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Trends in Surface Compensation 1997 – 2006

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1. Introduction and Summary of Results

The purpose of this study is to examine recent trends in surface compensation in Alberta and Saskatchewan. Specifically, the study quantifies the changes in compensation over the years 1997 to 2006. A year-by-year analysis was undertaken in all the 'heads of compensation' categories (Land Value, Loss of Use, etc.) specific to each jurisdiction. This study is an update of an analysis that was done in 2005.

The analysis focuses on three areas:

1. provide an analysis of any general trends in surface compensation in Alberta and Saskatchewan,
2. provide an analysis of trends in Alberta Surface Rights Board (SRB) decisions, and
3. provide benchmarking for specific companies against the general trends.

The overall findings of the analysis are:

- the rates of surface compensation have increased dramatically in Alberta but remain largely unchanged or declining slightly in Saskatchewan.
- in the last two years land values have increased in Alberta by 20-25%

- in Alberta:
  - all categories increased, with the most dramatic increase in the 'Land Value' category where the overall experience of well sites and pipelines is closely correlated with an 77-85% increase.
  - the majority of the increase took place between 2001 to 2006, while the rates changed very little from 1997 to 2000.
  - Oddly, rates in all categories dropped in 2004 with 'Loss of Use' taking a large 22% decline.
  - on a regional basis, the largest increases took place in the area south of Red Deer and the lowest rate of increase took place in the NW in the Grande Prairie and Peace River area.
  - see Appendix A for the Alberta details.

- In Saskatchewan:
  - the only category to increase significantly was 'Loss of Use' which increased only 17% during the period.
  - the regional variations presented no trend with some area increasing in some categories but declining in others.
  - see Appendix B for the Saskatchewan details.

- Alberta Surface Right Board (SRB) Decisions
  - although the sample is small the SRB data shows a consistent systemic upward bias in all categories except Adverse Effect.
  - awards for Land Value and General Disturbance are 20-40% higher than industry averages.
  - see Appendix C for the Alberta SRB details.

Figure 1

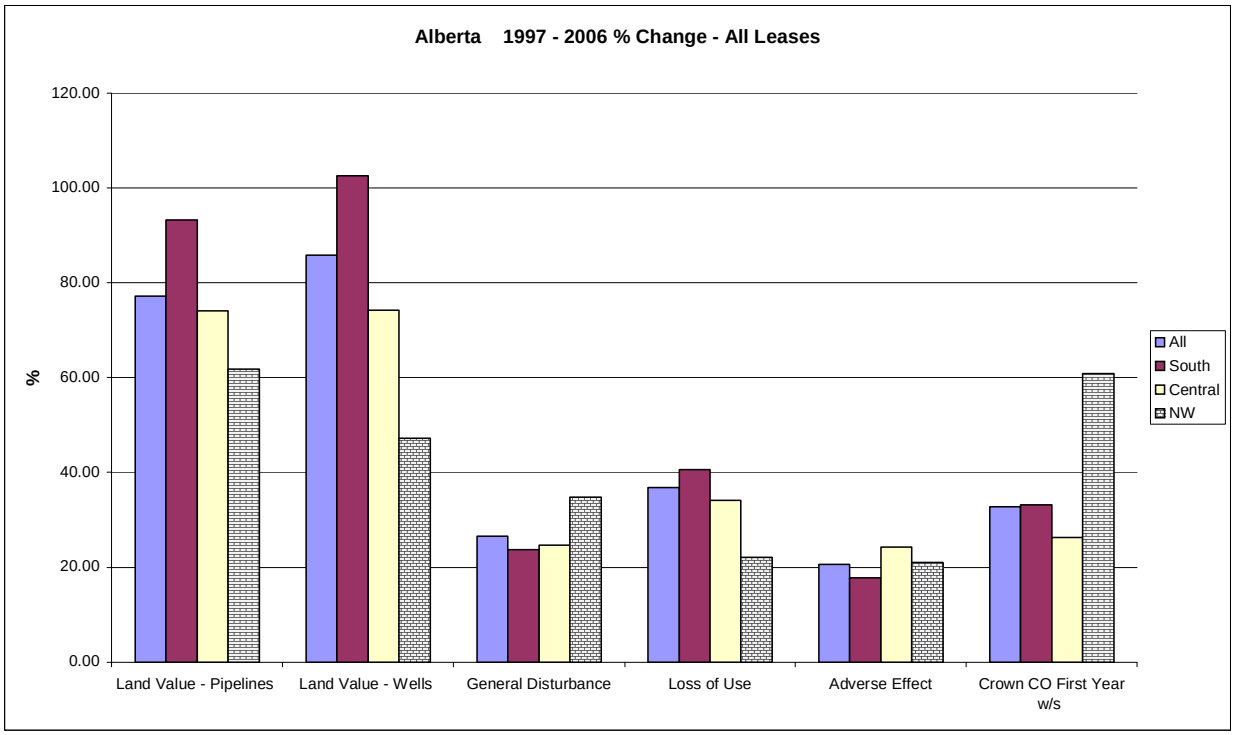
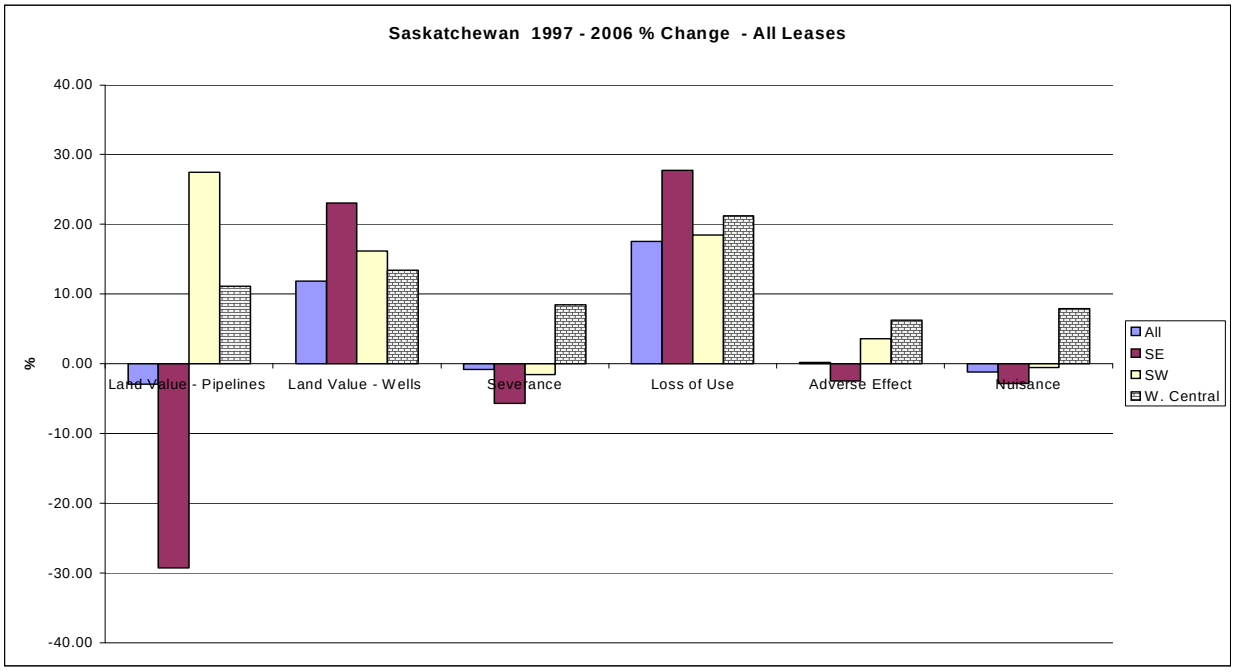


Figure 2



2. Methodology

The data source for this analysis is the Surface Land Compensation Database, which contains information on 26,000 Alberta surface leases and 7,000 Saskatchewan leases. The study covers the years 1997-2006. The data for the general trending includes only new takings while excluding rent reviews, amendments, and Surface Rights Board orders. For Alberta, the four standard categories: Land Value, General Disturbance, Loss of Use, and Adverse Effect are analysed. In Saskatchewan, the categories of Land Value (Capital Damage), Severance, Loss of Use, Adverse Effect, and, Nuisance and Inconvenience are analysed. An analysis of Land Value is done separately for well sites and pipelines. Also a separate analysis is provided for Alberta Crown Consent of Occupant payments.

The method of analysis was to break each province into areas so there is enough data to provide an unbiased data sample. Within each area, the data in each compensation category (eg Land Value) is averaged for each year and then a rate of change calculated on the differences between the year-to-year averages.

For Alberta, the province is broken into three areas:

(1) South comprised of everything south of Township 39;
(2) Central, everything between Township 38 and 68;
(3) Northwest, Township 68-90, Range 13-26, W5M, and Township 68-90, Range 1-13, W6M.

For Saskatchewan, the province is broken into three areas:

(1) Southeast comprised of Township 1-16, Range 30-34 W1M and Township 1-16, Range 1-16 W2M;
(2) Southwest, Township 1-21, Range 9-30 W3M;
(3) West Central, Township 27-53, Range 16-29 W3M.

3. Surface Compensation Trends

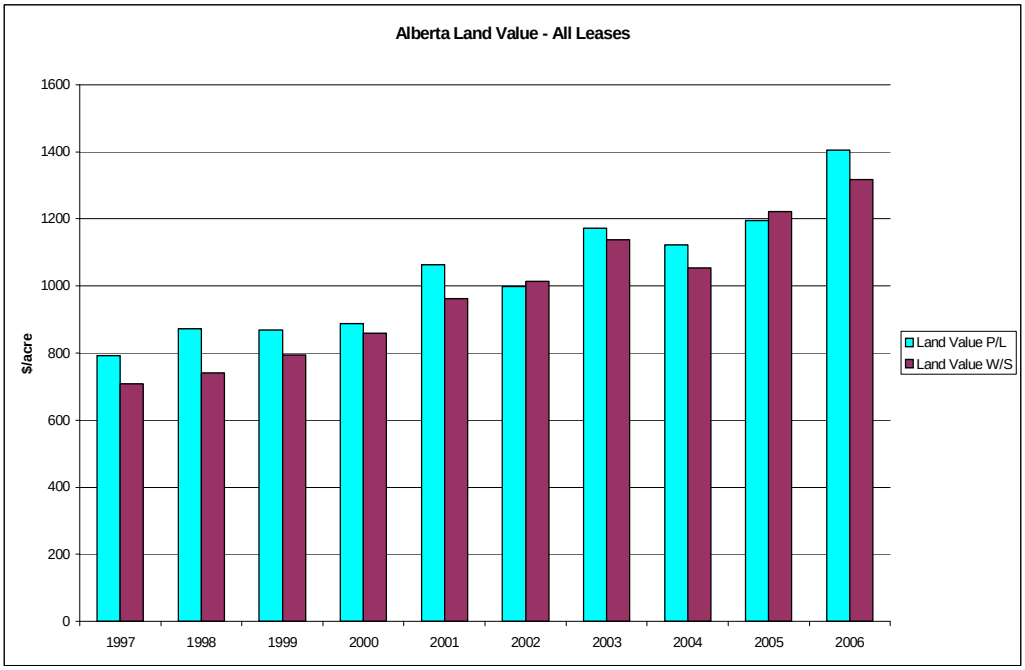
3.1 Alberta

None of the data exhibited a smooth trend but rather large changes were observed in various years. The discussion below provides comments on the observed changes in each compensation category. See Appendix A for all the detailed numbers.

3.1.1 Alberta Land Value - Pipelines

Land Value for pipelines in Alberta was the second fastest growing category at 77.22%. The only category to grow faster was Land Value for well sites at 85.86%. The majority of the increase took place between 2001 and 2006, with a small decline in 2004. The highest increase was in the South part of the province at 93.31%. Land Value is summarized in Figure 3.
Significantly, the average Land Value paid for pipelines is about 10% higher per acre than the average Land Value paid for well sites. This means that the pipelines have both the highest prices and the highest rates of increase. No doubt this can be explained by the global approach to handling pipeline

Figure 3

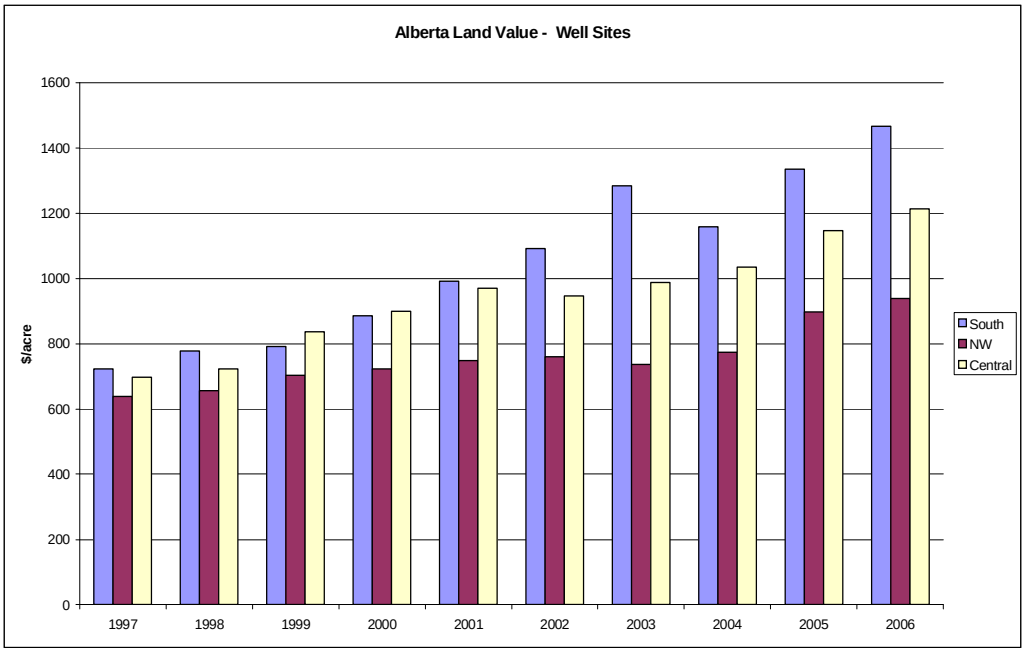


compensation versus the individual nature of well site negotiations. The global approach of offering the same Land Value along the entire length of the line is more likely to err on the side of higher values, a sort of “highest common denominator” approach.

3.1.2 Alberta Land Value - Well Sites

Land Value for well sites in Alberta was the fastest growing category at

Figure 4

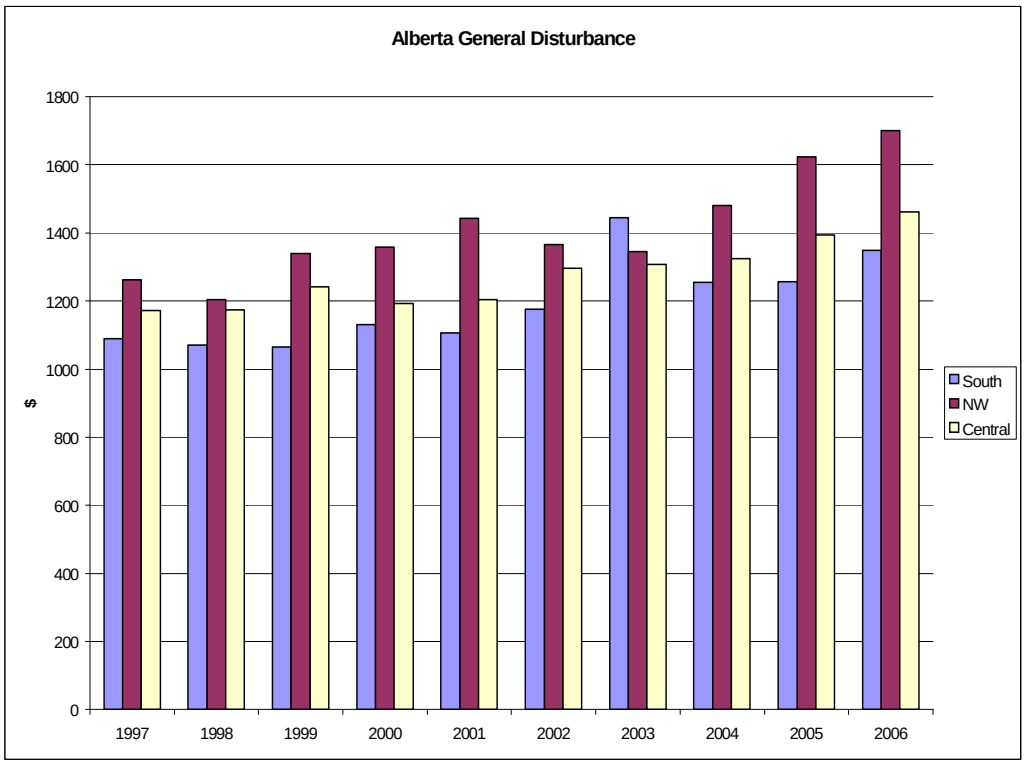


85.86%. Unlike Land Value for pipelines there is a steady increase starting in 1998 and continuing to 2003. The highest increase was in the South part of the province at 102.65%. In absolute terms the highest Land Values are in the South followed by Central and lastly the NW.

3.1.2 Alberta General Disturbance

General Disturbance had the second lowest change over the 10-year period at 26.61%. This increase is somewhat unexpected since nuisance, inconvenience and noise are more or less constant and not subject to market factors, as are land values. Similar to the other categories the highest increase took place in 2003 and the amounts fell off somewhat in 2004. Geographically, the highest amounts are in the NW and lowest in the South.

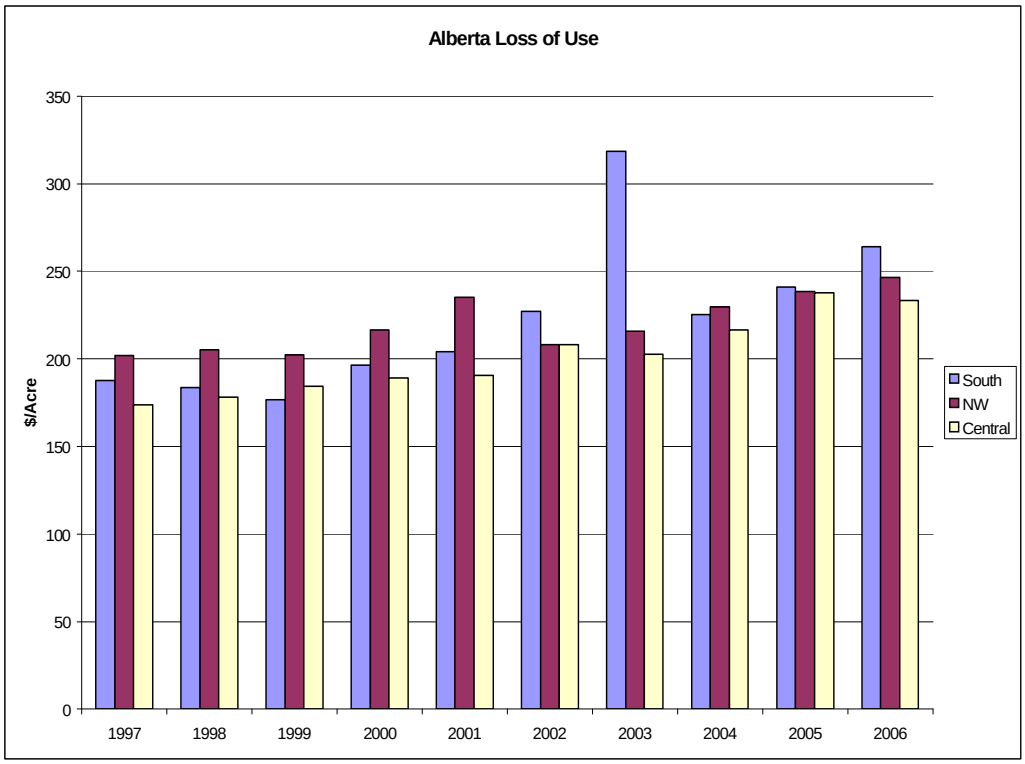
Figure 5



3.1.3 Alberta Loss of Use

Loss of Use increased 36.84% over the period although a remarkable 22.34% reduction took place in 2004. The lower increase in Loss of Use compared to Land Value is somewhat surprising since there should be a high correlation between agricultural real estate values and the value of production from agricultural lands. Geographically, the lowest Loss of Use is in the Central area with the highest rates in the NW. This somewhat surprising since the NW had the lowest Land Values. The Loss of Use data is summarized in Figure 6.

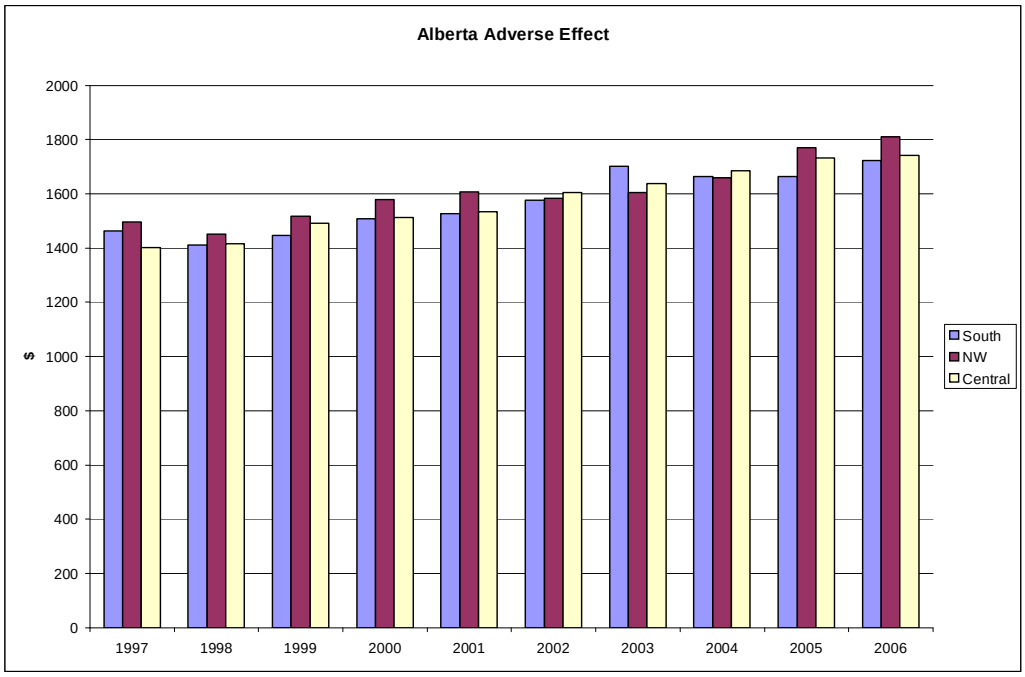
Figure 6



3.1.4 Alberta Adverse Effect

Adverse Effect increased 20.67% over the period, the lowest increase of all the categories and remains remarkably consistent across the province.

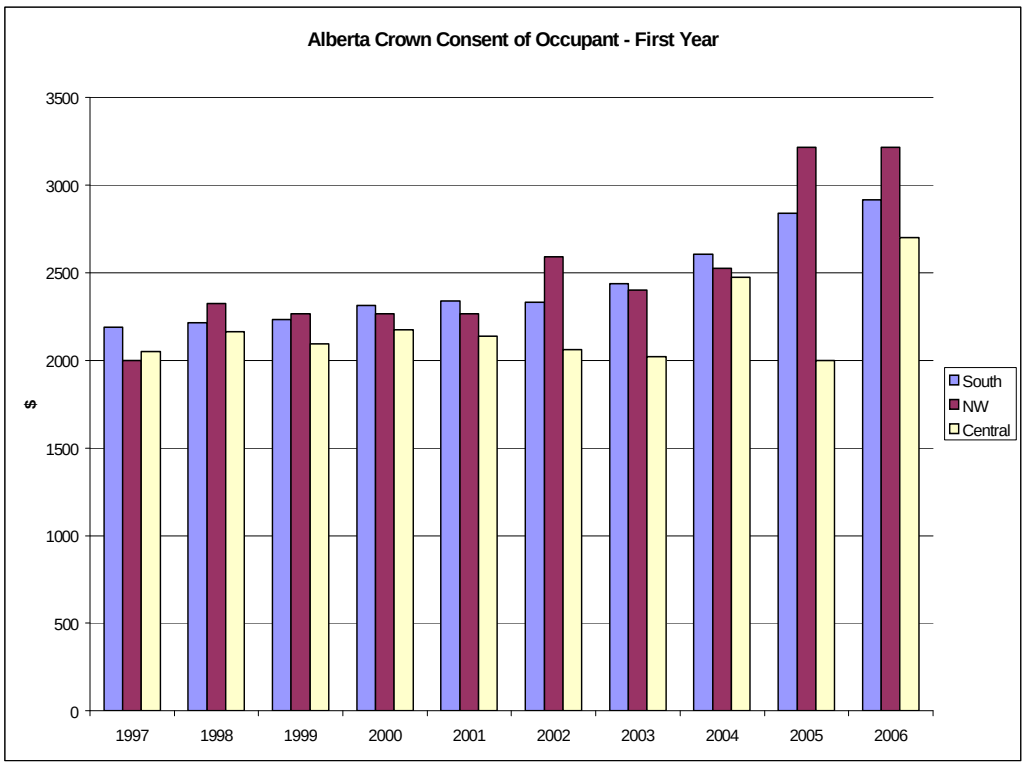
Figure 7



3.1.5 Alberta Crown CO First Year – Well sites

Data was also analyzed for Crown Consent of Occupant (CO) payments. First year payments on well sites is summarized in Figure 8. Overall, first year CO payments increased 32.87% and the data shows a slow but steady increase until 2004. Then there was high growth in the South and NW and a drop and recovery in Central. The highest absolute payments are in the NW.

Figure 8



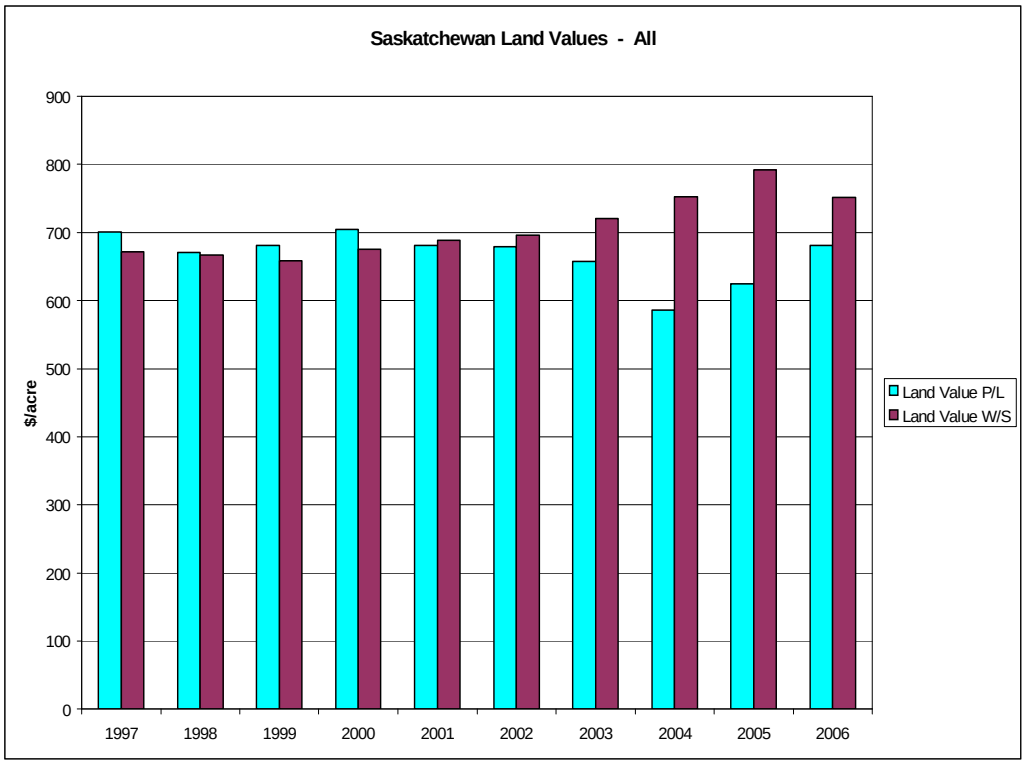
3.2 Saskatchewan

Overall, compensation has changed very little in Saskatchewan. The only exception in the 2005 study was Loss of Use but it has now decreased 10.22% in 2006. The categories of Severance, Adverse Effect, and Nuisance barely changed at all. The detailed numbers can be found in Appendix B.

3.2.1 Saskatchewan Land Values

Land Values have remained relatively constant except for the last few years where pipeline values have been decreasing and well site values have increased. This is completely the opposite result than was observed in Alberta. These values are summarized in Figure 9.

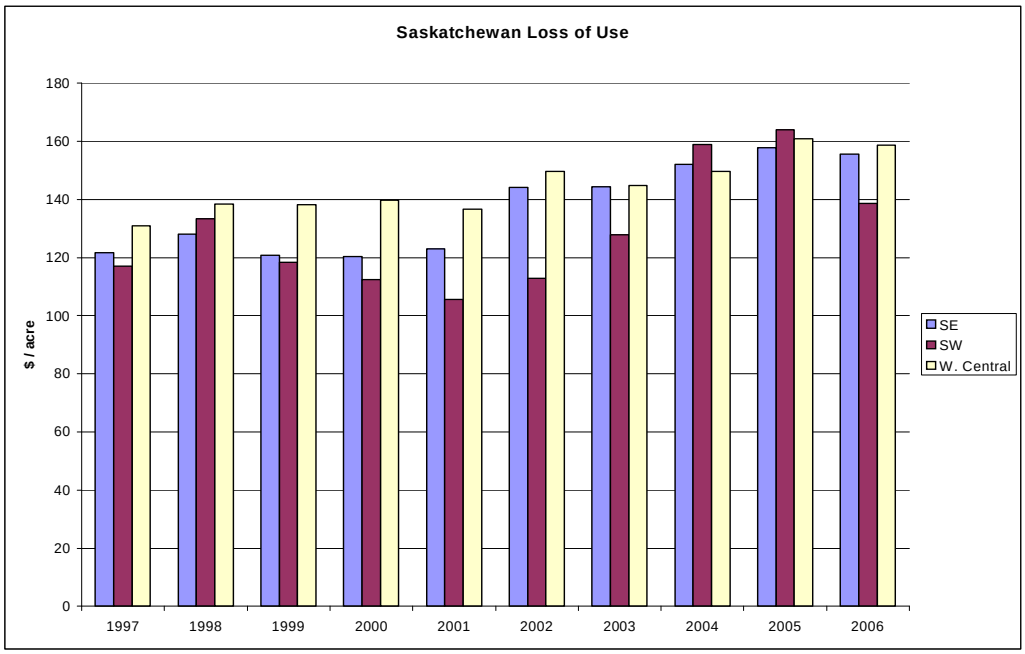
Figure 9



3.2.2 Saskatchewan Loss of Use

Loss of Use showed the lowest rates of growth in the SW area and the highest growth rates in the SE.

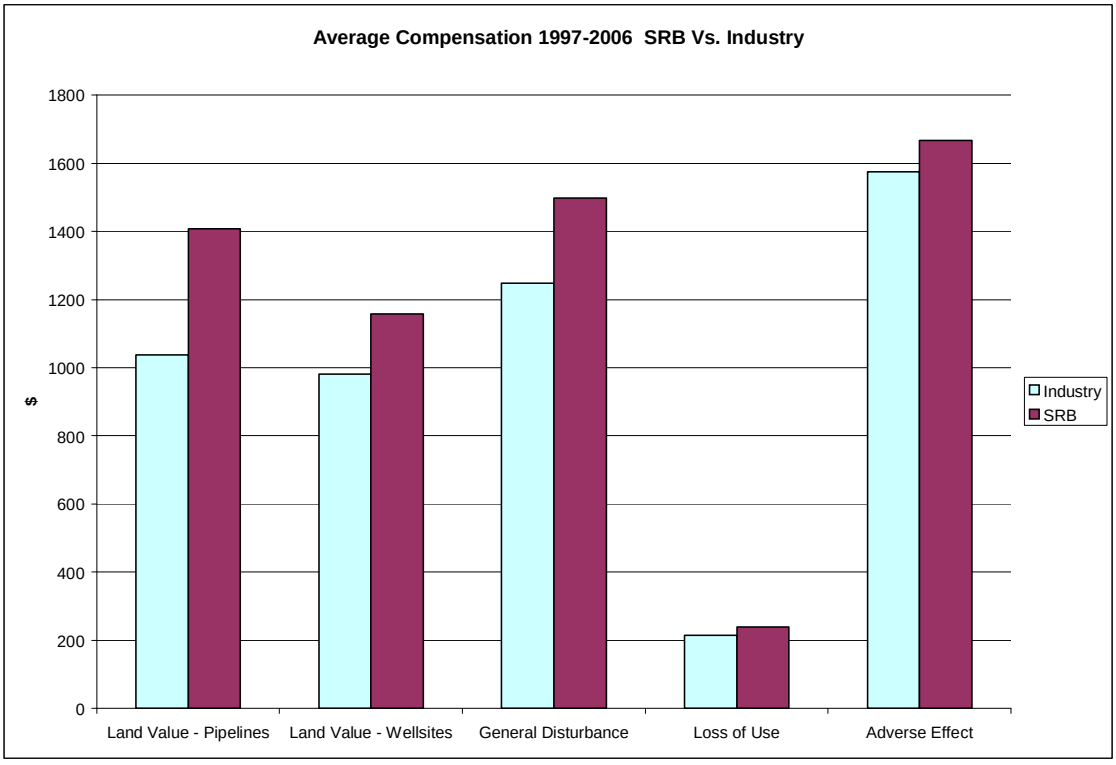
Figure 10



4. Trends in Surface Rights Board (SRB) Decisions

Because of the small number (30-50 per year) of SRB decisions, trend analysis is not very enlightening as the numbers vary widely year to year. Also the Board does not always fix compensation in each compensation 'head' so the data tends to be very sparse. Nonetheless, it is clear that in every category the SRB decisions are in excess of the industry averages. (See Appendix C for the detailed % change numbers over the period. These numbers are directly comparable to those in Appendix A and B.) Figure 11 shows the extent that the SRB decisions were above industry averages for the entire period. From a low of 6.32% for Adverse Effect to a high of 36.58% for Land Value - pipelines.

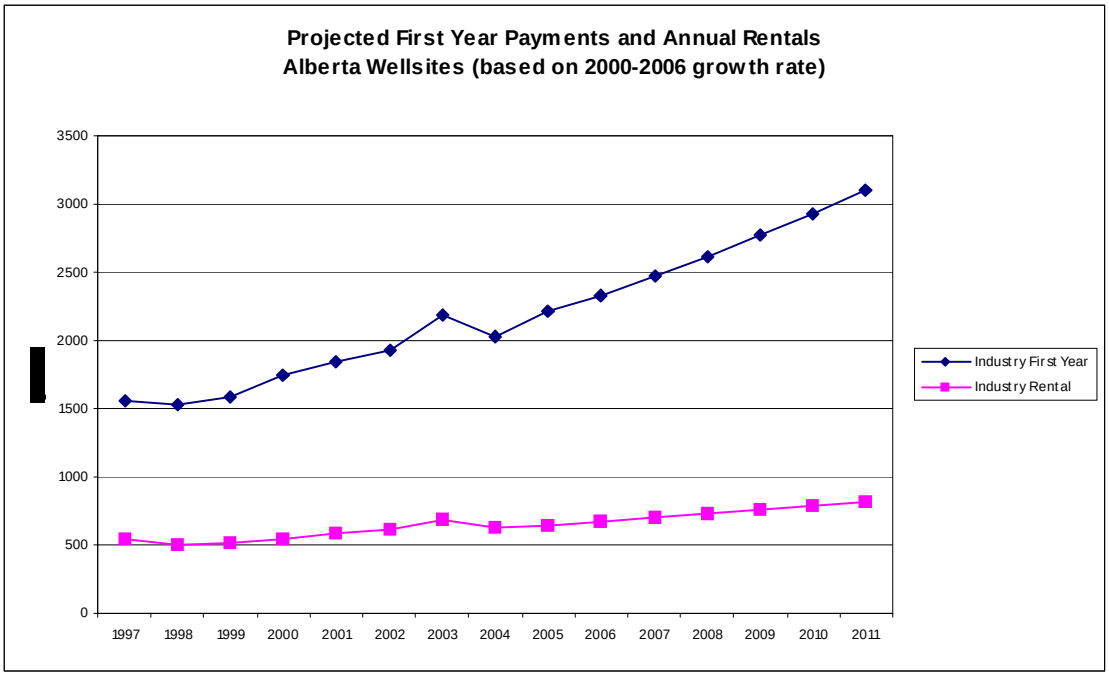
Figure 11



5. Average Growth Rates

To summarize all of the findings and provide a simple method to project surface costs into the future, the average annual growth rate was calculated for Alberta wellsites for the period 2000-2006. For First Year payments (per acre) the average annual growth rate was 5.89% while the growth rate for Rentals (per acre) was 4.02%. In 2006 the per acre First Year payment was $2333 which will increase to 3106 by 2011. See Figure 12 for a graphical representation.

Figure 12



6. Supporting Excel Spreadsheets

The following files contain all the supporting data for study:

AB Summary.xls – Alberta % changes and year to year in each compensation category
AB CO.xls – raw data for Alberta consent of occupant
AB PL.xls – raw data for Alberta pipelines
AB WS.xls – raw data for Alberta well sites
AB SRB.xls – raw data for Alberta SRB Decisions
SK Summary.xls – Saskatchewan % changes and year to year
SK PL.xls – raw data for Saskatchewan pipelines
SK WS.xls – raw data for Saskatchewan well sites

Appendix A - Alberta Summary

Summary 1997-2006 % Change - All Leases

	All	South	Central	NW
Leases Pipelines	8547	4155	2979	1396
Leases Well Sites	9982	5498	3407	1085
Leases Crown CO	1218	1087	105	24

	All	South	Central	NW
Land Value - Pipelines	77.22	93.31	74.19	61.87
Land Value - Wells	85.86	102.65	74.27	47.23
General Disturbance	26.61	23.73	24.72	34.80
Loss of Use	36.84	40.59	34.12	22.05
Adverse Effect	20.67	17.79	24.31	21.10
Crown CO First Year w/s	32.87	33.22	26.28	60.85

Summary of Year to Year % Changes - All Areas

	Land Value Pipelines	Land Value Well Sites	General Disturbance	Loss of Use	Adverse Effect	Crown CO w/s First Year
1998	10.13	4.18	0.51	-0.15	-1.79	1.13
1999	-0.51	6.75	1.01	-0.62	3.45	1.01
2000	2.22	7.69	4.02	7.88	3.65	2.80
2001	19.78	10.70	-2.26	2.71	0.84	1.16
2002	-6.02	5.00	5.42	7.52	3.18	1.50
2003	17.32	10.88	11.57	19.77	5.19	3.43
2004	-4.27	-7.83	-5.94	-22.34	-0.19	7.27
2005	6.51	13.71	2.01	6.80	1.87	6.43
2006	17.51	7.28	5.89	4.35	2.20	4.37
	77.22	**85.86**	**26.61**	**36.84**	**20.67**	**32.87**

Appendix B - Saskatchewan Summary

Summary 1997-2006 % Change - All Leases

	All	SE	SW	W. Central
Leases Pipelines	1614	399	740	457
Leases Well Sites	4086	373	2147	1139

	All	SE	SW	W. Central
Land Value - Pipelines	-2.92	-29.30	27.50	11.16
Land Value - Wells	11.90	23.02	16.22	13.38
Severance	-0.82	-5.67	-1.49	8.43
Loss of Use	17.55	27.77	18.49	21.26
Adverse Effect	0.18	-2.45	3.61	6.29
Nuisance	-1.16	-2.86	-0.51	7.87

Summary of Year to Year % Changes - All Areas

	Land Value Pipelines	Land Value Well Sites	Severance	Loss of Use	Adverse Effect	Nuisance
1998	-4.26	-0.78	1.48	6.89	0.05	-0.73
1999	1.43	-1.20	-5.67	-8.67	-4.75	-6.72
2000	3.50	2.42	1.95	-0.26	4.12	3.45
2001	-3.40	2.00	-1.84	-5.05	-1.62	-1.70
2002	-0.18	0.83	1.07	6.18	-0.01	0.87
2003	-3.18	3.61	2.10	8.83	3.99	4.90
2004	-10.90	4.29	1.56	11.81	-0.77	-0.26
2005	6.61	4.92	2.65	3.99	4.15	7.47
2006	8.91	-5.33	-4.51	-10.22	-5.51	-9.58
	-2.92	**11.90**	**-0.82**	**17.55**	**0.18**	**-1.16**

Appendix C - Surface Rights Board Summary

Summary of Year to Year % Changes SRB Decisions

	Decisions Pipelines	Decisions Well sites	Land Value Pipelines	Land Value Well Sites	General Disturbance	Loss of Use	Adverse Effect
1997	20	10					
1998	4	4	10.38	25.45	-13.41	-51.50	-9.33
1999	8	5	-10.12	-10.59	18.27	25.88	2.60
2000	9	7	28.33	38.81	4.96	9.61	6.53
2001	10	6	0.11	-36.00	-18.92	-11.19	-12.02
2002	11	11	150.72	-9.25	-10.74	-18.27	8.30
2003	1	3	-58.88	44.33	10.09	11.59	-10.54
2004	4	3	-21.33	27.03	37.46	22.81	34.13
2005	9	6	85.31	-38.30	5.51	27.57	-36.02
2006	18	6	-11.42	39.66	3.67	10.13	56.76
	94	61	**69.69**	**42.86**	**28.76**	**-6.47**	**13.66**