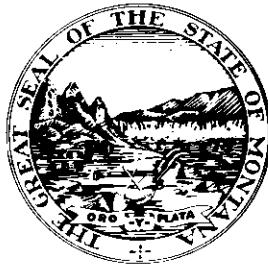


DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

Oil and Gas Conservation Division

Ted Schwinden, Governor



ANNUAL REVIEW FOR THE YEAR 1981

Relating to

OIL AND GAS

Volume 25

BOARD OF OIL AND GAS CONSERVATION

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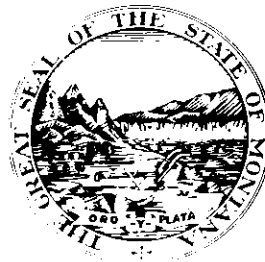
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Ted Schwinden, Governor

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Annual Review for the Year 1981 Volume 25

ACTIVITY REVIEW — MONTANA 1981

A record number of 1,149 wells were drilled in search of oil and gas in Montana during 1981, an increase of 197 over the last year. A total of 552 wildcats, also a record, and 597 development wells resulted in 402 oil and 218 gas completions. The completed wildcats included 29 oil and 5 gas new field discoveries, three development wells encountered new pay zones and 25 were significant field extensions.

Continued aggressive geological and geophysical exploration programs now being pursued show that the interest in Montana's potential oil and gas reserves is high, and the future outlook for the drilling and development of these reserves remains good.

Oil production was up by more than 1.2 million barrels over last year's total output, 30,813,412 barrels as compared to 29,583,804 barrels for 1980; the first reversal of a steady decline of Montana's yearly oil output since 1973. This is mainly the result of a substantial increase of oil production from the Williston Basin area of Eastern Montana where 19.95 million barrels of oil was produced, exceeding the 1980 oil output from this area by more than 2.2 million barrels. This upturn of oil production also reflects the high success rate of active wildcat and development well drilling in the Williston Basin during 1981, where the number of producing wells has increased from 996 in 1980 to 1,080 in 1981.

Total gas production for 1981 was 50.1 billion cubic feet, 3.7 billion cubic feet less than last year's total gas withdrawals. Marketed associated gas which is included in the yearly total and is produced with the oil from the deeper carbonate pays in the Williston Basin portion of Eastern Montana continues to increase however, and at 5.2 billion cubic feet was up by 463 million cubic feet over 1980's associated gas production.

Exploratory and development drilling can be expected to continue in Northern Montana to test the comparatively shallow gas and oil reservoirs in this area where oil production increased by 88,400 barrels in 1981. Active leasing, expanded exploration programs and drilling demonstrate the continued interest in the major oil and gas reserves expected to underlie Western Montana's Overthrust Belt. Several deep wildcats are drilling and others are reportedly planned.

The Board of Oil & Gas Conservation is designated by 82-11-113 MCA as the Montana jurisdictional agency to administer the Federal Natural Gas Policy Act of 1978 for state and fee lands. For each of the three years, 1979 through 1981, the Act has been in effect, the Board's Administrator and Geologist processed and made determinations on totals of 328, 273 and 273 N.G.P.A. applications. A summary of the 1981 Docket determinations is as follows: 256 qualified, 2 withdrawn, 9 pending additional documents, and 6 deferred until additional monthly production was available. Of the 273 N.G.P.A. (FERC) applications submitted, 96 were for new onshore well (Category 102-2 - 2.5 mile test), 1 new onshore well (Category 102-3 - 1,000' deeper test), 47 new onshore reservoir (Category 102-4), 93 new onshore production well (Category 103), and 36 stripper well (Category 108).

A record 164 orders were issued by the Board during the year, 25 more than in 1980. The greater portion of which included requests for drilling and spacing units, pooling of interests, unitizations, establishing field delineations and field spacing rules, exceptions to spacing rules and the inclusion of shallower and deeper pay zones into field rules; and 19 were administrative orders that regulate the disposal of produced water for the protection of fresh water resources. (CGM-1982)

**1981
SUMMARY OF YEAR ACTIVITIES**

OIL

	Bbls	Bbls of Oil per day
Oil Produced	30,813,411	84,420
Oil Imported:		
From: Canada	11,796,956	
North Dakota	14,455	
Wyoming	18,298,500	
Total	<u>30,109,911</u>	82,493
Oil Exported	21,566,733	59,087

GAS

	MCF	MCF per day
Gas Withdrawals:		
Natural	44,837,043	
Associated	5,235,968	
Total	<u>50,073,011</u>	137,186
Gas Imported:		
From: Canada	20,865,000	
North Dakota	6,630,000	
Wyoming	10,340,000	
Total	<u>37,835,000</u>	103,658
Gas Exported:		
To: Canada	106,000	
South Dakota	4,384,000	
Wyoming	2,976,000	
Midwest	11,699,000	
Total	<u>19,165,000</u>	52,507

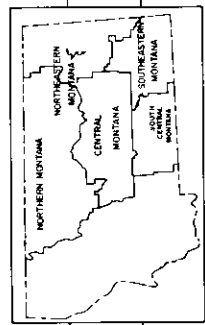
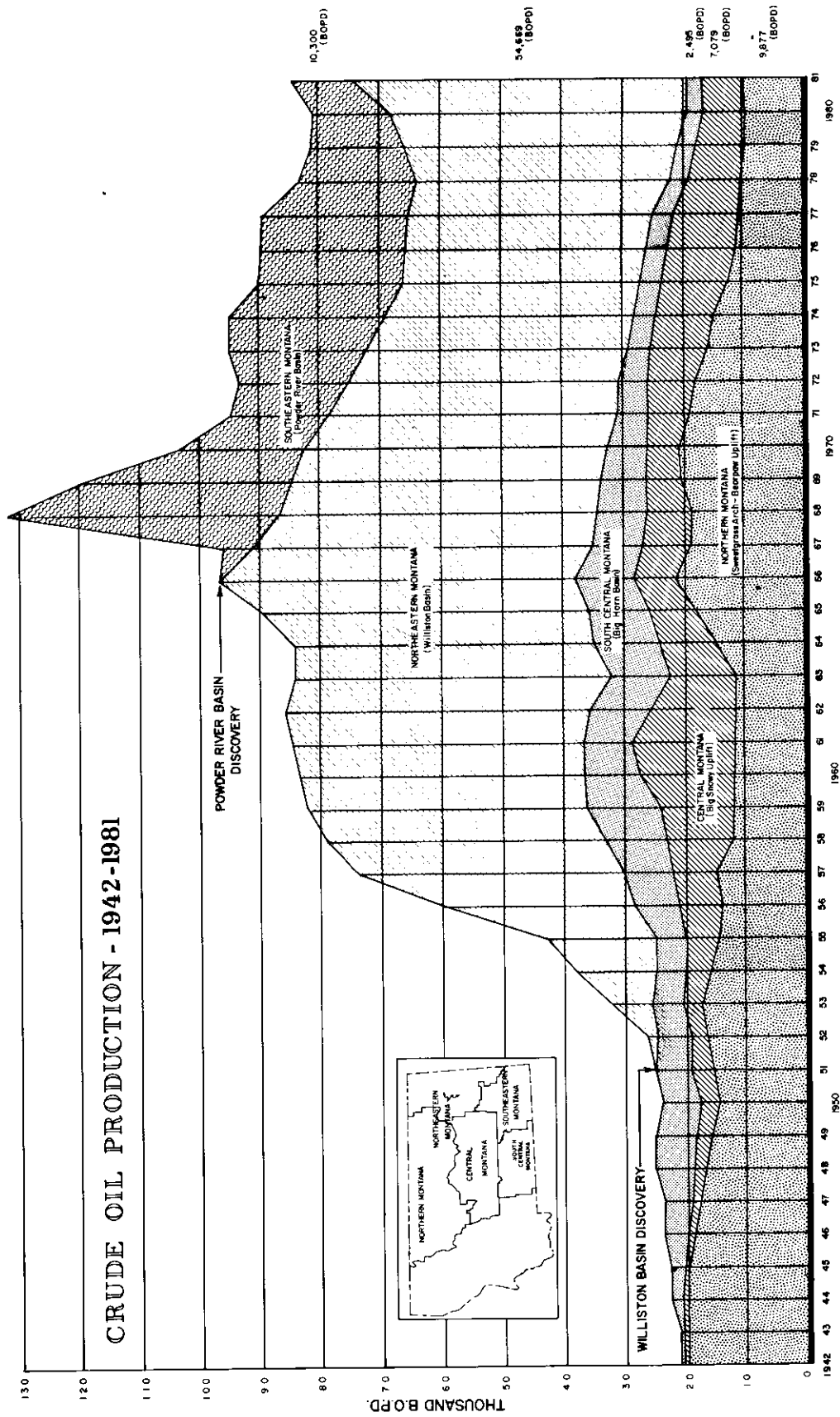
FIVE YEAR SUMMARY

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
PRODUCTION IN BARRELS:					
Northern Montana	4,060,957	3,671,322	3,536,296	3,516,807	3,605,207
South Central	1,210,064	1,095,737	1,131,798	1,055,105	910,595
Central	3,677,361	3,343,556	3,029,397	2,612,091	2,583,690
Williston Basin	14,621,635	15,103,853	16,546,576	17,739,142	19,954,159
Powder River Basin	9,110,037	7,252,869	5,713,032	4,660,659	3,759,760
TOTAL	<u>32,680,054</u>	<u>30,467,337</u>	<u>29,957,099</u>	<u>29,583,804</u>	<u>30,813,411</u>
NUMBER OF PRODUCING WELLS:					
Northern Montana	1,999	2,052	2,089	2,212	2,280
South Central	109	115	112	124	132
Central	343	347	340	358	354
Williston Basin	789	863	886	996	1,080
Powder River Basin	178	169	165	148	174
TOTAL	<u>3,418</u>	<u>3,546</u>	<u>3,592</u>	<u>3,838</u>	<u>4,020</u>
AVERAGE DAILY PRODUCTION/WELL:					
Northern Montana	5.6	4.9	4.6	4.3	4.3
South Central	30.4	26.1	27.7	23.2	18.9
Central	29.4	26.4	24.4	19.9	20.0
Williston Basin	50.8	48.9	51.2	48.7	50.6
Powder River Basin	140.2	117.6	94.9	86.0	59.2
STATE AVG.	<u>26.2</u>	<u>23.5</u>	<u>22.9</u>	<u>21.1</u>	<u>21.0</u>
DEVELOPMENT WELLS DRILLED:					
Oil Wells	98	123	120	241	276
Gas Wells	220	223	235	203	133
Dry Holes	188	232	182	206	188
TOTAL	<u>506</u>	<u>578</u>	<u>537</u>	<u>650</u>	<u>597</u>
EXPLORATORY WELLS DRILLED:					
Oil Wells	24	21	35	30	126
Gas Wells	19	15	20	12	85
Dry Holes	129	179	211	260	341
TOTAL	<u>172</u>	<u>215</u>	<u>266</u>	<u>302</u>	<u>552</u>
TOTAL WELLS DRILLED	678	793	803	952	1,149
TOTAL FOOTAGE DRILLED	2,482,379	2,968,842	3,147,341	4,032,032	5,797,770
AVERAGE FOOTAGE DRILLED	3,661	3,744	3,919	4,235	5,046

SUMMARY OF DRILLING BY COUNTIES — 1981
STATE OF MONTANA

County	Drilling Permits Issued	Wildcats		Development		Total Wells	Footage Drilled	Average Depth
		Oil	Gas	Oil	Gas			
Beaverhead.....	1					0	0	0
Big Horn.....	8			6		14	52,946	3,782
Blaine.....	68		20	1	10	90	140,367	1,560
Broadwater.....	0			1		1	7,339	7,339
Carbon.....	29		1	7	3	16	103,196	6,450
Carter.....	11		1	1	3	5	6,133	1,227
Cascade.....	2			2		2	4,504	2,252
Chouteau.....	29	1	5	26		32	67,751	2,117
Custer.....	2			2		2	13,211	6,606
Daniels.....	5			6		7	42,451	6,064
Dawson.....	18	4		6	1	10	108,009	10,801
Fallon.....	49		2	2	7	40	274,684	6,867
Fergus.....	13			10		10	19,074	1,907
Garfield.....	12			7		8	76,780	9,598
Glacier.....	89	1	3	1	14	48	168,695	3,514
Golden Valley.....	12	1		7		8	27,293	3,412
Hill.....	46		6	17	14	44	97,553	2,217
Judith Basin.....	2					0	0	0
Liberty.....	43		6	26	5	46	103,449	2,249
McCone.....	15			8		11	87,031	7,912
Madison.....	1					0	0	0
Meagher.....	1					0	0	0
Musselshell.....	81	7		11		42	180,880	4,307
Park.....	2			2		2	20,660	10,330
Petroleum.....	9			6		7	22,522	3,217
Phillips.....	43		6	5	8	20	38,929	1,946
Pondera.....	102	8	7	18	7	70	140,816	2,012
Powder River.....	17			2		15	67,344	4,490
Powell.....	1					0	0	0
Richland.....	171	51	1	25		134	1,534,422	11,451
Roosevelt.....	115	23		21		79	799,746	10,123
Rosebud.....	35	3		14	5	27	142,986	5,296
Sheridan.....	94	24		19		92	860,297	9,351
Stillwater.....	14		1	5	6	17	41,753	2,456
Sweetgrass.....	3		1	2		3	20,605	6,868
Teton.....	38		2	13	1	24	86,422	3,601
Toole.....	254	2	23	28	40	193	321,000	1,663
Treasure Valley.....	2			2		2	12,140	6,070
Valley.....	22			5	10	16	42,117	2,632
Wibaux.....	15	1		4		5	33,204	6,641
Yellowstone.....	12			7		7	31,461	4,494
TOTALS.....	1,486	126	85	341	133	1,149	5,797,770	5,046

CRUDE OIL PRODUCTION - 1942-1981



GAS PRODUCTION DATA — 1981

14.73 PSIA @ 60°F

Field	County	Producing Formations	1981 Marketed MCF
Natural Gas			
Alma	Liberty	Blackleaf, Bow Island, Sawtooth	4,564
Amanda	Toole	Swift	110,219
Antelope Coulee	Toole	Bow Island	17,361
Arch Apex	Toole	Bow Island	216,824
Badlands	Hill	Eagle	321,944
Battle Creek	Blaine	Eagle	2,085,517
Bears Den	Liberty	Sawtooth, Sunburst	15,964
Bell Creek	Powder River	Muddy	226,304
Big Coulee	Golden Valley, Stillwater	Lakota, Morrison	765,405
Big Rock	Glacier	Blackleaf, Bow Island	358,054
Bills Coulee	Teton	Sunburst, Madison	432,048
Black Butte	Hill	Eagle, Judith River	39,880
Black Coulee	Blaine	Eagle	184,433
Blackfoot	Glacier	Dakota	366,767
Black Jack	Liberty	Sunburst, Swift, Blackleaf	89,842
Bowdoin	Phillips, Valley	Bowdoin, Valley	8,851,781
Bowes	Blaine	Eagle	348,713
Browns Coulee	Hill	Judith River, Eagle	91,912
Browns Coulee, East	Hill	Eagle	119,993
Bullwacker and Area	Blaine, Chouteau	Judith River, Eagle-Virgelle	852,325
Canadian Coulee	Hill, Liberty	Sawtooth	479,597
Cedar Creek	Fallon	Judith River, Eagle	1,065,507
Chain Lakes	Hill	Eagle	31,878
Chester Area	Liberty	Bow Island	2,567
Chinook, East	Blaine	Eagle	34,337
Chip Creek	Chouteau	Eagle-Virgelle	13,018
Clark's Fork, South	Carbon	Frontier	3,956
Coal Creek	Hill	Eagle	61,909
Conrad Butte (Ledger Field)	Pondera, Toole	Bow Island	561,700
Cut Bank and Reagan	Glacier, Toole	Blackleaf, Moulton, Sunburst, Cut Bank, Madison	1,993,816
Dry Creek	Carbon	Judith River, Eagle, Frontier, Greybull, Lakota	875,972
Dunkirk, North	Toole	Bow Island	258,627
Eagle Springs	Toole	Bow Island	180,511
Ethridge	Toole	Bow Island, Swift	479,784
Flat Coulee	Liberty	Bow Island, Dakota, Swift, Sawtooth	61,599
Fred and George	Toole	Sunburst, Swift	106,067
Fresno	Hill	Judith River, Eagle-Virgelle	110,250
Fritzpatrick Lake	Toole	Bow Island	298,894
Gildford, North	Hill	Sawtooth	95,396
Goid Butte	Toole	Bow Island	5,412
Grandview	Liberty	Bow Island, Madison	179,102
Gypsy Basin	Pondera	Sunburst	517,557
Hammond	Carter	Muddy	65,888
Hardin	Big Horn	Frontier	25,701
Haystack	Liberty	Bow Island	89,627
Highview	Pondera	Madison	11,618
Keith Block	Liberty	Blackleaf, Bow Island, Sawtooth	643,645
Kevin-Sunburst	Toole	Bow Island, Sunburst, Swift, Sun River, Nisku	489,959
Kevin, Southwest	Toole	Bow Island, Sunburst, Swift	359,786
Kicking Horse	Toole	Bow Island, Sunburst, Sawtooth	208,593
Kinyon Coulee and Area	Toole	Bow Island	41,105
Lake Basin	Stillwater	Claggett, Eagle-Virgelle, Telegraph Creek, Frontier	453,610
Laredo	Hill	Eagle	19,751
Leroy	Blaine	Judith River, Eagle-Virgelle	718,688
Liscom Creek	Custer	Shannon	61,461
Little Rock	Glacier	Bow Island	274,621
Lohman	Blaine	Eagle	212,735
Marias River	Toole	Bow Island	172,254
Middle Butte	Toole	Bow Island	91,320
Middle Dry Creek	Carbon	Frontier, Lakota	28,824
Miners Coulee	Toole	Bow Island, Sunburst-Swift	688,089
Mt. Lily	Liberty	Madison	62,528
O'Briens Coulee	Liberty	Bow Island	285,824
Phantom	Toole	Sunburst, Swift	699,776
Plevna	Fallon	Judith River	14,991
Police Coulee	Toole	Bow Island	91,598
Prairie Dell	Toole	Bow Island, Swift	727,826
Pumpkin Creek	Custer	Shannon	7,925
Rapelje	Stillwater	Judith River, Claggett, Eagle-Virgelle	106,410
Rattlesnake Coulee	Toole	Bow Island	122,827
Red Rock	Hill	Eagle	150,477
Rocky Boy Area	Hill	Eagle	71,617
Rudyard	Hill	Sawtooth	542,065
Sage Creek	Liberty	Blackleaf	301,169
Sawtooth Mountain and Area	Blaine	Judith River, Eagle	698,647
Sherard	Blaine, Chouteau	Judith River, Eagle	623,693
Snoose Coulee	Liberty	Bow Island	65,434
Soberup Coulee	Pondera	Bow Island	2,917
South Devon	Toole	Bow Island	73,842
Strawberry Creek Area	Toole	Bow Island	19,294
Swanson Creek	Phillips	Phillips	324,456
Three Mile	Blaine	Eagle	12,215
Tiber	Toole	Bow Island	48,517
Tiger Ridge	Blaine, Hill	Judith River, Eagle	10,488,982
Trail Creek	Liberty, Toole	Bow Island, Sunburst	113,060
Two Forks	Blaine	Eagle	-0-
Utopia	Liberty	Sawtooth	165,277
Vandelia	Valley	Eagle, Bowdoin	153,691
West Butte	Toole	Bow Island, Sawtooth, Madison	22,230
Whitlash	Liberty	Bow Island, Kootenai, Swift	611,734
Williams	Pondera	Bow Island	381,267
Willow Ridge	Toole	Bow Island	272,173
SUB TOTAL NATURAL GAS			44,837,043

ASSOCIATED MARKETED GAS — 1981

Field	County	Producing Formation	1981 Marketed MCF
Associated Gas			
Anvil	Roosevelt	Red River	161,795
Bainville, North	Roosevelt	Red River, Winnepegosis	19,970
Bainville, West	Roosevelt	Red River	12,284
Big Muddy Creek	Roosevelt	Interlake, Red River	46,258
Blue Hill	Richland	Red River	14,098
Brorson & South Brorson	Richland	Madison, Red River	38,323
Burget, East	Roosevelt	Ratcliffe, Red River	430
Cabin Creek	Fallon	Mission Canyon, Interlake, Red River	392,656
Canal	Richland	Red River	17,513
Clark's Fork, South	Carbon	Greybull	14,647
Clear Lake	Sheridan	Mission Canyon, Red River	74,476
Colored Canyon	Sheridan	Red River	71,898
Comertown	Sheridan	Red River	18,740
Crane	Richland	Red River	167,853
Dagmar	Sheridan	Red River	23,017
Diamond Point	Roosevelt	Red River	58,419
Divide	Sheridan	Mission Canyon	2,896
Dry Creek	Carbon	Virgelle	138,551
Dry Creek, West	Carbon	Greybull	12,586
Dwyer	Sheridan	Ratcliffe	2,437
Eagle	Richland	Mission Canyon	12,840
Elk Basin	Carbon	Tensleep	57,008
Fairview	Richland	Winnepegosis, Red River	388,648
Fishhook	Sheridan	Red River	9,812
Fort Gilbert	Richland	Red River, Madison	4,892
Four Mile Creek	Richland	Red River	20,263
Four Mile Creek, West	Richland	Red River	13,908
Gypsy Basin	Pondera	Sunburst, Madison	214,723
Hay Creek	Richland	Mission Canyon, Red River	7,246
Highview	Pondera	Madison	19,594
Honker	Sheridan	Madison	325
Katy Lake, North	Sheridan	Red River	205,988
Lambert	Richland	Red River	7,821
Lone Butte	Richland	Red River	16,312
Lonetree Creek	Richland	Red River	88,037
Lookout Butte (Coral Creek)	Fallon	Interlake, Red River	90,561
Lowell	Sheridan	Red River	2,884
Medicine Lake	Sheridan	Red River, Winnepegosis	145,235
Midby	Sheridan	Red River	428
Miners Coulee	Toole	Sunburst	207
Mon Dak West	Richland	Madison, Mission Canyon, Ordovician	589,655
Mustang	Richland	Red River	53,631
North Fork	Richland	Madison, Red River	6,490
Ollie	Fallon	Duperow, Red River	317
Otis Creek	Richland	Red River	39,771
Oxbow	Roosevelt	Red River	9,128
Pelican	Sheridan	Red River	13,119
Pennel	Fallon	Madison, Silurian, Ordovician	373,129
Pine	Dawson, Prairie, Fallon, and Wibaux	Interlake, Mission Canyon, Red River	74,193
Putnam	Richland	Interlake, Mission Canyon, Red River	298,633
Raymond	Sheridan	Mississippian, Nisku, Red River, Winnepegosis	9,649
Reagan	Glacier	Madison	2,022
Red Bank	Roosevelt	Madison, Red River	25,738
Red Fox	Roosevelt	Nisku	385
Refuge	Sheridan	Red River	15,083
Ridgelawn	Richland	Madison, Red River	135,310
Rocky Point	Roosevelt	Red River	16
Second Creek	Richland	Red River	98,284
Sidney	Richland	Mission Canyon	39,597
Sidney, East	Richland	Madison	41,013
Single Tree	Roosevelt	Red River	4,267
Sioux Pass	Richland	Mission Canyon, Silurian, Ordovician	111,497
Sioux Pass, East	Richland	Red River	3,208
Sioux Pass, Middle	Richland	Red River	83,732
Sioux Pass, North	Richland	Red River	198,979
South Fork	Richland	Red River	49,673
Three Buttes	Richland	Mission Canyon, Gunton, Red River	5,903
Tule Creek	Roosevelt	Nisku	722
Two Medicine Creek	Glacier	Mission Canyon	19,332
Vaux	Richland	Mission Canyon, Red River	153,448
West Butte	Toole	Sunburst	34,449
Whitlash	Liberty	Swift	121,268
Wrinkler	Sheridan	Red River	14,329
Wrinkler, North	Sheridan	Red River	3,918
Wright Creek	Powder River	Muddy	1,712
Wildcat	Roosevelt		1,207
Wildcat	Sheridan		7,582
SUB TOTAL ASSOCIATED GAS MARKETED			5,235,968
SUB TOTAL NATURAL GAS MARKETED			44,837,043
TOTAL GAS MARKETED - 1981			50,073,011

NATURAL GAS IMPORTED MMCF

Canada	20,865
Wyoming	10,340
Dakotas	6,630
	<u>37,835 MMCF</u>

NATURAL GAS EXPORTED MMCF

Canada	106
Wyoming	2,976
Dakotas	4,384
Midwest	11,699
	<u>19,165 MMCF</u>

BARRELS OF CRUDE OIL REFINED IN MONTANA — 1981

	CONTINENTAL OIL CO.	EXXON COMPANY	FARMERS UNION	KENCO REF. INC.	PHILLIPS PET. CO.	WESCO REF. CO.	FLYING "J"	TOTALS
Total Montana Oil	2,860,142	516,082	702,237	1,367,664	1,763,741	880,775	600,794	8,691,435
Canada Oil Imported	7,025,514	2,182,018	2,429,892	---	159,532	---	---	11,796,956
North Dakota Oil Imported	14,455	---	---	---	---	---	---	14,455
Wyoming Oil Imported	3,183,072	10,260,397	4,855,031	---	---	---	---	18,298,500
Total Montana, Canadian, North Dakota, & Wyoming Oil	13,083,183	12,958,497	7,987,160	1,367,664	1,923,273	880,775	600,794	38,801,346

PERCENTAGE OF CRUDE OIL REFINED

	Montana	Canada	North Dakota	Wyoming
Year: 1977	18.49%	43.32%	.41%	37.78%
Year: 1978	18.51%	44.71%	.14%	36.64%
Year: 1979	17.12%	46.58%	.01%	36.29%
Year: 1980	17.92%	39.42%	.06%	42.60%
Year: 1981	22.40%	30.40%	.04%	47.16%

AVERAGE BARRELS PER DAY

	Montana	Canada	North Dakota	Wyoming	Total
Year: 1977	24,461	57,317	549	49,994	132,321
Year: 1978	24,240	58,545	190	47,982	130,957
Year: 1979	23,747	64,598	17	50,322	138,684
Year: 1980	21,901	48,162	69	52,050	122,182
Year: 1981	23,812	32,320	40	50,133	106,305

REFINING FIVE YEAR COMPARISON

1977	1978	1979	1980	1981
48,297,000	47,738,947	50,619,676	44,718,698	38,801,346

BOARD OF OIL AND GAS CONSERVATION OF THE STATE OF MONTANA

STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION—ALL MONTANA FIELDS YEAR 1981 AND ACCUMULATED TOTALS FROM DISCOVERY DATE

FIELD	COUNTY	PRODUCTION YEAR 1981			CUMULATIVE TO DECEMBER 31, 1981	
		BARRELS	VALUE	AVERAGE PRICE	BARRELS	VALUE
Alkali Coulee	Sheridan	8,070	291,456	36.116	8,070	291,456
Andes	Richland	5,266	190,292	36.136	16,273	490,623
Anvil	Roosevelt	322,899	11,597,240	35.916	709,528	18,890,250
Anvil, North	Sheridan	5,636	204,621	36.306	6,446	233,781
Ash Creek	Big Horn	7,543	263,402	34.920	790,834	2,484,259
Bainville, North	Roosevelt	144,548	5,200,259	35.976	317,618	11,560,578
Bainville, West	Roosevelt	28,548	1,026,643	35.962	90,406	2,790,134
Bannatyne	Teton	14,085	473,876	33.644	267,038	1,634,918
Bear's Den	Liberty	8,326	281,261	33.781	464,674	2,372,488
Belfry	Carbon	3,013	105,458	35.001	94,817	339,060
Bell Creek	Powder River	3,718,309	132,810,561	35.718	116,577,772	841,230,964
Benrud	Roosevelt	1,891	68,248	36.091	218,560	740,510
Benrud, East	Roosevelt	52,670	1,805,686	34.283	2,452,400	11,249,353
Benrud, Northeast	Roosevelt	9,531	344,546	36.150	917,558	3,120,769
Berthelote	Toole	702	19,215	27.372	54,319	236,869
Big Gully	Musselshell	3,074	97,793	31.813	85,649	1,123,992
Big Gully, North	Musselshell	3,045	109,940	36.105	15,800	305,426
Big Muddy Creek	Roosevelt	59,388	2,103,523	35.420	963,577	13,887,804
Big Wall	Musselshell	83,716	2,933,492	35.041	7,092,625	24,989,649
Big Wall, North	Musselshell	270	9,450	35.000	7,218	116,302
Blackfoot	Glacier	28,473	972,438	34.153	1,169,565	5,492,929
Blue Hill	Richland	9,727	327,187	33.637	121,822	1,977,397
Border	Toole	8,794	301,537	34.289	1,337,777	3,396,212
Boulder	Richland	6,143	219,889	35.795	128,680	1,755,101
Bowes	Blaine	120,038	3,376,549	28.129	8,720,284	26,371,859
Box Canyon	Richland	40,459	1,481,528	36.618	83,682	3,117,950
Bradley	Glacier	6,184	206,552	33.401	227,240	1,079,968
Brady	Pondera	23,813	803,451	33.740	88,950	1,226,235
Bredette	Roosevelt	34,970	1,255,038	35.889	220,146	1,667,542
Breed Creek	Rosebud	83,469	2,808,481	33.647	542,167	9,315,714
Brorson-Madison	Richland	35,354	1,250,506	35.371	528,704	4,223,773
Brorson-Red River	Richland	24,273	860,745	35.461	1,924,139	8,202,274
Brorson, South	Richland	57,660	1,988,809	34.492	1,275,416	9,183,891
Brush Lake	Sheridan	80,854	2,796,416	34.586	1,970,762	11,128,006
Burget	Roosevelt	4,575	164,714	36.003	4,575	164,714
Burget, East	Roosevelt	7,783	277,199	35.616	8,983	320,879
Burns Creek	Dawson, Richland	8,025	273,059	34.026	191,264	1,528,756
Cabin Creek	Fallon	1,567,944	52,891,574	33.732	79,354,563	300,082,509
Canal	Richland	48,972	1,718,379	35.089	548,830	3,778,074
Cannonball	Fallon	28,386	1,028,113	36.219	28,386	1,028,113
Carlyle	Wibaux	34,788	1,252,646	36.008	148,918	3,000,842
Cat Creek	Petroleum, Garfield	83,466	2,999,184	35.933	23,030,124	57,895,182
Charlie Creek	Richland	53,854	1,930,397	35.845	478,559	7,529,181
Charlie Creek, East	Richland	56,676	2,037,672	35.953	100,796	3,742,601
Clark's Fork	Carbon	733	26,900	34.799	84,141	285,435
Clark's Fork, North	Carbon	634	22,587	34.995	1,024,399	2,888,720
Clark's Fork, South	Carbon	279	10,115	36.253	80,509	632,613
Clear Lake	Sheridan	242,235	8,631,318	35.632	951,488	21,798,767
Coal Ridge	Sheridan	1,942	72,279	37.219	18,018	698,829
Colored Canyon	Sheridan	126,683	4,569,329	36.069	339,798	8,541,790
Comertown	Sheridan	206,350	7,391,044	35.818	293,761	10,687,400
Conrad, South	Pondera	2,289	77,169	33.713	137,243	699,384
Cow Creek	McCone	3,923	139,353	35.522	114,043	944,039
Cow Creek, East	McCone	89,781	3,160,740	35.205	1,990,422	18,419,591
Crane	Richland	312,999	11,163,7357	35.667	344,502	12,067,400
Culbertson	Roosevelt	1,088	38,734	35.601	169,051	931,888
Cupton	Fallon	115,371	4,100,978	35.546	1,573,043	14,017,550
Cut Bank	Glacier, Toole	1,309,368	44,449,115	33.947	153,784,729	530,789,479
Dagmar	Sheridan	53,007	1,876,925	35.409	267,707	4,975,128
Dagmar, North	Sheridan	15,362	559,699	36.434	15,362	559,699
Deadman's Coulee	Roosevelt	54,706	1,974,011	36.084	54,706	1,974,011

CUMULATIVE TO
DECEMBER 31, 1981

PRODUCTION YEAR 1981

FIELD	COUNTY	AVERAGE			CUMULATIVE TO	
		BARRELS	VALUE	PRICE	BARRELS	VALUE
Dean Dome	Stillwater	12,354	287,268	23.253	39,073	622,254
Deer Creek	Dawson	4,524	156,906	34.683	2,280,117	5,909,544
Delphia	Musselshell	1,449	51,905	35.821	304,543	1,031,987
Devil's Basin	Musselshell	23,910	819,204	34.262	87,372	1,131,331
Diamond Point	Roosevelt	69,298	2,219,871	33.996	237,904	4,497,739
Divide	Sheridan	231,549	8,229,020	35.539	319,358	11,440,998
Dry Creek	Carbon	7,170	257,618	35.930	4,083,910	8,421,181
Dry Creek, West	Carbon	154	5,873	38.135	5,042	148,829
Dugout Creek	Richland	31,283	1,115,677	35.664	31,283	1,115,677
Dwyer	Sheridan	126,997	4,177,947	32.898	6,244,879	23,492,431
Eagle	Richland	140,543	5,002,628	35.595	507,459	11,930,762
Elk Basin	Carbon	757,467	23,926,110	31.587	77,289,253	244,306,272
Elk Basin, Northwest	Carbon	9,582	318,170	33.205	1,198,527	4,791,794
Enid, North	Richland	16,442	577,180	35.104	49,341	1,173,841
Epworth	Richland	35,402	1,273,622	35.976	35,402	1,273,622
Fairview	Richland	272,784	9,414,594	34.513	6,347,496	35,048,945
Fairview, West	Richland	14,933	540,530	36.197	15,975	581,689
Fertile Prairie	Fallon	22,235	760,192	34.189	469,552	2,101,549
Fiddler Creek	Stillwater	212	7,847	37.013	365	11,978
Fishhook	Sheridan	84,113	3,007,208	35.752	128,943	4,754,143
Flat Coulee	Liberty	161,868	5,656,315	34.944	3,561,552	23,984,843
Flat Coulee, East	Liberty	227	8,123	35.782	886	30,520
Flat Lake	Sheridan	494,632	16,802,154	33.969	12,398,674	66,992,284
Flat Lake, South	Sheridan	70,610	2,497,829	35.375	881,493	6,518,069
Fort Gilbert	Richland	124,232	4,464,277	35.935	1,264,588	9,734,569
Four Mile Creek	Richland	27,806	994,982	35.783	243,542	3,802,777
Four Mile Creek, West	Richland	37,099	1,315,234	35.452	138,505	2,851,645
Fox Creek	Richland	19,201	681,693	35.503	113,211	2,102,047
Fox Creek, North	Richland	7,756	278,541	35.913	32,684	777,506
Frannie	Carbon	3,002	91,408	30.449	724,871	1,947,262
Fred & George Creek	Toole	282,336	9,308,900	32.971	12,041,587	58,743,776
Frog Coulee	Richland	15,685	582,196	37.118	93,977	3,031,943
Froid, South	Roosevelt	6,433	231,614	36.004	176,115	1,186,297
Gage	Musselshell	24,174	861,078	35.620	588,495	1,990,653
Gas City	Dawson	136,847	4,830,425	35.298	9,170,274	34,947,022
Girard	Richland	170	5,610	33.000	210,088	781,124
Glacier, East	Glacier	11,084	383,340	34.585	11,236	388,812
Glendive	Dawson	169,455	5,815,696	34.320	11,456,271	38,917,478
Golden Dome	Carbon	1,214	40,685	33.513	41,951	191,526
Goose Lake	Sheridan	225,067	7,819,278	34.742	7,484,254	36,117,561
Goose Lake, East	Sheridan	3,312	123,524	37.296	4,522	168,087
Gossett	Richland	2,649	95,626	36.099	6,900	250,577
Graben Coulee	Glacier	78,689	2,433,064	30.920	1,440,842	11,192,914
Grandview, East	Liberty	3,543	115,555	32.615	16,730	431,337
Green Coulee	Sheridan	14,202	503,120	35.426	14,202	503,120
Gumbo Ridge	Rosebud	45,259	1,573,384	34.764	395,034	6,077,394
Gunsight	Roosevelt	1,551	56,180	36.222	2,325	85,484
Gypsy Basin	Pondera	44,716	1,508,673	33.739	310,752	3,749,516
Hard Pan	Ponders	212	7,420	35.000	212	7,420
Hardscrabble Creek	Richland	6,296	221,172	35.129	7,538	224,799
Hawk Creek	Musselshell	1,167	40,120	34.379	7,744	53,059
Hawk Haven	Richland	2,764	96,574	34.940	2,764	96,574
Hay Creek	Richland	25,211	887,452	35.201	1,042,042	5,249,966
Hiawatha	Musselshell	30,953	1,017,704	32.879	1,379,847	5,916,063
Hibbard	Rosebud	5,509	190,523	34.584	180,533	903,527
High Five	Rosebud	165,602	5,834,821	35.234	1,243,815	23,456,695
Highview	Pondera	5,368	161,756	30.135	13,811	369,104
Honker	Sheridan	18,419	664,115	36.056	26,283	950,207
Horse Creek	Liberty	991	30,515	30.792	6,565	112,460
Howard Coulee	Musselshell	3,935	137,926	35.051	103,239	1,289,128
Injun Creek	Rosebud	7,696	271,492	35.277	30,734	330,553
Ivanhoe	Musselshell	14,917	531,165	35.608	4,437,292	12,681,232
Jim Coulee	Musselshell	126,502	4,140,537	32.731	3,586,765	28,464,743
Katy Lake, North	Sheridan	451,529	16,241,950	35.971	922,813	33,350,085
Keg Coulee	Musselshell	55,162	1,917,762	34.766	4,927,458	20,672,660
Keg Coulee, North	Musselshell	16,841	590,563	35.067	373,964	3,090,397
Kelley	Musselshell	16,150	556,287	34.445	896,242	3,719,455

FIELD	COUNTY	PRODUCTION YEAR 1981			CUMULATIVE TO DECEMBER 31, 1981	
		BARRELS	VALUE	AVERAGE PRICE	BARRELS	VALUE
Kevin Sunburst	Toole	501,542	17,110,607	34.116	73,785,579	176,092,355
Kicking Horse	Toole	302	10,379	34.368	921	32,162
Kincheloe Ranch, West	Rosebud	89,761	3,222,151	35.897	166,931	5,541,096
Krug Creek	Dawson	10,223	373,109	36.497	10,907	398,674
Laird Creek	Liberty	11,839	403,461	34.079	523,147	3,388,778
Lakeside	Roosevelt	487	18,489	37.965	487	18,489
Lambert	Richland	48,974	1,737,451	35.477	58,926	2,108,889
Landslide Butte	Glacier	3,592	118,511	32.993	44,014	347,351
Laurel	Yellowstone	192	6,720	35.000	1,017	36,458
Leary	Powder River	32,463	1,127,894	34.744	415,798	3,987,781
Little Beaver	Fallon	399,530	13,386,253	33.505	9,648,985	47,755,667
Little Beaver, East	Fallon	104,943	3,597,026	34.276	4,664,130	19,085,982
Little Phantom	Toole	6,161	201,847	32.762	29,276	541,983
Little Wall Creek	Musselshell	217,657	7,579,687	34.824	2,158,637	31,588,427
Lodge Grass	Big Horn	6,317	211,563	33.491	259,034	920,097
Lone Butte	Richland	23,258	844,056	36.291	323,476	4,580,051
Lonetree Creek	Richland	133,758	4,776,097	35.707	2,580,295	21,442,411
Long Creek	Roosevelt	5,172	182,628	35.311	39,205	665,843
Long Creek, West	Roosevelt	53,856	1,930,307	35.842	269,145	5,148,386
Lookout Butte	Fallon	542,573	18,267,890	33.669	19,980,423	86,385,816
Lowell	Sheridan	47,468	1,678,753	35.366	66,509	2,397,075
MacKay Dome	Stillwater	18,889	460,476	24.378	29,610	602,079
Mason Lake	Musselshell	82,767	2,977,543	35.975	587,092	13,294,373
Mason Lake, North	Musselshell	1,882	67,323	35.772	11,929	268,401
McCabe	Roosevelt	37,516	1,359,505	36.238	89,743	2,181,642
McCabe, East	Roosevelt	2,571	91,288	35.507	2,571	91,288
Meander	Pondera	904	29,727	32.884	904	29,727
Medicine Lake	Sheridan	389,372	14,191,831	36.448	1,178,432	40,866,573
Melstone	Musselshell	220,797	7,693,892	34.846	2,469,659	20,036,416
Midby	Sheridan	16,157	595,078	36.831	16,157	595,078
Mineral Bench	Roosevelt	3,510	128,157	36.512	161,727	869,341
Miner's Coulee	Toole	3,483	117,872	33.842	144,041	894,879
Mon-Dak West	Richland	982,173	35,100,899	35.738	4,084,764	92,376,494
Monarch	Fallon	149,014	5,187,177	34.810	4,484,775	21,937,592
Mosser Dome	Yellowstone	7,570	259,840	34.325	299,602	1,365,993
Musselshell	Rosebud	2,351	82,558	35.116	17,289	114,737
Mustang	Richland	79,514	2,892,481	36.377	189,449	6,643,540
Nohly	Richland	55,301	1,947,369	35.214	1,010,990	9,936,727
North Fork	Richland	45,512	1,619,636	35.587	227,102	4,121,878
Ollie	Fallon	91,346	3,375,509	36.953	103,240	3,821,249
Otis Creek	Richland	54,088	1,928,670	35.658	642,647	6,455,031
Otter Creek	Sheridan	10,399	375,092	36.070	13,458	491,398
Outlook	Sheridan	143,749	5,102,802	35.498	7,576,987	35,305,104
Outlook, South	Sheridan	6,467	223,441	34.551	664,692	2,142,067
Outlook, West	Sheridan	15,229	539,137	35.402	573,935	2,654,542
Oxbow	Roosevelt	27,358	986,064	36.043	148,803	2,884,734
Palomino	Roosevelt	153,132	5,511,833	35.994	190,880	6,843,980
Pelican	Sheridan	21,491	786,420	36.593	67,229	2,346,661
Pennel	Fallon	3,022,019	102,606,611	33.953	49,738,185	362,007,305
Pete Creek	Toole	1,708	58,318	34.144	9,793	189,147
Phantom	Toole	2,429	82,307	33.885	37,724	586,342
Pine	Dawson, Fallon, Prairie, Wibaux	1,848,080	62,304,321	33.713	93,712,964	356,580,516
Pondera	Pondera, Teton	343,919	11,585,255	33.686	22,080,115	86,322,687
Pondera Coulee	Teton	4,947	140,243	28.349	35,400	387,167
Poplar, East	Roosevelt	276,459	9,989,017	36.132	43,663,246	140,142,466
Poplar, Northeast	Roosevelt	96,567	3,457,388	35.803	1,435,629	17,053,035
Poplar, Southeast	Roosevelt	4,755	169,896	35.730	155,713	881,738
Prairie Elk	McCone	4,852	173,318	35.721	60,064	754,161
Prichard Creek	Toole	5,413	187,912	34.715	111,647	1,147,675
Putnam	Richland	427,905	15,741,341	36.787	2,278,848	48,409,017
Rabbit Hills	Blaine	67,083	1,832,305	27.314	527,766	7,038,268
Ragged Point	Musselshell	45,410	1,608,241	35.416	3,195,535	17,899,549
Rattler Butte	Rosebud	85,503	2,994,315	35.020	202,281	4,574,965
Rattlesnake Coulee	Toole	1,929	66,199	34.318	86,905	590,227
Raymond	Sheridan	378,205	13,653,579	36.101	2,998,197	44,817,890
Raymond, Northeast	Sheridan	4,049	139,889	34.549	116,738	1,616,702
Reagan	Glacier	228,465	7,793,627	34.113	7,062,476	46,630,999

FIELD	COUNTY	PRODUCTION YEAR 1981			CUMULATIVE TO DECEMBER 31, 1981	
		BARRELS	VALUE	AVERAGE PRICE	BARRELS	VALUE
Red Bank	Roosevelt	285,198	10,158,753	35.620	345,682	12,446,076
Red Bank, South	Roosevelt	22,267	736,815	33.090	22,267	736,815
Red Creek	Glacier	65,369	2,272,815	34.769	5,386,514	18,152,643
Red Fox	Roosevelt	3,032	109,486	36.110	367,660	1,372,063
Red Water	Richland	21,995	814,563	37.034	21,995	814,563
Redstone	Sheridan	5,032	177,303	35.235	448,442	1,689,272
Refuge	Sheridan	19,288	700,772	36.332	62,062	2,339,467
Repeat	Carter	9,030	281,610	31.186	484,100	2,103,579
Reserve	Sheridan	68,499	2,433,016	35.519	1,382,199	8,475,232
Richey	Dawson, McCone	19,769	700,831	35.451	1,942,856	5,760,531
Richey	Dawson	1,797	59,301	33.000	1,797	59,301
Richey, Southwest	McCone	7,497	272,134	36.299	1,879,665	5,793,907
Richey Area, West	McCone	4,000	148,668	37.167	11,062	403,670
Ridgelawn	Richland	562,870	20,307,787	36.079	826,150	28,332,107
RipRap Coulee	Roosevelt	43,321	1,533,780	35.405	184,899	3,428,681
River Bend	Richland	21,297	719,242	33.772	21,297	719,242
Rocky Point	Roosevelt	31,803	1,129,166	35.505	92,636	2,171,381
Roscoe Dome	Carbon	4,587	130,216	28.388	6,906	198,144
Rosebud	Rosebud	16,938	595,862	35.179	368,368	5,055,107
Royals	Dawson	35,008	1,272,471	36.348	45,232	1,646,710
Royals, South	Dawson	654	22,890	35.000	654	22,890
Rudyard	Hill	2,464	78,023	31.665	7,219	130,099
Runaway	Teton	644	23,034	35.767	1,555	55,856
Rush Mountain	Sheridan	16,335	576,740	35.307	390,346	2,139,298
Salt Lake	Sheridan	15,157	539,286	35.580	318,427	2,234,705
Sand Creek	Dawson	23,373	809,197	34.621	2,242,444	9,204,366
Scobey	Daniels	1,157	40,495	35.000	3,916	145,674
Second Creek	Richland	57,859	2,078,064	35.916	880,474	12,009,079
Shepherder	Musselshell	2,723	93,546	34.354	62,203	933,105
Shotgun Creek, North	Roosevelt	6,941	249,001	35.874	79,337	1,236,483
Sidney	Richland	265,957	9,455,835	35.554	1,727,957	28,060,414
Singleton	Roosevelt	4,162	137,621	33.066	59,158	1,042,474
Sioux Pass	Richland	167,110	5,959,319	35.661	2,257,743	30,620,063
Sioux Pass, East	Richland	5,527	195,247	35.326	47,217	771,391
Sioux Pass, Middle	Richland	117,290	4,190,772	35.730	733,159	15,811,615
Sioux Pass, North	Richland	339,218	12,130,775	35.761	1,610,844	33,433,243
Snoose Coulee	Liberty	180	5,921	32.894	180	5,921
Snowden	Roosevelt	56719,800	34,921	1,938	70,607	
Snyder	Big Horn	4,216	123,221	29.227	431,709	1,244,219
Soap Creek	Big Horn	55,260	1,608,398	29.106	2,178,980	10,058,148
Soap Creek, East	Big Horn	9,591	275,252	28.699	57,106	1,085,811
South Fork	Richland	66,324	2,366,772	35.685	568,247	9,799,979
Spring Lake	Richland	19,475	688,285	35.342	721,500	3,204,652
Spring Lake, South	Richland	17,600	626,226	35.581	17,600	626,226
Stampede	Richland	34,215	1,239,267	36.220	40,167	1,460,306
Stensvad	Musselshell, Rosebud	15,482	521,542	33.687	10,036,137	26,233,462
Sumatra	Rosebud	874,533	30,057,699	34.370	38,914,480	211,100,183
Sunnyhill	Sheridan	24,807	894,714	36.067	100,208	2,306,698
Target	Roosevelt	6,945	243,506	35.062	6,945	243,506
Three Buttes	Richland	39,072	1,406,787	36.005	68,516	2,384,599
Tippy Buttes	Musselshell	31,806	1,106,753	34.797	43,651	1,428,954
Tule Creek	Roosevelt	92,920	3,237,704	34.844	7,470,864	27,213,685
Tule Creek, East	Roosevelt	7,883	277,844	35.246	1,967,201	6,051,250
Tule Creek, South	Roosevelt	7,741	278,227	35.942	687,164	2,851,838
Two Medicine Creek	Glacier	2,035	70,391	34.590	10,159	368,071
Two Waters	Richland	17,190	626,507	36.446	44,925	1,688,314
Utopia Swift	Liberty	62,141	2,102,416	33.833	231,388	4,618,233
Vaux	Richland	302,312	10,693,682	35.373	1,104,219	24,155,123
Vida	McCone	1,188	44,164	37.175	255,753	935,664
Volt	Roosevelt	75,938	2,662,386	35.060	2,422,287	12,704,098
Wagon Box	Musselshell	1,015	34,340	33.833	22,039	284,983
Weed Creek	Yellowstone	3,992	134,714	33.714	585,387	2,127,329
Weldon	McCone	18,640	657,079	35.251	7,006,916	19,149,427
West Butte	Toole	16,971	582,105	34.300	241,971	1,782,226
West Fork	Roosevelt	4,411	155,620	35.280	4,411	155,620
Whitlash	Liberty	160,309	5,459,163	34.054	4,545,696	30,553,826
Whitlash, West	Liberty	3,801	128,694	33.858	70,966	648,980

FIELD	COUNTY	PRODUCTION YEAR 1981			CUMULATIVE TO DECEMBER 31, 1981	
		BARRELS	VALUE	AVERAGE PRICE	BARRELS	VALUE
Willow Creek, North	Musselshell	10,112	356,488	35.250	281,406	2,090,641
Willow Ridge	Toole	4,213	144,270	34.244	23,419	536,677
Willow Ridge, South	Toole	96	3,312	34.500	96	3,312
Wills Creek, South	Fallon	34,852	1,188,209	34.093	898,491	4,814,575
Winnett Junction	Musselshell	70,416	2,440,900	34.212	571,212	8,853,696
Wolf Springs	Yellowstone	14,279	503,863	35.287	4,581,227	12,451,815
Woodrow	Dawson	14,417	491,894	34.119	1,045,068	3,654,339
Wrangler	Sheridan	50,671	1,839,459	36.302	131,485	4,878,914
Wrangler, North	Sheridan	14,814	537,970	36.315	42,515	1,620,817
Wright Creek	Powder River	8,988	315,973	35.155	222,575	1,892,672
Yates	Wibaux	10,651	372,785	35.00	10,651	372,785
Wildcat	Dawson	271	10,456	37.749	277	10,456
Wildcat	Sheridan	12,578	443,211	35.237	51,711	547,362
Misc. Abandoned Fields		---	---	---	2,449,991	5,873,103
TOTALS		30,813,411	1,070,084,226	34.728	1,078,688,984	5,394,350,184

MISCELLANEOUS ABANDONED FIELDS AS OF DECEMBER 31, 1981

FIELD	BARRELS	DOLLARS	FIELD	BARRELS	DOLLARS
Bainville	264,518	989,773	Strawberry Creek	90	3,030
Bascom	27,830	65,674	Viking	160	1,957
Blackfoot, East	810	1,730	Wibaux	23,580	42,945
Bloomfield	7,163	18,589	Wolf Creek	1,979	2,275
Bredette, North	488,554	1,160,009	Woman's Pocket	3,526	7,461
Bynum	5,971	15,320	Yellowstone	39,405	72,518
Cadmus	1,173	3,381	Wildcat, Blaine County	9,324	19,667
Chelsea Creek	11,548	43,764	Wildcat, Carbon County	6,368	13,559
Four Buttes	41,067	122,184	Wildcat, Daniels County	3,508	7,787
Gage, Southwest	16,289	37,397	Wildcat, Fallon County	10,683	29,485
Gettysburg	304	11,987	Wildcat, Glacier County	48,231	124,918
Grandview	3,243	6,983	Hill County	161	1,804
Jack Creek	1,310	3,275	Wildcat, Liberty County	3,254	19,148
Katy Lake	1,056	2,872	Wildcat, McCone County	12,575	41,467
Lake Basin	473,639	661,111	Wildcat, Musselshell County	925	1,841
Line Coulee	57,789	138,495	Wildcat, Powder River County	27,445	65,594
Pine, East	19,349	233,378	Wildcat, Richland County	339,856	818,099
Pole Creek	169,726	277,956	Wildcat, Roosevelt County	86,154	236,920
Rattlesnake Butte	5,920	6,592	Wildcat, Stillwater County	11,283	13,365
Rough Creek	3,599	10,583	Wildcat, Toole County	35,809	118,817
Shotgun Creek	76,124	172,616	Wildcat, Wibaux County	8,388	25,416
Smoke Creek	100,305	221,361	TOTALS	2,449,991	5,873,103

1981 - OIL AND GAS DISCOVERIES, EXTENSIONS*, AND NEW PAY ZONES**

COUNTY	OPERATOR-WELL NAME AND LOCATION	FIELD	TOTAL DEPTH	INITIAL POTENTIAL OIL B/D, Gas MCF/D	PRODUCING FORMATION	DATE COMPLETED	
BLAINE	Xeno, Inc., Battle 9-17, 1-26N-18E	Battle Creek*	1,620			6-81	
CHOTEAU	General Well Service, Inc., Sada Woods 1-21,21-27N-3E	Genou	3,975		100 Bow Island	6-80	
	NorAm Exploration, Corp., Donald C. Killion 1-19, 19-26N-3E	Buffalo Flat*	1,170	2,341	Bow Island	6-81	
DAWSON	Helmerich & Payne, Inc., Pfaff 1-33, 33-27N-52E	South Royals	11,100	50	Dawson Bay	7-81	
	Dow Chemical Co., Lynn Casterline 1, 28-23N-50E	East Richey	10,931	44	Charles	10-81	
FALLON	Wood Petroleum Corp., Cox 26-1, 26-3N-61E	Gaslight	1,947		560 Eagle Sand	8-81	
GLACIER	Rainbow Resources, Two Medicine 1-3, 3-31N-12W	East Glacier	9,835	131	Greenhorn	2-81	
	Grand Prix Natural Gas Co., Findley 1, 27-34N-10W	Sharp Lake	3,290		55 Horse Thief	8-81	
HILL	Smoky Hill Exploration Co., Peterson 1-19, 19-35N-13E	Spring Coulee	3,706		11,159 Sawtooth	8-81	
LIBERTY	Macquest Resources Inc., Meissner 13-2-35-5, 2-35N-5E	Snoose Coulee*	1,403		180 Bow Island	1-81	
MUSSELSHELL	True Oil Company, Hougen 23-21, 21-10N-30E	Tippy Buttes	5,150	16	Stensvad	6-81	
PHILLIPS	Southland Royalty Co., Federal 1860 1, 18-36N30E	Loring Unit*	2,030		104 Phillips-Bowdoin	11-81	
PONDERA	Monterrey Petro Corp., State 1-10, 10-26N-2E	Hard Pan*	1,255		250 Bow Island	6-80	
	Batcron Oil Company, State 1-D, 36-30N-2W	Ledger*	1,310		29 Bow Island	6-81	
RICHLAND	Oxy Petroleum Inc., T. Larsen 1-27, 27-28N-6W	Highview*	3,089	47	Madison	9-81	
	Louisiana Land & Exploration, Indian Mound Ranch 1, 15-23N-55E	Box Canyon	11,950	26	Red River "C"	5-81	
	Louisiana Land & Exploration, TOO #2 FLB Cooper 32-2, 2-23N-55E	No Lambert	12,303	130	Red River "C"	3-81	
	Al Aquitaine, Prather Anvik 1-15, 15-25N-58E	Fairview*	9,376	154	Mission Canyon	9-91	
	Champlin Petroleum, Colwell/Culbertson, 42-10 #1, 10-27N-56E	River Bend	9,320	68	M. C. & Ratcliffe	3-81	
	Tom Brown, Inc., Foss 15-21X, 15-26N-55E	Dugout Creek	12,010	523	Red River	4-81	
	Coastal Oil & Gas, COGC/A1Aq B.N. #1, 33-24N-54E	North Enid*	11,644	90	Bakken	7-81	
	Louisiana Land & Exploration, LL&E TOO-State 12-16, 16-25N-56E	Windmill	12,349	75	Duperow	5-81	
	Southland Royalty Company, Richard Hier 1-30, 30-23N-56E	Lambert*	12,030	374	Red River	3-81	
	Gulf Oil Corporation, Obergfell 1-11-1B, 11-23N57E	Epworth	12,750	383	Red River	4-81	
	Al Aquitaine Exploration, Inc., Alomnd #1, 17-25N-58E	Sioux Pass*	12,900	62	Madison	8-81	
	Pennzoil Company, Almond #1, 8-23N-59E	Sidney*	12,720	74	Ratcliffe	4-81	
	Texaco, Inc., Pennzoil etal #1, 8-22N-58E	Intake II	12,444	621	Red River	6-81	
	Helmerich & Payne, Merrill 1-14, 14-22N-57E	Hawk Haven	12,350	83	Mission Canyon	4-81	
	Getty Oil Company, Nohley 28-14, 28-25N-59E	E. Fairview*	12,880	2,052	Red River C	5-81	
	Champlin Petroleum Company, Colwell #2, 13E-11,11-27N-56E	River Bend**	12,200	222	Red River	8-81	
	Farmers Union Central Exchange, Parsons 14-27, 27-26N-54E	No. Charlie Creek	11,510	32	Nisku	11-81	
	Tom Brown, Inc., B.N. 5-23, 5-25N-55E	Stampede*	11,900	135	Red River "C"	6-81	
	Coquina Oil Corporation, Simonsen #1, 12-24N-56E	Lonetree Creek*	12,600	88	Red River	10-81	
	BWAB, Inc., Wyman 28-33X, 28-22N-58E	Crane*	12,290	570	Red River	10-81	
	Farmers Union Exchange, Bradley 1-5,5-21N-58E	Crane*	12,260	75	Red River	12-81	
	BWAB, Inc. & Tom Brown, Inc., Johnson 9-34, 9-25N-59E	Fairview*	12,930	27	Madison	12-81	
	Farmers Union Central Exchange, B.N. 8-23, 33-26N-54E	No. Charlie Cr.	11,606		2,400 Red River	11-81	
	Al-Aquitain Exploration Ltd., N. Hatle COG-BN 2-33, 33-24N-54E	North Enid*	10,400	11	Rat & Miss Can	10-81	
	ROOSEVELT	Mosbacher Production Co., Pruet-John Peterson 1-13, 13-29N-57E	Burget	12,715	80	Red River	7-81
		Southland Royalty, Paul Wars 1-27,27-29N-57E	East McCabe	12,580	37	Red River "B"	2-81
		Gulf Oil Corporation, Gobbs 1-16-4B, 16-30N-52E	Lonerider	10,575	17	Duperow	7-81
Pennzoil Company, Larson Farms 1, 1-27N-58E		Banville II	12,700	140	Red River	4-81	
Southland Royalty Company, Panasuk 1-5,5-28N-59E		So. Red Bank	13,000	1,131	Red River "C"	11-81	
Luff Exploration, McCann-Federal 1-9, 9-27N-57E		W. Bainville*	12,484	38	Red River	9-81	
Patrick Petroleum Corp., FLB Toavs 1-16, 16-29N-47E		West Fork	8,029	291	Charles "C"	10-81	
SHERIDAN	Dome Petroleum Corp., Martin 1-8,8-29N-58E	Burget*	9,700	32	Mission Canyon	11-81	
	Southland Royalty, Ada G. Nash 1-5, 5-24N-54E	Midby	10,560	291	Red River "C"	1-81	
	Beren Corporation, Anderson 1, 11-33N-57E	North Dagmar	11,386	65	Red River "C"	1-81	
	Edwin L. Cox, B.R. Cox-Overby 1-30, 30-34N-55E	Lariat	11,160	58	Red River	7-81	
	Hunt Energy Corporation, Larson Farms 1, 2-32N-55E	Alkali Coulee	11,909	54	Red River	3-81	
	Tom Brown, Inc., Lund Ranch 4-32, 4-33N-55E	Green Coulee	11,100	293	Red River "C"	4-81	
	Sun Oil Company, Sunmark-State 1-36, 36-33N-55E	Reserve*	11,411	436	Red River	5-81	
	Wm Hunt Trust Estate, Fed-Stringer 1 14-32N-57E	No. Katy Lake**	11,497	665	Mission Canyon	5-81	
	Gulf Oil Corporation, Jorgenson 1-27-3C, 27-34N-57E	Lowell*	11,380	50	Red River	7-81	
	Beren Corporation, Arnekelen 1, 5-34N-56E	No. Antelope	11,081	20	Red River "C"	7-81	
	Sun Oil Company, E. Goff 1, 22-35N-57E	W. Goose Lake	11,500	259	Red River	10-81	
	Helmerich & Payne, Inc., Lund Ranch 1-3, 3-33N-55E	Green Coulee*	11,050	57	Red River	12-81	
	Diamond Shamrock Corporation, Langerquist Twin Fee 12-14, 14-36N-57E	Comertown**	6,850	75	Ratcliffe	10-81	
	Indrex, Inc., ATOC 1, 20-35N-56E	Pleantywood	10,902	142	Red River	11-81	
	Tenneco Oil Company, Sunsted 1, 7-33N-57E	Fishhook*	11,500	1,049	Red River	11-81	
	WIBAUX	Phillips Petroleum Company, Wojohn "A" 5-2, 2-13N-60E	Black Diamond	11,260	152	Red River	12-81
		Phillips Petroleum Company, Lawrence "E" 16-29, 29-14N-60E	Yates	10,100	147	Duperow	9-81

1981 — SUMMARY OF SECONDARY RECOVERY PROJECTS

Field	Formation	Operator	Type of Project	Injection Pattern	Date Inj. Com.	1981		No. of Inj. Wells	Source of Injection Media and Remarks
						Cumulative Injections M Bbls. or MMCF	Avg. Daily Inj. Rate Bbls. or MCF		
Ash Creek	Shannon	Transocean, Inc.	Waterflood	Peripheral	10-15-64	9.441	2.329	9	Parkman
Bell Creek Unit "A"	Muddy	Gary	Waterflood	Peripheral	7-1-70	139.910	22.962	52	Madison (Tertiary Began)
Bell Creek Unit "B"	Muddy	Gary	Waterflood	Peripheral	10-1-77	38.260	8.803	17	Madison
Bell Creek Unit "C"	Muddy	Gary	Waterflood	Peripheral	9-1-71	23.395	5.849	5	Madison
Bell Creek Unit "D"	Muddy	Gary	Waterflood	Peripheral	1-1-72	27.907	7.060	9	Madison
Bell Creek Unit "E"	Muddy	Gary	Waterflood	Peripheral	1-1-72	21.351	5.310	14	Madison
Bell Creek Ranch Unit	Muddy	Gary	Waterflood	Peripheral	3-1-71	38.061	4.658	8	Madison
Big Wall	Tyler B	Texaco, Inc.	Waterflood	Random	8-20-66	26.265	4.540	3	Produced, Amsden & Tyler
Blackfoot	Cut Bank	Croft Petroleum Co.	Waterflood	Random	7-1-76	965	619	3	Madison
Old Border Unit	Cut Bank	BG&O Co.	Waterflood	Random	6-1-73	-0-	-0-	0	Madison
Bowes	Sawtooth	Texaco, Inc.	Waterflood	Random	5-26-61	-0-	-0-	0	Madison
Cabin Creek	Siluro-Ord.	Shell	Waterflood	Semi-Peripheral	6-12-59	111.565	32	27	Produced & Fox Hills, (Cum. to 9/1/80)
Cat Creek, East Dome Unit	Swift	Hoss	Waterflood	Semi-Peripheral	7-30-70	809	189	4	Thrd Cat Creek Sand.
Cat Creek, Unit #1	1st Cat Creek	Farmers' Union	Waterflood	Semi-Peripheral	10-10-62	6.572	3.70	2	Thrd Cat Creek Sand.
Cat Creek, Unit #1	2nd Cat Creek	Farmers' Union	Waterflood	Semi-Peripheral	10-10-62	7.522	1.315	3	Thrd Cat Creek Sand
Cat Creek, Unit #2	1st Cat Creek	Farmers' Union	Waterflood	Semi-Peripheral	12-1-59	9.464	68	1	Thrd Cat Creek Sand
Cat Creek, Unit #2	2nd Cat Creek	Farmers' Union	Waterflood	Semi-Peripheral	12-1-59	10.230	1.063	3	Thrd Cat Creek Sand.
Cat Creek, Mosby Dome	Swift	Farmers' Union	Waterflood	Random	7-67	5.214	693	3	Thrd Cat Creek Sand.
Cat Creek, Mosby Dome	Amsden	Farmers' Union	Waterflood	Random	6-1-71	274	99	1	Thrd Cat Creek Sand.
Cut Bank, Marina Cut Bank	Cut Bank	BG&O Co.	Waterflood	5-Spot	6-72	-0-	-0-	0	Madison
Cut Bank, Tweedy	Cut Bank	BG&O Co.	Waterflood	5-Spot	6-72	-0-	-0-	2	Madison
Cut Bank, Northeast	Cut Bank	Texaco, Inc.	Waterflood	5-Spot	6-2-63	-0-	-0-	SI	Madison
Cut Bank, Northwest	Cut Bank	Phillips	Waterflood	5-Spot	1-30-67	17.339	1.263	11	Madison
Cut Bank, Northcentral	Cut Bank	Phillips	Waterflood	5-Spot	5-78	2.614	2.203	22	Madison
Cut Bank, Southeast	Cut Bank	Texaco, Inc.	Waterflood	5-Spot	4-62	-0-	-0-	38	Madison
Cut Bank, Southwest	Cut Bank	Phillips	Waterflood	5-Spot	9-67	103.722	13.734	76	Madison
Cut Bank, Southcentral	Cut Bank	Union	Waterflood	5-Spot	5-63	39.770	3.277	14	Madison
Cut Bank	Lander "A"	Phillips	Waterflood	Random	4-65	1.801	241	2	Madison
Cut Bank	Lander	Texaco, Inc.	Waterflood	Random	7-64	12.063	14.547	3	Eagle (abandoned)
Cut Bank, McGuiness	Moulton	Union	Waterflood	Random	12-62	5.603	932	1	Madison
Cut Bank	Cut Bank	Damson	Waterflood	5-Spot	9-1-71	5.299	751	14	Madison
Cut Bank, Two Medicine	Cut Bank	Conoco	Waterflood	Random	12-67	48.942	9.419	81	Madison
Cut Bank, Dalquist	Cut Bank	Union	Waterflood	Random	11-12-79	-0-	-0-	SI	Madison
Cut Bank, Northeast Darling Unit	Moulton	Ralph Fair	Waterflood	Random	2-68	5.774	222	2	Produced Water
Cut Bank, Darling State	Moulton	BG&O Co.	Waterflood	Random	2-67	-0-	-0-	SI	Madison
Cut Bank, Darling South Swenson	Moulton	BG&O Co.	Waterflood	Random	2-67	-0-	-0-	SI	Madison
Dean Dome	Greybull	Eastern American	Steam Injection	Cyclic	8-29-81	7.000	-0-	1	
Dwyer	Ratcliffe	Phillips	Waterflood	Peripheral	10-68	3.740	1.504	5	Madison
Elk Basin	Embar-Tensleep	Amoco	Gas Injection	Crestal	12-72	-0-	-0-	0	Produced Gas (None)
Elk Basin, Unit #2	Embar-Tensleep	Amoco	Waterflood	Random	1949	-0-	-0-	0	Produced Water
Elk Basin	Frontier	Amoco	Waterflood	Random	1926	-0-	-0-	0	Produced Water
Elk Basin, Madison Unit #2	Madison	Amoco	Waterflood	Peripheral	1962	-0-	-0-	0	Produced Water
Elk Basin, Northwest	Tensleep	ARCO	Waterflood	Semi-Peripheral	5-76	10.093	203	2	Madison Produced Water
Fairview, Northwest Unit	Red River	Superior	Gas Injection	Crestal	10-25-67	-0-	-0-	0	Produced Gas
Flat Coulee	Swift	Phillips	Waterflood	Peripheral	2-1-72	7.112	2.107	14	Eagle
Flat Lake	Ratcliffe	Chevron	Waterflood	Random	6-1-71	29.290	10.104	12	Produced Water
Frannie	Tensleep	Continental	Waterflood	Random	11-20-70	110.834	41.455	29	Produced Water
Fred & George Creek	Sunburst	Fulton	Waterflood	Random	7-70	30.916	8.847	2	Madison & Eagle
Gas City	Red River	Shell	Waterflood	Semi-Peripheral	10-31-69	-0-	-0-	SI	Mission Canyon
Goose Lake	Ratcliffe	Cotton Petroleum	Waterflood	Semi-Peripheral	1-73	11.509	5.677	5	Produced Water
Gumbo Ridge	Tyler B	Burlington Northern Inc.	Waterflood	Semi-Peripheral	6-1-80	517	962	2	Produced Water & 3rd Cat Creek
High Five	Stensvad	Grace Petroleum	Waterflood	Random	—	-0-	0	0	Produced Water & Cat Creek Sands (not initiated) (approved 9-11-80)
Jim Coulee	Tyler B	McAlester Fuel	Waterflood	Semi-Peripheral	7-72	10.891	3.063	5	Produced Water & 3rd Cat Creek
Keg Coulee, Northwest Unit	Tyler B	Flatt Corp.	Waterflood	Semi-Peripheral	8-31-66	7.530	4.858	1	Madison
Keg Coulee, East	Tyler	Juniper Petroleum Corp.	Waterflood	Semi-Peripheral	12-24-69	-0-	-0-	0	3rd Cat Creek
Keg Coulee, South	Tyler	BG&O Co.	Waterflood	Semi-Peripheral	1-1-70	-0-	-0-	0	Madison
Kelly	Tyler	McAlester Fuel	Waterflood	Random	7-69	3.365	712	1	Produced Water & 3rd Cat Creek
Kevin-Sunburst	Madison	BG&O Co.	Waterflood	Random	8-64	-0-	-0-	0	Madison
Kevin-Sunburst	Madison	Texaco, Inc.	Waterflood	Semi-Peripheral	8-64	11.883	2.712	9	Madison (projected figure)
Laird Creek	Swift	Burlington Northern Inc.	Waterflood	Semi-Peripheral	2-25-77	802	268	1	Sawtooth (1A 7-81)
Laurel	Dakota	Lakota Energy	Gas Injection	Random	-	-0-	-0-	0	Muddy (not initiated)
Little Beaver	Red River	Shell	Waterflood	Semi-Peripheral	8-7-66	-0-	-0-	0	Produced Water (insufficient data)
Little Beaver, East	Red River	Shell	Waterflood	Semi-Peripheral	4-65	-0-	-0-	0	Red River-Minnelusa
Lookout Butte (Coral Creek)	Red River	Shell	Waterflood	Semi-Peripheral	4-67	-0-	-0-	0	Minnelusa (Cum. to 9/1/80)
Lookout Butte (Coral Creek)	Mlp & Ord Commingled	Shell	Waterflood	Semi-Peripheral	9-76	-0-	-0-	0	Minnelusa (Cum. to 9/1/80) (2/69-9/76 Cum RR 1.625 & Mlp 1.993 M bbls.)
Pennel	Stony Mtn & Red River	Shell	Waterflood	Random	8-28-69	-0-	-0-	0	Dakota & Produced (Cum. to 9/1/80)
Pine, North	Silurian-Ord.	Shell	Waterflood	Semi-Peripheral	3-68	-0-	-0-	0	Lodgepole (Cum to 9/1/80)
Pine, South	Red River	Shell	Waterflood	Semi-Peripheral	3-59	-0-	-0-	0	Fox Hills & Produced (Cum to 9/1/80)
Prichard Creek	Sunburst	Fulton	Waterflood	Random	4-73	409	521	1	Eagle
Ragged Point	Tyler	Buites Resources	Waterflood	Semi-Peripheral	12-3-66	8.452	1.893	5	Thrd Cat Creek (projected figure)

Field	Formation	Operator	Type of Project	Injection Pattern	Date Inj. Com.	Cumulative Injections M Bbls. or MMCF	Avg. Daily Inj. Rate Bbls. or MCF	No. of Inj. Wells	Source of Injection Media and Remarks
Reagan	Madison	Union	Waterflood	Random	7-73	2,457	5,658	4	Produced Water
Reagan	Madison	Union	Gas Injection	Random	8-61	-0-	-0-	-0-	Associated Gas
Red Creek	Cut Bank	Exxon	Waterflood	5-Spot	6-65	15,381	2,611	5	Madison
Richey, Southwest	Dawson Bay & Interlake	ARCO	Waterflood	Random	12-65	2,592	195	1	Fox Hills
Stensvad	Tyler	Tomahawk Oil Company	Waterflood	Semi-Peripheral	2-63	28,244	96	1	Madison
Sumatra, Grebe	Tyler	F. U. C. E.	Waterflood	Random	6-16-75	-0-	-0-	51	Madison & Produced Water
Sumatra	Tyler	Butte Resources	Waterflood	Semi-Peripheral	6-80	520	142	1	Madison
Sumatra, Central	Tyler	Texaco, Inc.	Waterflood	Semi-Peripheral	9-16-69	104,711	20,277	34	Madison & Produced Water
Sumatra, Northeast	Tyler	Texaco, Inc.	Waterflood	Semi-Peripheral	9-16-69	7,122	2,038	6	Madison & Produced Water
Sumatra, Southeast	Tyler	Buttes Resources	Waterflood	Semi-Peripheral	12-1-69	-0-	-0-	7	Madison
Sumatra, West	Tyler	Continental	Waterflood	Semi-Peripheral	10-68	35,719	11,003	9	Produced Water
Sumatra, Kincheloe	Tyler	Exeter Exploration	Waterflood	Semi-Peripheral	—	-0-	-0-	-0-	Madison (not initiated) (approved 6/13/80)
Winnett Junction	Tyler	Petro-Lewis	Waterflood	Random	10-1-77	404	1,107	2	Produced Water

OIL AND GAS FIELDS

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
ALKALI COULEE Red River (Ord.)	1	Structural	Depletion	320 Acre spacing units; well location no closer than 660' from unit boundary and no closer than 1650' from well producing from the same pool. (Order 77-81.)	None
ALMA Greenhorn (U. Cret.)	1	Structural	Depletion	640-acre spacing units. Location to be no closer than 990' from spacing unit boundary. (Order 19-77.)	None
Blackleaf & Bow Island (L. Cret.)	1	Strat.			
Sawtooth (M. Jur.) (Shut-in)	1				
AMANDA Swift (U. Jur.)	1	Strat.	Depletion	320-acre spacing units for gas with one well per horizon from the base of the Swift to the surface to be located no closer than 660' from unit boundary. Spacing Unit to consist of two contiguous quarter sections lying within one or two governmental sections (Order 76-79).	None
Cut Bank (L. Cret.) (Shut-in)	1				
ANDES Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
Mission Canyon (Miss.)					
ANTELOPE COULEE Blackleaf (L. Cret.)	3	Structural	Water Drive	State-wide	None
(Shut-in)		Strat.			
ANVIL Red River (Ord.)	2	Structural-	Water Drive	State-wide.	None
Nisku (Dev.)	1	Strat.			
ANVIL, NORTH Ratcliffe (Miss.)	1	Structural-	Water Drive	State-wide	None
Red River		Strat.			
ARCH APEX Bow Island (L. Cret.) Gas	18	Strat.	Volumetric	330' from legal subdivision; 2400' from any other drilling or producible gas well producing from the same reservoir; 75' topographic tolerance. (Order 4-60.) Sometimes called Colorado Blackleaf pool. (Swift) State-wide.	None
Swift (U. Jur.) (Shut-in)	5	Strat.			
Sunburst (L. Cret.) Oil	5	Strat.	Depletion		
(Shut-in)	6				
ASH CREEK Shannon (U. Cret.)	3	Structural	Partial Water Drive and Depletion	Spacing waived within unitized portion of field except no well may be drilled closer than 660' from unit boundary. (Order 4-65.)	Waterflood started October, 1964. (Orders 22-64, 15-66.)
(Shut-in)	1				
ASSINIBOINE CREEK Niobrara (U. Cret.)	1	Structural	Depletion	State-wide.	None
(Shut-in)					
BADLANDS Eagle (U. Cret.) Gas	7	Structural	Volumetric	Drilling and spacing units allow one well per governmental section to be located anywhere within a section but no closer than 990' from a section line (Order 22-78.)	None
(Shut-in)	1	Strat.			
BAINVILLE Red River (Ord.)	1	Structural-	Depletion-	State-wide.	Produced Water disposed into Red River formation. (Order 7-A-75.)
(Shut-in)		Strat.	Water Drive		
BAINVILLE, NORTH Winnepegosis (Dev.)	2	Structural	Water Drive	320-acre spacing units to consist 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 1650' to any well producing from the same formation. (Order 84-79). (Board Order 84-79) is amended to permit a tolerance of 150' from the well location requirements of said order for topographic purposes (Order 39-80).	None
Red River (Ord.)	5				
Ratcliffe (Miss.)	1				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal																																																																																																																																																																														
BAINVILLE, WEST																																																																																																																																																																																			
Ratcliffe (Miss.)	1	Structural-Strat.	Depletion-Water Drive	320-acre spacing units 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 1650' to another producing well within the field. (Order 19-78.) (Amendment to Order 19-78 by Order 42-79.) 320-Acre spacing units aligned in east-west direction with permitted well to be no closer than 660' to unit boundary (Order 57-80.)	None																																																																																																																																																																														
Red River (Ord.)	3					BAINVILLE II						Red River (Ord.)	1	Structural	Water Drive	320-acre spacing.	None	BANNATYNE						Swift (U. Jur.)	14	Structural	Comb. Water Drive and Volumetric	Center of 10-acre tracts, 50' topographic tolerance. Commingling permitted. (Order 20-58.)	Pilot waterflood of Swift suspended in 1963.	Sun River (U. Miss.) (Shut-in)	3			BATTLE CREEK						Eagle (U. Cret.) Gas	24	Structural	Volumetric	State-wide.	None	BEARS DEN						Swift (U. Jur.) Oil	7	Structural	Depletion and Gas Cap Drive	State-wide.	None	Sawtooth (Jur.) Gas (Shut-in)	3			Sunburst (L. Cret.) Gas (Shut-in)				BELFRY						Tensleep (Penn.)	1	Structural	Water Drive	State-wide.	None	BELL CREEK						Muddy (L. Cret.) Oil & Gas	176	Strat.	Depletion	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.) Field now unitized. Tertiary program, see (Order 25-80).	Six areas unitized (Unit "A", "B", Ranch Creek, "C", "D", and "E".) Floods used Madison water. (Orders 7-70, 23-70, 8-71 26-71, 35-71, 36-71.)	Gas (Shut-in)	1			BELL CREEK SOUTHEAST						Muddy (L. Cret.) Gas (Shut-in) (TA)	2 1	Strat.	Depletion	160-acre spacing units, wells 660' from spacing boundary. (Order 31-72.)	None	BENRUD						Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted location within a 1320' square in center of quarter section. (Order 6-65.)	Water disposal into Judith River formation. (Order 64-62.)	BENRUD, EAST						Nisku (Dev.)	3	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Orders 64-62, 32-66, 4-A-73.)	BENRUD, NORTHEAST						Nisku (Dev.)	1	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Order 32-66.)	BERTHELOTE						Sunburst (L. Cret.) (Shut-in)	1 1	Strat.	Depletion	40-acre spacing units with well no closer than 330' from lease or property line and no closer than 660' between wells. (Order 18-66.)	None	BIG COULEE						3rd Cat Creek (L. Cret.) Gas (Shut-in)	9 1	Structural	Water Drive	State-wide.	None	Morrison (U. Jur.) Gas	1	Structural	Water Drive	BIG GULLY						L. Tyler (Penn.)	2	Strat.	Depletion
BAINVILLE II																																																																																																																																																																																			
Red River (Ord.)	1	Structural	Water Drive	320-acre spacing.	None																																																																																																																																																																														
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Swift (U. Jur.)	14	Structural	Comb. Water Drive and Volumetric	Center of 10-acre tracts, 50' topographic tolerance. Commingling permitted. (Order 20-58.)	Pilot waterflood of Swift suspended in 1963.																																																																																																																																																																														
Sun River (U. Miss.) (Shut-in)	3					BATTLE CREEK						Eagle (U. Cret.) Gas	24	Structural	Volumetric	State-wide.	None	BEARS DEN						Swift (U. Jur.) Oil	7	Structural	Depletion and Gas Cap Drive	State-wide.	None	Sawtooth (Jur.) Gas (Shut-in)	3			Sunburst (L. Cret.) Gas (Shut-in)				BELFRY						Tensleep (Penn.)	1	Structural	Water Drive	State-wide.	None	BELL CREEK						Muddy (L. Cret.) Oil & Gas	176	Strat.	Depletion	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.) Field now unitized. Tertiary program, see (Order 25-80).	Six areas unitized (Unit "A", "B", Ranch Creek, "C", "D", and "E".) Floods used Madison water. (Orders 7-70, 23-70, 8-71 26-71, 35-71, 36-71.)	Gas (Shut-in)	1			BELL CREEK SOUTHEAST						Muddy (L. Cret.) Gas (Shut-in) (TA)	2 1	Strat.	Depletion	160-acre spacing units, wells 660' from spacing boundary. (Order 31-72.)	None	BENRUD						Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted location within a 1320' square in center of quarter section. (Order 6-65.)	Water disposal into Judith River formation. (Order 64-62.)	BENRUD, EAST						Nisku (Dev.)	3	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Orders 64-62, 32-66, 4-A-73.)	BENRUD, NORTHEAST						Nisku (Dev.)	1	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Order 32-66.)	BERTHELOTE						Sunburst (L. Cret.) (Shut-in)	1 1	Strat.	Depletion	40-acre spacing units with well no closer than 330' from lease or property line and no closer than 660' between wells. (Order 18-66.)	None	BIG COULEE						3rd Cat Creek (L. Cret.) Gas (Shut-in)	9 1	Structural	Water Drive	State-wide.	None	Morrison (U. Jur.) Gas	1	Structural	Water Drive	BIG GULLY						L. Tyler (Penn.)	2	Strat.	Depletion	State-wide.	None																										
BATTLE CREEK																																																																																																																																																																																			
Eagle (U. Cret.) Gas	24	Structural	Volumetric	State-wide.	None																																																																																																																																																																														
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Swift (U. Jur.) Oil	7	Structural	Depletion and Gas Cap Drive	State-wide.	None																																																																																																																																																																														
Sawtooth (Jur.) Gas (Shut-in)	3																																																																																																																																																																																		
Sunburst (L. Cret.) Gas (Shut-in)						BELFRY						Tensleep (Penn.)	1	Structural	Water Drive	State-wide.	None	BELL CREEK						Muddy (L. Cret.) Oil & Gas	176	Strat.	Depletion	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.) Field now unitized. Tertiary program, see (Order 25-80).	Six areas unitized (Unit "A", "B", Ranch Creek, "C", "D", and "E".) Floods used Madison water. (Orders 7-70, 23-70, 8-71 26-71, 35-71, 36-71.)	Gas (Shut-in)	1			BELL CREEK SOUTHEAST						Muddy (L. Cret.) Gas (Shut-in) (TA)	2 1	Strat.	Depletion	160-acre spacing units, wells 660' from spacing boundary. (Order 31-72.)	None	BENRUD						Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted location within a 1320' square in center of quarter section. (Order 6-65.)	Water disposal into Judith River formation. (Order 64-62.)	BENRUD, EAST						Nisku (Dev.)	3	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Orders 64-62, 32-66, 4-A-73.)	BENRUD, NORTHEAST						Nisku (Dev.)	1	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Order 32-66.)	BERTHELOTE						Sunburst (L. Cret.) (Shut-in)	1 1	Strat.	Depletion	40-acre spacing units with well no closer than 330' from lease or property line and no closer than 660' between wells. (Order 18-66.)	None	BIG COULEE						3rd Cat Creek (L. Cret.) Gas (Shut-in)	9 1	Structural	Water Drive	State-wide.	None	Morrison (U. Jur.) Gas	1	Structural	Water Drive	BIG GULLY						L. Tyler (Penn.)	2	Strat.	Depletion	State-wide.	None																																																										
BELFRY																																																																																																																																																																																			
Tensleep (Penn.)	1	Structural	Water Drive	State-wide.	None																																																																																																																																																																														
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Muddy (L. Cret.) Oil & Gas	176	Strat.	Depletion	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.) Field now unitized. Tertiary program, see (Order 25-80).	Six areas unitized (Unit "A", "B", Ranch Creek, "C", "D", and "E".) Floods used Madison water. (Orders 7-70, 23-70, 8-71 26-71, 35-71, 36-71.)																																																																																																																																																																														
Gas (Shut-in)	1					BELL CREEK SOUTHEAST						Muddy (L. Cret.) Gas (Shut-in) (TA)	2 1	Strat.	Depletion	160-acre spacing units, wells 660' from spacing boundary. (Order 31-72.)	None	BENRUD						Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted location within a 1320' square in center of quarter section. (Order 6-65.)	Water disposal into Judith River formation. (Order 64-62.)	BENRUD, EAST						Nisku (Dev.)	3	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Orders 64-62, 32-66, 4-A-73.)	BENRUD, NORTHEAST						Nisku (Dev.)	1	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Order 32-66.)	BERTHELOTE						Sunburst (L. Cret.) (Shut-in)	1 1	Strat.	Depletion	40-acre spacing units with well no closer than 330' from lease or property line and no closer than 660' between wells. (Order 18-66.)	None	BIG COULEE						3rd Cat Creek (L. Cret.) Gas (Shut-in)	9 1	Structural	Water Drive	State-wide.	None	Morrison (U. Jur.) Gas	1	Structural	Water Drive	BIG GULLY						L. Tyler (Penn.)	2	Strat.	Depletion	State-wide.	None																																																																																						
BELL CREEK SOUTHEAST																																																																																																																																																																																			
Muddy (L. Cret.) Gas (Shut-in) (TA)	2 1	Strat.	Depletion	160-acre spacing units, wells 660' from spacing boundary. (Order 31-72.)	None																																																																																																																																																																														
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Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted location within a 1320' square in center of quarter section. (Order 6-65.)	Water disposal into Judith River formation. (Order 64-62.)																																																																																																																																																																														
BENRUD, EAST																																																																																																																																																																																			
Nisku (Dev.)	3	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Orders 64-62, 32-66, 4-A-73.)																																																																																																																																																																														
BENRUD, NORTHEAST																																																																																																																																																																																			
Nisku (Dev.)	1	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Order 32-66.)																																																																																																																																																																														
BERTHELOTE																																																																																																																																																																																			
Sunburst (L. Cret.) (Shut-in)	1 1	Strat.	Depletion	40-acre spacing units with well no closer than 330' from lease or property line and no closer than 660' between wells. (Order 18-66.)	None																																																																																																																																																																														
BIG COULEE																																																																																																																																																																																			
3rd Cat Creek (L. Cret.) Gas (Shut-in)	9 1	Structural	Water Drive	State-wide.	None																																																																																																																																																																														
Morrison (U. Jur.) Gas	1	Structural	Water Drive			BIG GULLY						L. Tyler (Penn.)	2	Strat.	Depletion	State-wide.	None																																																																																																																																																																		
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L. Tyler (Penn.)	2	Strat.	Depletion	State-wide.	None																																																																																																																																																																														

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
BIG GULLY, NORTH L. Tyler (Penn.)	1	Strat.	Depletion	State-wide.	None
BIG MUDDY CREEK Interlake (Sil.) Red River (Ord.) Mission Canyon	(Shut-in) 1 3 1	Structural	Water Drive	One well per 320 acre spacing unit with well no closer than 660 feet from boundary of four east-west units. (Order 4-75.)	None
BIG ROCK Blackleaf (L. Cret.) Gas	14	Strat.	Depletion	640-acre spacing units for Blackleaf "A" formation. Location to be no closer than 990' to any governmental section line. (Order 31-78.)	None
BIG WALL Amsden (Penn.)	2	Structural	Water Drive	Spaced by old state-wide spacing; 330' from lease or property line, 990' between wells in same reservoir. (Order 12-54.)	Previous disposal into Tyler "A" stopped in 1961. Waterflood of Tyler "B" sand started August, 1966. (Order 22-66.) Excess produced water disposed into the Tyler "B" formation. (Order 13-A-77.)
Tyler (Penn.)	(Shut-in) 8 7	Structural-Strat.	Depletion		
BIG WALL, NORTH Stensvad (Penn.)	1	Structural-Strat.	Water Drive	State-wide.	None
BILLS COULEE Sunburst (L. Cret.) Madison (Miss.) Gas	3 (Shut-in) 2	Strat.	Depletion	Field without restrictions except that no well may be drilled closer than 330' from the exterior boundary of the field. (Order 22-80).	None
BLACK BUTTE Eagle (U. Cret.) Gas	2	Structural Strat.	Volumetric	320-Acre spacing units 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' from a section line nor closer than 660' to the interior boundary. (Order 134-80).	None
BLACK COULEE Eagle (U. Cret.) Gas	7	Structural-Strat.	Water Drive	320-acre spacing units; well to be located no closer than 990' from unit boundary (Order 6-73.) Well location to be no closer than 660' to eastern boundary of Black Coulee Field. (Order 37-79.) Field extension. (Order 71-79.)	None
BLACK DIAMOND Red River (Ord.)	1	Structural	Depletion	320 Acre spacing units; well location no closer than 660' from unit boundary. (Order 147-81.)	
BLACKFOOT Cut Bank (L. Cret.) - Madison (Miss.) Sunburst (L. Cret.)	6 1	Strat.	Depletion	One well only 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 Dakota (L. Cret.)	7	Structural Strat.	Volumetric Depletion	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.)	None
BLACK JACK Sunburst (L. Cret.) Gas Swift (U. Jur.) Gas & Oil Blackleaf (U. Cret.) Gas	10 (Shut-in) 2 1	Strat.	Depletion	One gas well per 160-acres, no closer than 660' from boundary of each unit. (Order 3-69.) State-wide spacing. Order 3-69 amended to include Blackleaf in spacing and field rules for gas. (Order 4-74.) Blackleaf gas pooled. (Order 3-75.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
BLACKLEAF CANYON Sun River (Miss.) Gas	4	Structural Strat.	Volumetric Depletion	Single spacing unit with Blackleaf Federal 1-A as designated well. (Order 84-81).	None
BLACKLEAF UNIT Sun River (Miss.) (Shut-in)	4 1			Well spacing requirements set forth in 82-11-201 MCA and Board Rule 36.22.702 are suspended provided no well drilled to be closer than 990' from unit boundary. (Order 47-81.)	None
BLUE HILL Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
BORDER Cut Bank (L. Cret.) Oil & Gas (Shut-in) Cut Bank (L. Cret.) Gas	9 2 2	Strat.	Depletion	Oil: Unitized into New and Old Border fields. Unitized 6-1-73. (Orders 8-73, 9-73.) Gas: 330' from 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.)
BOULDER Duperow (Dev.)	1	Structural	Water Drive	State-wide spacing (Order 16-71)	None
BOWDOIN & ADJ. AREA Bowdoin & Phillips sands in Colorado Shale (U. Cret.) Gas (Shut-in)	546 75	Structural	Volumetric	One well per quarter section not less than 1000' from lease boundary or less than 2000' from any gas well in same horizon. (Order 29-55.) Unitized 1958. Delineated: (Order 3-72.)	Produced water injected into Phillips Sand-Ashfield unit. (Order 10-A-77.)
BOWES Eagle (U. Cret.) Gas (Shut-in)	30 7	Structural	Volumetric	660' from boundary of legal subdivision, 1320' from other wells in same formation. 75' topographic tolerance. (Order 23-54.) Order 23-54 amended by establishing 160-acre Eagle spacing units in Sec. 5, 6, 7, 8, 17, 18-31N-19E. (Order 44-75.)	None
Sawtooth (M. Jur.) Oil (Shut-in)	54 24	Structural	Partial Water Drive	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. (Order 6-61.) Water from Madison.
BOX CANYON Red River (Ord.)	2	Structural	Depletion Water Drive	State-wide.	None
BOX ELDER Nisku (Dev.)	1	Structural	Water Drive	State-wide.	None
BRADLEY Cut Bank (L. Cret.) Gas (Shut-in) Madison (Miss.) Sunburst (L. Cret.)	1 1 2	Structural	Water Drive	State-wide.	None
BRADY Sunburst (L. Cret.)	11	Strat.	Depletion Partial Water Drive	10-acre spacing units with 75' topographic tolerance from center of spacing unit. (Orders 34-62, 55-62.) Field enlargement. Operators may commingle production from Burwash and Sunburst formations in Sec. 16. (Order 86-81.)	None
BREDETTE Charles	1	Strat.	Water Drive		
BREED CREEK Tyler (Penn.) (Shut-in)	4 2	Strat.	Depletion	State-wide.	None
BROKEN BOW Blackleaf (L. Cret.) Gas	1	Strat.	Depletion	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
BRORSON					
Mission Canyon (Miss.) Oil & Gas (Shut-in)	4	Structural	Volumetric Water Drive	One well per 160-acre unit, no closer than 660' from unit boundary (Mission Canyon and Red River.) (Order 5-69.) Gas to Brorson Field Plant	Produced water injected into Dakota formation. (Order 129-A-81.)
Red River (Ord.) Oil & Gas (Shut-in)	1				
Ratcliffe (Miss.) Oil	2				
BRORSON, SOUTH					
Red River (Ord.) Oil & Gas (Shut-in)	3	Structural	Volumetric Water Drive	One well per 160-acre unit, no closer than 660' from unit boundary. (Order 26-68.) Gas to Brorson Field Plant. Reduced Field Area. (Order 26-77.)	None
Madison	1				
BROWN'S COULEE					
Judith River (U. Cret.) Gas	3	Structural	Volumetric	One well per 160-acre unit with well location no closer than 660' from unit boundary. Commingling permitted with administrative approval. (Order 7-74.)	None
Eagle (U. Cret.) Gas					
BROWN'S COULEE, EAST					
Eagle (U. Cret.) Gas (Shut-in)	5	Structural	Volumetric	State-wide.	None
	4				
BRUSH LAKE					
Red River (Ord.) Oil & Gas (Shut-in)	5	Structural-Strat.	Depletion Water Drive	320-acre spacing with initial nine spacing units described in (Order 15-71 corrected.)	None
	2				
BUFFALO FLAT					
Bow Island (L. Cret.) Gas	3	Structural	Volumetric	Statewide.	None
BULLWACKER					
Judith River (U. Cret.) Gas (Shut-in)	4	Structural	Volumetric	One well per 320-acre spacing unit with well location no closer than 660' from unit boundary and 990' from field boundary. (Order 26-74.)	None
Eagle-Virgelle (U. Cret.) Gas (Shut-in)	2				
	37				
	9				
BURGET					
Red River (Ord.)	1	Struc.	Water Drive	320-acre spacing units; Well location to be no closer than 660' to unit boundary and 1650' from existing well. 150' tolerance for topographic reasons. (Order 25-81.)	None
BURGET, EAST					
Ratcliffe (Miss.)	1	Strat.	Water Drive		None
BURNS CREEK					
Red River (Ord.)	2	Structural	Depletion Water Drive	State-wide.	None
BUTCHER CREEK					
Greybull (L. Cret.)				Order 17-60 amended to provide wells may be drilled anywhere within field but no closer than 160' from another producing well or 320' from exterior boundary. Each well may be used for steam stimulation in Greybull formation. (Order 100-81).	
CABIN CREEK					
Mission Canyon (Miss.) Oil & Gas (Shut-in)	8	Structural	Water Drive Depletion	Spacing waived and General Rules for (Deviation), (Commingling), and (Dual Completion) are suspended until present Unit Agreement becomes operative. (Order 36-62.) Many wells produce from both Interlake and Red River by dual completions. Gas through extraction plant.	Waterflood of Siluro-Ordovician reservoir has been expanded to full scale peripheral flood (Orders 60-62, 30-63.)
Interlake-Red River Oil & Gas (Sil.) (Ord.) (Shut-in)	16				
	82	Structural	Water Drive Depletion		
	6				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
CAMP CREEK Claggett (U. Cret.) Gas	1	Structural	Volumetric	Statewide.	None
CANADIAN COULEE Sawtooth (M. Jur.) Gas (Shut-in)	1 2	Structural- Strat.	Volumetric	320-acre spacing units with well location no closer than 660' from unit boundary, and 990' from field exterior boundaries. (Order 18-76.)	None
CANADIAN COULEE, NORTH Sawtooth (M. Jur.) Gas (Shut-in)	4 2	Structural- Strat.	Volumetric	640-acre spacing units. Location to be no closer than 1650' to section line (Order 15-75.)	None
CANAL Red River (Ord.) Mission Canyon (Miss.) (Shut-in)	1 1	Structural Structural	Water Drive Depletion	320-acre spacing units consisting of East half and West half of governmental section. (Order 34-70.)	None
CANNON BALL Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
CARLYLE Red River (Ord.)	2	Structural	Water Drive	320-acre spacing units; to consist of either the N/2 or S/2 or E/2 or W/2 of section or lots corresponding thereto. Well location to be no closer than 660' to unit boundary nor closer than 1650' to any well drilling or producing from the same pool. (Order 39-79.)	Produced water disposed into Dakota formation. (Order 126-A-81.)
CAT CREEK Kootenai (L. Cret.) (3 Sands) (3 sands) (Shut-in) Morrison (U. Jur.) Ellis (U. Jur.) (Shut-in) Amsden (Penn.)	40 1 2 26 2 2	Structural- Strat. Structural- Strat. Structural	Water Drive Water Drive Depletion- Water Drive Water Drive	220' from lease or property line, 440' from every other well in same formation. (Order 17-55.) Five separate producing areas, East, Antelope, Mosby, West and Landheim Domes. State-wide.	Three Kootenai, two Ellis, and one Amsden waterflood in progress. (Orders 17-56, 18-59, 13-62, 8-68, 38-70, 11-71.) Water from Third Cat Creek sand. Waterflood modified. (Order 29-74.)
CEDAR CREEK Judith River (U. Cret.) Gas (Shut-in) Eagle (U. Cret.) Gas (Shut-in)	79 9 66 6	Structural Structural	Volumetric Volumetric	1200' from legal subdivision line, 2400' from every other well in same formation. (Order 33-54.) 320-acre spacing units, Wells in center of NW¼ and SE¼ of each section with 200' topographic tolerance. (Order 1-61.) Field extension (Order 23-76.)	None None
CHAIN LAKES Eagle (U. Cret.) (Shut-in)	3 2	Structural	Volumetric	State-wide.	None
CHARLIE CREEK Nisku (Dev.) Duperow (Dev.)	1 1	Structural Structural	Water Drive Water Drive	320-acre spacing units, either east-west or north-south at option of operator, located no closer than 660' from spacing unit boundary and no closer than 1650' from another producing well. Spacing units may not cross section lines. (Order 66-76.)	None
CHARLIE CREEK, EAST Red River (Ord.)	1	Structural	Water Drive	Statewide.	None
CHESTER Bow Island (L. Cret.)	1	Structural	Volumetric	State-wide.	None
CHINOOK, EAST Eagle (U. Cret.)	3	Structural- Strat.	Volumetric	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
CHIP CREEK Eagle-Virgelle (U. Cret.)	3	Structural-Strat.	Volumetric	160-acre spacing units. Location no closer than 660' from spacing unit boundary. (Order 89-76.)	None
CLARK'S FORK Frontier (U. Cret.) (Shut-in)	1	Structural-	Depletion	330' from quarter-quarter section line, 1320' between wells with 75' topographic tolerance. (Order 17-54.)	None
CLARK'S FORK, NORTH Lakota (L. Cret.) Gas & Oil (Shut-in)	2 1	Structural-Strat.	Volumetric	160-acre quarter section spacing with location no closer than 660' from spacing unit boundary. (Order 23-75.)	None
CLARK'S FORK, SOUTH Greybull (L. Cret.) Oil & Gas (Shut-in)	2 1	Structural-Strat.	Depletion-Water Drive	160-acre spacing, location no closer than 330' from quarter section line or 1320' from any other well.	None
CLEAR LAKE Red River (Ord.) Mission Canyon (Miss.) Nisku	5 1	Structural	Water Drive	State-wide.	Produced water disposed into Dakota, Muddy, Lakota, & Swift formation. (Order 41-A-80.) and (Order 116-A-81.) (60-A-80.), (91-A-80.), (Order 123-A-81.)
CLEAR LAKE SOUTH Red River (Ord.) Nisku (Dev.)	2 2	Structural	Water Drive	State-wide.	None
COAL COULEE Eagle (U. Cret.) Gas	1	Structural-Strat.	Volumetric	One well per governmental section, to be located no closer than 990' from section line and only one well permitted per formation (Order 25-78.) Amendment to (Order 25-78.) provides 320-acre spacing units within certain sections to be designated by the operator. Well to be located no closer than 990' to unit boundary. (Order 36-79.)	None
COAL RIDGE Mission Canyon (Miss.)	1	Structural	Water Drive	State-wide.	Produced water injected into the Dakota formation (Order 81-A-79.)
COLORED CANYON Red River (Ord.)	1	Structural-Strat.	Water Drive	State-wide.	None
COMERTOWN Red River (Ord.)	2	Structural-Strat.	Water Drive	320-acre spacing units; permitted well to be no closer than 660' to unit boundary. (Order 35-80.) Field enlargement (Orders 9-81 and 150-81.)	None
CONRAD BUTTE (See Ledger Field)					
CONRAD SOUTH Dakota (L. Cret.) (Shut-in)	3 9	Strat.	Depletion	10-acre spacing units. Wells in center of each unit with 75' topographic tolerance. (Orders 34-62, 31-63.)	None
COW CREEK Charles (Miss.)	1	Structural	Water Drive	80-acre spacing units, direction at option of operator but wells to be in SW¼ and NE¼ of each quarter section. (Order 11-69.)	None
COW CREEK, EAST Kibbey (Miss.)	11	Structural	Water Drive	40-acre spacing units consisting of quarter-quarter section with permitted well to be at center with 150' topographic tolerance. (Order 35-74.)	Produced water disposed into Dakota formation. (Order 30-A-75 and 61-A-76.)

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
CRANE					
Red River (Ord.)	1	Structural-	Water Drive	320-acre spacing units consisting of one half of a governmental section with well location to be no closer than 660' from unit boundary and no closer than 1650' to any well drilling or producing from the same pool (Order 40-79.)	None
Duperow (Dev.) (Shut-in)	2	Strat.			
CULBERTSON					
Red River (Ord.)	1	Structural-Strat.	Depletion-Water Drive	State-wide in part. Unitized as to SE¼ of Section 32, SW¼ of Section 33, N½NW¼ of Section 4, and N½NE¼ of Section 5. (Order 29-70.)	Produced water disposed into Red River formation. (Order 13-A-72.)
CUPTON					
Red River (Ord.)	9	Structural-	Water Drive	160-acre quarter section spacing units. Location no closer than 660' from spacing unit boundary. (Order 4-72.)	Produced water disposed into Red River formation. (Order 1-A-80.)
(Shut-in)	2	Strat.			
CUT BANK					
Kootenai (L. Cret.) Oil & Gas	886	Strat.	Depletion	(Kootenai formation includes Moulton, Sunburst, and Cut Bank sands.) 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, 2400' between wells in same formation. 75' topographic tolerance. (Order 10-54.) Sections 20, 29, and 32 of Township 36 North, Range 4 West spaced 320-acres (N½ & S½.) (Order 26-70.)	There are 18 waterfloods in progress. Water from Eagle and Madison, or produced. Produced water disposed into Madison formation. (Orders 22-A-74, 55-A-77.), (60-A-80.), (91-A-80.), (Order 123-A-81.)
Madison (Miss.) Oil & Gas	39	Strat.	Water Drive		
(Shut-in)	8				
(Gas only) (Shut-in)	48				
Cut Bank (L. Cret.) Gas	178	Strat.	Depletion		
(Shut-in)	29				
Sunburst (L. Cret.) Gas	3	Strat.	Depletion		
(Shut-in)	2				
Moulton (L. Cret.) Gas	4	Strat.	Depletion		
(Shut-in)	2				
Bow Island (L. Cret.) Gas	3	Structural	Volumetric	320-acre spacing units for gas; (Cut Bank) units; (E½ & W½) wells to be located no closer than 330' from legal subdivision line nor less than 2400' from drilling or producible well producing from same reservoir. (Orders 82-76, 6-77.) Field extension (Order 3-79.) Board Orders No. 10-54, 26-70, 6-77, 82-76, and 3-79 amended to include all formations from surface to base of Madison Lime Formation. (Order 45-80.)	
DAGMAR					
Red River (Ord.)	2	Structural	Water Drive	State-wide.	None
DAGMAR, NORTH					
Red River (Ord.)	1	Structural	Water Drive	320-acre spacing units; - well location no closer than 660' from unit boundary. (Order 6-81.)	Produced water injected into Dakota formation. (Order 124 A-81.)
DARLING					
(Included as part of Cut Bank Field)					Field enlargement (Order 9-81 and 150-81.)
DEADMAN'S COULEE					
Nisku (Dev.)	4	Structural-Strat.	Water Drive		Produced water injected into Judith River formation. (Order 132-A-81.)
DEAN DOME					
Greybull (L. Cret.) Gas	1	Structural	Water Drive	State-wide. Oil ring below gas cap.	None
(Shut-in) Oil	4	Structural	Water Drive		
					Produced water disposed into Dakota formation. (Order 42-A-80, 130-A-81.)

Field. Formation. Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations. Field Rules, and Remarks	Secondary or Water Disposal
DEER CREEK Interlake (Sil.)	1	Structural	Water Drive	80-acre spacing units consisting of any two adjacent quarter-quarter sections. Well location in NE¼ and SW¼ of each quarter section with 75' topographic tolerance. (Orders 23-55 & 14-59.) Commingling of production permitted upon approval of Board Petroleum Engineer. (Order 18-63.)	Excess produced water is disposed into Dakota and Lakota formations. (Orders 6-56 & 3-58.)
DELPHIA Amsden (Penn.)	2	Structural	Water Drive	State-wide.	None
DEVIL'S BASIN Heath (U. Miss.) (Shut-in)	7 3	Structural	Depletion	10-acre spacing units; well location to be in the center of each spacing unit with a 75' tolerance permitted for topographic or geologic reasons. (Order 114-80.)	None
DEVON Blackleaf (U. Cret.) Gas (Shut-in) Kootenai (L. Cret.) Oil Depleted	21	Strat. Strat.	Volumetric Depletion	State-wide. State-wide.	None None
DEVON, SOUTH Bow Island (L. Cret.) Gas (Shut-in)	1 10	Strat.	Volumetric	Drilled on state-wide spacing. Unitized for primary production. (Order 28-71, corrected.)	None
DIAMOND POINT Red River (Ord.)	1	Structural	Water Drive	320-acre spacing unit; allowing two wells to produce from the Red River or from commercial production at any depth shallower. (Order 20-80.)	None
DIVIDE Mission Canyon (Miss.)	5	Structural	Water Drive	State-wide.	Produced water disposed into Dakota formation. (Order 42-A-80, 130-A-81.)
DRY CREEK Eagle (U. Cret.) Gas Judith River (U. Cret.) (Shut-in) Frontier (U. Cret.) Gas (Shut-in) Greybull (L. Cret.) Gas Greybull (L. Cret.) Oil (Shut-in)	1 2 9 2 2 7 1	Structural- Strat. Structural Strat.	Volumetric Volumetric Volumetric- Depletion	State-wide. Field re-delineated. (Order 8-70.) Six additional gas storage wells, west end of structure.	None
DRY CREEK MIDDLE Frontier (U. Cret.) Gas Lakota (L. Cret.) Gas (Shut-in)	1 1	Structural- Strat.	Volumetric	320-acre spacing units consisting of two adjacent governmental quarter sections lying N-S or E-W at operator's option with permitted well no closer than 660' from spacing boundary. (Order 25-75.)	None
DRY CREEK, WEST Greybull (L. Cret.) Oil & Gas (Gas) (Shut-in)	1 1	Structural- Strat.	Volumetric Depletion	160-acre spacing units; well location anywhere in spacing unit but no closer than 660' from unit boundary. (Order 43-78.)	None
DRY CREEK (Shallow Gas) Judith River (U. Cret.) Eagle (U. Cret.) Virgelle (U. Cret.)	2 1 1	Structural Structural- Strat.	Volumetric Volumetric	160-acre spacing units; (all formations capable of producing gas from the top of the Cody to the surface). One well per horizon per spacing unit to be located no closer than 660' from unit boundary. (Order 54-76.)	None
DUNKIRK Sunburst (L. Cret.)	13			Only one well may produce from each producing zone, formation, or horizon, but no closer than 990' from section lines. (Order 58-81.) Field enlargement. (Order 104-81.)	

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
DUNKIRK, NORTH Bow Island (L. Cret.) Gas (Shut-in)	9 5	Strat.	Water Drive	One well per governmental section per zone or horizon. Each producing well to be located anywhere within section but no closer than 990' feet from section line. (Order 25-77.) Field enlargement. (Order 64-78.) Field enlargement. (Order 157-81).	None
DWYER Ratcliffe (Miss.) (Shut-in)	10 5	Structural- Strat.	Water Drive- Volumetric	160-acre spacing units; well location in center of SE¼ of spacing units with 175' topographic tolerance. (Orders 25-60, 29-61.)	Produced water disposed into Dakota formation. (Order 26-63.) Waterflood. (Order 20-68.)
DUGOUT CREEK Red River (Ord.)	1	Structural	Water Drive		
EAGLE Mission Canyon (Miss.)	17	Structural	Water-Drive	State-wide.	None
EAGLE SPRINGS Bow Island (L. Cret.) Gas (Shut-in)	10 3	Structural	Depletion	One well per governmental section per zone, located anywhere but no closer than 990' from section line for all gas zones above the top of the Kootenai. (Order 4-78.) Commingling of Swift and Sunburst permissible (Order 19-79).	None
EAST GLACIER Greenhorn (U. Cret)	1	Structural		State-wide. 160-acre spacing units. (Order 41-81.) Amended to enlarge field and designate 80-acre spacing units with permitted well to be located no closer than 330' to the exterior boundaries. (Order 112-81.)	None
ELK BASIN (Mont. Portion) Frontier (U. Cret.) (Shut-in) Embar-Tensleep (Perm., Penn.) (Shut-in) Madison (Miss.) Big Horn (Ord.)	13 6 15 10 26 1	Structural	Gravity Drainage Gravity Drainage Water Drive	State-wide spacing is waived within Unit Area. (Order 10-61.) Gas to Elk Basin gasoline plant.	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.)
ELK BASIN, NORTHWEST Frontier (U. Cret.) (Shut-in) Embar-Tensleep (Perm., Penn.) O&G Madison (Miss.) (Shut-in)	7 4 2	Structural	Depletion Gravity Drainage Water Drive	Spacing waived within unitized portion except that bottom of hole be no closer than 330' from unit boundary and there be at least 1320' surface distance between wells in same formation; 75' topographic tolerance. (Orders 43-63, 28-64.) Gas to Elk Basin gasoline plant.	Frontier: Waterflood in progress. Embar - Tensleep: Waterflood. (Order 3-67, 6-74.) Madison: produced water.
ENID, NORTH Red River (Ord.)	1	Structural- Strat.	Water Drive	Spaced for one well field, NE¼ of Section 10 and NW¼ of Section 11, T-23N R-54E (Order 45-79.)	None
ETHRIDGE AREA Bow Island (L. Cret.) Gas (Shut-in) Swift (U. Jur.) Gas (Shut-in)	3 5 2	Strat. Strat.	Water Drive Water Drive	State-wide, except two wells by (Order 28-65.)	None
ETHRIDGE, NORTH Swift (U. Jur.)	2	Strat.	Water Drive	320-acre spacing units; well location to be no closer than 660' from unit boundaries. Section 2-33N-4W is a 640-acre spacing unit. (Order 98-81.)	None
FAIRVIEW Winnipegosis (Dev.) Oil & Gas (Shut-in) Red River (Ord.) Oil & Gas (Shut-in) Mission Canyon (Miss.)	3 8 3 2	Structural	Water Drive Water Drive Water Drive	160-acre spacing unit. Well location anywhere in spacing unit but no closer than 660' from unit boundary. (Orders 48-65, 1-67, 43-67, 44-67.) Gas to Fairview plant.	Northwest part of field unitized for gas injection. Gas from Fairview and Brorson fields. (Order 11-70.) Salt water disposal into Dakota. (Orders 9-A-71, 24-A-71.)

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
FAIRVIEW, EAST Red River (Ord.)	1	Structural	Water Drive	320-acre spacing units; designated well in the North half of section 28 may be located no closer than 660' from the unit boundary or 1650' from any well producing from the same pool. (Order 76-81.)	None
FAIRVIEW, WEST Ratcliffe (Miss.)	1	Structural	Water Drive	State-wide.	None
FERTILE PRAIRIE Red River (Ord.)	2	Structural-Strat.	Water Drive	80-acre spacing units consisting of north-south rectangular units. Well location in NW¼ and SE¼ of quarter section with 75' topographic tolerance. (Orders 3-56, 7-62.) Board Orders (3-56 & 7-62) amended to provide well locations for each 80-acre spacing units 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.)	None
FIDDLER CREEK Greybull (L. Cret.)	1	Structural Strat.	Depletion	State-wide.	None
FISHHOOK Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
FITZPATRICK LAKE Bow Island (U. Cret.) Gas (Shut-in) Sunburst (L. Cret.) Gas	7 2 1	Strat.	Depletion	One well per governmental section located no closer than 990' from section line for all gas zones above the top of the Kootenai. (Order 31-79.)	None
FLAT COULEE Bow Island (L. Cret.) Gas (Shut-in) Dakota (L. Cret.) Gas Swift (Jur.) Gas (Shut-in) Swift (Jur.) Oil Sawtooth (Jur.) Gas (Shut-in)	3 1 2 1 19 1 1	Structural Strat. Strat. Strat. Strat.	Depletion Depletion Depletion	330' from boundary of legal subdivision and 1320' from other wells in same reservoir. (Order 16-55.) State-wide, exception. (Order 11-66.) State-wide gas spacing. 40-acre spacing units. Well in center of spacing unit with 150' topographic tolerance. (Orders 16-62, 19-63.) State-wide.	Waterflood unit and redelineation approved for Swift sandstone. (Orders 13-71, 17-A-71, 22-71.)
FLAT COULEE, EAST Sawtooth (M. Jur.) (Shut-in)	1	Structural	Water Drive	State-wide.	None
FLAT LAKE Ratcliffe (Miss.) (Shut-in)	51 7	Structural Strat.	Partial Water Drive	160-acre spacing units; well location in center of NE¼ of quarter section with 200' topographic tolerance. Wells no closer than 961' to North Dakota state line and no closer than 1600' to Canadian line. (Orders 10-65, amended, 43-65, 23-66, 33-66.)	Excess salt water disposed into Muddy, Dakota, or Lakota formations (Orders 39-64, 39-66, 125-A-81.) and into Ratcliffe formation (Order 122-A-81.) Unit operation for eastern part of field. (Order 7-71.) Unit operation for western part of field. (Order 32-74.)
FLAT LAKE, SOUTH Ratcliffe (Miss.) (Shut-in)	6 1	Structural-Strat.	Partial Water Drive	160-acre spacing units established by (Order 2-67) then modified to provide that the permitted well may be located anywhere within the unit but no closer than 660' to any unit boundary. (Order 49-80.)	Excess salt water disposed into Muddy, Dakota, or Lakota. (Order 19-67.)
FORT CONRAD Bow Island (U. Cret.)	6	Structural-	Volumetric	640-acre spacing units; well location to be no closer than 990' from the section line. (Order 19-81.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
FORT GILBERT Red River (Ord.)	3	Structural	Depletion and Water Drive	160-acre spacing units; Well location no closer than 660' from unit boundary with 150' topographic tolerance. (Order 94-81.)	Excess produced associated gas reinjected into Duperow formation. (Order 78-81.)
Red River (Ord.) & Mission Canyon (Miss.)	5				
FOUR MILE CREEK Red River (Ord.)	1	Structural	Depletion	320-acre spacing units. (Order 43-75.)	None
FOUR MILE CREEK, WEST Red River (Ord.)	2	Structural	Depletion	State-wide.	None
FOX CREEK Mission Canyon (Miss.)	1	Structural	Depletion	State-wide.	None
FOX CREEK, NORTH Mission Canyon (Miss.) O&G	3	Structural	Depletion	State-wide.	None
FRANNIE (Mont. Portion) Tensleep (Penn.)	2	Structural	Comb. Water Drive and Gravity Drainage	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.)
FRED & GEORGE CREEK Sunburst (L. Cret.) Oil & Gas (Shut-in)	19 6	Strat.	Depletion	Oil: 40-acre spacing units; well location in center of unit with 250' topographic tolerance. (Orders 29-63, 1-65.) State-wide. Order 29-63 amended by (Order 48-77.)	Sunburst waterflood initiated July, 1970, using water from Madison, (Order 13-70) and Eagle water. (Order 27-71.) (Order 40-80.)
Swift (U. Jur.) Oil & Gas (Shut-in)	17 10	Strat.	Depletion		
Bow Island (L. Cret.) Gas (Shut-in)	3	Structural	Depletion		
FRESNO Eagle-Virgelle (U. Cret.) Gas	9	Structural-Strat.	Volumetric	640-acre spacing units, wells located no closer than 990' from 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.)	None
FROG COULEE Red River (Ord.)	1	Structural	Water Drive	320-acre spacing units; wells to be located no closer than 660' from the unit boundary. (Order 55-79.)	None
FROID, SOUTH Red River (Ord.)	2	Structural Strat.	Depletion	State-wide.	None
GAGE Amsden (Penn.)	3	Structural	Water Drive	40-acre spacing units; well location to be in center of each unit with a permitted tolerance of 150' for topographic or geological reasons. (Order 120-80.) Field enlargement. (Order 44-81.)	None
GAS CITY Red River (Ord.) (Shut-in)	11 9	Structural	Depletion-Water Drive	80-acre spacing units consisting of E½ and W½ of quarter sections; well location in NW¼ and SE¼ of quarter section; 150' topographic tolerance. Spacing waived and state-wide Rules for (Deviation), (Commingling), and (Dual Completion) are waived in unitized portion of field. (Order 29-62.)	Excess produced water disposed into Judith River formation. (Orders 32-61, 20-64.) Waterflood using produced water and Madison water. (Order 16-69.) Produced water disposal into Charles "B" formation. (Order 90-A-79.)

Field. Formation. Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations. Field Rules. and Remarks	Secondary or Water Disposal
GIRARD Red River (Ord.) (Shut-in)	1	Structural-Strat.	Depletion-Water Drive	State-wide.	None
GLENDIVI Red River (Ord.) Oil & Gas (Shut-in)	15 1	Structural-Strat.	Depletion-Water Drive	80-acre spacing units consisting of any two adjacent quarter-quarter sections; wells located in center of NE $\frac{1}{4}$ and SW $\frac{1}{4}$ of each quarter section with 75' topographic tolerance. (Orders 27-55, 19-62, 58-62, 20-66)	Excess produced water disposed into Swift, Dakota and Judith River formations. (Orders 16-56, 16-63, 40-A-70, 7-A-72.)
GOLD BUTTE Bow Island (L. Cret.) Gas	1	Structural	Water Drive	640-acre spacing, well location any quarter-quarter section cornering on center of section. (Order 26-59.) Amended field boundary. (Order 43-77.)	None
GOLDEN DOME Eagle (U. Cret.) Gas (Shut-in)	2	Structural-Strat.	Water Drive Depletion	160-acre spacing; 660' from spacing unit boundary. (Order 15-72.)	None
Greybull (L. Cret.) Oil	1			State-wide.	None
GOOSE LAKE Ratcliffe (Miss.) Oil & Gas (Shut-in)	34 4	Structural-Strat.	Partial Water Drive	Unitized. (Order 17-72.) Reduced field area; (Order 29-77.) Unit production curtailment; (Order 45-77.)	Excess produced water disposed into Mission Canyon and Dakota formations. (Orders 12-64, 14-66, 12-68.) Produced water disposed into Ratcliffe formation. (Order 138-A-80.) Produced water dispersed into Dakota formation. (Order 117-A-81.)
GOOSE LAKE, EAST Red River (Ord.)	1	Structural Strat.	Water Drive	320-acre spacing units. Well location no closer than 660' from unit boundary. (Order 20-81.)	None
GOSSETT Mission Canyon (Miss.)	1	Structural	Depletion	State-wide.	None
GORMAN COULEE Eagle-Clagget J.R. (U. Cret.) Gas (Shut-in)	6	Structural Strat.	Water Drive	State-wide.	None
GRABEN COULEE Swift, Cut Bank, Madison	68	Structural-Strat.	Depletion	40-acre spacing units; well location no closer than 330' from legal subdivision. (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. (Order 73-62.)	Excess produced water disposed into Cut Bank formation. (Order 45-A-75.)
GRANDVIEW Bow Island-Sunburst (L. Cret.) Gas (2 Zones) (Shut-in) Madison (Miss.) Gas	7 2 3	Structural	Unknown	320-acre spacing units aligned in a north-south direction; well location no closer than 660' to a spacing unit boundary. (Order 49-67.) Dual completion with Bow Island.	None
GRANDVIEW, EAST Swift (Jur.) (Shut-in)	2 1	Structural	Water Drive	State-wide.	None
GRANDVIEW, WEST Bow Island (L. Cret.) Gas (Shut-in)	1	Structural	Unknown	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
GREEN COULEE Red River (Ord.)	1	Structural	Water Drive	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 1650' from any well producing from the Red River. (Order 56-81.)	None
GUMBO RIDGE Tyler (L. Penn.) (Shut-in)	4 2	Structural-Strat.	Unknown	State-wide.	3rd Cat Creek water for waterflood (Order 54-79.)
GUNSIGHT Ratcliffe (Miss.)	1	Structural-Strat.	Water Drive	State-wide.	None
GYPSY BASIN Sawtooth, Sunburst, Swift, Madison Sawtooth, Madison, Sunburst (Gas)	18 4	Structural-Strat.	Comb. Water Drive and Depletion	330' from lease lines and 660' between wells in same formation. Only two wells per quarter-quarter section. (Order 7-66.) Same as Sunburst. (Sawtooth-Madison) Oil: 40-acre spacing units; wells no closer than 330' from lease line. (Order 7-66.) (Sawtooth-Madison) Gas: 160-acre spacing units; well locations in center of any quarter-quarter section in each 160-acre unit, 2340' between gas wells. 150' topographic tolerance (Order 13-59.)	Order 6-64 permits injection of excessive gas (produced with oil) into the Sunburst gas cap. None
GYPSY, NORTH Sunburst (L. Cret.) Nisku (Dev.)	1 1	Structural Strat.	Water Drive & Depletion	Production of both oil & gas from all horizons allowed without restrictions except no well may be drilled closer than 330' from the exterior boundary of the field. (Order 11-80.)	None
HAMMOND (Gas) Muddy (L. Cret.) (Shut-in)	11	Strat.	Volumetric	320-acre spacing units; 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.)	None
HARDIN Frontier (U. Cret.) Gas (Shut-in)	16 31	Strat.	Volumetric	State-wide.	Water disposal into Red River. (Order 20-A-70.)
HARDPAN Bow Island (L. Cret.) Swift (Jur.) (Shut-in)	1 1	Structural	Unknown	Spacing 1 well per section. Well location no closer than 990' from the section boundary. (Order 145-81.)	None
HARDSCRABBLE CREEK Red River (Ord.)	2	Structural	Water Drive	State-wide.	None
HAWK HAVEN Mission Canyon (Miss.)	1	Strat.	Water Drive		
HAY CREEK Mission Canyon (Miss.) (Shut-in)	2 1	Structural	Depletion	State-wide.	Produced water disposed into Dakota formation. (Orders 90-A-80, 129-A-81.)
Red River (Ord.) (Shut-in)	1 1	Structural	Volumetric Water Drive	320-acre spacing, any two adjacent quarter sections, direction to be determined by operator. Location no closer than 660' from unit boundary. (Orders 15-69, 27-73.) Gas to Brorson plant.	

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
HAYSTACK BUTTE Eagle-Virg. (U. Cret.) Bow Island (L. Cret.) Kootenai (L. Cret.)	7 1 (Shut-in)	Structural-Strat.	Volumetric	640-acre spacing units; one well per each producing horizon above Kootenai. Location no closer than 990' from spacing unit boundary. (Order 85-76.) Amended field boundary. (Order 37-77.)	None
HIAWATHA Tyler (L. Penn.) (2 sands)	4	Structural-Strat.	Depletion	State-wide.	None
HIBBARD Amsden (Penn.)	1	Unknown	Water Drive	State-wide.	None
HIGH FIVE Tyler (Penn.)	9 1 (Shut-in)	Structural-Strat.	Water Drive	State-wide.	Water disposed into Dakota and Stensvad formations (Orders 33-A-77, 70-A-78.) Unitized & Polymen-Waterflood authorized. (Order 110-80.)
HIGHVIEW Madison (Miss.) Oil & Gas (Shut-in)	4 2	Structural	Water Drive	160-acre spacing units, located no closer than 660' from spacing unit boundary. 150' topographic tolerance. (Order 84-76.)	None
HONKER Red River (Ord.)	1	Structural	Water Drive	320-acre specified spaing units; permitted well not to be closer than 660' from the unit boundary. (Order 105-80.)	None
HONKER-WINNIPEGOSIS Winnipegosis (Dev.)	1	Structural	Water Drive	Single spacing unit. (Order 81-81.)	None
HORSE CREEK Swift (U. Jur.) (Shut-in)	1 1	Structural	Water Drive	State-wide.	None
HOWARD COULEE Tyler (L. Penn.) (Shut-in)	1 2	Structural-Strat.	Unknown	State-wide.	Produced water injected into the Piper formation. (Order 69-A-78.)
INJUN CREEK Tyler Stensvad	1	Strat.	Depletion	State-wide.	None
INTAKE II Red River (Ord.)	1	Structural	Water Drive	320-acre spacing units; permitted well to be located no closer than 660' from the unit boundary. (Order 99-81.)	
IVANHOE DOME Amsden (L. Penn.) (Shut-in) Tyler (L. Penn.) (Shut-in) Morrison (U. Jur.) (Shut-in)	2 8 2 1	Structural-Strat. Structural-Strat.	Water Drive Depletion	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.)	Waterflood of Tyler B & C sands discontinued. Water disposal into Tyler "A". (Order 8-A-78.)
JIM COULEE Tyler (L. Penn.) (Shut-in)	12 1	Structural Strat.	Depletion Water Drive	Unitized (Order 18-72.) No well closer than 330' from unit boundary.	Waterflood; produced and Third Cat Creek water.
JIM COULEE, NORTH Tyler (L. Penn.)	1	Strat.	Depletion Water Drive		

Field. Formation. Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations. Field Rules. and Remarks	Secondary or Water Disposal
KATY LAKE, NORTH					
Red River (Ord.)	6	Structural	Depletion.	State-wide.	None
Mission Canyon	1	Strat.	Water Drive		
KEG COULEE					
Tyler (Penn.) Oil & Gas	14	Strat.	Depletion	40-acre spacing in southwest portion of field except that 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; W½ E½ and W½ Sec. 35-11N-30E; NW¼ Sec. 2-10N-30E). (Order 23-72.) Topographic tolerance varies from 100' to 250' (Orders 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: (Orders 58-76.)	Three waterflood units. (Orders 3-64, 28-66, 10-69, 14-69.) Madison water injected.
(Shut-in)	7				
KEG COULEE, NORTH					
Tyler (Penn.)	3	Strat.	Depletion	40-acre spacing units; well location in center of spacing unit with 150' topographic tolerance. (Order 46-64.) Buffer zone waived. (Order 16-65.) Field Area amended (Order 59-76.)	None
KEITH & EAST KEITH					
2nd White Specks (U. Cret.) Gas	9	Structural	Water Drive	State-wide, except unitized portions spaced by (Order 22-62.) Pooling (Order 19-66.)	None
(Shut-in)	2				
Blackleaf (L. Cret.) Gas	12				
(Shut-in)	4				
Sawtooth (Jur.) Gas	5				
(Shut-in)	2				
KELLEY					
Tyler (Penn.)	3	Strat.	Depletion	State-wide. 250' topographic tolerance. (Order 15-67.)	Waterflood using Third Cat Creek water. (Orders 8-69, 51-76.)
KEVIN-SUNBURST					
Sunburst (L. Cret.) Oil	33	Strat.	Depletion	Oil: 9 wells per 40-acre tract; only 3 wells on any side of tract with set back at least 220' from line. (Orders 8-54, 28-55.) Gas: Well to be no closer than 330' from the boundaries of any legal subdivision line, nor less than 2400' from every other drilling or produceable well on the same lease or unit. (Order 8-54.)	There are four water floods in operation using Madison water. (Orders 9-64, 17-64, 30-64, 36-65, 29-71.) Sunburst water disposed into Madison (Order 50-76.) H2S, CO2, and produced water disposed into Madison. (Order 156-81.)
Bow Island-Sunburst (L. Cret.) & Swift (U. Cret.) Gas	24	Structure			
Madison (Miss.) Oil & Gas	677	Structure-Strat.	Depletion		
KEVIN-SUNBURST NISKU GAS					
Nisku (Dev.)	4	Structural	Volumetric	640-acre spacing units; location no closer than 990' from spacing unit boundary. (Order 83-76.)	None
KEVIN, SOUTHWEST					
Bow Island (L. Cret.) Gas	4	Structure-Strat.	Depletion	320-acre one-half section spacing units lying N-S or E-W at operator's option. Location to be no closer than 660' from unit boundary for Sunburst-Swift formations and all formations above the top of the Kootenai. (Orders 26-78, 47-78, 48-78.) Field enlargement. (Order 96-79.) and (Order 47-80.) Field enlargement. (Order 163-81.)	None
(Shut-in)	1				
Sunburst (L. Cret.) Gas	7				
Swift (U. Jur.) Gas	1				
Bow Island-Swift	1				
(Shut-in)	1				
Bow Island-Sunburst	2				
KICKING HORSE					
Bow Island (L. Cret.) Gas	9	Structural	Depletion	320-acre spacing with location permitted no closer than 660' from unit boundary and 990' from field boundary. (Order 17-74.) Board (Order 17-74) is amended to include certain additional lands into field 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.)	None
(Shut-in)	1				
Sawtooth (Jur.) Gas	1	Strat.	Depletion		
Sunburst (L. Cret.)	1	Strat.	Depletion		

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
KINCHELOE RANCH, WEST Tyler (Penn.)	4	Strat.	Depletion	State-wide.	None
KINYON COULEE Bow Island (L. Cret.)	4	Structural Strat.	Volumetric	State-wide.	None
KINYON COULEE, SOUTH Bow Island (L. Cret.)	3	Structural	Volumetric	Only one well permitted. Well location no closer than 990' from section line. (Order 31-81.)	None
KRUG CREEK Red River (Ord.)	1	Structural	Water Drive	320-acre spacing units consisting of 2 contiguous quarter sections designated by operator. Well location no closer than 660' from unit boundary or 1650' from existing well. Production may be commingled with board approval. (Order 27-81.)	None
LAIRD CREEK Swift (U. Jur.) Oil & Gas	6	Strat.	Depletion	State-wide.	Unitized and waterflood authorized in Swift for oil production. (Order 25-74.) Commenced 2-25-77.
LAKE BASIN Telegraph Creek (U. Cret.) Gas Eagle-Virgelle (U. Cret.) Gas	23	Structural-Strat.	Volumetric	160-acre spacing units to base of Virgelle; wells no closer than 660' from unit boundary and 990' from field boundary. Commingling permitted after administrative approval. (Order 9-74.) Gas from Telegraph Creek pooled. (Order 29-75.)	None
LAKE BASIN, NORTH Eagle, Frontier (U. Cret.) Gas (Shut-in) Claggett (Shut-in) Eagle-Virg. (U. Cret.) Gas (Shut-in) Judith River (U. Cret.) Gas (Shut-in)	2 1 9 1 3 1 5 1	Structural	Unknown	640-acre spacing units consisting of one section. Locations 990' from section line. (Order 3-74.) 160-acre spacing units located no closer than 660' from quarter section lines within restricted Sections. (Order 63-76.)	None None
LAKE FRANCIS Bow Island (L. Cret.) Gas	1	Structural	Volumetric	Statewide	None
LAKESIDE Eagle (U. Cret.)	1	Structural	Volumetric	State-wide.	None
LAMBERT Red River (Ord.)	2	Structural	Depletion Water Drive	State-wide.	None
LANDSLIDE BUTTE Sun River (Miss.)	1	Unknown	Water Drive	State-wide.	None
LAREDO Eagle (U. Cret.) (Shut-in) Judith River (U. Cret.) (Shut-in)	29 1	Structural Strat.	Depletion	320-acre spacing with unit consisting of one-half section lying N-S or E-W at operator's option after administrative approval. Well no closer than 990' from unit boundary. (Order 8-74.)	None
LARIAT Red River (Ord.)	1	Struc.	Water Drive	Single well spacing unit for Red River (Order 57-81.)	
LAUREL Dakota (L. Cret.) (Shut-in)	20			10-acre spacing unit. Well location to be in center of spacing unit with 75' topographic tolerance. (Order 15-62.)	Muddy Gas injection into the Dakota approved. (Order 85-79.)
LEARY Muddy (L. Cret.)	5	Structural-Strat.	Depletion	80-acre spacing with locations in NE¼ and SW¼ of each quarter section, 200' topographic tolerance. (Orders 12-69, 19-70.) Reduced Field Area (Order 68-76.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
LEDGER Bow Island (L. Cret.) Gas	38	Structural	Volumetric	640-acre spacing; one well per section per Sand to be located no closer than 990' from section line. Permissible to commingle two or more Sands, subject to administrative approval by the Petroleum Engineer. (Order 53-77.)	None
LEDGER, NO. Bow Island (L. Cret.) (Shut-in)	1	Structural	Volumetric	State-wide.	None
LEROY Judith River-Eagle	22	Unknown	Depletion	320-acre spacing with unit consisting of one-half section lying N-S or E-W at operator's option after administrative approval. Well no closer than 660' from unit boundary and 990' from field boundary. (Order 19-75.) Board (Order 19-75) amended that a tolerance of 330' for permitted well be allowed for topographic reasons. (Order 72-80.)	None
Virgelle (U. Cret.) Gas (Shut-in)	4 8	Unknown	Depletion		
LISCOM CREEK Shannon (U. Cret.) Gas (Shut-in)	9 1	Structural-Strat.	Depletion	Spacing, one well per 640 acres, with location no closer than 990' from section boundary. (Order 20-72.)	None
LISK CREEK Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
LITTLE BEAVER (Mont. Portion) Red River (Ord.)	25	Structural	Comb. Depletion and Water Drive	Spacing waived and General Rules for (Deviation), (Commingle), and (Dual Completion) are suspended until present Unit Agreement becomes inoperative. (Order 41-62.)	Waterflood of the Red River was commenced in August, 1967. (Order 3-66.) Minnelusa water.
LITTLE BEAVER, EAST (Mont. Portion) Red River (Ord.) (Shut-in)	9 4	Structural	Comb. Depletion and Water Drive	Same as for Little Beaver. (Order 42-62.)	Waterflood of the Red River was commenced in April, 1965. (Order 33-64.)
LITTLE CREEK Eagle-Virgelle (U. Cret.) Gas	7	Structural	Volumetric	State-wide.	None
LITTLE PHANTOM Sunburst	1	Strat.	Depletion	10-acre spacing units; Well location to be located anywhere within the spacing unit but no closer than 220' from 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.)	
LITTLE ROCK Blackleaf (L. Cret.) Gas	14	Structural Strat.	Depletion	320-acre north half and south half spacing units. Well location no closer than 990' from west line of Section 14 and 660' from the remaining unit boundary lines. (Order 40-78.) Field enlargement. (Order 94-79.) and (Order 34-80.)	None
LITTLE WALL CREEK Tyler (Penn.)	24	Strat.	Depletion Water Drive	State-wide.	Produced water injected into Tyler formation (Orders 54-A-77, 63-A-78, Order 1-A-81.)
LODGE GRASS Tensleep (Penn.)	1	Structural-Strat.	Water Drive	State-wide.	None
LOHMAN Eagle (U. Cret.) (Shut-in)	4 1	Unknown	Depletion	640-acre spacing; one well per section to be located no closer than 990' from section line. (Order 23-78.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
LONE BUTTE Red River (Ord.)	1	Structural	Unknown	320-acre spacing units with well location at least 660' from unit boundary. Not delineated.	None
LONETREE CREEK Red River (Ord.)	9	Structural	Depletion	320-acre spacing, wells 660' from spacing boundary, 2000' between wells. (Order 29-72.) Field reduction (Order 162-81.)	None
LONG CREEK Madison (Miss.) Charles	1	Structural	Water Drive	State-wide spacing.	None
LONG CREEK, WEST Nisku (Dev.)	2	Structural	Water Drive	80-acre spacing units comprised of two contiguous quarter quarter sections which may lie in either one or two governmental sections aligned either North-South, East-West with location to be no closer than 330 feet from unit boundary nor less than 1000 feet from any other producing well. (Order 27-77.)	None
LOOKOUT BUTTE (Includes Coral Creek Unit) Madison (Miss.)	2	Structural	Water Drive	State-wide spacing.	Water disposal into Madison. (Order 68-62.)
(Shut-in)	5				
Interlake, Red River (Sil.-Ord.)	27	Structural	Comb. Depletion and Water Drive	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 per (Order 7-63.)	Waterflood of Silurian-Ordovician approved in 1966. (Order 35-66.) Water from Minnelusa.
(Shut-in)	6				
LOWELL Red River (Ord.)	3	Structural	Water Drive	320-acre 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' from unit boundary or closer than 1650' to well producing from the same horizon. (Order 104-79.)	None
MACKAY DOME Greybull (L. Cret.) Oil	4	Structural	Water Drive	State-wide.	None
MARIAS RIVER Bow Island (L. Cret.)	15	Structural	Depletion	One well per section per horizon above the top of the Kootenai. Location to be no closer than 990' from section line. (Order 18-78.)	None
MASON LAKE Lakota (L. Cret.)	13	Structural	Water Drive	80-acre spacing units consisting of 1/2 of a quarter section lying in either E-W or N-S direction; well location in center of the NE and SW quarter-quarter sections of each quarter section with 75' topographic tolerance. (Order 35-78.) Amending (Order 35-78) for certain lots designated as spacing units. (Order 66-78.) Field enlargement (Order 16-79.)	Produced water disposed into Muddy formation. (Order 3-A-80.)
MASON LAKE, NORTH Amsden (Penn.)	1	Structural	Water Drive	State-wide.	None
McCABE Ratcliffe (Miss.)	2	Structural	Depletion	160-acre spacing units; permitted well to be no closer than 660' from spacing unit boundary. (Order 100-80.) 150' tolerance allowed for topographic reasons. (Order 3-81.) Board Order No. 100-80 amended to eliminate the requirement of 1650' between wells producing from the Madison Group. (Order 37.81.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
MEDICINE LAKE					
Red River (Ord.)	10	Structural	Water Drive	320-acre spacing units to comprise of any two contiguous governmental quarter sections in either one or two governmental sections. Well to be located no closer than 660' from unit boundary nor closer than 1650' to any well producing from the same formation (Order 50-79.)	Produced water disposed into Kibby & Dakota formation. (Order 133-A-81.)
(Shut-in)	1				
Winnipegosis (Dev.)	1	Structural	Comb.		
Winnipegosis-Interlake (Dev.-Sil.)	1	Structural	Depletion and Water Drive		
Ratcliffe-Midale (Miss.)	1	Structural	Water Drive		
MELSTONE					
Tyler (Penn.)	12	Structural-Strat.	Depletion	State-wide.	None
MIDBY					
Red River (Ord.)	1	Structural	Water Drive	160-acre spacing units; Well location to be no closer than 660' from unit boundary and spacing units designated by: (Order 24-81.)	
MIDDLE BUTTE					
Bow Island (Cret.) Gas	5	Structural	Volumetric	Orders (3-60, 21-75) Amended to delineated field extension and 320-acre spacing units consisting of the E½ & W½ of each section; well location no closer than 990' from the section line and 660' from the interior boundary. (Order 47-77.)	None
(Shut-in)	1				
MINERAL BENCH					
Charles (Miss.)	1	Structural	Water Drive	State-wide.	Water disposal into Dakota-Lakota per (Order 18-65.)
MINERS COULEE					
Sunburst (L. Cret.) Oil	3	Strat.	Depletion	Oil: 40-acre units consisting of quarter-quarter sections; well location no closer than 330' from lease or property line and 660' from any other well (Order 9-66.) Order 9-66 amended to comply with Order 5-74.	None
(Shut-in)	3				
Swift (U. Jur.) Oil	1	Strat.	Depletion	Gas: 160-acre spacing with wells 990' from unit boundary. (Order 5-74.)	
(Shut-in)	1	Strat.?	Water Drive		
Sunburst-Swift Gas	2			Sawtooth gas spacing unit. (Order 43-76.) Field redelineation (Order 44-77.) Field enlargement. (Order 4-80.)	
(Shut-in)	1				
Sawtooth (M. Jur.) Gas	1	Strat.	Depletion		
Bow Island (L. Cret.) Gas	18				
(Shut-in)	1				
MONARCH					
Mission Canyon (Miss.)	2	Structural-Strat.	Water Drive	80-acre spacing units consisting of east and west half of quarter section. Well location in SW¼ and NE¼ of quarter section. Location within 660' square at center of quarter section. (Order 18-61.)	Produced water is disposed into the salt water disposal system for the Pennel Field.
Interlake, Red River (Sil.-Ord.)	12	Structural-Strat.		160-acre spacing units consisting of a quarter section; well location in center of SW¼ of each quarter section with 175' topographic tolerance. (Orders 12-59, 4-63.)	Waterflood initiated 12-1-73. (Order 23-73.)
(Shut-in)	3				
MON DAK WEST					
Madison (Miss.)	Total-	Structural	Water Drive	320-acre spacing units for Silurian and Ordovician pools. Units to consist of either (N½, S½, E½ or W½) well location to be no closer than 660' to unit boundary or closer than 1650' to any well drilling or producing from same pool. (Order 42-77.)	Produced water injected into Dakota-Lakota. (Order 49-A-78.), & (111-A-80.)
Dawson Bay (Dev.)	26				
(Shut-in)	2				
Winnipegosis (Dev.)	1	Structural	Comb.		
Interlake (Sil.)			Depletion and		
Stony Mtn. (Ord.)	8		Water Drive	320-acre spacing units for Madison and Devonian formations. Units to consist of either (N½, S½, E½ or W½) well location to be no closer than 660' from a quarter section line or section line and no closer than 1650' to any well drilling or producing from same pool. (Orders 23-77, 33-78, 51-79.)	
Red River (Ord.)					
MOSBY					
(See Cat Creek)					
MOSSER DOME					
Greybull (L. Cret.)	13	Structural	Water Drive	Spacing waived. Future development requires administrative approval of the Board. (Order 27-62.)	None

Field. Formation. Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations. Field Rules. and Remarks	Secondary or Water Disposal
MT. LILLY Madison (Miss.) Gas Sunburst (L. Cret.) Gas	2 1	Structural-Strat.	Water Drive Depletion	640-acre spacing, well location in approximate center of any of the four quarter-quarter sections adjoining center of section; 250' topographic tolerance. (Order 37-63.)	None
MUD CREEK Amsden (L. Penn.) (Shut-in)	2	Structural	Water Drive	640-acre spacing unit. Well location anywhere in 160-acre tract in center of each 640-acre well spacing unit. (Order 9-63.)	None
MUSTANG Red River (Ord.)	3	Structural	Water Drive	State-wide.	None
NOHLY Red River (Ord.)	2	Structural	Volumetric Water Drive	State-wide.	None
NORTH FORK Red River (Ord.) Mission Canyon (Miss.)	1 1	Structural Structural	Water Drive Water Drive	State-wide.	None
NORTH GILDFORD Sawtooth (M. Jur.) (Shut-in)	1	Structural	Unknown	320-acre specified spacing units. One well per unit 660' from boundary, 2640' between wells. (Order 9-58.) Boundary reduction. (Order 38-76.) Field enlargement (Order 9-79.)	None
O'BRIENS COULEE Bow Island (L. Cret.) (Shut-in)	9 8	Structural	Volumetric	State-wide.	None
OLLIE Red River (Ord.) Duperow (Dev.)	1 1	Structural	Water Drive	320-acre specified spacing units for the Red River and Duperow Formations. The permitted well for each spacing unit to be located no closer than 660' from the spacing unit boundary. (Order 73-80.)	None
OTIS CREEK Red River (Ord.)	3	Structural	Water Drive	320-acre spacing units; well to be located no closer than 660' to unit boundary. (Order 39-72.) Extended field boundary. (Orders 56-76, 67-76.)	
OTIS CREEK, SOUTH Red River (Ord.)	1	Structural	Depletion	Orders 39-72 and 56-76 amended to eliminate spacing units. New spacing units are qtr. sections. Well locatin no closer than 660' from unit boundary or 1650' from producing well with 150' tolerance. Operator may designate contiguous qtr. sections as spacing units. (Order 73-81.)	None
OTTER CREEK Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
OUTLOOK Duperow (Dev.) Winnipegosis (Dev.) Silurian-Devonian (Shut-in) (Shut-in)	1 2 1 3 1	Structural-Strat. Structural-Strat. Structural-Strat.	Water Drive Water Drive Water Drive	State-wide. State-wide. 160-acre spacing units; well location in center of either SW¼ or NE¼ of each quarter section; 175' topographic tolerance. (Order 19-59A.)	Produced water is disposed into Dakota and Siluro-Devonian formations. (Orders 16-59, 17-65, 36-66, 9-A-77.) Produced water disposed into Madison formation. (Order 59-A-78.)
OUTLOOK, SOUTH Winnipegosis (Dev.)	1	Structural	Water Drive	160-acre spacing; permitted wells in either SW¼ or NE¼ of quarter section; 175' topographic tolerance. (Order 19-59A.) Commingling permitted. (Order 45-64.)	Produced water disposed into Muddy and Dakota formations.

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
OUTLOOK WEST Winnepegosis (Dev.)	2	Structural	Water Drive	160-acre spacing units consisting of quarter sections; permitted wells in either SW¼ or NE¼ with a tolerance of 175'. (Order 7-67.)	Produced water disposed into Dakota formation. (Order 42-66.)
OXBOW Red River (Ord.)	1	Structural-Strat.	Water Drive	320-acre spacing consisting of two contiguous governmental quarter sections which may be in one or two governmental sections lying E-W or N-S at operator's option. Location to be no closer than 660' to the unit boundary or closer than 1650' to a well producing from same pool. (Order 7-78.) Field enlargement. (Order 137-80.)	None
PALOMINO Nisku (Dev.) Mission Canyon	1	Structural-	Water Drive	State-wide.	None
PELICAN Red River (Ord.)	1	Structural	Water Drive	320-acre spacing units; wells to be located no closer than 660' to any governmental section or quarter section line boundary. (Order 21-79.)	None
PENNEL Siluro-Ordovician Oil & Gas (Shut-in)	97 11	Structural	Depletion-Water Drive	80-acre spacing units consisting of east and west half of quarter section; wells located in center of SE¼ and NW¼ 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 SE¼ and NW¼ of each quarter section (80 acres) and in SE¼ of each quarter section on 160-acre spacing. (Orders 1-56, 8-56, 15-61, 20-62, 4-63, 7-63.) Commingling approved. (Order 59-62.)	Produced water is being injected into Dakota, Siluro-Ordovician and Madison formations. (Orders 16-60, 46-62, 68-62, 36-63, 13-64.) Waterflood for Siluro-Ordovician approved Nov. 1968. (Order 24-68.)
PETE CREEK Sunburst (L. Cret.) Oil (Shut-in)	1 1	Strat.	Depletion	State-wide.	None
PHANTOM Sunburst (Cret.) Gas Sunburst (L. Cret.) Oil (Shut-in) Swift (U. Jur.) Gas	1 2 1 2	Structural Strat. Strat.	Depletion Depletion Depletion	*Gas: wells permitted anywhere within the unit but no closer than 990' to the unit boundary. *Oil: projected depths greater than 6000' to be located no closer than 660' to the unit boundary. Project depths less than 6000' to be located no closer than 330' to the unit boundary. (Order 48-77.)	None
PHANTOM, WEST Sunburst (L. Cret.) Gas	1	Structural	Depletion	One well per spacing unit to be located no closer than 660' to the exterior boundaries of three certain spacing units. (Order 65-78.)	None
PINE Mission Canyon (Miss.) Oil & Gas (Shut-in) Siluro-Ordovician Oil & Gas (Shut-in)	2 2 80 25	Structural Structural	Water Drive Depletion-Water Drive	Spacing and General Rules 213, 218 and 219 are waived within the Pine Unit. 80-acre spacing units outside of unit area; well location in NW¼ and SE¼ of quarter section; 150' topographic tolerance. (Order 37-62) Gas through extraction plant.	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.) Produced water injected into Mission Canyon. (Order 10-A-74.)
PLEVNA Judith River (U. Cret.) Gas (Shut-in) Eagle (U. Cret.) Gas (Shut-in)	19 5 1	Structural	Water Drive	1200' from quarter section line; 2400' from other wells in same lease or unit; 75' topographic tolerance. (Orders 34-54, 4-57,) and Order 34-54 Corrected.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
POLICE COULEE Bow Island (L. Cret.)	8	Structural	Depletion	320-acre spacing units; location no closer than 990' from section line and 660' from half section lines. Spacing units to consist of north half or south half, east half or west half at discretion of operator. (Order 53-76.) Extended Field boundaries. (Order 24-77.) Field enlargements. (Orders 20-79 and Order 46-79.)	None
PONDERA Sun River (Miss.) Oil & Gas (Shut-in)	298 21	Structural-Strat.	Depletion-Water Drive	Oil: 220' from legal subdivision, 430' from other wells in same reservoir on same lease; 75' topographic tolerance. 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 1320' from the boundaries of any quarter section line, nor less than 3700' from every other drilling or produceable well on the same lease or unit. (Order 9-54 Corrected.)	Produced water injected into lower Madison. (Orders 11-56, 15-56, 4-65, 4-66, 20-A-71), (57-A-78), (58-A-78), (62-A-78), (71-A-78), (29-A-79), (62-A-79), (63-A-79), (64-A-79), (65-A-79), (14-A-80), (15-A-80), (16-A-80), (17-A-80), (127-A-81.)
PONDERA COULEE Sun River (Miss.) (Shut-in)	2 2	Structural	Water Drive	330' from legal subdivision lines or upon a 10-acre spacing pattern; 75' topographic tolerance. (Order 5-62.)	None
POPLAR, EAST Madison (Miss.) (Charles & Mission Canyon fms.) (Shut-in)	48 38	Structural	Water Drive	State-wide spacing; field delineated by (Order 7-55.) Re-delineation of field (Order 25-76.)	Unitized in 1955. (Order 7-55.) Excess produced water has been injected into the Dakota, Judith River, and Mission Canyon formations. (Orders No. 1-55, 5-57, 7-57, 14-61, 21-61, 34-61, 10-62, 51-67, 10-A-73, 127-A-80, and 121-A-81.)
Heath (Tyler) (Penn.)	1	Structural-Strat.	Water Drive		
Nisku (Dev.)	1	Structural	Water Drive		
POPLAR NORTHWEST Charles (Miss.) ("B" & "C" or McGowan Zone)	14	Structural	Water Drive	80-acre spacing units consisting of E/2 and W/2 of each quarter section; permitted wells to be located in the center of NW 1/4 or SE 1/4 of each quarter section with 75' tolerance allowed in any direction for surface hazards and obstructions. (Order 18-55) 80-acre specifically designated spacing units with well location to be located in the center of the NW 1/4 or SE 1/4 of each quarter section with a tolerance of 150' in any direction for topographic or geologic reasons. (Order 26-76.) 80-acre spacing units to be N/2 and S/2 or E/2 and W/2 of each quarter section; permitted well to be located in center of each NE 1/4 or SW 1/4 of each quarter section with 150' tolerance for topographic or geologic reasons. (Order 124-80.) 80-Acre spacing units for test wells to the Charles formation; spacing units to be N/2 and S/2 or E/2 and W/2 of each quarter section with location to be in center of each NE or SW 1/4 of each quarter section with 150' tolerance for archeological reasons only. (Order 161-81.)	Produced water disposed into Dakota. (Order 61-A-78.)
PRAIRIE DELL Bow Island (L. Cret.) Sunburst (L. Cret.) Swift (U. Jur.)	41	Structural-Strat.	Depletion	320-acre spacing units with well location no closer than 660' to spacing unit boundary. (Order 10-76.) Redelineation and amendment to (Order 10-76.) Field enlargement by: (Orders 28-78, 24-79, 132-80, 40-81, 54-81, and 142-81.)	None

Field. Formation. Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations. Field Rules, and Remarks	Secondary or Water Disposal
PRAIRE DELL, WEST Swift (U. Cret.) Gas	1	Structural-Strat.	Depletion	640-acre spacing unit; well to be no closer than 990' to the spacing unit boundary. (Order 16-78) Amending (Order 16-78) to include all horizons above the Rierdon formation. (Order 54-78.) Field enlargement. (Order 55-78.)	None
PRAIRIE ELK Charles "C" (Miss.)	1	Unknown	Water Drive	State-wide.	None
PRICHARD CREEK Sunburst (L. Cret.) Oil & Gas (Shut-in)	4	Strat.	Depletion	Well locations subject to administrative approval.	None. Unitized as to Sunburst for water injection. (Order 7-73.)
Swift (U. Jur.) Oil	2 1	Strat.	Depletion		
PUMPKIN CREEK Shannon (U. Cret.) Gas (Shut-in)	8	Strat. Strat.	Depletion	State-wide. Delineated (Order 10-71.)	None
PUTNAM Interlake (Sil.)	1	Structural	Volumetric Water Drive	State-wide.	None. Gas to McCulloch Gas Processing Corp. Brorson Plant.
Red River (Ord.)	10	Structural	Volumetric Water Drive		
Mission Canyon (Miss.)	3				
RABBIT HILLS Sawtooth (Jur.)	5	Structural Strat.	Volumetric Water Drive	160-acre spacing unit. Well location 660' from spacing unit boundary. (Orders 17-73, 34-74, 33-76.) Re-delineation (Order 47-76.)	Produced water disposed into Eagle formation. (Order 49-A-75.)
RAGGED POINT Tyler (Penn.) (Shut-in)	18 3	Strat.	Depletion	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 of the Tyler "A" sand was commenced in February, 1966, using Third Cat Creek water. (Order 35-65.)
RAPELJE Claggett, Eagle, Judith River, Virgelle (U. Cret.)	15 1	Structural-Strat.	Water Drive	160-acre spacing. Wells no closer than 990' to unit boundary. Commingling after administrative approval. (Order 29-73.)	None
RATTLER BUTTE Tyler (Penn.)	3	Strat.	Depletion	State-wide.	None
RATTLESNAKE COULEE Sunburst (L. Cret.) Oil & Gas Bow Island (L. Cret.) Gas (Shut-in)	2 1	Strat.	Depletion	State-wide.	None
RAYMOND Nisku (Dev.) Red River (Ord.) Winnipegosis (Dev.) Charles (Miss.)	2 2 1 10	Structural-Strat.	Depletion Water Drive	320-acre spacing units. Wells 660' from spacing unit boundary. (Order 38-72.) Gas Storage. (Order 50-78.) Field extension-new pool designation (Order 35-79.) (Order 50-78.) amended by (Order 60-79.) Field enlargement. (Order 31-80) and (Order 128-80.) Field reduction. (Order 135-81.)	Produced water injected into Dakota formation. (Order 38-A-74.) Produced water injected into Mission Canyon (Order 105-A-79) and (113-A-80.) Produced water injected into Raymond formation, (Order 131-A-81.) Authorization to inject gas into the Nisku formation. (Order 135-81.)
RAYMOND, NORTHEAST Nisku (Dev.)	1	Structural-Strat.	Depletion Water Drive	160-acre spacing units. Wells 660' from spacing unit boundary. (Order 12-74.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
REAGAN Sun River (Miss.) Oil	61	Structural	Gas Cap-Water Drive	State-wide. (Order 17-54.)	A pressure maintenance project utilizing gas injection was started in 1961. (Order 21-60.)
Gas	1				Waterflood. (Order 27-72.)
RED BANK Red River (Ord.) Ratcliffe (Miss.)	2 10	Structural Strat.	Water Drive	State-wide.	None
RED CREEK Cut Bank (L. Cret.) Oil & Gas (Shut-in)	7 2	Strat.	Depletion	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, 73-62, 31-64, 5-70.)	Excess produced water injected into Bow Island and Madison. (Orders 22-63, 37-64.) A waterflood project in the Cut Bank sand was initiated in June, 1965, using Madison water.
Sun River (Miss.) Oil & Gas (Shut-in)	12 6	Structural	Water Drive		
RED FOX Nisku (Dev.)	1	Structural	Water Drive	Field consists of one 160-acre spacing unit which straddles the section line. (Order 20-67.)	None
RED ROCK Eagle (U. Cret.) Gas	4	Structural-Strat.	Volumetric	Spacing units shall consist of the north half and south half of section with permitted well to be no closer than 990' from exterior section line nor closer than 660' to half section line. (Order 89-79.)	None
REDSTONE Winnipegosis (Dev.)	1	Unknown	Water Drive	One well per 160-acre unit, but no closer than 660' from unit boundary.	None
RED WATER Duperow (Dev.)	1	Structural-Strat.	Water Drive	State-wide.	None
REFUGE Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
REPEAT Red River (Ord.)	1	Unknown	Water Drive	State-wide.	None
RESERVE Interlake (Silr.)	1	Structural-Strat.	Water Drive	160-acre spacing units; permitted well within 1320' square in center of quarter section. Commingling of Red River and Interlake, production permitted on individual well basis. (Orders 34-66, 27-67.)	Excess water injected into Dakota sand. (Order 23-A-67.)
Red River (Ord.) (Shut-in)	4 1	Structural-Strat.	Water Drive		
Winnipegosis (Dev.)					
RICHEY Charles (Miss.)	3	Structural	Water Drive	State-wide. Original 80-acre spacing revoked. (Order 11-73.)	None
RICHEY, SOUTHWEST Interlake, Dawson Bay (Sil.) (Dev.)	4 2	Structural	Depletion	160-acre spacing units, wells no closer than 900' from boundary or spacing unit (Order 25-62.)	A waterflood project in the Interlake and Dawson Bay was started in 1965. (Order 34-65.)
(Shut-in)					
RICHEY, WEST Charles (Miss.)	1	Structural	Water Drive	State-wide.	None
RIDGELAWN Madison (Miss.) Red River	4 4	Structural	Water Drive	State-wide.	None
RIPRAP COULEE Ratcliffe (Miss.)	5	Structural-Strat.	Depletion	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
ROCKY BOY Eagle-Virgelle (U. Cret.) (Shut-in) Judith River (U. Cret.)	7 3 3	Structural-Strat.	Water Drive	State-wide.	None
ROCKY POINT Red River (Ord.)	1	Structural	Volumetric Water Drive	320-acre spacing unit well to be located no closer than 660' from exterior boundary (Order 22-79.)	None
ROSCOE DOME Lakota (L. Cret.)	3	Structural	Water Drive	State-wide.	None
ROSEBUD Tyler (L. Penn.)	5	Structural-Strat.	Unknown	State-wide.	None
ROUGH RIDGE Eagle (U. Cret.) (Shut-in)	1	Structural	Volumetric	State-wide.	None
ROYALS Dawson Bay (Dev.)	1	Structural	Depletion	State-wide.	None
RUDYARD Sawtooth (M. Jur.) Gas Oil	7 2	Structural	Volumetric	640-acre spacing units consisting of one section; well location in center of NW¼ of section with 75' topographic tolerance. (Order 2-58.) Field boundaries reduced. (Order 39-76.)	None
RUNAWAY Madison (Miss.)	1	Structural	Water Drive	State-wide.	None
RUSH MOUNTAIN Red River (Ord.)	1	Structural	Volumetric-Water Drive	State-wide. Dual zone completion in discovery well.	Excess water injected into Dakota sand. (Order 5-A-71.)
SAGE CREEK Greenhorn (Cret.) Gas Blackleaf (L. Cret.) Gas (Shut-in)	1 16 2	Strat.	Depletion	640-acre spacing, one producing well per section per formation above the Kootenai to be located no closer than 990' from section line. (Order 38-77.) Amended field boundary (Order 86-79.) Field enlargement (Order 33-81.)	None
SALT LAKE Bakken-Nisku (Miss.-Dev.)	4	Structural	Water Drive	State-wide.	Produced water disposed into Nesson (Madison) formation. (Order 61-A-80.)
SAND CREEK Interlake, Red River (Sil.) (Ord.) (Shut-in)	4 3	Structural	Water Drive	80-acre spacing units consisting of any two adjacent quarter-quarter sections. Wells located in center of NW¼ and SE¼ of each quarter section. (Order 16-59.) Commingling of production from Interlake and Red River authorized per (Order 49-62.)	Excess produced water is injected into the Swift formation. (Order 9-61.)
SANDWICH Sunburst (L. Cret.) Gas Swift (U. Jur.) Gas (Shut-in)	1 1	Strat.	Depletion	320-acre spacing unit. Well: located no closer than 990' to spacing unit boundaries. (Order 17-77.)	None
SAWTOOTH MOUNTAIN Judith River (U. Cret.) Eagle (U. Cret.) (Shut-in)	8 24 4	Structural-Strat.	Volumetric Water Drive	640-acre spacing units, one well per section per formation, location to be not less than 990' from governmental section line. (Order 45-76.)	None
SCOBAY Madison (Miss.)	1	Structural	Water Drive	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
SECOND CREEK Red River (Ord.)	4	Structural	Volumetric Water Drive	303.1-acre spacing unit; one well field. (Order 34-78.)	None
SECOND CREEK-DUPEROW Duperow (Dev.)	1	Structural	Water Drive	160-acre spacing units; well locations for each unit to be as specified by (Order 119-80.)	
SHEEPHERDER Tyler (L. Penn.)	3	Structural-Strat.	Unknown	State-wide.	None
SHELBY AREA Sunburst (L. Cret.) Gas (Shut-in) Bow Island (L. Cret.) Gas	33 17 5	Structural-Strat.	Depletion	State-wide. Field outline not delineated. A few small Swift sand wells commingled with Sunburst.	None
SHELBY, OLD Sunburst (L. Cret.) Gas (Shut-in)	1 8			320-acre spacing units to be comprised of either E/2, W/2, N/2, or S/2 of a section for Sunburst gas. Well location to be no closer than 660' to the unit boundary. (Order 85-81.) Field enlargement (Order 114-8 and 159-81.)	
SHERARD Eagle (U. Cret.) Gas (Shut-in) Judith River (U. Cret.) Dual	29 20 1	Structural-Strat.	Volumetric Water Drive	640-acre spacing units; 990' from section line. (Order 1-74.) 160-acre spacing units; (Eagle) 990' from section line, 660' from quarter section line. (Order 7-77.)	None
SHERARD WEST Eagle, Virgelle (U. Cret.) (Shut-in)	1 1	Structural-Strat.	Volumetric Water Drive	160-acre spacing units; location no closer than 660' to unit boundary. (Order 90-76.)	None
SHOTGUN CREEK, NORTH Gunton (Ord.) Red River (Ord.)	2	Structural	Water Drive	320-acre spacing units consisting of two contiguous governmental quarter sections which may be in one or two sections with permitted well to be no closer than 660' to the unit exterior boundary and no closer than 1500' to any well producing from the same formation. IF NOT feasible to produce two zones separately, commingling permissible with prior administrative approval. (Order 49-77.)	None
SIDNEY Mission Canyon (Miss.) (Shut-in) Red River (Ord.)	24 1 2	Structural	Water Drive	160-acre spacing units for Madison Group. One well per spacing unit to be located no closer than 660' from unit boundary and no closer than 1650' to well producing from the same formation. (Order 5-79.) Field enlargement. (Order 99-80.)	Excess water injected into Dakota formation. (Order 41-A-78.)
SIDNEY, EAST Madison	9	Strat.	Water Drive		
SINGLETREE Red River (Ord.)	1	Structural	Volumetric	State-wide.	Produced water disposed into Dakota Formation. (Order 59-A-80.)
SIOUX PASS Interlake (Sil.) Red River (Ord.) Mission Canyon	(Dual) 1 6 1	Structural	Volumetric Water Drive	320-acre spacing units consisting of two adjacent governmental quarter sections lying N-S or E-W at operator's option. Permitted well no closer than 660' from unit boundary. (Interlake and Red River). 160-acre spacing unit (Mission Canyon) with well no closer than 660' from unit boundary. Commingling of Interlake and Red River production authorized. (Order 10-75.) Amended field boundary. (Order 15-77.) Field reduction. (Order 89-81.)	Excess water injected into Dakota formation. (Order 15-A-75.)

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
SIoux PASS, EAST Red River (Ord.)	1	Structural-Strat.	Water Drive	State-wide.	None
SIoux PASS, MIDDLE Red River (Ord.)	6	Structural	Water Drive	320-acre spacing units 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 1650' from well producing from same formation. Commingling permissible with Administrative approval. (Order 55-76.) An exception to Order (55-76) by (Order 39-81.)	None
SIoux PASS, NORTH Interlake (Sil.) Red River (Ord.) Dual	1	Structural	Unknown	320-acre spacing units with well location at least 660' from unit boundary. (Order 12-75.) Field enlarged. (Order 16-75.) Commingling from Interlake and Red River approved. (Order 36-76.) Field Extension. (Order 12-77.) Orders (12-75, 16-75 and 12-79) Amended by (Order 8-79.) Field extension (Order 13-79.) Orders 12-75, 12-77, 8-79, and 13-79 amended to allow 150' tolerance closer to quarter section line or nearest well producing from same reservoir for topographical reasons. (Order 10-81.) Field enlargement. (Order 48-81.)	Produced water injected into Dakota-Lakota formations. (Order 34-A-75.)
Winnipegosis (Dev.)					
Nisku (Dev.) Red River (Ord.) Dual	1		Water Drive		
Red River (Ord.) (Shut-in)	12				
Madison (Miss.) (Shut-in)	1				
SIoux PASS, NORTH-DUPEROW Duperow (Dev.)	1	Structural	Water Drive	320-acre spacing unit consisting of NE ¼ Sec. 11 and NW ¼ Sec. 12, T 26 N, R 57 E. (Order 107-80.)	None
SNOOSE COULEE Bow Island (L. Cret.) Gas (Shut-in)	7 1	Structural-Strat.	Volumetric	640-acre spacing units; location no closer than 990' from spacing unit boundary. Bow Island and shallower Formations. (Order 18-18-77.)	None
SNOW COULEE Sunburst (L. Cret.) Gas (Shut-in)	1	Strat.	Depletion	Spacing units. E½ section 33 and W½ section 34, 36N-4E designated as spacing units. (Order 78-76.)	None
SNOWDEN Mission Canyon (Miss.)	1	Structural	Water Drive	Statewide.	None
SNYDER Tensleep (Penn.) (Shut-in)	3 1	Structural	Water Drive	10-acre spacing units with center 5-spot permitted; 150' topographic tolerance. (Order 45-62.)	None
SOAP CREEK Tensleep, Amsden, Madison (Penn.) (Penn.) (Miss.) (Shut-in)	24 1	Structural	Water Drive	One well per 10-acre spacing unit per producing formation; well location in center of spacing unit with 100' topographic tolerance. (Order 26-60.)	None
SOAP CREEK, EAST Tensleep (Penn.)	3	Structural	Water Drive	State-wide.	None
SOBERUP COULEE Bow Island (L. Cret.) Gas (Shut-in)	6	Structural	Water Drive	320-acre spacing units; well location to be no closer than 660' from the unit boundary (Order 25-79.)	None
SOUTH FORK Red River (Ord.)	3	Structural	Water Drive	State-wide.	None

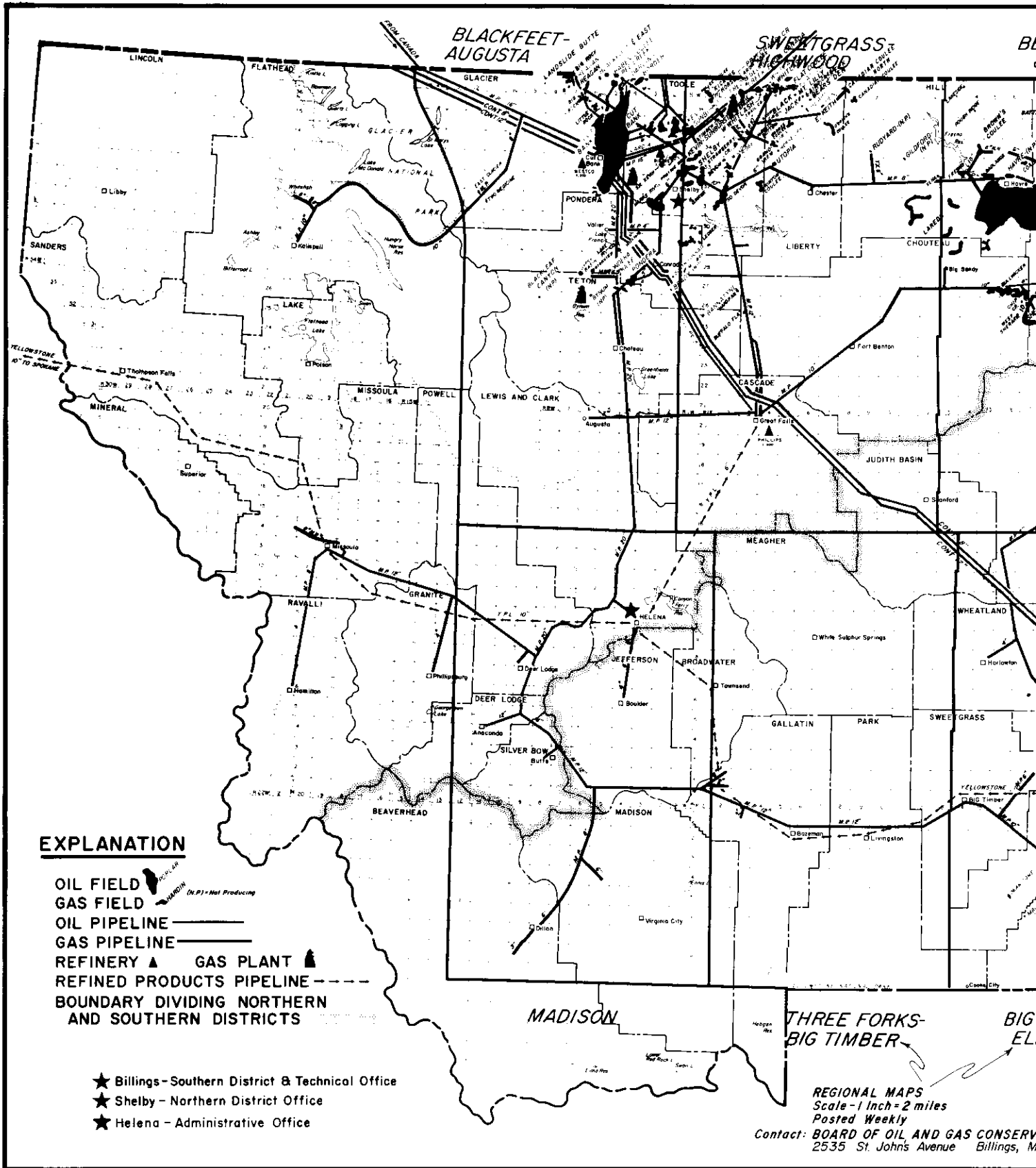
Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
SPRING LAKE Nisku (Dev.) Red River (Ord.)	(Shut-in) 1 2	Structural Structural	Depletion Depletion	One well per 160-acre spacing unit. Well location anywhere within 840' square in center of spacing unit. (Order 6-63.) Field redelineation. (Orders 30-76, 49-76.)	None
SPRING LAKE, SOUTH Red River (Ord.)	1	Structural	Water Drive	Single spacing unit. (Order 81-81.)	
STAMPEDE Red River (Ord.)	1	Structural	Depletion	State-wide.	None
STRAWBERRY CREEK Bow Island-Blackleaf (L. Cret.) Gas (Shut-in)	2 2	Structural-Strat.	Volumetric Water Drive	State-wide.	None
STENSVAD Tyler (Penn.) (Shut-in)	4 11	Strat.	Depletion	40-acre spacing units; well location in center of spacing unit with 200' tolerance. (Orders 2-59, 7-60.) Wells may be drilled anywhere within waterflood unit boundary, no closer than 660' from unit boundary. (Order 5-65, Amended.)	A waterflood operation has been in progress since 1963, using Madison water. (Orders 48-67, 9-67.) Excess produced water disposed into Madison (Order 70-A-76.)
STRATER Phillips Gas (Shut-in)	2	Strat.	Volumetric	160-acre spacing units; Well location to be no closer than 660' from quarter section line. (Order 103-81.)	None
SUMATRA Tyler (Penn.) Oil & Gas (Shut-in)	90 23	Strat.	Depletion	40-acre spacing units; well located in center of unit with 75' tolerance. (Order 14-58.) Field redelineated. (Order 14-75.) Vacuum pumps permitted on certain wells. (Order 99-79.) and (Order 32-80.)	Seven waterflood units using Madison water. (Orders 48-67, 6-69, 19-69, 23-69, 5-75, 21-78, and 43-80.) Produced water disposed into Madison formation. (Order 7-A-76.)
SUNNYHILL Red River (Ord.) Oil & Gas Madison (Miss.)	2 2	Structural Structural	Volumetric Water Drive Water Drive	320-acre 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 1650' to any well producing from same formation. (Order 39-78.)	Produced water disposed into Dakota formation. (Order 27-A-80)
SWANSON CREEK Phillips (U. Cret.) Gas (Shut-in)	14 24	Strat.	Depletion	320-acre spacing units; (Order 36-75) amended to enlarge field and provide that spacing units may run N-S or E-W at operator's option with permitted wells to be no closer than 990' to section or quarter section line. (Order 11-78.) Field boundaries extended. (Order 32-78.) Field extension (Order 92-79.) Field extension (Order 66-80.) Section 4-32N-34E included in Field with spacing units designated as E/2 and W/2 of Section 4. (Order 55-81.)	None
THIRTY MILE Eagle (U. Cret.) (Shut-in)	3	Structural	Unknown	State-wide.	None
THREE BUTTES Gunton & RR	3	Structural	Water Drive	160-acre spacing units, well location no closer than 660' from governmental quarter section line or unit boundary. (Order 11-81.)	
THREE MILE Eagle (U. Cret.) (Shut-in)	1 2	Structural	Volumetric Water Drive	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
TIBER Bow Island (L. Cret.) Gas	3	Strat.	Volumetric	Spacing allows one well for each gas producing horizon to be located anywhere within the section but no closer than 990' to the section line. (Order 143-81.)	None
TIBER, EAST Bow Island (L. Cret.) Gas (Shut-in)	1	Strat.	Volumetric	State-wide.	None
TIBER, SOUTH Colorado (Cret.) Gas	1	Strat.	Unknown	State-wide.	None
TIGER RIDGE Judith River (U. Cret.) Gas (Shut-in)	5 2	Structural- Strat.	Volumetric Water Drive	Field delineated; (Orders 17-67, 23-68) re-delineated and established. State-wide spacing. (Order 10-70.)	Excess produced water injected into Eagle formation. (Orders 19-A-73, 46-A-75.) (Order 19-A-73)
Eagle (U. Cret.) Gas (Shut-in)	219 48	Structural Strat.	Volumetric Water Drive	State-wide for field area not unitized. Two units: wells to be located no closer than 990' from unit boundary (Orders 11-72, 41-72) 160-acre spacing units: Sections 20, 21, 22, 27, 28, 33, 34, 32N-16E (Judith River) locations to be no closer than 660' from unit boundary (Order 32-73) Enlarge and redelineate Field (Order 13-75) 160-acre spacing units in Sections 22, 23, 24, 32N-14E (Eagle & Virgelle) wells to be located no closer than 990' from section line and 660' from quarter section line (Order 37-75) 160-acre spacing units: NW¼ & NE¼ Section 30, T-31N, R-17E well to be located at least 990' from quarter section line. 75' tolerance allowed for topographic reasons (Order 51-77.) 160-acre spacing units; Sections 32, 33, 31N-17E & Section 4, 30N-17E (Eagle) to be located no closer than 990' to a section line and 660' to quarter section line. (Order 52-77.) Field enlargement (Order 46-78.) Field enlargement. (Order 48-79.) Amendment to (Orders 17-67, 23-68 and 10-70) to establish 320-acre spacing units in certain areas. (Order 79-79.) Field enlargement and amending field rules to certain portions thereof (Order 26-80.) Amendment to (Orders 17-67, 23-68, and 10-70) to allow an additional well in certain sections (Orders 50-80 and 51-81.) Amendment to (Order 13-75) that allows one well per 160-acre spacing unit for Eagle formation with location to be no closer than 990' to boundaries of quarter section underlying section 35, T 32 N, R 18 E. (Order 54-80.)	Amended by (Order 60-A-78.)
TIGER RIDGE, NORTH Eagle (U. Cret.)	1	Structural	Volumetric Water Drive	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.)	None
TIGER RIDGE, SOUTH Eagle (U. Cret.)	1	Structural	Volumetric Water Drive	State-wide.	None
TIMBER CREEK Sunburst (L. Cret.) Gas (Shut-in)	2	Strat.	Depletion	320-acre spacing consisting of two adjacent governmental quarter sections lying N-S or E-W at operator's option. Permitted well no closer than 660' from spacing boundary and 990' from field boundary. (Order 24-75.)	None
TIMBER CREEK, WEST Sunburst (L. Cret.) Gas (Shut-in)	1	Strat.	Depletion	640-acre one well spacing unit. (Order 91-76.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
TIPPY BUTTES Tyler (Penn.)	2	Strat.	Depletion	State-wide.	None
TRAIL CREEK Sunburst (L. Cret.) Gas (Shut-in)	3	Structural-	Water Drive	One well per 320 acres consisting of S½ and N½ of each governmental section but not closer than 990' from spacing boundary. (Orders 33-70, 28-76.) Field enlargements (Order 135-80.)	None
Bow Island (L. Cret.) Gas (Shut-in)	2	Strat.	Volumetric		
TULE CREEK Nisku (Dev.)	3	Structural	Water Drive	160-acre spacing units with permitted well anywhere within 1320' square in center of each unit. (Orders 26-62, 6-65, 11-67, 5-77.)	Produced water injected into Dakota and Judith River formations. (Orders 12-66, 24-67, 8-A-76, 134-A-81.)
(Shut-in)	4				
TULE CREEK, EAST Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted well anywhere within 1320' square in center of each unit. (Orders 40-64, 6-65.)	Water injected into Judith River formation. (Order 13-68.) Water injected into Nisku formation. (Order 28-A-79.)
(Shut-in)	1				
TULE CREEK, SOUTH Nisku (Dev.)	2	Structural	Water Drive	160-acre spacing units with permitted well anywhere within a 1320' square in center of each unit.	Authority given to dispose of produced water into Dakota. (Order 44-64.) Into Judith River formation. (Order 29-67.)
TWO FORKS Judith River (U. Cret.) Gas	1	Structural	Volumetric	State-wide	None
Eagle (U. Cret.) Gas	1	Strat.			
TWO MEDICINE CREEK Sun River (Miss.)	1	Structural	Volumetric	State-wide.	Produced water disposed into Cut Bank formation (Order 89-A-80.)
		Strat.	Water Drive		
TWO WATERS Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
UTOPIA, GAS Sawtooth (Jur.) Gas	6	Structural	Depletion	640-acre spacing units; well location may be anywhere within the unit but no closer than 990' to any governmental section line (Order 13-80.)	None
(Shut-in)	3				
UTOPIA SWIFT Swift (U. Jur.) Oil	12	Structural	Water Drive	40-acre spacing units; 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 qtr. qtr. section no closer than 330' from the section boundary. (Order 96-81.)	None
(Shut-in)	1				
VAUX Red River (Ord.)	6	Structural	Water Drive	State-wide.	Produced water injected into the Dakota formation. (Order 44-A-79.)
(Shut-in)	1				
Mission Canyon (Miss.)	8				
(Shut-in)	1				
Interlake (Sil.)	2				
VIDA Interlake (Sil.)	2	Structural	Water Drive	160-acre spacing units with permitted well anywhere within an 840' square in center of each unit. (Order 39-63.) Field Area reduction. (Order 79-76.)	Water injected into Lakota formation. (Order 14-68.)
VIKING Dawson Bay (Dev.)	1	Structural-	Water Drive	320-acre spacing units, designated; to be located no closer than 660' to the unit exterior boundary and no closer than 1500' to any well producing from the same formation. If not feasible to produce two zones separately, commingling permissible with prior administrative approval. (Order 50-77.)	None
Winnipegosis	(Shut-in)	Strat.			

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
VOLT					
Nisku (Dev.)	4	Structural	Water Drive	160-acre spacing units with permitted well anywhere within a 1320' square in center of each unit. (Orders 27-64, 6-65, 32-65.) State-wide.	Excess produced water is disposed into Judith River. (Orders 3-65, 37-A-74.)
(Shut-in)	1				
Charles "C" (Miss.)	1	Structural	Water Drive		
WAGON BOX					
Tyler (Penn.)	1	Structural-Strat.	Unknown	State-wide.	None
(Shut-in)	1				
WEED CREEK					
Amsden (Penn.)	1	Structural	Water Drive	State-wide.	None
WELDON					
Kibbey (Miss.)	1	Structural	Partial Water Drive	80-acre spacing unit; each quarter section divided into two separate units running in either a north-south or east-west direction; well location in center of NE 1/4 and SW 1/4 of quarter section with 200' topographic tolerance. (Order 9-65.)	Excess produced water is disposed into the Dakota, Lakota, Morrison, Charles, and Kibby formations (Orders 31-65, 47-65, 37-66, 16-67, 51-A-81, 118-A-81, 128-A-81.)
(Shut-in)	2				
WEST BUTTE					
Sunburst (L. Cret.) Oil	4	Structural-Strat.	Depletion	State-wide, except W 1/2 Section 16 is considered a single spacing unit.	None
(Shut-in)					
Bow Island (L. Cret.) Gas	1				
Sawtooth (Jur.) Gas	3	Structural	Water Drive	Sawtooth-Madison gas commingled, unitized (Order 5-72.) No well closer than 330' from unit boundary.	
(Shut-in)					
Madison (Miss.) Gas	1				
WEST BUTTE SHALLOW GAS					
Bow Island (L. Cret.)	1	Structural-Strat.	Volumetric	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' feet from the spacing unit boundaries. (Order 39-77.)	None
(Shut-in)					
WHITLASH					
Bow Island, Kootenai, Swift Oil	71	Structural-Strat.	Volumetric	Gas: 300' from legal subdivision line and 2400' 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. General Rules 207, 211, 219, 221, 223, and 224 suspended. (Orders 16-54, 27-70.) Order 16-54 amended to include S/2 of section 30-37N-4E. SW/4 of 30 is 1 spacing unit, SE/4 is the other. Well location no closer than 990' from spacing unit boundary. (Order 45-81.)	None
(Cret.) (Jur.)	18				
Gas	43				
(Shut-in)	4				
Madison (Miss.) Gas	1				
WHITLASH, WEST					
Sunburst, Swift Oil	3	Structural-Strat.	Volumetric	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.) (Order 61-62) Amended by (Order 48-77.) Field extension. (Order 18-79)	None
(Cret.) (Jur.)					
Gas	12				
Sawtooth (Jur.)	1				
WILLIAMS					
Bow Island (L. Cret.) Gas	16	Structural	Volumetric	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.)	None
WILLOW CREEK, NORTH					
Tyler (Penn.) Oil	2	Structural-Strat.	Depletion Water Drive	State-wide.	Pilotflood. (Order 19-72.)
(Shut-in)	1				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary or Water Disposal
WILLOW RIDGE Bow Island (L. Cret.) Gas (Shut-in) Burwash (Cret.) Oil	11 3 4	Structural-Strat.	Volumetric	640-acre spacing units; location to be no closer than 990' to unit boundary for gas production from all formations to the top of the Kootenai. (Order 29-78.) 40-acre spacing units with permitted 5 wells; 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.)	None
WILLOW RIDGE, SOUTH Bow Island (L. Cret.) Gas	2	Structural Strat.	Volumetric	State-wide.	None
WILLS CREEK, SOUTH Interlake (Sil.)	3	Structural	Partial Water Drive	160-acre spacing units. Well location in center of SE $\frac{1}{4}$ of each unit with 175' topographic tolerance. (Orders 5-64, 30-66.)	Waterflood initiated 12-1-73. (Order 23-73.)
WINNETT JUNCTION Tyler (Penn.) (Shut-in)	3 3	Strat.	Depletion Water Drive	20-acre spacing units. Units to be designated as W $\frac{1}{2}$ and E $\frac{1}{2}$ 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.)
WISHBONE Swift (U. Jur.)	1	Strat.	Depletion	Single spacing unit. (Order 87-81.)	None
WOLF SPRINGS Amsden (Penn.) (Shut-in)	4 1	Structural	Water Drive	80-acre spacing units consisting of N $\frac{1}{2}$ and S $\frac{1}{2}$ of each quarter section. Well location in center of NW $\frac{1}{4}$ and SE $\frac{1}{4}$ of each quarter section with 75' topographic tolerance. (Orders 4-56, 9-59.) Field Area reduction (Order 92-76.)	None
WOODROW Interlake (Sil.) Red River (Ord.)	1 1	Structural	Water Drive	80-acre spacing units consisting of any two adjacent quarter-quarter sections; well locations in center of NE $\frac{1}{4}$ and SW $\frac{1}{4}$ of each quarter section with 200' topographic tolerance. (Order 47-62.)	Produced water injected into Dakota. (Order 48-62.)
WRANGLER Red River (Ord.)	2	Structural	Water Drive	State-wide.	None
WRANGLER, NORTH Red River (Ord.)	1	Structural	Water Drive	State-wide.	None
WRIGHT CREEK Muddy (L. Cret.) (Shut-in)	3 1	Structural-Strat.	Depletion Water Drive	80-acre spacing consisting of N $\frac{1}{2}$ and S $\frac{1}{2}$ of quarter section with locations in NW $\frac{1}{4}$ and SE $\frac{1}{4}$ of each quarter section with 200' tolerance. Field Area reduction (Order 69-76.)	Excess produced water is disposed of into the Muddy formation. (Order 8-A-77.)
XENA Judith River (U. Cret.) Gas	1	Structural Strat.	Volumetric Water Drive	State-wide.	None
YATES Duperow (Dev.)	1	Strat.	Water Drive	320-acre spacing units; Well locations as specified for the Duperow and Red River formations that may be dually completed. (Order 92-81.)	None

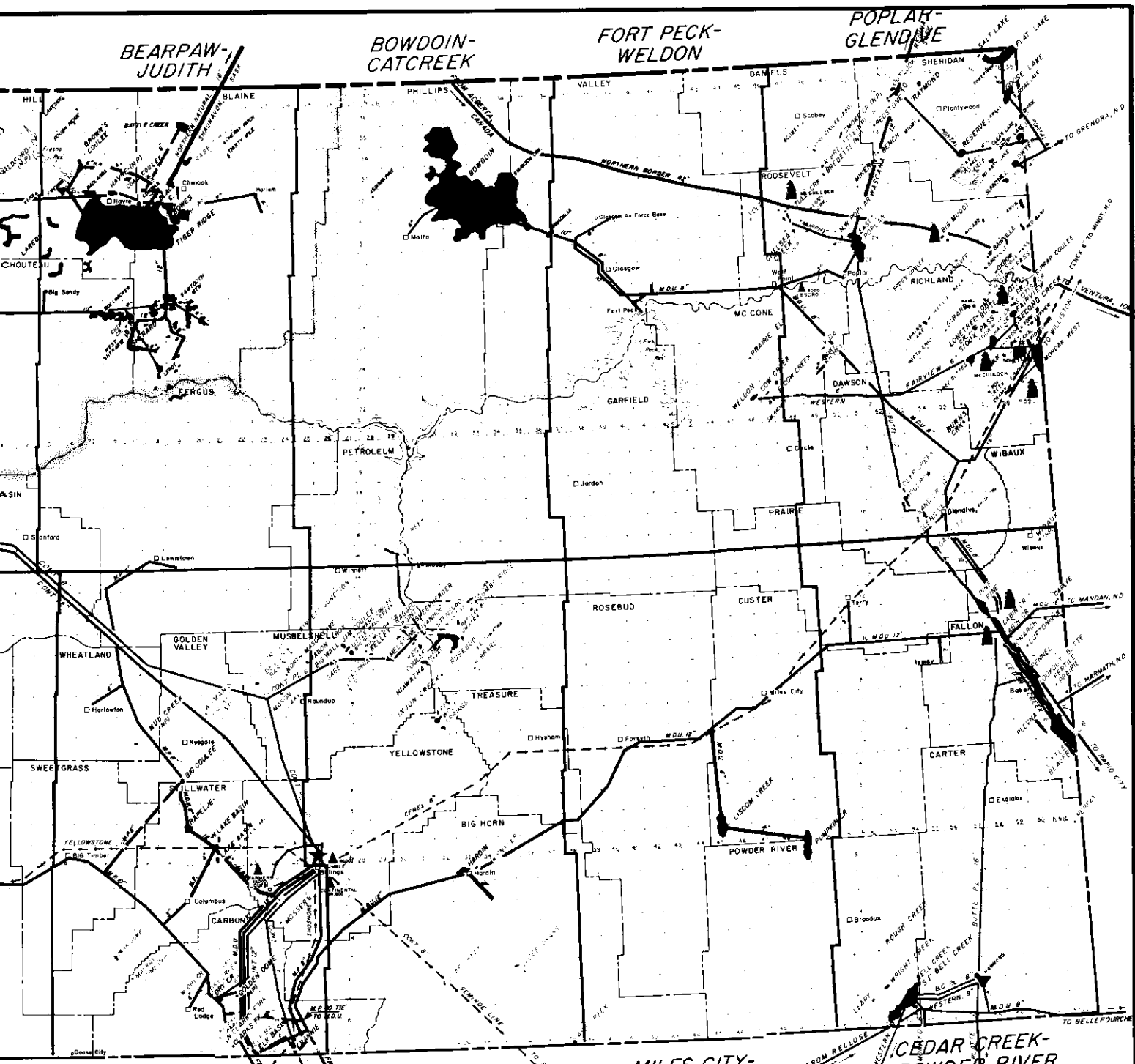


EXPLANATION

- 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 CONSERVATION
 2535 St. John's Avenue Billings, M.



**BEARPAW-
JUDITH**

**BOWDOIN-
CATCREEK**

**FORT PECK-
WELDON**

**POPLAR-
GLENDALE**

MONTANA

OIL AND GAS FIELDS, PIPELINES AND REFINERIES

1981

BOARD OF OIL AND GAS CONSERVATION

AND GAS CONSERVATION
s Avenue Billings, Mont. 59102

L. F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %		PRODUCTIVE AREA ACRES	ULTIMATE RECOVERY					1981 PRODUCTION		CUMULATIVE PRODUCTION 1-1-82 (M BBLs)	RESERVES (M BBLs)	LINE NO.			
				PRIMARY	SECONDARY		(M BBLs)	BBLs/ACRE	PRIMARY (M BBLs)	SECONDARY (M BBLs)	TOTAL (M BBLs)	BBLs./ ACRE	BBLs./ ACRE FT				BBLs	BOPD	
00	9	12	30	56	—	480	1,410	2,930	790	—	790	1,646	183	19,475	53	721	69	251	
														17,600	48	—	—	252	
														34,215	94	40	59	253	
17	25	14	20	31	14	1,200	22,280	18,570	7,000	3,080	10,080	8,400	336	15,482	42	10,036	44	254	
16	30	19	35	32	--	5,520	136,780	24,780	34,000	9,540	43,540	7,888	263	876,884	2,402	38,994	4,546	255	
														11,196	31	87	—	256	
38	25	17	50	1	—	960	11,470	11,950	170	--	170	177	7	13,611	37	89	81	257	
	12	—		—	—	320			90	—	90	625	52	36,565	100	66	24	258	
														31,806	87	44	17	259	
41	25	15	30	42	—	1,280	18,490	14,440	7,690	—	7,690	6,008	240	92,920	255	7,471	219	260	
91	30	18	30	41	—	320	4,910	15,350	2,030	—	2,030	6,344	211	7,883	22	1,967	63	261	
40	8	12	30	39	—	480	1,790	3,720	690	—	690	1,437	180	7,741	21	678	12	262	
														17,190	47	45	—	263	
15	17	16	40	4	—	680	7,490	11,010	310	—	310	456	27	62,141	170	231	79	264	
														78,038	214	131	141	265	
20	40	4	43	6	—	1,440	8,500	5,900	500	—	500	347	9	77,966	214	229	271	266	
60	24	14	45	6	—	2,240	20,070	8,960	1,290	—	1,290	576	24	142,192	390	740	550	267	
40	14	20	30	35	—	800	8,690	10,860	3,080	—	3,080	3,850	275	75,938	208	2,422	752	268	
07	12	8	23	14	—	800	4,290	5,360	590	—	590	738	61	3,992	11	585	5	269	
01	14	16	35	40	—	1,560	17,450	11,180	7,030	—	7,030	4,506	322	18,640	51	7,007	23	270	
10	10	24	23	13	—	160	2,090	13,030	270	—	270	1,688	169	16,971	46	242	28	271	
13	15	16	20	24	—	1,950	25,700	13,180	6,240	—	6,240	3,200	213	160,309	439	4,545	1,695	272	
														3,801	10	71	4	273	
20	12	13	54	36	7	160	740	4,640	250	50	300	1,875	156	10,112	28	281	274	275	
														4,213	12	23	29	276	
20	12	18	35	25	3	480	4,360	9,080	1,090	150	1,240	2,583	215	34,852	95	899	341	276	
10	12	18	30	14	26	240	2,560	10,660	350	670	1,020	4,250	354	70,416	193	571	449	277	
07	11	6	23	61	—	2,080	7,660	3,680	4,650	--	4,650	2,336	212	14,279	39	4,545	—	278	
30	25	14	35	15	—	560	7,600	13,580	1,120	—	1,120	2,000	80	14,417	39	1,045	50	279	
00	6	10	—	—	—	640			240	—	240	625	104	50,671	139	132	108	280	
	31					320			200	—	200	625	20	14,814	41	43	46	281	
10	5	26	48	14	—	400	1,910	4,770	270	—	270	675	135	7,935	22	222	48	282	
														10,651	29	11	—	283	
																		10	284
																		203,058	285

1,310,077
30,813,412

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203,058 285

GENERALIZED

SHOWING

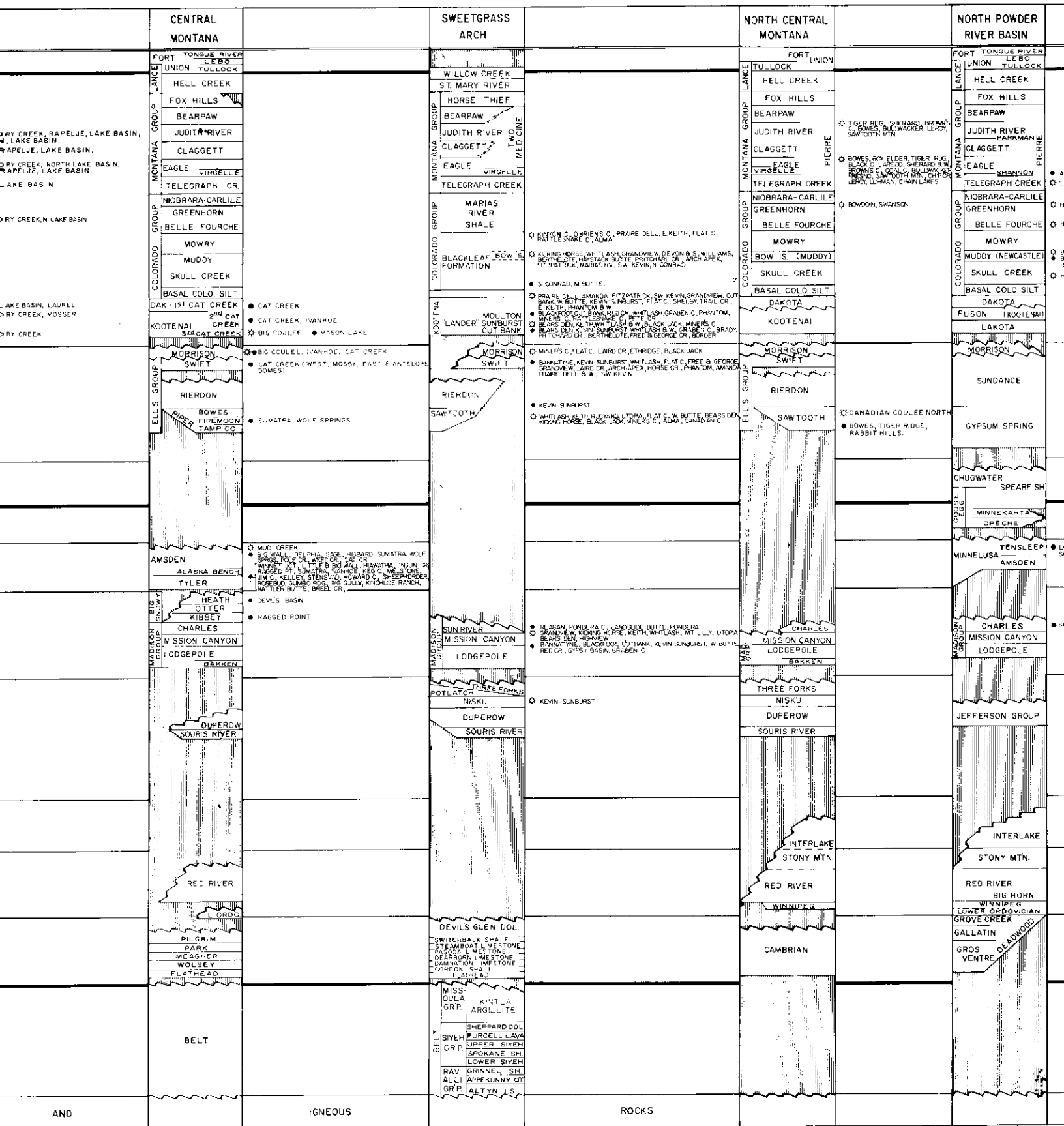
MONTANA BOARD OF OIL AND GAS CONSERVATION - 1981

ERA	PERIOD	SOUTHWESTERN MONTANA	CRAZY MOUNTAIN BASIN	BIG HORN BASIN		SOUTH CENTRAL MONTANA	CENTRAL MONTANA	
CENOZOIC	TERTIARY	BEAVERHEAD	TONGUE RIVER LEBO	FORT UNION			FORT UNION	
	MESOZOIC	UPPER	TULLOCK	LANCE			HELL CREEK	HELL CREEK
HELL CR			LENNEP	MEETEETSE		LENNEP	FOX H	
BEARPAW			JUDITH RIVER	MESA VERDE		BEARPAW	BEAR	
JUDITH RIVER			CLAGGETT			JUDITH RIVER	JUDITH	
CLAGGETT			EAGLE VIRGELLE	CODY SHALE		CLAGGETT	CLAG	
LOWER		MONTANA	FRONTIER	FRONTIER		EAGLE	EAGLE	
		COLORADO	MOWRY			TELEGRAPH CR.	TELEGR	
		GROUPS	MUDDY	MUDDY		NIORBARA-CARLILE	NIORBAR	
			SKULL CR	SKULL CREEK		GREENHORN	GREEN	
			DAK. SILT	DAK. SILT		BELLE FOURCHE	BELLE	
JURASSIC	UPPER	MORRISON SWIFT	MORRISON SWIFT	MORRISON UPPER SUNDANCE		MORRISON SWIFT	MORRI	
	MIDDLE	RIERDON	RIERDON	LOWER SUNDANCE		RIERDON	RIER	
	LOWER ?	SAWTOOTH	PIPER	GYPSON SPRING		PIPER	PIPER	
TRIASSIC	LOWER ?	THAYNES	CHUGWATER	CHUGWATER		CHUGWATER	CHUGWATER	
PALEOZOIC	PERMIAN	WOODSIDE	CHUGWATER	DINWOODY		DINWOODY	DINWOODY	
	PENNSYLVANIAN	DINWOODY	PHOSPHORIA	PHOSPHORIA		PHOSPHORIA	PHOSPHORIA	
		QUADRANT	TENSLEEP	TENSLEEP		TENSLEEP	TENSLEEP	
	MISSISSIPPIAN	AMSDEN	AMSDEN	AMSDEN		AMSDEN	AMSDEN	
		MADISON	CHARLES	MADISON		MADISON	MADISON	
		SAPPINGTON	MISSION CANYON	MISSION CANYON		MISSION CANYON	MISSION	
	DEVONIAN	UPPER	THREE FORKS	THREE FORKS	THREE FORKS		THREE FORKS	THREE FORKS
		MIDDLE	JEFFERSON	DUPEROW	DUPEROW		JEFFERSON	JEFFERSON
	SILURIAN	LOWER	MAYWOOD	SOURIS RIVER	BEARTOOTH BUTTE		BEARTOOTH BUTTE	BEARTOOTH BUTTE
		ORDOVICIAN	BIG HORN	BIG HORN	BIG HORN		BIG HORN	BIG HORN
CAMBRIAN	UPPER	RED LION	GROVE CREEK	GROVE CREEK		GROVE CREEK	GROVE CREEK	
	MIDDLE	PILGRIM	SNOWY RANGE	GALLATIN		GALLATIN	GALLATIN	
	LOWER	SILVER HILL	WOLSEY	GROS VENTRE		GROS VENTRE	GROS VENTRE	
PROTEROZOIC	PRE-CAMBRIAN	BELT	BELT	BELT		BELT	BELT	
ARCHEOZOIC					METAMORPHIC		AND	

GENERALIZED STRATIGRAPHIC CORRELATION CHART

SHOWING PRODUCTIVE FORMATIONS IN MONTANA OIL AND GAS FIELDS *

● OIL ✪ GAS



RELATION CHART

FIELDS *

CHARLES G. MAIO, GEOLOGIST — TOM RICHMOND, PETROLEUM ENGINEER

NORTH CENTRAL MONTANA		NORTH POWDER RIVER BASIN		WILLISTON BASIN		PERIOD	ERA
<p>FLAT C.</p> <p>S. WILLIAMS, CHAIK.</p> <p>CONYEW, CUT, TRAIL CR.</p> <p>PHANTOM.</p> <p>ERS. C. BRADY, BOGDA.</p> <p>ED. B. GEORGE, UNTON, AMANDA.</p> <p>BEARS DEN, ADIAN C.</p> <p>LILY, UTOPIA, WEST, W. BUTTE.</p>	<p>UNION</p> <p>TULLOCK</p> <p>HELL CREEK</p> <p>FOX HILLS</p> <p>BEARPAW</p> <p>JUDITH RIVER</p> <p>CLAGGETT</p> <p>EAGLE VIRGELLE</p> <p>TELEGRAPH CREEK</p> <p>NIORRARA-CARLILE</p> <p>GREENHORN</p> <p>BELLE FOURCHE</p> <p>MOWRY</p> <p>BOW IS (MUDDY)</p> <p>SKULL CREEK</p> <p>BASAL COLO SILT</p> <p>DAKOTA</p> <p>KOOTENAI</p> <p>MORRISON SWIFT</p> <p>RIERDON</p> <p>SAW TOOTH</p> <p>CHARLES</p> <p>MISSION CANYON</p> <p>LOGDGEPOLE</p> <p>BAKKEN</p> <p>THREE FORKS</p> <p>NISKU</p> <p>DUPEROW</p> <p>SOURIS RIVER</p> <p>INTERLAKE</p> <p>STONY MTN.</p> <p>RED RIVER</p> <p>WINNIPEG</p> <p>CAMBRIAN</p>	<p>TONGUE RIVER</p> <p>LEBO</p> <p>TULLOCK</p> <p>HELL CREEK</p> <p>FOX HILLS</p> <p>BEARPAW</p> <p>JUDITH RIVER</p> <p>PARKMAN</p> <p>CLAGGETT</p> <p>EAGLE SHANNON</p> <p>TELEGRAPH CREEK</p> <p>NIORRARA-CARLILE</p> <p>GREENHORN</p> <p>BELLE FOURCHE</p> <p>MOWRY</p> <p>MUDDY (NEWCASTLE)</p> <p>SKULL CREEK</p> <p>BASAL COLO SILT</p> <p>DAKOTA</p> <p>FUSON (KOOTENAI)</p> <p>LAKOTA</p> <p>MORRISON</p> <p>SUNDANCE</p> <p>GYPSUM SPRING</p> <p>CHUGWATER</p> <p>SPEARFISH</p> <p>MINNEKAHTA</p> <p>OPECHE</p> <p>TENSLEEP</p> <p>AMSDEN</p> <p>CHARLES</p> <p>MISSION CANYON</p> <p>LOGDGEPOLE</p> <p>JEFFERSON GROUP</p> <p>INTERLAKE</p> <p>STONY MTN.</p> <p>RED RIVER</p> <p>BIG HORN</p> <p>WINNIPEG</p> <p>GROVE CREEK</p> <p>GALLATIN</p> <p>GRS VENTRE</p> <p>DEADWOOD</p>	<p>UNION</p> <p>LUDLOW</p> <p>HELL CREEK</p> <p>FOX HILLS</p> <p>BEARPAW</p> <p>JUDITH RIVER</p> <p>CLAGGETT</p> <p>EAGLE</p> <p>TELEGRAPH CREEK</p> <p>NIORRARA-CARLILE</p> <p>GREENHORN</p> <p>BELLE FOURCHE</p> <p>MOWRY</p> <p>MUDDY (NEWCASTLE)</p> <p>SKULL CREEK</p> <p>BASAL COLO SILT</p> <p>DAKOTA</p> <p>FUSON (KOOTENAI)</p> <p>LAKOTA</p> <p>MORRISON</p> <p>SW FT</p> <p>RIERDON</p> <p>PIPERS</p> <p>NESSON</p> <p>SAUDE</p> <p>SPEARFISH</p> <p>PINE SALT</p> <p>MINNEKAHTA</p> <p>OPECHE</p> <p>AMSDEN</p> <p>TYLER</p> <p>HEATH</p> <p>OTTER</p> <p>KIBBEY</p> <p>CHARLES</p> <p>MISSION CANYON</p> <p>LOGDGEPOLE</p> <p>BAKKEN</p> <p>THREE FORKS</p> <p>BIRDBEAR (NISKU)</p> <p>DUPEROW</p> <p>SOURIS RIVER</p> <p>DAWSON BAY</p> <p>PRAIRIE EVAP</p> <p>WINNIPEGOSIS</p> <p>ASHERN</p> <p>INTERLAKE</p> <p>STONY MTN.</p> <p>RED RIVER</p> <p>WINNIPEG</p> <p>LOWER GARD</p> <p>DEADWOOD</p>	<p>ASH CR.</p> <p>LISCOM CR., MANKIN CR.</p> <p>HARDIN</p> <p>HAMMOND</p> <p>BE L. CR., HAMMOND</p> <p>RELL CR., WINDY CR., ROUGH CR., LEARY</p> <p>HAMMOND</p> <p>LODGE GRASS, SOAP CREEK, SNYDER</p> <p>SOAP CREEK.</p> <p>WELDON, L. CONYER, FLAT L., SHOTGUN CR., SMOKE CR., KATY L., DWYER, POPLAR, COW CR., RONEY, PRAIRIE, ELK, VOLT, MINERAL BCH., GAS CITY, GOOSE LAKE, MEDICINE L., CLEAR L., RIRAP, RIDGELAWN, DWIDE.</p> <p>SONEY, BRORSON, CABIN CR., MONARCH, PENNELL, POPLAR, RED BANK, BUTLOR, S. FLAT L., HARDSCRABBLE CR., SHOTGUN CR., SIOUX PASS, MONDOK W.</p> <p>PINE, PENNELL, LOOKOUT BUTTE, SALT L.</p> <p>TILE CR. S. B.E., BIRDBEAR, B.E., LONE TREE, SPRING L., VOLT, RED FOX, SALT L., CHELSEA CR., RAYMOND, CHARLE CR., S. CLEAR L.</p> <p>OUTLOOK, MINERAL BCH., WOODROW, BOULDER</p> <p>SW R. CHEY, MONDOK W.</p> <p>RED STONE, OUTLOOK B. W., FARVIEW, RESERVE, N. SIOUX PASS, RUSH MTN., RAYMOND B. N.E., MONDOK W., MEDICINE L., N. BARNVILLE.</p> <p>BIG MUDDY CR., SIOUX PASS B. N., DEER CR., MONARCH, PENNELL, PINE, OUTLOOK, SAND CR., SW R. CHEY, LOOKOUT BUTTE, VIDAL WILLS CR., WOODROW, RESERVE, CABIN CR., PUTNAM, MONDOK W., MEDICINE L.</p> <p>LOOKOUT BUTTE, GLENDOVE, PENNELL, WOODROW, MONDOK W.</p> <p>BURNS CR., NORTLY, RAYMOND B. N.E., SECOND CR., CUPTON, DEER CR., GARDNER, LITTLE BEAVER B. E., MONARCH, OUTLOOK, PENNELL, PINE, REPEAT, SAND CR., WILLS CR., FERTILE, PRAIRIE, BROOK, RUSH MTN., SPRING L., BEAST, BARNVILLE, B. N., OTIS CR., CULBERTSON, PROD. NAT CR., GIRARD, CANAL, FT. G. BERT, LONE TREE, SIOUX PASS, NICOLE B. N., LONE BUTTE, PUTNAM, BIG MUDDY CR., MONDOK W., OMBOW, MEDICINE L., W. FOUR MILE N. KATY L., CLEAR L. S., CARLILE, OLLIE, COMERTOWN, RED BANK, KRUG CR., WEBB.</p>	<p>UPPER</p> <p>CRETACEOUS</p> <p>LOWER</p> <p>UPPER</p> <p>MIDDLE</p> <p>LOWER ?</p> <p>PERMIAN</p> <p>PENNSYLVANIAN</p> <p>MISSISSIPPIAN</p> <p>UPPER</p> <p>MIDDLE</p> <p>LOWER</p> <p>UPPER</p> <p>MIDDLE</p> <p>LOWER</p> <p>UPPER</p> <p>MIDDLE</p> <p>LOWER</p>	<p>MESOZOIC</p> <p>JURASSIC</p> <p>TRIASSIC</p> <p>PERMIAN</p> <p>PENNSYLVANIAN</p> <p>MISSISSIPPIAN</p> <p>DEVONIAN</p> <p>SILURIAN</p> <p>ORDOVICIAN</p> <p>CAMBRIAN</p> <p>PRE-CAMBRIAN</p> <p>PROTEROZOIC</p> <p>ARCHEOZOIC</p>	

* SOME FIELDS SHOWN ARE DEPLETED OR NO LONGER PRODUCTIVE.