.93	05/10/2004	25,000			Inferior Soil	-1.40%	5%	25,883	165	23	13.68%
22B	N ½ 9-110-15-W5	DC, BU	316.04	19/05/2004	50,000			Inferior Soil	2.10%	5%	53,603	170	18	10.55%
23	SW 4-110-18-W5	DC	142.82	11/07/2005	55,000						55,000	385		
23A	NW 9-110-17-W5	DC	157.03	22/07/2005	52,500			Inferior Soil	0.00%	5%	55,125	351	34	9.70%
23B	SW 25-110-19-W5	DC	137.55	22/10/2005	60,000			Inferior Soil	-1.50%	5%	62,055	451	-66	-14.64%
24	S ½ 15-110-19-W5	DC	303.12	30/06/2008	190,000						190,000	627		
24A	SW 32-109-18-W5	DC	160	13/06/2008	95,000			Superior Soil	0.00%	-5%	90,250	564	63	11.13%
24B	N ½ 15-110-19-W5	DC	309.56	25/06/2008	190,000				0.00%		190,000	614	13	2.12%

				- (							Adjustn	nents		Price Diffe	erence	
	Subject/Comparable	Land Use	Size	Transfer Date	Sale Price	Imp	ECV	Inferi	or/Superior Characteristics	Time	-/+ Ch	aracteristics	Adj. Price	Price/ Acre	(Subj- Comp)	% Diff.
	Line 7L92 (Single Pole)	-	-					-				-			_	
25	SE 19-59-13-W4	OP, BU	96.28	18/10/2010	85,000								85,000	883		
25A	NE 30-59-12-W4	OP	74.68	28/10/2010	70,000			Inferior Access	Superior Land Use	0.00%	10%	-10%	70,000	937	-54	-5.81%
26	SW 19-59-13-W4	OP, BU	108.6	21/01/2004	40,000					0.70%			40,000	368	44	10 570/
26A	NE 22-59-14-W4	OP, BU	100.15	10/02/2004	33,000					-0.70%			32,769	327	41	12.57%
27	SW 36-53-14-W4	OP. DC	160	23/04/2004	85.000								85.000	531		
27A	SE 15-54-13-W4	OP	80.12	07/04/2004	41,500			Inferior Land Use	Size	0.00%	10%	-10%	41,500	518	13	2.56%
28	E ½ 36-58-14-W4 and	DC, BU	374.06	09/01/2007	230,000								230,000	615		
204	<b>NW 30-58-13-W4</b> N ½ 27-58-15-W4	BU, DC	220.62	04/08/2006	150.000	1 10000	\$7,500	Inferior Land Use		3.50%	10%		162.226	707	-92	-12.97%
28A	IN /2 27-38-13-W4	BU, DC	229.62	04/08/2006	150,000	1 lease	\$7,500	Interior Land Use		3.50%	10%		162,236	707	-92	-12.97%
29	NW 31-55-13-W4	DC	80	15/04/2008	100,000								100,000	1,250		
29A	SW 9-54-12-W4	DC	79.5	17/03/2008	80,000			Inferior Soil		0.70%	20%		, 96,672	1,216	34	2.80%
29B	SW 3-55-13-W4	DC	137.73	19/12/2007	133,000			Size		2.10%	5%		142,583	1,035	215	20.75%
30	NE 18-59-13-W4	OP, BU	153	17/07/2008	95,000								95,000	621		
30A	SW 28-58-14-W4	OP, BU	158.01	04/06/2008	120,000	1 lease	\$7,500			0.70%			113,288	717	-96	-13.40%
				,,	,		+.,									
31	NW 19-56-13-W4	DC	158.98	10/09/2009	160,000								160,000	1,006		
31A	SW 34-56-12-W4	DC	160	15/12/2009	155,000					-1.20%			153,140	957	49	5.15%
31B	NW 1-56-12-W4	DC	149.92	16/04/2009	155,000					2.00%			158,100	1,055	-48	-4.57%
31C	SE 9-56-13-W4	DC, BU	157.9	13/01/2010	125,000			Inferior Land Use		-1.60%	20%		147,600	935	72	7.66%
	Line 7L98 (Single Pole)															
32	NW 10-32-4-W4	DC	155.84	09/03/2009	63,360								63,360	407		
32A	S ½ 26-31-4-W4	DC	314.97	05/02/2009	128,000	1 lease	\$5,000			0.40%			123,492	392	14	3.70%
32B	SE 5-31-4-W4	DC, OP	159.07	10/07/2009	72,000					-1.60%			70,848	445	-39	-8.72%
32C	W ½ 11-31-4-W4	DC	318.2	24/08/2009	126,000					-2.00%			123,480	388	19	4.77%
33	NW 10-34-4-W4	OP	155.54	13/01/2004	45,750								45,750	294		
33A	NW 19-34-3-W4	DC, OP	154.25	13/01/2004	54,600			Superior Land Use		0.00%	-10%		49,140	319	-24	-7.67%
33B	NW 14-34-3-W4	DC	127.61	23/04/2004	50,000			Superior Land Use		-2.10%	-10%		44,055	345	-51	-14.80%
33C	NE 23-34-4-W4	OP	160	13/01/2004	47,250					0.00%			47,250	295	-1	-0.40%
	9L11 (H-Frame)															
34	SW 23-71-21-W5	BU, OP	160	05/07/2008	75,000								75,000	469		
34A	NW 28-71-21-W5	OP, BU	116.5	25/01/2008	60,000			Inferior Soil	Size	4.20%	5%	-5%	62,520	537	-68	-12.65%
34B	SW 28-71-21-W5	BU, OP	160	07/02/2008	75,000			Inferior Soil		3.50%	5%		81,506	509	-41	-7.98%
35	NE 23-71-21-W5	BU	160	05/08/2009	75,000								75,000	469		
35A	NE 11-72-21-W5	BU	126.05	02/06/2009	50,000	1 lease	\$5,000	Inferior Soil		0.80%	5%		47,628	378	91	24.06%

#### Serecon Valuations Inc.

				Transfer	Sale							Adjust	ments			Price Diff	erence	
	Subject/Comparable	Land Use	Size	Date	Price	Imp	ECV	Infer	ior/Superior Characte	ristics	Time	-/+ C	haracte	ristics	Adj. Price	Price/ Acre	(Subj- Comp)	% Diff.
<b>36</b> 36A	<b>SW 19-82-18-W5</b> SE 27-82-19-W5	BU BU, DC	<b>159</b> 158.97	<b>21/11/2011</b> 21/02/2011	<b>99,900</b> 120,000			Superior Soil	Superior Land Use		5.40%	-5%	-10%		<b>99,900</b> 107,508	<b>628</b> 676	-48	-7.09%
37	SW 21-76-19-W5	DC	160	25/01/2010	150,000										150,000	938		
37A	NE 18-76-20-W5	DC	160	11/01/2010	220,000			Superior Access	Superior Soil	Superior Location	0.00%	-10%	-5%	-5%	176,000	1,100	-163	-14.77%
37B	SW 7-76-20-W5	DC	160	02/04/2010	210,000			Superior Access	Superior Soil	Superior Location	0.60%	-10%	-5%	-5%	169,008	1,056	-119	-11.25%
38	SW 19-81-18-W5	BU, DC	156	12/01/2006	59,000	Cabin	\$7,500								51,500	330		
38A	S ½ 33-80-19-W5	DC, BU	310.74	24/10/2005	105,000			Severed	Superior Land Use		1.70%	5%	-5%		106,785	344	-14	-3.93%
38B	NE 25-81-19-W5	BU, OP	160	04/09/2006	42,000			Inferior Soil	Inferior Land Use		-5.60%	5%	10%		45,595	285	45	15.85%
39	SW 19-81-18-W5	BU, DC	156	29/07/2005	59,000	Cabin	\$7,500								51,500	330		
39A	E ½ 12-81-19-W5	OP, BU	320	31/05/2005	86,000			Inferior Soil	Inferior Land Use		1.00%	5%	10%		99,889	312	18	5.76%
39B	S ½ 33-80-19-W5	DC, BU	310.74	24/10/2005	105,000			Severed	Superior Land Use		1.70%	5%	-5%		106,785	344	-14	-3.93%
	9L36/9L37 (Steel Lattice)																	
40	SE 8-63-10-W4	BU	161.24	24/03/2005	45,000										45,000	279		
40A	SW 10-64-11-W4	BU	161.24	02/06/2005	50,600	1 lease	\$5,000	Superior Access			-1.00%	-10%			40,630	252	27	10.76%
	9L59 (H-Frame)																	
41	W ½ 18-33-13-W4	OP	314.75	13/04/2011	110,162	3 leases	\$15,000								95,162	302		
41A	E ½ 5-34-13-W4	OP	318	15/04/2011	135,150	3 leases	\$15,000	Superior soil	Inferior Access	Superior Topography	0.00%	-5%	5%	-10%	108,135	340	-38	-11.09%
42	E ½ 18-39-13-W4	OP	318.99	23/10/2007	190,000	1 lease	\$5,000								185,000	580		
42A	SE 12-39-13-W4	OP, DC	139.11	28/11/2007	77,000			Superior Land Use			-1.40%	5%			79,718	573	7	1.20%
43	S ½ 24-29-14-W4	OP	318	20/12/2004	104,000										104,000	327		
43A	NE 32-28-15-W4	DC	159	26/11/2004	71,550	1 lease	\$5 <i>,</i> 000	Superior Land Use			0.70%	-5%			63 <i>,</i> 665	400	-73	-18.32%
43B	NE 29-30-15-W4	OP,DC	159	01/06/2005	66,400						-3.00%				64,408	405	-78	-19.26%
	9L960/9L961 (Steel Lattice)																	
44	NE 28-57-18-W4	OP, BU	160	17/01/2008	105,000										105,000	656		
44A	SE 12-57-17-W4	OP, DC	160	15/11/2007	140,000			Superior Soil	Superior Land Use		2.80%	-10%	-10%		115,136	720	-63	-8.80%
45	NE 30-61-11-W4	BU, OP	160	25/05/2007	80,000										80,000	500		
45A	SE 35-61-11-W4	OP, BU	160	31/05/2007	92,000			Superior Land Use			0.00%	-10%			82,800	518	-18	-3.38%
45B	NW 26-61-11-W4	BU	156.44	04/06/2007	78,500			Inferior Land Use			0.00%	10%			86,350	552	-52	-9.42%
46	NW 30 & SW 31-60-13-W4	BU, OP	314.2	06/07/2007	100,000										100,000	318		
46A	SW 30-60-13-W4	BU, OP	138.49	06/07/2007	50,000			Superior Access			0.00%	-5%			47,500	343	-25	-7.21%
46B	SE 15-59-14-W4	BU, OP	161.24	14/05/2007	45,000			Superior Access			2.80%	-10%			41,634	258	60	23.26%
47	SE 23-62-12-W4	DC, OP	158.49	16/12/2008	60,000										60,000	379		
47A	S 1/2 10-62-12-W4	DC, OP, BU	320	18/12/2008	101,000			Inferior Land Use	Inferior Soil		0.00%	5%	5%		111,100	347	31	9.04%
47B	NE 14-62-12-W4	OP	160	16/12/2008	60,000			Inferior Land Use			0.00%	5%			63,000	394	-15	-3.85%

#### Impact of High Voltage Transmission Lines on Rural Property Values

				Tronofor	Colo						Adjustmen	ts		Price Diff	erence	
	Subject/Comparable	Land Use	Size	Transfer Date	Sale Price	Imp	ECV	Inferio	r/Superior Characteristics	Time	-/+ Chara	octeristics	Adj. Price	Price/ Acre	(Subj- Comp)	% Diff.
48	NW 6-59-15-W4	BU, OP	154.5	19/11/2004	99,000								99,000	641		
48A	NE 28-60-16-W4	BU	159.3	09/02/2005	81,000			Inferior Land Use		-1.70%	10%		87,585	550	91	16.54%
49	SE 30-61-11-W4	OP, BU	158.97	19/01/2011	97,000								97,000	610		
49A	SE 35-61-11-W4	OP, BU	160	16/08/2010	100,000					1.50%			101,500	634	-24	-3.81%
50	NW 16-59-15-W4	DC	160	26/03/2004	110,000	1 lease	\$7,500						102,500	641		
50A	NE 21-58-15-W4	DC	151.34	18/02/2004	106,000	1 lease	\$7,500			0.70%			99,190	655	-15	-2.26%
51	SE 7-59-15-W4	BU, OP	161	13/08/2010	200,000								200,000	1,242		
51A	NE 15-59-16-W4	BU, OP	160.88	09/04/2010	169,900	2 leases	\$15,000			1.20%			156,759	974	268	27.49%
	7L14 (Single Pole)															
52	SE 25-50-5-W4	OP	146.73	10/05/2007	110,047								110,047	750		
52A	SW 27-49-5-W4	DC, OP	158.78	04/05/2007	130,000			Superior Land Use	Superior Soil	0.00%	-10% -5	5%	110,500	696	54	7.77%
53	SW 25-50-5-W4	OP	158.61	02/09/2011	150,680								150,680	950		
53A	SE 4-51-4-W5	OP	163.21	30/05/2011	132,000	1 lease	\$7,500			1.80%			126,741	777	173	22.34%

#### **3.3.1 Mathematical Analysis**

Over the 13 total lines there were 53 on-line sales and 79 off-line sales utilized. Based on a simple average of the differences between the 79 pairs, there is no definitive difference between the sale price of on-line properties and the sale price of similar off-line properties. In fact on a dollar per acre basis, the mathematical average difference between on-line properties and the average off-line property is +\$2.16. As a percentage difference this difference is +0.82%. Both of these factors show that there is no effect of the HVTL on property values. When you eliminate the pairs which necessitated a gross adjustment of more than 5%, the differences become +\$11.72 or +1.96%. This limited mathematical analysis shows negligible price effect from the power lines, which results are complimentary to the statistical analysis in the next section.

There also appears to be very little difference in terms of impact between the 144 kV transmission lines and the 240 kV transmission lines. Of the 79 total pairs, 53 are along 144 kV lines (primarily single pole structures) and 26 are along 240 kV lines (H-frame and steel lattice structures). From a mathematical standpoint the 144 kV pairs show average differences between on-line and off-line values of +\$6.87 and +1.37%. The average differences on the 240 kV lines are -\$8.75 and -0.58%.

Similarly, another mathematical analysis was done in respect of properties containing the actual 144 kV and 240 kV structures and omitting those on-line properties which were immediately adjacent to a HVTL contained within a road allowance. This distinction narrowed the data set to a total of 42 pairs. These pairs then showed average differences of -\$0.24 per acre and -0.47%.

#### 3.3.2 Statistical Analysis

The objective of this study has been to assess the impact of 144 kV and 240 kV transmission lines on property values. In order to quantify the difference, data has been collected in respect of property values located on lines or where the line is adjacent to the property in a road right-of-way, in addition to comparative values of properties located away from the transmission lines. This data was then organized in a way that allows for the best statistical analysis of the data.

#### Paired Two Sample Comparison of Means

In this approach we have organized the data into pairs, or matched pairs of data. One match pair is made up of one on-line property and one comparative off-line property. The resulting analysis can be viewed as analyzing the mean difference between the matched pairs (mean of the differences), or a paired two sample comparison of means. The reason this approach was used as opposed to a straight forward comparison of two means (mean of properties located on line versus the mean of those located of line) is that the data in question is not independent of each other. The value of a 160 acre property in say, Consort, Alberta located off-line is not independent of a 160 acre property in Consort Alberta located on-line. When dealing with two means that each have wide values (\$1,000.00 to \$16,000.00 per acre properties for example) each sample will have a large standard deviation. However, the



standard deviation of the differences of the matched pairs will be much smaller as the property values of each pair are dependent on one another. This matched pairs approach allows for an appropriate determination if the mean values of the sample populations are different.

The data has been compared on both a value and a percentage basis, and this has been done based on three scenarios:

- (i) on all properties within the previously discussed study area;
- (ii) by considering only those properties in respect of which minimal adjustments have been made by Serecon (minimal adjustments are defined as those paired sales in which only a gross 5% or less adjustment was made to the comparable or [off-line] sale); and
- (iii) by considering only those properties on which a HVTL is present and not in an adjacent road allowance.

The following two tables have been prepared to summarize the findings. Included in these tables are the mean (average) differences in the three populations, the standard deviation of this difference, and the statistical test. In this case the statistical test is in the form of a t-test, or p-value. A t-test is a statistical test used to determine if there is a significant difference between the mean or average values of two groups. The hypothesis that we are testing is that there is no difference between property values on-line and property values off-line. We write this as the null hypothesis of H<sub>0</sub>: ( $x_D$ ) =0, where  $x_D$  is the mean difference of the properties on-line, and those off-line. Our alternative hypothesis is that on-line properties are less than those off-line expressed as H<sub>A</sub>: ( $x_D$ ) <0.

If we use a 95% confidence level, or alpha of 0.05, we can reject the null hypothesis in favour of the alternative hypothesis if the p-value is less than 0.05. Similarly, we can reject the null hypothesis in favour of the alternative hypothesis if the t-stat is larger (negative) than the relevant t-test.

We have organized the data into two tables, one for the difference in value and one for the difference in percent.

Data Set	Number of Matched Pairs	Mean Difference in Value	Standard Deviation of Differences in Value	Relevant t-test	t-stat (values)	P-Value (Values)	Reject or Not- Reject H₀(\$)
All Data	79	\$2.16	\$80.68	1.66	0.238	0.406	Not-Reject
Min. Adjustments	37	\$11.72	\$86.81	1.69	0.821	0.208	Not-Reject
HVTL on Property	42	-\$0.24	\$82.00	1.68	-0.019	0.492	Not-Reject



Data Set	Number of Matched Pairs	Mean Difference of %	Standard Deviation of Differences in %	Relevant t-test	t-stat (%)	P-Value (%)	Reject or Not- Reject H <sub>0</sub> (%)
All Data	79	0.82%	11.66%	1.66	0.621	0.268	Not-Reject
Min. Adjustments	37	1.96%	12.40%	1.69	0.962	0.171	Not-Reject
HVTL on Property	42	-0.47%	11.87%	1.68	-0.256	0.340	Not-Reject

Statistical Analysis of Rural Properties in Percentage Terms

Based on the above statistical analysis, the null hypothesis is not-rejected in favour of the alternative hypothesis. In other words, the statistical evidence indicates that the value of properties on-line are not lower than values of properties off-line. This can be seen in the first table as the p-value of 0.406 for "all data" is much higher than 0.05. In the analysis of the percent differences in the second table, the p-value is 0.268, also much higher than 0.05.

While the results vary slightly when properties in respect of which significant adjustments were required are removed; the conclusion is the same; there is not enough statistical evidence to reject the null hypothesis in favour of the alternative hypothesis. The difference between on-line and off-line values is not statistically significant.

### **3.4 IMPROVED PROPERTIES**

The purpose of this report is to evaluate the effects of HVTLs on rural property values, including rural properties with buildings and improvements. Properties along the aforementioned transmission lines were searched in order to find recent sales. These sales, between January, 2004 and December, 2011, included both bareland sales and improved sales. However, the volume of improved sales was very limited. Along the 13 lines searched 10 properties were identified as being arm's-length transactions and having buildings or improvements of some degree. Of these ten sales, six were deemed to be building sites with major improvements and four were building sites with minor improvements. Major improvements were deemed to be sites with a residence and three or more significant service buildings. Minor improvements were sites with a residence and two or less service buildings.

The difficulty with assessing properties with building sites is twofold. First, it is very difficult to obtain the necessary information regarding the buildings (type of building, size of building, age of building, etc.). Secondly, it is very difficult to find comparable building sites with a very similar complement of buildings in the same market area. The appraisers attempted to utilize multiple listing services (MLS) and local municipalities' assessment branches to determine the exact compliment and necessary detail of buildings on the subject properties. This was met with a lack of MLS sales and a number of municipalities that were not willing to divulge the necessary information. In addition to these issues, it was deemed that utilizing the major building sites, due to their complexity, was not a viable option. In the end, we were left with two on-line sales in respect of which sufficient data was



available to complete a Paired Sale Analysis. It is the opinion of the appraisers that two sales, with still quite limited data, is not enough from which to draw any conclusions, even of a general nature. Therefore, an additional analysis of improved properties was not completed.

Any impact from transmission lines on improved properties would need to be assessed on a site specific basis.

### **3.5 PAIRED SALES CONCLUSIONS**

Overall, the quantitative results from the Paired Sales Analysis indicated no difference between the adjusted sale prices of vacant on-line and off-line properties. Our general observations can be summarized as follows:

- Taken as a whole, the information reported here, when analyzed statistically, indicates that vacant on-line sales compared to vacant off-line sales are the same. It is not possible to attribute any variation to the presence of the overhead transmission line.
- Due to a lack of sales and information, the impact of HVTLs on improved properties is not easily calculated on a general scale. Rather, a site specific analysis would need to be completed in order to assess any possible impacts.



# 4.0 REGRESSION ANALYSIS

### 4.1 METHODOLOGY

As described previously, an alternative approach to determining the effect on property values of HVTLs is by way of a Regression Analysis. With this approach, property values are regressed on specific property characteristics, and the resulting estimates indicate the effects of each of these characteristics on property values, holding the effects of all other variables constant.

Even though the focus of the Regression Analysis is the effect on property values of the transmission line, it is necessary to explicitly include other variables that affect property values in the regression models that are estimated. Failure to do so would mean that the coefficient on the transmission line variable would be biased, so that any inferences that were made in such a case could be misleading. For example, if a smaller property size is expected to result in a higher property value per acre, but the parcel size variable is omitted from the regression model, and if larger parcel sizes happen to be more prevalent adjacent to a transmission line, then the results of the regression analysis may indicate that the values of properties adjacent to transmission lines are lower than the values of other properties. By explicitly including property size and other variables that are expected to affect property values in the regression model, the coefficients on the transmission line variable will indicate the effect on property values of a HVTL, while holding constant the effects of all other variables that are included in the model. Of course, it is not possible to include all variables that may affect property values in the regression analysis as some are not recorded or all the necessary information is not always available. The effects of factors such as these are addressed as part of the error term in the regression model.

#### 4.1.1 Data

Data utilized in the regression analysis was collected from Alberta Municipal transfer data. The same 13 lines searched in the Paired Sales Analysis were also used in the Regression Analysis, searching all townships which contain a portion of one of the studied 144 kV or 240 kV transmission lines. These transfers were then sorted to include only transfers in which the properties were 70 acres in size or larger and a value and consideration were both recorded. Additional information was then obtained for the selected properties in order to determine parcel size, land use, CLI soil rating, presence of surface leases, presence of improvements and the relevant municipality. These characteristics were then included with the sale price, time of transfer and whether the property is on-line or off-line and utilized as the regression data set.

Four separate regression analyses were run in order to obtain the best model in determining the significance of the on-line variable. The first model was a base linear model containing all variables. The second was a base model using (natural) log of value. The third model was a base model with log values, with two extra variables to help explain parcel size. The fourth model was similar to model #3 with the addition of an interaction term for each location.



# 4.2 FINDINGS

The findings of the Regression Analysis were very similar to those of the Paired Sales Analysis, in that the effect of the on-line variable was insignificant overall in all four models. In general, the log model was preferred to the base model as it indicated a better overall fit; however, neither model is perfect and therefore some explanatory issues persist with both. Both the base model and the log model did show similar results in terms of the on-line variable in that they both show it as a positive and not significant coefficient (regression output is summarized in the Appendix).

The third model introduces two extra variables:

- i) parcel size squared; and
- ii) parcel size x on-line.

These additional variables allow the property value to increase non-linearly as parcel size increases, and for the effect of being on-line to change as parcel size increases. Both of these additional variables helped to improve the model. The on-line coefficient then becomes negative, however it is still considered not significant.

Finally, the fourth model adds an interaction term for each municipality in which the properties are located. This allows the effect for being on-line to be different for each municipality. However, this final addition leads to non-credible results which likely stems from the lack of on-line properties for any one municipality.

Overall the findings of the Regression Analysis are consistent across all of the models run. No matter the model, the final results show that the on-line variable remains insignificant. This would indicate that the presence of the HVTL (on-line) is not a significant variable when trying to determine the value of the parcel.

#### 4.3 CONCLUSIONS

Overall, the results of the Regression Analysis showed that the inclusion of an on-line variable was insignificant to the overall regression model. Our general observations can be summarized as follows:

- Regardless of the model used (some models were preferred and considered better) the on-line variable was considered insignificant.
- The addition of extra explanatory variables increased the reliability of the model, but not the significance of the on-line variable.
- There is not enough location (municipality) specific data to determine if the impact of the online variable changes based on the municipality it is located in.



# **5.0 OVERALL CONCLUSIONS**

The two approaches utilized (Paired Sales Analysis and Regression Analysis) to estimate the impact of HVTLs on rural property values resulted in similar findings.

When analyzed statistically, the Paired Sales Analysis did not indicate any negative effect on vacant rural or bareland property values from the presence of a transmission line on, or in a road allowance adjacent to, the property when all on-line sales were considered together. When analyzed on a purely mathematical basis, properties as a whole had average impacts of +\$2.16 per acre and +0.82%. Properties with minimal adjustments had average impacts of +\$11.72 per acre and +1.96%. These results are somewhat inconsistent, but overall small and insignificant. This insignificance was further confirmed through statistical analysis of the paired sales. Unfortunately, inadequate data and information resulted in the inability to determine the impact on improved properties.

The Regression Analysis yielded similar results showing in all four models that the on-line variable within the regression was insignificant. The direction of impact (positive or negative) changed based on the model, but the overall results were the same, showing insignificance.

It is our opinion, based on the results from this study, that 144 kV and 240 kV transmission lines located on, or in road allowances adjacent to vacant rural properties, have no impact on their market values.



# APPENDIX

# APPENDIX A – SUBJECT AND COMPARABLE MAPS

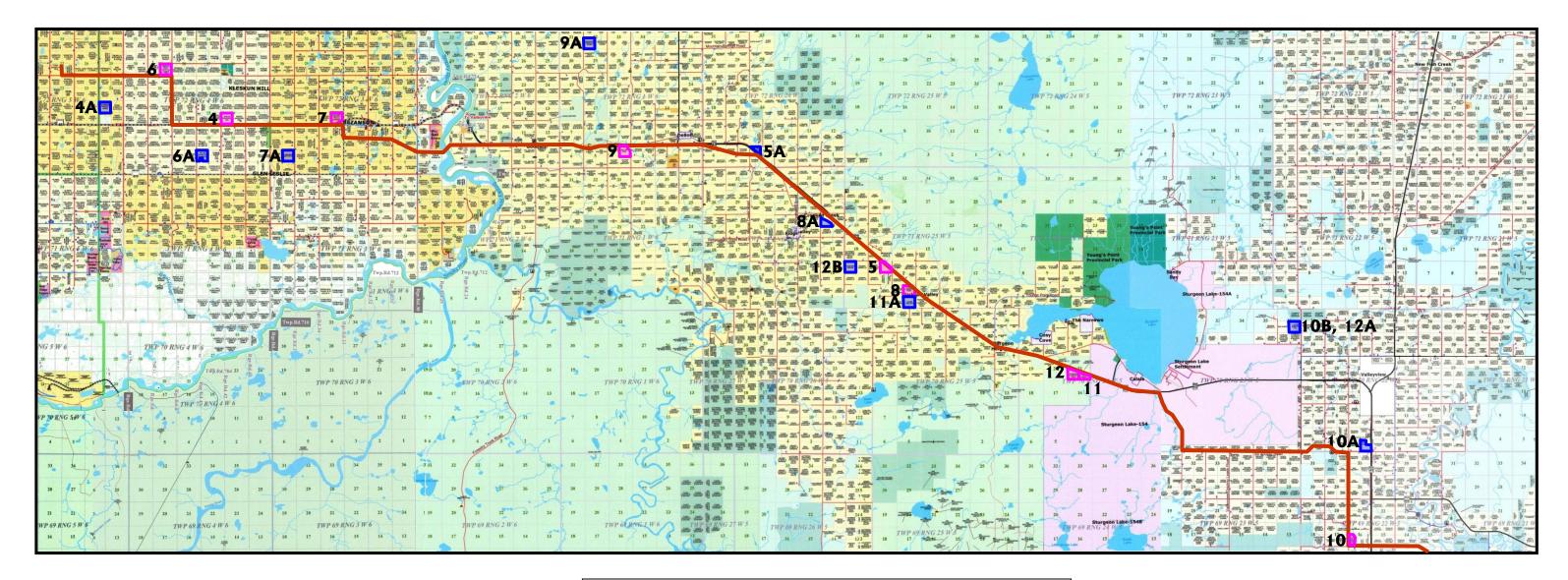
### APPENDIX B – REGRESSION ANALYSIS OUTPUT

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	and Land RD	in the second	ARLIN	0.000000000000000000000000000000000000	-		14	100	GA C	ANN ARM	F & CM	-+	G-L	G.	LEMIY, M.S.S.	RPAE FARMEL LTEL	THE P.	in the second	Trans	KG	INNE SEL		MALLER S	120	Q.S.C.	E.A.G.		_		PAN.	R. & K. Animati LTD
	and a	AG	L.S. M.	r events	NOR NJ	20	Pagements LTD		TAV	HAR CM	enere e		24			19		#001 N & 0	P240	2775	Pus a Za	29	LID 23		E C	EAG	19	DED.	20	AX.	1
	ESS .	asper	E & W	E. A M		K BINE PARME LTD.	PARLICIA LTD	Event.	HOSE UP & CH	and a char	Rather C. Reding		HENRIE. & HUT	EAP	ADMM. G.A.		Contain.	Lin h in			ANE.	TANKE CO	275		HIN. E.A.H.	t-	· ·	-	PG.6 M	AX I	LA M
	and a	Sanchese 19	AG	DACK	A & D	E OHSTE	Han Pa	ATTALS BRAC FARME	REDITION FAMILIE LTD	R	H O	HENRIL, LE A FIZ	ROAK S	-E	ADAMA G.	NORT, M.J.	TROC	HI	FREME FRAMES LTD.	ACEE.	THENE PROMO UTB	FREINE FARMO LUD	靈	ONLL BA	HALLER LICEN	A & YZ	IA & Y	and a	C N	HECHIG.	AG VENILIES UD
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Line 7L16



Line 7L32



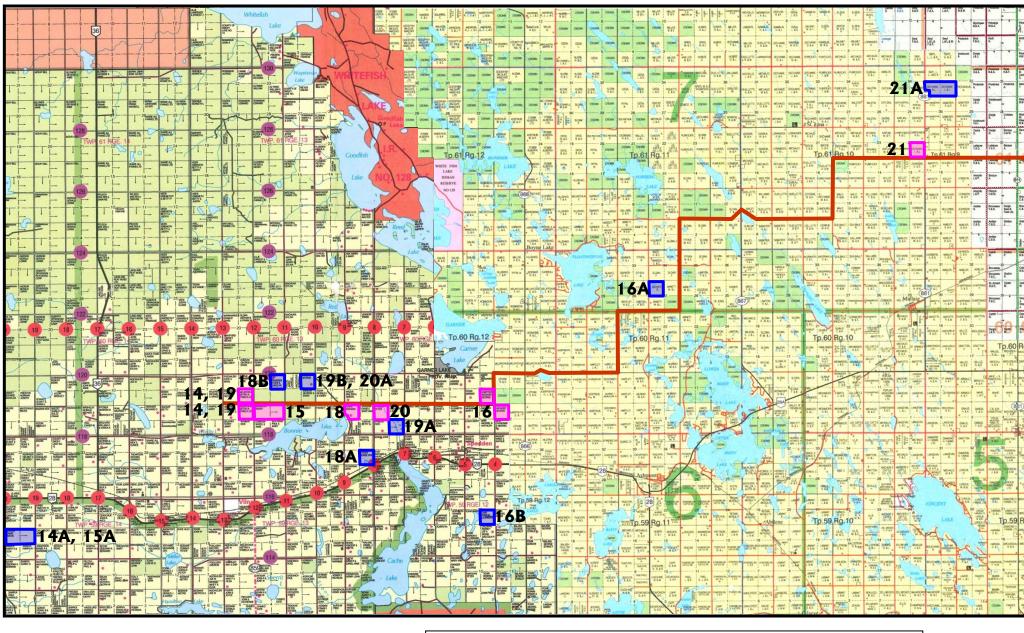
On-line Off-line — Approximate Location of Transmission Line

	X	2		1		6		5			VANDEMASK	3 <sub>FWD</sub>	FND C	- FNO	KORVARY	KOSIOREK, WANDA	MERE	5	FARMS LTD.	5			- 3		SALTER,
	$\sim$	~			СНІ	NCHAG	A ROA	_			_	FWD CONTRACTING	FWD CONTRACTING		KOSIOREX,		HERE DWN	C	SHELLEY C	State-	BOOS. OTAL	BOOS, OZZE A TRACY			KM
A STERNAR & MARTIN	IFTODY, MARTIN & SUZANNE	JOHN WILLIAM				1	VANDERMARK, KEITH W	VANDEWARK, KORK & JANET	MANNING DIVERSIFIED FOREST PRODUCTS LTD.	RSTL GROUP	WARDEN ERE.	VANDEMARK, KIRK R & JANET E	EVANOFF ENTERPRISES LTD.	NELSON, AUSTIN & RHONDA	KOSIOREK.	KOSIOREK, WANDA	EVANOFT DN TEXPRESS	STICKNEY, DEWEY	FEDORCHUK, ANDREW & SHAUN	Officer C	BOOS OZTE & TRACT	BOOS OZDE & TRACY	DOIRON, ALLISON R	DORON, ALLISON R	DOIRON, ALLISON R
SINGHMAR ACRES LTD.		JOHN WILLIAM			DOIRON, ALLISON	DOIRON, ALLISON	VANDERMARK KEITH W	VANDEMARK, JANET & KIRK			WILDERNESS FARMS LTD.	DECHANT, BARABARA SONIA	VANDEMARK KIRK R & JANET E	MANNING DIVERSIFIED FOREST PRODUCTS LTD.	FWD CONTRACTING		KOSIOREK, WANDA	KOSIOREK, WANDA	FEDORCHUK, SHAUN & NICHOLAS	ALLISON	BUDAL, CLARENCE & DARLEEN	BUDAL CLARENCE & DARLEEN	DOIRON, ALLISON R	DOIRON, ALLISON R	UNCARIAN, BERRY & LOUISE
-	IFTODY, JOHN WILLIAM			E				VANDEMARK, OHARMAINE & WILLIAM	RSTL GROUP INC.	DAWYDIUK, BRENT JAMES	WILDERNESS CONSTRUCTION	KOVER &	NOVOTNY, TONY F	MANNING DIVERSIFIED FOREST PRODUCTS LTD.	BRUCE	I 3	WLDERNESS FAMMS LTD.	PROSKURNIAK, NAN J & NICHOLAS	PROSKURNIAK NAN J & NICHOLAS	REDMAN, ROBERT & SYLVA	HUDEMA, HELEN	HUDEMA, HELEN	NICHIPORIK, GREC	SALTER, KIM & JOANNE	VANDEMARK DANNY & CASSIE
, ,	Y	0	-	5		0	-	9 MOSURE, RLAYTON	RSTL GROUP	B RSTL GROUP INC.	VANCEMARK KEITH & ROBERTA	WILDERNESS FARMS LTD.	MANINING DIVERSIFIED PRODUCTS LTD BEELESK, STANLEY J	NOVOTINI TONY DECUTOR	RAY V	EVANOFF	WLDERINESS PARMS LTD.	PROSKURNIAK NAN J & NICHOLAS	PROSKUNIAK, NICHOLAS & NAN J HUDEMA, HELEN	HUDEMA, HELEN	NICHPORIK, BRUCE	NICHEPORIK, BRUCE & DOUGLAS	GORDEY, C	GORDEY, JUDY & ALLAN	Í
		2	2					BIERAUGLE, DONALD & PATRICIA	RSTL GROUP INC.	& BRENT	MLDERNESS CONSTRUCTION LTD	BIFLESKI, STANLEY	VANDEMARK, EDNA 1 & ROBERT	A LARDNCE	PAMLUSKI, EDWARD & CHRISTINE	EVANOFF ENTERPRISES LTD.	EVANOFF ENTERPRISES LTD.	EVANOFF ENTERPRISES LTD.	-	VANDEMARK, KETN & ROBERTA T: 05	LINGARIAN, TEARY & LOUISE 31221	SEPT.	FEDOROHUK, TERRY LYN & ANDREW	2	L
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			1	MUNROE. DAVID ANDREW		2	5.	70		WILDERNESS CONSTRUCTION LTD	WILDERWESS CONSTRUCTION	ROBINSON, DARLA	YASINSHI, WILLIAM	GORDEY, RONALD	ALLEN I	PAWLUSKI OHRISTINË & EDWARD	EVANOFF INTERPRISES LTD.	EVANOFF DVTERPRISES LTD.	VANDEMARK, KEITH & ROBERTA	UNGARIAN, TERRY & LOUISE	GORDEY, JUDY & ALLAN	GORDEY, JUDY & ALLAN	FEDOROHUK, ANDREW & TERRY L		2
		TDS FORESTRY CONTRACTING LTD.	BLACK, CECE & MABEL	BLACK, CECL & MABEL	MUNROE DAVO & BERNA	FOWLER, SHARON	5	25	2	VREELING, TRAVIS	VANDEMARK, KEITH & ROBERTA	VANDEMARK, KEITH & ROBERTA	HOTOHOSS RIVER ENTERPRISES	BERAUCLE ROBN & AMY	BOOS	NC DONALD. ERNEST ALTON JOHN	EVANOPF DNTERPROSES LTD.	EVANOFF DNTEIDPRISES LTD.	VANDEMARK, ROBERTA & KEITH	HAYDEY. WILLIAM	GORDEY, ALLAN & JUDY	EVANOFF ENTERPRISES LTD.	EVANOFF ENTERPRISES LTD.	HICHPORIK, BRUCE N	NICHIPORIN BRUCE N
			FOWLER, SHARON	MUNROE, DAVD & BERNA	MUNROE, DAVID & FOWLER, SHARON	BRADSHAW, BRIAN E	BRADSHAW, BRIAN E	PHARIS FARMS LTD.	VANDEMARK CASSIE & DANNY	~	BOOS, ROBERT & WILLIAM	BOOS ANITA AS ROBERT	A DIVERSE	C BRYAN	THE TOWN OF	BOOS	PROSKUMAAK, RICHARD & NAN J	VANDEMARK KETTH & ROBERTA	HAYDEY.	EVANOFF, ENTERPRISES	NICHPORK, BRUCE NICK	NICHIPORIK, BRUCE NICK	NICHPORK, BRUCE NICK		NICHPORK BRUCE N
			PAND ONEN	MUNROE BERNA & ANDREW	FOWLER, SHARON & MUNROE, DAVID	VANDEMARK, BRODEY & ANGELA	BRADSHAW, BRIAN E	PHARIS FARMS LTD.	VANDEMARK, DANNY & CASSIE	BOOS, ANITA & ROBERT	BOOS, ROBERT & ANETA	BOOS, ANTA	KELEMEN, KENNETH B & GEORGIA A		- HERNOX	LAND & FORESTS	PROSKUNIAK. RICHARD & NAN J	VANDEMARK KEITH A ROBERTA	KOVER KENNETH & BRYAN	NICHIPORIK, BRUCE NICK	UNGARIAN, TERRY	NICHPORIK, BRUCE NICK	NICHPORK, BRUCE NICK	NICHER	
			KAUP, TERESA & BILL	FOILER, SHARON	COORCEPICK IVAN & TERRA	GOODZECK, IVAN & TERRA	STONE ADELINE & DOUG & DUANE	DMITRUK, THERESA	BOOS, TRACY	KOVER, KDN & BRYAN	BOOS, ROBERT & ANITA	BOOS, ROBERT & ANITA	DMTRUK THORESA	BOOS, TRACY	BACSO, KAREN & ANDREW	RACEO, ANDREW & HARPN		2	KOVER, GEORGE & MAE	UNGARIAN, TERRY	UNGARIAN, TERRY & LOUISE	BRUCE NICK	CROWN	CROWN	CHARLES J
		STONE, ADELINE & DOUG & DUANE	SMITH, DIANNA & DONALD	TAXLOR MATTINE	CORINELIUS A	GREAVES, KAREN & TERRY	STONE, NORMA	GREMM, MELVIN	ASMUSSEN, LORME & THELMA	KOVER, BRYAN . & KEN	Kover, Bryan & Ken	KOVER, BRYAN TA	KELEMEN, CRAIG & STEPHANE	BODS, TRACY	BACSO, ANDREW & KAREN	BACSO, KAREN & ANDREW	GINGELL CLARENCE & ISABELLE	BACSO, JOHN & OTHERS	UNGARIAN, TERRY	UNCARIAN, TERRY	INCARIAN, TERRY	DECKER, M	PASHKO, MARVIN	PASHKO, MARVIN	MCCRACKED CHARLES & JUDITH
		YANENCHUK,	STONE, DOUC & ADELINE & DUANE	GORDEY, RONALD B	LOVAS, WANDA & STEPHANIE	SCHAMEHORN, DAVID W & VALERIE	MCLTHE.	JAEGER, MARY A & DOLIGIAS	~	KELEMEN, KENNETH B & GEORGIA A	KELEMEN, KENNETH B & GEORGIA A	KENECH &	BOOS, TONY W &	BOOS, TRACY	ASMUSSEN, OHESTER CHRISTIAN	WARRACK LAND & CATTLE LTD.	WARRACK LAND & CATTLE LTD.	BACSO, GEORGE & REINE & JOHN	VANCLEEMPUT, GEORGE & MARY	VANCLEEMPUT, MARY & GEORGE	VILLENDO DECINICE à MARY	DECKER BARBARA M	KAMENECKI, CARSON DAVID	GRAW, BERNARD JOSEPH	GRESCHINER ANTON & VERNA
			JAEGER, DOUGLAS & MARY ANNA	JAEGER DOLICIAS & MARY ANNA	LAEGER, A DOUGLAS & BAMY ANNIA	SCHAMEHORN DAVID W & VALERIE	AURORA- ALLEN DNTERPRISES LTD,	ROBERT & ANITA	a boliacks	KELEMEN, KENNETH & GEORGIA		BIERAUGLE & OTHERS	ASMUSSEDI, SHELLEY & BRYCE	HARRACK LAND & CATTLE LTD.	BACED ANDREW & KARDN	WARRACK LAND & CATTLE LTD.	WARRACK LAND & CATTLE LTD.	BACSO, REDAE & GEORGE & JOHN	HASKELL, CAROL & JERRY & CALVIN	VANCLEDMPUT, MARY & GEORGE	HASKELL CAROL & CAROL & CAROL &	HHLLANS, BARBARA & LAWRENCE	KAMENECK, CARSON DAVID	GRAW, BERNARD JOSEPH	GRESCHNER ANTON & VERNA
		6	2	SCHAMEHORN, CHANDRADAE & TERENCE	SCHAMEHORN, VALERIE & WAYNE	SCHANEHORN, DOROTHY & DAVID & VALERIE	JACKSON, ROBERT	JACKSON, edefet	DOUGLAS M	DOUGLAS M	BIERAUGLE & OTHERS	SIERAUGIE & OTHERS	WARRACK LAND & CATTLE LTD.	LAND & CATTLE LTD	WARRACK LAND & CATTLE LTD.	FRANCES B	ASMUSSEN, BRYDE & SHELLEY	WARRACK LAND & CATTLE LTD.	HASKELL, CAROL & HERRON, GLEN	HASKELL CAROL &	HASHELL. CAROL & SERRY & CALVIN	WHELLANS, BARBARA & LAWRENCE	GRESCHNER, PAMELA & RICK	GRAW, BERNARD JOSEPH	KAMENIECKI SANDRA & DANIEL
				BOOS, ROBERT & ANITA	BARBUTZA, BRUCE E.	KOVER, LYNNE & DYLA	SCHOFIELD, CATHY L	GOSLING, LAWRENCE & SHRLEY	STONE, KENINETH & PENNY	STONE, KIDNNETH & PENNY	BACSO, ANDREW & KARDN	KOVER. KENNETH & BRYAN S	WARRACK LAND & CATTLE LTD.	WARRACK LAND & CATTLE LTD.	WARRACK LAND & LAND & CATTLE LTD.	SALLISS BERMADETTE & GARY	ASHUSSEN SHELLEY A BRYCE	HASKELL CAROL &E SERT & CALVIN	HASKELL, CAROL & HERRON, GLEN	HASKELL, EAROL & HEPRON, GLEN	WHILLANS, MARGARET & MUFRED		GRESCHNER, PAMELA & RICK	GRAW, BERNARD JOSEPH	KAMENECKI SANDRA & DANIEL
	2	2 ~	JAEGDR, CARRE & LEO	BOOS, ROBERT & ANITA	DMITRUK, THERESA	DMITRUK, THERESA	DMITRUK, TAZSA	DWITRUK, THERESA	SCHANDHORN, KATHLEEN & A DMGHT	KRIEGER, KARL & COUN A	KREGER, KARL & COLN A 5	KOVER KENNETH & BRYAN	HARRACK LAND & CATTLE LTD.	HARRACK LAND & CATTLE LTD.	WARRACK LAND & CATTLE LTD.	WARRACK LAND & CATTLE LTD.	PAPAR	PAPAN, ANNE	HASKELL CAROL & HERRY GLIN	HASKELL, DAROL & MERICAL	DOWALD R		GRESCHNER, RICK & PAMELA	PASHKO, MARVIN	GRAINLAND INVESTMENTS LTD.
	~~	-5"1	3A	JARVIE T	DMTRUK, THERESA	ASMUSSEN, ARTICE & SHOLLEY	WALLAN L GLENN L T:	092:	ASMUSSEN, THELMA & LORNE	KARL &	KOVER BRYAN STEDEN ROSE	KOVER, BRYAN & KENNETH	SOHMEHORN.	LOVAS, A BRUCE PETERS, JAKE	GARBER DISTRIBUTORS LTD.	KING DENNIS	PAPAN	CROWN	LDN, ALVIN	LEIN, ALVIN	LEIN, ALVIN	TDS FORESTRY CONTRACTING	GRESOHNER, RECK & PAMELA	PASHKO, MARVIN	GRAINLAND INVESTMENTS LTD. 21221
w	1		1	3	JAEGER, LEO J & CARRIE	JAEGER, CARRIE & LEO	TRANSPORT LIMITED	LAMPENCE TRANSPORT LIMITED.	AGMUSSEN, LORNE & THELMA	ASMUSSEN, OHESTER CHRISTIAN	KOVER, KEDINETH & BRYAN	KOVER, KENNETH & BRYAN	A TRESA	A BRUCE	GARBER DISTRIBUTORS LTD.	PAPAN, ANNE	CROWN	KING, DENNIS	LEIN, ALVIN	LEIN, CURTIS & DEBINE	LEIN KENTON & TANYA	HUTTERIAN BRETHREN CHURCH OF TWN RIVERS	MATHESON, DAVID W	GRAW, BERNARD JOSEPH	CHARLES
	1				WARRACK, L	UNEGER. DOLIGIAS &	BARBUTZA EUGENE & BRUCE	BARBUTZA, EUGDIE & BRUCE E.		ASMUSSEN, CHESTER CHRISTIAN	KOVER NENNETH & BRYAN	SCHAMEHORN, EUNICE & LEONARD	SCHANE-CRN STANLE JAMES	LORENCZ, GERALD & CATHY	LORENCZ, GERALD & CATHY	LORENCZ. GERALD & CATH	o SNAS c	HOMEST & SUCCESSION	LEIN, ALVIN L	MATHESON, DAVID & NARY ANNE	MATHESON, DAVID & MARY ANNE	HUTTERIAN BRETHREN CHURCH OF TWN RIVERS	KAMENECK, LEE	MCORACKEN, CHARLES & JUDITH	AARDEMA, ALEEN
			1	2	HOLDINGS	VACHON, MICHELLE & JULIEN	JAEOER, M	AURORA ENTERPRISES	ASHUSSEN, DENNIS & LORRAINE	LAWERNEE KATHRINE & LAVERNEE	KOVER, A	KONTER KONNETH & BRYAN	KOVER KENNETH A BRYAN	SOHANDHORN, EUNICE & LEONIARD	ASMUSSEN, KATHERINE & DONALD	ASMUSSEN, DONALD & KATHERINE	-	KIMASNEY, KAN C KIMASNEY, KIMASNEY,	PASHOO	FEDUSCHAK, WALTER & DON	FEDUSCHAK, WALTER & DON	HUTTERIAN BREITHREN CHURCH OF TWIN RIVERS	HUTTERIAN BRETHREN CHURCH OF TWN RIVERS	GRESCHNER, KEITH & CHERYL	HUTTERIAN BRETHREN CHURCH OF TWN RIVERS
			1			GRIMM, MELVIN	JAEGER, DOUGLAS & MARY	GRIMM, MELVIN	ASMUSSEN, DONALD & KATHERINE	LAWRENCE, LAVERNE & KATHERTINE	SCHANDIORN, MARK	SCHAMEHORN MARK & DOROTHY	KOVER, BRYAN A KENNETH	EUNICE & LEONARD		DECHANIT, DAVID & DEBCRAH	KING, MARKA	FEDUSCHAK, WALTER & DON	KURYLONCH, STEVE	KAMIENIECKI, DAVID & JANET	PALINODA, ANTON	PALINODA, ANTON	HUTTERIAN BRETHREN CHURCH OF TWN RIVERS	GRESCHNER, MORRIS & MICHELE	GRESCHNER ANTON & VERNA
						GRIMM, MELVIN	ASMUSSEN, DONALD & KATHERINE	ASMUSSEN, THELMA ALORNE	GRIMM, MELVIN	GRIMM, MELVIN	SCHAMPHORN MLO & DORDTHY	LEN, DARREN & AUSON	KOVER, KENNETH J	KOVER, KENNETH & BRYAN	-	ASON, ROBERT & LINDA DO SO	WHILLANS GEORGENA & HAROLD	ATRINSON, ARTHUR & SHARON	PASHKO, STELLA & MARVIN	KAMENECKI, DAVID M	PALIWODA, ANTON	FEDUSCHAK, DON & WALTER	HUTTERIAN BRETHREN CHURCH OF TWIN RIVERS	GRESCHNER, KEVIN & VICKI	HUTTERIAN BRETHREN CHURCH OF TWIN RIVERS
					KOHUT, GNDY & DALE	KOHUT, DALE & CINDY	ASMUSSIDI, KATHERINE & DONALD	LORENCZ, GERALD & CATHY	LORENCZ, GERALD & CATHY	нитонас КЕТН	4945927 LIB.	GURTLER, AUKJE & GEORGE	KING, C DENNES	CREAK, MELVIN MELVIN	PROVENSIONAL REALTH CENTRE	EWACH, RELLIAN SHOW	And a	ATTRACT & NAME	PASHKO.	KAMENECKI,	WAQNER	FEDUSCHAK, & DON WALTER	HUTTERIAN BRETHREN CHURCH OF TWIN RIVERS	GRESCHNER, VICKI & KEVIN	HUTTERIAN BRETHREN CHURCH OF TWIN RIVERS
					ULLEY, JOHN A & SANDRA L		ASMUSSEN, KENNETH & BRENDA	YASINSKI, RANDY & DILLMAN DOROTHY	DIZABETH-	BUCHINSKI CATERING LTD.	BHELDS BRYAN E HELDN	KOHUT, CINDY & DALE	DENNS C	Proversitier	SOHNIDT GREG Usanry, C & D	ENACH	RABIEY, KENNETH & JOANNE	PASHKO CARL A	ATTONSON, SHARON & ARTHUR	KAMENECKI, EDWARD A	KAMENEOR, CARSON & TINA	KAMENECKI, CARSON & TNA	HUTTERIAN BRETHERN CHURCH OF TWN RIVERS	GRESCHNER, KEVIN & VICKI	GRESCHNER
-	3		GOODZECK, WILLIAM & HANNAH	OCCOZECK, WILLIAM & HANNAH	LULLEY, JOHN A & SANDRA L HARTMAN, JEROME	I SOMMERVILLE, DONALD J & SHARP, DEANNA	GALBRAITH, NANCY & GORDON	BARKS, CALVIN & RUTH	GALBRAITH, GORDON R.			DECHANT, DAVID & DEBORAH	JACOBSEN HARVEY & JACRIE	SORCIKAL DENSE DENSE DENSE DENSE DENSE DENSE	PASHKO ANDREW	ATKINSON, ARTHUR LEONARD	MATHESON DAVID & MARY	MINICH, HENRY G	EWACH, WILLIAM	2 KAMENECKI, EDWARD A	KAMENECK, CARSON D & TINA M	CARSON D & TINA M	HILLANS DAVID & BRENDA	a Junes	WHITE, JAMES & ELSE
	OLSEN, VERNEN	MDNL NO.22 OLSEN, VERNEN	OLSEN, VERNEN	olsen, Vernen	PALLOVICH, DUSTIN	STONE, BYRON & STACEY	GALBRAITH, NANCY M & GORDON R	GALBRAITH, NANCY & GORDON	DODDS. PETER & SANDRA	Man	R	DOLL CA TERRANCEPT BMARGARE AG	KOHUT JOHN & HILLS	KORN AND THE REAL	PASHKO	STONE, BYRON & STACEY	MATHESON. DAUG & DART	HENRY G	MINICH, LEO L	MENCH, LED L	WACHER, LEO	WAGNER,	GRESCIER, KEMN & WORI	MAY, GMEN WILLIAM	MAY, GWEN & WILLIAM
FRED'S CILFIELD SURVICES LTD.	OLSEN, VERNEN	OLSEN, VERNEN	OLSEN, VERNEN	GOODZECK, SHERYL & ERC	GREER, DALE & PENNY	RUNDERS ELANE S BARBARA	COULTER, TRACEY & MARGARET	MAY, ELIZABETH	1002524 ALBERTA_LID	Mannin		RABEY, JOANNE & KENNETH	DOLL MARGARET & TERRANCE	U W BA	GANDECHI, ADAN & IRENE	PASHKO, CAR ALEXANDER	GRAM RICHARD & ERNEST	GRAW, ROBERT & ERNEST	MINECH, 2	MINOR,	KAMENECKI, MARY 691	KAMIENIECKO, MARY & Ziccie	GRESCHNER, KEVIN & VICICI	GWEN &	GRESCHNER KEITH & CHERTL
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Line 7L58



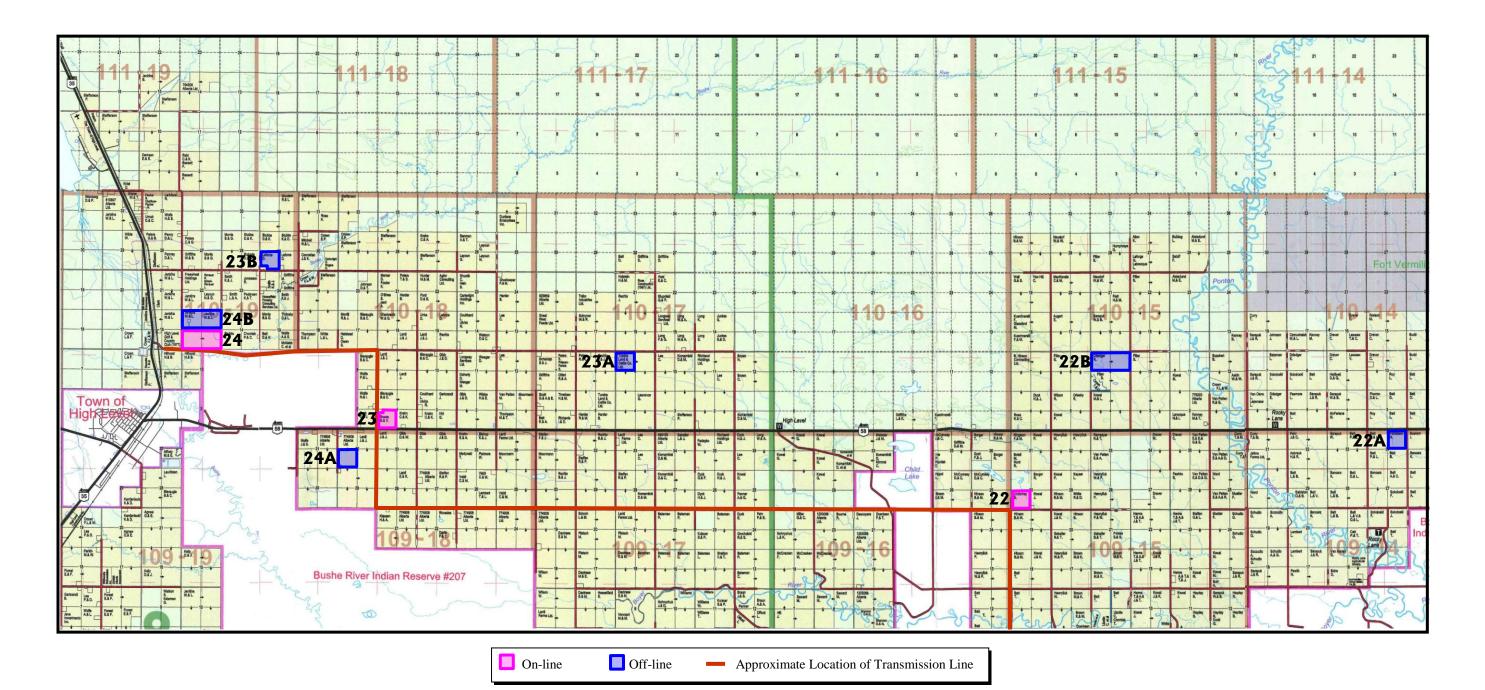
Line 7L70



On-line Off-line

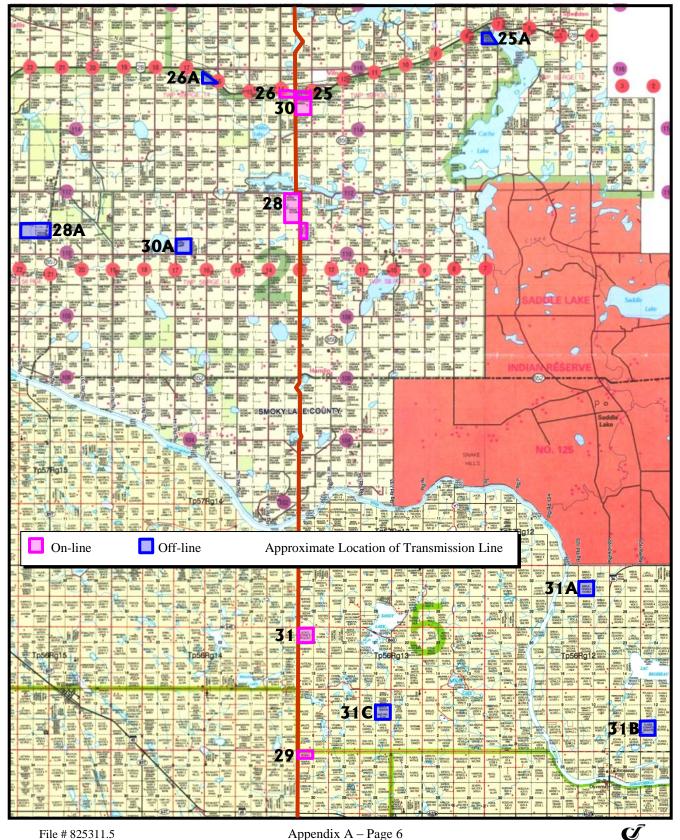
Approximate Location of Transmission Line

Ř	8.8.5		KTEAL	M. O	•	K	ALD.	W.	DAF.	Runn	1.1.	M.	WAR	FLAW. Marth HLAN	PLAN	- Com			1	Name of Street	•	Aato A&L		Asto ALL -
D.	of Bo	nny	ville	No.8	7	Thurthuk M.& J.	Lucial D.	Bubieralo D.A.F.	2724	Oszani M.	Other	A	Martin WAR	-		Marte W&H		~	-		1	Ma	-	
instrum		W	Rom HAF.	DASA WAD	Name of Street, or other	Lucina MAAAD	MAARD.	Laciale D.&.C.	Stantin A&H	Cecusi M.	FITEAL	Ourust	Katalowski La M	Kontelizoneti L Kontelizoneti SI.	Makanik W.	1	Kik C&A	Henting Resources LM	-	~	-		solake	
tár.	Gasteer F.	-U-+		Thattus	Reistowell	Dorgia R.	Luciet M.&A Pimak	Musled M.	5-6-	Spenka M	ET.K.	Kissel G.A.B.	5	Lanni E.A.L.	Cberg	Mokanik	2	0	FAA	挪	Cherg	Fitzpenid Constitution 2001 Inc.	1	T
ockik U Jadih	Masiuk M. Deonance P.	Kinadi B.S.M.	Mastal B.& V.	-	Afress	Dorgis R.	Abata	Muslar M	Spania M	1272	Parchest D.& K	Parties	Pankal	EAL	Roter SAD.	Retter S.A.D.		Janz W. Makanak		Makandi P.	(beg		Attacher 0.4.1	
Manachy 3		Str. o	Putya JAP.	Pubya	Gabrer F.	Johnson E		-	B	Hoteau RAS.	+		++-	REA	6		••		•	Jane W.	2 Makentik P.		•	Automation D.8.2
Gand LA H	Weydow	Ċ	Nationachry	Lanka MAPAT	•	Anderson G.		Nesinik JAL	Biodeau RAS	Desnoyers	Spaskik K	Patrick KAR Patrick KAR at al	• 1	Martin W.A.H.	Correctly 18.1	Callaghan N.S.H.	i	Makatak M.	• .	Morgala C.		Addbacher D.B.J.		Luckei Charter Senices
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HAB. Bacque	Michalow 8.	Hannam	Haranam WAK	Harateen W.A.K.	Curzon H. Diana	Lataberg B.	Plamendon	Solt -	Wanduk D.S.G.	Osola L Adamen	Spaniuk R	Lanei EAL	Histadika P.	Doating R&L	-	Dia PAT.	Curta M.S.K.	Anala -	*7	Carson B.			Carson B.	Dranchulk Fail P. K.A
+ 2	Rampa W	D. Planention Maleschi	Andreas	Harmen	CAN 24 Faubert Appleture	Lothers Mack Latal	Warisk Varisk Tab Olekaan S. et al	Hizzká Čálos čálos L et d		Numbh	Sundy	Feachult		10	Dowing		Crown Lar			Makana La H	-	Furan C	Johnson Bå b	Calebalan R
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-	Baccus D.A.W.	Diamond H. Farma	2	Lampron C. Histert		Sabos L	Smith MAA	2	Smith MAA	- \		- Martin	Corrolly 181	Tarach M.	RAL	No. H	Woycenie D.& W.	Danitha	Christe K.	D Makank	-	Franke	/	Powel
Dousses	Borgus D.S.W.	Habert JAT.	HOME DAN	Lanpron C. Hebert	Plana R Plath P.4H	Perso R.L.W.	Smith R	Scritt M.	Selb VARAA	Cuzuet Q.	Werthat D.4 G.	Singishayka D.S.E.	Tarsch M.	Tarach M.		AND A	Lonar L	Makana	Citat	MacDonald	Man Andrew Street	Fa	Real Life	Sales -
CAO. Brossserv CAO.	Hebert M.S.N.	Heber RAT.	0.4 M	C. Kolatkowski M.S.A.	D.	Pere RAE	Seal	Swith M.S.A.	-	Self R&A Village	of	Kinsel G.S.N.		HAR .	·I.	120.	2 Wenth&	<u> </u>		CHAR MAD				Mo
Gration P.	•	Hant MARK	Dargie Seed & Feed Ltd.	Outor	JAE	Nhin G.A.C.	Kaladowski K	Doonanco		Glend	Kashuk	Kontinua	Warstak H.& S.	Runaw	Andh Court LAF.	露.	•	CHR M & D	Shep D.	0000	2	b.		r
1. 1	Xalatouski M. et di	Fishert JAL VE Vot	Contrut	Webs	Sman PAD.	Swin VARAA	Smith VARAA	Wentlak DAG	Labela	1	Wenkk	Wankk	Nesimik B.	+	Borderiak MAAA VAK	Nuelmint B.	Lapism D.	Kanthia Q.	+	5		-	0	
Cash NAL	St. Armat	BROOM	Dargie Seed & Faad LM	PAA Dargis	Narte D.A.A	Pasitrus R	Pasktruk R	Hiptic LAL	Zetal	Water	R	Watch	Ranar RAS	Rinar	Romanda MAAA VAK	PAR	Kostrika D.	Katha G	NEPRA T.4.D.	Manda		Z	- r	SA
t 3 Cath	R S. Areat FAQ	AL AL	Phipps T.	Phips 3	Durgis R.	Butanio C	Hupsto LAL	-+-	2-+-	Kiyuaneesti KAK	Works	Real		Salabory R&L	S Buberio A&L	Waniak S.	Koetnia G.	Witnisk C.	WitthA P&L	.5	-			10
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1 Degis 181		Pipter Meadown Farm LM	Leise	Habet R	Poplar Meatows Farm Ltd.	Poplar Meadows Fam Ltd.	Dargis Land & Cattle LM	Seven G.	Habart J.B.M.	Seven G.	Walks VAD.	TARA A	Borbertat B	Loch TAF.	Loth CAM.	C. Borderiux B.	25	Orystile 8.	-		Savaga DAVA DAA et al	Saver DAVA DAA	24V	in T
Bround a	3.2	Partie 2	-	Dargia H.	24 Coulee Hog Fare	Seven	-	Book		E, Met DAT.	CAE Feedyard	CAE Feedpart	Salitary FARAL	Balante Personal Kalante	Loon	Leah	Onyshia P.S.S.	Z	2 Ton	Ross	etal Seith MAS	**	Smith MAS	22-
Rg.S	and	BAOBA	HORAN	UMIDE.	LUL Dargie H	Dargis Land & Catfie Lat.	Warstkik D.A.G.	Wenduk D.	D	Habert C	0	10 Winstak	8	Crown PL&W. Maloout B. et al	TAC	Loch T&C.	Shap D.	FRE		Resa	Seith	R C	0	-07
DAIGS.P	141	CIENN	WOMA	- Devices USE1	Dargis Land & Cette Ltd.	+	Wierstha D.4 M.	Nanta C.4 M.	Kostaw M.S.P.	Koshan	Wenthk R&D	C&E Fuelyad	-	B. etal Sman P.A.D.	A Serum B,	Crown	DAF.	Sandmeyer D.A.F.		Pass LAD.	Rom		-+	Nicholain 15 G. W.
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TANKS	VIDOLA Vienes	50. W	-	Po go	Resal	Pederson A Formarek E&J	Resald	Record GAL	Seder S. Rishard A.S.B.	Krawchuk	Doonance D.S.A.		Garska S.	Wilkowski M.A.C.	Beko E	Gamia R.S.A.	Ganka S.A.K.	Kaban G.A.J.A.T.	Kabus G.A.Y.	Wood GAB.	Dargts / Land & Cattle Lat	X		-
-100.0		Rain	GL. #	HILENOCH	ASASP	EA1			A&B.	Bedr S		Distrares D.& A	Ganka R.	+	TAJAG.	Garsta S.S.R.	25 Kaliyn	Kaban GAD.	Kabyn G.S.J.	Bodrer LAL Metonec	Kithen GAR	- And	-	- 27-
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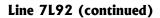


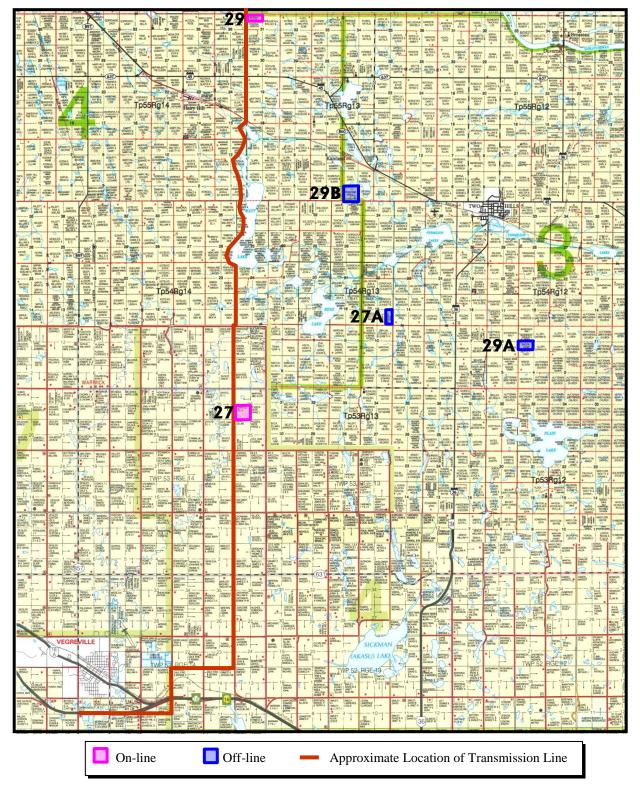
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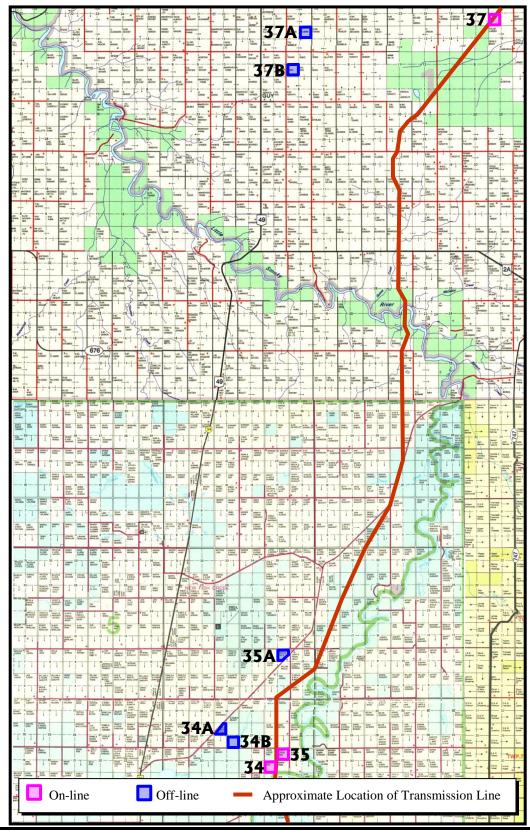


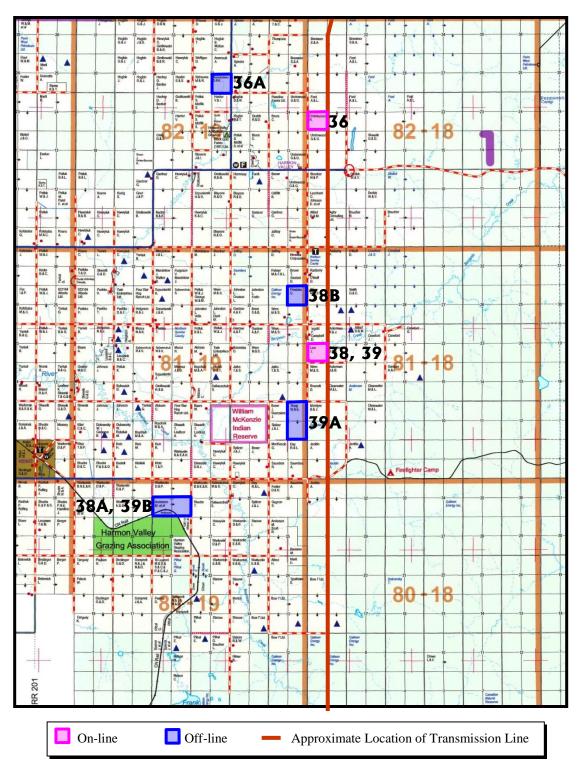


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Line 7L98

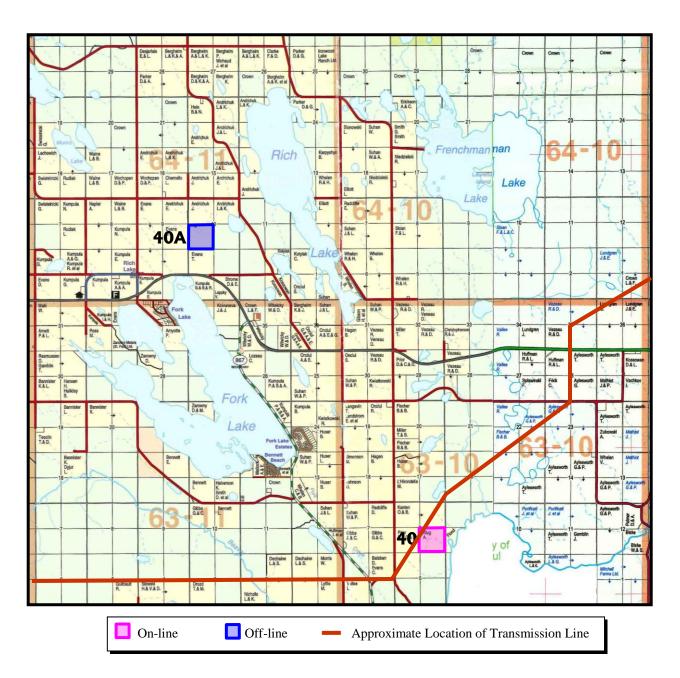






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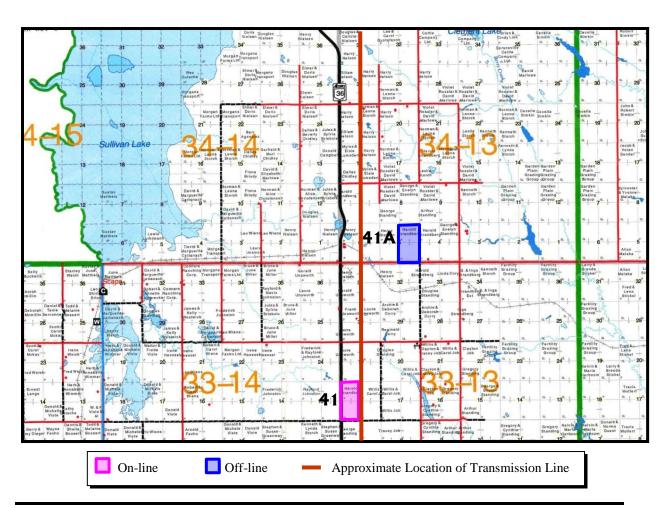


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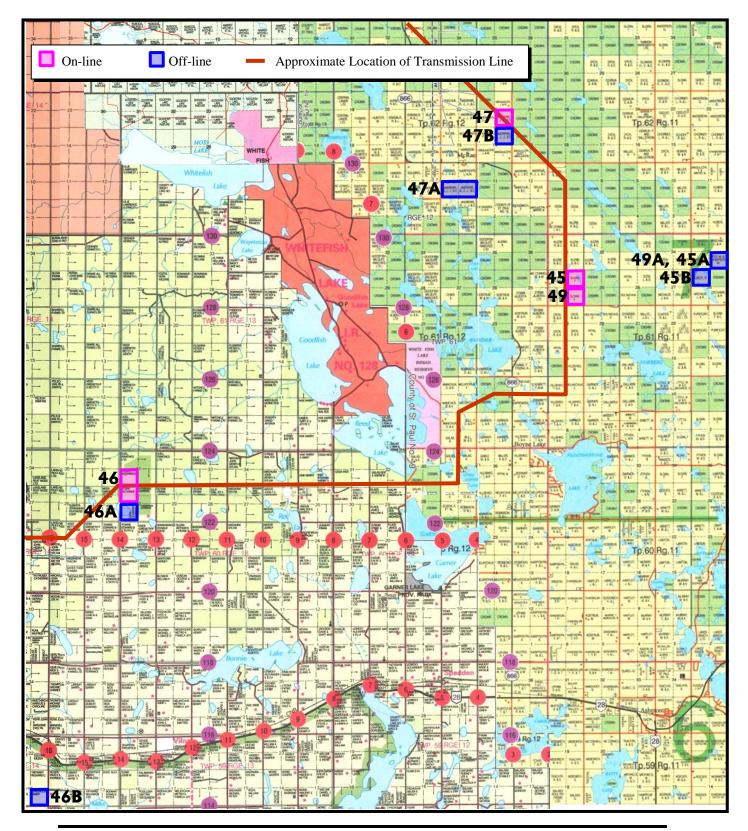




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Line 9L59 (continued)

# Line 9L960/9L961





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Immedia         Participa         Dom         <	All Mercary Linny	No.         No.         No.         Prof.         No.         Prof.         No.         Prof.         No.         Prof.
Balling         Barrier         Barrier <t< td=""><td>U         Drive R         Charger R/R &amp; R         Charger R         Charger R/R &amp; R         Charger R         Charger R         Charg</td><td>Real         Real         Rea         Real         Real</td></t<>	U         Drive R         Charger R/R & R         Charger R         Charger R/R & R         Charger R         Charger R         Charg	Real         Rea         Real         Real
Note         -	No.         Press.         Dir.         Press.         Dir.         Press.         Dir.	Name         Name <th< td=""></th<>
Oppose         Opto         <	Prior         Prior <th< td=""><td>Home Here Accessing Borning Bo</td></th<>	Home Here Accessing Borning Bo
Lit. Lit. Provide a provid	Month         Distant         Clinter         Alling Catter         Particular	Con Diverse R. R. Busine R. Basin Line Con R. Basin Line R
Constant Bages Satility Report Colors Colors Colors		

Line 7L14

On-line

Off-line -

Approximate Location of Transmission Line

# **APPENDIX B – REGRESSION ANALYSIS OUTPUT**

Welcome to SHAZAM - Version 10.0 - JAN 2009 SYSTEM=WIN-XP PAR= 11000 - 03/11/12 13:01:15 CURRENT WORKING DIRECTORY IS: C:\Documents and Settings\dryan\Desktop read (ATCO.txt) &

/skiplines=1

UNIT 88 IS NOW ASSIGNED TO: ATCO.txt

...SAMPLE RANGE IS NOW SET TO: 1 962

skipif(psize.eq.-9999)

OBSERVATION 913 WILL BE SKIPPED OBSERVATION 914 WILL BE SKIPPED

stat /all

Name	N	Mean	St. Dev	Variance	Minimum	Maximum
ALUE	960	0.15985E+06	0.16179E+06	0.26176E+11	4000.0	0.22800E+07
PSIZE	960	155.00	42.239	1784.1	69.900	572.96
ONLINE	960	0.76042E-01	0.26520	0.70333E-01	0.0000	1.0000
OP	960	0.28229	0.45035	0.20281	0.0000	1.0000
BU	960	0.17917	0.38369	0.14722	0.0000	1.0000
UR	960	0.10417E-02	0.32275E-01	0.10417E-02	0.0000	1.0000
CLASS2	960	0.17292	0.37837	0.14317	0.0000	1.0000
CLASS3	960	0.30000	0.45850	0.21022	0.0000	1.0000
CLASS4	960	0.31875	0.46623	0.21737	0.0000	1.0000
CLASS5	960	0.10625	0.30832	0.95060E-01	0.0000	1.0000
CLASS6	960	0.46875E-01	0.21148	0.44724E-01	0.0000	1.0000
CLASS7	960	0.83333E-02	0.90953E-01	0.82725E-02	0.0000	1.0000
ORGANIC	960	0.52083E-02	0.72018E-01	0.51866E-02	0.0000	1.0000
LEASES	960	0.24375	0.63850	0.40768	0.0000	7.0000
IMPROVE	960	0.24479	0.43019	0.18506	0.0000	1.0000
LCOGP	960	0.34375E-01	0.18229	0.33228E-01	0.0000	1.0000
LLAMC	960	0.80208E-01	0.27176	0.73852E-01	0.0000	1.0000
LCOM	960	0.17708E-01	0.13196	0.17413E-01	0.0000	1.0000
LCOP	960	0.60417E-01	0.23838	0.56826E-01	0.0000	1.0000
LRDC	960	0.33333E-01	0.17960	0.32256E-01	0.0000	1.0000
LSMC	960	0.10104	0.30154	0.90927E-01	0.0000	1.0000
LMDOSR	960	0.47917E-01	0.21370	0.45668E-01	0.0000	1.0000
LCOSP	960	0.47917E-01	0.21370	0.45668E-01	0.0000	1.0000
LCOS	960	0.50000E-01	0.21806	0.47550E-01	0.0000	1.0000
LCOTH	960	0.57292E-01	0.23252	0.54066E-01	0.0000	1.0000
LCOVR	960	0.32292E-01	0.17687	0.31281E-01	0.0000	1.0000
SPEC	960	0.58333E-01	0.23449	0.54988E-01	0.0000	1.0000
SPEC4	960	0.15625E-01	0.12408	0.15397E-01	0.0000	1.0000
LMDOG	960	0.12292	0.32851	0.10792	0.0000	1.0000
LNSC	960	0.10417E-01	0.10158	0.10319E-01	0.0000	1.0000
LMC	960	0.75000E-01	0.26353	0.69447E-01	0.0000	1.0000
LCONL	960	0.45833E-01	0.20923	0.43778E-01	0.0000	1.0000
LLAKC	960	0.28125E-01	0.16542	0.27362E-01	0.0000	1.0000
LFC	960	0.20833E-02	0.45620E-01	0.20812E-02	0.0000	1.0000
LKC	960	0.13542E-01	0.11564	0.13372E-01	0.0000	1.0000
LLACC	960	0.12500E-01	0.11116	0.12357E-01	0.0000	1.0000
Y2004S	960	0.66667E-01	0.24957	0.62287E-01	0.0000	1.0000



Y2005F	960	0.53125E-01	0.22440	0.50355E-01	0.0000	1.0000
Y2005S	960	0.62500E-01	0.24219	0.58655E-01	0.0000	1.0000
Y2006F	960	0.75000E-01	0.26353	0.69447E-01	0.0000	1.0000
Y2006S	960	0.64583E-01	0.24592	0.60475E-01	0.0000	1.0000
Y2007F	960	0.84375E-01	0.27809	0.77336E-01	0.0000	1.0000
Y2007S	960	0.64583E-01	0.24592	0.60475E-01	0.0000	1.0000
Y2008F	960	0.59375E-01	0.23645	0.55908E-01	0.0000	1.0000
Y2008S	960	0.57292E-01	0.23252	0.54066E-01	0.0000	1.0000
Y2009F	960	0.44792E-01	0.20695	0.42830E-01	0.0000	1.0000
Y2009S	960	0.37500E-01	0.19008	0.36131E-01	0.0000	1.0000
Y2010F	960	0.66667E-01	0.24957	0.62287E-01	0.0000	1.0000
Y2010S	960	0.62500E-01	0.24219	0.58655E-01	0.0000	1.0000
Y2011F	960	0.69792E-01	0.25493	0.64988E-01	0.0000	1.0000
Y2011S	960	0.56250E-01	0.23052	0.53141E-01	0.0000	1.0000
SKIP\$	960	0.0000	0.0000	0.0000	0.0000	0.0000

set nowarnskip

skipif(online.eq.0)

stat / all

Name	N	Mean	St. Dev	Variance	Minimum	Maximum
VALUE	73	0.13973E+06	0.21454E+06	0.46029E+11	5900.0	0.18120E+07
PSIZE	73	149.07	22.056	486.47	69.900	161.24
ONLINE	73	1.0000	0.0000	0.0000	1.0000	1.0000
OP	73	0.35616	0.48218	0.23250	0.0000	1.0000
BU	73	0.24658	0.43400	0.18836	0.0000	1.0000
UR	73	0.0000	0.0000	0.0000	0.0000	0.0000
CLASS2	73	0.13699	0.34621	0.11986	0.0000	1.0000
CLASS3	73	0.17808	0.38523	0.14840	0.0000	1.0000
CLASS4	73	0.36986	0.48611	0.23630	0.0000	1.0000
CLASS5	73	0.13699	0.34621	0.11986	0.0000	1.0000
CLASS6	73	0.95890E-01	0.29648	0.87900E-01	0.0000	1.0000
CLASS7	73	0.27397E-01	0.16437	0.27017E-01	0.0000	1.0000
ORGANIC	73	0.13699E-01	0.11704	0.13699E-01	0.0000	1.0000
LEASES	73	0.21918	0.55893	0.31240	0.0000	3.0000
IMPROVE	73	0.13699	0.34621	0.11986	0.0000	1.0000
LCOGP	73	0.13699E-01	0.11704	0.13699E-01	0.0000	1.0000
LLAMC	73	0.68493E-01	0.25434	0.64688E-01	0.0000	1.0000
LCOM	73	0.13699E-01	0.11704	0.13699E-01	0.0000	1.0000
LCOP	73	0.41096E-01	0.19989	0.39954E-01	0.0000	1.0000
LRDC	73	0.13699E-01	0.11704	0.13699E-01	0.0000	1.0000
LSMC	73	0.12329	0.33104	0.10959	0.0000	1.0000
LMDOSR	73	0.41096E-01	0.19989	0.39954E-01	0.0000	1.0000
LCOSP	73	0.54795E-01	0.22915	0.52511E-01	0.0000	1.0000
LCOS	73	0.13699E-01	0.11704	0.13699E-01	0.0000	1.0000
LCOTH	73	0.54795E-01	0.22915	0.52511E-01	0.0000	1.0000
LCOVR	73	0.41096E-01	0.19989	0.39954E-01	0.0000	1.0000
SPEC	73	0.13699	0.34621	0.11986	0.0000	1.0000
SPEC4	73	0.27397E-01	0.16437	0.27017E-01	0.0000	1.0000
LMDOG	73	0.10959	0.31454	0.98935E-01	0.0000	1.0000
LNSC	73	0.68493E-01	0.25434	0.64688E-01	0.0000	1.0000
LMC	73	0.27397E-01	0.16437	0.27017E-01	0.0000	1.0000



LCONL	73	0.95890E-01	0.29648	0.87900E-01	0.0000	1.0000
LLAKC	73	0.13699E-01	0.11704	0.13699E-01	0.0000	1.0000
LFC	73	0.0000	0.0000	0.0000	0.0000	0.0000
LKC	73	0.0000	0.0000	0.0000	0.0000	0.0000
LLACC	73	0.0000	0.0000	0.0000	0.0000	0.0000
Y2004S	73	0.95890E-01	0.29648	0.87900E-01	0.0000	1.0000
Y2005F	73	0.27397E-01	0.16437	0.27017E-01	0.0000	1.0000
Y2005S	73	0.54795E-01	0.22915	0.52511E-01	0.0000	1.0000
Y2006F	73	0.54795E-01	0.22915	0.52511E-01	0.0000	1.0000
Y2006S	73	0.54795E-01	0.22915	0.52511E-01	0.0000	1.0000
Y2007F	73	0.41096E-01	0.19989	0.39954E-01	0.0000	1.0000
Y2007S	73	0.54795E-01	0.22915	0.52511E-01	0.0000	1.0000
Y2008F	73	0.41096E-01	0.19989	0.39954E-01	0.0000	1.0000
Y2008S	73	0.95890E-01	0.29648	0.87900E-01	0.0000	1.0000
Y2009F	73	0.27397E-01	0.16437	0.27017E-01	0.0000	1.0000
Y2009S	73	0.68493E-01	0.25434	0.64688E-01	0.0000	1.0000
Y2010F	73	0.27397E-01	0.16437	0.27017E-01	0.0000	1.0000
Y2010S	73	0.95890E-01	0.29648	0.87900E-01	0.0000	1.0000
Y2011F	73	0.10959	0.31454	0.98935E-01	0.0000	1.0000
Y2011S	73	0.41096E-01	0.19989	0.39954E-01	0.0000	1.0000
SKIP\$	73	0.0000	0.0000	0.0000	0.0000	0.0000

## delete skip\$

VARIABLE SKIP\$ IS DELETED 962 WORDS RELEASED skipif(online.eq.1)

## skipif(psize.eq.-9999)

#### stat / all

Name	N	Mean	St. Dev	Variance	Minimum	Maximum
VALUE	887	0.16151E+06	0.15671E+06	0.24557E+11	4000.0	0.22800E+07
PSIZE	887	155.49	43.456	1888.4	70.100	572.96
ONLINE	887	0.0000	0.0000	0.0000	0.0000	0.0000
OP	887	0.27621	0.44738	0.20014	0.0000	1.0000
BU	887	0.17362	0.37900	0.14364	0.0000	1.0000
UR	887	0.11274E-02	0.33577E-01	0.11274E-02	0.0000	1.0000
CLASS2	887	0.17587	0.38093	0.14511	0.0000	1.0000
CLASS3	887	0.31003	0.46277	0.21415	0.0000	1.0000
CLASS4	887	0.31454	0.46460	0.21585	0.0000	1.0000
CLASS5	887	0.10372	0.30507	0.93067E-01	0.0000	1.0000
CLASS6	887	0.42841E-01	0.20261	0.41052E-01	0.0000	1.0000
CLASS7	887	0.67644E-02	0.82013E-01	0.67262E-02	0.0000	1.0000
ORGANIC	887	0.45096E-02	0.67040E-01	0.44943E-02	0.0000	1.0000
LEASES	887	0.24577	0.64485	0.41583	0.0000	7.0000
IMPROVE	887	0.25366	0.43535	0.18953	0.0000	1.0000
LCOGP	887	0.36077E-01	0.18659	0.34814E-01	0.0000	1.0000
LLAMC	887	0.81172E-01	0.27325	0.74668E-01	0.0000	1.0000
LCOM	887	0.18038E-01	0.13317	0.17733E-01	0.0000	1.0000
LCOP	887	0.62007E-01	0.24130	0.58228E-01	0.0000	1.0000
LRDC	887	0.34949E-01	0.18375	0.33766E-01	0.0000	1.0000
LSMC	887	0.99211E-01	0.29911	0.89469E-01	0.0000	1.0000
LMDOSR	887	0.48478E-01	0.21490	0.46180E-01	0.0000	1.0000
LCOSP	887	0.47351E-01	0.21251	0.45159E-01	0.0000	1.0000



LCOS	887	0.52988E-01	0.22414	0.50237E-01	0.0000	1.0000	
LCOTH	887	0.57497E-01	0.23292	0.54252E-01	0.0000	1.0000	
LCOVR	887	0.31567E-01	0.17494	0.30605E-01	0.0000	1.0000	
SPEC	887	0.51860E-01	0.22187	0.49226E-01	0.0000	1.0000	
SPEC4	887	0.14656E-01	0.12024	0.14458E-01	0.0000	1.0000	
LMDOG	887	0.12401	0.32978	0.10876	0.0000	1.0000	
LNSC	887	0.56370E-02	0.74910E-01	0.56115E-02	0.0000	1.0000	
LMC	887	0.78918E-01	0.26976	0.72772E-01	0.0000	1.0000	
LCONL	887	0.41714E-01	0.20005	0.40019E-01	0.0000	1.0000	
LLAKC	887	0.29312E-01	0.16878	0.28485E-01	0.0000	1.0000	
LFC	887	0.22548E-02	0.47458E-01	0.22522E-02	0.0000	1.0000	
LKC	887	0.14656E-01	0.12024	0.14458E-01	0.0000	1.0000	
LLACC	887	0.13529E-01	0.11559	0.13361E-01	0.0000	1.0000	
Y2004S	887	0.64262E-01	0.24536	0.60200E-01	0.0000	1.0000	
Y2005F	887	0.55242E-01	0.22858	0.52250E-01	0.0000	1.0000	
Y2005S	887	0.63134E-01	0.24334	0.59215E-01	0.0000	1.0000	
Y2006F	887	0.76663E-01	0.26621	0.70866E-01	0.0000	1.0000	
Y2006S	887	0.65389E-01	0.24735	0.61182E-01	0.0000	1.0000	
Y2007F	887	0.87937E-01	0.28336	0.80294E-01	0.0000	1.0000	
Y2007S	887	0.65389E-01	0.24735	0.61182E-01	0.0000	1.0000	
Y2008F	887	0.60879E-01	0.23924	0.57238E-01	0.0000	1.0000	
Y2008S	887	0.54115E-01	0.22637	0.51244E-01	0.0000	1.0000	
Y2009F	887	0.46223E-01	0.21009	0.44136E-01	0.0000	1.0000	
Y2009S	887	0.34949E-01	0.18375	0.33766E-01	0.0000	1.0000	
Y2010F	887	0.69899E-01	0.25512	0.65086E-01	0.0000	1.0000	
Y2010S	887	0.59752E-01	0.23716	0.56245E-01	0.0000	1.0000	
Y2011F	887	0.66516E-01	0.24932	0.62162E-01	0.0000	1.0000	
Y2011S	887	0.57497E-01	0.23292	0.54252E-01	0.0000	1.0000	
SKIP\$	887	0.0000	0.0000	0.0000	0.0000	0.0000	

delete skip\$

-

VARIABLE SKIP\$ IS DELETED 962 WORDS RELEASED

skipif(psize.eq.-9999)

# ols Value Online PSize OP BU UR Class2 Class3 Class4 Class5 Class6 Class7 Organic Leases Improve LCOGP LLAMC LCOM &

#### /hetcov nogf

REQUIRED MEMORY IS PAR CURRENT PAR	802 11000
OLS ESTIMATION	
960 OBSERVATIONS DEPENDENT VARIABLE NOTESAMPLE RANGE SET TO: 1, 962	VALUE
USING HETEROSKEDASTICITY-CONSISTENT COVARIANCE MATRIX	÷.

R-SQUARE	0.3442
R-SQUARE ADJUSTED	0.3082
VARIANCE OF THE ESTIMATE-SIGMA**2	0.18109E+11
STANDARD ERROR OF THE ESTIMATE-SIGMA	0.13457E+06
SUM OF SQUARED ERRORS-SSE	0.16462E+14
MEAN OF DEPENDENT VARIABLE	0.15985E+06



LOG OF THE L	IKELIHOOD FUN	ICTION			-1	12673.4		
MODEL SELEC	TION TESTS - SI	EE JUDGE	ET AL	. (1985,P.242)	L			
AKAIKE (1969	) FINAL PREDIC	TION ERF	ROR - F	PE	0.190	72E+11		
(FPE IS ALS	50 KNOWN AS A	AMEMIYA	PREDI	CTION CRITER	ION - PC)			
	) INFORMATION			OG AIC		23.671		
SCHWARZ (19	78) CRITERION	- LOG SC	2			23.930		
MODEL SELEC	TION TESTS - S	EE RAMAI	ATHA	N (1998, P.165	)			
CRAVEN-WAR	BA (1979)				_			
	CROSS VALIDA	TION - G	icv		0.191	26E+11		
HANNAN AND	QUINN (1979)	CRITERIO	N		0.210	43E+11		
RICE (1984) 0	RITERION				0.191	86E+11		
SHIBATA (198	1) CRITERION				0.189	69E+11		
SCHWARZ (19	78) CRITERION	- SC			0.246	96E+11		
AKAIKE (1974	) INFORMATION	CRITERI	ION - A	IC	0.190	70E+11		
		2						
	ANALYSIS OF	VARIAN	ICE - F	ROM MEAN				
	SS		F	MS	F			
REGRESSION	0.86417E			.17283E+12	9.544			
ERROR	0.16462E			.18109E+11	P-VALUE			
TOTAL	0.25103E	+14 95	59. 0	.26176E+11	0.000			
						ŕ		
	ANALYSIS OF	VARIAN	NCE - I	ROM ZERO				
			(mark)					
	SS		F	MS	F			
REGRESSION	0.33173E	+14 5	1. 0	.65045E+12	35.918			
ERROR	0.33173E 0.16462E	+14 5 +14 90	1. 0 )9. 0	.65045E+12 .18109E+11	35.918 <b>P-VALUE</b>			
	0.33173E	+14 5 +14 90	1. 0 )9. 0	.65045E+12	35.918			
ERROR	0.33173E 0.16462E	+14 5 +14 90	1. 0 9. 0 50. 0	.65045E+12 .18109E+11 .51703E+11	35.918 P-VALUE 0.000 p-Value ( 909	e Partial Correlation	Standardised Coefficient	Elasticity at Means
ERROR TOTAL Variable Name	0.33173E 0.16462E 0.49635E Estimated Coefficient	+14 5 +14 90 +14 96 <b>Standar</b>	1. 0 99. 0 50. 0	.65045E+12 .18109E+11 .51703E+11	35.918 P-VALUE 0.000 p-Value ( 909 DF)	Correlation	Coefficient	Means
ERROR TOTAL Variable Name ONLINE	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557	1. 0 9. 0 50. 0 <b>-d Errc</b> 7E+05	.65045E+12 .18109E+11 .51703E+11 or T-Ratio 1.086	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 DF) 0.278	0.036	Coefficient 0.0455	<b>Means</b> 0.0132
ERROR TOTAL Variable Name	0.33173E 0.16462E 0.49635E Estimated Coefficient	+14 5 +14 90 +14 96 <b>Standar</b>	1. 0 09. 0 50. 0 rd Errc 7E+05 22	.65045E+12 .18109E+11 .51703E+11 or T-Ratio 1.086 5.208	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000	0.036 0.170	Coefficient 0.0455 0.1213	Means 0.0132 0.4505
ERROR TOTAL Variable Name ONLINE PSIZE	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763. 464.66	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89.	1. 0 99. 0 60. 0 <b>rd Erro</b> 7E+05 22 99.	.65045E+12 .18109E+11 .51703E+11 or T-Ratio 1.086	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115	0.036	Coefficient 0.0455	<b>Means</b> 0.0132
ERROR TOTAL Variable Name ONLINE PSIZE OP	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763. 464.66 -15599.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989	1. 0 09. 0 60. 0 rd Errc 7E+05 22 99. 5E+05	.65045E+12 .18109E+11 .51703E+11 or T-Ratio 1.086 5.208 -1.576	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115	0.036 0.170 -0.052	Coefficient 0.0455 0.1213 -0.0434	Means 0.0132 0.4505 -0.0275
ERROR TOTAL Variable Name ONLINE PSIZE OP BU	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763. 464.66 -15599. -8588.5	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989 0.1066	1. 0 09. 0 60. 0 <b>rd Erro</b> 7E+05 22 99. 5E+05 2E+05	.65045E+12 .18109E+11 .51703E+11 or T-Ratio 1.086 5.208 -1.576 -0.8060	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420	0.036 0.170 -0.052 -0.027	Coefficient 0.0455 0.1213 -0.0434 -0.0204	Means 0.0132 0.4505 -0.0275 -0.0096
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763. 464.66 -15599. -8588.5 0.44839E+06	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989 0.1066 0.2852	1. 0 99. 0 60. 0 7 <b>E</b> +05 22 99. 5 <b>E</b> +05 2 <b>E</b> +05 2 <b>E</b> +05	.65045E+12 .18109E+11 .51703E+11 <b>pr T-Ratio</b> 1.086 5.208 -1.576 -0.8060 15.72	35.918 <b>p-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000	0.036 0.170 -0.052 -0.027 0.462	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989 0.1066 0.2852 0.5610	1. 0 9. 0 60. 0 <b>rd Errc</b> 7E+05 22 99. 5E+05 2E+05 9E+05 9E+05 4E+05	.65045E+12 .18109E+11 .51703E+11 <b>or T-Ratio</b> 1.086 5.208 -1.576 -0.8060 15.72 -1.278	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202	0.036 0.170 -0.052 -0.027 0.462 -0.042	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3	0.33173E 0.16462E 0.49635E <b>Estimated</b> <b>Coefficient</b> 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2555 89. 988 0.1066 0.2852 0.5610 0.5424	1. 0 9. 0 60. 0 <b>rd Errce</b> 7E+05 22 99. 5E+05 2E+05 2E+05 5E+05 4E+05 9E+0	.65045E+12 .18109E+11 .51703E+11 <b>or T-Ratio</b> 1.086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.202 0.129	0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4	0.33173E 0.16462E 0.49635E <b>Estimated</b> <b>Coefficient</b> 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89 98 0.1066 0.2852 0.5610 0.5424 0.5405	1. 0 9. 0 60. 0 <b>rd Errce</b> 7E+05 22 99. 5E+05 2E+05 2E+05 5E+05 5E+05 5E+05 5E+05	.65045E+12 .18109E+11 .51703E+11 or T-Ratio 1.086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518 -1.628	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.202 0.129 0.104	0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.042 -0.050 -0.054	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5	0.33173E 0.16462E 0.49635E <b>Estimated</b> <b>Coefficient</b> 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 989 0.1066 0.2852 0.5610 0.5424 0.5409 0.5895	1. 0 99. 0 50. 0 <b>rd Errc</b> 7E+05 22 99. 5E+05 2E+05 2E+05 5E+05 4E+05 5E+05 4E+05	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518 -1.628 -1.172	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.108	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.0462 -0.0462 -0.042 -0.050 -0.054 -0.054 -0.039	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLASS6	0.33173E 0.16462E 0.49635E <b>Estimated</b> <b>Coefficient</b> 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 98% 0.1066 0.2857 0.5610 0.5424 0.5409 0.5664	1. 0 99. 0 50. 0 56. 0 56. 0 7E+05 22 99. 56E+05 2E+05 56E+05 56E+05 56E+05 56E+05	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518 -1.628 -1.172 -1.610	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.108	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.042 -0.050 -0.054 -0.039 -0.053	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLASS5 CLASS6 CLASS7 ORGANIC LEASES	0.33173E 0.16462E 0.49635E <b>Estimated</b> <b>Coefficient</b> 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989 0.1065 0.2852 0.5610 0.5892 0.5664 0.5893 0.5664 0.5833 0.1178	1. 0 09. 0 00. 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 -1.576 -0.8060 15.72 -1.278 -1.578 -1.518 -1.518 -1.628 -1.172 -1.610 -0.8129 -2.091 1.590	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.104 0.242 0.108 0.417 0.037 0.112	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.039 -0.053 -0.027 -0.069 0.053	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0040 0.0286
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS3 CLASS4 CLASS5 CLASS5 CLASS5 CLASS6 CLASS7 ORGANIC LEASES IMPROVE	0.33173E 0.16462E 0.49635E 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989 0.1066 0.5852 0.5614 0.5429 0.5664 0.5895 0.5664 0.5835 0.1178 0.1096	1. 0 09. 0 00. 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 .1.576 .0.8060 15.72 .1.278 .1.518 .1.628 .1.172 .1.610 .0.8129 .2.091 1.590 11.09	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.104 0.242 0.108 0.417 0.037 0.112 0.000	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.039 -0.053 -0.027 -0.069 0.053 0.345	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0040 0.0286 0.1862
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLA	0.33173E 0.16462E 0.49635E 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06 0.11506E+06	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 988 0.1066 0.2852 0.5664 0.5895 0.5664 0.5833 0.1178 0.1096 0.3523	1. 0 09. 0 00. 0 0 00. 0 00. 0	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 .1.576 .0.8060 15.72 .1.278 .1.518 .1.518 .1.628 .1.172 .1.610 .0.8129 .2.091 1.590 11.09 3.262	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.202 0.129 0.104 0.242 0.108 0.417 0.242 0.108 0.417 0.037 0.112 0.000 0.001	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.039 -0.053 -0.027 -0.069 0.053 0.345 0.108	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233 0.1296	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0024 0.0286 0.1862 0.0247
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLA	0.33173E 0.16462E 0.49635E Estimated Coefficient 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06 0.11506E+06 -8149.0	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89. 989 0.1066 0.2852 0.5664 0.5899 0.5664 0.5833 0.1178 0.5664 0.5833 0.1178 0.1096 0.3522 0.2569	1. 0 09. 0 00. 0 0 00. 0 00. 0	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 .1.576 .0.8060 15.72 .1.278 .1.578 .1.518 .1.628 .1.172 .1.610 .0.8129 .2.091 1.590 11.09 3.262 .0.3178	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> (909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.129 0.104 0.242 0.108 0.417 0.242 0.108 0.417 0.273 0.112 0.000 0.011 0.751	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.039 -0.053 -0.027 -0.069 0.053 0.345 0.108 -0.011	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233 0.1296 -0.0137	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0040 0.0286 0.1862 0.0247 -0.0041
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLASS5 CLASS6 CLASS7 ORGANIC LEASES IMPROVE LCOGP LLAMC LCOM	0.33173E 0.16462E 0.49635E <b>Estimated</b> 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06 0.11506E+06 -8149.0 -44384.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89 983 0.1066 0.2852 0.5610 0.5422 0.5409 0.5664 0.5899 0.5664 0.6416 0.5899 0.1177 0.1096 0.3522 0.2563 0.3520	1.         0           09.         0           60.         <	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518 -1.628 -1.172 -1.610 -0.8129 -2.091 1.590 11.09 3.262 -0.3178 -1.261	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.108 0.417 0.377 0.112 0.000 0.417 0.377 0.112 0.000 0.001 0.751 0.208	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.039 -0.053 -0.027 -0.069 0.053 0.345 0.108 -0.011 -0.042	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233 0.1296 -0.0137 -0.0362	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0040 0.0286 0.1862 0.0247 -0.0041 -0.0049
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLA	0.33173E 0.16462E 0.49635E Coefficient 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06 0.11506E+06 -8149.0 -44384. -42532.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 89, 988 0.1066 0.2852 0.5610 0.5424 0.5409 0.5664 0.5437 0.1090 0.3522 0.2563 0.1096 0.3522 0.3520	1.         0           09.         0           60.         <	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518 -1.628 -1.172 -1.610 -0.8129 -2.091 1.590 11.09 3.262 -0.3178 -1.261 -1.120	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.108 0.417 0.377 0.112 0.000 0.001 0.751 0.208 0.208 0.263	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.053 -0.027 -0.069 0.053 0.345 0.108 -0.011 -0.042 -0.037	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233 0.1296 -0.0137 -0.0362 -0.0627	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0040 0.0286 0.1862 0.0247 -0.0041 -0.0049 -0.0161
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLASS5 CLASS5 CLASS5 CLASS5 CLASS7 ORGANIC LEASES IMPROVE LCOGP LLAMC LCOP LLAMC	0.33173E 0.16462E 0.49635E Coefficient 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06 0.11506E+06 -8149.0 -44384. -42532. 89573.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 0.5610 0.5852 0.5610 0.5424 0.5409 0.5664 0.6416 0.5837 0.1176 0.1096 0.3522 0.2565 0.3520 0.3520	1. 0 09. 0 050. 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 .5.208 .1.576 .0.8060 15.72 .1.278 .1.518 .1.628 .1.172 .1.610 .0.8129 .2.091 1.590 11.09 3.262 .0.3178 .1.261 .1.120 3.105	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.108 0.417 0.37 0.112 0.000 0.001 0.751 0.208 0.208 0.203 0.203 0.203	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.053 -0.027 -0.069 0.053 0.345 0.108 -0.011 -0.042 -0.037 0.102	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233 0.1296 -0.0137 -0.0362 -0.0627 0.0994	Means 0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0027 -0.0040 0.0286 0.1862 0.0247 -0.0041 -0.0049 -0.0161 0.0187
ERROR TOTAL Variable Name ONLINE PSIZE OP BU UR CLASS2 CLASS3 CLASS4 CLASS5 CLA	0.33173E 0.16462E 0.49635E Coefficient 27763. 464.66 -15599. -8588.5 0.44839E+06 -71670. -82322. -88034. -69068. -91189. -52154. -0.12202E+06 18736. 0.12159E+06 0.11506E+06 -8149.0 -44384. -42532.	+14 5 +14 90 +14 96 <b>Standar</b> 0.2557 98 0.1066 0.2852 0.5610 0.5424 0.5409 0.589 0.5664 0.6416 0.5833 0.1176 0.1076 0.3522 0.2563 0.3522 0.3526 0.3526	1.         0           09.         0           60.         <	.65045E+12 .18109E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .51703E+11 .086 5.208 -1.576 -0.8060 15.72 -1.278 -1.518 -1.628 -1.172 -1.610 -0.8129 -2.091 1.590 11.09 3.262 -0.3178 -1.261 -1.120	35.918 <b>P-VALUE</b> 0.000 <b>p-Value</b> ( 909 <b>DF</b> ) 0.278 0.000 0.115 0.420 0.000 0.202 0.129 0.104 0.242 0.108 0.417 0.37 0.112 0.000 0.001 0.751 0.208 0.208 0.263 0.202 0.203	Correlation 0.036 0.170 -0.052 -0.027 0.462 -0.042 -0.050 -0.054 -0.053 -0.027 -0.069 0.053 0.345 0.108 -0.011 -0.042 -0.037	Coefficient 0.0455 0.1213 -0.0434 -0.0204 0.0894 -0.1676 -0.2333 -0.2537 -0.1316 -0.1192 -0.0293 -0.0543 0.0739 0.3233 0.1296 -0.0137 -0.0362 -0.0627	0.0132 0.4505 -0.0275 -0.0096 0.0029 -0.0775 -0.1545 -0.1755 -0.0459 -0.0267 -0.0027 -0.0040 0.0286 0.1862 0.0247 -0.0041 -0.0049 -0.0161



LCOSP	-47394.	0.2095E+05	-2.262	0.024	-0.075	-0.0626	-0.0142
LCOS	76217.	0.3973E+05	1.919	0.055	0.064	0.1027	0.0238
LCOTH	-67381.	0.2738E+05	-2.461	0.014	-0.081	-0.0968	-0.0241
LCOVR	-19276.	0.2692E+05	-0.7159	0.474	-0.024	-0.0211	-0.0039
SPEC	-0.10055E+06	0.2056E+05	-4.890	0.000	-0.160	-0.1457	-0.0367
SPEC4	-96151.	0.3679E+05	-2.614	0.009	-0.086	-0.0737	-0.0094
LMDOG	-64034.	0.2217E+05	-2.889	0.004	-0.095	-0.1300	-0.0492
LNSC	-0.13057E+06	0.2753E+05	-4.743	0.000	-0.155	-0.0820	-0.0085
LMC	-72274.	0.2422E+05	-2.984	0.003	-0.098	-0.1177	-0.0339
LCONL	-0.12108E+06	0.2329E+05	-5.199	0.000	-0.170	-0.1566	-0.0347
LLAKC	-55853.	0.2132E+05	-2.619	0.009	-0.087	-0.0571	-0.0098
LFC	-60624.	0.2842E+05	-2.133	0.033	-0.071	-0.0171	-0.0008
LKC	59996.	0.3290E+05	1.824	0.069	0.060	0.0429	0.0051
LLACC	0.11812E+06	0.4753E+05	2.485	0.013	0.082	0.0812	0.0092
Y2004S	4888.6	0.1181E+05	0.4138	0.679	0.014	0.0075	0.0020
Y2005F	-9814.6	0.1376E+05	-0.7131	0.476	-0.024	-0.0136	-0.0033
Y2005S	9005.3	0.1248E+05	0.7217	0.471	0.024	0.0135	0.0035
Y2006F	13967.	0.1312E+05	1.064	0.287	0.035	0.0227	0.0066
Y2006S	22101.	0.1317E+05	1.678	0.094	0.056	0.0336	0.0089
Y2007F	26811.	0.1170E+05	2.292	0.022	0.076	0.0461	0.0142
Y2007S	85794.	0.2815E+05	3.047	0.002	0.101	0.1304	0.0347
Y2008F	52037.	0.1683E+05	3.091	0.002	0.102	0.0760	0.0193
Y2008S	35336.	0.1487E+05	2.377	0.018	0.079	0.0508	0.0127
Y2009F	53811.	0.1673E+05	3.215	0.001	0.106	0.0688	0.0151
Y2009S	60393.	0.1568E+05	3.851	0.000	0.127	0.0710	0.0142
Y2010F	83189.	0.3605E+05	2.308	0.021	0.076	0.1283	0.0347
Y2010S	84365.	0.2068E+05	4.080	0.000	0.134	0.1263	0.0330
Y2011F	77772.	0.1482E+05	5.248	0.000	0.171	0.1225	0.0340
Y2011S	99566.	0.3353E+05	2.970	0.003	0.098	0.1419	0.0350
CONSTANT	0.12629E+06	0.5696E+05	2.217	0.027	0.073	0.0000	0.7900

genr Ilflin=\$LLF

\*

..NOTE..CURRENT VALUE OF \$LLF

-12673.

## genr Logvalue=log(value)

ols logValue Online PSize OP BU UR Class2 Class3 Class4 Class5 Class6 Class7 Organic Leases Improve LCOGP LLAMC LCOM &

/hetcov loglin nogf

REQUIRED MEMORY IS PAR CURRENT PAR	818 11000
OLS ESTIMATION	
960 OBSERVATIONS DEPENDENT VARIABLE NOTESAMPLE RANGE SET TO: 1, 962	LOGVALUE
USING HETEROSKEDASTICITY-CONSISTENT COVA	RIANCE MATRIX

R-SQUARE	0.5371
R-SQUARE ADJUSTED	0.5116
VARIANCE OF THE ESTIMATE-SIGMA**2	0.33410
STANDARD ERROR OF THE ESTIMATE-SIGMA	0.57801
SUM OF SQUARED ERRORS-SSE	303.70



LOG OF THE L	IKELIHOOD FUNCTION(IF DEPVAR LOG)						2001.5	
MODEL SELEC	TION TESTS - S	SEE JUDGI	E ET AL.	(1985,P.24	2)			
AKAIKE (1969	) FINAL PREDI	CTION ER	ROR - FP	E		0	.35185	
	SO KNOWN AS				RION			
AKAIKE (1973	) INFORMATIO	N CRITER	ION - LO	G AIC		-	1.0447	
SCHWARZ (19	78) CRITERIO	N - LOG S	С			-0	.78610	
MODEL SELEC	TION TESTS - S	SEE RAMA	NATHAN	(1998,P.16	55)			
CRAVEN-WAH	HBA (1979)							
GENERALIZED	CROSS VALID	ATION - C	GCV			0	.35284	
HANNAN AND	QUINN (1979)	CRITERIO	NC			0	.38822	
RICE (1984) C	CRITERION					0	.35396	
SHIBATA (198	31) CRITERION					0	.34996	
SCHWARZ (19	78) CRITERIO	N - SC				0	.45562	
AKAIKE (1974	) INFORMATIO	N CRITER	ION - AI	С		0	.35181	
	ANALYSIS O	EVADIA			-			
	ANALISIS U		DF	MS		F		
REGRESSION	352	.37 5	0. 7	7.0473	21.094	4		
ERROR	303			.33410		ALUE		
TOTAL	656				0.000			
REGRESSION		<b>55</b> 83E+06	<b>DF</b> 51.	<b>MS</b> 2565.2	767	<b>F</b> 8.031		
ERROR		3.70	909.	0.33410		VALUE		
TOTAL		13E+06	960.	136.59	0.00	CONCERNING OF CONCERNING		
Variable Name	Estimated Coefficient	Standar	d Error	T-Rati	0	p-Value (909	Partial Correlation	Standardised Coefficient
ONLINE	0.12771	0.8678	PE 01	1.472		<b>DF)</b> 0.141	0.049	0.0409
PSIZE	0.33129E-02	0.427		7.745		0.000	0.249	0.1692
OP	-0.14737	0.462		-3.189		0.001	-0.105	-0.0802
BU	-0.16445	0.6470		-2.542		0.001	-0.084	-0.0763
UR	1.1888	0.11		10.54		0.000	0.330	0.0464
CLASS2	-0.12025	0.11		-1.033		0.302	-0.034	-0.0550
CLASS2 CLASS3	-0.23908			-2.097		0.036	-0.069	-0.1325
CLASS5	-0.29727	1.000	0.1140 0.1181		-2.518 0.012		-0.083	-0.1676
CLASS5	-0.28921	0.13		-2.088		0.037	-0.069	-0.1078
CLASS6	-0.31391	0.13		-2.277		0.023	-0.075	-0.0803
CLASS7	-0.19968E-01			-0.8852E		0.929	-0.003	-0.0022
ORGANIC	-0.76379	0.30		-2.490		0.013	-0.082	-0.0665
LEASES	0.33204E-01	0.388		0.855		0.393	0.028	0.0256
IMPROVE	0.71572	0.448		15.96		0.000	0.468	0.3723
LCOGP	0.38386	0.1		3.260		0.001	0.108	0.0846
	0 00750	0.074	25 01	2 221	-	0 000	0.077	0.0747

LLAMC

LCOM

LCOP

LRDC

LSMC

-0.22750

-0.32742

-0.45762

0.35828

-0.46158

0.9742E-01

0.1509

0.1040

0.9831E-01

0.8593E-01

-2.335

-2.170

-4.401

3.644

-5.372

0.020

0.030

0.000

0.000

0.000

-0.077

-0.072

-0.144

0.120

-0.175

-0.0747

-0.0522

-0.1319

0.0778

-0.1683



Elasticity at Means 0.0097 0.5135 -0.0416 -0.0295 0.0012 -0.0208 -0.0717 -0.0948 -0.0307 -0.0147 -0.0002 -0.0040 0.0081 0.1752 0.0132

> -0.0182 -0.0058

> -0.0276

0.0119 -0.0466

LMDOSR	-0.23592	0.1049	-2.250	0.025	-0.074	-0.0610	-0.0113
LCOSP	-0.36311	0.8990E-01	-4.039	0.000	-0.133	-0.0938	-0.0174
LCOS	0.16972	0.9906E-01	1.713	0.087	0.057	0.0447	0.0085
LCOTH	-0.46969	0.9978E-01	-4.707	0.000	-0.154	-0.1320	-0.0269
LCOVR	-0.11532	0.1051	-1.097	0.273	-0.036	-0.0247	-0.0037
SPEC	-1.1037	0.1391	-7.936	0.000	-0.255	-0.3129	-0.0644
SPEC4	-1.2493	0.2864	-4.362	0.000	-0.143	-0.1874	-0.0195
LMDOG	-0.50736	0.9069E-01	-5.594	0.000	-0.182	-0.2015	-0.0624
LNSC	-0.96373	0.1906	-5.057	0.000	-0.165	-0.1184	-0.0100
LMC	-0.86510	0.1146	-7.550	0.000	-0.243	-0.2756	-0.0649
LCONL	-1.0358	0.1146	-9.038	0.000	-0.287	-0.2620	-0.0475
LLAKC	-0.30469	0.1040	-2.930	0.003	-0.097	-0.0609	-0.0086
LFC	-0.34336	0.1432	-2.399	0.017	-0.079	-0.0189	-0.0007
LKC	0.29778	0.1178	2.529	0.012	0.084	0.0416	0.0040
LLACC	0.52771	0.1485	3.554	0.000	0.117	0.0709	0.0066
Y2004S	-0.84211E-01	0.9400E-01	-0.8959	0.371	-0.030	-0.0254	-0.0056
Y2005F	-0.22664	0.1129	-2.008	0.045	-0.066	-0.0615	-0.0120
Y2005S	-0.30674E-01	0.1084	-0.2829	0.777	-0.009	-0.0090	-0.0019
Y2006F	0.62206E-01	0.8896E-01	0.6992	0.485	0.023	0.0198	0.0047
Y2006S	0.13010	0.9231E-01	1.409	0.159	0.047	0.0387	0.0084
Y2007F	0.16569	0.8120E-01	2.040	0.042	0.068	0.0557	0.0140
Y2007S	0.41400	0.8976E-01	4.612	0.000	0.151	0.1231	0.0267
Y2008F	0.28059	0.1049	2.676	0.008	0.088	0.0802	0.0167
Y2008S	0.13957	0.1123	1.243	0.214	0.041	0.0392	0.0080
Y2009F	0.28731	0.8854E-01	3.245	0.001	0.107	0.0719	0.0129
Y2009S	0.43206	0.1020	4.234	0.000	0.139	0.0993	0.0162
Y2010F	0.33792	0.9990E-01	3.383	0.001	0.111	0.1020	0.0225
Y2010S	0.38056	0.1056	3.603	0.000	0.119	0.1114	0.0238
Y2011F	0.46588	0.9451E-01	4.929	0.000	0.161	0.1436	0.0325
Y2011S	0.48668	0.1087	4.478	0.000	0.147	0.1356	0.0274
CONSTANT	11.455	0.1534	74.65	0.000	0.927	0.0000	11.4555

genr liflog=\$LLF

.. NOTE .. CURRENT VALUE OF \$LLF

-12002.

?box Value Online PSize OP BU UR Class2 Class3 Class4 Class5 Class6 Class7 Organic Leases Improve LCOGP LLAMC LCOM &

Y2005F Y2005S Y2006F Y2006S Y2007F Y2007S Y2008F Y2008S Y2009F Y2009S Y2010F Y2010S Y2011F Y2011S

genr lifbc=\$LLF

\*

..NOTE..CURRENT VALUE OF \$LLF

-11987.

gen1 LRlin=2\*(Ilfbc-Ilflin)

gen1 LRlog=2\*(llfbc-llflog)

print LRlin LRlog

LRLIN 1372.707

LRLOG



28.83774

\*

genr P2=Psize\*Psize

genr PO=PSize\*online

genr PO2=P2\*online

\*

ols logValue Online PSize OP BU UR Class2 Class3 Class4 Class5 Class6 Class7 Organic Leases Improve LCOGP LLAMC LCOM &

P2 P0	/ neccov	login	nogr	

REQUIRED MEMORY IS PAR	871
CURRENT PAR	11000
OLS ESTIMATION	
960 OBSERVATIONS DEPENDENT VARIABLE	LOGVALUE
NOTESAMPLE RANGE SET TO: 1, 962	

USING HETEROSKEDASTICITY-CONSISTENT COVARIANCE MATRIX

R-SQUARE	0.5392
R-SQUARE ADJUSTED	0.5128
VARIANCE OF THE ESTIMATE-SIGMA**2	0.33329
STANDARD ERROR OF THE ESTIMATE-SIGMA	0.57731
SUM OF SQUARED ERRORS-SSE	302.30
MEAN OF DEPENDENT VARIABLE	11.658
LOG OF THE LIKELIHOOD FUNCTION(IF DEPVAR LOG)	-11999.3

#### MODEL SELECTION TESTS - SEE JUDGE ET AL. (1985, P.242)

AKAIKE (1969) FINAL PREDICTION ERROR - FPE	0.35169
(FPE IS ALSO KNOWN AS AMEMIYA PREDICTION CRITERION - PC)	
AKAIKE (1973) INFORMATION CRITERION - LOG AIC	-1.0451
SCHWARZ (1978) CRITERION - LOG SC	-0.77642
MODEL SELECTION TESTS - SEE RAMANATHAN (1998, P.165)	

CRAVEN-WAHBA (1979)	
GENERALIZED CROSS VALIDATION - GCV	0.35277
HANNAN AND QUINN (1979) CRITERION	0.38954
RICE (1984) CRITERION	0.35398
SHIBATA (1981) CRITERION	0.34966
SCHWARZ (1978) CRITERION - SC	0.46005
AKAIKE (1974) INFORMATION CRITERION - AIC	0.35165

ANALYSIS OF VARIANCE - FROM MEAN							
	SS	DF	MS	F			
REGRESSION	353.77	52.	6.8032	20.412			
ERROR	302.30	907.	0.33329	P-VALUE			
TOTAL	656.06	959.	0.68411	0.000			

#### ANALYSIS OF VARIANCE - FROM ZERO



		SS	DF	MS	F			
REGRESSION	0.130	83E+06	53.	2468.5	7406.287			
ERROR	30	2.30	907.	0.33329	P-VALUE			
TOTAL	0.131	13E+06	960.	136.59	0.000			
Variable Name	Estimated Coefficient	Standar	d Error	T-Ratio	p-Value 0 (907 DF)	Partial Correlation	Standardised Coefficient	Elasticity a Means
ONLINE	-0.36778	0.56	54	-0.6504	4 0.516	-0.022	-0.1179	-0.0280
PSIZE	0.53523E-02	0.1361	E-02	3.932	0.000	0.129	0.2733	0.8296
OP	-0.14266	0.4618	8E-01	-3.089	0.002	-0.102	-0.0777	-0.0403
BU	-0.16002	0.6473	8E-01	-2.472	0.014	-0.082	-0.0742	-0.0287
UR	1.1945	0.11	26	10.60	0.000	0.332	0.0466	0.0012
CLASS2	-0.13375	0.11	65	-1.148	0.251	-0.038	-0.0612	-0.0231
CLASS3	-0.25347	0.11	47	-2.211	0.027	-0.073	-0.1405	-0.0760
CLASS4	-0.30680	0.11	80	-2.600	0.009	-0.086	-0.1729	-0.0978
CLASS5	-0.30122	0.13	82	-2.180	0.030	-0.072	-0.1123	-0.0320
CLASS6	-0.31908	0.13		-2.317		-0.077	-0.0816	-0.0150
CLASS7	-0.20597E-01	0.23	16	-0.8893E	-01 0.929	-0.003	-0.0023	-0.0002
ORGANIC	-0.78560	0.31	18	-2.520	0.012	-0.083	-0.0684	-0.0041
LEASES	0.33717E-01	0.3849		0.8759		0.029	0.0260	0.0082
IMPROVE	0.71574	0.4497		15.92		0.467	0.3723	0.1752
LCOGP	0.37797	0.11		3.188	0.001	0.105	0.0833	0.0130
LLAMC	-0.21414	0.9825		-2.180		-0.072	-0.0704	-0.0172
LCOM	-0.32052	0.15		-2.094		-0.069	-0.0511	-0.0057
LCOP	-0.45240	0.10		-4.356		-0.143	-0.1304	-0.0273
LRDC	0.36018	0.9939		3.624	0.000	0.119	0.0782	0.0120
LSMC	-0.45743	0.8637		-5.296		-0.173	-0.1668	-0.0462
LMDOSR	-0.23311	0.10		-2.216		-0.073	-0.0602	-0.0112
LCOSP	-0.36702	0.907		-4.046		-0.133	-0.0948	-0.0176
LCOS	0.17754	0.10		1.773		0.059	0.0468	0.0089
LCOTH	-0.46368	0.9983		-4.645		-0.152	-0.1304	-0.0266
LCOVR	-0.11814	0.990		-1.120		-0.037	-0.0253	-0.0038
SPEC	-1.1051	0.13		-8.033		-0.258	-0.3133	-0.0645
SPEC4	-1.2559	0.28		-4.402		-0.145	-0.1884	-0.0196
LMDOG								
	-0.51044	0.9140		-5.585		-0.182	-0.2027	-0.0627
LNSC	-0.99238	0.19		-5.181		-0.170	-0.1219	-0.0103
LMC	-0.86883	0.11		-7.540		-0.243	-0.2768	-0.0652
LCONL	-1.0410	0.11		-9.028		-0.287	-0.2634	-0.0477
LLAKC	-0.31140	0.10		-2.986		-0.099	-0.0623	-0.0088
LFC	-0.34969	0.14		-2.385		-0.079	-0.0193	-0.0007
LKC	0.29217	0.11		2.469		0.082	0.0408	0.0040
LLACC	0.54175	0.15		3.594		0.118	0.0728	0.0068
Y2004S	-0.83898E-01	0.937		-0.895		-0.030	-0.0253	-0.0056
Y2005F	-0.22853	0.11		-2.023		-0.067	-0.0620	-0.0121
Y2005S	-0.14894E-01	0.10		-0.135		-0.004	-0.0044	-0.0009
Y2006F	0.66669E-01	0.8682		0.7679		0.025	0.0212	0.0050
Y2006S	0.13125	0.9133		1.437		0.048	0.0390	0.0085
Y2007F	0.16863	0.8110		2.078		0.069	0.0567	0.0142
Y2007S	0.41516	0.895	9E-01	4.634		0.152	0.1234	0.0268
Y2008F	0.28829	0.10	)56	2.731	0.006	0.090	0.0824	0.0171
Y2008S	0.13966	0.1	24	1.243	0.214	0.041	0.0393	0.0080
Y2009F	0.28274	0.881	9E-01	3.206	0.001	0.106	0.0707	0.0127
Y2009S	0.43737	0.10	021	4.285	0.000	0.141	0.1005	0.0164



CONSTANT	11.275	0.1872	60.24	0.000	0.894	0.0000	11.2755
PO	0.33072E-02	0.3834E-02	0.8627	0.389	0.029	0.1599	0.0375
P2	-0.50211E-05	0.2833E-05	-1.772	0.077	-0.059	-0.1123	-0.1296
Y2011S	0.48525	0.1079	4.499	0.000	0.148	0.1352	0.0273
Y2011F	0.46139	0.9378E-01	4.920	0.000	0.161	0.1422	0.0322
Y2010S	0.38111	0.1057	3.606	0.000	0.119	0.1116	0.0238
Y2010F	0.33944	0.9871E-01	3.439	0.001	0.113	0.1024	0.0226

```
test
```

test PO=0

test p2=0

end

F STATISTIC	2.1407803
WITH 2 AND 907 D.F. P-VALUE	0.11816
WALD CHI-SQUARE STATISTIC	4.2815607
WITH 2 D.F. P-VALUE	0.11756
UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY	0.46712

test online+PO=0

#### test online+10\*PO=0

TEST VALUE = -0.33470 STD. ERROR OF TEST VALUE 0.52757T STATISTIC = -0.63442339 WITH 907 D.F. P-VALUE= 0.52596F STATISTIC = 0.40249304 WITH 1 AND 907 D.F. P-VALUE= 0.52596WALD CHI-SQUARE STATISTIC = 0.40249304 WITH 1 D.F. P-VALUE= 0.52580UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY = 1.00000

#### test online+30\*PO=0

 TEST VALUE = -0.26856
 STD. ERROR OF TEST VALUE 0.45208

 T STATISTIC = -0.59404957
 WITH 907 D.F. P-VALUE= 0.55263

 F STATISTIC = 0.35289489
 WITH 1 AND 907 D.F. P-VALUE= 0.55263

 WALD CHI-SQUARE STATISTIC = 0.35289489
 WITH 1 D.F. P-VALUE= 0.55248

 UPPER BOUND ON P-VALUE BY
 CHEBYCHEV INEQUALITY = 1.00000

#### test online+50\*PO=0

 TEST VALUE = -0.20241
 STD. ERROR OF TEST VALUE 0.37707

 T STATISTIC = -0.53680826
 WITH 907 D.F. P-VALUE= 0.59153

 F STATISTIC = 0.28816311
 WITH 1 AND 907 D.F. P-VALUE= 0.59153

 WALD CHI-SQUARE STATISTIC = 0.28816311
 WITH 1 D.F. P-VALUE= 0.59140

 UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY = 1.00000

### test online+100\*PO=0

TEST VALUE = -0.37052E-01 STD. ERROR OF TEST VALUE 0.19527 T STATISTIC = -0.18974779 WITH 907 D.F. P-VALUE= 0.84955 F STATISTIC = 0.36004223E-01 WITH 1 AND 907 D.F. P-VALUE= 0.84955 WALD CHI-SQUARE STATISTIC = 0.36004223E-01 WITH 1 D.F. P-VALUE= 0.84951 UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY = 1.00000

test online+200\*PO=0



 TEST VALUE = 0.29367
 STD. ERROR OF TEST VALUE 0.22468

 T STATISTIC = 1.3070529
 WITH 907 D.F. P-VALUE= 0.19153

 F STATISTIC = 1.7083874
 WITH 1 AND 907 D.F. P-VALUE= 0.19153

 WALD CHI-SQUARE STATISTIC = 1.7083874
 WITH 1 D.F. P-VALUE= 0.19153

 UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY = 0.58535 test online+300\*PO=0 

 TEST VALUE = 0.62440
 STD. ERROR OF TEST VALUE 0.59731

 T STATISTIC = 1.0453541
 WITH 907 D.F. P-VALUE= 0.29614

 F STATISTIC = 1.0927651
 WITH 1 AND 907 D.F. P-VALUE= 0.29614

 WALD CHI-SQUARE STATISTIC = 1.0927651
 WITH 1 D.F. P-VALUE= 0.29586

 UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY = 0.91511 genr OLCOGP=online\*LCOGP genr OLLAMC=online\*LLAMC genr OLCOM=online\*LCOM genr OLCOP=online\*LCOP genr OLRDC=online\*LRDC genr OLSMC=online\*LSMC genr OLMDOSR=online\*LMDOSR genr OLCOSP=online\*LCOSP genr OLCOS=online\*LCOS genr OLCOTH=online\*LCOTH genr OLCOVR=online\*LCOVR genr OSPEC=online\*SPEC genr OSPEC4=online\*SPEC4 genr OLMDOG=online\*LMDOG genr OLNSC=online\*LNSC genr OLMC=online\*LMC genr OLCONL=online\*LCONL genr OLLAKC=online\*LLAKC \*genr OLFC=online\*LFC \*genr OLKC=online\*LKC \*genr OLLACC=online\*LLACC ols logValue Online PSize OP BU UR Class2 Class3 Class4 Class5 Class6 Class7 Organic Leases Improve LCOGP LLAMC LCOM & /hetcov loglin nogf

**REQUIRED MEMORY IS PAR** 

1151

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CURRENT PAR				11000		
OLS ESTIMATION						
960 OBSERVATIONS DEPENI NOTESAMPLE RANGE SET			LOO	GVALUE		
USING HETEROSKEDASTIC	ITY-CONSISTENT	COVARIANO	CE MATRIX			
R-SQUARE				0.5593		
R-SQUARE ADJUSTED				0.5246		
VARIANCE OF THE ESTIMAT	E-SIGMA**2		(	.32520		
STANDARD ERROR OF THE E	STIMATE-SIGMA		0	.57027		
SUM OF SQUARED ERRORS-	SSE			289.11		
MEAN OF DEPENDENT VARIA	ABLE			11.658		
LOG OF THE LIKELIHOOD FU	INCTION(IF DEPVA	R LOG)	-1	1977.9		
MODEL SELECTION TESTS -	SEE JUDGE ET AL.	(1985,P.242	נ			
AKAIKE (1969) FINAL PRED	CTION ERROR - FP	F	ſ	).34926		
(FPE IS ALSO KNOWN AS			15 March 1997	.54520		
AKAIKE (1973) INFORMATIC				-1.0522		
SCHWARZ (1978) CRITERIO				.69227		
MODEL SELECTION TESTS -	SEE RAMANATHAN	(1998,P.165	5)			
CRAVEN-WAHBA (1979)						
GENERALIZED CROSS VALIE	DATION - GCV		(	.35118		
HANNAN AND QUINN (1979)				.40046		
RICE (1984) CRITERION				0.35343		
SHIBATA (1981) CRITERION			(	.34570		
SCHWARZ (1978) CRITERIO				.50044		
AKAIKE (1974) INFORMATIC		8		.34916		
ANALYSIS	F VARIANCE - FR	OM MEAN				
	S DF	MS	F			
REGRESSION 366	5.96 70. 5	5.2423 16	5.120			
ERROR 289	9.11 889. 0	.32520	P-VALUE			
TOTAL 656	5.06 959. 0	.68411 0.	000			
ANALYSIS	OF VARIANCE - FR	ROM ZERO				
	SS DF	MS	F			
REGRESSION 0.130	84E+06 71.	1842.8	5666.712			
ERROR 28	9.11 889.	0.32520	P-VALUE			
TOTAL 0.131	13E+06 960.	136.59	0.000			
Variable Estimated Name Coefficient	Standard Error	T-Ratio	p-Value (889 DF)	Partial Correlation	Standardised Coefficient	Elasticity at Means
ONLINE -0.75058	0.8185	-0.9170	0.359	-0.031	-0.2407	-0.0571
PSIZE 0.54792E-02		3.876	0.000	0.129	0.2798	0.8493
OP -0.16422	0.4630E-01	-3.547	0.000	-0.118	-0.0894	-0.0464
BU -0.17377	0.6233E-01	-2.788	0.005	-0.093	-0.0806	-0.0311
UR 1.1503	0.1106	10.40	0.000	0.329	0.0449	0.0012
CLASS2 -0.14559	0.1179	-1.234	0.217	-0.041	-0.0666	-0.0252

CLASS3

-0.23843

0.1153

-2.067

0.039

-0.069

-0.1322



-0.0715

CLASS6         -0.27086         0.1373         -1.973         0.049         -0.066         -0.0693         -0.0127           CLASS7         0.39995E-01         0.2221         0.1799         0.857         0.006         0.0044         0.0003           DRGANIC         0.5976         0.2852         -2.095         0.036         -0.070         -0.0523         0.0073           ILPASES         0.29997E-01         0.3826E-01         0.7841         0.433         0.026         0.0232         0.0073           ILPAROVE         0.71612         0.4475E-01         16.00         0.000         0.473         0.3725         0.1371           ILCOM         -0.221216         0.9888E-01         -2.146         0.032         -0.072         -0.0697         -0.0170           LCOM         -0.23530         0.9929E-01         3.556         0.000         -0.118         0.0767         0.0118           LBDCS         -0.35805         0.9038E-01         -4.210         0.000         -0.1680         -0.01732         -0.0466           LCOSP         -0.38055         0.9038E-01         -4.210         0.000         -0.1737         -0.0272           LCOSP         -0.38055         0.9038E-01         -4.210         0.000	CLASS4	-0.27716	0.1187	-2.334	0.020	-0.078	-0.1562	-0.0883
CLASS7         0.39958E-01         0.2221         0.1799         0.837         0.006         0.0021           ORGANIC         -0.59760         0.2852         -2.095         0.036         -0.070         -0.0520         -0.0031           LRASES         0.2997F-01         0.3826E-01         0.7411         0.433         0.026         0.0232         0.0073           IMPROVE         0.71612         0.4475E-01         16.00         0.000         0.473         0.3725         0.0134           LCMM         -0.21216         0.58885         0.1177         3.304         0.059         -0.063         -0.0474         -0.0032           LCMM         -0.235361         0.8954E-01         -5.981         0.000         -0.180         -0.1732         -0.04802           LCDP         -0.33038         0.9929E-01         3.556         0.000         -0.180         -0.0732         -0.0480           LCOSP         -0.21838         0.1045         -2.099         0.37         -0.070         -0.0534         -0.0172           LCOSP         -0.38055         0.9918E-01         1.573         0.116         0.053         -0.0174         -0.0265           LCOSP         -0.38055         0.9918E-01         1.573	CLASS5	-0.27483	0.1357	-2.025	0.043	-0.068	-0.1024	-0.0292
ORGANIC         -0.59760         0.2822         -2.095         0.036         -0.070         -0.0320         -0.031           LEASES         0.29997E-01         0.3826E-01         0.7841         0.433         0.026         0.0232         0.0073           LRACE         0.38985         0.1177         3.304         0.001         0.110         0.0857         -0.0372         0.0170           LCOP         0.2326         0.6888E-01         -2.146         0.032         -0.047         -0.0697         -0.0170           LCOP         -0.53561         0.8954E-01         -5.891         0.000         -0.118         -0.027         -0.0654         -0.0123           LCOP         -0.53508         0.9929E-01         3.556         0.000         -0.118         -0.0767         -0.0156           LCOS         0.47503         0.8705E-01         -5.457         0.000         -0.1137         -0.0450           LCOS         0.15605         0.9918E-01         -1.573         0.116         0.053         -0.0173         -0.0272         -0.0264         -0.0272         -0.0264         -0.0272         -0.0264         -0.272         -0.0474         -0.0272         -0.0272         -0.0173         -0.0272         -0.0173         -0.0	CLASS6	-0.27086	0.1373	-1.973	0.049	-0.066	-0.0693	-0.0127
LEASES         0.29997E-01         0.3826E-01         0.7641         0.433         0.026         0.0232         0.0073           IMPROVE         0.71612         0.4475E-01         16.00         0.000         0.473         0.3725         0.0134           LCOGP         0.38895         0.1177         3.304         0.001         0.0110         0.0857         0.0134           LLAMC         0.21216         0.88885e-01         -2.146         0.032         -0.072         -0.0697         -0.0134           LCOM         -0.235361         0.8954E-01         -5.981         0.000         -0.197         -0.1544         -0.0324           LRDC         0.35308         0.9929E-01         3.556         0.000         -0.180         -0.732         -0.0480           LCOSP         -0.38055         0.9938E-01         1.573         0.116         0.053         0.0111         -0.0726           LCOSP         -0.38055         0.9938E-01         1.573         0.116         -0.025         -0.0174         -0.026           LCOTH         -0.41726         0.1149         -7.674         0.000         -0.1437         -0.026           SPEC4         -1.1295         0.1472         -7.674         0.000 <td< td=""><td>CLASS7</td><td>0.39955E-01</td><td>0.2221</td><td>0.1799</td><td>0.857</td><td>0.006</td><td>0.0044</td><td>0.0003</td></td<>	CLASS7	0.39955E-01	0.2221	0.1799	0.857	0.006	0.0044	0.0003
IMPROVE         0.71612         0.4475E-01         16.00         0.000         0.473         0.3725         0.1753           LCOGP         0.38895         0.1177         3.304         0.001         0.110         0.0687         0.0134           LLAMC         0.21216         0.9888E-01         -2.146         0.032         -0.0623         -0.0647         -0.0637           LCOM         -0.23361         0.8954E-01         -5.581         0.000         -0.118         0.0767         0.0118           LSMC         -0.47503         0.8705E-01         -5.457         0.000         -0.160         -0.1732         -0.0440           LCOS         0.15505         0.9938E-01         -4.753         0.000         -0.160         -0.1732         -0.0440           LCOS         0.15505         0.9938E-01         -4.753         0.000         -0.157         -0.137         -0.0226           LCOVR         -0.81246E-01         0.1109         -0.7278         0.464         -0.025         -0.174         -0.0226           LCOVR         -0.81246E-01         0.1144         -7.674         0.000         -0.135         -0.1837         -0.0216           LCOVR         -0.81262         0.1472         -7.674	ORGANIC	-0.59760	0.2852	-2.095	0.036	-0.070	-0.0520	-0.0031
LCOCP         0.38895         0.1177         3.304         0.001         0.110         0.08877         0.0134           LLAMC         -0.21216         0.9888E-01         -2.146         0.032         -0.072         -0.0697         -0.0170           LCOM         -0.23738         0.89924E-01         -5.981         0.000         -0.197         -0.1544         -0.0323           LCOP         -0.35308         0.9929E-01         -5.457         0.000         -0.173         -0.0480           LMDC         -0.36055         0.9038E-01         -5.457         0.000         -0.163         -0.04480           LCOSP         -0.38055         0.9038E-01         -4.753         0.100         -0.137         -0.0131           LCOSP         -0.38055         0.9038E-01         -1.573         0.116         0.033         -0.0114         -0.0026           LCOTH         -0.47500         0.1010         -4.753         0.000         -0.135         -0.1980         -0.0226           LNCOR         -1.2159         0.3267         -4.044         0.000         -0.248         -0.2780         -0.0063           LNCC         -0.4750         0.8701         -5.602         0.000         -0.248         -0.2780         <	LEASES	0.29997E-01	0.3826E-01	0.7841	0.433	0.026	0.0232	0.0073
LLAMC         -0.21216         0.9888E-01         -2.146         0.032         -0.072         -0.0697         -0.0170           LCOM         -0.23733         0.1571         -1.894         0.059         -0.063         -0.0474         -0.0324           LCOP         -0.33308         0.9929E-01         3.556         0.000         0.118         0.0767         0.0118           LROC         -0.35308         0.9928E-01         -5.457         0.000         -0.160         -0.0767         0.0118           LCOS         -0.35055         0.9938E-01         -4.210         0.000         -0.140         -0.0983         -0.0122           LCOS         0.15505         0.9938E-01         -4.753         0.000         -0.157         -0.1337         -0.0272           LCOTH         -0.47560         0.1001         -4.753         0.000         -0.135         -0.1986         -0.0205           SPEC         -1.1295         0.1472         -7.674         0.000         -0.248         -0.2272         -0.0659           LNOG         -0.49279         0.377         -7.674         0.000         -0.148         -0.0202         -0.0635         -0.0893           LLOV         -1.12159         0.477         0.762	IMPROVE	0.71612	0.4475E-01	16.00	0.000	0.473	0.3725	0.1753
LCOM         -0.23739         0.1571         -1.894         0.059         -0.063         -0.0474         -0.0035           LCOP         -0.33508         0.89245-01         -5.961         0.000         -0.197         -0.1544         -0.0324           LSPC         0.35308         0.99295-01         -5.457         0.000         -0.180         -0.757         -0.0460           LMDOSR         -0.21838         0.1045         -2.090         0.037         -0.130         -0.070         -0.0564         -0.0182           LCOSP         -0.38055         0.9038E-01         -4.210         0.000         -0.140         -0.0983         -0.0125           LCOSP         -0.47560         0.1010         -4.753         0.100         -0.133         -0.0265           SPEC4         -1.1295         0.1472         -7.674         0.000         -0.135         -0.1980         -0.0206           LNDSC         -1.2159         0.2573         -4.725         0.000         -0.125         -0.1493         -0.0271           LCAC         -0.3721         0.1147         -10.25         0.000         -0.248         -0.2780         -0.0653           LCONL         -1.1751         0.1146         -2.241         0.025 </td <td>LCOGP</td> <td>0.38895</td> <td>0.1177</td> <td>3.304</td> <td>0.001</td> <td>0.110</td> <td>0.0857</td> <td>0.0134</td>	LCOGP	0.38895	0.1177	3.304	0.001	0.110	0.0857	0.0134
LCOP         -0.53561         0.8954E-01         -5.981         0.000         -0.197         -0.1544         -0.0224           LRDC         0.35308         0.9928E-01         3.556         0.000         0.118         0.0767         0.0118           LMDOSR         -0.47503         0.8705E-01         5.4577         0.000         -0.1702         -0.0480           LMDOSR         -0.21838         0.1045         -2.090         0.037         -0.070         -0.05544         -0.0125           LCOS         0.15605         0.9918E-01         1.573         0.116         0.053         -0.0141         -0.0265           LCOTH         -0.47560         0.1001         -4.753         0.000         -0.157         -0.1337         -0.0272           LCOWR         -0.81246E-01         0.1109         -0.7328         0.464         -0.022         -0.0155           SPEC         -1.1219         0.2573         -4.725         0.000         -0.157         -0.1493         -0.0127           LMC         -0.47924         0.2573         -4.725         0.000         -0.248         -0.2973         -0.0554           LMC         -0.37261         0.1147         -10.25         0.000         -0.122         -0.0	LLAMC	-0.21216	0.9888E-01	-2.146	0.032	-0.072	-0.0697	-0.0170
LRDC         0.35308         0.9929E-01         3.556         0.000         0.118         0.0767         0.0118           LSMC         -0.47503         0.8705E-01         -5.457         0.000         -0.180         -0.1732         -0.0400           LMDOSR         -0.21838         0.1045         -2.090         0.037         -0.070         -0.0554         -0.0105           LCOS         0.15605         0.9918E-01         -1.4210         0.000         -0.140         -0.0983         -0.0122           LCOVH         -0.81246E-01         0.1109         -0.7328         0.464         -0.025         -0.0174         -0.0205           SPEC4         -1.1295         0.1472         -7.674         0.000         -0.135         -0.1980         -0.0205           SPEC4         -1.2159         0.2737         -4.725         0.000         -0.185         -0.1980         -0.0225           LINSC         -1.2159         0.2737         -4.725         0.000         -0.285         -0.0273         -0.0551           LLOKL         -1.1751         0.1144         -7.629         0.000         -0.285         -0.0751         -0.0181         -0.0071           LLAKC         -0.3721         0.1165         -1.	LCOM	-0.29739	0.1571	-1.894	0.059	-0.063	-0.0474	-0.0053
LSMC         -0.47503         0.8705E-01         -5.457         0.000         -0.180         -0.1732         -0.0480           LMDOSR         -0.21838         0.1045         -2.090         0.037         -0.070         -0.0564         -0.0105           LCOSP         -0.38055         0.9918E-01         1.573         0.116         0.053         -0.0113         -0.0272           LCOTH         -0.47560         0.1010         -4.753         0.000         -0.149         -0.3202         -0.0659           SPEC         -1.1295         0.1472         -7.674         0.000         -0.135         -0.1986         -0.0266           LNDG         -0.49249         0.8791E-01         -5.602         0.000         -0.135         -0.1986         -0.0266           LNC         -0.47261         0.1144         -7.629         0.000         -0.248         -0.2783         -0.0564           LCONL         -1.1751         0.1147         -10.25         0.000         -0.157         -0.1493         -0.0564           LCONL         -1.1751         0.1144         -7.629         0.000         -0.2280         -0.0665         -0.0703         -0.0580         -0.0780         0.0237         -0.2780         -0.079 <t< td=""><td>LCOP</td><td>-0.53561</td><td>0.8954E-01</td><td>-5.981</td><td>0.000</td><td>-0.197</td><td>-0.1544</td><td>-0.0324</td></t<>	LCOP	-0.53561	0.8954E-01	-5.981	0.000	-0.197	-0.1544	-0.0324
LNDOSR         -0.21838         0.1045         -2.090         0.037         -0.070         -0.0564         -0.0105           LCOSP         -0.38055         0.9038E-01         -4.210         0.000         -0.140         -0.0983         -0.0182           LCOS         0.15605         0.9918E-01         1.573         0.116         0.053         0.0411         0.0078           LCOTH         -0.47560         0.1001         -4.753         0.000         -0.157         -0.1337         -0.0272           LCOVR         -0.81246E-01         0.1109         -0.7328         0.464         -0.025         -0.0174         -0.0026           SPEC         -1.1295         0.1472         -7.674         0.000         -0.157         -0.1493         -0.0127           LNDG         -0.4249         0.8791E-01         -5.602         0.000         -0.157         -0.1493         -0.0127           LNC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1165         -2.241         0.025         -0.0181         -0.0071           LKC         0.2715         0.1165         -2.328         0.020         -0.0756 </td <td>LRDC</td> <td>0.35308</td> <td>0.9929E-01</td> <td>3.556</td> <td>0.000</td> <td>0.118</td> <td>0.0767</td> <td>0.0118</td>	LRDC	0.35308	0.9929E-01	3.556	0.000	0.118	0.0767	0.0118
LCOSP         -0.38055         0.9038E-01         -4.210         0.000         -0.140         -0.0983         -0.0182           LCOS         0.15605         0.9918E-01         1.573         0.116         0.053         0.0411         0.0078           LCOVR         -0.81246E-01         0.1109         -0.7328         0.464         -0.025         -0.0174         -0.026           SPEC4         -1.1295         0.1472         -7.674         0.000         -0.1493         -0.1956         -0.0659           SPEC4         -1.1295         0.2573         -4.725         0.000         -0.157         -0.1493         -0.0126           LNC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1147         -10.25         0.000         -0.248         -0.2780         -0.0635           LCC         0.321731         0.1039         -3.054         0.002         -0.0122         -0.0635         -0.0083           LLAC         0.22177         0.1510         3.455         0.011         -0.1135         -0.03380         0.0331         -0.0033           V2004S         -0.14351E-01         0.1083         -0.1	LSMC	-0.47503	0.8705E-01	-5.457	0.000	-0.180	-0.1732	-0.0480
LCOS         0.15605         0.9918E-01         1.573         0.116         0.0053         0.0411         0.0078           LCOTH         -0.47560         0.1001         -4.753         0.000         -0.157         -0.1337         -0.0272           LCOVR         0.81246E-01         0.1109         -0.7328         0.464         -0.025         -0.0174         -0.0026           SPEC         -1.1295         0.1472         -7.674         0.000         -0.135         -0.1980         -0.0226           SPEC         -1.2159         0.2573         -4.725         0.000         -0.1485         -0.1596         -0.0665           LNSC         -1.2159         0.2573         -4.725         0.000         -0.248         -0.2780         -0.0654           LNKC         -0.31731         0.1039         -3.054         0.002         -0.012         -0.0635         -0.0089           LKC         0.22173         0.1166         -2.2241         0.025         -0.0778         -0.0380         0.0037           V2004S         -0.44855E-01         0.9320E-01         -0.4785         0.632         -0.0135         -0.0033         -0.0074           V2005F         0.1301E-01         0.1633         -0.1491 <td< td=""><td>LMDOSR</td><td>-0.21838</td><td>0.1045</td><td>-2.090</td><td>0.037</td><td>-0.070</td><td>-0.0564</td><td>-0.0105</td></td<>	LMDOSR	-0.21838	0.1045	-2.090	0.037	-0.070	-0.0564	-0.0105
LCOTH         -0.47560         0.1001         -4.753         0.000         -0.157         -0.1337         -0.0272           LCOWR         -0.81246E-01         0.1109         -0.7228         0.464         -0.025         -0.0174         -0.0026           SPEC         -1.1295         0.1472         -7.674         0.000         -0.249         -0.3202         -0.059           SPEC         -1.3197         0.3261         -4.048         0.000         -0.185         -0.1956         -0.0206           LMDC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2973         -0.0531           LCONL         -1.1751         0.1147         -10.25         0.000         -0.248         -0.2803         -0.0653           LCAC         -0.32820         0.1465         -2.241         0.025         -0.1121         -0.0635         -0.0099           LKC         0.5217         0.1510         3.455         0.001         0.115         0.0701         0.0665           Y2004S         -0.44595E-01         0.9320E-01         -0.4785         0.632         -0.016         -0.0133         -0.0033           Y2004S         -0.13371         0.1155         -1.677         0.944 <td>LCOSP</td> <td>-0.38055</td> <td>0.9038E-01</td> <td>-4.210</td> <td>0.000</td> <td>-0.140</td> <td>-0.0983</td> <td>-0.0182</td>	LCOSP	-0.38055	0.9038E-01	-4.210	0.000	-0.140	-0.0983	-0.0182
LCOVR         -0.81246E-01         0.1109         -0.7328         0.464         -0.025         -0.0174         -0.0026           SPEC         -1.1295         0.1472         -7.674         0.000         -0.249         -0.3202         -0.0659           SPEC4         -1.3197         0.3261         -4.048         0.000         -0.135         -0.1986         -0.0206           LMDOG         -0.49249         0.8791E-01         -5.602         0.000         -0.185         -0.1936         -0.0270           LMC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1147         -10.25         0.002         -0.102         -0.6335         -0.0089           LLAK         -0.31731         0.1166         -2.241         0.022         -0.1075         -0.0181         -0.0071         0.0665           V2005F         0.52177         0.1510         3.455         0.001         0.115         0.071         0.0665           V2005F         0.1330FE-01         0.1643         -0.075         -0.0135         -0.0033         -0.0071           V2005F         0.13616E-01         0.1083         -0.1049	LCOS	0.15605	0.9918E-01	1.573	0.116	0.053	0.0411	0.0078
SPEC         -1.1295         0.1472         -7.674         0.000         -0.249         -0.3202         -0.0659           SPEC4         -1.3197         0.3261         -4.048         0.000         -0.135         -0.1980         -0.0206           LNDCG         -0.49249         0.8791E-01         -5.602         0.000         -0.185         -0.1993         -0.0127           LNC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1144         -7.629         0.000         -0.325         -0.2973         -0.0539           LLAKC         -0.31731         0.1039         -3.054         0.002         -0.102         -0.0635         -0.0089           LKC         0.27153         0.1166         2.328         0.020         0.078         0.0380         0.0037           LLACC         0.52177         0.1510         3.455         0.612         -0.016         -0.0133         -0.0033           Y2005F         -0.13971         0.1155         -1.677         0.94         -0.056         -0.023         -0.0103           Y2005F         0.1361E-01         0.4837E-01         0.6960         0.487	LCOTH	-0.47560	0.1001	-4.753	0.000	-0.157	-0.1337	-0.0272
SPEC4         -1.3197         0.3261         -4.048         0.000         -0.135         -0.1980         -0.0206           LMDOG         -0.49249         0.8791E-01         -5.602         0.000         -0.185         -0.1956         -0.0605           LNSC         -1.2159         0.2573         -4.725         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1144         -7.629         0.000         -0.325         -0.2793         -0.0539           LLAKC         -0.31731         0.1039         -3.054         0.002         -0.102         -0.06635         -0.0089           LFC         -0.32820         0.1465         -2.241         0.020         0.078         0.0380         0.0037           LLACC         0.52177         0.1510         3.455         0.011         0.115         -0.0130         -0.0033         -0.0007           Y2004S         -0.14351E-01         0.1833         -0.1049         0.916         -0.0146         -0.0233         -0.0107           Y2005F         -0.19371         0.1155         -1.677         0.94         -0.056         -0.0526         -0.0103           Y2005F         0.13161         0.1083         -0.1047<	LCOVR	-0.81246E-01	0.1109	-0.7328	0.464	-0.025	-0.0174	-0.0026
LMDOG         -0.49249         0.8791E-01         -5.602         0.000         -0.185         -0.1956         -0.0605           LNSC         -1.2159         0.2573         -4.725         0.000         -0.143         -0.0127           LMC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2973         -0.053           LLAKC         -0.31731         0.1039         -3.054         0.002         -0.102         -0.0635         -0.0089           LFC         -0.332820         0.1465         -2.241         0.025         -0.075         -0.0181         -0.0007           LKC         0.27173         0.1106         2.328         0.020         0.078         0.0380         0.0037           Y2005F         -0.19371         0.1155         -1.677         0.94         -0.056         -0.0526         -0.0103           Y2005F         0.11361E-01         0.1083         -0.124         0.023         0.0186         0.0044           Y2005F         0.11361E-01         0.6960         0.487         0.023         0.0186         0.0042           Y2005F         0.11361E-01         0.6960         0.487         0.023         0.0642         0.0101	SPEC	-1.1295	0.1472	-7.674	0.000	-0.249	-0.3202	-0.0659
LNSC         -1.2159         0.2573         -4.725         0.000         -0.157         -0.1493         -0.0127           LMC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1147         -10.25         0.000         -0.328         -0.0635         -0.0635           LLAKC         -0.32820         0.1465         -2.241         0.025         -0.075         -0.0181         -0.0007           LKC         0.7153         0.1166         2.328         0.020         0.078         0.0380         0.0037           LKC         0.52177         0.1510         3.455         0.061         -0.115         0.0701         0.0065           Y2005F         -0.19371         0.1155         -1.677         0.94         -0.056         -0.0526         -0.0103           Y2005F         -0.1337         1.1543         0.123         0.052         0.04470         0.004         -0.0033         -0.0077           Y2005F         0.1361E-01         0.543         0.123         0.052         0.0420         0.0161           Y2005F         0.40477         0.3325E-01         3.767         0.007         0.04	SPEC4	-1.3197	0.3261	-4.048	0.000	-0.135	-0.1980	-0.0206
LMC         -0.87261         0.1144         -7.629         0.000         -0.248         -0.2780         -0.0654           LCONL         -1.1751         0.1147         -10.25         0.000         -0.325         -0.2973         -0.0539           LLAKC         -0.31731         0.1039         -3.054         0.002         -0.102         -0.0635         -0.089           LKC         0.27153         0.1166         2.328         0.020         0.078         0.0380         0.0037           LLACC         0.52177         0.1510         3.455         0.001         0.115         0.7071         0.0065           Y2005F         -0.19371         0.1155         -1.677         0.094         -0.056         -0.0526         -0.0103           Y2005F         -0.11361E-01         0.1083         -0.1049         0.916         -0.044         -0.033         -0.007           Y2005F         0.11361E-01         0.18377E-01         0.6960         0.487         0.022         0.0420         0.0091           Y2005F         0.11416         0.9150E-01         1.543         0.123         0.0420         0.0091           Y2005F         0.28979         0.1052         0.0420         0.0091         0.0263	LMDOG	-0.49249	0.8791E-01	-5.602	0.000	-0.185	-0.1956	-0.0605
LCONL         -1.1751         0.1147         -10.25         0.000         -0.325         -0.2973         -0.0539           LLAKC         -0.31731         0.1039         -3.054         0.002         -0.102         -0.0635         -0.0089           LFC         -0.32820         0.1465         -2.241         0.025         -0.075         -0.0181         -0.0007           LKC         0.27153         0.1166         2.328         0.020         0.078         0.0330         0.0037           LLACC         0.52177         0.1510         3.455         0.001         0.115         0.0701         0.0065           Y2005F         -0.13371         0.1155         -1.677         0.094         -0.056         -0.033         -0.0071           Y2005F         0.13610-101         0.8377E-01         0.6960         0.487         0.023         0.0186         0.0044           Y2007F         0.19101         0.8199E-01         2.330         0.020         0.078         0.0642         0.0161           Y2007F         0.19101         0.8199E-01         3.149         0.002         0.105         0.0708         0.0172           Y2008F         0.28979         0.1065         2.722         0.007         <	LNSC	-1.2159	0.2573	-4.725	0.000	-0.157	-0.1493	-0.0127
LLAKC         -0.31731         0.1039         -3.054         0.002         -0.102         -0.0635         -0.0089           LFC         -0.32820         0.1465         -2.241         0.025         -0.075         -0.0181         -0.0007           LKC         0.27153         0.1166         2.328         0.020         0.078         0.0380         0.0037           LLACC         0.52177         0.1510         3.455         0.001         0.115         0.00135         -0.0030           Y2004S         -0.44595E-01         0.9320E-01         -0.4785         0.632         -0.016         -0.0133         -0.0030           Y2005F         -0.11361E-01         0.1083         -0.1049         0.916         -0.004         -0.033         -0.0071           Y2006S         0.14116         0.9150E-01         1.543         0.123         0.052         0.0420         0.0091           Y2007F         0.19101         0.8199E-01         2.330         0.020         0.078         0.0642         0.0161           Y2008F         0.28379         0.1065         2.722         0.007         0.911         0.0828         0.172           Y2008F         0.28311         0.8990E-01         3.149         0.002 <td>LMC</td> <td>-0.87261</td> <td>0.1144</td> <td>-7.629</td> <td>0.000</td> <td>-0.248</td> <td>-0.2780</td> <td>-0.0654</td>	LMC	-0.87261	0.1144	-7.629	0.000	-0.248	-0.2780	-0.0654
LFC-0.328200.1465-2.2410.025-0.075-0.0181-0.0077LKC0.271530.11662.3280.0200.0780.03800.0037LLACC0.521770.15103.4550.0010.1150.07010.0065Y2004S-0.4395E-010.9320E-01-0.47850.632-0.016-0.0135-0.0030Y2005F-0.11361E-010.1083-0.10490.916-0.004-0.0033-0.0071Y2005F0.58305E-010.8377E-010.69600.4870.0230.01860.0041Y2007F0.191010.8199E-012.3300.0200.0780.06420.1011Y2007F0.191010.8199E-012.3300.0200.0780.06420.0161Y2007F0.404770.9326E-014.3400.0000.1440.12030.0261Y2008F0.289790.10652.7220.0070.0910.08280.0172Y2009F0.283110.890E-013.1490.0020.1050.07080.127Y2010F0.367500.9755E-013.7670.0000.1270.11710.250Y2010F0.367500.9755E-013.7670.0000.1270.11710.0270Y2010F0.367500.3010E-05-1.7240.085-0.058-0.1161-0.1337Y2010F0.43678E-020.4352E-020.96530.3350.0320.21220.0495Y2010F0.43678E-020.4352E-020.9	LCONL	-1.1751	0.1147	-10.25	0.000	-0.325	-0.2973	-0.0539
LKC         0.27153         0.1166         2.328         0.020         0.078         0.0380         0.0037           LLACC         0.52177         0.1510         3.455         0.001         0.115         0.0701         0.0065           Y2004S         -0.44595E-01         0.9320E-01         -0.4785         0.632         -0.016         -0.0135         -0.0030           Y2005F         -0.11361E-01         0.1083         -0.1049         0.916         -0.004         -0.0033         -0.0004           Y2005S         0.14116         0.9150E-01         1.543         0.123         0.052         0.0420         0.0091           Y2007F         0.19101         0.8199E-01         2.330         0.020         0.078         0.0642         0.0161           Y2007F         0.19101         0.8199E-01         2.330         0.020         0.078         0.0628         0.0127           Y2008S         0.18114         0.1073         1.687         0.92         0.057         0.0509         0.0144           Y2009F         0.28311         0.8990E-01         3.149         0.002         0.1155         0.1103         0.225           Y2010F         0.36750         0.9755E-01         3.767         0.000 </td <td>LLAKC</td> <td>-0.31731</td> <td>0.1039</td> <td>-3.054</td> <td>0.002</td> <td>-0.102</td> <td>-0.0635</td> <td>-0.0089</td>	LLAKC	-0.31731	0.1039	-3.054	0.002	-0.102	-0.0635	-0.0089
LLACC         0.52177         0.1510         3.455         0.001         0.115         0.0701         0.0065           Y2004S         -0.44595E-01         0.9320E-01         -0.4785         0.632         -0.016         -0.0135         -0.030           Y2005F         -0.11361E-01         0.11083         -1.677         0.094         -0.056         -0.0526         -0.0135           Y2005F         0.58305E-01         0.8377E-01         0.6960         0.487         0.023         0.0186         0.0001           Y2005F         0.19101         0.8179E-01         1.543         0.123         0.052         0.0420         0.0091           Y2005F         0.19101         0.8199E-01         2.330         0.020         0.078         0.0642         0.0161           Y2008F         0.28979         0.1065         2.722         0.007         0.091         0.828         0.0172           Y2008F         0.28979         0.1065         2.722         0.007         0.0191         0.828         0.0127           Y2008F         0.28311         0.8990E-01         3.149         0.002         0.105         0.0708         0.0127           Y2019F         0.36750         0.9755E-01         3.767	LFC	-0.32820	0.1465	-2.241	0.025	-0.075	-0.0181	-0.0007
Y2004S       -0.44595E-01       0.9320E-01       -0.4785       0.632       -0.016       -0.0135       -0.0030         Y2005F       -0.19371       0.1155       -1.677       0.094       -0.056       -0.0526       -0.0103         Y2005S       -0.11361E-01       0.1083       -0.1049       0.916       -0.004       -0.0033       -0.007         Y2005F       0.58305E-01       0.8377E-01       0.6960       0.487       0.023       0.0186       0.0044         Y2007F       0.19101       0.8199E-01       2.330       0.020       0.078       0.0642       0.0161         Y2007F       0.40477       0.9326E-01       4.340       0.000       0.144       0.1203       0.0261         Y2008F       0.28979       0.1065       2.722       0.007       0.091       0.0828       0.0172         Y2008S       0.18114       0.1073       1.687       0.92       0.057       0.0509       0.0104         Y2009F       0.28311       0.8990E-01       3.149       0.002       0.105       0.0708       0.0127         Y2010S       0.39988       0.1046       3.823       0.000       0.125       0.1109       0.2455         Y2011F       0.49619	LKC	0.27153	0.1166	2.328	0.020	0.078	0.0380	0.0037
Y2005F       -0.19371       0.1155       -1.677       0.094       -0.056       -0.0526       -0.0103         Y2005S       -0.11361E-01       0.1083       -0.1049       0.916       -0.004       -0.0033       -0.0077         Y2006F       0.58305E-01       0.8377E-01       0.6960       0.487       0.023       0.0186       0.0044         Y2007F       0.19101       0.8199E-01       2.330       0.020       0.078       0.0642       0.0161         Y2007F       0.19101       0.8199E-01       2.330       0.020       0.078       0.0642       0.0161         Y2007F       0.40477       0.9326E-01       4.340       0.000       0.144       0.1203       0.0261         Y2008F       0.28979       0.1065       2.722       0.007       0.091       0.0828       0.0172         Y2009F       0.28311       0.8990E-01       3.149       0.002       0.105       0.0708       0.0127         Y2010F       0.36750       0.9755E-01       3.767       0.000       0.125       0.1109       0.0245         Y2010F       0.36750       0.9755E-01       5.724       0.000       0.173       0.1536       0.0348         Y2011F       0.49819	LLACC	0.52177	0.1510	3.455	0.001	0.115	0.0701	0.0065
Y2005S-0.11361E-010.1083-0.10490.916-0.004-0.0033-0.007Y2006F0.58305E-010.8377E-010.69600.4870.0230.01860.0044Y2006S0.141160.9150E-011.5430.1230.0520.04200.0091Y2007F0.191010.8199E-012.3300.0000.0780.06420.0161Y2007S0.404770.9326E-014.3400.0000.1440.12030.0261Y2008F0.289790.10652.7220.0070.0910.08280.0172Y2008F0.289110.8990E-013.1490.0020.1050.07080.0127Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010F0.399880.10463.8230.0000.1730.15360.308Y2011F0.498190.9492E-015.2490.0000.1730.15360.338P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.322-0.0156-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0006OLCOGP1.46520.73421.9960.466<	Y2004S	-0.44595E-01	0.9320E-01	-0.4785	0.632	-0.016	-0.0135	-0.0030
Y2006F         0.58305E-01         0.8377E-01         0.6960         0.487         0.023         0.0186         0.0044           Y2006S         0.14116         0.9150E-01         1.543         0.123         0.052         0.0420         0.0091           Y2007F         0.19101         0.8199E-01         2.330         0.020         0.078         0.0642         0.0161           Y2007S         0.40477         0.9326E-01         4.340         0.000         0.144         0.1203         0.0261           Y2008F         0.28979         0.1065         2.722         0.007         0.091         0.0828         0.0172           Y2008S         0.18114         0.1073         1.687         0.092         0.057         0.0509         0.0104           Y2009S         0.43227         0.9949E-01         4.345         0.000         0.144         0.0993         0.0162           Y2010F         0.36750         0.9755E-01         3.767         0.000         0.127         0.1171         0.0250           Y2011F         0.49819         0.9492E-01         5.249         0.000         0.173         0.1536         0.0307           Y2011F         0.49819         0.9492E-01         5.249         0.000 <td>Y2005F</td> <td>-0.19371</td> <td>0.1155</td> <td>-1.677</td> <td>0.094</td> <td>-0.056</td> <td>-0.0526</td> <td>-0.0103</td>	Y2005F	-0.19371	0.1155	-1.677	0.094	-0.056	-0.0526	-0.0103
Y2006S0.141160.9150E-011.5430.1230.0520.04200.0091Y2007F0.191010.8199E-012.3300.0200.0780.06420.0161Y2007S0.404770.9326E-014.3400.0000.1440.12030.0261Y2008F0.289790.10652.7220.0070.0910.08280.0172Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1730.15360.348Y2011F0.498190.9492E-015.2490.0000.1730.15360.348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4529E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0161-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0008OLCOGP1.46520.73421.9960.4660.6670.09890.0046OLCOM-0.151310.4320-0.55520.559	Y2005S	-0.11361E-01	0.1083	-0.1049	0.916	-0.004	-0.0033	-0.0007
Y2007F0.191010.8199E-012.3300.0200.0780.06420.0161Y2007S0.404770.9326E-014.3400.0000.1440.12030.0261Y2008F0.289790.10652.7220.0070.0910.08280.0172Y2008S0.181140.10731.6870.0920.0570.05090.0104Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1730.15360.348Y2011F0.498190.9492E-015.2490.0000.1730.15360.348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLCOM-0.151310.4320-0.35020.726-0.012-0.0059-0.0002OLCOM-0.151310.43420.46160.6440.0150.02340.0019OLCOS0.20410.43420.46160.6440	Y2006F	0.58305E-01	0.8377E-01	0.6960	0.487	0.023	0.0186	0.0044
Y2007S0.404770.9326E-014.3400.0000.1440.12030.0261Y2008F0.289790.10652.7220.0070.0910.08280.0172Y2008S0.181140.10731.6870.0920.0570.05090.0104Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1730.15360.348Y2011F0.498190.992E-015.2490.0000.1730.15360.348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0088OLCOF1.46520.73421.9960.0460.0670.09890.0046OLCOF1.46520.73421.9960.0460.0670.09890.0000OLSMC0.200410.43420.46160.6440.015	Y2006S	0.14116	0.9150E-01	1.543	0.123	0.052	0.0420	0.0091
Y2008F0.289790.10652.7220.0070.0910.08280.0172Y2008S0.181140.10731.6870.0920.0570.05090.0104Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1730.15360.0348Y2011F0.498190.992E-015.2490.0000.1730.13360.0348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0008OLCOP1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.20410.43420.46160.6440.0150.02340.0019OLMDOSR-0.266220.4549-0.58520.559	Y2007F	0.19101	0.8199E-01	2.330	0.020	0.078	0.0642	0.0161
Y2008S0.181140.10731.6870.0920.0570.05090.0104Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1270.11710.0250Y2011F0.498190.9492E-015.2490.0000.1730.15360.0348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0095OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.008OLCOF1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.0180-0.0008OLCOS0.695100.57231.2150.225<	Y2007S	0.40477	0.9326E-01	4.340	0.000	0.144	0.1203	0.0261
Y2009F0.283110.8990E-013.1490.0020.1050.07080.0127Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1270.11710.0250Y2011F0.498190.9492E-015.2490.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33600.7350.0110.01340.008OLCOP1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.0180-0.0008OLCOS0.695100.57231.2150.2250.0410.02710.0075	Y2008F	0.28979	0.1065	2.722	0.007	0.091	0.0828	0.0172
Y2009S0.432270.9949E-014.3450.0000.1440.09930.0162Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1270.11710.0250Y2011F0.498190.9492E-015.2490.0000.1730.15360.0348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.008OLCOM-0.151310.4320-0.35020.726-0.012-0.0059-0.0002OLCOP1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.1180-0.0005OLCOS0.695100.57231.2150.2250.0410.02710.0077	Y2008S	0.18114	0.1073	1.687	0.092	0.057	0.0509	0.0104
Y2010F0.367500.9755E-013.7670.0000.1250.11090.0245Y2010S0.399880.10463.8230.0000.1270.11710.0250Y2011F0.498190.9492E-015.2490.0000.1730.15360.0348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339P00.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0008OLCOM-0.151310.4320-0.35020.726-0.012-0.0059-0.0002OLCOP1.46520.73421.9960.0460.6670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.0019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.0180-0.0008OLCOS0.695100.57231.2150.2250.0410.02710.0007	Y2009F	0.28311	0.8990E-01	3.149		0.105	0.0708	0.0127
Y2010S0.399880.10463.8230.0000.1270.11710.0250Y2011F0.498190.9492E-015.2490.0000.1730.15360.0348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339PO0.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0008OLCOM-0.151310.4320-0.35020.726-0.012-0.0059-0.0002OLCOP1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.0180-0.0008OLCOS0.695100.57231.2150.2250.0410.02710.0007	Y2009S	0.43227	0.9949E-01	4.345	0.000	0.144	0.0993	
Y2011F0.498190.9492E-015.2490.0000.1730.15360.0348Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339PO0.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0008OLCOM-0.151310.4320-0.35020.726-0.012-0.0059-0.002OLCOP1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.0180-0.0008OLCOS0.695100.57231.2150.2250.0410.02710.0007	Y2010F	0.36750	0.9755E-01	3.767	0.000	0.125	0.1109	0.0245
Y2011S0.479640.9992E-014.8010.0000.1590.13370.0270P2-0.51886E-050.3010E-05-1.7240.085-0.058-0.1161-0.1339PO0.43678E-020.4525E-020.96530.3350.0320.21120.0495OLCOGP-0.450790.4369-1.0320.302-0.035-0.0176-0.0005OLLAMC0.153400.45390.33800.7350.0110.01340.0008OLCOM-0.151310.4320-0.35020.726-0.012-0.059-0.002OLCOP1.46520.73421.9960.0460.0670.09890.0046OLRDC-0.72775E-020.4285-0.1698E-010.986-0.001-0.00030.0000OLSMC0.200410.43420.46160.6440.0150.02340.0019OLMDOSR-0.266220.4549-0.58520.559-0.020-0.1180-0.0008OLCOS0.695100.57231.2150.2250.0410.02710.0007	Y2010S	0.39988	0.1046	3.823		0.127		0.0250
P2         -0.51886E-05         0.3010E-05         -1.724         0.085         -0.058         -0.1161         -0.1339           P0         0.43678E-02         0.4525E-02         0.9653         0.335         0.032         0.2112         0.0495           OLCOGP         -0.45079         0.4369         -1.032         0.302         -0.035         -0.0176         -0.0005           OLLAMC         0.15340         0.4539         0.3380         0.735         0.011         0.0134         0.0008           OLCOM         -0.15131         0.4320         -0.3502         0.726         -0.012         -0.0059         -0.0002           OLCOP         1.4652         0.7342         1.996         0.046         0.067         0.989         0.0046           OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.1180         -0.0008           OLCOS         0.69510         0.5723         1.215         0.225<	Y2011F	0.49819	0.9492E-01	5.249	0.000	0.173	0.1536	0.0348
PO         0.43678E-02         0.4525E-02         0.9653         0.335         0.032         0.2112         0.0495           OLCOGP         -0.45079         0.4369         -1.032         0.302         -0.035         -0.0176         -0.0005           OLLAMC         0.15340         0.4539         0.3380         0.735         0.011         0.0134         0.0008           OLCOM         -0.15131         0.4320         -0.3502         0.726         -0.012         -0.0059         -0.0002           OLCOP         1.4652         0.7342         1.996         0.046         0.067         0.9899         0.0046           OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225	Y2011S	0.47964	0.9992E-01	4.801	0.000	0.159		0.0270
OLCOGP         -0.45079         0.4369         -1.032         0.302         -0.035         -0.0176         -0.0005           OLLAMC         0.15340         0.4539         0.3380         0.735         0.011         0.0134         0.0008           OLCOM         -0.15131         0.4320         -0.3502         0.726         -0.012         -0.0059         -0.0002           OLCOP         1.4652         0.7342         1.996         0.046         0.067         0.989         0.0046           OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.1180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007	P2	-0.51886E-05	0.3010E-05	-1.724	0.085			
OLLAMC         0.15340         0.4539         0.3380         0.735         0.011         0.0134         0.0008           OLCOM         -0.15131         0.4320         -0.3502         0.726         -0.012         -0.0059         -0.0002           OLCOP         1.4652         0.7342         1.996         0.046         0.067         0.0989         0.0046           OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007	PO			0.9653	0.335	0.032		
OLCOM         -0.15131         0.4320         -0.3502         0.726         -0.012         -0.0059         -0.0002           OLCOP         1.4652         0.7342         1.996         0.046         0.067         0.0989         0.0046           OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007	OLCOGP	-0.45079	0.4369	-1.032	0.302	-0.035		
OLCOP         1.4652         0.7342         1.996         0.046         0.067         0.0989         0.0046           OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007	OLLAMC	0.15340	0.4539	0.3380	0.735			
OLRDC         -0.72775E-02         0.4285         -0.1698E-01         0.986         -0.001         -0.0003         0.0000           OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007		-0.15131						
OLSMC         0.20041         0.4342         0.4616         0.644         0.015         0.0234         0.0019           OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007		1.4652						
OLMDOSR         -0.26622         0.4549         -0.5852         0.559         -0.020         -0.0180         -0.0008           OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007	OLRDC	-0.72775E-02						
OLCOSP         0.12508         0.4768         0.2624         0.793         0.009         0.0097         0.0005           OLCOS         0.69510         0.5723         1.215         0.225         0.041         0.0271         0.0007	OLSMC	0.20041	0.4342	0.4616				
OLCOS 0.69510 0.5723 1.215 0.225 0.041 0.0271 0.0007	OLMDOSR	-0.26622	0.4549					
	OLCOSP		0.4768					
	OLCOS	0.69510	0.5723	1.215	0.225	0.041	0.0271	0.0007



CONSTANT	11.253	0.1892	59.48	0.000	0.894	0.0000	11.2526
OLLAKC	-0.28079	0.4405	-0.6375	0.524	-0.021	-0.0110	-0.0003
OLCONL	1.0301	0.4497	2.290	0.022	0.077	0.1060	0.0075
OLMC	-0.57683	0.4487	-1.286	0.199	-0.043	-0.0318	-0.0012
OLNSC	0.61318	0.4991	1.229	0.220	0.041	0.0534	0.0032
OLMDOG	-0.22159	0.5334	-0.4154	0.678	-0.014	-0.0244	-0.0018
OSPEC4	0.52069	0.5187	1.004	0.316	0.034	0.0287	0.0011
OSPEC	0.20070	0.5079	0.3951	0.693	0.013	0.0246	0.0021
OLCOVR	-0.16300	0.4697	-0.3470	0.729	-0.012	-0.0110	-0.0005
	0.29405	0.4308	0.6826	0.495	0.023	0.0229	0.0012

test

test OLCOGP=0

test OLLAMC=0

test OLCOM=0

test OLCOP=0

test OLRDC=0

test OLSMC=0

test OLMDOSR=0

test OLCOSP=0

test OLCOS=0

test OLCOTH=0

test OLCOVR=0

test OSPEC=0

test OSPEC4=0

test OLMDOG=0

test OLNSC=0

test OLMC=0

test OLCONL=0

test OLLAKC=0

end

4.3638438 F STATISTIC WITH 18 AND 889 D.F. P-VALUE WALD CHI-SQUARE STATISTIC WITH 18 D.F. P-VALUE UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY

0.00000 78.549188 0.00000 0.22916

genr oc2=online\*Class2

genr oc3=online\*Class3



genr oc4=online\*Class4 genr oc5=online\*Class5 genr oc6=online\*Class6 genr oc7=online\*Class7 genr oo=online\*Organic genr oL=online\*Leases genr oI=online\*Improve ols logValue Online PSize OP BU UR Class2 Class3 Class4 Class5 Class6 Class7 Organic Leases Improve LCOGP LLAMC LCOM & /hetcov loglin nogf REQUIRED MEMORY IS PAR 1292 CURRENT PAR 11000 **OLS ESTIMATION** 960 OBSERVATIONS DEPENDENT VARIABLE LOGVALUE ...NOTE..SAMPLE RANGE SET TO: 1, 962 USING HETEROSKEDASTICITY-CONSISTENT COVARIANCE MATRIX **R-SQUARE** 0.5633 **R-SQUARE ADJUSTED** 0.5241 VARIANCE OF THE ESTIMATE-SIGMA\*\*2 0.32559 STANDARD ERROR OF THE ESTIMATE-SIGMA 0.57060 SUM OF SQUARED ERRORS-SSE 286.52 MEAN OF DEPENDENT VARIABLE 11.658 LOG OF THE LIKELIHOOD FUNCTION(IF DEPVAR LOG) -11973.5 MODEL SELECTION TESTS - SEE JUDGE ET AL. (1985, P.242) AKAIKE (1969) FINAL PREDICTION ERROR - FPE 0.35272 (FPE IS ALSO KNOWN AS AMEMIYA PREDICTION CRITERION - PC) AKAIKE (1973) INFORMATION CRITERION - LOG AIC -1.0425 SCHWARZ (1978) CRITERION - LOG SC -0.63689 MODEL SELECTION TESTS - SEE RAMANATHAN (1998, P.165) CRAVEN-WAHBA (1979) **GENERALIZED CROSS VALIDATION - GCV** 0.35519 HANNAN AND QUINN (1979) CRITERION 0.41147 RICE (1984) CRITERION 0.35815 SHIBATA (1981) CRITERION 0.34820 SCHWARZ (1978) CRITERION - SC 0.52893 AKAIKE (1974) INFORMATION CRITERION - AIC 0.35258 ANALYSIS OF VARIANCE - FROM MEAN SS DF MS F REGRESSION 79. 4.6778 369.55 14.367

ERROR

TOTAL

286.52

656.06

880.

959.

0.32559

0.68411

**P-VALUE** 

0.000



AN	<b>IALYSIS OF VARIA</b>	NCE - FI	ROM ZERO	
	SS	DF	MS	F
REGRESSION	0.13084E+06	80.	1635.5	5023.387
ERROR	286.52	880.	0.32559	<b>P-VALUE</b>
TOTAL	0.13113E+06	960.	136.59	0.000

Variable Name	Estimated Coefficient	Standard Error	T-Ratio	p-Value (880 DF)	Partial Correlation	Standardised Coefficient	Elasticity at Means
ONLINE	-0.44963	0.7352	-0.6116	0.541	-0.021	-0.1442	-0.0342
PSIZE	0.55344E-02	0.1417E-02	3.905	0.000	0.131	0.2826	0.8578
OP	-0.15936	0.4655E-01	-3.424	0.001	-0.115	-0.0868	-0.0450
BU	-0.16489	0.6292E-01	-2.621	0.009	-0.088	-0.0765	-0.0295
UR	1.1659	0.1108	10.53	0.000	0.334	0.0455	0.0012
CLASS2	-0.13283	0.1237	-1.074	0.283	-0.036	-0.0608	-0.0230
CLASS3	-0.20723	0.1224	-1.693	0.091	-0.057	-0.1149	-0.0622
CLASS4	-0.24674	0.1256	-1.964	0.050	-0.066	-0.1391	-0.0786
CLASS5	-0.24581	0.1426	-1.724	0.085	-0.058	-0.0916	-0.0261
CLASS6	-0.32369	0.1476	-2.193	0.029	-0.074	-0.0828	-0.0152
CLASS7	0.17150	0.2608	0.6575	0.511	0.022	0.0189	0.0014
ORGANIC	-0.55442	0.3147	-1.762	0.078	-0.059	-0.0483	-0.0029
LEASES	0.32594E-01	0.3946E-01	0.8261	0.409	0.028	0.0252	0.0079
IMPROVE	0.71188	0.4597E-01	15.48	0.000	0.463	0.3703	0.1743
LCOGP	0.38579	0.1178	3.274	0.001	0.110	0.0850	0.0133
LLAMC	-0.18403	0.9999E-01	-1.840	0.066	-0.062	-0.0605	-0.0148
LCOM	-0.28106	0.1566	-1.795	0.073	-0.060	-0.0448	-0.0050
LCOP	-0.52747	0.9051E-01	-5.828	0.000	-0.193	-0.1520	-0.0319
LRDC	0.35850	0.9986E-01	3.590	0.000	0.120	0.0778	0.0120
LSMC	-0.47059	0.8716E-01	-5.399	0.000	-0.179	-0.1716	-0.0475
LMDOSR	-0.21319	0.1047	-2.036	0.042	-0.068	-0.0551	-0.0102
LCOSP	-0.38973	0.9069E-01	-4.297	0.000	-0.143	-0.1007	-0.0187
LCOS	0.15809	0.9929E-01	1.592	0.112	0.054	0.0417	0.0079
LCOTH	-0.46155	0.1012	-4.559	0.000	-0.152	-0.1298	-0.0264
LCOVR	-0.81227E-01	0.1116	-0.7281	0.467	-0.025	-0.0174	-0.0026
SPEC	-1.1272	0.1477	-7.631	0.000	-0.249	-0.3196	-0.0658
SPEC4	-1.3072	0.3202	-4.083	0.000	-0.136	-0.1961	-0.0204
LMDOG	-0.49766	0.8876E-01	-5.607	0.000	-0.186	-0.1977	-0.0612
LNSC	-1.2158	0.2589	-4.695	0.000	-0.156	-0.1493	-0.0127
LMC	-0.87578	0.1149	-7.622	0.000	-0.249	-0.2790	-0.0657
LCONL	-1.1671	0.1150	-10.15	0.000	-0.324	-0.2952	-0.0535
LLAKC	-0.32141	0.1041	-3.087	0.002	-0.104	-0.0643	-0.0090
LFC	-0.31326	0.1494	-2.097	0.036	-0.071	-0.0173	-0.0007
LKC	0.27298	0.1165	2.343	0.019	0.079	0.0382	0.0037
LLACC	0.52336	0.1514	3.458	0.001	0.116	0.0703	0.0065
Y2004S	-0.65492E-01	0.9347E-01	-0.7007	0.484	-0.024	-0.0198	-0.0044
Y2005F	-0.20592	0.1156	-1.781	0.075	-0.060	-0.0559	-0.0109
Y2005S	-0.28613E-01	0.1092	-0.2621	0.793	-0.009	-0.0084	-0.0018
Y2006F	0.56499E-01	0.8334E-01	0.6779	0.498	0.023	0.0180	0.0042
Y2006S	0.13444	0.9140E-01	1.471	0.142	0.050	0.0400	0.0087
Y2007F	0.18273	0.8236E-01	2.219	0.027	0.075	0.0614	0.0154
Y2007S	0.40054	0.9245E-01	4.332	0.000	0.145	0.1191	0.0259
Y2008F	0.28263	0.1059	2.669	0.008	0.090	0.0808	0.0168
Y2008S	0.18352	0.1066	1.721	0.086	0.058	0.0516	0.0105



Y2009F	0.26657	0.9087E-01	2.934	0.003	0.098	0.0667	0.0119
Y2009S	0.43562	0.9807E-01	4.442	0.000	0.148	0.1001	0.0163
Y2010F	0.35527	0.9806E-01	3.623	0.000	0.121	0.1072	0.0237
Y2010S	0.36403	0.1047	3.477	0.001	0.116	0.1066	0.0228
Y2011F	0.47002	0.9607E-01	4.893	0.000	0.163	0.1449	0.0328
Y2011S	0.47017	0.9929E-01	4.735	0.000	0.158	0.1310	0.0264
P2	-0.53066E-05	0.3019E-05	-1.758	0.079	-0.059	-0.1187	-0.1369
PO	0.54504E-02	0.4175E-02	1.305	0.192	0.044	0.2635	0.0618
OLCOGP	-0.49662	0.5095	-0.9747	0.330	-0.033	-0.0194	-0.0005
OLLAMC	-0.27266	0.5003	-0.5450	0.586	-0.018	-0.0237	-0.0014
OLCOM	-1.0129	0.6180	-1.639	0.102	-0.055	-0.0395	-0.0011
OLCOP	1.4104	0.8491	1.661	0.097	0.056	0.0952	0.0044
OLRDC	0.38307E-01	0.5234	0.7319E-01	0.942	0.002	0.0015	0.0000
OLSMC	-0.62775E-01	0.4691	-0.1338	0.894	-0.005	-0.0073	-0.0006
OLMDOSR	-0.24023	0.5015	-0.4790	0.632	-0.016	-0.0162	-0.0008
OLCOSP	0.61158E-01	0.5053	0.1210	0.904	0.004	0.0048	0.0003
OLCOS	0.67637	0.5608	1.206	0.228	0.041	0.0264	0.0007
OLCOTH	0.18280E-01	0.5060	0.3613E-01	0.971	0.001	0.0014	0.0001
OLCOVR	-0.12817	0.4885	-0.2624	0.793	-0.009	-0.0087	-0.0004
OSPEC	0.71363E-01	0.5162	0.1382	0.890	0.005	0.0088	0.0007
OSPEC4	0.42922	0.5214	0.8232	0.411	0.028	0.0237	0.0009
OLMDOG	-0.47364	0.6812	-0.6953	0.487	-0.023	-0.0521	-0.0039
OLNSC	0.53089	0.5438	0.9763	0.329	0.033	0.0462	0.0028
OLMC	-0.57781	0.5857	-0.9866	0.324	-0.033	-0.0319	-0.0012
OLCONL	0.21856	0.6094	0.3587	0.720	0.012	0.0225	0.0016
OLLAKC	-0.32979	0.4616	-0.7144	0.475	-0.024	-0.0129	-0.0003
OC2	0.37681	0.3144	1.199	0.231	0.040	0.0463	0.0039
OC3	-0.36515	0.2470	-1.478	0.140	-0.050	-0.0511	-0.0049
OC4	-0.36223	0.2893	-1.252	0.211	-0.042	-0.0724	-0.0102
OC5	-0.42966	0.3748	-1.146	0.252	-0.039	-0.0528	-0.0045
0C6	0.24968	0.2456	1.017	0.310	0.034	0.0257	0.0018
OC7	-0.79665	0.3655	-2.179	0.030	-0.073	-0.0439	-0.0017
00	-0.58310	0.4035	-1.445	0.149	-0.049	-0.0228	-0.0006
OL	-0.79611E-01	0.1838	-0.4331	0.665	-0.015	-0.0158	-0.0013
OI	-0.58475E-01	0.1794	-0.3260	0.745	-0.011	-0.0072	-0.0006
CONSTANT							

test

test OLCOGP=0

test OLLAMC=0

test OLCOM=0

test OLCOP=0

test OLRDC=0

test OLSMC=0

test OLMDOSR=0

test OLCOSP=0

test OLCOS=0



test OLCOTH=0

test OLCOVR=0

test OSPEC=0

test OSPEC4=0

test OLMDOG=0

test OLNSC=0

test OLMC=0

test OLCONL=0

test OLLAKC=0

#### end

F STATISTIC	3.5499043
WITH 18 AND 880 D.F. P-VALUE	0.00000
WALD CHI-SQUARE STATISTIC	63.898277
WITH 18 D.F. P-VALUE	0.00000
UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY	0.28170

test

test oc2=0

test oc3=0

test oc4=0

test oc5=0

test oc6=0

test oc7=0

test oo=0

test oL=0

test oI=0

### end

F STATISTIC	2.6314907
WITH 9 AND 880 D.F. P-VALUE	0.00524
WALD CHI-SQUARE STATISTIC	23.683416
WITH 9 D.F. P-VALUE	0.00483
UPPER BOUND ON P-VALUE BY CHEBYCHEV INEQUALITY	0.38001
stop	

