

# MONTANA



# OIL<sub>and</sub> GAS

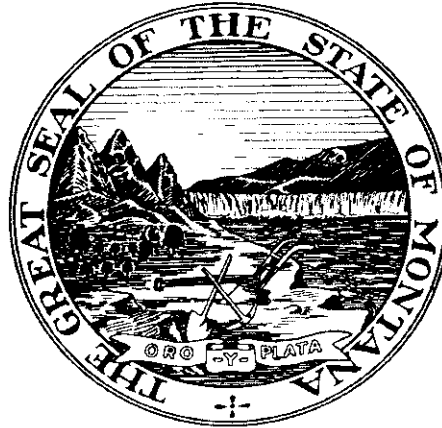
**ANNUAL REVIEW 1998**

Volume Forty-two

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION  
OF THE STATE OF MONTANA

# Oil and Gas Conservation Division

Marc Racicot, Governor



**ANNUAL REVIEW FOR THE YEAR 1998**

Relating to  
**OIL AND GAS**  
Volume 42

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**September, 1999**

## **ACKNOWLEDGMENTS**

The data in this report was compiled by Richard Jacobson, Statistician in the Billings office of the Montana Board of Oil and Gas Conservation, and Larry Syth, Statistical Technician in the Helena office. Cover, graphics, and layout by the Information Services Section of DNRC.

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## **Annual Review for the Year 1998 Volume 42**

# **ACTIVITY REVIEW**

Montana's oil production was 16.61 million barrels in 1998, compared to 16.07 million barrels the previous year. Gas production increased from 53.5 million MCF in 1997 to 59.7 million MCF in 1998. The drilling of 209 development wells represents a decrease in activity from the previous year, but the number of exploratory wells drilled in 1998 increased to 101. During the year, 165 new gas wells and 79 new oil wells were completed.

The 1998 activities reflect a shift in interest to natural gas exploration and production, and a somewhat decreased interest in oil prospects. In-fill drilling projects in existing gas fields and coal bed methane projects dominated drilling activity in 1998.

Seven geophysical contractors were active during the year, and 29 seismic projects were completed. The Williston Basin received most of the seismic activity. A significant number of the permitted projects involved 3-D techniques.

Horizontal drilling activity decreased somewhat from the high level established in 1997. Permits for 55 new

horizontal wells and 3 horizontal re-completions of existing vertical wells were approved. The Board of Oil and Gas Conservation approved one new tertiary enhanced recovery project, thereby qualifying the incremental increase in production for a lower tax rate. Thirty-one horizontal re-completion efforts were certified for tax purposes.

Drilling permit activity increased from 484 permits in 1997 to 551 permits to drill issued in 1998. The board's staff performed environmental assessments for each application involving private or state-owned lands prior to permit issuance. The board issued 107 orders during the year. Most of these orders authorized increased well density to accommodate in-fill drilling programs, established permanent spacing for horizontal wells and exception wells, delineated new fields, and allowed exceptions to existing field rules.

Underground Injection Control Program staff received 17 injection well permit applications. The board issued 16 new injection well permits. Staff approved 10 new wells in existing area permits.

# 1998 SUMMARY OF YEAR ACTIVITIES

## OIL

	<b>BBLs</b>	<b>BBLs/DAY</b>
Oil Produced .....	16,612,937	45,515
Oil Imported From:		
Canada .....	39,449,284	
Wyoming .....	<u>13,067,038</u>	
Total .....	52,516,322	143,880
Oil Exported .....	13,600,000	37,250

## GAS

	<b>MCF</b>	<b>MCF/DAY</b>
Gas Withdrawals:		
Natural .....	52,076,991	
Associated .....	<u>7,676,435</u>	
Total .....	59,753,426	163,708
Gas Imported From:		
Canada .....	16,124,184	
North Dakota .....	10,304,038	
Wyoming .....	<u>6,105,598</u>	
Total .....	32,533,820	89,134
Gas Exported To:		
North Dakota .....	12,709,188	
South Dakota .....	4,907,765	
Midwest .....	<u>20,425,225</u>	
Total .....	38,042,178	104,225

# FIVE YEAR SUMMARY

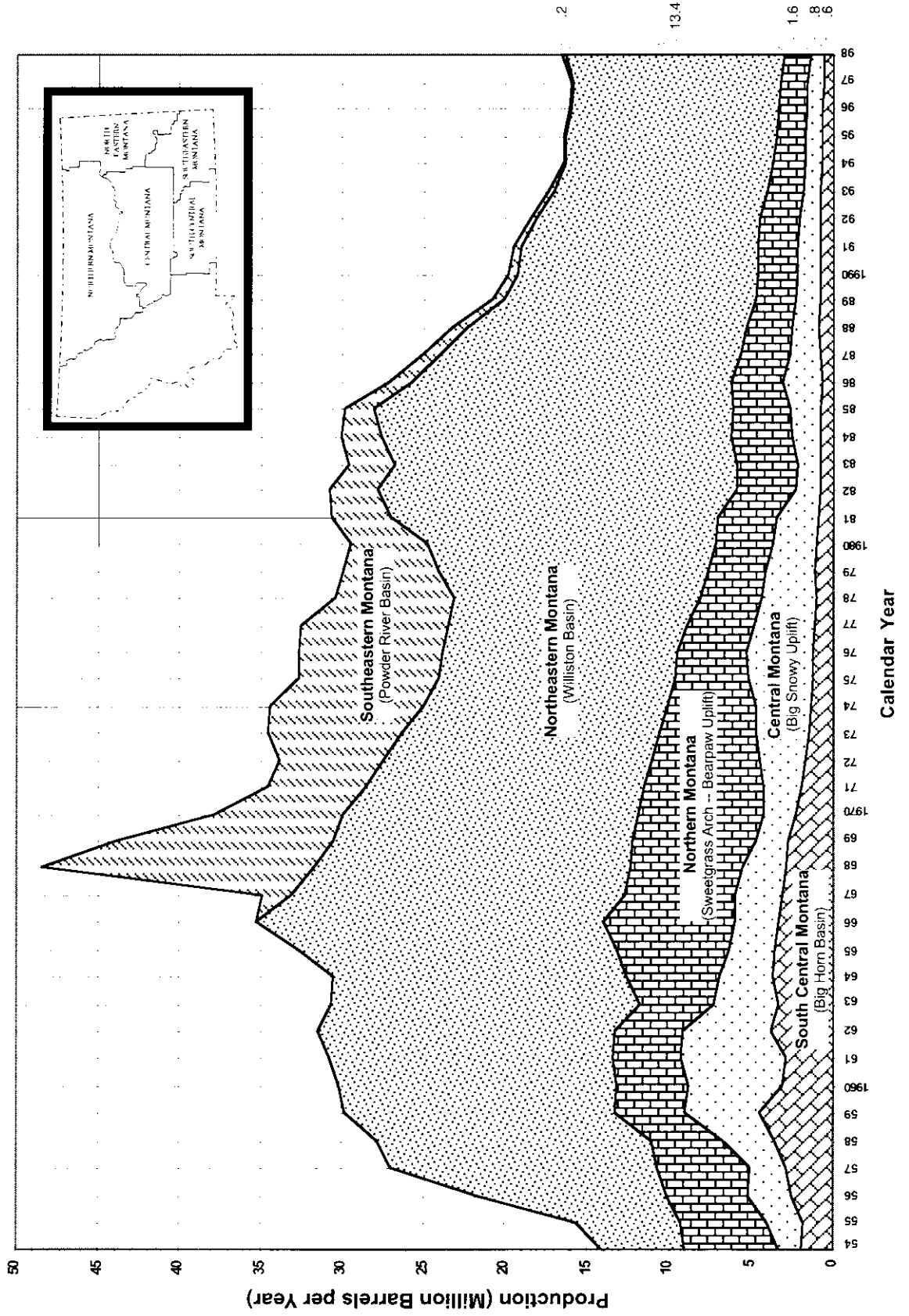
	1994	1995	1996	1997	1998
<b>OIL PRODUCTION IN BARRELS</b>					
Northern Montana	2,003,272	1,783,331	1,735,895	1,677,301	1,582,032
South Central	733,965	698,537	653,723	606,858	583,112
Central	955,703	1,040,127	950,865	967,478	815,762
Williston Basin	12,747,075	12,877,305	12,695,462	12,637,980	13,396,334
Powder River Basin	90,965	126,524	115,662	179,406	235,697
TOTAL	<u>16,530,980</u>	<u>16,525,824</u>	<u>16,151,607</u>	<u>16,069,023</u>	<u>16,612,937</u>
<b>NUMBER OF PRODUCING OIL WELLS</b>					
Northern Montana	2,324	2,093	2,029	1,971	1,884
South Central	136	132	130	130	131
Central	272	249	239	231	230
Williston Basin	1,311	1,310	1,294	1,301	1,330
Powder River Basin	71	28	46	73	82
TOTAL	<u>4,114</u>	<u>3,812</u>	<u>3,738</u>	<u>3,706</u>	<u>3,657</u>
<b>AVERAGE DAILY PRODUCTION/OIL WELL</b>					
Northern Montana	2.4	2.3	2.3	2.3	2.3
South Central	14.8	14.5	13.7	12.8	12.2
Central	9.6	11.4	10.8	11.5	9.7
Williston Basin	26.6	26.9	26.8	26.6	27.6
Powder River Basin	3.5	12.4	6.9	6.7	7.9
STATE AVERAGE	<u>11.0</u>	<u>11.9</u>	<u>11.8</u>	<u>11.9</u>	<u>12.4</u>
<b>DEVELOPMENT WELLS DRILLED</b>					
Oil Wells	34	53	68	59	44
Gas Wells	78	65	54	194	140
Dry Holes	29	14	15	33	23
Service Wells	5	10	4	4	2
TOTAL	<u>146</u>	<u>142</u>	<u>141</u>	<u>290</u>	<u>209</u>
<b>EXPLORATORY WELLS DRILLED</b>					
Oil Wells	23	7	13	31	35
Gas Wells	12	15	10	7	25
Dry Holes	45	44	40	41	38
Temporary Abandoned	6	3	5	2	3
TOTAL	<u>86</u>	<u>69</u>	<u>68</u>	<u>81</u>	<u>101</u>
TOTAL WELLS DRILLED	232	211	209	371	310
TOTAL FOOTAGE DRILLED	906,564	1,068,715	1,072,556	1,704,167	1,530,118
AVERAGE FOOTAGE DRILLED	3,908	5,065	5,131	4,593	4,935

# COUNTY ACTIVITY SUMMARY - 1998

COUNTY	DEVELOPMENT			EXPLORATORY			SERVICE WELLS	TEMP. ABAND.	TOTAL WELLS	TOTAL FEET	AVERAGE FEET
	OIL	GAS	DRY	OIL	GAS	DRY					
Big Horn	0	0	2	0	0	0	0	0	2	1,560	780
Blaine	0	26	6	4	11	4	0	0	51	99,036	1,941
Carbon	0	0	1	0	0	0	0	0	1	5,725	5,725
Chouteau	0	0	0	0	1	0	0	0	1	2,220	2,220
Daniels	0	0	0	1	0	1	0	0	2	16,693	8,346
Dawson	1	0	0	2	0	2	0	0	5	48,406	9,681
Fallon	30	31	0	6	0	0	0	1	68	594,723	8,745
Garfield	0	0	0	0	0	2	0	0	2	11,058	5,529
Glacier	1	5	0	0	0	2	0	0	8	30,112	3,764
Hill	0	26	10	1	9	3	0	0	49	82,437	1,682
Lewis and Clark	0	0	0	0	0	1	0	0	1	5,024	5,024
Liberty	0	1	0	0	0	0	0	0	1	1,893	1,893
McCone	0	0	0	0	0	4	0	0	4	34,658	8,664
Meagher	0	0	0	0	0	1	0	0	1	5,107	5,107
Musselshell	0	0	0	0	0	1	0	0	1	3,301	3,301
Petroleum	0	0	0	0	0	1	0	0	1	2,205	2,205
Phillips	0	29	1	0	3	0	0	0	33	48,494	1,469
Pondera	0	0	1	0	0	0	0	0	1	358	358
Richland	2	0	0	8	0	3	1	1	15	170,605	11,373
Roosevelt	1	0	0	4	0	4	1	0	10	99,902	9,990
Rosebud	0	0	0	2	0	0	0	0	2	11,442	5,721
Sheridan	5	0	0	5	0	4	0	1	15	160,726	10,715
Toole	4	22	2	1	1	1	0	0	31	59,466	1,918
Wheatland	0	0	0	0	0	1	0	0	1	9,163	9,163
Wibaux	0	0	0	1	0	1	0	0	2	19,412	9,706
Yellowstone	0	0	0	0	0	2	0	0	2	6,392	3,196
<b>TOTAL</b>	<b>44</b>	<b>140</b>	<b>23</b>	<b>35</b>	<b>25</b>	<b>38</b>	<b>2</b>	<b>3</b>	<b>310</b>	<b>1,530,118</b>	<b>4,935</b>



# Crude Oil Production in Montana - 1954-1998





## GAS PRODUCTION DATA - 1998 NATURAL GAS

Field	County	Reported Formation	Produced MCF
Amanda .....	Toole .....	Bow Island, Burwash, Dakota, Sunburst, Swift .....	202,500
Antelope Coulee .....	Toole .....	Bow Island .....	3,255
Arch Apex .....	Toole .....	Bow Island, Sunburst .....	245,085
Ashfield .....	Phillips .....	Bowdoin (Carlile), Greenhorn, Phillips .....	1,964,392
Badlands .....	Hill .....	Eagle .....	112,251
Battle Creek .....	Blaine .....	Eagle, Niobrara .....	1,624,923
Bears Den .....	Liberty .....	Bow Island, Swift .....	2,207
Bell Creek, Southeast .....	Powder River .....	Muddy .....	169,707
Big Coulee & Area .....	Golden Valley, Stillwater .....	Big Elk, Cat Creek, Morrison .....	196,582
Big Rock .....	Glacier .....	Blackleaf, Bow Island, Colorado .....	260,910
Black Butte .....	Hill .....	Eagle .....	29,136
Black Coulee .....	Blaine .....	Eagle .....	138,511
Blackfoot .....	Glacier .....	Bow Island, Dakota, Sunburst .....	59,183
Blackjack .....	Liberty .....	Blackleaf, Second White Specks, Sunburst .....	64,281
Bowdoin and Area .....	Phillips, Valley .....	Bowdoin (Carlile), Greenhorn, Phillips .....	4,503,905
Bowes .....	Blaine .....	Eagle .....	463,772
Bradley .....	Glacier .....	Bow Island, Sunburst .....	2,932
Browns Coulee .....	Hill .....	Eagle, Second White Specks .....	406,792
Browns Coulee, East .....	Hill .....	Eagle .....	98,679
Bullwacker .....	Blaine, Chouteau .....	Eagle, Judith River, Virgelle .....	1,026,026
Camp Creek .....	Chouteau .....	Eagle .....	16,842
Cedar Creek .....	Fallon .....	Eagle, Judith River .....	3,794,464
Chain Lakes .....	Hill .....	Eagle .....	2,308
Clark's Fork .....	Carbon .....	Greybull .....	24,680
Coal Coulee .....	Hill .....	Eagle .....	20,453
Coal Mine Coulee .....	Chouteau .....	Eagle, Second White Specks .....	16,198
Cut Bank .....	Glacier, Toole .....	Blackleaf, Bow Island, Cut Bank, Dakota, Kootenai, Lander, Moulton, Sunburst .....	2,197,981
Devon .....	Toole .....	Bow Island .....	69,288
Devon, East .....	Toole .....	Bow Island .....	11,492
Devon, South Unit .....	Toole .....	Bow Island .....	11,763
Dry Creek .....	Carbon .....	Frontier, Judith River, Virgelle .....	399,041
Dry Creek (Shallow Gas) .....	Carbon .....	Eagle, Virgelle .....	31,864
Dry Creek, Middle .....	Carbon .....	Frontier .....	16,053
Dry Creek, West .....	Carbon .....	Greybull .....	28,009
Dry Fork .....	Pondera .....	Bow Island .....	18,617
Dunkirk .....	Toole .....	Dakota .....	54,611
Dunkirk, North .....	Toole .....	Bow Island, Sunburst, Swift .....	158,258
Dutch John Coulee .....	Toole .....	Sunburst .....	67,140
Eagle Springs .....	Toole .....	Bow Island .....	8,398
Ethridge .....	Toole .....	Swift .....	72,519
Ethridge, North .....	Toole .....	Bow Island .....	24,277
Fitzpatrick Lake .....	Toole .....	Bow Island .....	85,935
Flat Coulee .....	Liberty .....	Bow Island, Dakota, Swift .....	33,237
Fort Conrad .....	Pondera, Toole .....	Bow Island .....	23,513
Fred and George Creek .....	Toole .....	Bow Island .....	26,857
Fresno and Area .....	Hill .....	Eagle .....	272,780
Galata .....	Toole .....	Bow Island .....	44,595
Gas Light .....	Fallon .....	Eagle .....	192,509
Golden Dome .....	Carbon .....	Eagle, Frontier .....	56,095
Grandview .....	Liberty .....	Bow Island .....	40,314
Hardpan .....	Chouteau, Pondera .....	Bow Island .....	64,532
Hardpan Area .....	Pondera .....	Bow Island .....	7,312
Havre .....	Blaine, Hill .....	Eagle .....	17,502
Haystack Butte .....	Liberty .....	Bow Island .....	27,722
Haystack Butte, West .....	Liberty .....	Bow Island .....	60,989

## GAS PRODUCTION DATA - 1998 NATURAL GAS (continued)

Field	County	Reported Formation	Produced MCF
Highline .....	Hill .....	Eagle .....	8,780
Keith Area .....	Liberty .....	Bow Island, Sawtooth, Second White Specks .....	61,982
Keith, East .....	Liberty .....	Bow Island, Niobrara, Sawtooth, Second White Specks ....	311,220
Kevin Area .....	Toole .....	Swift .....	1,204
Kevin Southwest .....	Toole .....	Bow Island, Dakota, Kootenai, Sunburst, Swift .....	194,984
Kevin Sunburst .....	Toole .....	Blackleaf, Bow Island, Burwash, Cut Bank, Dakota, Ellis, Kootenai, Madison, Nisku, Rierdon, Sunburst, Swift .....	528,351
Kevin Sunburst (Dakota) .....	Toole .....	Dakota .....	14,029
Kevin Sunburst-Bow Island .....	Toole .....	Bow Island .....	41,123
Kevin Sunburst Nisku & Area .....	Toole .....	Nisku .....	78,589
Kevin, East Bow Island Gas .....	Toole .....	Bow Island, Sunburst .....	14,701
Kevin, East Gas .....	Toole .....	Bow Island, Sunburst, Swift .....	66,860
Kevin, East Nisku Oil .....	Toole .....	Nisku .....	23,386
Kicking Horse .....	Toole .....	Bow Island, Sunburst .....	109,227
Lake Basin .....	Stillwater .....	Big Elk, Claggett .....	73,130
Ledger .....	Pondera, Toole .....	Bow Island .....	114,393
Leroy .....	Blaine .....	Eagle .....	146,567
Liscom Creek .....	Custer .....	Shannon .....	241,481
Little Creek .....	Chouteau .....	Eagle, Virgelle .....	9,448
Little Rock .....	Glacier .....	Blackleaf, Bow Island, Cut Bank, Dakota, Lander, Sunburst, Swift .....	100,125
Lohman .....	Blaine .....	Eagle .....	49,914
Lohman Area .....	Blaine .....	Eagle .....	412,878
Loring .....	Phillips .....	Bowdoin (Carlile), Greenhorn, Phillips .....	1,849,248
Loring, East .....	Phillips .....	Bowdoin (Carlile), Greenhorn, Phillips .....	1,180,873
Loring, West .....	Phillips .....	Bowdoin (Carlile), Greenhorn, Phillips .....	69,040
Marias River .....	Pondera, Toole .....	Bow Island .....	38,598
Middle Butte .....	Liberty, Toole .....	Blackleaf, Bow Island, Second White Specks .....	45,963
Milk River .....	Phillips .....	Phillips .....	820
Miners Coulee .....	Toole .....	Blackleaf, Bow Island, Sunburst, Swift .....	55,004
Mount Lily .....	Liberty .....	Bow Island, Swift .....	7,059
O'Briens Coulee .....	Liberty .....	Bow Island, Blackleaf, Second White Specks, Spike .....	141,085
Old Shelby .....	Toole .....	Bow Island, Sunburst, Swift .....	783,616
Phantom .....	Toole .....	Sunburst .....	12,852
Phantom, West .....	Toole .....	Sunburst .....	14,359
Plevna .....	Fallon .....	Eagle .....	60,248
Police Coulee .....	Toole .....	Bow Island .....	41,550
Prairie Dell .....	Toole .....	Bow Island, Dakota, Kootenai, Sunburst, Swift .....	779,828
Prairie Dell, West .....	Toole .....	Bow Island, Dakota, Kootenai, Madison, Rierdon, Sunburst, Swift .....	85,429
Rattlesnake Coulee .....	Toole .....	Sunburst .....	1,213
Red Rock .....	Blaine, Hill .....	Eagle, Second White Specks .....	1,226,778
Rocky Boy Area .....	Hill .....	Eagle, Judith River .....	143,763
Rudyard .....	Hill .....	Eagle, Sawtooth .....	37,144
Sage Creek .....	Liberty .....	Blackleaf, Bow Island, Second White Specks .....	75,104
Sawtooth Mountain & Area .....	Blaine .....	Eagle, Judith River .....	590,825
Shelby Area .....	Toole .....	Sunburst .....	10,671
Shelby, East .....	Toole .....	Bow Island, Burwash, Sunburst, Swift .....	38,530
Sherard .....	Blaine, Chouteau .....	Eagle, Judith River .....	60,931
Sherard Area .....	Blaine, Chouteau .....	Eagle, Judith River .....	1,330,142
Sixshooter Dome .....	Stillwater, Sweet Grass .....	Eagle, Lakota, Telegraph Creek .....	235,696
Snoose Coulee .....	Liberty .....	Bow Island .....	27,958
Snow Coulee .....	Liberty .....	Sunburst .....	2,778
Spring Coulee .....	Hill .....	Greenhorn .....	6,762
Strawberry Creek Area .....	Toole .....	Bow Island, Burwash .....	35,833
Swanson Creek .....	Phillips, Valley .....	Carlile, Greenhorn, Phillips .....	322,208

**GAS PRODUCTION DATA - 1998**  
**NATURAL GAS (continued)**

Field	County	Reported Formation	Produced MCF
Three Mile .....	Blaine .....	Eagle .....	52,131
Tiber Area .....	Toole .....	Bow Island .....	13,357
Tiber, East .....	Toole .....	Bow Island .....	66,801
Tiger Ridge and Area .....	Blaine, Hill .....	Eagle, Judith River .....	16,157,608
Timber Creek, West .....	Toole .....	Sunburst .....	8,787
Trail Creek .....	Liberty, Toole .....	Bow Island, Sunburst, Swift .....	98,721
Utopia .....	Liberty .....	Sawtooth, Bow Island .....	181,085
Vandalia .....	Valley .....	Carlile .....	23,831
West Butte .....	Toole .....	Bow Island .....	21,638
West Butte Shallow Gas .....	Toole .....	Bow Island .....	9,516
Whitewater .....	Phillips .....	Bowdoin, Carlile, Greenhorn, Phillips .....	2,667,328
Whitewater, East .....	Phillips .....	Carlile, Greenhorn, Martin, Phillips .....	410,220
Whitlash .....	Liberty .....	Bow Island, Dakota, Madison, Spike, Sunburst, Swift .....	575,624
Whitelash, West .....	Liberty, Toole .....	Bow Island, Sunburst .....	15,219
Williams .....	Pondera .....	Bow Island .....	825
Willow Ridge .....	Toole .....	Bow Island, Sunburst .....	180,968
Willow Ridge, South .....	Toole .....	Bow Island, Sunburst .....	100,537
Willow Ridge, West .....	Toole .....	Bow Island .....	5,338
<b>TOTAL NATURAL GAS .....</b>			<b>52,076,991</b>

## GAS PRODUCTION DATA - 1998 ASSOCIATED GAS

Field	County	Reported Formation	Produced MCF
Alkali Coulee .....	Sheridan .....	Red River .....	8,424
Anvil .....	Roosevelt .....	Nisku, Ratcliffe, Red River .....	93,861
Bainville .....	Roosevelt .....	Ratcliffe, Red River, Winnipegosis .....	25,267
Bainville (Ratcliffe/Mission Canyon) .....	Roosevelt .....	Ratcliffe .....	3,180
Bainville, North .....	Roosevelt .....	Madison, Nisku, Red River, Winnipegosis .....	437,970
Bainville, West .....	Roosevelt .....	Red River .....	4,548
Bainville II .....	Roosevelt .....	Ratcliffe, Red River .....	25,239
Beanblossum .....	Garfield .....	Tyler .....	1,674
Big Muddy Creek .....	Roosevelt .....	Interlake, Mission Canyon .....	12,500
Bloomfield .....	Dawson .....	Dawson Bay, Interlake .....	8,169
Breed Creek .....	Rosebud .....	Tyler .....	6,015
Brorson .....	Richland .....	Interlake, Madison, Red River .....	107,177
Brorson, South .....	Richland .....	Bakken, Mission Canyon, Red River .....	32,103
Brush Lake .....	Sheridan .....	Red River, Stonewall .....	112,831
Burget, East .....	Roosevelt .....	Nisku .....	26,544
Cabaret Coulee .....	Daniels .....	Madison .....	172
Cabin Creek .....	Fallon .....	Madison, Red River, Siluro-Ordovician .....	332,905
Canal .....	Richland .....	Madison, Mission Canyon, Red River .....	18,006
Cattails .....	Richland .....	Ratcliffe .....	39,022
Cattails, South .....	Richland .....	Madison .....	5,480
Charlie Creek .....	Richland .....	Bakken, Dawson Bay .....	24,602
Charlie Creek, East .....	Richland .....	Red River .....	17,967
Chelsea Creek .....	Roosevelt .....	Nisku .....	1,610
Clear Lake .....	Sheridan .....	Mission Canyon, Nisku, Ratcliffe, Red River .....	52,695
Clear Lake, South .....	Sheridan .....	Red River .....	2,720
Colored Canyon .....	Sheridan .....	Red River .....	47,685
Comertown .....	Sheridan .....	Nisku, Ratcliffe, Red River .....	22,917
Comertown, South .....	Sheridan .....	Red River .....	5,418
Cottonwood .....	Richland .....	Ratcliffe .....	11,769
Cottonwood, East .....	Roosevelt .....	Ratcliffe .....	1,750
Crane .....	Richland .....	Devonian, Duperow, Interlake, Red River .....	30,005
Cupton .....	Fallon .....	Red River .....	6,782
Cut Bank .....	Pondera, Glacier, Toole .....	Cut Bank, Madison .....	72,241
Dagmar .....	Sheridan .....	Red River .....	11,300
Deer Creek .....	Dawson .....	Charles, Tyler .....	583,776
Diamond Point .....	Roosevelt .....	Interlake, Red River .....	21,825
Divide .....	Sheridan .....	Madison, Ratcliffe, Red River .....	71,133
Dooley .....	Sheridan .....	Ratcliffe .....	3,744
Dry Creek .....	Carbon .....	Greybull .....	99,065
Dwyer .....	Sheridan .....	Charles, Red River .....	26,665
Eagle .....	Richland .....	Interlake, Madison, Mission Canyon, Ratcliffe .....	11,542
Elk Basin .....	Carbon .....	Embar, Frontier, Madison, Tensleep .....	319,360
Elk Basin, Northwest .....	Carbon .....	Cloverly, Embar, Frontier, Madison, Tensleep .....	15,613
Enid, North .....	Richland .....	Red River .....	12,404
Epworth .....	Richland .....	Bakken .....	7,060
Fairview .....	Richland .....	Madison, Mission Canyon, Ratcliffe, Red River .....	179,638
Fairview, East .....	Richland .....	Ratcliffe, Winnipegosis .....	8,968
Fishhook .....	Sheridan .....	Red River .....	5,691
Flat Coulee .....	Liberty .....	Swift .....	5,268
Flat Lake .....	Sheridan .....	Nisku, Ratcliffe, Red River .....	299,700
Flat Lake, South .....	Sheridan .....	Ratcliffe .....	1,365
Fort Gilbert .....	Richland .....	Madison, Mission Canyon, Red River .....	32,487
Four Mile Creek .....	Richland .....	Red River .....	5,201
Four Mile Creek, West .....	Richland .....	Red River .....	17,053
Fred & George Creek .....	Toole .....	Sunburst .....	140
Frog Coulee .....	Richland .....	Red River .....	4,302
Froid, South .....	Roosevelt .....	Red River, Winnipegosis .....	26,303
Girard .....	Richland .....	Bakken, Red River .....	17,229
Glendive .....	Dawson .....	Red River, Siluro-Ordovician, Stoney Mountain .....	26,230

**GAS PRODUCTION DATA - 1998**  
**ASSOCIATED GAS (continued)**

Field	County	Reported Formation	Produced MCF
Golden Dome .....	Carbon .....	Greybull .....	28,631
Goose Lake .....	Sheridan .....	Ratcliffe, Red River .....	10,464
Goose Lake, West .....	Sheridan .....	Red River .....	6,460
Graben Coulee .....	Glacier .....	Cut Bank, Sunburst .....	1,898
Green Coulee .....	Sheridan .....	Ratcliffe .....	4,963
Gunsight .....	Roosevelt .....	Mission Canyon .....	6,728
Hardscrabble Creek .....	Richland .....	Red River .....	16,553
Hay Creek .....	Richland .....	Mission Canyon, Red River .....	31,646
Hiawatha .....	Musselshell .....	Tyler .....	229
High Five .....	Rosebud .....	Stensvad, Tyler .....	9,282
Intake II .....	Richland .....	Mission Canyon .....	8,006
Jim Coulee .....	Musselshell .....	Tyler .....	615
Katy Lake .....	Sheridan .....	Red River .....	12,484
Katy Lake, North .....	Sheridan .....	Madison, Mission Canyon, Nesson, Red River .....	83,377
Kevin-Sunburst .....	Toole .....	Madison, Sunburst, Swift .....	21,119
Kevin, East Nisku Oil .....	Toole .....	Nisku .....	20,031
Kincheloe Ranch, West .....	Rosebud .....	Tyler .....	3,079
Lambert .....	Richland .....	Red River .....	29,428
Landslide Butte .....	Glacier .....	Madison .....	76,194
Lane .....	Richland .....	Red River .....	29,137
Leary .....	Powder River .....	Muddy .....	3,105
Little Beaver .....	Fallon .....	Red River, Siluro-Ordovician .....	22,874
Little Beaver, East .....	Fallon .....	Mission Canyon, Red River, Siluro-Ordovician .....	10,889
Little Wall Creek .....	Musselshell .....	Stensvad, Tyler .....	9,059
Little Wall Creek, South .....	Musselshell .....	Tyler .....	2,303
Lone Butte .....	Richland .....	Mission Canyon, Red River .....	11,736
Lonetree Creek .....	Richland .....	Interlake, Red River .....	115,838
Long Creek, West .....	Roosevelt .....	Nisku .....	725
Lookout Butte .....	Fallon .....	Madison, Red River, Siluro-Ordovician .....	104,192
Lookout Butte, East .....	Fallon .....	Lodgepole, Red River .....	646,880
Lowell, South .....	Sheridan .....	Red River .....	29,526
Lustre .....	Valley .....	Charles, Mission Canyon, Ratcliffe .....	42,168
Lustre, North .....	Valley .....	Charles .....	2,120
McCabe .....	Roosevelt .....	Ratcliffe .....	3,826
McCabe, East .....	Roosevelt .....	Red River .....	19,693
McCoy Creek .....	Sheridan .....	Red River .....	526
Medicine Lake .....	Sheridan .....	Devonian, Duperow, Gunton, Mission Canyon, .....	
		Red River, Winnipegosis .....	33,830
Medicine Lake, South .....	Sheridan .....	Red River .....	63,833
Melstone .....	Musselshell .....	Tyler .....	12,223
Midfork .....	Valley .....	Charles, Nisku .....	15,258
Missouri Breaks .....	Richland .....	Nisku, Red River .....	2,237
Mon Dak, West .....	Richland .....	Duperow, Interlake, Madison, Mission Canyon, .....	
		Ordovician, Red River, Stoney Mountain .....	212,327
Mona .....	Richland .....	Red River .....	8,386
Monarch .....	Fallon .....	Interlake, Madison, Red River, Siluro-Ordovician .....	55,192
Mustang .....	Richland .....	Bakken, Red River .....	60,188
Neiser Creek .....	Sheridan .....	Red River .....	68,862
Nielsen Coulee .....	Daniels .....	Madison .....	1,437
Ninemile .....	Toole .....	Nisku .....	2,904
Nohly .....	Richland .....	Madison, Mission Canyon, Nisku, Ratcliffe, .....	
		Red River, Stonewall .....	321,167
North Fork .....	Richland .....	Mission Canyon .....	8,127
Ollie .....	Fallon .....	Red River .....	872
Otis Creek .....	Richland .....	Ratcliffe .....	2,851
Otis Creek, South .....	Richland .....	Ratcliffe .....	1,144
Outlook .....	Sheridan .....	Madison, Nisku .....	30,692
Oxbow .....	Roosevelt .....	Red River .....	19,392
Oxbow II .....	Roosevelt .....	Nisku .....	42,017

**GAS PRODUCTION DATA - 1998  
ASSOCIATED GAS (continued)**

Field	County	Reported Formation	Produced MCF
Palomino .....	Roosevelt .....	Nisku .....	2,773
Pennel .....	Fallon .....	Red River, Siluro-Ordovician, Stoney Mountain .....	333,467
Pine .....	Fallon, Wibaux, Prairie, Dawson .....	Mission Canyon, Siluro-Ordovician .....	167,867
Poplar, Northwest .....	Roosevelt .....	Charles .....	16,798
Pronghorn .....	Sheridan .....	Red River .....	537
Putnam .....	Richland .....	Bakken, Interlake, Madison, Mission Canyon, Red River .....	72,713
Rattlesnake Butte .....	Petroleum .....	Cat Creek .....	3,475
Raymond .....	Sheridan .....	Duperow, Nisku, Red River, Winnipegosis .....	191,242
Raymond, North .....	Sheridan .....	Red River .....	4,191
Reagan .....	Glacier .....	Madison .....	64,100
Red Bank .....	Roosevelt .....	Madison, Mission Canyon .....	12,100
Red Bank, South .....	Roosevelt .....	Red River .....	3,697
Red Creek .....	Glacier .....	Cut Bank, Madison .....	20,273
Red Water .....	Richland .....	Red River, Winnipegosis .....	5,078
Red Water, East .....	Richland .....	Red River .....	5,125
Refuge .....	Sheridan .....	Nisku, Red River .....	6,782
Reserve .....	Sheridan .....	Red River .....	39,347
Reserve II .....	Sheridan .....	Interlake .....	322
Reserve South .....	Sheridan .....	Ratcliffe .....	600
Ridgelawn .....	Richland .....	Mission Canyon, Ratcliffe, Red River .....	54,499
Ridgelawn, North .....	Richland .....	Madison .....	14,226
RipRap Coulee .....	Roosevelt .....	Ratcliffe .....	18,704
Rocky Point .....	Roosevelt .....	Red River .....	12,496
Royals .....	Dawson .....	Dawson Bay .....	3,624
Rush Mountain .....	Sheridan .....	Gunton, Ratcliffe .....	33,892
Salt Lake .....	Sheridan .....	Red River .....	2,340
Second Creek .....	Richland .....	Duperow, Ratcliffe, Red River .....	16,269
Shotgun Creek .....	Roosevelt .....	Ratcliffe .....	12,850
Sidney .....	Richland .....	Madison, Mission Canyon, Ratcliffe, Red River .....	24,733
Sioux Pass .....	Richland .....	Interlake, Red River .....	113,580
Sioux Pass, Middle .....	Richland .....	Red River .....	41,903
Sioux Pass, North .....	Richland .....	Madison, Ratcliffe, Red River .....	78,266
Sioux Pass, South .....	Richland .....	Red River .....	2,706
Sioux Pass, West .....	Richland .....	Red River .....	29,844
Snake Creek .....	Roosevelt .....	Gunton, Red River, Winnipegosis .....	13,919
South Fork .....	Richland .....	Mission Canyon, Red River .....	14,239
Spring Lake .....	Richland .....	Bakken, Dawson Bay .....	17,485
Spring Lake, West .....	Richland .....	Bakken .....	1,115
Stampede .....	Richland .....	Bakken, Red River .....	15,859
Sunny Hill, West .....	Sheridan .....	Ratcliffe .....	7,040
Target .....	Roosevelt .....	Nisku .....	9,658
Three Buttes .....	Richland .....	Bakken, Red River .....	18,886
Tule Creek .....	Roosevelt .....	Devonian, Nisku .....	10,941
Tule Creek, East .....	Roosevelt .....	Nisku .....	2,848
Utopia .....	Liberty .....	Swift .....	12,634
Vaux .....	Richland .....	Bakken, Interlake, Madison, Mission Canyon, Red River, Stonewall .....	113,054
Wakea .....	Sheridan .....	Duperow, Nisku, Red River, Winnipegosis .....	31,651
Waterhole Creek .....	Fallon .....	Red River .....	62,156
Weed Creek .....	Yellowstone .....	Amsden .....	740
Whitlash .....	Liberty .....	Sunburst, Swift .....	39,111
Wills Creek, South .....	Fallon .....	Siluro-Ordovician .....	29,348
Windy Ridge .....	Fallon .....	Red River .....	18,233
Woodrow .....	Dawson .....	Charles, Interlake .....	4,320
Wrangler .....	Sheridan .....	Red River .....	31,798
Wright Creek .....	Powder River .....	Muddy .....	9,948

**TOTAL ASSOCIATED GAS** ..... **7,676,435**



## REFINERS' ANNUAL REPORT — 1998

COMPANY	BEGINNING STORAGE	MONTANA OIL	WYOMING OIL	CANADA OIL	REFINED	ENDING STORAGE
Cenex	311,130	1,524,879	572,752	14,471,664	16,636,236	244,189
Conoco	120,481	223,173	1,585,674	17,220,914	18,970,396	179,847
Exxon Corp.	239,094	811,281	10,908,612	6,112,547	17,904,360	167,174
Montana Refining Co.	17,015	643,397	-0-	1,644,159	2,288,237	16,334
<b>TOTALS</b>	<b>687,720</b>	<b>3,202,730</b>	<b>13,067,038</b>	<b>39,449,284</b>	<b>55,799,229</b>	<b>607,544</b>

### PERCENTAGE OF CRUDE OIL RECEIVED

YEAR	MONTANA	CANADA	WYOMING
1994	5.94	71.40	22.66
1995	5.92	74.47	19.61
1996	5.49	76.98	17.53
1997	5.75	71.04	23.21
1998	5.75	70.80	23.45

### AVERAGE BARRELS PER DAY

YEAR	MONTANA	CANADA	WYOMING	TOTAL
1994	8,518	102,420	32,506	143,444
1995	8,333	104,837	27,600	140,770
1996	8,288	116,254	26,466	151,008
1997	8,706	107,660	35,179	151,545
1998	8,775	108,080	35,800	152,655

### REFINING FIVE YEAR COMPARISON

1994	1995	1996	1997	1998
52,157,319	51,400,112	55,200,114	55,391,669	55,799,229

# 1998 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

1998 CUMULATIVE				1998 CUMULATIVE			
FIELD	COUNTY	BARRELS	BARRELS	FIELD	COUNTY	BARRELS	BARRELS
Ace High	Rosebud	0	3,686	Cattails	Richland	41,840	923,864
Agawan	Teton	0	79	Cattails, South	Richland	10,145	183,115
Alkali Coulee	Sheridan	9,272	49,522	Charlie Creek	Richland	19,676	863,838
Andes	Richland	0	21,175	Charlie Creek, East	Richland	25,514	915,991
Antelope, North	Sheridan	0	2,484	Charlie Creek, North	Richland	0	43,894
Anvil	Roosevelt	106,081	4,809,033	Chelsea Creek	Roosevelt	3,618	130,198
Anvil, North	Sheridan	0	9,446	Clark's Fork	Carbon	510	95,265
Ash Creek	Big Horn	0	868,155	Clark Fork's, North	Carbon	0	1,024,608
Ator Creek	Sheridan	3,532	23,409	Clark Fork's, South	Carbon	0	80,553
Autumn	Valley	0	35,546	Clear Lake	Sheridan	107,266	3,898,790
Bainville	Roosevelt	32,593	1,044,811	Clear Lake, South	Sheridan	6,353	221,501
Bainville (Ratcliffe/ Mission Canyon)	Roosevelt	7,187	24,149	Coal Ridge	Sheridan	0	22,937
Bainville II	Roosevelt	25,729	834,623	Colored Canyon	Sheridan	77,907	1,019,463
Bainville, North	Roosevelt	569,360	4,324,959	Comertown	Sheridan	53,791	2,847,376
Bainville, West	Roosevelt	4,105	260,115	Comertown, South	Sheridan	14,631	441,803
Bannatyne	Teton	0	422,406	Conrad, South	Pondera	0	159,410
Bascom	Musselshell	0	27,830	Corner Pocket	Richland	0	14,483
Beanblossom	Garfield	13,393	616,858	Cottonwood	Richland	38,293	393,277
Bear's Den	Liberty	18,846	743,018	Cottonwood, East	Roosevelt	7,897	94,304
Belfry	Carbon	0	101,245	Cow Creek	McCone	0	127,813
Bell Creek	Carter, Powder River	229,714	132,451,667	Cow Creek, East	McCone	17,951	2,650,940
Benrud	Roosevelt	0	289,695	Crane	Richland	46,352	2,717,933
Benrud, East	Roosevelt	3,178	2,968,094	Crocker Springs, East	Pondera	0	3,464
Benrud, Northeast	Roosevelt	0	1,019,598	Crooked Creek	Yellowstone	0	27,395
Berthelote	Toole	737	99,088	Culbertson	Roosevelt	0	175,652
Big Gully	Musselshell	466	114,443	Cupton	Fallon	49,395	2,718,495
Big Gully, North	Musselshell	0	29,892	Curlew	Sheridan	0	5,468
Big Muddy Creek	Roosevelt	20,180	1,346,267	Cut Bank	Glacier, Toole	481,674	167,600,635
Big Rock	Glacier	0	12,444	Dagmar	Sheridan	12,643	667,757
Big Wall	Musselshell	39,454	8,264,352	Dagmar, North	Sheridan	0	55,342
Big Wall, North	Musselshell	0	7,218	Deadman's Coulee	Roosevelt	0	264,528
Black Diamond	Wibaux	0	661,442	Dean Dome	Stillwater	0	92,597
Blackfoot	Glacier	14,433	1,750,096	Deer Creek	Dawson	96,902	2,653,515
Blackfoot, East	Glacier	0	810	Delphia	Musselshell	0	354,923
Blackleaf Canyon	Teton	0	32,922	Den	Daniels	7,536	48,590
Bloomfield	Dawson	16,328	619,221	Devil's Basin	Musselshell	436	129,903
Blue Hill	Richland	0	162,532	Devil's Pocket	Golden Valley	0	53,796
Blue Mountain	Wibaux	27,453	123,595	Diamond Point	Roosevelt	22,919	1,067,078
Border	Toole	4,142	1,481,904	Divide	Sheridan	113,125	2,981,397
Boulder	Richland	0	156,754	Dooley	Sheridan	13,209	326,701
Bowes	Blaine	87,202	10,807,448	Dry Creek	Carbon	2,109	4,169,143
Box Canyon	Richland	0	245,847	Dry Creek, Middle	Carbon	0	1,694
Bradley	Glacier	916	269,760	Dry Creek, West	Carbon	159	13,902
Brady	Pondera	4,957	234,150	Dugout Coulee	Richland	0	66,740
Bredette	Roosevelt	0	232,121	Dunkirk, North	Toole	0	19
Bredette, North	Roosevelt	0	488,554	Dutch Henry	Daniels	10,134	218,249
Breed Creek	Rosebud	131,710	2,268,696	Dutch John Coulee	Toole	7,337	251,956
Brorson	Richland	119,036	4,538,044	Dwyer	Sheridan	73,514	9,130,863
Brorson, South	Richland	44,942	2,242,131	Eagle	Richland	34,190	2,167,159
Brush Lake	Sheridan	116,941	3,134,248	East Glacier	Glacier	400	25,563
Buffalo Flats	Chouteau	0	603	Elk Basin	Carbon	437,557	87,286,228
Buffalo Lake	Glacier	0	936	Elk Basin, Northwest	Carbon	57,671	2,352,972
Burget	Roosevelt	0	6,504	Enid, North	Richland	7,737	465,046
Burget, East	Roosevelt	81,537	391,641	Epworth	Richland	9,616	72,035
Burns Creek	Dawson, Richland	0	260,204	Fairview	Richland	105,873	9,493,594
Burns Creek, South	Dawson	0	79,958	Fairview, East	Richland	12,539	479,980
Butchers Creek	Carbon	0	579	Fairview, West	Richland	26,568	448,042
Bynum	Teton	0	5,971	Fiddler Creek	Stillwater	0	2,574
Cabaret Coulee	Daniels	1,917	445,122	Fishhook	Sheridan	15,277	1,169,561
Cabin Creek	Fallon	1,154,552	103,391,599	Fitzpatrick Lake	Toole	0	257
Cadmus	Glacier	0	1,173	Flat Coulee	Liberty	55,807	5,400,253
Canadian Coulee	Hill	0	2,145	Flat Lake	Sheridan	546,521	17,450,394
Canal	Richland	26,127	1,318,722	Flat Lake, East	Sheridan	10,740	150,796
Cannonball	Fallon	0	74,779	Flat Lake, South	Sheridan	5,475	1,267,174
Carlyle	Wibaux	0	330,289	Flaxville	Daniels	0	56,283
Cat Creek	Petroleum, Garfield	25,045	23,924,205	Fort Gilbert	Richland	30,877	2,456,006
				Four Buttes	Sheridan	1,324	42,391

# 1998 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

FIELD	COUNTY	1998	CUMULATIVE
		BARRELS	BARRELS
Four Mile Creek	Richland	7,240	428,985
Four Mile Creek, West	Richland	22,973	448,944
Fox Creek	Richland	0	200,464
Fox Creek, North	Richland	0	75,398
Frannie	Carbon	0	773,613
Fred & George Creek	Toole	31,003	13,448,455
Frog Coulee	Richland	12,029	265,151
Froid, South	Roosevelt	30,176	318,708
Gage	Musselshell	657	656,271
Gage, Southwest	Musselshell	0	16,289
Gas City	Dawson	61,731	10,639,789
Gettysburg	Richland	0	304
Girard	Richland	23,718	594,240
Glendive	Dawson	109,422	13,895,484
Glendive, South	Dawson	0	68,936
Golden Dome	Carbon	821	113,941
Goose Lake	Sheridan	82,335	9,894,951
Goose Lake, East	Sheridan	0	4,522
Goose Lake, Southeast	Sheridan	0	45,527
Goose Lake, West	Sheridan	25,229	643,900
Gossett	Richland	3,057	395,157
Graben Coulee	Glacier	20,018	2,412,306
Grandview	Liberty	0	9,784
Grandview, East	Liberty	792	60,371
Gray Blanket	Big Horn	24,796	230,913
Green Coulee	Sheridan	10,034	222,947
Green Coulee, East	Sheridan	0	62,942
Gumbo Ridge	Rosebud	383	609,296
Gunsight	Roosevelt	9,918	365,061
Gypsy Basin	Pondera	121	508,045
Hardpan	Pondera	0	2,805
Hardscrabble Creek	Richland	11,385	156,795
Hawk Creek	Musselshell	0	13,277
Hawk Haven	Richland	2,614	34,617
Hay Creek	Richland	42,267	1,610,920
Hell Coulee	Daniels	12,445	66,260
Hiawatha	Musselshell	11,891	1,672,597
Hibbard	Rosebud	0	219,686
High Five	Rosebud	43,333	2,871,675
Highview	Pondera	2,910	106,499
Homestead	Roosevelt	0	303
Honker	Sheridan	0	117,078
Horse Creek	Liberty	0	13,516
Howard Coulee	Musselshell	4,537	197,058
Injun Creek	Rosebud	1,006	133,893
Intake II	Richland	14,239	945,813
Ivanhoe	Musselshell	18,289	4,662,787
Jack Creek	Carbon	0	1,310
Jim Coulee	Musselshell	15,378	4,483,398
Katy Lake	Sheridan	7,133	206,172
Katy Lake, North	Sheridan	156,936	5,643,613
Keg Coulee	Musselshell	10,275	5,772,701
Keg Coulee, North	Musselshell	485	445,785
Kelley	Musselshell	1,859	1,030,761
Kevin Nisku Oil, East	Toole	53,070	664,943
Kevin Sunburst	Toole	220,139	81,078,280
Kicking Horse	Toole	0	1,526
Kincheloe Ranch, West	Rosebud	11,088	825,088
Kippen, East	Toole	0	150
Krug Creek	Dawson	0	15,288
Laird Creek	Liberty	4,120	613,076
Lake Basin	Stillwater	0	473,639
Lakeside	Roosevelt	0	487
Lambert	Richland	74,474	640,389
Lambert, North	Richland	0	36,552
Lambert, South	Richland	50,211	136,956
Lamesteer Creek	Wibaux	0	31,845

FIELD	COUNTY	1998	CUMULATIVE
		BARRELS	BARRELS
Landslide Butte	Glacier	28,931	631,189
Lane	Richland	58,162	58,162
Lariat	Sheridan	0	3,599
Laurel	Yellowstone	0	1,017
Leary	Powder River	1,199	676,899
Ledger	Toole	0	275
Line Coulee	Daniels	0	57,789
Lisk Creek	Dawson, Richland	24	1,963
Little Beaver	Fallon	201,517	15,127,113
Little Beaver, East	Fallon	123,766	6,562,332
Little Phantom	Toole	357	58,500
Little Wall Creek	Musselshell	77,339	5,123,444
Lobo	Sheridan, Roosevelt	0	260,141
Lodge Grass	Big Horn	5,616	361,906
Lone Butte	Richland	10,717	812,842
Lone Rider	Roosevelt	0	5,903
Lonetree Creek	Richland	137,114	4,510,601
Lonetree Creek, West	Richland	0	33,029
Long Creek	Roosevelt	1,847	87,303
Long Creek, West	Roosevelt	16,606	829,312
Lookout Butte	Fallon	442,839	28,101,317
Lookout Butte, East	Fallon	1,155,282	4,373,933
Lost Creek	McCone	0	1,534
Lowell	Sheridan	3,618	303,849
Lowell, South	Sheridan	79,770	79,770
Lustre	Valley	123,955	5,712,986
Lustre, North	Valley	1,044	190,737
Mackay Dome	Stillwater	7,977	87,580
Malcolm Creek	Sheridan	0	11,450
Mason Lake	Musselshell	3,409	1,005,152
Mason Lake, North	Musselshell	0	17,923
McCabe	Roosevelt	4,935	274,120
McCabe, East	Roosevelt	23,405	33,557
McCabe, South	Roosevelt	0	6,599
McCabe, West	Roosevelt	0	69,988
McCoy Creek	Sheridan	1,354	69,418
Meander	Pondera	202	7,380
Medicine Lake	Sheridan	57,346	3,884,706
Medicine Lake, South	Sheridan	57,998	57,998
Melstone	Musselshell	31,107	3,965,561
Midby	Sheridan	0	70,172
Midfork	Valley	42,574	609,539
Mineral Bench	Roosevelt	0	186,656
Miners Coulee	Toole	116	153,056
Missouri Breaks	Richland	14,458	424,690
Mon Dak, West	Richland	238,629	11,224,407
Mona	Richland	2,308	148,975
Monarch	Fallon	254,913	7,066,379
Mosser Dome	Yellowstone	5,274	432,991
Musselshell	Musselshell	467	40,754
Mustang	Richland	61,408	935,721
Neiser Creek	Sheridan	41,161	473,020
Nielsen Coulee	Daniels	2,487	217,202
Ninemile	Toole	1,940	61,762
Nohly	Richland	287,565	7,183,377
Nohly, South	Richland	0	125,082
North Fork	Richland	10,665	597,779
Olje	Sheridan	0	163,449
Ollie	Fallon	2,250	262,334
Otis Creek	Richland	6,338	899,318
Otis Creek, South	Richland	3,345	290,842
Otter Creek	Sheridan	0	28,492
Outlet	Daniels	0	6,384
Outlook	Sheridan	31,210	9,039,540
Outlook, South	Sheridan	0	693,151
Outlook, Southwest	Sheridan	6,010	111,131
Outlook, West	Sheridan	15,551	948,387

# 1998 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

		1998 CUMULATIVE				1998 CUMULATIVE	
FIELD	COUNTY	BARRELS	BARRELS	FIELD	COUNTY	BARRELS	BARRELS
Oxbow	Roosevelt	11,338	513,966	Rush Mountain	Sheridan	53,729	782,224
Oxbow II	Roosevelt	66,920	601,233	Salt Lake	Sheridan	31,496	1,079,815
Palomino	Roosevelt	106,961	2,663,415	Salt Lake, West	Sheridan	23,445	197,410
Pasture	Dawson	0	2,869	Sand Creek	Dawson	8,736	2,385,188
Pasture Creek	Dawson	0	1,914	Saturn	Daniels	0	32,773
Pelican	Sheridan	0	194,638	Scobey	Daniels	0	3,916
Pennel	Fallon	1,838,811	96,479,039	Second Creek	Richland	30,300	1,420,454
Pete Creek	Toole	0	23,343	Second Guess	Teton	1,667	21,726
Phantom	Toole	0	43,585	Sheepherder	Musselshell	0	76,942
Pine	Dawson, Fallon, Prairie, Wibaux	746,445	115,376,290	Short Creek	Toole	1,270	1,270
Pine, East	Wibaux	0	19,349	Shotgun Creek	Roosevelt	56,045	659,526
Pipeline	Sheridan	0	16,424	Shotgun Creek, North	Roosevelt	0	89,673
Plentywood	Sheridan	0	22,830	Sidney	Richland	29,927	3,485,273
Pole Creek	Musselshell	0	169,726	Sidney, East	Richland	2,098	592,821
Police Coulee	Toole	0	14	Singletree	Roosevelt	0	373,992
Pondera	Pondera, Teton	178,051	27,464,041	Sioux Pass	Richland	151,362	4,180,029
Pondera Coulee	Teton	1,888	102,328	Sioux Pass, East	Richland	0	89,267
Poplar, East	Roosevelt	102,002	46,556,879	Sioux Pass, Middle	Richland	33,589	1,727,016
Poplar, Northwest	Roosevelt	80,339	4,279,515	Sioux Pass, North	Richland	94,821	4,750,175
Poplar, Southeast	Roosevelt	0	162,546	Sioux Pass, South	Richland	6,405	306,122
Prairie Dell	Toole	0	1,575	Sioux Pass, West	Richland	37,906	101,946
Prairie Elk	McCone	0	104,226	Smoke Creek	Daniels	0	100,305
Prichard Creek	Toole	0	164,444	Snake Creek	Roosevelt	17,865	21,066
Pronghorn	Sheridan	4,750	477,104	Snoose Coulee	Liberty	0	6,861
Putnam	Richland	114,156	5,534,423	Snowden	Roosevelt	0	1,938
Rabbit Hills	Blaine	108,597	2,044,207	Snyder	Big Horn	0	476,486
Rabbit Hills, South	Blaine	30,216	67,239	Soap Creek	Big Horn	34,414	2,949,334
Ragged Point	Musselshell	3,403	2,608,896	Soap Creek, East	Big Horn	6,208	205,807
Ragged Point, Southwest	Musselshell	14,971	1,770,495	South Fork	Richland	13,805	1,111,228
Rainbow	Richland	0	166,375	Spring Lake	Richland	53,974	1,325,637
Rattler Butte	Rosebud	132,646	1,306,919	Spring Lake, South	Richland	0	110,660
Rattlesnake Butte	Petroleum	13,375	643,456	Spring Lake, West	Richland	3,269	71,352
Rattlesnake Coulee	Toole	0	91,024	Stampede	Richland	9,114	395,382
Raymond	Sheridan	73,380	5,375,610	Stampede, North	Richland	0	4,566
Raymond, North	Sheridan	13,008	135,979	Stensvad	Musselshell, Rosebud	16,984	10,284,318
Raymond, Northeast	Sheridan	0	120,687	Studhorse	Garfield	303	202,199
Reagan	Glacier	107,367	9,707,549	Sumatra	Rosebud	145,851	45,786,857
Red Bank	Roosevelt	41,871	2,217,846	Sundown	Richland	2,801	35,244
Red Bank, South	Roosevelt	4,815	387,423	Sunnyhill	Sheridan	1,848	271,451
Red Creek	Glacier	59,103	6,821,040	Sunnyhill, West	Sheridan	5,665	194,871
Red Fox	Roosevelt	0	380,137	Target	Roosevelt	29,787	960,304
Red Water	Richland	20,767	112,192	Thirty Mile	Blaine	0	11,893
Red Water, East	Richland	6,747	283,354	Three Buttes	Richland	25,547	544,710
Redstone	Sheridan	1,135	469,313	Tinder Box	Musselshell	5,095	22,801
Refuge	Sheridan	20,575	264,295	Tippy Buttes	Musselshell	0	126,246
Repeat	Carter	0	547,064	Tule Creek	Roosevelt	26,989	8,411,241
Reserve	Sheridan	64,613	1,998,905	Tule Creek, East	Roosevelt	3,296	2,052,127
Reserve II	Sheridan	1,595	216,328	Tule Creek, South	Roosevelt	8,308	984,929
Reserve, South	Sheridan	308	70,088	Two Medicine Creek	Glacier	0	10,249
Richey	Dawson, McCone	0	2,030,144	Two Waters	Richland	2,490	343,683
Richey Area, West	McCone	0	11,062	Utopia	Liberty	17,579	790,439
Richey, East	Dawson	0	10,386	Vaux	Richland	116,099	5,127,651
Richey, Southwest	McCone	0	1,903,129	Vida	McCone	0	264,988
Ridgelawn	Richland	153,889	7,245,611	Viking	Sheridan	0	160
Ridgelawn, North	Richland	39,474	256,376	Volt	Roosevelt	73,263	3,754,239
RipRap Coulee	Roosevelt	21,700	806,636	Wagon Box	Musselshell	0	32,379
River Bend	Richland	0	275,733	Wagon Trail	Richland	0	43,321
Rocky Point	Roosevelt	17,110	574,294	Wakea	Sheridan	74,402	2,792,480
Roscoe Dome	Carbon	0	15,556	Waterhole Creek	Fallon	261,657	306,637
Rosebud	Rosebud	2,819	584,346	Weed Creek	Yellowstone	1,342	619,245
Rough Creek	Powder River	0	3,599	Weldon	McCone	0	7,050,531
Royals	Dawson	6,261	356,038	West Butte	Toole	2,415	320,579
Royals, South	Dawson	0	3,082	West Fork	Roosevelt	0	6,671
Rudyard	Hill	490	23,416	Weygand	Blaine	5,289	349,327
Runaway	Teton	0	4,532	Whitlash	Liberty, Toole	26,600	5,573,147
				Whitlash, West	Toole	106	132,632

# 1998 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

		1998 CUMULATIVE				1998 CUMULATIVE	
FIELD	COUNTY	BARRELS	BARRELS	FIELD	COUNTY	BARRELS	BARRELS
Wibaux	Wibaux	0	23,580	Wildcat	Daniels	0	3,779
Willow Creek, North	Musselshell	4,608	409,163	Wildcat	Dawson	0	1,489
Willow Ridge	Toole	1,224	60,815	Wildcat	Fallon	0	11,647
Willow Ridge, South	Toole	0	3,267	Wildcat	Garfield	0	468
Wills Creek, South	Fallon	110,909	1,573,586	Wildcat	Glacier	0	48,412
Windmill	Richland	0	31,943	Wildcat	Hill	0	405
Windy Ridge	Fallon	58,672	67,183	Wildcat	Liberty	0	3,254
Winnett Junction	Musselshell	16,880	1,060,657	Wildcat	McCone	0	12,575
Wolf Creek	Roosevelt	0	1,979	Wildcat	Musselshell	0	925
Wolf Springs	Yellowstone	8,364	4,841,507	Wildcat	Powder River	0	27,445
Wolf Springs, South	Yellowstone	7,497	900,084	Wildcat	Richland	0	343,260
Woman's Pocket	Golden Valley	0	3,526	Wildcat	Roosevelt	0	87,044
Woodrow	Dawson	12,481	1,302,919	Wildcat	Sheridan	0	19,076
Wrangler	Sheridan	24,523	726,466	Wildcat	Stillwater	0	11,283
Wrangler, North	Sheridan	1,223	144,965	Wildcat	Teton	0	9,324
Wright Creek	Powder River	4,784	356,226	Wildcat	Toole	0	36,379
Yates	Wibaux	0	70,861	Wildcat	Valley	0	447
Yellowstone	Dawson	0	39,405	Wildcat	Wibaux	0	8,388
Wildcat	Carbon	0	6,368				
Statewide Totals						16,612,937	1,453,121,083

# 1998 WELL COMPLETIONS

OPERATOR	LOCATION	WELL	STATUS CODE	API#	FIELD	FORMATION	COMP. DATE	TOTAL DEPTH	IP OIL	IP GAS
<b>003 Big Horn</b>										
Redstone Gas Partners, LLC	NESW 35 9S 39E	Consol Fed 23C-3599	3	21249	CX		05/19/98	338		
Redstone Gas Partners, LLC	NENE 30 9S 41E	Holmes Fed 41EC-3091	3	21251	Wildcat		10/14/98	1222		
<b>005 Blaine</b>										
Brown, J. Burns Operating Co.	NENW 13 33N 17E	State 13-33-17B	5**	22731	Lohman Area	Eagle	12/10/97	1515		
Brown, J. Burns Operating Co.	NENE 24 33N 17E	Peterson 24-33-17	5**	22732	Lohman Area	Eagle	11/25/97	1490		
Brown, J. Burns Operating Co.	LT 2' 18 33N 18E	Peterson 18-33-18B	5**	22741	Lohman Area	Eagle	11/22/97	1510		
Brown, J. Burns Operating Co.	LT 1 18 33N 18E	Peterson 18-33-18	6	22730	Wildcat		11/02/97	1487		
Brown, J. Burns Operating Co.	SWSW 1 33N 18E	Mitchell 1-33-18	5	22745	Wildcat	Eagle	12/23/97	1606		
Klabzuba Oil & Gas, Inc.	SWSE 6 25N 20E	Federal 6-25-20	3	22789	Leroy		09/07/98	2000		
Klabzuba Oil & Gas, Inc.	SWNE 7 26N 20E	Federal 7-26-20	3	22781	Sawtooth Mountain & Area		09/02/98	2050		
Klabzuba Oil & Gas, Inc.	NESE 36 26N 19E	State 36-26-19	5**	22784	Sawtooth Mountain & Area	Eagle	08/29/98	1900		
Klabzuba Oil & Gas, Inc.	SENE 30 26N 18E	Hilton 30-26-18	5**	22790	Sawtooth Mountain & Area	Eagle	10/03/98	2000		220
Klabzuba Oil & Gas, Inc.	NESE 3 33N 18E	Neibauer 3-33-18	6	22752	Wildcat		08/17/98	2500		
Ocean Energy, Inc.	LT 2 7 31N 19E	Sorensen 7-5	2	22770	Bowes	Eagle	07/09/98	1531		125
Ocean Energy, Inc.	SESE 3 26N 17E	US 3-16	5**	22775	Bullwacker	Eagle	10/28/98	2200		110
Ocean Energy, Inc.	LT 2 1 26N 17E	Slagsvold 1-2	3	22782	Bullwacker		08/24/98	2403		
Ocean Energy, Inc.	SESE 10 27N 18E	Read 10-16	3	22779	Sawtooth Mountain & Area		09/03/98	2218		
Ocean Energy, Inc.	SWNW 22 27N 18E	Moore 22-5	3	22787	Sawtooth Mountain & Area		10/12/98	2310		
Ocean Energy, Inc.	SESW 3 30N 17E	US 3-11	2	22753	Tiger Ridge	Eagle	07/30/98	1880		92
Ocean Energy, Inc.	NWSE 32 31N 18E	Dehnbom 32-10	2	22754	Tiger Ridge	Eagle	08/06/98	1540		62
Ocean Energy, Inc.	NWNW 36 31N 17E	State 36-4	2	22755	Tiger Ridge	Eagle	07/08/98	1530	0	152
Ocean Energy, Inc.	SENE 21 31N 18E	Shankle 21-6	2	22756	Tiger Ridge	Eagle	07/24/98	1563		94
Ocean Energy, Inc.	NWSW 28 31N 18E	Ramberg 28-12	2	22757	Tiger Ridge	Eagle	07/23/98	1595		16
Ocean Energy, Inc.	NWSE 30 31N 18E	Olson 30-10	2	22758	Tiger Ridge	Eagle	07/18/98	1317		519
Ocean Energy, Inc.	NWSW 3 30N 17E	Ross 1-12	2	22759	Tiger Ridge	Eagle	07/30/98	1550		203
Ocean Energy, Inc.	NWNE 32 31N 18E	Paulsen 32-2	2	22761	Tiger Ridge	Eagle	07/23/98	1470		882
Ocean Energy, Inc.	NENW 13 31N 17E	O'Neil 13-3	2	22762	Tiger Ridge	Eagle	06/24/98	1750		31
Ocean Energy, Inc.	SWSW 13 31N 17E	Verduyssen 13-13	2	22763	Tiger Ridge	Eagle	06/24/98	1700		56
Ocean Energy, Inc.	NWNW 25 31N 17E	Olson 25-4	2	22764	Tiger Ridge	Eagle	07/07/98	1560		149
Ocean Energy, Inc.	SWSE 26 31N 17E	Olson 26-15	2	22765	Tiger Ridge	Eagle	07/08/98	1530		345
Ocean Energy, Inc.	NWSW 1 30N 18E	Blackwood 1-12	3	22766	Tiger Ridge		07/20/98	1490		
Ocean Energy, Inc.	SENE 9 30N 18E	Kane 9-6	2	22767	Tiger Ridge	Eagle	08/06/98	1740		30
Ocean Energy, Inc.	SENE 11 31N 18E	Risley 11-6B	2	22769	Tiger Ridge	Eagle	07/16/98	1626		39
Ocean Energy, Inc.	NWSW 28 31N 19E	S-B 28-12	2	22771	Tiger Ridge	Eagle	07/29/98	1360		141
Ocean Energy, Inc.	NWNE 33 31N 19E	S-B 33-2	2	22772	Tiger Ridge	Eagle	07/28/98	1360		311
Ocean Energy, Inc.	NWSW 34 31N 19E	S-B 34-12	2**	22773	Tiger Ridge	Eagle	07/29/98	1378		114
Ocean Energy, Inc.	SESE 33 31N 19E	S-B 33-14	2	22774	Tiger Ridge	Eagle	07/28/98	1409		77
Ocean Energy, Inc.	SENE 17 30N 18E	US 17-6	2	22788	Tiger Ridge	Eagle	11/04/98	1775		10
Ocean Energy, Inc.	NENE 8 30N 18E	Ross 8-1	2	22791	Tiger Ridge	Eagle	10/15/98	1620		193
Ocean Energy, Inc.	NWNE 18 31N 18E	Olson 18-2	2	22792	Tiger Ridge	Eagle	10/15/98	1625		12
Ocean Energy, Inc.	NENW 18 30N 19E	Hoteldt 18-3	2	22793	Tiger Ridge	Eagle	10/21/98	1200		140
Ocean Energy, Inc.	SESE 4 30N 18E	Dehnbom 4-16	2	22795	Tiger Ridge	Eagle	10/19/98	1750		80
Ocean Energy, Inc.	SWSE 7 30N 18E	Blackwood 7-15	2	22796	Tiger Ridge	Eagle	10/19/98	1650		26
Ocean Energy, Inc.	NENW 18 30N 18E	Blackwood 18-3	2	22797	Tiger Ridge	Eagle	10/20/98	1775		0
Ocean Energy, Inc.	NESE 8 26N 19E	US 8-9	5	22776	Wildcat	Eagle	10/22/98	2300		1824
Ocean Energy, Inc.	SWNW 14 26N 19E	US 14-5	6	22777	Wildcat		10/09/98	2000		
Ocean Energy, Inc.	SESE 5 26N 19E	US 5-16	5	22778	Wildcat	Judith River	10/22/98	2370		113
Ocean Energy, Inc.	NENW 23 26N 18E	Moore 23-3	5	22783	Wildcat	Eagle	09/24/98	2154		402
Ocean Energy, Inc.	NWNE 18 26N 18E	Biebinger 18-2	5	22785	Wildcat	Eagle	09/24/98	2100		111
Ocean Energy, Inc.	NENW 23 27N 18E	Moore 23-3	6	22794	Wildcat		10/06/98	2190		
Summit Resources, Inc.	NENW 36 34N 19E	Rabbit 3-36	4	22738	Wildcat		01/13/98	4131	50	
Summit Resources, Inc.	NENE 35 34N 19E	Rabbit 1-35	4	22742	Wildcat	Sawtooth	02/03/98	4160	37	
Summit Resources, Inc.	SESE 26 34N 19E	Unruh 16-26	4	22746	Wildcat		01/21/98	4056	25	
Summit Resources, Inc.	SWNE 15 34N 19E	Holman Rabbit 7-15	4	22748	Wildcat		02/13/98	4112		
<b>009 Carbon</b>										
KGH Operation Co.	SWSW 2 7S 21E	Dry Creek 2-13	3	21257	Dry Creek	Lakota	11/09/98	5725		
<b>015 Chouteau</b>										
Brown, J. Burns Operating Co.	NWNW 15 26N 16E	Fed 15-26-16B ReEntry	5**	21669	Sherard, Area	Eagle	11/22/95	2220	0	426
<b>019 Daniels</b>										
Swift Energy Company	NENE 30 36N 44E	Birch 44-30	6	21135	Wildcat		07/09/98	7463		
Union Pacific Resources Co.	NWNW 19 36N 47E	Lombard St. 11-19 1H	4**	21133	Four Buttes	McGowan	02/26/98	9230	40	
<b>021 Dawson</b>										
Burlington Resources Oil & Gas	SESE 6 22N 52E	Kaufman 44-6H	4**	21140	Lisk Creek	Dawson Bay	02/10/98	11866		
Burlington Resources Oil & Gas	SENE 33 21N 50E	Dagger 22-33	6	21141	Wildcat		09/01/98	9150		
Crown Oil, Inc.	SWNW 23 17N 53E	NCT 4-2 Hz ReEntry	1	05147	Deer Creek	Charles A	07/24/97	8231	18	
Samedan Oil Corporation	SWSW 2 17N 53E	Diamond V 14-2H	4	21132	Wildcat	Charles C	08/01/98	9292	0	
Samedan Oil Corporation	SWNW 8 17N 54E	Nissley 12-8H	6	21139	Wildcat	Charles C	11/14/97	9867		
<b>025 Fallon</b>										
Burlington Resources Oil & Gas	SWNE 1 6N 60E	ELOB 32-1NHR ReEntry	1	21523	Lookout Butte East	Red River	09/13/98	13600	66	7
Burlington Resources Oil & Gas	SWSW 5 6N 61E	ELOB 14-5NH	1	21689	Lookout Butte East	Red River	02/14/98	15424	68	20
Burlington Resources Oil & Gas	NWNE 4 6N 61E	ELOB 31-4NH	1	21708	Lookout Butte East	Red River	03/27/98	14726	302	0
Burlington Resources Oil & Gas	SWSE 29 7N 61E	ELOB 34-29NH	1	21720	Lookout Butte East	Red River	04/19/98	13747	314	0
Burlington Resources Oil & Gas	NENE 32 7N 61E	ELOB 41-32NH	1	21721	Lookout Butte East	Red River	03/18/98	13669	155	39
Burlington Resources Oil & Gas	SWNE 29 7N 61E	ELOB 32-29NH	1	21722	Lookout Butte East	Red River	06/13/98	15350	433	108
Burlington Resources Oil & Gas	NENW 29 7N 61E	ELOB 21-29NH	1	21724	Lookout Butte East	Red River	05/12/98	12090	559	
Burlington Resources Oil & Gas	SWSW 3 6N 61E	ELOB 14-3NH	1	21728	Lookout Butte East	Red River	04/21/98	15064	496	
Burlington Resources Oil & Gas	SESE 4 6N 61E	ELOB 44-4SH	1	21729	Lookout Butte East	Red River	07/18/98	14358	364	91
Burlington Resources Oil & Gas	SWNE 4 6N 61E	ELOB 32-4NH	1	21761	Lookout Butte East	Red River	05/18/98	14690	541	
Burlington Resources Oil & Gas	NENE 10 7N 60E	ELOB 41-10SH	1	21762	Lookout Butte East	Red River	07/18/98	14880	68	17

# 1998 WELL COMPLETIONS

OPERATOR	LOCATION	WELL	STATUS CODE	API#	FIELD	FORMATION	COMP. DATE	TOTAL DEPTH	IP OIL	IP GAS
Burlington Resources Oil & Gas	SWSW 14 7N 60E	ELOB 14-14NH	1	21763	Lookout Butte East	Red River	07/09/98	16166	128	32
Burlington Resources Oil & Gas	SNNW 3 6N 61E	ELOB 12-3NH	1	21765	Lookout Butte East	Red River	06/17/98	14485	109	27
Burlington Resources Oil & Gas	NESW 36 7N 60E	ELOB 23-36SH	1	21766	Lookout Butte East	Red River	09/03/98	13600	266	109
Burlington Resources Oil & Gas	NWSE 19 7N 61E	ELOB 32-19NH	1	21768	Lookout Butte East	Red River	08/01/98	15284	136	48
Burlington Resources Oil & Gas	SWNE 4 6N 61E	ELOB 32-4SH	1	21775	Lookout Butte East	Red River	09/09/98	16787	267	53
Burlington Resources Oil & Gas	SWSW 23 7N 60E	ELOB 14-23NH	1	21778	Lookout Butte East	Red River	08/12/98	16274	120	30
Burlington Resources Oil & Gas	SWSE 33 7N 61E	ELOB 34-33SH	1	21779	Lookout Butte East	Red River	08/20/98	15507	162	40
Burlington Resources Oil & Gas	SWSW 12 7N 60E	ELOB 14-12NH	1	21781	Lookout Butte East	Red River	09/20/98	15004	145	43
Burlington Resources Oil & Gas	SWSE 19 7N 61E	ELOB 34-19NH	1	21783	Lookout Butte East	Red River	10/25/98	14100	344	69
Burlington Resources Oil & Gas	SWSE 7 6N 61E	ELOB 34-7NH	1	21785	Lookout Butte East	Red River	11/24/98	15123	109	18
Burlington Resources Oil & Gas	SWNE 13 7N 60E	ELOB 32-13NH	1	21794	Lookout Butte East	Red River	12/03/98	15137	80	10
Burlington Resources Oil & Gas	SWSE 1 6N 60E	ELOB 34-1SH	1	21795	Lookout Butte East	Red River	12/01/98	12183	119	16
Burlington Resources Oil & Gas	SWSW 23 9N 58E	BR Monarch 41-23H	1	21706	Monarch	Red River	10/24/98	14473	156	
Burlington Resources Oil & Gas	NENE 25 9N 58E	BR Monarch 41-25H	1	21707	Monarch	Red River	06/24/98	14184	279	
Burlington Resources Oil & Gas	NENE 21 6N 61E	Buffalo Creek 41-21H	1	21650	Waterhole Creek	Red River	01/24/98	14396	60	0
Burlington Resources Oil & Gas	NENE 26 6N 61E	Federal BR 11-26H	8	21697	Waterhole Creek	Red River	05/05/98	15650		
Burlington Resources Oil & Gas	SWSW 15 7N 61E	BR Duffield 14-15H	1	21714	Windy Ridge	Red River	05/16/98	15645	42	
Burlington Resources Oil & Gas	SNNW 1 7N 60E	BR 12-1NH	1	21726	Windy Ridge	Red River	04/04/98	15265		
Burlington Resources Oil & Gas	SWSW 16 7N 61E	State Dodge 14-16NH	1	21772	Windy Ridge	Red River	07/19/98	15125	53	
Burlington Resources Oil & Gas	NWNE 21 7N 61E	Griffith 31-21H	1	21786	Windy Ridge	Red River	11/28/98	10518	489	
Chesapeake Operating, Inc.	SESW 24 9N 59E	Schweigert 1-24	4**	21723	Cupton	Red River	03/02/98	9855	36	15
Continental Resources Inc	SESE 9 6N 61E	Buffalo Creek 1-9	4	21725	Lookout Butte East	Red River	04/28/98	14910	188	
Continental Resources Inc	LT 1 35 7N 61E	Homung 1-35F	4	21679	Waterhole Creek	Red River	03/23/98	10189	607	0
Continental Resources Inc	SWI 2 6N 61E	Corral Creek 1-2F	4	21701	Waterhole Creek	Red River	01/03/98	16554	575	144
Continental Resources Inc	NENE 23 6N 61E	Mike 1-23F	4	21702	Waterhole Creek	Red River	03/27/98	15394	202	
Continental Resources Inc	SWSW 27 7N 61E	Merritt 1-27F	4	21703	Windy Ridge	Red River	09/05/98	16337	677	
Williston Basin Interstate	SNNW 19 5N 61E	Fee 493	2	21628	Cedar Creek	Eagle	09/17/98	1900		1560
Williston Basin Interstate	SWSE 2 5N 60E	Federal 2067	2	21731	Cedar Creek	Eagle	09/15/98	1900	125	
Williston Basin Interstate	SESE 8 5N 61E	Federal 2071	2	21732	Cedar Creek	Eagle	10/01/98	1850	820	
Williston Basin Interstate	SWSE 28 5N 61E	Federal 2082	2	21733	Cedar Creek	Eagle	09/19/98	1900	1650	
Williston Basin Interstate	NWSE 30 5N 61E	Federal 2081	2	21734	Cedar Creek	Eagle	09/17/98	1900	850	
Williston Basin Interstate	SESE 32 5N 61E	Federal 2085	2	21735	Cedar Creek	Eagle	10/01/98	1900	370	
Williston Basin Interstate	NWNN 32 6N 61E	Federal 2064	2	21736	Cedar Creek	Eagle	09/30/98	1900	140	
Williston Basin Interstate	NWSE 32 6N 61E	Federal 2065	2	21737	Cedar Creek	Eagle	09/30/98	1900	132	
Williston Basin Interstate	NWSE 5 8N 59E	Federal 2029	2	21738	Cedar Creek	Eagle	09/30/98	1900	942	
Williston Basin Interstate	NENE 24 9N 58E	Federal 2027	2	21739	Cedar Creek	Eagle	09/29/98	1975	56	
Williston Basin Interstate	NWSE 24 9N 58E	Federal 2009	2	21740	Cedar Creek	Eagle	09/29/98	1990	248	
Williston Basin Interstate	SESE 21 5N 61E	Fee 2078	2	21741	Cedar Creek	Eagle	09/21/98	1900	1900	
Williston Basin Interstate	NWSW 11 6N 60E	Fee 2053	2	21742	Cedar Creek	Eagle	09/29/98	1975	161	
Williston Basin Interstate	NWSW 16 6N 60E	State 2042	2	21743	Cedar Creek	Eagle	07/14/98	1990		
Williston Basin Interstate	SESW 25 6N 60E	Fee 2061	2	21744	Cedar Creek	Eagle	10/02/98	1900	1320	
Williston Basin Interstate	SWNE 19 7N 60E	Fee 2031	2	21745	Cedar Creek	Eagle	09/14/98	1900	1140	
Williston Basin Interstate	SESW 29 7N 60E	Fee 2033	2	21746	Cedar Creek	Eagle	10/02/98	1900	1270	
Williston Basin Interstate	NESW 25 9N 58E	Fee 2028	2	21747	Cedar Creek	Eagle	09/30/98	1900	1620	
Williston Basin Interstate	SESW 32 7N 60E	Fee 2035	2	21748	Cedar Creek	Eagle	09/15/98	1900	1250	
Williston Basin Interstate	SESW 33 7N 60E	Fee 2036	2	21749	Cedar Creek	Eagle	09/15/98	1950	1000	
Williston Basin Interstate	NWNN 13 5N 60E	Fee 2072	2	21750	Cedar Creek	Eagle	09/16/98	1850	2500	
Williston Basin Interstate	SESE 13 5N 60E	Fee 2074	2	21751	Cedar Creek	Eagle	09/16/98	1850	595	
Williston Basin Interstate	NESE 5 5N 61E	Fee 2068	2	21752	Cedar Creek	Eagle	10/01/98	1850	494	
Williston Basin Interstate	NWNN 8 5N 61E	Fee 2069	2	21753	Cedar Creek	Eagle	10/01/98	1800	1300	
Williston Basin Interstate	NWSE 11 5N 60E	Fee 2070	2	21754	Cedar Creek	Eagle	09/16/98	1850	1900	
Williston Basin Interstate	SESE 17 5N 61E	Fee 2075	2	21755	Cedar Creek	Eagle	10/01/98	1900	1030	
Williston Basin Interstate	SESE 19 5N 61E	Fee 2077	2	21756	Cedar Creek	Eagle	09/17/98	1900	1400	
Williston Basin Interstate	NENW 21 5N 61E	Fee 2076	2	21757	Cedar Creek	Eagle	09/20/98	1900	1900	
Williston Basin Interstate	SENE 23 6N 60E	Fee 2055	2	21759	Cedar Creek	Eagle	09/29/98	1900	800	
Williston Basin Interstate	NWNN 35 6N 60E	Fee 2063	2	21760	Cedar Creek	Eagle	09/28/98	1950	32	
Williston Basin Interstate	NWSE 23 6N 60E	Fee 2057	2	21774	Cedar Creek	Eagle	09/28/98	1900	1000	
<b>033 Garfield</b>										
Mull Drillings Company	NESE 25 14N 31E	Velociraptor 1-25	6	21149	Wildcat		08/25/98	3596		
Mull Drillings Company	SESE 17 13N 32E	Camosaurus 1-17	6	21152	Wildcat		08/17/98	7462		
<b>035 Glacier</b>										
Conwest Exploration Co., LTD.	SESE 30 36N 6W	Sinclair 2608 #1	6	21969	Wildcat		01/09/98	6100		
Conwest Exploration Co., LTD.	SESW 13 37N 8W	Blackfeet 2634 #1	6	21970	Wildcat		02/07/98	6234		
Montalban Oil & Gas Operations	NWSW 13 37N 5W	Kruger 9	1	21965	Cut Bank	Cut Bank/ Madison	09/17/97	2727	115	
NRC Development, LLC	NWNN 36 36N 6W	State 36-4	2	21971	Cut Bank	Lander	06/04/98	3057		411
NRC Development, LLC	SWSW 25 36N 6W	Huebner 13-25	2	21966	Little Rock	Lander	09/12/97	2965		415
NRC Development, LLC	NESW 25 36N 6W	Huebner 11-25	2	21967	Little Rock	Cut Bank	09/15/97	3007		980
NRC Development, LLC	SENW 25 36N 6W	Johnson 25-6	2	21972	Little Rock	Lander	06/17/98	2974		674
NRC Development, LLC	SESW 13 36N 6W	Zimmerman 13-14	2	21973	Little Rock	Cut Bank	07/08/98	3048		795
<b>041 Hill</b>										
Brown, J. Burns Operating Co.	N2NE 28 34N 14E	Springer 28-34-14	5**	22604	Browns Coulee	Eagle	11/04/97	1608		
Brown, J. Burns Operating Co.	N2SE 27 34N 14E	Compton 27-34-14B	2	22606	Browns Coulee	Eagle	12/20/97	1600		
Brown, J. Burns Operating Co.	SWSW 9 33N 14E	Higgins 9-33-14	5**	22605	Fresno & Area		11/19/97	1521		
Brown, J. Burns Operating Co.	S2NE 8 34N 17E	Beck 8-34-17B	5	22607	Wildcat	Eagle	12/12/97	1515		
Brown, J. Burns Operating Co.	SWSW 4 35N 16E	Bessette 4-35-16	5	22608	Wildcat	Eagle	08/26/98	1750		521
Klabzuba Oil & Gas, Inc.	N2SE 28 34N 14E	Springer 28-34-14B	4**	22650	Browns Coulee	Eagle	07/31/98	2400		525
Klabzuba Oil & Gas, Inc.	SWNE 4 33N 17E	Hofeldt 4-33-17	5	22630	Wildcat	Eagle	10/16/98	1210		750
Klabzuba Oil & Gas, Inc.	SENW 18 34N 15E	State Veik 18-34-15	5	22631	Wildcat	Eagle	07/31/98	1700		765
Klabzuba Oil & Gas, Inc.	S2NE 18 35N 16E	Shrauger 18-35-16	5	22632	Wildcat	Eagle	05/29/98	1315		600
Klabzuba Oil & Gas, Inc.	N2SE 4 33N 14E	Morse 4-33-14	6	22635	Wildcat	Eagle	07/25/98	1550		
Klabzuba Oil & Gas, Inc.	NWNE 29 33N 17E	Baltrusch 29-33-17	5	22649	Wildcat	Eagle	08/22/98	2300		93
Klabzuba Oil & Gas, Inc.	S2NE 4 33N 14E	Morse 4-33-14B	5	22655	Wildcat	Eagle	08/13/98	1580		1
Klabzuba Oil & Gas, Inc.	NENE 8 34N 16E	Pattison 8-34-16	6	22662	Wildcat	Eagle	10/07/98	1600		
Ocean Energy, Inc.	SNNW 2 30N 15E	Hegle 2-5	3	22609	Tiger Ridge		06/07/98	1795		
Ocean Energy, Inc.	LT 1 5 30N 15E	Herron 5-1	2	22610	Tiger Ridge	Eagle	06/23/98	1455		99
Ocean Energy, Inc.	SWSE 5 30N 15E	State 5-15	2	22612	Tiger Ridge	Eagle	08/04/98	1455		227

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OPERATOR	LOCATION	WELL	STATUS CODE	API#	FIELD	FORMATION	COMP. DATE	TOTAL DEPTH	IP OIL	IP GAS
Ocean Energy, Inc.	NESE 21 30N 15E	Boyce 21-9	2	22613	Tiger Ridge	Eagle	06/03/98	1750		60
Ocean Energy, Inc.	NWSE 22 30N 15E	Nystrom 22-10	2	22614	Tiger Ridge	Eagle	06/05/98	1750		135
Ocean Energy, Inc.	NWNE 27 30N 15E	Boyce 27-2	2	22615	Tiger Ridge	Eagle	06/02/98	2001		118
Ocean Energy, Inc.	SWNE 24 31N 14E	Becker 24-7	2	22616	Tiger Ridge	Eagle	06/01/98	1255		759
Ocean Energy, Inc.	NWNW 20 31N 15E	Dahlin 20-4	2	22617	Tiger Ridge	Eagle	06/19/98	1420		278
Ocean Energy, Inc.	NENW 8 30N 15E	Rocky Boy 8-3	2	22618	Tiger Ridge	Eagle	08/04/98	1423		27
Ocean Energy, Inc.	NESW 20 30N 15E	Rocky Boy 20-11	2	22620	Tiger Ridge	Eagle	07/13/98	1580		2330
Ocean Energy, Inc.	SWSE 24 31N 14E	Berger 24-15	2	22621	Tiger Ridge	Eagle	06/01/98	1250		40
Ocean Energy, Inc.	SESE 3 31N 15E	Lane 3-16	3	22622	Tiger Ridge		06/03/98	1564		
Ocean Energy, Inc.	NESW 8 31N 15E	Neuwerth 8-11	2	22623	Tiger Ridge	Eagle	06/22/98	1442		484
Ocean Energy, Inc.	SWSE 19 31N 15E	Berger 19-15	3	22624	Tiger Ridge		05/17/98	1373		
Ocean Energy, Inc.	SENE 19 31N 15E	Greenway 19-6	3	22625	Tiger Ridge		05/27/98	1286		
Ocean Energy, Inc.	NWNW 29 31N 16E	Gregoire 29-4	3	22626	Tiger Ridge		06/06/98	1780		
Ocean Energy, Inc.	NWSE 30 31N 16E	Anderson 30-10	2	22627	Tiger Ridge	Judith River	06/23/98	1750		120
Ocean Energy, Inc.	NWNW 28 30N 15E	Rocky Boy 28-4	2	22628	Tiger Ridge	Eagle	07/13/98	1740		54
Ocean Energy, Inc.	SESE 28 32N 14E	Daniel 28-16	2	22629	Tiger Ridge	Eagle	06/22/98	1348		52
Ocean Energy, Inc.	SWSW 21 30N 15E	Rocky Boy 21-13	2	22633	Tiger Ridge	Eagle	07/14/98	1720		952
Ocean Energy, Inc.	NESW 93 1N 17E	Wiley 9-11	2	22636	Tiger Ridge	Eagle	07/07/98	1760		63
Ocean Energy, Inc.	SWSE 15 31N 17E	Olson 15-15	2	22637	Tiger Ridge	Eagle	07/07/98	1660		80
Ocean Energy, Inc.	NESW 22 31N 17E	Olson 22-11	3	22638	Tiger Ridge		06/12/98	1740		
Ocean Energy, Inc.	NWNW 29 30N 15E	Rocky Boy 29-4	2	22639	Tiger Ridge	Eagle	08/05/98	2217		86
Ocean Energy, Inc.	NENE 30 30N 15E	Rocky Boy 30-1	2	22640	Tiger Ridge	Judith River	08/05/98	2120		23
Ocean Energy, Inc.	SWSE 34 30N 15E	Rocky Boy 34-15	3	22641	Tiger Ridge		08/01/98	2557		
Ocean Energy, Inc.	NESW 19 30N 16E	Boyce 19-11	3	22643	Tiger Ridge		06/11/98	2029		
Ocean Energy, Inc.	NWNW 34 31N 17E	Olson 34-4	2	22645	Tiger Ridge	Eagle	07/10/98	1900		42
Ocean Energy, Inc.	NESE 22 30N 15E	Nystrom 22-9	3	22653	Tiger Ridge		09/21/98	1810		
Ocean Energy, Inc.	NENW 25 31N 15E	US 25-3	3	22654	Tiger Ridge		09/05/98	1550		
Ocean Energy, Inc.	NENE 10 31N 15E	Majerus 10-1	2	22656	Tiger Ridge	Eagle	09/25/98	1533		105
Ocean Energy, Inc.	NWNW 22 31N 15E	Hegle 22-4	2	22657	Tiger Ridge	Eagle	09/25/98	1675		476
Ocean Energy, Inc.	SWNE 20 31N 16E	State 20-7	2	22658	Tiger Ridge	Eagle	10/13/98	1530		89
Ocean Energy, Inc.	SESW 17 31N 16E	Gregoire 17-14	2	22659	Tiger Ridge	Eagle	10/12/98	1830		164
Ocean Energy, Inc.	LT 4 20 31N 16E	State 20-14	2	22660	Tiger Ridge	Eagle	10/12/98	1600		32
Ocean Energy, Inc.	SWNW 20 30N 16E	Sterling 20-5	6	22646	Wildcat		07/19/98	2140		
<b>049 Lewis and Clark</b>										
Stone & Wolf, LLC	SWSW 2 20N 4W	T Simpson KTO 2-1	6	21014	Wildcat		07/28/98	5024		
<b>051 Liberty</b>										
Branch Oil and Gas	SWSW 11 35N 4E	Oswood 14-11X	2	21699	Haystack Butte	Bow Island	04/13/98	1893		130
<b>055 McCone</b>										
Burlington Resources Oil & Gas	SWSW 22 23N 48E	Kluth 14-22	6	21194	Wildcat		09/20/98	8400		
Burlington Resources Oil & Gas	SWSW 29 23N 47E	Schillinger 14-29	6	21195	Wildcat		10/10/98	8050		
Vision Exploration Production	SWSW 9 21N 47E	LLC BN 1-9 ReEntry	6	21059	Wildcat		03/10/98	8284		
Vision Exploration Production	SESE 19 21N 47E	BR 1-19	6	21193	Wildcat		02/09/98	9924		
<b>059 Meagher</b>										
Hunt Oil Company	SESE 13 13N 1E	Galt 13-1	6	21007	Wildcat		11/17/97	5107		
<b>065 Musselshell</b>										
JN Exploration & Production	SWNW 14 11N 25E	Mang 12-14	6	21840	Wildcat		05/25/98	3301		
<b>069 Petroleum</b>										
Avian Tech international, Inc.	NWNE 16 13N 25E	State Cash #2	6	21150	Wildcat		01/10/94	2205	0	0
<b>071 Phillips</b>										
Anschutz Exploration Corp.	LT 2 1 32N 32E	Buffalo 2-1	3	22463	Bowdoin & Area		08/29/98	4190		
North American Resources Co.	NWNE 31 36N 32E	Dunbar 31-31	2	22293	Loring, East	Bowdoin	12/02/98	1740	0	20
North American Resources Co.	SWSW 24 37N 31E	Federal 2471-1-14	2	22466	Loring, East	Bowdoin	09/19/98	1896		5
North American Resources Co.	SESE 1 36N 31E	Anderson 0161-4-44	2	22482	Loring, East	Bowdoin	09/21/98	1675		65
North American Resources Co.	NENE 35 36N 30E	Federal 3560-1-41	2	22464	Loring, West	Eagle	09/12/98	1600		
North American Resources Co.	SENE 20 35N 31E	Federal 2051-2-42	2	22465	Loring, West	Bowdoin	09/29/98	1500		15
North American Resources Co.	SENE 36 37N 29E	State 3679-2-22	2	22477	Loring, West	Bowdoin	09/14/98	1700		73
North American Resources Co.	SWNW 23 33N 33E	Palm 2333-4-12	2	22467	Whitewater, East	Green Horn	09/23/98	1555		60
Saco, Town Of	NESE 7 31N 34E	Stiles 2	2	22440	Bowdoin & Area	Bowdoin	05/09/98	850		100
Samedan Oil Corporation	NWNW 29 37N 31E	Federal 2971-4-11	2	22394	Loring, East	Judith River	09/17/98	1840		25
Seagull Energy E&P, Inc.	NESE 32 32N 31E	Fee 3221-5	5**	22461	Ashfield	Phillips	08/31/98	1300		
Seagull Energy E&P, Inc.	NESE 19 36N 30E	Martin Lake 1960-2	5**	22462	Loring, West		08/16/98	1988		960
Seagull Energy E&P, Inc.	NEWE 27 33N 31E	Federal 2731-2	5**	22438	Whitewater	Phillips	11/26/97	1575		10
Williston Basin Interstate	SENE 20 32N 33E	Federal 996	2	22285	Bowdoin & Area	Phillips	07/08/98	1200	0	926
Williston Basin Interstate	SWSE 24 32N 32E	Federal 986	2	22298	Bowdoin & Area	Phillips	07/08/98	1250	0	1070
Williston Basin Interstate	SESW 24 32N 32E	Federal 998	2	22299	Bowdoin & Area	Phillips	07/08/98	1250	0	1070
Williston Basin Interstate	SWNW 3 3 2N 32E	Federal 1013	2	22441	Bowdoin & Area	Phillips	07/15/98	1300		1600
Williston Basin Interstate	NWNE 7 32N 32E	Federal 1011	2	22443	Bowdoin & Area	Phillips	07/14/98	1250		1760
Williston Basin Interstate	NENW 12 32N 32E	Federal 1021	2	22444	Bowdoin & Area	Phillips	07/17/98	1220		900
Williston Basin Interstate	NENE 12 32N 32E	Federal 1022	2	22445	Bowdoin & Area	Phillips	07/13/98	1220		1070
Williston Basin Interstate	NWSE 13 32N 32E	Federal 1023	2	22446	Bowdoin & Area	Phillips	07/09/98	1230		750
Williston Basin Interstate	SENE 17 32N 32E	Federal 1009	2	22448	Bowdoin & Area	Phillips	07/09/98	1250		840
Williston Basin Interstate	NWNE 18 32N 32E	Federal 1010	2	22449	Bowdoin & Area	Phillips	07/10/98	1250		1820
Williston Basin Interstate	NESW 27 33N 32E	Federal 1017	2	22450	Bowdoin & Area	Phillips	07/14/98	1275		420
Williston Basin Interstate	NENE 31 33N 32E	Federal 1014	2	22451	Bowdoin & Area	Phillips	07/15/98	1350		400
Williston Basin Interstate	S2NW 33 33N 32E	Federal 1015	2	22452	Bowdoin & Area	Phillips	07/15/98	1350		830
Williston Basin Interstate	NESE 16 32N 32E	State 1007	2	22453	Bowdoin & Area	Phillips	07/10/98	1240		770
Williston Basin Interstate	SENE 1 32N 32E	Fee 1020	2	22454	Bowdoin & Area	Phillips	07/17/98	1225		630
Williston Basin Interstate	NWSW 17 32N 32E	Fee 1008	2	22455	Bowdoin & Area	Phillips	07/13/98	1200		1250



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OPERATOR	LOCATION	WELL	STATUS CODE	API#	FIELD	FORMATION	COMP. DATE	TOTAL DEPTH	IP OIL	IP GAS
Williston Basin Interstate	NWSW 20 32N 32E	Fee 1005	2	22456	Bowdoin & Area	Phillips	07/13/98	1250		620
Williston Basin Interstate	NWSE 21 32N 32E	Fee 1004	2	22457	Bowdoin & Area	Phillips	07/09/98	1250		862
Williston Basin Interstate	SWNE 34 33N 32E	Fee 1018	2	22459	Bowdoin & Area	Phillips	07/14/98	1275		1018
Williston Basin Interstate	NESE 34 33N 32E	Fee 1019	2	22460	Bowdoin & Area	Phillips	07/17/98	1250		800
<b>073 Pondera</b>										
Hawley Hydrocarbons	SWNW 9 27N 4W	Copley-Haber "B" 4	3	21756	Pondera		04/03/98	358	0	0
<b>083 Richland</b>										
Brown, J. Burns Operating Co.	NWNE 30 27N 57E	Federal 30 Com 1	6	21868	Wildcat		02/20/98	12380		
Burlington Resources Oil & Gas	NWSW 19 23N 54E	BROG 13-19H	4**	21866		Red River	02/03/98	12530	726	700
Chesapeake Operating, Inc.	NWSW 15 26N 55E	Dugout 1-15	4**	21873	Dugout Creek	Red River	12/06/98	12200	266	150
Chesapeake Operating, Inc.	SENE 34 26N 59E	Kittleson 1-34	8	21855	Nohly		07/19/97	13175		
Chesapeake Operating, Inc.	SESW 31 26N 59E	Warren 1-31	4**	21854	Otis Creek, South	Stonewall	01/28/98	12850	158	146
Chesapeake Operating, Inc.	NESW 4 26N 56E	BLM 1-4	6	21874	Wildcat		12/10/98	12420		
Collins and Ware, Inc.	NWSE 21 24N 55E	Johnson 21-1	6	21870	Wildcat		02/13/98	8000		
Columbus Energy Corp.	NENE 7 22N 60E	CS Lien 1 Hz ReEntry	1	21194	Mondak, West	Madison	01/08/98	10662	27	11
Flying J Exploration & Prod.	SENE 32 24N 58E	Dynneson 6-32 ReEntry	7	21801	Brorson	Dakota	04/06/98	6118		
Hallwood Petroleum, Inc.	NENE 32 23N 57E	Obergfell 1-32 ReEnt	1	21341	Putnam	Red River	12/17/97	12930	80	154
Intermountain Operating, Inc.	NWSW 1 25N 59E	Dahl 14-1 ReEntry	4**	21713	Nohly	Ratcliffe	06/12/98	10530	17	
Lyc0 Operating Co.	SENE 27 24N 57E	Johnson 27-1 ReEntry	4	21051	Wildcat	Bakken	03/18/98	10552	30	15
Rigel Petroleum, Inc.	NWNW 16 26N 59E	Cottonwood 4-16HZ	4**	21865	Cottonwood	Ratcliffe	02/13/98	12050		
Union Pacific Resources Co.	SESW 24 24N 59E	Baxter 24-24H	4**	21852	Ridgellawn, North	Mission Canyon	05/14/97	12808	90	50
Vastar Resources, Inc.	NWSW 24 23N 53E	Bellezza 1-24	4**	21875	Lane	Red River	11/25/98	11400	342	0
<b>085 Roosevelt</b>										
Burlington Resources Oil & Gas	SENE 4 28N 58E	Dunn 42-4	1	21640	Bainville, North	Red River	06/23/98	12620	65	0
Columbus Energy Corp.	SESW 2 29N 56E	McCabe 3-2	6	21635	Wildcat		12/13/97	7220		
Forest Oil Corporation	NENW 34 29N 55E	Krueger 21-34	6	21642	Wildcat		09/25/98	12250		
GCRIL Energy Ltd.	SENE 3 31N 52E	Craigie 1	6	21637	Wildcat		03/19/98	10800		
JN Exploration & Production	SWSW 5 29N 49E	Ft Peck 14-5	4**	21632	Palomino	Nisku	01/06/98	7650	85	
Parterra Petroleum MT GENL PRT	NESE 33 29N 58E	Crusch 9-33	4**	21629	Snake Creek	Winnepogosis	12/04/97	12970	85	51
Pintail Petroleum, Ltd.	S2SW 31 31N 48E	Stai 2-A SWD	7	21631	Benrud, East	Dakota	01/08/98	4390		
Samedan Oil Corporation	NENW 21 29N 58E	Krogedal 21-21	4**	21636	Burget, East	Nisku	03/16/98	11792	575	150
Samson Resources Co.	NENE 15 28N 58E	Granley Unit 1-15	4**	21626	Bainville, North	Red River	02/03/98	12700	243	100
Westech Energy Corp.	LT10 7 29N 47E	Sprague 13-7	6	21623	Wildcat		10/07/97	7510		
<b>087 Rosebud</b>										
Tyler Oil Company	SESE 30 12N 33E	Federal 30-16	4**	21653	Rattler Butte	Tyler	05/21/98	5649	42	
Tyler Oil Company	LT10 31 12N 33E	State 31-16	4**	21654	Rattler Butte	Tyler	08/10/98	5793	50	
<b>091 Sheridan</b>										
GCRIL Energy Ltd.	NESW 33 33N 52E	Sota Wakpana 1	6	21735	Wildcat		01/25/98	11008		
Hugoton Energy Corp.	SESE 8 31N 56E	Engelke 1-8	4**	21723	Medicine Lake South	Red River	02/15/98	11630	485	425
Hugoton Energy Corp.	SESE 16 37N 54E	Larter State 1-16	4**	21720	Raymond, North	Red River	01/10/98	10350	120	40
Hugoton Energy Corp.	SESW 35 37N 54E	Fink 1-35	6	21721	Wildcat		01/07/98	10500		
Lyc0 Operating Co.	NENE 15 34N 58E	Teal Onstad 15-1	4**	21737	Divide	Red River	04/11/98	13925	107	40
Marshall & Winston, Inc.	SWSW 31 31N 52E	Scott 1	6	21744	Wildcat		07/17/98	10088		
Summit Resources, Inc.	SWSW 35 34N 57E	Neilsen 13-35	4**	21738	Lowell South	Red River	01/29/98	11350	540	216
Tipperary Oil & Gas Inc.	SENE 30 32N 57E	Shiny 30-42	4**	21736	Reluge	Red River	05/20/98	11600	182	102
Wascana Oil & Gas, Inc.	SENE 6 37N 58E	Anderson 7	1	21712	Flat Lake	Red River	04/08/97	10360	94	
Wascana Oil & Gas, Inc.	NWNW 15 37N 57E	Jerde 3H	1	21732	Flat Lake	Nisku	03/29/98	9472	142	
Wascana Oil & Gas, Inc.	NENE 16 37N 57E	Joyes State 5H	1	21734	Flat Lake	Nisku	12/23/97	9285	62	
Wascana Oil & Gas, Inc.	LT 6 5 37N 58E	Anderson 8	1	21739	Flat Lake	Red River	01/26/98	10450		
Wascana Oil & Gas, Inc.	SWNW 11 37N 57E	Ward 10H	1	21741	Flat Lake	Nisku	02/22/98	9480		37
Wascana Oil & Gas, Inc.	NESE 23 37N 57E	Mayhew 1H	8	21743	Flat Lake	Nisku	07/22/98	9903		
Wyoming Resources Corporation	NESE 18 33N 57E	Johansen 9-18 ReEntry	6	21668	Wildcat		11/08/97	11325		
<b>101 Toole</b>										
Branch Oil and Gas	SWNE 26 34N 3W	Edwards 7-26	2	23838	Kevin Southwest	Swift	04/18/98	1504		300
Enron Oil & Gas Company	SWSE 16 35N 1E	Short Creek 1-16H	4**	23846	Short Creek	Nisku	09/04/98	6000	363	250
Griffon Petroleum, Inc.	NENW 25 34N 2W	Moffatt 1-25	2	23831	Kevin Sunburst	Bow Island/Swift	02/06/98	1182		54
Griffon Petroleum, Inc.	NWNE 26 34N 2W	Marmont 1-26	2	23832	Kevin Sunburst	Swift	02/18/98	1273		
Griffon Petroleum, Inc.	NENW 25 34N 2W	Moffatt 1-25T	2	23835	Kevin Sunburst	Bow Island	02/14/98	250		300
Hallwood Petroleum, Inc.	LT 2 4 34N 1E	Whitsitt 1-4	1	23842	Kevin, East Nisku Oil	Nisku	08/31/98	4660	10	
Hallwood Petroleum, Inc.	LT 2 5 34N 1E	Suphellen 4-5	1	23843	Kevin, East Nisku Oil	Nisku	08/12/98	4535	128	
Hallwood Petroleum, Inc.	SESW 32 35N 1E	Greetan 1-32	1	23844	Kevin, East Nisku Oil	Nisku	07/17/98	4244	75	
K2 America Corporation	N2NE 19 33N 2W	Atkins 19-1	3	23834	Prairie Dell		03/09/98	1586		
K2 America Corporation	LT 4 7 33N 2W	Wilcox 7-13	2	23833	Prairie Dell, West	Bow Island/Dakota	03/05/98	1583		45
Kee Sun Corporation	SWSW 24 34N 1W	Restana 13-24 MPC	2	23810	Prairie Dell	Sunburst	09/26/98	1434		200
Kee Sun Corporation	N2NW 25 34N 1W	Restana MPC 3-25	2	23818	Prairie Dell	Swift	10/24/97	1443		80
Kee Sun Corporation	SWNE 18 32N 3W	Silverhawk 7-18	6	23848	Wildcat		08/28/98	2265		
NRC Development, LLC	CSW 23 3N 2W	Boggs 2-12	1	23813	Prairie Dell	Bow Island/Swift	09/10/97	1383		138
NRC Development, LLC	SWNW 10 33N 2W	Rogers 10-5	2	23814	Prairie Dell	Bow Island/Dakota/Sunburst	09/10/97	1473		47
NRC Development, LLC	NESW 9 33N 2W	Atkins 9-12	2	23816	Prairie Dell	Swift	10/11/97	1592		67
NRC Development, LLC	NWSW 15 33N 2W	Flesch 15-12	2	23817	Prairie Dell	Bow Island/Dakota	10/16/97	1551		61
NRC Development, LLC	SWSW 17 33N 2W	Atkins 17-13	2	23819	Prairie Dell	Bow Island/Sunburst	10/28/97	1467		542
NRC Development, LLC	SWSW 1 33N 2W	Flesch 1-13	2	23820	Prairie Dell	Bow Island/Dakota/Sunburst	11/05/97	1353		148
NRC Development, LLC	W2SW 16 33N 2W	State 16-12	2	23823	Prairie Dell	Bow Island/Swift	11/25/97	1624		114
NRC Development, LLC	NENW 17 33N 2W	Kelleher 17-3	2	23824	Prairie Dell	Bow Island/Swift	11/23/97	1562		260
NRC Development, LLC	SWNE 18 33N 2W	Wilcox 18-7	2	23826	Prairie Dell	Bow Island/Swift	12/08/97	1592		95

# 1998 WELL COMPLETIONS

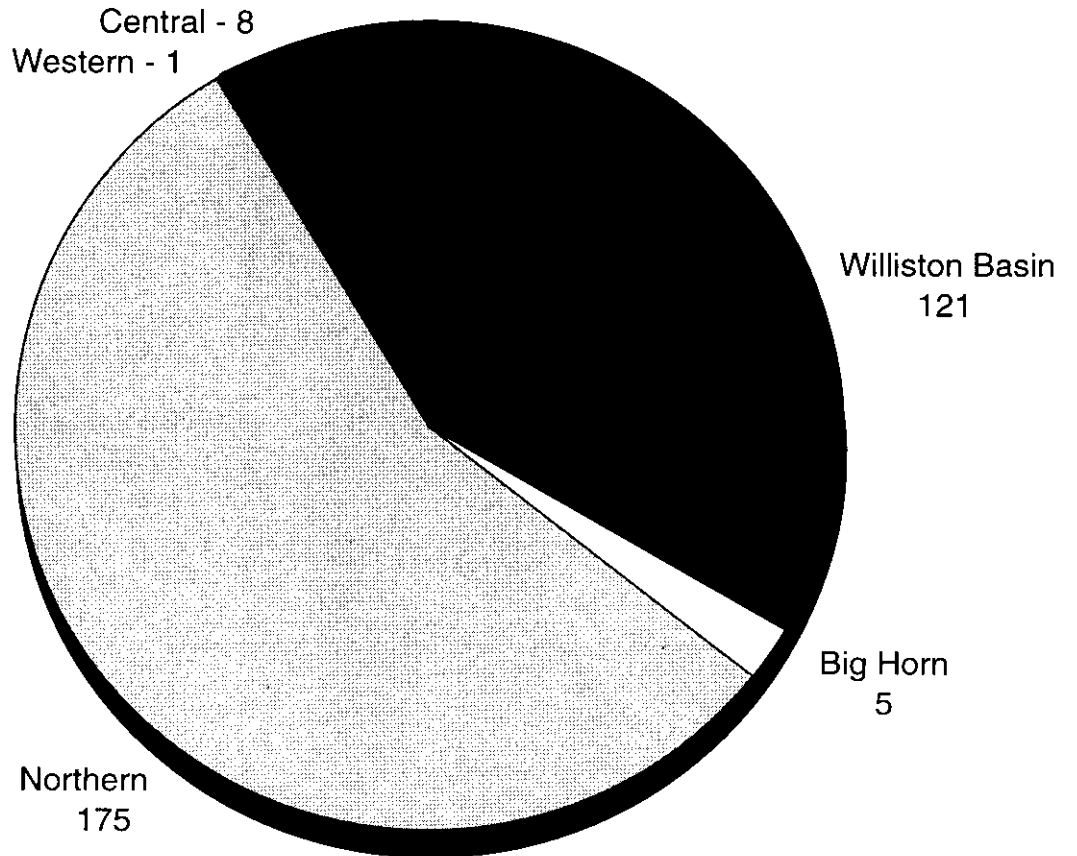
OPERATOR	LOCATION	WELL	STATUS CODE	API#	FIELD	FORMATION	COMP. DATE	TOTAL DEPTH	IP OIL	IP GAS
NRC Development, LLC	CNE 17 33N 2W	Kassle 17-1	2	23830	Prairie Dell	Bow Island/Swift	12/31/97	1610		168
NRC Development, LLC	NESW 4 33N 2W	Kelleher 4-11	3	23837	Prairie Dell		04/02/98	1563		
NRC Development, LLC	NENE 19 33N 2W	Atkins 19-1B	2	23839	Prairie Dell	Bow Island/Sunburst	04/25/98	1460		73
NRC Development, LLC	SWSE 6 33N 2W	Wilcox 6-15	2	23811	Prairie Dell, West	Bow Island/Sunburst	08/25/97	1533		172
NRC Development, LLC	CSE 7 33N 2W	Wilcox 7-10	2	23815	Prairie Dell, West	Dakota	10/01/97	1563		55
NRC Development, LLC	SESW 8 33N 2W	Kelleher 8-14	2	23828	Prairie Dell, West	Bow Island/Swift	12/16/97	1574		121
NRC Development, LLC	SESE 8 33N 2W	Kelleher 8-16	2	23829	Prairie Dell, West	Bow Island/Swift	12/19/97	1593		219
NRC Development, LLC	SENW 8 33N 2W	Kelleher 8-6	2	23836	Prairie Dell, West	Bow Island/Sunburst	05/04/98	1474		220
NRC Development, LLC	LT 1 16 33N 2W	Wilcox 18-3	5	23827	Wildcat	Sunburst	12/10/97	1540		615
<b>107 Wheatland</b>										
Conoco Inc	NWNE 36 10N 17E	J Ross 36 #1	6	21025	Wildcat		02/26/98	9163		
<b>109 Wibaux</b>										
Burlington Resources Oil & Gas Canyon Energy Operating, LLC	NENE 12 17N 58E	Stinger 41-12	4**	21088	Blue Mountain	Red River	03/14/98	11662	213	40
	SWNE 31 17N 59E	Honeycomb 31-32	6	21089	Wildcat		06/28/98	7750		
<b>111 Yellowstone</b>										
Ballard Petroleum LLC	SWSW 16 4N 26E	State 14-16H	6	21225	Wildcat		04/22/98	5413		
Black Hawk Resources, LLC	NWSW 23 3S 24E	Miller 23-12	6	21226	Wildcat		10/10/98	979		

**Status Codes:**

- 1- Development Oil                   \* New Pay Zones
- 2- Development Gas                 \*\* Extensions
- 3- Development Dry                 \*\*\* New Discovery
- 4- Exploratory Oil
- 5- Exploratory Gas
- 6- Exploratory Dry
- 7- Service Well
- 8- Other/Temp. Aband.

# Wells Completed in 1998

(310 Wells - by Region)



# 1998 SUMMARY OF SECONDARY RECOVERY PROJECTS

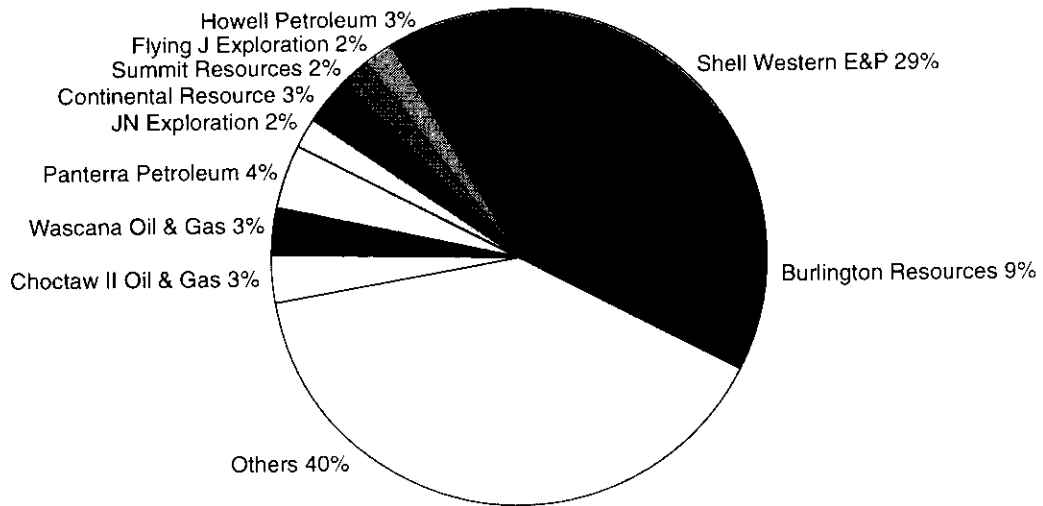
Field	Formation	Operator	Type of Project	Injection Pattern	Date Injection Commenced	1998 Injection Volume BBLs or MCF	1998 Cumulative Injections BBLs or MCF	Avg. Daily Injection Rate BBLs or MCF	No. of Active Injection Wells	Source of Injection Media and Remarks
Bears Den	Swift	FX Drilling Co., Inc.	Waterflood	Random	11/90	132275	1633341	362	4	WSW/Produced
Bell Creek Consolidated	Muddy	Richardson Operating	Waterflood	5 Spot	4/70	2539722	534279320	6958	31	Produced (Consolidated 1/92)
Bell Creek, South	Muddy	Richardson Operating	Waterflood	Peripheral	2/91	50152	1960857	137	4	Produced
Big Wall BWLTSU	Lower Tyler	Citation Oil & Gas	Waterflood	Random	10/84	2452708	38092410	6720	3	Produced
Big Wall BWUTSU	Upper Tyler	Citation Oil & Gas	Waterflood	Random	8/66	1002145	46358891	2746	1	Produced
Blackfoot	Cut Bank	Croft Petroleum	Waterflood	Random	7/76	106098	4687251	291	4	Madison
Border, Old	Cut Bank	Gypsy Highview System	Waterflood	Random	6/73	27419	1991155	75	1	Cut Bank
Bowes	Sawtooth	Citation Oil & Gas	Waterflood	Random	05/61	503252	13036377	1379	4	Madison
Breed Creek	Tyler	True Oil Co.	Waterflood	Random	11/92	1132114	4129050	3102	3	WSW and Produced
Cabin Creek	Siluro-Ord.	Shell Western E&P	Waterflood	Semi-Perip	6/59	8895664	396964780	24372	27	Produced
Cat Creek East Dome	Ellis Sand	Carrell Oil Company	Waterflood	Semi-Perip	7/70	26957	1731153	74	1	Third Cat Creek
Cat Creek Mosby Dome	Swift	Carrell Oil Company	Waterflood	Random	7/67	81396	7196986	223	2	Third Cat Creek
Cat Creek Unit 1	1st Cat	Carrell Oil Company	Waterflood	Semi-Perip	10/62	223126	9341872	611	2	Third Cat Creek
Cat Creek Unit 1	2nd Cat	Carrell Oil Company	Waterflood	Semi-Perip	10/62	385075	14716487	1055	2	Third Cat Creek
Cat Creek Unit 2	1st Cat	Carrell Oil Company	Waterflood	Semi-Perip	12/59	172462	10575585	472	2	Third Cat Creek
Cat Creek Unit 2	2nd Cat	Carrell Oil Company	Waterflood	Semi-Perip	12/59	172462	15101307	472	2	Third Cat Creek
Cut Bank Airport Unit	Cut Bank	Mercury Exploration	Waterflood		6/93	29775	770630	82	1	Madison
Cut Bank Dahlquist	Cut Bank	KeeSun Corp.	Waterflood	Random	11/79	0	671049	0	0	Idle
Cut Bank Lander A	Lander Sand	MSR Exploration Ltd.	Waterflood	Random	4/65	0	2115000	0	0	Idle
Cut Bank Marina	Cut Bank	Gypsy Highview System	Waterflood	5 Spot	6/72	0	2074515	0	0	Idle
Cut Bank NCCBSU	Cut Bank	Gypsy Highview	Waterflood	5 Spot	5/78	0	5757000	0	0	Idle
Cut Bank NECBSU	Cut Bank	J and G Operating	Waterflood	5 Spot	6/63	0	13409000	0	0	Idle
Cut Bank NWCBSU	Cut Bank	MSR Exploration Ltd.	Waterflood	5 Spot	1/62	551	19794551	2	1	Madison
Cut Bank Rieckhoff	Cut Bank	FX Drilling Co., Inc.	Waterflood	Random	1983	341813	3148521	936	6	Madison/Recycle
Cut Bank SCCBSU	Cut Bank	Mercury Exploration	Waterflood	5 Spot	5/63	1702349	74949221	4664	35	Madison
Cut Bank SWCBSU	Cut Bank	FX Drilling Co., Inc.	Waterflood	5 Spot	9/62	2340674	155092097	6413	34	Madison/Recycle
Cut Bank Tesoro	Cut Bank	City Oil Co.	Waterflood	5 Spot	9/71	0	6759000	0	0	Madison/Recycle
Cut Bank Tweedy	Madison	Gypsy Highview	Waterflood	5 Spot	6/72	3735	997571	10	1	Cut Bank
Cut Bank Two Medicine	Cut Bank	Provident Energy	Waterflood	Random	12/67	144596	58663596	396	2	Produced
Darling North Unit	Moulton	Buttes Resources	Waterflood	Random	2/68	0	2472122	0	0	Idle
Darling South Unit	Moulton	KCS Mountain Resource	Waterflood	Random	2/67	0	7548073	0	0	Idle
Dean Dome	Greybull	Eastern American	Steam Inj	Cyclic	8/81	0	29000	0	0	Idle
Dwyer	Charles	CamWest LP	Waterflood	Peripheral	10/68	135416	3119235	371	1	Produced/Charles
Elk Basin	Frontier	Howell Petroleum	Waterflood	Crestal	12/72	0	6039000	0	0	Idle
Elk Basin	Madison	Howell Petroleum	Waterflood	Semi-Perip	8/61	3339568	143420763	9150	13	Produced
Elk Basin Northwest	Madison	Howell Petroleum	Waterflood	Semi-Perip	12/88	220671	3093814	805	1	Produced
Elk Basin Northwest	Tensleep	Howell Petroleum	Waterflood	Semi-Perip	1/67	0	5918000	0	0	Idle
Elk Basin Unit	Tensleep	Howell Petroleum	Waterflood	Semi-Perip	4/67	0	2431000	0	0	Idle
Fairview	Red River	Mepna, Inc.	Pressure M	Random	5/70	0	4186000	0	0	Idle
Flat Coulee	Swift	Breck Operating Corp	Waterflood	Peripheral	2/72	891075	22041075	2441	12	Eagle & Produced
Flat Lake Unit	Ratcliffe	Wascana Oil & Gas Inc	Pressure M	Random	6/71	1238036	52102036	3392	10	Produced
Flat Lake West	Ratcliffe	Wascana Oil & Gas Inc	Pressure M	Random	11/74	393196	10321196	1077	3	Produced
Frannie	Tensleep	Conoco	Waterflood	Random	11/70	0	526846	0	0	Montana project P&A'd
Frannie	Tensleep	Conoco	LPG Inj	Random	11/70	0	23131	0	0	Idle
Fred & George Creek	No. Sunburst "B"	Fulton Fuel Company	Waterflood		1/96	6941	159113	224	1	Eagle & Sunburst A (1 month)
Fred & George Creek	SE Sunburst "B"	Fulton Fuel Company	Waterflood		1/96	252632	1256880	692	2	Eagle and Sunburst A
Fred & George Creek	Sunburst "A"	William M. Fulton	Waterflood	Random	7/76	746949	65102949	2046	2	Sunburst/Eagle
Gas City	Red River	Home-Stake Royalty Co	Waterflood	Semi-Perip	10/69	257014	18915014	704	1	Mission Canyon
Goose Lake North Unit	Ratcliffe	Makoil, Inc.	Waterflood	Semi-Perip	1/73	973203	32310203	2666	2	Produced
Gumbo Ridge	Tyler B	Cline Production Co.	Waterflood	Semi-Perip	6/80	9500	3347735	170	1	Produced (2 Months)
Highview	Madison	Mountain States Res.	Waterflood	Random	12/91	4088	199701	11	1	Madison (Converted CO2)
Ivanhoe	Tyler	Tomahawk Oil Co.	Pressure M	Random	5/64	125157	848157	343	1	Produced
Jim Coulee	Tyler	Beartooth Oil & Gas	Waterflood	Semi-Perip	7/72	763610	30448610	2092	2	Produced Cat Creek
Keg Coulee NW Unit	Tyler	Charoil Company	Waterflood	Semi-Perip	3/64	22370	6513370	61	1	Madison
Keg Coulee Tyler Unit	Tyler	Cline Production Co.	Waterflood	Semi-Perip	12/69	10503	3607503	29	2	Produced
Keg Coulee Unit	Tyler	Xeric Oil & Gas Corp.	Waterflood	Semi-Perip	8/66	4869	7151869	13	1	Produced
Kelley	Tyler B	Grand Resources, Ltd.	Waterflood	Random	7/69	56600	5102600	155	1	Produced
Kevin Homestake SU	Sunburst	KCS Resources Inc.	Waterflood	Random	8/64	320601	10061601	878	7	WSW & Produced
Kevin Sunburst Ferdig	Swift	Somont Oil Company	Waterflood		8/92	20957	124957	57	2	Produced
Kevin Sunburst SU	Sunburst	Basin Operating Co.	Waterflood	Random	8/64	0	13108	0	0	Abandoned 8/96
Kincheloe Ranch	Tyler A	Tyler Rockies Explor.	Waterflood	Random	11/89	109406	2543406	300	1	Third Cat Creek
Kincheloe Ranch, West	Tyler A	Tyler Rockies Explor.	Waterflood	Random	02/92	15097	252097	41	1	Third Cat Creek
Laird Creek	Swift	KCS Resources, Inc.	Waterflood	Semi-Perip	2/77	0	807000	0	0	Idle
Little Beaver	Red River	Shell Western E&P	Waterflood	Semi-Perip	8/66	1056674	64027674	2895	8	Produced
Little Beaver East	Red River	Shell Western E&P	Waterflood	Semi-Perip	4/65	617450	28348450	1692	6	Produced
Little Wall - Weisner	Tyler	Beartooth Oil & Gas	Waterflood	Random	01/92	246300	730445	675	1	Produced
Little Wall Creek	Tyler	Citation Oil & Gas	Waterflood	Random	1984	49572	1283504	136	1	Produced
Little Wall S Gunderson	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/87	269360	2374998	738	1	Produced
Little Wall South Unit	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/83	774005	20036005	2121	3	Produced
Lookout Butte Coral Crk	Red River	Shell Western E&P	Waterflood	Semi-Perip	4/67	1862515	74043515	5103	13	Produced
Lookout Butte East	Red River B	Burlington Resources	Waterflood	Random	7/88	1870525	3707525	5125	22	Produced
Mason Lake	1st Cat Creek	Nielco, Inc.	Waterflood	Pilot	11/88	0	472000	0	0	Idle
Melstone North	Tyler	True Oil Co.	Waterflood	Unknown	1/83	692214	10462214	1896	4	3rd Cat Creek & produced
Monarch	Siluro/Ord	Shell Western E&P	Waterflood	Unknown	12/73	197281	8178281	540	2	Produced
Pennell	Siluro/Ord	Shell Western E&P	Waterflood	Random	8/69	8449183	318138183	23148	79	Produced
Pine North C & D	Red River	Shell Western E&P	Waterflood	Semi-Perip	3/68	400915	27429915	1098	2	Lodgepole

# 1998 SUMMARY OF SECONDARY RECOVERY PROJECTS

Field	Formation	Operator	Type of Project	Injection Pattern	Date Injection Commenced	1998	1998	Avg. Daily Injection Rate BBLs or MCF	No. of Active Injection Wells	Source of Injection Media and Remarks
						Injection Volume BBLs or MCF	Cumulative Injections BBLs or MCF			
Pine South A	Siluro/Ord	Shell Western E&P	Waterflood	Semi-Perip	3/59	6288234	226963234	17228	24	Produced
Prichard Creek	Sunburst	Fulton Producing	Waterflood	Random	4/73	0	1183981	0	0	Idle
Rabbit Hills	Sawtooth	Summit Resources	Polymer/WF	Random	1/96	42109	243109	115	1	Produced
Ragged Point SW	Tyler	Grand Resources, Ltd.	Waterflood	Random	10/82	986522	15510522	2703	4	Produced
Ragged Point Tyler A	Tyler	Xeric Oil & Gas Corp.	Waterflood	Semi-Perip	12/66	30015	12076015	82	1	Produced
Rattler Butte	Tyler	Cline Production Co.	Waterflood	Unknown	5/93	43305	173305	119	1	Produced & WSW
Raymond	Nisku	Costilla Petroleum	CO2 Inj.	Unknown	8/83	65259	2526259	179	1	Produced
Reagan Dome	Madison	No.American Resources	Waterflood	Random	7/73	513734	10738734	1407	4	Produced
Red Creek	Madison	Summit Resources, Inc	Waterflood	5 Spot	6/65	3471764	33528764	9512	3	Produced
Ridgelawn RDU	Duperow	Cowry Enterprises Ltd	Secondary	Unknown	7/90	372791	4537791	1021	3	Duperow/Dakota Produced
Roscoe Dome	Lakota	E. American Energy	Steam Inj.	Unknown	5/82	0	5000	0	0	Idle
Rosebud	Tyler	Cline Production Co.	ER	Random	09/91	117718	879870	323	1	WSW & Produced
Stensvad	Tyler	Tomahawk Oil Co.	Waterflood	Semi-Perip	12/63	252156	300049156	691	2	Produced
Sumatra Central	Tyler	Ballard & Associates	Waterflood	Semi-Perip	9/69	4989854	220760854	13671	11	Produced
Sumatra Grebe	Tyler	Tomahawk Oil Co.	Waterflood	Random	6/75	31524	1458524	86	1	Produced
Sumatra NE	Tyler	Tomahawk Oil Co. Inc.	Waterflood	Semi-Perip	9/69	65470	13610470	179	3	Produced
Sumatra SE	Tyler	Central Resources inc	Waterflood	Semi-Perip	12/69	976640	37336640	2676	3	Produced
Sumatra Sawyer	Tyler	Central Resources Inc	Waterflood	Semi-Perip	6/80	0	1541000	0	0	Idle
Sumatra W.Kincheloe	Tyler	Great Plains Oper.	Waterflood	Semi-Perip	5/82	1620887	32203887	4441	8	Tyler 'sd'
Sumatra West	Tyler	Cline Production Co.	Waterflood	Semi-Perip	10/68	1656231	72494231	4538	5	Produced
Utopia	Swift	True Oil Co.	Waterflood	Random	03/92	183559	1040387	503	7	Sunburst WSW
Willow Ridge	Burwash	Croft Petroleum Co.	Waterflood		10/97	9495	12495	26	2	WSW
Winnett Junction	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/77	361835	11036835	991	2	Produced
Wolf Springs South	Amsden	Beartooth Oil & Gas	Waterflood	Unknown	1/93	16799	306728	46	2	WSW and Produced

## Top Producing Oil Companies - 1998

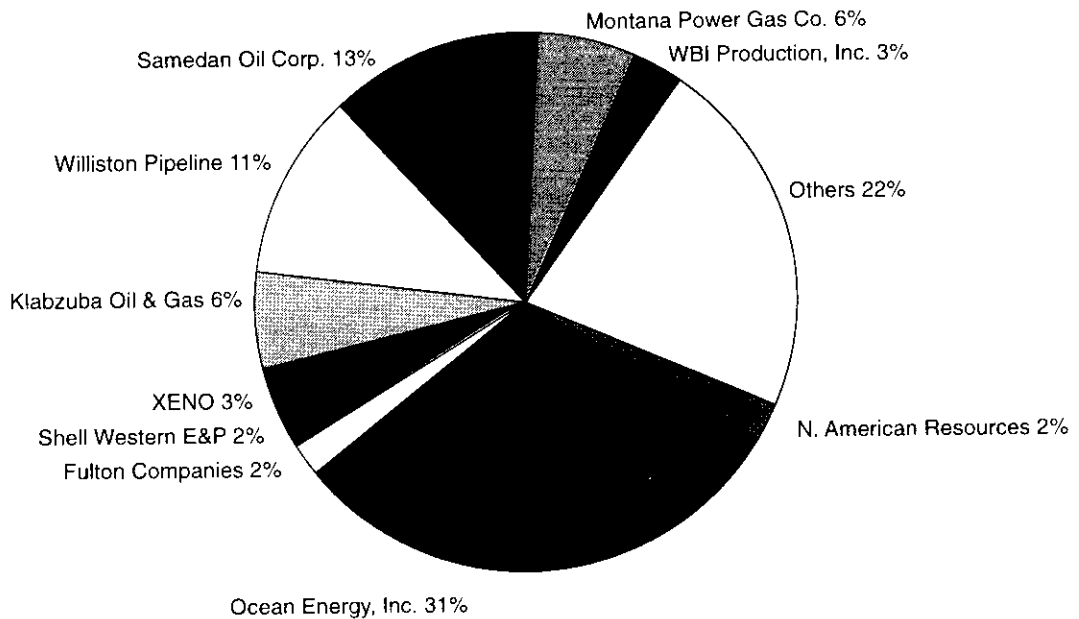
16,612,937 Barrels



202 Active Oil Producers -1998

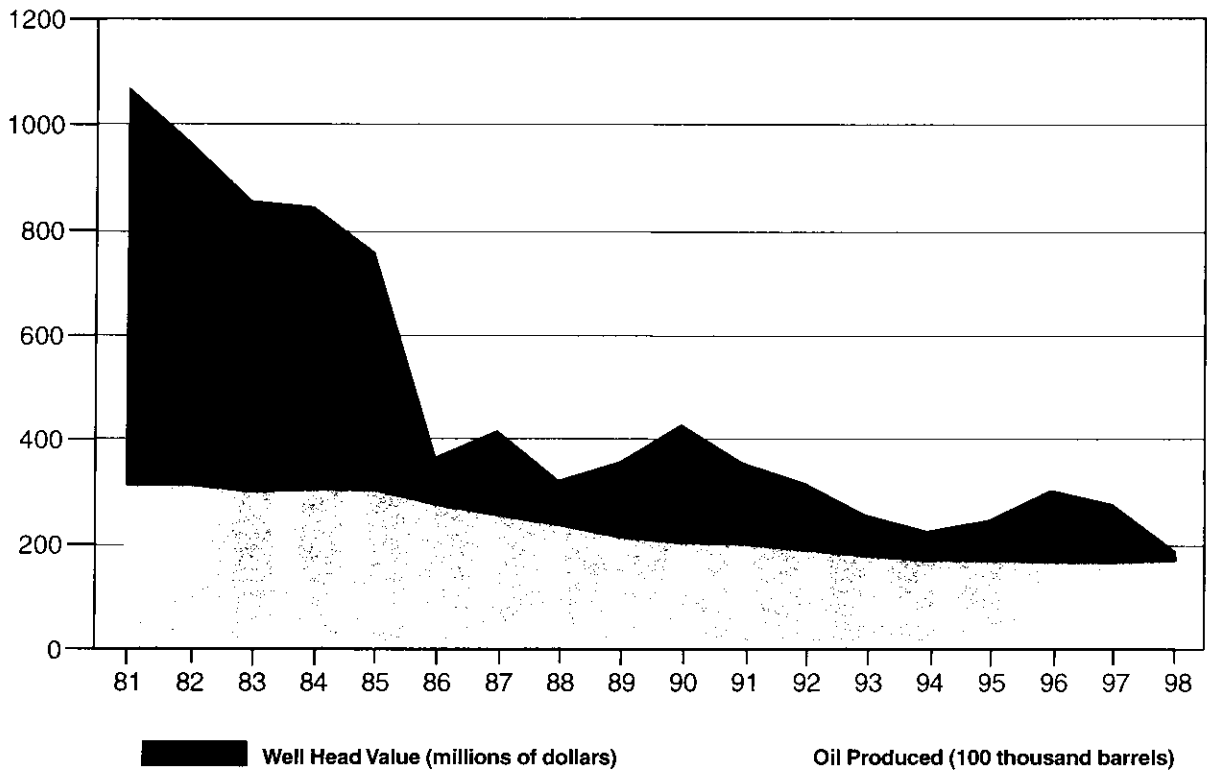
## Top Producing Gas Companies - 1998

59,753,426 Mcf

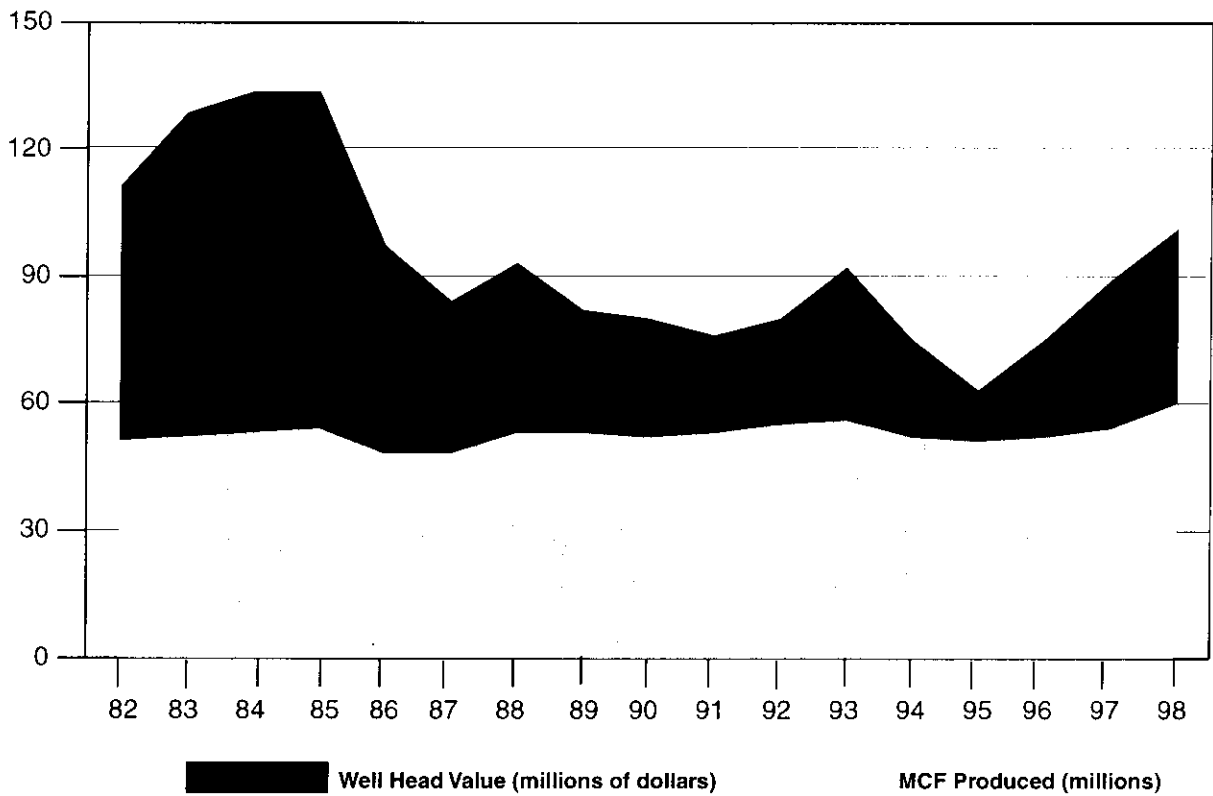


165 Active Gas Producers - 1998

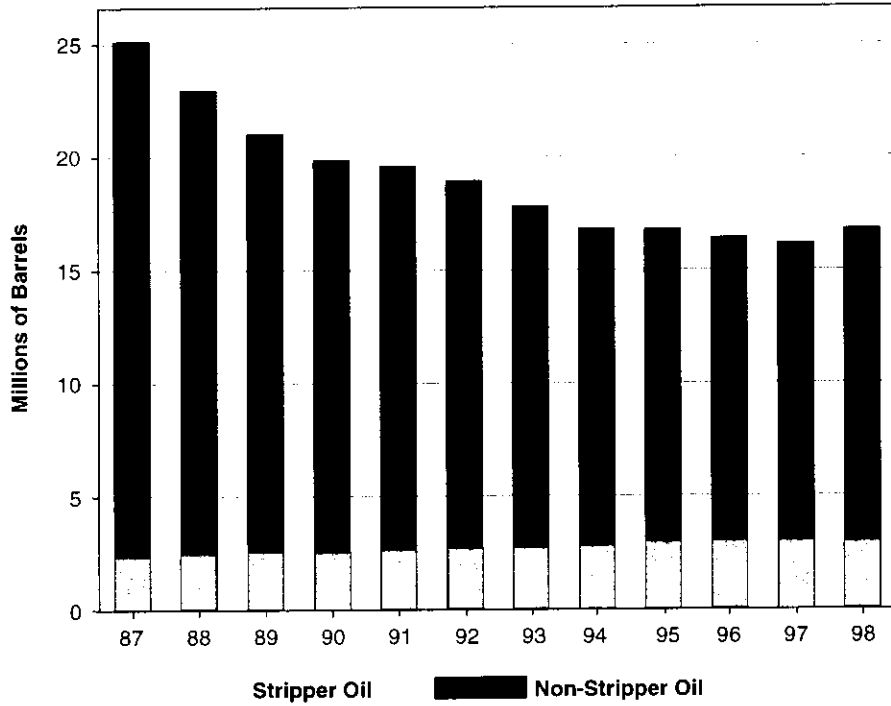
## Oil Produced and Oil Value



## Gas Produced and Gas Value Natural and Associated Gas

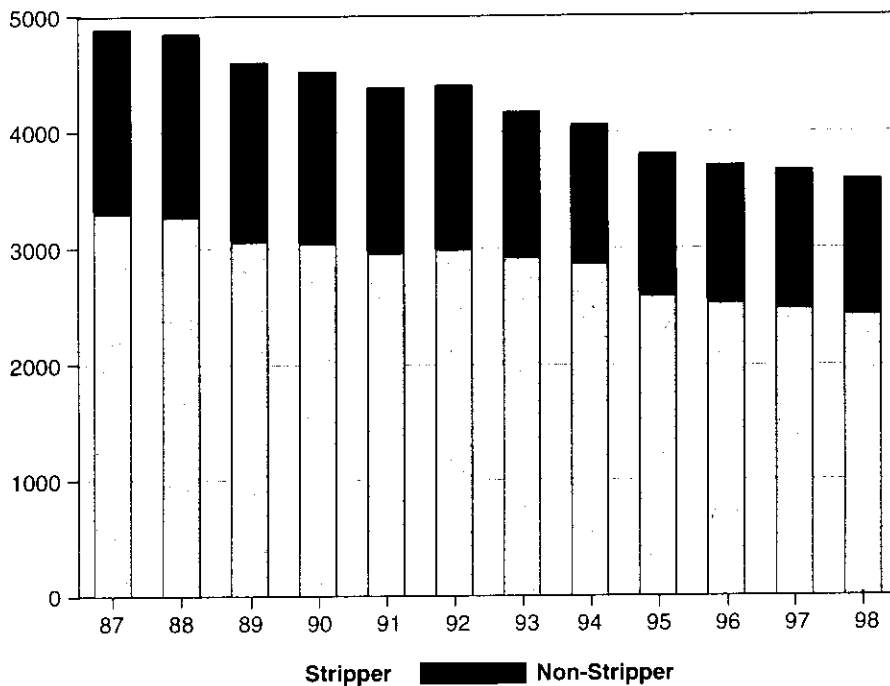


## Stripper and Non-Stripper Oil Production



A Stripper Well Produces 10 BOPD or Less

## Stripper and Non-Stripper Number of Producing Wells

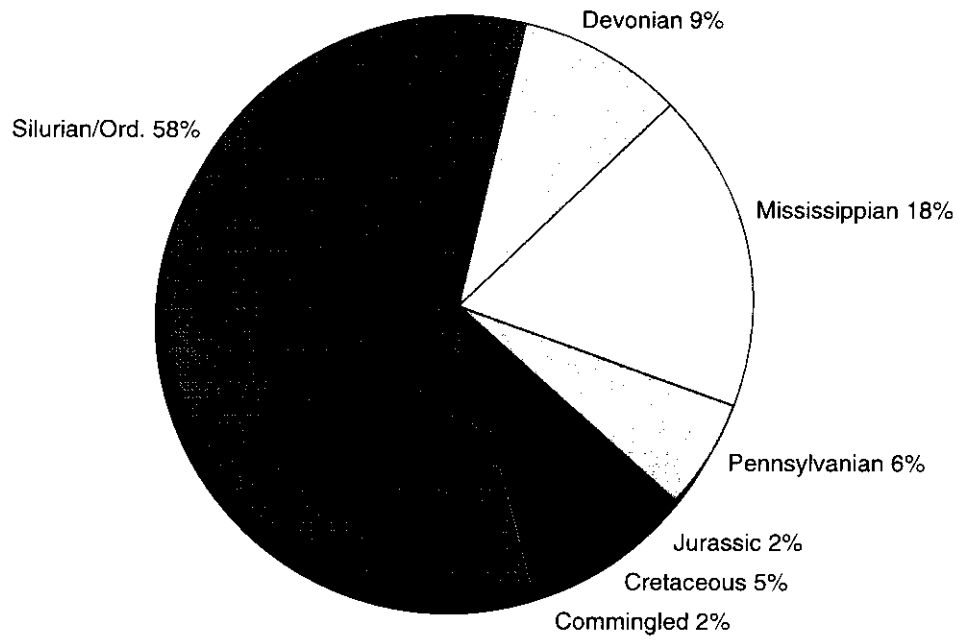


A Stripper Well Produces 10 BOPD OR Less



# Oil Production

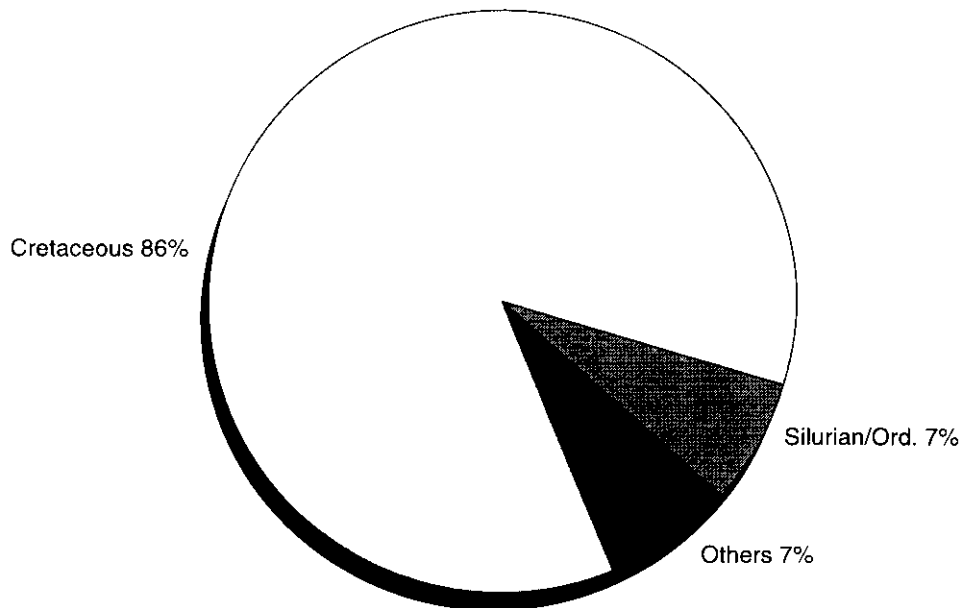
By Geologic Period



16,612,937 Bbls Produced

# Gas Production

By Geologic Period  
Natural and Associated Gas



59,753,426 Mcf Produced

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
ALKALI COULEE Red River	1	0	0	320-acre Red River Fm. spacing units with 660' setback from spacing unit boundaries and 1650' between wells (Order 77-81).
ALMA	0	0	0	640-acre spacing units for gas production from the Sawtooth, Bow Island, and shallower formations; location to be no closer than 990' to spacing unit boundary (Order 19-77).
ALMA, NORTH	0	0	0	Single 640-acre spacing unit for Blackleaf gas production (Order 95-82).
AMANDA				
Bow Island Sandstone	0	9	2	320-acre spacing units for gas with one well per horizon from the base of the Swift to the surface; wells to be no closer than 660' to spacing unit boundary; spacing units to consist of two contiguous quarter sections lying within one or two sections (Order 76-79). Field enlargement (Orders 25-83, 1-85, 25-88, 42-88, 2-89 and 29-91). Add Sec. 23-36N-4W for gas production below Bow Island and through the Swift (Order 63-91).
Burwash	0	1	0	
Dakota Sandstone	0	0	1	
Sunburst	0	4	0	
Swift Formation	0	1	0	
Bow Island, Dakota	0	1	0	
Swift, Sunburst	0	4	0	
ANTELOPE COULEE				
Bow Island Sandstone	0	1	0	Statewide.
ANVIL				
Nisku Formation	2	0	0	320-acre spacing units for Red River "B" and "C" with one well per zone located no closer than 660' to spacing unit boundary; commingling approved with one well per spacing unit (Order 75-85).
Ratcliffe Interval	1	0	0	
Red River	6	0	1	
ARCH APEX				
Bow Island Sandstone	0	39	5	Delineated for Colorado Blackleaf pool; wells to be 330' from legal subdivision, 2,400' from any other well drilling to or producing from the same reservoir; 75' topographic tolerance (Orders 5-56, 4-60). Single Bow Island spacing unit (Order 3-78).
Sunburst	0	1	1	
Swift, Sunburst	0	0	1	
ASH CREEK				
Shannon Sandstone	0	0	5	Spacing waived within unitized portion of field except no well may be drilled closer than 660' to unit boundary (Order 4-65). Waterflood initiated October 1964 (Orders 22-64, 15-66).
ASHFIELD				
Bowdoin	0	1	1	640-acre spacing units for Bowdoin/Greenhorn/Phillips with two wells per formation (Orders 41-82 and 16-89). Amended to allow 4 wells per formation per 640-acre spacing unit located no closer than 660' to the spacing unit boundary, 1,320' between wells producing from the same formation with 150' geologic or topographic tolerance (Order 17-89). Amend to allow 8 wells per spacing unit in 4 spacing units and reduce between-well distance to 990' with 150' topographic tolerance (Order 8-92).
Carlile Shale	0	71	2	
Phillips Sandstone	0	31	1	
Bowdoin, Greenhorn, Phillips	0	11	0	
Bowdoin, Greenhorn	0	4	0	
Greenhorn-Phillips	0	28	0	
ATOR CREEK				
Red River	1	0	0	Single spacing unit comprised of W/2 NE/4 and E/2 NW/4, Sec. 36, T35N, R55E for production of oil from Red River Formation (Order 73-96).
BADLANDS				
Eagle Formation	0	8	7	One Eagle Formation well per governmental section spacing unit; to be located no closer than 990' to a section line (Order 22-78).
BAINVILLE				
Ratcliffe Interval	1	0	0	Single 320-acre spacing unit for Winnipegosis Formation (Order 117-84). Single spacing unit for Winnipegosis (Order 18-88, Order 53-98). Single Red River spacing unit (Order 53-98).
Red River	2	0	0	
Winnipegosis Formation	1	0	0	
BAINVILLE (RATCLIFFE/MISSION CANYON)				
Ratcliffe Interval	1	0	0	Single spacing unit consisting of S/2 NW/4 and N/2 SW/4 Sec. 13, T28N, R58E for production from the Mission Canyon/Ratcliffe (Order 5-94).
BAINVILLE II				
Ratcliffe Interval	1	0	0	320-acre Red River spacing units; no well closer than 660' to the unit boundaries (Order 36-82). Field reduction (Order 16-85). Single Red River spacing unit designated (Order 69-85). Single Madison Group spacing unit, NW/4 27N-59E-6 (Order 122-97).
Red River	2	0	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>BAINVILLE, NORTH</b>				
Interlake Formation	1	0	0	320-acre spacing units for Winnipegosis and Red River consisting of two governmental quarter sections located in either one or two governmental sections; wells to be located no closer than 660' to unit boundary and no closer than 1,650' to any well producing from the same formation (Order 84-79). Amended to permit a topographic tolerance of 150' from the well location requirements (Order 39-80). Single spacing units for production from the Nisku Formation (Orders 61-92, 57-96). Single spacing unit for production from the Madison (Order 16-93). Pooling, Red River (Order 61-96). Commingling authorized (Orders 34-97, 35-97, 112-97, 113-97).
Mission Canyon	1	0	0	
Nisku Formation	4	0	0	
Ratcliffe Interval	2	0	0	
Red River	9	0	1	
Winnipegosis Formation	4	0	0	
<b>BAINVILLE, WEST</b>				
Red River	1	0	0	320-acre spacing units for Madison Group to consist of two governmental quarter sections that may be in either one or two governmental sections; location to be no closer than 660' to the unit boundary or closer than 1,650' to another producing well within the field (Orders 19-78, 42-79). 320-acre Red River spacing units aligned in east-west direction with permitted well to be no closer than 660' to unit boundary (Order 57-80).
<b>BANNATYNE</b>				
	0	0	0	Delineated for production from the Swift and Madison Formations; wells to be located at center of 10-acre tracts, 50' topographic tolerance; commingling permitted (Order 20-58). Pilot waterflood of Swift Formation suspended in 1963.
<b>BATTLE CREEK</b>				
Eagle Formation	0	55	11	Originally delineated for production of gas from all formations from surface to top of Virgelle with one well per producing horizon per section located no closer than 990' to section line but allowing additional wells in each section no closer than 1,320' to wells producing from same horizon (Order 40-86). Field rules amended to include Lower Eagle and Upper Colorado intervals in a portion of the field (Order 76-92).
Niobrara Formation	0	2	0	
<b>BEANBLOSSOM</b>				
Lower Tyler	1	0	1	Three spacing units consisting of individual lots with one well per lot (Order 23-86).
<b>BEARS DEN</b>				
Bow Island Sandstone	0	1	0	Swift unit delineated and spacing waived in unitized portion of field (Order 5-89). Statewide spacing for non-unitized lands and formations.
Swift Formation	7	1	3	
<b>BELL CREEK</b>				
Muddy Sandstone	75	0	200	Originally 40-acre spacing units with location 660' from unit boundary with 150' tolerance for topographic reasons only (Orders 37-67, 39-67, 50-67, 1-69, 17-70). Tertiary recovery program (Order 25-80). Dissolution of secondary and enhanced recovery units created under Orders 7-70, 23-70 8-71, 26-71, 35-71, 25-80, 82-84, 111-84, 112-84 and consolidation as the Bell Creek Consolidated (Muddy) Unit approved 12-12-91 (Order 71-91). South Bell Creek (Muddy) Unit approved 6-28-90 (Order 24-90). Certification of Consolidated Unit (Order 44-96) and South Bell Creek Unit (Order 74-97) as expanded enhanced recovery projects.
<b>BELL CREEK, SOUTHEAST</b>				
Muddy Sandstone	0	2	0	160-acre spacing units for Muddy gas production, wells 660' from spacing unit boundary (Order 31-72).
<b>BENRUD</b>				
	0	0	0	160-acre spacing for Devonian with wells no closer than 990' from spacing unit boundaries (Orders 1-62 and 44-62). Field rules amended to allow drilling not closer than 660' to the spacing unit boundaries (Order 6-65). Field reduction (Order 66-84).
<b>BENRUD AREA</b>				
Nisku Formation	0	0	1	Statewide.
<b>BENRUD, EAST</b>				
Nisku Formation	1	0	0	160-acre spacing units for Nisku with permitted location within a 1,320' square in center of quarter section (Order 6-65). Single Nisku Formation spacing unit consisting of Lots 3 and 4, Sec. 6, T30N, R48E (Orders 108-84 and 7-85).
<b>BENRUD, NORTHEAST</b>				
	0	0	0	Same as East Benrud Field (Order 6-65). Field enlargement (Order 26-66).
<b>BERTHELOTE</b>				
Sunburst	3	0	0	Sunburst wells to be located 330' from lease lines; 660' between wells with no more than one well per governmental quarter-quarter section (Order 18-66).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>BIG COULEE</b>				
Big Elk Sandstone	0	1	0	Statewide except for single spacing unit for production of gas from the Morrison Formation consisting of Sec. 29, T4N R20E (Order 25-86).
Third Cat Creek	0	6	1	
Morrison Formation	0	1	0	
<b>BIG GULLY</b>				
Tyler	2	0	0	Statewide.
<b>BIG GULLY, NORTH</b>				
Tyler	0	0	1	Statewide.
<b>BIG MUDDY CREEK</b>				
Interlake Formation	1	0	0	One well per 320-acre spacing unit for Interlake and Red River with wells no closer than 660' from boundary of the four N/2-S/2 spacing units (Order 4-75).
Mission Canyon	2	0	0	
<b>BIG ROCK GAS FIELD</b>				
Bow Island Sandstone	0	6	0	640-acre spacing units for gas production from Blackleaf "A" Formation; location to be no closer than 990' to any governmental section line (Order 31-78). Amended to allow 2 wells per section in 5 sections (Order 64-85).
Blackleaf Formation	0	25	1	
Colorado Shale	0	5	0	
<b>BIG WALL</b>				
Amsden Formation	3	0	4	Basal Amsden Sand and Amsden Dolomite spaced by old statewide spacing; 330' from lease or property line, 990' between wells in same reservoir (Order 12-54). Waterflood of Tyler "B" sand started August 1966 (Order 22-66). A second Tyler "B" waterflood authorized by Order 96-83.
Tyler	8	0	0	
<b>BILLS COULEE</b>				
Dakota Sandstone	0	0	1	Field without restrictions except that no well may be drilled closer than 330' to the exterior field boundary (Order 22-80).
Kootenai Formation	0	0	3	
Madison Formation or Group	0	0	1	
Moulton Sandstone	0	0	2	
Sunburst	0	0	1	
<b>BLACK BUTTE</b>				
Eagle Formation	0	1	2	320-acre spacing units for gas production from the Eagle Sandstone consisting of either the N/2 and S/2 or E/2 and W/2 of the section with well location to be no closer than 990' to exterior field boundaries nor closer than 660' to the interior spacing unit boundaries (Order 134-80).
<b>BLACK COULEE</b>				
Eagle Formation	0	5	8	320-acre Eagle spacing units; well to be located no closer than 990' to unit boundary (Order 6-73). Well location to be no closer than 660' to eastern boundary of Black Coulee Field (Order 37-79). Field enlargement (Order 71-79).
<b>BLACK DIAMOND</b>				
Duperow Formation	0	0	2	320-acre spacing units for Duperow, Red River and Nisku Formations; well location no closer than 660' to unit boundary (Orders 147-81 and 51-86). Field enlarged (Order 15-87). Portion of existing field delineated for production from Ratcliffe Formation (Order 32-89).
<b>BLACK JACK</b>				
Blackleaf Formation	0	1	1	Delineated for Sunburst and Swift with one gas well per 160 acre spacing unit, with well no closer than 660' to spacing unit boundaries (Order 3-69). Order 3-69 amended to include Blackleaf Formation in spacing and field rules (Order 4-74).
Sunburst	0	10	1	
Second White Specks	0	1	0	
<b>BLACKFOOT</b>				
Dakota Sandstone	1	6	0	Delineated for Cut Bank and Madison with one well per 40-acre spacing unit; 300' tolerance from center of spacing unit; dual completion in Cut Bank and Madison with administrative approval (Order 3-57). Waterflood started November 1976 (Order 34-76). Blackfoot Shallow Gas: 640-acre spacing units; one well per section per producing horizon above the Kootenai with location to be no closer than 990' to unit boundaries (Order 121-80).
Nisku Formation	1	0	0	
Bow Island, Dakota	0	1	0	
Cut Bank, Madison	8	0	2	
Sunburst, Dakota	0	1	0	
<b>BLACKLEAF CANYON</b>				
Sun River Dolomite	0	0	4	Single 160-acre Madison spacing unit (Order 84-81). Knowlton Unit: Well spacing requirements suspended provided no well drilled to be closer than 990' to unit boundary (Order 47-81). Two 280-acre spacing units for Sun River (Order 25-85).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>BLOOMFIELD</b>				
Dawson Bay Formation	1	0	0	320-acre spacing units for Interlake and Red River Formations consisting of two contiguous governmental quarter sections which need not be in the same section; wells located no closer than 660' to spacing unit boundaries (Order 38-83). Dawson Bay Formation added and commingling of Dawson Bay, Interlake, and Red River formations authorized (Order 16-84). Enlarged (Orders 32-84 and 26-89).
Interlake Formation	1	0	0	
Red River	1	0	0	
<b>BLUE MOUNTAIN</b>				
Red River	2	0	0	Statewide.
<b>BORDER</b>				
Cut Bank Sandstone	11	0	6	Oil: Unitized into New and Old Border fields; Unitized 6-1-73 (Orders 8-73, 9-73). Gas: Location no closer than 330' to boundary of legal subdivision; 2,400' between wells in same formation on same lease; 75' topographic tolerance (Order 7-54). Waterflood approved (Orders 8-73, 9-73, 28-73).
Moulton Sandstone	0	0	1	
Sunburst	0	0	1	
<b>BOWDOIN &amp; AREA</b>				
Bowdoin	0	10	2	One well per quarter section not less than 1,000' from lease boundary or less than 2,000' from any gas well in same horizon (Order 29-55). Unitized 1958. Delineated (Order 3-72). Spacing waived within lands participating in Bowdoin and Hinsdale Units, 660' setback from unit boundaries (Order 135-97).
Carlile Shale	0	8	0	
Cloverly	0	72	0	
Greenhorn	0	269	4	
Phillips Sandstone	0	44	1	
Bowdoin, Greenhorn, Phillips	0	3	1	
Bowdoin, Greenhorn	0	3	0	
<b>BOWES</b>				
Eagle Formation	0	45	9	Eagle Sandstone gas wells to be located 660' from boundary of legal subdivision and 1,320' from other wells in same formation with 75' topographic tolerance (Order 23-54). 160-acre Eagle spacing units in Sec. 5, 6, 7, 8, 17, and 18, T31N, R19E (Order 44-75). Sawtooth (Piper) oil wells 330' from lease or property line, 990' between wells in the same formation (Order 13-54). Pilot waterflood initiated in 1961 and expanded to fieldwide waterflood in 1965 utilizing water from Madison (Order 6-61). Vacuum pumps authorized for Sawtooth Formation wells (Order 74-83). Location and spacing requirements waived for lands committed to unit agreement (Order 61-97). Certification as an expanded enhanced recovery unit (Order 85-97).
Sawtooth Formation	43	0	39	
<b>BOX CANYON</b>				
Red River	0	0	1	Statewide.
<b>BRADLEY</b>				
Bow Island Sandstone	0	1	0	One well per formation per section for production of gas from all horizons above the top of the Kootenai Formation (Order 91-84). Amended to allow two wells per spacing unit (Order 47-95).
Madison Formation or Group	0	0	1	
Sunburst	1	1	0	
<b>BRADY</b>				
Burwash	1	0	2	Originally delineated for Sunburst Sandstone; wells to be located at center of 10-acre spacing units with 75' topographic tolerance (Orders 34-62, 55-62). Field enlargement; operators may commingle production from Burwash and Sunburst formations in Section 16 (Order 86-81).
Morrison Formation	0	0	11	
Sunburst	8	0	4	
<b>BREED CREEK</b>				
Tyler	11	0	5	Breed Creek Waterflood Unit approved; spacing waived within unitized area; wells to be located no closer than 330' to unit boundaries (Order 12-92). Certified as expanded enhanced recovery unit effective 9/1/94 (Order 90-94).
<b>BROADVIEW</b>				
Big Elk Sandstone	0	0	1	Single 640-acre Frontier spacing unit comprised of Sec. 35, T5N, R22E (Order 8-86).
<b>BRORSON</b>				
Interlake Formation	1	0	0	One well per 160-acre spacing unit, wells no closer than 660' from spacing unit boundary for Mission Canyon and Red River Formations (Order 5-69). Field enlargement (Order 25-82).
Madison Formation or Group	4	0	0	
Mission Canyon	3	0	0	
Ratcliffe Interval	1	0	0	
Red River	5	0	0	
<b>BRORSON, SOUTH</b>				
Bakken Formation	2	0	0	Delineated for Red River production with one well per 160-acre spacing unit, no closer than 660' from spacing unit boundary (Order 26-68). Gas to Brorson Field Plant. Reduced Field Area (Order 26-77).
Mission Canyon	5	0	0	
Red River	0	1	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>BROWN'S COULEE</b>				
Eagle Formation	0	3	2	Delineated for Judith River and Eagle gas production; one well per 160-acre spacing unit located no closer than 660' to spacing unit boundary; commingling allowed upon administrative approval (Order 7-74). Eagle spacing unit consisting of S/2 SW 23-34N-13E and N/2 NW 26-34N-14E (Order 4-99).
Second White Specks	0	1	0	
<b>BROWN'S COULEE, EAST</b>				
Eagle Formation	0	1	3	Statewide.
Judith River Formation	0	0	1	
<b>BRUSH LAKE</b>				
Red River	4	0	1	320-acre Red River spacing units with initial nine spacing units (Order 15-71).
Stonewall Formation	1	0	0	
<b>BULLWACKER</b>				
Eagle Formation	0	40	3	Delineated for Judith River and Virgelle/Eagle gas production with one well per 320-acre spacing unit with well location no closer than 660' to internal spacing unit boundaries and 990' to exterior field boundary (Order 26-74). Field enlarged (Order 63-85).
Judith River Formation	0	3	0	
Virgelle Sandstone	0	1	0	
<b>BURGET, EAST</b>				
Madison Formation or Group	1	0	0	Statewide.
Mission Canyon	1	0	0	
Nisku Formation	1	0	0	
Ratcliffe Interval	1	0	0	
<b>BURNS CREEK</b>				
Red River	0	0	1	Statewide.
<b>BURNS CREEK, SOUTH</b>				
Red River	0	0	1	Statewide.
<b>CABARET COULEE</b>				
Madison Formation or Group	1	0	4	Statewide.
Ratcliffe Interval	0	0	1	
<b>CABIN CREEK</b>				
Madison Formation or Group	5	0	18	Spacing waived and General Rules suspended until present Unit Agreement becomes inoperative (Order 36-62). Field boundaries amended and some spacing units designated (Order 118-84). Waterflood of Siluro-Ordovician (Orders 5-59, 15-60, and 30-63). Certified as an expanded enhanced recovery project effective 9/1/94 (75-94).
Red River	8	0	1	
Siluro-Ordovician	89	1	21	
<b>CAMP CREEK</b>				
Eagle Formation	0	1	1	Statewide.
<b>CANADIAN COULEE &amp; AREA</b>				
Eagle Formation	0	0	1	320-acre spacing units for Jurassic Sawtooth/Piper with well location no closer than 660' to interior spacing unit boundary, and 990' to field boundaries (Order 18-76).
Firemoon Limestone Mbr	0	0	1	
<b>CANADIAN COULEE, NORTH</b>				
	0	0	0	640-acre spacing units for Jurassic Sawtooth. Wells to be no closer than 1,650' to section line (Order 15-74).
<b>CANAL</b>				
Madison Formation or Group	1	0	0	320-acre Red River spacing units consisting of E 1/2 and W 1/2 of governmental section (Order 34-70). 160-acre Madison spacing units; wells located no closer than 660' to unit boundary with 150' topographic tolerance (Order 58-85). Permanent spacing unit, E/2, 23N-59E-7, for horizontal Ratcliffe well (Order 95-97).
Mission Canyon	1	0	0	
McGowan Zone	1	0	0	
Ratcliffe Interval	1	0	0	
Red River	1	0	0	
<b>CARLYLE</b>				
	0	0	0	320-acre Red River spacing units to consist of either the N/2 and S/2 or E/2 and W/2 of section or lots corresponding thereto; well location to be no closer than 660' to unit boundary nor closer than 1,650' to any well drilling or producing from the same pool (Order 39-79). E 1/2 of 18-11N-61E designated as a spacing unit for Nisku Formation with permission to commingle production with Red River (Order 29-87).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
CAT CREEK, EAST DOME Ellis Group	4	0	1	220' from lease or property line, 440' from every other well in same formation (Order 17-55). Three separate producing areas, East, Mosby, and West Domes. Field enlargement; upper and lower Brindley wells in Sec. 1, T15N, R28E are to be no closer than 350' from other Morrison wells in said section (Order 101-82). Three Kootenai, two Ellis, and one Amsden waterflood approved by Orders 17-56, 18-59, 13-62, 8-68, 38-70, 11-71 utilizing water from Third Cat Creek Sandstone. Waterflood modified (Order 29-74).
CAT CREEK, MOSBY DOME Amsden Formation	2	0	0	See Cat Creek, East Dome regulation summary.
Second Cat Creek	1	0	0	
Ellis Group	3	0	5	
CAT CREEK, WEST DOME Second Cat Creek	0	0	4	See Cat Creek, East Dome regulation summary.
Ellis Group	1	0	0	
Morrison Formation	3	0	0	
Cat Creek 1 & 2	26	0	4	
CATTAILS Ratcliffe Interval	7	0	0	160-acre spacing units for Ratcliffe zone; wells no closer than 660' to unit boundaries (Order 31-88).
CATTAILS, SOUTH Madison Formation or Group	2	0	0	160-acre spacing units for Ratcliffe zone; wells no closer than 660' to spacing unit boundaries. Horizontal wells may cross spacing unit boundaries (Order 70-91).
Ratcliffe Interval	1	0	0	
CEDAR CREEK Eagle Formation	0	169	3	320-acre Eagle Formation spacing units for a portion of the area, with wells in center of NW 1/4 and SE 1/4 of each section with 200' topographic tolerance (Order 1-61). Delineation amendments (Order 23-76 and 32-86). Order 33-54 (original delineation) vacated, and a portion of the lands included in Order 1-61 removed by Order 32-86. Spacing in Baker North Eagle Unit waived; 660' setback from unit boundaries required (Order 93-94). Two Eagle Fm. wells per spacing unit for a portion of field (Order 4-97). 160-acre spacing for Fed. Units 8A & 8B, 660' setback, 460' topographic tolerance (Order 61-98).
Judith River, Eagle	0	1	0	
CHAIN LAKES Eagle Formation	0	1	0	Statewide.
CHARLIE CREEK Dawson Bay Formation	1	0	0	Delineated for Red River, Duperow, and Nisku with 320-acre spacing units, oriented either east-west or north-south at option of operator; well no closer than 660' to spacing unit boundary and no closer than 1,650' to another producing well; spacing units may not cross section lines; commingling upon administrative approval (Order 66-76). Single 320 acre spacing unit for Dawson Bay oil production (Order 3-95).
CHARLIE CREEK AREA Bakken Formation	1	0	0	Statewide.
CHARLIE CREEK, EAST Red River	3	0	0	Two 160-acre spacing units for Duperow Formation (Order 47-87). Two 320-acre spacing units for Red River Formation (Order 38-88).
CHARLIE CREEK, NORTH	0	0	0	Single Red River spacing unit (Order 37-82).
CHELSEA CREEK Nisku Formation	1	0	0	Statewide.
CHINOOK, EAST Eagle Formation	0	0	3	Statewide.
Sawtooth Formation	0	0	2	
CHIP CREEK Eagle Formation	0	0	3	160-acre spacing units for Virgelle/Eagle and shallower formations; location no closer than 660' to spacing unit boundary (Order 89-76).
CLARK'S FORK Greybull Sandstone	0	1	0	330' from quarter-quarter section line; 1,320' between wells with 75' topographic tolerance (Order 17-54).
CLARK'S FORK, SOUTH	0	0	0	160-acre spacing for Frontier and deeper horizons; location no closer than 330' from quarter section line or 1,320' from any other well (Order 21-69).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>CLEAR LAKE</b>				
Mission Canyon	2	0	1	Statewide plus single spacing unit for Madison and Nisku consisting of E/2 NW/4 and W/2 NE/4 Sec. 8, T33N, R58E (Order 21-94).
Nisku Formation	2	0	0	
Ratcliffe Interval	2	0	1	
Red River	6	0	0	
<b>CLEAR LAKE, SOUTH</b>				
Red River	1	0	0	Statewide.
<b>COAL COULEE</b>				
Eagle Formation	0	2	1	One Eagle well per governmental section, to be located no closer than 990' to section line and only one well permitted per formation (Order 25-78). Amendment to Order 25-78 provides 320-acre spacing units to be designated by the operator within certain sections; well to be located no closer than 990' to spacing unit boundary (Order 36-79).
<b>COAL MINE COULEE</b>				
Eagle Formation	0	4	0	Delineated for Judith River and Eagle Formations with 4 wells per 640-acre spacing unit per formation with permitted well no closer than 990' to the exterior boundaries of the field and no closer than 660' to spacing unit boundaries with 150' topographic tolerance (Order 1-90).
Judith River Formation	0	0	1	
Second White Specks	0	1	0	
<b>COLORED CANYON</b>				
Nisku Formation	0	0	1	Single Red River spacing unit (Order 28-84). Single 160-acre Nisku spacing unit (Order 86-85). Single Red River Fm. spacing unit, S/2 NW/4 and N/2 SW/4, 7-32N-57E (Order 115-97).
Red River	3	0	0	
<b>COMERTOWN</b>				
Nisku Formation	1	0	1	320-acre Red River spacing units; permitted well to be no closer than 660' to spacing unit boundary (Order 35-80). Field enlargement (Orders 9-81 and 150-81).
Ratcliffe Interval	1	0	1	
Red River	4	0	1	
Nisku, Duperow	0	0	1	
<b>COMERTOWN AREA, SOUTH</b>				
Red River	0	0	1	Statewide.
<b>COMERTOWN, SOUTH</b>				
Red River	1	0	0	320-acre designated spacing units, wells located no closer than 660' to unit boundary (Order 96-84). Enlarged (Order 20-85).
<b>CONRAD, SOUTH</b>				
Dakota Sandstone	0	0	4	Delineated for Dakota production with 10-acre spacing units. Wells in center of each unit with 75' topographic tolerance (Orders 34-62, 31-63).
Sunburst	0	0	5	
<b>COTTONWOOD</b>				
Ratcliffe Interval	3	0	0	Single 320-acre Red River spacing unit (Order 85-84). Amended to include Ratcliffe (Order 54-92).
<b>COTTONWOOD, EAST</b>				
Ratcliffe Interval	1	0	0	Statewide.
<b>COW CREEK</b>				
	0	0	0	80-acre Charles spacing units, direction at option of operator but wells to be in SW 1/4 and NE 1/4 of each quarter section (Order 11-69).
<b>COW CREEK, EAST</b>				
Kibbey Formation	5	0	0	40-acre spacing units for Charles and Kibbey Formations consisting of quarter-quarter section with permitted well to be at center with 150' topographic tolerance (Order 35-74). Amendment of Order 35-74 and designation of ten 80-acre Charles Fm. spacing units (Order 73-97).
<b>CRANE</b>				
Devonian Undifferentiated	1	0	1	320-acre spacing units for Red River and Duperow Formations consisting of one half of a governmental section; well location to be no closer than 660' to spacing unit boundary and no closer than 1,650' to any well drilling to or producing from the same pool (Order 40-79).
Duperow Formation	1	0	0	
Red River	1	0	0	
Red River, Interlake	1	0	0	
<b>CROCKER SPRINGS, EAST</b>				
Madison Formation or Group	0	0	1	Statewide (Order 68-82 which established 80-acre spacing units was vacated by Order 37-87).
<b>CUPTON</b>				
Red River	5	0	1	160-acre quarter section spacing units for Red River Formation. Location no closer than 660' to spacing unit boundary (Order 4-72).
<b>CUPTON AREA</b>				
	0	0	0	Statewide plus single Red River spacing unit (Order 14-85).



## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>CUT BANK</b>				
Bow Island Sandstone	0	21	1	Oil: 330' from legal subdivision line, 650' between wells in same formation 5-spot on 40-acre tract permitted; 75' topographic tolerance (Order 10-54). Gas: 330' from legal subdivision, 2,400' between wells in same formation; 75' topographic tolerance except for setback from legal subdivision boundary (Order 10-54). Sec. 20, 29, and 32 of T36N, R4W spaced 320-acres (N 1/2 and S 1/2) (Order 26-70). Cut Bank Special Spacing area: E 1/2 and W 1/2 spacing units with wells to be located no closer than 330' to legal subdivision line nor less than 2,400' from any well drilling or producing from same reservoir (Orders 82-76, 6-77). Field extension (Order 3-79). Rules amended to include all formations from surface to base of Madison Formation (Order 45-80). Field enlarged (Orders 68-83, 13-85). Designated spacing unit for Sunburst and Cut Bank Formation gas (Order 73-92). Additional wells in selected spacing units in Special Spacing area (Orders 14-93, 51-93, 2-94). SCCBSU enhanced recovery approved (Order 88-85). Cut Bank-Airport Unit approved (Order 26-92). Airport Unit vacated, Westbank Unit approved (Order 32-97).
Blackleaf Formation	0	2	2	
Cut Bank Sandstone	404	204	400	
Dakota Sandstone	0	1	0	
Kootenai Formation	0	3	1	
Lander Sandstone	1	4	3	
Madison Formation or Group	42	2	23	
Moulton Sandstone	19	4	40	
Sunburst	8	9	4	
Cut Bank, Madison	3	0	0	
Moulton, Sunburst	1	0	0	
<b>CX</b>				
Anderson/Dietz	0	0	5	Temporary designation, 160-acre spacing units, surface to base Fort Union; four wells per spacing unit, 220' setback from spacing unit boundaries (Order 108-97). Publication of Intent to drill waived (Order 35-98).
Cook	0	0	4	
Monarch	0	0	2	
<b>DAGMAR</b>				
Red River	2	0	0	Statewide.
<b>DEAN DOME</b>				
	0	0	0	Statewide.
<b>DEER CREEK</b>				
Charles	3	0	0	80-acre spacing units for Interlake and Red River consisting of any two adjacent quarter-quarter sections. Well location in NE 1/4 and SW 1/4 of each quarter section with 75' topographic tolerance (Orders 23-55 and 14-59). Well location amendment. (Order 10-86) Commingling of production from the Interlake, Stony Mountain, Red River, and Charles with administrative approval (Order 18-63). 80-acre Charles Fm spacing unit, E/2 NE/4, 17N-53E-22 (Order 75-97). Regular section spacing units for Charles Fm horizontal wells (Orders 20-97, 90-97, 91-97, 118-97). Tyler spacing unit, E/2 NE 35-17N-53E (Order 51-98).
Charles C	3	1	1	
Tyler	0	1	0	
<b>DELPHIA</b>				
	0	0	0	Statewide.
<b>DEN</b>				
McGowan Zone	1	0	0	Delineated with single spacing unit for production of oil from Charles and Mission Canyon Formations with two existing wells as the designated wells (Order 34-95).
Ratcliffe Interval	1	0	0	
<b>DEVIL'S BASIN</b>				
Heath Formation	2	0	7	10-acre spacing units for Heath Formation; well location to be in the center of each spacing unit with a 75' tolerance for topographic or geologic reasons (Order 114-80). Certain lands removed from field (Orders 103-94, 64-97).
Tyler	1	0	0	
<b>DEVIL'S POCKET</b>				
	0	0	0	40-acre spacing units for Heath Formation; wells no closer than 165' to spacing unit boundary (Order 34-85).
<b>DEVON</b>				
Bow Island Sandstone	0	23	8	160-acre spacing units for production of gas from all formations from surface to top of Kootenai Formation; wells located no closer than 330' to any quarter section line and 660' to exterior boundaries of field, existing wells excluded (Order 32-83). Field enlarged and amended to provide 320-acre spacing units for Bow Island Formation; wells located no closer than 660' to interior spacing unit line and 990' to section lines (Order 50-86). Field enlargement (Order 5-88).
<b>DEVON, EAST</b>				
Bow Island Sandstone	0	3	4	320-acre spacing units for Bow Island gas production consisting of any two contiguous quarter sections; wells located no closer than 660' to spacing unit boundaries (Order 42-86). Field enlarged (Order 26-87).
<b>DEVON, SOUTH UNIT</b>				
Bow Island Sandstone	0	7	4	South Devon Unit drilled on statewide spacing and unitized for primary production (Order 28-71, corrected). South Devon Field delineated for gas production from all horizons above the top of the Kootenai with 320-acre spacing units; wells located no closer than 660' to unit boundaries (Order 24-84). Field enlarged (Order 11-87).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
DIAMOND POINT				
Interlake Formation	1	0	0	320-acre spacing unit allowing two wells to produce from the Red River or from commercial production at any depth shallower (Order 20-80).
Red River	2	0	0	
DIVIDE				
Madison Formation or Group	3	0	0	Ratcliffe and Mission Canyon 160-acre spacing units, no closer than 660' to spacing unit boundaries and 1600' between wells; 150' topographic tolerance excluding boundary setback (Order 7-81).
Ratcliffe Interval	5	0	0	
Red River	1	0	0	
DIVIDE AREA				
Red River	4	0	0	Statewide.
DOOLEY				
Ratcliffe Interval	3	0	0	Statewide.
DRY CREEK				
Eagle Formation	0	0	1	Field delineated for Frontier gas production with E 1/2 or W 1/2 of sections as spacing units (Order 8-70). West Dome gas storage project approved (Order 31-66). Enlarged (Order 69-92). Order 8-70 modified to allow N 1/2 or S 1/2 of section as spacing units (Order 31-76).
Frontier Formation	0	14	1	
Greybull Sandstone	0	1	0	
Judith River Formation	0	3	0	
Virgelle Sandstone	1	2	0	
DRY CREEK (SHALLOW GAS)				
Eagle, Virgelle	0	1	0	160-acre spacing units with 1 well per productive horizon above Cody Shale per spacing unit; location no closer than 660' to spacing unit boundaries (Order 54-76). Additional wells (Order 13-90).
DRY CREEK, MIDDLE				
Frontier Formation	0	2	1	320-acre spacing units for Frontier gas production consisting of two adjacent governmental quarter sections lying north-south or east-west at operator's option; permitted well no closer than 660' to spacing boundary (Order 25-75).
DRY CREEK, WEST				
Greybull Sandstone	0	1	0	Originally 160-acre spacing units for Greybull Sandstone; well location anywhere in spacing unit but no closer than 660' to unit boundary (Order 43-78); amended to include Frontier Formation (Order 65-82). Field enlargement (Order 86-82).
DRY FORK				
Bow Island Sandstone	0	7	2	One well per section per horizon above top of Kootenai; wells no closer than 990' to spacing unit boundaries (Order 32-82).
DUGOUT CREEK				
	0	0	0	Delineated for production from Red River with 320-acre spacing units, 660' setback from boundaries (Order 22-82). Field enlargement, S/2 26N-55E-15 (Order 98-98).
DUNKIRK				
Dakota Sandstone	0	14	2	Only one well per section may produce from each producing zone, formation, or horizon above Kootenai Formation, but no closer than 990' to section lines (Order 58-81). Field enlargements (Orders 104-81 and 66-82).
DUNKIRK, NORTH				
Bow Island Sandstone	0	26	8	One well per governmental section per Bow Island zone or horizon. Each producing well to be located anywhere within section but no closer than 990' to section line (Order 25-77). Field amended to allow 4 wells per section located no closer than 1,320' to another well producing from the same horizon (Order 7-89). Field enlargements (Orders 64-78, 157-81 and 6-89). Field reductions (Order 61-91, 6-95). Field amended to include Sunburst and Swift formations in 3 sections, 4 wells per formation per section with each Sunburst and Swift well located no closer than 660' to spacing unit boundaries and 1320' to any other well producing from same formation with a 75' topographic or geologic tolerance (Order 72-91).
Sunburst	0	1	0	
Swift Formation	0	1	0	
DUTCH HENRY				
Madison Formation or Group	1	0	0	Statewide plus two designated 160-acre spacing units (Orders 95-94 and 96-94).
McGowan Zone	2	0	1	
Ratcliffe Interval	0	0	2	
DUTCH JOHN COULEE				
Sunburst	2	2	4	Sunburst sand unitization and gas repressuring project approved; operator may drill additional wells anywhere in unit but no closer than 330' to unit boundaries (Order 27-88).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>DWYER</b>				
Charles	5	0	6	160-acre Madison spacing units; well location in center of SE 1/4 of spacing units with 175' topographic tolerance (Orders 25-60, 29-61). Field reduction (Order 30-85). Single 320-acre Nisku spacing unit (Order 30-87). Waterflood (Order 20-68). Single Red River spacing unit with 2 wells (Order 97-83). Single 320-acre Winnipegosis spacing unit (Order 10-91). Exception to produce Ratcliffe (Order 60-96). Duperow spacing unit, NE Sec. 11, NW Sec. 12, T32N, R58E (Order 28-98).
Nisku Formation	0	0	1	
Ratcliffe Interval	1	0	1	
Red River	3	0	0	
Winnipegosis Formation	0	0	1	
Nisku, Duperow	1	0	0	
<b>EAGLE</b>				
Duperow Formation	1	0	0	Statewide.
Interlake Formation	1	0	0	
Madison Formation or Group	3	0	0	
Mission Canyon	4	0	0	
Ratcliffe Interval	2	0	1	
Red River	1	0	0	
<b>EAGLE SPRINGS</b>				
Bow Island Sandstone	0	4	5	One well per governmental section per zone, located no closer than 990' to section line for all gas zones above the top of the Rierdon Formation; commingling of Swift and Sunburst permissible (Orders 4-78, 19-79). Enlargement (Order 20-93).
<b>EAST GLACIER</b>				
Greenhorn	2	0	0	160-acre spacing units for Greenhorn (Order 41-81). Amended to enlarge field and designate 80-acre spacing units; permitted well to be located no closer than 330' to the exterior boundaries (Order 112-81).
<b>ELK BASIN</b>				
Big Horn Dolomite	1	0	0	Spacing waived within unit areas (Order 10-61). Frontier: Water injection (Order 1-72). Embar-Tensleep pressure maintenance by crestal gas injection. Waterflood approved in 1966 (Order 5-66). Madison: Water injection (Order 17-61).
Frontier Formation	11	0	13	
Madison Formation or Group	16	0	15	
Embar, Tensleep	20	0	13	
<b>ELK BASIN, NORTHWEST</b>				
Cloverly	1	0	1	Spacing waived within unitized portion except that bottom of hole be no closer than 330' from unit boundary and there be at least 1,320' surface distance between wells in same formation; 75' topographic tolerance (Orders 43-63, 28-64). Frontier waterflood in progress. Embar-Tensleep waterflood (Order 3-67, 6-74).
Frontier Formation	1	2	9	
Madison Formation or Group	6	0	4	
Embar, Tensleep	4	0	2	
<b>ENID, NORTH</b>				
Red River	1	0	1	Spaced for one-well Red River field, NE 1/4 of Section 10 and NW 1/4 of Section 11, T23N, R54E (Order 45-79).
<b>EPWORTH</b>				
Bakken Formation	1	0	0	Statewide.
<b>ETHRIDGE</b>				
Swift Formation	0	10	0	320-acre spacing units for Swift Formation; well locations no closer than 660' to unit boundaries (Order 4-90). Field enlarged (Order 4-92).
<b>ETHRIDGE, NORTH</b>				
Bow Island Sandstone	0	6	1	320-acre spacing units for horizons above Rierdon; well location to be no closer than 660' to unit boundaries; Section 2, T33N, R4W to remain a 640-acre spacing unit (Order 98-81). Designation of a 640-acre spacing unit for Third Bow Island Sand gas production (Order 66-93).
Swift Formation	0	0	1	
<b>FAIRVIEW</b>				
Madison Formation or Group	1	0	0	160-acre spacing units; well location anywhere in spacing unit but no closer than 660' to unit boundary (Orders 48-65, 1-67, 43-67, 44-67, 38-84). Field area reduced (Order 119-84). Field enlarged (Order 16-87). Northwest part of field unitized for gas injection utilizing gas from Fairview and Brorson fields (Order 11-70).
Mission Canyon	2	0	0	
Ratcliffe Interval	3	0	0	
Red River	9	0	4	
<b>FAIRVIEW, EAST</b>				
Ratcliffe Interval	1	0	0	320-acre designated Red River spacing units (Order 76-81).
Winnipegosis Formation	1	0	0	
<b>FAIRVIEW, WEST</b>				
Madison Formation or Group	2	0	0	Statewide.
Ratcliffe Interval	3	0	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
FERTILE PRAIRIE	0	0	0	80-acre north-south spacing units; well location in NW 1/4 and SE 1/4 of quarter section with 75' topographic tolerance (Orders 3-56, 7-62). Amended to provide well locations for each 80-acre spacing unit to be the center of the SW or NE quarter quarter section of each quarter section with 75' tolerance for surface obstructions (Order 65-80). Field enlargement (Order 70-94). Field rules vacated for Red River Formation (East Lookout Butte (Red River) unit, Order 70-95).
FIDDLER CREEK Greybull Sandstone	0	0	1	Statewide.
FISHHOOK Madison Formation or Group	1	0	0	Statewide.
Red River	2	0	0	
FITZPATRICK LAKE Bow Island Sandstone	0	9	1	One well per governmental section located no closer than 990' to section line for all gas zones above the top of the Kootenai (Order 31-79). Field enlarged (Orders 113-84 and 2-92). Authorization to complete two Swift Formation gas wells in Sec. 10, T36N, R4W (Order 50-93). Sec. 14 & 15, T36N, R4W delineated for formations above Swift and below Bow Island; 320-acre spacing units consisting of two regular quarter sections in one or two sections; 660' setback from spacing unit boundaries (Order 1-94).
Swift Formation	0	0	1	
FLAT COULEE Bow Island Sandstone	0	3	0	Bow Island Gas: wells to be 330' from boundary of legal subdivision and 1,320' from other wells in same reservoir (Orders 36-54, 16-55). Sawtooth/Swift oil: 40-acre spacing units; well in center of spacing unit with 150' topographic tolerance (Orders 16-62, 19-63). Waterflood unit and redelineation approved for Swift sandstone (Orders 13-71, 17-A-71, 22-71).
Dakota Sandstone	0	2	1	
Swift Formation	14	1	6	
FLAT LAKE Madison Formation or Group	1	0	0	160-acre Madison spacing units; well location in center of NE 1/4 of quarter section with 200' topographic tolerance; wells no closer than 961' to North Dakota state line and no closer than 1,600' to Canadian line (Orders 10-65, amended; 43-65, 23-66, 33-66). Unit operation for eastern part of field (Order 7-71). Unit operation for western part of field (Order 32-74). Lower Ratcliffe permanent spacing unit NE/4 Sec. 13 and NW/4 Sec. 18, 37N-57E, for horizontal well (Order 22-97).
Nisku Formation	11	0	0	
Ratcliffe Interval	31	0	38	
Red River	1	0	1	
FLAT LAKE, EAST Madison Formation or Group	1	0	0	Single 160-acre Madison spacing unit (Order 103-84).
FLAT LAKE, SOUTH Ratcliffe Interval	3	0	1	160-acre spacing units for Ratcliffe (Order 2-67); modified to provide that wells may be located anywhere within the spacing unit but no closer than 660' to any unit boundary (Order 49-80).
FLAXVILLE	0	0	0	160-acre Madison spacing units; permitted well to be no closer than 660' to the exterior boundaries of the unit (Order 105-82). Order 105-82 amended to provide 150' tolerance for topographic reasons (Order 124-82).
FORT CONRAD Bow Island Sandstone	0	13	3	640-acre spacing units for Bow Island gas production; well location to be no closer than 990' to the section line (Order 19-81). Field enlargement (Order 118-82).
FORT GILBERT Madison Formation or Group	3	0	0	160-acre Ratcliffe/Mission Canyon spacing units; well location no closer than 660' to unit boundary with 150' topographic tolerance (Order 94-81). Excess produced associated gas reinjected into Duperow Formation (Order 78-81).
Mission Canyon	1	0	1	
Red River	2	1	0	
FOUR BUTTES McGowan Zone	1	0	0	Single spacing unit for production from McGowan (Order 15-98).
FOUR MILE CREEK Red River	1	0	0	320-acre spacing units for Red River (Order 43-75). Field reduction (Order 10-83).
FOUR MILE CREEK, WEST Red River	1	0	0	Statewide.
FOX CREEK, NORTH	0	0	0	160-acre spacing units for Madison Formation; wells located no closer than 660' to the unit boundary with 150' topographic tolerance (Order 13-84).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
FRANNIE	0	0	0	10-acre spacing units; well location in center of each unit with 100' topographic tolerance (Order 35-63). Unitized for waterflood of Phosphoria-Tensleep formations using produced fluids (Order 21-70). EOR approved (Order 62-85).
FRED & GEORGE CREEK				
Bow Island Sandstone	0	3	1	Sunburst Oil: 40-acre spacing units; well location in center of unit with 250' topographic tolerance (Orders 29-63, 1-65, amended by Order 27-65).
Sunburst	20	0	33	Sunburst Gas: same as Arch Apex (Order 4-60). Statewide for other formations. Several Sunburst A and B Sand waterflood units in field and area (Orders 13-70, 27-71, 40-80, 43-93, 44-93, 60-93, 64-93).
Swift Formation	1	0	1	
Swift, Sunburst	0	0	1	
FRESNO & AREA				
Eagle Formation	0	4	4	640-acre spacing units for Eagle (Virgelle) and shallower horizons; wells located no closer than 990' to unit boundary; one well may be drilled within each spacing unit for each producing horizon within the spacing unit (Order 14-76). Field enlargement and modification of field rules within certain areas (Order 52-80).
FROG COULEE				
Red River	1	0	0	320-acre Red River spacing units; wells to be located no closer than 660' to the unit boundary (Order 55-79).
FROID, SOUTH				
Red River	2	0	0	Statewide.
Winnepigosis Formation	1	0	0	
GAGE				
Amsden Formation	2	0	0	40-acre Amsden spacing units; well location to be in center of each unit with a permitted tolerance of 150' for topographical or geological reasons (Order 120-80). Field enlargement (Order 44-81).
First Cat Creek	0	0	1	
GALATA				
Bow Island Sandstone	0	5	4	Two wells from same Bow Island horizon per section no closer than 1,320' to each other and 990' to section lines (Order 28-85). Field enlarged (Orders 21-84, 41-85 and 76-85).
GAS CITY				
Madison Formation or Group	2	0	1	80-acre spacing units consisting of E 1/2 and W 1/2 of quarter sections; well location in NW 1/4 and SE 1/4 of quarter section; 150' topographic tolerance; spacing waived and statewide rules for Deviation, Commingling, and Dual Completion are waived in unitized portion of field (Order 29-62). Waterflood using produced water and Madison water (Order 16-69).
Red River	3	0	0	
Siluro-Ordovician	6	0	3	
Madison, Ordovician	1	0	0	
GAS LIGHT				
Eagle Formation	0	10	0	Statewide.
GILFORD, NORTH				
	0	0	0	320-acre spacing units for Sawtooth production with no well closer than 660' to spacing unit boundary (Orders 9-58, 38-76, 9-79).
GIRARD				
Bakken Formation	2	0	0	Statewide.
Red River	1	0	0	
GLENDIVE				
Red River	6	0	2	80-acre spacing units consisting of any two adjacent quarter-quarter sections; wells located in center of NE 1/4 and SW 1/4 of each quarter section with 75' topographic tolerance (Orders 27-55, 19-62, 58-62, 20-66). Additional 80-acre spacing units; commingling of Red River and Madison formations (Order 95-84). Additional Red River Formation wells in specific spacing units (Orders 21-93, 22-93).
Stony Mountain Formation	2	0	0	
Siluro-Ordovician	6	0	1	
GOLD BUTTE				
Bow Island Sandstone	0	0	1	640-acre spacing for Bow Island and Swift, well location any quarter-quarter section cornering on center of section (Order 26-59). Amended field boundary (Order 43-77).
GOLDEN DOME				
Eagle Formation	0	1	0	Originally 160-acre spacing for Judith River, Claggett, and Eagle (Virgelle); wells to be 660' from spacing unit boundary (Order 15-72). Single spacing unit for Greybull Formation (Order 17-82). Field enlargement and inclusion of Frontier and Greybull formations (Order 135-82).
Frontier Formation	1	5	1	
Greybull Sandstone	0	1	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
GOOSE LAKE				
Ratcliffe Interval	19	0	7	160-acre spacing units for Ratcliffe Formation (Order 42-63). Field enlarged (Orders 40-66, 47-67, 16-68). Refer to said orders for authorized well locations. Field size reduced (Order 29-77). Single spacing unit for Red River (Order 1-82). North Goose Lake Unit waterflood (Order 17-72). Unit production curtailment (Order 45-77).
Red River	1	0	1	
GOOSE LAKE RED RIVER				
Mission Canyon	0	0	1	Two 320-acre spacing units for Red River Formation (Orders 1-82, 56-96). Red River 'D' zone excluded from Order 56-96 (Order 41-97).
Red River	0	0	1	
GOOSE LAKE, WEST				
Red River	2	0	0	Statewide, plus single Red River spacing unit (Order 100-98).
GOSSETT				
Ratcliffe Interval	1	0	0	Statewide.
GRABEN COULEE				
Cut Bank Sandstone	47	1	38	Sunburst - 40-acre spacing units; well location no closer than 330' to legal subdivision boundary. Cut Bank and Madison - Oil: 330' from boundary of legal subdivision and 650' from any other well in same reservoir and on same lease; 75' topographic tolerance; 5-spot location on 40-acre tract allowed (Order 73-62). Waterflood of Cut Bank sands (Order 61-83).
Sunburst	8	0	7	
GRANDVIEW				
Bow Island Sandstone	0	4	1	320-acre spacing units for all gas producing horizons, aligned in a north-south direction; well location no closer than 660' to a spacing unit boundary (Order 49-67).
Sawtooth Formation	0	1	1	
GRANDVIEW, EAST				
Swift Formation	2	0	0	Statewide.
GRAY BLANKET				
Tensleep Sandstone	1	0	0	40-acre spacing units for Tensleep Formation. Wells located no closer than 330' to spacing unit boundary with 150' tolerance upon administrative approval (Order 20-92).
GREBE (TYLER SAND UNIT)				
Tyler	3	0	1	Tyler secondary recovery unit approved (Order 5-75).
GREEN COULEE				
Ratcliffe Interval	1	0	0	160-acre spacing units for Ratcliffe Formation; well location to be no closer than 660' to unit boundaries with 150' tolerance allowed for topographic or geologic reasons. 320-acre spacing units for the Red River Formation with well location to be no closer than 660' to the unit boundary nor closer than 1,650' to any well producing from the Red River (Order 56-81).
GREEN COULEE, EAST				
	0	0	0	Delineated for production from Red River Formation with single 320-acre spacing unit (Order 99-82). Redelineation (Order 6-95).
GUMBO RIDGE				
Tyler	3	0	3	Tyler Formation waterflood unit (Order 54-79). Certified as an expanded enhanced recovery unit effective 1/1/95 (Order 1/95).
GUNSIGHT				
Madison Formation or Group	1	0	0	Statewide.
Mission Canyon	1	0	0	
Ratcliffe Interval	1	0	0	
GYPSY BASIN				
Devonian Undifferentiated	0	0	1	Sunburst-Swift - 330' from lease lines and 660' between wells in same formation; only two wells per quarter-quarter section (Order 7-66). Sawtooth-Madison oil and gas - 40-acre spacing units; wells no closer than 330' from lease line (Orders 7-66, 12-79).
Madison Formation or Group	3	0	20	
Moulton Sandstone	0	0	1	
Morrison Formation	0	0	1	
Nisku Formation	0	0	1	
Sunburst	0	0	10	
Sawtooth Formation	0	0	4	
Swift Formation	0	0	2	
HAMMOND				
Muddy Sandstone	0	0	9	320-acre spacing units for Muddy Formation; each unit shall consist of a regular half of a governmental section with well location to be no closer than 660' to a unit boundary nor closer than 990' to the exterior boundaries of the field (Order 97-80).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>HARDPAN</b> Bow Island Sandstone	0	7	3	Spacing one well per section for Kootenai and above. Well location no closer than 990' to the section boundary (Order 145-81). Field enlargement (Order 131-82). Allow 2 wells per spacing unit in Sections 15, 20 and 21, T27N, R3E (Order 72-92).
<b>HARDPAN AREA</b> Bow Island Sandstone	0	1	0	Statewide.
<b>HARDSCRABBLE CREEK</b> Red River	1	0	0	Statewide.
<b>HAVRE</b> Eagle Formation	0	1	1	Single spacing unit for production of gas from Eagle (Order 48-82).
<b>HAWK CREEK</b> Amsden Formation	0	0	1	Statewide.
<b>HAWK HAVEN</b> Mission Canyon	1	0	0	Single 320-acre Madison spacing unit (Order 101-94).
<b>HAY CREEK</b> Madison Formation or Group	1	0	0	320-acre spacing for Red River, consisting of any two adjacent quarter sections, direction to be determined by operator; location no closer than 660' to unit boundary (Orders 15-69, 27-73).
Mission Canyon	1	0	0	
Red River	2	0	0	
<b>HAYSTACK BUTTE</b> Bow Island Sandstone	0	4	4	640-acre spacing units; one well per producing horizon above Kootenai Formation; location no closer than 990' to spacing unit boundary (Order 85-76). Amended field boundary (Order 37-77).
<b>HAYSTACK BUTTE, WEST</b> Bow Island Sandstone	0	8	0	320-acre regular half-section spacing units for all formations above Rierdon; wells located no closer than 660' to the unit boundaries; commingling of production authorized as specified (Order 6-88). Field enlarged (Order 46-91).
<b>HELL COULEE</b> McGowan Zone	1	0	0	Statewide.
Ratcliffe Interval	1	0	0	
<b>HIAWATHA</b> Tyler	1	0	1	Statewide.
Tyler, Stensvad	1	0	0	
<b>HIBBARD</b>	0	0	0	Statewide.
<b>HIGH FIVE</b> Stensvad	3	0	6	Spacing waived, unitized, and polymer-waterflood authorized (Order 110-80).
Tyler	5	0	0	
<b>HIGHLINE</b> Eagle Formation	0	1	0	Single 640-acre spacing unit for Eagle and shallower horizons (Order 35-88).
<b>HIGHVIEW</b> Devonian Undifferentiated	1	0	0	160-acre spacing units, located no closer than 660' from spacing unit boundary; 150' topographic tolerance (Order 84-76). Orders 32-76, 84-76 and 63-82 are amended to provide as follows: 1. Permitted wells to the Moulton, Sunburst, Morrison, and Swift formations shall be no closer than 330' from the lease line nor closer than 660' to a permitted well in the same formation with only two such wells per quarter quarter section with a 150' topographic tolerance. 2. Madison: (Gas) 160-acre spacing units with well location to be no closer than 660' from quarter section lines. 3. Madison: (Oil) 40-acre spacing units with permitted location to be no closer than 330' from the lease line with a 150' topographic tolerance. 4. Sawtooth: (Oil and Gas) 40-acre spacing units with permitted location to be no closer than 330' from the lease line with a 150' topographic tolerance (Order 136-82).
Madison Formation or Group	5	0	14	
Sawtooth Formation	1	0	0	
Swift Formation	0	0	1	
<b>HONKER</b>	0	0	0	320-acre specified spacing units for Red River Formation; permitted well no closer than 660' to the unit boundary (Order 105-80). Single 160-acre Winnipegosis spacing unit (Order 82-81).
<b>HOWARD COULEE</b> Tyler	1	0	0	Statewide.
<b>INJUN CREEK</b> Stensvad	2	0	0	Statewide.

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>INTAKE II</b>				
Mission Canyon	2	0	0	320-acre spacing units for Red River Formation; permitted well to be located no closer than 660' from the unit boundary (Order 99-81).
Madison, Ordovician	0	0	1	
<b>IVANHOE</b>				
Amsden Formation	1	0	0	40-acre spacing unit for production from any one common formation; well location in center of unit with 200' topographic tolerance (Order 7-60 and 13-56). Field size reduced (Orders 27-89 and 29-89).
Second Cat Creek	1	0	0	
Morrison Formation	1	0	1	
Tyler	2	0	3	
Amsden, Tyler	0	0	1	
<b>JIM COULEE</b>				
Tyler	5	0	1	Unitized, no well to be drilled closer than 330' to unit boundary (Order 18-72).
<b>KATY LAKE</b>				
Red River	1	0	0	Statewide.
<b>KATY LAKE, NORTH</b>				
Madison Formation or Group	3	0	0	Statewide except for single 320-acre Red River spacing unit (Order 88-84), and single 160-acre Mission Canyon spacing unit (Order 89-84).
Mission Canyon	1	0	0	
Nesson Formation	1	0	0	
Red River	5	0	0	
<b>KEG COULEE</b>				
Lower Tyler	2	0	5	40-acre spacing in southwest portion of field; spacing is waived in unitized portion (Orders 3-64, 4-64, 23-64). 80-acre spacing in remainder of field with variable pattern (Orders 11-60, 28-62). 40-acre spacing: W 1/2 E 1/2 and W 1/2 Sec. 35-11N-30E; NW 1/4 Sec. 35-11N-30E; NW 1/4 Sec. 2-10N-30E (Order 23-72). Topographic tolerance varies from 100' to 250' (Order 11-60, 4-64, 23-64). Buffer zone waived (Order 16-65). Field reduction (Order 2-76). Orders 11-60, 4-64, and 2-76 amended by Order 58-76. Three waterflood units (Orders 3-64, 28-66, 14-69). Expanded enhanced recovery unit approved effective 11/1/94 (Order 94-94).
Stensvad	1	0	0	
Tyler	4	0	10	
<b>KEG COULEE, NORTH</b>				
Tyler	1	0	0	40-acre spacing units with wells to be located at center of each spacing unit; 150' topographic tolerance (Order 46-64). Field reduction (Order 59-76).
<b>KEITH AREA</b>				
Bow Island Sandstone	0	1	0	Statewide.
Sawtooth Formation	0	1	0	
Second White Specks	0	2	1	
<b>KEITH, EAST</b>				
Bow Island Sandstone	0	13	0	Statewide, except unitized portions spaced by Order 22-62. Amended to allow additional wells in Johns and Osler units (Order 52-95). Designation of 36N-6E-13 as spacing unit; no more than 4 wells for each Cretaceous Fm and no more than 2 wells for each pre-Cretaceous Fm (Order 47-96). Kolhei Unit - no more than 4 wells for each Cretaceous Fm and no more than 2 wells for each pre-Cretaceous Fm (Order 48-96).
Niobrara Formation	0	1	0	
Sawtooth Formation	0	6	0	
Second White Specks	0	9	3	
<b>KELLEY</b>				
Tyler	1	0	2	40-acre spacing units with well at center of spacing unit with a 250' topographic tolerance (Order 15-67). Waterflood using Third Cat Creek water (Orders 8-69, 51-76). Certified as an expanded enhanced recovery unit effective 4/1/95 (Order 19-95).
<b>KEVIN AREA</b>				
Swift Formation	0	1	0	Statewide.
<b>KEVIN SOUTHWEST</b>				
Bow Island Sandstone	0	1	0	320-acre one-half section spacing units lying north-south or east-west at operator's option; location to be no closer than 660' to unit boundary for Sunburst-Swift formations and all formations above the top of the Kootenai (Orders 26-78, 47-78, 48-78). Field enlargement (Orders 82-79, 96-79, 47-80, 163-81 and 41-89).
Dakota Sandstone	0	5	0	
Eagle Formation	0	0	1	
Kootenai Formation	0	1	0	
Sunburst	0	8	2	
Swift Formation	0	2	0	
Bow Island, Dakota, Sunburst	0	2	0	
Bow Island, Dakota	0	3	0	
Bow Island, Dakota, Sunburst, Swift	0	1	0	
Bow Island, Sunburst	0	3	1	
Sunburst, Dakota	0	2	0	



## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>KEVIN SUNBURST</b>				
Bow Island Sandstone	0	32	3	Oil: 9 Wells per 40-acre tract; only 3 wells on any side of tract with set back at least 220' from line; Gas: Well to be no closer than 330' from the boundaries of any legal subdivision line, nor less than 2,400' from every other drilling or producible well on the same lease or unit (Orders 8-54, 28-55). Single spacing unit (Order 61-85). Field enlarged (Order 54-87). 160-acre Bow Island spacing units established (Orders 2-88, 17-88, and 60-88). Two 80-acre spacing units for production of gas from all formations from surface to base of Sunburst Sandstone (Order 40-92). There are three waterfloods in operation using Madison water (Orders 9-64, 17-64, 30-64, 36-65). H2S, CO2 and produced water disposed into Madison (EPA-87). SWD approved EPA-84, 85, 86, 87, 88. Enhanced recovery approved EPA-88, 91, 92. Ferdig Swift Unit approved (Order 52-92).
Blackleaf Formation	0	1	0	
Burwash	9	1	1	
Cut Bank Sandstone	0	1	0	
Dakota Sandstone	0	2	0	
Ellis Group	39	2	42	
Madison Formation or Group	560	8	928	
Nisku Formation	1	1	1	
Rierdon Shale	0	1	0	
Sunburst	91	46	77	
Swift Formation	28	9	8	
Unknown	0	0	2	
Bow Island, Dakota, Sunburst	0	2	0	
Bow Island, Dakota	0	2	1	
Bow Island, Sunburst	0	9	1	
Bow Island, Swift	0	2	2	
Bow Island, Dakota, Kootenai, Sunburst	0	3	0	
Ellis, Madison	2	0	0	
Sunburst, Dakota	0	2	0	
Nisku, Sunburst	0	0	1	
Swift, Sunburst	0	3	0	
<b>KEVIN SUNBURST (DAKOTA)</b>				
Dakota Sandstone	0	1	0	Single spacing unit for gas production from Dakota (Order 45-90).
<b>KEVIN SUNBURST, NISKU &amp; AREA</b>				
Nisku Formation	0	2	0	Nisku Gas: 640-acre spacing units; location no closer than 990' to spacing unit boundary (Order 83-76). Nisku Oil: 80-acre spacing units; location no closer than 330' to spacing unit boundary (Order 7-86). Gas spacing unit comprised of N/2 and N/2 S/2 35N-1W-35 (Order 10-98).
<b>KEVIN SUNBURST-BOW ISLAND</b>				
Bow Island Sandstone	0	7	0	160-acre Bow Island spacing units; location no closer than 660' to spacing unit boundary (Orders 2-88, 60-88). Field enlargement (Orders 17-88, 11-91).
<b>KEVIN, EAST BOW ISLAND GAS</b>				
Bow Island Sandstone	0	5	0	160-acre spacing units, one well no closer than 660' to spacing unit boundary per each producing zone, formation, or horizon from top of the Blackleaf to top of Dakota (Order 3-92).
Sunburst	0	5	0	
<b>KEVIN, EAST GAS</b>				
Sunburst	0	4	0	320-acre designated spacing units for gas production from all horizons above the Rierdon Formation; 660' setback from spacing unit boundaries, 1 well per horizon per spacing unit, commingling authorized (Order 23-85). Field enlargements (Orders 29-86, 10-87, and 8-90).
Bow Island, Sunburst, Swift	0	1	0	
Bow Island, Sunburst	0	3	0	
Swift, Sunburst	0	1	0	
<b>KEVIN, EAST NISKU OIL</b>				
Nisku Formation	18	1	3	80-acre spacing units consisting of E 1/2 or W 1/2 of governmental quarter section; wells located in center of SW 1/4 or NE 1/4 of each quarter section with 200' geologic or topographic tolerance (Order 46-84). Field enlarged (Order 9-86). Single spacing unit authorized to produce gas from the gas cap (Order 24-88). Exceptions to drill horizontal Nisku wells (Orders 29-97, 11-98). Exception to drill NW/4 SW/4, 35N-1E-31 (Order 70-97).
<b>KICKING HORSE</b>				
Bow Island Sandstone	0	13	0	320-acre spacing units for Madison and shallower horizons; location no closer than 660' to unit boundary and 990' to field boundary (Order 17-74). Board Order 17-74 is amended to include additional lands and provide that 320-acre spacing units may be either the N/2 & S/2 or E/2 & W/2 of section (Order 53-80).
Sunburst	0	3	1	
<b>KINCHELOE RANCH, WEST</b>				
Tyler	5	0	1	Statewide. Kincheloe Ranch Tyler "A" Unit approved (EPA-88 and Order 46-88). KR Tyler "A" Sand Unit approved (Order 47-91).
<b>KINYON COULEE SOUTH</b>				
	0	0	0	Single Bow Island spacing unit with only one well allowed; location no closer than 990' to section line (Order 31-81).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>KIPPEN AREA, EAST</b>				
Sawtooth Formation	0	0	1	Statewide.
Madison, Swift	0	0	1	
<b>LAIRD CREEK (LAIRD CREEK UNIT)</b>				
Swift Formation	6	1	3	Unitized and waterflood authorized in Swift for oil production (Order 25-74), commenced 2-25-77. Single 320-acre spacing unit for Swift gas production (Order 37-92).
<b>LAKE BASIN</b>				
Big Elk Sandstone	0	1	0	160-acre spacing units to base of Virgelle; wells no closer than 660' to unit boundary and 990' to field boundary; commingling with administrative approval (Order 9-74). Gas from Telegraph Creek pooled (Order 29-75).
Claggett Shale	0	1	0	
Eagle Formation	0	0	1	
<b>LAKE BASIN, NORTH</b>				
Eagle Formation	0	0	1	640-acre spacing units consisting of one section for all productive horizons; locations 990' from section line (Orders 6-58, 3-74). 160-acre spacing units for Claggett and Eagle/Virgelle, wells located no closer than 660' to quarter section lines within restricted sections (Order 63-76).
<b>LAMBERT</b>				
Interlake Formation	0	0	1	320-acre Red River spacing units consisting of the E 1/2 and W 1/2 of section (Order 3-83).
Red River	3	0	0	
<b>LAMBERT, SOUTH</b>				
Red River	1	0	0	Single Red River Formation Spacing Unit (Order 75-96).
<b>LAMESTEER CREEK</b>				
	0	0	0	Single Red River spacing unit (Order 101-84).
<b>LANDSLIDE BUTTE</b>				
Madison Formation or Group	10	0	7	Statewide.
Sun River Dolomite	0	0	2	
<b>LANE</b>				
Red River	1	0	0	Statewide.
<b>LAREDO</b>				
Eagle Formation	0	0	2	320-acre Eagle spacing with unit consisting of one-half section lying north-south or east-west; well no closer than 990' to unit boundary (Order 8-74).
<b>LEARY</b>				
Muddy Sandstone	1	0	0	40-acre spacing units for Muddy Formation; wells located no closer than 330' to spacing unit boundary with 75' topographic tolerance (Order 115-84 which amended Orders 12-69, 19-70, and 68-76).
<b>LEDGER</b>				
Bow Island Sandstone	0	45	8	640-acre Bow Island spacing; one well per section per sand to be located no closer than 990' to section line; permissible to commingle two or more sands with administrative approval (Order 53-77). Field enlargement and amendment to allow two wells per sand per section (Order 1-87).
Sawtooth Formation	0	0	1	
<b>LEROY</b>				
Eagle Formation	0	23	12	320-acre spacing for Judith River and Eagle/Virgelle with unit consisting of one-half section lying north-south or east-west. Wells no closer than 660' to unit boundary and 990' to field boundary. (Order 19-75) Tolerance of 330' allowed for topographic reasons (Order 72-80). Field enlargement (Order 31-87).
<b>LISCOM CREEK</b>				
Shannon Sandstone	0	6	1	Shannon spacing, one well per 640 acres, with location no closer than 990' to section boundary (Order 20-72).
<b>LISK CREEK</b>				
Dawson Bay Formation	1	0	0	Statewide.
<b>LITTLE BASIN</b>				
	0	0	0	640-acre Frontier spacing units; one well per section located no closer than 990' to spacing unit boundary (Order 27-86).
<b>LITTLE BEAVER</b>				
Red River	1	0	5	Spacing waived and General Rules suspended until unit agreement becomes inoperative (Order 41-62). Waterflood of the Red River was commenced in August 1967 (Order 3-66). Cedar Creek Units 8A & 8B certified as expanded enhanced recovery units effective 9/1/94 (Order 79-94).
Siluro-Ordovician	28	0	9	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>LITTLE BEAVER, EAST</b>				
Mission Canyon	1	0	0	Same as for Little Beaver (Order 42-62). Waterflood of the Red River commenced in April 1965 (Order 33-64). Cedar Creek Units 8A & 8B certified as expanded enhanced recovery units effective 9/1/94 (Order 80-94).
Red River	3	0	0	
Siluro-Ordovician	11	0	1	
<b>LITTLE CREEK</b>				
Eagle Formation	0	3	0	Statewide.
Virgelle Sandstone	0	0	1	
Eagle, Virgelle	0	2	0	
<b>LITTLE PHANTOM</b>				
Sunburst	1	0	0	10-acre spacing units; well location to be located anywhere within the spacing unit but no closer than 220' to the exterior boundary lines of the field nor closer than 440' to any well capable of or producing from the Sunburst Sands (Order 46-81).
<b>LITTLE ROCK</b>				
Bow Island Sandstone	0	1	0	320-acre N 1/2 and S 1/2 spacing units for Blackleaf and Bow Island; well location no closer than 990' to west line of Section 14 and 660' to the remaining unit boundary lines (Order 40-78). Field enlargement (Orders 94-79 and 34-80). Allow two wells within each spacing unit no closer than 1,320' to each other and no closer than 660' to unit boundaries (Order 12-90). Two 320-acre spacing units for Lander Formation gas, 2 wells per spacing unit located no closer than 1320' to another Lander formation well and 330' to the spacing unit boundary (Order 56-91). Enlarge for Lander gas production (Order 48-93).
Blackleaf Formation	0	11	0	
Cut Bank Sandstone	0	1	0	
Lander Sandstone	0	6	0	
Bow Island, Dakota, Sunburst, Swift	0	1	0	
<b>LITTLE WALL CREEK</b>				
Tyler	3	0	0	Little Wall Creek, Tyler Sand Unit (Order 40-84). Weisner Tyler Sand Unit approved (Order 65-91).
Tyler, Stensvad	2	0	2	
<b>LITTLE WALL CREEK, SOUTH</b>				
Tyler	8	0	2	South Little Wall Creek Unit waterflood (Order 85-83). Gunderson Tyler Sand Unit (Order 39-87; unit area reduced by Order 21-92). Hamilton-Gunderson Tyler Sand Unit (Order 22-92).
<b>LODGE GRASS</b>				
Tensleep Sandstone	2	0	0	Statewide.
<b>LOHMAN</b>				
Eagle Formation	0	3	4	640-acre Eagle spacing; one well per section to be located no closer than 990' from section line (Order 23-78).
<b>LOHMAN AREA</b>				
Eagle Formation	0	4	1	Statewide.
<b>LONE BUTTE</b>				
Madison Formation or Group	1	0	0	Single 320-acre spacing unit for Red River and Interlake formations; 160-acre spacing units for Madison with well location no closer than 660' to unit boundary; 150' topographic or geologic tolerance (Order 83-85).
Mission Canyon	2	0	0	
Ratcliffe Interval	0	0	1	
Red River	1	0	0	
<b>LONETREE CREEK</b>				
Interlake Formation	2	0	0	320-acre Red River spacing, wells 660' from spacing boundary, 2,000' between wells (Order 29-72). Field reduction (Orders 162-81 and 84-85). Ratcliffe and Mission Canyon delineation for S/2, Sec. 10, T24N, R57E (Order 45-93). Interlake spacing unit consisting of the N/2, Sec. 10, T24N, R57E (Order 51-95).
Mission Canyon	1	0	0	
Red River	4	0	1	
Red River, Interlake	1	0	0	
<b>LONETREE CREEK, WEST</b>				
	0	0	0	Red River spacing units shall be S 1/2 and N 1/2 of Section 12, T24N R56E. No well closer than 660' to spacing unit boundary or 1,320' to existing well (Order 73-82).
<b>LONG CREEK</b>				
Charles C	1	0	0	Statewide.
<b>LONG CREEK, WEST</b>				
Nisku Formation	2	0	0	80-acre spacing units comprised of two contiguous quarter quarter sections in either one or two governmental sections aligned either north-south or east-west with location to be no closer than 330' to unit boundary nor less than 1,000' from any other producing well (Order 27-77). Field enlarged (Order 71-83).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>LOOKOUT BUTTE</b>				
Madison Formation or Group	2	0	4	160-acre spacing; well location in center of SE 1/4 of each quarter section with 150' topographic tolerance (Order 21-62). Coral Creek Unit not subject to spacing rules. Redelineated (Orders 7-63, 5-95). Field reductions (Orders 57-85, 6-87, 69-94). Waterflood of Silurian-Ordovician approved in 1966 (Order 35-66). Pennel and Coral Creek Deep Units certified as expanded enhanced recovery units effective 9/1/94 (Orders 77-94, 78-94, 5-95).
Red River	7	0	1	
Siluro-Ordovician	30	0	10	
<b>LOOKOUT BUTTE AREA, EAST</b>				
Lodgepole Limestone	1	0	0	22 delineated Red River spacing units with wells located no closer than 660' to the unit boundary with 175' topographic tolerance (Order 87-85). Field enlargement and inclusion of Madison group and all Silurian formations (Order 6-87). Pilot waterflood (Orders 19-88, 21-89, 42-90A, 49-90, 77-92, 35-93, 23-94). Redelineation of pilot area and certification as an expanded enhanced recovery project (Order 53-94). Approval of enhanced recovery unit for Red River Formation (Order 70-95).
Red River	70	0	12	
<b>LORING</b>				
Bowdoin	0	6	0	640-acre spacing units with 2 wells per formation (Order 79-82 and 12-89). Amended to allow 4 wells per formation per spacing unit, no closer than 660' to section boundaries, 1,320' between wells producing from same formation, 150' tolerance for geologic and topographic reasons (Order 13-89). Pilot infill drilling program approved for a portion of the field, with up to 8 wells per spacing unit with between well distance reduced to 990' (Order 15-91). Commingle Carlile/Bowdoin, Greenhorn and Phillips (Order 26-98).
Carlile Shale	0	84	4	
Greenhorn	0	3	0	
Phillips Sandstone	0	4	1	
Bowdoin, Greenhorn, Phillips	0	64	1	
Bowdoin, Greenhorn	0	20	1	
Greenhorn-Phillips	0	32	0	
<b>LORING, EAST</b>				
Bowdoin	0	4	1	160-acre spacing units; where discrete gas formations (Bowdoin, Greenhorn and Phillips) exist, a well may be drilled to each discrete formation and may be located no closer than 660' from the spacing unit boundaries (Order 60-82). 640-acre spacing for lands under communitization agreements prior to field delineation, 4 wells per spacing unit; authorization to commingle (Order 39-97).
Carlile Shale	0	12	1	
Greenhorn	0	4	0	
Phillips Sandstone	0	26	3	
Bowdoin, Greenhorn, Phillips	0	33	4	
Bowdoin, Greenhorn	0	20	4	
Greenhorn-Phillips	0	8	1	
<b>LORING, WEST</b>				
Bowdoin	0	3	0	Spacing units comprised of 1 full section with 4 wells permitted to each formation in each spacing unit located no closer than 660' to the exterior boundary of the section and no closer than 1,320' to a well in the same formation (Order 7-87). Field enlargement, commingling (Order 27-98).
Carlile Shale	0	2	0	
Martin Sandstone	0	1	0	
Phillips Sandstone	0	3	0	
Greenhorn-Phillips	0	1	0	
<b>LOWELL</b>				
Red River	2	0	0	320-acre Red River spacing units consisting of two contiguous governmental quarter sections which may lie in either one or two governmental sections; wells to be located no closer than 660' to unit boundary or closer than 1,650' to well producing from the same horizon (Order 104-79).
<b>LOWELL, SOUTH</b>				
Red River	1	0	0	Single Red River Formation spacing unit (Order 29-98).
<b>LUSTRE</b>				
Charles	8	0	1	80-acre Madison spacing units consisting of 1/2 of a regular governmental quarter section, either E 1/2 and W 1/2 or N 1/2 and S 1/2; well to be located in either NE 1/4 or SW 1/4 with 200' tolerance (Order 19-83). Field enlargement (Order 43-84). Field Reduction (Order 43-96).
Charles C	14	0	2	
Mission Canyon	5	0	1	
Ratcliffe Interval	5	0	0	
<b>LUSTRE, NORTH</b>				
Charles	1	0	0	80-acre spacing units for Madison Group Formations consisting of E 1/2 or W 1/2 of a governmental quarter section; wells located no closer than 660' to spacing unit boundary with 200' topographic or geologic tolerance (Order 39-84).
<b>MACKAY DOME</b>				
Greybull Sandstone	1	0	0	Statewide.
<b>MARIAS RIVER</b>				
Bow Island Sandstone	0	15	2	One well per section per horizon above the top of the Kootenai (Order 18-78). Field enlargement (Order 12-83). Field amended to allow 2 wells per zone in each spacing unit located no closer than 1,320' to each other and no closer than 990' to spacing unit boundaries (Order 26-90).
Dakota Sandstone	0	0	1	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>MASON LAKE</b>				
Amsden Formation	1	0	2	80-acre First Cat Creek Sand spacing units consisting of one half of a quarter section lying in either east-west or north-south direction; well location in center of the NE and SW quarter-quarter sections of each quarter section with 75' topographic tolerance (Order 35-78). Amend Order 35-78 for certain lots designated as spacing units (Order 66-78). Field enlargement (Order 16-79). Pilot enhanced recovery approved (Orders 37-88, 67-89 and 52-90). Mason Lake (1st Cat Creek) Unit approved (Order 80-96).
First Cat Creek	5	0	8	
Third Cat Creek	0	0	2	
Muddy Sandstone	0	0	1	
<b>MCCABE</b>				
Ratcliffe Interval	1	0	0	160-acre spacing units for Madison group; permitted well to be no closer than 660' to spacing unit boundary (Orders 100-80, 43-79). 150' tolerance allowed for topographic reasons (Order 3-81). Board Order No. 100-80 amended to eliminate the requirement of 1,650' between wells producing from the Madison group (Order 37-81).
<b>MCCABE, EAST</b>				
Red River	1	0	0	Statewide.
<b>MCCOY CREEK</b>				
Red River	1	0	0	Statewide.
<b>MEANDER</b>				
Sunburst	2	0	0	40-acre spacing units for Sunburst with wells not closer than 330' to spacing unit boundaries (Order 30-82).
<b>MEDICINE LAKE</b>				
Devonian Undifferentiated	1	0	0	Delineated for formations from the base of the Winnipeg to the base of the Last Charles Salt; 320-acre spacing units comprised of any two contiguous governmental quarter sections in either one or two governmental sections; wells to be located no closer than 660' to unit boundary nor closer than 1,650' to any well producing from the same formation (Order 50-79). Additional Red River 'C' well, S/2 Sec. 22, T32N, R56E (Order 10-96).
Duperow Formation	1	0	0	
Gunton Formation	2	0	1	
Mission Canyon	1	0	0	
Red River	3	0	0	
Winnipegosis Formation	1	0	0	
<b>MEDICINE LAKE, SOUTH</b>				
Red River	2	0	0	Two designated 320-acre spacing units for Red River Formation production (Orders 101 and 102-98).
<b>MELSTONE</b>				
Tyler	2	0	0	Statewide.
<b>MELSTONE, NORTH</b>				
Tyler	5	0	5	Waterflood unit approved (Order 125-82). Polymer-augmented tertiary recovery project approved (Order 37-84). Certification as expanded enhanced recovery unit effective 11/1/94 (Order 89-94).
<b>MIDDLE BUTTE</b>				
Bow Island Sandstone	0	3	2	Orders 3-60, 21-75 amended to delineate field extension and 320-acre spacing units for Bow Island consisting of the E 1/2 and W 1/2 of each section; well location no closer than 990' to the section line and 660' to the interior boundary (Order 47-77). Enlarge (Order 25-93).
Blackleaf Formation	0	1	0	
Second White Specks	0	1	0	
<b>MIDFORK</b>				
Charles C	6	0	1	Statewide. Also a single 80-acre Charles Formation spacing unit (Order 46-92).
Nisku Formation	2	0	0	
<b>MILK RIVER</b>				
Phillips Sandstone	0	1	0	Single 160-acre spacing unit for Phillips gas production (Order 12-98).
<b>MINERS COULEE</b>				
Bow Island Sandstone	0	11	5	Oil: 40-acre units Sunburst/Swift consisting of quarter-quarter sections; well location no closer than 330' to lease or property line and 660' to any other well (Order 9-66). Order 9-66 amended to comply with Order 5-74. Gas: 160-acre spacing units for horizons above Rierdon; wells to be located 990' from boundary (Orders 5-74, 43-76, 44-77). Sawtooth gas spacing unit (Order 43-76). Field redelineation/enlargement (Orders 77-76, 44-77, 4-80).
Blackleaf Formation	0	1	0	
Sunburst	1	2	8	
Sawtooth Formation	0	0	1	
Sawtooth, Madison	0	0	1	
Swift, Sunburst	0	1	0	
<b>MISSOURI BREAKS</b>				
Nisku Formation	1	0	0	320-acre Red River spacing units as specified by Order 97-82. Creation of 320-acre spacing unit for production from Charles, Mission Canyon, and Nisku Formations (Order 8-95).

**OIL AND GAS FIELDS**

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>MON DAK, WEST</b>				
Devonian Undifferentiated	1	0	0	320-acre spacing units for Silurian and Ordovician pools; Spacing units to consist of either N 1/2 and S 1/2, or E 1/2 and W 1/2; well location to be no closer than 660' to unit boundary or closer than 1,650' to any well drilling to or producing from same pool (Order 42-77). 320-acre spacing units for interval below Last Charles Salt and above the Devonian; units to consist of either N 1/2 and S 1/2, or E 1/2 and W 1/2 of the section; well location to be no closer than 660' to a quarter section line or section line and no closer than 1,650' to any well drilling to or producing from same pool (Order 23-77). Madison Formation delineation (Order 51-79 as amended by Order 95-83). Field Reduction (Order 42-96).
Duperow Formation	1	0	0	
Interlake Formation	1	0	0	
Madison Formation or Group	7	0	0	
Mission Canyon	6	0	0	
Red River	3	0	0	
Stony Mountain Formation	1	0	1	
Siluro-Ordovician	0	0	1	
Madison, Ordovician	2	0	0	
Red River, Stony Mountain	1	0	0	
<b>MONA</b>				
Red River	1	0	0	Statewide.
<b>MONARCH</b>				
Interlake Formation	4	0	0	80-acre Madison spacing units consisting of E 1/2 and W 1/2 of quarter section; well location in SW 1/4 and NE 1/4 of quarter section; Location within 660' square at center of quarter section (Order 18-61). 160-acre Siluro-Ordovician spacing units consisting of a quarter section; well location in center of SW 1/4 of each quarter section with 175' topographic tolerance (Orders 12-59, 4-63). Spacing waived within Siluro-Ordovician waterflood area (Order 23-73). Certified as expanded enhanced recovery unit effective 9/1/94 (Order 76-94). Spacing units for horizontal wells (Orders 81-94, 2-96, 3-96, 68-96, 103-97, 24-98).
Madison Formation or Group	0	0	2	
Red River	6	0	1	
Siluro-Ordovician	15	0	4	
<b>MOSSER DOME</b>				
Mosser Sand	23	0	1	Spacing waived. Future development requires administrative approval (Order 27-62).
<b>MT. LILLY</b>				
Bow Island Sandstone	0	1	0	640-acre spacing for Madison; well location in approximate center of any of the four quarter-quarter sections adjoining center of section; 250' topographic tolerance (Order 37-63).
Madison Formation or Group	0	0	2	
Swift Formation	0	1	0	
<b>MUD CREEK</b>				
	0	0	0	640-acre spacing units; wells located no closer than 1320' to section lines (Order 9-63). Amended to allow production from two wells in Sec. 12, T6N, R17E (Order 49-92).
<b>MUSSELSHELL</b>				
Tyler	1	0	1	Statewide.
<b>MUSTANG</b>				
Bakken Formation	4	0	0	Statewide.
Madison Formation or Group	1	0	0	
Red River	2	0	0	
<b>MUSTANG (BAKKEN)</b>				
	0	0	0	NE/4 Sec. 33, T24N, R 57E approved as single-well spacing unit for Bakken oil production (Order 54-94).
<b>NEISER CREEK</b>				
Red River	2	0	0	Single 160-acre Red River spacing unit (Order 78-82). Enlargement (Order 63-96). Include Winnipegosis and commingling in single spacing unit (Order 98-97).
<b>NIELSEN COULEE</b>				
Madison Formation or Group	2	0	0	Statewide. Second well in quarter section authorized (Order 37-93).
<b>NINEMILE</b>				
Nisku Formation	2	0	0	Statewide.
<b>NOHLY</b>				
Madison Formation or Group	4	0	0	Single Red River spacing unit (Order 77-83). Field enlarged, 320-acre designated Red River spacing units (Orders 54-84, 104-98). 160-acre Nisku spacing units, 660' setback from spacing unit boundaries, 150' topographic tolerance (Order 55-84). Nohly (Ratcliffe/Mission Canyon) field delineation; 160-acre spacing units with wells located no closer than 660' to the spacing unit boundaries (Order 70-92). Ratcliffe/Mission Canyon Field enlargement (Orders 6-94, 105-94).
Mission Canyon	2	0	0	
Nisku Formation	3	0	1	
Ratcliffe Interval	3	0	0	
Red River	3	0	1	
<b>NOHLY AREA</b>				
Ratcliffe Interval	2	0	0	Statewide.
Red River	0	0	1	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
NORTH FORK Mission Canyon	3	0	0	Statewide, plus single Madison spacing unit, N/2 Sec. 23, T24N, R59E, with designated well (Order 104-94).
O'BRIENS COULEE Bow Island Sandstone	0	11	5	Statewide.
Blackleaf Formation	0	1	1	
Second White Specks	0	1	0	
Bow Island Spike	0	2	0	
OLD SHELBY Bow Island Sandstone	0	4	1	320-acre spacing units to be comprised of either E 1/2, W 1/2, N 1/2, or S 1/2 of a section for Swift, Kootenai, Dakota, and Sunburst gas; also delineated for Bow Island excluding T32N, R1W, Section 3 and T33N, R1W, Sections 14, 23, 26, and 35; two wells per spacing unit per gas producing horizon with well location to be no closer than 660' to spacing unit boundaries or 1320' to another well producing from the same horizon in the same spacing unit; wells drilled prior to April 1, 1953 exempted (Order 17-94 which supercedes all earlier orders). Field enlargement (Order 31-95).
Eagle Formation	0	0	1	
Sunburst	0	59	8	
Swift Formation	0	35	3	
Swift, Sunburst	0	4	0	
OLJE Mission Canyon	0	0	1	Single 160-acre spacing unit (Order 35-85).
OLLIE Red River	1	0	0	320-acre specified spacing units for the Red River and Duperow formations with the permitted well for each spacing unit to be located no closer than 660' to the spacing unit boundary (Order 73-80).
OTIS CREEK Ratcliffe Interval	1	0	0	Statewide.
OTIS CREEK, SOUTH Ratcliffe Interval	1	0	0	320-acre spacing units for Red River; well to be located no closer than 660' to unit boundary (Order 39-72). Extended field boundary (Orders 56-76, 67-76). Orders 39-72 and 56-76 amended to eliminate spacing units with new spacing units to consist of quarter sections; well location no closer than 660' from spacing unit boundary or 1,650' from producing well with 150' tolerance (Order 73-81). Designation of single 160-acre spacing unit for Charles Formation production (Order 9-95).
Stonewall Formation	1	0	0	
OUTLET	0	0	0	Delineated for production from the Madison Group; 160-acre spacing units with wells to be located no closer than 660' to spacing unit boundaries (Order 11-94).
OUTLOOK Bakken Formation	0	0	1	160-acre spacing units for Siluro-Devonian; well location in center of either SW 1/4 or NE 1/4 of each quarter section; 175' topographic tolerance (Order 19-59A).
Duperow Formation	0	0	1	
Madison Formation or Group	1	0	0	
Nisku Formation	2	0	2	
OUTLOOK, SOUTH	0	0	0	160-acre spacing for Siluro-Devonian; permitted wells in either SW 1/4 or NE 1/4 of quarter section; 175' topographic tolerance (Order 19-59A). Red River and Siluro-Devonian commingling permitted in single spacing unit (Order 45-64).
OUTLOOK, SOUTHWEST WINNIPEGOSIS Winneposis Formation	1	0	0	Single 320-acre spacing unit (Order 92-94).
OUTLOOK, WEST Winneposis Formation	1	0	0	160-acre spacing units for Winneposis consisting of quarter sections; permitted wells in 840' square in the center of spacing unit and no closer than 900' to quarter section boundaries (Order 7-67 as amended by Order 26-67). Field reduction (Order 50-94).
OXBOW Red River	1	0	0	320-acre spacing units consisting of two contiguous governmental quarter sections which may be in one or two governmental sections lying east-west or north-south at operator's option; location to be no closer than 660' to the unit boundary or closer than 1,650' to a well producing from same pool (formations below 11,000) (Order 7-78). Field enlargement (Order 137-80).
OXBOW II Nisku Formation	1	0	0	320-acre spacing units for Red River consisting of two contiguous quarter sections which may cross section lines; wells located no closer than 660' to spacing unit boundaries (Order 50-84).
Red River	1	0	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
PALOMINO Nisku Formation	6	0	0	Statewide.
PARK CITY Frontier Formation	0	0	2	Statewide.
PELICAN	0	0	0	320-acre Ordovician spacing unit; well to be located no closer than 660' to any governmental section or quarter section line boundary (Order 21-79). Field rules vacated (Order 81-97).
PENNEL Red River	36	0	7	Field originally delineated with 80-acre spacing units consisting of E and W 1/2 of quarter section; wells located in center of SE 1/4 and NW 1/4 of quarter sections with 150' topographic tolerance (Order 15-61). 80-acre spacing units on west side and 160-acre spacing units on east side of pool wells to be located in SE 1/4 and NW 1/4 of each quarter section (80 acres) and in SE 1/4 of each quarter section on 160-acre spacing (Orders 1-56, 8-56, 15-61, 20-62, 4-63, 7-63). Spacing rules waived within unitized area (Order 24-68). Commingling approved (Order 59-62). Waterflood for Siluro-Ordovician (Order 24-68). Pennel Unit certified as expanded enhanced recovery unit effective 9/1/94 (Order 78-94). Field reduction (Order 2-96).
Stony Mountain Formation	1	0	0	
Siluro-Ordovician	130	0	44	
PENNEL AREA Red River	1	0	0	Statewide.
PETE CREEK Sunburst	0	0	1	Statewide.
PHANTOM Sunburst	0	2	4	Gas: wells permitted anywhere within the unit but no closer than 990' to the unit boundary. Oil: wells with projected depths greater than 6,000' to be located no closer than 660' to the unit boundary; those with projected depths less than 6,000' to be located no closer than 330' to the unit boundary; formations between surface and top Rierdon included (Order 48-77).
PHANTOM, WEST Sunburst	0	2	0	Delineated for Sunburst Sandstone gas production with one well per spacing unit to be located no closer than 660' to the exterior boundaries of the three designated spacing units (Order 65-78).
PINE Madison Formation or Group	0	0	3	Statewide spacing rules are waived within the Pine Unit. 80-acre spacing units outside of unit area; well location in NW 1/4 and SE 1/4 of quarter section; 150' topographic tolerance (Order 37-62). A waterflood program for the south area was started in 1959. A waterflood of the north area was approved in 1967 (Orders 13-68, 1-60, 8-62, 32-67). Brine and CO2 injection test (Order 70-83). North Pine and South Pine Units certified as expanded enhanced recovery projects effective 9/1/94 (Orders 73-94, 74-94). Re-delineation (Order 16-97). 640-acre spacing unit for horizontal wells (Order 23-98).
Mission Canyon	1	0	0	
Stony Mountain Formation	0	0	1	
Siluro-Ordovician	78	0	58	
PINE GAS Eagle Formation	0	0	31	Delineated for gas production from Judith River through top Greenhorn, 160-acre spacing units, 660' setback and 460' topographic tolerance (Order 60-98). Field enlargements (Orders 94-98, 47-99, 48-99).
Judith River Formation	0	0	17	
PLEVNA Eagle Formation	0	2	0	Delineated for Judith River and Eagle gas production, 1200' setback from quarter section lines, 2400' between wells on same lease, 75' topographic tolerance (Order 34-54). Redelineation (Order 4-57).
POLICE COULEE Bow Island Sandstone	0	8	1	320-acre spacing units for Bow Island Formation; location no closer than 990' to section line and 660' to half section lines; spacing units to consist of N 1/2 or S 1/2, E 1/2 or W 1/2 at discretion of operator (Order 53-76). Field enlargements (Orders 24-77, 20-79, and 46-79).
PONDERA Madison Formation or Group	269	0	149	Delineated for production from Ellis/Madison contact; Oil: 220' from legal subdivision, 430' from other wells in same reservoir on same lease; 75' topographic tolerance (Order 2-54). Porter Bench Extension: 330' from legal subdivision line; 650' from other wells in same reservoir on same lease or unit; 75' topographic tolerance (Order 9-54). Gas: Well to be located no closer than 1,320' from the boundaries of any quarter section line, nor less than 3,700' from every other drilling or producible well on the same lease or unit (Order 9-54 corrected). Amend Order 9-54 to designate six 160-acre spacing units for gas with wells to be located no closer than 660' from unit boundaries (Order 26-83).
Sun River Dolomite	13	0	1	



## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>PONDERA COULEE</b>				
Madison Formation or Group	2	0	4	330' from legal subdivision lines or upon a 10-acre spacing pattern; 75' topographic tolerance (Order 5-62).
Sun River Dolomite	0	0	5	
<b>POPLAR AREA, NORTHWEST</b>				
	0	0	0	Statewide.
<b>POPLAR, EAST</b>				
Charles	3	0	0	Statewide spacing; field delineated (Order 7-55). Redelineation of field (Order 25-76). Horizontal well exception and removal of production restrictions for horizontal wells (Order 67-93). Unitized in 1955 (Order 7-55). Removal of internal setback requirements except for non-committed lands (Order 69-96).
Charles C	1	0	0	
Heath Formation	2	0	1	
Madison Formation or Group	39	0	20	
Nisku Formation	1	0	1	
<b>POPLAR, NORTHWEST</b>				
Charles	3	0	1	80-acre spacing units, E 1/2 and W 1/2 of each quarter section; wells located in the center of NW 1/4 or SE 1/4 of each quarter section; 75' tolerance for surface hazards and obstructions (Order 18-55). 80-acre designated spacing units with well location in the center of the NW 1/4 or SE 1/4 of each quarter section; 150' topographic or geologic tolerance (Order 26-76). 80-acre spacing units to be N 1/2 and S 1/2 or E 1/2 and W 1/2 of each quarter section; wells located in center of each NE 1/4 or SW 1/4 of each quarter section, 150' topographic or geologic tolerance (Orders 124-80, 83-83, 97-84 and 6-85). 80-acre spacing units for test wells to the Charles formation; spacing units to be N 1/2 and S 1/2 or E 1/2 and W 1/2 of each quarter section; wells in center of NE 1/4 or SW 1/4 of each quarter section, 150' tolerance for archeological reasons only (Order 161-81). Field enlargement with 80-acre spacing units consisting of N 1/2 and S 1/2 of each quarter section; wells in center of the NE or SW quarter of each quarter section with 150' topographic or geologic tolerance (Order 42-83).
Charles B	1	0	0	
Charles C	16	0	2	
Madison Formation or Group	1	0	0	
<b>POTTER</b>				
Eagle Formation	0	0	1	Single section delineated for production of gas from all formations between the surface and the top of the Jurassic Rierdon Formation with one designated well for the spacing unit (Order 8-93).
<b>PRAIRIE DELL</b>				
Bow Island Sandstone	0	13	2	320-acre spacing units for all horizons above the Rierdon with well location no closer than 660' to spacing unit boundary (Order 10-76). Field enlargement (Orders 28-78, 24-79, 132-80, 40-81, 54-81, 142-81, 56-83, 9-85, 60-86, 12-87, 21-95, 63-97, 49-98, 50-98). Two wells per spacing unit approved for a portion of the field, well locations no closer than 1,320' to a producing well from the same zone and 660' to the spacing unit boundary (Orders 21-88, 3-91, 35-92, 48-92 and 51-92). Two 160-acre spacing units (Order 3-89).
Eagle Formation	0	0	1	
Madison Formation or Group	0	0	1	
Sunburst	0	13	3	
Swift Formation	0	12	0	
Bow Island, Dakota, Sunburst	0	10	1	
Bow Island, Sunburst, Swift	0	7	0	
Bow Island, Dakota, Swift	0	7	0	
Bow Island, Dakota	0	13	0	
Bow Island, Dakota, Sunburst, Swift	0	12	0	
Bow Island, Sunburst	0	22	2	
Bow Island, Swift	0	11	1	
Bow Island, Dakota, Kootenai, Swift	0	1	0	
Dakota, Sunburst, Swift	0	1	0	
Sunburst, Dakota	0	3	0	
Swift, Sunburst	0	1	0	
<b>PRAIRIE DELL, WEST</b>				
Bow Island Sandstone	0	3	0	640-acre spacing unit for Swift Formation with well no closer than 990' to spacing unit boundary (Order 16-78). Amended to include all horizons above the Rierdon Formation (Order 54-78). Field enlarged (Order 55-78). Field enlarged and amended to allow 4 wells per spacing unit no closer than 1,320' to each other and no closer than 660' to the unit boundaries (Order 22-90).
Dakota Sandstone	0	1	0	
Madison Formation or Group	0	1	0	
Rierdon Shale	0	1	0	
Sunburst	0	1	0	
Swift Formation	0	2	0	
Bow Island, Dakota, Sunburst	0	1	0	
Bow Island, Dakota, Swift	0	2	0	
Bow Island, Dakota	0	1	0	
Bow Island, Sunburst	0	2	0	
Bow Island, Swift	0	2	0	
Bow Island, Dakota, Kootenai, Sunburst	0	1	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
PRAIRIE ELK Charles C	0	0	1	Statewide.
PRICHARD CREEK Bow Island Sandstone	0	0	1	Sunburst/Swift spacing rules waived with locations subject to administrative approval. Unitized for Sunburst waterflood (Order 7-73).
Sunburst	0	0	5	
Swift Formation	0	0	1	
PRONGHORN Red River	1	0	0	160-acre spacing units for Red River; wells located no closer than 660' to unit boundary with 150' topographic or geologic tolerance (Orders 75-84 and 110-84).
PUTNAM Bakken Formation	3	0	0	Statewide, except for single spacing unit consisting of portions of Sections 15 and 16, T23N, R57E for production from all formations between 6,000 to 11,000 feet (Order 2-84 as amended by Order 11-85). Single Mission Canyon Formation spacing unit consisting of E/2 NE/4, Sec. 32 and W/2 NW/4, Sec. 33, T23N, R57E (Order 18-93).
Interlake Formation	1	0	0	
Madison Formation or Group	1	0	0	
Mission Canyon	7	0	0	
Ratcliffe Interval	1	0	0	
Red River	2	0	1	
Red River, Interlake	1	0	0	
RABBIT HILLS Sawtooth Formation	4	0	0	Statewide. Pilot tertiary recovery project including a portion of Northeast Rabbit Hills Field (Order 78-95).
RABBIT HILLS, NORTHEAST Sawtooth Formation	10	0	1	160-acre (quarter section) spacing units for Sawtooth, wells not closer than 660' to spacing unit boundaries (Order 33-76, referring to Order 34-74). Field reduction (Order 98-83). Amended to allow 1 well per quarter quarter section no closer than 330' to the quarter quarter section line (Order 48-91). Pilot tertiary recovery project (Order 78-95). Pilot Tertiary Recovery Project (Order 14-96).
RABBIT HILLS, SOUTH Bowes Member	1	0	0	Statewide.
Sawtooth Formation	4	0	0	
RABBIT HILLS, SOUTHWEST Sawtooth Formation	2	0	0	160-acre (quarter section) spacing units for Sawtooth, with wells not less than 660' from spacing unit boundaries (Order 33-76, referring to order 34-74). Allow 4 wells in NW 1/4 Section 24, T34N, R19E (Order 78-92). NE 1/4, Sec. 23 downspaced to 40-acre spacing units (Order 3-93).
RAGGED POINT Amsden Formation	0	0	1	40-acre spacing units; 75' topographic tolerance (Order 8-59). Spacing waived for Tyler "A" sand reservoir within Tyler "A" Sand Unit except no well can be closer than 660' to unit boundary (Order 35-65). A waterflood project on the Tyler "A" sand was commenced in February 1966, using Third Cat Creek water (Order 35-65). Certification of expanded enhanced recovery project effective 4/1/95 (Order 18-95).
Madison Formation or Group	0	0	1	
Tyler	2	0	8	
RAGGED POINT, SOUTHWEST Tyler	9	0	2	Waterflood approval; applicants may drill and produce wells to the Tyler "A" Formation anywhere within the unit but not closer than 330' to the unit boundaries (Order 83-82).
RAINBOW	0	0	0	Single 160-acre Red River spacing unit (Order 69-82).
RAPELJE Eagle Formation	0	0	3	160-acre spacing for formations from surface to base of Telegraph Creek; wells no closer than 990' to unit boundary; commingling after administrative approval (Order 29-73).
Virgelle Sandstone	0	0	2	
Eagle, Claggett, Virgelle	0	0	4	
RATTLER BUTTE Third Cat Creek	0	0	1	Rattler Butte (Tyler "A") Unit approved (Order 39-92). East Rattler Butte (Tyler "C") Unit (Order 90-98).
Tyler	8	0	2	
RATTLESNAKE BUTTE Amsden Formation	2	0	4	Statewide.
First Cat Creek	1	0	1	
Second Cat Creek	1	0	1	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>RATTLESNAKE COULEE</b>				
Bow Island Sandstone	0	0	2	Statewide.
Sunburst	0	1	0	
<b>RAYMOND</b>				
Duperow Formation	0	1	0	320-acre spacing units for Red River, Winnipegosis, Duperow, and Nisku formations. Wells 660' from spacing unit boundary (Order 38-72). Gas Storage (Order 50-78 and amended by Order 60-79). Mississippian pool delineation with 40-acre spacing units, wells no closer than 330' to spacing unit boundary (Order 35-79). Field enlargement for Mississippian pool (Orders 31-80 and 128-80). Field reduction for Nisku pool (Order 135-81). Nisku Formation rules suspended for unit except for 660' setback distance from external unit boundaries (Order 3-86). Authorization to inject Duperow gas into the Nisku Formation (Order 135-81).
Mississippian Undifferentiated	1	0	7	
Nisku Formation	1	2	0	
Red River	1	0	1	
Winnipegosis Formation	1	0	0	
<b>RAYMOND, NORTH</b>				
Red River	2	0	0	Delineated with single Red River spacing unit (Order 94-82). Enlargement, designated spacing unit (Order 31-98).
<b>REAGAN</b>				
Madison Formation or Group	51	4	14	Statewide. (Order 17-54) A pressure maintenance project utilizing gas injection was started in 1961 (Order 21-60). Waterflood (Order 27-72).
<b>RED BANK</b>				
Madison Formation or Group	2	0	1	Statewide.
Mission Canyon	3	0	2	
Ratcliffe Interval	1	0	1	
<b>RED BANK, SOUTH</b>				
Red River	1	0	0	Statewide.
<b>RED CREEK</b>				
Cut Bank Sandstone	5	0	1	40-acre spacing units; wells in center of spacing unit with 75' topographic or obstruction tolerance; spacing and field rules waived for unitized portion (Orders 16-58, 31-64, 5-70). Field enlarged (Order 9-62), redelineated (Order 73-62).
Madison Formation or Group	7	0	3	
Sunburst	1	0	0	
Cut Bank, Madison	7	0	5	
<b>RED FOX</b>				
	0	0	0	Field consists of one 160-acre spacing unit for Nisku production which straddles the section line (Order 20-67).
<b>RED ROCK</b>				
Eagle Formation	0	10	9	Eagle Spacing units consisting of the N 1/2 and S 1/2 of section with permitted well to be no closer than 990' to exterior section line nor closer than 660' to half section line (Order 89-79).
Judith River Formation	0	0	4	
<b>RED WATER</b>				
Bakken Formation	1	0	0	Statewide.
Red River	1	0	0	
Winnipegosis Formation	1	0	0	
<b>RED WATER, EAST</b>				
Red River	1	0	0	320-acre spacing units for Red River Formation consisting of 2 contiguous quarter sections with permitted well to be no closer than 660' to exterior boundaries of spacing unit (Order 31-83).
<b>REDSTONE</b>				
Winnipegosis Formation	1	0	0	160-acre spacing units for production from the Winnipegosis; wells to be located no closer than 660' to spacing unit boundaries (Order 30-67).
<b>REFUGE</b>				
Nisku Formation	1	0	0	Statewide.
Red River	2	0	0	
<b>RESERVE</b>				
Red River	4	0	0	Delineated for Red River, Silurian, and Winnipegosis production with 160-acre spacing units; permitted well within 1,320' square in center of quarter section; Commingling of Red River and Interlake production permitted on individual well basis (Orders 34-66, 27-67). Field reduction (Order 68-85, 100-94). Redelineation and temporary spacing (Orders 11-96, 12-96, 66-96).
<b>RESERVE II</b>				
Interlake Formation	1	0	0	Single 160-acre spacing unit for Red River (Order 44-87). Single 160-acre spacing unit for Winnipegosis, Interlake and Gunton (Order 55-88).
Red River	0	0	1	
<b>RESERVE, SOUTH</b>				
Ratcliffe Interval	1	0	0	Single spacing unit for Red River production (Order 33-86).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
RICHEY Charles	0	0	2	Statewide, original 80-acre spacing revoked (Order 11-73).
RICHEY, SOUTHWEST	0	0	0	160-acre spacing units for production from Devonian, Silurian, and Ordovician; wells no closer than 900' to boundary of spacing unit (Order 25-62). A waterflood project in the Interlake and Dawson Bay was started in 1965 (Order 34-65).
RIDGELAWN Duperow Formation	4	0	2	160-acre Duperow spacing units; wells no closer than 660' to spacing unit boundary with 150' topographic tolerance (Order 18-89). Ridgelawn Duperow Unit approved for secondary recovery (Orders 49-89, 55-89 and 11-90).
Madison Formation or Group	2	0	1	
Mission Canyon	7	0	1	
Ratcliffe Interval	3	0	0	
Red River	3	0	0	
RIDGELAWN, NORTH Madison Formation or Group	1	0	0	Single 640-acre spacing unit (Order 11-92).
Mission Canyon	1	0	0	
RIPRAP COULEE Ratcliffe Interval	4	0	0	160-acre spacing units for Ratcliffe; wells located no closer than 660' from spacing unit boundary with 150' topographic and geologic tolerance (Order 93-84).
ROCKY BOY AREA Eagle Formation	0	9	0	Statewide.
Judith River Formation	0	1	0	
ROCKY POINT Red River	1	0	0	320-acre Red River spacing unit; well to be located no closer than 660' to exterior boundary (Order 22-79).
ROSCOE DOME	0	0	0	Statewide. Steam injection into Greybull and Lakota formations (Order 40-82).
ROSEBUD Tyler	3	0	2	Statewide. Rosebud "Tyler B" waterflood unit approved (Order 30-91).
ROUGH RIDGE Eagle Formation	0	0	1	Statewide.
ROYALS Dawson Bay Formation	1	0	0	Statewide.
RUDYARD Eagle Formation	0	2	3	640-acre spacing units for Sawtooth gas production; well location in center of NW 1/4 of section with 75' topographic tolerance (Order 2-58). Field boundaries reduced (Order 39-76). Allow two wells per 640-acre spacing unit with a 990' setback from spacing unit boundaries, 1320' between wells in the same spacing unit (Order 15-93). Rudyard (Eagle) delineation: 640-acre spacing units for Eagle Formation, 2 wells per spacing unit to be located no closer than 330' to interior spacing unit boundaries, 990' to field boundaries (Order 33-94).
Sawtooth Formation	1	2	2	
RUNAWAY Madison Formation or Group	0	0	1	Statewide.
RUSH MOUNTAIN Gunton Formation	1	0	0	Statewide. Commingling of Gunton and Winnipegosis in Hoffelt #2 well approved (Order 17-85).
Ratcliffe Interval	1	0	0	
Red River	0	0	1	
SAGE CREEK Bow Island Sandstone	0	1	0	640-acre spacing for horizons above the Kootenai, one producing well per section per formation to be located no closer than 990' from section line (Order 38-77). Amended field boundary (Order 86-79). Field enlargement (Orders 33-81, 65-83 and 36-84).
Blackleaf Formation	0	2	0	
Eagle Formation	0	0	1	
Second White Specks	0	13	7	
SALT LAKE Gunton Formation	1	0	0	Four 160-acre spacing units for Red River Formation with production allocation by stipulated agreement (Order 48-89).
Nisku Formation	2	0	1	
Red River	3	0	0	

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SALT LAKE, WEST Ratcliffe Interval	1	0	0	Single 160-acre spacing unit for Ratcliffe oil and gas production (Order 47-92).
SAND CREEK Charles	2	0	0	80-acre spacing units for production from the Silurian and Ordovician consisting of any two adjacent quarter-quarter sections; wells to be located in the center of NW and SE 1/4 of each quarter section with 150' topographic tolerance (Order 16-59). Commingling of Interlake and Red River production (Order 49-62). Field enlargement (Order 20-66).
SANDWICH Swift Formation	0	0	1	320-acre spacing units for production of gas from Swift; wells to be located no closer than 990' to spacing unit boundaries (Order 17-77).
SATURN	0	0	0	Statewide.
SAWTOOTH MOUNTAIN & AREA Eagle Formation	0	28	6	640-acre spacing units for Eagle and Judith River formations, one well per section per formation, location to be not less than 990' from governmental section line (Order 45-76). Amended to allow one well per formation per quarter section in six sections; wells no closer than 660' to quarter section lines and 990' to section lines (Order 65-85). Amended to allow 4 wells per formation per section for 3 additional sections (Ordered 62-89).
Judith River Formation	0	5	3	
SECOND CREEK Duperow Formation	1	0	0	303.1-acre Red River spacing unit (Order 34-78). 160-acre Duperow spacing units; well locations for each unit to be as specified (Order 119-80). Duperow spacing units combined into single spacing unit (Order 97-98).
Mission Canyon	0	0	1	
Ratcliffe Interval	1	0	1	
Red River	2	0	0	
SECOND GUESS Madison Formation or Group	2	0	0	40-acre spacing units for oil production from top 100' of Mississippian Madison Formation to the surface; wells to be located no closer than 330' to the spacing unit boundaries with 75' for topographic tolerance (Order 57-91).
SHELBY AREA Sunburst	0	1	0	Statewide.
SHELBY, EAST Bow Island Sandstone	0	1	0	640-acre spacing units for all formations from the surface to the top of the Rierdon Formation (Order 8-91). Field enlarged and amended to allow 2 wells per spacing unit no closer than 990' to the section line and no closer than 990' to another well in the same section producing from the same horizon (Order 45-91). Field enlarged for Bow Island production (Order 61-91).
Burwash	0	1	0	
Sunburst	0	4	4	
Swift, Sunburst	0	1	0	
SHERARD Eagle Formation	0	11	4	640-acre Eagle spacing units; 990' setback from section line (Order 1-74). 160-acre Eagle spacing units for Section 8, T25N, R17E; wells to be located no closer than 990' from section line, 660' from quarter section line (Order 7-77). Enlarged field boundary with well locations no closer than 660' from quarter section line in enlarged area (Order 4-83). 320-acre Eagle gas spacing units for Sections 19 and 30, T26N, R17E; wells located no closer than 990' to unit boundaries (Order 24-87).
Judith River Formation	0	1	0	
SHERARD, AREA Eagle Formation	0	36	45	Statewide, with numerous exceptions.
Judith River Formation	0	3	4	
SHORT CREEK Nisku Formation	1	0	0	Single 640-acre Nisku spacing unit with 4 horizontal wells allowed, 330' setback from section lines (Order 35-99).
SHOTGUN CREEK Mission Canyon	0	0	1	Statewide.
Ratcliffe Interval	5	0	1	
SHOTGUN CREEK, NORTH	0	0	0	320-acre spacing units for Red River and Gunton production; wells to be located no closer than 660' to spacing unit boundaries and 1500' to another well producing from the same formation (Order 49-77).

**OIL AND GAS FIELDS**

<b>Field, Formation</b>	<b>Oil</b>	<b>Gas</b>	<b>Shut-In</b>	<b>Spacing Regulations, Field Rules, and Remarks</b>
<b>SIDNEY</b>				
Madison Formation or Group	3	0	0	160-acre spacing units for Madison group with one well per spacing unit to be located no closer than 660' from unit boundary and no closer than 1,650' to well producing from the same formation (Order 5-79). Field enlargement (Order 99-80).
Mission Canyon	1	0	1	
Ratcliffe Interval	4	0	0	
Red River	2	0	0	
<b>SIDNEY, EAST</b>				
Mission Canyon	1	0	0	Statewide.
Ratcliffe Interval	1	0	0	
<b>SINGLETREE</b>				
Ratcliffe Interval	0	0	1	Single spacing unit for production from Winnipegosis (Order 78-84).
<b>SIOUX PASS</b>				
Red River	7	0	0	320-acre spacing units for Interlake and Red River consisting of two adjacent governmental quarter sections lying north-south or east-west at operator's option; permitted well no closer than 660' from unit boundary; 160-acre spacing units for Mission Canyon with well no closer than 660' from unit boundary; commingling of Interlake and Red River production authorized (Orders 10-75, 15-77). Amended field boundary (Order 15-77). Field reduction (Order 89-81). Additional wells (Orders 82-96, 83-96).
Red River, Interlake	3	0	0	
<b>SIOUX PASS, EAST</b>				
Red River	0	0	1	Statewide.
<b>SIOUX PASS, MIDDLE</b>				
Red River	4	0	0	320-acre spacing units for Red River Formation to consist of two contiguous governmental quarter sections at operator's option; location to be no closer than 660' from exterior boundary of unit and no closer than 1,650' from well producing from same formation; commingling permissible with Administrative approval (Order 55-76). Exception location (Order 39-81).
<b>SIOUX PASS, NORTH</b>				
Madison Formation or Group	2	0	0	320-acre spacing units for Red River, Interlake, Winnipegosis, Nisku, Madison; well locations at least 660' from unit boundary (Orders 12-75, 17-76, 8-79). Commingling approved (Order 17-76). 150' topographic tolerance (Order 10-81). Field extensions (Orders 12-77, 13-79 and 48-81). Two 320-acre spacing units for Duperow (Orders 107-80, 74-82). Additional well, E2 26N-58E-7 (Order 30-97).
Ratcliffe Interval	1	0	0	
Red River	8	0	0	
<b>SIOUX PASS, SOUTH</b>				
Red River	2	0	0	Statewide.
<b>SIOUX PASS, WEST</b>				
Red River	2	0	0	Designated 320-acre spacing units for Red River Formation (Orders 105-98, 106-98).
<b>SIXSHOOTER DOME</b>				
Eagle Formation	0	2	2	160-acre spacing units for gas production at a depth from 969' to 1500'; wells no closer than 660' to spacing unit boundary with 75' topographic tolerance (Order 18-92).
Lakota Sandstone	0	3	0	
Telegraph Creek Formation	0	1	0	
<b>SNAKE CREEK</b>				
Gunton Formation	1	0	0	Designated 320-acre spacing unit for Gunton, Winnipegosis, Red River (Order 63-98).
Red River	1	0	0	
Winnipegosis Formation	1	0	0	
<b>SNOOSE COULEE</b>				
Bow Island Sandstone	0	8	1	640-acre spacing units for Bow Island and shallower formations; location no closer than 990' to spacing unit boundary (Order 18-77). 320-acre Sunburst gas spacing unit approved (Order 58-88).
Sunburst	0	0	1	
<b>SNOW COULEE</b>				
Sunburst	0	1	0	Two 320-acre spacing units for Sunburst gas production (Order 78-76).
<b>SNYDER</b>				
Tensleep Sandstone	0	0	4	10-acre spacing units with center 5-spot permitted; 150' topographic tolerance (Order 45-62).
<b>SOAP CREEK</b>				
Amsden Formation	1	0	0	One well per 10-acre spacing unit per producing formation; well location in center of spacing unit with 100' topographic tolerance. Delineation includes Madison, Amsden, and Tensleep formations (Order 26-60).
Madison Formation or Group	17	0	1	
Tensleep Sandstone	9	0	1	
Madison, Amsden	6	0	1	
<b>SOAP CREEK, EAST</b>				
Tensleep Sandstone	3	0	0	Statewide.

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SOBERUP COULEE	0	0	0	320-acre 2nd Bow Island Sandstone spacing units, consisting of E 1/2 and W 1/2 of delineated section with locations no closer than 660' to spacing unit boundaries (Order 25-79).
SOUTH FORK				
Mission Canyon	1	0	0	Statewide.
Red River	2	0	0	
SPRING COULEE				
Eagle Formation	0	0	1	Statewide.
Greenhorn	0	1	3	
SPRING LAKE				
Bakken Formation	4	0	0	Delineated for Red River and Nisku formations with one well per 160-acre spacing unit; well location anywhere within 840' square in center of spacing unit (Order 6-63). Field redelineation (Orders 30-76, 49-76). Single 320-acre spacing unit for Bakken Formation production (Order 26-95).
Dawson Bay Formation	1	0	0	
Red River	0	0	1	
SPRING LAKE, WEST				
Bakken Formation	1	0	0	Single 160-acre Duperow spacing unit (Order 42-82).
STAMPEDE				
Bakken Formation	1	0	0	320-acre specified spacing units for the Red River Formation; 160-acre spacing units for the Duperow Formation with well location to be no closer than 660' from a spacing unit boundary line (Order 19-82).
Red River	1	0	0	
STENSVAD				
Tyler	5	0	10	40-acre spacing units; well location in center of spacing unit with 200' tolerance (Orders 2-59 and 7-60). Wells may be drilled anywhere within waterflood unit boundary, no closer than 660' to unit boundary (Order 5-65, amended). Field enlarged (Order 22-59). Waterflood area enlarged (Order 9-67).
STRAWBERRY CREEK AREA				
Bow Island Sandstone	0	1	1	Statewide.
Burwash	0	1	0	
STUDHORSE				
Tyler	2	0	4	Statewide.
SUMATRA				
Amsden Formation	2	0	0	40-acre spacing units; well located in center of unit with 75' tolerance (Order 14-58). Field redelineated (Orders 14-75 and 16-72). Vacuum pumps permitted on certain wells (Orders 99-79 and 32-80). Seven waterflood units using Madison water (Orders 48-67, 6-69, 19-69, 23-69, 5-75, 21-78, and 43-80). Convert CTSU, SESTSU and Kincheloe Sumatra Unit to tertiary recovery projects (Orders 99-84, 100-84 and 29-85). Certification of Kincheloe Sumatra Unit (Order 23-95) and West Sumatra Unit (Order 68-95) as an expanded enhanced recovery projects.
Heath Formation	1	0	0	
Lower Tyler	7	0	5	
Madison Formation or Group	0	0	1	
Tyler	37	0	41	
SUNDOWN				
Red River	1	0	0	Single Red River Formation spacing unit (Order 11-97).
SUNNY HILL				
Ratcliffe Interval	1	0	0	320-acre Red River & Duperow spacing units; location to be no closer than 660' to the section or quarter section line which is the exterior boundary of the unit nor closer than 1,650' to any well producing from same formation. 160-acre Madison spacing units consisting of regular quarter sections; location no closer than 660' to section or quarter section lines (Order 39-78). Field boundaries reduced (Order 79-84).
SUNNY HILL, WEST				
Ratcliffe Interval	1	0	0	Single 320-acre spacing unit consisting of S/2, Sec. 14, T31N, R57E, with designated well (Order 55-93).
SWANSON CREEK				
Carlile Shale	0	2	0	320-acre spacing units (Order 36-75), amended to enlarge field and provide that spacing units may run north-south or east-west with permitted wells to be no closer than 990' to section or quarter section lines (Order 11-78). Field boundaries extended by Orders 32-78, 92-79, 66-80 and 55-81. All previous Swanson Creek orders are amended to allow one additional well in each existing 320-acre spacing unit that shall be drilled in a manner that there be no more than one well per quarter section and located no closer than 660' to the quarter section boundaries (Order 28-82).
Phillips Sandstone	0	67	1	
Greenhorn-Phillips	0	7	0	
SWEETGRASS				
Sunburst	0	0	1	Single Sunburst gas spacing unit (Order 121-82).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SWEETGRASS AREA Sunburst	0	0	1	Statewide.
TARGET Madison Formation or Group	0	0	2	Single spacing unit for Mission Canyon/Ratcliffe formations (Order 18-82). Amendment to Order 18-82 for field enlargement and establishing 160-acre spacing units with permitted well locations to be no closer than 660' to the unit boundaries; 150' tolerance for topographic reasons (Order 35-82). Field enlargement (Order 23-84).
Mission Canyon	0	0	2	
Nisku Formation	2	0	0	
Ratcliffe Interval	3	0	3	
THIRTY MILE Sawtooth Formation	0	0	2	Statewide.
THREE BUTTES Bakken Formation	3	0	0	160-acre spacing units for Madison Group formations, with well location no closer than 660' from governmental quarter section line or unit boundary (Order 11-81). Red River and Bakken Fm. delineation, SW/4 23N-57E-19 (Order 59-97).
Red River	2	0	0	
THREE MILE Eagle Formation	0	3	3	Statewide.
TIBER Bow Island Sandstone	0	0	2	Two wells per each gas producing horizon from the surface down to and including the Kootenai Formation per section; 990' setbacks and 1,320' between wells in each section (Orders 143-81, 21-84 and 28-85).
TIBER AREA Bow Island Sandstone	0	2	0	Statewide.
TIBER, EAST Bow Island Sandstone	0	9	0	Two wells from same Bow Island horizon per section no closer than 990' to section lines and 1,320' to each other (Orders 21-84 and 28-85).
TIGER RIDGE Eagle Formation	0	393	93	Field delineation and redelineations (Orders 17-67, 23-68, 10-70, 13-75, 46-78, 48-79, 26-80, 30-89, 10-90 and 66-91). Statewide spacing for field area not unitized. Numerous spacing rule amendments.
Judith River Formation	0	5	0	
TIGER RIDGE AREA Eagle Formation	0	2	1	Statewide.
TIGER RIDGE, NORTH Eagle Formation	0	0	1	160-acre spacing units; one well per horizon per spacing unit from the Virgelle Formation to the surface; well to be no closer than 990' to the section line nor closer than 660' to the interior quarter section line (Order 80-79).
TIMBER CREEK	0	0	0	320-acre Sunburst Sandstone spacing units consisting of two contiguous quarter sections oriented either North-South or East West; locations no closer than 660' to internal spacing unit boundaries, or 990' to external boundaries (Order 24-75).
TIMBER CREEK, WEST Sunburst	0	1	0	Single 640-acre spacing unit for Sunburst Sandstone production in Sec. 6, T35N, R1E (Order 91-76).
TINDER BOX Tyler	1	0	0	Statewide.
TRAIL CREEK Bow Island Sandstone	0	6	0	One well per 320-acres consisting of S 1/2 and N 1/2 of each governmental section but not closer than 990' from spacing boundary (Orders 33-70, 28-76). Field enlargements (Order 135-80).
Sunburst	0	2	0	
Swift, Sunburst	0	1	0	
TULE CREEK Devonian Undifferentiated	1	0	0	160-acre spacing units with permitted well anywhere within 1,320' square in center of each unit (Orders 26-62, 6-65, 11-67, 5-77, 52-86).
Nisku Formation	2	0	0	
TULE CREEK, EAST Nisku Formation	1	0	0	160-acre Nisku spacing units for Devonian Nisku with permitted well anywhere within 1,320' square in center of each unit (Orders 40-64, 6-65, 4-86).
TULE CREEK, SOUTH Nisku Formation	1	0	0	160-acre Nisku spacing units with permitted well anywhere within a 1,320' square in center of each unit (Orders 34-64, 6-65).



## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>TWO FORKS</b>				
Eagle Formation	0	0	1	Statewide.
Judith River Formation	0	0	1	
<b>TWO WATERS</b>				
Bakken Formation	2	0	1	Statewide.
<b>UTOPIA</b>				
Bow Island Sandstone	0	4	1	640-acre spacing units for formations between top of Kootenai and top of Greenhorn; well location no closer than 990' to any governmental section line (Order 13-80). 40-acre spacing units for Swift Formation; location to be in center of quarter-quarter section with no more than 100' topographic tolerance (Order 9-78). Order 9-78 amended; spacing units shall consist of 1 well per quarter-quarter section located no closer than 330' to the section boundary (Order 96-81). Utopia Swift Unit approved for secondary recovery (Orders 11-89, 38-89 and 33-90). Certification as expanded enhanced recovery project effective 10/1/94 (Order 88-94).
Sawtooth Formation	0	2	0	
Swift Formation	17	0	10	
<b>VALIER</b>				
Blackleaf Formation	0	0	2	320-acre spacing units for production of gas from all formations from the top of the Kootenai Formation to the surface; one well per spacing unit per formation, wells no closer than 660' to spacing unit boundaries and 990' to field boundaries (Order 15-91).
<b>VANDALIA</b>				
Carille Shale	0	7	1	160-acre spacing units; where discrete gas formations (Bowdoin, Greenhorn, and Phillips) exist a well may be drilled to each discrete formation; wells to be located no closer than 660' to the spacing unit boundaries (Order 61-82).
<b>VAUX</b>				
Bakken Formation	2	0	0	Single spacing unit with commingling approved for Madison group (Order 63-83). Single spacing unit for Mississippian Bakken formation (Order 20-86). Single 160-acre spacing unit for Mission Canyon Formation (Order 25-87).
Interlake Formation	1	0	0	
Madison Formation or Group	6	0	0	
Mission Canyon	9	0	0	
Ratcliffe Interval	0	0	1	
Red River	4	0	0	
Stonewall Formation	1	0	0	
<b>VOLT</b>				
Madison Formation or Group	1	0	0	160-acre Nisku spacing units with permitted well anywhere within a 1,320' square in center of each unit (Orders 27-64, 6-65, 32-65).
Nisku Formation	4	0	0	
<b>WAKEA</b>				
Nisku Formation	2	0	0	Two 320-acre spacing units (Order 84-83). Field enlarged; wells located no closer than 660' to spacing unit boundaries. Delineation includes Red River, Nisku, Duperow, Winnipegosis, Interlake and Gunton formations (Order 34-84). Commingling of production from Nisku and Duperow formations approved for one well (Order 59-91).
Red River	2	0	0	
Winnipegosis Formation	1	0	1	
Nisku, Duperow	1	0	0	
<b>WATERHOLE CREEK</b>				
Red River	5	1	1	Delineation of numerous lands for production of oil from horizontal Red River Formation wells; spacing units set by order (Order 120-97).
<b>WEED CREEK</b>				
Amsden Formation	1	0	1	Statewide.
<b>WEST BUTTE</b>				
Bow Island Sandstone	0	3	1	Sawtooth-Madison gas commingled, unitized; no well closer than 330' to unit boundary (Order 5-72).
Sunburst	2	0	4	
<b>WEST BUTTE SHALLOW GAS</b>				
Bow Island Sandstone	0	2	1	160-acre spacing units; with one well to be permitted to produce from each individual gas producing formation above the top of the Kootenai to the surface within each 160-acre spacing unit; well locations to be anywhere within the spacing unit but not closer than 990' to the spacing unit boundaries (Order 39-77).
<b>WEYGAND</b>				
Eagle Formation	0	0	1	Statewide.
Sawtooth Formation	3	0	1	

## OIL AND GAS FIELDS

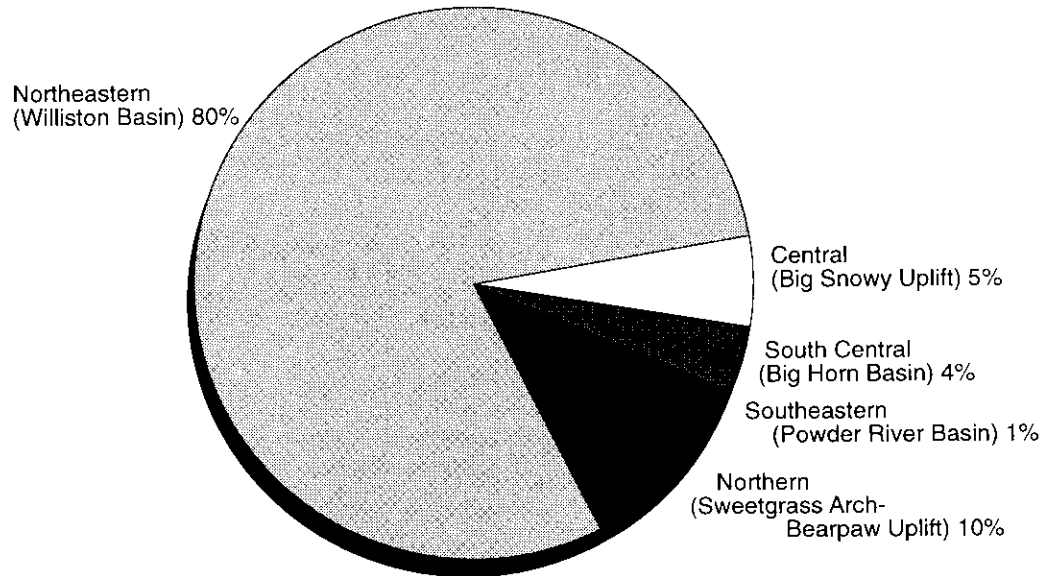
Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
<b>WHITEWATER</b>				
Carlile Shale	0	97	0	640-acre spacing units with 2 wells per formation (Orders 41-82 and 14-89). Amend to allow 4 wells per formation per spacing unit no closer than 660' to spacing unit boundaries, 1,320' between wells producing from the same formation with 150' of tolerance for geologic or topographic reasons (Order 15-89). Pilot infill drilling program approved for a portion of the field with up to 8 wells per spacing unit with between-well distance reduced to 990' (Order 15-91). Expand pilot infill drilling program (Order 6-92).
Greenhorn	0	22	0	
Phillips Sandstone	0	29	0	
Bowdoin, Greenhorn, Phillips	0	59	0	
Bowdoin, Greenhorn	0	20	0	
Greenhorn-Phillips	0	68	1	
<b>WHITEWATER, EAST</b>				
Carlile Shale	0	12	0	640-acre spacing units with two wells allowed per formation to be located anywhere within the spacing unit but not closer than 990' to spacing unit boundary (Order 100-83). Amend to allow 4 wells per formation per spacing unit no closer than 1,320' to another well producing from the same formation with 150' tolerance for geologic or topographic reasons (Order 65-89). Pilot infill drilling program in Section 31, T33N, R34E allowing up to 8 wells with 990' between wells, 150' tolerance and 660' setbacks (Order 7-92). Field enlargement, commingling (Order 33-98).
Greenhorn	0	1	0	
Martin Sandstone	0	1	0	
Phillips Sandstone	0	18	0	
Greenhorn-Phillips	0	10	0	
<b>WHITLASH</b>				
Bow Island Sandstone	0	32	2	Gas: 300' from legal subdivision line and 2,400' between wells, 75' topographic tolerance. Oil: 330' from legal subdivision line and 650' between wells; 5-spot location at center of 40-acre tract permitted; 75' topographic tolerance (Orders 16-54, 27-70). Order 16-54 amended to include S 1/2 of Section 30, T37N, R4E. SW 1/4 of 30 is 1 spacing unit, SE 1/4 is the other; well location no closer than 990' from spacing unit boundary (Order 45-81).
Dakota Sandstone	0	0	3	
Madison Formation or Group	0	1	1	
Rierdon Shale	0	0	1	
Sunburst	0	1	3	
Swift Formation	14	6	28	
Bow Island, Dakota	0	2	0	
Bow Island Spike	0	1	0	
Swift, Sunburst	20	0	20	
<b>WHITLASH, WEST</b>				
Bow Island Sandstone	0	1	0	Gas: 160-acre spacing units consisting of quarter sections; well location anywhere within a 660' square in center of spacing unit. Oil: 330' from legal subdivision line, 650' between wells in same reservoir on same lease; 5-spot location permitted (Orders 61-62, 22-65 as amended). Orders 61-62 amended by Order 48-77. Field extension (Order 18-79).
Sunburst	0	5	6	
Swift, Sunburst	1	0	3	
<b>WILD HORSE</b>				
Eagle Formation	0	0	2	Statewide.
<b>WILLIAMS</b>				
Bow Island Sandstone	0	15	3	640-acre spacing unit; well to be located no closer than 990' to exterior boundary for all formations above the Kootenai (Order 49-79). Amendment enlarging field boundary (Order 102-79, 11-83).
<b>WILLOW CREEK, NORTH</b>				
Tyler	2	0	2	Statewide. Pilot waterflood (Order 19-72).
<b>WILLOW RIDGE</b>				
Bow Island Sandstone	0	11	0	640-acre spacing units; location to be no closer than 990' to unit boundary for gas production from all formations from the surface to the top of the Kootenai (Order 29-78). 40-acre spacing units for oil production from the Burwash, with 5 wells permitted in each spacing unit; well may be located in the center of each 10 acre quarter-quarter-quarter section and one in the center of each 40-acre subdivision with a 75' topographic tolerance allowed (Order 30-78). Willow Ridge (Burwash) Unit (Order 88-97).
Burwash	2	0	0	
Sunburst	0	1	0	
<b>WILLOW RIDGE, SOUTH</b>				
Bow Island Sandstone	0	1	0	Statewide.
Sunburst	0	1	0	
<b>WILLOW RIDGE, WEST</b>				
Bow Island Sandstone	0	2	0	Delineated for gas production from the 4th Bow Island sand; 640-acre spacing units, wells to be located no closer than 990' to spacing unit boundaries (Order 3-88).
<b>WILLS CREEK, SOUTH</b>				
Siluro-Ordovician	3	0	2	160-acre spacing units for Siluro-Ordovician; well location in center of SE 1/4 of each unit with 175' topographic tolerance (Orders 5-64, 30-66). Waterflood initiated 12-1-73 (Order 23-73). Field enlargement and designation of single 640-acre spacing unit for up to 4 horizontal or vertical wells (Order 4-95).

## OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-in	Spacing Regulations, Field Rules, and Remarks
WINDY RIDGE Red River	5	0	1	Delineation of numerous lands for production of oil from horizontal Red River Formation wells; spacing units set by order; delineation to be reviewed in October, 2000 (Order 121-97).
WINNETT JUNCTION Tyler	3	0	1	20-acre spacing units to be designated as W 1/2 and E 1/2 of quarter-quarter section, no closer than 120' to the boundary of a spacing unit (Order 57-76). Certain lands bound by Order 57-76 vacated by Order 41-77. A waterflood operation commenced October 1, 1977 into Tyler Formation (Order 41-77).
WOLF SPRINGS Amsden Formation	3	0	3	80-acre Amsden spacing units consisting of N 1/2 and S 1/2 of each quarter section; well location in center of NW 1/4 and SE 1/4 of each quarter section with 75' topographic tolerance (Orders 4-56, 9-59). Boundary changes (Order 92-76 and 5-90).
WOLF SPRINGS AREA Amsden Formation	1	0	0	Statewide.
WOLF SPRINGS, SOUTH Amsden Formation	1	0	3	80-acre spacing units for Amsden comprised of W 1/2 or E 1/2 of quarter section; wells located center of NW 1/4 or SE 1/4 of quarter section with 150' topographic tolerance (Order 57-84). Field enlargement (Order 8-85). South Wolf Springs Amsden Unit approved (Order 23-92). Certified as expanded enhanced recovery unit effective 6/29/94 (Order 52-94).
WOODROW Charles	1	0	0	80-acre spacing units consisting of any two adjacent quarter-quarter sections; well locations in center of NE 1/4 and SW 1/4 of each quarter section with 200' topographic tolerance (Order 47-62).
Interlake Formation	1	0	1	
Charles, Interlake	1	0	0	
WRANGLER Red River	2	0	0	320-acre spacing units for production from Red River Formation consisting of W 1/2 and E 1/2 of S25 T34N R56E (Order 44-85).
WRANGLER, NORTH Red River	1	0	0	Statewide.
WRIGHT CREEK Muddy Sandstone	6	0	1	80-acre spacing units for Muddy Sandstone production consisting of N 1/2 and S 1/2 of quarter section with locations in NW 1/4 and SE 1/4 of each quarter section with 200' tolerance (Order 27-69). Field area reduction (Order 69-76).
YATES	0	0	0	320-acre spacing units; well locations as specified for the Duperow and Red River formations that may be dually completed (Order 92-81). Single 320-acre spacing unit for Ratcliffe/Mission Canyon formations (Order 22-86).

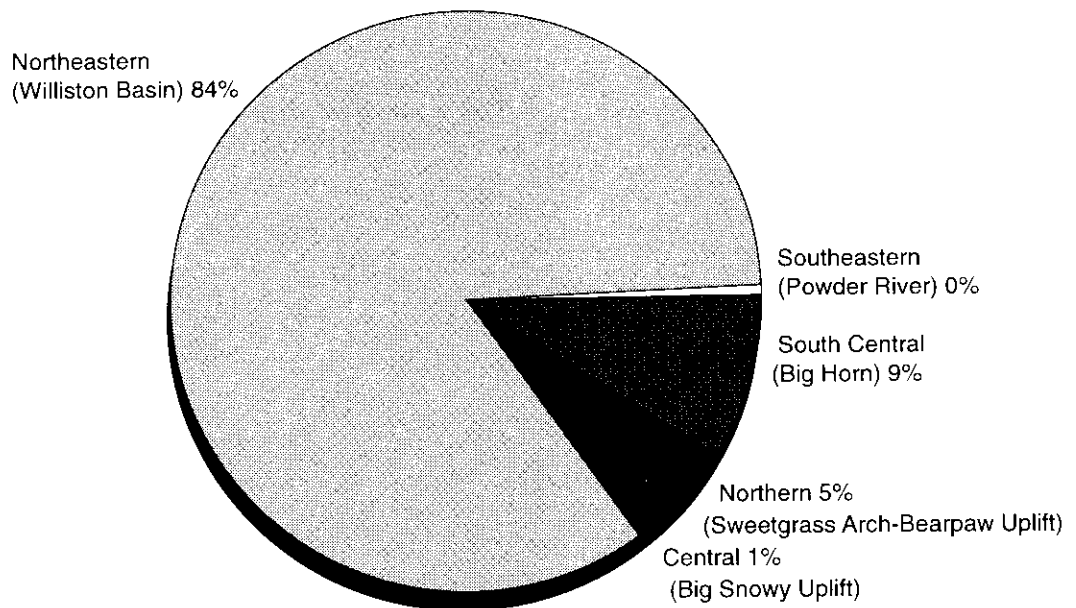
## 1998 Oil Production by Region

16,612,937 Barrels



## 1998 Oil Reserves by Region

(117 Million Barrels)



# SUMMARY OF PRODUCING

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY(%)	% WATER	RE
											FA
											PRIM.
1.	Anvil	Nisku	Roosevelt	1981	10900	40.0	1.50	14	17	34	43
2.	Anvil	Ratcliffe	Roosevelt	1982	8990	36.0	1.35	22	11	50	9
3.	Anvil	Red River	Roosevelt	1978	12600	47.0	1.63	26	14	32	13
4.	Bainville	Ratcliffe	Roosevelt	1988	8630	38.0	0.00	16	0	0	0
5.	Bainville	Situro/Ord.	Roosevelt	1969	12402	44.0	0.00	8	25	31	0
6.	Bainville (RAT/MC)	Ratcliffe/Mission C	Roosevelt	1993	8900	0.0	0.00	0	0	0	0
7.	Bainville II	Red River	Roosevelt	1981	12700	42.0	1.20	40	10	35	5
8.	Bainville, North	Nisku	Roosevelt	1992	10832	43.4	0.00	8	0	0	0
9.	Bainville, North	Ratcliffe	Roosevelt	1980	8800	30.0	0.00	13	14	52	0
10.	Bainville, North	Red River/Interlake	Roosevelt	1979	12400	43.0	1.55	40	9	32	13
11.	Bainville, North	Winnipegosis	Roosevelt	1979	11400	44.0	1.60	35	7	20	15
12.	Bainville, West	Red River	Roosevelt	1978	8500	34.0	1.50	12	6	45	13
13.	Beanblossom	Lower Tyler	Garfield	1985	4562	32.0	1.05	22	21	35	6
14.	Bears Den	Swift	Liberty	1924	2300	39.0	1.08	20	9	35	26
15.	Bell Creek	Muddy	Powder River	1967	4400	36.0	1.11	10	26	23	31
16.	Benrud, East	Nisku	Roosevelt	1962	7500	46.0	1.37	22	15	30	36
17.	Big Muddy Creek	Madison	Roosevelt	1981	8500	44.0	0.00	4	7	0	0
18.	Big Wall	Amsden	Musselshell	1953	2500	19.0	1.01	17	16	35	28
19.	Big Wall	Lower Tyler Unit	Musselshell	1948	3000	31.0	1.02	22	17	40	33
20.	Big Wall	Upper Tyler Unit	Musselshell	1948	3000	30.8	1.03	16	17	32	3
21.	Blackfoot	Devonian/Madison	Glacier	1957	3500	30.0	1.10	15	15	35	26
22.	Bloomfield	Dawson Bay	Dawson	1984	10500	41.0	1.38	15	2	25	49
23.	Bloomfield	Interlake/Red River	Dawson	1983	10650	43.0	1.32	13	4	0	26
24.	Blue Hill	Red River	Richland	1977	12600	48.0	1.35	32	10	60	9
25.	Blue Mountain	Red River	Wibaux	1984	11949	31.0	1.25	20	18	15	2
26.	Bowes Sawtooth Unit	Sawtooth	Blaine	1949	3300	19.0	1.02	32	12	31	15
27.	Brady	Sunburst	Pondera	1942	1500	34.0	1.01	10	12	30	6
28.	Breed Creek	Tyler	Rosebud	1976	4900	32.0	1.15	20	15	37	44
29.	Brorson	Madison	Richland	1954	9600	32.0	1.40	40	5	40	15
30.	Brorson	Red River	Richland	1968	12600	48.0	1.70	20	10	35	31
31.	Brorson, South	Bakken	Richland	1990	10400	42.0	0.00	24	0	4	0
32.	Brorson, South	Madison	Richland	1978	9000	42.0	0.00	52	0	0	0
33.	Brush Lake	Red River	Sheridan	1969	11400	40.0	1.50	30	14	35	12
34.	Burget, East	Madison	Roosevelt	1981	9000	0.0	0.00	36	0	0	0
35.	Cabin Creek Unit 1	Situro/Ord.	Fallon	1953	9000	33.0	1.20	50	13	30	9
36.	Cabin Creek Unit 2	Madison	Fallon	1956	7300	33.0	1.13	25	11	30	53
37.	Canal	Madison	Richland	1977	9200	33.0	1.30	47	2	41	30
38.	Canal	Red River	Richland	1970	12700	47.0	2.07	58	8	40	23
39.	Cattails	Ratcliffe	Richland	1987	8975	31.6	0.00	0	0	0	0
40.	Cattails, South	Ratcliffe	Richland	1991	9445	33.4	0.00	26	0	0	0
41.	Charlie Creek, East	Red River	Richland	1980	11900	45.0	0.00	27	0	0	0
42.	Chelsea Creek	Nisku	Roosevelt	1961	7626	44.7	0.00	0	0	0	0
43.	Clear Lake	Madison	Sheridan	1978	7600	33.0	1.15	10	5	30	38
44.	Clear Lake	Nisku	Sheridan	1979	9000	43.0	1.53	31	11	27	4
45.	Clear Lake	Red River	Sheridan	1977	11200	42.0	1.65	32	18	35	9
46.	Clear Lake, South	Red River	Sheridan	1984	11500	38.0	1.39	10	23	21	4
47.	Colored Canyon	Red River	Sheridan	1978	11300	40.0	1.40	18	13	28	7
48.	Comertown	Ratcliffe	Sheridan	1981	6807	30.0	1.20	16	26	0	1
49.	Comertown	Red River	Sheridan	1980	10500	30.0	1.30	19	10	38	43
50.	Comertown, South	Red River	Sheridan	1984	11000	38.0	1.08	17	12	50	6
51.	Cottonwood	Ratcliffe	Richland	1992	8805	0.0	0.00	12	0	0	0
52.	Cottonwood, East	Ratcliffe	Richland	1990	8842	31.5	0.00	36	0	46	0
53.	Cow Creek, East	Kibby	McCone	1971	6300	35.0	1.05	15	15	0	10
54.	Crane	Devonian	Richland	1979	11900	47.0	1.65	20	12	35	23
55.	Crane	Situro/Ord.	Richland	1979	12700	44.4	1.50	8	12	18	33
56.	Cupton	Red River	Fallon	1955	9600	38.0	1.25	40	12	16	6
57.	Cut Bank	Cut Bank/Madison	Glacier/Toole	1932	2900	31.0	1.09	18	15	35	22

# PRODUCING OIL FIELDS - 1998

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1998 PRODUCTION		CUMUL. PROD. 1-99 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ACRE	BBLs/ACRE FT.	BBLs	BOPD			
34	43	0	480	3900	8125	1670	0	1670	3479	249	37688	103	1229	441	1.
50	9	0	480	3338	6954	290	0	290	604	27	6656	18	247	43	2.
32	13	0	2560	30159	11780	4010	0	4010	1566	60	61737	169	3331	679	3.
0	0	0	320	0	0	0	0	0	0	0	5153	14	87	38	4.
31	0	0	1920	0	0	0	0	0	0	0	27440	75	633	126	5.
0	0	0	160	0	0	0	0	0	0	0	7187	20	25	126	6.
35	5	0	960	16137	16809	880	0	880	917	23	22568	62	735	145	7.
0	0	0	640	0	0	0	0	0	0	0	78657	215	375	294	8.
52	0	0	640	0	0	0	0	0	0	0	24911	68	349	129	9.
32	13	0	3200	39208	12252	5280	0	5280	1650	41	371404	1018	2401	2879	10.
20	15	0	1280	12165	9503	1780	0	1780	1391	40	94388	259	1230	550	11.
45	13	0	960	1966	2047	260	0	260	271	23	4105	11	251	9	12.
35	6	0	480	10650	22187	590	0	590	1229	56	13393	37	531	59	13.
35	26	0	360	3026	8405	790	0	790	2194	110	18846	52	743	47	14.
23	31	28	16000	223878	13992	70090	62690	132780	8299	830	229714	629	132452	328	15.
30	36	0	640	8372	13081	2990	0	2990	4672	212	3178	9	2970	20	16.
0	0	0	480	0	0	0	0	0	0	0	11629	32	100	19	17.
35	28	0	320	4346	13581	1230	0	1230	3844	226	8797	24	1181	49	18.
40	33	1	1220	20822	17067	6950	210	7160	5869	267	22648	62	6949	211	19.
32	3	0	480	6687	13931	210	0	210	438	27	8009	22	135	75	20.
35	26	22	360	3713	10313	970	820	1790	4972	331	14433	40	1748	42	21.
25	49	0	320	405	1265	200	0	200	625	42	3921	11	187	13	22.
0	26	0	640	1956	3056	510	0	510	797	61	12407	34	424	86	23.
60	9	0	640	4708	7356	420	0	420	656	21	37906	104	264	156	24.
15	2	0	640	12155	18992	190	0	190	297	15	27453	75	124	66	25.
31	15	0	3760	75774	20152	11220	0	11220	2984	93	87202	239	10781	439	26.
30	6	0	680	4387	6451	280	0	280	412	41	4957	14	233	47	27.
37	44	0	480	6120	12750	2710	0	2710	5646	282	131710	361	2239	471	28.
40	15	0	1760	11703	6649	1750	0	1750	994	25	34597	95	1657	93	29.
35	31	0	1600	9492	5932	2950	0	2950	1844	92	68292	187	2740	210	30.
4	0	0	480	0	0	0	0	0	0	0	15365	42	248	43	31.
0	0	0	640	0	0	0	0	0	0	0	29577	81	339	176	32.
35	12	0	2240	31628	14119	3650	0	3650	1629	54	110127	302	3122	528	33.
0	0	0	640	0	0	0	0	0	0	0	12053	33	284	57	34.
30	9	11	16320	480065	29415	45160	52810	97970	6003	120	1079258	2957	87977	9993	35.
30	53	0	2260	29868	13215	15760	0	15760	6973	279	75294	206	15413	347	36.
41	30	0	640	2118	3309	640	0	640	1000	21	17701	48	587	53	37.
40	23	0	320	3339	10434	780	0	780	2438	42	8426	23	731	49	38.
0	0	0	1120	0	0	0	0	0	0	0	41840	115	924	129	39.
0	0	0	640	0	0	0	0	0	0	0	10145	28	184	6	40.
0	0	0	960	0	0	0	0	0	0	0	25514	70	733	49	41.
0	0	0	160	0	0	0	0	0	0	0	3618	10	92	5	42.
30	38	0	960	2267	2361	860	0	860	896	90	21833	60	766	94	43.
27	4	0	480	6059	12622	240	0	240	500	16	11359	31	212	28	44.
35	9	0	2240	39432	17603	3470	0	3470	1549	48	74074	203	2901	569	45.
21	4	0	640	6490	10140	250	0	250	391	39	6353	17	222	28	46.
28	7	0	1920	17926	9336	1310	0	1310	682	38	77907	213	981	329	47.
0	1	0	480	12909	26893	190	0	190	396	25	3549	10	169	21	48.
38	43	0	800	5624	7030	2400	0	2400	3000	158	47084	129	2030	370	49.
50	6	0	960	7034	7327	410	0	410	427	25	14631	40	342	68	50.
0	0	0	480	0	0	0	0	0	0	0	38293	105	217	179	51.
46	0	0	160	0	0	0	0	0	0	0	7897	22	95	76	52.
0	10	0	1600	26599	16624	2690	0	2690	1681	112	17951	49	2651	39	53.
35	23	0	960	7041	7334	1590	0	1590	1656	83	17978	49	1525	65	54.
18	33	0	960	3909	4071	1300	0	1300	1354	169	28374	78	1193	107	55.
16	6	0	2240	56054	25024	3090	0	3090	1379	34	49395	135	2708	382	56.
35	22	6	49000	612063	12491	132320	36720	169040	3450	192	482055	1321	167610	1430	57.

# SUMMARY OF PRODUCTION

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	PORO-OSITY(%)	% WATER	PERCENTAGE
											PERCENTAGE
58.	Dagmar	Red River	Sheridan	1976	11300	37.0	1.65	22	16	35	5
59.	Deer Creek	Charles+Tyler	Dawson	1990	7870	30.2	1.00	10	13	50	19
60.	Diamond Point	Red River	Roosevelt	1976	11900	47.0	0.00	26	0	0	0
61.	Divide	Madison	Sheridan	1979	7900	33.0	1.35	25	7	42	20
62.	Divide	Red River	Sheridan	1987	11398	35.4	0.00	14	0	0	0
63.	Dooley	Ratcliffe	Sheridan	1987	6451	28.0	0.00	0	0	0	0
64.	Dutch John Coulee	Sunburst	Toole	1985	2040	48.0	1.20	12	21	30	11
65.	Dwyer	Red River	Sheridan	1982	11552	35.0	0.00	0	0	0	0
66.	Dwyer Unit	Charles	Sheridan	1960	8000	37.0	1.32	38	11	56	16
67.	Elk Basin	Frontier	Carbon	1915	1400	28.9	0.00	0	0	0	0
68.	Elk Basin	Madison	Carbon	1942	5300	28.0	1.12	224	12	9	36
69.	Elk Basin	Tensleep	Carbon	1942	5000	29.0	1.16	124	11	10	25
70.	Elk Basin, NW	Madison/Tensleep	Carbon	1964	6000	37.0	1.15	27	12	22	5
71.	Enid, North	Red River	Richland	1979	11800	47.0	1.75	8	7	34	27
72.	Fairview	Madison	Richland	1981	9520	34.0	1.60	45	4	51	16
73.	Fairview NW Unit	Red River	Richland	1965	12700	47.7	0.00	0	0	0	0
74.	Fairview Non Unit	Red River	Richland	1965	12700	47.0	1.70	35	11	28	23
75.	Fairview, East	Winnipegosis	Richland	1990	11590	36.8	0.00	7	8	30	0
76.	Fairview, West	Madison	Richland	1980	9200	37.0	0.00	60	3	0	0
77.	Fishhook	Red River	Sheridan	1980	11200	41.0	1.28	10	10	31	21
78.	Flat Coulee Unit	Swift	Liberty	1933	2900	37.0	1.10	18	21	35	14
79.	Flat Lake	Madison/Nisku	Sheridan	1982	8042	0.0	0.00	0	0	0	0
80.	Flat Lake	Ratcliffe	Sheridan	1964	6500	33.0	1.26	14	15	45	26
81.	Flat Lake, East	Madison	Sheridan	1984	6523	28.0	0.00	0	0	0	0
82.	Fort Gilbert	Madison	Richland	1981	9200	35.0	1.30	30	6	55	9
83.	Fort Gilbert	Red River	Richland	1970	12500	48.0	1.89	42	12	20	7
84.	Four Mile Creek	Red River	Richland	1975	12500	47.0	1.50	35	15	35	9
85.	Four Mile Creek, W.	Red River	Richland	1976	12500	45.0	1.30	15	13	40	31
86.	Fred & George Creek	Sunburst	Toole	1963	2600	39.0	1.20	31	27	30	10
87.	Frog Coulee	Red River	Richland	1979	11000	49.0	1.42	15	18	35	11
88.	Froid, South	Red River	Roosevelt	1970	12100	48.0	1.55	12	17	25	7
89.	Gas City	Red River/Madison	Dawson	1955	8900	38.0	1.28	25	12	35	29
90.	Girard	Bakken	Richland	1966	11839	40.0	1.15	18	10	8	7
91.	Girard	Red River	Richland	1985	11850	43.6	0.00	8	0	9	0
92.	Glendive	Siluro/Ord.	Dawson	1952	8900	38.0	1.24	147	8	35	13
93.	Goose Lake	Ratcliffe	Sheridan	1962	7000	34.0	1.20	40	16	55	5
94.	Goose Lake	Red River	Sheridan	1980	11063	0.0	0.00	0	0	0	0
95.	Goose Lake, West	Red River	Sheridan	1981	11500	39.0	0.00	29	0	0	0
96.	Gray Blanket	Tensleep	Big Horn	1991	6115	22.0	1.05	9	18	18	24
97.	Gunsight	Madison	Roosevelt	1980	9550	36.0	0.00	0	0	0	0
98.	Hay Creek	Mission Canyon	Richland	1969	9600	39.0	1.15	40	5	0	5
99.	Hay Creek	Siluro/Ord.	Richland	1969	12600	46.0	1.90	53	12	30	9
100.	Hiawatha	Tyler	Musselshell	1967	5000	33.0	1.15	34	12	25	22
101.	High Five	Tyler/Stensvad	Rosebud	1976	5600	33.0	1.15	20	20	0	12
102.	Howard Coulee	Tyler	Musselshell	1974	3498	31.0	0.00	0	0	0	0
103.	Intake II	Ratcliffe	Richland	1982	9200	32.3	0.00	10	13	43	0
104.	Ivanhoe	Tyler/Amsden	Musselshell	1956	4100	33.0	1.08	29	15	20	32
105.	Jim Coulee Unit	Tyler	Musselshell	1971	3700	33.0	1.10	37	15	33	3
106.	Katy Lake	Red River	Sheridan	1984	11523	0.0	0.00	11	0	0	0
107.	Katy Lake, North	Mission Canyon	Sheridan	1981	8056	35.0	1.34	18	18	57	41
108.	Katy Lake, North	Red River	Sheridan	1979	11300	46.0	1.42	19	15	30	26
109.	Kevin East Nisku Oil	Nisku	Toole	1984	3000	39.0	1.10	7	9	30	39
110.	Kevin Sunburst	Total Production	Toole	1922	1500	32.0	1.08	7	20	35	23
111.	Kincheloe Ranch, W.	Kincheloe Ranch Unit	Rosebud	1979	5500	32.1	1.10	8	13	40	55
112.	Kincheloe Ranch, W.	Tyler Unit	Rosebud	1980	5344	38.0	0.00	18	0	0	0
113.	Lambert	Red River	Richland	1980	12200	44.0	0.00	7	13	40	0
114.	Landslide Butte	Madison/Sun River	Glacier	1967	4700	41.0	0.00	24	0	0	0

# PRODUCING OIL FIELDS - 1998

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1998 PRODUCTION		CUMUL. PROD. 1-99 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ACRE	BBLs/ACRE FT.	BBLs	BOPD			
35	5	0	1280	13770	10757	730	0	730	570	26	12643	35	668	62	58.
50	19	0	1120	5648	5042	1060	0	1060	946	95	96902	265	340	720	59.
0	0	0	640	0	0	0	0	0	0	0	22919	63	1068	301	60.
42	20	0	2240	13066	5833	2610	0	2610	1165	47	46355	127	2149	461	61.
0	0	0	1600	0	0	0	0	0	0	0	66770	183	814	328	62.
0	0	0	640	0	0	0	0	0	0	0	13209	36	327	92	63.
30	11	0	200	2281	11405	240	0	240	1200	100	7337	20	215	25	64.
0	0	0	1600	0	0	0	0	0	0	0	43087	118	1671	301	65.
56	16	5	2960	31996	10809	5160	1600	6760	2284	60	25233	69	6643	117	66.
0	0	0	520	0	0	0	0	0	0	0	8098	22	1756	53	67.
9	36	0	1080	182989	169434	65440	0	65440	60593	271	209131	573	59562	5878	68.
10	25	0	1400	114941	82100	28500	0	28500	20357	164	220152	603	25210	3290	69.
22	5	3	2080	35461	17048	1900	1060	2960	1423	53	57671	158	2343	617	70.
34	27	0	960	1573	1638	420	0	420	438	55	7737	21	405	15	71.
51	16	0	960	4106	4277	640	0	640	667	15	15506	42	628	12	72.
0	0	0	2240	0	0	0	0	0	0	0	49953	137	782	363	73.
28	23	0	2880	36432	12650	8290	0	8290	2878	82	40254	110	7969	321	74.
30	0	0	320	0	0	0	0	0	0	0	9947	27	75	97	75.
0	0	0	800	0	0	0	0	0	0	0	26568	73	437	15	76.
31	21	0	1280	5353	4182	1100	0	1100	859	86	12928	35	1013	87	77.
35	14	0	640	11090	17328	1590	0	1590	2484	138	52683	144	1080	510	78.
0	0	0	1440	0	0	0	0	0	0	0	336879	923	582	622	79.
45	26	0	9600	68270	7111	17970	0	17970	1872	134	184862	506	16795	1175	80.
0	0	0	160	0	0	0	0	0	0	0	10740	29	153	427	81.
55	9	0	2240	10828	4833	1010	0	1010	451	15	15514	43	943	67	82.
20	7	0	1280	21185	16550	1570	0	1570	1227	29	15363	42	1513	57	83.
35	9	0	320	5648	17650	520	0	520	1625	46	7240	20	429	91	84.
40	31	0	640	4469	6982	1400	0	1400	2188	146	22973	63	450	950	85.
30	10	14	1480	56060	37878	5682	7848	13530	9142	295	30893	85	13416	114	86.
35	11	0	320	3068	9587	330	0	330	1031	69	12029	33	265	65	87.
25	7	0	640	4901	7657	330	0	330	516	43	27009	74	297	33	88.
35	29	5	2800	33093	11818	9650	1650	11300	4036	161	61731	169	10535	765	89.
8	7	0	640	7150	11171	480	0	480	750	42	10040	28	434	46	90.
9	0	0	320	0	0	0	0	0	0	0	13678	37	159	94	91.
35	13	0	2400	114778	47824	14780	0	14780	6158	42	109422	300	13896	884	92.
55	5	3	6880	128100	18619	5810	3840	9650	1403	35	57738	158	9487	163	93.
0	0	0	640	0	0	0	0	0	0	0	24597	67	381	138	94.
0	0	0	960	0	0	0	0	0	0	0	25229	69	648	102	95.
18	24	0	160	1570	9812	370	0	370	2313	257	24796	68	231	139	96.
0	0	0	480	0	0	0	0	0	0	0	9918	27	360	24	97.
0	5	0	480	6476	13491	350	0	350	729	18	6638	18	332	18	98.
30	9	0	960	17451	18178	1590	0	1590	1656	31	35629	98	1279	311	99.
25	22	0	400	8257	20642	1780	0	1780	4450	131	11891	33	1674	106	100.
0	12	0	960	25905	26984	3110	0	3110	3240	162	43333	119	2872	238	101.
0	0	0	160	0	0	0	0	0	0	0	4537	12	198	27	102.
43	0	0	320	0	0	0	0	0	0	0	14239	39	219	74	103.
20	32	0	600	14999	24998	4750	0	4750	7917	273	17756	49	4632	118	104.
33	3	6	1920	50353	26225	1350	2880	4230	2203	60	15378	42	4177	53	105.
0	0	0	320	0	0	0	0	0	0	0	7133	20	206	73	106.
57	41	0	800	6453	8066	2670	0	2670	3338	185	49559	136	1515	1155	107.
30	26	0	1920	20927	10899	5450	0	5450	2839	149	105297	288	4030	1420	108.
30	39	0	760	2364	3110	920	0	920	1211	173	53070	145	636	284	109.
35	23	3	48720	318475	6536	73200	7970	81170	1666	238	219457	601	80084	1086	110.
40	55	0	320	1408	4400	780	0	780	2438	305	6847	19	776	4	111.
0	0	0	80	0	0	0	0	0	0	0	4241	12	202	14	112.
40	0	0	1280	0	0	0	0	0	0	0	74474	204	641	479	113.
0	0	0	520	0	0	0	0	0	0	0	28931	79	628	106	114.



# SUMMARY OF PRODUCTION

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY %API	F.V.F.	NET PAY FT.	PORO-OSITY(%)	% WATER	PRI
115.	Little Beaver Unit	Red River	Fallon	1952	8300	29.0	1.29	37	12	35	7
116.	Little Beaver, East	Mission Canyon	Fallon	1993	6772	31.5	0.00	4	0	0	0
117.	Little Beaver, East	Red River	Fallon	1954	8300	30.0	1.50	24	13	35	31
118.	Little Wall Creek	Tyler/Stensvad	Musselshell	1970	3700	33.0	1.10	40	15	33	17
119.	Lodge Grass	Tensleep	Big Horn	1964	6520	22.0	1.16	15	15	34	6
120.	Lone Butte	Madison	Richland	1987	9146	38.0	0.00	13	0	0	0
121.	Lonetree Creek	Mission Canyon	Richland	1991	9147	35.1	0.00	0	0	50	0
122.	Lonetree Creek	Red River/Interlake	Richland	1970	12500	47.0	1.86	19	11	30	25
123.	Long Creek, West	Nisku	Roosevelt	1977	7700	39.0	1.25	24	16	20	16
124.	Lookout Butte	Red River/Madison	Fallon	1961	8900	33.0	1.15	15	15	25	3
125.	Lookout Butte, East	Red River	Fallon	1984	9300	31.3	0.00	0	0	0	0
126.	Lustre	Madison	Valley	1982	7200	33.0	1.19	27	16	45	5
127.	McCabe	Ratcliffe	Roosevelt	1973	8700	37.0	1.50	20	13	40	8
128.	Medicine Lake	Devonian	Sheridan	1980	10300	44.0	0.00	11	0	49	0
129.	Medicine Lake	Mission Canyon	Sheridan	1979	8500	0.0	0.00	0	0	0	0
130.	Medicine Lake	Siluro/Ord.	Sheridan	1984	11319	43.5	1.55	38	9	35	10
131.	Melstone	Tyler	Musselshell	1948	4400	34.0	1.09	25	15	30	28
132.	Midfork	Charles	Valley	1985	7174	38.3	0.00	0	0	0	0
133.	Monarch Unit	Siluro/Ord.	Fallon	1958	8400	32.0	1.00	31	7	35	2
134.	Mondak West	Devonian	Richland	1979	10600	41.4	1.50	8	10	25	38
135.	Mondak West	Madison	Richland	1976	9200	30.0	1.30	100	4	60	6
136.	Mondak West	Siluro/Ord.	Richland	1976	12200	48.0	1.64	45	10	43	20
137.	Mustang	Bakken	Richland	1994	10565	44.0	0.00	0	0	0	0
138.	Mustang	Madison	Richland	1988	9200	33.7	0.00	0	0	0	0
139.	Mustang	Red River	Richland	1979	12500	47.0	1.41	17	12	0	8
140.	Neisser Creek	Red River	Sheridan	1982	10900	46.0	2.00	15	17	21	29
141.	Nohly	Nisku	Richland	1983	10700	38.0	1.30	15	11	39	72
142.	Nohly	Red River	Richland	1972	12900	46.0	1.43	27	10	40	30
143.	Nohly Area	Ratcliffe	Richland	1984	9444	32.0	1.23	17	10	57	35
144.	North Fork	Madison	Richland	1977	9500	35.0	1.37	18	3	70	62
145.	Otis Creek	Ratcliffe	Richland	1993	8900	35.0	0.00	0	0	0	0
146.	Outlook	Nisku	Sheridan	1958	9170	40.0	0.00	20	0	0	0
147.	Outlook, Southwest	Winnipegosis	Sheridan	1994	8886	0.0	0.00	10	0	0	0
148.	Outlook, West	Winnipegosis	Sheridan	1958	9100	39.0	1.12	16	8	30	34
149.	Oxbow	Red River	Roosevelt	1978	12600	47.0	1.50	18	12	45	30
150.	Oxbow Area	Nisku	Roosevelt	1993	10653	38.8	1.36	6	22	25	45
151.	Palomino	Nisku	Roosevelt	1980	7500	48.0	1.15	39	16	20	11
152.	Pennel	Siluro/Ord.	Fallon	1955	7000	31.0	1.10	38	3	30	61
153.	Pine	Red River	Fallon/Wibaux	1952	8400	34.0	1.17	32	12	30	19
154.	Pondera	Madison/Sun River	Pondera	1927	2100	34.0	1.20	15	16	31	17
155.	Poplar, East	Heath	Roosevelt	1969	4900	38.0	1.10	8	11	50	30
156.	Poplar, East	Madison	Roosevelt	1952	5500	40.0	1.10	25	11	30	19
157.	Poplar, Northwest	Madison	Roosevelt	1952	6300	40.0	1.10	16	10	45	14
158.	Pronghorn	Red River	Sheridan	1983	10580	40.0	1.30	17	13	54	4
159.	Putnam	Interlake/Red River	Richland	1969	11900	41.0	1.75	16	9	30	20
160.	Putnam	Madison	Richland	1978	9500	34.0	1.42	92	6	35	1
161.	Rabbit Hills	Sawtooth	Blaine	1972	4000	21.0	1.15	12	18	16	28
162.	Ragged Point	Tyler	Musselshell	1956	3600	32.0	1.11	13	14	32	24
163.	Rattler Butte	Tyler	Rosebud	1975	5300	35.0	1.10	25	12	60	55
164.	Rattlesnake Butte	Cat Creek/Amsden	Petroleum	1984	2732	27.7	1.10	26	21	70	18
165.	Raymond	Nisku	Sheridan	1972	7900	50.0	1.40	22	9	0	14
166.	Raymond	Red River	Sheridan	1972	10000	39.0	1.42	33	12	10	7
167.	Raymond	Winnipegosis	Sheridan	1972	9300	42.0	1.17	40	5	27	21
168.	Reagan	Madison	Glacier	1947	3700	38.0	1.10	11	12	30	49
169.	Red Bank	Madison	Roosevelt	1980	13000	31.0	2.00	16	14	11	5
170.	Red Bank, South	Red River	Roosevelt	1981	13000	44.0	1.60	17	17	30	12

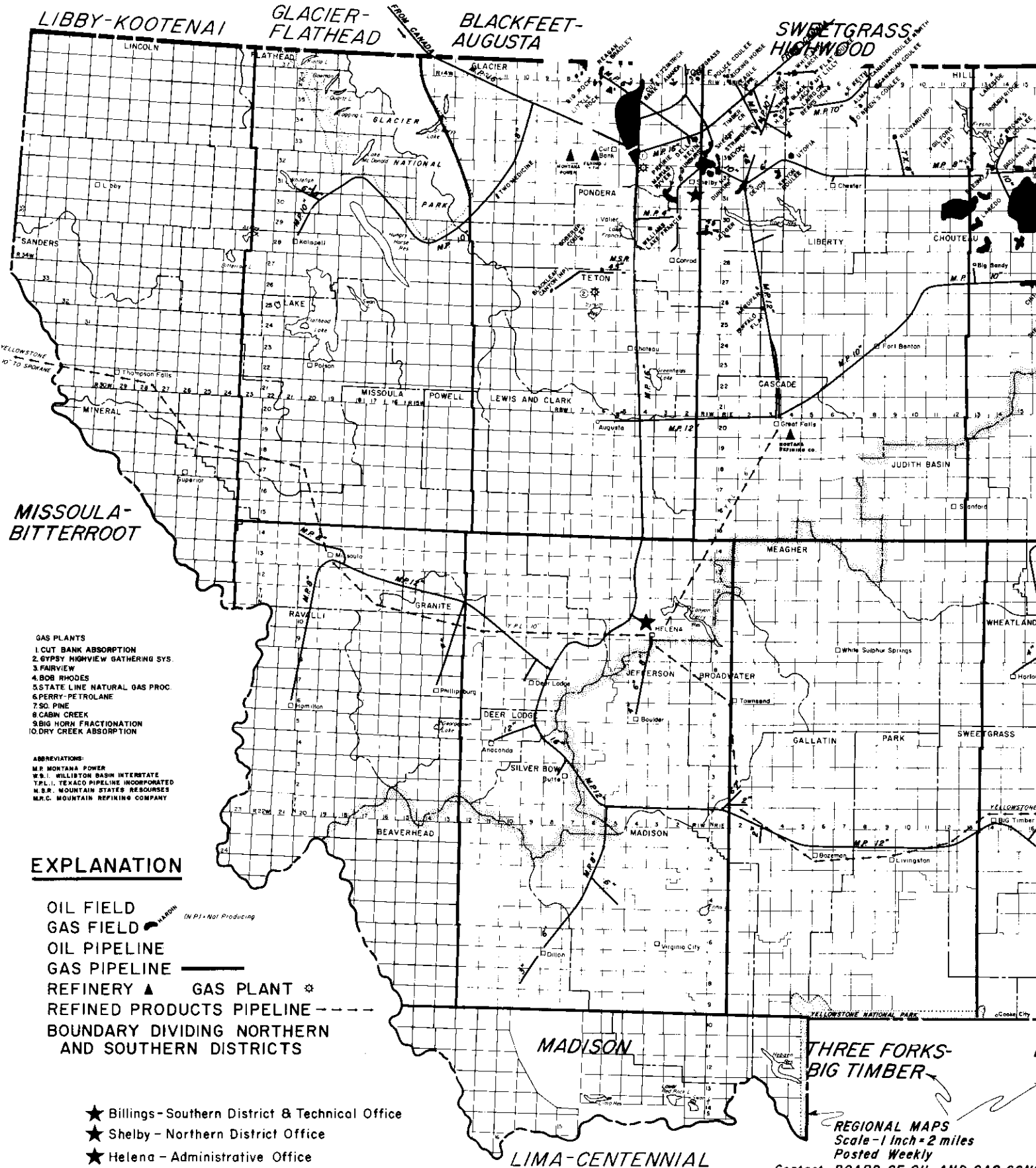
# PRODUCING OIL FIELDS - 1998

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1998 PRODUCTION		CUMUL. PROD. 1-99 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ACRE	BBLs/ACRE FT.	BBLs	BOPD			
35	7	10	4960	86087	17356	5840	8850	14690	2962	80	201317	552	12405	2285	115.
0	0	0	160	0	0	0	0	0	0	0	5436	15	59	7	116.
35	31	0	2240	23495	10488	7390	0	7390	3299	137	118330	324	6503	887	117.
33	17	0	1120	31754	28351	5510	0	5510	4920	123	77339	212	5122	388	118.
34	6	0	640	6356	9931	400	0	400	625	42	5616	15	372	28	119.
0	0	0	640	0	0	0	0	0	0	0	6304	17	88	7	120.
50	0	0	480	0	0	0	0	0	0	0	5522	15	84	18	121.
30	25	0	3200	19527	6102	4970	0	4970	1553	82	131592	361	4424	546	122.
20	16	0	320	6101	19065	950	0	950	2969	124	16606	45	829	121	123.
25	3	19	13120	149358	11383	3950	28380	32330	2464	164	452748	1240	28121	4209	124.
0	0	0	15680	0	0	0	0	0	0	0	1139753	3123	4363	9679	125.
45	5	0	8000	123919	15489	6230	0	6230	779	29	123955	340	5722	508	126.
40	8	0	480	3873	8068	310	0	310	646	32	4935	14	275	35	127.
49	0	0	480	0	0	0	0	0	0	0	11068	30	258	22	128.
0	0	0	320	0	0	0	0	0	0	0	10173	28	104	32	129.
35	10	0	1600	17802	11126	1760	0	1760	1100	29	36105	99	1629	131	130.
30	28	0	800	14947	18683	4160	0	4160	5200	208	31107	85	3973	187	131.
0	0	0	1120	0	0	0	0	0	0	0	38230	105	528	177	132.
35	2	4	2720	29764	10942	690	1190	1880	691	22	30947	85	1711	169	133.
25	38	0	320	993	3103	380	0	380	1188	149	15551	43	279	101	134.
60	6	0	10880	103886	9548	6240	0	6240	574	6	69447	190	5536	704	135.
43	20	0	3200	38828	12133	7920	0	7920	2475	55	153631	421	5421	2499	136.
0	0	0	640	0	0	0	0	0	0	0	31874	87	98	35	137.
0	0	0	160	0	0	0	0	0	0	0	8124	22	82	50	138.
0	8	0	960	10775	11223	860	0	860	896	53	21410	59	746	114	139.
21	29	0	320	2501	7815	730	0	730	2281	152	41161	113	473	257	140.
39	72	0	800	4805	6006	3480	0	3480	4350	290	36551	100	3340	140	141.
40	30	0	960	8437	8788	2500	0	2500	2604	96	103612	284	2063	437	142.
57	35	0	1760	8115	4610	2850	0	2850	1619	95	129983	356	1747	1103	143.
70	62	0	960	881	917	550	0	550	573	32	34627	95	458	92	144.
0	0	0	160	0	0	0	0	0	0	0	6338	17	49	35	145.
0	0	0	640	0	0	0	0	0	0	0	23539	64	177	140	146.
0	0	0	160	0	0	0	0	0	0	0	6010	16	148	6	147.
30	34	0	480	2979	6206	1010	0	1010	2104	132	15551	43	948	62	148.
45	30	0	320	1966	6143	580	0	580	1813	101	11338	31	511	69	149.
25	45	0	320	1807	5646	820	0	820	2563	427	63753	175	507	313	150.
20	11	0	960	32329	33676	3430	0	3430	3573	92	106961	293	2659	771	151.
30	61	11	28960	162989	5628	99330	18000	117330	4051	107	1828902	5011	96287	21043	152.
30	19	23	16480	293731	17823	56750	67500	124250	7539	236	746445	2045	115329	8921	153.
31	17	0	15600	167014	10706	27910	0	27910	1789	119	178051	488	27453	457	154.
50	30	0	480	1490	3104	440	0	440	917	115	11074	30	374	66	155.
30	19	0	18070	245327	13576	46230	0	46230	2558	102	90554	248	45948	282	156.
45	14	0	5440	33763	6206	4690	0	4690	862	54	80339	220	4270	420	157.
54	4	0	1280	7765	6066	340	0	340	266	16	4750	13	334	6	158.
30	20	0	5440	24309	4468	4940	0	4940	908	57	64139	176	4762	178	159.
35	1	0	1600	31364	19602	230	0	230	144	2	29298	80	160	70	160.
16	28	0	800	9792	12240	2710	0	2710	3388	282	108597	298	2044	666	161.
32	24	10	1440	12456	8650	3030	1250	4280	2972	229	18374	50	4249	31	162.
60	55	0	360	3047	8463	1670	0	1670	4639	186	132646	363	1361	309	163.
70	18	0	320	3697	11553	660	0	660	2063	79	13375	37	627	33	164.
0	14	0	640	7022	10971	970	0	970	1516	69	12070	33	938	32	165.
10	7	0	960	18693	19471	1270	0	1270	1323	40	20399	56	1086	184	166.
27	21	0	960	9294	9681	1950	0	1950	2031	51	37484	103	1763	187	167.
30	49	14	2600	16943	6516	8240	2300	10540	4054	369	107367	294	9704	836	168.
11	5	0	5120	39594	7733	1970	0	1970	385	24	41871	115	1786	184	169.
30	12	0	320	3139	9809	390	0	390	1219	72	4815	13	387	3	170.



# PRODUCING OIL FIELDS - 1998

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1998 PRODUCTION		CUMUL. PROD. 1-99 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ACRE	BBLs/ACRE FT.	BBLs	BOPD			
30	24	2	1410	26942	19107	6470	540	7010	4972	249	59103	162	6821	189	171.
40	13	0	320	2341	7315	310	0	310	969	48	6747	18	283	27	172.
30	33	0	1600	7219	4511	2390	0	2390	1494	83	64613	177	1994	396	173.
20	9	0	1600	16757	10473	1520	0	1520	950	35	75835	208	965	555	174.
50	15	0	4480	23858	5325	3540	0	3540	790	15	40366	111	3463	77	175.
35	41	0	1600	7644	4777	3140	0	3140	1963	131	37688	103	2816	324	176.
0	0	0	320	0	0	0	0	0	0	0	15512	42	197	55	177.
45	18	0	800	5147	6433	910	0	910	1138	81	21700	59	807	103	178.
47	17	0	640	3889	6076	650	0	650	1016	53	17110	47	574	76	179.
32	20	0	320	2012	6287	400	0	400	1250	27	6261	17	356	44	180.
33	72	0	320	1437	4490	1030	0	1030	3219	230	34814	95	761	269	181.
92	0	0	160	0	0	0	0	0	0	0	23445	64	200	133	182.
25	26	0	480	2793	5818	720	0	720	1500	115	28711	79	597	123	183.
0	0	0	800	0	0	0	0	0	0	0	56045	154	552	299	184.
45	8	0	640	5301	8282	410	0	410	641	21	8879	24	380	30	185.
35	16	0	2880	30755	10678	5030	0	5030	1747	44	151362	415	4134	896	186.
25	9	0	1920	21705	11304	1940	0	1940	1010	59	33589	92	1727	213	187.
40	2	0	1920	29493	15360	670	0	670	349	8	16898	46	625	45	188.
40	7	0	4480	68817	15360	4550	0	4550	1016	23	77923	213	4113	437	189.
35	18	0	1280	18442	14407	3260	0	3260	2547	127	34414	94	2905	355	190.
35	20	0	120	1335	11125	270	0	270	2250	150	6208	17	203	67	191.
51	41	0	160	170	1062	70	0	70	438	73	4601	13	51	19	192.
0	1	0	960	33589	34988	290	0	290	302	7	9204	25	271	19	193.
20	14	0	640	3601	5626	490	0	490	766	45	32162	88	347	143	194.
40	6	0	640	7277	11370	430	0	430	672	17	6750	18	371	59	195.
20	44	14	960	17824	18566	7840	2500	10340	10771	431	16984	47	10284	56	196.
35	27	7	5520	136779	24778	36770	9540	46310	8389	280	145851	400	45795	515	197.
0	0	0	160	0	0	0	0	0	0	0	5665	16	52	20	198.
35	8	0	1760	9467	5378	770	0	770	438	27	9967	27	756	14	199.
0	0	0	320	0	0	0	0	0	0	0	19820	54	167	128	200.
0	0	0	640	0	0	0	0	0	0	0	14186	39	496	76	201.
30	46	0	1280	18487	14442	8530	0	8530	6664	267	26989	74	8411	119	202.
30	42	0	320	4913	15353	2060	0	2060	6438	215	3296	9	2052	8	203.
30	54	0	480	1787	3722	960	0	960	2000	250	8308	23	897	63	204.
40	7	1	960	10569	11009	779	71	850	885	52	17579	48	790	60	205.
25	0	0	960	0	0	0	0	0	0	0	18673	51	775	131	206.
43	14	0	3360	19811	5896	2750	0	2750	818	20	69197	190	2485	265	207.
45	10	0	2240	20071	8960	1940	0	1940	866	36	18241	50	1805	135	208.
40	4	0	160	1341	8381	60	0	60	375	31	4825	13	39	21	209.
30	56	0	800	8689	10861	4890	0	4890	6113	437	68438	188	3715	1175	210.
31	57	0	960	2749	2863	1560	0	1560	1625	271	25774	71	1273	287	211.
30	52	0	320	2056	6425	1070	0	1070	3344	279	9505	26	1019	51	212.
54	57	0	160	742	4637	420	0	420	2625	219	4608	13	409	11	213.
35	35	0	640	5809	9076	2030	0	2030	3172	264	110909	304	1574	456	214.
30	22	26	240	2559	10662	570	670	1240	5167	431	16880	46	1013	227	215.
23	63	0	2080	7664	3684	4850	0	4850	2332	212	8364	23	4839	11	216.
40	18	0	960	5107	5319	930	0	930	969	65	7497	21	900	30	217.
35	19	0	560	7603	13576	1440	0	1440	2571	103	12481	34	1306	134	218.
0	32	0	640	2979	4654	960	0	960	1500	250	24523	67	726	234	219.
											1664562	4560		37	220.
											<b>16,612,937</b>	<b>45,515</b>		<b>117,786</b>	<b>221.</b>



- GAS PLANTS**
- 1. CUT BANK ABSORPTION
  - 2. GYPSY HIGHVIEW GATHERING SYS.
  - 3. FAIRVIEW
  - 4. BOB RHODES
  - 5. STATE LINE NATURAL GAS PROC.
  - 6. PERRY-PETROLANE
  - 7. SO. PINE
  - 8. CABIN CREEK
  - 9. BIG HORN FRACTIONATION
  - 10. DRY CREEK ABSORPTION

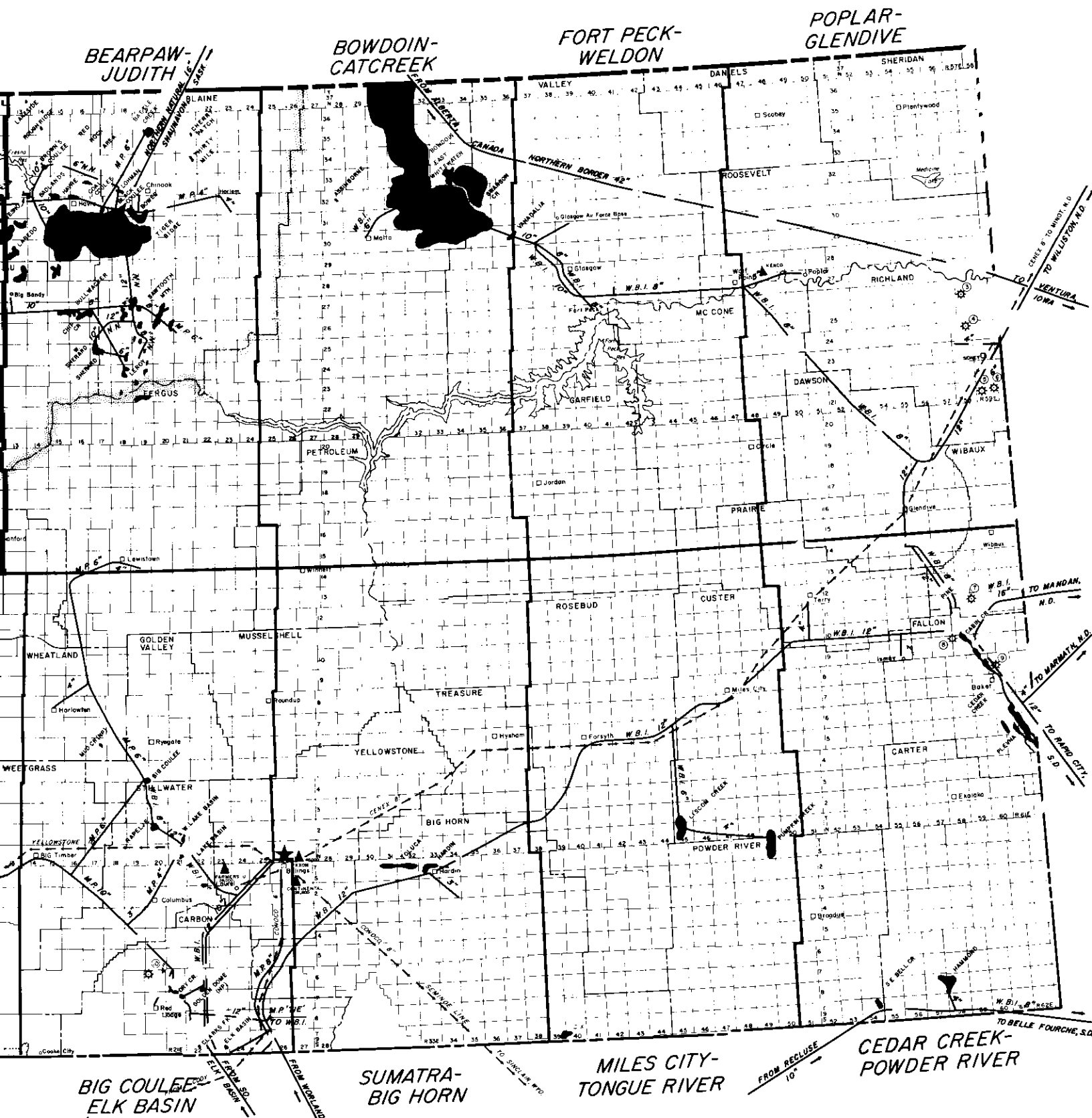
- ABBREVIATIONS:**
- M.R. MONTANA POWER
  - W.B.I. WILLISTON BASIN INTERSTATE
  - T.P.L.I. TEXACO PIPELINE INCORPORATED
  - M.S.R. MOUNTAIN STATES RESOURCES
  - M.R.C. MOUNTAIN REFINING COMPANY

**EXPLANATION**

- OIL FIELD
- GAS FIELD
- OIL PIPELINE
- GAS PIPELINE
- REFINERY
- GAS PLANT
- REFINED PRODUCTS PIPELINE
- BOUNDARY DIVIDING NORTHERN AND SOUTHERN DISTRICTS

- ★ Billings - Southern District & Technical Office
- ★ Shelby - Northern District Office
- ★ Helena - Administrative Office

**REGIONAL MAPS**  
 Scale - 1 Inch = 2 miles  
 Posted Weekly  
 Contact: BOARD OF OIL AND GAS CONS.  
 2535 St. John's Avenue Billings



**MONTANA**  
**OIL AND GAS FIELDS, PIPELINES AND REFINERIES**  
 1987

ERA	PERIOD	SOUTHWEST MONTANA (GENERALIZED)	CRAZY MOUNTAINS BASIN	CENTRAL MONTANA		BIG HORN BASIN		
CENOZOIC	TERTIARY	HOPEMAN GP SIXMILL CREEK FM RENOVA FM SPHINX CGL	FOOT HORN FM *ONGLE RIVER MBR LEBO MBR TULLOCK MBR			FOOT HORN FM TONGUE RIVER MBR LEBO MBR TULLOCK MBR		
		UPPER MONTANA VOLCANICS BEAVERHEAD CGL MONTANA UNDIVIDED	LIVINGSTON GP HELL CREEK FM LENNIP FM BLANPAW FM JUDITH RIVER FM CLAGG LT FM FAGLE FM TELEGRAPH CK CODY SH FRONTIER FM FRONTIER FM MOWRY SH MUDDY SS THERMOPHILIS SH (RUSTY BED MBR) KOOTENAI FM	LIVINGSTON GP HELL CREEK FM LENNIP FM BLANPAW FM JUDITH RIVER FM CLAGG LT FM FAGLE FM TELEGRAPH CK FM CODY SH FRONTIER FM FRONTIER FM GREENHORN FM BIG FLK SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM	MONTANA GP HELL CREEK FM FOX HILLS FM BEARPAW FM JUDITH RIVER FM CLAGGET FM EAGLE FM TELEGRAPH CK FM CARLILE FM FRONTIER FM BELE FOURCHE FM BIG FLK SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT 1st CAT CK FM KOOTENAI FM 2nd CAT CREEK FM 3rd CAT CK FM		MUSKATWIDE GP JUDITH RIVER FM PARKMAN SS CLAGGET FM EAGLE FM TELEGRAPH CK FM CODY FM TORCHLIGHT SS FRONTIER FM PEAY SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM GREYBULL SS KOOTENAI FM LAKOTA FM	* S CLARK'S FK, ELK BASIN & NW, LINE CK
MESOZOIC	CRETACEOUS	LOWER COLORADO GP UNDIVIDED MOWRY SH MUDDY SS THERMOPHILIS SH (RUSTY BED MBR) KOOTENAI FM	COLORADO GP MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM	COLORADO GP MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT 1st CAT CK FM KOOTENAI FM 2nd CAT CREEK FM 3rd CAT CK FM	* BIG C, BROADVIEW, LITTLE BASIN * MUD CK * CAT CK, MASON L, HATTLESNAKE BUTTE * CAT CK, IVANHOE, RATTLESNAKE BUTTE * CAT CK, MASON I * BIG C	COLORADO GP MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM GREYBULL SS KOOTENAI FM LAKOTA FM	* BELFRY, S CLARK'S FK, OFAN DOME, NW ELK BASIN, JACK CK, MACKAY DOME * CLARK'S FORK * MACKAY DOME, ROSCOW DOME * N. CLARKS FORK	
		JURASSIC	MORRISON FM SWIFT FM HIFRDN FM SAWTOOTH FM	MORRISON FM SWIFT FM HIFRDN FM PIPER FM	MORRISON FM SWIFT FM HIFRDN FM PIPER FM	* CAT CK, IVANHOE * BIG C * CAT CK * SUMATRA, WOLF SPRINGS	MORRISON FM SUNDANCE FM GYPSUM SPRINGS FM	
		TRIASSIC	THAYNES FM WOODSIDE FM DINWOODY FM	CHUGWATER FM DINWOODY FM			CHUGWATER FM DINWOODY FM	
PALEOZOIC	PERMIAN	SILDHORN FM PHOSPHORIA FM PARK CITY MBR	PHOSPHORIA FM			PHOSPHORIA FM	* ELK BASIN	
	PENNSYLVANIAN	QUADRANT FM AMSDEN GP	QUADRANT FM AMSDEN GP	TENSIPEP FM AMSDEN GP (ALASKA BENCH) TYFER FM	* MLD CK * BIGWALL, CAT CK, DELPHIA, GAGE, HAWK CK * HIEBARD, IVANHOE, MASON LAKE, POI F CK, SUMATHA * WFFD CK * ACE HIGH, BASCOM, BIG GULLY, BIG & LITTLE WALL * BREED CK, DEVILS BASIN, GREBE, GUMBO RIDGE, HEATH * DEVILS BASIN & POCKET 1 * SUMATRA * RAGGED POINT	TENSILEP FM AMSDEN FM DARWIN SS	* ELK BASIN, NW ELK BASIN, FRANNIE * FLK BASIN	
	MISSISSIPPIAN	BIG SNOWY GP MISSION CANYON SS FODGEPOLE LS SAPPINGTON MBR THREE FORKS FM JEFFERSON FM MAYWOOD FM	BIG SNOWY GP CHARLES FM MISSION CANYON LS FODGEPOLE LS SAPPINGTON MBR THREE FORKS FM BYRDBEAR FM? JEFFERSON FM MAYWOOD FM	BIG SNOWY GP HEATH FM OTTER FM KIBBEY FM CHARLES FM MISSION CANYON LS FODGEPOLE LS BAKKEN FM THREE FORKS FM BYRDBEAR FM? JEFFERSON FM MAYWOOD FM	* HIWATHA, HIGH RIVE, HOWARD C, INJUN CK IVANHOE, JIM C, KEG C, KELLY, KINCHLOE, MELSTONE, MUSSELSHILL, RAGGED PT, RATTILR BUTTE, ROSEBUD, STENSVAD, STUDIO HORSE, SUMATHA, TIPPI BUTTES, WAGON BOX, WINNIE T. J.	MADISON GROUP THREE FORKS FM JEFFERSON FM BEARTOOTH BUTTE FM	* ELK BASIN, NW ELK BASIN, FRANNIE	
	DEVONIAN	THREE FORKS FM JEFFERSON FM MAYWOOD FM	THREE FORKS FM BYRDBEAR FM? JEFFERSON FM MAYWOOD FM	THREE FORKS FM BYRDBEAR FM? JEFFERSON FM MAYWOOD FM		THREE FORKS FM JEFFERSON FM BEARTOOTH BUTTE FM	* ELK BASIN	
	SILURIAN							
	ORDOVICIAN	BIG HORN FM	BIG HORN FM	RED RIVER FM WYNYPEG FM		BIG HORN FM LANDER MBR	* ELK BASIN	
CAMBRIAN		RFD LION FM HIL GRIM FM HARMARK FM PARK SH MEAGHER LS SILVER HILL FM WOLSEY SH FLATHEAD SS	SNOWY RANGE FM PILGRIM FM PARK SH MEAGHER LS WOLSEY SH FLATHEAD SS	SNOWY RANGE FM PILGRIM FM PARK SH MEAGHER LS WOLSEY SH FLATHEAD SS		GROVE CK FM GALLATIN LS SNOWY RANGE PILGRIM FM GHOS VENTRE GP FLATHPAD SS		
	PROTEROZOIC	BELT SUPPLIGROUP	BELT SUPPLIGROUP	BELT SUPPLIGROUP		PRE-BELT ROCKS		
PRECAMBRIAN	ARCHEAN	PRE-BELT METAMORPHIC AND IGNEOUS ROCKS	PRE-BELT METAMORPHIC AND IGNEOUS ROCKS	PRE-BELT METAMORPHIC AND IGNEOUS ROCKS		PRE-BELT ROCKS		
		SOUTHWEST MONTANA (GENERALIZED)	CRAZY MOUNTAINS BASIN	CENTRAL MONTANA		BIG HORN BASIN		







SWEETGRASS ARCH		NORTHERN DISTURBED BELT		PERIOD	ERA	
				TERTIARY	CENOZOIC	
<p>WILLOW CK FM</p> <p>ST MARY RIVER FM</p> <p>HORSETHIEF SS</p> <p>BLARPAW FM</p> <p>JUDITH RIVER FM</p> <p>TWO MEDICINE FM</p> <p>VIRGELLI SS</p> <p>TELEGRAPH CK FM</p> <p>KEVIN SH MBR</p> <p>FERDIG MBR</p> <p>CONE (2ND WHITE SPK) (GREENHORN)</p> <p>FLOWER HILL MBR</p> <p>(FISH SCALE SS)</p> <p>BOOTLEGGER MBR</p> <p>(RED SPK)</p> <p>VAUGHN ISLAND</p> <p>TAFI HILL</p> <p>FLOOD (DAKOTA) (BURWASH)</p> <p>KOOTENAI FM</p> <p>(MOUNTAIN) (SUNBURST) (LANDER) (CUT BANK)</p>		<p>WILLOW CK FM</p> <p>ST MARY RIVER FM</p> <p>HORSETHIEF SS</p> <p>TWO BEARPAW FM</p> <p>MEDICINE FM</p> <p>VIRGILE SS</p> <p>TELEGRAPH CK FM</p> <p>KEVIN SH MBR</p> <p>FERDIG MBR</p> <p>CONE (2ND WHITE SPK) (GREENHORN)</p> <p>LOWFREE MBR</p> <p>VAUGHN MBR</p> <p>"AFT HILL" MBR</p> <p>FLOOD MBR</p> <p>KOOTENAI FM</p> <p>MT PABLO FM (CUT BANK)</p>		UPPER	CRETACEOUS	MESOZOIC
<p>BROWN'S C. &amp; F., BULLWACKER, COAL MINE C., LEROY, RED ROCK, SAWTOOTH MTN., TIGER RIDGE, TWO FORKS</p> <p>BADLANDS, BATTLE CK, BLACK HUFF, BLACK C., BOWLS, BROWN'S C. &amp; E., BULLWACKER, CHAIN LAKES, CHIP CK, COAL C., COAL MINE C., FRESNO, HAVER, HIGH PINE, LAREDO, LYROY, LUTMAN, RED ROCK, RUDYARD, SAWTOOTH MTN., SHERARD, TIGER RIDGE, TWO FORKS</p> <p>ASHFIELD, BOWDOIN, LORING, F. &amp; W. LORING, SWANSON CK, VANDALIA, WHITE WATER &amp; E.</p> <p>ASHFIELD, BOWDOIN, COAL MINE C., GORHAM C., LORING &amp; I., SPONGS C., SWANSON CK, VANDALIA, WHITE WATER &amp; E., WILD HORSE</p>		<p>MONTANA GP</p> <p>COLORADO GP</p> <p>BLACKLEAF RIVER FM</p> <p>BLARPAW FM</p> <p>CONRAD (GA.) (SUNBURST) (CUT BANK)</p> <p>BLACKLEAF RIVER FM</p> <p>BLARPAW FM</p> <p>CONRAD (GA.) (SUNBURST) (CUT BANK)</p> <p>BLACKLEAF RIVER FM</p> <p>BLARPAW FM</p> <p>CONRAD (GA.) (SUNBURST) (CUT BANK)</p>		LOWER		
<p>BOWFS, RABBIT HILLS &amp; NL &amp; SW, THIRTY MILE, CANADIAN C., E. CHINOOK, N. GILFORD, RUDYARD</p>		<p>MORRISON FM</p> <p>SWIFT FM</p> <p>RIFERDON FM</p> <p>SAWTOOTH FM</p>			JURASSIC	
					TRIASSIC	
					PERMIAN	
					PENNSYLVANIAN	
					MISSISSIPPIAN	
<p>SUN RIVER DOLomite</p> <p>MISSION CANYON LS</p> <p>LONGPOLE LS</p> <p>EXSHAW (BAKKEN) FM</p>		<p>SUN RIVER CASTLE REEF DOL</p> <p>LOWER MBR</p> <p>ALLAN MOUNTAIN LS</p> <p>EXSHAW (BAKKEN) FM</p>				
<p>THREE FORKS FM</p> <p>THREE FORKS SHALE</p> <p>POLLAICHANHY</p> <p>BIRDBEAR (NISKU) FM</p> <p>JUPEROV FM</p> <p>SOURIS RIVER FM</p>		<p>THREE FORKS FM</p> <p>THREE FORKS SHALE</p> <p>BIRDBEAR (NISKU) FM</p> <p>JEFFERSON FM</p> <p>LOWER MBR (JUPEROV)</p> <p>MAYWOOD (SOURIS RIVER) FM</p>			DEVONIAN	
					SILURIAN	
					ORDOVICIAN	
<p>RED LION FM</p> <p>PILGRIM FM</p> <p>CAMBRIAN PAIK SH</p> <p>SHAI F MEAGHER LS</p> <p>UNDIVIDED WOLSTY SH</p> <p>FLATHEAD SS</p>		<p>DE VILS GLEN DOL</p> <p>SWITCHBACK SH</p> <p>STEAMBOAT LS</p> <p>FITZPATRICK SH</p> <p>FAGOODA LS</p> <p>DEARBORN LS</p> <p>DAMNATION LS</p> <p>GORDON SH</p> <p>FLATHEAD SS</p>			CAMBRIAN	
					PROTEROZOIC	
<p>PRE-BELL ROCKS</p>		<p>BELL SUPERGROUP</p> <p>PRE-BELL ROCKS</p>			ARCHEAN	PRECAMBRIAN
SWEETGRASS ARCH		NORTHERN DISTURBED BELT				