National Energy Board | Office national de l'énergie

Short-term Canadian Natural Gas Deliverability

2006–2008

Appendices

AN ENERGY MARKET ASSESSMENT OCTOBER 2006

Canada

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Appendix A.1

Components of Canadian Rig Fleet

The primary data source used to determine the capabilities of the Canadian drilling industry is the Rig Locator report published by Nickle's Energy Group. The Rig Locator report provides a weekly summary of activity for Canada's drilling rig fleet. For each member of the Canadian Association of Oilwell Drilling Contractors (CAODC), the weekly Rig Locator report lists all drilling rigs, and shows information for each rig including where the rig is located, the activity status of each rig, the depth capacity of the rig, and other information.

Using the Rig Locator report, the historic geographic distribution of the Canadian rig fleet was reviewed, resulting in the division of the Canadian fleet into 5 sub-groups as follows:

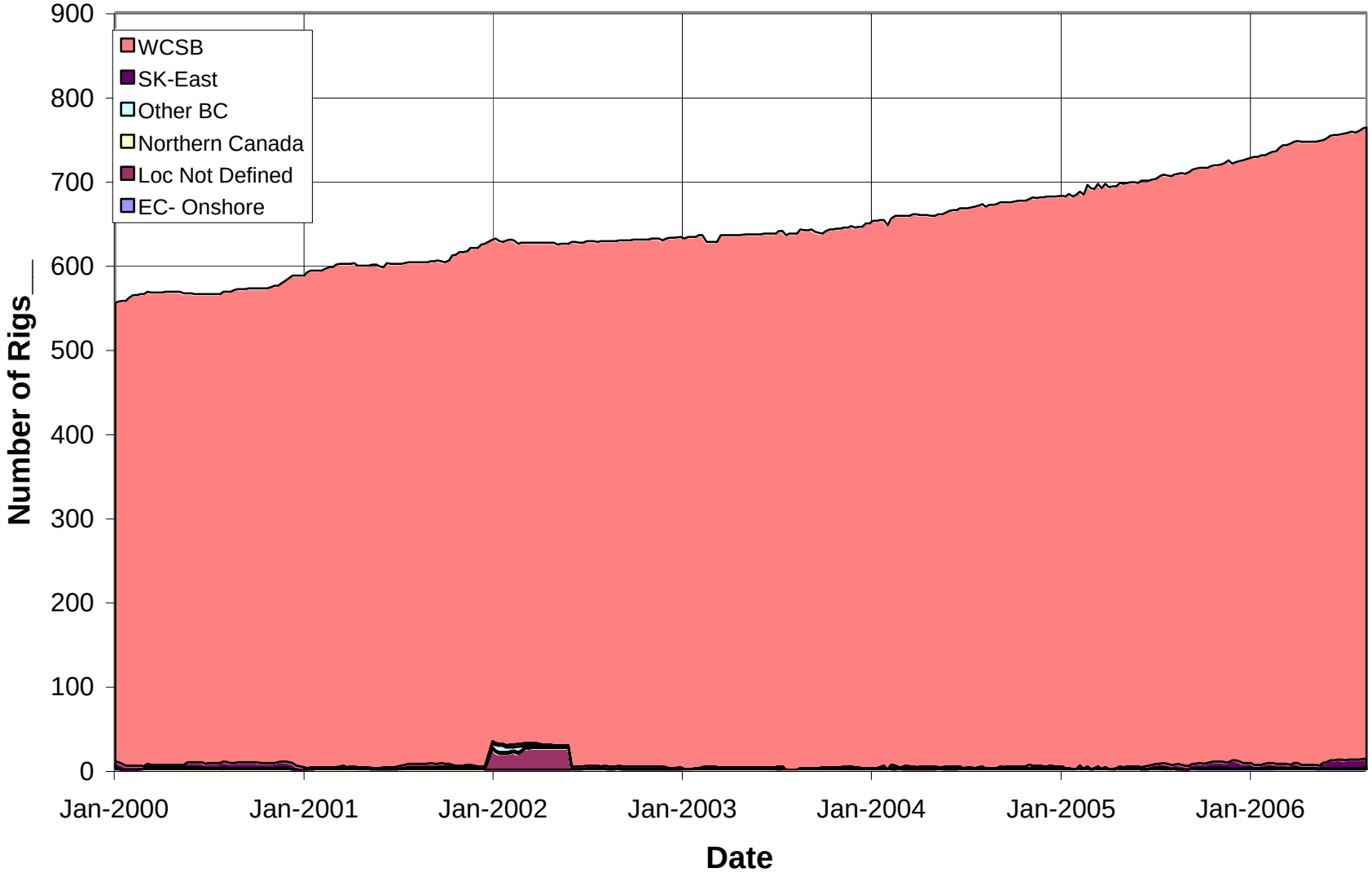
- East Coast Offshore Rigs
- Eastern Canada Onshore Rigs
- Northern Canada Rigs—rigs predominantly involved in the exploration of oil and gas north of Fort Simpson, NWT.
- Eastern Saskatchewan Rigs- rigs that operate predominantly in the Eastern Saskatchewan Area, which is an area heavily dominated by oil.
- WCSB Rig Fleet- rigs that operate predominantly in Alberta, BC, the western half of Saskatchewan, and those portions of the Yukon and Northwest Territories south of Fort Simpson (where some commercial gas production occurs).

The above categorization of the Canadian Rig Fleet allows focus on the WCSB Rig Fleet, which is the portion of the total Canadian Fleet which will affect short term gas Canadian deliverability through the drilling of gas wells in the WCSB. The Eastern Saskatchewan rig fleet works predominantly in the south eastern Saskatchewan which has practically no history of gas wells, and so it is categorized separately from the WCSB Rig Fleet. This study presumes that the Eastern Saskatchewan rig fleet will not be involved in the drilling of gas wells in the WCSB.

This Appendix A.1 contains charts showing the location of the rigs comprising each of the rig groupings listed above, validating the division of the Canadian Fleet into these geographic categories. The charts show that the rigs in the Canadian Rig Fleet predominantly work in the geographic areas into which they are categorized.

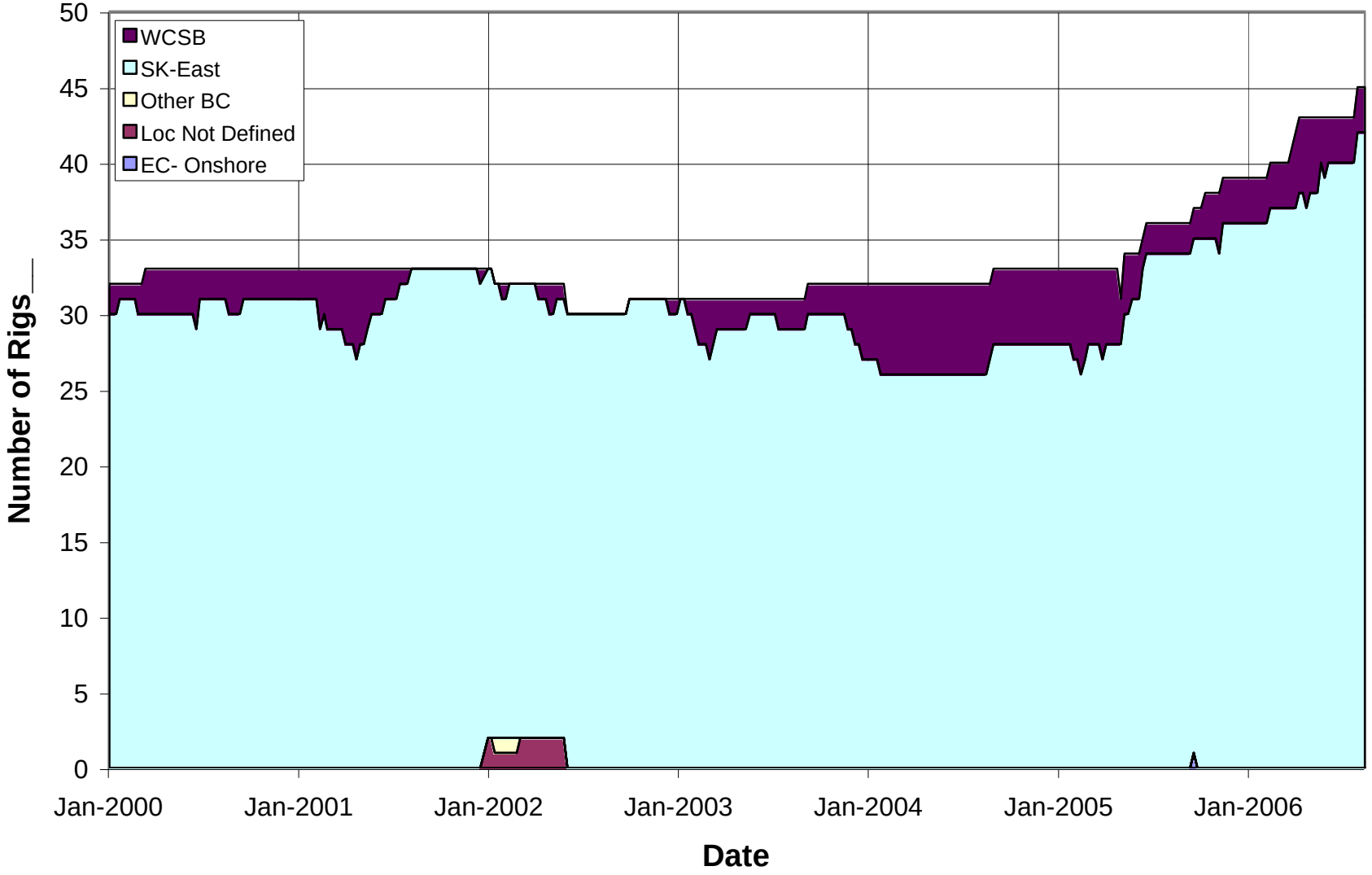
Appendix A.1.a - 2006 Short-term Gas Deliverability EMA- Weekly Rig Location (General Area)

Rig Grouping: WCSB Rigs



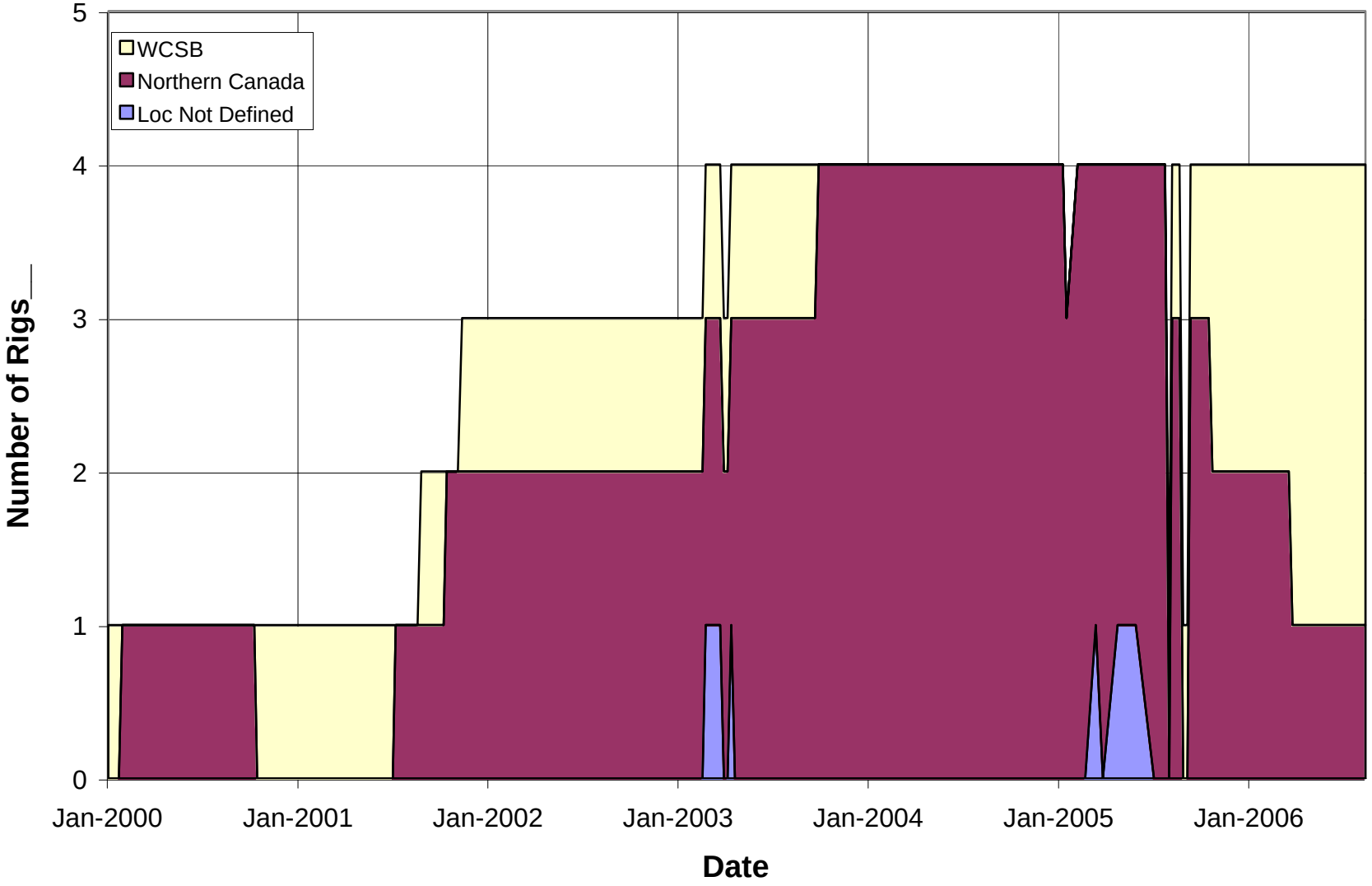
Appendix A.1.b - 2006 Short-term Gas Deliverability EMA- Weekly Rig Location (General Area)

Rig Grouping: Eastern Saskatchewan Rigs



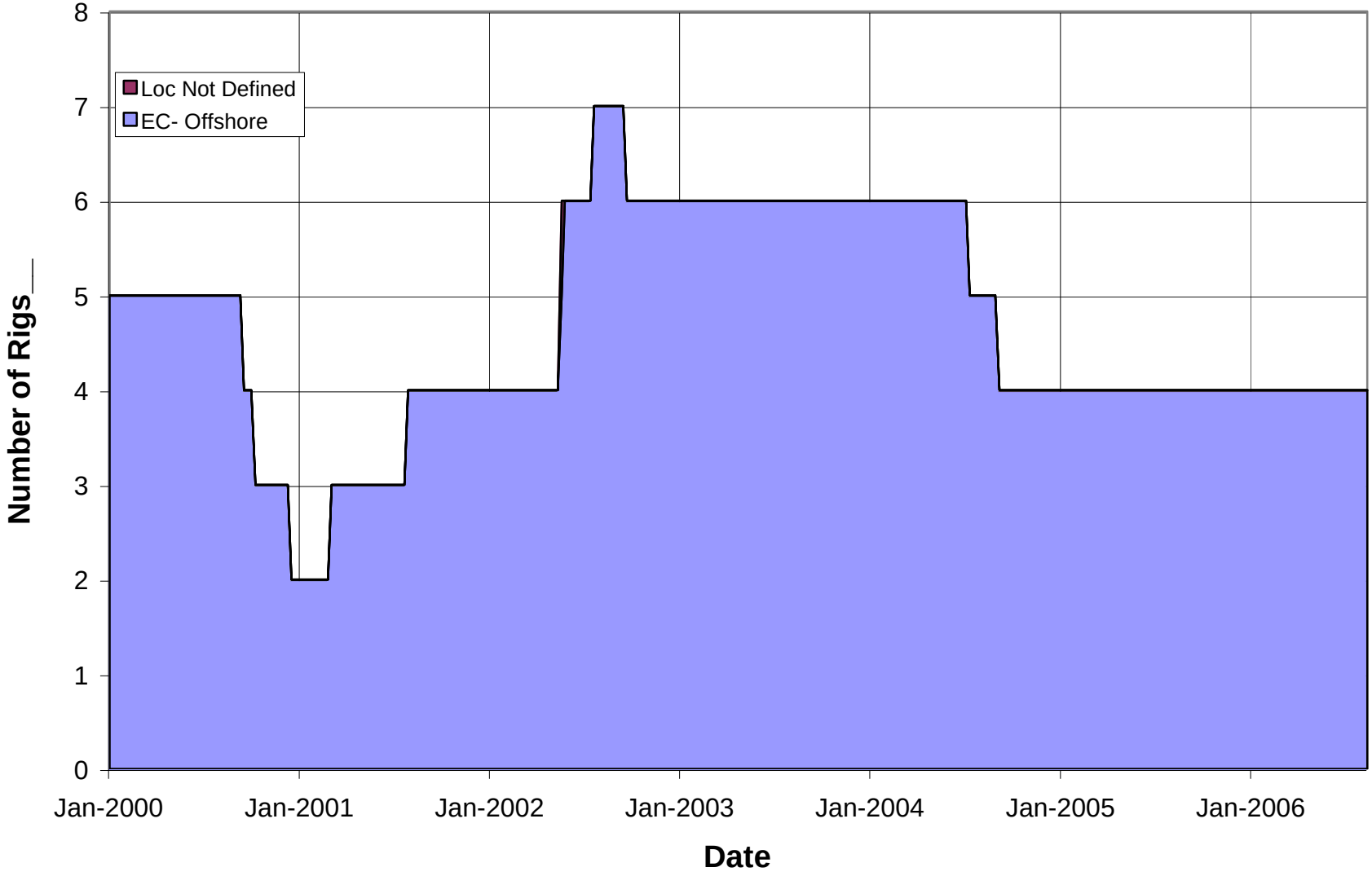
Appendix A.1.c - 2006 Short-term Gas Deliverability EMA- Weekly Rig Location (General Area)

Rig Grouping: Northern Canada



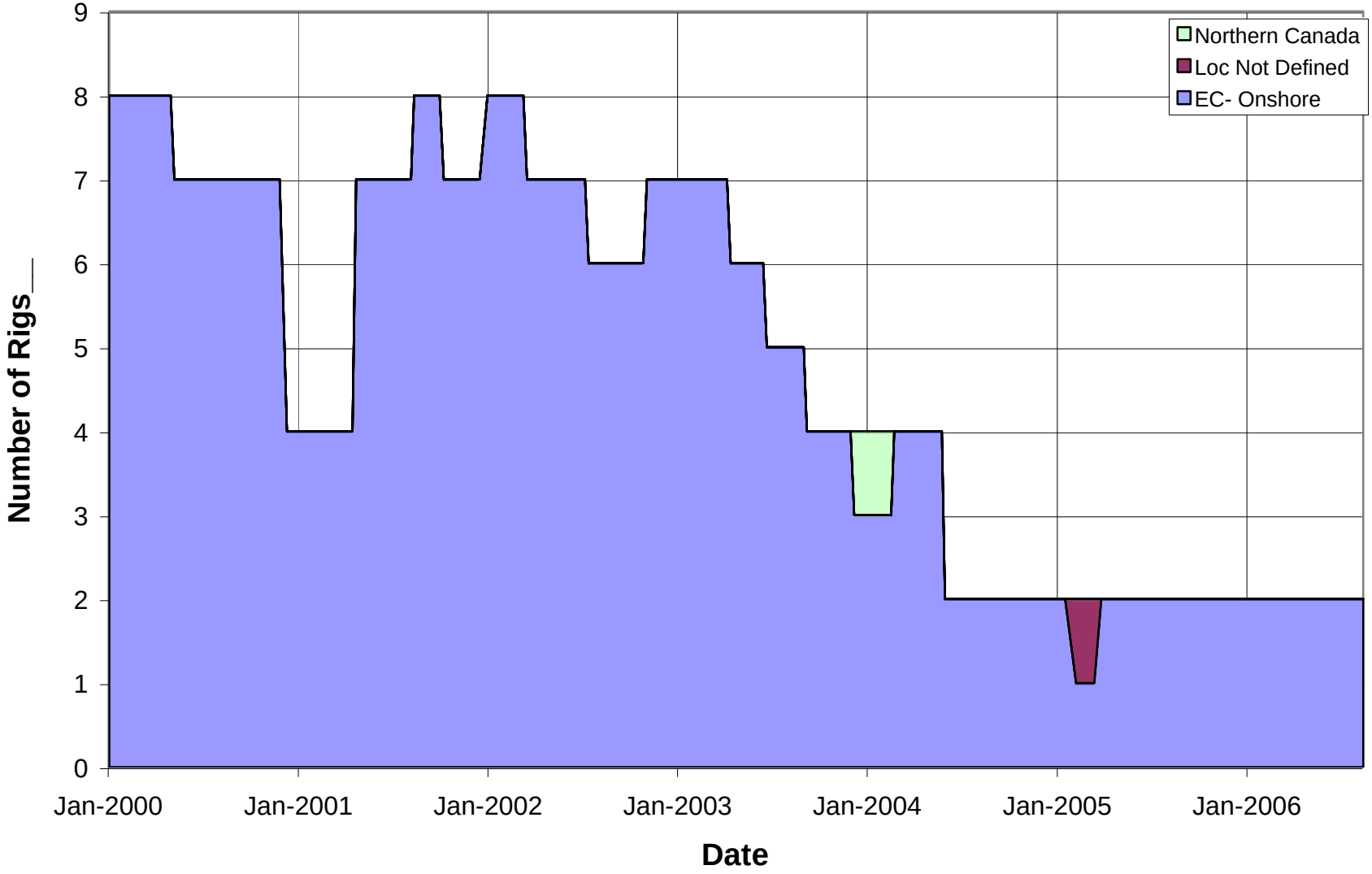
Appendix A.1.d - 2006 Short-term Gas Deliverability EMA- Weekly Rig Location (General Area)

Rig Grouping: East Coast Offshore



Appendix A.1.e - 2006 Short-term Gas Deliverability EMA- Weekly Rig Location (General Area)

Rig Grouping: Eastern Canada Onshore



Appendix A.2

WCSB Rig Fleet- Historical and Project Rig Fleet Growth by Rig Category

The rigs comprising the WCSB Rig Fleet were identified as described in Appendix A.1. In this Appendix A.2, the WCSB Rig Fleet is categorized on the basis of depth capacity into Shallow, Medium and Deep rigs. The Rig Locator Report provides the depth capacity for each rig. The criteria for each rig category is as follows:

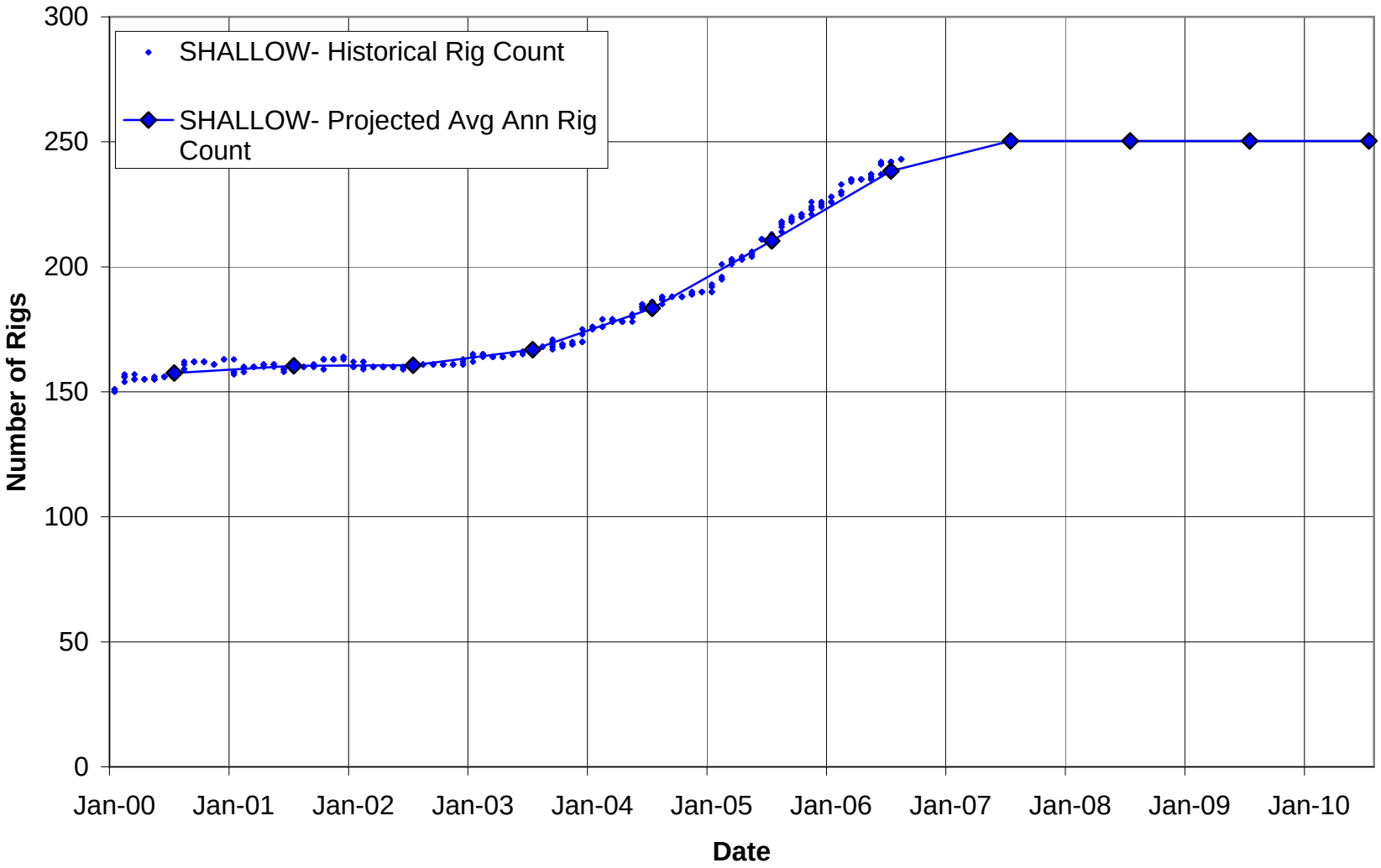
Depth capacity, m	Rig Category
<= 1,850	Shallow
> 1,850 and <= 3,050	Medium
>3050	Deep

The weekly Rig Locator reports were used to provide rig counts of the WCSB rig fleet over the period January 2000 to August 2006. After splitting the historical data into the categories of Shallow, Medium and Deep, the historical trends in growth for each category of rig were reviewed to develop a projection of fleet rig count in each category. In addition, organizations representing the drilling and producing industries were consulted to obtain insights on growth of the WCSB rig fleet. This analysis resulted in a projection of rig fleet size in each category for 2006 thru to 2008.

The charts in this Appendix A.2 show the historical and projected number of rigs in each rig category for the WCSB rig fleet. The projected size of the each rig category of the WCSB rig fleet is used in assessing the number of rig days that will be available to the industry during the projection period.

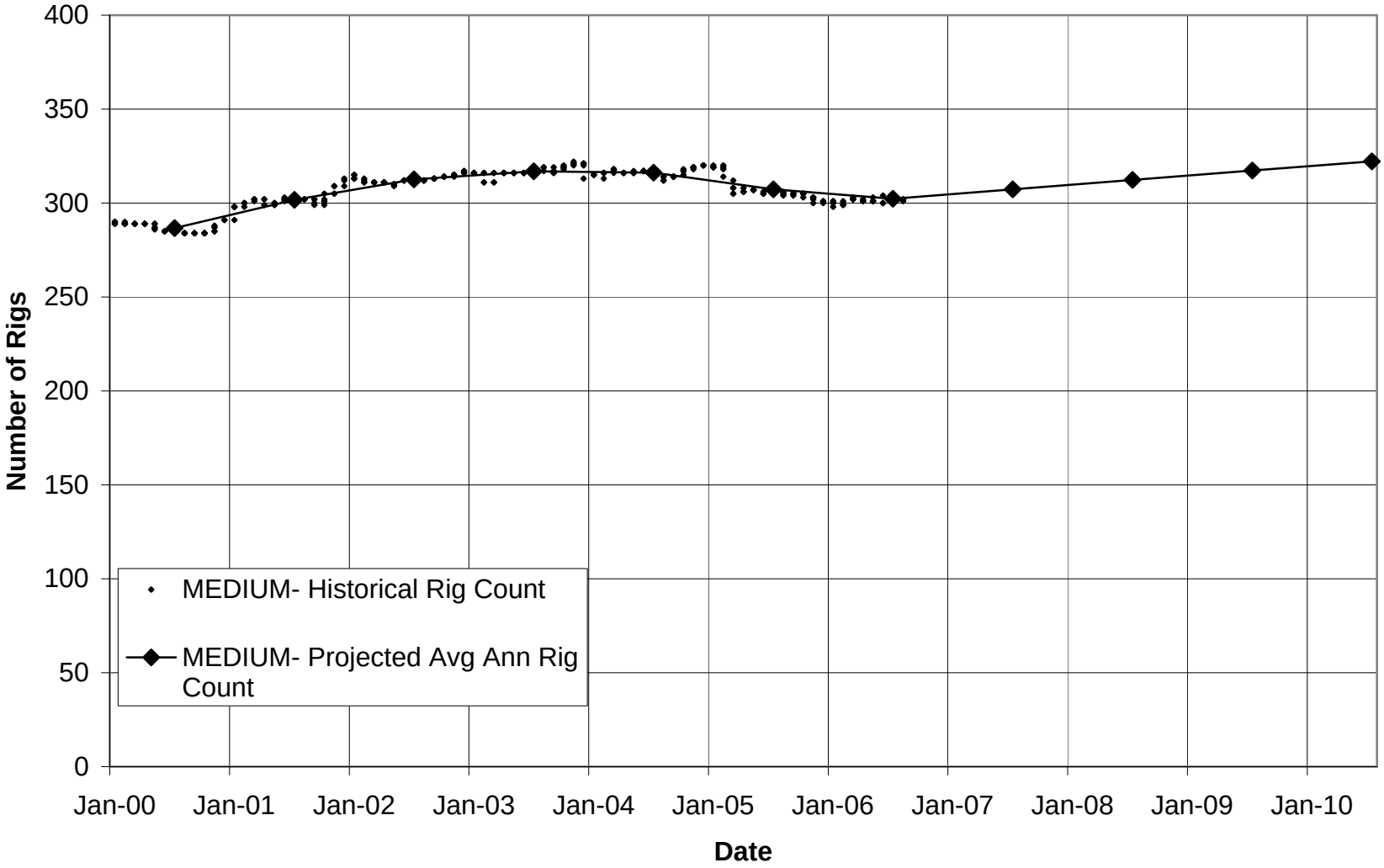
Appendix A.2.a: 2006 Short-term Gas Deliv EMA- Historical and Projected WCSB Rig Fleet Growth

RigCategory: SHALLOW



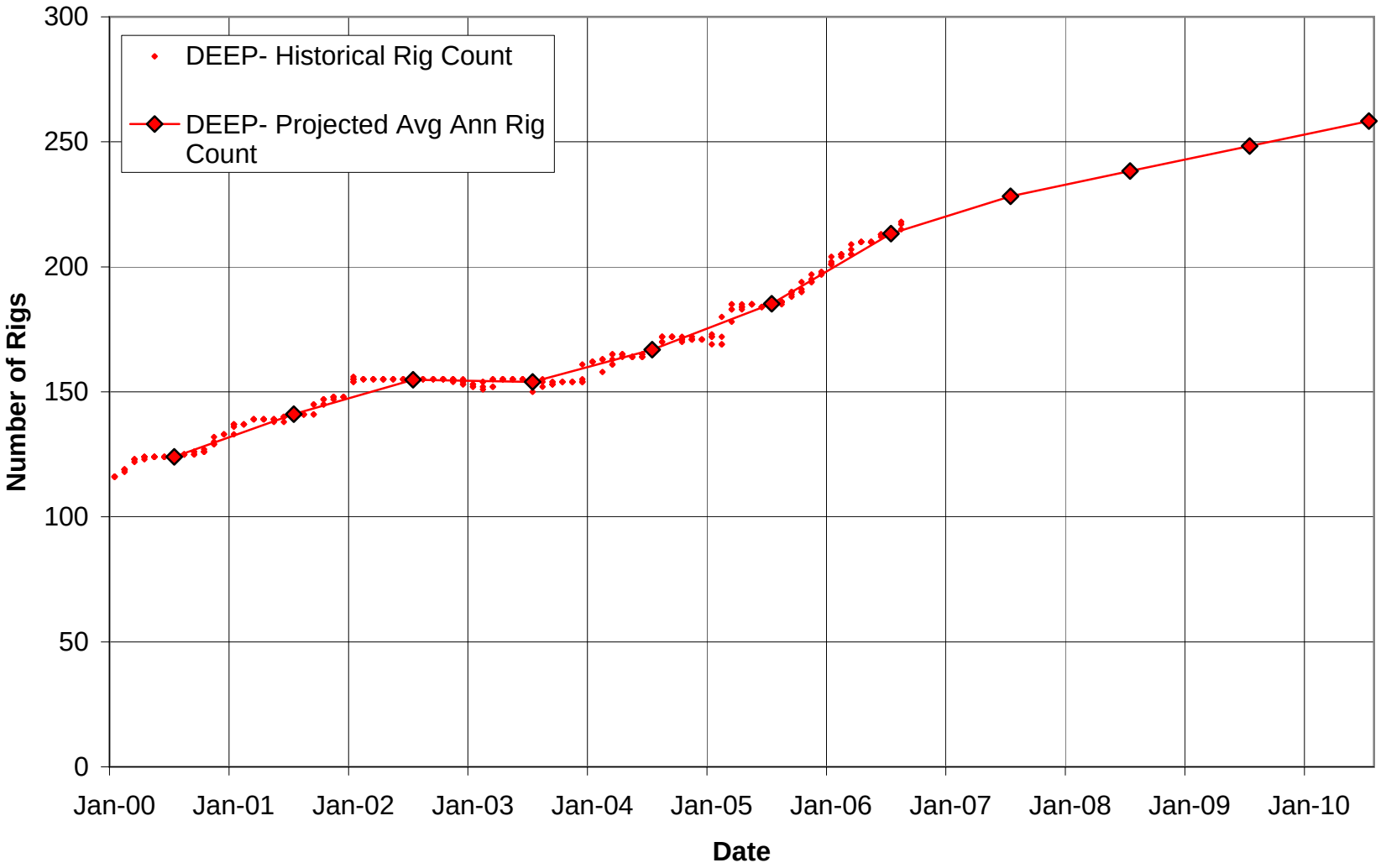
Appendix A.2.b: 2006 Short-term Gas Deliv EMA- Historical and Projected WCSB Rig Fleet Growth

RigCategory: MEDIUM



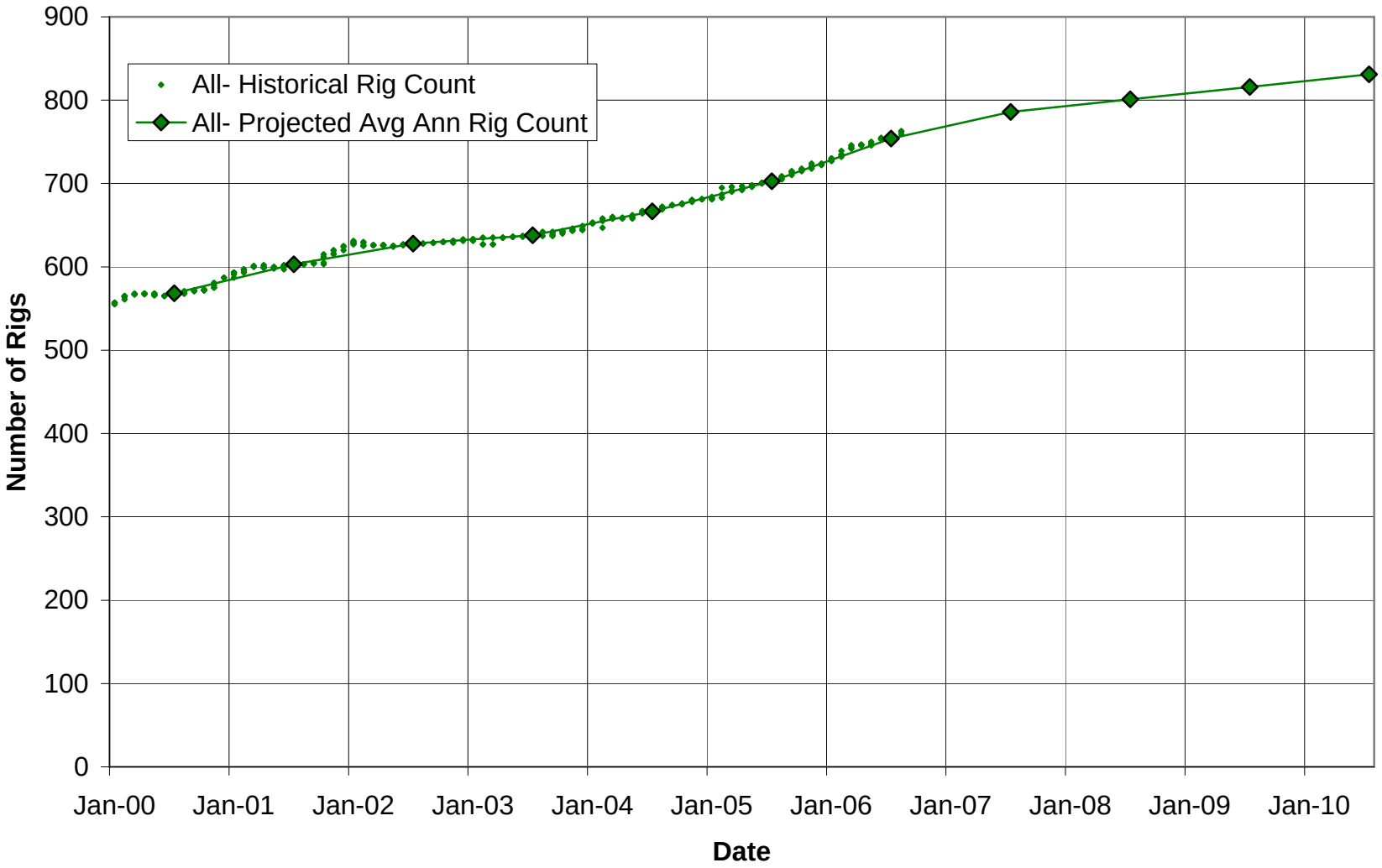
Appendix A.2.c: 2006 Short-term Gas Deliv EMA- Historical and Projected WCSB Rig Fleet Growth

RigCategory: DEEP



Appendix A.2.d: 2006 Short-term Gas Deliv EMA- Historical and Projected WCSB Rig Fleet Growth

RigCategory: ALL



Appendix A.3

WCSB Rig Fleet – Allocation of Rig Days to Study Areas

The charts presented in Appendix A.2 provide the projected size of the WCSB Rig Fleet in each of the 3 rig categories for the projection period. In this Appendix A.3, the historical trends for each of the 3 drilling rig categories were examined to determine the number of ***rig days*** for each study area. The annual rig days in each rig category are allocated to the study areas on the basis of the NEB's analysis of recent trends for the location of rigs (as per Nickle's Rig Locator report).

The determination of rig days in each Rig Category for each Study Area is done in two steps. An initial step where rig days in each rig category were allocated to one of three main areas (North, South, & West), and a second step where the rig days for each main area (N, S, & W) were allocated to the Study Areas comprising the main area.

The North, South and West areas are comprised of the following Study Areas:

- North—comprised of Study Areas: Alberta - Northeast and Northwest, B.C.- Fort St. John and Fort Nelson.
- South—comprised of Study Areas: Alberta - Southeast, East Central and Central, Saskatchewan - Central and Southwest
- West—comprised of Study Areas: Alberta - Foothills and Foothills Front, and B.C. - Foothills.

The analysis of the data at the North/South/West area levels was appropriate because there were discernable trends in the historical rig location data at this level. Based on the historical trends for rig location to the 3 main geographic areas, the future allocation of rig days to each of the 3 main areas (N, S & W) was projected. The historical data showing the weekly rig count for each of the 3 different rig categories located in the main geographic areas of North, South and West is shown in Appendix A.3.a.

The historical and projected annual rig days for each rig category and each Study Area are shown in the tables of Appendix A.3.b. The tables show the two step allocation of rig days to the Study Areas:

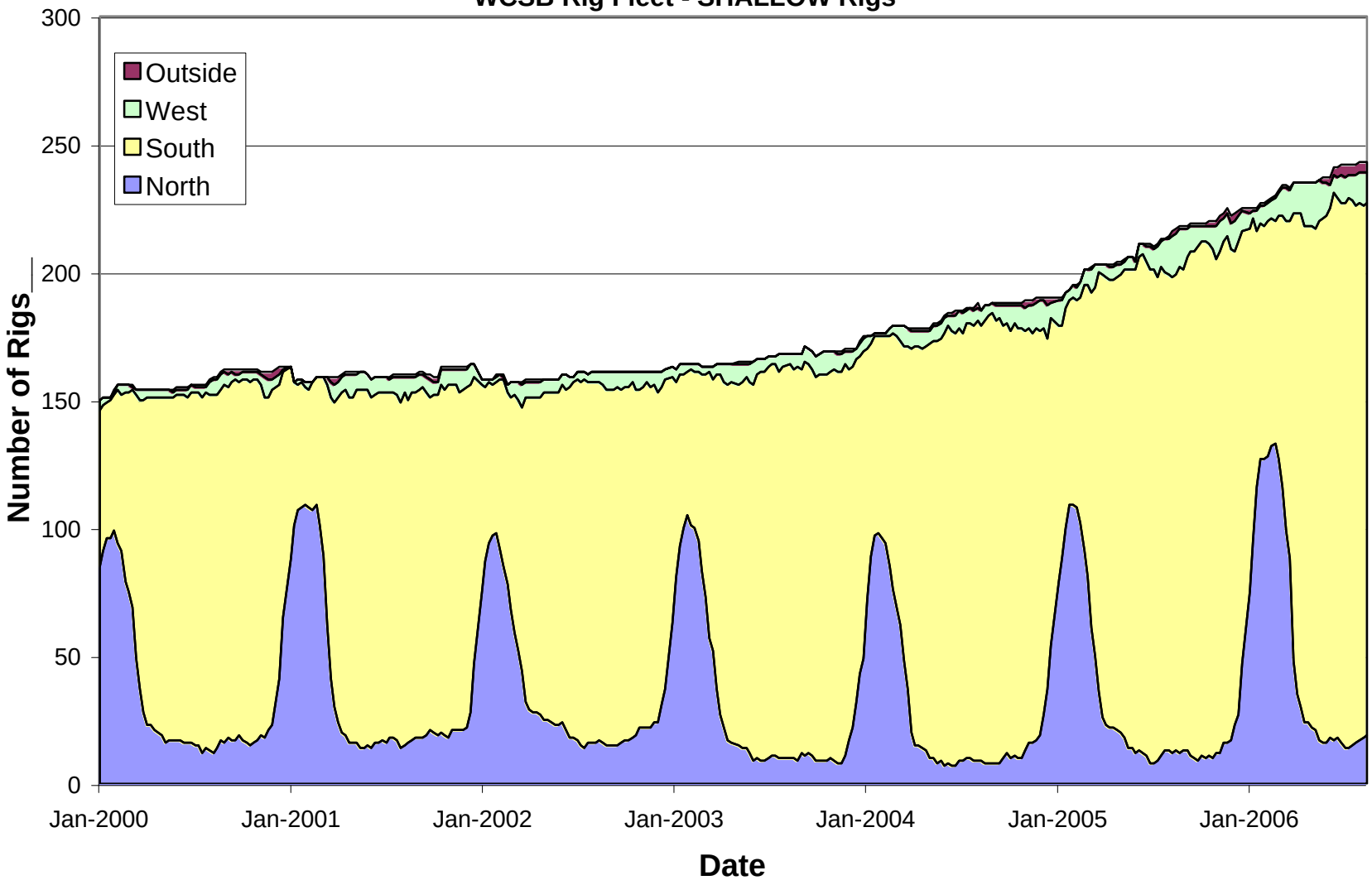
1. the allocation of rig days to the 3 main geographic areas (N, S & W), and
2. the allocation of rig days to the Study Areas comprising each main geographic area.

Thus, the rig days for each rig category in each Study Area are defined in this step. The next step is to determine the utilization levels that may be expected for the projection period to calculate ***drill days*** from the rig days.

Appendix A.3.a.i: 2006 Short-term Gas Deliverability EMA

Weekly Rig Count in Major Geographic Areas of WCSB (North, South and West)

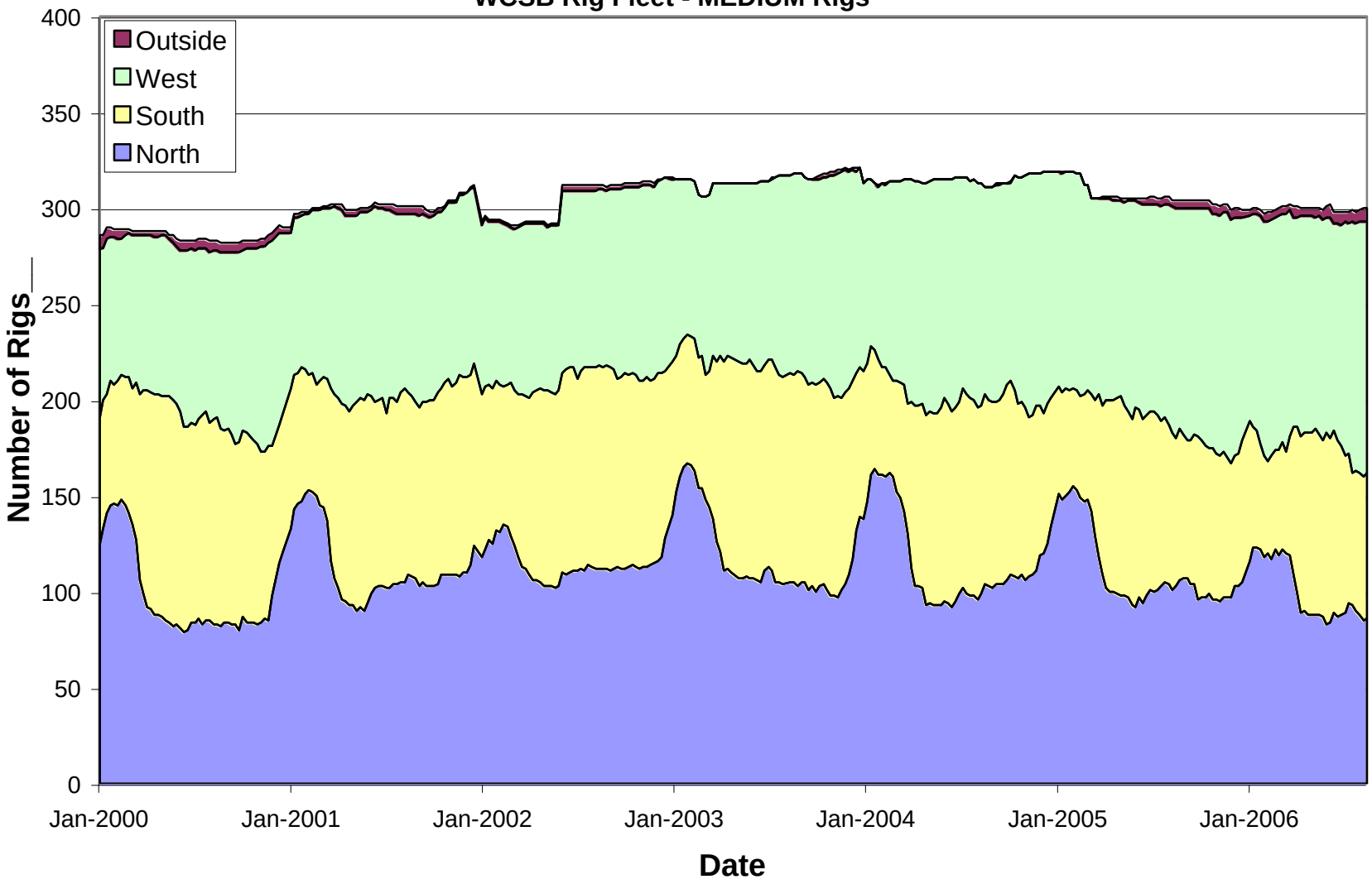
WCSB Rig Fleet - SHALLOW Rigs



Appendix A.3.a.ii: 2006 Short-term Gas Deliverability EMA

Weekly Rig Count in Major Geographic Areas of WCSB (North, South and West)

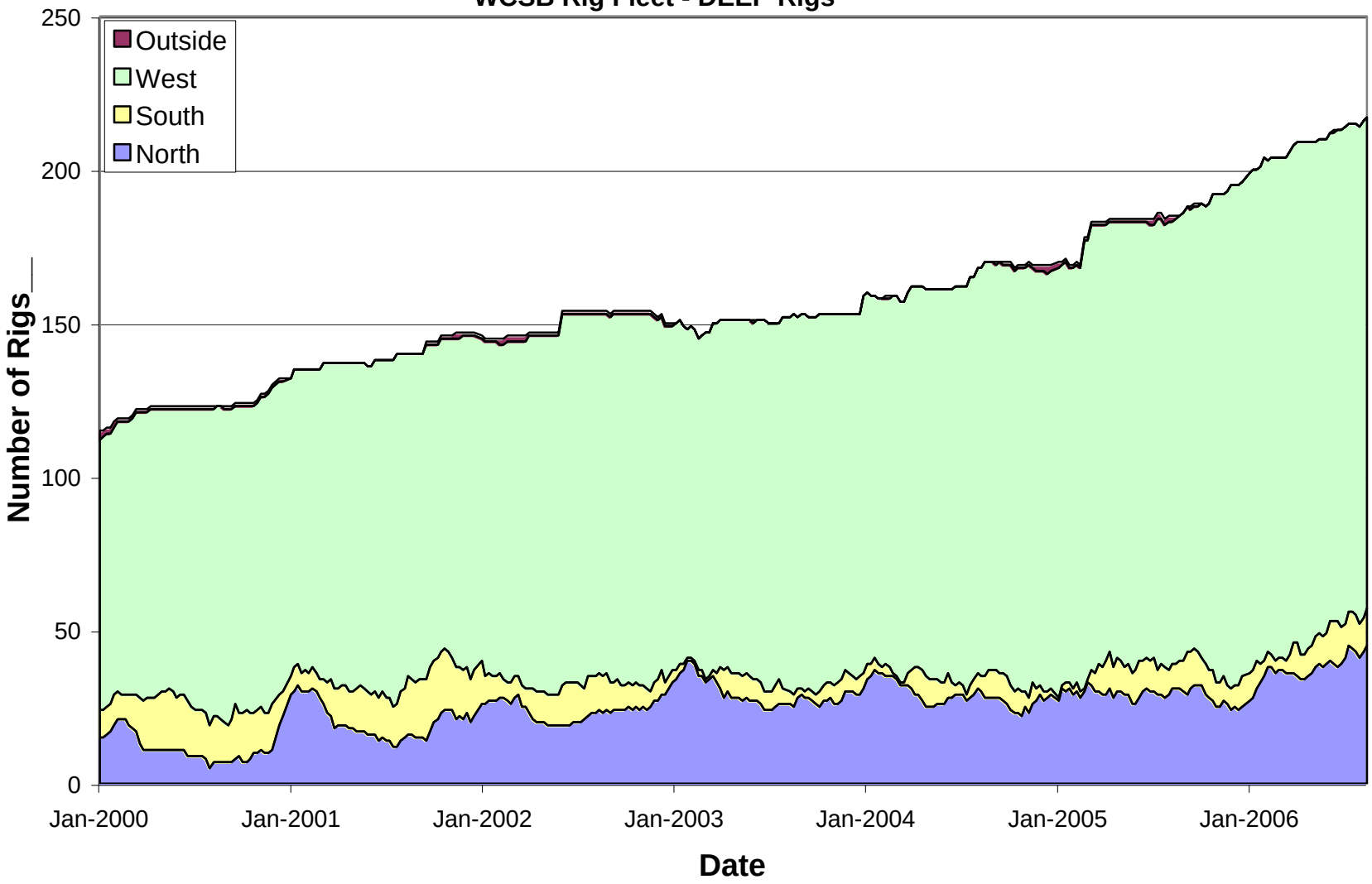
WCSB Rig Fleet - MEDIUM Rigs



Appendix A.3.a.iii: 2006 Short-term Gas Deliverability EMA

Weekly Rig Count in Major Geographic Areas of WCSB (North, South and West)

WCSB Rig Fleet - DEEP Rigs



Appendix A.3.b.i: 2006 Short-term Gas Deliverability EMA - Projected Allocation of SHALLOW Rig Days to Study Areas

Rig Category: **SHALLOW**

Source: Derived from Nickles Weekly Rig Locator Report

1. Allocation of Rig Days for SHALLOW Rigs amongst the 3 Main Geographic regions of WCSB (North, South and West)

Year	Avg Annual Rig Count	Total Rig Days Calc'd From Avg Ann Rig Count
2000	158	57,652
2001	160	58,557
2002	161	58,618
2003	167	60,926
2004	183	67,143
2005	210	76,772
2006	238	86,992
2007	250	91,372
2008	250	91,622

SHALLOW Rig Days Allocated to Main Geographic Area				
North	South	West	Outside	Total
12,749	43,443	1,205	440	57,837
13,547	42,733	1,968	337	58,585
12,586	43,867	1,761	399	58,613
11,221	48,323	2,040	140	61,724
10,247	53,425	2,264	316	66,252
11,660	61,702	2,977	450	76,789
13,919	69,593	3,480		86,992
14,619	73,097	3,655		91,372
14,660	73,298	3,665		91,622

Split (fraction) of SHALLOW Rig Days amongst Main Geographic Areas				
North	South	West	Outside or No Loc	Total
0.2221	0.7569	0.0210	N/A	1.0000
0.2326	0.7336	0.0338	N/A	1.0000
0.2162	0.7535	0.0303	N/A	1.0000
0.1822	0.7847	0.0331	N/A	1.0000
0.1554	0.8103	0.0343	N/A	1.0000
0.1527	0.8083	0.0390	N/A	1.0000
0.1600	0.8000	0.0400		1.0000
0.1600	0.8000	0.0400		1.0000
0.1600	0.8000	0.0400		1.0000

2.a - Allocation of SHALLOW Rig Days amongst Study Areas Comprising the North

MainArea: North
RigCat: SHALLOW
RigDays

Year	Annual Rig Days
2000	12,749
2001	13,547
2002	12,586
2003	11,221
2004	10,247
2005	11,660
2006	13,919
2007	14,619
2008	14,660

Allocation of SHALLOW Rig Days amongst Study Areas comprising the North				
AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	Total
3,936	6,305	2,049	459	12,749
4,018	7,207	1,799	523	13,547
5,109	5,634	1,307	536	12,586
3,893	5,664	1,136	528	11,221
2,479	5,370	1,928	470	10,247
3,100	5,507	2,762	291	11,660
3,619	6,959	2,784	557	13,919
3,801	7,310	2,924	585	14,619
3,811	7,330	2,932	586	14,660

North
SHALLOW
Fractions

Split (fraction) of SHALLOW Rig Days amongst Study Areas comprising the North				
AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	Total
0.3087	0.4945	0.1607	0.0360	1.0000
0.2966	0.5320	0.1328	0.0386	1.0000
0.4059	0.4476	0.1038	0.0426	1.0000
0.3469	0.5048	0.1012	0.0471	1.0000
0.2419	0.5241	0.1882	0.0459	1.0000
0.2659	0.4723	0.2369	0.0250	1.0000
0.2600	0.5000	0.2000	0.0400	1.0000
0.2600	0.5000	0.2000	0.0400	1.0000
0.2600	0.5000	0.2000	0.0400	1.0000

2.b - Allocation of SHALLOW Rig Days amongst Study Areas Comprising the South

MainArea: South
RigCat: SHALLOW
RigDays

Year	Annual Rig Days
2000	43,443
2001	42,733
2002	43,867
2003	48,323
2004	53,425
2005	61,702
2006	69,593
2007	73,097
2008	73,298

Allocation of SHALLOW Rig Days amongst Study Areas comprising the South					
AB- Southeast	AB- East Central	AB- Central	SK- Central	SK- Southwest	Total
15,800	9,879	7,119	5,305	5,340	43,443
18,740	7,249	8,237	4,022	4,485	42,733
16,666	8,211	10,012	3,653	5,325	43,867
20,077	8,162	9,469	4,271	6,344	48,323
23,135	7,599	12,754	4,348	5,589	53,425
26,295	8,873	15,344	4,690	6,500	61,702
29,229	10,439	17,398	5,567	6,959	69,593
30,701	10,965	18,274	5,848	7,310	73,097
30,785	10,995	18,324	5,864	7,330	73,298

South
SHALLOW
Fractions

Split (fraction) of SHALLOW Rig Days amongst Study Areas comprising the South					
AB- Southeast	AB- East Central	AB- Central	SK- Central	SK- Southwest	Total
0.3637	0.2274	0.1639	0.1221	0.1229	1.0000
0.4385	0.1696	0.1928	0.0941	0.1050	1.0000
0.3799	0.1872	0.2282	0.0833	0.1214	1.0000
0.4155	0.1689	0.1960	0.0884	0.1313	1.0000
0.4330	0.1422	0.2387	0.0814	0.1046	1.0000
0.4262	0.1438	0.2487	0.0760	0.1053	1.0000
0.4200	0.1500	0.2500	0.0800	0.1000	1.0000
0.4200	0.1500	0.2500	0.0800	0.1000	1.0000
0.4200	0.1500	0.2500	0.0800	0.1000	1.0000

2.c - Allocation of SHALLOW Rig Days amongst Study Areas Comprising the West

MainArea: West
RigCat: SHALLOW
RigDays

Year	Annual Rig Days
2000	1,205
2001	1,968
2002	1,761
2003	2,040
2004	2,264
2005	2,977
2006	3,480
2007	3,655
2008	3,665

Allocation of SHALLOW Rig Days amongst Study Areas comprising the West			
AB- Foothills	AB- Foothills Front	BC- Foothills	Total
28	1,093	84	1,205
21	1,940	7	1,968
238	1,516	7	1,761
49	1,991	0	2,040
0	2,243	21	2,264
63	2,844	70	2,977
70	3,375	35	3,480
73	3,545	37	3,655
73	3,555	37	3,665

West
SHALLOW
Fractions

Split (fraction) of SHALLOW Rig Days amongst Study Areas comprising the West			
AB- Foothills	AB- Foothills Front	BC- Foothills	Total
0.0232	0.9071	0.0697	1.0000
0.0107	0.9858	0.0036	1.0000
0.1352	0.8609	0.0040	1.0000
0.0240	0.9760	0.0000	1.0000
0.0000	0.9907	0.0093	1.0000
0.0212	0.9553	0.0235	1.0000
0.0200	0.9700	0.0100	1.0000
0.0200	0.9700	0.0100	1.0000
0.0200	0.9700	0.0100	1.0000

Appendix A.3.b.ii: 2006 Short-term Gas Deliverability EMA - Projected Allocation of MEDIUM Rig Days to Study Areas

Rig Category: **MEDIUM**

Source: Derived from Nickles Weekly Rig Locator Report

1. Allocation of Rig Days for MEDIUM Rigs amongst the 3 Main Geographic regions of WCSB (North, South and West)

Year	Avg Annual Rig Count	Total Rig Days Calc'd From Avg Ann Rig Count
2000	287	104,947
2001	302	110,123
2002	313	114,112
2003	317	115,690
2004	316	115,735
2005	307	112,155
2006	302	110,330
2007	307	112,155
2008	312	114,292

MEDIUM Rig Days Allocated to Main Geographic Area				
North	South	West	Outside	Total
36,464	34,310	32,556	1,947	105,277
41,267	33,630	34,303	991	110,191
41,902	34,961	33,618	3,635	114,116
44,023	36,033	36,424	789	117,269
41,794	31,215	40,603	557	114,169
40,428	28,837	41,632	1,260	112,157
40,822	27,583	41,925		110,330
41,497	26,917	43,741		112,155
42,288	26,287	45,717		114,292

Split (fraction) of MEDIUM Rig Days amongst Main Geographic Areas				
North	South	West	Outside or No Loc	Total
0.3529	0.3320	0.3151	N/A	1.0000
0.3779	0.3080	0.3141	N/A	1.0000
0.3793	0.3164	0.3043	N/A	1.0000
0.3779	0.3093	0.3127	N/A	1.0000
0.3679	0.2748	0.3574	N/A	1.0000
0.3646	0.2600	0.3754	N/A	1.0000
0.3700	0.2500	0.3800		1.0000
0.3700	0.2400	0.3900		1.0000
0.3700	0.2300	0.4000		1.0000

2.a - Allocation of MEDIUM Rig Days amongst Study Areas Comprising the North

MainArea: North
RigCat: MEDIUM
RigDays

Year	Annual Rig Days
2000	36,464
2001	41,267
2002	41,902
2003	44,023
2004	41,794
2005	40,428
2006	40,822
2007	41,497
2008	42,288

Allocation of MEDIUM Rig Days amongst Study Areas comprising the North				
AB-Northeast	AB-Northwest	BC- Fort St John	BC- Fort Nelson	Total
4,052	17,211	9,533	5,668	36,464
3,621	21,573	7,863	8,210	41,267
3,071	22,238	8,930	7,663	41,902
2,949	19,587	11,300	10,187	44,023
3,432	18,461	10,348	9,553	41,794
4,301	18,796	10,738	6,593	40,428
4,082	18,370	11,022	7,348	40,822
4,150	18,674	11,204	7,470	41,497
4,229	19,030	11,418	7,612	42,288

North
MEDIUM
Fractions

Split (fraction) of MEDIUM Rig Days amongst Study Areas comprising the North				
AB-Northeast	AB-Northwest	BC- Fort St John	BC- Fort Nelson	Total
0.1111	0.4720	0.2614	0.1554	1.0000
0.0877	0.5228	0.1905	0.1989	1.0000
0.0733	0.5307	0.2131	0.1829	1.0000
0.0670	0.4449	0.2567	0.2314	1.0000
0.0821	0.4417	0.2476	0.2286	1.0000
0.1064	0.4649	0.2656	0.1631	1.0000
0.1000	0.4500	0.2700	0.1800	1.0000
0.1000	0.4500	0.2700	0.1800	1.0000
0.1000	0.4500	0.2700	0.1800	1.0000

2.b - Allocation of MEDIUM Rig Days amongst Study Areas Comprising the South

MainArea: South
RigCat: MEDIUM
RigDays

Year	Annual Rig Days
2000	34,310
2001	33,630
2002	34,961
2003	36,033
2004	31,215
2005	28,837
2006	27,583
2007	26,917
2008	26,287

Allocation of MEDIUM Rig Days amongst Study Areas comprising the South					
AB-Southeast	AB- East Central	AB-Central	SK-Central	SK-Southwest	Total
10,870	2,456	17,880	1,521	1,583	34,310
13,379	2,033	16,113	1,558	547	33,630
12,592	2,973	17,208	1,417	771	34,961
12,468	4,048	16,287	2,146	1,084	36,033
8,297	3,393	16,483	1,660	1,382	31,215
7,336	2,853	16,492	1,253	903	28,837
6,344	2,482	16,550	1,379	827	27,583
6,191	2,423	16,150	1,346	808	26,917
6,046	2,366	15,772	1,314	789	26,287

South
MEDIUM
Fractions

Split (fraction) of MEDIUM Rig Days amongst Study Areas comprising the South					
AB-Southeast	AB- East Central	AB-Central	SK-Central	SK-Southwest	Total
0.3168	0.0716	0.5211	0.0443	0.0461	1.0000
0.3978	0.0605	0.4791	0.0463	0.0163	1.0000
0.3602	0.0850	0.4922	0.0405	0.0221	1.0000
0.3460	0.1123	0.4520	0.0596	0.0301	1.0000
0.2658	0.1087	0.5280	0.0532	0.0443	1.0000
0.2544	0.0989	0.5719	0.0435	0.0313	1.0000
0.2300	0.0900	0.6000	0.0500	0.0300	1.0000
0.2300	0.0900	0.6000	0.0500	0.0300	1.0000
0.2300	0.0900	0.6000	0.0500	0.0300	1.0000

2.c - Allocation of MEDIUM Rig Days amongst Study Areas Comprising the West

MainArea: West
RigCat: MEDIUM
RigDays

Year	Annual Rig Days
2000	32,556
2001	34,303
2002	33,618
2003	36,424
2004	40,603
2005	41,632
2006	41,925
2007	43,741
2008	45,717

Allocation of MEDIUM Rig Days amongst Study Areas comprising the West			
AB-Foothills	AB-Foothills Front	BC-Foothills	Total
757	31,037	762	32,556
585	32,399	1,319	34,303
694	31,620	1,304	33,618
510	34,908	1,006	36,424
716	38,101	1,786	40,603
914	39,740	978	41,632
839	39,829	1,258	41,925
875	41,554	1,312	43,741
914	43,431	1,372	45,717

West
MEDIUM
Fractions

Split (fraction) of MEDIUM Rig Days amongst Study Areas comprising the West			
AB-Foothills	AB-Foothills Front	BC-Foothills	Total
0.0233	0.9533	0.0234	1.0000
0.0171	0.9445	0.0385	1.0000
0.0206	0.9406	0.0388	1.0000
0.0140	0.9584	0.0276	1.0000
0.0176	0.9384	0.0440	1.0000
0.0220	0.9546	0.0235	1.0000
0.0200	0.9500	0.0300	1.0000
0.0200	0.9500	0.0300	1.0000
0.0200	0.9500	0.0300	1.0000

Appendix A.3.b.iii: 2006 Short-term Gas Deliverability EMA - Projected Allocation of DEEP Rig Days to Study Areas

Rig Category: **DEEP**

Source: Derived from Nickles Weekly Rig Locator Report

1. Allocation of Rig Days for DEEP Rigs amongst the 3 Main Geographic regions of WCSB (North, South and West)

Year	Avg Annual Rig Count	Total Rig Days Calc'd From Avg Ann Rig Count
2000	124	45,384
2001	141	51,501
2002	155	56,526
2003	154	56,188
2004	167	61,072
2005	185	67,625
2006	213	77,845
2007	228	83,320
2008	238	87,208

DEEP Rig Days Allocated to Main Geographic Area				
North	South	West	Outside	Total
4,371	5,124	35,230	861	45,586
7,414	5,062	38,391	674	51,541
8,699	3,336	42,448	2,041	56,524
10,859	1,823	43,232	1,032	56,946
10,399	1,989	46,730	1,136	60,254
10,544	2,940	53,454	708	67,646
12,455	3,114	62,276		77,845
13,331	3,333	66,656		83,320
13,953	3,488	69,767		87,208

Split (fraction) of DEEP Rig Days amongst Main Geographic Areas				
North	South	West	Outside or No Loc	Total
0.0977	0.1146	0.7877	N/A	1.0000
0.1458	0.0995	0.7547	N/A	1.0000
0.1597	0.0612	0.7791	N/A	1.0000
0.1942	0.0326	0.7732	N/A	1.0000
0.1759	0.0336	0.7905	N/A	1.0000
0.1575	0.0439	0.7986	N/A	1.0000
0.1600	0.0400	0.8000		
0.1600	0.0400	0.8000		
0.1600	0.0400	0.8000		

2.a - Allocation of DEEP Rig Days amongst Study Areas Comprising the North

MainArea North North
RigCat DEEP DEEP
RigDays Fractions

Year	Annual Rig Days
2000	4,371
2001	7,414
2002	8,699
2003	10,859
2004	10,399
2005	10,544
2006	12,455
2007	13,331
2008	13,953

Allocation of DEEP Rig Days amongst Study Areas comprising the North				
AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	Total
203	1,932	1,454	782	4,371
7	2,394	3,570	1,443	7,414
288	2,619	4,717	1,075	8,699
356	2,127	7,190	1,186	10,859
533	2,231	6,573	1,062	10,399
978	2,051	6,579	936	10,544
872	2,366	7,971	1,246	12,455
933	2,533	8,532	1,333	13,331
977	2,651	8,930	1,395	13,953

Split (fraction) of DEEP Rig Days amongst Study Areas comprising the North				
AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	Total
0.0464	0.4420	0.3326	0.1789	1.0000
0.0009	0.3229	0.4815	0.1946	1.0000
0.0331	0.3011	0.5422	0.1236	1.0000
0.0328	0.1959	0.6621	0.1092	1.0000
0.0513	0.2145	0.6321	0.1021	1.0000
0.0928	0.1945	0.6240	0.0888	1.0000
0.0700	0.1900	0.6400	0.1000	1.0000
0.0700	0.1900	0.6400	0.1000	1.0000
0.0700	0.1900	0.6400	0.1000	1.0000

2.b - Allocation of DEEP Rig Days amongst Study Areas Comprising the South

MainArea South South
RigCat DEEP DEEP
RigDays Fractions

Year	Annual Rig Days
2000	5,124
2001	5,062
2002	3,336
2003	1,823
2004	1,989
2005	2,940
2006	3,114
2007	3,333
2008	3,488

Allocation of DEEP Rig Days amongst Study Areas comprising the South					
AB- Southeast	AB- East Central	AB- Central	SK- Central	SK- Southwest	Total
1,490	102	3,532			5,124
632	245	4,185			5,062
435	434	2,467			3,336
293	126	1,404			1,823
347	154	1,488			1,989
176	28	2,617	56	63	2,940
311	156	2,647	0	0	3,114
333	167	2,833	0	0	3,333
349	174	2,965	0	0	3,488

Split (fraction) of DEEP Rig Days amongst Study Areas comprising the South					
AB- Southeast	AB- East Central	AB- Central	SK- Central	SK- Southwest	Total
0.2908	0.0199	0.6893	0.0000	0.0000	1.0000
0.1249	0.0484	0.8267	0.0000	0.0000	1.0000
0.1304	0.1301	0.7395	0.0000	0.0000	1.0000
0.1607	0.0691	0.7702	0.0000	0.0000	1.0000
0.1745	0.0774	0.7481	0.0000	0.0000	1.0000
0.0599	0.0095	0.8901	0.0190	0.0214	1.0000
0.1000	0.0500	0.8500	0.0000	0.0000	1.0000
0.1000	0.0500	0.8500	0.0000	0.0000	1.0000
0.1000	0.0500	0.8500	0.0000	0.0000	1.0000

2.c - Allocation of DEEP Rig Days amongst Study Areas Comprising the West

MainArea West West
RigCat DEEP DEEP
RigDays Fractions

Year	Annual Rig Days
2000	35,230
2001	38,391
2002	42,448
2003	43,232
2004	46,730
2005	53,454
2006	62,276
2007	66,656
2008	69,767

Allocation of DEEP Rig Days amongst Study Areas comprising the West			
AB- Foothills	AB- Foothills Front	BC- Foothills	Total
6,983	27,014	1,233	35,230
7,010	28,521	2,860	38,391
8,075	32,471	1,902	42,448
10,314	30,459	2,459	43,232
10,015	34,198	2,517	46,730
8,619	41,414	3,421	53,454
11,832	47,330	3,114	62,276
12,665	50,659	3,333	66,656
13,256	53,023	3,488	69,767

Split (fraction) of DEEP Rig Days amongst Study Areas comprising the West			
AB- Foothills	AB- Foothills Front	BC- Foothills	Total
0.1982	0.7668	0.0350	1.0000
0.1826	0.7429	0.0745	1.0000
0.1902	0.7650	0.0448	1.0000
0.2386	0.7045	0.0569	1.0000
0.2143	0.7318	0.0539	1.0000
0.1612	0.7748	0.0640	1.0000
0.1900	0.7600	0.0500	1.0000
0.1900	0.7600	0.0500	1.0000
0.1900	0.7600	0.0500	1.0000

Appendix A.4

WCSB Rig Fleet- Historical and Projected Rig Utilization

In this Appendix, the rig utilization of the WCSB Rig Fleet is examined for each Rig Category in each Study Area. Historical rig utilization levels are first calculated and then used as the basis for projecting future rig utilization levels.

Rig utilization is the number of ***drill days*** divided by the number of rig days, and is calculated in this appendix for each rig category in each Study Area. The determination of historical and projected rig days for each rig category in each Study Area is covered in Appendix A.3. To calculate historical rig utilization levels, the number of drill days for each rig category and each study area must first be determined.

To determine drill days, the well records from GeoScout were used. GeoScout contains a large amount of information for wells drilled in Alberta, B.C. and Saskatchewan including well location, spud date, date drilling completed, drill days, well status, drilling contractor and rig number. The NEB processes the GeoScout well data to obtain drill days for the WCSB Rig Fleet from the start of year 2000 for each rig category in each study area. The annual drill days are then divided by the annual rig days (for each rig category and study area) to obtain annual rig utilization levels from 2000 to 2005 inclusive. The trends in rig utilization seen in recent years were used to project the rig utilization levels for each study area and each rig category through to the year 2008.

The historical and projected rig utilization levels for each rig category and study area are tabulated in this Appendix A.4. The projected rig utilization levels may be applied to the projected rig days for each rig category and study area to obtain the projected number of drill days.

Appendix A.4.a: 2006 Short-term Gas Deliverability EMA - WCSB Rig Fleet Rig Utilization by Study Area for SHALLOW Rigs

Drill Days
RigCat SHALLOW

Sum of DrlDays	Historic Drill Days in each Study Area for SHALLOW Rigs												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	
2000	12	493	10,387	5,319	2,698	2,357	3,725	1,111	866	29	2,997	3,487	33,481
2001	74	594	9,819	3,314	2,779	3,405	3,857	1,110	1,121		2,006	3,106	31,184
2002	34	577	8,276	3,065	2,728	2,564	2,982	518	284	7	1,757	3,930	26,722
2003	43	1,016	12,386	4,056	5,258	1,778	3,024	909	552		2,580	4,562	36,165
2004		907	14,770	3,939	6,770	1,739	2,945	1,504	458	12	2,654	4,218	39,915
2005	16	1,746	17,832	4,608	8,477	1,646	3,429	2,003	634		2,648	4,375	47,414
2006	10	762	4,823	1,110	2,713	1,682	2,638	1,676	1,173		696	1,020	18,302
frac of total SHALLOW Drill Days=>	0.001	0.025	0.342	0.113	0.134	0.063	0.093	0.033	0.018	0.000	0.068	0.110	214,881

Rig Days
RigCat SHALLOW

Sum of RigDays	Historic Rig Days in each Study Area for SHALLOW Rigs												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	
2000	28	1,093	15,800	9,879	7,119	3,936	6,305	2,049	459	84	5,305	5,340	57,397
2001	21	1,940	18,740	7,249	8,237	4,018	7,207	1,799	523	7	4,022	4,485	58,248
2002	238	1,516	16,666	8,211	10,012	5,109	5,634	1,307	536	7	3,653	5,325	58,214
2003	49	1,991	20,077	8,162	9,469	3,893	5,664	1,136	528	0	4,271	6,344	61,584
2004	0	2,243	23,135	7,599	12,754	2,479	5,370	1,928	470	21	4,348	5,589	65,936
2005	63	2,844	26,295	8,873	15,344	3,100	5,507	2,762	291	70	4,690	6,500	76,339
2006	28	2,515	15,117	6,999	11,067	4,151	5,461	2,373	695	0	3,037	2,919	54,362

SHALLOW

	Historic and Projected Rig Utilization for SHALLOW Rigs in each Study Area												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	
2000	0.4286	0.4512	0.6574	0.5384	0.3790	0.5988	0.5909	0.5421	1.8859	0.3452	0.5649	0.6530	0.5833
2001	3.5238	0.3061	0.5240	0.4572	0.3373	0.8473	0.5352	0.6170	2.1428	0.0000	0.4989	0.6925	0.5354
2002	0.1429	0.3808	0.4966	0.3732	0.2725	0.5018	0.5292	0.3959	0.5308	1.0000	0.4811	0.7380	0.4590
2003	0.8776	0.5105	0.6169	0.4969	0.5553	0.4566	0.5339	0.8003	1.0455	NA	0.6040	0.7192	0.5873
2004	NA	0.4043	0.6384	0.5183	0.5308	0.7013	0.5484	0.7799	0.9741	0.5714	0.6104	0.7547	0.6054
2005	0.2460	0.6139	0.6781	0.5194	0.5525	0.5309	0.6227	0.7251	2.1784	0.0000	0.5647	0.6731	0.6211
2006	default	0.5500	0.6200	0.5000	0.5200	0.5400	0.5900	0.7500	default	default	0.5800	0.7000	0.6000
2007	default	0.5500	0.6400	0.5200	0.5400	0.5400	0.5900	0.7500	default	default	0.5800	0.7000	0.6000
2008	default	0.5500	0.6400	0.5200	0.5400	0.5400	0.5900	0.7500	default	default	0.5800	0.7000	0.6000

Appendix A.4.b: 2006 Short-term Gas Deliverability EMA - WCSB Rig Fleet Rig Utilization by Study Area for MEDIUM Rigs

Drill Days
RigCat MEDIUM

Sum of DrlDays	Historic Drill Days in each Study Area for MEDIUM Rigs												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	
2000	530	14,510	6,603	1,379	5,042	2,807	7,301	5,322	3,329	594	776	693	48,886
2001	594	14,605	7,436	1,362	4,872	2,272	9,213	4,622	5,479	769	763	329	52,315
2002	381	10,952	6,187	1,522	3,891	2,177	7,117	3,576	3,151	565	888	427	40,835
2003	448	17,009	7,449	2,402	5,554	2,012	7,857	5,611	5,848	498	1,271	611	56,568
2004	563	17,921	5,490	1,417	5,898	2,086	8,344	6,096	5,987	671	816	591	55,879
2005	412	21,406	4,855	1,852	7,949	3,849	9,442	7,352	5,479	662	979	493	64,730
2006	143	8,939	1,383	575	2,821	1,103	4,024	2,622	3,421	353	253	56	25,692
frac of total MEDIUM Drill Days=>	0.009	0.302	0.119	0.031	0.104	0.048	0.154	0.102	0.092	0.012	0.017	0.010	319,213

Rig Days
RigCat MEDIUM

All Study Areas

Year	Historic Rig Days in each Study Area for MEDIUM Rigs												All Study Areas
	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	
2000	757	31,037	10,870	2,456	17,880	4,052	17,211	9,533	5,668	762	1,521	1,583	103,330
2001	585	32,399	13,379	2,033	16,113	3,621	21,573	7,863	8,210	1,319	1,558	547	109,200
2002	694	31,620	12,592	2,973	17,208	3,071	22,238	8,930	7,663	1,304	1,417	771	110,481
2003	510	34,908	12,468	4,048	16,287	2,949	19,587	11,300	10,187	1,006	2,146	1,084	116,480
2004	716	38,101	8,297	3,393	16,483	3,432	18,461	10,348	9,553	1,786	1,660	1,382	113,612
2005	914	39,740	7,336	2,853	16,492	4,301	18,796	10,738	6,593	978	1,253	903	110,897
2006	442	26,298	3,407	1,517	11,790	1,864	11,211	6,081	4,315	757	748	221	68,651

MEDIUM

Year	Historic and Projected Rig Utilization for MEDIUM Rigs in each Study Area												All Study Areas
	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	
2000	0.7001	0.4675	0.6075	0.5613	0.2820	0.6928	0.4242	0.5583	0.5873	0.7789	0.5102	0.4379	0.4731
2001	1.0154	0.4508	0.5558	0.6697	0.3024	0.6274	0.4271	0.5879	0.6674	0.5826	0.4898	0.6015	0.4791
2002	0.5492	0.3464	0.4913	0.5120	0.2261	0.7090	0.3200	0.4004	0.4112	0.4333	0.6268	0.5532	0.3696
2003	0.8775	0.4872	0.5975	0.5934	0.3410	0.6824	0.4011	0.4965	0.5741	0.4945	0.5922	0.5632	0.4856
2004	0.7864	0.4704	0.6617	0.4175	0.3579	0.6078	0.4520	0.5891	0.6267	0.3757	0.4915	0.4273	0.4918
2005	0.4508	0.5386	0.6617	0.6492	0.4820	0.8950	0.5023	0.6847	0.8310	0.6769	0.7813	0.5462	0.5837
2006	default	0.5000	0.6600	0.6000	0.4300	default	0.4800	0.6500	0.7500	default	default	default	0.5200
2007	default	0.5200	0.6600	0.6000	0.4600	default	0.4800	0.6500	0.7500	default	default	default	0.5200
2008	default	0.5200	0.6600	0.6000	0.4600	default	0.4800	0.6500	0.7500	default	default	default	0.5200

Appendix A.4.c: 2006 Short-term Gas Deliverability EMA - WCSB Rig Fleet Rig Utilization by Study Area for DEEP Rigs

Drill Days
RigCat DEEP

Sum of DrlDays	Historic Drill Days in each Study Area for DEEP Rigs												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	All Study Areas
2000	3,431	14,187	1,323	85	1,212	179	1,070	898	755	578	5	11	23,733
2001	3,941	15,807	391	201	1,012	57	1,115	2,109	693	1,739	93	10	27,166
2002	3,477	12,498	399	65	333	249	1,221	2,315	1,204	1,556		1	23,316
2003	4,728	14,535	120	51	131	155	1,140	3,449	635	1,422		21	26,384
2004	6,142	16,725	229	142	395	387	879	3,622	713	1,660	25	14	30,931
2005	5,459	20,659	126	53	876	668	1,028	5,172	631	2,065	62	10	36,808
2006	2,499	9,793	41	19	390	488	844	2,365	498	1,418	8		18,363
frac of total DEEP Drill Days=>	0.161	0.561	0.015	0.004	0.024	0.010	0.038	0.104	0.028	0.054	0.001	0.000	168,338

Rig Days
RigCat DEEP

Sum of RigDays	Historic Rig Days in each Study Area for DEEP Rigs												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	All Study Areas
2000	6,983	27,014	1,490	102	3,532	203	1,932	1,454	782	1,233	0	0	44,725
2001	7,010	28,521	632	245	4,185	7	2,394	3,570	1,443	2,860	0	0	50,867
2002	8,075	32,471	435	434	2,467	288	2,619	4,717	1,075	1,902	0	0	54,483
2003	10,314	30,459	293	126	1,404	356	2,127	7,190	1,186	2,459	0	0	55,914
2004	10,015	34,198	347	154	1,488	533	2,231	6,573	1,062	2,517	0	0	59,118
2005	8,619	41,414	176	28	2,617	978	2,051	6,579	936	3,421	56	63	66,938
2006	6,937	28,247	142	154	1,810	848	2,564	4,446	830	2,581	0	0	48,559

DEEP

	Historic and Projected Rig Utilization for DEEP Rigs in each Study Area												All Study Areas
Year	AB- Foothills	AB- Foothills Front	AB- Southeast	AB- East Central	AB- Central	AB- Northeast	AB- Northwest	BC- Fort St John	BC- Fort Nelson	BC- Foothills	SK- Central	SK- Southwest	All Study Areas
2000	0.4913	0.5252	0.8881	0.8284	0.3431	0.8832	0.5538	0.6173	0.9655	0.4688	NA	NA	0.5307
2001	0.5621	0.5542	0.6190	0.8220	0.2417	8.1905	0.4656	0.5906	0.4799	0.6080	NA	NA	0.5341
2002	0.4306	0.3849	0.9165	0.1486	0.1350	0.8642	0.4661	0.4907	1.1195	0.8182	NA	NA	0.4279
2003	0.4584	0.4772	0.4096	0.4008	0.0933	0.4340	0.5357	0.4796	0.5354	0.5781	NA	NA	0.4719
2004	0.6132	0.4890	0.6604	0.9199	0.2651	0.7252	0.3940	0.5510	0.6718	0.6595	NA	NA	0.5232
2005	0.6333	0.4988	0.7174	1.8988	0.3348	0.6831	0.5014	0.7861	0.6745	0.6035	1.0982	0.1534	0.5499
2006	0.6200	0.4900	0.6500	default	0.3200	0.7000	0.4800	0.6500	0.6700	0.6300	default	default	0.5300
2007	0.6200	0.4900	0.6500	default	0.3200	0.7000	0.4800	0.6500	0.6700	0.6300	default	default	0.5300
2008	0.6200	0.4900	0.6500	default	0.3200	0.7000	0.4800	0.6500	0.6700	0.6300	default	default	0.5300

Appendix A.5

WCSB Rig Fleet – Historical and Projected Resource Targets for Drilling

In this Appendix A.5, the historical data for 2000 to 2005 inclusive is reviewed to determine trends for the target resource for drilling efforts. Well data from GeoScout is used to determine the target resource for wells drilled by the WCSB Rig Fleet for each rig category in each study area The NEB's processes the GeoScout well data, resulting in the assignment of each well to one of the following four resource targets:

- Gas- conventional
- Gas- CBM
- Oil- conventional
- Oil- Oil Sands

In cases of most dry holes, or when a well has no production or any other indication of what the target resource may be, the target resource is not available from the data source. The drill days for these wells with unknown resource targets are not used in determining the fraction of drill days targeted to each resource.

Drilling for the purpose of service and storage wells has been a very small portion of the drill days (about .5 %) in the past 5 years, and thus these drilling efforts are excluded from the calculation. So, all of the projected drill days for the WCSB Rig Fleet will be allocated to one of the four target resources: Gas, CBM, Oil or Oil Sands.

The fraction of drill days targeted to each of the four target resources was calculated for each rig category and each study area for the years 2000 – 2005 inclusive. The fraction of drill days targeted to each of the four resource types for future years was projected for each rig category in each study area, generally based on the historical data. This Appendix A.5 tabulates the historical and projected fractions for allocation of drill days to resource targets for each rig category in each Study Area. These fractions are applied to the projected drill days to determine the drill days for gas and CBM wells that may be expected over the projection period.

Appendix A.5.a: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

a

RigCat	SHALLOW

Target Resource Allocations for Alberta- Foothills Study Area

Alberta- Foothills

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
1	2000					
	2001		16			16
	2002		31			31
	2003		27			27
	2004					
	2005	4	12			16
	2006	10				10

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000					0.0000
2001	0.0000	1.0000	0.0000	0.0000	1.0000
2002	0.0000	1.0000	0.0000	0.0000	1.0000
2003	0.0000	1.0000	0.0000	0.0000	1.0000
2004					0.0000
2005	0.2581	0.7419	0.0000	0.0000	1.0000
2006	0.0000	1.0000	0.0000	0.0000	1.0000
2007	0.0000	1.0000	0.0000	0.0000	1.0000
2008	0.0000	1.0000	0.0000	0.0000	1.0000

Target Resource Allocations for Alberta- Foothills Front Study Area

Alberta- Foothills Front

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
2	2000	215	47	79		342
	2001	203	81	36		319
	2002	146	46	3		194
	2003	500	180	71		751
	2004	727	58	30		815
	2005	1,332	129	163		1,623
	2006	635	40	49		725

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.6303	0.1385	0.2312	0.0000	1.0000
2001	0.6345	0.2527	0.1128	0.0000	1.0000
2002	0.7521	0.2350	0.0129	0.0000	1.0000
2003	0.6661	0.2393	0.0946	0.0000	1.0000
2004	0.8923	0.0708	0.0368	0.0000	1.0000
2005	0.8207	0.0792	0.1002	0.0000	1.0000
2006	0.8300	0.0500	0.1200	0.0000	1.0000
2007	0.8300	0.0500	0.1200	0.0000	1.0000
2008	0.8300	0.0500	0.1200	0.0000	1.0000

Target Resource Allocations for Alberta- Southeast Study Area

Alberta- Southeast

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
3	2000	5,716	232	694		6,642
	2001	5,679	309	304		6,293
	2002	4,957	393	453		5,804
	2003	8,769	719	438		9,926
	2004	10,507	2,182	598	3	13,290
	2005	12,085	3,183	805	3	16,076
	2006	3,150	745	99		3,994

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.8606	0.0349	0.1045	0.0000	1.0000
2001	0.9025	0.0492	0.0483	0.0000	1.0000
2002	0.8541	0.0678	0.0781	0.0000	1.0000
2003	0.8834	0.0724	0.0442	0.0000	1.0000
2004	0.7906	0.1642	0.0450	0.0002	1.0000
2005	0.7517	0.1980	0.0501	0.0002	1.0000
2006	0.7500	0.2000	0.0500	0.0000	1.0000
2007	0.7300	0.2200	0.0500	0.0000	1.0000
2008	0.7100	0.2400	0.0500	0.0000	1.0000

Appendix A.5.a: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

a

RigCat	SHALLOW

Target Resource Allocations for Alberta- East Central Study Area

Alberta- East Central

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
4	2000	626		1,844	1,089	3,559
	2001	837	6	996	299	2,137
	2002	827	19	606	421	1,872
	2003	1,430	10	793	681	2,914
	2004	1,759	11	1,043	365	3,179
	2005	1,786	25	1,382	752	3,945
	2006	296	3	460	250	1,010

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.1759	0.0000	0.5180	0.3061	1.0000
2001	0.3916	0.0028	0.4659	0.1397	1.0000
2002	0.4416	0.0101	0.3235	0.2248	1.0000
2003	0.4907	0.0034	0.2721	0.2339	1.0000
2004	0.5534	0.0035	0.3282	0.1148	1.0000
2005	0.4528	0.0064	0.3503	0.1905	1.0000
2006	0.4600	0.0000	0.3300	0.2000	0.9900
2007	0.4600	0.0000	0.3300	0.2000	0.9900
2008	0.4600	0.0000	0.3300	0.2000	0.9900

Target Resource Allocations for Alberta- Central Study Area

Alberta- Central

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
5	2000	1,022	34	430		1,485
	2001	1,007	101	310		1,418
	2002	944	301	179		1,424
	2003	1,767	989	399		3,154
	2004	2,846	1,691	235		4,771
	2005	4,157	2,690	671	70	7,589
	2006	1,185	892	265	3	2,346

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.6880	0.0228	0.2892	0.0000	1.0000
2001	0.7105	0.0709	0.2185	0.0000	1.0000
2002	0.6627	0.2117	0.1256	0.0000	1.0000
2003	0.5601	0.3134	0.1265	0.0000	1.0000
2004	0.5964	0.3544	0.0491	0.0000	1.0000
2005	0.5478	0.3545	0.0885	0.0092	1.0000
2006	0.5300	0.3800	0.0900	0.0000	1.0000
2007	0.5300	0.4000	0.0700	0.0000	1.0000
2008	0.5100	0.4200	0.0700	0.0000	1.0000

Target Resource Allocations for Alberta- Northeast Study Area

Alberta- Northeast

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
6	2000	953		16	40	1,009
	2001	1,119		3	66	1,188
	2002	1,115		3		1,118
	2003	723		77	39	839
	2004	1,063		14	86	1,163
	2005	973		107	51	1,131
	2006	1,124		164	4	1,292

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.9450	0.0000	0.0154	0.0397	1.0000
2001	0.9421	0.0000	0.0028	0.0551	1.0000
2002	0.9973	0.0000	0.0027	0.0000	1.0000
2003	0.8617	0.0000	0.0916	0.0467	1.0000
2004	0.9143	0.0000	0.0120	0.0737	1.0000
2005	0.8605	0.0000	0.0943	0.0452	1.0000
2006	0.8500	0.0000	0.1000	0.0500	1.0000
2007	0.8500	0.0000	0.1000	0.0500	1.0000
2008	0.8500	0.0000	0.1000	0.0500	1.0000

Appendix A.5.a: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

a

RigCat	SHALLOW

Target Resource Allocations for Alberta- Northwest Study Area

Alberta- Northwest

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
7	2000	1,377		407	14	1,799
	2001	1,365		498	29	1,892
	2002	1,320		278	25	1,623
	2003	1,302		217	19	1,537
	2004	2,224		449	14	2,687
	2005	2,099		567	14	2,679
	2006	2,049		200	36	2,285

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.7657	0.0000	0.2266	0.0078	1.0000
2001	0.7214	0.0000	0.2633	0.0153	1.0000
2002	0.8136	0.0000	0.1710	0.0154	1.0000
2003	0.8471	0.0000	0.1408	0.0120	1.0000
2004	0.8279	0.0000	0.1671	0.0050	1.0000
2005	0.7833	0.0000	0.2114	0.0052	1.0000
2006	0.8300	0.0000	0.1700	0.0000	1.0000
2007	0.8300	0.0000	0.1700	0.0000	1.0000
2008	0.8300	0.0000	0.1700	0.0000	1.0000

Target Resource Allocations for B.C.- Fort St. John Study Area

B.C.- Fort St. John

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
8	2000	640		163		803
	2001	799		142		941
	2002	348		51		399
	2003	495		91		586
	2004	1,026		79		1,104
	2005	1,354		45		1,399
	2006	713		8		721

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.7969	0.0000	0.2031	0.0000	1.0000
2001	0.8496	0.0000	0.1504	0.0000	1.0000
2002	0.8722	0.0000	0.1278	0.0000	1.0000
2003	0.8448	0.0000	0.1552	0.0000	1.0000
2004	0.9289	0.0000	0.0711	0.0000	1.0000
2005	0.9680	0.0000	0.0320	0.0000	1.0000
2006	0.9700	0.0000	0.0300	0.0000	1.0000
2007	0.9700	0.0000	0.0300	0.0000	1.0000
2008	0.9700	0.0000	0.0300	0.0000	1.0000

Target Resource Allocations for B.C.- Fort Nelson Study Area

B.C.- Fort Nelson

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
9	2000	638		36		673
	2001	645		184		829
	2002	105		67		172
	2003	240		140		380
	2004	198		128		327
	2005	496		43		539
	2006	170		71		240

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.9471	0.0000	0.0529	0.0000	1.0000
2001	0.7784	0.0000	0.2216	0.0000	1.0000
2002	0.6105	0.0000	0.3895	0.0000	1.0000
2003	0.6313	0.0000	0.3687	0.0000	1.0000
2004	0.6075	0.0000	0.3925	0.0000	1.0000
2005	0.9205	0.0000	0.0795	0.0000	1.0000
2006	0.7500	0.0000	0.2500	0.0000	1.0000
2007	0.7500	0.0000	0.2500	0.0000	1.0000
2008	0.7500	0.0000	0.2500	0.0000	1.0000

Appendix A.5.a: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

a

RigCat	SHALLOW

Target Resource Allocations for B.C.- Foothills Study Area

B.C.- Foothills

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
10	2000	16				16
	2001					
	2002					
	2003					
	2004	12				12
	2005					
	2006					

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	1.0000	0.0000	0.0000	0.0000	1.0000
2001	0.0000	0.0000	0.0000	0.0000	0.0000
2002	0.0000	0.0000	0.0000	0.0000	0.0000
2003	0.0000	0.0000	0.0000	0.0000	0.0000
2004	1.0000	0.0000	0.0000	0.0000	1.0000
2005	0.0000	0.0000	0.0000	0.0000	0.0000
2006	1.0000	0.0000	0.0000	0.0000	1.0000
2007	1.0000	0.0000	0.0000	0.0000	1.0000
2008	1.0000	0.0000	0.0000	0.0000	1.0000

Target Resource Allocations for Saskatchewan- Central Study Area

Saskatchewan- Central

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
11	2000	216		2,286		2,502
	2001	342		1,190		1,532
	2002	261		1,223		1,484
	2003	667		1,571		2,238
	2004	726		1,364		2,090
	2005	821		1,544		2,364
	2006	282		390		672

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0864	0.0000	0.9136	0.0000	1.0000
2001	0.2233	0.0000	0.7767	0.0000	1.0000
2002	0.1758	0.0000	0.8242	0.0000	1.0000
2003	0.2980	0.0000	0.7020	0.0000	1.0000
2004	0.3475	0.0000	0.6525	0.0000	1.0000
2005	0.3470	0.0000	0.6530	0.0000	1.0000
2006	0.3500	0.0000	0.6500	0.0000	1.0000
2007	0.3500	0.0000	0.6500	0.0000	1.0000
2008	0.3500	0.0000	0.6500	0.0000	1.0000

Target Resource Allocations for Saskatchewan- Southwest Study Area

Saskatchewan- Southwest

		Historic SHALLOW Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
12	2000	1,884		1,420		3,304
	2001	1,899		968		2,867
	2002	2,816		864		3,680
	2003	3,587		822		4,408
	2004	3,161		799		3,960
	2005	3,107		1,086		4,194
	2006	648		296		944

	Historic & Projected Fraction of SHALLOW Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.5702	0.0000	0.4298	0.0000	1.0000
2001	0.6624	0.0000	0.3376	0.0000	1.0000
2002	0.7652	0.0000	0.2348	0.0000	1.0000
2003	0.8137	0.0000	0.1863	0.0000	1.0000
2004	0.7981	0.0000	0.2019	0.0000	1.0000
2005	0.7410	0.0000	0.2590	0.0000	1.0000
2006	0.7500	0.0000	0.2500	0.0000	1.0000
2007	0.7500	0.0000	0.2500	0.0000	1.0000
2008	0.7500	0.0000	0.2500	0.0000	1.0000

Appendix A.5.b: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources fo

b

RigCat	MEDIUM

Target Resource Allocations for Alberta- Foothills Study Area

Alberta- Foothills

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
1	2000	279		82		361
	2001	462		53		515
	2002	195	48	22		265
	2003	70				70
	2004	313		117		430
	2005	273	12	108		393
	2006	143				143

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.7729	0.0000	0.2271	0.0000	1.0000
2001	0.8971	0.0000	0.1029	0.0000	1.0000
2002	0.7366	0.1804	0.0830	0.0000	1.0000
2003	1.0000	0.0000	0.0000	0.0000	1.0000
2004	0.7280	0.0000	0.2720	0.0000	1.0000
2005	0.6947	0.0305	0.2748	0.0000	1.0000
2006	0.7200	0.0000	0.2800	0.0000	1.0000
2007	0.7200	0.0000	0.2800	0.0000	1.0000
2008	0.7200	0.0000	0.2800	0.0000	1.0000

Target Resource Allocations for Alberta- Foothills Front Study Area

Alberta- Foothills Front

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
2	2000	8,076	9	2,088	39	10,212
	2001	7,852	10	2,253		10,115
	2002	6,214	5	1,337		7,555
	2003	10,249	15	2,688	41	12,992
	2004	13,893	16	2,178		16,086
	2005	16,273	9	2,335	6	18,623
	2006	6,690		758		7,448

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.7908	0.0009	0.2045	0.0038	1.0000
2001	0.7763	0.0010	0.2227	0.0000	1.0000
2002	0.8224	0.0007	0.1769	0.0000	1.0000
2003	0.7888	0.0012	0.2069	0.0032	1.0000
2004	0.8636	0.0010	0.1354	0.0000	1.0000
2005	0.8738	0.0005	0.1254	0.0003	1.0000
2006	0.8700	0.0000	0.1300	0.0000	1.0000
2007	0.8800	0.0000	0.1200	0.0000	1.0000
2008	0.8800	0.0000	0.1200	0.0000	1.0000

Target Resource Allocations for Alberta- Southeast Study Area

Alberta- Southeast

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
3	2000	1,412	8	2,528		3,947
	2001	2,497	50	2,221	51	4,818
	2002	2,337	72	2,111	57	4,576
	2003	3,188	32	2,718	26	5,964
	2004	2,790	37	2,008	43	4,878
	2005	2,228	252	1,779	114	4,374
	2006	785	52	325	21	1,183

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.3577	0.0020	0.6403	0.0000	1.0000
2001	0.5182	0.0104	0.4609	0.0106	1.0000
2002	0.5107	0.0156	0.4613	0.0123	1.0000
2003	0.5346	0.0053	0.4557	0.0044	1.0000
2004	0.5719	0.0076	0.4117	0.0088	1.0000
2005	0.5095	0.0577	0.4068	0.0260	1.0000
2006	0.5300	0.0500	0.4200	0.0000	1.0000
2007	0.5200	0.0600	0.4200	0.0000	1.0000
2008	0.5200	0.0700	0.4100	0.0000	1.0000

Appendix A.5.b: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources fo

b

RigCat	MEDIUM

Target Resource Allocations for Alberta- East Central Study Area

Alberta- East Central

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
4	2000	32		497	57	586
	2001	102		486	294	882
	2002	70		317	701	1,087
	2003	100		915	710	1,724
	2004	158		660	344	1,162
	2005	92	36	330	467	924
	2006	53	85	85	197	420

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0546	0.0000	0.8479	0.0975	1.0000
2001	0.1156	0.0000	0.5515	0.3329	1.0000
2002	0.0642	0.0000	0.2912	0.6445	1.0000
2003	0.0578	0.0000	0.5305	0.4116	1.0000
2004	0.1363	0.0000	0.5678	0.2959	1.0000
2005	0.0991	0.0390	0.3568	0.5052	1.0000
2006	0.1000	0.0200	0.4400	0.4400	1.0000
2007	0.1000	0.0200	0.4400	0.4400	1.0000
2008	0.1000	0.0200	0.4400	0.4400	1.0000

Target Resource Allocations for Alberta- Central Study Area

Alberta- Central

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
5	2000	1,468	22	1,195		2,685
	2001	1,329	50	1,239		2,617
	2002	1,124	76	940		2,139
	2003	1,985	158	1,394		3,536
	2004	3,122	143	1,638		4,902
	2005	3,446	1,355	2,015	19	6,835
	2006	749	856	824		2,429

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.5467	0.0082	0.4451	0.0000	1.0000
2001	0.5076	0.0191	0.4733	0.0000	1.0000
2002	0.5252	0.0355	0.4392	0.0000	1.0000
2003	0.5613	0.0446	0.3941	0.0000	1.0000
2004	0.6368	0.0292	0.3340	0.0000	1.0000
2005	0.5041	0.1983	0.2949	0.0028	1.0000
2006	0.3500	0.3500	0.3000	0.0000	1.0000
2007	0.3200	0.4000	0.2800	0.0000	1.0000
2008	0.3200	0.4500	0.2300	0.0000	1.0000

Target Resource Allocations for Alberta- Northeast Study Area

Alberta- Northeast

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
6	2000	37		6	2,477	2,521
	2001	46		8	1,961	2,015
	2002	42			1,766	1,808
	2003	47			1,819	1,866
	2004	9		26	1,712	1,747
	2005	5		9	2,555	2,569
	2006	4			806	810

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0147	0.0000	0.0025	0.9828	1.0000
2001	0.0227	0.0000	0.0040	0.9734	1.0000
2002	0.0230	0.0000	0.0000	0.9770	1.0000
2003	0.0249	0.0000	0.0000	0.9751	1.0000
2004	0.0052	0.0000	0.0149	0.9800	1.0000
2005	0.0021	0.0000	0.0034	0.9945	1.0000
2006	0.0000	0.0000	0.0000	1.0000	1.0000
2007	0.0000	0.0000	0.0000	1.0000	1.0000
2008	0.0000	0.0000	0.0000	1.0000	1.0000

Appendix A.5.b: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources fo

b

RigCat	MEDIUM

Target Resource Allocations for Alberta- Northwest Study Area

Alberta- Northwest

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
7	2000	1,691		2,034	40	3,765
	2001	2,501		2,905	322	5,728
	2002	1,644		2,192	202	4,038
	2003	2,125		2,487	321	4,932
	2004	3,775		2,628	783	7,186
	2005	4,925		3,228	579	8,732
	2006	1,982		1,094	313	3,389

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.4492	0.0000	0.5402	0.0106	1.0000
2001	0.4366	0.0000	0.5072	0.0562	1.0000
2002	0.4072	0.0000	0.5428	0.0500	1.0000
2003	0.4309	0.0000	0.5042	0.0650	1.0000
2004	0.5254	0.0000	0.3656	0.1090	1.0000
2005	0.5640	0.0000	0.3697	0.0663	1.0000
2006	0.5500	0.0000	0.3700	0.0800	1.0000
2007	0.5500	0.0000	0.3700	0.0800	1.0000
2008	0.5500	0.0000	0.3700	0.0800	1.0000

Target Resource Allocations for B.C.- Fort St. John Study Area

B.C.- Fort St. John

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
8	2000	2,621		754		3,375
	2001	3,336		380		3,716
	2002	2,482		259		2,741
	2003	3,887		389		4,276
	2004	4,498		378		4,876
	2005	4,779		348		5,127
	2006	704		7		711

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.7766	0.0000	0.2234	0.0000	1.0000
2001	0.8977	0.0000	0.1023	0.0000	1.0000
2002	0.9053	0.0000	0.0947	0.0000	1.0000
2003	0.9091	0.0000	0.0909	0.0000	1.0000
2004	0.9226	0.0000	0.0774	0.0000	1.0000
2005	0.9322	0.0000	0.0678	0.0000	1.0000
2006	0.9300	0.0000	0.0700	0.0000	1.0000
2007	0.9300	0.0000	0.0700	0.0000	1.0000
2008	0.9300	0.0000	0.0700	0.0000	1.0000

Target Resource Allocations for B.C.- Fort Nelson Study Area

B.C.- Fort Nelson

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
9	2000	2,264		243		2,507
	2001	3,909		96		4,005
	2002	2,298		234		2,531
	2003	4,468		176		4,644
	2004	4,361		217		4,578
	2005	4,266				4,266
	2006	1,603		103		1,706

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.9031	0.0000	0.0969	0.0000	1.0000
2001	0.9760	0.0000	0.0240	0.0000	1.0000
2002	0.9077	0.0000	0.0923	0.0000	1.0000
2003	0.9620	0.0000	0.0380	0.0000	1.0000
2004	0.9526	0.0000	0.0474	0.0000	1.0000
2005	1.0000	0.0000	0.0000	0.0000	1.0000
2006	0.9600	0.0000	0.0400	0.0000	1.0000
2007	0.9600	0.0000	0.0400	0.0000	1.0000
2008	0.9600	0.0000	0.0400	0.0000	1.0000

Appendix A.5.b: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources fo

b

RigCat	MEDIUM

Target Resource Allocations for B.C.- Foothills Study Area

B.C.- Foothills

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
10	2000	465				465
	2001	478	37			515
	2002	372				372
	2003	415				415
	2004	436				436
	2005	253				253
	2006					

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	1.0000	0.0000	0.0000	0.0000	1.0000
2001	0.9291	0.0709	0.0000	0.0000	1.0000
2002	1.0000	0.0000	0.0000	0.0000	1.0000
2003	1.0000	0.0000	0.0000	0.0000	1.0000
2004	1.0000	0.0000	0.0000	0.0000	1.0000
2005	1.0000	0.0000	0.0000	0.0000	1.0000
2006	1.0000	0.0000	0.0000	0.0000	1.0000
2007	1.0000	0.0000	0.0000	0.0000	1.0000
2008	1.0000	0.0000	0.0000	0.0000	1.0000

Target Resource Allocations for Saskatchewan- Central Study Area

Saskatchewan- Central

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
11	2000	15		543		558
	2001	23		550		573
	2002	15		655		670
	2003	49		1,071		1,119
	2004	25		564		589
	2005	15		858		873
	2006	5		222		227

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0269	0.0000	0.9731	0.0000	1.0000
2001	0.0402	0.0000	0.9598	0.0000	1.0000
2002	0.0221	0.0000	0.9779	0.0000	1.0000
2003	0.0433	0.0000	0.9567	0.0000	1.0000
2004	0.0425	0.0000	0.9575	0.0000	1.0000
2005	0.0172	0.0000	0.9828	0.0000	1.0000
2006	0.0300	0.0000	0.9700	0.0000	1.0000
2007	0.0300	0.0000	0.9700	0.0000	1.0000
2008	0.0300	0.0000	0.9700	0.0000	1.0000

Target Resource Allocations for Saskatchewan- Southwest Study Area

Saskatchewan- Southwest

		Historic MEDIUM Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
12	2000	74		603		677
	2001	23		275		297
	2002	89		263		352
	2003	236		340		576
	2004	140		422		562
	2005	209		260		469
	2006	48		9		56

	Historic & Projected Fraction of MEDIUM Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.1095	0.0000	0.8905	0.0000	1.0000
2001	0.0758	0.0000	0.9242	0.0000	1.0000
2002	0.2521	0.0000	0.7479	0.0000	1.0000
2003	0.4092	0.0000	0.5908	0.0000	1.0000
2004	0.2484	0.0000	0.7516	0.0000	1.0000
2005	0.4459	0.0000	0.5541	0.0000	1.0000
2006	0.4000	0.0000	0.6000	0.0000	1.0000
2007	0.4000	0.0000	0.6000	0.0000	1.0000
2008	0.4000	0.0000	0.6000	0.0000	1.0000

Appendix A.5.c: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

c

RigCat	DEEP

Target Resource Allocations for Alberta- Foothills Study Area

Alberta- Foothills

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
1	2000	2,687		19		2,706
	2001	2,749				2,749
	2002	2,388				2,388
	2003	3,314		39		3,353
	2004	5,020		175	84	5,279
	2005	4,462		332		4,794
	2006	2,054		40		2,094

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.9930	0.0000	0.0070	0.0000	1.0000
2001	1.0000	0.0000	0.0000	0.0000	1.0000
2002	1.0000	0.0000	0.0000	0.0000	1.0000
2003	0.9884	0.0000	0.0116	0.0000	1.0000
2004	0.9509	0.0000	0.0332	0.0159	1.0000
2005	0.9307	0.0000	0.0693	0.0000	1.0000
2006	0.9800	0.0000	0.0200	0.0000	1.0000
2007	0.9800	0.0000	0.0200	0.0000	1.0000
2008	0.9800	0.0000	0.0200	0.0000	1.0000

Target Resource Allocations for Alberta- Foothills Front Study Area

Alberta- Foothills Front

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
2	2000	9,236		471	81	9,788
	2001	10,594		911		11,505
	2002	8,273		732		9,005
	2003	10,733		752		11,485
	2004	14,152	24	615		14,791
	2005	17,373		920		18,293
	2006	8,407		455		8,862

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.9437	0.0000	0.0481	0.0083	1.0000
2001	0.9208	0.0000	0.0792	0.0000	1.0000
2002	0.9187	0.0000	0.0813	0.0000	1.0000
2003	0.9345	0.0000	0.0655	0.0000	1.0000
2004	0.9568	0.0016	0.0416	0.0000	1.0000
2005	0.9497	0.0000	0.0503	0.0000	1.0000
2006	0.9500	0.0000	0.0500	0.0000	1.0000
2007	0.9500	0.0000	0.0500	0.0000	1.0000
2008	0.9500	0.0000	0.0500	0.0000	1.0000

Target Resource Allocations for Alberta- Southeast Study Area

Alberta- Southeast

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
3	2000	305				305
	2001	280		36		316
	2002	118		5		123
	2003	98				98
	2004	155	11			165
	2005	60		10		70
	2006	2	4			6

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	1.0000	0.0000	0.0000	0.0000	1.0000
2001	0.8862	0.0000	0.1138	0.0000	1.0000
2002	0.9593	0.0000	0.0407	0.0000	1.0000
2003	1.0000	0.0000	0.0000	0.0000	1.0000
2004	0.9364	0.0636	0.0000	0.0000	1.0000
2005	0.8620	0.0000	0.1380	0.0000	1.0000
2006	1.0000	0.0000	0.0000	0.0000	1.0000
2007	1.0000	0.0000	0.0000	0.0000	1.0000
2008	1.0000	0.0000	0.0000	0.0000	1.0000

Appendix A.5.c: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

c

RigCat	DEEP

Target Resource Allocations for Alberta- East Central Study Area

Alberta- East Central

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
4	2000			3	31	34
	2001				185	185
	2002				44	44
	2003			1	16	17
	2004	57		35	9	101
	2005	32		8	3	43
	2006	2		8		10

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0000	0.0000	0.0746	0.9254	1.0000
2001	0.0000	0.0000	0.0000	1.0000	1.0000
2002	0.0000	0.0000	0.0000	1.0000	1.0000
2003	0.0000	0.0000	0.0588	0.9412	1.0000
2004	0.5679	0.0000	0.3427	0.0894	1.0000
2005	0.7510	0.0000	0.1795	0.0695	1.0000
2006	0.2500	0.0000	0.2500	0.5000	1.0000
2007	0.2500	0.0000	0.2500	0.5000	1.0000
2008	0.2500	0.0000	0.2500	0.5000	1.0000

Target Resource Allocations for Alberta- Central Study Area

Alberta- Central

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
5	2000	286		697		983
	2001	345	6	363		714
	2002	103		118		221
	2003	32	15	47		94
	2004	226		149		375
	2005	334	97	361	19	810
	2006	116	125	87		328

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.2906	0.0000	0.7094	0.0000	1.0000
2001	0.4832	0.0084	0.5084	0.0000	1.0000
2002	0.4661	0.0000	0.5339	0.0000	1.0000
2003	0.3404	0.1596	0.5000	0.0000	1.0000
2004	0.6021	0.0000	0.3979	0.0000	1.0000
2005	0.4116	0.1193	0.4457	0.0234	1.0000
2006	0.3000	0.3000	0.4000	0.0000	1.0000
2007	0.3000	0.3000	0.4000	0.0000	1.0000
2008	0.3000	0.3000	0.4000	0.0000	1.0000

Target Resource Allocations for Alberta- Northeast Study Area

Alberta- Northeast

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
6	2000				135	135
	2001					
	2002				215	215
	2003				144	144
	2004			43	180	222
	2005	13		157	315	485
	2006	4		3	208	214

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0000	0.0000	0.0000	1.0000	1.0000
2001					0.0000
2002	0.0000	0.0000	0.0000	1.0000	1.0000
2003	0.0000	0.0000	0.0000	1.0000	1.0000
2004	0.0000	0.0000	0.1913	0.8087	1.0000
2005	0.0262	0.0000	0.3239	0.6499	1.0000
2006	0.0000	0.0000	0.1000	0.9000	1.0000
2007	0.0000	0.0000	0.1000	0.9000	1.0000
2008	0.0000	0.0000	0.1000	0.9000	1.0000

Appendix A.5.c: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

c

RigCat	DEEP

Target Resource Allocations for Alberta- Northwest Study Area

Alberta- Northwest

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
7	2000	498		177		675
	2001	483		233		716
	2002	491		139		630
	2003	486		240		726
	2004	539		157		696
	2005	464		65	251	779
	2006	385		98	309	792

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.7378	0.0000	0.2622	0.0000	1.0000
2001	0.6742	0.0000	0.3258	0.0000	1.0000
2002	0.7792	0.0000	0.2208	0.0000	1.0000
2003	0.6694	0.0000	0.3306	0.0000	1.0000
2004	0.7739	0.0000	0.2261	0.0000	1.0000
2005	0.5950	0.0000	0.0833	0.3217	1.0000
2006	0.6500	0.0000	0.1500	0.2000	1.0000
2007	0.6500	0.0000	0.1500	0.2000	1.0000
2008	0.6500	0.0000	0.1500	0.2000	1.0000

Target Resource Allocations for B.C.- Fort St. John Study Area

B.C.- Fort St. John

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
8	2000	659				659
	2001	1,554		23		1,577
	2002	1,312		115		1,427
	2003	1,791		162		1,953
	2004	2,529				2,529
	2005	3,364		6		3,370
	2006	427				427

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	1.0000	0.0000	0.0000	0.0000	1.0000
2001	0.9854	0.0000	0.0146	0.0000	1.0000
2002	0.9194	0.0000	0.0806	0.0000	1.0000
2003	0.9171	0.0000	0.0829	0.0000	1.0000
2004	1.0000	0.0000	0.0000	0.0000	1.0000
2005	0.9982	0.0000	0.0018	0.0000	1.0000
2006	0.9800	0.0000	0.0200	0.0000	1.0000
2007	0.9800	0.0000	0.0200	0.0000	1.0000
2008	0.9800	0.0000	0.0200	0.0000	1.0000

Target Resource Allocations for B.C.- Fort Nelson Study Area

B.C.- Fort Nelson

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
9	2000	358				358
	2001	548				548
	2002	1,093				1,093
	2003	367				367
	2004	399				399
	2005	386				386
	2006	52				52

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	1.0000	0.0000	0.0000	0.0000	1.0000
2001	1.0000	0.0000	0.0000	0.0000	1.0000
2002	1.0000	0.0000	0.0000	0.0000	1.0000
2003	1.0000	0.0000	0.0000	0.0000	1.0000
2004	1.0000	0.0000	0.0000	0.0000	1.0000
2005	1.0000	0.0000	0.0000	0.0000	1.0000
2006	1.0000	0.0000	0.0000	0.0000	1.0000
2007	1.0000	0.0000	0.0000	0.0000	1.0000
2008	1.0000	0.0000	0.0000	0.0000	1.0000

Appendix A.5.c: 2006 Short-term Gas Deliverability EMA - Allocation of Drill Days to Target Resources

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RigCat	DEEP

Target Resource Allocations for B.C.- Foothills Study Area

B.C.- Foothills

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
10	2000	455				455
	2001	1,341				1,341
	2002	839				839
	2003	1,129				1,129
	2004	1,541				1,541
	2005	694				694
	2006	38				38

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	1.0000	0.0000	0.0000	0.0000	1.0000
2001	1.0000	0.0000	0.0000	0.0000	1.0000
2002	1.0000	0.0000	0.0000	0.0000	1.0000
2003	1.0000	0.0000	0.0000	0.0000	1.0000
2004	1.0000	0.0000	0.0000	0.0000	1.0000
2005	1.0000	0.0000	0.0000	0.0000	1.0000
2006	1.0000	0.0000	0.0000	0.0000	1.0000
2007	1.0000	0.0000	0.0000	0.0000	1.0000
2008	1.0000	0.0000	0.0000	0.0000	1.0000

Target Resource Allocations for Saskatchewan- Central Study Area

Saskatchewan- Central

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
11	2000					
	2001			86		86
	2002					
	2003					
	2004			8		8
	2005			62		62
	2006			3		3

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000					0.0000
2001	0.0000	0.0000	1.0000	0.0000	1.0000
2002					0.0000
2003					0.0000
2004	0.0000	0.0000	1.0000	0.0000	1.0000
2005	0.0000	0.0000	1.0000	0.0000	1.0000
2006	0.0000	0.0000	1.0000	0.0000	1.0000
2007	0.0000	0.0000	1.0000	0.0000	1.0000
2008	0.0000	0.0000	1.0000	0.0000	1.0000

Target Resource Allocations for Saskatchewan- Southwest Study Area

Saskatchewan- Southwest

		Historic DEEP Rig Drill Days For Target Resource				Total
AreaNo	Year	Gas	CBM	Oil	Oil Sands	
12	2000			11		11
	2001	10				10
	2002	1				1
	2003	21				21
	2004	14				14
	2005	3		7		10
	2006					

	Historic & Projected Fraction of DEEP Rig Drill Days Allocated to Target				Total
Year	Gas	CBM	Oil	Oil Sands	
2000	0.0000	0.0000	1.0000	0.0000	1.0000
2001	1.0000	0.0000	0.0000	0.0000	1.0000
2002	1.0000	0.0000	0.0000	0.0000	1.0000
2003	1.0000	0.0000	0.0000	0.0000	1.0000
2004	1.0000	0.0000	0.0000	0.0000	1.0000
2005	0.3103	0.0000	0.6897	0.0000	1.0000
2006	1.0000	0.0000	0.0000	0.0000	1.0000
2007	1.0000	0.0000	0.0000	0.0000	1.0000
2008	1.0000	0.0000	0.0000	0.0000	1.0000

Appendix A.6

WCSB Rig Fleet – Drill Days per Well for each Resource Target in each Study Area

In this Appendix A.6, the historical trends for drill days per well are examined and projections for drill days per well for 2006 through 2008 are developed. The historical drill days and well counts are obtained via NEB analysis of GeoScout well data.

The data set upon which the historical drill days per well is based is comprised of those wells from the GeoScout data base that were completed since the start of 2000.

Appendix 6 contains tables showing the derivation of drill days per well for each rig category in each Study Area for each target resource for historical data and provides the estimate of drill days per well for the projection period, where applicable.

For each grouping (Rig Category/Study Area/Target Resource), the drill days per well is applied to the drill days to determine the number of wells.

Appendix A.6.a: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for SHALLOW Wells

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RigCat	SHALLOW

Drill Days per Well by Target Resource and Study Area

Area: Alberta- Foothills

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
1	2000										
	2001			16.0	1					16.0	1
	2002			31.0	2					31.0	2
	2003			27.0	3					27.0	3
	2004										
	2005	4.0	1	11.5	1					15.5	2
	2006	10.0	2							10.0	2

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000					
2001		16.0			16.0
2002		15.5			15.5
2003		9.0			9.0
2004					
2005	4.0	11.5			7.8
2006	4.0	12.0	NA	NA	8.0
2007	4.0	12.0	NA	NA	8.0
2008	4.0	12.0	NA	NA	8.0

Area: Alberta- Foothills Front

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
2	2000	215.3	38	47.3	9	79.0	10			341.7	57
	2001	202.5	47	80.7	15	36.0	4			319.2	66
	2002	145.6	34	45.5	13	2.5	1			193.6	48
	2003	499.9	86	179.6	40	71.0	13			750.5	139
	2004	727.1	157	57.7	14	30.0	6			814.8	177
	2005	1,332.2	272	128.5	22	162.6	21			1,623.3	315
	2006	635.2	121	40.0	8	49.4	6			724.6	135

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	5.7	5.3	7.9		6.0
2001	4.3	5.4	9.0		4.8
2002	4.3	3.5	2.5		4.0
2003	5.8	4.5	5.5		5.4
2004	4.6	4.1	5.0		4.6
2005	4.9	5.8	7.7		5.2
2006	5.0	5.0	7.0	NA	5.0
2007	5.0	5.0	7.0	NA	5.0
2008	5.0	5.0	7.0	NA	5.0

Area: Alberta- Southeast

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
3	2000	5,716.2	2474	231.9	62	693.9	128			6,642.0	2664
	2001	5,679.4	3448	309.5	79	303.8	62			6,292.7	3589
	2002	4,957.2	3163	393.2	99	453.4	79			5,803.8	3341
	2003	8,769.1	5337	718.8	420	438.5	86			9,926.3	5843
	2004	10,507.2	5568	2,182.2	1070	597.7	147	3.1	3	13,290.3	6788
	2005	12,084.6	4960	3,183.5	1161	805.0	168	2.5	1	16,075.6	6290
	2006	3,149.9	1253	744.6	274	99.2	23			3,993.7	1550

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	2.3	3.7	5.4		2.5
2001	1.6	3.9	4.9		1.8
2002	1.6	4.0	5.7		1.7
2003	1.6	1.7	5.1		1.7
2004	1.9	2.0	4.1	1.0	2.0
2005	2.4	2.7	4.8	2.5	2.6
2006	2.3	2.5	4.8	2.0	2.4
2007	2.3	2.5	4.8	2.0	2.4
2008	2.3	2.5	4.8	2.0	2.4

Appendix A.6.a: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for SHALLOW Wells

a

RigCat	SHALLOW

Area: Alberta- East Central

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
4	2000	626.1	198			1,843.7	540	1,089.3	369	3,559.2	1107
	2001	837.1	239	6.0	1	995.7	278	298.6	109	2,137.4	627
	2002	826.8	334	19.0	4	605.7	187	420.8	141	1,872.4	666
	2003	1,429.7	492	9.8	3	792.8	207	681.5	224	2,913.8	926
	2004	1,759.1	556	11.2	4	1,043.4	288	365.0	129	3,178.7	977
	2005	1,786.4	583	25.3	10	1,382.2	365	751.5	247	3,945.5	1205
	2006	296.4	117	3.0	1	460.3	93	249.8	78	1,009.5	289

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	3.2		3.4	3.0	3.2
2001	3.5	6.0	3.6	2.7	3.4
2002	2.5	4.8	3.2	3.0	2.8
2003	2.9	3.3	3.8	3.0	3.1
2004	3.2	2.8	3.6	2.8	3.3
2005	3.1	2.5	3.8	3.0	3.3
2006	3.1	3.0	3.7	2.9	3.3
2007	3.1	3.0	3.7	2.9	3.3
2008	3.1	3.0	3.7	2.9	3.3

Area: Alberta- Central

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
5	2000	1,021.8	271	33.8	12	429.6	76			1,485.2	359
	2001	1,007.5	267	100.6	34	309.8	64			1,417.9	365
	2002	943.6	221	301.5	55	178.8	38			1,423.9	314
	2003	1,766.7	484	988.5	160	399.0	88			3,154.2	732
	2004	2,845.8	696	1,691.1	587	234.5	35			4,771.4	1318
	2005	4,157.2	992	2,690.3	1106	671.3	136	70.0	2	7,588.7	2236
	2006	1,185.0	318	892.2	351	265.4	47	3.0	1	2,345.6	717

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	3.8	2.8	5.7		4.1
2001	3.8	3.0	4.8		3.9
2002	4.3	5.5	4.7		4.5
2003	3.7	6.2	4.5		4.3
2004	4.1	2.9	6.7		3.6
2005	4.2	2.4	4.9	35.0	3.4
2006	4.1	2.6	5.0	NA	3.5
2007	4.1	2.6	5.0	NA	3.5
2008	4.1	2.6	5.0	NA	3.5

Area: Alberta- Northeast

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
6	2000	953.2	265			15.5	4	40.0	13	1,008.7	282
	2001	1,119.2	328			3.3	2	65.5	17	1,188.0	347
	2002	1,115.5	196			3.0	1			1,118.5	197
	2003	722.8	244			76.8	5	39.2	6	838.8	255
	2004	1,063.1	363			14.0	4	85.7	21	1,162.8	388
	2005	973.4	260			106.6	47	51.1	19	1,131.1	326
	2006	1,123.9	363			164.4	57	4.0	2	1,292.3	422

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	3.6		3.9	3.1	3.6
2001	3.4		1.7	3.9	3.4
2002	5.7		3.0		5.7
2003	3.0		15.4	6.5	3.3
2004	2.9		3.5	4.1	3.0
2005	3.7		2.3	2.7	3.5
2006	3.3	NA	2.8	3.2	3.2
2007	3.3	NA	2.8	3.2	3.2
2008	3.3	NA	2.8	3.2	3.2

Appendix A.6.a: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for SHALLOW Wells

a

RigCat	SHALLOW

Area: Alberta- Northwest

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
7	2000	1,377.2	428			407.5	61	14.0	3	1,798.7	492
	2001	1,365.0	523			498.2	74	29.0	2	1,892.1	599
	2002	1,320.5	371			277.5	43	25.0	4	1,623.0	418
	2003	1,302.2	511			216.5	40	18.5	4	1,537.2	555
	2004	2,224.2	730			449.0	74	13.5	3	2,686.7	807
	2005	2,098.9	650			566.5	85	14.0	3	2,679.4	738
	2006	2,049.5	598			199.9	37	36.0	7	2,285.4	642

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	3.2		6.7	4.7	3.7
2001	2.6		6.7	14.5	3.2
2002	3.6		6.5	6.3	3.9
2003	2.5		5.4	4.6	2.8
2004	3.0		6.1	4.5	3.3
2005	3.2		6.7	4.7	3.6
2006	3.3	NA	6.3	4.6	3.4
2007	3.3	NA	6.3	4.6	3.4
2008	3.3	NA	6.3	4.6	3.4

Area: B.C.- Fort St. John

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
8	2000	639.7	63			163.0	17			802.7	80
	2001	799.1	136			141.5	18			940.6	154
	2002	348.0	60			51.0	6			399.0	66
	2003	495.4	91			91.0	7			586.4	98
	2004	1,025.8	229			78.5	9			1,104.3	238
	2005	1,354.4	257			44.8	4			1,399.2	261
	2006	712.6	124			8.0	3			720.6	127

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	10.2		9.6		10.0
2001	5.9		7.9		6.1
2002	5.8		8.5		6.0
2003	5.4		13.0		6.0
2004	4.5		8.7		4.6
2005	5.3		11.2		5.4
2006	5.5	NA	10.0	NA	5.5
2007	5.5	NA	10.0	NA	5.5
2008	5.5	NA	10.0	NA	5.5

Area: B.C.- Fort Nelson

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
9	2000	637.5	28			35.6	8			673.1	36
	2001	645.1	47			183.6	33			828.7	80
	2002	105.0	22			67.0	10			172.0	32
	2003	240.0	24			140.2	21			380.2	45
	2004	198.4	21			128.2	23			326.6	44
	2005	496.2	27			42.8	9			539.0	36
	2006	169.8	26			70.7	5			240.5	31

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	22.8		4.5		18.7
2001	13.7		5.6		10.4
2002	4.8		6.7		5.4
2003	10.0		6.7		8.4
2004	9.4		5.6		7.4
2005	18.4		4.8		15.0
2006	15.0	NA	5.8	NA	14.0
2007	15.0	NA	5.8	NA	14.0
2008	15.0	NA	5.8	NA	14.0

Appendix A.6.a: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for SHALLOW Wells

a

RigCat	SHALLOW

Area: B.C.- Foothills

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
10	2000	16.0	1							16.0	1
	2001										
	2002										
	2003										
	2004	12.0	1							12.0	1
	2005										
	2006										

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	16.0				16.0
2001					
2002					
2003					
2004	12.0				12.0
2005					
2006	14.0	NA	NA	NA	14.0
2007	14.0	NA	NA	NA	14.0
2008	14.0	NA	NA	NA	14.0

Area: Saskatchewan- Central

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
11	2000	216.2	85			2,286.3	812			2,502.5	897
	2001	342.2	117			1,190.2	447			1,532.4	564
	2002	260.9	96			1,223.0	429			1,483.9	525
	2003	666.9	233			1,571.2	546			2,238.1	779
	2004	726.1	220			1,363.6	455			2,089.6	675
	2005	820.5	196			1,543.8	522			2,364.3	718
	2006	282.5	82			389.8	139			672.2	221

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	2.5		2.8		2.8
2001	2.9		2.7		2.7
2002	2.7		2.9		2.8
2003	2.9		2.9		2.9
2004	3.3		3.0		3.1
2005	4.2		3.0		3.3
2006	3.3	NA	2.9	NA	3.2
2007	3.3	NA	2.9	NA	3.2
2008	3.3	NA	2.9	NA	3.2

Area: Saskatchewan- Southwest

AreaNo	Year	Drill Days and Well Counts for SHALLOW Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
12	2000	1,884.0	1095			1,419.8	360			3,303.8	1455
	2001	1,899.0	1165			967.7	311			2,866.7	1476
	2002	2,815.9	1691			864.0	296			3,679.9	1987
	2003	3,587.0	1878			821.5	271			4,408.5	2149
	2004	3,160.9	1572			799.5	275			3,960.4	1847
	2005	3,107.4	1320			1,086.3	311			4,193.7	1631
	2006	648.4	249			295.8	68			944.3	317

Year	Historic and Projected Average Drill Days per Well by Target Resource for SHALLOW Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	1.7		3.9		2.3
2001	1.6		3.1		1.9
2002	1.7		2.9		1.9
2003	1.9		3.0		2.1
2004	2.0		2.9		2.1
2005	2.4		3.5		2.6
2006	2.2	NA	3.3	NA	2.3
2007	2.2	NA	3.3	NA	2.3
2008	2.2	NA	3.3	NA	2.3

Appendix A.6.b: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for MEDIUM Wells

b

RigCat	MEDIUM

Drill Days per Well by Target Resource and Study Area

Area: Alberta- Foothills

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
1	2000	279.0	6			82.0	1			361.0	7
	2001	462.0	11			53.0	2			515.0	13
	2002	195.3	7	47.8	4	22.0	1			265.2	12
	2003	70.0	5							70.0	5
	2004	313.1	16			117.0	2			430.1	18
	2005	273.0	13	12.0	1	108.0	3			393.0	17
	2006	143.0	6							143.0	6

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	46.5		82.0		51.6
2001	42.0		26.5		39.6
2002	27.9	12.0	22.0		22.1
2003	14.0				14.0
2004	19.6		58.5		23.9
2005	21.0	12.0	36.0		23.1
2006	21.0	12.0	36.0	NA	22.0
2007	21.0	12.0	36.0	NA	22.0
2008	21.0	12.0	36.0	NA	22.0

Area: Alberta- Foothills Front

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
2	2000	8,075.5	483	9.0	2	2,088.3	177	39.0	1	10,211.8	663
	2001	7,851.7	460	10.0	2	2,253.0	191			10,114.7	653
	2002	6,213.8	459	5.0	1	1,336.5	126			7,555.3	586
	2003	10,248.8	733	15.0	4	2,687.5	297	41.0	1	12,992.3	1035
	2004	13,892.6	1037	16.0	9	2,177.5	210			16,086.1	1256
	2005	16,273.3	1216	9.0	1	2,334.5	221	6.0	1	18,622.8	1439
	2006	6,689.9	515			758.0	67			7,447.9	582

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	16.7	4.5	11.8	39.0	15.4
2001	17.1	5.0	11.8		15.5
2002	13.5	5.0	10.6		12.9
2003	14.0	3.8	9.0	41.0	12.6
2004	13.4	1.8	10.4		12.8
2005	13.4	9.0	10.6	6.0	12.9
2006	13.5	5.0	10.5	NA	13.3
2007	13.5	5.0	10.5	NA	13.3
2008	13.5	5.0	10.5	NA	13.3

Area: Alberta- Southeast

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
3	2000	1,411.8	218	8.0	1	2,527.5	313			3,947.3	532
	2001	2,496.7	521	50.1	14	2,220.6	300	51.0	2	4,818.5	837
	2002	2,337.1	539	71.5	12	2,111.0	304	56.5	3	4,576.1	858
	2003	3,188.2	678	31.5	12	2,717.8	380	26.0	3	5,963.5	1073
	2004	2,789.9	724	37.0	15	2,008.1	277	43.0	4	4,878.0	1020
	2005	2,228.5	410	252.5	86	1,779.3	262	113.5	6	4,373.7	764
	2006	785.3	122	51.5	16	325.3	41	21.0	2	1,183.1	181

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	6.5	8.0	8.1		7.4
2001	4.8	3.6	7.4	25.5	5.8
2002	4.3	6.0	6.9	18.8	5.3
2003	4.7	2.6	7.2	8.7	5.6
2004	3.9	2.5	7.2	10.8	4.8
2005	5.4	2.9	6.8	18.9	5.7
2006	4.7	3.0	7.1	15.0	5.5
2007	4.7	3.0	7.1	15.0	5.5
2008	4.7	3.0	7.1	15.0	5.5

Appendix A.6.b: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for MEDIUM Wells

b

RigCat	MEDIUM

Area: Alberta- East Central

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
4	2000	32.0	7			497.0	83	57.2	23	586.2	113
	2001	102.0	28			486.5	116	293.7	166	882.1	310
	2002	69.8	14			316.6	79	700.8	329	1,087.3	422
	2003	99.7	35			914.7	254	709.7	253	1,724.1	542
	2004	158.3	53			659.8	200	343.8	150	1,162.0	403
	2005	91.5	30	36.0	3	329.5	79	466.6	156	923.6	268
	2006	53.0	17	85.0	21	85.0	19	196.7	41	419.7	98

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	4.6		6.0	2.5	5.2
2001	3.6		4.2	1.8	2.8
2002	5.0		4.0	2.1	2.6
2003	2.8		3.6	2.8	3.2
2004	3.0		3.3	2.3	2.9
2005	3.1	12.0	4.2	3.0	3.4
2006	3.0	4.0	4.0	2.5	3.2
2007	3.0	4.0	4.0	2.5	3.2
2008	3.0	4.0	4.0	2.5	3.2

Area: Alberta- Central

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
5	2000	1,467.5	189	22.0	5	1,195.0	124			2,684.5	318
	2001	1,328.5	199	50.0	8	1,238.5	104			2,617.0	311
	2002	1,123.5	154	76.0	12	939.5	96			2,139.0	262
	2003	1,985.0	290	157.8	23	1,393.5	147			3,536.3	460
	2004	3,121.8	533	143.0	29	1,637.5	182			4,902.3	744
	2005	3,445.5	613	1,355.2	182	2,015.5	195	19.0	1	6,835.1	991
	2006	748.7	130	856.2	88	824.0	71			2,428.9	289

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	7.8	4.4	9.6		8.4
2001	6.7	6.3	11.9		8.4
2002	7.3	6.3	9.8		8.2
2003	6.8	6.9	9.5		7.7
2004	5.9	4.9	9.0		6.6
2005	5.6	7.4	10.3	19.0	6.9
2006	6.0	10.0	10.0	NA	8.0
2007	6.0	10.0	10.0	NA	8.0
2008	6.0	10.0	10.0	NA	8.0

Area: Alberta- Northeast

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
6	2000	37.0	6			6.3	1	2,477.4	330	2,520.7	337
	2001	45.7	10			8.0	2	1,961.1	312	2,014.8	324
	2002	41.5	7					1,766.5	301	1,808.0	308
	2003	46.5	15					1,819.4	331	1,865.9	346
	2004	9.0	4			26.0	3	1,712.5	320	1,747.5	327
	2005	5.3	1			8.8	1	2,554.7	446	2,568.8	448
	2006	3.5	1					806.1	90	809.6	91

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	6.2		6.3	7.5	7.5
2001	4.6		4.0	6.3	6.2
2002	5.9			5.9	5.9
2003	3.1			5.5	5.4
2004	2.3		8.7	5.4	5.3
2005	5.3		8.8	5.7	5.7
2006	4.5	NA	8.0	5.7	5.8
2007	4.5	NA	8.0	5.7	5.8
2008	4.5	NA	8.0	5.7	5.8

Appendix A.6.b: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for MEDIUM Wells

b

RigCat	MEDIUM

Area: Alberta- Northwest

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
7	2000	1,691.4	169			2,034.0	158	40.0	2	3,765.4	329
	2001	2,500.5	215			2,905.0	209	322.0	20	5,727.5	444
	2002	1,644.3	141			2,192.0	149	202.0	15	4,038.3	305
	2003	2,125.0	182			2,486.6	197	320.5	47	4,932.1	426
	2004	3,775.5	381			2,627.5	214	782.9	106	7,185.9	701
	2005	4,924.5	438			3,228.3	298	578.9	79	8,731.6	815
	2006	1,982.2	186			1,094.3	92	312.9	19	3,389.4	297

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	10.0		12.9	20.0	11.4
2001	11.6		13.9	16.1	12.9
2002	11.7		14.7	13.5	13.2
2003	11.7		12.6	6.8	11.6
2004	9.9		12.3	7.4	10.3
2005	11.2		10.8	7.3	10.7
2006	11.0	NA	12.0	7.5	11.0
2007	11.0	NA	12.0	7.5	11.0
2008	11.0	NA	12.0	7.5	11.0

Area: B.C.- Fort St. John

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
8	2000	2,621.4	188			754.0	36			3,375.4	224
	2001	3,335.5	182			380.3	31			3,715.8	213
	2002	2,481.8	165			259.5	15			2,741.3	180
	2003	3,887.2	242			388.5	31			4,275.7	273
	2004	4,498.2	280			377.5	26			4,875.7	306
	2005	4,779.2	275			347.5	22			5,126.7	297
	2006	704.0	53			7.0	1			711.0	54

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	13.9		20.9		15.1
2001	18.3		12.3		17.4
2002	15.0		17.3		15.2
2003	16.1		12.5		15.7
2004	16.1		14.5		15.9
2005	17.4		15.8		17.3
2006	16.0	NA	15.0	NA	16.0
2007	16.0	NA	15.0	NA	16.0
2008	16.0	NA	15.0	NA	16.0

Area: B.C.- Fort Nelson

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
9	2000	2,263.9	85			243.0	17			2,506.9	102
	2001	3,908.8	121			96.0	6			4,004.8	127
	2002	2,297.5	103			233.6	34			2,531.1	137
	2003	4,468.0	245			176.5	35			4,644.5	280
	2004	4,361.5	244			217.0	20			4,578.5	264
	2005	4,266.0	221							4,266.0	221
	2006	1,603.1	60			102.5	10			1,705.6	70

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	26.6		14.3		24.6
2001	32.3		16.0		31.5
2002	22.3		6.9		18.5
2003	18.2		5.0		16.6
2004	17.9		10.9		17.3
2005	19.3				19.3
2006	19.0	NA	9.0	NA	19.0
2007	19.0	NA	9.0	NA	19.0
2008	19.0	NA	9.0	NA	19.0

Appendix A.6.b: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for MEDIUM Wells

b

RigCat	MEDIUM

Area: B.C.- Foothills

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
10	2000	464.5	8							464.5	8
	2001	478.0	9	36.5	2					514.5	11
	2002	372.0	9							372.0	9
	2003	415.0	10							415.0	10
	2004	436.0	14							436.0	14
	2005	253.0	16							253.0	16
	2006										

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	58.1				58.1
2001	53.1	18.3			46.8
2002	41.3				41.3
2003	41.5				41.5
2004	31.1				31.1
2005	15.8				15.8
2006	25.0	NA	NA	NA	25.0
2007	25.0	NA	NA	NA	25.0
2008	25.0	NA	NA	NA	25.0

Area: Saskatchewan- Central

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
11	2000	15.0	4			542.5	85			557.5	89
	2001	23.0	9			549.7	113			572.7	122
	2002	14.8	7			655.0	176			669.8	183
	2003	48.5	17			1,070.5	223			1,119.0	240
	2004	25.0	9			563.8	128			588.8	137
	2005	15.0	6			858.0	178			873.0	184
	2006	5.0	2			222.0	49			227.0	51

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	3.8		6.4		6.3
2001	2.6		4.9		4.7
2002	2.1		3.7		3.7
2003	2.9		4.8		4.7
2004	2.8		4.4		4.3
2005	2.5		4.8		4.7
2006	2.7	NA	4.7	NA	4.6
2007	2.7	NA	4.7	NA	4.6
2008	2.7	NA	4.7	NA	4.6

Area: Saskatchewan- Southwest

AreaNo	Year	Drill Days and Well Counts for MEDIUM Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
12	2000	74.2	25			603.0	105			677.2	130
	2001	22.5	8			274.5	55			297.0	63
	2002	88.7	13			263.0	53			351.7	66
	2003	235.5	138			340.0	67			575.5	205
	2004	139.5	29			422.0	75			561.5	104
	2005	209.0	64			259.8	43			468.8	107
	2006	47.7	19			8.5	3			56.2	22

Year	Historic and Projected Average Drill Days per Well by Target Resource for MEDIUM Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	3.0		5.7		5.2
2001	2.8		5.0		4.7
2002	6.8		5.0		5.3
2003	1.7		5.1		2.8
2004	4.8		5.6		5.4
2005	3.3		6.0		4.4
2006	3.0	NA	5.5	NA	4.3
2007	3.0	NA	5.5	NA	4.3
2008	3.0	NA	5.5	NA	4.3

Appendix A.6.c: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for DEEP Wells

c

RigCat	DEEP

Drill Days per Well by Target Resource and Study Area

Area: Alberta- Foothills

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
1	2000	2,687.0	30			19.0	1			2,706.0	31
	2001	2,748.5	35							2,748.5	35
	2002	2,387.8	32							2,387.8	32
	2003	3,314.0	45			39.0	1			3,353.0	46
	2004	5,019.7	66			175.0	4	84.0	1	5,278.7	71
	2005	4,461.8	59			332.0	6			4,793.8	65
	2006	2,054.0	30			40.0	1			2,094.0	31

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	89.6		19.0		87.3
2001	78.5				78.5
2002	74.6				74.6
2003	73.6		39.0		72.9
2004	76.1		43.8	84.0	74.3
2005	75.6		55.3		73.8
2006	75.0	NA	50.0	NA	75.0
2007	75.0	NA	50.0	NA	75.0
2008	75.0	NA	50.0	NA	75.0

Area: Alberta- Foothills Front

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
2	2000	9,236.0	212			470.5	21	81.0	1	9,787.5	234
	2001	10,594.0	257			911.0	36			11,505.0	293
	2002	8,273.2	221			732.0	30			9,005.2	251
	2003	10,732.5	343			752.0	29			11,484.5	372
	2004	14,151.5	530	24.0	1	615.0	31			14,790.5	562
	2005	17,372.6	676			920.0	45			18,292.6	721
	2006	8,407.0	318			454.8	17			8,861.8	335

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	43.6		22.4	81.0	41.8
2001	41.2		25.3		39.3
2002	37.4		24.4		35.9
2003	31.3		25.9		30.9
2004	26.7	24.0	19.8		26.3
2005	25.7		20.4		25.4
2006	27.0	NA	22.0	NA	26.0
2007	27.0	NA	22.0	NA	26.0
2008	27.0	NA	22.0	NA	26.0

Area: Alberta- Southeast

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
3	2000	305.0	11							305.0	11
	2001	280.4	12			36.0	1			316.4	13
	2002	117.8	6			5.0	1			122.8	7
	2003	98.0	3							98.0	3
	2004	154.7	8	10.5	1					165.2	9
	2005	60.0	22			9.6	3			69.6	25
	2006	2.5	3	4.0	1					6.5	4

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	27.7				27.7
2001	23.4		36.0		24.3
2002	19.6		5.0		17.5
2003	32.7				32.7
2004	19.3	10.5			18.4
2005	2.7		3.2		2.8
2006	20.0	10.0	10.0	NA	15.0
2007	20.0	10.0	10.0	NA	15.0
2008	20.0	10.0	10.0	NA	15.0

Appendix A.6.c: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for DEEP Wells

c

RigCat	DEEP

Area: Alberta- East Central

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
4	2000					2.5	1	31.0	24	33.5	25
	2001							185.4	95	185.4	95
	2002							43.5	35	43.5	35
	2003					1.0	1	16.0	4	17.0	5
	2004	57.2	21			34.5	13	9.0	4	100.7	38
	2005	32.4	16			7.8	4	3.0	2	43.2	22
	2006	2.3	2			8.0	5			10.2	7

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000			2.5	1.3	1.3
2001				2.0	2.0
2002				1.2	1.2
2003			1.0	4.0	3.4
2004	2.7		2.7	2.3	2.6
2005	2.0		1.9	1.5	2.0
2006	2.3	NA	2.2	1.8	3.6
2007	2.3	NA	2.2	1.8	3.6
2008	2.3	NA	2.2	1.8	3.6

Area: Alberta- Central

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
5	2000	285.5	14			697.0	34			982.5	48
	2001	345.0	20	6.0	1	363.0	19			714.0	40
	2002	103.0	6			118.0	9			221.0	15
	2003	32.0	1	15.0	1	47.0	3			94.0	5
	2004	225.5	23			149.0	11			374.5	34
	2005	333.5	81	96.7	7	361.2	22	19.0	1	810.4	111
	2006	116.3	18	125.0	9	87.0	5			328.3	32

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	20.4		20.5		20.5
2001	17.3	6.0	19.1		17.9
2002	17.2		13.1		14.7
2003	32.0	15.0	15.7		18.8
2004	9.8		13.5		11.0
2005	4.1	13.8	16.4	19.0	7.3
2006	9.0	14.0	16.0	NA	12.0
2007	9.0	14.0	16.0	NA	12.0
2008	9.0	14.0	16.0	NA	12.0

Area: Alberta- Northeast

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
6	2000							134.5	86	134.5	86
	2001										
	2002							215.1	89	215.1	89
	2003							144.0	11	144.0	11
	2004					42.5	3	179.9	35	222.4	38
	2005	12.7	2			157.2	11	315.5	40	485.4	53
	2006	3.5	1			3.0	1	207.6	21	214.1	23

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000				1.6	1.6
2001					
2002				2.4	2.4
2003				13.1	13.1
2004			14.2	5.1	5.9
2005	6.4		14.3	7.9	9.2
2006	NA	NA	14.0	9.0	10.0
2007	NA	NA	14.0	9.0	10.0
2008	NA	NA	14.0	9.0	10.0

Appendix A.6.c: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for DEEP Wells

c

RigCat	DEEP

Area: Alberta- Northwest

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
7	2000	498.0	19			177.0	10			675.0	29
	2001	482.5	23			233.2	14			715.7	37
	2002	490.7	19			139.0	9			629.7	28
	2003	486.0	20			240.0	11			726.0	31
	2004	538.7	24			157.4	11			696.1	35
	2005	463.7	22			64.9	7	250.7	40	779.3	69
	2006	385.0	21			97.5	6	309.5	37	792.0	64

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	26.2		17.7		23.3
2001	21.0		16.7		19.3
2002	25.8		15.4		22.5
2003	24.3		21.8		23.4
2004	22.4		14.3		19.9
2005	21.1		9.3	6.3	11.3
2006	21.0	NA	16.0	7.0	18.0
2007	21.0	NA	16.0	7.0	18.0
2008	21.0	NA	16.0	7.0	18.0

Area: B.C.- Fort St. John

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
8	2000	658.5	21							658.5	21
	2001	1,553.5	38			23.0	2			1,576.5	40
	2002	1,311.7	35			115.0	3			1,426.7	38
	2003	1,791.0	42			162.0	3			1,953.0	45
	2004	2,529.0	61							2,529.0	61
	2005	3,363.5	98			6.0	1			3,369.5	99
	2006	426.5	14							426.5	14

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	31.4				31.4
2001	40.9		11.5		39.4
2002	37.5		38.3		37.5
2003	42.6		54.0		43.4
2004	41.5				41.5
2005	34.3		6.0		34.0
2006	36.0	NA	34.0	NA	36.0
2007	36.0	NA	34.0	NA	36.0
2008	36.0	NA	34.0	NA	36.0

Area: B.C.- Fort Nelson

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
9	2000	358.0	4							358.0	4
	2001	548.0	14							548.0	14
	2002	1,092.5	14							1,092.5	14
	2003	367.0	19							367.0	19
	2004	399.4	19							399.4	19
	2005	385.8	15							385.8	15
	2006	51.5	2							51.5	2

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	89.5				89.5
2001	39.1				39.1
2002	78.0				78.0
2003	19.3				19.3
2004	21.0				21.0
2005	25.7				25.7
2006	24.0	NA	NA	NA	24.0
2007	24.0	NA	NA	NA	24.0
2008	24.0	NA	NA	NA	24.0

Appendix A.6.c: 2006 Short-term Gas Deliverability EMA - Drill days per well by Resource Target and Study Area for DEEP Wells

c

RigCat	DEEP

Area: B.C.- Foothills

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
10	2000	455.0	4							455.0	4
	2001	1,340.5	12							1,340.5	12
	2002	839.0	6							839.0	6
	2003	1,129.0	10							1,129.0	10
	2004	1,541.0	17							1,541.0	17
	2005	693.5	12							693.5	12
	2006	38.0	1							38.0	1

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000	113.8				113.8
2001	111.7				111.7
2002	139.8				139.8
2003	112.9				112.9
2004	90.6				90.6
2005	57.8				57.8
2006	85.0	NA	NA	NA	85.0
2007	85.0	NA	NA	NA	85.0
2008	85.0	NA	NA	NA	85.0

Area: Saskatchewan- Central

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
11	2000										
	2001					85.5	23			85.5	23
	2002										
	2003										
	2004					7.5	3			7.5	3
	2005					61.5	10			61.5	10
	2006					2.5	1			2.5	1

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000					
2001			3.7		3.7
2002					
2003					
2004			2.5		2.5
2005			6.2		6.2
2006	NA	NA	6.0	NA	6.0
2007	NA	NA	6.0	NA	6.0
2008	NA	NA	6.0	NA	6.0

Area: Saskatchewan- Southwest

AreaNo	Year	Drill Days and Well Counts for DEEP Rigs									
		Gas		CBM		Oil		Oil Sands		All Targets	
		Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count	Drill Days	Well Count
12	2000					11.0	2			11.0	2
	2001	10.0	3							10.0	3
	2002	0.5	1							0.5	1
	2003	20.8	19							20.8	19
	2004	14.0	5							14.0	5
	2005	3.0	1			6.7	4			9.7	5
	2006										

Year	Historic and Projected Average Drill Days per Well by Target Resource for DEEP Rigs				
	Gas	CBM	Oil	Oil Sands	All Targets
2000			5.5		5.5
2001	3.3				3.3
2002	0.5				0.5
2003	1.1				1.1
2004	2.8				2.8
2005	3.0		1.7		1.9
2006	2.0	NA	3.0	NA	2.0
2007	2.0	NA	3.0	NA	2.0
2008	2.0	NA	3.0	NA	2.0

Appendix A.7

WCSB Rig Fleet –Historical and Projected Drilling Levels for each Study Area for Gas-Intent and CBM-Intent Wells

In Appendices A.1 through A.6 the parameters needed to project gas well drilling were developed. To summarize these steps, the amount of drilling projected for 2006 thru 2008 and allocated to the various areas of the WCSB is estimated on the basis of:

- rig fleet size,
- geographic allocation of the rigs,
- rig utilization levels,
- resource targets for rigs, and
- drill days per well

This Appendix A.7 tabulates the drilling projections for Gas-Intent Wells and CBM-Intent Wells in terms of drill days (A.7.a) and in terms of wells (A.7.b). The drill days table is included as this is a more accurate indicator of actual drilling effort than number of wells. For example, in 2004 there were approximately 6,900 gas intent wells drilled in the Alberta-Southeast area and approximately 1,900 gas-intent wells drilled in the Alberta-Foothills Front area. However, the number of gas-intent drill days in 2004 was approximately 15,000 in the Alberta-Southeast compared to approximately 32,000 gas-intent drill days for the Alberta-Foothills Front. As this example demonstrates, well counts can be a misleading indicator of drilling effort.

Appendix A.7.a: 2006 Short-term Gas Deliveerability EMA - WCSB Rig Fleet Gas-Intent and CBM-Intent Drilling - DRILL DAYS

Historical and Projected Annual Gas-Intent and CBM-Intent Drill Days by WCSB Rig Fleet by Study Area-- All Rig Categories

Gas-Intent Drilling - Annual Drill Days

	Number of Gas-Intent Drill Days												Gas-Intent Total
Year	Alberta - Foothills	Alberta - Foothills Front	Alberta - Southeast	Alberta - East Central	Alberta Central	Alberta - Northeast	Alberta - Northwest	B.C. - Fort St. John	B.C. - Fort Nelson	B.C. - Foothills	SK - Central	SK - Southwest	
2000	3,824	24,535	13,109	936	5,045	2,395	7,098	6,030	4,544	1,201	242	2,016	70,975
2001	4,437	26,062	13,332	1,237	5,176	3,493	7,863	7,119	6,837	2,425	406	2,100	80,485
2002	3,740	20,624	10,609	1,254	4,198	2,677	6,514	5,831	4,155	2,121	295	3,163	65,182
2003	5,037	27,485	14,869	2,012	6,378	1,709	6,658	9,073	6,513	1,919	762	3,926	86,340
2004	6,256	32,203	14,912	2,342	8,090	1,662	7,530	10,644	6,636	2,343	813	3,492	96,925
2005	5,362	39,569	15,795	2,264	9,217	1,296	8,771	13,935	6,679	2,727	932	3,473	110,019
2006	7,503	40,899	16,013	2,571	7,540	1,661	8,996	13,766	6,125	2,616	1,152	3,826	112,666
2007	8,023	44,215	16,685	2,790	7,879	1,745	9,300	14,335	6,271	2,782	1,208	4,006	119,238
2008	8,374	46,053	16,246	2,787	7,632	1,745	9,415	14,683	6,398	2,903	1,208	4,001	121,444

CBM-Intent Drilling - Annual Drill Days

	Number of CBM-Intent Drill Days					CBM-Intent Total
Year	Alberta - Foothills	Alberta - Foothills Front	Alberta - Southeast	Alberta - East Central	Alberta Central	
2000	0	86	290	0	120	496
2001	112	160	618	6	309	1,205
2002	120	158	553	21	683	1,535
2003	113	288	1,007	14	1,824	3,246
2004	0	108	2,634	15	2,498	5,255
2005	24	138	4,019	65	4,440	8,685
2006	42	93	3,834	30	6,183	10,181
2007	44	97	4,568	29	7,191	11,929
2008	44	97	4,994	28	7,684	12,848

Appendix A.7.b: 2006 Short-term Gas Deliverability EMA - WCSB Rig Fleet Gas-Intent and CBM-Intent Drilling - ANNUAL WELLS

Historical and Projected Annual Gas-Intent and CBM-Intent Wells by WCSB Rig Fleet by Study Area-- All Rig Categories

Gas-Intent Drilling - Number of of Annual Wells

	Number of Gas-Intent Wells												Gas-Intent Total
Year	Alberta - Foothills	Alberta - Foothills Front	Alberta - Southeast	Alberta - East Central	Alberta Central	Alberta - Northeast	Alberta - Northwest	B.C. - Fort St. John	B.C. - Fort Nelson	B.C. - Foothills	SK - Central	SK - Southwest	
2000	55	1,088	4,667	287	896	643	1,158	399	175	18	92	1,137	10,615
2001	62	1,148	5,466	358	898	829	1,333	434	255	28	138	1,279	12,228
2002	56	1,017	4,525	450	722	427	937	337	171	25	110	1,753	10,530
2003	73	1,510	6,822	667	1,197	537	1,107	492	362	29	268	2,074	15,138
2004	92	1,928	6,545	754	1,519	462	1,253	708	371	39	253	1,661	15,585
2005	81	2,423	5,714	720	1,912	342	1,316	911	334	63	239	1,464	15,519
2006	111	2,408	6,392	833	1,613	503	1,509	926	313	49	350	1,718	16,725
2007	118	2,606	6,699	904	1,702	529	1,571	961	320	52	368	1,800	17,630
2008	123	2,703	6,517	903	1,645	529	1,579	975	327	54	367	1,799	17,522

CBM-Intent Drilling - Number of Annual Wells

	Number of CBM-Intent Wells					CBM-Intent Total
Year	Alberta - Foothills	Alberta - Foothills Front	Alberta - Southeast	Alberta - East Central	Alberta Central	
2000	0	16	79	0	31	126
2001	9	30	132	1	73	245
2002	10	21	136	4	132	303
2003	7	57	497	4	255	820
2004	0	26	1,176	5	758	1,965
2005	2	23	1,429	13	1,355	2,822
2006	3	19	1,520	7	1,589	3,139
2007	4	19	1,811	7	1,835	3,676
2008	4	19	1,979	7	1,940	3,949

Allocation of CBM Drilling to CBM Resources			
Year	HSC Main Play	Mannville	Other CBM
2,006	2,904	146	89
2,007	3,394	183	100
2,008	3,626	219	104

Appendix A.8

Ratio of Annual Connections to Annual Wells Drilled

Appendix A.7 provides a projection of Gas-intent and NGC-Intent drilling for each Study Area for 2006 – 2008. In the This Appendix A.8, the historical ratio of Annual Connections to Annual Wells Drilled is examined to provide a basis for projecting this ratio for 2006 – 2008. The projected Connection to Well ratio may then be applied to the well projections to obtain estimates of gas and CBM connection that will be made over 2006 - 2008.

The historic data includes wells where the target resource (ie- oil, gas, CBM or oil sands) was not determined-- these were predominantly dry holes and "drilled and cased" wells where the drilling intent could not be ascertained by NEB processes. In these cases of Unknown intent, the wells were allocated to the target resources based on the proportions of wells for each target resource where the intent was known.

This Appendix A.8 shows the historic data for annual gas-intent and CBM-intent wells and the number of gas and CBM connections for the past 5 years for each Study Area. The table also shows the projections of the connection to well ratio for 2006 to 2008, that were based on the historic data.

Appendix A.8.a: 2006 Short-term Gas Deliverability EMA - Connection to Well Ratios

Study Area: Alberta - Foothills

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
1	2000	51	55	0.927	
	2001	65	62	1.048	
	2002	67	56	1.196	
	2003	74	73	1.014	
	2004	102	92	1.109	
	2005	63	81	0.778	
	2006				1
	2007				1
	2008				1

Study Area: Alberta - Foothills Front

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
2	2000	960	1088	0.882	
	2001	1218	1148	1.061	
	2002	1006	1017	0.989	
	2003	1462	1510	0.968	
	2004	1860	1928	0.965	
	2005	2276	2423	0.939	
	2006				0.98
	2007				0.96
	2008				0.96

Study Area: Alberta - Southeast

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
3	2000	4604	4667	0.987	
	2001	5057	5466	0.925	
	2002	4538	4525	1.003	
	2003	6119	6822	0.897	
	2004	7800	6545	1.192	
	2005	6422	5714	1.124	
	2006				1.05
	2007				1.05
	2008				1.05

Study Area: Alberta - East Central

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
4	2000	460	287	1.603	
	2001	531	358	1.483	
	2002	633	450	1.407	
	2003	794	667	1.190	
	2004	968	754	1.284	
	2005	956	720	1.328	
	2006				1.25
	2007				1.25
	2008				1.25

Appendix A.8.a: 2006 Short-term Gas Deliverability EMA - Connection to Well Ratios

Study Area: Alberta - Central

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
5	2000	1035	896	1.155	
	2001	1122	898	1.249	
	2002	855	722	1.184	
	2003	1265	1197	1.057	
	2004	1476	1519	0.972	
	2005	1849	1912	0.967	
	2006				0.97
	2007				0.97
	2008				0.97

Study Area: Alberta - Northeast

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
6	2000	732	643	1.138	
	2001	775	829	0.935	
	2002	450	427	1.054	
	2003	547	537	1.019	
	2004	504	462	1.091	
	2005	346	342	1.012	
	2006				1.03
	2007				1.03
	2008				1.03

Study Area: Alberta - Northwest

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
7	2000	968	1158	0.836	
	2001	1157	1333	0.868	
	2002	778	937	0.830	
	2003	919	1107	0.830	
	2004	958	1253	0.765	
	2005	1126	1316	0.856	
	2006				0.83
	2007				0.83
	2008				0.83

Study Area: B.C. - Fort St. John

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
8	2000	303	399	0.759	
	2001	374	434	0.862	
	2002	296	337	0.878	
	2003	414	492	0.841	
	2004	660	708	0.932	
	2005	797	911	0.875	
	2006				0.88
	2007				0.88
	2008				0.88

Appendix A.8.a: 2006 Short-term Gas Deliverability EMA - Connection to Well Ratios

Study Area: B.C. - Fort Nelson

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
9	2000	139	175	0.794	
	2001	170	255	0.667	
	2002	134	171	0.784	
	2003	287	362	0.793	
	2004	312	371	0.841	
	2005	287	334	0.859	
	2006				0.85
	2007				0.85
	2008				0.85

Study Area: B.C - Foothills

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
10	2000	6	18	0.333	
	2001	9	28	0.321	
	2002	15	25	0.600	
	2003	21	29	0.724	
	2004	41	39	1.051	
	2005	42	63	0.667	
	2006				0.8
	2007				0.8
	2008				0.8

Study Area: Saskatchewan - Central

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
11	2000	98	92	1.065	
	2001	187	138	1.355	
	2002	141	110	1.282	
	2003	206	268	0.769	
	2004	235	253	0.929	
	2005	264	239	1.105	
	2006				1
	2007				1
	2008				1

Study Area: Saskatchewan - Southwest

Area No	Year	Gas Connections	Gas Intent Wells	Historic Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
12	2000	1354	1137	1.191	
	2001	1690	1279	1.321	
	2002	1926	1753	1.099	
	2003	1838	2074	0.886	
	2004	1750	1661	1.054	
	2005	1531	1464	1.046	
	2006				1.05
	2007				1.05
	2008				1.05

Appendix A.8.b: 2006 Short-term Gas Deliverability EMA - Connection to Well Ratios for CBM

Coalbed Methane- Horseshoe Canyon Main Play

Resource	Year	CBM Connections	CBM Intent Wells	Historical Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
Horseshoe Canyon Main Play	2000	57	85	0.671	
	2001	67	126	0.532	
	2002	76	159	0.478	
	2003	526	557	0.944	
	2004	1482	1798	0.824	
	2005	2574	2525	1.019	
	2006				1.000
	2007				1.000
	2008				1.000

Note:
To get historical CBM intent wells for the Horseshoe Canyon Main Play group, all CBM intent wells falling within the Horseshoe Canyon Main Play Area were selected.

Historical CBM Connections for the Horseshoe Canyon Main Play = all CBM connections falling with the Horseshoe Canyon Main Play Area and producing formation not equal to Mannville.

Mannville CBM

Resource	DrlYr	CBM Connections	CBM Intent Wells	Historical Annual Conn/Well Ratio	Projected Annual Conn/Well Ratio
Mannville CBM	2003		1	0.000	
	2004		10	0.000	
	2005	47	62	0.758	
	2006				0.900
	2007				0.900
	2008				0.900

Note:
CBM connections to be made over 2006 - 2008 producing from Mannville coals are likely to be mostly horizontal wells associated with the Corbett Project Area. The historical data is limited as the Corbett project was announced as commercial only in 2005.
The above data shows the limited historical data associated with Corbett horizontal CBM wells and connections.
A projected Conn/Well Ratio for this grouping is set at .9 as greater success and regularity of tie -ins can be expected as the project develops.

Coalbed Methane- Other CBM (not Horseshoe Canyon Main Play or Mannville CBM)

Connection to Well Ratio to be Applied for Other CBM: 0.500

Note:
Development of Other CBM resources has bee limited and a reasonably ratio could not be obtained from historical data. Thus far, productivity of these wells has been low and it is expected to remain so for the projection period.
These resources are still in the experimental stage of development.
The Projected Annual Conn/Well Ratio has been set at .5 as a rough estimate for the projection period.

Appendix A.9

Fraction of Annual Connections for each Month in Year by Study Area

This Appendix A.9 deals with the allocation of annual gas connections and annual CBM connections to the months in each year of the projection period. To establish these monthly connection fractions, the fraction of annual connections made in each month of the year for the past 5 years were examined. Based on the historic monthly connection patterns, a set of monthly connection fractions were selected for each study area to be used in determining conventional gas and CBM connections to be made in each month for the projection period. This step is performed to account for the strong seasonal connection pattern that exists in most study areas.

This Appendix A.9 contains tables and charts showing the historic monthly connection fractions and the monthly connection fractions selected for each study area to be used in projecting gas deliverability.

Appendix A.9.a: 200 Short-term Gas Deliverability EMA- Fraction of Annual Gas Connections for each Month in Year

Date: July 26, 2005

Conn GAS

Source: derived from GeoScout v

Area: Alberta- Foothills

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
1	1	6	3	4	5	10	11.8%	4.8%	5.9%	6.8%	10.5%	7.9%	8.0%
	2	4	7	10	5	14	7.8%	11.1%	14.7%	6.8%	14.7%	11.0%	11.0%
	3	5	4	9	9	10	9.8%	6.3%	13.2%	12.2%	10.5%	10.4%	12.0%
	4	6	7	16	7	8	11.8%	11.1%	23.5%	9.5%	8.4%	12.9%	11.0%
	5	6	6	2	2	5	11.8%	9.5%	2.9%	2.7%	5.3%	6.4%	7.0%
	6	2	6	1	7	1	3.9%	9.5%	1.5%	9.5%	1.1%	5.1%	6.0%
	7	4	3	2	8	11	7.8%	4.8%	2.9%	10.8%	11.6%	7.6%	7.5%
	8	6	6	5	4	6	11.8%	9.5%	7.4%	5.4%	6.3%	8.1%	7.5%
	9	2	4	4	9	6	3.9%	6.3%	5.9%	12.2%	6.3%	6.9%	7.5%
	10	2	6	8	6	6	3.9%	9.5%	11.8%	8.1%	6.3%	7.9%	7.5%
	11	5	5	6	3	7	9.8%	7.9%	8.8%	4.1%	7.4%	7.6%	7.5%
	12	3	6	1	9	11	5.9%	9.5%	1.5%	12.2%	11.6%	8.1%	7.5%
Total Annual Conns		51	63	68	74	95	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: Alberta- Foothills Front

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
2	1	97	137	68	95	120	10.1%	11.2%	6.8%	6.5%	6.6%	8.3%	8.0%
	2	108	102	107	107	196	11.3%	8.4%	10.7%	7.4%	10.8%	9.7%	10.0%
	3	126	159	148	195	220	13.1%	13.1%	14.9%	13.4%	12.1%	13.3%	13.0%
	4	72	104	105	103	142	7.5%	8.5%	10.5%	7.1%	7.8%	8.3%	8.0%
	5	35	98	31	41	79	3.6%	8.0%	3.1%	2.8%	4.3%	4.4%	4.0%
	6	72	80	62	81	103	7.5%	6.6%	6.2%	5.6%	5.7%	6.3%	6.0%
	7	48	66	67	144	136	5.0%	5.4%	6.7%	9.9%	7.5%	6.9%	7.0%
	8	60	89	70	127	122	6.3%	7.3%	7.0%	8.7%	6.7%	7.2%	7.0%
	9	44	110	61	105	123	4.6%	9.0%	6.1%	7.2%	6.8%	6.7%	7.0%
	10	84	83	70	139	164	8.8%	6.8%	7.0%	9.6%	9.0%	8.2%	9.0%
	11	88	90	85	157	188	9.2%	7.4%	8.5%	10.8%	10.3%	9.2%	10.0%
	12	126	100	122	158	225	13.1%	8.2%	12.2%	10.9%	12.4%	11.4%	11.0%
Total Annual Conns		960	1218	996	1452	1818	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: Alberta- Southeast

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
3	1	153	235	247	500	501	3.3%	4.6%	5.5%	8.2%	6.6%	5.6%	7.0%
	2	317	185	449	532	737	6.8%	3.7%	9.9%	8.8%	9.7%	7.8%	7.0%
	3	226	273	366	265	518	4.9%	5.4%	8.1%	4.4%	6.8%	5.9%	6.0%
	4	173	343	372	251	618	3.7%	6.8%	8.2%	4.1%	8.1%	6.2%	6.0%
	5	226	401	357	262	385	4.9%	7.9%	7.9%	4.3%	5.1%	6.0%	6.0%
	6	385	579	268	393	347	8.3%	11.4%	5.9%	6.5%	4.6%	7.3%	7.5%
	7	374	394	273	476	519	8.1%	7.8%	6.0%	7.8%	6.8%	7.3%	7.5%
	8	511	665	240	536	622	11.0%	13.1%	5.3%	8.8%	8.2%	9.3%	9.0%
	9	539	350	448	688	843	11.6%	6.9%	9.9%	11.3%	11.1%	10.2%	10.0%
	10	561	480	410	681	764	12.1%	9.5%	9.0%	11.2%	10.1%	10.4%	10.0%
	11	639	563	361	613	842	13.8%	11.1%	8.0%	10.1%	11.1%	10.8%	11.0%
	12	531	599	740	877	893	11.5%	11.8%	16.3%	14.4%	11.8%	13.2%	13.0%
Total Annual Conns		4635	5067	4531	6074	7589	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix A.9.a: 200 Short-term Gas Deliverability EMA- Fraction of Annual Gas Connections for each Month in Year

Date: July 26, 2005

Conn GAS

Source: derived from GeoScout w

Area: Alberta- East Central

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
4	1	25	45	34	35	60	5.4%	8.5%	5.4%	4.4%	6.3%	6.0%	6.0%
	2	32	36	35	44	86	6.9%	6.8%	5.5%	5.5%	9.1%	6.8%	6.0%
	3	40	46	55	49	110	8.7%	8.6%	8.7%	6.2%	11.6%	8.8%	6.0%
	4	31	32	32	20	36	6.7%	6.0%	5.1%	2.5%	3.8%	4.8%	6.0%
	5	34	37	34	55	55	7.4%	7.0%	5.4%	6.9%	5.8%	6.5%	6.0%
	6	49	33	30	70	76	10.6%	6.2%	4.7%	8.8%	8.0%	7.7%	8.0%
	7	32	39	38	75	53	6.9%	7.3%	6.0%	9.4%	5.6%	7.1%	8.0%
	8	54	45	54	73	60	11.7%	8.5%	8.5%	9.2%	6.3%	8.8%	9.0%
	9	60	59	104	81	55	13.0%	11.1%	16.5%	10.2%	5.8%	11.3%	11.0%
	10	36	75	51	85	87	7.8%	14.1%	8.1%	10.7%	9.2%	10.0%	11.0%
	11	46	34	128	105	168	10.0%	6.4%	20.3%	13.2%	17.7%	13.5%	13.0%
	12	22	51	37	102	102	4.8%	9.6%	5.9%	12.8%	10.8%	8.8%	10.0%
Total Annual Conns		461	532	632	794	948	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: Alberta- Central

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
5	1	57	117	51	83	79	5.5%	10.4%	6.0%	6.6%	5.7%	6.9%	7.0%
	2	82	92	78	95	127	7.9%	8.2%	9.1%	7.6%	9.2%	8.4%	8.0%
	3	115	130	85	157	152	11.1%	11.6%	9.9%	12.5%	11.0%	11.2%	11.0%
	4	49	90	47	51	70	4.7%	8.0%	5.5%	4.1%	5.1%	5.5%	5.5%
	5	78	75	39	35	84	7.6%	6.7%	4.6%	2.8%	6.1%	5.5%	5.5%
	6	78	105	59	98	114	7.6%	9.4%	6.9%	7.8%	8.3%	8.0%	8.0%
	7	62	78	63	118	118	6.0%	7.0%	7.4%	9.4%	8.6%	7.7%	8.0%
	8	78	104	88	106	102	7.6%	9.3%	10.3%	8.4%	7.4%	8.6%	8.0%
	9	86	77	66	114	92	8.3%	6.9%	7.7%	9.1%	6.7%	7.7%	8.0%
	10	105	91	74	114	136	10.2%	8.1%	8.7%	9.1%	9.9%	9.2%	9.0%
	11	115	92	99	155	144	11.1%	8.2%	11.6%	12.3%	10.4%	10.7%	11.0%
	12	127	69	106	131	162	12.3%	6.2%	12.4%	10.4%	11.7%	10.6%	11.0%
Total Annual Conns		1032	1120	855	1257	1380	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: Alberta- Northeast

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
6	1	51	78	28	45	54	6.9%	10.0%	6.2%	8.3%	10.8%	8.5%	9.0%
	2	174	148	102	86	118	23.7%	19.0%	22.7%	15.8%	23.5%	21.0%	21.0%
	3	286	261	163	167	210	39.0%	33.6%	36.3%	30.7%	41.8%	36.3%	36.0%
	4	92	106	67	94	58	12.5%	13.6%	14.9%	17.3%	11.6%	14.0%	14.0%
	5	24	69	23	16	10	3.3%	8.9%	5.1%	2.9%	2.0%	4.4%	4.0%
	6	15	21	25	54	9	2.0%	2.7%	5.6%	9.9%	1.8%	4.4%	4.0%
	7	17	20	12	2	11	2.3%	2.6%	2.7%	0.4%	2.2%	2.0%	2.0%
	8	19	33	6	22	6	2.6%	4.2%	1.3%	4.0%	1.2%	2.7%	2.0%
	9	13	5	3	21	3	1.8%	0.6%	0.7%	3.9%	0.6%	1.5%	2.0%
	10	14	13	10	11	8	1.9%	1.7%	2.2%	2.0%	1.6%	1.9%	2.0%
	11	14	14	7	6	8	1.9%	1.8%	1.6%	1.1%	1.6%	1.6%	2.0%
	12	15	9	3	20	7	2.0%	1.2%	0.7%	3.7%	1.4%	1.8%	2.0%
Total Annual Conns		734	777	449	544	502	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix A.9.a: 200 Short-term Gas Deliverability EMA- Fraction of Annual Gas Connections for each Month in Year

Date: July 26, 2005

Conn GAS

Source: derived from GeoScout v

Area: Alberta- Northwest

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
7	1	82	55	63	31	62	8.5%	4.7%	8.1%	3.4%	6.6%	6.3%	6.0%
	2	149	126	101	81	130	15.4%	10.9%	13.0%	8.8%	13.8%	12.4%	12.0%
	3	278	452	296	227	283	28.7%	39.0%	38.1%	24.7%	30.1%	32.2%	31.0%
	4	174	192	102	290	146	18.0%	16.6%	13.1%	31.6%	15.5%	19.0%	19.0%
	5	38	60	24	24	19	3.9%	5.2%	3.1%	2.6%	2.0%	3.4%	4.0%
	6	27	31	23	26	62	2.8%	2.7%	3.0%	2.8%	6.6%	3.6%	4.0%
	7	23	42	28	37	43	2.4%	3.6%	3.6%	4.0%	4.6%	3.6%	4.0%
	8	44	44	26	59	36	4.6%	3.8%	3.4%	6.4%	3.8%	4.4%	4.0%
	9	28	34	16	25	21	2.9%	2.9%	2.1%	2.7%	2.2%	2.6%	4.0%
	10	28	48	27	38	43	2.9%	4.1%	3.5%	4.1%	4.6%	3.8%	4.0%
	11	47	29	37	50	49	4.9%	2.5%	4.8%	5.4%	5.2%	4.6%	4.0%
	12	49	45	33	30	46	5.1%	3.9%	4.3%	3.3%	4.9%	4.3%	4.0%
Total Annual Conns		967	1158	776	918	940	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: B.C.- Fort St John

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
8	1	16	30	21	16	23	5.3%	8.0%	7.1%	3.9%	3.6%	5.6%	6.0%
	2	55	41	37	48	95	18.2%	11.0%	12.5%	11.7%	14.9%	13.7%	14.0%
	3	103	84	56	97	151	34.1%	22.5%	19.0%	23.7%	23.7%	24.6%	25.0%
	4	38	65	61	76	165	12.6%	17.4%	20.7%	18.6%	25.9%	19.0%	20.0%
	5	10	22	22	8	44	3.3%	5.9%	7.5%	2.0%	6.9%	5.1%	5.0%
	6	10	14	8	8	15	3.3%	3.7%	2.7%	2.0%	2.4%	2.8%	3.0%
	7	4	20	10	14	18	1.3%	5.3%	3.4%	3.4%	2.8%	3.3%	3.0%
	8	8	16	10	20	24	2.6%	4.3%	3.4%	4.9%	3.8%	3.8%	3.0%
	9	2	17	10	21	16	0.7%	4.5%	3.4%	5.1%	2.5%	3.2%	3.0%
	10	16	23	22	27	29	5.3%	6.1%	7.5%	6.6%	4.6%	6.0%	6.0%
	11	22	20	22	32	35	7.3%	5.3%	7.5%	7.8%	5.5%	6.7%	6.0%
	12	18	22	16	42	22	6.0%	5.9%	5.4%	10.3%	3.5%	6.2%	6.0%
Total Annual Conns		302	374	295	409	637	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: B.C.- Fort Nelson

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
9	1	8	4	13	13	25	5.8%	2.4%	9.7%	4.5%	8.0%	6.1%	6.0%
	2	15	20	13	29	53	10.8%	11.8%	9.7%	10.1%	17.0%	11.9%	12.0%
	3	53	86	36	82	124	38.1%	50.6%	26.9%	28.7%	39.7%	36.8%	37.0%
	4	28	28	47	57	78	20.1%	16.5%	35.1%	19.9%	25.0%	23.3%	23.0%
	5	1	5	1	16	4	0.7%	2.9%	0.7%	5.6%	1.3%	2.3%	2.0%
	6	1	1		1	13	0.7%	0.6%	0.0%	0.3%	4.2%	1.2%	1.5%
	7	3	5		9	2	2.2%	2.9%	0.0%	3.1%	0.6%	1.8%	1.5%
	8	4	2	1	7	1	2.9%	1.2%	0.7%	2.4%	0.3%	1.5%	1.5%
	9	3	10	6	6	4	2.2%	5.9%	4.5%	2.1%	1.3%	3.2%	3.0%
	10	8	2	12	19	2	5.8%	1.2%	9.0%	6.6%	0.6%	4.6%	4.0%
	11	1			17	3	0.7%	0.0%	0.0%	5.9%	1.0%	1.5%	3.0%
	12	14	7	5	30	3	10.1%	4.1%	3.7%	10.5%	1.0%	5.9%	5.5%
Total Annual Conns		139	170	134	286	312	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix A.9.a: 200 Short-term Gas Deliverability EMA- Fraction of Annual Gas Connections for each Month in Year

Date: July 26, 2005

Conn GAS

Source: derived from GeoScout v

Area: B.C.- Foothills

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
10	1					2	0.0%	0.0%	0.0%	0.0%	5.1%	1.0%	2.0%
	2			1	2	7	0.0%	0.0%	6.7%	9.5%	17.9%	6.8%	7.0%
	3	2	2	2		1	33.3%	20.0%	13.3%	0.0%	2.6%	13.8%	13.0%
	4	1	1	3	1	2	16.7%	10.0%	20.0%	4.8%	5.1%	11.3%	13.0%
	5		1	3	5	5	0.0%	10.0%	20.0%	23.8%	12.8%	13.3%	13.0%
	6				1	1	0.0%	0.0%	0.0%	4.8%	2.6%	1.5%	2.0%
	7	1	1		3		16.7%	10.0%	0.0%	14.3%	0.0%	8.2%	8.0%
	8		1	5	1		0.0%	10.0%	33.3%	4.8%	0.0%	9.6%	8.0%
	9				1		0.0%	0.0%	0.0%	4.8%	0.0%	1.0%	5.0%
	10	1	1			6	16.7%	10.0%	0.0%	0.0%	15.4%	8.4%	8.0%
	11	1		1	6	11	16.7%	0.0%	6.7%	28.6%	28.2%	16.0%	13.0%
	12		3		1	4	0.0%	30.0%	0.0%	4.8%	10.3%	9.0%	8.0%
Total Annual Conns		6	10	15	21	39	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: Saskatchewan- Central

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
11	1	9	14	7	13	5	9.2%	7.5%	5.0%	6.3%	2.1%	6.0%	6.0%
	2	6	15	17	9	22	6.1%	8.0%	12.1%	4.3%	9.4%	8.0%	8.0%
	3	27	13	17	15	32	27.6%	7.0%	12.1%	7.2%	13.6%	13.5%	13.0%
	4		12	11	8	8	0.0%	6.4%	7.8%	3.9%	3.4%	4.3%	6.0%
	5	7	23	3	18	7	7.1%	12.3%	2.1%	8.7%	3.0%	6.6%	6.0%
	6	7	11	12	14	16	7.1%	5.9%	8.5%	6.8%	6.8%	7.0%	6.0%
	7		6	9	16	13	0.0%	3.2%	6.4%	7.7%	5.5%	4.6%	6.0%
	8	4	15	8	17	17	4.1%	8.0%	5.7%	8.2%	7.2%	6.6%	7.0%
	9	7	16	11	15	26	7.1%	8.6%	7.8%	7.2%	11.1%	8.4%	8.0%
	10	7	27	14	13	32	7.1%	14.4%	9.9%	6.3%	13.6%	10.3%	10.0%
	11	16	20	17	30	19	16.3%	10.7%	12.1%	14.5%	8.1%	12.3%	12.0%
	12	8	15	15	39	38	8.2%	8.0%	10.6%	18.8%	16.2%	12.4%	12.0%
Total Annual Conns		98	187	141	207	235	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Area: Saskatchewan- Southwest

	Month	Connections made in Month 2000	2001	2002	2003	2004	Fraction of Annual Conns Made in Month 2000	2001	2002	2003	2004	Last 5 Year Avg	Selected Monthly Conn Fraction
12	1	37	60	58	71	47	2.7%	3.6%	3.0%	3.9%	2.7%	3.2%	4.0%
	2	34	136	113	54	108	2.5%	8.1%	5.9%	2.9%	6.2%	5.1%	4.0%
	3	58	81	81	65	78	4.3%	4.8%	4.2%	3.5%	4.5%	4.3%	4.0%
	4	29	72	14	10	154	2.1%	4.3%	0.7%	0.5%	8.8%	3.3%	4.0%
	5	47	125	25	27	45	3.5%	7.4%	1.3%	1.5%	2.6%	3.2%	4.0%
	6	110	127	24	48	83	8.1%	7.5%	1.2%	2.6%	4.7%	4.8%	4.0%
	7	170	141	37	277	140	12.6%	8.3%	1.9%	15.1%	8.0%	9.2%	9.0%
	8	124	157	119	299	98	9.2%	9.3%	6.2%	16.3%	5.6%	9.3%	9.0%
	9	158	326	256	260	272	11.7%	19.3%	13.3%	14.1%	15.5%	14.8%	15.0%
	10	298	236	512	312	356	22.0%	14.0%	26.6%	17.0%	20.3%	20.0%	20.0%
	11	162	173	456	231	197	12.0%	10.2%	23.7%	12.6%	11.3%	13.9%	14.0%
	12	127	55	231	185	172	9.4%	3.3%	12.0%	10.1%	9.8%	8.9%	9.0%
Total Annual Conns		1354	1689	1926	1839	1750	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix A.9.b- 2006 Short-term Gas Deliverability EMA- Fraction of Annual CBM Connections for each Month in Year

Date: July 26, 2005

Source: derived from GeoScout well da

Conr CBM

Area: Alberta- Total - Applied to Horseshoe Canyon Main Play

	Month	CBM Connections made in Month					Fraction of Annual Conns Made in Month					Last 2 Year Avg	Selected Monthly Conn Fraction
		2000	2001	2002	2003	2004	2000	2001	2002	2003	2004		
20	1	1	2	15	54	51	1.9%	2.8%	16.3%	9.5%	3.6%	6.6%	6.5%
	2	0	5	10	34	86	0.0%	7.0%	10.9%	6.0%	6.1%	6.0%	6.0%
	3	2	8	7	16	104	3.8%	11.3%	7.6%	2.8%	7.4%	5.1%	5.0%
	4	4	2	8	13	47	7.7%	2.8%	8.7%	2.3%	3.3%	2.8%	3.0%
	5	2	1	6	8	76	3.8%	1.4%	6.5%	1.4%	5.4%	3.4%	3.0%
	6	7	2	4	42	68	13.5%	2.8%	4.3%	7.4%	4.8%	6.1%	6.0%
	7	1	5	7	35	101	1.9%	7.0%	7.6%	6.2%	7.2%	6.7%	7.0%
	8	4	11	3	66	81	7.7%	15.5%	3.3%	11.6%	5.7%	8.7%	8.5%
	9	3	3	3	32	173	5.8%	4.2%	3.3%	5.6%	12.3%	8.9%	9.0%
	10	8	11	8	83	179	15.4%	15.5%	8.7%	14.6%	12.7%	13.6%	14.0%
	11	12	8	4	103	219	23.1%	11.3%	4.3%	18.1%	15.5%	16.8%	17.0%
	12	8	13	17	82	227	15.4%	18.3%	18.5%	14.4%	16.1%	15.3%	15.0%
Total Annual Conns		52	71	92	568	1412	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

For Mannville CBM and Other CBM, Future Annual CBM connections are spread out evenly amongst the 12 months the year in the deliverability model.

Appendix B.1

Group Performance Parameters for Existing Connections in the WCSB

In this EMA, deliverability parameters are determined for groups of existing gas connections in the WCSB. These groupings of gas wells are made on the basis of Study Area and connection year. Existing gas connections are defined as those that came on stream prior to January 1, 2006. The deliverability parameters for these groupings of existing gas connections are listed in this Appendix B.1.

Deliverability parameters for the groupings of existing CBM connections (on stream prior to Jan. 1, 2006) are tabulated in part b. of this appendix.

The deliverability parameters for all solution gas are also tabulated by Study Area in this appendix.

Appendix B.1.a: 2006 Short Term Gas Deliverability EMA

Group Deliverability Parameters- Conventional Gas

Notes:
The parameters listed below are the basis for the deliverability projections for existing gas connections and all solution gas in this EMA. The parameters are based on extrapolation of historical production the group. In the case of Gas Connections, the applicable average connection performance parameters and the known connection schedule are also utilized to estimate group performance parameters. The group deliverability parameters for recent connection year groupings are heavily influenced by the deliverability expectations based on average connection parameters. The parameters d2, months to d2, d3 and months to d3 are all surmised from the projections based upon the average connection parameters.

Group			Group Performance Parameters					
Gas Type	Area Name	Connection Year	q @ 2005 Yr End, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline
GAS	Alberta- Foothills	pre-1996	265.00	0.080	N/A	N/A	N/A	N/A
GAS	Alberta- Foothills	1996	12.30	0.125	0.080	30	N/A	N/A
GAS	Alberta- Foothills	1997	16.50	0.100	0.080	24	N/A	N/A
GAS	Alberta- Foothills	1998	8.30	0.140	0.130	24	N/A	N/A
GAS	Alberta- Foothills	1999	29.00	0.160	0.120	50	N/A	N/A
GAS	Alberta- Foothills	2000	30.50	0.120	0.080	60	N/A	N/A
GAS	Alberta- Foothills	2001	37.50	0.180	0.130	30	0.080	70
GAS	Alberta- Foothills	2002	81.00	0.160	0.120	8	0.080	78
GAS	Alberta- Foothills	2003	78.00	0.190	0.125	17	0.080	87
GAS	Alberta- Foothills	2004	119.00	0.180	0.125	30	0.080	95
GAS	Alberta- Foothills	2005	85.00	0.350	0.180	15	0.125	40
GAS	Alberta- Foothills Front	pre-1996	982.00	0.120	N/A	N/A	N/A	N/A
GAS	Alberta- Foothills Front	1996	69.00	0.120	N/A	N/A	N/A	N/A
GAS	Alberta- Foothills Front	1997	120.00	0.120	N/A	N/A	N/A	N/A
GAS	Alberta- Foothills Front	1998	148.00	0.170	0.120	32	N/A	N/A
GAS	Alberta- Foothills Front	1999	152.00	0.160	0.120	50	N/A	N/A
GAS	Alberta- Foothills Front	2000	220.00	0.170	0.120	65	N/A	N/A
GAS	Alberta- Foothills Front	2001	273.00	0.170	0.120	72	N/A	N/A
GAS	Alberta- Foothills Front	2002	285.00	0.170	0.120	75	N/A	N/A
GAS	Alberta- Foothills Front	2003	410.00	0.240	0.170	22	0.120	82
GAS	Alberta- Foothills Front	2004	565.00	0.270	0.170	26	0.120	90
GAS	Alberta- Foothills Front	2005	1000.00	0.470	0.270	12	0.170	38
GAS	Alberta- Southeast	pre-1996	575.00	0.105	N/A	N/A	N/A	N/A
GAS	Alberta- Southeast	1996	39.00	0.105	N/A	N/A	N/A	N/A
GAS	Alberta- Southeast	1997	58.00	0.105	N/A	N/A	N/A	N/A
GAS	Alberta- Southeast	1998	80.00	0.105	N/A	N/A	N/A	N/A
GAS	Alberta- Southeast	1999	115.00	0.140	0.105	40	N/A	N/A
GAS	Alberta- Southeast	2000	171.00	0.140	0.105	50	N/A	N/A
GAS	Alberta- Southeast	2001	180.00	0.140	0.105	60	N/A	N/A
GAS	Alberta- Southeast	2002	164.00	0.250	0.140	5	0.105	75
GAS	Alberta- Southeast	2003	265.00	0.270	0.140	14	0.105	87
GAS	Alberta- Southeast	2004	415.00	0.280	0.140	27	0.105	100
GAS	Alberta- Southeast	2005	510.00	0.580	0.270	12	0.140	38
GAS	Alberta- East Central	pre-1996	158.00	0.110	N/A	N/A	N/A	N/A
GAS	Alberta- East Central	1996	12.50	0.130	N/A	N/A	N/A	N/A
GAS	Alberta- East Central	1997	10.50	0.130	N/A	N/A	N/A	N/A
GAS	Alberta- East Central	1998	13.50	0.200	0.130	24	N/A	N/A
GAS	Alberta- East Central	1999	18.00	0.200	0.130	36	N/A	N/A
GAS	Alberta- East Central	2000	17.50	0.170	0.130	48	N/A	N/A
GAS	Alberta- East Central	2001	25.50	0.170	0.130	60	N/A	N/A
GAS	Alberta- East Central	2002	48.00	0.200	0.170	5	0.130	80
GAS	Alberta- East Central	2003	46.00	0.280	0.170	17	0.130	92
GAS	Alberta- East Central	2004	61.00	0.300	0.170	25	0.130	100
GAS	Alberta- East Central	2005	105.00	0.580	0.290	14	0.170	40
GAS	Alberta- Central	pre-1996	305.00	0.160	N/A	N/A	N/A	N/A
GAS	Alberta- Central	1996	40.00	0.160	N/A	N/A	N/A	N/A
GAS	Alberta- Central	1997	42.50	0.160	N/A	N/A	N/A	N/A
GAS	Alberta- Central	1998	43.00	0.160	N/A	N/A	N/A	N/A
GAS	Alberta- Central	1999	51.00	0.180	0.160	30	N/A	N/A
GAS	Alberta- Central	2000	57.00	0.200	0.160	42	N/A	N/A
GAS	Alberta- Central	2001	67.00	0.200	0.160	54	N/A	N/A
GAS	Alberta- Central	2002	69.00	0.300	0.200	5	0.160	80
GAS	Alberta- Central	2003	123.00	0.350	0.200	18	0.160	100
GAS	Alberta- Central	2004	202.00	0.340	0.200	24	0.160	100
GAS	Alberta- Central	2005	320.00	0.590	0.330	13	0.200	38

Appendix B.1.a: 2006 Short Term Gas Deliverability EMA

Group Deliverability Parameters- Conventional Gas

Notes:
The parameters listed below are the basis for the deliverability projections for existing gas connections and all solution gas in this EMA. The parameters are based on extrapolation of historical production the group. In the case of Gas Connections, the applicable average connection performance parameters and the known connection schedule are also utilized to estimate group performance parameters. The group deliverability parameters for recent connection year groupings are heavily influenced by the deliverability expectations based on average connection parameters. The parameters d2, months to d2, d3 and months to d3 are all surmised from the projections based upon the average connection parameters.

Group			Group Performance Parameters					
Gas Type	Area Name	Connection Year	q @ 2005 Yr End, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline
GAS	Alberta- Northeast	pre-1996	193.00	0.150	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	1996	22.00	0.220	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	1997	47.00	0.180	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	1998	47.00	0.210	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	1999	45.00	0.180	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	2000	58.00	0.200	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	2001	70.00	0.180	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	2002	52.00	0.180	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	2003	62.00	0.180	N/A	N/A	N/A	N/A
GAS	Alberta- Northeast	2004	58.00	0.250	0.180	12	N/A	N/A
GAS	Alberta- Northeast	2005	43.00	0.550	0.250	12	0.180	42
GAS	Alberta- Northwest	pre-1996	312.00	0.150	N/A	N/A	N/A	N/A
GAS	Alberta- Northwest	1996	46.50	0.150	N/A	N/A	N/A	N/A
GAS	Alberta- Northwest	1997	52.00	0.150	N/A	N/A	N/A	N/A
GAS	Alberta- Northwest	1998	66.00	0.200	0.150	30	N/A	N/A
GAS	Alberta- Northwest	1999	66.00	0.200	0.150	40	N/A	N/A
GAS	Alberta- Northwest	2000	83.00	0.200	0.150	52	N/A	N/A
GAS	Alberta- Northwest	2001	117.00	0.200	0.150	80	N/A	N/A
GAS	Alberta- Northwest	2002	108.00	0.350	0.200	20	0.150	70
GAS	Alberta- Northwest	2003	121.00	0.310	0.200	24	0.150	90
GAS	Alberta- Northwest	2004	190.00	0.380	0.280	8	0.200	40
GAS	Alberta- Northwest	2005	360.00	0.560	0.290	16	0.200	54
GAS	B.C.- Fort St. John	pre-1996	255.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort St. John	1996	20.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort St. John	1997	33.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort St. John	1998	39.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort St. John	1999	44.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort St. John	2000	52.00	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Fort St. John	2001	93.00	0.200	0.120	50	N/A	N/A
GAS	B.C.- Fort St. John	2002	73.00	0.260	0.120	24	N/A	N/A
GAS	B.C.- Fort St. John	2003	115.00	0.300	0.160	24	0.120	40
GAS	B.C.- Fort St. John	2004	205.00	0.300	0.160	20	0.120	50
GAS	B.C.- Fort St. John	2005	380.00	0.630	0.300	9	0.160	32
GAS	B.C.- Fort Nelson	pre-1996	146.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort Nelson	1996	17.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort Nelson	1997	28.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort Nelson	1998	12.00	0.120	N/A	N/A	N/A	N/A
GAS	B.C.- Fort Nelson	1999	36.00	0.180	0.120	10	N/A	N/A
GAS	B.C.- Fort Nelson	2000	31.00	0.160	0.120	10	N/A	N/A
GAS	B.C.- Fort Nelson	2001	65.00	0.200	0.120	20	N/A	N/A
GAS	B.C.- Fort Nelson	2002	49.00	0.160	0.120	25	N/A	N/A
GAS	B.C.- Fort Nelson	2003	90.00	0.320	0.180	12	0.120	50
GAS	B.C.- Fort Nelson	2004	143.00	0.360	0.180	22	0.120	60
GAS	B.C.- Fort Nelson	2005	190.00	0.600	0.350	5	0.180	38
GAS	B.C.- Foothills	pre-1996	80.00	0.150	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	1996	17.50	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	1997	32.50	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	1998	33.00	0.100	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	1999	5.40	0.060	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	2000	12.40	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	2001	36.00	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	2002	10.50	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	2003	60.00	0.140	N/A	N/A	N/A	N/A
GAS	B.C.- Foothills	2004	92.00	0.300	0.140	8	N/A	N/A
GAS	B.C.- Foothills	2005	70.00	0.300	0.140	18	N/A	N/A

Appendix B.1.a: 2006 Short Term Gas Deliverability EMA

Group Deliverability Parameters- Conventional Gas

Notes:
The parameters listed below are the basis for the deliverability projections for existing gas connections and all solution gas in this EMA. The parameters are based on extrapolation of historical production the group. In the case of Gas Connections, the applicable average connection performance parameters and the known connection schedule are also utilized to estimate group performance parameters. The group deliverability parameters for recent connection year groupings are heavily influenced by the deliverability expectations based on average connection parameters. The parameters d2, months to d2, d3 and months to d3 are all surmised from the projections based upon the average connection parameters.

Group			Group Performance Parameters					
Gas Type	Area Name	Connection Year	q @ 2005 Yr End, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline
GAS	Saskatchewan- Central	pre-1996	38.00	0.130	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	1996	4.50	0.130	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	1997	2.50	0.200	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	1998	7.50	0.130	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	1999	4.50	0.130	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	2000	4.50	0.270	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	2001	7.00	0.360	0.250	15	N/A	N/A
GAS	Saskatchewan- Central	2002	7.50	0.300	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	2003	10.50	0.300	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Central	2004	23.00	0.500	0.300	8	N/A	N/A
GAS	Saskatchewan- Central	2005	38.00	0.580	0.300	20	N/A	N/A
GAS	Saskatchewan- Southwest	pre-1996	96.00	0.120	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Southwest	1996	10.00	0.120	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Southwest	1997	6.50	0.120	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Southwest	1998	11.00	0.120	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Southwest	1999	17.00	0.130	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Southwest	2000	23.50	0.130	N/A	N/A	N/A	N/A
GAS	Saskatchewan- Southwest	2001	29.00	0.160	0.130	24	N/A	N/A
GAS	Saskatchewan- Southwest	2002	50.00	0.230	0.160	10	0.130	36
GAS	Saskatchewan- Southwest	2003	73.00	0.230	0.160	20	0.130	50
GAS	Saskatchewan- Southwest	2004	72.00	0.240	0.160	30	0.130	75
GAS	Saskatchewan- Southwest	2005	115.00	0.500	0.250	13	0.160	42
SOLUTION	Alberta- Foothills	All	2.5	0.050	N/A	N/A	N/A	N/A
SOLUTION	Alberta- Foothills Front	All	400.0	0.020	N/A	N/A	N/A	N/A
SOLUTION	Alberta- Southeast	All	155.0	0.040	N/A	N/A	N/A	N/A
SOLUTION	Alberta- East Central	All	90.0	0.010	N/A	N/A	N/A	N/A
SOLUTION	Alberta- Central	All	410.0	0.030	N/A	N/A	N/A	N/A
SOLUTION	Alberta- Northeast	All	61.0	0.050	N/A	N/A	N/A	N/A
SOLUTION	Alberta- Northwest	All	270.0	0.030	N/A	N/A	N/A	N/A
SOLUTION	B.C.- Fort St. John	All	52.0	0.150	N/A	N/A	N/A	N/A
SOLUTION	B.C.- Fort Nelson	All	5.0	0.010	N/A	N/A	N/A	N/A
SOLUTION	Saskatchewan- Central	All	40.0	0.010	N/A	N/A	N/A	N/A
SOLUTION	Saskatchewan- Southwest	All	23.0	0.030	N/A	N/A	N/A	N/A
SOLUTION	Saskatchewan- Southeast	All	30.0	0.010	N/A	N/A	N/A	N/A

Appendix B.1.b: 2006 Short Term Gas Deliverability EMA

Group Deliverability Parameters- Unconventional Gas

Notes:
The parameters listed below are the basis for the deliverability projections for existing CBM connections. The parameters are based on extrapolation of historical production the group. The applicable average connection performance parameters and the known connection schedule are also utilized to estimate group performance parameters. The group deliverability parameters for recent connection year groupings are heavily influenced by the deliverability expectations based on average connection parameters. The parameters d2, months to d2, d3 and months to d3 are all surmised from the projections based upon the average connection parameters.

Group			Group Performance Parameters					
Gas Type	Group Description	Connection Year	q @ 2005 Yr End, MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline
CBM	Horseshoe Canyon Main Play	all Pre-2003	13.0	0.15	0.1	12	N/A	N/A
CBM	Horseshoe Canyon Main Play	2003	33.0	0.15	0.1	30	N/A	N/A
CBM	Horseshoe Canyon Main Play	2004	120.0	0.15	0.1	40	N/A	N/A
CBM	Horseshoe Canyon Main Play	2005	205.0	0.100	0.150	14	0.1	55
CBM	Other NGC	2002	4.1	0.280	0.150	20	0.1	60
CBM	Other NGC	all Pre-2003	6.5	0.150	0.100	30	N/A	N/A
CBM	Other NGC	2004	2.7	0.380	0.150	12	0.1	40
CBM	Other NGC	2005	5.5	0.350	0.150	24	0.1	53
CBM	Mannville- Corbett Area, 2005 Horizontal Connections	2005	19.0	0.250	0.150	22	0.1	60
CBM	Mannville- Corbett Area, 2005 Vertical Connections, and all pre-2005 Conns	mostly pre-2005	6.5	0.250	0.150	20	0.1	60
CBM	Mannville- Outside of Corbett Area, all pre-2006 Connections	all Pre-2006	6.0	0.250	0.150	20	0.1	60

Appendix B.2

Historic and Projected Performance Parameters for Average Gas and CBM Connections by Connection Year and Study Area

In this EMA, deliverability for future connections of gas and NGC is estimated on the basis of the expected performance characteristics of the average future connections and the number of those connections expected to occur over the projection period. This Appendix B.2 provides the NEB assessment of performance characteristics for average gas well connections for each Study Area for connection years 1996 - 2005, and provides the NEB's projection of performance parameters for 2006 – 2008. The historical and projected performance parameters for the average CBM connections in each of the 3 CBM resource groupings are shown ion part b. of this appendix.

Appendix B.2.a - Average Connection Performance Parameters by Area; Historical and Projected:
Conventional Gas Connections

Notes:
- Greyed out cells indicate where values were estimated based on performance of earlier connection year groupings for the area. In cases where the greyed out cell is for the 1996 Connection Year, the terminal decline rate determined for the grouping of all pre-1996 gas connections for the area was applied, along with a 120 month period before the terminal decline is reached.
- In some cases the lifetime decline of the average connection can be described with 2 or 3 decline rates applying at different times over the wells life. In these cases the susequequent decline parameters are listed as "N/A".

Area: Alberta- Foothills; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	5.900	0.280	0.150	26	0.120	75	0.080	120	14,609.0
GAS	1997	3.800	0.155	0.100	38	0.080	120	N/A	N/A	13,054.0
GAS	1998	3.800	0.029	0.590	22	0.280	50	0.130	70	6,081.0
GAS	1999	2.400	0.380	0.175	10	0.150	75	0.110	120	4,900.0
GAS	2000	2.000	0.450	0.170	15	0.120	60	0.080	120	4,317.0
GAS	2001	1.580	0.230	0.180	50	0.130	80	0.080	120	3,534.0
GAS	2002	2.550	0.390	0.160	11	0.120	50	0.080	120	6,519.0
GAS	2003	2.250	0.410	0.190	17	0.125	50	0.080	120	4,757.0
GAS	2004	1.900	0.350	0.180	17	0.125	50	0.080	120	4,360.0
GAS	2005	1.600	0.380	0.180	17	0.125	50	0.080	120	3,553.0

Projected Decline Parameters for Alberta- Foothills Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.380	0.180	17	0.125	50	0.080	120

Projected Initial Productivity for Alberta- Foothills Area-- variable, decreases with depletion of resources

Connection Year	q init, Mkt MMcf/d
2006	1.377
2007	1.249
2008	1.138

Area: Alberta- Foothills Front; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	1.610	0.430	0.240	21	0.190	45	0.120	120	2,268.0
GAS	1997	1.340	0.340	0.270	23	0.140	52	0.120	120	2,181.0
GAS	1998	1.450	0.420	0.270	17	0.170	48	0.120	120	2,120.0
GAS	1999	1.360	0.550	0.260	18	0.160	45	0.120	120	1,769.0
GAS	2000	1.010	0.485	0.240	17	0.170	45	0.120	120	1,455.0
GAS	2001	0.890	0.510	0.250	16	0.170	46	0.120	120	1,240.0
GAS	2002	1.000	0.500	0.270	17	0.170	45	0.120	120	1,359.0
GAS	2003	0.720	0.480	0.260	18	0.170	45	0.120	120	997.0
GAS	2004	0.620	0.510	0.270	17	0.170	45	0.120	120	831.0
GAS	2005	0.560	0.510	0.270	17	0.170	45	0.120	120	745.0

Projected Decline Parameters for Alberta- Foothills Front Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.510	0.270	17	0.170	45	0.120	120

Projected Initial Productivity for Alberta- Foothills Front Area-- variable, decreases with depletion of resources

Connection Year	q init, Mkt MMcf/d
2006	0.530
2007	0.500
2008	0.480

Area: Alberta- Southeast; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.370	0.630	0.240	18	0.140	55	0.105	120	463.0
GAS	1997	0.385	0.600	0.310	15	0.140	55	0.105	120	471.0
GAS	1998	0.290	0.610	0.330	15	0.140	45	0.105	120	364.0
GAS	1999	0.215	0.630	0.260	18	0.140	45	0.105	120	274.0
GAS	2000	0.190	0.610	0.260	17	0.140	42	0.105	120	259.0
GAS	2001	0.160	0.610	0.260	16	0.140	45	0.105	120	219.0
GAS	2002	0.147	0.630	0.280	17	0.140	45	0.105	120	187.0
GAS	2003	0.120	0.540	0.270	17	0.140	45	0.105	120	172.0
GAS	2004	0.118	0.620	0.270	16	0.140	45	0.105	120	157.0
GAS	2005	0.103	0.620	0.270	17	0.140	45	0.105	120	134.0

Projected Decline Parameters for Alberta- Southeast Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.620	0.270	17	0.140	45	0.105	120

Projected Initial Productivity for Alberta- Southeast Area-- variable, decreases with depletion of resources

Connection Year	q init, Mkt MMcf/d
2006	0.091
2007	0.084
2008	0.079

Appendix B.2.a - Average Connection Performance Parameters by Area; Historical and Projected:
Conventional Gas Connections

Notes:
- Greyed out cells indicate where values were estimated based on performance of earlier connection year groupings for the area. In cases where the greyed out cell is for the 1996 Connection Year, the terminal decline rate determined for the grouping of all pre-1996 gas connections for the area was applied, along with a 120 month period before the terminal decline is reached.
- In some cases the lifetime decline of the average connection can be described with 2 or 3 decline rates applying at different times over the wells life. In these cases the susequequent decline parameters are listed as "N/A".

Area: Alberta- East Central; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.540	0.500	0.300	19	0.160	50	0.130	120	670.0
GAS	1997	0.500	0.550	0.320	17	0.160	60	0.130	120	553.0
GAS	1998	0.390	0.650	0.280	16	0.200	44	0.130	120	420.0
GAS	1999	0.325	0.510	0.290	16	0.200	45	0.130	120	397.0
GAS	2000	0.285	0.610	0.300	26	0.170	45	0.130	120	282.0
GAS	2001	0.310	0.680	0.300	21	0.170	45	0.130	120	300.0
GAS	2002	0.265	0.450	0.300	18	0.170	45	0.130	120	355.0
GAS	2003	0.175	0.580	0.280	19	0.170	45	0.130	120	203.0
GAS	2004	0.150	0.620	0.290	18	0.170	45	0.130	120	167.0
GAS	2005	0.139	0.620	0.290	18	0.170	45	0.130	120	154.0

Projected Decline Parameters for Alberta- East Central Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.620	0.290	18	0.170	45	0.130	120

Projected Initial Productivity for Alberta- East Central Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.118
2007	0.106
2008	0.096

Area: Alberta- Central; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.730	0.660	0.360	18	0.170	48	0.160	120	672.0
GAS	1997	0.680	0.850	0.400	12	0.170	45	0.160	120	574.0
GAS	1998	0.610	0.640	0.350	16	0.200	48	0.160	120	575.0
GAS	1999	0.560	0.710	0.380	17	0.180	46	0.160	120	488.0
GAS	2000	0.500	0.680	0.310	23	0.200	48	0.160	120	422.0
GAS	2001	0.400	0.630	0.360	18	0.200	48	0.160	120	366.0
GAS	2002	0.375	0.590	0.350	18	0.200	45	0.160	120	369.0
GAS	2003	0.320	0.630	0.340	18	0.200	45	0.160	120	305.0
GAS	2004	0.295	0.610	0.310	16	0.200	45	0.160	120	308.0
GAS	2005	0.225	0.620	0.330	18	0.200	45	0.160	120	218.0

Projected Decline Parameters for Alberta- Central Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.620	0.330	18	0.200	45	0.160	120

Projected Initial Productivity for Alberta- Central Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.215
2007	0.192
2008	0.172

Area: Alberta- Northeast; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.630	0.370	0.220	28	N/A	N/A	N/A	N/A	806.0
GAS	1997	0.535	0.320	0.210	36	0.180	60	N/A	N/A	777.0
GAS	1998	0.540	0.410	0.260	18	0.210	50	N/A	N/A	687.0
GAS	1999	0.510	0.340	0.260	23	0.180	52	N/A	N/A	731.0
GAS	2000	0.360	0.270	0.200	52	N/A	N/A	N/A	N/A	541.0
GAS	2001	0.270	0.300	0.180	22	N/A	N/A	N/A	N/A	459.0
GAS	2002	0.300	0.290	0.180	28	N/A	N/A	N/A	N/A	498.0
GAS	2003	0.250	0.300	0.180	30	N/A	N/A	N/A	N/A	403.0
GAS	2004	0.203	0.310	0.180	30	N/A	N/A	N/A	N/A	321.0
GAS	2005	0.190	0.600	0.250	20	N/A	N/A	N/A	N/A	200.0

Projected Decline Parameters for Alberta- Northeast Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.310	0.180	30	N/A	N/A	N/A	N/A

Projected Initial Productivity for Alberta- Northeast Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.200
2007	0.190
2008	0.181

Appendix B.2.a - Average Connection Performance Parameters by Area; Historical and Projected:
Conventional Gas Connections

Notes:
- Greyed out cells indicate where values were estimated based on performance of earlier connection year groupings for the area. In cases where the greyed out cell is for the 1996 Connection Year, the terminal decline rate determined for the grouping of all pre-1996 gas connections for the area was applied, along with a 120 month period before the terminal decline is reached.
- In some cases the lifetime decline of the average connection can be described with 2 or 3 decline rates applying at different times over the wells life. In these cases the susequequent decline parameters are listed as "N/A".

Area: Alberta- Northwest; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	1.400	0.350	0.240	45	0.200	90	0.150	120	1,747.0
GAS	1997	1.050	0.410	0.310	30	0.200	65	0.150	120	1,187.0
GAS	1998	0.990	0.420	0.260	36	0.200	70	0.150	120	1,112.0
GAS	1999	0.830	0.460	0.270	30	0.200	65	0.150	120	900.0
GAS	2000	0.650	0.600	0.290	20	0.200	60	0.150	120	635.0
GAS	2001	0.600	0.560	0.300	22	0.200	60	0.150	120	592.0
GAS	2002	0.740	0.820	0.360	12	0.200	60	0.150	120	614.0
GAS	2003	0.530	0.620	0.310	24	0.200	60	0.150	120	464.0
GAS	2004	0.450	0.540	0.280	20	0.200	60	0.150	120	480.0
GAS	2005	0.440	0.580	0.290	22	0.200	60	0.150	120	428.0

Projected Decline Parameters for Alberta- Northwest Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.580	0.290	22	0.200	60	0.150	120

Projected Initial Productivity for Alberta- Northwest Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.399
2007	0.369
2008	0.341

Area: B.C.- Fort St. John; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.990	0.400	0.220	28	0.120	65	N/A	N/A	1,496.0
GAS	1997	1.050	0.400	0.170	33	0.120	90	N/A	N/A	1,554.0
GAS	1998	0.850	0.440	0.160	25	0.120	65	N/A	N/A	1,386.0
GAS	1999	0.860	0.440	0.210	17	0.120	80	N/A	N/A	1,363.0
GAS	2000	0.800	0.510	0.210	19	0.120	65	N/A	N/A	1,175.0
GAS	2001	0.760	0.470	0.210	22	0.120	65	N/A	N/A	1,122.0
GAS	2002	0.930	0.500	0.260	24	0.120	65	N/A	N/A	1,163.0
GAS	2003	1.020	0.760	0.300	16	0.160	50	0.120	65	1,075.0
GAS	2004	0.740	0.680	0.300	14	0.160	40	0.120	65	939.0
GAS	2005	0.710	0.720	0.300	15	0.160	40	0.120	65	839.0

Projected Decline Parameters for B.C.- Fort St. John Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.720	0.300	15	0.160	40	0.120	65

Projected Initial Productivity for B.C.- Fort St. John Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.674
2007	0.642
2008	0.612

Area: B.C.- Fort Nelson; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	2.640	0.330	0.200	45	0.120	75	N/A	N/A	4,129.0
GAS	1997	3.500	0.340	0.150	21	0.120	40	N/A	N/A	7,407.0
GAS	1998	1.870	0.500	0.180	24	0.120	70	N/A	N/A	2,672.0
GAS	1999	1.550	0.290	0.220	45	0.120	75	N/A	N/A	2,623.0
GAS	2000	1.270	0.590	0.260	14	0.120	65	N/A	N/A	1,687.0
GAS	2001	1.100	0.270	0.200	24	0.120	75	N/A	N/A	2,140.0
GAS	2002	1.440	0.460	0.300	22	0.160	45	0.120	70	2,003.0
GAS	2003	1.150	0.720	0.320	15	0.180	45	0.120	75	1,236.0
GAS	2004	1.180	0.700	0.360	12	0.180	45	0.120	75	1,281.0
GAS	2005	1.050	0.710	0.350	13	0.180	45	0.120	75	1,127.0

Projected Decline Parameters for B.C.- Fort Nelson Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.710	0.350	13	0.180	45	0.120	75

Projected Initial Productivity for B.C.- Fort Nelson Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.928
2007	0.868
2008	0.811

Appendix B.2.a - Average Connection Performance Parameters by Area; Historical and Projected:
Conventional Gas Connections

Notes:
- Greyed out cells indicate where values were estimated based on performance of earlier connection year groupings for the area. In cases where the greyed out cell is for the 1996 Connection Year, the terminal decline rate determined for the grouping of all pre-1996 gas connections for the area was applied, along with a 120 month period before the terminal decline is reached.
- In some cases the lifetime decline of the average connection can be described with 2 or 3 decline rates applying at different times over the wells life. In these cases the susequequent decline parameters are listed as "N/A".

Area: B.C.- Foothills; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	6.400	0.240	0.140	24	N/A	N/A	N/A	N/A	14,096.0
GAS	1997	11.000	0.001	0.220	24	0.140	55	N/A	N/A	29,876.0
GAS	1998	5.400	0.130	0.080	30	0.100	70	N/A	N/A	19,593.0
GAS	1999	1.830	0.950	0.060	18	N/A	N/A	N/A	N/A	3,253.0
GAS	2000	13.000	0.400	0.140	50	N/A	N/A	N/A	N/A	16,067.0
GAS	2001	6.000	0.090	0.140	50	N/A	N/A	N/A	N/A	18,413.0
GAS	2002	1.700	0.300	0.140	24	N/A	N/A	N/A	N/A	3,354.0
GAS	2003	5.500	0.280	0.140	30	N/A	N/A	N/A	N/A	10,753.0
GAS	2004	3.300	0.300	0.140	24	N/A	N/A	N/A	N/A	6,580.0
GAS	2005	1.900	0.300	0.140	24	N/A	N/A	N/A	N/A	3,798.0

Projected Decline Parameters for B.C.- Foothills Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.300	0.140	24	N/A	N/A	N/A	N/A

Projected Initial Productivity for B.C.- Foothills Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	2.641
2007	2.533
2008	2.409

Area: Saskatchewan- Central; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.400	0.560	0.170	22	0.130	80	N/A	N/A	521.0
GAS	1997	0.450	0.510	0.265	13	0.200	90	N/A	N/A	524.0
GAS	1998	0.450	0.390	0.200	35	0.130	70	N/A	N/A	633.0
GAS	1999	0.410	0.510	0.270	23	0.130	75	N/A	N/A	472.0
GAS	2000	0.365	0.610	0.300	15	0.270	90	N/A	N/A	334.0
GAS	2001	0.260	0.530	0.360	24	0.270	80	N/A	N/A	216.0
GAS	2002	0.230	0.450	0.300	35	N/A	N/A	N/A	N/A	213.0
GAS	2003	0.217	0.750	0.300	20	N/A	N/A	N/A	N/A	153.0
GAS	2004	0.230	0.600	0.300	24	N/A	N/A	N/A	N/A	185.0
GAS	2005	0.180	0.600	0.300	24	N/A	N/A	N/A	N/A	144.0

Projected Decline Parameters for Saskatchewan- Central Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.600	0.300	24	N/A	N/A	N/A	N/A

Projected Initial Productivity for Saskatchewan- Central Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.167
2007	0.153
2008	0.141

Area: Saskatchewan- Southwest; GAS Connections

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
GAS	1996	0.118	0.410	0.170	16	0.120	80	N/A	N/A	220.0
GAS	1997	0.135	0.380	0.200	27	0.120	80	N/A	N/A	211.0
GAS	1998	0.127	0.430	0.240	21	0.120	65	N/A	N/A	188.0
GAS	1999	0.105	0.600	0.300	15	0.160	45	0.130	80	131.0
GAS	2000	0.081	0.490	0.230	16	0.160	60	0.130	80	117.0
GAS	2001	0.072	0.550	0.270	12	0.160	50	0.130	80	100.0
GAS	2002	0.070	0.380	0.230	21	0.160	50	0.130	80	113.0
GAS	2003	0.089	0.430	0.230	17	0.160	50	0.130	80	141.0
GAS	2004	0.075	0.490	0.230	15	0.160	50	0.130	80	114.0
GAS	2005	0.090	0.520	0.250	17	0.160	50	0.130	80	123.0

Projected Decline Parameters for Saskatchewan- Southwest Area-- deemed to remain constant for all Connection Years after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.520	0.250	17	0.160	50	0.130	80

Projected Initial Productivity for Saskatchewan- Southwest Area-- variable, decreases with depletion of resources

Connection Year	q init, MMcf/d
2006	0.080
2007	0.076
2008	0.072

Appendix B.2.b - Average Connection Performance Parameters by Area; Historical and Projected: Unconventional Connections (CBM)

Notes:
- The short history of CBM Connections in the WCSB does not allow for estimation of some of the decline parameters based on the production decline analysis performed in this study. In these cases, the cells are greyed out and the value shown in the table shows the NEB's current estimate, which were made on the basis of discussions with CBM producers, and expectations of ultimate recoveries per well
- In some cases the lifetime decline of the average connection can be described with 2 or 3 decline rates applying at different times over the wells life. In these cases the susequequent decline parameters are listed as "N/A".

CBM Group Horseshoe Canyon Main Play

- All CBM Connections inside the Horseshoe Canyon Main Play Area and not producing from the Mannville zone

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
CBM	2003	0.102	0.260	0.150	16	0.100	60	0.100	500	272.0
CBM	2004	0.087	0.050	0.150	16	0.100	60	0.100	500	295.0
CBM	2005	0.079	0.050	0.150	16	0.100	60	0.100	500	268.0

Projected Decline Parameters for Horseshoe Canyon Main Play average connection-- deemed to remain constant after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.050	0.150	16	0.100	60	N/A	N/A

Projected Initial Productivity for Horseshoe Canyon Main Play average connection-- variable, decreases with depletion of resources

Connection Year	q init, Mkt MMcf/d
2006	0.080
2007	0.077
2008	0.075

CBM Group Other CBM

- all CBM connections which are not categorized as Horseshoe Canyon Main Play or Mannville

Connection Tye	Connection Year	Average Connection Performance Parameters								
		q init, Mkt MMcf/d	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	Avg Conn Recoverable Gas, Mkt MMcf
CBM	2003	0.142	0.280	0.150	30	0.100	60	0.100	500	327.0
CBM	2004	0.078	0.400	0.150	30	0.100	60	0.100	500	141.0
CBM	2005	0.056	0.350	0.150	30	0.100	60	0.100	500	113.0

Projected Decline Parameters for Other CBM average connection-- deemed to remain constant after 2005:

d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
0.350	0.150	30	0.100	60	N/A	N/A

Projected Initial Productivity for Other CBM average connection-- deemed to remain constant for the projection period

Connection Year	q init, Mkt MMcf/d
2006	0.070
2007	0.070
2008	0.070

CBM Group Mannville CBM

- CBM Connection connections which are not categorized as Horseshoe Canyon Main Play or Mannville

Connection Tye	Connection Year	Average Connection Performance Parameters									
		Peak q, MMcf/d	Months to Peak q	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline	AvCn Recoverable Gas, MMcf
CBM	2005	0.400	4	0.25	0.15	24	0.1	60	N/A	N/A	1050

Note: Average connection performance parameters for the Mannville CBM group are based on the performance of selected horizontal CBM wells within the Corbett Project Area brought on stream in 2005. This type of connection is most likely to reflect the performance of future Mannville CBM Connections in the projection period. The performance parameters include a "Months to Peak q" value to account for the increasing flow rate during the initial production period when de-watering occurs.

Projected Decline Parameters for Mannville CBM average connection-- deemed to remain constant after 2005:

Months to Peak q	d1, (frac)	d2, (frac)	Months to 2nd decline	d3, (frac)	Months to 3rd decline	d4, (frac)	Months to 4th decline
4	0.250	0.150	24	0.100	60	N/A	N/A

Projected Initial Productivity for Mannville CBM average connection-- deemed to remain constant for the projection period

Connection Year	q init, Mkt MMcf/d
2006	0.400
2007	0.400
2008	0.400

Appendix B.3

Trend of Initial Productivity of Average Gas Connection by Study Area

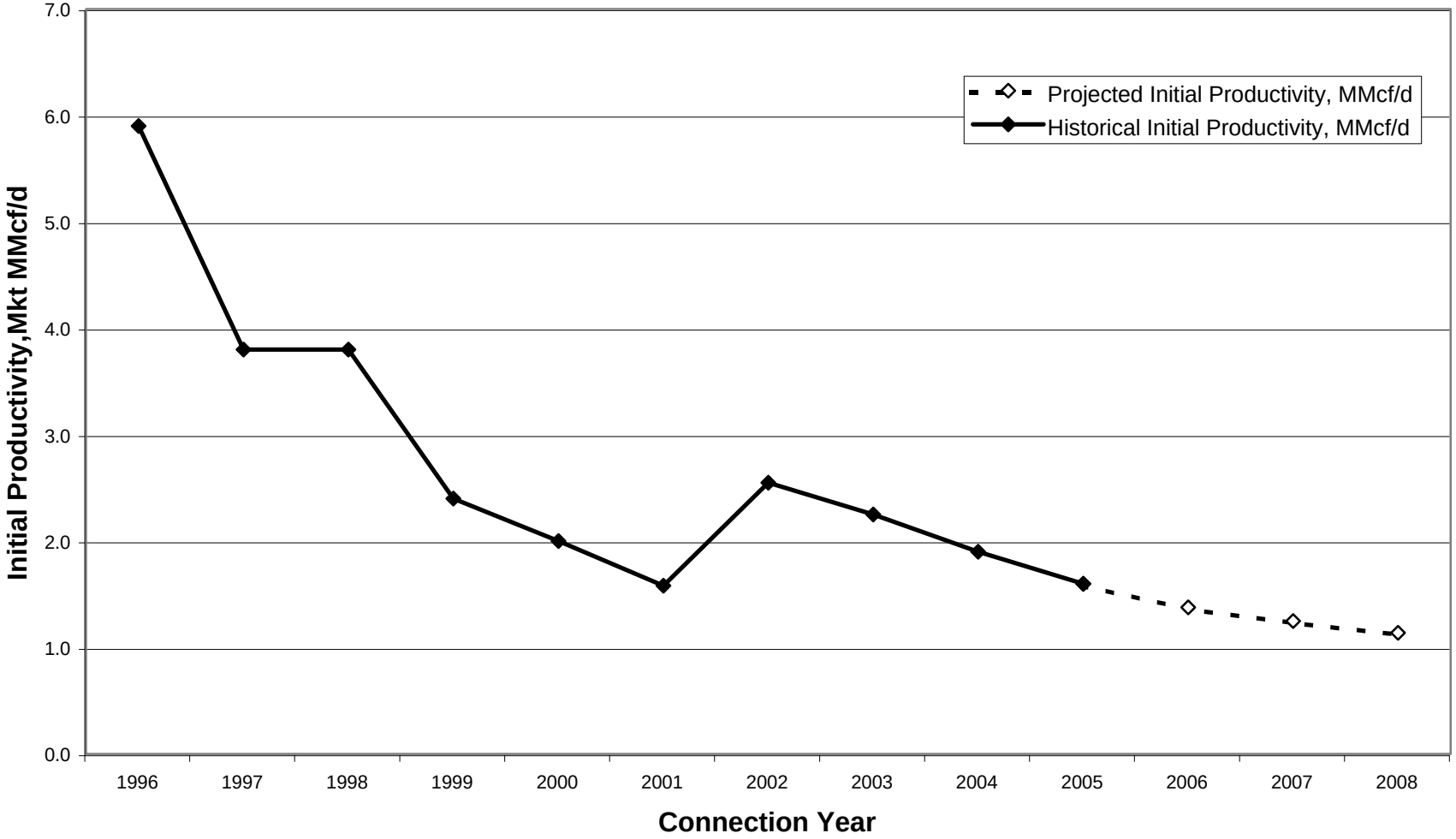
The review of average gas connection performance over the past several years reveals that, by and large, the initial productivity of gas connections in each Study Area has been decreasing, while the other parameters that define performance (first decline rate, second decline rate, and months to second decline rate) remain quite stable. This Appendix B.3 provides charts showing the historic trends and the NEB's projection for initial productivity for gas connections in each Study Area.

Appendix B.3.a- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- Foothills

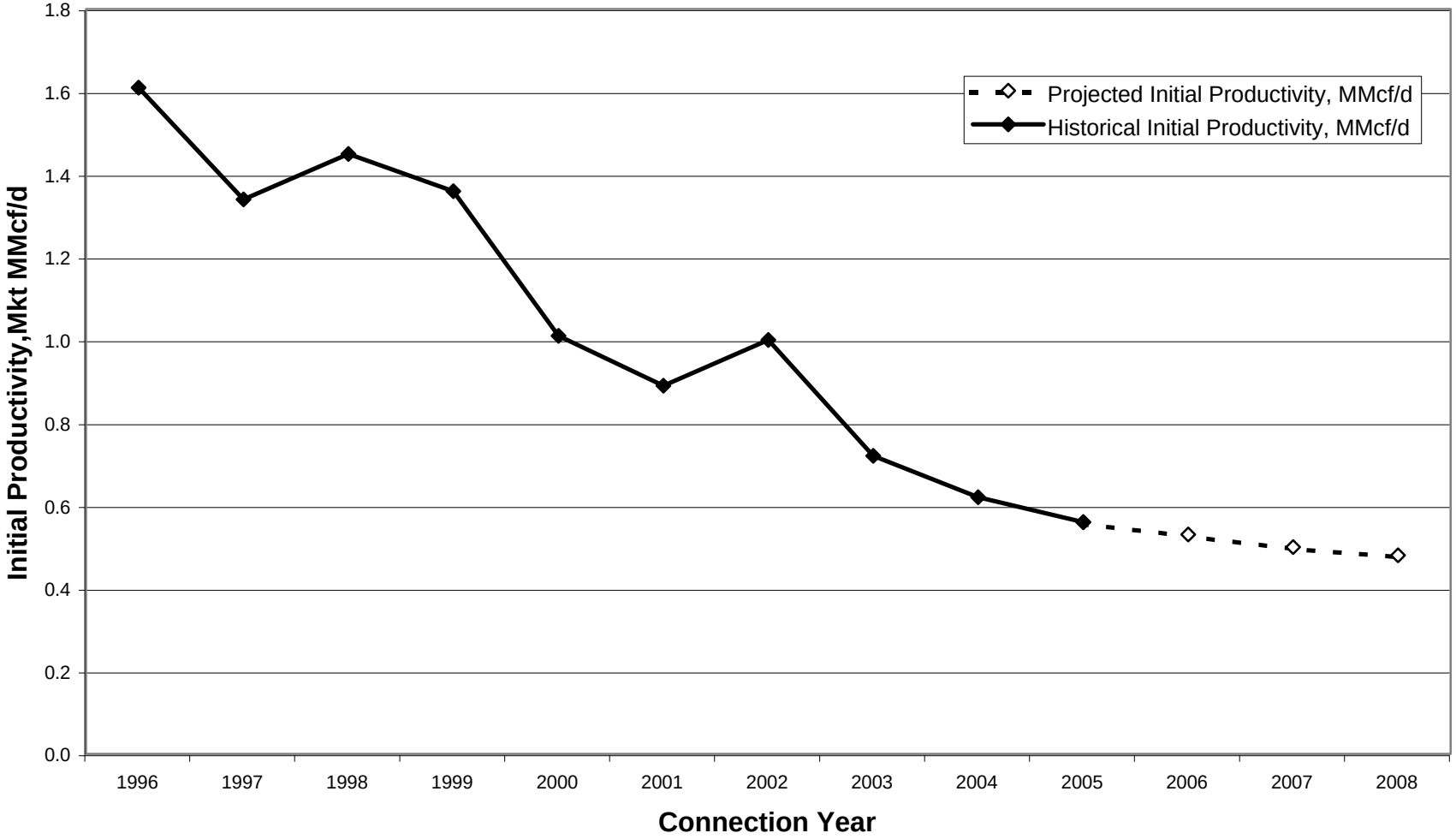


Appendix B.3.b- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- Foothills Front

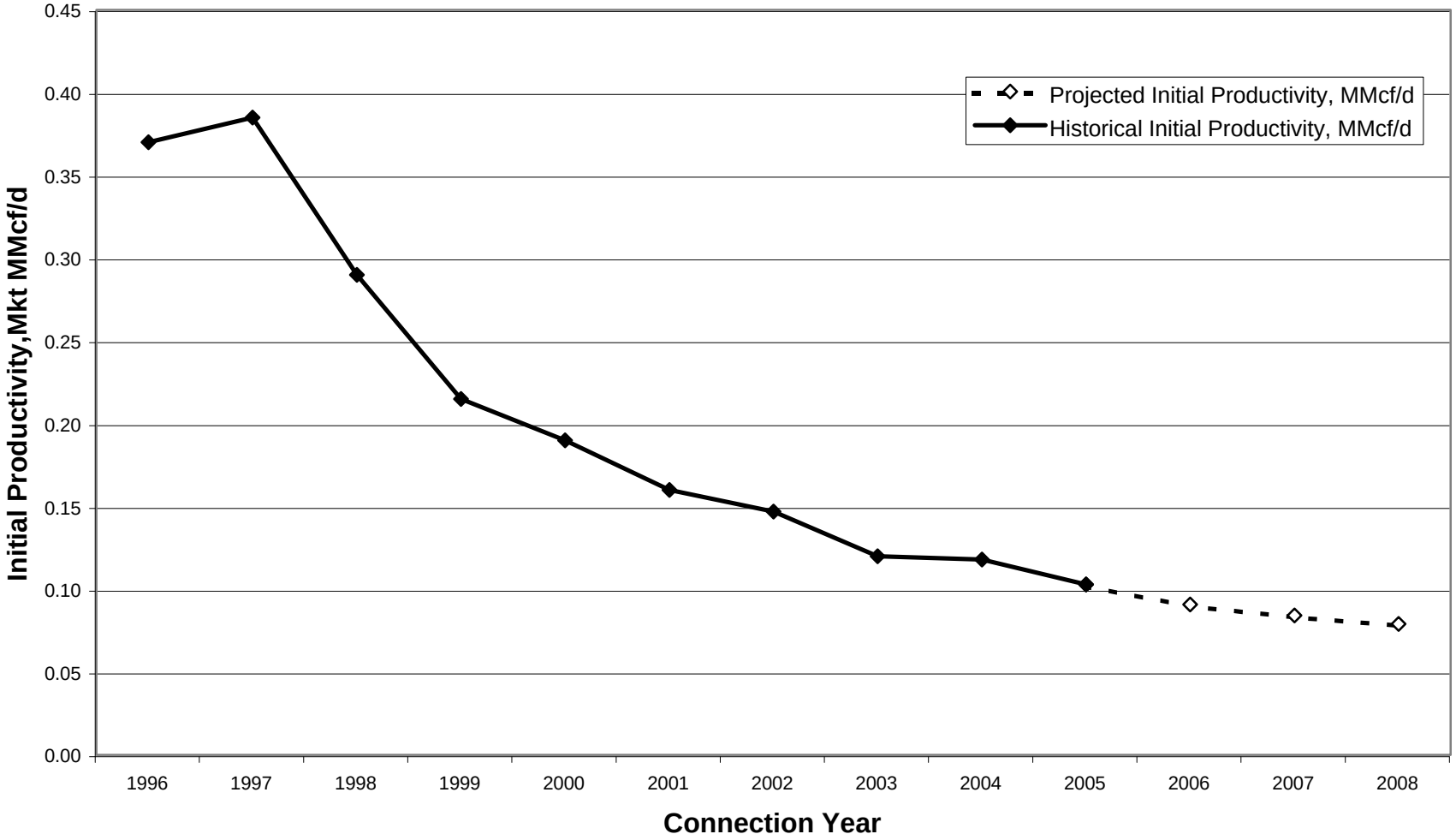


Appendix B.3.c- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- Southeast

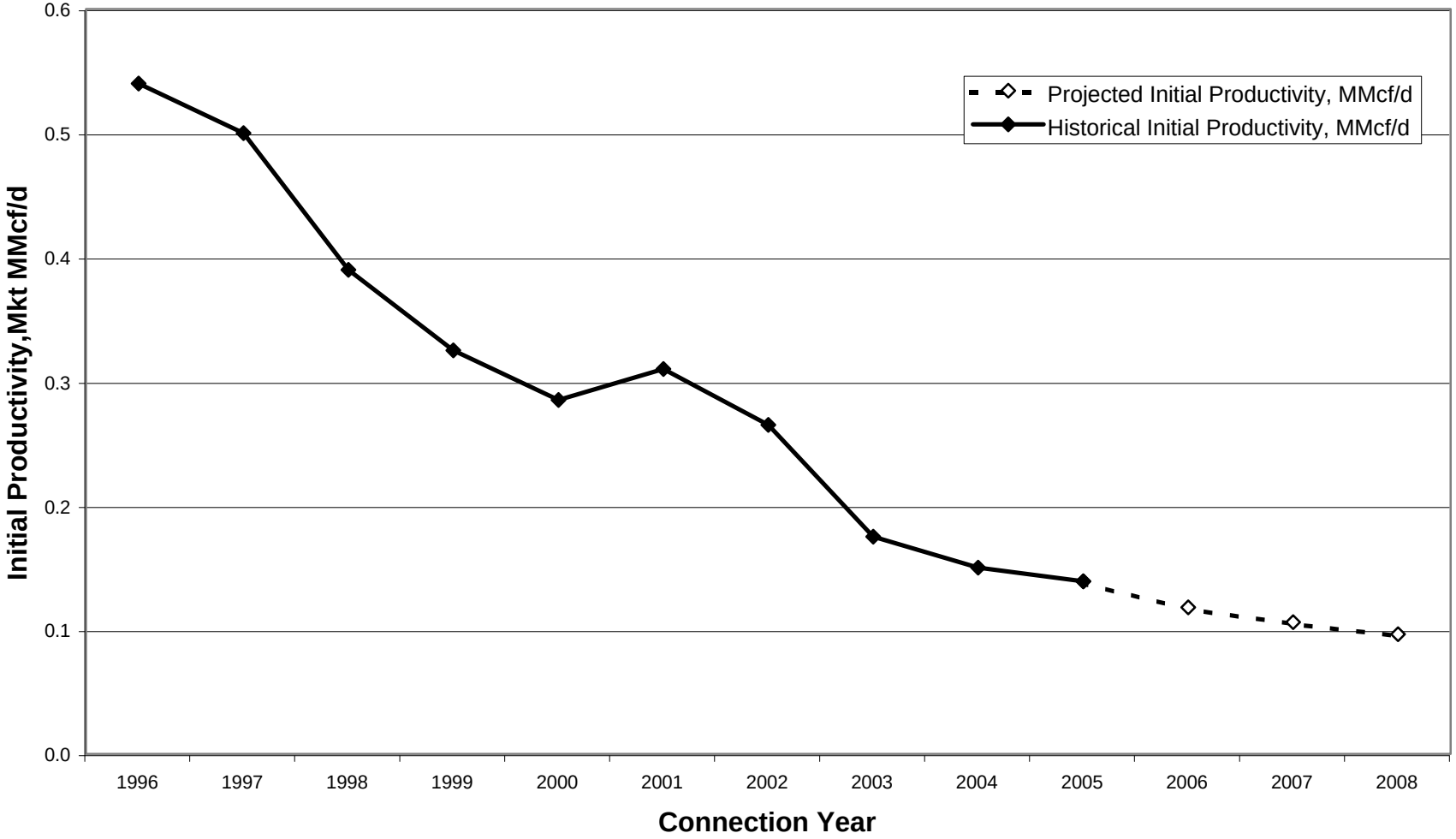


Appendix B.3.d- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- East Central

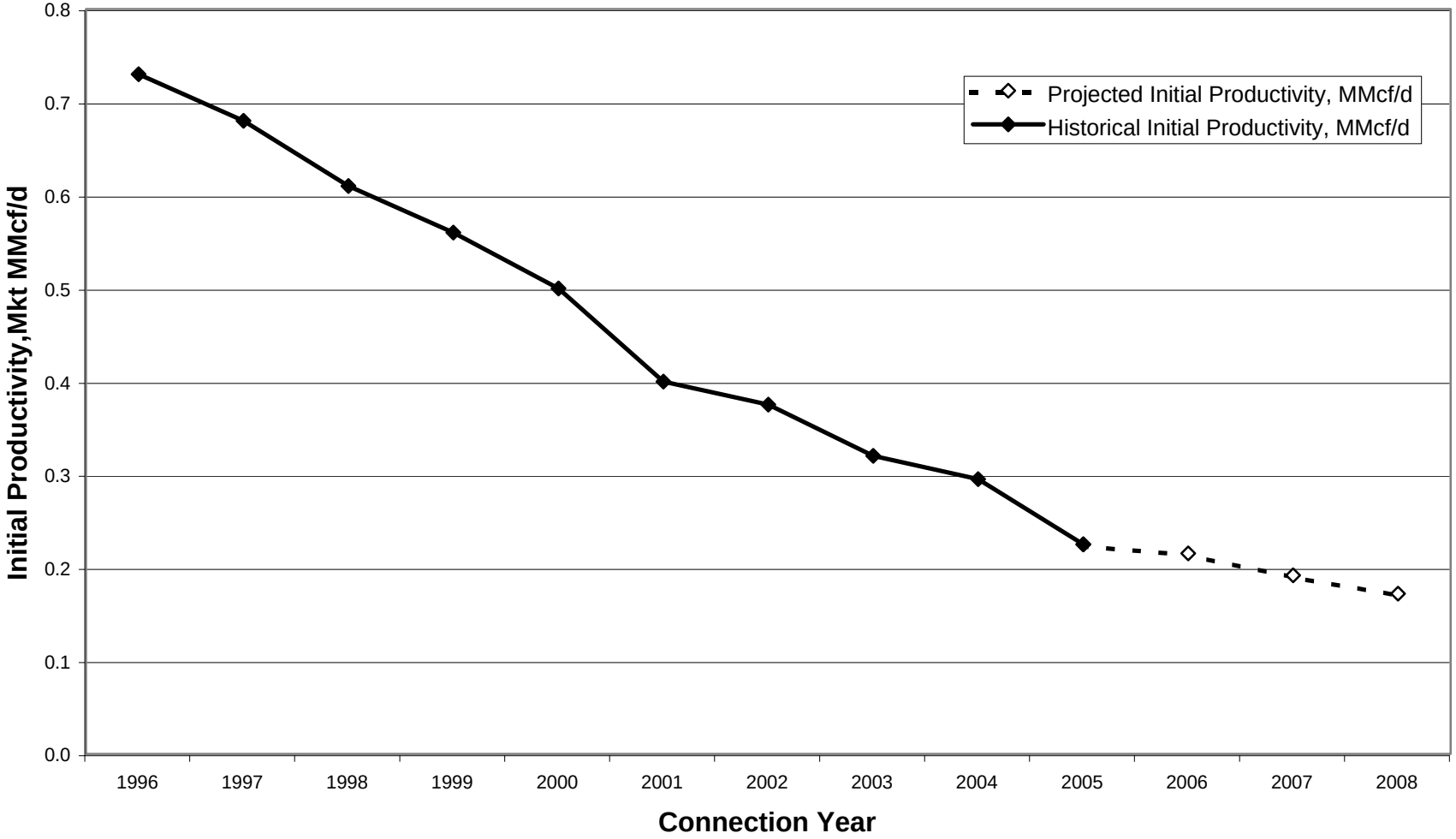


Appendix B.3.e- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- Central

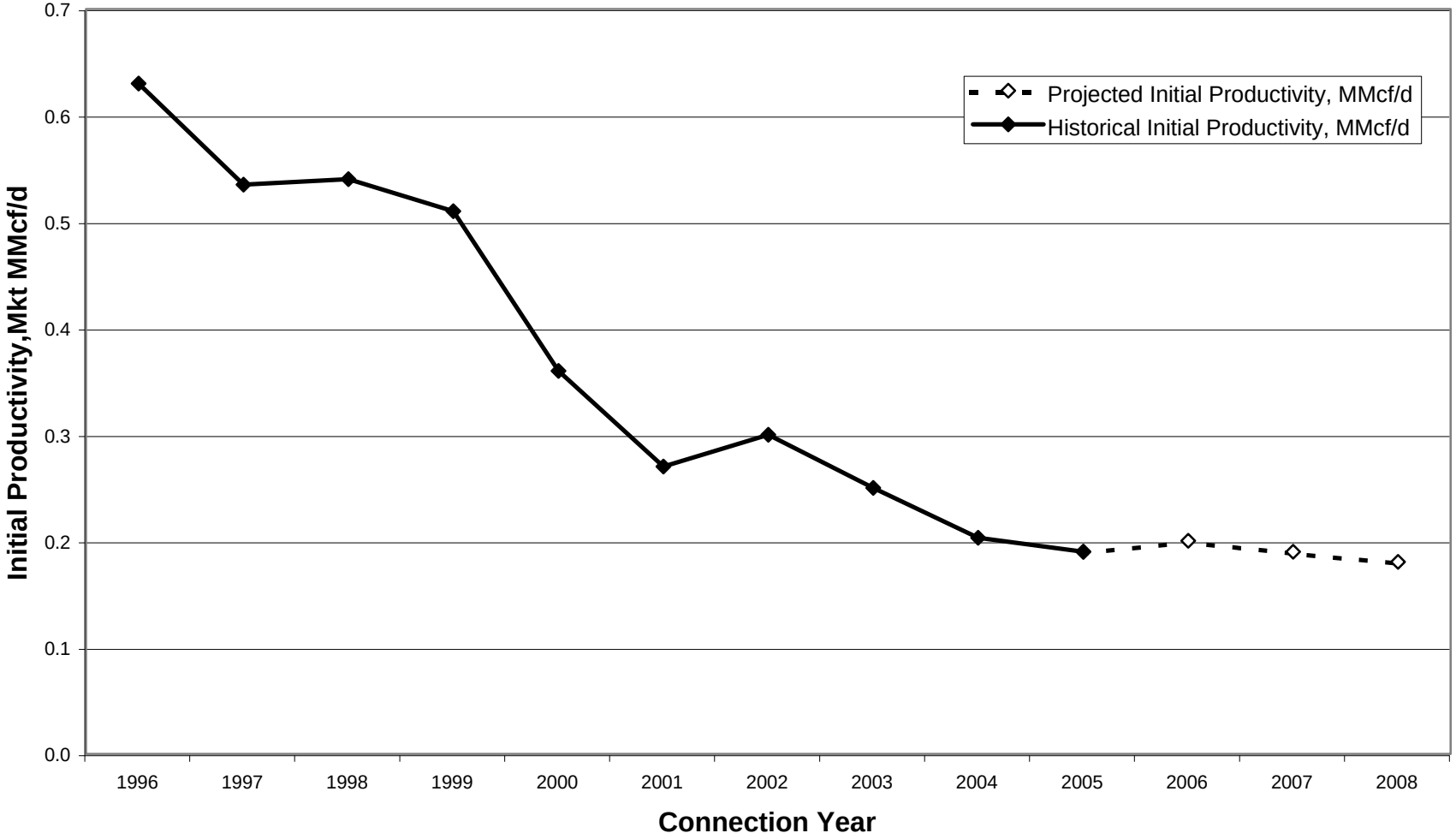


Appendix B.3.f- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- Northeast

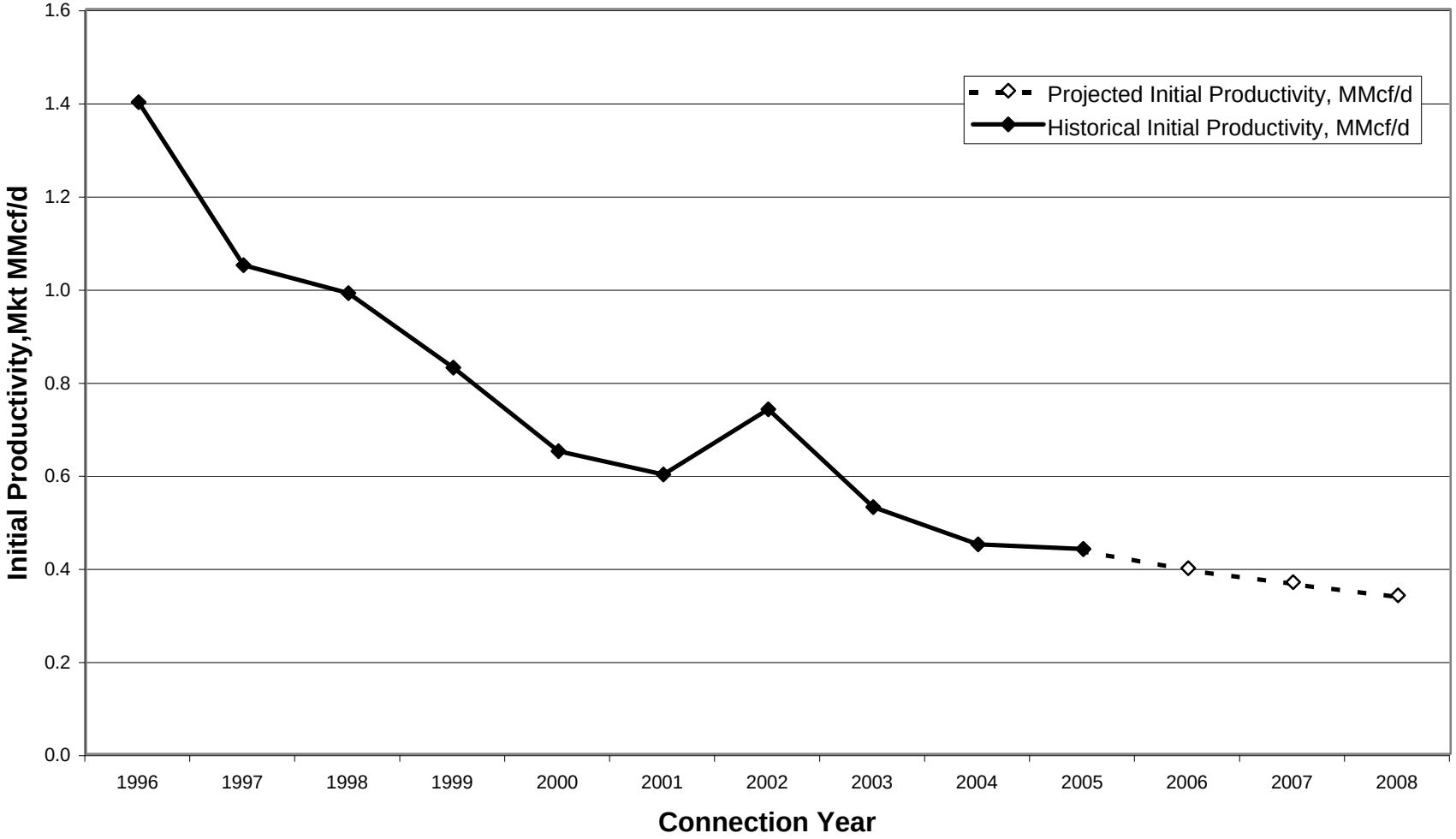


Appendix B.3.g- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Alberta- Northwest

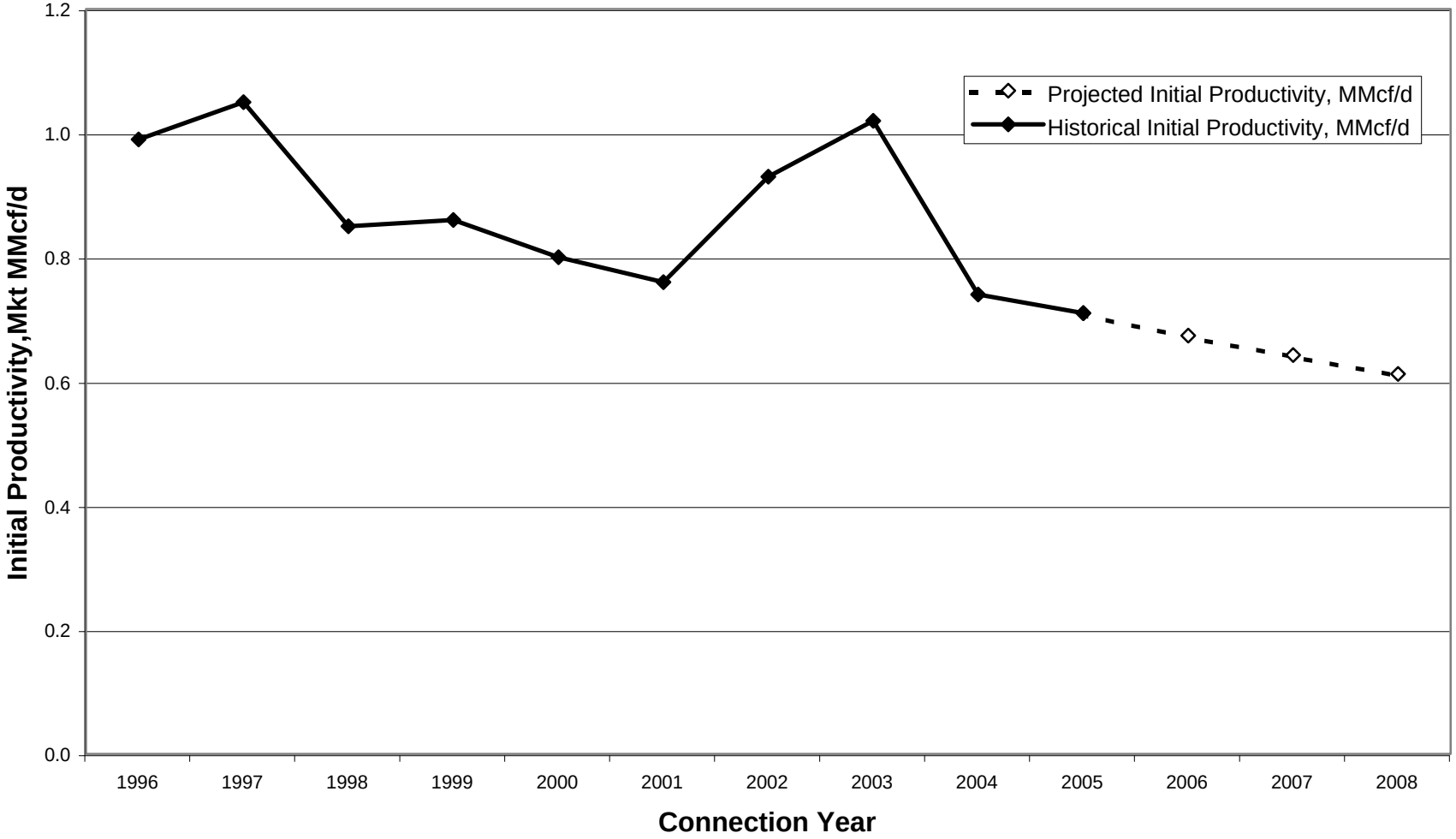


Appendix B.3.h- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: B.C.- Fort St. John

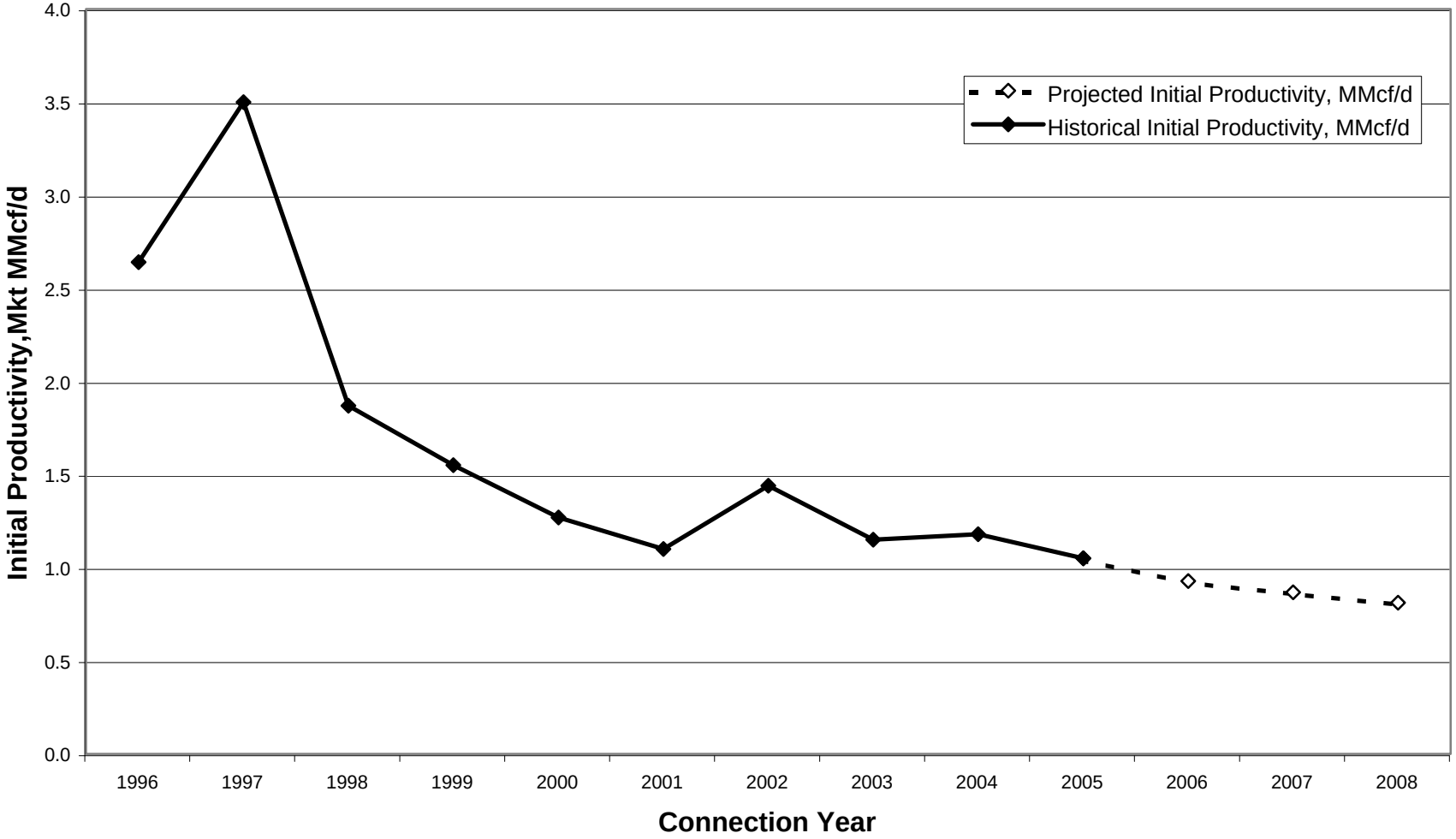


Appendix B.3.i- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: B.C.- Fort Nelson

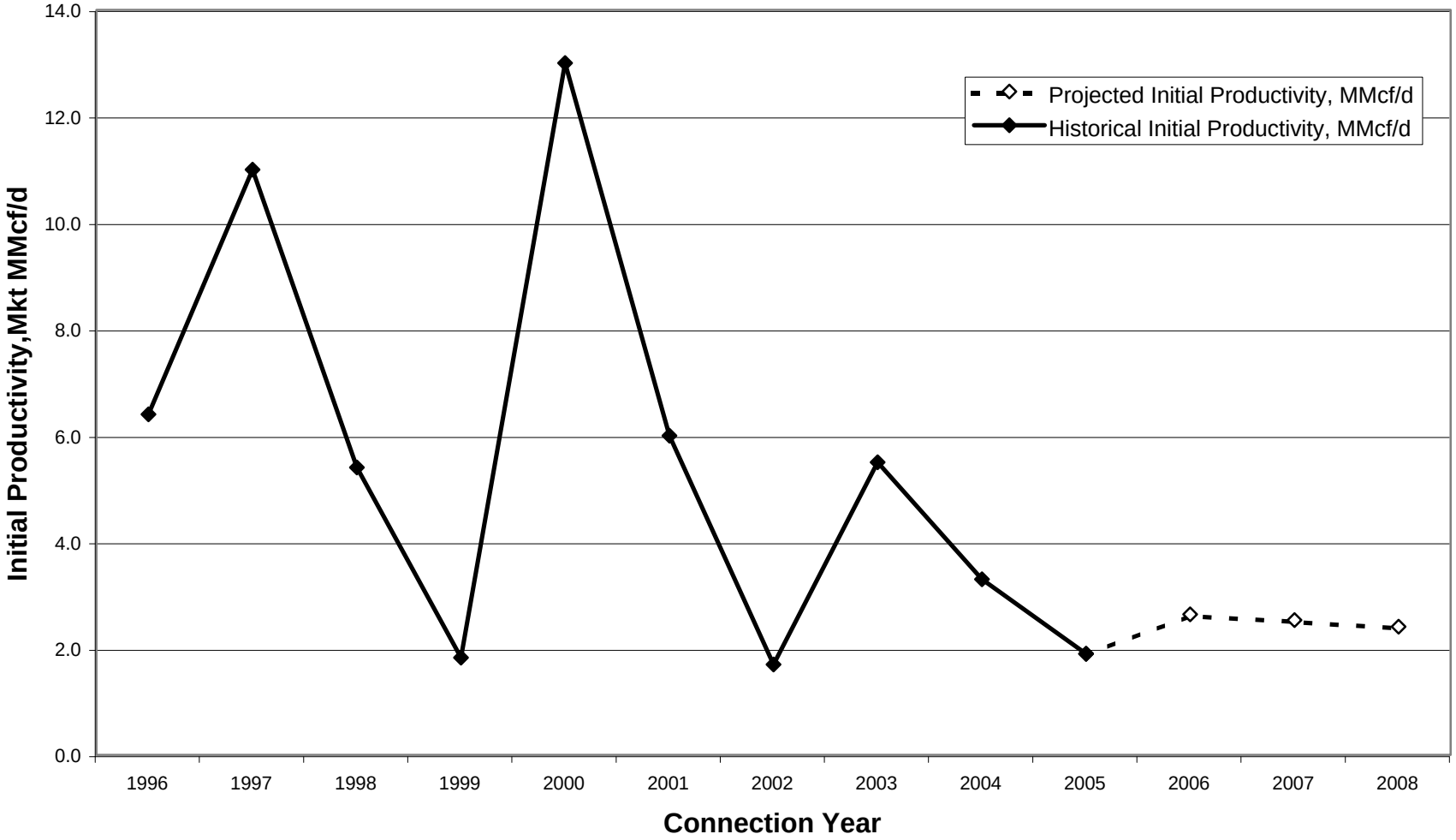


Appendix B.3.j- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: B.C.- Foothills

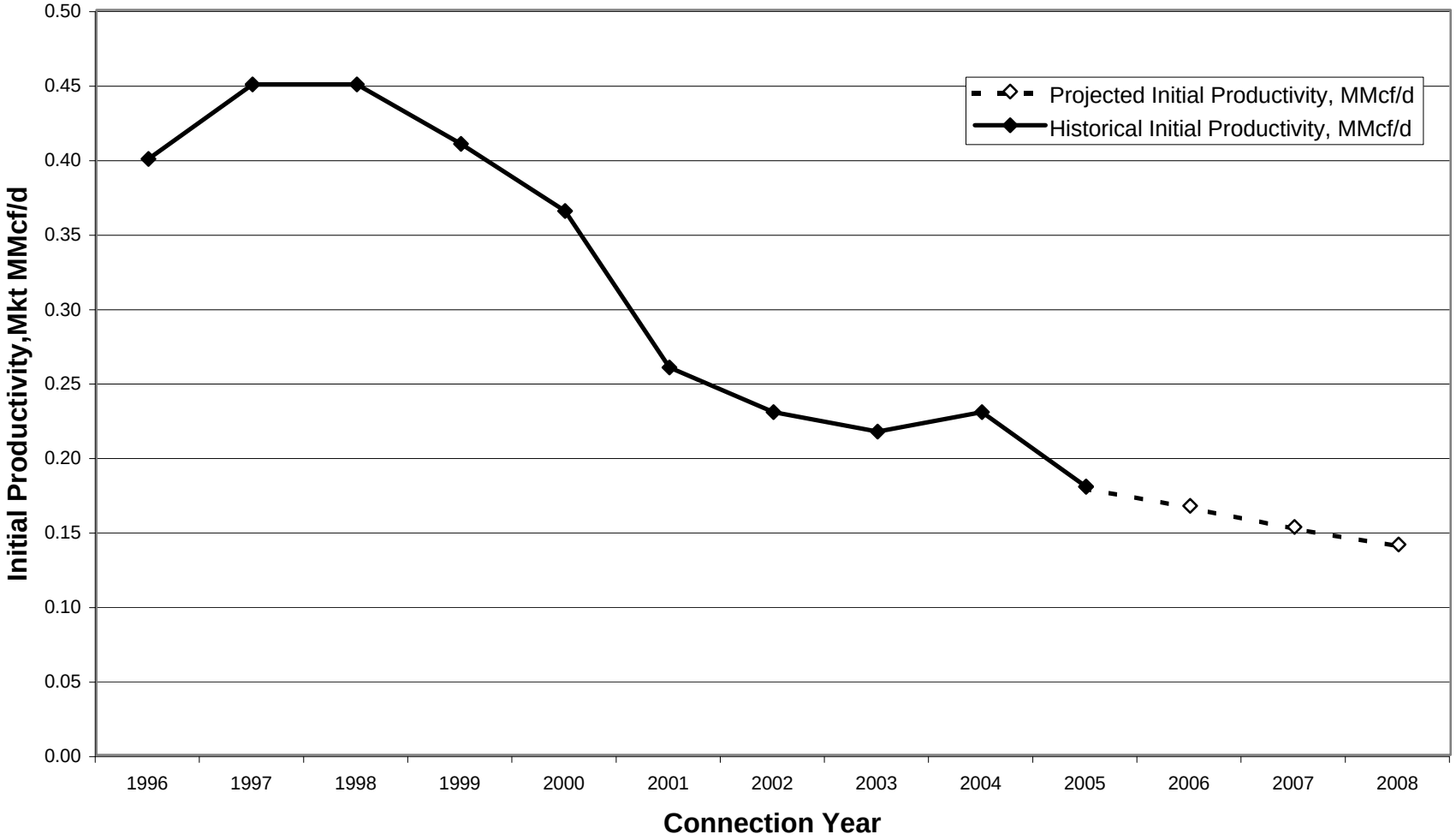


Appendix B.3.k- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Saskatchewan- Central

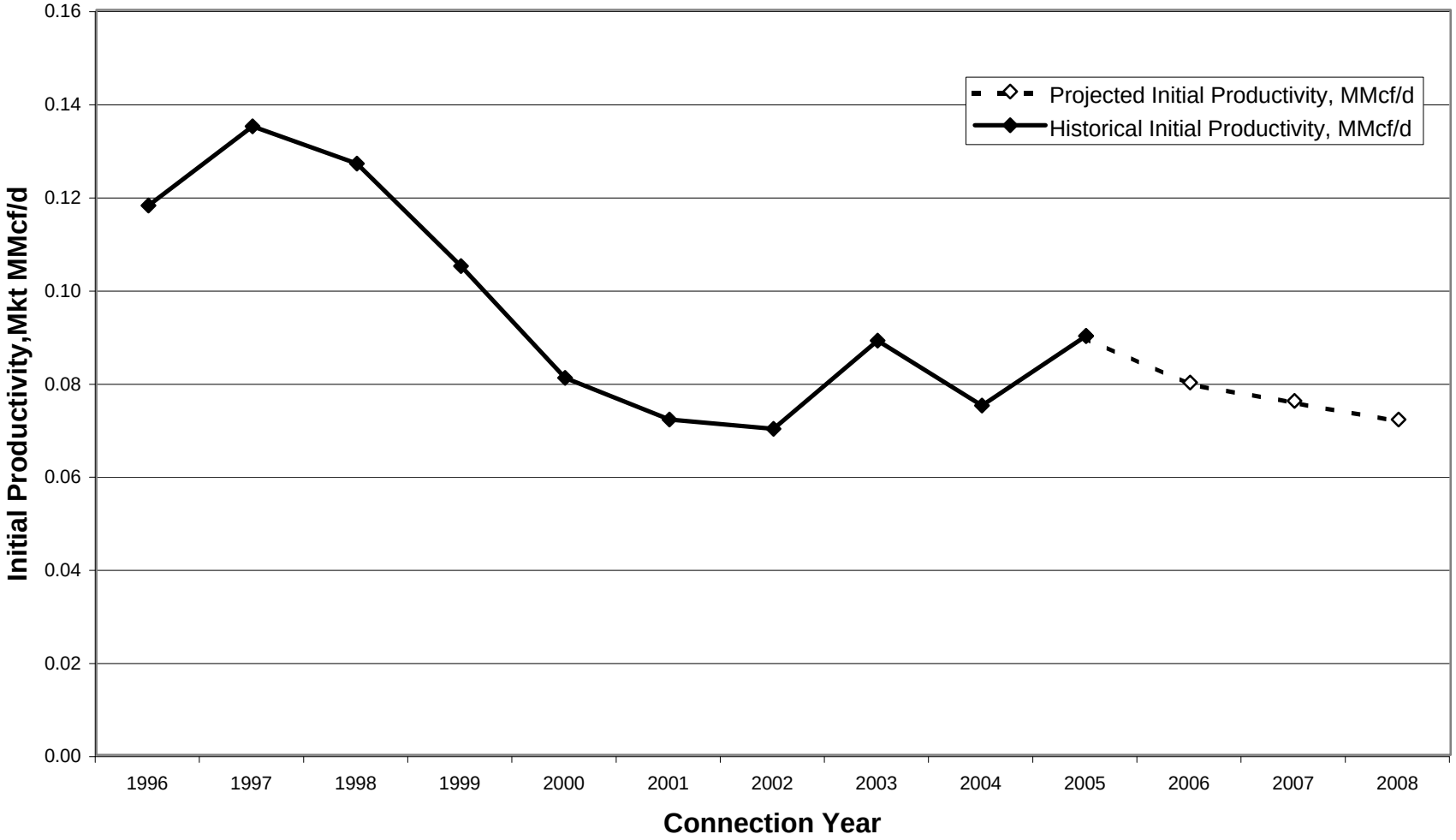


Appendix B.3.l- 2006 Short-term Gas Deliverability EMA

Projection of Initial Productivity for Average Connection

Conventional Gas

Area: Saskatchewan- Southwest



Appendix B.4

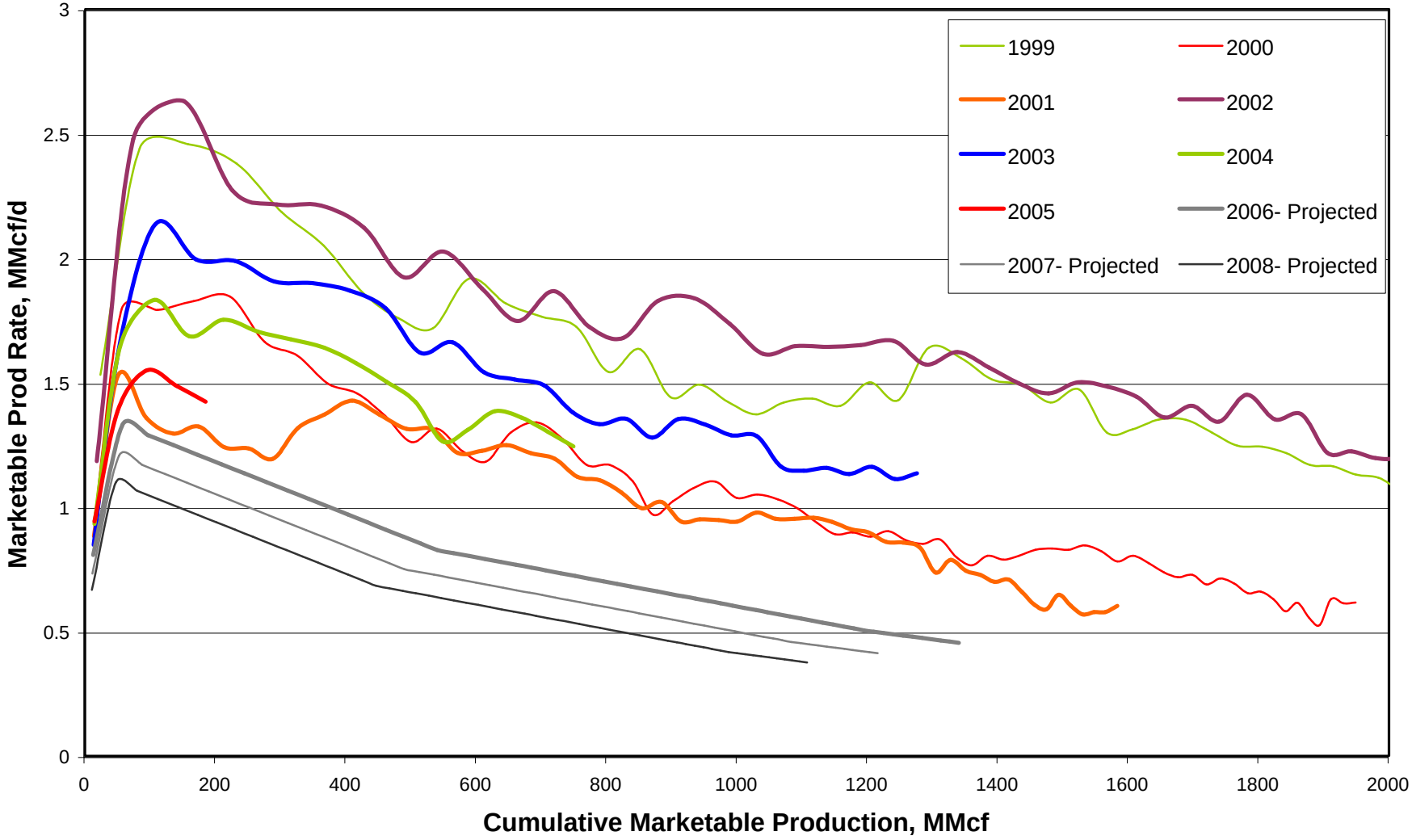
Performance Charts (Rate vs Cumulative Production) - Historic and Projected Average Gas Connections in each Study Area

This Appendix B.4 provides charts of actual historic performance of average gas connections in each Study Area. The charts also depict the performance curves expected for future average gas connections based on the parameters projected by the NEB for gas connections in 2006 – 2008.

Appendix B.4.a - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

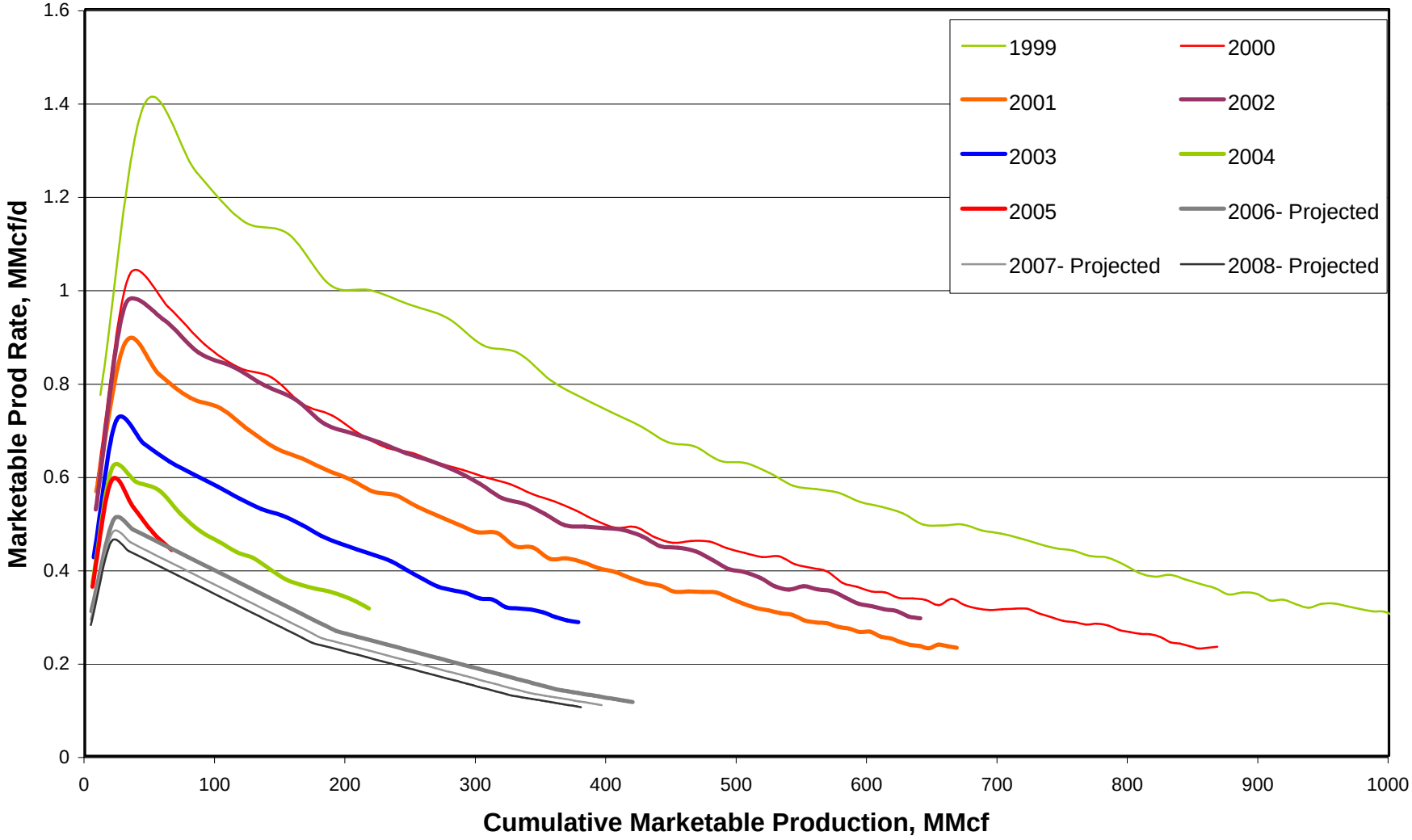
Area: Alberta- Foothills



Appendix B.4.b - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

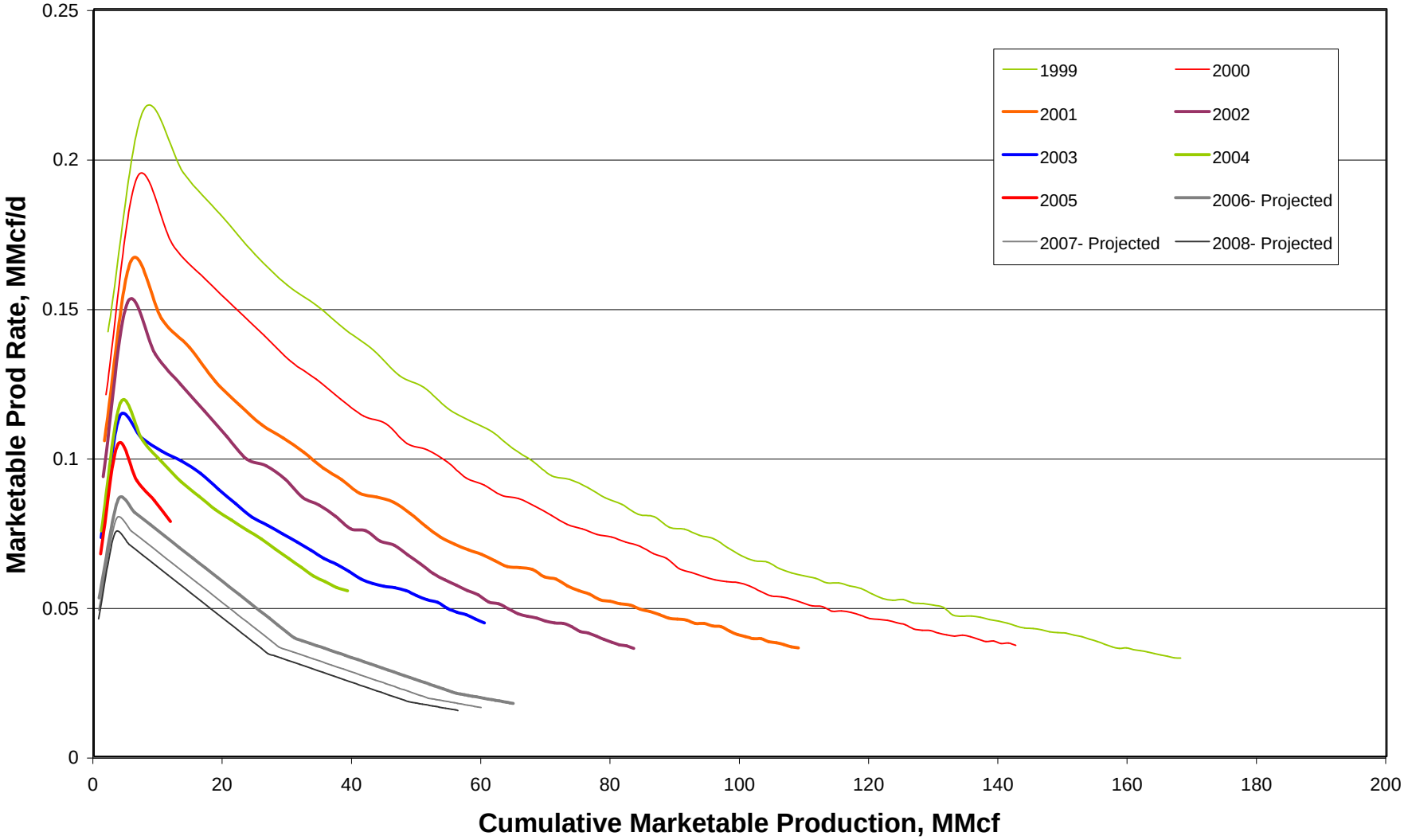
Area: Alberta- Foothills Front



Appendix B.4.c - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

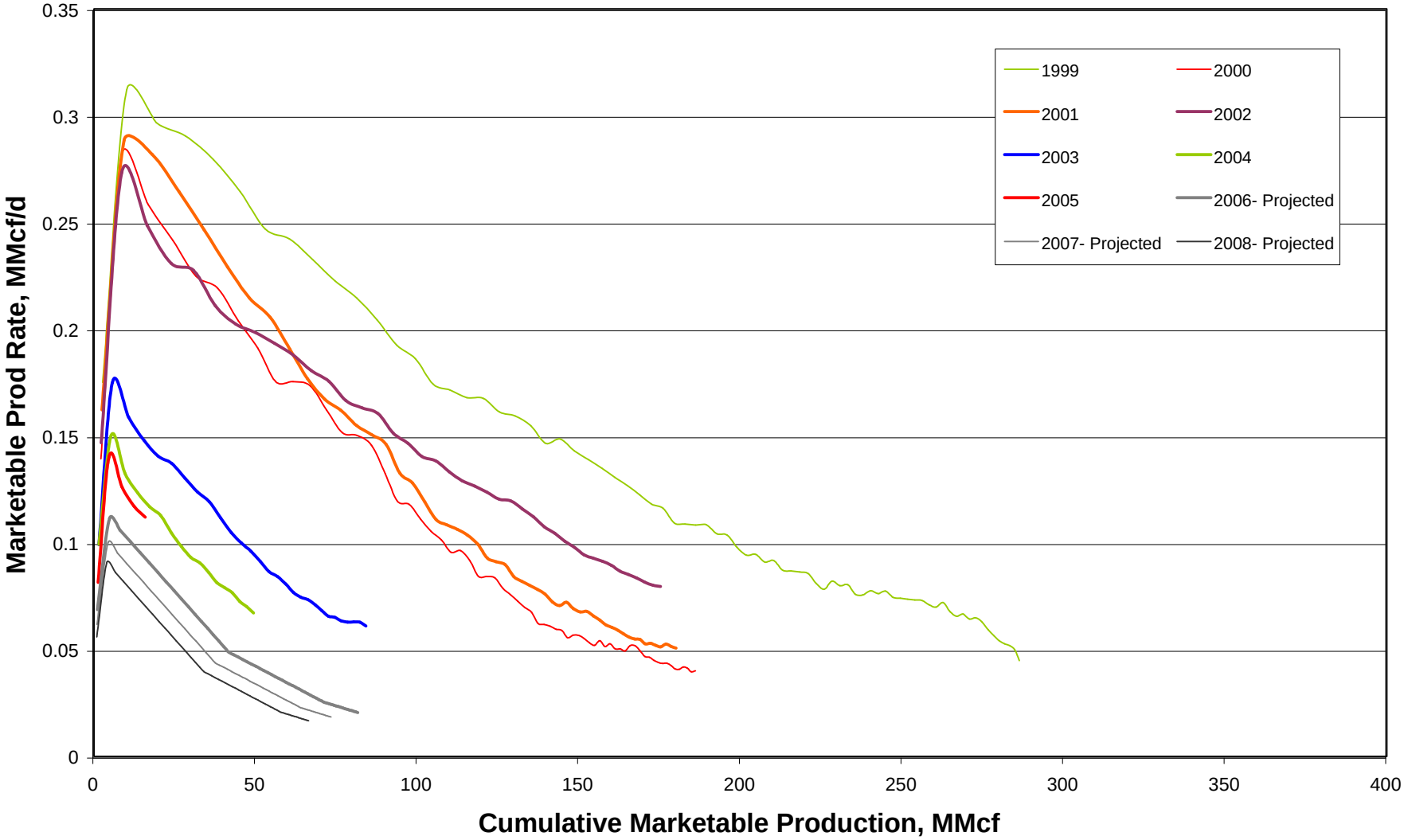
Area: Alberta- Southeast



Appendix B.4.d - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

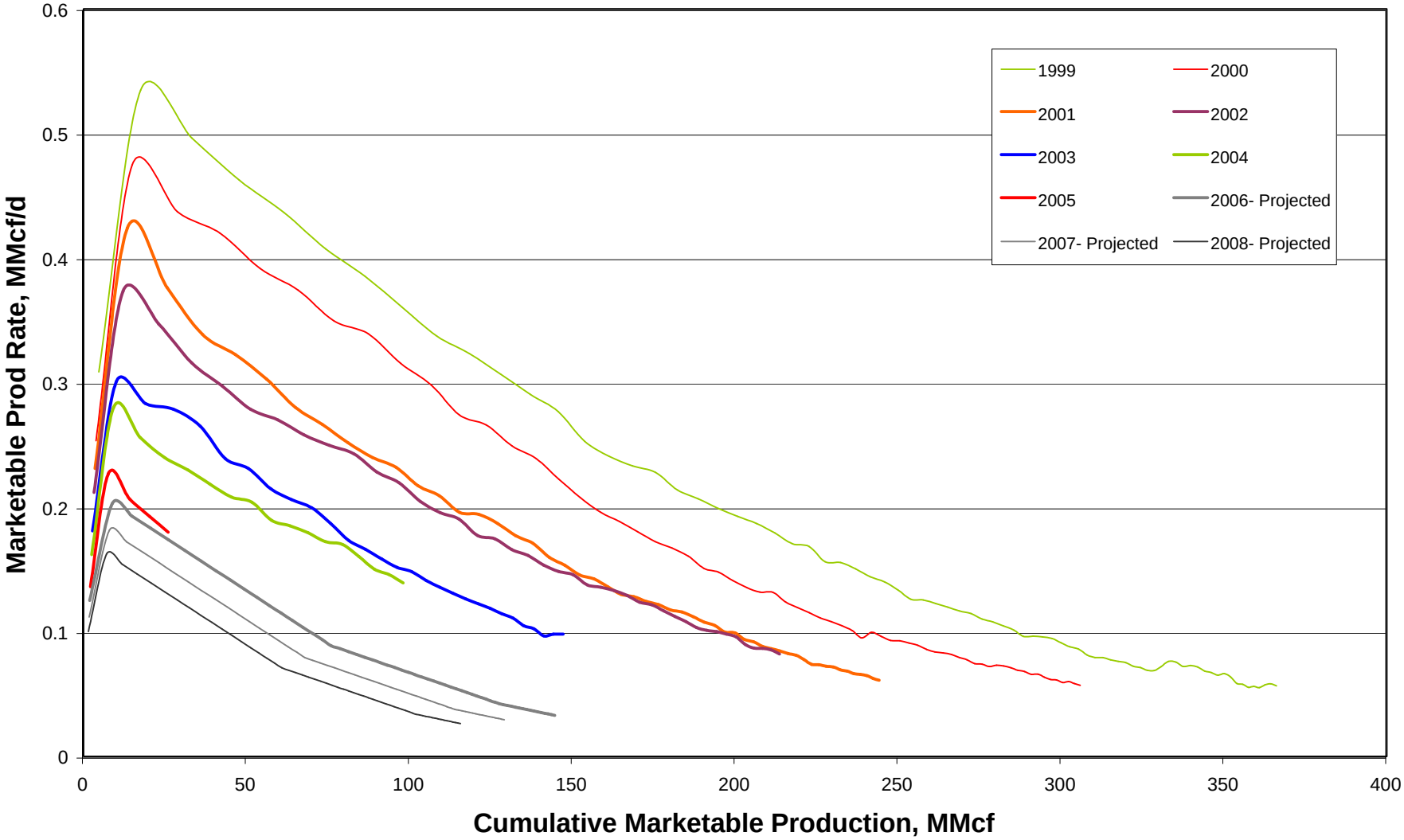
Area: Alberta- East Central



Appendix B.4.e - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

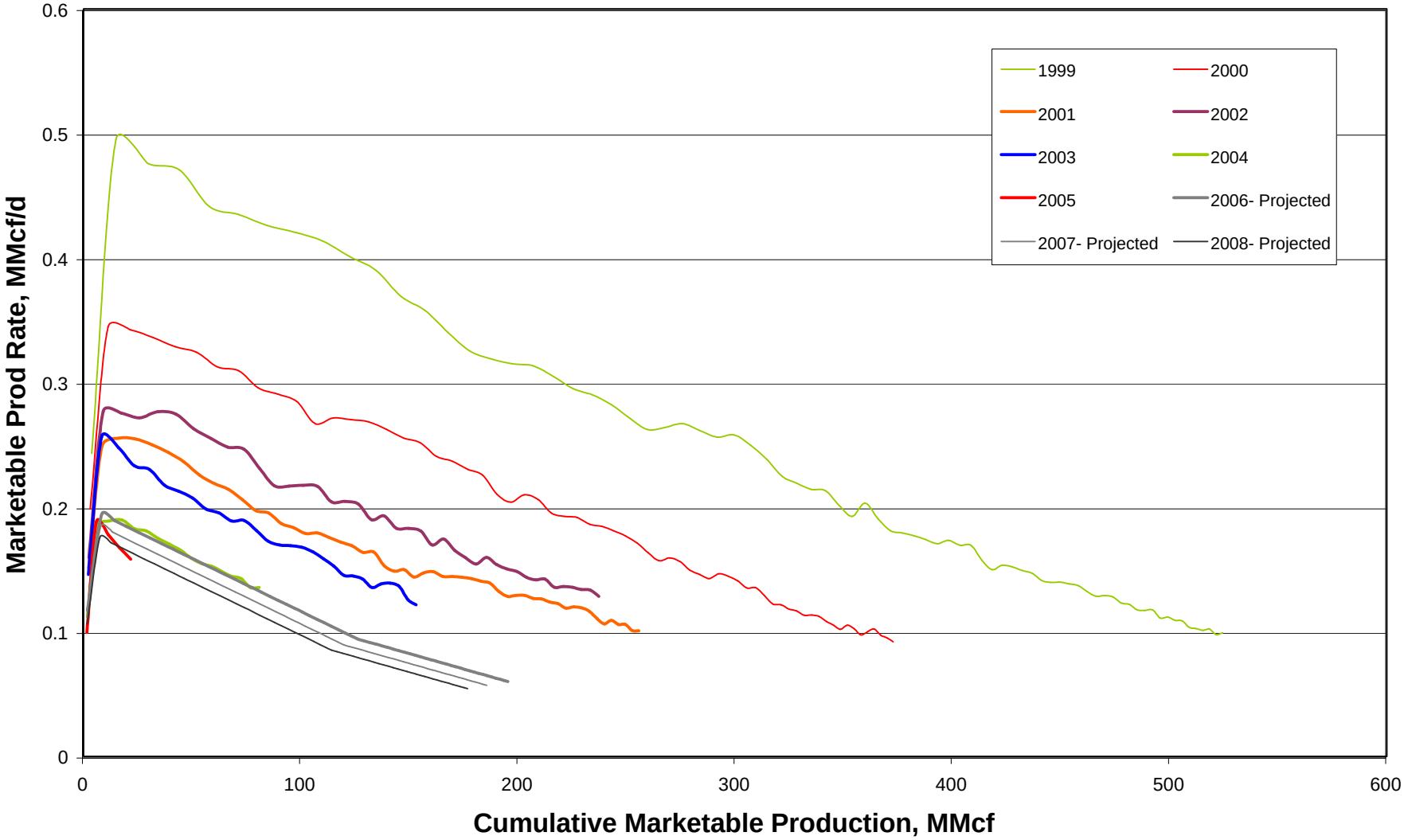
Area: Alberta- Central



Appendix B.4.f - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

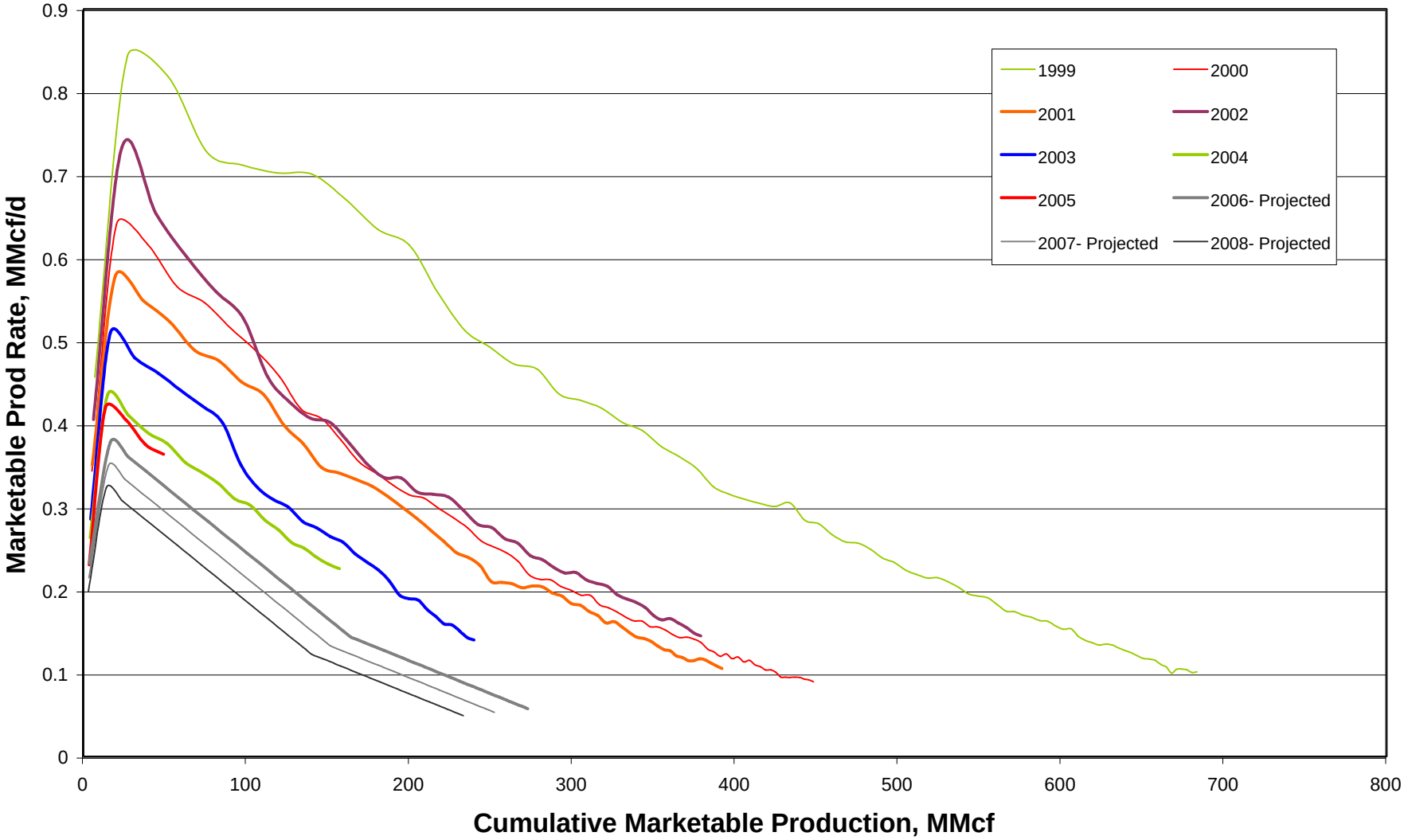
Area: Alberta- Northeast



Appendix B.4.g - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

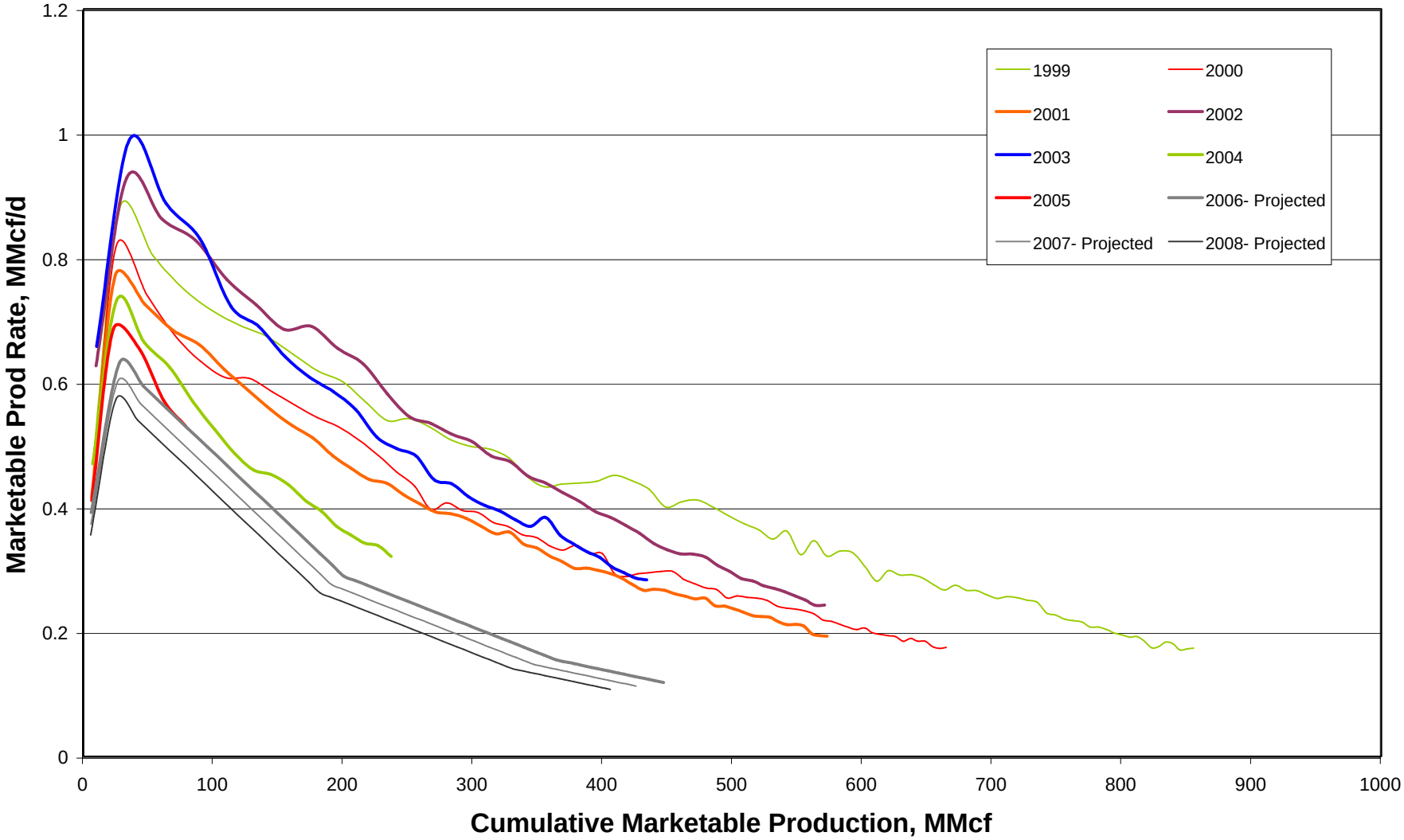
Area: Alberta- Northwest



Appendix B.4.h - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

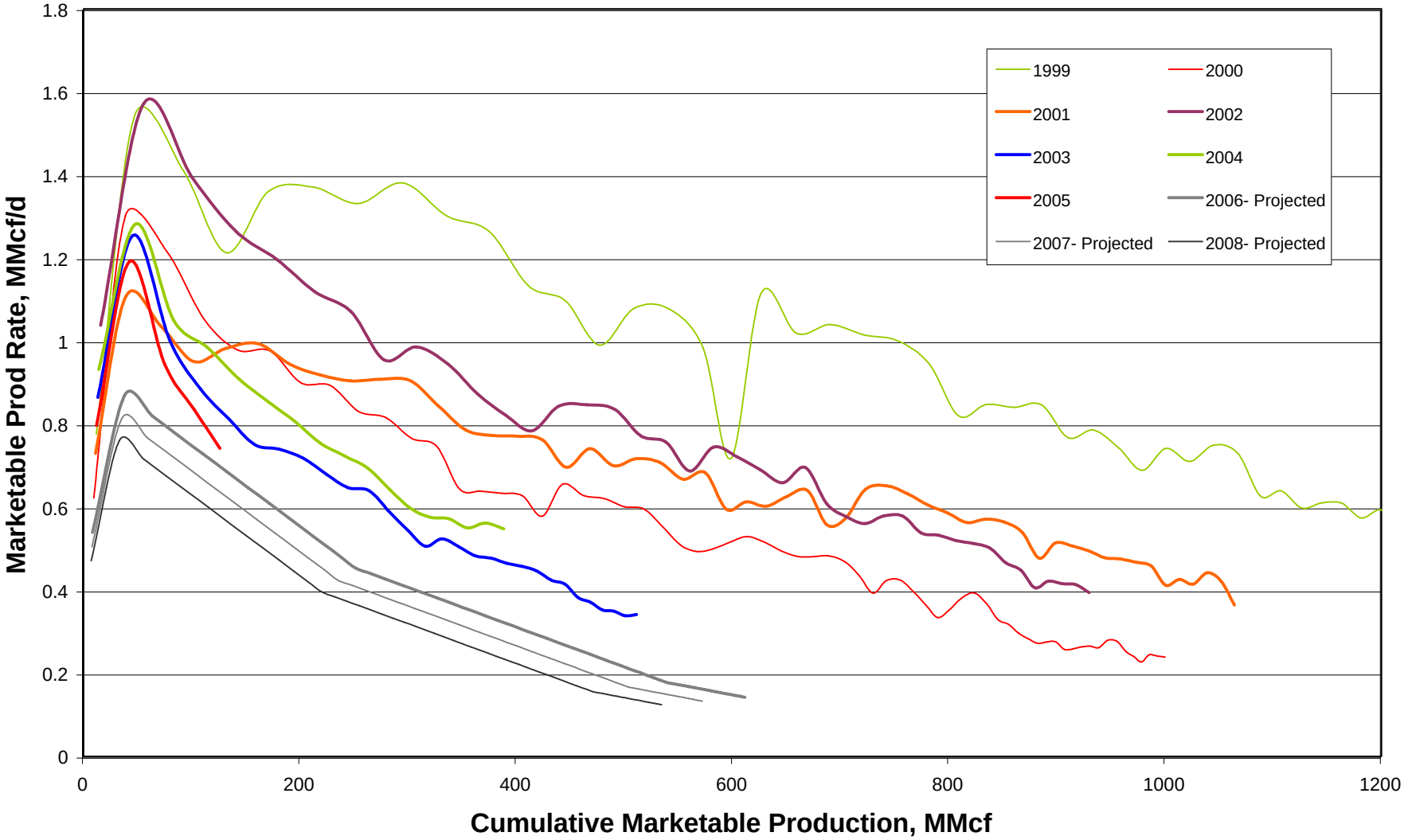
Area: B.C.- Fort St. John



Appendix B.4.i - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

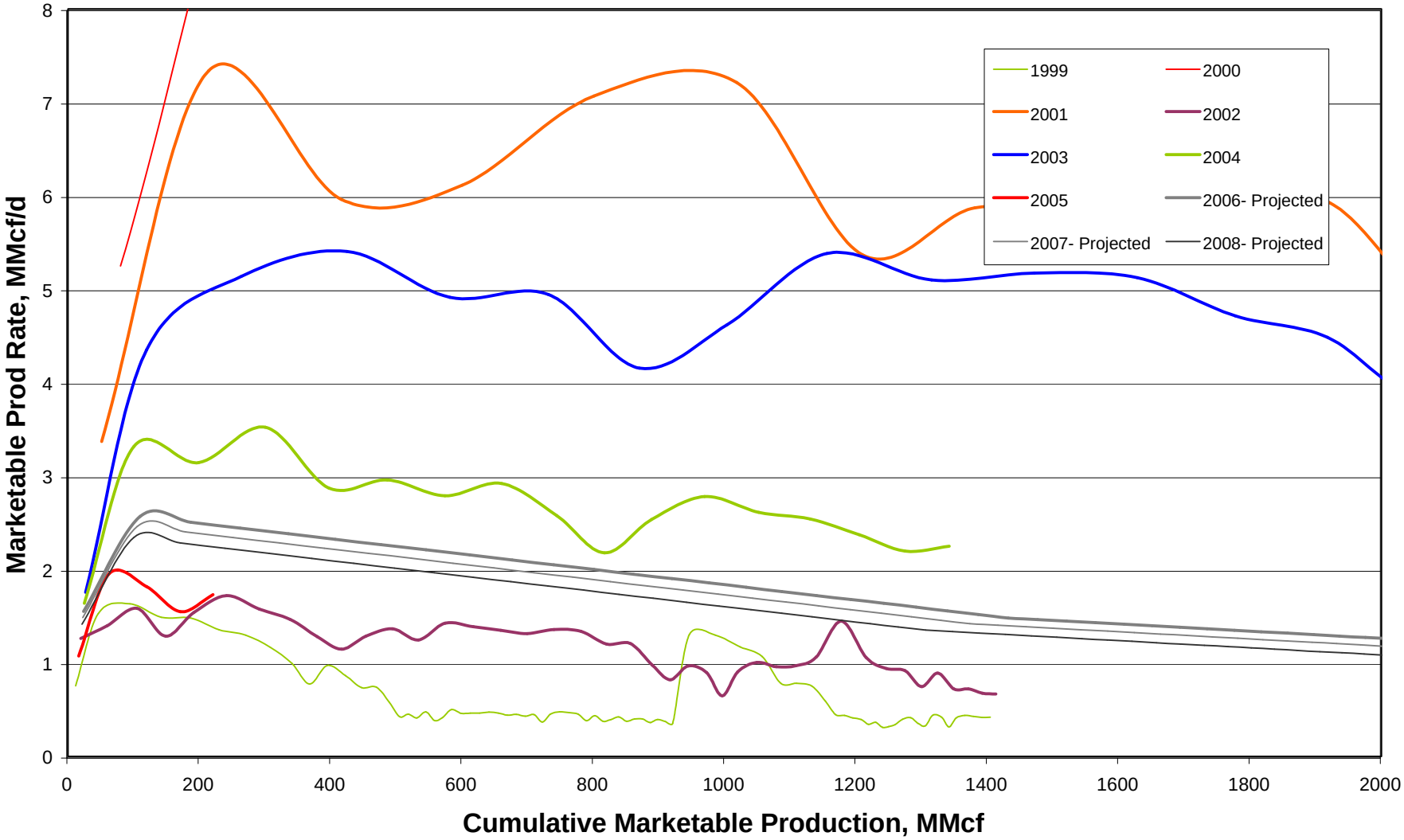
Area: B.C.- Fort Nelson



Appendix B.4.j - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

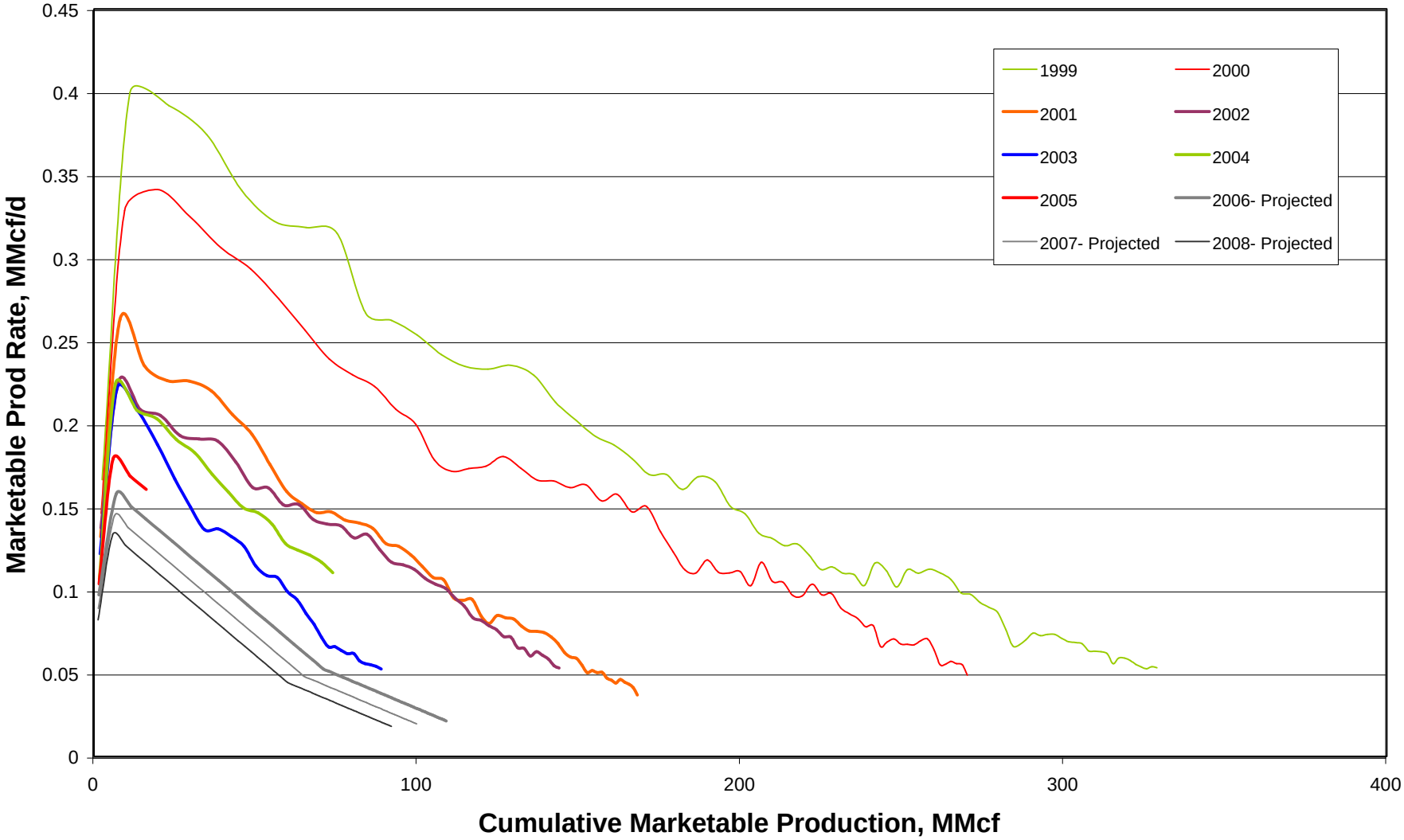
Area: B.C.- Foothills



Appendix B.4.k - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

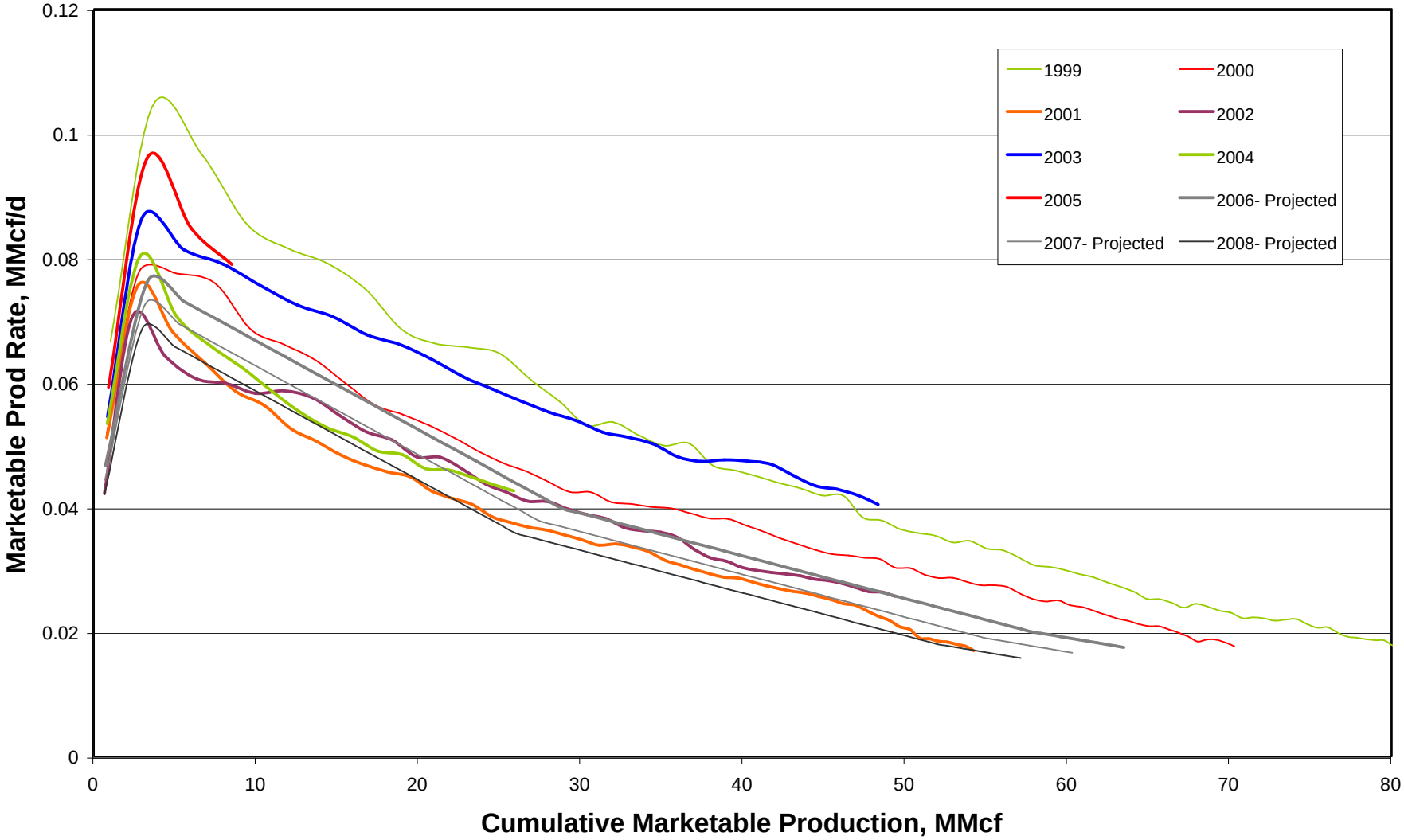
Area: Saskatchewan- Central



Appendix B.4.I - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Conventional Gas Connections

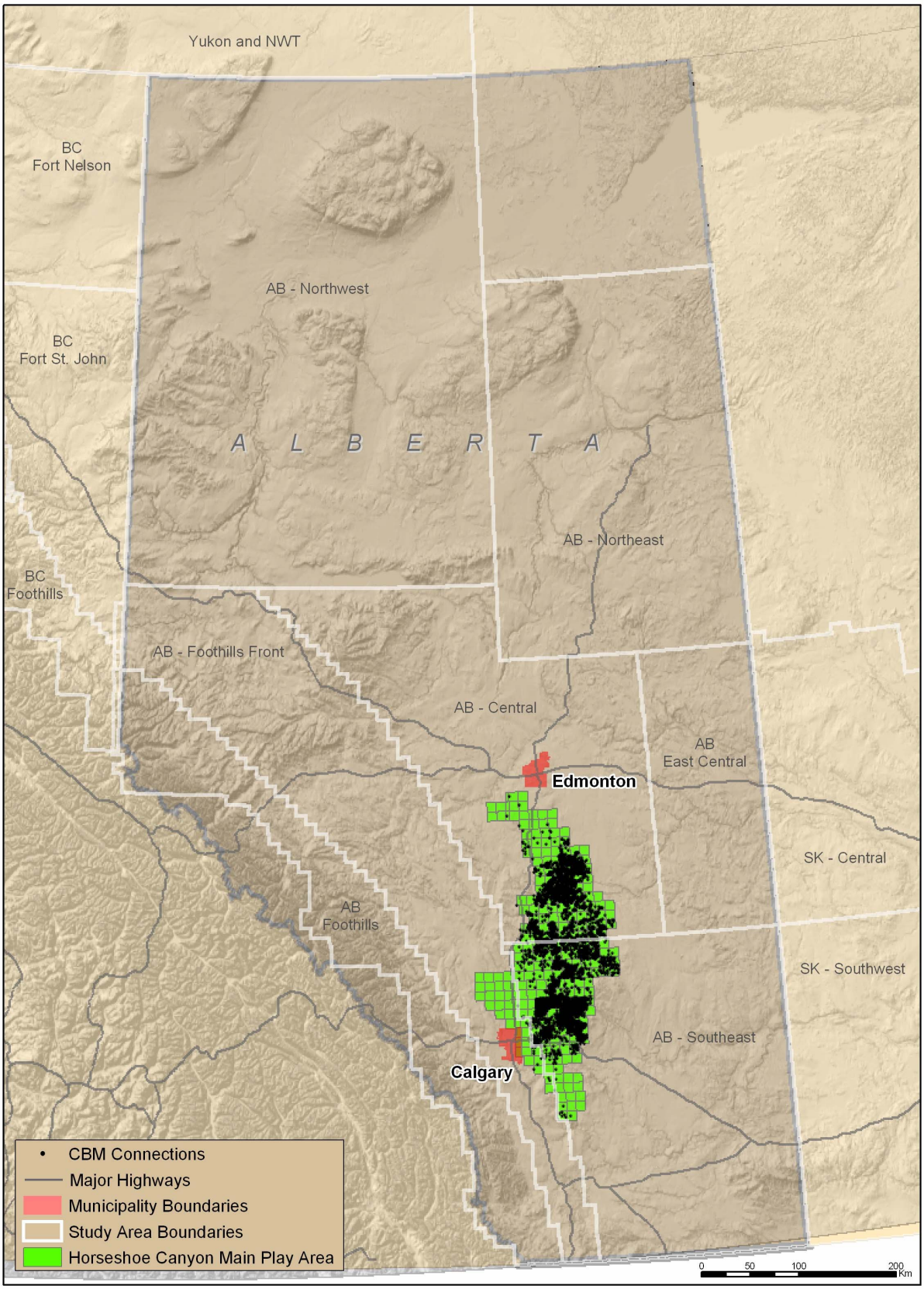
Area: Saskatchewan- Southwest



Appendix C.1

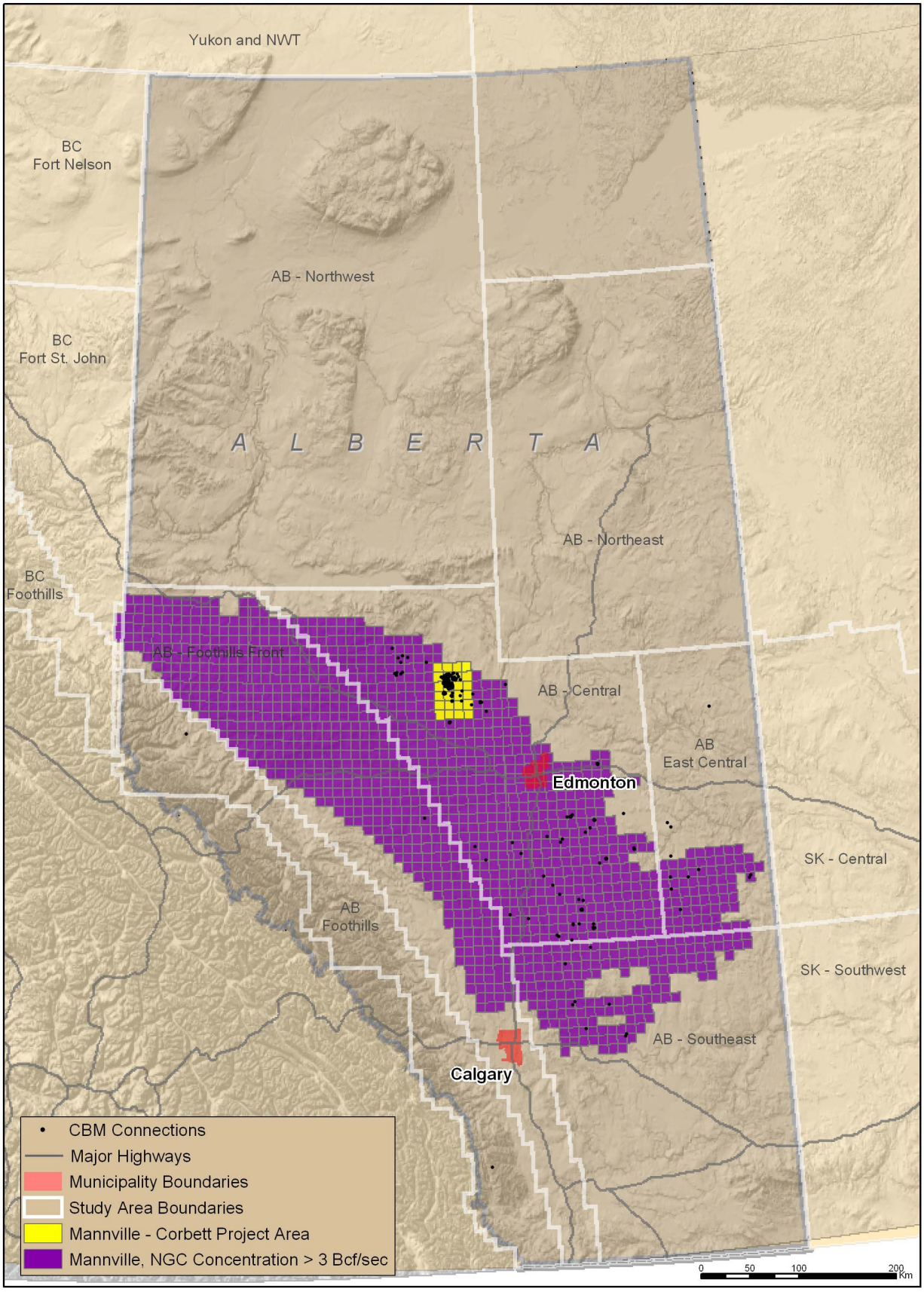
Maps Relating to CBM Resource Groupings

Appendix C.1.a- Horseshoe Canyon Main Play Area and Development



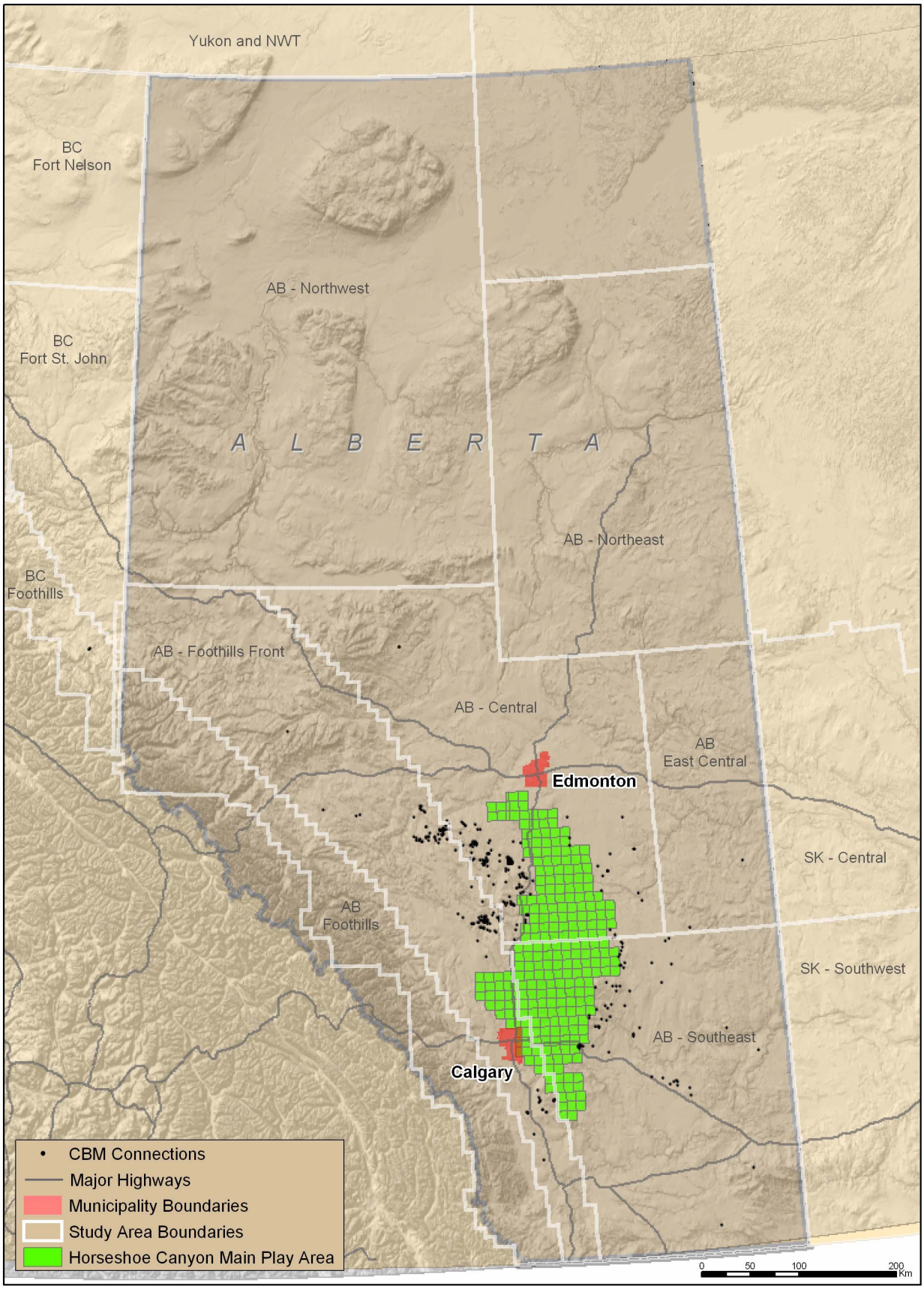
Notes: Area shown as **Horseshoe Canyon Main Play Area** approximately covering the areas of the Horseshoe Canyon Coal zone where gas concentration > 2 Bcf per section as illustrated in "U2 Figure 27 - Gas Concentration (Bcf/Section) within the Horseshoe Canyon Coal Zone" from report Natural Gas Potential in Canada 2005- Volume 4, published by the Canadian Gas Potential Committee.

Appendix C.1.b- Mannville CBM Resources and Development



Notes: Area shown as **Mannville, CBM Concentration > 3 Bcf/section** approximately covers the area so described in "U.2 Figure 7 - Gas Concentration (Bcf/Section) Within the Mannville Coal Zone" from report *Natural Gas Potential in Canada 2005- Volume 4*, published by the Canadian Gas Potential Committee.
Mannville - Corbett Project Area, shown above is as described in presentation titled "The Corbett CBM Field: An Emerging Giant Gas Field" in the 2005 Annual CSUG Conference, November 2005.

Appendix C.1.c- Other CBM Development



Notes: Area shown as **Horseshoe Canyon Main Play Area** approximately covers the areas of the Horseshoe Canyon Coal zone where gas concentration > 2 Bcf per section as illustrated in "U2 Figure 27 - Gas Concentration (Bcf/Section) within the Horseshoe Canyon Coal Zone" from report Natural Gas Potential in Canada 2005- Volume 4, published by the Canadian Gas Potential Committee.

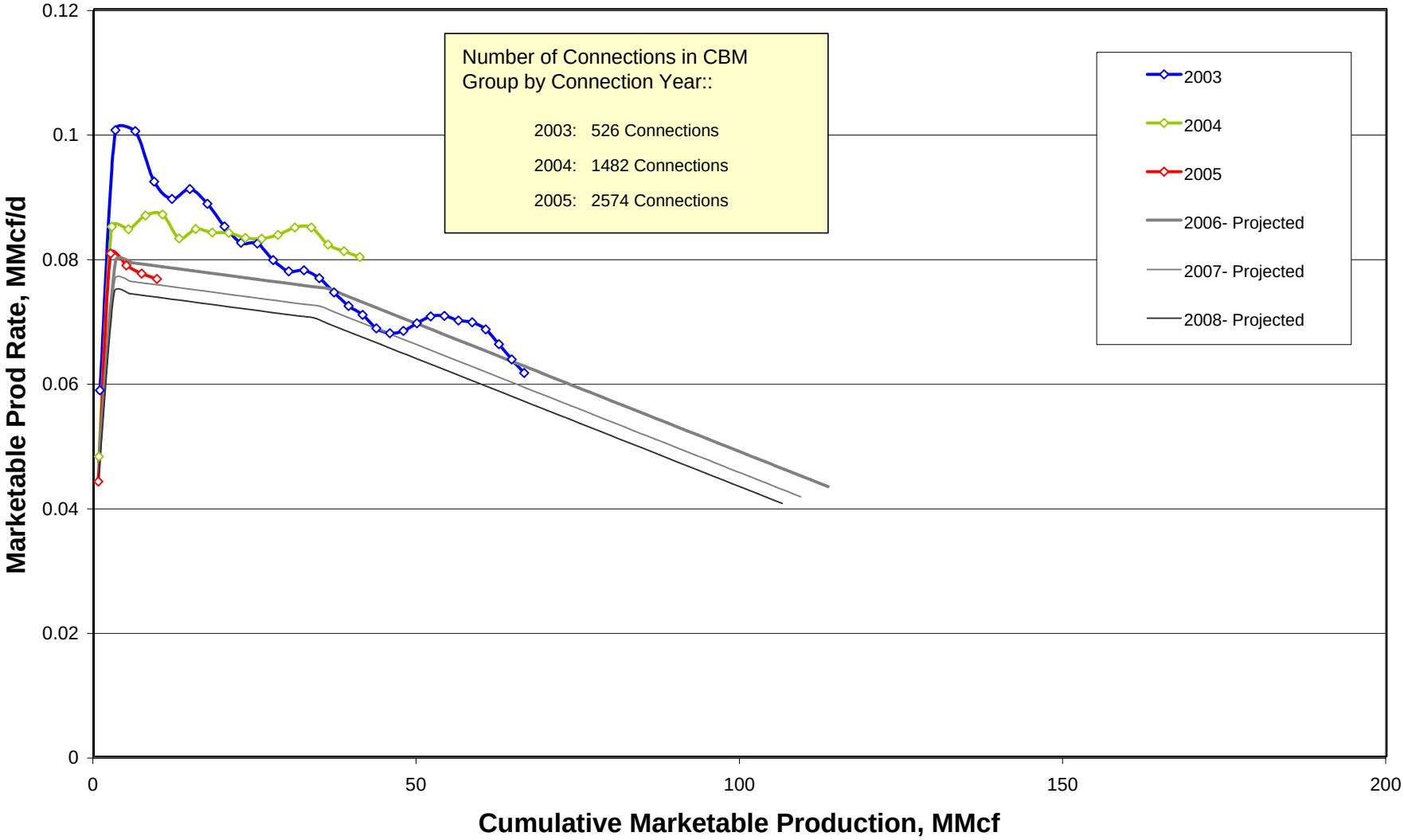
Appendix C.2

CBM Average Connection Performance Charts- Historical and Projected

Appendix C.2.a - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Unconventional Gas - CBM

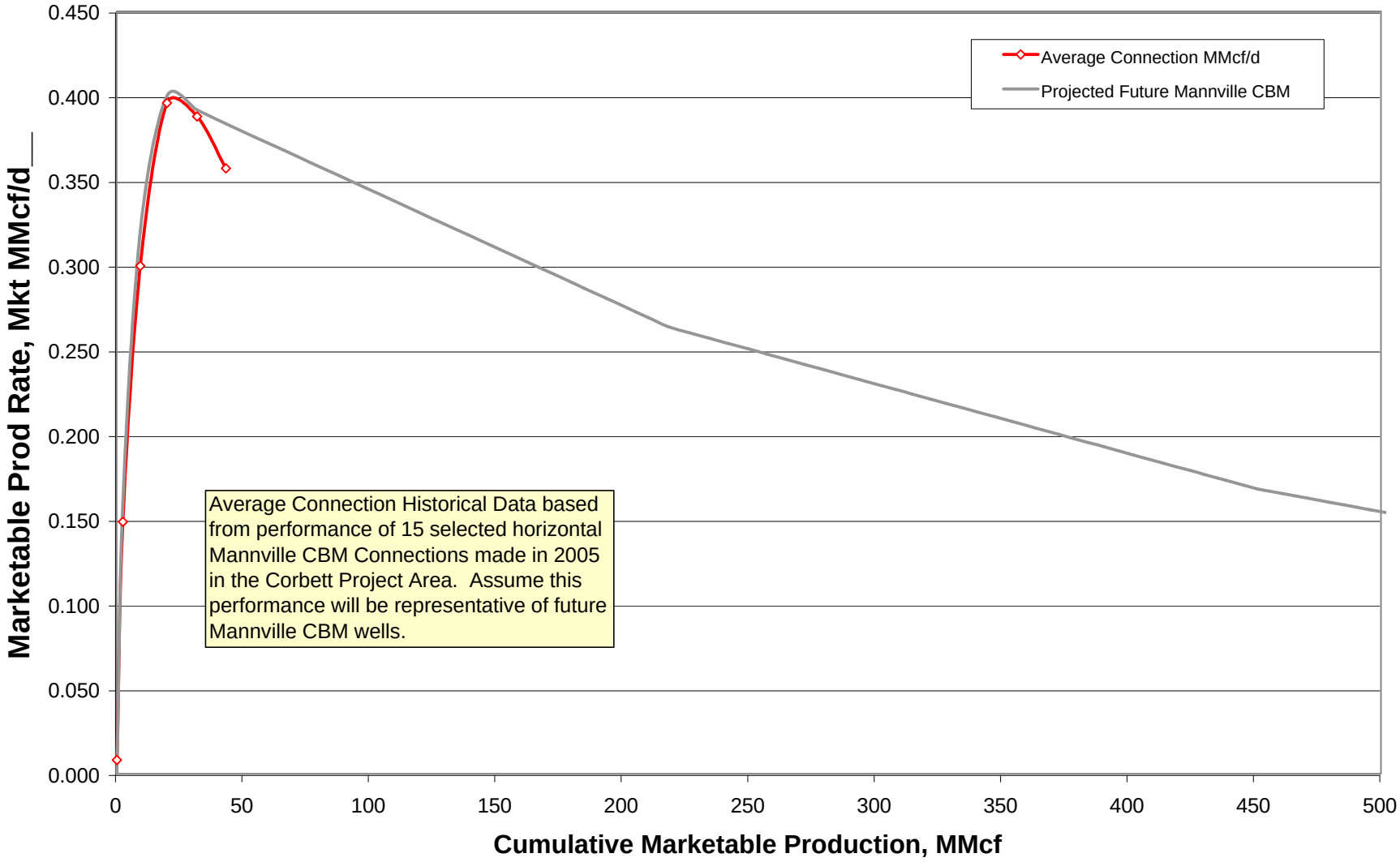
CBM Group: Horseshoe Canyon Main Play



Appendix C.2.b - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Unconventional Gas - CBM

CBM Group: Mannville CBM



Appendix C.2.c - 2006 Short-term Gas Deliverability EMA, Average Connection Performance Trends

Unconventional Gas - CBM

CBM Group: Other CBM