DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

Oil and Gas Conservation Division

Thomas L. Judge, Governor

ANNUAL REVIEW FOR THE YEAR 1973

Relating to

OIL AND GAS

Volume 17

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Thomas L. Judge, Governor

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Annual Review for the Year 1973
Volume 17

INTRODUCTION

Oil production in Montana during 1973 totaled 34,620,182 barrels. This is slightly over a two percent increase in production as compared with 1972. Favorable response to many secondary recovery programs throughout the State was the primary factor in this increased production. Seven new waterflood units for secondary recovery were approved by the Board. Due to the increased value of oil many small operators were able to upgrade their equipment and procedures resulting in additional production.

The energy shortage of 1973 caused industry and this Board to intensify their efforts toward conservation in Montana which, hopefully, will be reflected in a further increase in production during 1974.

Refinery output continued to increase during 1973. Source of the oil put through the nine refineries in the State during 1973 was as follows:

Montana	19.02%
Canada	31.13%
Wyoming	49.85%

Production of natural gas increased significantly during 1973. Total production was 57,739,515 MCF representing a sixty-five percent increase over 1972. Most of this increase came from the Tiger Ridge Field of central northern Montana which went on stream in November of 1972. Additional gas reserves were established to the south and west of the Tiger Ridge area and these new wells should add considerably to the volume of natural gas produced in 1974.

There were 36 new gas discoveries and 7 new oil discoveries completed during 1973. Of 311 development wells drilled 165 found gas and 46 found oil. Total wells drilled in 1973 was 719 compared to 724 drilled in 1972.

Leasing of lands for oil and gas exploration reached an all time State high in 1973 exceeding the lease activity of 1951-1955 which followed the discovery of oil in the Williston Basin (northeastern) portion of the State.

Several multiple well programs were planned for 1974 and at least one additional major gas transmission line was planned for 1974 subject to Federal and State approval.

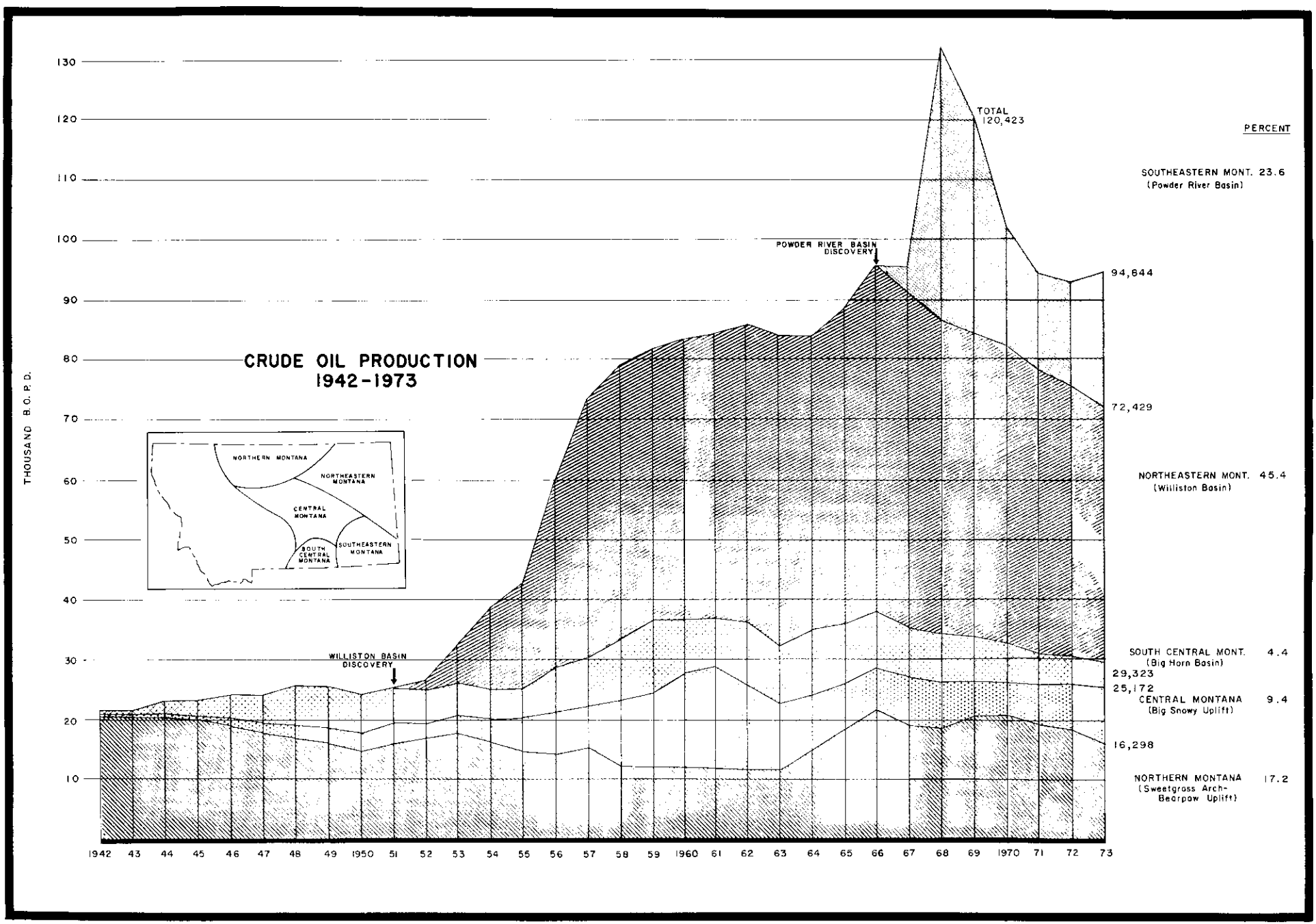
Inquiries and visitors to the Board increased markedly in the latter part of 1973 with many new individuals and companies showing interest in participating in future exploration in Montana.

FIVE YEAR SUMMARY

	1969	1970	1971	1972	1973
Production, Northern Montana—Bbls.	7,557,966	7,680,831	7,292,476	6,646,908	5,948,826
South Central—Bbls.	2,739,346	2,329,187	2,028,304	1,742,749	1,515,088
Central—Bbls.	2,011,445	1,915,273	2,274,124	2,817,045	3,238,967
Williston Basin—Bbls.	18,396,618	18,110,147	17,042,703	16,361,771	15,735,703
Powder River Basin—Bbls.	13,248,737	7,843,259	5,961,116	6,335,666	8,181,598
TOTAL	43,954,112	37,878,697	34,598,723	33,904,139	34,620,182
No. of Producing Wells, Northern Montana	1,827	1,806	1,768	1,856	1,708
South Central	108	92	96	83	83
Central	244	200	212	224	245
Williston Basin	759	743	748	706	709
Powder River Basin	397	371	321	265	248
TOTAL	3,335	3,212	3,145	3,134	2,993
Average Daily Production/Well—BOPD,					
Northern Montana	11.3	11.6	11.3	9.8	9.5
South Central	69.5	69.3	57.9	57.4	50.0
Central	22.6	26.2	29.4	34.4	36.2
Williston Basin	66.4	66.8	62.4	63.3	60.8
Powder River Basin	91.4	57.9	50.9	65.3	90.4
STATE AVERAGE	36.1	32.3	30.1	29.6	31.7
Development Wells Drilled, Oil Wells	171	60	49	79	46
Gas Wells	44	30	36	97	165
Dry Holes	105	63	34	87	100
TOTAL	320	153	119	263	311
Exploratory Wells Drilled, Oil Wells	15	12	3	7	6
Gas Wells	5	11	22	19	36
Dry Holes	466	272	323	435	366
TOTAL	486	295	348	461	408
TOTAL WELLS DRILLED	806	488	467	724	719
TOTAL FOOTAGE DRILLED	3,682,758	1,969,583	1,735,222	2,300,075	1,834,288
AVERAGE DEPTH OF ALL WELLS	4,569	4,396	3,716	3,177	2,551

SUMMARY OF DRILLING BY COUNTIES — 1973
STATE OF MONTANA

County	Wildcats			Development			Total Wells	Footage Drilled	Average Depth
	Dry	Oil	Gas	Dry	Oil	Gas			
Big Horn	7	0	0	0	1	0	8	30,060	3,758
Blaine	58	0	8	3	2	8	79	148,656	1,882
Carbon	4	0	0	1	0	0	5	21,802	4,360
Carter	2	0	0	0	0	0	2	7,330	3,665
Cascade	2	0	0	0	0	0	2	2,720	1,360
Chouteau	84	0	11	15	0	28	138	271,936	1,971
Custer	12	0	0	1	0	1	14	36,062	2,576
Daniels	3	0	0	0	0	0	3	22,380	7,460
Dawson	0	0	0	0	2	0	2	12,610	6,305
Fallon	0	0	0	1	1	0	2	18,910	9,455
Fergus	28	0	0	0	0	1	29	66,654	2,298
Garfield	6	0	0	0	0	0	6	42,205	7,034
Glacier	2	1	0	2	13	1	19	52,978	2,788
Golden Valley	1	0	1	0	0	0	2	5,483	2,742
Hill	38	0	10	35	0	36	119	190,664	1,602
Judith Basin	10	0	0	0	0	0	10	25,241	2,524
Liberty	9	0	0	10	2	7	28	71,550	2,555
Madison	1	0	0	0	0	0	1	500	500
McCone	4	0	0	2	0	0	6	44,008	7,335
Musselshell	10	2	0	11	7	0	30	114,232	3,808
Petroleum	3	0	0	0	2	0	5	20,462	4,092
Phillips	14	0	3	0	0	54	71	120,987	1,704
Pondera	2	0	0	1	0	0	3	5,552	1,851
Powder River	12	0	0	0	1	0	13	62,072	4,775
Prairie	0	0	0	0	1	0	1	9,180	9,180
Richland	0	2	0	1	2	0	5	63,368	12,674
Roosevelt	1	1	0	1	0	0	3	26,560	8,853
Rosebud	15	0	0	3	7	0	25	107,921	4,317
Sheridan	1	0	0	0	1	0	2	19,610	9,805
Stillwater	8	0	3	2	0	15	28	57,367	2,049
Teton	4	0	0	1	2	0	7	14,176	2,025
Toole	13	0	0	10	1	7	31	72,989	2,354
Valley	4	0	0	0	0	5	9	26,551	2,950
Wheatland	2	0	0	0	0	2	4	11,333	2,833
Wibaux	0	0	0	0	1	0	1	9,199	9,199
Yellowstone	6	0	0	0	0	0	6	25,056	4,176
TOTALS	366	6	36	100	46	165	719	1,834,288	2,551


CRUDE OIL PRODUCTION
1942-1973
THOUSAND B.O.P.D.
130
120
110
100
90
80
70
60
50
40
30
20
10
1942 43 44 45 46 47 48 49 1950 51 52 53 54 55 56 57 58 59 1960 61 62 63 64 65 66 67 68 69 1970 71 72 73
TOTAL
120,423
POWDER RIVER BASIN
DISCOVERY
WILLISTON BASIN
DISCOVERY
94,644
72,429
29,323
25,172
16,298
PERCENT
SOUTHEASTERN MONT. 23.6
(Powder River Basin)
NORTHEASTERN MONT. 45.4
(Williston Basin)
SOUTH CENTRAL MONT. 4.4
(Big Horn Basin)
CENTRAL MONTANA 9.4
(Big Snowy Uplift)
NORTHERN MONTANA 17.2
(Sweetgrass Arch-
Bearpaw Uplift)
NORTHERN MONTANA
NORTHEASTERN MONTANA
CENTRAL MONTANA
SOUTH CENTRAL MONTANA
SOUTHEASTERN MONTANA

GAS PRODUCTION DATA — 1973

Field	County	Producing Formation	1973 Production M.C.F.
Bear's Den	Liberty	Sunburst & Sawtooth	8,481
Bell Creek*	Powder River	Muddy	846,426
Big Coulee	Golden Valley & Stillwater	Lakota & Morrison	1,126,326
Black Coulee	Blaine	Eagle	23,950
Blackjack	Liberty	Sunburst & Swift	370,889
Bowdoin	Phillips & Valley	Bowdoin & Phillips	5,300,849
Bowes	Blaine	Eagle	472,642
Cabin Creek*	Fallon	Interlake & Red River	885,744
Cedar Creek	Fallon	Judith River & Eagle	7,471,946
Cut Bank & Reagan	Glacier & Toole	Cut Bank & Madison	3,274,900
Dry Creek	Carbon	Eagle & Frontier	461,849
Elk Basin*	Carbon	Tensleep	463,018
Ethridge	Toole	Bow Island & Swift	157,504
Flat Coulee	Liberty	Blackleaf & Swift	127,218
Gold Butte	Toole	Bow Island	2,814
Grandview	Liberty	Bow Island & Madison	177,031
Hardin	Big Horn	Frontier	26,686
Keith Block	Liberty	Bow Island, Sawtooth	803,203
Kevin-Sunburst	Toole	Sunburst & Sun River	367,404
Lake Basin	Stillwater	Frontier & Eagle	119,933
Liscom Creek	Custer	Shannon	451,360
Middle Butte	Toole	Blackleaf	11,596
Mt. Lilly	Liberty	Madison	186,782
Pine*	Dawson, Prairie, Fallon & Wibaux	Interlake & Red River	620,182
Plevna	Fallon	Judith River	90,360
South Devon	Toole	Bow Island	277,831
Tiger Ridge	Blaine & Hill	Judith River & Eagle	29,130,011
Trail Creek	Liberty & Toole	Sunburst	103,865
Utopia	Liberty	Ellis, Sawtooth, Madison	449,389
West Butte	Toole	Sawtooth, Madison	592,153
Whitlash	Liberty	Bow Island, Kootenai & Swift	524,885
Miscellaneous**	Various	Various	2,812,288
		TOTAL ALL FIELDS	57,739,515

*Associated Gas.

**Brorson, Tule Creek & Fairview Produced Associated Gas; Devon and Fred & George Creek Produced Non-associated Gas.

REFINING — 1973

	Year 1973 Total Bbls.
Big West Oil Company	1,469,405
Continental Oil Company	16,488,321
Diamond Asphalt Company	3,069
Farmers Union Central Exchange, Inc.	11,921,953
Exxon Company	16,668,281
Jet Fuel Refinery	6,982
Phillips Petroleum Company	2,219,519
Spruce Oil Company	668,318
Westco Refining Company	1,521,358
	50,967,206

Refining Five Year Comparison

1969	1970	1971	1972	1973
40,437,537	42,330,220	44,996,860	48,464,721	50,067,206

SUMMARY OF SECONDARY RECOVERY PROJECTS — JANUARY 1, 1974

Field, Formation	Operator	Type of Project	Injection Pattern	Date Injections Commenced	Cumulative Injections 1000's Bbls. or MCF	Dec. 1973 Avg. Daily Inj. Rate Bbls. or MCF	No. of Injection Wells	Source of Injection Media and Remarks
Ash Creek, Shannon	McDermott	Waterflood	Peripheral	10-15-64	890	1,500	2	Parkman
Bell Creek, Unit "A", Muddy	Gary	Waterflood	Peripheral	7- 1-70	37,852	26,667	26	Madison
Bell Creek, Unit "B", Muddy	Gary	Waterflood	Peripheral	11- 1-70	10,610	10,250	11	Madison
Bell Creek, Ranch Creek, Muddy	Gary	Waterflood	Peripheral	7- 1-71	13,368	13,354	13	Madison
Bell Creek, Unit "C", Muddy	Gary	Waterflood	Peripheral	12- 1-71	4,007	5,429	6	Madison
Bell Creek, Unit "D", Muddy	Gary	Waterflood	Peripheral	8-72	5,767	9,438	16	Madison
Bell Creek, Unit "E", Muddy	Gary	Waterflood	Peripheral	8-72	3,600	5,855	14	Madison
Big Wall, Tyler B	Texaco, Inc.	Waterflood	Peripheral	8-20-66	13,137	3,615	2	Produced, Amsden & Tyler
Border, New, Cut Bank	BG&O Co.	Waterflood	Random	6- 1-73	24	83	1	Madison
Border, Old, Cut Bank	BG&O Co.	Waterflood	Random	6- 1-73	76	354	4	Madison
Bowes, Sawtooth	Texaco, Inc.	Waterflood	Random	5-23-61	3,156	848	3	Madison
Cabin Creek, Siluro-Ord.	Shell	Waterflood	Semi-Peripheral	6-12-59	115,092	44,872	31	Produced & Fox Hills
Cat Creek, East Dome, Swift	Hoss	Waterflood	Semi-Peripheral	7-30-70	114	98	2	Third Cat Creek
Cat Creek, 1st & 2nd CC (Unit 1)	Farmers Union	Waterflood	Semi-Peripheral	10-10-62	8,826	2,245	7	Third Cat Creek
Cat Creek, 1st & 2nd CC (Unit 2)	Farmers Union	Waterflood	Semi-Peripheral	12- 1-59	16,821	787	5	Third Cat Creek
Cat Creek, Mosby, Swift	Farmers Union	Waterflood	Random	7-67	2,500	1,340	5	Third Cat Creek
Cat Creek, Mosby, Amsden	Farmers Union	Waterflood	Random	6- 1-71	31	19	1	Third Cat Creek
Cut Bank, Marina, Cut Bank	BG&O Co.	Waterflood	5-Spot	6-72	493	1,059	9	Madison
Cut Bank, Tweedy, Cut Bank	BG&O Co.	Waterflood	5-Spot	6-72	397	566	4	Madison
Cut Bank NE, Cut Bank	Texaco, Inc.	Waterflood	5-Spot	6- 2-63	12,126	1,257	20	Madison
Cut Bank NW, Cut Bank	Phillips	Waterflood	5-Spot	1-30-62	13,119	1,738	15	Madison
Cut Bank SC, Cut Bank	Union	Waterflood	5-Spot	5-63	24,972	7,793	48	Madison
Cut Bank SE, Cut Bank	Texaco, Inc.	Waterflood	5-Spot	4-62	42,985	9,717	51	Madison
Cut Bank SW, Cut Bank	Phillips	Waterflood	5-Spot	9-62	55,798	20,787	111	Madison
Cut Bank, Lander A	Phillips	Waterflood	Random	4-65	1,270	144	2	Madison
Cut Bank, Lander	Texaco, Inc.	Waterflood	Random	7-64	5,700	1,502	7	Eagle
Cut Bank, McGuiness, Moulton	Union	Waterflood	Random	12-62	2,960	961	1	Madison
Cut Bank, Cut Bank	Tesoro	Waterflood	5-Spot	9- 1-71	977	2,569	18	Madison
Cut Bank, Two Medicine, Cut Bank	Miami	Waterflood	Random	12-67	31,502	14,174	99	Madison
Cut Bank, West Wilcox, Moulton	Decalta	Waterflood	Random	2-71	598	433	1	Madison
Cut Bank, Moulton, Moulton	Union	Waterflood Gas Injection	Random Random	11-69 5-15-71	11,164 Shut-in	7,611 --	11 --	Water inj. into Madison Gas Inj. into Moulton
Darling, State, Moulton	BG&O Co.	Waterflood	Random	2-67	1,859	900	1	Madison
Darling, NE Unit, Moulton	Ralph Fair	Waterflood	Random	2-68	3,435	1,425	4	Produced Water
Darling, South Swenson, Moulton	BG&O Co.	Waterflood	Random	2-67	6,085	2,202	5	Madison
Dwyer, Ratcliffe	Phillips	Waterflood	Peripheral	10-68	996	930	5	Madison
Elk Basin, Embar-Tensleep	Amoco	Gas Injection	Random	12-72	2,020 M	1,300	1	Purchased Gas
Elk Basin, Frontier	Amoco	Waterflood	Random	1926	1,228	1,200	2	Madison
Elk Basin, Unit 2, Tensleep	Amoco	Waterflood	Random	1949	1,646	719	1	Produced Water
Elk Basin, Madison	Amoco	Waterflood	Peripheral	1962	43,374	1,500	8	Produced Water
Elk Basin NW, Tensleep	Atlantic-Richfield	Waterflood	Semi-Peripheral	5-67	2,304	711	1	Madison
Fairview, NW Unit, Red River	Superior	Gas Injection	Crestal	10-25-67	1,519 M	1,896	1	Purchased Gas
Flat Coulee, Swift	Cardinal	Waterflood	Peripheral	2- 1-72	1,389	2,311	15	Eagle
Flat Lake, Ratcliffe	Chevron	Waterflood	Random	6- 1-71	5,887	7,326	11	Produced Water
Frannie, Tensleep	Continental	Waterflood	Random	9-70	1,075	818	1	Produced Water
Fred & George, Sunburst	Fulton	Waterflood	Random	7-70	6,740	9,203	3	Madison & Eagle
Gas City, Red River	Shell	Waterflood	Semi-Peripheral	10-31-69	4,935	3,622	7	Mission Canyon
Goose Lake, Ratcliffe	Cotton Petroleum	Waterflood	Semi-Peripheral	1-73	330	2,912	4	Produced Water
Jim Coulee, Tyler B	McAlester Fuel	Waterflood	Semi-Peripheral	6- 1-72	1,287	3,150	5	Third Cat Creek
Keg Coulee, NW Unit, Tyler B	Ada Oil	Waterflood	Semi-Peripheral	8-31-66	4,255	503	2	Madison
Keg Coulee, East, Tyler	Continental	Waterflood	Semi-Peripheral	12-24-69	2,879	2,162	4	Third Cat Creek
Keg Coulee, South, Tyler	BG&O Co.	Waterflood	Semi-Peripheral	1- 1-70	969	709	1	Madison
Kelley, Tyler	McAlester Fuel	Waterflood	Random	7-69	968	789	3	Third Cat Creek
Kevin-Sunburst, Madison	Lon Crumley	Waterflood	Random	9-63	859	252	2	Madison
Kevin-Sunburst, Madison	BG&O Co.	Waterflood	Random	8-64	4,187	2,659	4	Madison
Kevin-Sunburst, Madison	Texaco, Inc.	Waterflood	Semi-Peripheral	8-64	7,376	1,554	9	Madison
Little Beaver, Red River	Shell	Waterflood	Semi-Peripheral	8- 7-66	17,936	6,656	13	Madison
Little Beaver East, Red River	Shell	Waterflood	Semi-Peripheral	4-65	6,959	3,723	6	Madison
Lookout Butte, Red River	Shell	Waterflood	Semi-Peripheral	4-67	14,347	6,112	12	Minnelusa
Lookout Butte, Madison	Shell	Waterflood	Semi-Peripheral	2-69	1,148	893	1	Minnelusa
Monarch, Silurian	Shell	Waterflood	Random	12- 1-73	30	967	3	Siluro-Ord.
Pennel, Red River	Shell	Waterflood	Random	6-28-69	25,013	26,617	47	Dakota and Produced
Pine, South, Red River	Shell	Waterflood	Semi-Peripheral	3-59	94,606	42,994	37	Fox Hills and Produced
Pine, North, Red River	Shell	Waterflood	Semi-Peripheral	3-68	9,816	4,846	11	Lodgepole
Prichard Creek, Sunburst	Fulton Producing	Waterflood	Random	4-73	146	493	1	Eagle
Ragged Point, Tyler	BG&O Co.	Waterflood	Semi-Peripheral	12- 3-66	4,942	1,561	4	Third Cat Creek
Reagan, Madison	Union	Gas Injection	Random	8-61	4,107 M	728	2	Gas Injection
Red Creek, Cut Bank	Exxon	Waterflood	5-Spot	6-65	7,671	3,014	6	Madison
Richey SW, Interlake	Atlantic-Richfield	Waterflood	Random	12-65	2,044	138	1	Fox Hills
Stensvad, Tyler	Ada Oil	Waterflood	Semi-Peripheral	2-63	23,271	5,675	7	Madison
Sumatra West, Tyler	Continental	Waterflood	Semi-Peripheral	10-68	8,821	5,293	11	Madison
Sumatra Central, Tyler	Texaco, Inc.	Waterflood	Semi-Peripheral	9-16-69	28,176	20,510	15	Madison
Sumatra NE, Tyler	Texaco, Inc.	Waterflood	Semi-Peripheral	9-16-69	2,259	1,588	7	Madison
Sumatra SE, Tyler	BG&O Co.	Waterflood	Semi-Peripheral	12- 1-69	4,225	3,693	5	Madison
Willow Creek, North, Tyler B	Resources Investment	Waterflood	Random	6- 1-72	25	101	1	Produced

OIL AND GAS DISCOVERIES IN 1973

County	Operator-Well Name and Location	Field	Total Depth	Initial Potential Oil B/D	Initial Potential Gas MCF	Producing Formation	Date Completed
Blaine	Gas Producing Enterprises, State 16-1, NE SW SE 16-30N-21E	Unnamed	1,500		Shut-in	Eagle	7-14-73
	Texas Gas Exploration, Federal 1, NE SW 18-24N-20E	Unnamed	1,650		Shut-in	Eagle	6- 8-73
	Texas Gas Exploration, Federal 1, NE SW 12-24N-20E	Unnamed	1,847		Shut-in	Eagle	6- 8-73
	Gas Producing Enterprises, State 12-30-20, NE SW SW 12-30N-20E	Unnamed	1,275		Shut-in	Eagle	6-30-73
	Colorado Oil & Gas, USA 14-23-17, SW NE SE 14-23N-17E	Unnamed	1,700		Shut-in	Eagle	7-29-73
	Probe Oil & Gas, Williams 1, NE SE 18-34N-18E	Unnamed	1,555		21 MCF/D	Judith River	8-27-73
	Colorado Oil & Gas, USA 1, SE NW NW 22-24N-17E	Unnamed	1,850		Shut-in	Eagle	8- 4-73
	Colorado Oil & Gas, USA 1, SW SW 10-26N-21E	Unnamed	1,900		Shut-in	Eagle	8-11-73
Chouteau	Roland S. Bond, Boyce 2-24, SE NW SE 24-27N-16E	Unnamed	2,164		600 MCF/D	Eagle	6-14-73
	Gas Producing Enterprises, State 16-23-17, C NW¼ 16-23N-17E	Unnamed	1,500		Shut-in	Eagle	7-24-73
	Gas Producing Enterprises, Rutledge 14-34, C SW¼ 34-25N-14E	Unnamed	1,490		Shut-in	Eagle	7-13-73
	Gas Producing Enterprises, Orga 23-22, NE NE SW 22-24N-15E	Unnamed	1,480		Shut-in	Eagle	7- 6-73
	Roland S. Bond-Lone Star, IX Ranch C1-11, NE SW SE 11-27N-15E	Unnamed	1,725		Shut-in	Eagle	9-15-73
	Colorado Oil & Gas, Tordik 41-3, NW SE NE 3-23N-16E	Unnamed	1,500		Shut-in	Eagle	8-18-73
	Gas Producing Enterprises, Adamic 13-34, SW¼ 34-24N-15E	Unnamed	1,809		Shut-in	Eagle	9- 1-73
	Gas Producing Enterprises, State 16-28, C NE¼ 16-28N-12E	Unnamed	1,462		Shut-in	Eagle	9-13-73
	Probe Oil Company, Anderson 1, SW NE NE 6-25N-16E	Unnamed	1,630		Shut-in	Eagle	3-23-73
	High Crest, Cowan 21X2, SE NW NE 21-29N-14E	Unnamed	1,400		Shut-in	Eagle	8-28-73
	Roland S. Bond-Lone Star, IX Ranch F1-33, SW NE 33-28N-14E	Unnamed	1,535		Shut-in	Eagle	7-30-73
Glacier	Mountain States Resources, Tuma 4-1, NE SE 4-37N-5W	Graben Coulee	2,930	IPP 120 BOPD		Cut Bank	3- 5-73
Golden Valley	Cardinal Petroleum Co., Conover 9-35, NE SE 35-5N-22E	Unnamed	3,675		750 MCF/D	Mowry	12-15-73
Hill	Gas Producing Enterprises, State 16-30-11, NE¼ 16-30N-11E	Unnamed	1,092		Shut-in	Eagle	6-16-73
	Gas Producing Enterprises, State 35-33-12, SW¼ 35-33N-12E	Unnamed	1,494		Shut-in	Eagle	6-26-73
	Gas Producing Enterprises, State 16-30-13, SE¼ 16-30N-13E	Unnamed	1,196		Shut-in	Eagle	8- 9-73
	Gas Producing Enterprises, State 36-31-11, SE¼ 36-31N-11E	Unnamed	1,092		Shut-in	Eagle	6-15-73
	Probe Oil Company, Paulsen 1, SE NW 6-33N-17E	Unnamed	1,370		Shut-in	Eagle	8-21-73
	Probe Oil Company, Romaine 1, SW NW 10-34N-16E	Unnamed	1,393		16 MCF/D	Eagle	8-21-73
	Fulton Producing, Federal 3-1, SW NE NE 3-35N-12E	Unnamed	2,300		Shut-in	Eagle	8-14-73
	Oil Resources, Inc., E. Mueller 18-13, SW SW 18-37N-8E	Unnamed	3,700		15.5 MCF/D	Sawtooth	12-21-73
	Montana Power Co., State 16-11, NW SE SE 11-35N-9E	Unnamed	3,570		Shut-in	Sawtooth	12- 8-73
	Gas Producing Enterprises, Effinger 34-32-11, SE¼ 34-32N-11E	Unnamed	1,139		Shut-in	Eagle	12-21-73
Musselshell	True Oil Company, Beckman 11-24, NW NW 24-10N-25E	Unnamed	2,965	Swab 3 BOPH		Tyler "B"	- -
	Soape-Petro-Lewis-Hancock, Mang 15-5, SW SE 5-11N-25E	Winnett Junction	2,735	IPP 103 BOPD		Tyler "A"	7-31-73
Phillips	Miami Oil Producers, Kovach 1, NW¼ 27-35N-29E	Unnamed	2,357 ?		Shut-in	Bowdoin	2- 7-73
	Miami Oil Producers, Doucette 1, NW¼ 35-31N-28E	Unnamed	2,631		Shut-in	Phillips	1-28-73
	Jack Grynberg & Assoc., Federal 1, W½ NE SE 21-31N-33E	Unnamed	1,500		Shut-in	Bowdoin	2- 3-73
Richland	Pennzoil, Inc., Tveit 2, N½ SE¼ 19-25N-58E	Sioux Pass	12,795	IPF 563 BOPD IPF 397 BOPD		Interlake Red River	9-28-73
	Kenneth Luff, Federal 1-20, NW NW 20-26N-58E	North Sioux Pass	12,475	IPF 506 BOPD		Red River	10-24-73
Roosevelt	Helmerich & Payne, Inc., Wilson 1, SW NW 33-27N-59E	Riprap Coulee	12,966	IPP 165 BOPD		Ratcliffe	8-30-73
Stillwater	West Gas, Inc., Keating 1-26, C NE¼ 26-1N-21E	Lake Basin	4,140		Shut-in	Eagle	12- 3-73
	Concept Resources, Inc., State 4-16, SE NW NW 16-2N-20E	Rapelje	1,362		2,600 MCF/D	Eagle	7- 2-73
	Concept Resources, Inc., State 4-16A, SE NW NW 16-2N-20E	Rapelje	762		220 MCF/D	Claggett	7- 2-73

SIGNIFICANT EXTENSIONS AND NEW PAY ZONES IN 1973

Musselshell	Petro-Lewis, Ward Estate 13-17, C SW SW 17-11N-30E	Ragged Point	4,119	IPP 160 BOPD		Tyler "A"	2-15-73

OIL AND GAS FIELDS

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
ANTELOPE					
Swift (U. Jur.)	3	Structural	Water Drive	(Listed as part of Cat Creek Field.)	None
ARCH APEX					
Bow Island (L. Cret.) Gas	4	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 (Jurassic) Gas (Shut-in)	3	Strat.	Volumetric		
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.)
BAINVILLE					
Red River (Ord.)	1	Structural-Strat.	Depletion-Water Drive	State-wide.	None
(Shut-in)	1				
BANNATYNE					
Swift (U. Jur.)	1	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)	1				
BEARS DEN					
Sunburst (L. Cret.) Gas (Shut-in)	2	Structural	Depletion and Gas Cap Drive	State-wide.	None
Swift (U. Jur.) Oil	5				
Sawtooth (Jur.) Gas (Shut-in)	1				
BELL CREEK					
Muddy (L. Cret.) Oil & Gas	240	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.	Six areas unitized (Unit "A", "B", Ranch Creek, "C", "D", and "E".) Floods use Madison water. (Orders 7-70, 23-70, 8-71, 26-71, 35-71, 36-71.)
Gas	1				
BELL CREEK, SOUTHEAST					
Muddy (L. Cret.) Gas	2	Strat.	Depletion	160-acre spacing units, wells 660' from spacing boundary. (Order 31-72.)	None
BENRUD					
Nisku (Dev.)	1	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.)
(Shut-in)	1				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
BENRUD, EAST					
Nisku (Dev.)	3	Structural	Water Drive	Same as Benrud Field. (Order 6-65.)	Water disposal into Judith River formation. (Order 64-62, 32-66.)
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	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	5	Structural	Water Drive	State-wide.	None
Morrison (U. Jur.) Gas	1	Structural	Water Drive		
BIG WALL					
Amsden (Penn.)	1	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.)
(Shut-in)	1				
Tyler (Penn.)	13	Struct.-Strat.	Depletion		
(Shut-in)	4				
BLACK COULEE					
Eagle (U. Cret.)	4	Structural-Strat.	Water Drive	One well per 320-acre spacing unit, two adjacent quarter sections, direction operator's option.	(Order 6-73.)
BLACKFOOT					
Cut Bank (L. Cret.) (Shut-in)	3	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.)	None
	7				
Sun River (Miss.)		Structural	Water Drive		
BLACK JACK					
Sunburst (L. Cret.) Gas	6	Strat.	Depletion	One gas well per 160-acres, no closer than 660' from boundary of each unit. (Order 3-69.) Oil: State-wide spacing.	None
Swift (U. Jur.) Gas & Oil	1				
BORDER					
Cut Bank (L. Cret.) Oil & Gas	7	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.)

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
BOWDOIN					
Bowdoin & Phillips sands in Colorado Shale (U. Cret.) Gas	327	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.	None
(Shut-in)	19				
BOWES					
Eagle (U. Cret.) Gas	26	Structural	Volumetric	660' from boundary of legal subdivision, 1320' from other wells in same formation. 75' topographic tolerance. (Order 23-54.)	None
Sawtooth (M. Jur.) Oil	41	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 field-wide waterflood in 1965. (Order 5-61.) Water from Madison.
(Shut-in)	29				
BRADLEY					
Sun River (Miss.)	1	Structural	Water Drive	State-wide.	None
(Shut-in)	1				
BRADY					
Sunburst (L. Cret.) (Shut-in)	1	Strat.	Depletion, Partial Water Drive	10-acre spacing units with 75' topographic tolerance from center of spacing unit. (Order 34-62, 55-62.)	None
BRORSON					
Mission Canyon (Miss.) Oil & Gas	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.	None
Red River (Ord.) Oil & Gas	5				
BRORSON, SOUTH					
Red River (Ord.) Oil & Gas	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.	None
BRUSH LAKE					
Red River (Ord.) Oil & Gas	6	Structural-Strat.	Depletion Water Drive	320-acre spacing with initial nine spacing units described in (Order 15-71 corrected).	None
BURNS CREEK					
Red River (Ord.)	1	Structural	Depletion Water Drive	State-wide.	None
CABIN CREEK					
Mission Canyon (Miss.) Oil & Gas	18	Structural	Water Drive, Depletion	Spacing waived and General Rules No. 213 (Deviation), 218 (Commingling) and 219 (Dual Completion) are suspended until present Unit Agreement becomes inoperative. (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 a full scale peripheral flood. (Orders 60-62, 30-63.)
Interlake-Red River Oil & Gas	67	Structural	Water Drive, Depletion		

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
CANAL					
Red River (Ord.)	1	Structural	Water Drive Depletion	320-acre spacing units consisting of East half and West half of governmental section. (Order 34-70.)	None
CAT CREEK					
Kootenai (L. Cret.)	32	Structural-Strat.	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.	Three Kootenai, two Ellis, and one Amsden waterfloods in progress. (Orders 17-56, 18-59, 13-62, 8-68, 38-70, 11-71.) Water from Third Cat Creek sand.
(3 sands) (Shut-in)	4				
Morrison (U. Jur.)	2	Structural-Strat.	Water Drive		
Ellis (U. Jur.)	11	Structural	Depletion-Water Drive		
(Shut-in)	5				
Amsden (Penn.)	1	Structural-Strat.	Water Drive	State-wide.	
CEDAR CREEK					
Judith River (U. Cret.) Gas	188	Structural	Volumetric	1200' from legal subdivision line, 2400' from every other well in same formation. (Order 33-54.)	None
Eagle (U. Cret.) Gas	50	Structural	Volumetric	320-acre spacing units. Wells in center of NW¼ and SE¼ of each section with 200' topographic tolerance. (Order 1-61.)	None
CHELSEA CREEK					
Nisku (Dev.)	1	Structural	Water Drive	State-wide.	None
CLARK'S FORK					
Frontier (U. Cret.)	1	Structural-Strat.	Depletion	330' from quarter-quarter section line, 1320' between wells with 75' topographic tolerance. (Order 17-54.)	None
CLARK'S FORK, SOUTH					
Greybull (L. Cret.) Oil & Gas (Shut-in)	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
CONRAD, SOUTH					
Dakota (L. Cret.) (Shut-in)	1	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.)	2	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.)	5	Structural	Water Drive	80-acre spacing units east half and west half of quarter section, wells NE¼ and SW¼ of each quarter section with 150' topographic tolerance. (Order 32-71.)	None
(Shut-in)	1				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
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 N½ NE¼ of Section 5. (Order 29-70.)	None
CUPTON					
Red River (Ord.)	6	Structural-Strat.	Water Drive	160-acre quarter section spacing units. Location no closer than 660' from spacing unit boundary. (Order 4-72.)	None
CUT BANK					
Kootenai (L. Cret.) Oil & Gas	844	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 19 waterfloods in progress. Water from Eagle and Madison, or produced.
(Gas only)	129				
Madison (Miss.) Oil & Gas	27	Strat.	Water Drive		
(Gas only) (Shut-in)	29				
DARLING					
(Included as part of Cut Bank Field)					
DEAN DOME					
Greybull (L. Cret.) Gas (Shut-in)	1	Structural	Water Drive	State-wide. Oil ring below gas cap.	None
Oil (Shut-in)	1				
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 Commission Petroleum Engineer. (Order 18-63.)	Excess produced water is disposed into Dakota and Lakota formations. (Orders 6-56 & 3-58.) Two Silurian wells shut-in.
(Shut-in)	4				
Red River (Ord.) (Shut-in)	2	Structural	Water Drive		
DELPHIA					
Amsden (Penn.)	1	Structural	Water Drive	State-wide.	None
DEVIL'S BASIN					
Heath (U. Miss.)	3	Structural	Depletion	State-wide.	None
DEVON					
Blackleaf (U. Cret.) Gas (Shut-in)	23	Strat.	Volumetric	State-wide.	None
Kootenai (L. Cret.) Oil Depleted		Strat.	Depletion	State-wide.	None
DEVON, SOUTH					
Bow Island (L. Cret.) Gas	1	Strat.	Volumetric	Drilled on state-wide spacing. Unitized for primary production. (Order 28-71, corrected).	None
(Shut-in)	9				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
DRY CREEK					
Eagle (U. Cret.) Gas	1	Structural-Strat.	Volumetric	State-wide. Field re-delineated. (Order 8-70.)	None
Frontier (U. Cret.) Gas	8	Structural	Volumetric	Six additional gas storage wells, west end of structure.	
Greybull (L. Cret.) Gas, (Shut-in) some oil	1	Structural-Strat.	Volumetric-Depletion		
DWYER					
Ratcliffe (Miss.)	10	Structural-Strat.	Water Drive-Volumetric	160-acre spacing units; well location in center of SE¼ of spacing unit with 175' topographic tolerance. (Orders 25-60, 29-61.)	Produced water disposed into Dakota formation. (Order 26-63.) Waterflood. (Order 20-68.)
(Shut-in)	4				
EAST KEITH & KEITH					
Bow Island (L. Cret.) Gas	7	Structural	Water Drive	State-wide, except unitized portions spaced by (Order 22-62). Pooling (Order 19-66).	None
Dakota (L. Cret.)	1				
Sawtooth-Madison (Jur.-Miss.) Gas	5				
ELK BASIN (Mont. Portion)					
Frontier (U. Cret.)	11	Structural	Gravity Drainage	Rule No. 203 (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.)
(Shut-in)	14				
Embar-Tensleep (Perm., Penn.) Oil and Gas	17	Structural	Gravity Drainage		
(Shut-in)	13				
Madison (Miss.)	20	Structural	Water Drive		
ELK BASIN, NORTHWEST					
Frontier (U. Cret.)	2	Structural	Depletion	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.) Madison, produced water.
(Shut-in)	5				
Embar-Tensleep (Perm., Penn.) Oil and Gas	5	Structural	Gravity Drainage		
Madison (Miss.)	1	Structural	Water Drive		
ETHRIDGE AREA					
Bow Island (L. Cret.) Gas	3	Strat.	Water Drive	State-wide.	None
Swift (U. Jur.) Gas	3	Strat.	Water Drive	State-wide, except two wells by (Order 28-65).	
(Shut-in)	1				
FAIRVIEW					
Winnipegosis (Dev.) Oil & Gas	1	Structural	Water Drive	160-acre spacing unit. Well location anywhere in spacing unit but no closer than 660' from unit boundary. (Order 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.)
Red River (Ord.) Oil & Gas	9	Structural	Water Drive		

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
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.)	None
FLAT COULEE					
Bow Island (L. Cret.) Gas	3	Structural and Strat.	Depletion	330' from boundary of legal subdivision and 1320' from other wells in same reservoir. (Order 16-55.)	Waterflood unit and redelineation approved for Swift sandstone. (Orders 13-71, 17-A-71, 22-71.)
(Shut-in)	1				
Dakota (L. Cret.) Gas	2	Strat.	Depletion	State-wide, exception (Order 11-66.)	
Swift (Jur.) Gas	1	Strat.	Depletion	State-wide gas spacing.	
Swift (Jur.) Oil	20	Strat.	Depletion	40-acre spacing units. Well in center of spacing unit with 150' topographic tolerance. (Orders 16-62, 19-63.)	
Sunburst (Jur.) Gas	1	Strat.	Depletion		
Sawtooth (Jur.) Gas	1	Strat.	Depletion	State-wide.	
FLAT LAKE					
Nesson (Miss.)	1	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.) Unit operation for eastern part of field. (Order 7-71.)
Ratcliffe (Miss.)	52	Structural-Strat.	Partial Water Drive		
(Shut-in)	5				
FLAT LAKE, SOUTH					
Ratcliffe (Miss.)	6	Structural-Strat.	Partial Water Drive	Same as Flat Lake spacing. (Order 2-67.)	Excess salt water disposed into Muddy, Dakota, or Lakota. (Order 19-67.)
FRANNIE (Mont. Portion)					
Tensleep (Penn.)	1	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	15	Strat.	Depletion	Oil: 40-acre spacing units; well location in center of unit with 250' topographic tolerance. (Orders 29-63, 1-65.)	Sunburst waterflood initiated July, 1970, using water from Madison, (Order 13-70) and Eagle water. (Order 27-71.)
(Shut-in)	2				
Swift (U. Jur.) Oil & Gas	13	Strat.	Depletion	State-wide.	
FROID, SOUTH					
Red River (Ord.)	1	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 Recovery or Water Disposal
FT. GILBERT					
Red River (Ord.)	2	Structural-Strat.	Depletion	State-wide.	None
(Shut-in)	1				
GAGE					
Amsden (Penn.)	1	Structural	Water Drive	State-wide.	None
GAS CITY					
Red River (Ord.)	17	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 213 (Deviation), 218 (Commingling) and 219 (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.)
GIRARD					
Red River (Ord.)	1	Structural-Strat.	Depletion-Water Drive	State-wide.	None
GLENDIVE					
Red River (Ord.) Oil & Gas	14	Structural-Strat.	Depletion-Water Drive	80-acre spacing units consisting of any two adjacent quarter-quarter sections; wells located in center of NE¼ and SW¼ 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.)
(Shut-in)	1				
GOLD BUTTE					
Bow Island (L. Cret.)	1	Structural	Water Drive?	640-acre spacing, well location any quarter-quarter section cornering on center of section. (Order 26-59.)	None
Swift (U. Jur.) Gas (Shut-in)	1	Structural	Water Drive?		
GOLDEN DOME					
Eagle (U. Cret.) Gas (Shut-in)	2	Structural-Strat.		160-acre spacing; 660' from spacing unit boundary.	None
GOOSE LAKE					
Ratcliffe (Miss.) Oil & Gas	28	Structural-Strat.	Partial Water Drive	Unitized. (Order 17-72.)	Excess produced water disposed into Mission Canyon and Dakota formations. (Orders 12-64, 14-66, 12-68.)
(Shut-in)	4				
GRABEN COULEE					
Sunburst (L. Cret.)	1	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.)	None
Cut Bank (L. Cret.)	17	Structural-Strat.	Depletion		
Cut Bank-Madison (Dual)	3	Structural-Strat.	Depletion		

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
GRANDVIEW					
Bow Island (L. Cret.) Gas (2 Zones)	5	Structural	Unknown	320-acre spacing units aligned in a north-south direction; well locations no closer than 660' to a spacing unit boundary. (Order 49-67.) Dual completion with Bow Island.	None
Madison (Miss.) Gas	1	Structural	Unknown		
GYPSY BASIN					
Sunburst (L. Cret.) Oil & Gas	1	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.)	Order 6-64 permits injection of excessive gas (produced with oil) into the Sunburst gas cap.
Swift (U. Jur.)	1	Structural-Strat.	Comb. Water Drive and Depletion	Same as Sunburst	
Sawtooth-Madison (Jur. & Miss.) Oil & Gas	2	Structural-Strat.	Comb. Water Drive and Depletion	(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.)	
HARDIN					
Frontier (U. Cret.) Gas (Shut-in)	30 18	Strat.	Volumetric	State-wide.	None
HAVRE					
Eagle (U. Cret.)	1	Structural-Strat.	Water Drive Depletion	State-wide. Single well used in town of Havre.	None
HAY CREEK					
Mission Canyon (Miss.)	1	Structural	Depletion	State-wide.	Water disposal into Red River. (Order 20A-70.)
Red River (Ord.)	1	Structural	Volumetric Water Drive	320acre 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.	
HIAWATHA					
Tyler (L. Penn.) (2 Sands)	4	Structural-Strat.	Depletion	State-wide.	None
HIBBARD					
Amsden (Penn.)	1	Unknown	Water Drive	State-wide.	None
INJUN CREEK					
Tyler (Penn.) Abandoned.	0	Strat	Depletion	State-wide.	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
IVANHOE					
Morrison (U. Jur.)	1	Structural-Strat.	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 9-56).	Waterflood of Tyler B & C sands discontinued.
Amsden (L. Penn.) (Shut-in)	1	Structural-Strat.	Water Drive		
Tyler (L. Penn.)	9	Structural-Strat.	Depletion		
JIM COULEE					
Tyler (L. Penn.)	20	Structural-Strat.	Depletion Water Drive	Unitized. (Order 18-72.) No well closer than 330' from unit boundary.	Waterflood; produced and Third Cat Creek water.
KEG COULEE					
Tyler (Penn.) Oil & Gas	19	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.) Topographic tolerance varies from 100' to 250'. (Orders 11-60, 4-64, 23-64.) Buffer zone waived. (Order 16-65.)	Three waterflood units. (Orders 3-64, 28-66, 10-69, 14-69.) Madison water injected.
(Shut-in)	2				
KEG COULEE, NORTH					
Tyler (Penn.)	2	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.)	None
KEITH (see East Keith)					
KELLEY					
Tyler (Penn.)	3	Strat.	Depletion	State-wide, 250' topographic tolerance. (Order 15-67.)	Waterflood using Third Cat Creek water. (Order 8-69.)
KEVIN-SUNBURST					
Sunburst (L. Cret.) Oil & Gas	40?	Strat.	Depletion	9 wells per 40-acre tract; only 3 wells on any side of tract set back at least 220' from line. Field delineated by (Orders 8-54, 28-55.) (Estimated 400 wells shut-in.)	There are five waterfloods in operation, using Madison water. (Orders 9-64, 17-64, 30-64, 36-65, 29-71.)
Swift (U. Jur.)	?	Structure			
Sun River (Miss.) Oil & Gas	367	Structure-Strat.	Depletion		
Gas only	12				
(Shut-in)	?				
KICKING HORSE					
Sun River (Miss.) Gas	1	Structural	Depletion	640-acre field (unit)) consisting of parts of four sections. All formations. (Order 4-70.)	None
LAIRD CREEK					
Swift (U. Jur.) Oil & Gas	10	Strat.	Depletion	State-wide. One shut-in gas well.	None
(Shut-in)	1				

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
LAKE BASIN, NORTH					
Eagle, Frontier (U. Cret.) Gas	2	Structural	Unknown	640-acre spacing units consisting of one section. Locations 990' from section line. (Order 3-74.)	None
(Shut-in)	2				
LANDSLIDE BUTTE					
Sun River (Miss.)	2	Unknown	Water Drive	State-wide.	None
(Shut-in)	1				
LEARY					
Muddy (L. Cret.)	3	Structural-Strat.	Depletion	80-acre spacing with locations in NE¼ and SW¼ of each quarter section, 200' topographic tolerance. (Order 12-69, 19-70.)	None
LISCOM CREEK					
Shannon (U. Cret.) Gas	7	Structural-Strat.	Depletion	Spacing, one well per 640 acres.	None
LITTLE BEAVER (Mont. Portion)					
Red River (Ord.)	23	Structural	Comb. Depletion and Water Drive	Spacing waived and General Rules 213 (Deviation), 218 (Commingling) and 219 (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 (Montana Portion)					
Red River (Ord.)	10	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 WALL CREEK					
Tyler (Penn.)	1	Strat.	Depletion Water Drive	State-wide.	None
LODGE GRASS					
Tensleep (Penn.)	1	Structural-Strat.	Water Drive	160-acre spacing units; well locations vary according to areas; 250' topographic tolerance. (Orders 26-64, 26-65.)	None
LONETREE CREEK					
Red River (Ord.)	7	Structural	Depletion	320-acre spacing, wells 660' from spacing boundary, 2000' between wells. (Order 29-72.)	None

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
MOSSER					
Greybull (L. Cret.)	4	Structural	Water Drive	Spacing waived. Future development requires administrative approval of the Commission. (Order 27-62.)	None
MT. LILLY					
Madison (Miss.) Gas	2	Structural	Water Drive	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
NOHLY					
Red River (Ord.)	1	Structural	Volumetric Water Drive	State-wide.	None
NORTH GUILDFORD					
Sawtooth (M. Jur.)	1	Structural	Unknown	320-acre specified spacing units. One well per unit 660' from boundary, 2640' between wells. (Order 9-58.)	None
NORTH LAKE BASIN					
(See Lake Basin, North)					
NORTH WILLOW CREEK					
(See Willow Creek, North)					
OTIS CREEK					
Red River (Ord.)	2	Structural	Depletion	State-wide.	None
OTIS CREEK, SOUTH					
Red River (Ord.)	1	Structural	Depletion	State-wide.	None
OUTLOOK					
Duperow (Dev.)	2	Structural-Strat.	Water Drive	State-wide.	Produced water is disposed into Dakota and Siluro - Devonian formations. (Orders 16-59, 17-65, 36-66.)
Winnipegosis (Dev.)	3	Structural-Strat.	Water Drive	State-wide.	
Silurian-Devonian	3	Structural-Strat.	Water Drive	160-acre spacing units; well location in center of either SW¼ or NE¼ of each quarter section; 175' topographic tolerance. (Order 19-59A.)	
(Shut-in)	2				
OUTLOOK, SOUTH					
Winnipegosis (Dev.) Interlake (Sil.) (Dual Completion with Dev. zone)	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. (Orders 19-59, 17-65.)
Red River (Ord.) (Shut-in)	1	Structural	Water Drive		
OUTLOOK, WEST					
Winnipegosis (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.)

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
PENNEL					
Mission Canyon (Miss.)	8	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.)	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.)
Siluro-Ordovician Oil & Gas	99	Structural	Depletion-Water Drive	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.)	
PINE					
Mission Canyon (Miss.) Oil & Gas	4	Structural	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.)
Siluro-Ordovician Oil & Gas	105	Structural	Depletion-Water Drive		
PLEVNA					
Judith River (U. Cret.) Gas	20	Structural	Water Drive	1200' from legal subdivision line; 2400' from other wells on same lease or unit; 75' topographic tolerance. (Orders 34-54, 4-57.)	None
PONDERA					
Sun River (Miss.) Oil & Gas	280	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: 1320' from legal subdivision; 3700' from other wells on same lease or unit; 75' topographic tolerance. (Order 9-54.) General Rules 207, 211, 219, 221, 223, and 224 do not apply.	Produced water injected into lower Madison. (Orders 11-56, 15-56, 4-65, 4-66, 20-A-71.) A small waterflood project has been in operation since 1959, using Madison water.
PONDERA COULEE					
Sun River (Miss.) (Shut-in)	4	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.)	58	Structural	Water Drive	State-wide spacing; field delineated by (Order 7-55.)	Unitized in 1955. (Order 7-55.) Excess produced water has been injected into the Dakota and Judith River formations. (Orders 1-55, 5-57, 7-57, 14-61, 21-61, 34-61, 10-62, 51-67.)
Heath (Tyler) (Penn.)	3	Structural-Strat.	Water Drive		
Nisku (Dev.)	1	Structural	Water Drive		

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
POPLAR, NORTHWEST					
Charles (Miss.) ("C" or McGowan Zone)	3	Structural	Water Drive	80-acre spacing units for McGowan or "C" zone consisting of E½ and W½ of each quarter section; permitted wells in NW¼ and SE¼ of quarter section. All other formations on state-wide spacing. (Order 18-55.)	None
PRAIRIE ELK					
Charles "C" (Miss.) (Shut-in)	1	Unknown	Water Drive	State-wide.	None
PRICHARD CREEK					
Sunburst (L. Cret.) Oil & Gas	5	Strat.	Depletion	Well locations subject to administrative approval.	None. Unitized as to Sunburst for water injection. (Order 7-73.)
(Shut-in)	1				
PUMPKIN CREEK					
Shannon (U. Cret.) Gas (Shut-in)	8	Structural-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.) (Shut-in)	1	Structural	Volumetric Water Drive		
RABBIT HILLS					
Sawtooth (Jur.)	3	Structural Strat.	Volumetric Water Drive	160-acre spacing unit. Well location 660' from spacing unit boundary. (Order 17-73.)	None
RAGGED POINT					
Tyler (Penn.)	13	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.)
Kibbey (Miss.) Plugged	0	Structural	Water Drive	State-wide spacing. (Order 15-54.) Commingling of production from Tyler and Kibbey permitted in one well per (Order 11-65.)	
RAPELJE					
Claggett, Eagle, Judith River, Virgelle (U. Cret.)	9	Structural-Strat.	Water Drive	160-acre spacing. Wells no closer than 990' to unit boundary. (Order 29-73.)	None
RATTLESNAKE COULEE					
Sunburst (L. Cret.)	2	Strat.	Depletion	State-wide.	None
RAYMOND					
Nisku (Dev.)	2	Structural-Strat.	Depletion Water Drive	320-acre spacing units. Wells 660' from spacing unit boundary. (Order 38-72.)	None
Duperow (Dev.)	1				
Winnipegosis (Dev.)	3				
Red River (Ord.)	1				
REAGAN					
Sun River (Miss.) Oil	44	Structural	Gas Cap-Water Drive	State-wide. (Order 17-54.)	A pressure maintenance project utilizing gas injection was started in 1961. (Order 21-60.) Waterflood. (Order 27-72.)
(Shut-in)	19				
Gas	1				

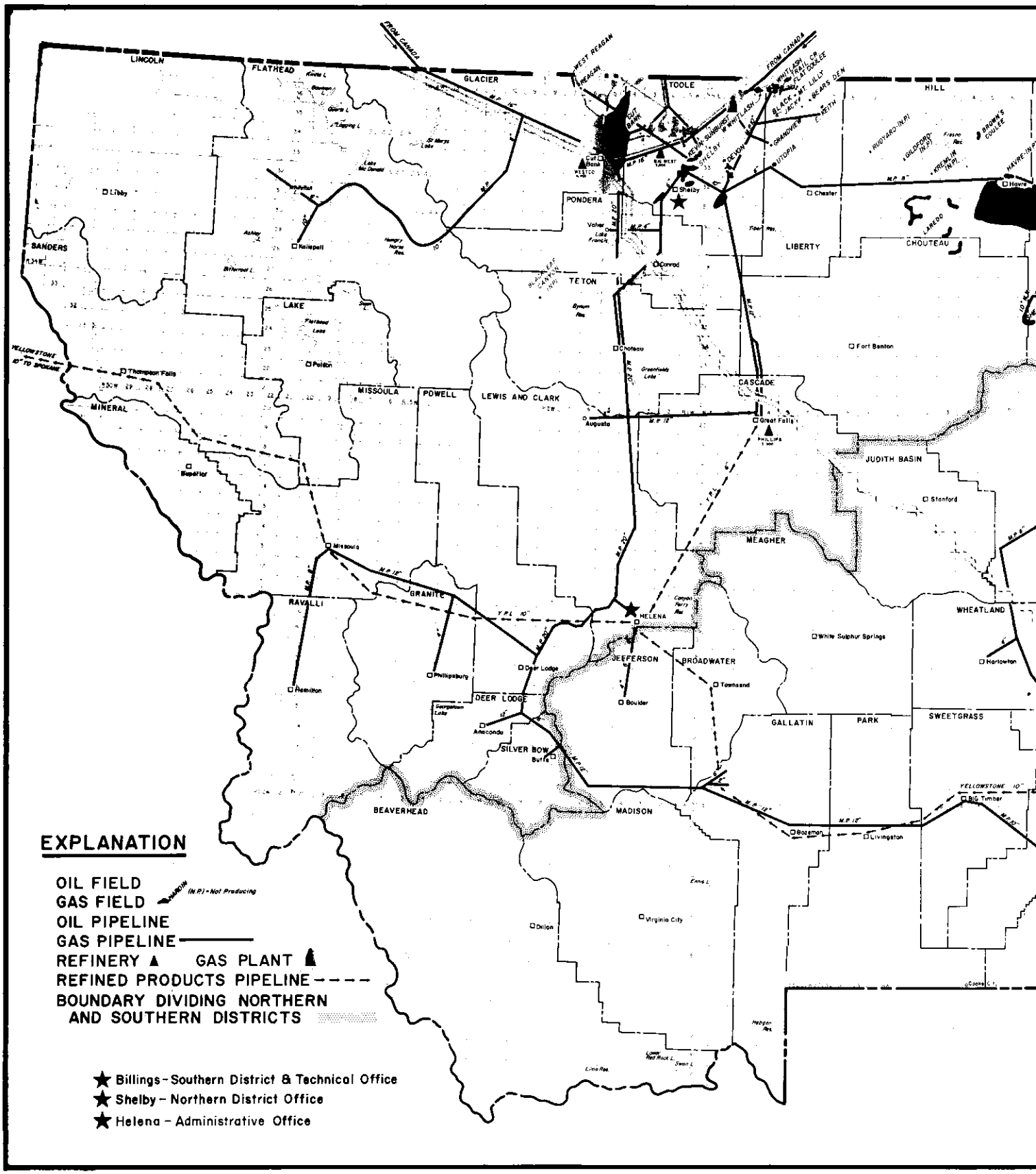
Field, Formation, Age		No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
REAGAN, WEST						
Blackleaf (U. Cret.) Gas		10	Strat.	Depletion	State-wide. Injected into Reagan field as secondary recovery agent.	None
RED CREEK						
Cut Bank (L. Cret.) Oil & Gas		7	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.
	(Shut-in)	2				
Sun River (Miss.) Oil & Gas		12	Structural	Water Drive		
	(Shut-in)	9				
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
REDSTONE						
Winnipegosis (Dev.)	(Shut-in)	1	Unknown	Water Drive	One well per 160-acre unit, but no closer than 660' from unit boundary.	None
REPEAT						
Red River (Ord.)		1	Unknown	Water Drive	State-wide.	None
RESERVE						
Winnipegosis (Dev.)	(Shut-in)	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.)
Interlake (Sil.)	(Shut-in)	1	Structural-Strat.	Water Drive		
Red River (Ord.)		4	Structural-Strat.	Water Drive		
	(Shut-in)	1				
RICHEY						
Charles (Miss.)		1	Structural	Water Drive	State-wide.	Original 80-acre spacing revoked. (Order 11-73.)
RICHEY, SOUTHWEST						
Interlake, Dawson Bay (Sil.) (Dev.)		5	Structural	Depletion	160-acre spacing units; wells no closer than 900' from boundary of spacing unit. (Order 25-62.)	A waterflood project in the Interlake and Dawson Bay was started in 1965. (Order 34-65.)
	(Shut-in)	1				
RIPRAP COULEE						
Ratcliffe (Miss.)		1	Structural-Strat.	Depletion	State-wide.	None
ROSCOE						
Lakota (L. Cret.)	(Shut-in)	1	Structural	Water Drive	State-wide.	None
ROUGH CREEK						
Muddy (L. Cret.)	(Shut-in)	1	Structural Strat.	Depletion	State-wide. Formerly called Duncan Creek.	None

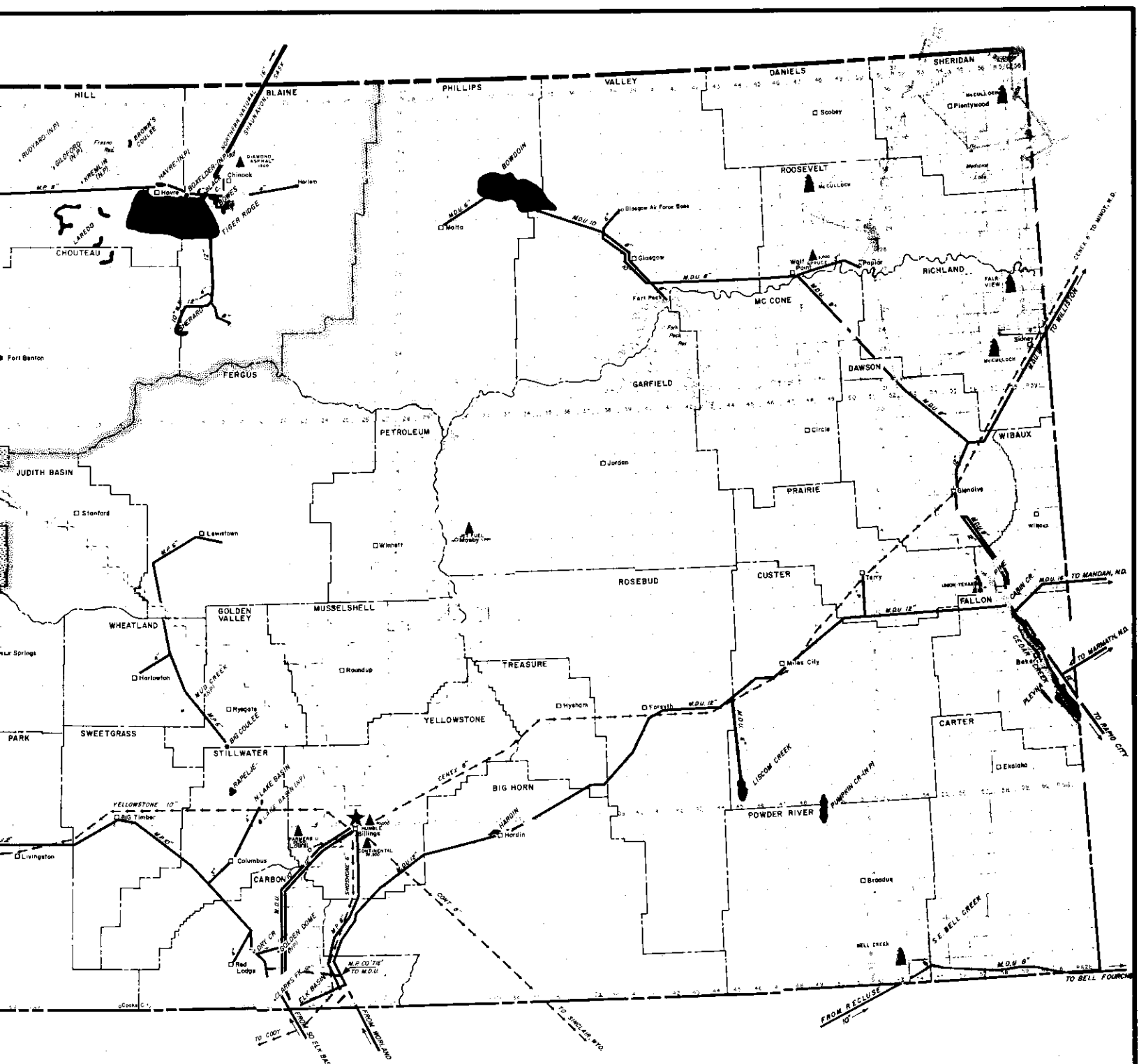
Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
RUDYARD					
Sawtooth (M. Jur.) Gas (Shut-in)	3	Structural	Volumetric	640-acre spacing units consisting of one section; well location in center of NW¼ of section with 75' topographic tolerance. (Order 2-58.)	None
RUSH MOUNTAIN					
Winnipegosis (M. Dev.) 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.)
SALT LAKE					
Bakken-Nisku (Miss.-Dev.)	3	Structural	Water Drive	State-wide.	None
SAND CREEK					
Interlake, Red River (Sil.) (Ord.) (Shut-in)	2 6	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.)
SECOND CREEK					
Red River (Ord.)	1	Structural	Volumetric Water Drive	State-wide.	None
SHELBY AREA					
Sunburst (L. Cret.) Gas Swift (Jur.) Gas	33	Structural-Strat.	Depletion	State-wide. Field outline not delineated. A few small Swift sand wells commingled with Sunburst.	None
SHERARD					
Eagle (U. Cret.) Gas	12	Structural-Strat.	Volumetric Water Drive	640-acre spacing units; 990' from section line. (Order 1-74.)	None
SHOTGUN CREEK					
Ratcliffe (Miss.) (Shut-in)	1	Structural	Water Drive	State-wide.	None
SIDNEY					
Mission Canyon (Miss.) (Shut-in)	1	Structural	Water Drive	State-wide.	None
SIOUX PASS					
Interlake (Sil.) Red River (Ord.)	1 1	Structural	Volumetric Water Drive	State-wide.	None
SNYDER					
Tensleep (Penn.)	3	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.)	12	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

Field, Formation, Age		No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
SPRING LAKE						
Nisku (Dev.)	(Shut-in)	1	Structural	Depletion	One well per 160-acre spacing unit. Well location anywhere within 840' square in center of spacing unit. (Order 6-63.)	None
Red River (Ord.)		2	Structural	Depletion		
SQUAW COULEE (Now included as part of Tiger Ridge Field.) (Order 10-70.)						
STENSVAD						
Tyler (Penn.)		8	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. (Orders 5-65, Amended.)	A waterflood operation has been in progress since 1963, using Madison water. (Orders 48-67, 9-67.)
	(Shut-in)	9				
SUMATRA						
Tyler (Penn.) Oil & Gas		79	Strat.	Depletion	40-acre spacing units; well located in center of unit with 75' tolerance. (Order 14-58.)	Four waterflood units using Madison water. (Orders 48-67, 6-69, 15-69, 19-69, 3-70.)
TIGER RIDGE						
Judith River (U. Cret.) Gas		6	Structural-Strat.	Depletion-Water Drive	160-acre spacing; location no closer than 660' to unit boundary. (Order 32-73.) State-wide, for part not unitized. Two units: (Order 11-72 and 41-72.) Wells 990' from unit boundary.	
Eagle (U. Cret.) Gas		123	Structural-Strat.	Depletion-Water Drive	Originally one well per section within 2640' square in center of each unit and no closer than 1320' from boundary of unit. Changed to state-wide spacing by (Order 10-70.)	(Orders 17-67, 23-68, 10-70.)
	(Shut-in)	37				
Sawtooth (Jur.) Oil	(Shut-in)	1	Structural-Strat.	Water Drive	State-wide.	
TRAIL CREEK						
Sunburst (L. Cret.) Gas		2	Structural-Strat.	Water Drive-Depletion	One well per 320 acres consisting of S½ and N½ of each governmental section but no closer than 990' from spacing boundary. (Order 33-70.)	None
TULE CREEK						
Nisku (Dev.)		5	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.)	Produced water injected into Dakota and Judith River formations. (Orders 12-66, 24-67.)
	(Shut-in)	1				
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.)

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
TULE CREEK, SOUTH					
Nisku (Dev.)	3	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.)
UTOPIA					
Sawtooth (Jur.) Gas Madison (Miss.)	4	Structural	Depletion Water Drive	State-wide. Two wells produced small amount of oil from Swift sand.	None
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.)	Water injected into Lakota formation. (Order 14-68.)
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.)	Excess produced water is disposed into Judith River. (Order 3-65.)
(Shut-in)	2				
Charles "C" (Miss.)	1	Structural	Water Drive	State-wide.	
WEED CREEK					
Amsden (L. Penn.) Abandoned	0	Structural	Water Drive	State-wide.	None
WELDON					
Kibbey (Miss.)	3	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 NE¼ and SW¼ of quarter section with 200' topographic tolerance. (Order 9-65.)	Excess produced water is disposed into the Dakota, Lakota, Morrison, and Charles formations. (Orders 31-65, 47-65, 37-66, 16-67.)
(Shut-in)	9				
WEST BUTTE					
Sunburst (L. Cret.) Oil	1	Structural-Strat.	Depletion	State-wide, except W½ Section 16 is considered a single spacing unit.	None
Sawtooth (Jur.) Gas Madison (Miss.) Gas	1	Structural	Water Drive	Sawtooth-Madison gas commingled, unitized. (Order 5-72.) No well closer than 330' from unit boundary.	
WEST REAGAN					
(See Reagan, West)					

Field, Formation, Age	No. Prod. Wells	Type of Trap	Probable Drive Mechanism	Spacing Regulations, Field Rules, and Remarks	Secondary Recovery or Water Disposal
WHITLASH					
Bow Island, Kootenai, Swift (Cret.) (Jur.) Oil	40	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.)	None
(Shut-in)	7				
Gas	5				
(Shut-in)	3				
WHITLASH, WEST					
Sunburst, Swift (Cret.) (Jur.) Sawtooth (Jur.) (Shut-in) Oil	1	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.)	None
Gas	9				
WILLOW CREEK, NORTH					
Tyler (Penn.) Oil	2	Structural-Strat.	Depletion Water Drive	State-wide.	Pilotflood. (Order 19-72.)
WILLS CREEK, SOUTH					
Interlake (Sil.)	2	Structural	Partial Water Drive	160-acre spacing units. Well location in center of SE¼ of each unit with 175' topographic tolerance. (Orders 5-64, 30-66.)	Waterflood initiated 12-1-73. (Order 23-73.)
WINNETT JUNCTION					
Tyler (Penn.)	3	Strat.	Depletion Water Drive	State-wide.	None
WOLF SPRINGS					
Amsden (Penn.)	2	Structural	Water Drive	80-acre spacing units consisting of N½ and S½ of each quarter section. Well location in center of NW¼ and SE¼ of each quarter section with 75' topographic tolerance. (Orders 4-56, 9-59.)	None
WOODROW					
Charles, Duperow, Interlake	1	Structural	Water Drive	80-acre spacing units consisting of any two adjacent quarter-quarter sections; well locations in center of NE¼ and SW¼ of each quarter section with 200' topographic tolerance. (Order 47-62.)	Produced water injected into Dakota. (Order 48-62.)
Red River (Ord.)	1				
(Shut-in)	4				
WRIGHT CREEK					
Muddy (L. Cret.)	4	Structural-Strat.	Depletion Water Drive	80-acre spacing consisting of N½ and S½ of quarter section with locations in NW¼ and SE¼ of each quarter section with 200' tolerance.	None
(Shut-in)	1				


LINCOLN
FLATHEAD
GLACIER
TOOLE
HILL
SANDERS
LAKE
MINERAL
MISSOULA
POWELL
LEWIS AND CLARK
TETON
PONDERA
LIBERTY
CHOUTEAU
CASCADE
JUDITH BASIN
MEAGHER
WHEATLAND
SWEETGRASS
PARK
GALLATIN
BROADWATER
JEFFERSON
GRANITE
RAVALLI
DEER LODGE
SILVER BOW
BEAVERHEAD
MADISON
Libby
Kalispell
Polson
Thompson Falls
Superior
Missoula
Hamilton
Philipsburg
Deer Lodge
Anaconda
Butte
Boulder
Townsend
White Sulphur Springs
Harlowton
Big Timber
Livingston
Bozeman
Virginia City
Dillon
Stanford
Fort Benton
Great Falls
Augusta
Choteau
Conrad
Shelby
Cut Bank
Chester
Havre
HELENA
FROM CANADA
WEST REAGAN
SHELBY
KEVIN SUNBURST
WHITLASH
BLACK JACK
FLAT COULEE
ST. LILLY
BEARS DEN
EGETH
GRANDVIEW
DUPUYER
UTOPIA
RUDYARD (N.P.)
GILFORD (N.P.)
KREMLIN (N.P.)
BROWN'S COULEE
LAREDO
YELLOWSTONE 10" TO SPOKANE
YELLOWSTONE 10"
M.P. 8"
M.P. 10"
M.P. 12"
M.P. 16"
M.P. 18"
M.P. 20"
M.P. 6"
M.P. 4"
Y.P.L. 10"
EXPLANATION
OIL FIELD
GAS FIELD
(N.P.) = Not Producing
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



MONTANA

OIL AND GAS FIELDS, PIPELINES AND REFINERIES

1973

BOARD OF OIL AND GAS CONSERVATION

STATE OF MONTANA – SUMMARY OF PRODUCING

MONTANA BOARD OF OIL AND GAS CONSERVATION

LINE NO.	FIELD	COUNTY	PRODUCING FORMATION	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY (%)	Sw (%)	O.O.I.P. (BBLS/ACRE)	PRODUCTIVE AREA 1-1-74 (ACRES)	O.O.I.P. (M BBLS.
1	Ash Creek	Big Horn	Shannon (U. Cret.)	1952	4,500	34	1.05	14	22	42	13,200	200	2,640
2	Bainville	Roosevelt	Red River (Ord.)	1969	10,300	45	1.75	38	15	34	16,680	320	5,340
3	Bears Den	Liberty	Sunburst (L. Cret.)	1924	2,300	39	1.08	20	12	35	11,210	200	2,240
4	Bell Creek	Powder River	Muddy (Cret.)	1967	4,400	36	1.11	10	26	23	13,990	16,000	223,840
5	Benrud	Roosevelt	Nisku (Dev.)	1961	7,700	43	1.41	22	16	30	13,560	80	1,080
6	Benrud, East	Roosevelt	Nisku (Dev.)	1962	7,500	46	1.37	22	15	30	13,080	480	6,280
7	Benrud, Northeast	Roosevelt	Nisku (Dev.)	1964	7,600	46	1.40	23	16	30	14,270	160	2,280
8	Big Wall	Musselshell	Amsden (Penn.)	1953	2,500	19	1.61	17	16	35	8,520	280	2,390
9	Big Wall	Musselshell	Tyler (Penn.)	1948	3,000	31	1.02	22	17	40	17,070	1,220	20,830
10	Blackfoot	Glacier	Madison (Miss.)	1955	3,600	25	1.15	8	14	40	4,530	480	2,170
11	Blackfoot	Glacier	Cut Bank (L. Cret.)	1955	3,500	30	1.11	15	15	35	10,220	160	1,640
12	Bowes	Blaine	Sawtooth (M. Jur.)	1949	3,300	19	1.02	37	12	31	23,300	3,760	87,610
13	Brorson	Richland	Madison (Miss.)	1954	9,600	32	1.40	40	5	40	6,650	1,120	7,450
14	Brorson	Richland	Red River (Ord.)	1968	12,600	48	1.70	20	10	35	5,930	1,440	8,540
15	Brorson, South	Richland	Red River (Ord.)	1968	12,600	48	1.70	20	12	30	7,670	480	3,680
16	Brush Lake	Sheridan	Red River (Ord.)	1969	11,400	40	1.50	30	14	35	14,120	2,240	31,630
17	Burns Creek	Dawson	Red River (Ord.)	1972	11,400	39	1.25	14	14	40	7,300	320	2,340
18	Cabin Creek	Fallon	Siluro-Ordovician	1953	9,000	33	1.20	50	13	30	29,420	7,620	224,180
19	Cabin Creek	Fallon	Mission Canyon (Miss.)	1956	7,300	33	1.13	25	11	30	13,220	2,260	29,880
20	Canal	Richland	Red River (Ord.)	1970	12,700	47	2.07	58	8	40	10,430	320	3,340
21	Cat Creek (West Dome)	Petroleum	Kootenai (L. Cret.)	1920	1,100	52	1.10	51	21	19	61,180	900	55,060
22	Cat Creek (Antelope Dome)	Garfield	Kootenai (L. Cret.)	1920	1,200	52	1.10	10	21	19	12,000	200	2,400
23	Cat Creek	Petroleum, Garfield	Morrison (U. Jur.)	1945	1,600	52	1.10	6	22	40	5,590	240	1,340
24	Cat Creek	Petroleum, Garfield	Ellis (U. Jur.)	1945	1,700	52	1.10	25	18	40	19,040	880	16,760
25	Cat Creek	Petroleum	Amsden (Penn.)	1967	2,000	52	1.00	10	8	30	4,340	80	350
26	Cow Creek	McCone	Charles (Miss.)	1969	6,800	40	1.20	25	8	48	6,720	240	1,610
27	Cow Creek, East	McCone	Kibbey (Miss.)	1971	6,300	35	1.05	15	15	35	10,810	400	4,320
28	Culbertson	Roosevelt	Red River (Ord.)	1969	11,900	48	1.80	20	12	16	8,690	320	2,780
29	Cupton	Fallon	Red River (Ord.)	1955	9,600	38	1.25	40	12	30	20,850	1,280	26,690
30	Cut Bank	Glacier, Toole, Pondera	Kootenai (L. Cret.)	1932	2,900	31	1.09	18	15	35	12,490	49,000	612,000
31	Cut Bank	Glacier, Toole	Madison (Miss.)	1945	3,000	34	1.10	10	14	30	6,910	3,200	22,110
32	Deer Creek	Dawson	Interlake (Sil.)	1956	9,400	43	1.20	38	7	30	12,040	320	3,850
33	Dwyer	Sheridan	Ratcliffe (Miss.)	1960	8,000	37	1.32	38	11	56	10,810	3,840	41,510
34	Elk Basin	Carbon	Frontier (U. Cret.)	1915	1,200	45	1.16	30	21	20	33,710	120	4,050
35	Elk Basin	Carbon	Tensleep (Penn.)	1942	5,000	29	1.16	124	11	10	82,100	1,400	114,940
36	Elk Basin	Carbon	Madison (Miss.)	1942	5,300	28	1.12	224	12	9	169,430	920	155,880
37	Elk Basin, Northwest	Carbon	Madison (Miss.)	1947	6,200	35	1.08	124	12	35	69,480	200	13,900
38	Elk Basin, Northwest	Carbon	Tensleep (Penn.)	1964	6,000	37	1.15	27	12	22	17,050	580	9,890
39	Fairview	Richland	Winnipegosis (Dev.)	1967	11,500	43	1.10	27	7	30	9,330	160	1,490
40	Fairview	Richland	Red River (Ord.)	1965	12,700	47	1.70	35	11	28	12,650	1,920	24,290
41	Fertile Prairie	Fallon	Red River (Ord.)	1952	9,300	29	1.20	6	14	27	3,960	400	1,580
42	Flat Coulee	Liberty	Swift (U. Jur.)	1933	2,900	37	1.10	18	21	35	17,330	1,280	22,180
43	Flat Lake	Sheridan	Ratcliffe (Miss.)	1964	6,500	33	1.26	14	15	45	7,110	9,600	68,260
44	Flat Lake, South	Sheridan	Ratcliffe (Miss.)	1966	6,500	32	1.26	9	12	45	3,660	1,120	4,100
45	Fort Gilbert	Sheridan	Red River (Ord.)	1970	12,500	48	1.89	42	12	20	16,550	640	10,590
46	Frannie	Carbon	Tensleep (Penn.)	1928	2,700	27	1.02	29	19	16	35,200	80	2,820
47	Fred & George Creek	Toole	Sunburst (L. Cret.)	1963	2,600	39	1.20	31	27	30	37,880	880	33,330
48	Fred & George Creek	Toole	Swift (U. Jur.)	1963	2,700	39	1.10	8	14	30	5,530	840	4,650
49	Froid, South	Roosevelt	Red River (Ord.)	1970	12,100	48	1.55	12	17	25	7,660	160	1,230
50	Gas City	Dawson	Red River (Ord.)	1955	8,900	38	1.28	25	12	35	11,820	2,800	33,100
51	Girard	Richland	Red River (Ord.)	1969	11,900	46	1.15	18	15	40	10,930	320	3,500
52	Glendive	Dawson	Red River (Ord.)	1952	8,900	38	1.25	147	8	35	47,440	1,280	60,720
53	Goose Lake	Sheridan	Ratcliffe (Miss.)	1962	7,000	34	1.20	40	16	55	18,620	6,240	116,190
54	Graben Coulee	Glacier	Sunburst, Cut Bank, Madison	1961	2,900	34	1.10	15	12	30	8,890	800	7,110
55	Hay Creek	Richland	Red River (Ord.)	1969	12,600	46	1.90	53	12	25	19,480	640	12,470
56	Hay Creek	Richland	Mission Canyon (Miss.)	1969	9,600	39	1.15	40	5	30	9,440	160	1,510
57	Hiawatha	Musselshell	Tyler (L. Penn.)	1967	5,000	33	1.15	34	12	30	19,270	360	6,940
58	Ivanhoe	Musselshell	Tyler (L. Penn.)	1956	4,100	33	1.08	29	15	20	25,000	600	15,000
59	Jim Coulee	Musselshell	Tyler (L. Penn.)	1971	3,700	33	1.10	37	15	33	26,230	760	19,930
60	Keg Coulee	Musselshell	Tyler (L. Penn.)	1960	4,600	33	1.15	19	14	32	12,200	1,800	21,960
61	Keg Coulee, North	Musselshell	Tyler (L. Penn.)	1964	4,600	33	1.15	14	12	32	7,710	120	930
62	Kelley	Musselshell	Tyler (L. Penn.)	1966	4,400	33	1.15	50	13	30	30,690	200	6,140
63	Kevin-Sunburst	Toole	Madison-Sunburst (Miss.-L.Cret.)	1922	1,500	32	1.08	7	20	35	6,540	40,200	262,910
64	Laird Creek	Liberty	Swift (U. Jur.)	1968	2,800	39	1.10	14	16	25	11,850	480	5,690
65	Leary	Powder River	Muddy (Cret.)	1969	5,800	41	1.15	7	17	33	5,180	240	1,290
66	Little Beaver	Fallon	Red River (Ord.)	1952	8,300	29	1.40	37	12	35	15,990	2,390	38,220
67	Little Beaver, East	Fallon	Red River (Ord.)	1954	8,300	30	1.50	24	13	35	10,490	1,600	16,780
68	Little Wall Creek	Musselshell	Tyler (L. Penn.)	1970	3,700	33	1.10	40	15	33	28,350	160	4,540
69	Lonetree Creek	Richland	Red River (Ord.)	1970	12,500	47	1.86	19	11	30	6,100	2,240	13,660
70	Lookout Butte	Fallon	Red River (Ord.)	1961	8,900	33	1.15	15	15	25	11,380	6,100	69,420
71	Lookout Butte	Fallon	Mission Canyon-Lodgepole (Miss.)	1966	8,000	26	1.13	26	10	35	11,600	1,920	22,270
72	Melstone	Musselshell	Tyler (L. Penn.)	1948	4,300	34	1.09	25	15	30	18,680	360	6,720
73	Monarch	Fallon	Siluro-Ordovician	1958	8,400	32	1.10	31	7	35	9,950	2,240	22,290
74	Mohiy	Richland	Red River (Ord.)	1972	12,900	46	1.43	27	10	40	8,790	320	2,810
75	Otis Creek	Richland	Red River (Ord.)	1970	12,700	48	1.78	23	12	35	7,820	640	5,000
76	Outlook	Sheridan	Silurо-Devonian	1956	9,000	38	1.12	20	8	30	7,760	1,600	12,420
77	Outlook	Sheridan	Duperow (Dev.)	1964	8,200	39	1.50	15	10	25	5,820	640	3,720
78	Outlook	Sheridan	Winnipegosis (Dev.)	1971	9,000	39	1.12	18	8	30	6,980	480	3,350
79	Outlook, South	Sheridan	Winnipegosis (Dev.)	1957	9,100	39	1.12	18	8	30	6,980	240	1,680
80	Outlook, West	Sheridan	Winnipegosis (Dev.)	1958	9,100	39	1.12	16	8	30	6,210	320	1,990
81	Pennel	Fallon	Silurо-Ordovician	1955	8,800	33	1.14	25	11	35	12,160	22,380	272,140
82	Pennel	Fallon	Mission Canyon (Miss.)	1957	7,000	31	1.10	38	3	30	5,630	720	4,050
83	Pennel	Fallon	Lodgepole (Miss.)	1960	7,500	36	1.13	30	8	35	10,710	320	3,430
84	Pine	Fallon, Wibaux, Prairie, Dawson	Silurо-Ordovician	1952	8,400	34	1.17	32	12	30	17,820	13,320	237,360
85	Pondera	Pondera, Teton	Madison (Miss.)	1927	2,100	34	1.20	15	16	31	10,710	5,560	59,550
86	Poplar	Roosevelt	Madison (Miss.)	1952	5,500	40	1.10	25	11	30	13,580	18,070	245,390
87	Poplar	Roosevelt	Heath (Penn.)	1969	4,900	38	1.10	8	11	50	3,100	480	1,490
88	Poplar	Roosevelt	Nisku (Dev.)	1969	7,300	42	1.40	12	8	50	2,660	320	850
89	Poplar, Northwest	Roosevelt	Madison (Miss.)	1952	6,300	40	1.10	16	10	45	6,210	400	2,480
90	Putnam	Richland	Silurо-Ordovician	1969	11,900	41	1.75	16	9	30	4,470	320	1,430
91	Rabbit Hills	Blaine	Sawtooth (Jur.)	1972	4,000	21	1.15	12	18	16	12,240	640	7,830
92	Ragged Point	Musselshell	Tyler (L. Penn.)	1956	3,600	32	1.11	13	14	32	8,650	1,040	9,000
93	Raymond	Sheridan	Nisku (Dev.)	1972	7,900	50	1.40	22	8	50	4,880	320	1,560
94	Raymond	Sheridan	Duperow (Dev.)	1972	8,400	46	1.50	19	13	29	9,070	160	1,450
95	Raymond	Sheridan	Winnipegosis (Dev.)	1972	9,300	42	1.17	40	5	10	11,940	480	5,730
96	Raymond	Sheridan	Red River (Ord.)	1972	10,000	39	1.42	33	12	27	15,790	160	2,530
97	Reagan	Glacier	Madison (Miss.)	1947	3,700	38	1.10	11	12	30	6,520	2,520	16,430
98	Red Creek	Glacier	Cut Bank (L. Cret.)	1958	2,600	31	1.08	20	19	30	19,110	770	14,710
99	Red Creek	Glacier	Madison (Miss.)	1958	2,800	28	1.10	32	13	30	20,540	640	13,150
100	Redstone	Sheridan	Winnipegosis (Dev.)	1958	9,400	42	1.10	34	8	30	13,430	160	2,150
101	Repeat	Carter	Red River (Ord.)	1956	8,600	23	1.02	25	10	30	13,310	160	2,130
102	Reserve	Sheridan	Red River (Ord.)	1966	11,100	39	1.30	18	6	30	4,510	960	4,330
103	Richey, Southwest	McCone	Silurо-Ordovician	1952	9,200	48	1.37	27	9	30	9,630	1,160	11,170
104	Rush Mountain	Sheridan	Red River (Ord.)	1968	12,000	39	1.62	14	10	33	4,490	320	1,440
105	Salt Lake	Sheridan	Nisku (Dev.)	1970	7,900	43	1.50	23	11	35	8,510	480	4,080
106	Sand Creek	Dawson	Red River (Ord.)	1959	9,000	39	1.30	25	10	40	8,950	880	7,880
107	Second Creek	Richland	Red River (Ord.)	1972	12,700	46	1.50	30	7	40	6,520	320	2,090
108	Sioux Pass	Richland	Silurо-Ordovician	1973	11,900	47	1.70	40	8	35	9,490	320	3,040
109	Sioux Pass	Richland	Red River (Ord.)	1973	12,700	47	1.70	40	10	35	11,870	320	3,800
110	Soap Creek	Big Horn	Tensleep-Amsden-Madison (Penn.-Miss.)	1952	1,900	20	1.05	20	15	35	14,410	600	8,650
111	Spring Lake	Richland	Red River (Ord.)	1963	11,700	51	2.00	9	12	30	2,930	900	2,640
112	Stensvad	Musselshell, Rosebud	Tyler (Penn.)	1958	5,500	33	1.17	25	14	20	18,570	1,500	27,860
113	Sumatra	Rosebud	Tyler (Penn.)	1949	4,500	32	1.16	30	19	35	24,780	4,360	108,040
114	Tule Creek	Roosevelt	Nisku (Dev.)	1960	7,500	46	1.41	25	15	30	14,440	1,160	16,750
115	Tule Creek, East	Roosevelt	Nisku (Dev.)	1964	7,500	43	1.91	30	18	30	15,350	400	6,140
116	Tule Creek, South	Roosevelt	Nisku (Dev.)	1964	7,600	43	1.40	8	12	30	3,720	400	1,490
117	Vida	McCone, Dawson	Interlake (Sil.)	1963	9,300	51	1.40	33	2	56	1,610	320	520
118	Volt	Roosevelt	Nisku (Dev.)	1964	7,300	47	1.40	14	20	30	10,860	800	8,690
119	Weed Creek	Yellowstone	Amsden (L. Penn.)	1966	6,200	35	1.07	12	8	23	5,360	640	3,430
120	Weldon	McCone	Kibbey (U. Miss.)	1964	5,900	39	1.01	14	16	35	11,180	1,560	17,440
121	West Butte	Toole	Sunburst (Cret.)	1968	2,300	40	1.10	10	24	23	13,030	40	520
122	Whitlash	Liberty	Swift-Sunburst (Jur.-Cret.)	1927	2,600	38	1.13	15	16	20	13,180	1,920	25,310
123	Willow Creek, North	Musselshell	Tyler (Penn.)	1970	4,000	32	1.20	12	13	54	4,640	160	740
124	Wills Creek, South	Fallon	Interlake (Sil.)	1964	8,700	33	1.20	12	18	35	9,080	320	2,910
125	Winnett Junction	Musselshell	Tyler (Penn.)	1973	2,500	28	1.10	12	18	30	10,660	160	1,710
126	Wolf Springs	Yellowstone	Amsden (L. Penn.)	1955	6,200	30	1.07	11	6	23	3,680	3,840	14,130
127	Woodrow	Dawson	Silurо-Ordovician	1952	9,600	42	1.30	25	14	35	13,580	480	6,520
128	Wright Creek	Powder River	Muddy (Cret.)	1969	4,800	35	1.10	5	26	48	4,770	480	2,290
129	Miscellaneous												

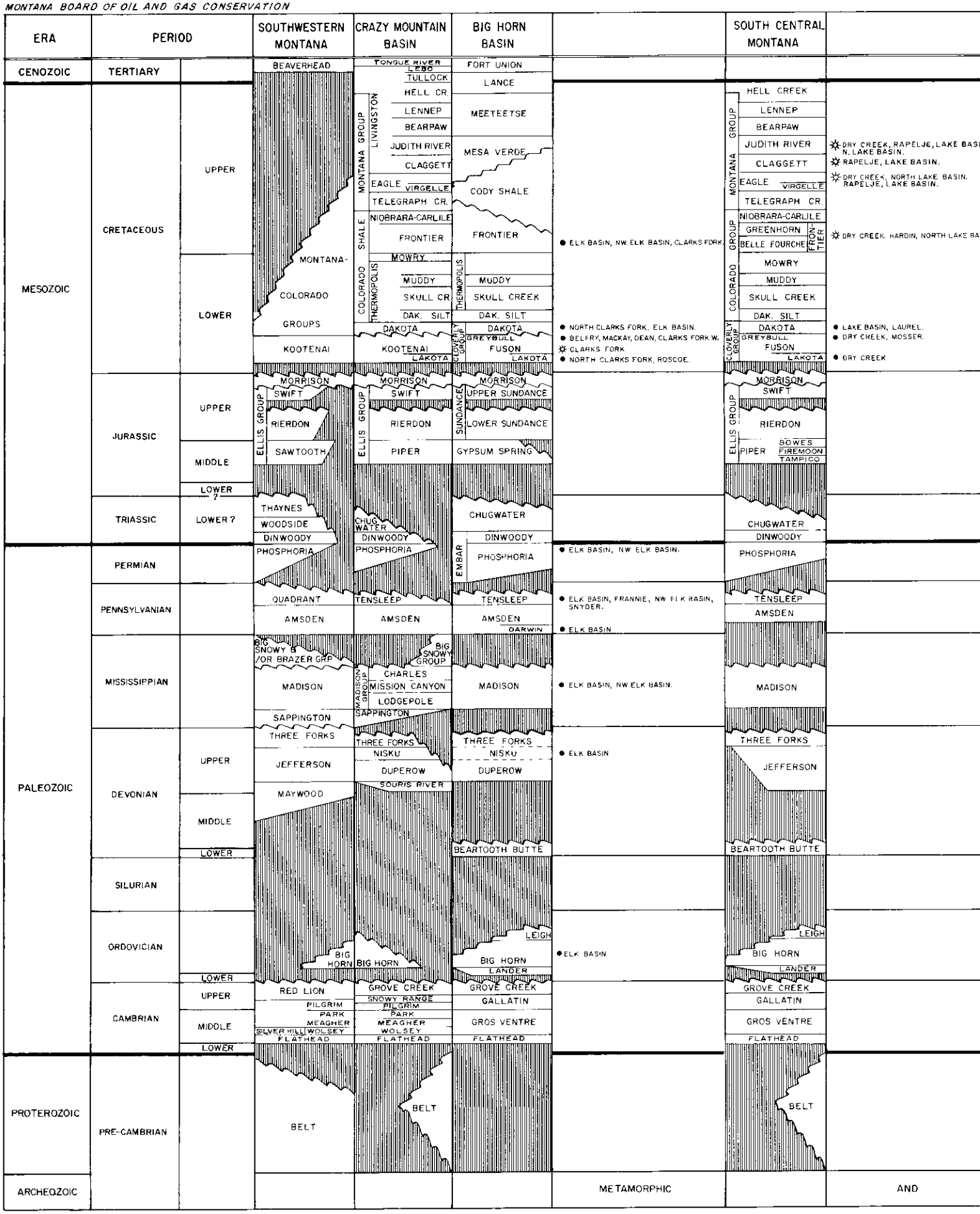
F MONTANA — SUMMARY OF PRODUCING OIL FIELDS — 1973

MONTANA BOARD OF OIL AND GAS CONSERVATION

H	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY (%)	Sw (%)	O.O.I.P. (BBLS/ACRE)	PRODUCTIVE AREA 1-1-74 (ACRES)	O.O.I.P. (M BBLS.)	RECOVERY FACTOR (%) PRIMARY	RECOVERY FACTOR (%) SECONDARY	ULTIMATE RECOVERY (M BBLS.) PRIMARY	ULTIMATE RECOVERY (M BBLS.) SECONDARY	ULTIMATE RECOVERY (M BBLS.) TOTAL	CUMULATIVE PRODUCTION 1-1-74 (M BBLS.)	RESERVES 1-1-74 (M BBLS.)	1973 PRODUCTION (BBLS.)	1973 PRODUCTION (BOPD)	ULTIMATE RECOVERY (BBLS./ ACRE)	ULTIMATE RECOVERY (BBLS.) (ACRE/FT.)	LINE NO.
D	34	1.05	14	22	42	13,200	200	2,640	25	6	650	150	800	721	79	10,797	30	4,000	286	1
D	45	1.75	38	15	34	16,680	320	5,340	7	--	400	--	400	256	144	25,394	70	1,250	33	2
D	39	1.08	20	12	35	11,210	200	2,240	22	--	500	--	500	385	115	11,197	31	2,500	125	3
D	36	1.11	10	26	23	13,990	16,000	223,840	26	26	58,000	58,000	116,000	59,529	56,471	8,137,047	22,293	7,250	725	4
D	43	1.41	22	16	30	13,560	80	1,080	21	--	230	--	230	200	30	9,047	25	2,880	131	5
D	46	1.37	22	15	30	13,080	480	6,280	48	--	3,000	--	3,000	1,639	1,361	157,129	430	6,250	284	6
D	46	1.40	23	16	30	14,270	160	2,280	43	--	980	--	980	809	171	20,013	55	6,130	267	7
D	19	1.61	17	16	35	8,520	280	2,390	29	--	700	--	700	615	85	8,437	23	2,500	147	8
D	31	1.02	22	17	40	17,070	1,220	20,830	27	2	5,700	500	6,200	5,824	376	53,829	147	5,080	231	9
D	25	1.15	8	14	40	4,530	480	2,170	36	--	780	--	1,200	1,013	187	16,217	44	1,630	204	10
D	30	1.11	15	15	35	10,220	160	1,640	26	--	420	--						2,630	175	11
D	19	1.02	37	12	31	23,300	3,760	87,610	8	2	7,000	1,600	8,600	7,729	871	85,798	235	2,290	62	12
D	32	1.40	40	5	40	6,650	1,120	7,450	12	--	900	--	900	666	234	37,345	102	800	20	13
D	48	1.70	20	10	35	5,930	1,440	8,540	23	--	2,000	--	2,000	1,600	400	105,946	290	1,390	70	14
D	48	1.70	20	12	30	7,670	480	3,680	34	--	1,250	--	1,250	766	484	87,798	240	2,600	130	15
D	40	1.50	30	14	35	14,120	2,240	31,630	8	--	2,450	--	2,450	1,264	1,186	169,615	465	1,090	36	16
D	39	1.25	14	14	40	7,300	320	2,340	11	--	250	--	250	96	154	42,170	116	780	56	17
D	33	1.20	50	13	30	29,420	7,620	224,180	23	13	51,000	29,000	80,000	52,796	27,204	2,230,521	1,392	10,500	210	18
D	33	1.13	25	11	30	13,220	2,260	29,880	47	--	14,500	--	14,500	12,453	2,047	508,246	632	6,420	257	19
D	47	2.07	58	8	40	10,430	320	3,340	21	--	700	--	700	337	363	71,828	197	2,190	38	20
D	52	1.10	51	21	19	61,180	900	55,060	27	5	14,600	3,000	17,600	17,175	425	97,103	266	19,560	384	21
D	52	1.10	10	21	19	12,000	200	2,400	21	8	500	200	700					3,500	350	22
D	52	1.10	6	22	40	5,590	240	1,340	30	--	400	--	400	4,949	651	61,242	168	1,670	278	23
D	52	1.10	25	18	40	19,040	880	16,760	26	--	4,400	100	4,500					5,110	204	24
D	52	1.00	10	8	30	4,340	80	350	17	11	60	40	100	46	54	3,521	10	1,250	125	25
P	40	1.20	25	8	48	6,720	240	1,610	7	--	125	--	125	84	41	7,842	21	520	21	26
P	35	1.05	15	15	35	10,810	400	4,320	28	--	1,200	--	1,200	599	601	212,986	583	3,000	200	27
P	48	1.80	20	12	16	8,690	320	2,780	6	--	175	--	175	137	38	9,105	25	550	28	28
P	38	1.25	40	12	30	20,850	1,280	26,690	5	--	1,300	--	1,300	710	590	94,222	258	1,020	26	29
P	31	1.09	18	15	35	12,490	49,000	612,000	20	11	125,000	67,500	192,500	131,649	60,851	3,916,348	10,727	3,930	218	30
P	34	1.10	10	14	30	6,910	3,200	22,110	33	--	7,300	--	7,300	6,244	1,056	89,256	244	2,280	228	31
P	43	1.20	38	7	30	12,040	320	3,850	34	--	1,300	--	1,300	1,168	132	13,561	37	4,060	107	32
P	37	1.32	38	11	56	10,810	3,840	41,510	11	3	4,500	1,300	5,800	5,159	641	151,122	414	1,510	40	33
P	45	1.16	30	21	20	33,710	120	4,050	37	30	1,500	1,200	2,700	1,447	1,253	31,546	86	22,500	750	34
P	29	1.16	124	11	10	82,100	1,400	114,940	--	48	--	55,000	55,000	49,394	5,606	865,355	2,370	39,290	317	35
P	28	1.12	224	12	9	169,430	920	155,880	9	6	14,000	9,000	23,000	16,131	6,869	489,568	1,341	25,000	112	36
P	35	1.08	124	12	35	69,480	200	13,900	7	--	1,000	--	1,000	918	82	7,994	22	5,000	40	37
P	37	1.15	27	12	22	17,050	580	9,890	10	2	1,000	200	1,200	1,126	74	28,037	77	2,070	77	38
P	43	1.10	27	7	30	9,330	160	1,490	18	--	270	--	270	230	40	13,701	38	1,690	63	39
P	47	1.70	35	11	28	12,650	1,920	24,290	17	8	4,200	2,000	6,200	3,889	2,311	362,010	992	3,230	92	40
I	29	1.20	6	14	27	3,960	400	1,580	32	--	500	--	500	366	134	15,672	43	1,250	208	41
I	37	1.10	18	21	35	17,330	1,280	22,180	13	11	2,800	2,400	5,200	2,455	2,745	106,723	292	4,060	226	42
I	33	1.26	14	15	45	7,110	9,600	68,260	14	5	9,300	3,500	12,800	7,810	4,990	638,274	1,748	1,330	95	43
I	32	1.26	9	12	45	3,660	1,120	4,100	32	--	1,300	--	1,300	700	600	96,261	264	1,160	129	44
I	48	1.89	42	12	20	16,550	640	10,590	12	--	1,300	--	1,300	735	565	183,224	502	2,030	48	45
I	27	1.02	29	19	16	35,200	80	2,820	27	--	750	--	750	670	80	11,558	32	9,380	323	46
I	39	1.20	31	27	30	37,880	880	33,330	23	20	7,700	6,700	14,400	7,593	6,807	397,085	1,088	16,360	528	47
I	39	1.10	8	14	30	5,530	840	4,650	26	--	1,200	--	1,200	980	220	25,580	70	1,430	179	48
I	48	1.55	12	17	25	7,660	160	1,230	16	--	200	--	200	130	70	10,377	28	1,250	104	49
I	38	1.28	25	12	35	11,820	2,860	33,100	26	5	8,600	1,600	10,200	7,883	2,317	268,018	734	3,640	146	50
I	46	1.15	18	15	40	10,930	320	3,500	11	--	400	--	400	281	119	21,789	60	1,250	69	51
I	38	1.25	147	8	35	47,440	1,280	60,720	21	--	12,500	--	12,500	9,717	2,783	283,867	778	9,770	66	52
I	34	1.20	40	16	55	18,620	6,240	116,190	7	1	7,850	1,150	9,000	5,584	3,416	314,700	862	1,440	36	53
I	34	1.10	15	12	30	8,890	800	7,110	23	--	1,600	--	1,600	942	658	80,188	220	2,000	133	54
I	46	1.90	53	12	25	19,480	640	12,470	12	--	1,500	--	1,500	707	793	74,064	203	2,340	44	55
I	39	1.15	40	5	30	9,440	160	1,510	13	--	200	--	200	109	91	13,167	36	1,250	31	56
I	33	1.15	34	12	30	19,270	360	6,940	22	--	1,500	--	1,500	1,017	483	64,154	176	4,170	123	57
I	33	1.08	29	15	20	25,000	600	15,000	27	--	4,000	--	4,000	3,726	274	38,171	105	6,670	230	58
I	33	1.10	37	15	33	26,230	760	19,930	18	9	3,600	1,800	5,400	1,087	4,313	476,508	1,306	7,110	192	59
I	33	1.15	19	14	32	12,200	1,800	21,960	20	12	4,400	2,700	7,100	4,139	2,961	262,297	719	3,940	208	60
I	33	1.15	14	12	32	7,710	120	930	32	--	300	--	300	214	86	35,622	98	2,500	179	61
I	33	1.15	50	13	30	30,690	200	6,140	8	7	500	400	900	684	216	62,524	171	4,500	90	62
I	32	1.08	7	20	35	6,540	40,200	262,910	27	4	70,000	10,000	80,000	70,947	9,053	268,239	735	1,990	284	63
I	39	1.10	14	16	25	11,850	480	5,690	12	--	700	--	700	370	330	31,434	86	1,460	104	64
I	41	1.15	7	17	33	5,380	240	1,290	23	--	300	--	300	149	151	29,032	80	1,250	178	65
I	29	1.40	37	12	35	15,990	2,390	38,220	17	10	6,500	4,000	10,500	6,247	4,253	466,652	1,278	4,390	119	66
I	30	1.50	24	13	35	10,490	1,600	16,780	23	12	3,900	2,000	5,900	3,617	2,283	143,961	394	3,690	154	67
I	33	1.10	40	15	33	28,350	160	4,540	17	--	800	--	800	130	670	39,646	109	5,000	125	68
I	47	1.86	19	11	30	6,100	2,240	13,660	22	--	3,000	--	3,000	1,210	1,790	286,746	786	1,340	71	69
I	33	1.15	15	15	25	11,380	6,100	69,420	19	12	13,000	8,000	21,000	13,849	7,151	639,023	1,751	3,440	229	70
I	26	1.13	26	10	35	11,600	1,920	22,270	7	--	1,600	--	1,600	1,352	248	41,400	113	830	32	71
I	34	1.09	25	15	30	18,680	360	6,720	27	--	1,800	--	1,800	1,637	163	22,872	63	5,000	200	72
I	32	1.10	31	7	35	9,950	2,240	22,290	22	2	4,900	500	5,400	3,269	2,131	162,028	435	2,410	78	73
I	46	1.43	27	10	40	8,790	320	2,810	21	--	600	--	600	271	329	116,612	319	1,880	70	74
I	48	1.78	23	12	35	7,820	640	5,000	10	--	500	--	500	240	260	77,505	103	780	34	75
I	38	1.12	20	8	30	7,760	1,600	12,420	43	--	5,400	--	5,400	5,010	390	80,727	221	3,380	169	76
I	39	1.50	15	10	25	5,820	640	3,720	27	--	1,000	--	1,000	844	156	38,675	106	1,560	104	77
I	39	1.12	18	8	30	6,980	480	3,350	12	--	400	--	400	219	181	60,941	167	830	46	78
I	39	1.12	18	8	30	6,980	240	1,680	19	--	320	--	320	302	18	4,432	12	1,330	74	79
I	39	1.12	16	8	30	6,210	320	1,990	30	--	600	--	600	476	124	28,948	79	1,880	63	80
I	33	1.14	25	11	35	12,160	22,380	272,140	11	8	31,000	21,800						2,360	94	81
I	31	1.10	38	3	30	5,630	720	4,050	17	--	700	--	54,200	27,356	26,844	2,256,977	6,293	970	26	82
I	36	1.13	30	8	35	10,710	320	3,430	20	--	700	--						2,190	73	83
I	34	1.17	32	12	30	17,820	13,320	237,360	24	18	57,000	43,000	100,000	75,680	24,320	2,884,405	7,902	7,510	235	84
I	34	1.20	15	16	31	10,710	5,560	59,550	39	--	23,500	--	23,500	19,732	3,768	280,870	770	4,230	282	85
I	40	1.10	25	11	30	13,580	18,070	245,390	19	--	46,000	--	46,000	40,369	5,631	484,745	1,331	2,550	102	86
I	38	1.10	8	11	50	3,100	480	1,490	20	--	300	--	300	191	109	16,740	46	630	79	87
I	42	1.40	12	8	50	2,660	320	850	24	--	200	--	200	164	36	11,161	31	630	53	88
I	40	1.10	16	10	45	6,210	400	2,480	22	--	550	--	550	482	68	13,885	38	1,380	86	89
I	41	1.75	16	9	30	4,470	320	1,430	39	--	700	--	700	398	302	97,957	268	2,190	137	90
I	21	1.15	12	18	16	12,240	640	7,830	6	--	500	--	500	67	433	60,098	165	780	65	91
I	32	1.11	13	14	32	8,650	1,040	9,000	20	13	1,850	1,150	3,000	1,853	1,147	154,670	424	2,880	222	92
I	50	1.40	22	8	50	4,880	320	1,560	38	--	600	--	600	119	481	82,284	225	1,880	85	93
I	46	1.50	19	13	29	9,070	160	1,450	48	--	700	--	700	125	575	80,889	222	4,380	231	94
I	42	1.17	40	5	10	11,940	480	5,730	21	--	1,200	--	1,200	314	886	188,768	517	2,500	63	95
I	39	1.42	33	12	27	15,790	160	2,530	20	--	500	--	500	114	386	41,623	114	3,130	95	96
I	38	1.10	11	12	30	6,520	2,520	16,430	33	10	5,400	1,600	7,000	5,495	1,505	186,958	512	2,780	253	97
I	31	1.08	20	19	30	19,110	770	14,710	15	3	2,250	450	2,700	1,918	782	64,790	178	3,510	176	98
I	28	1.10	32	13	30	20,540	640	13,150	27	--	3,500	--	3,500	2,675	825	111,252	305	5,470	171	99
I	42	1.10	34	8	30	13,430	160	2,150	21	--	450	--	450	368	82	13,191	36	2,810	83	100
I	23	1.02	25	10	30	13,310	160	2,130	21	--	450	--	450	393	57	10,290	28	2,810	112	101
I	39	1.30	18	6	30	4,510	960	4,330	16	--	700	--	700	539	161	58,684	161	730	41	102
I	48	1.37	27	9	30	9,630	1,160	11,170	15	1	1,700	150	1,850	1,797	53	15,091	41	1,590	59	103
I	39	1.62	14	10	33	4,490	320	1,440	31	--	450	--	450	229	221	28,514	78	1,410	101	104
I	43	1.50	23	11	35	8,510	480	4,080	10	--	400	--	400	137	263	41,302	113	830	36	105
I	39	1.30	25	10	40	8,950	880	7,880	28	--	2,200	--	2,200	2,039	161	21,236	58	2,500	100	106
I	46	1.50	30	7	40	6,520	320	2,090	19	--	400	--	400	120	280	116,085	318	1,250	42	107
I	47	1.70	40	8	35	9,490	320	3,040	33	--	1,000	--	1,000	186	814	185,545	508	3,130	78	108
I	47	1.70	40	10	35	11,870	320	3,800	21	--	800	--	800	39	761	38,713	106	2,500	63	109
I	20	1.05	20	15	35	14,410	600	8,650	24	--	2,100	--	2,100	1,749	351	49,250	135	3,500	175	110
I	51	2.00	9	12	30	2,930	900	2,640	27	--	700	--	700	580	120	18,000	49	780	87	111
I	33	1.17	25	14	20	18,570	1,500	27,860	27	18	7,500	5,000	12,500	9,578	2,922	543,468	1,489	8,330	333	112
I	32	1.16	30	19	35	24,780	4,360	108,040	25	12	27,500	13,500	41,000	26,811	14,189	1,208,520	3,311	9,400	313	113
I	46	1.41	25	15	30	14,440	1,160	16,750	54	--	9,000	--	9,000	6,341	2,659	229,003	627	7,760	310	114
I	43	1.91	30	18	30	15,350	400	6,140	36	--	2,200	--	2,200	1,834	366	70,976	194	5,500	183	115
I	43	1.40	8	12	30	3,720	400	1,490	47	--	700	--	700	577	123	29,665	81	1,750	219	116
I	51	1.40	33	2	56	1,610	320	520	58	--	300	--	300	244	56	9,722	27	940	28	117
I	47	1.40	14	20	30	10,860	800	8,690	31	--	2,700	--	2,700	1,625	1,075	120,894	331	3,380	241	118
I	35	1.07	12	8	23	5,360	640	3,430	17	--	600	--	600	539	61	5,513	15	940	118	119
I	39	1.01	14	16	35	11,180	1,560	17,440	40	--	7,000	--	7,000	6,781	219	71,063	195	4,490	321	120
I	40	1.10	10	24	23	13,030	40	520	38	--	200	--	200	163	37	14,484	40	5,000	500	121
I	38	1.13	15	16	20	13,180	1,920	25,310	18	--	4,500	--	4,500	3,322	1,178	141,689	388	2,340	156	122
I	32	1.20	12	13	54	4,640	160	740	34	14	250	100	350	195	155	34,398	94	2,190	183	123
I	33	1.20	12	18	35	9,080	320	2,910	31	--	900	--	900	646	254	28,811	79	2,810	255	124
I	28	1.10	12	18	30	10,660	160	1,710	18	--	300	--	300	32	268	32,007	88	1,880	157	125
I	30	1.07	11	6	23	3,680	3,840	14,130	33	--	4,600	--	4,600	4,448	152	18,960	52	1,200	109	126
I	42	1.30	25	14	35	13,580	480	6,520	15	--	1,000	--	1,000	895	105	27,630	76	2,080	83	127
I	35	1.10	5	26	48	4,770	480	2,290	9	--	200	--	200	152	48	15,244	42	420	84	128
															1,032	142,573	391			129
															334,000	34,620,182	94,850			

GENERALIZ

MONTANA BOARD OF OIL AND GAS CONSERVATION



GENERALIZED STRATIGRAPHIC CORRELATION CHA

SHOWING PRODUCTIVE FORMATIONS IN MONTANA OIL AND GAS FIELDS *

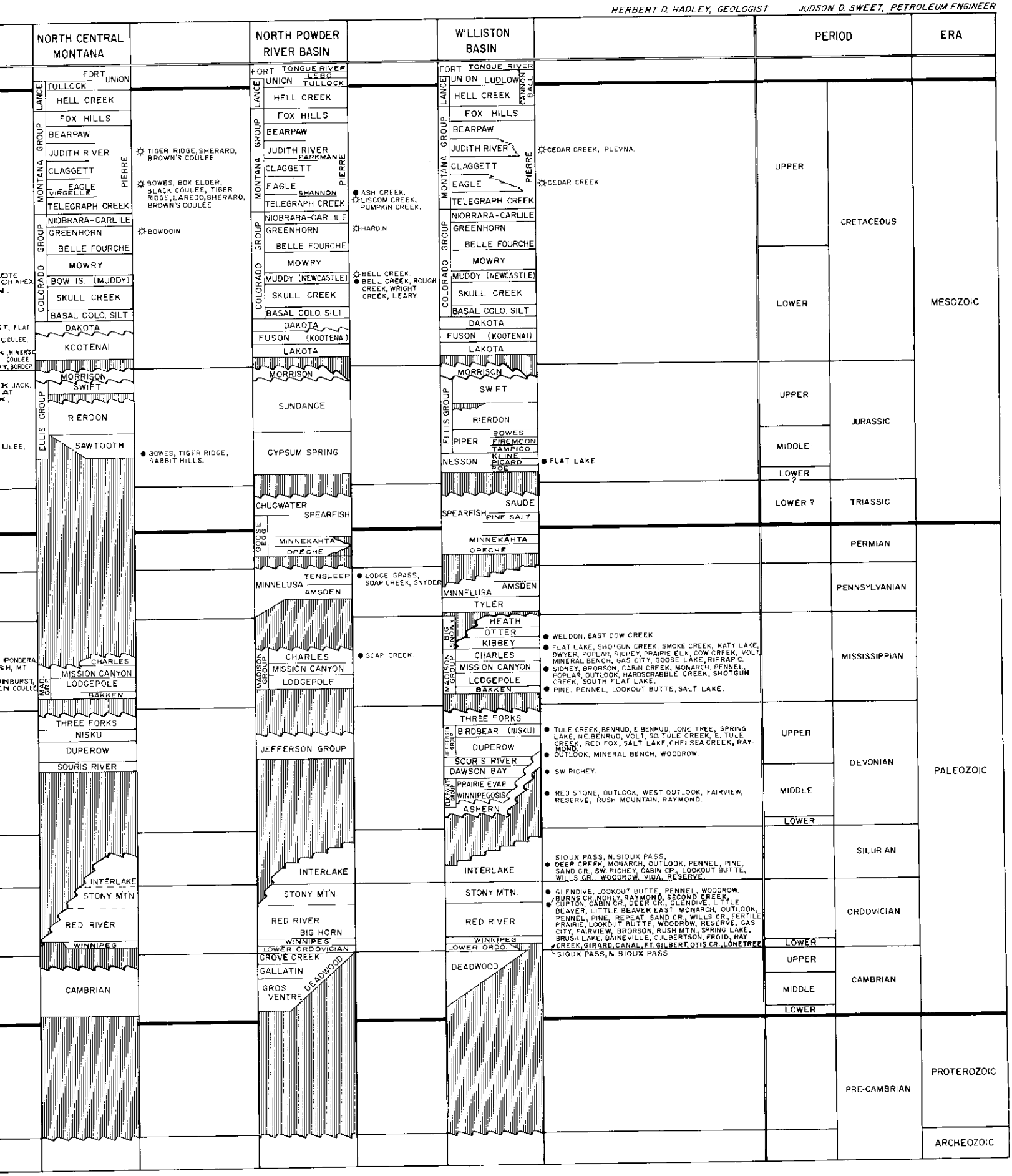
● OIL ☼ GAS

1973

ATION CHART

ELDS *

HERBERT D. HADLEY, GEOLOGIST JUDSON D. SWEET, PETROLEUM ENGINEER



* SOME FIELDS SHOWN ARE DEPLETED OR NOT PRODUCTIVE