

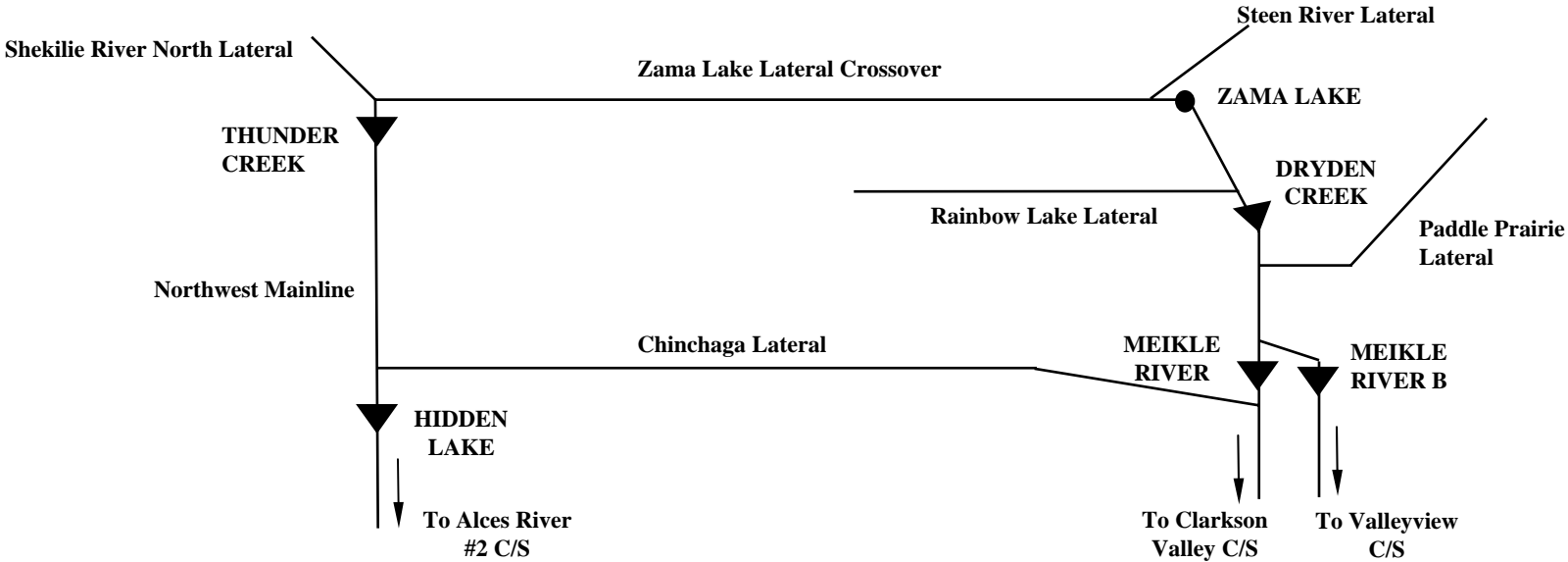
APPENDIX 5

FLOW SCHEMATICS

Flow schematics for each of the design areas are presented for each applicable season and Gas Year.

The flow schematics may differ from the design flow requirements shown in Appendix 4. This is because the detailed flow schematic information is taken directly from the hydraulic simulations whereas design flow requirements are estimated for the entire design area.

2007/08 GAS YEAR UPPER PEACE RIVER DESIGN SUB AREA WINTER DESIGN



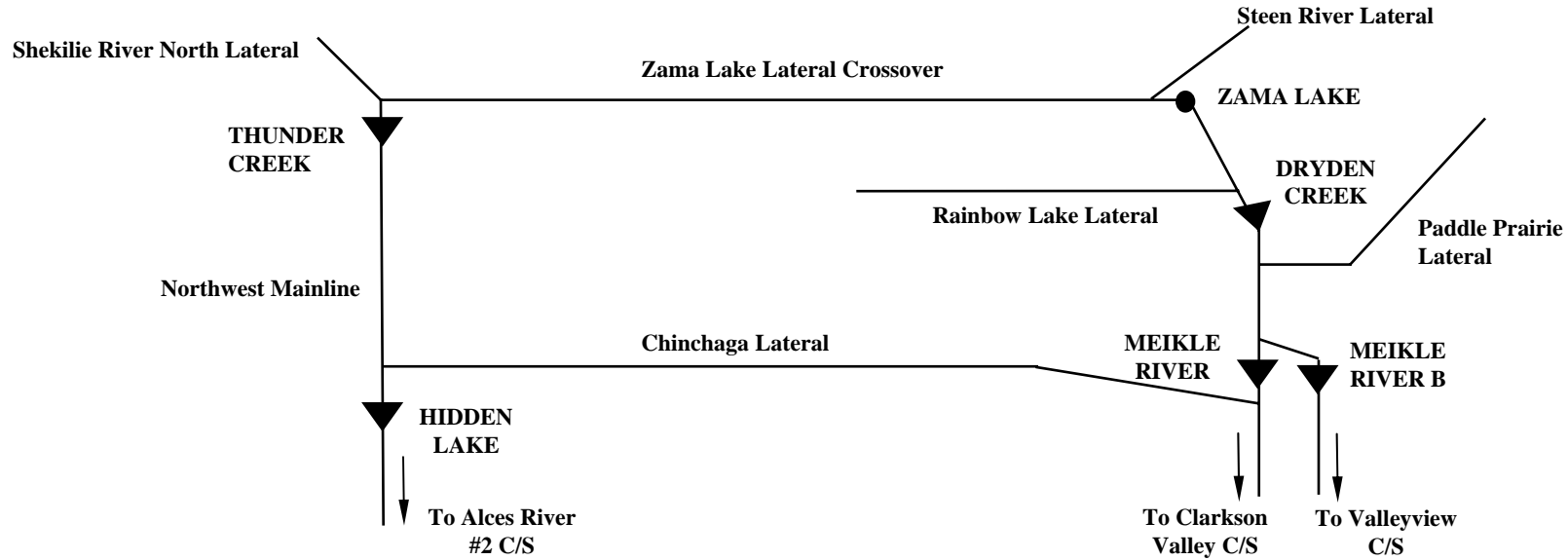
LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)

- NOTES:
- NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

COMPRESSOR STATION SUMMARY

	THUNDER CREEK	HIDDEN LAKE	DRYDEN CREEK	MEIKLE RIVER	MEIKLE RIVER B
P_{sct} (kPa _g)	8124	7476	5176	4515	4515
P_{dis} (kPa _g)	8123	7475	5655	5650	5428
Flow (10 ⁶ m ³ /d @ STP)	5.2	13.5	4.4	5.4	0
Fuel (10 ³ m ³ /d @ STP)	0	0	6	21	0
Power Avail (MW)	2.8	9.3	3.4	6.5	3.3
Power Req'd (MW)	0.0	0.0	0.6	1.8	0.0
Compression Ratio	N/A	N/A	1.09	1.25	N/A
T_{sct} (°C)	4.7	4.4	3.1	2.3	4.0
T_{dis} (°C)	4.7	4.4	11.2	22.0	4.0
T_{amb} (°C)	-1.0	1.0	0.0	0.0	0.0

**2007/08 GAS YEAR
UPPER PEACE RIVER DESIGN SUB AREA
SUMMER DESIGN**



LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)

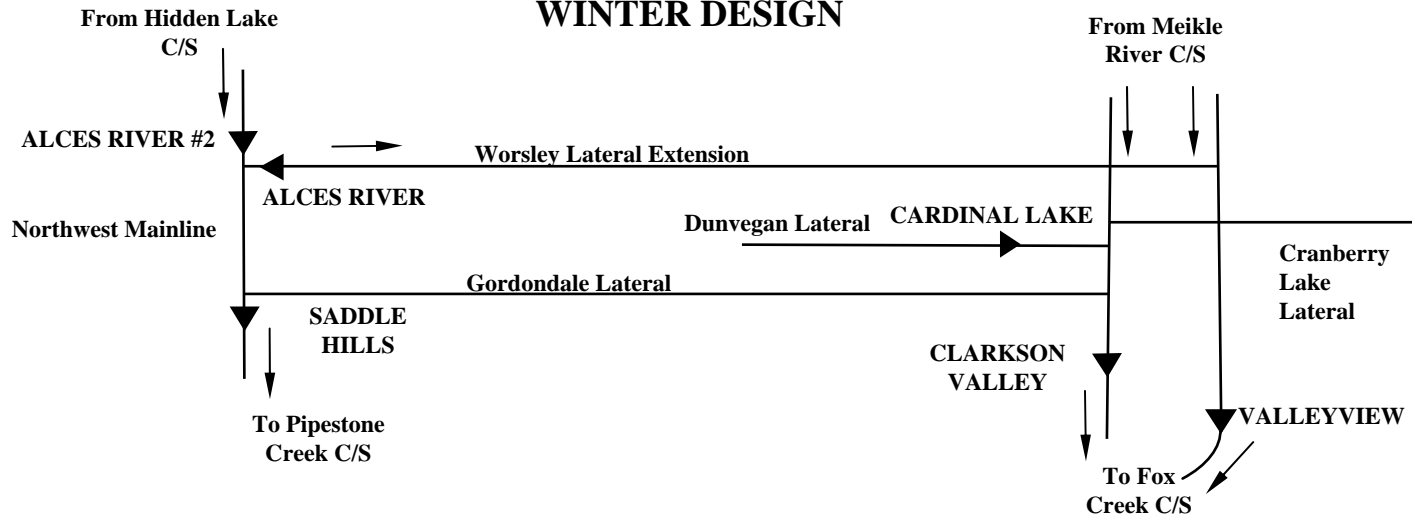
NOTES:

- NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
- STP IS 101.325 kPa AND 15° C
- POWER IS AT SITE CONDITIONS
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

COMPRESSOR STATION SUMMARY

	THUNDER CREEK	HIDDEN LAKE	DRYDEN CREEK	MEIKLE RIVER	MEIKLE RIVER B
P_{sct} (kPa _g)	8031	7260	5076	4214	4214
P_{dis} (kPa _g)	8030	7259	5655	5650	5364
Flow (10 ⁶ m ³ /d @ STP)	5.8	14.9	4.8	5.9	0
Fuel (10 ³ m ³ /d @ STP)	0	0	8	29	0
Power Avail (MW)	2.6	8.1	3.0	5.7	2.9
Power Req'd (MW)	0.0	0.0	0.8	2.6	0.0
Compression Ratio	N/A	N/A	1.11	1.33	N/A
T_{sct} (°C)	13.3	12.8	12.7	11.7	14.0
T_{dis} (°C)	13.3	12.8	22.9	38.3	14.0
T_{amb} (°C)	19.0	19.0	19.0	19.0	19.0

**2007/08 GAS YEAR
CENTRAL PEACE RIVER DESIGN SUB AREA
WINTER DESIGN**



LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)

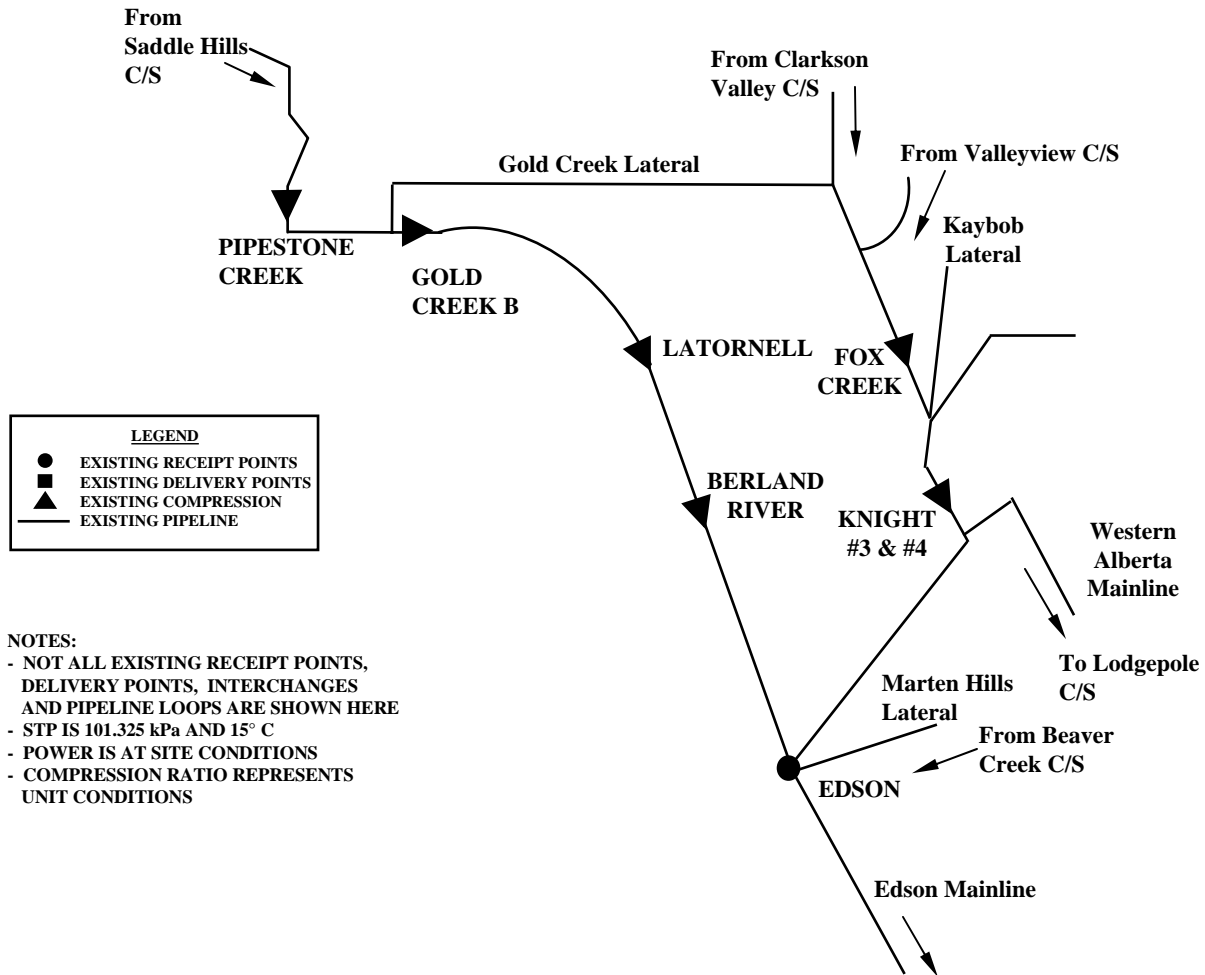
NOTES:

- NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
- STP IS 101.325 kPa AND 15° C
- POWER IS AT SITE CONDITIONS
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
- ALCES RIVER STATION IS OFF, LINE PRESSURES INDICATED

COMPRESSOR STATION SUMMARY

	ALCES RIVER	ALCES RIVER #2	SADDLE HILLS	CARDINAL LAKE	CLARKSON VALLEY	VALLEY-VIEW
P_{sct} (kPa _g)	5754	7162	6878	5483	5110	5455
P_{dis} (kPa _g)	7160	7161	6876	5482	6303	6128
Flow (10 ⁶ m ³ /d @ STP)	0	16.6	16.6	2.8	15.1	0
Fuel (10 ³ m ³ /d @ STP)	0	0	0	0	58	0
Power Avail (MW)	3.1	10.0	16.2	2.8	15.0	3.0
Power Req'd (MW)	0.0	0.0	0.0	0.0	4.3	0.0
Compression Ratio	N/A	N/A	N/A	N/A	1.23	N/A
T_{sct} (°C)	4.0	5.2	3.4	5.2	2.8	4.0
T_{dis} (°C)	4.0	5.2	3.4	5.2	20.0	4.0
T_{amb} (°C)	1.0	1.0	2.0	2.0	3.0	3.0

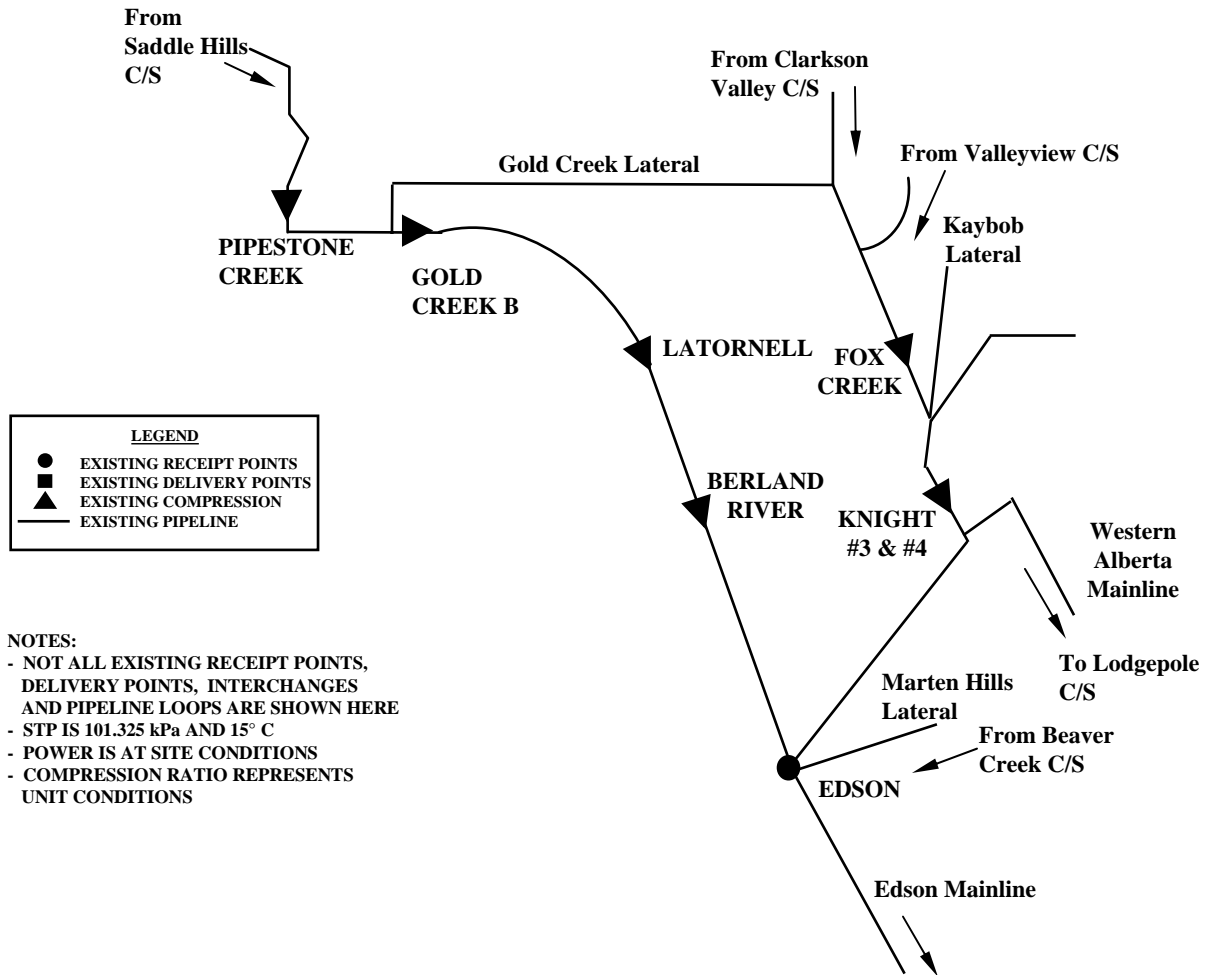
2007/08 GAS YEAR LOWER PEACE RIVER DESIGN SUB AREA WINTER DESIGN



COMPRESSOR STATION SUMMARY

	PIPESTONE CREEK	GOLD CREEK B	LATOR- NELL	BERLAND RIVER	FOX CREEK	KNIGHT #3 & #4
P_{sct} (kPa _g)	6760	6289	7444	7067	5689	5294
P_{dis} (kPa _g)	6759	8201	7442	8260	5687	5293
Flow (10 ⁶ m ³ /d @ STP)	20.2	45.3	45.5	52.5	18.4	21.2
Fuel (10 ³ m ³ /d @ STP)	0	148	0	103	0	0
Power Avail (MW)	28.0	34.1	27.6	24.0	11.5	26.1
Power Req'd (MW)	0.0	16.7	0.0	11.9	0.0	0.0
Compression Ratio	N/A	1.30	N/A	1.17	N/A	N/A
T_{sct} (°C)	4.0	6.5	17.6	11.4	5.8	2.6
T_{dis} (°C)	4.0	28.8	17.6	24.9	5.7	2.6
T_{amb} (°C)	3.0	3.0	3.0	3.0	3.0	3.0

2007/08 GAS YEAR LOWER PEACE RIVER DESIGN SUB AREA SUMMER DESIGN



COMPRESSOR STATION SUMMARY

	PIPESTONE CREEK	GOLD CREEK B	LATOR- NELL	BERLAND RIVER	FOX CREEK	KNIGHT #3 & #4
P_{set} (kPa _g)	6260	5566	7100	6589	5523	5061
P_{dis} (kPa _g)	6259	8058	7098	8268	5521	6133
Flow (10 ⁶ m ³ /d @ STP)	22.6	50.3	50.3	58.0	20.7	23.6
Fuel (10 ³ m ³ /d @ STP)	0	202	0	142	0	63
Power Avail (MW)	25.1	30.9	25.2	21.8	10.3	23.5
Power Req'd (MW)	0.0	27.4	0.0	19.9	0.0	6.4
Compression Ratio	N/A	1.44	N/A	1.25	N/A	1.21
T_{set} (°C)	13.6	14.1	31.6	22.3	16.3	12.0
T_{dis} (°C)	13.6	44.8	31.6	42.5	16.3	28.2
T_{amb} (°C)	19.0	18.0	18.0	18.0	18.0	18.0

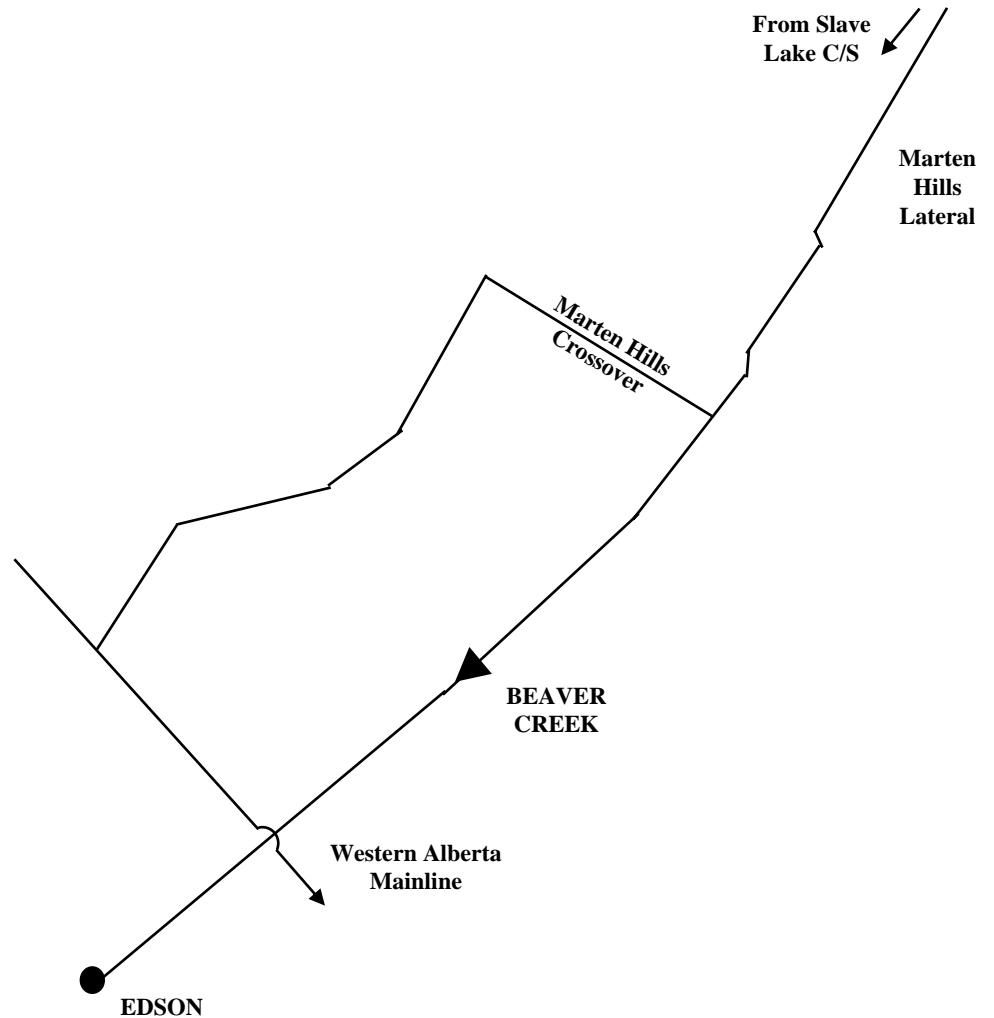
2007/08 GAS YEAR MARTEN HILLS DESIGN AREA WINTER DESIGN

COMPRESSOR STATION SUMMARY

	<u>BEAVER CREEK</u>
P_{set} (kPa _g)	6051
P_{dis} (kPa _g)	6360
Flow (10 ⁶ m ³ /d @ STP)	5.2
Fuel (10 ³ m ³ /d @ STP)	10
Power Avail (MW)	2.8
Power Req'd (MW)	0.5
Compression Ratio	1.05
T_{set} (°C)	4.7
T_{dis} (°C)	10.4
T_{amb} (°C)	3.0

<u>LEGEND</u>	
●	EXISTING RECEIPT POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS



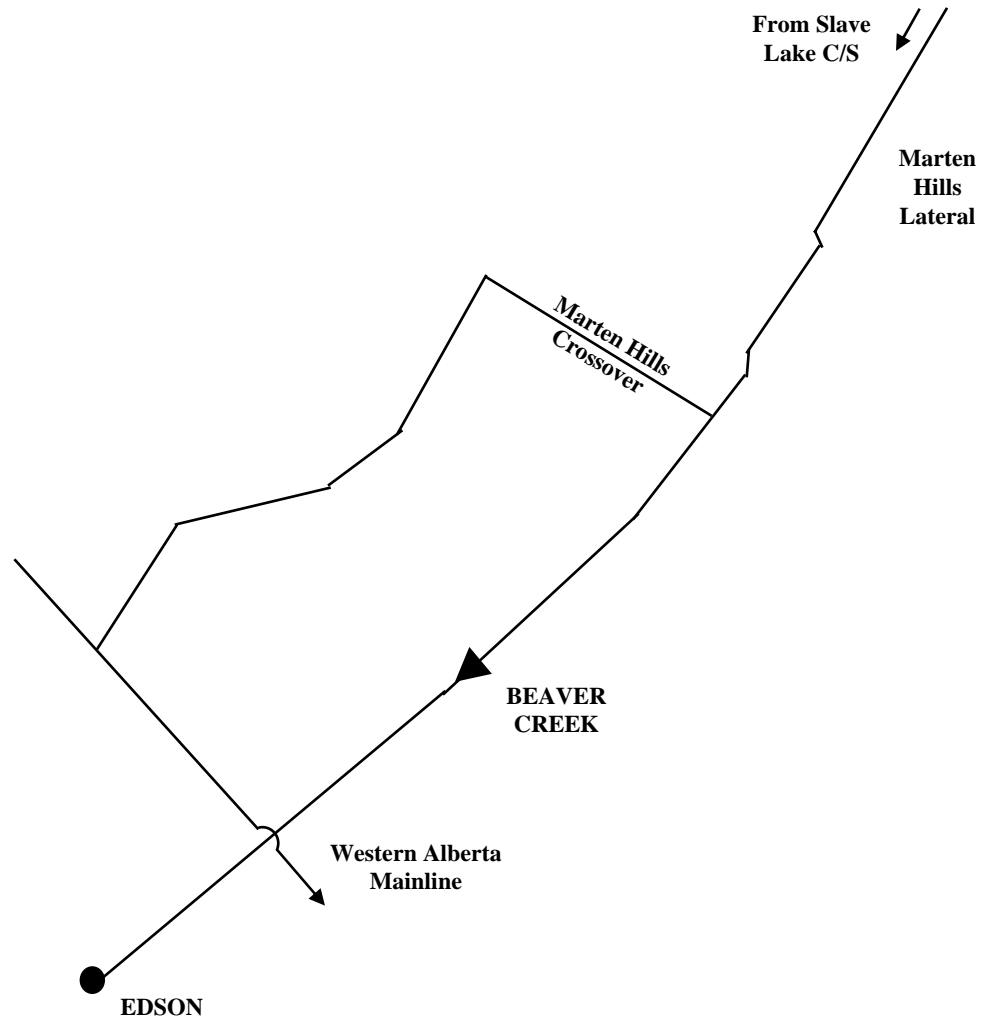
2007/08 GAS YEAR MARTEN HILLS DESIGN AREA SUMMER DESIGN

COMPRESSOR STATION SUMMARY

	BEAVER CREEK
P_{set} (kPa _g)	6015
P_{dis} (kPa _g)	7354
Flow (10 ⁶ m ³ /d @ STP)	5.8
Fuel (10 ³ m ³ /d @ STP)	24
Power Avail (MW)	2.6
Power Req'd (MW)	1.9
Compression Ratio	1.22
T_{set} (°C)	10.0
T_{dis} (°C)	29.0
T_{amb} (°C)	18.0

LEGEND	
●	EXISTING RECEIPT POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

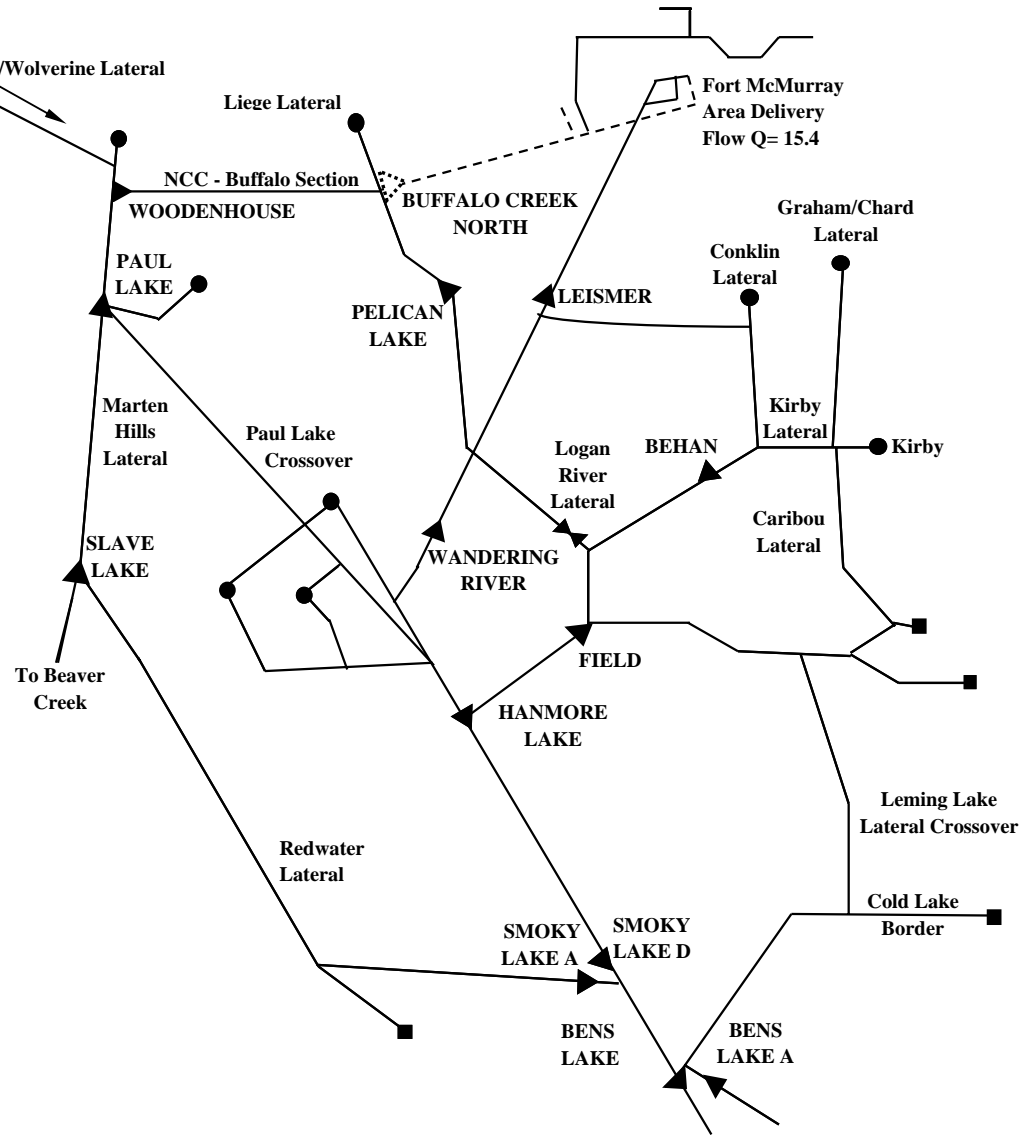


**2007/08 GAS YEAR
NORTH OF BENS LAKE DESIGN AREA
WINTER DESIGN**

COMPRESSOR STATION SUMMARY

	FIELD	HANMORE	BENS	BENS	BENS	SMOKY
	<u>LAKE</u>	<u>LAKE</u>	<u>LAKE A</u>	<u>LAKE B</u>	<u>LAKE C,D</u>	<u>LAKE D</u>
P_{set}(kPa_g)	7433	7458	6006	7501	7499	7516
P_{dis}(kPa_g)	8501	7458	6005	7501	7499	7516
Flow (10⁶m³/d @ STP)	4.1	3.9	0.8	3.0	1.5	0.3
Fuel (10³m³/d @ STP)	10	0	0	0	0	0
Power Avail (MW)	6.3	6.5	14.4	3.2	7.7	15.2
Power Required (MW)	0.8	0.0	0.0	0.0	0.0	0.0
Compression Ratio	1.14	N/A	N/A	N/A	N/A	N/A
T_{set} (°C)	4.8	4.8	5.0	5.1	5.0	5.0
T_{dis} (°C)	16.7	4.8	5.0	5.1	5.0	5.0
T_{amb} (°C)	2.0	2.0	2.0	2.0	2.0	2.0

	PELICAN	WOODEN	BUFFALO	WAND.	SLAVE
	<u>LAKE</u>	<u>HOUSE</u>	<u>NORTH</u>	<u>RIVER</u>	<u>LAKE</u>
P_{set}(kPa_g)	6557	7388	7287	7313	6857
P_{dis}(kPa_g)	8979	7387	7283	7312	6856
Flow (10⁶m³/d @ STP)	5.4	5.4	10.9	2.2	2.6
Fuel (10³m³/d @ STP)	22	0	0	0	30
Power Avail (MW)	2.9	10.6	5.0	2.9	0.9
Power Required (MW)	2.2	0.0	0.0	0.0	2.8
Compression Ratio	1.36	N/A	N/A	N/A	1.32
T_{set} (°C)	4.5	4.6	5.3	4.7	3.5
T_{dis} (°C)	30.5	4.6	5.3	4.7	35.2
T_{amb} (°C)	2.0	2.0	2.0	2.0	3.0



LEGEND

- EXISTING RECEIPT POINTS
- EXISTING DELIVERY POINTS
- ▲ EXISTING COMPRESSION
- EXISTING PIPELINE (NGTL)
- ⋈ EXISTING CONTROL VALVE
- - - OTHER PIPELINE SYSTEMS

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR COMPRESSION AT PAUL LAKE, SMOKY LAKE 'A', HANMORE LAKE 'A', AND BEHAN NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q. FLOW IS IN 10⁶ m³/d

**2007/08 GAS YEAR
NORTH OF BENS LAKE DESIGN AREA
SUMMER DESIGN WITH PROPOSED 2007/08 SUMMER FACILITIES**

COMPRESSOR STATION SUMMARY

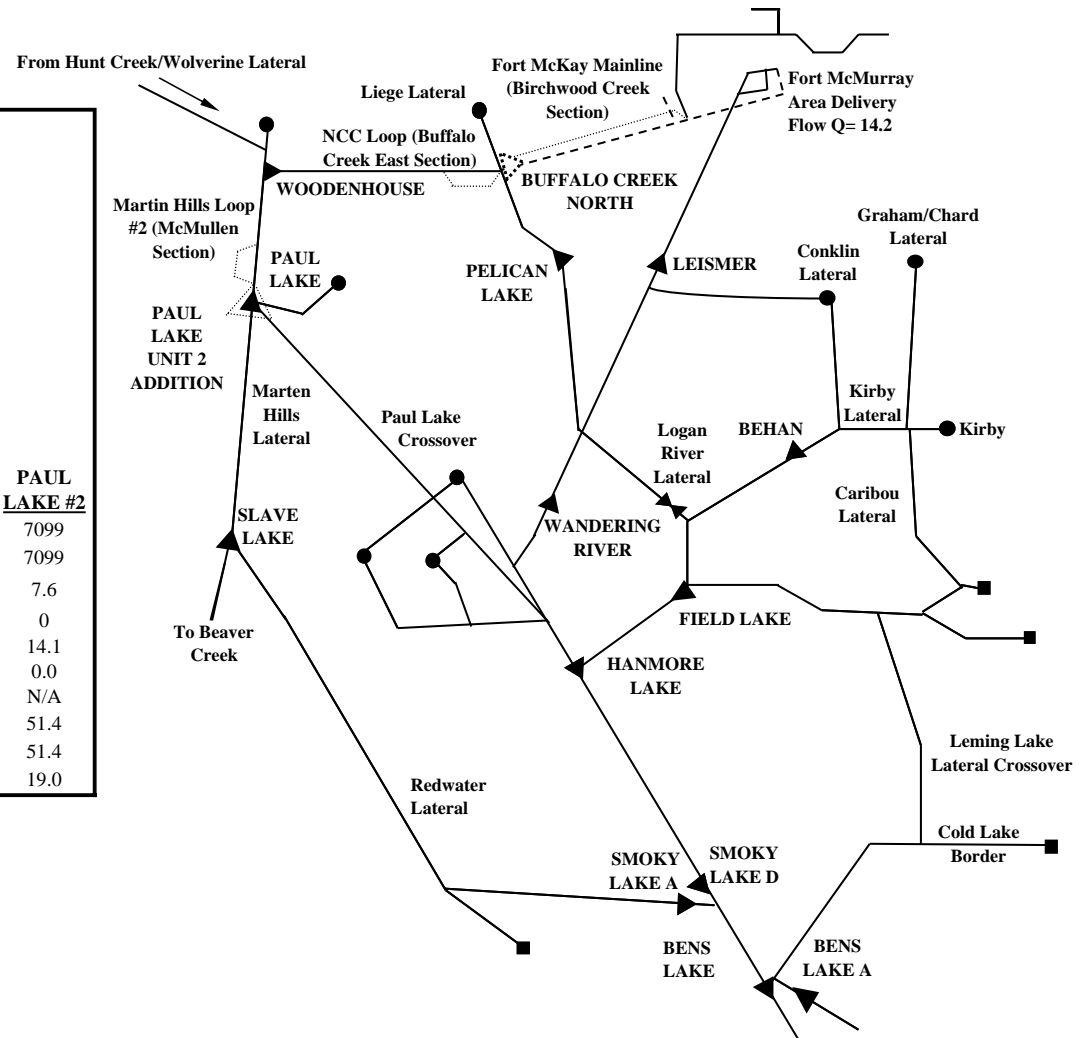
	FIELD LAKE	HANMORE LAKE	BENS LAKE A	BENS LAKE B	BENS LAKE C,D	SMOKY LAKE D
P_{set} (kPa _g)	7234	7159	5954	7189	7187	7208
P_{dis} (kPa _g)	7234	7159	5953	5953	7187	7208
Flow (10 ⁶ m ³ /d @ STP)	0.6	0.0	0.7	0.0	2.8	1.8
Fuel (10 ³ m ³ /d @ STP)	0	0	0	0	0	0
Power Avail (MW)	6.1	7.0	13.1	3.3	7.1	16.5
Power Required (MW)	0.0	0.0	0.0	0.0	0.0	0.0
Compression Ratio	N/A	N/A	N/A	0.00	N/A	N/A
T_{set} (°C)	11.0	11.0	13.9	14.0	14.0	11.1
T_{dis} (°C)	11.0	11.0	13.9	14.0	14.0	11.1
T_{amb} (°C)	19.0	19.0	20.0	20.0	20.0	19.0

	PELICAN LAKE	WOODEN HOUSE	BUFFALO NORTH	WAND. RIVER	LEISMER	SLAVE LAKE	PAUL LAKE #2
P_{set} (kPa _g)	6511	6690	6293	7069	6688	5120	7099
P_{dis} (kPa _g)	6511	6689	6290	7069	6688	5122	7099
Flow (10 ⁶ m ³ /d @ STP)	1.6	8.6	10.6	1.8	2.1	5.4	7.6
Fuel (10 ³ m ³ /d @ STP)	0	0	0	0	0	0	0
Power Avail (MW)	2.8	9.7	4.5	2.8	0.9	3.6	14.1
Power Required (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compression Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A
T_{set} (°C)	11.2	12.1	9.5	10.8	10.8	10.0	51.4
T_{dis} (°C)	11.2	12.1	9.5	10.8	10.8	10.0	51.4
T_{amb} (°C)	20.0	19.0	20.0	20.0	20.0	18.0	19.0

LEGEND

- EXISTING RECEIPT POINTS
- ▲ EXISTING DELIVERY POINTS
- EXISTING COMPRESSION
- EXISTING PIPELINE (NGTL)
- ⊗ EXISTING CONTROL VALVE
- - - OTHER PIPELINE SYSTEMS
- PROPOSED FACILITIES

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR COMPRESSION AT PAUL LAKE, SMOKY LAKE 'A', HANMORE LAKE 'A', AND BEHAN NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q, FLOW IS IN 10⁶ m³/d
 - COMPRESSOR STATIONS WITH ZERO FLOW ARE CONSIDERED BYPASSED

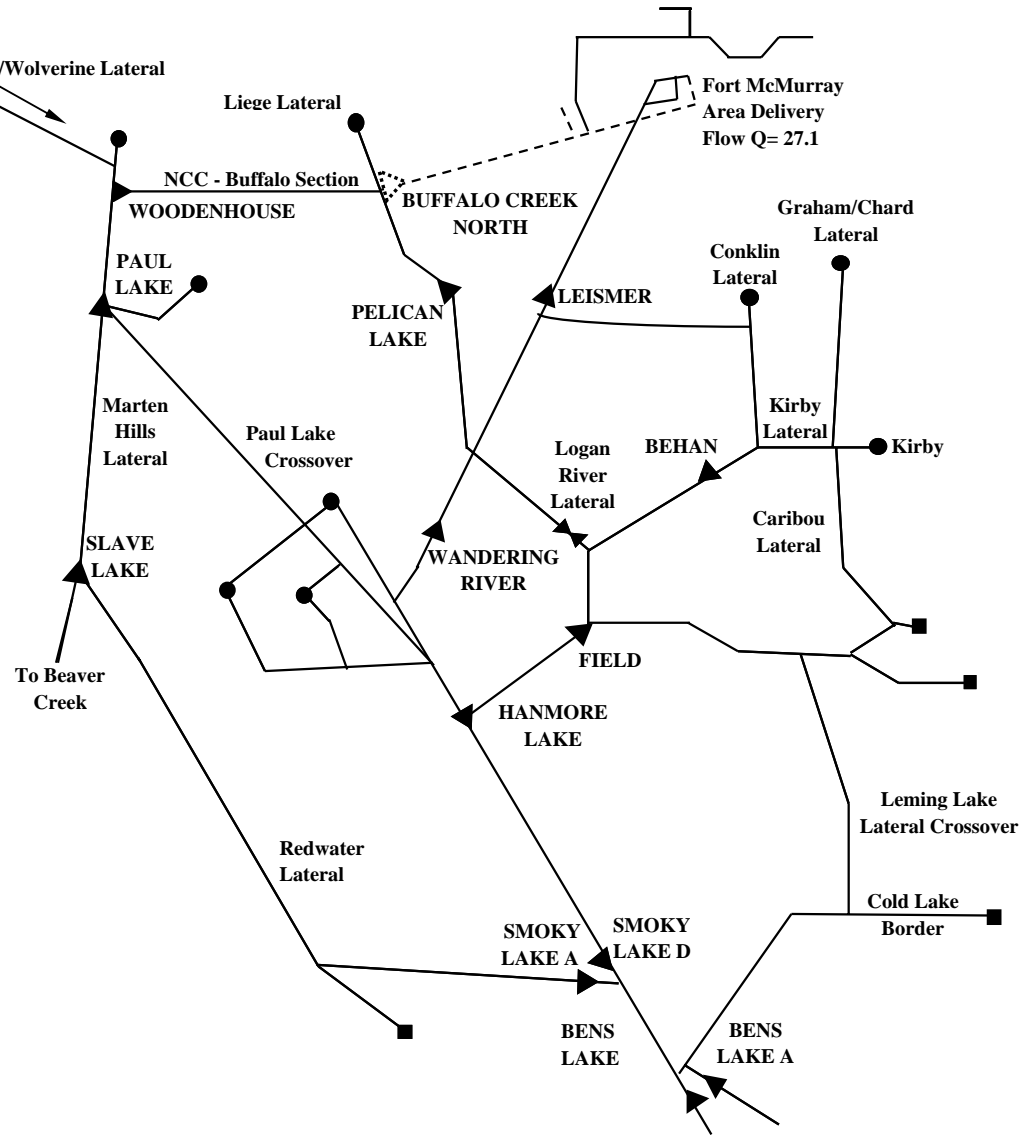


2007/08 GAS YEAR
NORTH OF BENS LAKE DESIGN AREA
WITH MAXIMUM DELIVERIES TO THE FORT MCMURRAY AREA
WINTER DESIGN

COMPRESSOR STATION SUMMARY

	FIELD	HANMORE	BENS	BENS	BENS	SMOKY
	LAKE	LAKE	LAKE A	LAKE B	LAKE C,D	LAKE D
P_{set} (kPa_g)	7326	7938	6000	8245	7609	8111
P_{dis} (kPa_g)	9462	7938	7646	8259	8379	8108
Flow (10⁶ m³/d @ STP)	8.9	0.0	3.0	0.0	29.8	0.0
Fuel (10³ m³/d @ STP)	28	0	15	0	36	0
Power Avail (MW)	6.3	6.5	14.4	3.2	7.7	15.2
Power Required (MW)	3.0	0.0	1.1	0.0	4.5	0.0
Compression Ratio	1.29	N/A	1.27	N/A	1.10	N/A
T_{set} (°C)	3.5	5.3	4.4	16.2	8.3	7.0
T_{dis} (°C)	24.1	5.3	26.3	16.3	16.7	7.0
T_{amb} (°C)	2.0	2.0	2.0	2.0	2.0	2.0

	PELICAN	WOODEN	BUFFALO	WAND.	SLAVE
	LAKE	HOUSE	NORTH	RIVER	LAKE
P_{set} (kPa_g)	7221	5937	7855	6578	7231
P_{dis} (kPa_g)	9000	9500	9198	9401	8187
Flow (10⁶ m³/d @ STP)	4.5	15.1	19.2	5.3	5.0
Fuel (10³ m³/d @ STP)	15	72	33	31	11
Power Avail (MW)	2.9	10.6	5.0	2.9	0.9
Power Required (MW)	1.3	8.7	3.8	2.6	0.9
Compression Ratio	1.24	1.59	1.17	1.42	1.13
T_{set} (°C)	4.9	4.0	14.0	1.7	4.7
T_{dis} (°C)	22.7	39.4	26.2	32.0	15.7
T_{amb} (°C)	2.0	2.0	2.0	2.0	3.0



LEGEND

- EXISTING RECEIPT POINTS
- EXISTING DELIVERY POINTS
- ▲ EXISTING COMPRESSION
- EXISTING PIPELINE (NGTL)
- ⋈ EXISTING CONTROL VALVE
- - - OTHER PIPELINE SYSTEMS

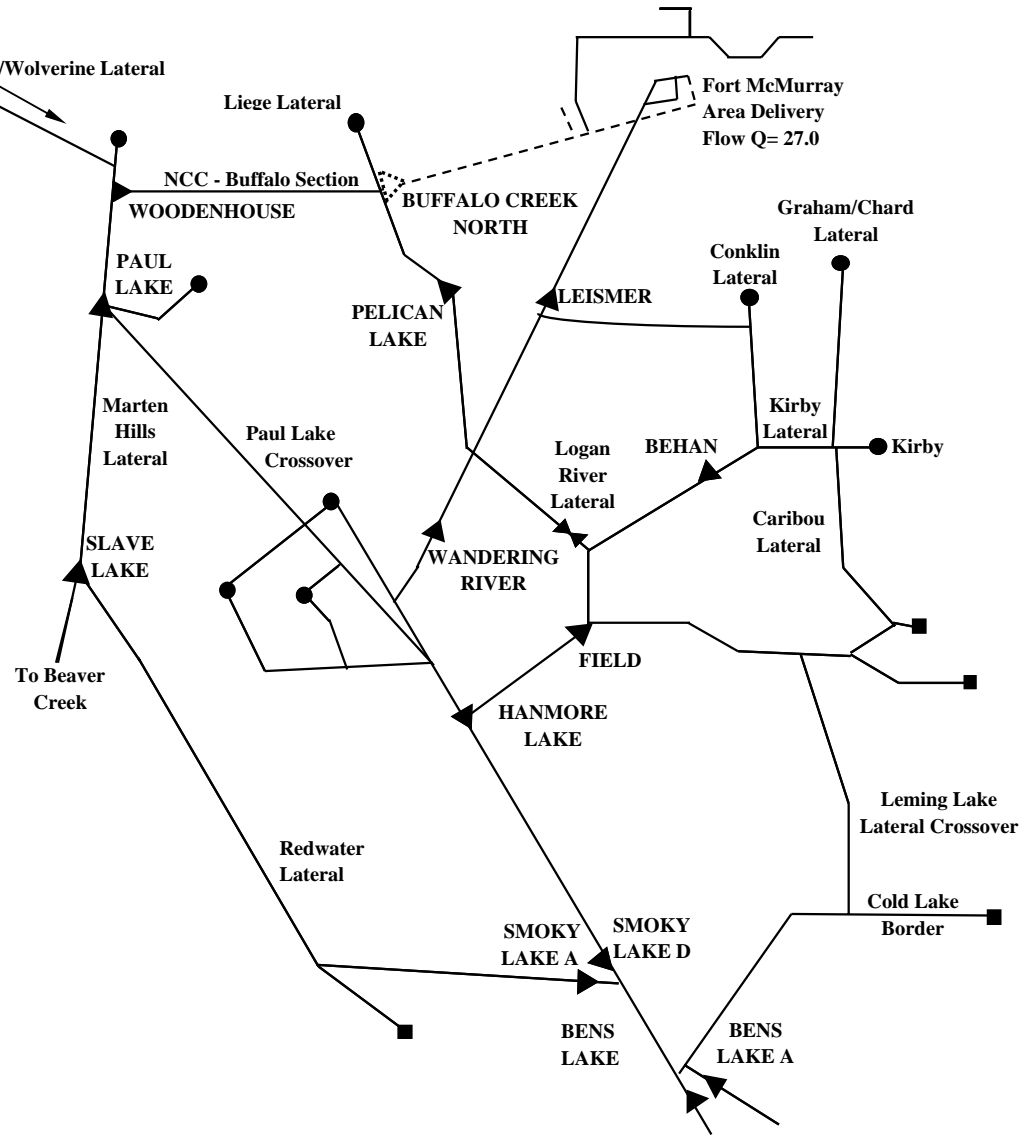
NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR COMPRESSION AT PAUL LAKE, SMOKY LAKE 'A', HANMORE LAKE 'A', AND BEHAN NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q, FLOW IS IN 10⁶ m³/d
 - COMPRESSOR STATIONS WITH ZERO FLOW ARE CONSIDERED BYPASSED

2007/08 GAS YEAR
NORTH OF BENS LAKE DESIGN AREA
WITH MAXIMUM DELIVERIES TO THE FORT MCMURRAY AREA
SUMMER CAPABILITY WITHOUT PROPOSED 2007/08 SUMMER FACILITIES

COMPRESSOR STATION SUMMARY

	FIELD	HANMORE	BENS	BENS	BENS	SMOKY
	<u>LAKE</u>	<u>LAKE</u>	<u>LAKE A</u>	<u>LAKE B</u>	<u>LAKE C,D</u>	<u>LAKE D</u>
P_{set}(kPa_g)	6973	7928	4641	6188	7760	8087
P_{dis}(kPa_g)	8886	7928	6224	8191	8251	8085
Flow (10⁶m³/d @ STP)	8.4	0.0	3.6	4.4	20.8	0.0
Fuel (10³m³/d @ STP)	27	0	25	23	32	0
Power Avail (MW)	6.1	7.0	13.1	3.3	7.1	16.5
Power Required (MW)	2.8	0.0	1.8	2.3	2.5	0.0
Compression Ratio	1.27	N/A	1.33	1.32	1.06	N/A
T_{set} (°C)	8.8	13.1	9.6	35.1	16.4	17.0
T_{dis} (°C)	29.5	13.1	40.1	31.8	22.3	17.0
T_{amb} (°C)	19.0	19.0	20.0	20.0	20.0	19.0

	PELICAN	WOODEN	BUFFALO	WAND.		SLAVE
	<u>LAKE</u>	<u>HOUSE</u>	<u>NORTH</u>	<u>RIVER</u>	<u>LEISMER</u>	<u>LAKE</u>
P_{set}(kPa_g)	6294	5947	7639	6473	6510	5691
P_{dis}(kPa_g)	9278	9311	8940	8928	7350	6352
Flow (10⁶m³/d @ STP)	5.2	14.8	19.6	5.4	4.6	14.8
Fuel (10³m³/d @ STP)	27	80	37	31	11	29
Power Avail (MW)	2.8	9.7	4.5	2.8	0.9	3.6
Power Required (MW)	2.8	9.7	4.5	2.5	0.9	2.7
Compression Ratio	1.47	1.56	1.17	1.37	1.13	1.11
T_{set} (°C)	10.4	11.4	20.0	7.6	10.4	11.3
T_{dis} (°C)	43.9	44.9	33.9	36.2	21.9	22.1
T_{amb} (°C)	20.0	19.0	20.0	20.0	20.0	18.0



LEGEND

- EXISTING RECEIPT POINTS
- EXISTING DELIVERY POINTS
- ▲ EXISTING COMPRESSION
- EXISTING PIPELINE (NGTL)
- ⋈ EXISTING CONTROL VALVE
- - - OTHER PIPELINE SYSTEMS

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR COMPRESSION AT PAUL LAKE, SMOKY LAKE 'A', HANMORE LAKE 'A', AND BEHAN NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q, FLOW IS IN 10⁶ m³/d
 - COMPRESSOR STATIONS WITH ZERO FLOW ARE CONSIDERED BYPASSED

2007/08 GAS YEAR
NORTH OF BENS LAKE DESIGN AREA
WITH MAXIMUM DELIVERIES TO THE FORT McMURRAY AREA
SUMMER DESIGN WITH PROPOSED 2007/08 SUMMER FACILITIES

COMPRESSOR STATION SUMMARY

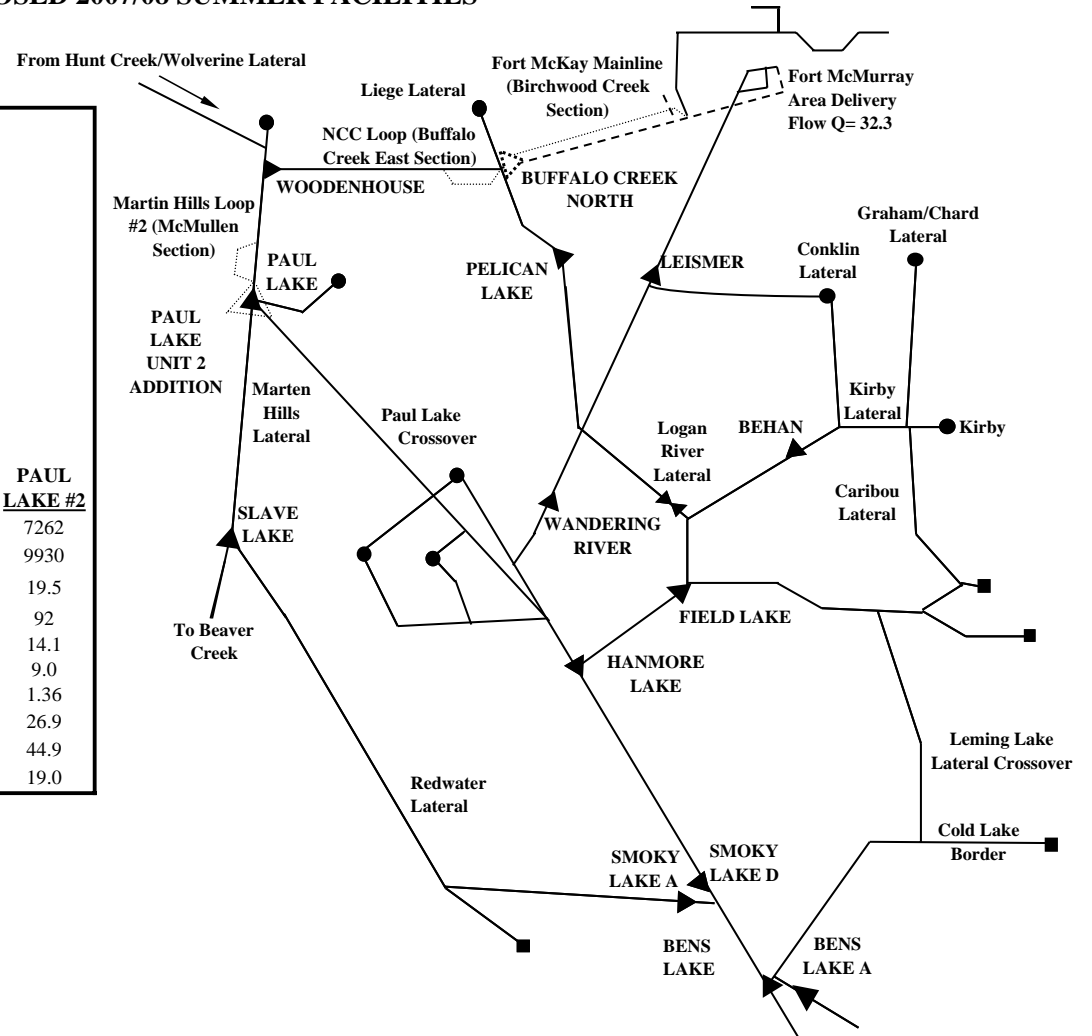
	FIELD LAKE	HANMORE LAKE	BENS LAKE A	BENS LAKE B	BENS LAKE C,D	SMOKY LAKE D
P_{set} (kPa _g)	7015	7861	4653	6232	7453	8085
P_{dis} (kPa _g)	9004	7860	6267	8274	8372	8082
Flow (10^6 m ³ /d @ STP)	8.2	0.0	3.6	4.3	26.1	0.0
Fuel (10^3 m ³ /d @ STP)	27	0	25	23	52	0
Power Avail (MW)	6.1	7.0	13.1	3.3	7.1	16.5
Power Required (MW)	2.8	0.0	1.8	2.3	5.2	0.0
Compression Ratio	1.28	N/A	1.34	1.32	1.12	N/A
T_{set} (°C)	9.2	13.7	9.8	35.5	16.8	18.3
T_{dis} (°C)	30.5	13.7	40.6	34.2	27.2	18.3
T_{amb} (°C)	19.0	19.0	20.0	20.0	20.0	19.0

	PELICAN LAKE	WOODEN HOUSE	BUFFALO NORTH	WAND. RIVER	LEISMER	SLAVE LAKE	PAUL LAKE #2
P_{set} (kPa _g)	6656	7844	7782	6451	6954	5650	7262
P_{dis} (kPa _g)	9599	9930	7765	9032	8187	6307	9930
Flow (10^6 m ³ /d @ STP)	5.6	20.8	26.0	5.1	3.5	14.8	19.5
Fuel (10^3 m ³ /d @ STP)	27	58	0	30	11	29	92
Power Avail (MW)	2.8	9.7	4.5	2.8	0.9	3.6	14.1
Power Required (MW)	2.8	6.9	0.0	2.5	0.9	2.7	9.0
Compression Ratio	1.44	1.26	1.00	1.39	1.17	1.11	1.36
T_{set} (°C)	10.4	15.2	16.4	8.0	10.7	11.2	26.9
T_{dis} (°C)	41.6	35.6	16.3	37.6	25.9	22.1	44.9
T_{amb} (°C)	20.0	19.0	20.0	20.0	20.0	18.0	19.0

LEGEND

- EXISTING RECEIPT POINTS
- ▲ EXISTING DELIVERY POINTS
- EXISTING COMPRESSION
- EXISTING PIPELINE (NGTL)
- ⊗ EXISTING CONTROL VALVE
- - - OTHER PIPELINE SYSTEMS
- PROPOSED FACILITIES

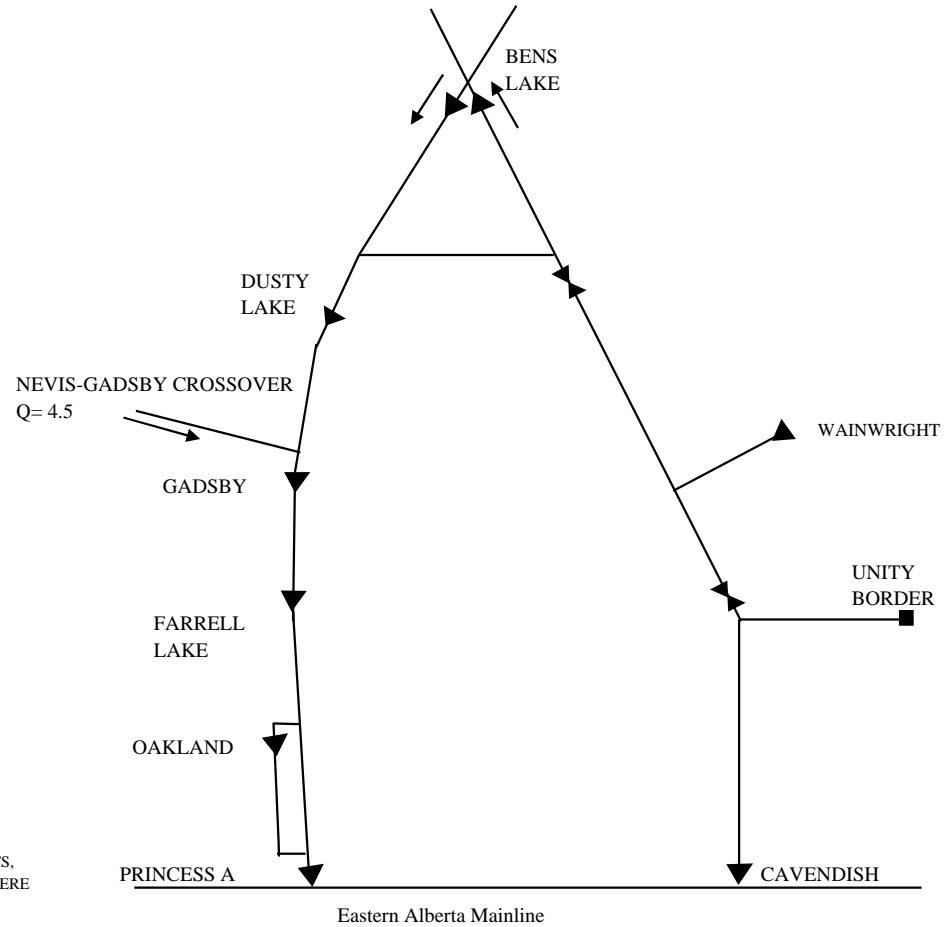
NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR COMPRESSION AT PAUL LAKE, SMOKY LAKE 'A', HANMORE LAKE 'A', AND BEHAN NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q, FLOW IS IN 10^6 m³/d
 - COMPRESSOR STATIONS WITH ZERO FLOW ARE CONSIDERED BYPASSED



**2007/08 GAS YEAR
SOUTH OF BENS LAKE DESIGN AREA
WINTER DESIGN**

COMPRESSOR STATION SUMMARY

	<u>DUSTY</u>		<u>FARRELL</u>	
	<u>LAKE</u>	<u>GADSBY</u>	<u>LAKE</u>	<u>OAKLAND</u>
P_{sct}(kPa_g)	5946	5883	5722	5584
P_{dis}(kPa_g)	5945	5883	5723	5587
Flow (10⁶ m³/d @ STP)	6.5	11.7	13.4	14.9
Fuel (10³ m³/d @ STP)	0	0	0	0
Power Avail (MW)	29.0	28.9	27.6	13.8
Power Required (MW)	0.0	0.0	0.0	0.0
Compression Ratio	N/A	N/A	N/A	N/A
T_{sct} (°C)	5.3	8.8	5.1	4.9
T_{dis} (°C)	5.3	8.8	5.1	4.9
T_{amb} (°C)	2.0	3.0	4.0	4.0
	<u>PRINCESS A</u>		<u>CAVENDISH</u>	
P_{sct}(kPa_g)	5301		4051	
P_{dis}(kPa_g)	5695		5040	
Flow (10⁶ m³/d @ STP)	20.3		4.1	
Fuel (10³ m³/d @ STP)	18		11	
Power Avail (MW)	17.0		4.5	
Power Required (MW)	2.5		1.3	
Compression Ratio	1.07		1.24	
T_{sct} (°C)	4.2		4.6	
T_{dis} (°C)	11.2		23.7	
T_{amb} (°C)	6.0		5.0	



<u>LEGEND</u>	
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
✕	EXISTING CONTROL VALVE

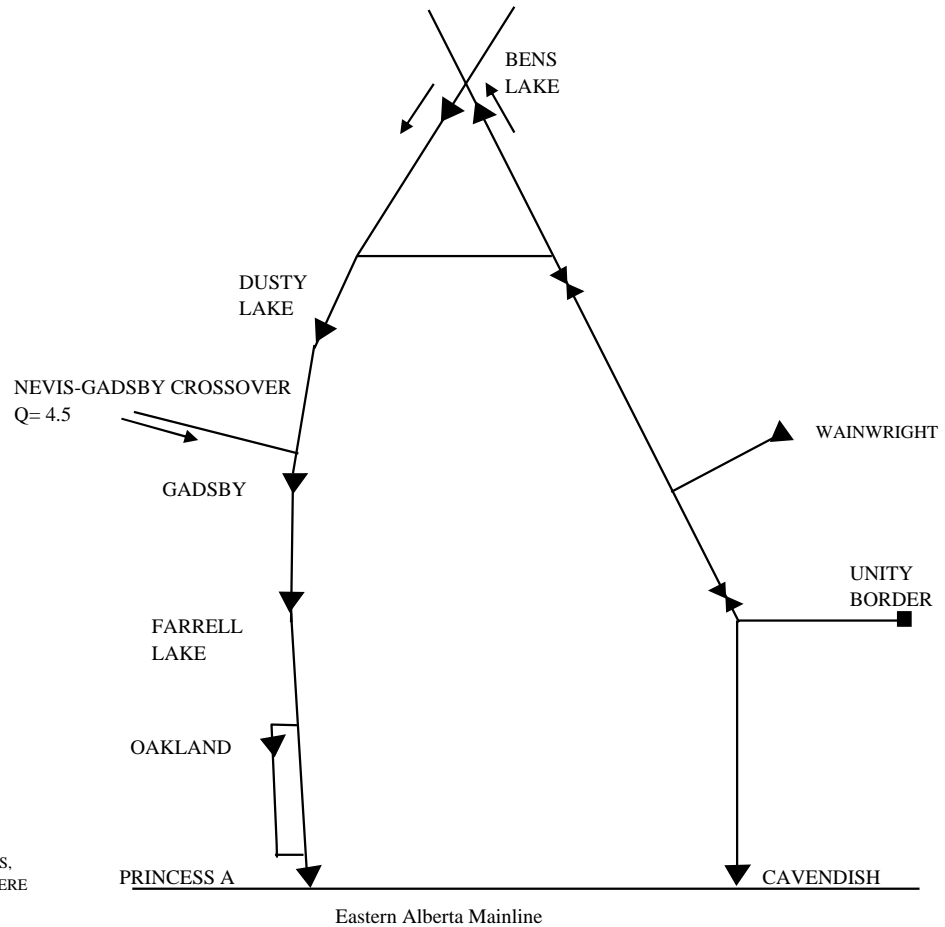
NOTE: - NOT ALL EXISTING RECIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR LATERAL COMPRESSION AT WAINWRIGHT NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q, FLOW IS IN 10⁶ m³/d

2007/08 GAS YEAR
SOUTH OF BENS LAKE DESIGN AREA
SUMMER DESIGN WITH PROPOSED NORTH OF BENS 2007/08 SUMMER FACILITIES

COMPRESSOR STATION SUMMARY

	DUSTY		FARRELL	
	LAKE	GADSBY	LAKE	OAKLAND
P_{sct} (kPa _g)	5882	5804	5617	5449
P_{dis} (kPa _g)	5882	5804	5618	5452
Flow ($10^6 m^3/d$ @ STP)	7.6	12.7	14.2	14.8
Fuel ($10^3 m^3/d$ @ STP)	0	0	0	0
Power Avail (MW)	25.8	25.8	25.0	12.2
Power Required (MW)	0.0	0.0	0.0	0.0
Compression Ratio	N/A	N/A	N/A	N/A
T_{sct} (°C)	14.0	14.3	13.6	13.8
T_{dis} (°C)	14.0	14.3	13.6	13.8
T_{amb} (°C)	20.0	20.0	20.0	20.0

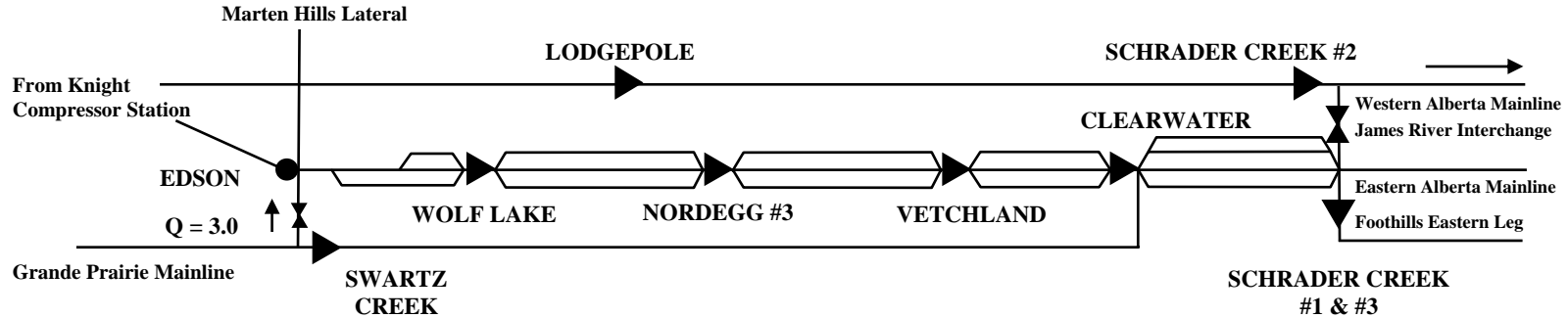
	PRINCESS A		CAVENDISH	
	P_{sct} (kPa _g)	5234	4160	
P_{dis} (kPa _g)	5692	5035		
Flow ($10^6 m^3/d$ @ STP)	20.4	3.7		
Fuel ($10^3 m^3/d$ @ STP)	21	9		
Power Avail (MW)	17.0	4.0		
Power Required (MW)	3.0	1.1		
Compression Ratio	1.09	1.21		
T_{sct} (°C)	13.5	13.7		
T_{dis} (°C)	21.9	31.0		
T_{amb} (°C)	22.0	23.0		



LEGEND	
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
✕	EXISTING CONTROL VALVE

- NOTE: - NOT ALL EXISTING RECIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSOR CONDITIONS FOR LATERAL COMPRESSION AT WAINWRIGHT NOT SHOWN
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - Q, FLOW IS IN $10^6 m^3/d$

2007/08 GAS YEAR EDSON MAINLINE DESIGN SUB AREA WINTER DESIGN



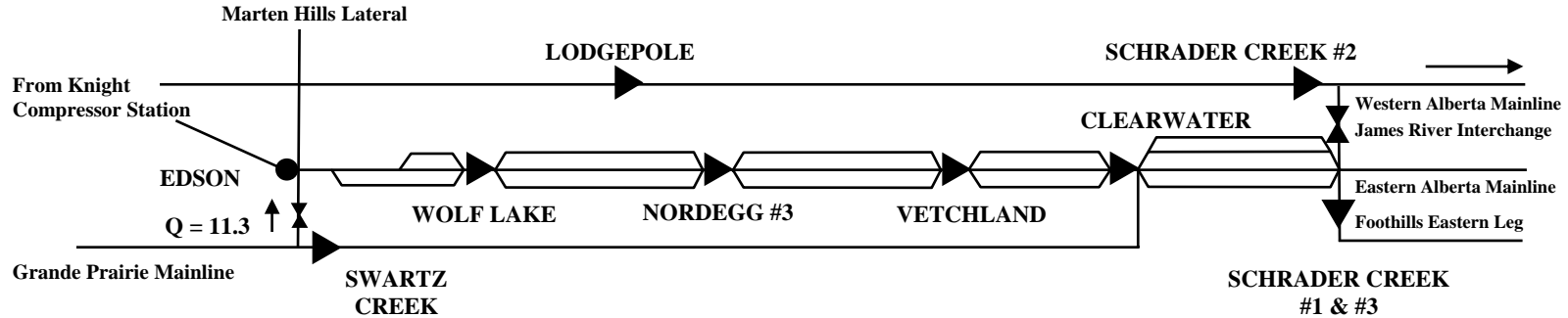
COMPRESSOR STATION SUMMARY

	<u>SWARTZ CREEK</u>	<u>WOLF LAKE</u>	<u>NORDEGG #3</u>	<u>VETCHLAND</u>	<u>CLEARWATER</u>	<u>LODGEPOLE</u>
P_{set} (kPa _g)	7499	5167	7422	4903	4789	4751
P_{dis} (kPa _g)	8500	5167	7421	4903	6450	5564
Flow (10 ⁶ m ³ /d @ STP)	59.0	31.4	59.0	35.9	46.8	12.5
Fuel (10 ³ m ³ /d @ STP)	105	0	0	0	158	25
Power Avail (MW)	27.3	23.8	30.9	46.5	41.0	2.9
Power Req'd (MW)	10.3	0.0	0.0	0.0	20.8	2.9
Compression Ratio	1.13	N/A	N/A	N/A	1.34	1.17
T_{set} (°C)	13.3	5.4	14.1	4.2	6.0	4.6
T_{dis} (°C)	23.7	5.4	14.1	4.2	32.6	18.4
T_{amb} (°C)	3.0	3.0	4.0	4.0	4.0	3.0

<u>LEGEND</u>	
●	EXISTING RECEIPT POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
◀▶	EXISTING CONTROL VALVE

- NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
- STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - FOR SCHRADER CREEK EAST COMPRESSOR STATION CONDITIONS SEE EASTERN ALBERTA MAINLINE DESIGN SUB AREA
 - FOR SCHRADER CREEK #2 COMPRESSOR STATION CONDITIONS SEE WESTERN ALBERTA MAINLINE DESIGN SUB AREA
 - Q, FLOW IN 10⁶m³/d

**2007/08 GAS YEAR
EDSON MAINLINE DESIGN SUB AREA
SUMMER DESIGN**



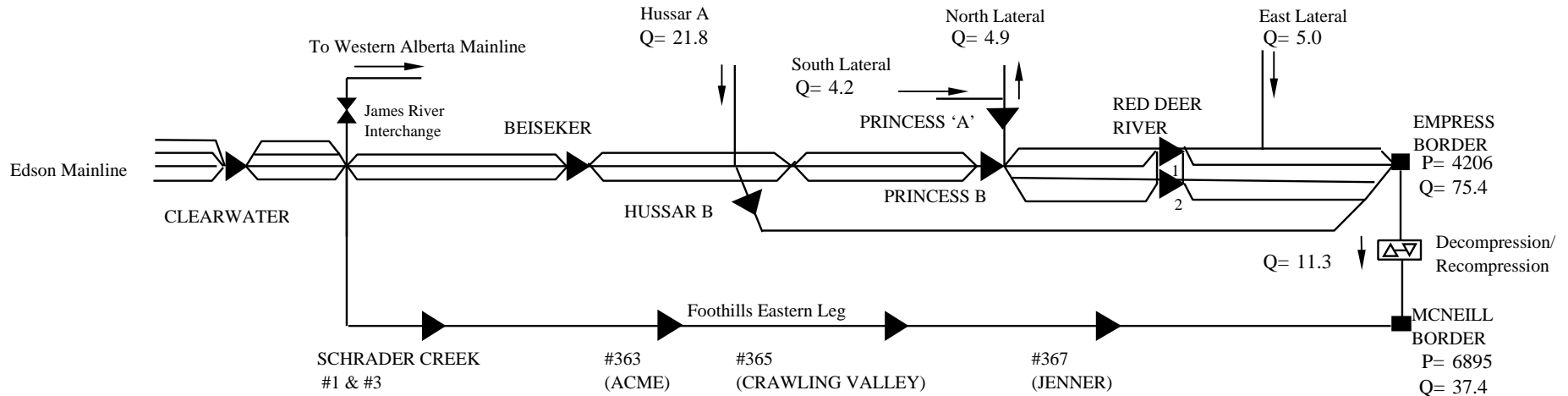
COMPRESSOR STATION SUMMARY

	<u>SWARTZ CREEK</u>	<u>WOLF LAKE</u>	<u>NORDEGG #3</u>	<u>VETCHLAND</u>	<u>CLEARWATER</u>	<u>LODGEPOLE</u>
P_{set} (kPa _g)	7249	5912	7409	5515	5327	5157
P_{dis} (kPa _g)	8500	5911	7407	5514	6450	5767
Flow (10 ⁶ m ³ /d @ STP)	57.3	42.4	57.3	47.4	59.5	14.5
Fuel (10 ³ m ³ /d @ STP)	122	0	0	0	142	23
Power Avail (MW)	24.7	21.6	28.7	42.4	38.0	2.5
Power Req'd (MW)	13.6	0.0	0.0	0.0	17.9	2.5
Compression Ratio	1.17	N/A	N/A	N/A	1.21	1.12
T_{set} (°C)	25.9	15.8	27.7	11.5	12.4	12.1
T_{dis} (°C)	40.1	15.8	27.7	11.5	30.3	22.4
T_{amb} (°C)	18.0	18.0	18.0	18.0	18.0	18.0

LEGEND	
●	EXISTING RECEIPT POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
✕	EXISTING CONTROL VALVE

- NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
- STP IS 101.325 kPa AND 15° C
 - POWER IS AT SITE CONDITIONS
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
 - FOR SCHRADER CREEK EAST COMPRESSOR STATION CONDITIONS SEE EASTERN ALBERTA MAINLINE DESIGN SUB AREA
 - FOR SCHRADER CREEK #2 COMPRESSOR STATION CONDITIONS SEE WESTERN ALBERTA MAINLINE DESIGN SUB AREA
 - Q, FLOW IN 10⁶m³/d

2007/08 GAS YEAR
EASTERN ALBERTA MAINLINE DESIGN SUB AREA
(JAMES RIVER TO PRINCESS AND PRINCESS TO EMPRESS/MCNEILL)
WINTER DESIGN



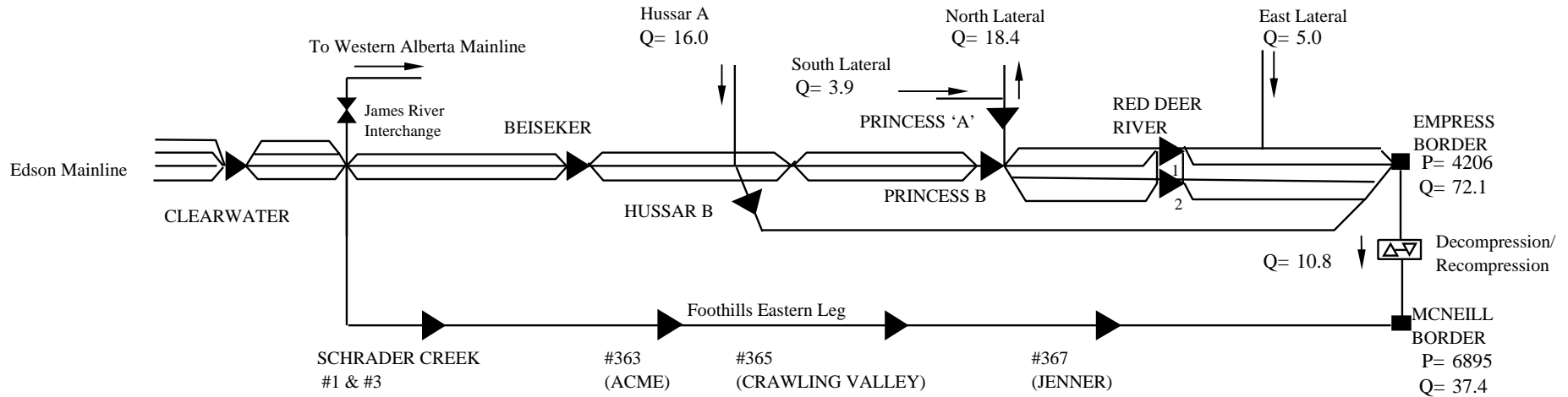
COMPRESSOR STATION SUMMARY

	BEISEKER	HUSSAR B	PRINCESS B	RED DEER RIVER #1	RED DEER RIVER #2	SCHRADER CREEK #1 & #3	#363	#365	#367
P_{set} (kPa_g)	5419	5254	4619	4428	4428	5638	7773	7505	7201
P_{dis} (kPa_g)	5418	5253	4617	4427	4427	8000	7772	7503	7199
Flow (10⁶ m³/d @ STP)	57.4	33.8	52.3	30.0	22.8	26.1	26.1	26.1	26.1
Fuel (10³ m³/d @ STP)	0	0	0	0	0	109	0	0	0
Power Avail (MW)	20.7	13.5	20.7	24.2	24.2	37.6	25.1	21.4	40.6
Power Required (MW)	0.0	0.0	0.0	0.0	0.0	13.7	0.0	0.0	0.0
Compression Ratio	N/A	N/A	N/A	N/A	N/A	1.41	N/A	N/A	N/A
T_{set} (°C)	6.4	5.0	4.3	3.8	4.4	19.5	14.0	8.3	5.5
T_{dis} (°C)	6.4	5.0	4.3	3.8	4.4	26.8	14.0	8.3	5.5
T_{amb} (°C)	5.0	5.0	6.0	6.0	6.0	4.0	5.0	5.0	6.0

LEGEND	
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
✕	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HER
- STP IS 101.325 kPa AND 15° C
- POWER IS AT SITE CONDITIONS
- Q, FLOW IS IN 10⁶ m³/d
- P, PRESSURE IS IN kPa_g
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
- FOR CLEARWATER COMPRESSOR STATION CONDITIONS SEE EDSON MAINLINE DESIGN SUB ARE,
- FOR PRINCESS 'A' COMPRESSOR STATION CONDITIONS SEE THE SOUTH OF BENS LAKE DESIGN ARE,

2007/08 GAS YEAR
EASTERN ALBERTA MAINLINE DESIGN SUB AREA
(JAMES RIVER TO PRINCESS AND PRINCESS TO EMPRESS/MCNEILL)
SUMMER DESIGN



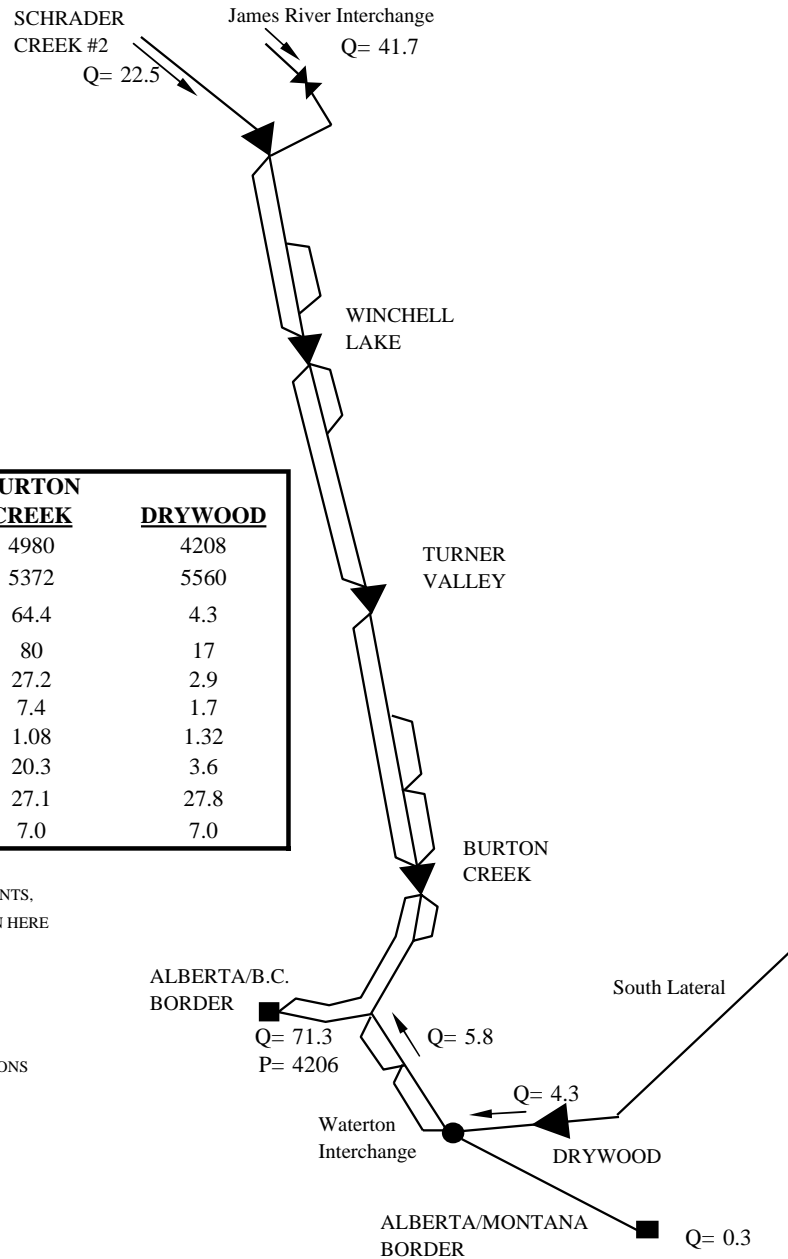
COMPRESSOR STATION SUMMARY

	BEISEKER	HUSSAR B	PRINCESS B	RED DEER RIVER #1	RED DEER RIVER #2	SCHRADER CREEK #1 & #3	#363	#365	#367
P_{set}(kPa_g)	5779	5497	4573	4404	4404	6210	7869	7568	7232
P_{dis}(kPa_g)	5777	5497	4572	4402	4402	8115	7867	7566	7230
Flow (10⁶m³/d @ STP)	74.2	37.0	46.6	27.2	20.7	26.6	26.6	26.6	26.6
Fuel (10³m³/d @ STP)	0	0	0	0	0	110	0	0	0
Power Avail (MW)	18.6	11.9	20.5	21.5	21.5	33.3	22.5	18.1	35.8
Power Required (MW)	0.0	0.0	0.0	0.0	0.0	10.8	0.0	0.0	0.0
Compression Ratio	N/A	N/A	N/A	N/A	N/A	1.30	N/A	N/A	N/A
T_{set} (°C)	16.1	14.1	11.4	12.7	13.5	26.8	19.7	16.0	14.2
T_{dis} (°C)	16.1	14.1	11.4	12.7	13.5	27.9	19.7	15.9	14.2
T_{amb} (°C)	20.0	21.0	22.0	22.0	22.0	18.0	20.0	21.0	23.0

LEGEND	
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
✕	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HER
- STP IS 101.325 kPa AND 15° C
- POWER IS AT SITE CONDITIONS
- Q, FLOW IS IN 10⁶ m³/d
- P, PRESSURE IS IN kPa_g
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS
- FOR CLEARWATER COMPRESSOR STATION CONDITIONS SEE EDSON MAINLINE DESIGN SUB ARE,
- FOR PRINCESS 'A' COMPRESSOR STATION CONDITIONS SEE THE SOUTH OF BENS LAKE DESIGN ARE,

2007/08 GAS YEAR WESTERN ALBERTA MAINLINE DESIGN SUB AREA WINTER DESIGN



COMPRESSOR STATION SUMMARY

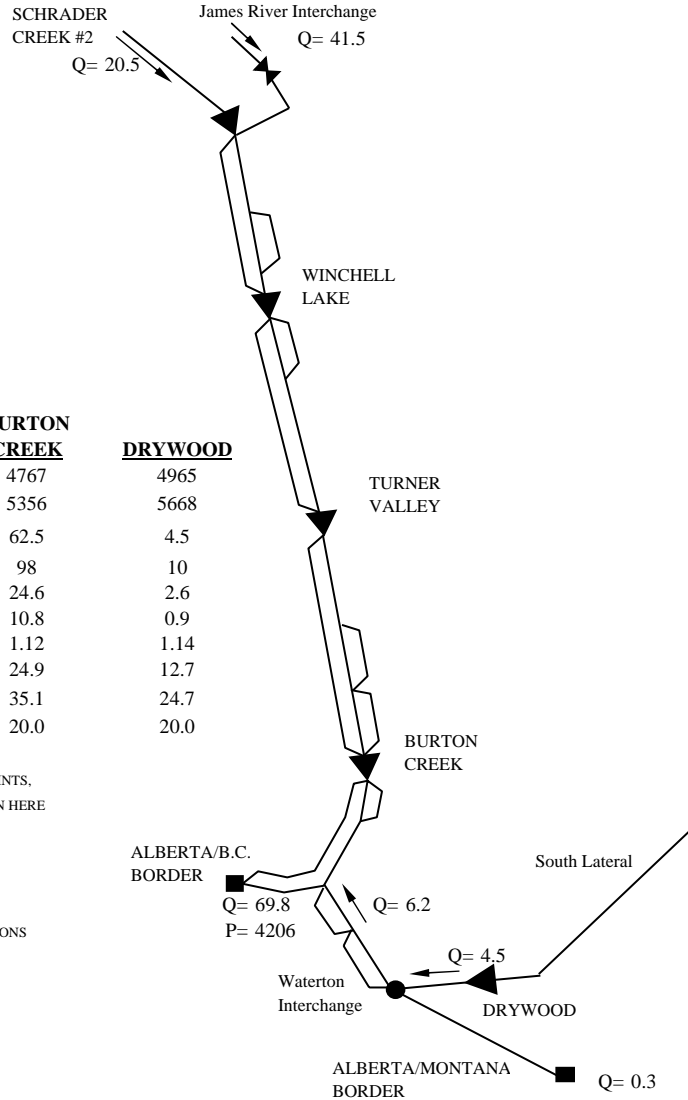
	<u>SCHRADER CREEK #2</u>	<u>WINCHELL LAKE</u>	<u>TURNER VALLEY</u>	<u>BURTON CREEK</u>	<u>DRYWOOD</u>
P_{set}(kPa_g)	3774	4872	4581	4980	4208
P_{dis}(kPa_g)	5803	5822	5824	5372	5560
Flow (10⁶ m³/d @ STP)	22.5	66.5	63.0	64.4	4.3
Fuel (10³ m³/d @ STP)	82	126	208	80	17
Power Avail (MW)	13.1	23.2	45.6	27.2	2.9
Power Required (MW)	13.1	17.3	23.4	7.4	1.7
Compression Ratio	1.53	1.19	1.27	1.08	1.32
T_{set} (°C)	1.4	11.9	22.6	20.3	3.6
T_{dis} (°C)	36.1	27.3	44.8	27.1	27.8
T_{amb} (°C)	4.0	5.0	6.0	7.0	7.0

LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
⋈	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE

- STP IS 101.325 kPa AND 15° C
- Q, FLOW IS IN 10⁶ m³/d
- P, PRESSURE IS IN kPa_g
- POWER IS AT SITE CONDITIONS
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

**2007/08 GAS YEAR
WESTERN ALBERTA MAINLINE DESIGN SUB AREA
SUMMER DESIGN**



COMPRESSOR STATION SUMMARY

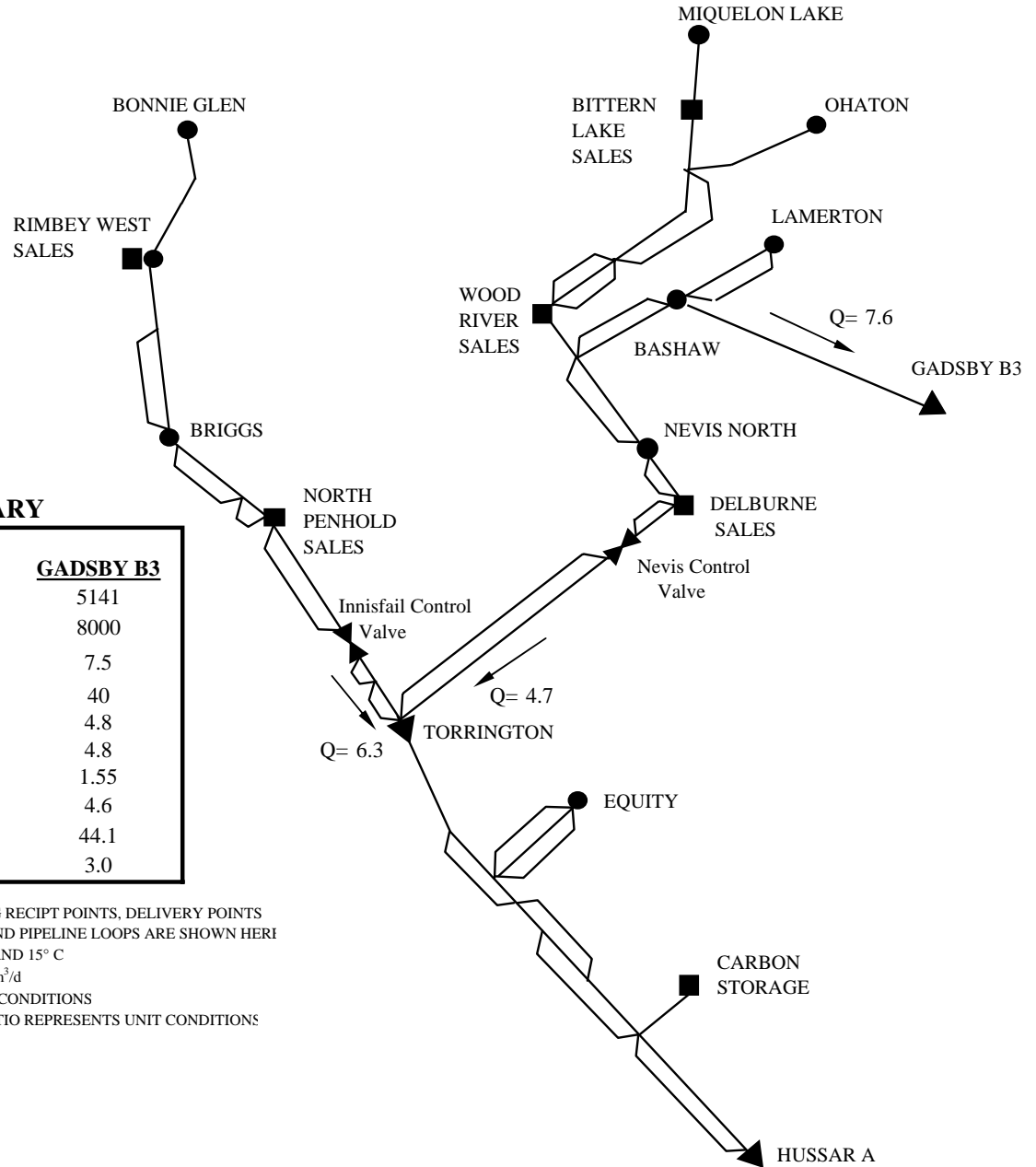
	SCHRADER CREEK #2	WINCHELL LAKE	TURNER VALLEY	BURTON CREEK	DRYWOOD
P_{set}(kPa_g)	3839	4886	4481	4767	4965
P_{dis}(kPa_g)	5800	5700	5600	5356	5668
Flow (10⁶ m³/d @ STP)	20.5	64.5	60.9	62.5	4.5
Fuel (10³ m³/d @ STP)	76	117	201	98	10
Power Avail (MW)	11.8	21.1	41.7	24.6	2.6
Power Required (MW)	11.8	15.5	22.0	10.8	0.9
Compression Ratio	1.50	1.16	1.25	1.12	1.14
T_{set} (°C)	7.7	21.2	30.7	24.9	12.7
T_{dis} (°C)	41.5	34.9	44.9	35.1	24.7
T_{amb} (°C)	18.0	19.0	19.0	20.0	20.0

LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
◀▶	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - Q, FLOW IS IN 10⁶ m³/d
 - P, PRESSURE IS IN kPa_g
 - POWER IS AT SITE CONDITIONS
 - COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

REVISED

**2007/08 GAS YEAR
RIMBEY - NEVIS DESIGN AREA
WINTER DESIGN**



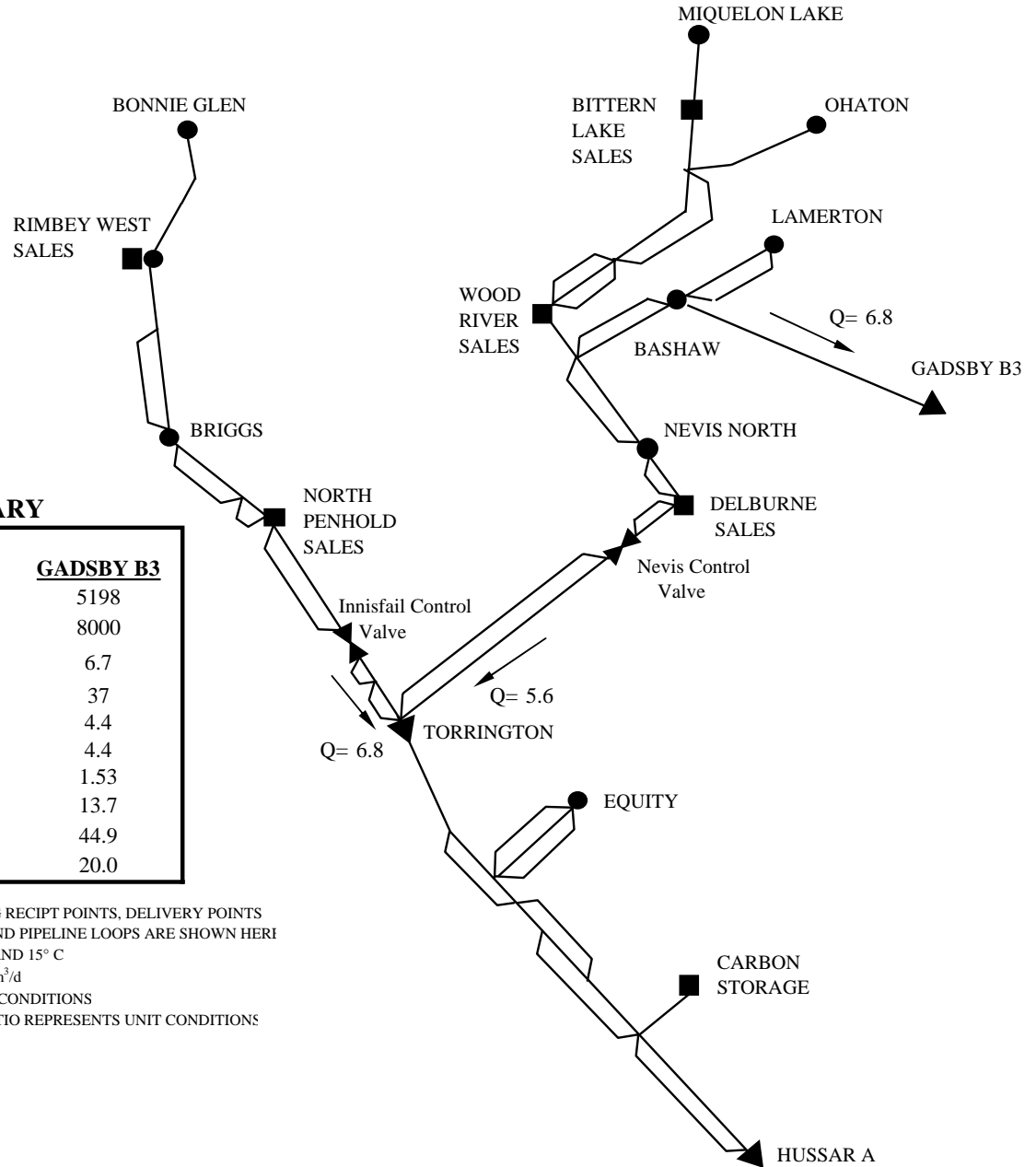
COMPRESSOR STATION SUMMARY

	<u>TORRINGTON</u>	<u>HUSSAR A6,7</u>	<u>GADSBY B3</u>
P_{sct} (kPa _g)	5456	5029	5141
P_{dis} (kPa _g)	5454	5915	8000
Flow ($10^6 m^3/d$ @ STP)	11.0	21.9	7.5
Fuel ($10^3 m^3/d$ @ STP)	0	47	40
Power Avail (MW)	7.4	27.0	4.8
Power Required (MW)	0.0	5.0	4.8
Compression Ratio	N/A	1.17	1.55
T_{set} (°C)	4.8	4.6	4.6
T_{dis} (°C)	4.8	18.3	44.1
T_{amb} (°C)	4.0	5.0	3.0

LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
⋈	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECIPT POINTS, DELIVERY POINTS
INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
- STP IS 101.325 kPa AND 15° C
- Q, FLOW IS IN $10^6 m^3/d$
- POWER IS AT SITE CONDITIONS
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

**2007/08 GAS YEAR
RIMBEY - NEVIS DESIGN AREA
SUMMER DESIGN**



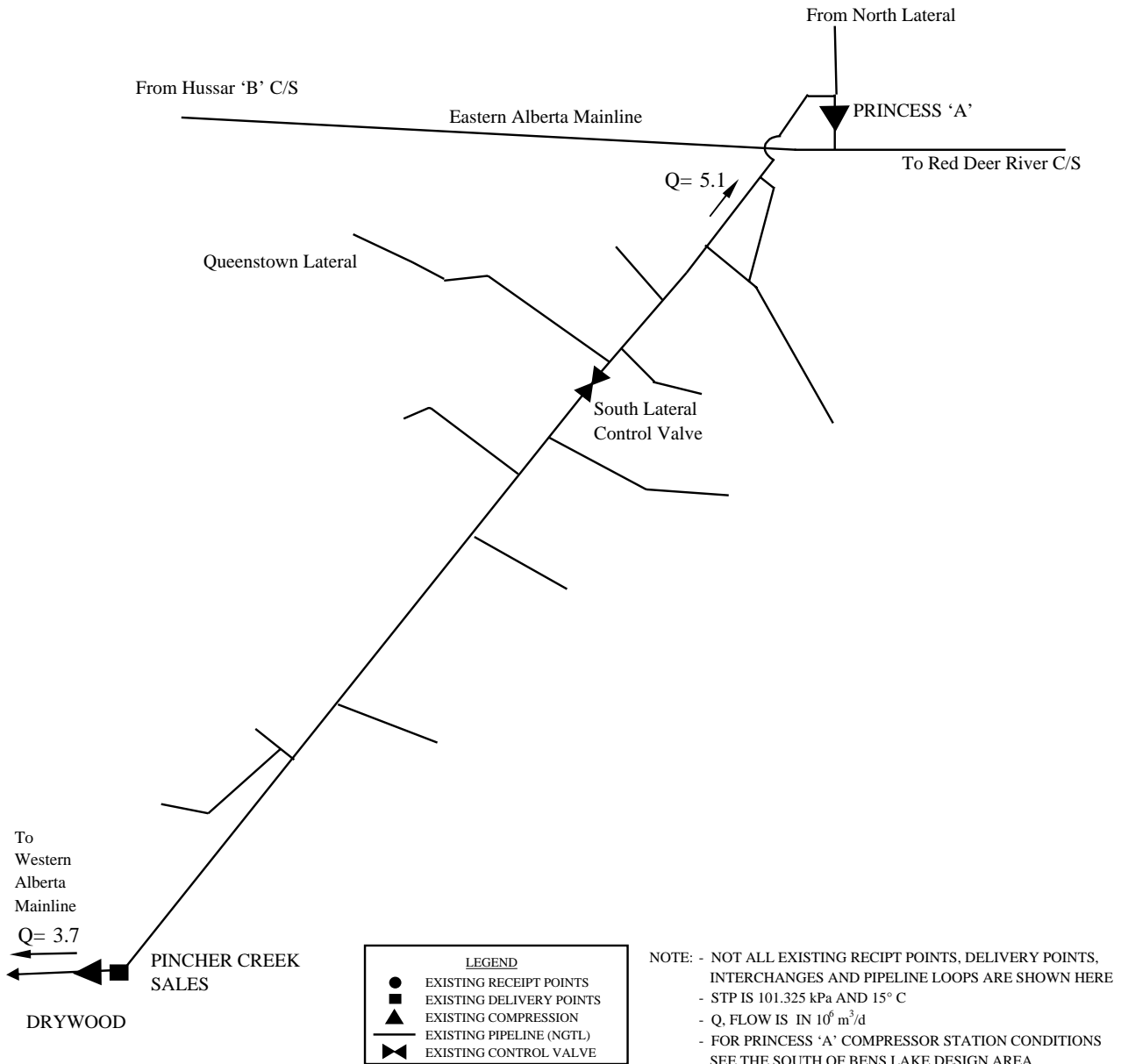
COMPRESSOR STATION SUMMARY

	<u>TORRINGTON</u>	<u>HUSSAR A6,7</u>	<u>GADSBY B3</u>
P_{sct} (kPa _g)	5304	4748	5198
P_{dis} (kPa _g)	5302	5915	8000
Flow ($10^6 m^3/d$ @ STP)	12.3	23.2	6.7
Fuel ($10^3 m^3/d$ @ STP)	0	58	37
Power Avail (MW)	6.6	23.8	4.4
Power Required (MW)	0.0	7.5	4.4
Compression Ratio	N/A	1.24	1.53
T_{set} (°C)	13.7	13.0	13.7
T_{dis} (°C)	13.7	32.1	44.9
T_{amb} (°C)	19.0	21.0	20.0

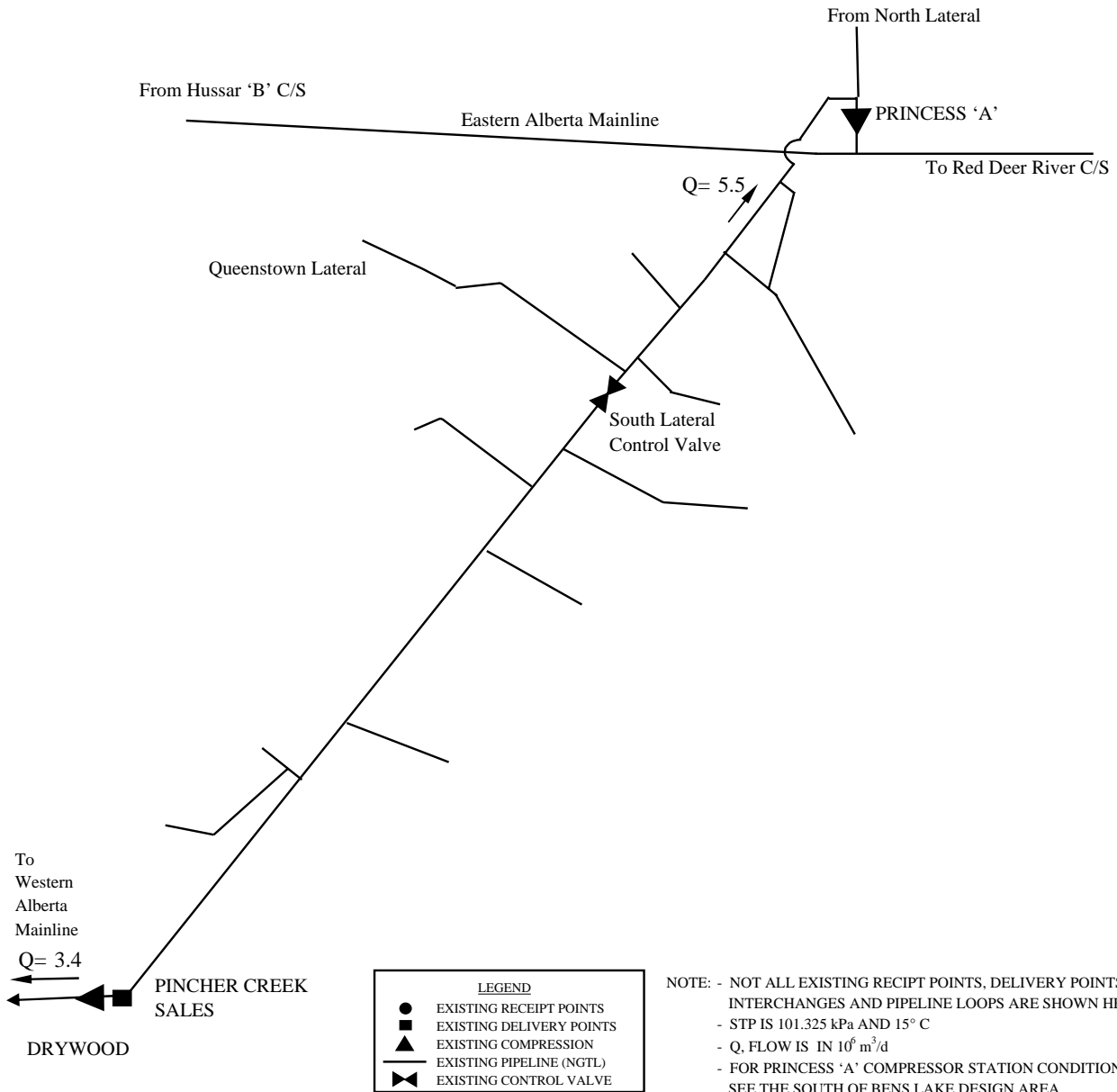
LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
▲	EXISTING COMPRESSION
—	EXISTING PIPELINE (NGTL)
⋈	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECIPT POINTS, DELIVERY POINTS
INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
- STP IS 101.325 kPa AND 15° C
- Q, FLOW IS IN $10^6 m^3/d$
- POWER IS AT SITE CONDITIONS
- COMPRESSION RATIO REPRESENTS UNIT CONDITIONS

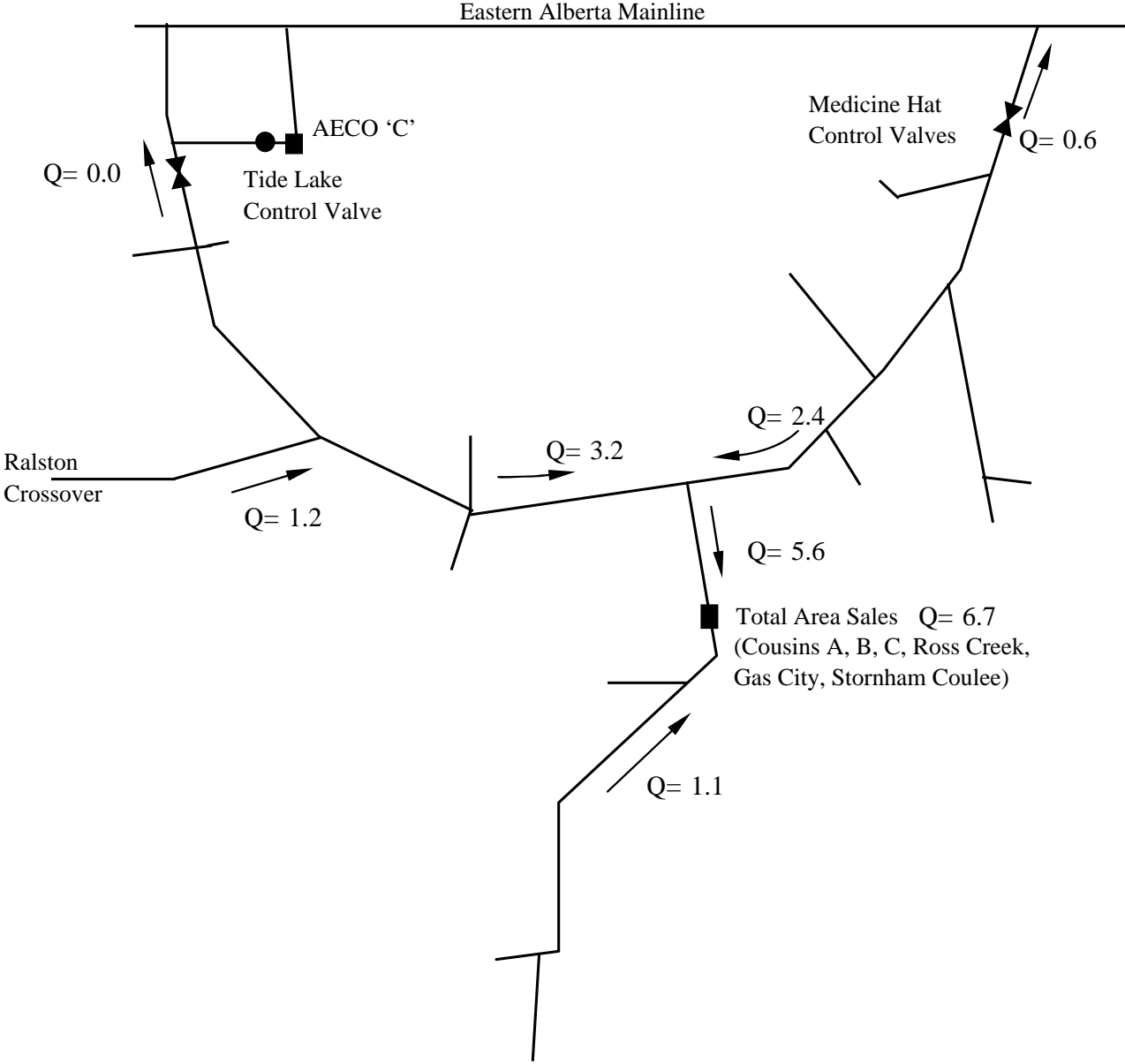
2007/08 GAS YEAR SOUTH AND ALDERSON DESIGN AREA WINTER DESIGN



2007/08 GAS YEAR SOUTH AND ALDERSON DESIGN AREA SUMMER DESIGN



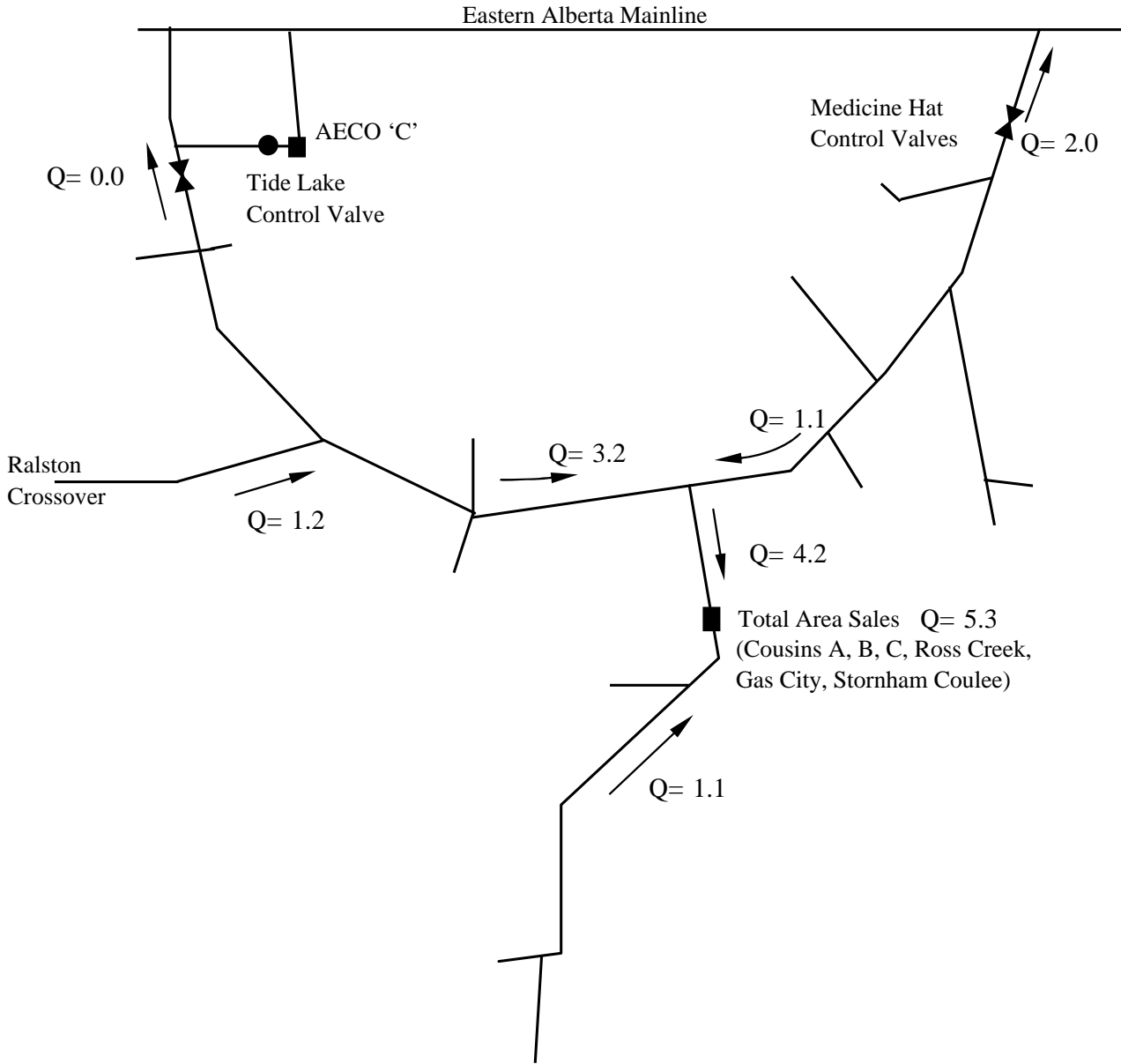
2007/08 GAS YEAR MEDICINE HAT DESIGN AREA WINTER DESIGN



LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
—	EXISTING PIPELINE (NGTL)
⌞	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - Q, FLOW IS IN 10⁶ m³/d

2007/08 GAS YEAR MEDICINE HAT DESIGN AREA SUMMER DESIGN



LEGEND	
●	EXISTING RECEIPT POINTS
■	EXISTING DELIVERY POINTS
—	EXISTING PIPELINE (NGTL)
▲	EXISTING CONTROL VALVE

NOTE: - NOT ALL EXISTING RECEIPT POINTS, DELIVERY POINTS, INTERCHANGES AND PIPELINE LOOPS ARE SHOWN HERE
 - STP IS 101.325 kPa AND 15° C
 - Q, FLOW IS IN $10^6 \text{ m}^3/\text{d}$