

MONTANA

OIL and GAS

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DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

Oil and Gas Conservation Division

Stan Stephens, Governor



ANNUAL REVIEW FOR THE YEAR 1991

Relating to

OIL AND GAS

Volume 35

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July, 1992

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Administrators for the Board of Oil and Gas Conservation of the State of Montana

THOMAS P. RICHMOND,
ADMINISTRATOR/PETROLEUM ENGINEER
2535 ST. JOHNS AVENUE
BILLINGS, MONTANA 59102

DEE RICKMAN,
EXECUTIVE SECRETARY
1520 EAST SIXTH AVENUE
HELENA, MONTANA 59620

DONALD A. GARRITY,
ATTORNEY
1313 ELEVENTH AVENUE
HELENA, MONTANA 59601

JAMES W. HALVORSON,
GEOLOGIST
2535 ST. JOHNS AVENUE
BILLINGS, MONTANA 59102

TIMOTHY C. FOX,
ENVIRONMENTAL COORDINATOR
2535 ST. JOHNS AVENUE
BILLINGS, MONTANA 59102

FLOYD W. PODOLL,
FIELD SUPERVISOR
2535 ST. JOHNS AVENUE
BILLINGS, MONTANA 59102

Administrative Office 1520 East Sixth Avenue, Helena, Montana 59620
Technical Office and Southern District Field Office 2535 St. Johns Avenue, Billings, Montana 59102
Northern District Field Office 218 Main Street, Shelby, Montana 59474

Annual Review for the Year 1991 Volume 35 ACTIVITY REVIEW—MONTANA 1991

Approximately 19.6 million barrels of oil were produced in Montana in 1991, down only slightly from 1990 production and indicating a flattening in the rate of decline established in the previous several years. New drilling activity declined in 1991 from the previous year, resulting in 54 fewer wells drilled. Both exploratory activities as well as development drilling declined, and only 52 wildcat wells were drilled during the year. The number of producing wells also declined somewhat as less-efficient wells were inactivated. Development drilling for natural gas continues to be the most active arena in the state. Four geophysical contractors were active in the state during the year, down from the eight contractors that were active in 1990.

The Board of Oil and Gas Conservation held eight regular hearings during 1991, and also held several public meetings and informal working sessions to review and receive public comment on proposed revisions to its operating rules and regulations. Open

houses were held in the Billings, Helena, and Shelby offices to allow informal comments and suggestions during the rule-making process. The Board considered rules regulating the disposal of exploration and production waste, permitting and use of earthen pits, blowout prevention equipment required during drilling operations, and notification requirements for emergencies and undesirable events. Also under consideration were revised bonding requirements, regulation of idle wells, and requirements for horizontal drilling.

The Board issued 76 orders for spacing, forced pooling, well exceptions, and similar matters. There were 26 NGPA gas pricing determinations made administratively during 1991. Two tight gas applications were made and approved by the Board during the year. The Board's staff also prepared environmental assessments for the 206 drilling permits that were issued for wells on private and State-owned lands during the year.

1991

SUMMARY OF YEAR ACTIVITIES

OIL

	BBLs	BBLs/DAY
Oil Produced	19,573,348	53,626
Oil Imported From:		
Canada	26,991,106	
Wyoming	<u>15,031,153</u>	
Total	42,022,259	115,129
Oil Exported	15,400,000	42,192

GAS

	MCF	MCF/DAY
Gas Withdrawals:		
Natural	44,449,969	
Associated	<u>8,552,561</u>	
Total	53,002,530	145,212
Gas Imported From:		
Canada	10,366,104	
North Dakota	13,307,268	
Wyoming	<u>8,512,966</u>	
Total	32,186,338	88,182
Gas Exported To:		
Canada	38,858	
North Dakota	8,374,138	
South Dakota	7,311,767	
Wyoming	14,716,554	
Midwest	<u>16,504,023</u>	
Total	46,945,340	128,617

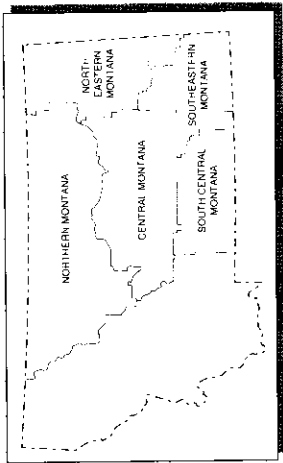
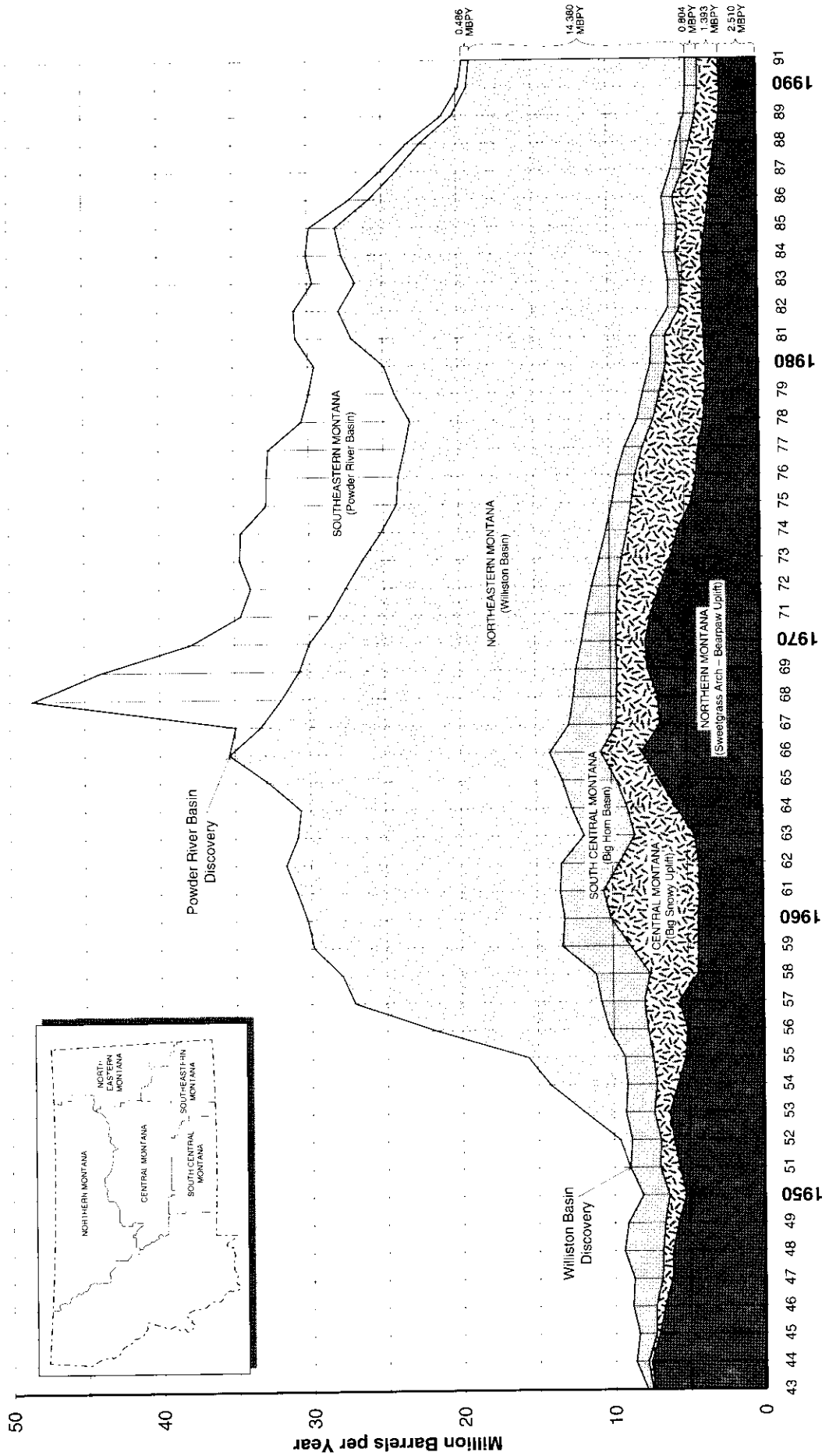
FIVE YEAR SUMMARY

	1987	1988	1989	1990	1991
OIL PRODUCTION IN BARRELS					
Northern Montana	3,040,941	2,779,524	2,488,169	2,432,506	2,510,130
South Central	827,229	884,954	773,372	805,807	804,003
Central	1,847,551	1,684,853	1,544,989	1,454,066	1,393,046
Williston Basin	18,319,149	17,089,238	15,476,534	14,592,497	14,380,288
Powder River Basin	1,069,179	878,887	686,228	550,211	485,881
TOTAL	25,104,049	23,317,456	20,969,292	19,835,087	19,573,348
NUMBER OF PRODUCING OIL WELLS					
Northern Montana	2,850	2,821	2,644	2,579	2,534
South Central	130	128	131	135	123
Central	363	355	331	323	310
Williston Basin	1,430	1,434	1,377	1,356	1,338
Powder River Basin	112	103	112	118	79
TOTAL	4,885	4,841	4,595	4,514	4,385
AVERAGE DAILY PRODUCTION/OIL WELL					
Northern Montana	2.9	2.7	2.6	2.6	2.7
South Central	17.4	18.9	16.2	16.4	17.9
Central	13.9	13.0	12.8	12.3	12.3
Williston Basin	35.1	32.6	30.8	29.5	29.4
Powder River Basin	26.2	23.3	16.8	12.8	16.9
STATE AVERAGE	14.1	13.2	12.5	12.0	12.2
DEVELOPMENT WELLS DRILLED					
Oil Wells	86	72	32	34	46
Gas Wells	75	54	115	180	140
Dry Holes	39	46	29	39	34
Service Wells	21	12	8	5	6
TOTAL	221	184	184	258	226
EXPLORATORY WELLS DRILLED					
Oil Wells	7	10	8	4	2
Gas Wells	9	19	12	12	17
Dry Holes	100	100	38	57	32
Temporary Abandoned	11	9	0	1	1
TOTAL	127	138	58	74	52
TOTAL WELLS DRILLED	348	322	242	332	278
TOTAL FOOTAGE DRILLED	1,526,389	1,301,884	720,785	920,283	822,739
AVERAGE FOOTAGE DRILLED	4,386	4,043	2,978	2,772	2,959

SUMMARY OF DRILLING BY COUNTIES—1991

County	Development			Wildcat		Service	Temp. Aband.	Total Wells	Footage Drilled	Average Depth
	Oil	Gas	Dry	Oil	Gas					
Big Horn	1	0	0	0	1	2	0	4	11,763	2,940
Blaine	8	16	6	1	0	4	0	36	96,539	2,681
Carbon	2	0	1	2	3	2	0	8	27,201	3,400
Chouteau	0	0	1	1	0	1	0	2	4,295	2,147
Daniels	0	0	1	1	0	4	0	6	43,890	7,315
Fallon	5	0	0	0	0	0	0	9	49,680	5,520
Fergus	0	0	0	0	0	1	0	1	1,400	1,400
Glacier	9	6	0	0	0	0	0	15	46,553	3,103
Hill	0	13	10	0	1	0	0	24	43,132	1,797
Jefferson	0	0	0	0	0	1	0	1	14,846	14,846
Liberty	0	2	0	0	0	0	0	2	2,927	1,463
Musselshell	1	0	1	0	0	0	0	2	11,201	5,600
Petroleum	0	0	0	0	0	2	0	2	6,227	3,113
Phillips	0	74	0	0	0	0	0	74	116,372	1,572
Pondera	1	0	1	0	0	2	0	4	9,966	2,491
Powder River	0	0	0	0	0	1	0	1	4,170	4,170
Prairie	2	0	0	0	0	0	0	2	18,420	9,210
Richland	5	0	1	1	0	0	0	7	76,896	10,985
Roosevelt	1	0	1	1	0	2	0	4	35,819	8,954
Rosebud	0	0	2	2	0	1	0	4	21,946	5,486
Sheridan	1	0	1	1	0	2	0	4	33,315	8,328
Stillwater	0	0	0	0	0	1	0	1	5,230	5,230
Sweet Grass	0	0	0	0	2	0	0	2	6,050	3,025
Toole	6	29	7	0	10	5	0	57	86,291	1,513
Valley	1	0	1	0	0	1	0	3	20,819	6,939
Wibaux	3	0	0	0	0	0	0	3	27,791	9,263
TOTALS	46	140	34	2	17	32	6	278	822,739	2,959

Crude Oil Production 1943-1991



GAS PRODUCTION DATA - 1991 NATURAL GAS

Field	County	Producing Formation	Produced MCF
Alma	Liberty	Bow Island, Blackleaf	2,887
Amanda	Toole	Swift, Bow Island, Sunburst, Dakota	271,474
Arch Apex	Toole	Bow Island, Sunburst-Swift	271,382
Ashfield	Phillips	Carlile, Greenhorn, Phillips, Bowdoin	618,583
Badlands	Hill	Eagle	269,502
Battle Creek	Blaine	Eagle	2,129,383
Bears Den	Liberty	Bow Island, Swift	20,581
Big Coulee	Golden Valley, Stillwater	Morrison, Cat Creek	191,619
Big Rock	Glacier	Blackleaf, Bow Island, Colorado	435,998
Bills Coulee	Teton	Sunburst, Moulton, Kootenai, Dakota, Madison	71,756
Black Butte	Hill	Eagle	84,442
Black Coulee	Blaine	Eagle	231,608
Blackfoot Shallow Gas	Glacier	Dakota-Sunburst	85,520
Blackjack	Liberty	Second White Specks, Sunburst, Blackleaf, Bow Island	73,251
Blackleaf Canyon	Teton	Sun River	219,226
Border	Toole	Sunburst, Moulton	13,892
Bowdoin and Area	Phillips, Valley	Montana and Colorado Shale	3,986,470
Bowes	Blaine	Eagle	433,495
Bradley	Glacier	Dakota	4,299
Broadview	Golden Valley	Frontier	13,229
Browns Coulee, East	Hill	Eagle	30,708
Bullwacker and Area	Blaine, Chouteau	Eagle, Judith River, Virgelle	898,644
Camp Creek	Chouteau	Eagle	20,791
Canadian Coulee and Area	Hill	Sawtooth	409
Canadian Coulee, North	Hill, Liberty	Sawtooth	3,517
Cedar Creek	Fallon	Eagle	312,751
Charlie Creek, North	Richland	Red River	3,751
Clarks Fork	Carbon	Greybull	24,716
Coal Coulee	Hill	Eagle	21,720
Coal Mine Coulee	Chouteau	Eagle, Second White Specks	64,674
Cut Bank	Glacier, Toole	Cut Bank, Blackleaf, Moulton, Sunburst, Bow Island, Madison, Dakota, Kootenai	3,118,870
Devon	Toole	Bow Island	177,410
Devon, East	Toole	Bow Island	16,248
Devon, South	Toole	Bow Island	16,209
Dry Creek	Carbon	Frontier, Judith River, Virgelle-Eagle, Greybull	556,617
Dry Creek (Shallow Gas)	Carbon	Virgelle	74,388
Dry Creek, Middle	Carbon	Frontier	25,683
Dry Creek, West	Carbon	Greybull	25,964
Dry Fork	Pondera	Bow Island	23,351
Dunkirk	Toole	Dakota, Bow Island	117,953
Dunkirk, North	Toole	Bow Island, Swift, Sunburst	427,487
Eagle Springs	Toole	Bow Island, Sunburst-Swift	13,046
Ethridge Area	Toole	Swift	153,288
Ethridge, North	Toole	Swift	6,334
Fitzpatrick Lake	Toole	Bow Island-Sunburst	71,493
Flat Coulee	Liberty	Sawtooth, Bow Island, Dakota, Swift	78,872
Fort Conrad	Toole, Pondera	Bow Island	55,477
Fred and George Creek	Toole	Bow Island, Sunburst/Swift	69,476
Fresno and Area	Hill	Eagle	27,159
Galata	Toole	Bow Island	121,222
Gold Butte	Toole	Bow Island	1,734
Golden Dome	Carbon	Greybull, Frontier, Eagle	110,861
Grandview	Liberty	Bow Island, Sawtooth	31,770
Hardpan and Area	Pondera, Chouteau	Bow Island, Blackleaf	75,648
Havre	Hill, Blaine	Eagle	48,256
Haystack Butte	Liberty	Bow Island	24,908
Haystack Butte, West	Liberty	Bow Island	43,853
Highline	Hill	Eagle	1,704
Keith, East and Area	Liberty	Second White Specks, Sawtooth, Bow Island, Niobrara	483,441
Kevin East Bow Island	Toole	Bow Island, Sunburst	19,201
Kevin Southwest	Toole	Bow Island, Sunburst, Swift, Dakota, Sunburst	271,698
Kevin Sunburst	Toole	Dakota, Eagle, Madison, Swift, Nisku, Sunburst, Bow Island, Kootenai	694,207
Kevin Sunburst (Dakota)	Toole	Dakota	108,085
Kevin Sunburst-Bow Island	Toole	Bow Island	123,128
Kevin Sunburst Nisku	Toole	Swift	82,258
Kicking Horse	Toole	Bow Island, Sunburst, Sawtooth	113,639
Kinyon Coulee Area	Toole	Bow Island	13,303
Kippen Area, East	Toole	Madison, Swift	3,601
Lake Basin	Stillwater	Eagle-Virgelle, Telegraph Creek, Frontier	115,765
Lake Basin, North	Stillwater	Eagle	900

**GAS PRODUCTION DATA - 1991
NATURAL GAS (CONTINUED)**

Field	County	Producing Formation	Produced MCF
Ledger	Pondera	Bow Island	204,414
Leroy	Blaine	Eagle	401,599
Liscom Creek	Custer	Shannon	71,482
Little Basin	Stillwater	Frontier, Lakota	78,422
Little Creek	Chouteau	Eagle, Virgelle	34,157
Little Rock	Glacier	Bow Island-Blackleaf	72,830
Lohman and Area	Blaine	Eagle	225,288
Loring Unit	Phillips	Phillips-Bowdoin-Carlile-Greenhorn	1,103,182
Loring, East	Phillips	Phillips-Bowdoin-Carlile-Greenhorn	717,138
Loring, West	Phillips	Carlile	16,893
Marias River	Toole, Pondera	Bow Island	141,917
Middle Butte	Toole, Liberty	Bow Island, Second White Specks, Blackleaf	35,198
Miners Coulee	Toole	Sunburst/Swift, Bow Island, Sawtooth, Blackleaf	109,345
Mount Lily	Liberty	Swift, Bow Island	11,930
O'Briens Coulee	Liberty	Bow Island, Second White Specks, Blackleaf, Bow-Island Spike	254,185
Old Shelby	Toole	Bow Island, Sunburst-Swift	969,962
Park City	Stillwater	Virgelle	478
Phantom	Toole	Sunburst	28,252
Phantom, West	Toole	Sunburst	23,914
Police Coulee	Toole	Bow Island	39,087
Prairie Dell	Toole	Bow Island-Swift-Sunburst, Dakota	922,458
Prairie Dell, West	Toole	Swift, Bow Island-Dakota	64,938
Rapelje	Stillwater	Eagle-Virgelle-Claggett	18,882
Rattlesnake Coulee	Toole	Bow Island, Sunburst	15,795
Red Rock Area	Hill	Eagle, Judith River	570,580
Rocky Boy	Hill	Eagle, Judith River	56,095
Rudyard	Hill	Sawtooth, Eagle	14,647
Sage Creek	Liberty	Blackleaf, Second White Specks, Bow Island	98,716
Sandwich	Liberty	Swift	249
Sawtooth Mountain	Blaine	Judith River, Eagle	669,342
Shelby Area	Toole	Sunburst	14,743
Sherard and Area	Blaine, Chouteau	Eagle, Judith River	1,747,323
Snoose Coulee	Liberty	Bow Island	45,777
Soberup Coulee	Pondera	Bow Island	794
Spring Coulee	Hill	Sawtooth, Second White Specks	41,595
Strawberry Creek	Toole	Bow Island, Burwash	31,780
Swanson Creek	Phillips, Valley	Phillips-Bowdoin-Greenhorn-Carlile	350,609
Sweetgrass Area	Toole	Sunburst	136,848
Three Mile	Blaine	Eagle	112,642
Tiber	Toole	Bow Island	4,047
Tiber, East	Toole	Bow Island	88,355
Tiger Ridge and Area	Toole	Eagle, Judith River	13,045,639
Timber Creek	Toole	Sunburst	28,671
Trail Creek	Liberty, Toole	Bow Island, Sunburst, Swift	156,858
Utopia	Liberty	Sawtooth, Bow Island	65,187
Valier	Pondera	Blackleaf	17,637
Vandalia	Valley	Carlile	41,122
West Butte	Toole	Bow Island, Sunburst	23,435
West Butte Shallow Gas	Toole	Bow Island-Dakota	11,074
Whitewater	Phillips	Bowdoin-Phillips-Greenhorn Carlile	1,881,315
Whitewater, East	Phillips	Bowdoin-Phillips-Greenhorn Carlile	153,787
Whitlash	Liberty	Dakota, Swift-Sunburst, Bow Island, Madison, Spike	489,416
Whitelash, West	Toole	Bow Island, Swift-Sunburst	15,770
Williams	Pondera	Bow Island	104,110
Willow Ridge	Toole	Bow Island, Swift, Dakota, Sunburst	231,789
Willow Ridge, South	Toole	Sunburst	171,202
Willow Ridge, West	Toole	Bow Island	18,773
Wildcat	Stillwater		37,213
Wildcat	Toole		56,298

SUBTOTAL NATURAL GAS

44,449,969

NATURAL GAS IMPORTED MMCF

Canada	10,366
North Dakota	13,307
Wyoming	<u>8,513</u>
Total	32,186

NATURAL GAS EXPORTED MMCF

Canada	39
North Dakota	8,374
South Dakota	7,312
Wyoming	14,717
Midwest	<u>16,504</u>
Total	46,946

**GAS PRODUCTION DATA - 1991
ASSOCIATED GAS**

Field	County	Producing Formation	Produced MCF
Anvil	Roosevelt	Nisku, Ratcliffe, Red River, Winnipegosis	216,599
Bainville	Roosevelt	Red River, Ratcliffe	28,677
Bainville, North	Roosevelt	Interlake, Ratcliffe, Red River, Winnipegosis, Mission Canyon	80,301
Bainville, West	Roosevelt	Red River	8,638
Bainville II	Roosevelt	Red River	33,965
Beanblossom	Garfield	Tyler	2,879
Bell Creek	Carter, Powder River	Muddy	12,908
Benrud, East	Roosevelt	Nisku	16,131
Benrud, Northeast	Roosevelt	Nisku	2,054
Big Muddy Creek	Roosevelt	Mission Canyon, Red River	16,778
Black Diamond	Wibaux	Madison, Nisku	22,482
Blackfoot	Glacier	Dakota	5,194
Bloomfield	Dawson	Dawson Bay, Red River, Interlake	23,981
Box Canyon	Richland	Red River	7,380
Breed Creek	Rosebud	Tyler	645
Brorson	Richland	Madison, Red River	97,939
Brorson, South	Richland	Madison, Red River	67,304
Brush Lake	Sheridan	Red River	19,763
Cabin Creek	Fallon	Madison, Siluro-Ord	504,066
Canal	Richland	Madison, Red River	46,291
Cannon Ball	Fallon	Red River	3,133
Cattails	Richland	Ratcliffe	60,110
Charlie Creek	Richland	Red River	17,680
Charlie Creek, East	Richland	Red River, Duperow	65,028
Clear Lake	Sheridan	Madison, Nisku, Red River	119,843
Clear Lake, South	Sheridan	Red River	4,804
Colored Canyon	Sheridan	Red River, Nisku	7,640
Comertown	Sheridan	Bakken, Duperow, Madison, Nesson, Nisku, Red River	42,338
Comertown, South	Sheridan	Nisku, Red River	8,263
Cottonwood	Richland	Red River	1,887
Cottonwood, East	Roosevelt	Ratcliffe	5,710
Crane	Richland	Devonian, Siluro-Ord	191,160
Cupton	Fallon	Red River	30,486
Cut Bank	Pondera, Glacier, Toole	Madison, Moulton, Cut Bank	35,720
Dagmar	Sheridan	Red River	18,125
Deer Creek	Dawson	Charles	3,109
Diamond Point	Roosevelt	Red River	34,400
Divide	Sheridan	Madison, Red River	58,395
Dooley	Sheridan	Ratcliffe	19,895
Dry Creek	Carbon	Greybull	96,375
Dutch John Coulee	Toole	Sunburst	96,414
Dwyer	Sheridan	Madison	5,294
Dwyer-Nisku	Sheridan	Nisku	8,329
Dwyer Red River & Area	Sheridan	Red River	43,815
Dwyer-Winnipegosis	Sheridan	Winnipegosis	112
Eagle	Richland	Duperow, Madison, Siluro-Ord	100,767
Elk Basin	Carbon	Madison, Frontier, Embar-Tensleep	364,886
Elk Basin, Northwest	Carbon	Madison, Frontier, Tensleep, Cloverly	65,015
Enid, North	Richland	Red River	25,228
Fairview	Richland	Madison, Red River	277,101
Fairview, East	Richland	Red River, Winnipegosis	17,790
Fairview, West	Richland	Madison	361
Fertile Prairie	Fallon	Red River	6,824
Fishhook	Sheridan	Red River	17,195
Flat Coulee (Swift SU)	Liberty	Swift	9,179
Flat Lake	Sheridan	Nisku, Madison	48,977
Flat Lake, South	Sheridan	Ratcliffe	1,420
Fort Gilbert	Richland	Madison, Red River	45,944
Four Mile Creek	Richland	Red River	1,122
Four Mile Creek, West	Richland	Red River	9,038
Fox Creek, North	Richland	Bakken	250
Frannie	Carbon	Tensleep	1
Fred & George Creek	Toole	Sunburst	534
Frog Coulee	Richland	Red River	2,429
Froid, South	Roosevelt	Red River	5,699

**GAS PRODUCTION DATA - 1991
ASSOCIATED GAS (CONTINUED)**

Field	County	Producing Formation	Produced MCF
Gas City	Dawson	Madison, Siluro-Ord	1,455
Girard	Richland	Red River	12,148
Glendive	Dawson	Siluro-Ord	17,628
Golden Dome	Carbon	Greybull	43,704
Goose Lake	Sheridan	Ratcliffe, Red River	30,469
Goose Lake, Southeast	Sheridan	Ratcliffe	4,825
Goose Lake, West	Sheridan	Red River	9,560
Gossett	Richland	Red River	8,208
Gunsight	Roosevelt	Mission Canyon	1,440
Hardscabble Creek	Richland	Red River, Mission Canyon	641
Hay Creek	Richland	Mission Canyon, Red River	21,615
Hiawatha	Musselshell	Tyler, Stensvad	1,446
High Five	Rosebud	Tyler, Stensvad	8,380
Intake II	Richland	Red River, Madison, Ordovician	26,232
Jim Coulee	Musselshell	Tyler	3,498
Jim Coulee, North	Musselshell	Tyler, Stensvad	128
Katy Lake	Sheridan	Red River	72,917
Katy Lake, North	Sheridan	Red River, Madison, Nesson	117,517
Kevin-Sunburst	Toole	Madison, Sunburst	26,747
Kincheloe Ranch, West	Rosebud	Tyler	17,679
Laird Creek	Liberty	Swift	447
Lambert	Richland	Red River	35,211
Landslide Butte	Glacier	Madison	57,497
Leary	Powder River	Muddy	300
Little Beaver	Fallon	Siluro-Ord	32,309
Little Beaver, East	Fallon	Siluro-Ord	14,137
Little Wall Creek	Musselshell	Tyler, Stensvad	14,055
Little Wall Creek, South	Musselshell	Tyler	9,617
Lobo	Sheridan, Roosevelt	Interlake	28,621
Lone Butte	Richland	Red River	19,461
Lonetree Creek	Richland	Mission Canyon, Red River	110,316
Lookout Butte	Fallon	Siluro-Ord, Madison	84,738
Lookout Butte, East	Fallon	Red River, Lodgepole	24,534
Lowell	Sheridan	Red River	2,920
Lustre	Valley	Madison	77,204
McCabe	Roosevelt	Ratcliffe	4,245
McCoy Creek	Sheridan	Red River	2,099
Medicine Lake	Sheridan	Siluro-Ord, Duperow	211,474
Melstone	Musselshell	Tyler	20,201
Midfork	Valley	Charles C, Nisku	13,841
Missouri Breaks	Richland	Red River	11,382
Mon Dak, West	Richland	Madison, Siluro-Ord, Devonian, Duperow	352,168
Mona	Richland	Red River	51,759
Monarch	Fallon	Siluro-Ord	24,616
Mustang	Richland	Red River, Madison	37,611
Neiser Creek	Sheridan	Red River	13,181
Nohly	Richland	Red River, Nisku, Madison	252,357
North Fork	Richland	Mission Canyon	10,210
Olje	Sheridan	Red River	1,992
Ollie	Fallon	Red River	2,262
Otis Creek	Richland	Red River	2,146
Otis Creek, South	Richland	Red River	10,044
Outlook	Sheridan	Duperow, Siluro-Ord, Nisku	33,520
Oxbow	Roosevelt	Red River	20,138
Oxbow II	Roosevelt	Red River	9,737
Palomino	Roosevelt	Nisku	1,461
Pennel	Fallon	Siluro-Ord	652,879
Pine	Fallon, Wibaux	Siluro-Ord	300,279
Poplar, Northwest	Roosevelt	Charles	94,787
Pronghorn	Sheridan	Red River	3,602
Putnam	Richland	Madison, Siluro-Ord	56,492
Ragged Point	Musselshell	Tyler	2,501
Rainbow	Richland	Red River	19,376
Rattler Butte	Rosebud	Tyler	8,388
Rattlesnake Butte	Petroleum	Cat Creek 1	4,380
Raymond	Sheridan	Mississippian, Red River, Winnipegosis, Nisku, Duperow	331,833

**GAS PRODUCTION DATA - 1991
ASSOCIATED GAS (CONTINUED)**

Field	County	Producing Formation	Produced MCF
Reagan	Glacier	Madison	223,144
Red Bank	Roosevelt	Red River, Madison, Gunton	17,114
Red Bank, South	Roosevelt	Red River	11,472
Red Creek Unit	Glacier	Cut Bank, Madison	2,035
Red Fox	Roosevelt	Nisku	49
Red Water, East	Richland	Red River	5,669
Refuge	Sheridan	Red River	8,137
Reserve	Sheridan	Red River, Winnipegosis	14,835
Reserve II	Sheridan	Siluro-Ord	6,934
Ridgelawn	Richland	Duperow, Madison, Red River	399,867
RipRap Coulee	Roosevelt	Ratcliffe	10,230
River Bend	Richland	Red River	16,455
Rocky Point	Roosevelt	Red River	23,375
Rosebud	Rosebud	Tyler	510
Royals	Dawson	Dawson Bay	8,398
Rush Mountain	Sheridan	Winnipegosis	3,827
Salt Lake	Sheridan	Red River	1,305
Saturn	Daniels	Ratcliffe	1,498
Second Creek	Richland	Red River	29,930
Shotgun Creek	Roosevelt	Ratcliffe	5,678
Sidney	Richland	Madison, Red River	61,045
Sidney, East	Richland	Madison	13,156
Singletree	Roosevelt	Red River	6,212
Sioux Pass	Richland	Siluro-Ord	101,034
Sioux Pass, Middle	Richland	Red River	54,998
Sioux Pass, North	Richland	Madison, Red River, Nisku	165,077
Sioux Pass, South	Richland	Red River	21,907
Snoose Coulee	Liberty	Bow Island	7,540
South Fork	Richland	Red River	11,513
Spring Lake	Richland	Bakken, Red River	26,662
Spring Lake, West	Richland	Bakken	5,460
Stampede	Richland	Red River, Bakken	13,704
Sumatra	Rosebud	Tyler	688
Sunny Hill, West	Sheridan	Red River	5,014
Three Buttes	Richland	Red River	18,079
Tippy Buttes	Musselshell	Tyler	126
Tule Creek	Roosevelt	Devonian, Nisku	15,607
Tule Creek, East	Roosevelt	Nisku	6,230
Two Waters	Richland	Bakken, Duperow	177,771
Utopia	Liberty	Swift	9,393
Vaux	Richland	Bakken, Dawson Bay, Interlake, Madison, Red River, Stonewall	194,996
Wakea	Sheridan	Red River, Winnipegosis, Nisku, Duperow	57,000
Weed Creek	Yellowstone	Amsden	752
Whitlash	Liberty	Swift	13,079
Whitlash, West	Liberty, Toole	Swift, Sunburst	35,863
Wills Creek, South	Fallon	Siluro-Ord	5,388
Windmill	Richland	Red River	666
Woodrow	Dawson	Charles, Interlake	4,320
Wrangler	Sheridan	Red River	34,894
Wrangler, North	Sheridan	Red River	971
Wildcat	Richland	Bakken	2,589
SUBTOTAL ASSOCIATED GAS PRODUCED			8,552,561
SUBTOTAL NATURAL GAS PRODUCED			44,449,969
TOTAL GAS			53,002,530

REFINERS' ANNUAL REPORT—1991

COMPANY	BEGINNING STORAGE	MONTANA OIL	WYOMING OIL	CANADA OIL	REFINED	ENDING STORAGE
Cenex	248,264	2,487,264	3,736,814	6,792,892	13,036,758	227,506
Conoco	194,706	1,038,881	1,730,610	13,489,955	16,350,534	103,618
Exxon Corp.	260,271	149,595	9,563,729	4,943,329	14,499,790	417,134
Montana Refining Co.	16,252	596,114	-0-	1,764,930	2,360,910	16,386
TOTALS	719,493	4,271,854	15,031,153	26,991,106	46,247,992	764,644

PERCENTAGE OF CRUDE OIL RECEIVED

YEAR	MONTANA	CANADA	WYOMING
1987	11.57	56.54	31.89
1988	10.51	55.47	34.02
1989	9.60	54.64	35.76
1990	8.49	57.10	34.41
1991	9.23	58.30	32.47

AVERAGE BARRELS PER DAY

YEAR	MONTANA	CANADA	WYOMING	TOTAL
1987	13,680	66,840	37,692	118,212
1988	12,589	66,409	40,730	119,728
1989	12,261	69,808	45,685	127,754
1990	11,115	74,716	45,017	130,848
1991	11,704	73,948	41,181	126,833

REFINING FIVE YEAR COMPARISON

1987	1988	1989	1990	1991
42,987,742	43,992,177	46,615,040	47,517,800	46,247,992

STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION - ALL MONTANA FIELDS

PRODUCTION YEAR 1991

CUMULATIVE TO DECEMBER 31, 1991

FIELD	COUNTY	BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Anvil	Roosevelt	184,225	3,636,601	19.74	3,893,851	90,553,627
Ash Creek	Big Horn	6,237	123,118	19.74	843,691	3,682,138
Bainville	Roosevelt	43,459	859,184	19.77	760,493	10,663,650
Bainville II	Roosevelt	40,936	798,252	19.50	621,657	13,016,847
Bainville, North	Roosevelt	106,645	2,100,906	19.70	1,645,882	41,748,284
Bainville, West	Roosevelt	7,296	144,972	19.87	222,084	6,068,208
Bannatyne	Teton	8,483	141,157	16.64	376,478	3,957,607
Beanblossom	Garfield	31,227	556,465	17.82	465,791	8,038,807
Bear's Den	Liberty	9,946	184,896	18.59	533,489	3,855,357
Bell Creek	Powder River	465,736	9,198,286	19.75	131,176,149	1,209,264,813
Benrud, East	Roosevelt	29,322	573,245	19.55	2,836,747	19,985,671
Benrud, Northeast	Roosevelt	6,205	122,487	19.74	996,048	4,863,282
Berthelote	Toole	624	11,538	18.49	93,960	572,276
Big Gully	Musselshell	1,625	28,194	17.35	108,156	1,624,116
Big Gully, North	Musselshell	769	13,369	17.38	29,182	622,833
Big Muddy Creek	Roosevelt	16,095	313,531	19.48	1,298,971	21,927,370
Big Wall	Musselshell	78,987	1,352,257	17.12	7,845,590	40,488,902
Black Diamond	Wibaux	36,774	729,596	19.84	602,128	11,364,508
Blackfoot	Glacier	36,419	649,351	17.83	1,570,352	14,115,811
Bloomfield	Dawson	27,862	555,847	19.95	497,774	9,963,593
Blue Mountain	Wibaux	3,700	72,187	19.51	63,905	1,387,786
Border	Toole	8,463	148,102	17.50	1,438,489	5,542,042
Bowes	Blaine	156,763	2,320,092	14.80	9,974,618	47,453,323
Box Canyon	Richland	9,624	190,363	19.78	230,936	6,653,054
Bradley	Glacier	2,773	45,533	16.42	257,716	1,758,346
Brady	Pondera	7,176	130,460	18.18	194,491	3,649,165
Breed Creek	Rosebud	79,023	1,414,512	17.90	1,402,131	27,837,779
Brorson-Madison	Richland	72,326	1,395,161	19.29	1,305,892	21,597,110
Brorson-Red River	Richland	46,343	903,458	19.49	2,355,752	17,805,576
Brorson, South	Richland	64,905	1,257,859	19.38	1,761,232	20,390,522
Brush Lake	Sheridan	47,858	938,495	19.61	2,695,417	27,433,304
Burget, East	Roosevelt	15,712	304,970	19.41	225,530	5,109,876
Burns Creek	Dawson, Richland	3,474	66,909	19.26	253,168	3,125,022
Cabaret Coulee	Daniles	285,204	4,640,269	16.27	398,114	7,481,085
Cabin Creek	Fallon	1,237,738	21,128,188	17.07	94,010,429	607,932,762
Canadian Coulee	Hill	255	3,634	14.25	1,850	37,036
Canal	Richland	29,928	586,290	19.59	1,131,912	17,752,208
Cannonball	Fallon	3,219	63,446	19.71	69,223	2,062,308
Carlyle	Wibaux	8,012	160,240	20.00	300,375	6,825,558
Cat Creek	Petroleum, Garfield	56,695	1,075,814	18.98	23,662,263	72,437,626
Cattails	Richland	143,853	2,774,924	19.29	478,861	9,432,482
Cattails, South	Richland	4,245	75,221	17.72	4,245	75,221
Charlie Creek	Richland	9,006	174,806	19.41	716,318	12,583,633
Charlie Creek, East	Richland	88,428	1,759,717	19.90	572,627	13,756,118
Charlie Creek, North	Richland	20	347	17.37	43,894	1,185,223
Chelsea Creek	Roosevelt	90	1,629	18.10	104,243	1,773,429
Clark's Fork	Carbon	613	11,003	17.95	91,504	442,746
Clear Lake	Sheridan	159,482	3,137,011	19.67	2,968,968	65,138,460
Clear Lake, South	Sheridan	11,241	231,452	20.59	166,926	3,457,976
Colored Canyon	Sheridan	16,179	324,551	20.06	848,585	21,041,745
Comertown	Sheridan	121,611	2,370,198	19.49	2,309,017	59,112,188
Comertown, South	Sheridan	28,734	560,169	19.49	315,947	6,309,249
Conrad, South	Pondera	392	9,450	24.10	154,175	1,098,415
Cottonwood	Richland	4,020	79,234	19.71	176,736	3,682,354
Cottonwood, East	Roosevelt	16,097	309,397	19.22	22,218	490,517
Cow Creek, East	McCone	41,249	711,133	17.24	2,489,834	29,345,053
Crane	Richland	164,422	3,221,027	19.59	2,139,396	52,103,547
Crocker Springs, East	Pondera	586	10,560	18.02	3,287	78,445
Crooked Creek	Yellowstone	193	358	18.55	27,395	518,780
Cupton	Fallon	60,932	1,207,076	19.81	2,348,991	32,003,823
Cut Bank	Glacier, Toole	826,829	15,312,873	18.52	163,758,357	751,562,659
Dagmar	Sheridan	15,891	314,801	19.81	569,967	12,602,656
Deer Creek	Dawson	10,718	209,644	19.56	2,326,763	6,923,316
Delphia	Musselshell	3,299	60,339	18.29	335,348	1,696,095
Devil's Basin	Musselshell	1,448	26,976	18.63	118,167	1,861,146

STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION - ALL MONTANA FIELDS

PRODUCTION YEAR 1991

CUMULATIVE TO DECEMBER 31, 1991

FIELD	COUNTY	BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Devil's Pocket	Golden Valley	1,774	30,087	16.96	51,731	968,170
Diamond Point	Roosevelt	37,872	724,113	19.12	819,679	17,645,419
Divide	Sheridan	131,373	2,298,915	17.50	2,183,317	50,776,869
Dooley	Sheridan	34,431	507,513	14.74	191,643	2,894,015
Dry Creek	Carbon	3,341	61,107	18.29	4,154,796	10,172,617
Dry Creek, Middle	Carbon	153	2,907	19.00	1,407	29,726
Dry Creek, West	Carbon	1,360	25,990	19.11	10,953	247,664
Dutch John Coulee	Toole	10,259	199,025	19.40	206,024	3,792,863
Dwyer	Sheridan	151,989	2,810,277	18.49	8,388,765	71,522,180
Eagle	Richland	79,467	1,555,169	19.57	1,852,373	42,673,118
East Glacier	Glacier	268	4,851	18.10	21,351	660,300
Elk Basin	Carbon	608,739	10,719,894	17.61	83,618,841	374,043,127
Elk Basin, Northwest	Carbon	99,552	1,854,654	18.63	1,848,468	16,025,236
Enid, North	Richland	28,641	555,922	19.41	342,296	8,556,305
Fairview	Richland	132,772	2,571,794	19.37	8,676,543	89,201,535
Fairview, East	Richland	18,235	357,953	19.63	399,372	11,351,161
Fairview, West	Richland	8,978	172,467	19.21	208,450	5,131,277
Fertile Prairie	Fallon	18,507	364,773	19.71	723,381	8,102,512
Fishhook	Sheridan	24,578	489,102	19.90	1,035,421	28,222,624
Flat Coulee	Liberty	98,215	1,832,692	18.66	4,908,730	54,835,422
Flat Lake	Sheridan	203,070	3,210,537	15.81	15,662,868	133,966,691
Flat Lake, East	Sheridan	11,883	244,671	20.59	73,806	1,387,604
Flat Lake, South	Sheridan	13,769	209,151	15.19	1,213,793	13,762,880
Fort Gilbert	Richland	52,942	1,060,958	20.04	2,208,244	32,584,899
Four Mile Creek	Richland	8,362	160,216	19.16	378,799	7,118,486
Four Mile Creek, West	Richland	9,891	190,195	19.23	285,567	6,290,634
Fox Creek, North	Richland	921	18,518	20.11	73,654	1,853,392
Frannie	Carbon	1,824	27,652	15.16	772,543	2,967,790
Fred & George Creek	Toole	58,614	1,106,518	18.88	13,167,110	85,521,720
Frog Coulee	Richland	3,982	78,127	19.62	191,637	5,147,770
Froid, South	Roosevelt	7,132	144,138	20.21	240,378	2,628,635
Gage	Musselshell	1,787	32,237	18.04	645,465	3,352,850
Gas City	Dawson	63,648	1,240,500	19.49	10,155,936	57,687,215
Girard	Richland	23,018	447,010	19.42	439,581	5,273,572
Glendive	Dawson	135,336	2,644,465	19.54	13,048,457	73,837,292
Golden Dome	Carbon	9,614	186,127	19.36	101,859	1,608,267
Goose Lake	Sheridan	147,496	2,533,981	17.18	9,085,586	70,634,495
Goose Lake, Southeast	Sheridan	6,986	136,926	19.60	33,657	615,000
Goose Lake, West	Sheridan	19,894	396,686	19.94	526,260	13,085,336
Gossett	Richland	22,738	446,120	19.62	312,773	7,051,224
Graben Coulee	Glacier	51,704	880,002	17.02	2,174,808	26,872,712
Grandview, East	Liberty	2,438	42,665	17.50	49,990	1,165,019
Gray Blanket	Big Horn	7,561	100,519	13.29	7,561	100,519
Green Coulee	Sheridan	8,052	157,578	19.57	182,947	4,620,356
Gumbo Ridge	Rosebud	6,265	112,060	17.89	589,507	11,336,365
Gunsight	Roosevelt	17,296	324,127	18.74	244,064	5,473,260
Gypsy Basin	Pondera	6,665	118,237	17.74	490,873	7,864,507
Hardpan	Pondera	159	2,705	17.01	2,805	61,802
Hardscrabble Creek	Richland	4,911	97,287	19.81	125,925	2,999,495
Hawk Creek	Musselshell	465	8,928	19.20	12,267	156,966
Hay Creek	Richland	25,410	515,315	20.28	1,365,674	12,480,326
Hiawatha	Musselshell	14,555	263,009	18.07	1,589,559	10,588,299
Hibbard	Rosebud	716	13,024	18.19	218,403	2,026,090
High Five	Rosebud	77,007	1,404,608	18.24	2,410,834	50,527,299
Highview	Pondera	3,636	60,648	16.68	85,532	1,836,911
Horse Creek	Liberty	401	6,997	17.45	12,158	236,143
Howard Coulee	Musselshell	8,829	157,068	17.79	161,774	2,515,502
Injun Creek	Rosebud	1,589	29,651	18.66	125,379	3,028,783
Intake II	Richland	14,300	279,994	19.58	728,471	19,681,146
Ivanhoe	Musselshell	11,046	194,741	17.63	4,530,516	14,867,544
Jim Coulee	Musselshell	45,054	800,259	17.76	4,318,100	45,388,767
Katy Lake	Sheridan	9,709	189,131	19.48	152,167	2,682,261
Katy Lake, North	Sheridan	245,282	4,922,810	20.07	4,397,186	112,324,202
Keg Coulee	Musselshell	32,222	583,218	18.10	5,611,558	36,248,675
Kelley	Musselshell	4,218	74,532	17.67	1,012,008	6,341,414

STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION - ALL MONTANA FIELDS

PRODUCTION YEAR 1991

CUMULATIVE TO DECEMBER 31, 1991

FIELD	COUNTY	BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Kevin Nisku Oil, East	Toole	38,154	716,532	18.78	375,249	7,043,120
Kevin-Sunburst	Toole	394,862	6,996,937	17.72	79,209,248	297,728,219
Kincheloe Ranch, West	Rosebud	63,591	1,158,628	18.22	670,549	17,426,557
Laird Creek	Liberty	4,158	74,844	18.00	590,033	4,942,250
Lambert	Richland	22,579	449,322	19.90	441,144	12,031,838
Landslide Butte	Glacier	50,314	979,614	19.47	378,689	7,088,690
Leary	Powder River	13,882	276,807	19.94	630,230	9,464,302
Little Beaver	Fallon	333,686	5,522,503	16.55	13,379,424	124,047,751
Little Beaver, East	Fallon	100,548	1,668,091	16.59	5,838,332	43,194,004
Little Phantom	Toole	763	12,399	16.25	54,223	1,123,238
Little Wall Creek	Musselshell	185,841	3,328,842	17.91	4,261,055	77,394,502
Lobo	Sheridan, Roosevelt	28,584	564,820	19.76	259,413	4,491,465
Lodge Grass	Big Horn	4,283	62,746	14.65	314,980	1,994,608
Lone Butte	Richland	26,262	523,664	19.94	653,412	11,141,127
Lonetree Creek	Richland	72,970	1,443,347	19.78	3,599,745	45,110,465
Long Creek	Roosevelt	2,462	48,058	19.52	72,753	1,423,941
Long Creek, West	Roosevelt	29,957	598,840	19.99	675,098	14,444,606
Lookout Butte	Fallon	433,605	7,524,909	17.35	24,766,650	187,624,796
Lookout Butte, East	Fallon	73,232	1,425,095	19.46	429,229	7,674,204
Lowell	Sheridan	10,550	217,224	20.59	249,163	6,931,022
Lustre	Valley	237,996	3,759,261	15.80	4,523,212	92,335,464
Lustre, North	Valley	8,830	140,838	15.95	158,352	3,090,881
Mason Lake	Musselshell	9,935	186,083	18.73	965,325	23,709,685
McCabe	Roosevelt	5,611	113,062	20.15	238,421	6,006,732
McCoy Creek	Sheridan	3,231	64,135	19.85	49,132	964,765
Meander	Pondera	412	7,301	17.72	5,373	128,933
Medicine Lake	Sheridan	140,368	2,775,075	19.77	3,323,773	90,757,011
Melstone	Musselshell	54,480	978,461	17.96	3,698,865	48,632,201
Midfork	Valley	28,874	498,365	17.26	198,070	3,070,602
Missouri Breaks	Richland	12,632	247,840	19.62	320,353	8,320,078
Mon Dak, West	Richland	391,870	7,625,790	19.46	9,174,602	210,967,530
Mona	Richland	15,897	276,926	17.42	106,658	2,707,722
Monarch	Fallon	119,467	2,148,017	17.98	5,891,674	50,924,965
Mosser Dome	Yellowstone	7,405	124,700	16.84	391,755	3,195,203
Musselshell	Musselshell	1,289	22,790	17.68	37,372	533,124
Mustang	Richland	33,164	639,734	19.29	574,870	15,564,362
Neiser Creek	Sheridan	16,535	340,125	20.57	253,027	5,593,069
Ninemile	Toole	2,252	42,315	18.79	43,736	788,618
Nohly	Richland	366,524	7,229,456	19.72	4,765,901	83,447,051
North Fork	Richland	17,583	342,165	19.46	502,058	10,430,933
Olje	Sheridan	4,499	93,084	20.69	156,110	2,792,200
Ollie	Fallon	5,693	111,355	19.56	230,734	7,038,509
Otis Creek	Richland	2,146	42,239	19.68	837,617	11,355,348
Otis Creek, South	Richland	8,538	167,343	19.60	248,153	5,784,336
Outlook	Sheridan	55,626	1,115,858	20.06	8,821,425	64,773,907
Outlook, West	Sheridan	23,391	454,253	19.42	788,296	7,428,760
Oxbow	Roosevelt	16,980	337,562	19.88	406,105	8,690,439
Oxbow II	Roosevelt	5,738	111,547	19.44	58,734	1,203,689
Palomino	Roosevelt	142,276	2,802,837	19.70	1,815,199	44,108,322
Pennel	Fallon	2,854,981	49,033,213	17.17	80,698,753	1,017,476,720
Pete Creek	Toole	705	12,761	18.10	21,549	446,766
Pine	Dawson, Fallon, Prairie, Wibaux	1,304,053	22,338,428	17.13	108,959,565	689,998,214
Pondera	Pondera, Teton	301,752	5,494,904	18.21	25,826,395	167,559,292
Pondera Coulee	Teton	5,878	102,847	17.50	77,997	1,171,687
Poplar, East	Roosevelt	161,924	3,173,710	19.60	45,633,317	185,359,236
Poplar, Northwest	Roosevelt	138,926	2,730,860	19.66	3,566,749	62,898,131
Prairie Dell	Toole	316	5,609	17.75	1,143	21,623
Prairie Elk	McCone	3,268	61,602	18.85	101,248	1,601,666
Prichard Creek	Toole	214	4,097	19.14	163,609	2,483,632
Pronghorn	Sheridan	10,971	213,605	19.47	421,074	10,446,025
Putnam	Richland	138,105	2,722,050	19.71	4,858,994	101,922,011
Rabbit Hills	Blaine	135,674	2,100,319	15.48	1,044,605	15,453,482
Ragged Point	Musselshell	12,028	212,535	17.67	2,573,960	12,170,169
Ragged Point, Southwest	Musselshell	52,182	939,276	18.00	1,553,024	25,737,847

STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION - ALL MONTANA FIELDS

PRODUCTION YEAR 1991

CUMULATIVE TO DECEMBER 31, 1991

FIELD	COUNTY	BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Rainbow	Richland	9,025	181,583	20.12	150,370	3,770,707
Rattler Butte	Rosebud	25,944	468,030	18.04	954,949	24,816,826
Rattlesnake Butte	Petroleum	34,477	601,968	17.46	500,192	9,085,490
Raymond	Sheridan	112,506	2,207,368	19.62	4,732,621	84,769,864
Reagan	Glacier	136,579	2,597,733	19.02	8,933,817	89,293,419
Red Bank	Roosevelt	72,692	1,303,368	17.93	1,812,633	47,351,172
Red Bank, South	Roosevelt	13,075	254,440	19.46	332,696	8,814,366
Red Creek	Glacier	44,087	774,609	17.57	6,240,047	36,134,543
Red Fox	Roosevelt	303	5,887	19.43	380,137	1,681,598
Red Water	Richland	7,967	156,711	19.67	59,990	1,678,218
Red Water, East	Richland	10,678	217,511	20.37	227,651	5,367,908
Refuge	Sheridan	10,152	203,954	20.09	202,411	5,498,340
Reserve	Sheridan	16,708	331,320	19.83	1,669,587	15,610,050
Reserve II	Sheridan	12,897	270,579	20.98	173,211	3,159,948
Richey	Dawson, McCone	9,545	184,450	19.32	2,021,881	7,606,368
Richey, Southwest	McCone	376	6,806	18.10	1,902,756	6,398,250
Ridgelawn	Richland	326,280	6,315,718	19.35	5,691,459	136,535,427
Ridgelawn, North	Richland	36,410	684,199	18.79	36,410	684,199
RipRap Coulee	Roosevelt	33,269	652,405	19.61	597,307	12,442,024
River Bend	Richland	11,603	239,718	20.66	232,276	5,554,138
Rocky Point	Roosevelt	14,458	287,425	19.88	482,602	12,058,398
Rosebud	Rosebud	9,203	164,366	17.86	472,332	7,429,163
Royals	Dawson	11,204	224,528	20.04	302,167	7,975,262
Rudyard	Hill	797	14,410	18.08	17,429	343,474
Runaway	Teton	93	1,683	18.10	4,505	120,956
Rush Mountain	Sheridan	10,584	213,162	20.14	591,783	6,552,604
Salt Lake	Sheridan	79,810	1,585,027	19.86	735,970	10,436,589
Saturn	Daniels	1,629	25,624	15.73	32,773	656,021
Second Creek	Richland	26,796	519,574	19.39	1,245,351	20,311,920
Second Guess	Teton	2,474	46,588	18.83	8,324	166,357
Shotgun Creek	Roosevelt	24,043	477,013	19.84	418,927	7,475,769
Sidney	Richland	77,008	1,500,116	19.48	3,171,405	62,909,372
Sidney, East	Richland	17,013	331,754	19.50	570,711	16,290,663
Singletree	Roosevelt	9,380	173,061	18.45	310,571	6,691,446
Sioux Pass	Richland	100,467	2,009,381	20.00	3,448,793	57,666,114
Sioux Pass, East	Richland	940	18,443	19.62	89,267	1,640,008
Sioux Pass, Middle	Richland	42,814	838,726	19.59	1,461,427	33,103,550
Sioux Pass, North	Richland	180,632	3,525,937	19.52	3,861,737	87,576,002
Sioux Pass, South	Richland	14,355	282,937	19.71	250,468	6,006,899
Snoose Coulee	Liberty	629	11,146	17.72	3,612	66,595
Snyder	Big Horn	2,349	30,514	12.99	466,234	1,901,275
Soap Creek	Big Horn	42,260	535,012	12.66	2,680,470	18,799,830
Soap Creek, East	Big Horn	8,712	106,199	12.19	156,151	2,677,996
South Fork	Richland	25,271	494,048	19.55	981,977	19,427,724
Spring Lake	Richland	31,048	597,364	19.24	1,022,544	9,514,779
Spring Lake, West	Richland	4,762	92,573	19.44	45,169	806,135
Stampede	Richland	18,364	361,220	19.67	295,017	7,468,055
Stensvad	Musselshell, Rosebud	17,455	314,714	18.03	10,169,732	28,940,144
Studhorse	Garfield	6,310	111,435	17.66	185,218	4,029,287
Sumatra	Rosebud	397,236	7,229,695	18.20	44,228,383	332,455,806
Sunnyhill	Sheridan	7,629	148,155	19.42	242,813	5,910,170
Sunnyhill, West	Sheridan	5,896	115,385	19.57	137,917	2,975,216
Target	Roosevelt	34,185	672,761	19.68	659,456	16,618,750
Thirty Mile	Blaine	2,129	33,106	15.55	11,660	206,982
Three Buttes	Richland	18,813	368,547	19.59	388,229	9,863,115
Tinder Box	Musselshell	1,499	27,411	18.29	9,150	149,689
Tippy Buttes	Musselshell	451	8,564	18.99	126,246	3,620,312
Tule Creek	Roosevelt	37,070	740,659	19.98	8,158,085	43,562,459
Tule Creek, East	Roosevelt	4,615	90,269	19.56	2,026,651	7,420,578
Tule Creek, South	Roosevelt	12,488	242,142	19.39	917,284	7,576,660
Two Waters	Richland	35,841	598,186	16.69	310,351	7,116,358
Utopia	Liberty	29,178	524,620	17.98	643,213	13,656,854
Vaux	Richland	209,037	4,080,402	19.52	4,012,208	87,631,376
Volt	Roosevelt	84,003	1,642,259	19.55	3,234,558	30,406,102
Wakea	Sheridan	117,059	2,399,710	20.50	2,123,962	42,730,448

STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION - ALL MONTANA FIELDS

FIELD	COUNTY	PRODUCTION YEAR 1991			CUMULATIVE TO DECEMBER 31, 1991	
		BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Weed Creek	Yellowstone	1,983	34,821	17.56	608,202	2,668,102
West Butte	Toole	3,792	72,124	19.02	303,814	3,224,451
Weygand	Blaine	17,589	285,316	16.22	271,624	5,121,493
Whitlash	Liberty, Toole	42,107	785,717	18.66	5,358,428	50,101,002
Whitlash, West	Toole	2,311	41,529	17.97	125,665	1,880,471
Willow Creek, North	Musselshell	11,321	196,759	17.38	367,213	3,809,574
Willow Ridge	Toole	1,843	36,418	19.76	50,289	1,164,413
Wills Creek, South	Fallon	20,582	343,925	16.71	1,135,821	9,864,616
Windmill	Richland	2,348	45,058	19.19	31,312	605,633
Winnett Junction	Musselshell	18,930	341,686	18.05	931,157	17,132,001
Wolf Springs	Yellowstone	18,880	345,969	18.32	4,738,475	15,669,106
Wolf Springs, South	Yellowstone	17,483	314,170	17.97	821,954	16,178,722
Woodrow	Dawson	16,074	326,141	20.29	1,204,826	7,136,206
Wrangler	Sheridan	31,279	625,893	20.01	548,228	13,990,250
Wrangler, North	Sheridan	4,873	90,638	18.60	119,737	3,499,526
Wright Creek	Powder River	6,263	120,563	19.25	302,513	3,728,826
Yates	Wibaux	2,084	35,678	17.12	70,810	1,759,099
Miscellaneous Inactive Fields					19,755,670	147,145,230
TOTALS		19,573,348	355,880,349	18.18	1,335,351,739	11,066,863,202

*Average price calculated from data provided by the Montana Department of Revenue.

MISCELLANEOUS INACTIVE FIELDS AS OF DECEMBER 31, 1991

FIELD	BARRELS	VALUE	FIELD	BARRELS	VALUE
Ace High	3,686	45,448	McCabe,East	6,805	205,642
Agawan	79	2,259	McCabe,West	69,988	1,514,214
Alkali Coulee	19,546	635,465	McCabe,South	6,599	208,261
Andes	21,175	646,333	Midby	70,172	2,300,577
Antelope,North	2,484	85,522	Mineral Bench	186,656	1,393,790
Anvil,North	9,446	330,277	Miners Coulee	152,708	1,137,078
Autumn	35,546	1,125,986	Nohly,South	125,082	3,504,089
Bascom	27,830	65,674	Otter Creek	28,492	959,881
Belfry	101,245	503,603	Outlook,South	693,151	2,882,883
Benrud	289,695	2,436,618	Pasture	2,869	90,868
Big Rock	10,764	262,921	Pasture Creek	1,914	62,789
Big Wall,North	7,218	116,302	Pelican	191,494	5,298,958
Blackfoot,East	810	1,730	Phantom	43,585	757,070
Blackleaf Canyon	32,922	806,319	Pine,East	19,349	233,378
Blue Hill	162,251	3,110,843	Pipeline	16,424	229,075
Boulder	156,754	2,530,800	Plentywood	22,830	711,421
Bredette	232,121	2,062,125	Pole Creek	169,726	277,956
Bredette,North	488,554	1,160,009	Police Coulee	14	189
Buffalo Flats	603	15,037	Poplar,Southeast	162,546	1,093,017
Buffalo Lake	936	26,493	Rattlesnake Coulee	91,024	693,093
Burget	6,504	228,647	Raymond,North	119,990	3,116,174
Burns Creek,South	79,958	2,279,384	Raymond,Northeast	120,687	1,721,719
Butchers Creek	579	20,259	Redstone	468,178	2,212,903
Bynum	5,971	15,320	Repeat	547,054	3,304,614
Cadmus	1,173	3,381	Reserve,South	33,899	544,081
Clark Fork,North	1,024,608	2,895,208	Richey,East	10,386	333,467
Clark Fork,South	80,553	634,021	Richey Area,West	11,062	403,670
Coal Ridge	22,582	795,495	Roscoe Dome	15,556	348,482
Corner Pocket	14,483	353,729	Rough Creek	3,599	10,583
Cow Creek	127,813	1,304,283	Royals,South	3,082	101,400
Culbertson	175,652	1,134,101	Sand Creek	2,349,120	11,812,804
Curlew	5,468	94,972	Sheepherder	76,942	1,278,743
Dagmar,North	55,342	1,652,908	Scobey	3,916	145,674
Deadman's Coulee	264,528	8,048,112	Shotgun Creek,North	89,647	1,564,569
Dean Dome	92,597	1,537,193	Smoke Creek	100,305	221,361
Dugout Coulee	66,740	2,205,099	Snowden	1,938	70,607
Dunkirk,North	19	498	Spring Lake,South	110,660	2,910,139
Epworth	55,142	1,909,226	Stampede,North	4,566	136,865
Fiddler Creek	2,574	50,224	Two Medicine Creek	10,249	370,951
Flaxville	56,283	1,392,485	Vida	264,988	1,192,054
Four Buttes	41,067	122,184	Viking	160	1,957
Fox Creek	200,464	4,640,130	Wagon Box	32,379	575,263
Gage,Southwest	16,289	37,397	Wagon Trail	43,321	1,297,560
Gettysburg	304	11,987	Weldon	7,050,531	20,454,760
Glendive,South	68,936	2,009,079	West Fork	6,671	229,773
Goose Lake,East	4,522	168,087	Wibaux	23,580	42,945
Grandview	9,784	196,936	Willow Ridge,South	3,267	102,156
Green Coulee,East	62,942	1,741,899	Wolf Creek	1,979	2,275
Hawk Haven	7,392	236,689	Woman's Pocket	3,526	7,461
Homestead	303	8,726	Yellowstone	39,405	72,518
Honker	117,078	3,134,727	Wildcat,Carbon County	6,368	13,559
Jack Creek	1,310	3,275	Wildcat,Daniels County	3,508	7,787
Keg Coulee,North	438,488	4,827,464	Wildcat,Dawson County	1,489	42,127
Kicking Horse	1,526	48,566	Wildcat,Fallon County	10,683	29,485
Kippen,East	150	4,815	Wildcat,Garfield County	468	13,166
Krug Creek	15,288	538,314	Wildcat,Glacier County	48,412	127,430
Lake Basin	473,639	661,111	Wildcat,Hill County	405	8,831
Lakeside	487	18,489	Wildcat,Liberty County	3,254	19,148
Lambert,North	36,552	1,221,300	Wildcat,McCone County	12,575	41,467
Lamesteer Creek	31,845	658,685	Wildcat,Musselshell County	925	1,841
Lariat	3,599	123,587	Wildcat,Pondera County	469	7,407
Laurel	1,017	36,458	Wildcat,Powder River County	27,445	65,594
Ledger	275	7,948	Wildcat,Richland County	339,856	818,099
Line Coulee	57,789	138,495	Wildcat,Roosevelt County	86,968	259,956
Lisk Creek	1,939	70,297	Wildcat,Sheridan County	52,561	571,834
Lone Rider	5,903	194,397	Wildcat,Stillwater County	11,283	13,365
Lonetree Creek,West	33,029	1,020,547	Wildcat,Teton County	9,324	19,667
Lost Creek	1,534	42,905	Wildcat,Toole County	36,379	128,683
Mackay Dome	77,334	1,538,558	Wildcat,Valley County	447	6,034
Malcolm Creek	11,450	353,129	Wildcat,Wibaux County	8,388	25,416
Mason Lake,North	17,923	442,087			
			TOTALS	19,755,670	147,145,230

1991 WELL COMPLETIONS

OPERATOR	LOCATION	WELL NAME	STATUS CODE	API NO.	FIELD	PRODUCING FORMATION	DATE COMPLETED	TOTAL DEPTH	INITIAL POTENTIAL	
									OIL B/D	GAS MCF/D
003 Big Horn										
Hallwood Petroleum, Inc.	NESW 4 7S 39E	Helvey 4-11	6	21206	Wildcat		09/18/91	3884		
Macum Energy Inc.	SENE 18 6S 36E	Mann 8-18 ***	1	21207	Gray Blanket	Tensleep	11/24/91	6200	200	
Pg&e Resources Co (ngc Energy)	SWNE 9 9S 41E	Holmes 1	6	21203	Wildcat		09/04/90	795		
Powers Energy Inc.	SESE 28 9S 39E	Jensen #1	5	21202	Wildcat	Frontier	01/27/91	884		75
005 Blaine										
Brown, J. Burns Operating Co.	NENE 26 32N 18E	Wright 26-32-18B	2	22547	Tiger Ridge	Eagle	03/15/91	1400		
Brown, J. Burns Operating Co.	SCSE 23 32N 18E	Marsh 23-16B	2	22553	Tiger Ridge		05/25/91	1500		
Jordan Oil & Gas Co	SWSE 27 36N 17E	State 1-27	6	22543	Wildcat		01/23/91	4184		
L.E. Behm, Inc.	NWNE 18 34N 20E	Federal Rabbit 1	1	22549	Rabbit Hills, Northeast	Sawtooth	05/02/91	4200	350	
L.E. Behm, Inc.	SWNE 18 34N 20E	Federal Rabbit 2	1	22550	Rabbit Hills, Northeast	Sawtooth	05/12/91	4200	150	
Meridian Oil, Inc.	NENW 18 34N 20E	Flynn 21-18	1	22577	Rabbit Hills	Sawtooth	09/24/91	4175	112	
Meridian Oil, Inc.	SENE 18 34N 20E	Wolf Federal 22-18	1	22584	Rabbit Hills	Sawtooth	12/23/91	4200	86	
Montana Power Company	SESW 10 31N 19E	Columbian 14-10	2	22585	Bowes	Eagle	11/20/91	1345		170
Montana Power Company	NWNE 15 31N 19E	Fee 2-15	2	22586	Bowes	Eagle	11/22/91	1377		60
Norfolk Energy Inc.	SWSE 7 34N 20E	Flynn Trust 7-15	1	22545	Rabbit Hills, Northeast	Sawtooth	01/28/91	4236	75	
Norfolk Energy Inc.	SESW 7 34N 20E	Flynn Trust 7-14	1	22552	Rabbit Hills, Northeast	Sawtooth	05/30/91	4254	100	
Norfolk Energy Inc.	NWNW 14 26N 18E	US 14-4	3	22572	Sherard		10/19/91	2200		
Norfolk Energy Inc.	NENW 31 25N 18E	US 31-3	3	22573	Sherard		09/12/91	1700		
Norfolk Energy Inc.	NWNE 2 25N 17E	Boguess 2-2	2	22575	Sherard	Eagle	09/08/91	2000		1300
Norfolk Energy Inc.	SENE 1 25N 17E	Boguess 1-8	2	22576	Sherard	Eagle	09/10/91	2000		1400
Norfolk Energy Inc.	SESE 31 32N 18E	Staff 31-16	2	22556	Tiger Ridge	Eagle	07/18/91	1600		1100
Norfolk Energy Inc.	SWNW 5 30N 18E	Kane 5-5	2	22557	Tiger Ridge	Eagle	06/26/91	1500		1075
Norfolk Energy Inc.	NENE 36 31N 17E	State 36-1	2	22558	Tiger Ridge	Eagle	07/18/91	1300		1036
Norfolk Energy Inc.	SESE 4 31N 18E	Williamson 4-16	2	22559	Tiger Ridge	Eagle	06/24/91	1600		192
Norfolk Energy Inc.	NWSW 26 31N 18E	Roberts 26-12	2	22560	Tiger Ridge	Eagle	06/26/91	1750		950
Norfolk Energy Inc.	NESE 26 31N 18E	S-B 26-9	2	22561	Tiger Ridge	Eagle	06/26/91	1800		600
Norfolk Energy Inc.	NENW 13 30N 17E	Blackwood 13-3	3	22562	Tiger Ridge		08/22/91	2200		
Norfolk Energy Inc.	SESE 24 31N 18E	Fournier 24-16	3	22563	Tiger Ridge		08/28/91	1440		
Norfolk Energy Inc.	NESW 25 30N 17E	Davies Ranch 25-11	3	22566	Tiger Ridge		08/25/91	2144		
Norfolk Energy Inc.	SESE 7 30N 19E	Hofeldt 7-16	3	22567	Tiger Ridge		09/06/91	1325		
Norfolk Energy Inc.	SESE 28 31N 19E	Roberts 28-16	2	22568	Tiger Ridge	Eagle	09/04/91	1300		1000
Norfolk Energy Inc.	NWNW 34 31N 19E	S-B Ranch 34-4	2	22570	Tiger Ridge	Eagle	09/26/91	1300		1600
Norfolk Energy Inc.	NESE 35 35N 20E	Lybeck 35-9 **	4	22544	Weygand	Sawtooth	01/21/91	4350	10	
Norfolk Energy Inc.	SENE 24 25N 17E	US 24-8	6	22571	Wildcat		09/16/91	1850		
Norfolk Energy Inc.	NWSE 7 34N 20E	Flynn Trust 7-10	6	22580	Wildcat		10/12/91	4280	0	0
Texaco Exploration And Prod.	SE 3 31N 19E	Sawtooth Unit G703-H	8	22564	Bowes		09/06/91	4449		
Texaco Exploration And Prod.	NW 35 32N 19E	Sawtooth Unit D135-H	1	22565	Bowes	Sawtooth	09/05/91	4871	178	
Texaco Exploration And Prod.	SESE 3 31N 19E	G703-HR	1	22578	Bowes	Sawtooth	09/27/91	5563	203	
Union Texas Petroleum Corp.	SENE 31 36N 23E	Johnson 31 #1	6	22530	Wildcat		11/01/91	5085		
Xeno Inc	NWSE 17 36N 19E	Battle 10-17	2	22554	Battle Creek	Eagle	05/18/91	1932		685
Xeno Inc	NESW 29 36N 19E	Battle 11-29	2	22555	Battle Creek	Eagle	05/20/91	1929		854
009 Carbon										
Amoco Production Co	SESW 34 9S 23E	Elk Basin #336	1	21238	Elk Basin	Embar	01/07/91	6155	17	
Falcon Petroleum Corporation	SWSE 13 7S 23E	Pfeifer-Schwend #1	3	21210	Jack Creek		07/19/91	400		
Florentine Exploration & Prod.	SWNE 19 8S 21E	AETNO 7-19-8-21	5	21239	Wildcat		03/12/91	1182		
Florentine Exploration & Prod.	SENE 10 8S 20E	ARCO 6-10-8-20	6	21241	Wildcat		01/29/91	1632		
Florentine Exploration & Prod.	NENW 24 8S 20E	AETNA 3-24-8S-20E	5	21242	Wildcat		03/14/91	1570		
Florentine Exploration & Prod.	NWNW 13 8S 20E	AETNA 4-13-8-20 ***	5	21243	Wildcat		03/03/91	1762		
North American Resources Co.	NWNW 16 7S 22E	State 4-16	1	21240	Golden Dome	Frontier	02/09/91	6300	4	110
Phillips Petroleum Company	NWNW 15 9S 20E	Ruby A Federal 1-9	6	21237	Wildcat		08/23/91	8200		
015 Chouteau										
Montana Power Company	SWNW 8 28N 14E	Trunk 5-8	3	21662	Coal Mine Coulee		04/10/91	2263		
Zama Corporation	SWNW 10 24N 7E	Nelson 10-5	6	21663	Wildcat		06/11/91	2032		
019 Daniels										
Nerdlihc Company Inc.	SESW 24 34N 47E	Fisher 1-24	7	21085	Cabarett Coulee	Dakota	11/29/90	6896		
Nerdlihc Company Inc.	NENE 25 34N 47E	Fugere 2-25	6	21086	Cabarett Coulee	Duperow	11/17/90	7729	845	
Nerdlihc Company Inc.	NESW 24 34N 47E	Fisher 2-24	3	21094	Cabarett Coulee		12/16/91	6949		
Nerdlihc Company Inc.	SENE 29 34N 44E	Hubbard State 1-29	6	21087	Wildcat		12/17/90	7206		
Reef Oil Corporation	NWSE 12 33N 46E	Wilcoxon #1	6	21088	Wildcat		07/29/91	7410		
Samedan Oil Corporation	NWNW 34 33N 47E	Mitchell 1-34	6	21089	Wildcat		08/28/91	7700		
025 Fallon										
Shell Western E & P Inc.	NESW 33 10N 58E	Unit 23-33R	1	21483	Cabin Creek	Interlake	04/12/91	9033	45	10
Shell Western E & P Inc.	SWNW 17 10N 58E	Unit 12X-17R	1	21492	Cabin Creek	Red River	06/14/91	8995	177	51
Shell Western E & P Inc.	SESE 18 10N 58E	Unit 44-18	1	21494	Cabin Creek	Red River	07/18/91	9120	185	134
Shell Western E & P Inc.	NESW 14 8N 59E	Federal 23X-14	1	21489	Pennel	Red River	02/15/91	9005	118	15
Shell Western E & P Inc.	NWNW 14 8N 59E	Unit 11XX-14	1	21490	Pennel	Red River	03/01/91	8895	132	22
Williston Basin Interstate	SESW 12 5N 60E	Federal 131-A	7	21478	Cedar Creek		09/22/89	1402		
Williston Basin Interstate	SWSW 22 10N 58E	Well 6-A	7	21479	Cedar Creek		09/26/89	1030		
Williston Basin Interstate	SWSW 22 10N 58E	Well 1-A	7	21480	Cedar Creek		09/24/89	1100		
Williston Basin Interstate	NENE 28 10N 58E	Well 5-A	7	21481	Cedar Creek		09/28/89	1100		

1991 WELL COMPLETIONS (CONTINUED)

OPERATOR	LOCATION	WELL NAME	STATUS CODE	API NO.	FIELD	PRODUCING FORMATION	DATE COMPLETED	TOTAL DEPTH	INITIAL POTENTIAL	
									OIL B/D	GAS MCF/D
027 Fergus										
Lone Mountain Production Co.	NENW 2 14N 24E	Archer #2	6	21226	Wildcat		10/04/91	1400		
035 Glacier										
Berenergy Corporation	SWSW 20 37N 8W	Tribal JV 20-1	1	21843	Landslide Butte	Madison	04/20/91	4857	15	
Croft Petroleum Company	NENW 11 37N 6W	Muntzing D-11	1	21842	Blackfoot	Cut Bank	01/30/91	4975	11	
Gypsy Highview Gathering	SWSE 14 37N 5W	Federal 14-3	1	21823	Cut Bank	Cut Bank	08/16/90	2670	9	
Gypsy Highview Gathering	SWSE 14 37N 5W	Federal 14-4	1	21824	Cut Bank	Cut Bank	01/15/91	2660	8	
Montana Power Company	NESW 1 36N 5W	Barkram 11-1	2	21844	Cut Bank	Moulton	03/09/91	2771		83
Montana Power Company	SESW 11 36N 5W	Harto 14-11	2	21845	Cut Bank	Moulton	03/15/91	2538		83
Montana Power Company	NENE 22 34N 5W	Callison 1-22	2	21849	Cut Bank	Cut Bank	11/01/91	2652		526
Montana Power Company	SWSW 21 34N 5W	Parker 13-21	2	21850	Cut Bank	Cut Bank	06/23/91	2690		260
Montana Power Company	SWNW 26 35N 5W	DeZort 5-26	2	21851	Cut Bank	Cut Bank/Bow Island	07/17/91	2690		250
Union Oil Company Of Calif.	SW 27 37N 7W	Blackfeet 194 43-M27	2	21835	Big Rock Gas Field	Bow Island	01/03/91	2421		193
Union Oil Company Of Calif.	NWSE 5 33N 5W	SCCBSU 20-4	1	21840	Cut Bank	Cut Bank	01/24/91	2887	1	0
Union Oil Company Of Calif.	NESW 14 33N 6W	Evelyn Steen 2-14	1	21852	Cut Bank	Cut Bank	09/22/91	3220	2	
Union Oil Company Of Calif.	SWSE 14 33N 6W	Raymaker 1-14	1	21853	Cut Bank	Cut Bank	08/31/91	3143	2	
Union Oil Company Of Calif.	SWNE 23 33N 6W	Don Goldrick 2-23	1	21854	Cut Bank	Cut Bank	09/12/91	3247	4	
Union Oil Company Of Calif.	NWNE 23 33N 6W	Don Goldrick 1-23	1	21855	Cut Bank	Cut Bank	11/05/91	3132	1	
041 Hill										
Brown, J. Burns Operating Co.	NWNE 8 35N 16E	Burrington 2-8	5	22446	Wildcat		07/26/90	1580		
Lytm Company, Inc.	NENE 18 32N 17E	Jacobsen 18-1	2	22471	Tiger Ridge		08/24/91	1350		
Norfolk Energy Inc.	NENW 34 30N 15E	Boyce 34-3	2	22449	Tiger Ridge	Eagle	09/05/91	2200		186
Norfolk Energy Inc.	SESE 29 31N 17E	Olson 29-16	3	22450	Tiger Ridge		07/13/91	2200		
Norfolk Energy Inc.	SWNE 22 31N 17E	Olson 22-7	2	22451	Tiger Ridge	Eagle	06/26/91	1900		2100
Norfolk Energy Inc.	NENE 20 31N 17E	U.S. 20-1	3	22452	Tiger Ridge		07/10/91	2025		
Norfolk Energy Inc.	SWSW 18 31N 17E	Herman 18-13	3	22453	Tiger Ridge		08/16/91	1800		
Norfolk Energy Inc.	NENE 24 31N 16E	Herman 24-1	3	22454	Tiger Ridge		08/10/91	2158		
Norfolk Energy Inc.	SESE 6 31N 17E	Davey 6-16	3	22455	Tiger Ridge		06/27/91	2000		
Norfolk Energy Inc.	SENE 2 31N 17E	O'Neil 2-8	3	22456	Tiger Ridge		06/18/91	1500		
Norfolk Energy Inc.	SENE 19 31N 16E	Gregoire 19-8	2	22458	Tiger Ridge	Eagle	08/08/91	1700		553
Norfolk Energy Inc.	NWSW 20 31N 15E	Dahlin 20-12	2	22459	Tiger Ridge	Eagle	08/09/91	1400		2260
Norfolk Energy Inc.	SENE 29 31N 16E	Tautges 29-8	2	22460	Tiger Ridge	Eagle	08/08/91	1300		481
Norfolk Energy Inc.	SENE 3 30N 15E	Hillbrant 3-6	2	22461	Tiger Ridge	Eagle	08/08/91	1550		352
Norfolk Energy Inc.	NWNW 21 31N 15E	Frédrickson 21-4	3	22462	Tiger Ridge		07/22/91	1500		
Norfolk Energy Inc.	SESE 13 30N 15E	Golie 13-16	3	22463	Tiger Ridge		08/05/91	2000		
Norfolk Energy Inc.	NENW 28 30N 15E	Boyce 28-3	2	22464	Tiger Ridge	Eagle	09/05/91	1700		886
Norfolk Energy Inc.	SWNW 27 30N 15E	Boyce 27-5	2	22465	Tiger Ridge	Eagle	09/04/91	2000		508
Norfolk Energy Inc.	SESE 13 31N 15E	Gregoire 13-16	3	22466	Tiger Ridge		07/19/91	1600		
Norfolk Energy Inc.	NWNW 22 30N 15E	Chippewa-Cree 22-4	2	22467	Tiger Ridge	Eagle	09/23/91	1750		244
Norfolk Energy Inc.	SESW 22 30N 15E	Chippewa-Cree 22-14	2	22468	Tiger Ridge	Eagle	09/04/91	1700		1031
Norfolk Energy Inc.	NWNW 19 30N 16E	Boyce 19-4	2	22469	Tiger Ridge	Eagle	09/09/91	2000		1100
Norfolk Energy Inc.	SESW 19 30N 16E	Boyce 19-14	3	22470	Tiger Ridge		09/13/91	2100		
Norfolk Energy Inc.	SWSW 26 30N 15E	Boyce 26-13	2	22472	Tiger Ridge	Eagle	09/01/91	2119		1600
043 Jefferson										
Balcron Oil Company	NWNE 11 4N 2W	Kimpton Ranch 1-11	6	21002	Wildcat		04/01/91	14846		
051 Liberty										
Branch, Jerry L.	NWSE 32 36N 4E	Beaudoin 10-32	2	21680	Haystack Butte, West	Bow Island	12/19/91	1940	0	687
Great Northern Drilling Co.	SWNE 10 35N 5E	State 32-10	2	21679	Snoose Coulee	Bow Island	11/16/91	987		125
065 Musselshell										
Beartooth Oil & Gas Company	NWSE 10 10N 27E	Gunderson TSU #5	3	21803	Little Wall South Unit Area		09/02/91	3880		
Delphi International Inc.	SENE 26 9N 27E	Delphi #1	1	21800	Delphia	Amsden	11/15/91	7321	240	480
069 Petroleum										
Basso-Westwood-Lindberg-Wolf	NWNW 3 15N 28E	Manuel #1	6	21145	Wildcat		12/07/88	2413		
Phillips Petroleum Company	SENE 20 13N 28E	Salt Sage A #1	6	21149	Wildcat		04/23/90	3814		
071 Phillips										
Freeport-Mcmoran Inc.	SENE 14 31N 33E	1413 Federal #2	2	22091	Ashfield	Greenhorn/Phillips	07/14/91	1375		96
Freeport-Mcmoran Inc.	NENE 23 31N 33E	2313 Well #2	2	22098	Ashfield	Greenhorn/Phillips	07/16/91	1315		33
Freeport-Mcmoran Inc.	SWSW 14 31N 32E	1412 Well #3	2	22103	Ashfield	Greenhorn/Phillips	07/14/91	1160		357
Freeport-Mcmoran Inc.	NWSW 15 31N 32E	1512 Well #3	2	22104	Ashfield	Greenhorn/Phillips	06/23/91	1235		603
Freeport-Mcmoran Inc.	NESE 15 32N 31E	1521 Well #3	2	22105	Ashfield	Greenhorn/Phillips	07/13/91	1240		393
Freeport-Mcmoran Inc.	NENE 21 31N 32E	2112 Well #3	2	22107	Ashfield	Greenhorn/Phillips	06/19/91	1260		441
Freeport-Mcmoran Inc.	SWNE 23 31N 32E	2312 Well #2	2	22108	Ashfield	Greenhorn/Phillips	07/14/91	1180		374
Freeport-Mcmoran Inc.	SESE 23 32N 31E	2321 Federal #3	2	22111	Ashfield	Greenhorn/Phillips	06/21/91	1330		276
Freeport-Mcmoran Inc.	SENE 26 32N 31E	2621 Federal #2	2	22113	Ashfield	Greenhorn/Phillips	06/21/91	1205		309
Freeport-Mcmoran Inc.	SESE 25 32N 31E	2521 Federal #2	2	22114	Ashfield	Greenhorn/Phillips	07/13/91	1165		657
Freeport-Mcmoran Inc.	NWNE 14 32N 31E	1421 Federal #3	2	22115	Ashfield	Greenhorn/Phillips	06/20/91	1270		382
Freeport-Mcmoran Inc.	NENW 8 31N 32E	0812 Well #3	2	22116	Ashfield	Greenhorn/Phillips	06/20/91	1220		322
Freeport-Mcmoran Inc.	NWNE 22 31N 32E	2212 Federal #3	2	22130	Ashfield	Greenhorn/Phillips	06/23/91	1215		565
Freeport-Mcmoran Inc.	NWNW 27 35N 31E	2751 Federal #5	2	22149	Bowdoin & Area	Greenhorn/Phillips	08/10/91	1405		47

1991 WELL COMPLETIONS (CONTINUED)

OPERATOR	LOCATION	WELL NAME	STATUS CODE	API NO.	FIELD	PRODUCING FORMATION	DATE COMPLETED	TOTAL DEPTH	INITIAL POTENTIAL	
									OIL B/D	GAS MCF/D
Freeport-Mcmoran Inc.	NWNE 27 35N 31E	2751 Federal #6	2	22151	Bowdoin & Area	Greenhorn/Phillips	08/10/91	1310		152
Freeport-Mcmoran Inc.	SWSW 14 36N 30E	Well 1460 #4	2	22023	Loring	Bowdoin/Greenhorn/Phillips	07/18/91	1620		1872
Freeport-Mcmoran Inc.	NENE 12 36N 32E	Well 1260 #3	2	22028	Loring	Bowdoin/Greenhorn/Phillips	08/08/91	1695		214
Freeport-Mcmoran Inc.	SESE 2 37N 30E	0270 Federal #3	2	22096	Loring	Bowdoin/Greenhorn/Phillips	08/19/91	2015		53
Freeport-Mcmoran Inc.	NENE 18 36N 31E	1861 Well #4	2	22106	Loring	Bowdoin/Greenhorn/Phillips	08/06/91	1735		1164
Freeport-Mcmoran Inc.	NWNE 17 36N 31E	1761 Federal #4	2	22119	Loring	Bowdoin/Greenhorn/Phillips	08/08/91	1740		372
Freeport-Mcmoran Inc.	SWSW 12 37N 30E	1270 Federal #3	2	22121	Loring	Bowdoin/Greenhorn/Phillips	08/21/91	1950		185
Freeport-Mcmoran Inc.	SWSW 6 36N 31E	0661 Federal #3	2	22122	Loring	Bowdoin/Greenhorn/Phillips	08/28/91	1785		581
Freeport-Mcmoran Inc.	NENE 3 37N 30E	0370 Federal #3	2	22123	Loring	Bowdoin/Greenhorn/Phillips	08/17/91	2193		576
Freeport-Mcmoran Inc.	NENE 1 36N 30E	0160 Federal #3	2	22124	Loring	Bowdoin/Greenhorn/Phillips	08/27/91	1795		356
Freeport-Mcmoran Inc.	SWNE 20 37N 30E	2070 Well #3	2	22126	Loring	Bowdoin/Greenhorn/Phillips	09/08/91	1880		184
Freeport-Mcmoran Inc.	SWSE 16 36N 30E	1660 State #3	2	22127	Loring	Bowdoin/Greenhorn/Phillips	08/07/91	1670		522
Freeport-Mcmoran Inc.	L1 1 3 36N 30E	0360 Well #2	2	22129	Loring	Bowdoin/Greenhorn/Phillips	08/24/91	1760		396
Freeport-Mcmoran Inc.	SWSW 5 36N 31E	0561 Federal #3	2	22136	Loring	Bowdoin/Greenhorn/Phillips	07/21/91	1863		432
Freeport-Mcmoran Inc.	SWSW 33 37N 30E	3370 Federal #4	2	22137	Loring	Bowdoin/Greenhorn/Phillips	08/06/91	1770		408
Freeport-Mcmoran Inc.	NENE 29 37N 30E	2970 Federal #4	2	22139	Loring	Bowdoin/Greenhorn/Phillips	09/14/91	1815		256
Freeport-Mcmoran Inc.	NENE 4 36N 31E	0461 Federal #4	2	22147	Loring	Bowdoin/Greenhorn/Phillips	09/08/91	1870		1243
Freeport-Mcmoran Inc.	NESE 33 36N 31E	3361 Federal #2	2	22157	Loring	Greenhorn/Phillips	09/08/91	1580		124
Freeport-Mcmoran Inc.	NWNE 33 36N 31E	3361 Federal #4	2	22158	Loring	Greenhorn/Phillips	09/08/91	1575		142
Freeport-Mcmoran Inc.	NWSW 33 36N 31E	3361 Well #3	2	22160	Loring	Greenhorn/Phillips	09/08/91	1570		101
Freeport-Mcmoran Inc.	NWSW 36 37N 30E	3670 State #8	2	22161	Loring	Bowdoin/Greenhorn/Phillips	07/18/91	1865		376
Freeport-Mcmoran Inc.	SWNE 36 37N 30E	3670 State #5	2	22162	Loring	Bowdoin/Greenhorn/Phillips	08/26/91	1955		404
Freeport-Mcmoran Inc.	SESE 36 37N 30E	3670 State #7	2	22163	Loring	Bowdoin/Greenhorn/Phillips	07/20/91	1940		326
Freeport-Mcmoran Inc.	NENW 36 37N 30E	3670 State #6	2	22164	Loring	Bowdoin/Greenhorn/Phillips	07/29/91	1965		586
Freeport-Mcmoran Inc.	SENE 8 36N 31E	0861 Well #6	2	22165	Loring	Bowdoin/Greenhorn/Phillips	07/29/91	1805		402
Freeport-Mcmoran Inc.	NWNW 8 36N 31E	0861 Well #5	2	22166	Loring	Bowdoin/Greenhorn/Phillips	07/18/91	1790		323
Freeport-Mcmoran Inc.	SESW 8 36N 31E	0861 Federal #8	2	22171	Loring	Bowdoin/Greenhorn/Phillips	08/04/91	1755		964
Freeport-Mcmoran Inc.	NWSE 8 36N 31E	0861 Federal #7	2	22174	Loring	Bowdoin/Greenhorn/Phillips	08/27/91	1845		402
Freeport-Mcmoran Inc.	NWSW 1 37N 30E	0170 Well #2	2	22102	Loring, East	Bowdoin/Greenhorn/Phillips	08/21/91	2000		74
Freeport-Mcmoran Inc.	NENE 31 37N 31E	3171 Federal #3	2	22140	Loring, East	Bowdoin/Greenhorn/Phillips	09/05/91	1950		628
Freeport-Mcmoran Inc.	NWSE 33 37N 31E	3371 Federal #2	2	22144	Loring, East	Bowdoin/Greenhorn/Phillips	09/04/91	1775		655
Freeport-Mcmoran Inc.	NENW 19 37N 31E	1971 Federal #2	2	22145	Loring, East	Bowdoin/Greenhorn/Phillips	08/23/91	1940		217
Freeport-Mcmoran Inc.	SESE 20 37N 31E	2071 Federal #2	2	22148	Loring, East	Bowdoin/Greenhorn/Phillips	09/05/91	1825		285
Freeport-Mcmoran Inc.	SWNW 16 35N 32E	1652 State #3	2	22152	Loring, East	Greenhorn/Phillips	08/15/91	1730		57
Freeport-Mcmoran Inc.	SESE 35 37N 31E	3571 Well #3	2	22155	Loring, East	Bowdoin/Greenhorn/Phillips	09/05/91	1710		207
Freeport-Mcmoran Inc.	NWNE 17 35N 32E	1752 Federal #3	2	22159	Loring, East	Greenhorn/Phillips	08/15/91	1660		19
Freeport-Mcmoran Inc.	SWSE 25 37N 29E	2579 Federal #2	2	22176	Loring, West	Bowdoin/Greenhorn/Phillips	09/15/91	1700		139
Freeport-Mcmoran Inc.	NENE 3 32N 34E	0324 Federal #3	2	22131	Swanson Creek	Greenhorn/Phillips	09/10/91	1140		382
Freeport-Mcmoran Inc.	NWNW 2 32N 34E	0224 Federal #3	2	22132	Swanson Creek	Greenhorn/Phillips	09/10/91	1180		308
Freeport-Mcmoran Inc.	NENE 4 32N 34E	0424 Federal #3	2	22150	Swanson Creek	Greenhorn/Phillips	09/10/91	1320	0	477
Freeport-Mcmoran Inc.	NENE 2 34N 31E	Well 0241-4	2	22007	Whitewater	Greenhorn/Phillips	09/08/91	1265		272
Freeport-Mcmoran Inc.	SWSE 19 34N 32E	Well 1942 #2	2	22021	Whitewater	Greenhorn/Phillips	08/08/91	1375		345
Freeport-Mcmoran Inc.	NWSE 21 34N 32E	Well 2142 #2	2	22022	Whitewater	Greenhorn/Phillips	08/08/91	1535		143
Freeport-Mcmoran Inc.	NENE 12 33N 31E	1231 Federal #2	2	22092	Whitewater	Greenhorn/Phillips	08/06/91	1365		410
Freeport-Mcmoran Inc.	SESW 29 34N 32E	2942 Well #3	2	22099	Whitewater	Greenhorn/Phillips	07/12/91	1285		439
Freeport-Mcmoran Inc.	SENE 25 33N 32E	2532 Well #2	2	22109	Whitewater	Greenhorn/Phillips	09/09/91	1330		638
Freeport-Mcmoran Inc.	SESW 15 33N 32E	1532 Federal #2	2	22120	Whitewater	Greenhorn/Phillips	08/06/91	1145		626
Freeport-Mcmoran Inc.	NWSE 27 35N 31E	2751 Federal #7	2	22133	Whitewater	Greenhorn/Phillips	09/09/91	1340		178
Freeport-Mcmoran Inc.	SESW 27 35N 31E	2751 Federal #8	2	22134	Whitewater	Greenhorn/Phillips	08/12/91	1360		375
Freeport-Mcmoran Inc.	SWNE 23 34N 31E	2341 Federal #6	2	22135	Whitewater	Greenhorn/Phillips	08/09/91	1390		210
Freeport-Mcmoran Inc.	NESE 23 34N 31E	2341 Federal #7	2	22141	Whitewater	Greenhorn/Phillips	09/09/91	1405		363
Freeport-Mcmoran Inc.	SWSW 23 34N 31E	2341 Federal #8	2	22146	Whitewater	Greenhorn/Phillips	08/09/91	1405		204
Freeport-Mcmoran Inc.	NWNE 16 34N 32E	1642 State #3	2	22153	Whitewater	Greenhorn/Phillips	07/21/91	1646		135
Freeport-Mcmoran Inc.	SESW 24 35N 31E	2451 Federal #4	2	22169	Whitewater	Greenhorn/Phillips	06/19/91	1445		24
Freeport-Mcmoran Inc.	SWNW 23 34N 31E	2341 Federal #5	2	22172	Whitewater	Greenhorn/Phillips	08/10/91	1395		258
Freeport-Mcmoran Inc.	NESW 31 33N 34E	3134 Well #3	2	22100	Whitewater, East	Greenhorn/Phillips	09/10/91	1385		1295
Freeport-Mcmoran Inc.	NESW 30 33N 34E	3034 Federal #3	2	22110	Whitewater, East	Greenhorn/Phillips	09/10/91	1445		716
Freeport-Mcmoran Inc.	SWSW 25 33N 33E	2533 Federal #3	2	22112	Whitewater, East	Greenhorn/Phillips	09/10/91	1380		862
Meridian Oil, Inc.	SWSE 9 35N 32E	0952 Federal #3	2	22156	Loring, East	Greenhorn/Phillips	08/24/91	1980		85
Meridian Oil, Inc.	NWNW 29 34N 33E	2943 Federal #1	2	22170	Whitewater	Greenhorn/Phillips	09/09/91	1880		6
073 Pondera										
Balcon Oil Company	NWSE 12 28N 3W	McFarland 33-12	6	21748	Wildcat		09/24/91	1403		
Chamberlain, Virgil R.	NWSW 21 28N 5W	Earl Sprague 12-21**	1	21745	Pondera Coulee	Madison	12/14/90	2980	43	
Morton Brothers, Dba	SWSW 32 30N 6W	Ryan 1	6	21754	Wildcat		10/11/91	3373		
Natural Gas Processing Co.	SESE 2 29N 5W	Goff 44-2	3	21753	Valier		10/07/91	2210		
075 Powder River										
Terry, Orlyn	NENW 35 9S 54E	Francis Cadwell #1	6	22216	Wildcat		12/21/90	4170	0	0
079 Prairie										
Shell Western E & P Inc.	NWSE 30 13N 56E	Unit 33X-30C	1	21033	Pine	Red River	03/25/91	9235	11	2
Shell Western E & P Inc.	NENW 30 13N 56E	Federal Unit 21-30C	1	21034	Pine	Red River	06/20/91	9185	377	61
083 Richland										
Conoco Inc	NESW 2 23N 59E	Duperow Unit #9	3	21797	Ridgetawn		11/18/91	10860		
Luff Exploration Company	NWNW 20 26N 58E	Federal D-20	1	21795	Sioux Pass, North	Red River	02/16/91	12485	208	111

1991 WELL COMPLETIONS (CONTINUED)

OPERATOR	LOCATION	WELL NAME	STATUS CODE	API NO.	FIELD	PRODUCING FORMATION	DATE COMPLETED	TOTAL DEPTH	INITIAL POTENTIAL	
									OIL B/D	GAS MCF/D
Meridian Oil, Inc.	NWNW 9 25N 59E	Johnson 11-9H	1	21799	Cattails, South	Ratcliffe	11/30/91	11672	150	
Pennzoil Exploration And Prod.	NENE 34 26N 59E	Cayko 34-41	1	21791	Nohly	Mission Canyon	03/20/91	11204	145	62
Pennzoil Exploration And Prod.	SWNE 26 26N 59E	Filer 26-32	1	21792	Nohly	Mission Canyon	03/24/91	9460	66	34
Pennzoil Exploration And Prod.	NWSW 26 24N 59E	Candee 26-13H	** 4	21793	Ridgelawn	Madison	08/19/91	12115	280	180
Slawson Exploration Company	NE 5 25N 59E	Kittleston 3-5	1	21777	Cattails	Ratcliffe	05/24/89	9100	156	
085 Roosevelt										
American Hunter Exploration	NWNE 10 30N 57E	AHEL Ducklake 1	6	21574	Wildcat		04/05/91	11202		
Balcon Oil Company	NESE 32 30N 50E	Chaske 43-32	1	21570	Poplar, Northwest		02/22/91	6420	65	
Slawson Exploration Company	NENE 23 27N 58E	Harmon 1-23	3	21575	Wildcat		11/03/91	8997		
Slawson Exploration Company	SENE 3 26N 59E	Elder 1-3	6	21576	Wildcat		12/11/91	9200		
087 Rosebud										
Caza Exploration Company	NENE 2 11N 32E	Coffee #1	6	21624	Wildcat		03/21/91	5530		
Huckabay, E Doyle Ltd	LT 4 4 11N 32E	State 3-4	7	21626	Kincheloe Ranch		10/05/91	5504		
Huckabay, E Doyle Ltd	SWSE 33 12N 32E	Grebe 4-33	3	21627	Kincheloe Ranch		09/26/91	5478		
Huckabay, E Doyle Ltd	SWNW 32 12N 32E	Kincheloe 4-32	3	21628	Kincheloe Ranch, West		10/13/91	5434		
091 Sheridan										
Continental Resources Inc	NWSW 6 37N 57E	Conrad Granvold 1-6	3	21660	Flat Lake		09/17/91	10420		
Maxus Exploration Company	SWNW 11 36N 57E	Muriel Fee 12-11	6	21663	Wildcat		01/07/91	8645		
Nielco, Inc.	SWSE 19 35N 58E	Carl Petersen #1	1	21664	Goose Lake	Ratcliffe	04/02/91	7150	40	8
Western Production Company	SESE 13 35N 57E	Overgaard 43-13	6	21667	Wildcat		12/05/91	7100		
095 Stillwater										
Texaco Exploration And Prod.	NESW 30 3S 21E	DK Skibstad #1	6	21242	Wildcat		12/19/91	5230		
097 Sweet Grass										
Balcon Oil Company	SWSW 13 3N 18E	Stimpson 14-13	5	21044	Wildcat	Lakota	09/21/91	4500		450
Balcon Oil Company	SWSW 13 3N 18E	Stimpson Eagle 14-13	5	21045	Wildcat	Eagle	12/11/91	1550		80
101 Toole										
Balcon Oil Company	SWSW 12 30N 2E	Peterson 41-12	2	23474	Tiber, East	Bow Island	09/22/91	834		311
Balcon Oil Company	NWNW 13 33N 2E	Stratton 11-13	6	23473	Wildcat		09/19/91	1830		
Branch, Jerry L.	NWNW 30 33N 3W	Torgerson 4-30	2	23395	Ethridge	Swift	02/02/91	1975		
Branch, Jerry L.	SESE 24 33N 4W	Schimmel 16-24	2	23453	Ethridge	Swift	04/26/91	1957		34
Brown, J. Burns Operating Co.	SWSW 19 33N 3W	Negu 19-33-3	** 2	23446	Ethridge	Swift	09/10/91	1945		1200
Brown, J. Burns Operating Co.	SESE 23 33N 2W	MPC 23-33-2	3	23457	Prairie Dell		04/04/91	1470		
Brown, J. Burns Operating Co.	NWNW 21 32N 1W	State 21-32-1	2	23437	Shelby, East	Bow Island	04/02/91	1184		259
Brown, J. Burns Operating Co.	SESE 22 32N 1W	Balcon 22-32-1	2	23454	Shelby, East	Sunburst	03/23/91	1411	0	526
Brown, J. Burns Operating Co.	SESE 16 32N 1W	State 16-32-1	5	23455	Wildcat	Sunburst	03/29/91	1434		101
Brown, J. Burns Operating Co.	SWSW 15 32N 1W	Monson 15-32-1	5	23456	Wildcat	Sunburst	04/01/91	1523		22
Brown, J. Burns Operating Co.	NWSW 28 32N 1W	Miller 28-32-1	5	23458	Wildcat	Sunburst	04/09/91	1479		227
Brown, J. Burns Operating Co.	NENW 21 32N 1W	State 21-32-1-B	5	23461	Wildcat	Sunburst	04/18/91	1432		61
Brown, J. Burns Operating Co.	NWNW 31 33N 3W	Roddie 31-33-3	5	23488	Wildcat	Rierdon	11/19/91	2066	0	119
C R Energy Corp.	SESE 23 33N 3W	Federal 7-23	2	23492	Kevin Southwest	Dakota	12/28/91	1470		53
Crescent Oil & Gas Corp.	W2NW 2 33N 1W	Adaskovitch 1-2	2	23459	Old Shelby	Bow Island/Sunburst	04/10/91	1324		202
Crescent Oil & Gas Corp.	SWNW 28 33N 1W	Hayes 1-28	2	23463	Old Shelby	Swift	04/20/91	1421		144
Croft Petroleum Company	NWSE 8 35N 2E	State 10-8	6	23452	Wildcat		08/15/91	2060		
Held By Production, Inc.	SENE 17 35N 2W	Wolfer A #28N	1	23262	Kevin Sunburst	Madison	05/09/91	1660	5	
Keesun Partners	NWNE 25 36N 4W	State 2-25	3	23434	Amanda		12/15/91	1950		
Keesun Partners	NWNW 35 36N 4W	Wiser 4-35	2	23432	Kevin Sunburst	Bow Island/Sunburst	01/27/91	2528		150
Keesun Partners	NENE 24 34N 3W	Potter 1-24	1	23460	Kevin Sunburst	Madison	04/17/91	1582	18	
Keesun Partners	NWSW 11 35N 1W	Alme-Johnson 12-11	2	23464	Kevin Sunburst	Bow Island	05/07/91	870		50
Keesun Partners	NENE 24 34N 3W	Potter 1-24E	1	23468	Kevin Sunburst	Madison	06/19/91	1580	10	
Keesun Partners	NENE 23 35N 1W	Alme-Milledge 1-23	2	23487	Kevin Sunburst	Bow Island	11/13/91	903		50
Keesun Partners	SWNE 3 35N 4W	Spencer 7-3	2	23493	Kevin Sunburst	Bow Island	12/09/91	1850	0	900
Keesun Partners	SWNW 22 36N 4W	Fitzpatrick 5-22	5	23449	Wildcat	Bow Island	01/20/91	2007		61
Keesun Partners	SWNW 13 35N 1W	Alme-Johnson 5-13	5	23489	Wildcat	Bow Island	11/06/91	1770		60
Keesun Partners	NENW 24 35N 1W	Alme-Milledge 3-24	6	23490	Wildcat		11/09/91	980		
Keesun Partners	NENW 24 35N 1W	Alme-Milledge 3A-24	5	23494	Wildcat	Bow Island	11/14/91	880		90
Montana Power Company	SESE 25 34N 3E	Henry 16-25	6	23435	Wildcat		11/09/90	2515		
Natural Gas Processing Co.	NENW 23 35N 1W	Federal 3-23	2	23469	Kevin Sunburst	Bow Island	07/01/91	900		64
Nichols, Paul F.	SENE 21 35N 2W	Halter 2B-91	1	23451	Kevin Sunburst	Madison	02/26/91	1550	3	
Ranck Oil Company, Inc.	ECNW 16 31N 2W	State 2-16	3	23418	Marias River		10/08/91	1166		
Ranck Oil Company, Inc.	NENE 17 31N 2W	Parker 2	2	23419	Marias River	Bow Island	11/07/90	1210		40
Sands Oil Company	SWSW 6 31N 2W	Zell 14-6	5	23465	Wildcat	Bow Island	05/22/91	1351		20
Sands Oil Company	SESE 10 33N 4W	Torgerson 16-10	6	23484	Wildcat		10/01/91	1925		
Sands Oil Company	NWSE 33 34N 4W	MPC/UNOCAL 10-33	5	23485	Wildcat	Bow Island	10/04/91	2000		134
Somont Oil Company, Inc.	SWSW 24 36N 4W	State 24-13	2	23471	Amanda	Dakota	09/23/91	2055		599
Somont Oil Company, Inc.	NWNW 25 36N 4W	State 25-4	2	23472	Amanda	Bow Island/Dakota	09/13/91	2045		1600
Somont Oil Company, Inc.	SWSW 29 35N 4W	State 29-13	2	23477	Cut Bank	Sunburst	09/17/91	2115		80
Somont Oil Company, Inc.	SWSW 21 35N 4W	Somont 21-13	2	23478	Cut Bank	Bow Island	09/14/91	1480		81
Somont Oil Company, Inc.	NWNE 10 34N 4W	Halvorson 1A	2	23317	Kevin Sunburst	Blackleaf	05/23/89	2054		80
Spectrum Energy, Inc.	NENE 26 33N 1W	State 5-26	2	23421	Dunkirk, North	Bow Island	03/19/91	762		129
Spectrum Energy, Inc.	CSW 12 33N 1W	Batts 2-12	2	23422	Dunkirk, North	Bow Island	03/21/91	847		133
Spectrum Energy, Inc.	SWNE 3 32N 1W	Rogers 1X-3	2	23462	Dunkirk, North	Bow Island	03/22/91	855		369

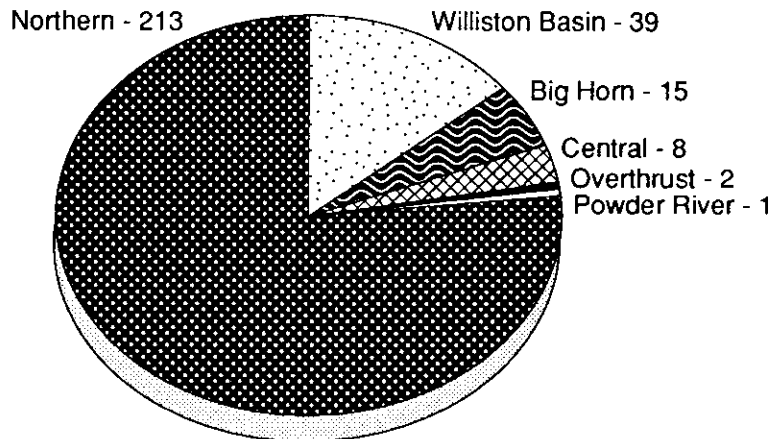
1991 WELL COMPLETIONS (CONTINUED)

OPERATOR	LOCATION	WELL NAME	STATUS		FIELD	PRODUCING FORMATION	DATE COMPLETED	TOTAL DEPTH	INITIAL POTENTIAL	
			CODE	API NO.					OIL B/D	GAS MCF/D
Spectrum Energy, Inc.	SESW 3 32N 1W	Benjamin-Wolfe 4-3	3	23481	Dunkirk, North		10/09/91	1000		
Spectrum Energy, Inc.	SENW 3 32N 1W	Benjamin-Wolfe 5-3	3	23482	Dunkirk, North		10/09/91	988		
Spectrum Energy, Inc.	NCNE 33 33N 1W	Williams 1-33	2	23423	Old Shelby	Sunburst	03/21/91	1294		511
Spectrum Energy, Inc.	SWNE 27 33N 1W	Benjamin-FLB 2-27	2	23479	Old Shelby	Swift/Sunburst	09/20/91	1294		640
Spectrum Energy, Inc.	SWNW 23 33N 1W	Barkson 2-23	2	23480	Old Shelby	Sunburst	09/20/91	1234		274
Spectrum Energy, Inc.	SENE 22 33N 1W	Benjamin-FLB 2-22	2	23491	Old Shelby	Swift	11/20/91	1330		108
Spectrum Energy, Inc.	NESE 27 33N 1W	Benjamin-FLB 3-27	2	23497	Old Shelby	Sunburst	12/22/91	1200		542
Walls, A. G. Aka Walls, Adrian	NWSE 11 34N 2W	Rossmiller 3	2	23440	Kevin Sunburst		11/16/90	1563		
Walls, A. G. Aka Walls, Adrian	NWSW 2 34N 2W	Normont 1	1	23443	Kevin Sunburst	Madison	11/18/90	1544		
Walls, A. G. Aka Walls, Adrian	NESW 3 34N 2W	Stephanie 1	3	23444	Kevin Sunburst		11/21/90	1566		
Walls, A. G. Aka Walls, Adrian	SENE 3 34N 2W	Comanche 1	3	23445	Kevin Sunburst		08/02/91	1602		
Walls, A. G. Aka Walls, Adrian	NWNW 19 34N 2W	Fraizer 5	1	23470	Kevin Sunburst	Madison	07/25/91	1571	30	
105 Valley										
Basic Earth Science Systems	NENW 21 27N 36E	Hurricane Fed 1-21	6	21414	Wildcat		11/11/90	6075		
Continental Resources Inc	SESE 9 30N 45E	O'Toole 1-9	3	21415	Midfork		09/26/91	7394		
Continental Resources Inc	NESW 16 30N 45E	Gary 1-16	1	21416	Midfork	Charles C	08/14/91	7350	40	12
109 Wibaux										
Shell Western E & P Inc.	NWNE 9 11N 57E	Unit 31-09A	1	21073	Pine	Interlake/Stoney Mountain	03/04/91	9236	73	7
Shell Western E & P Inc.	SENE 23 11N 57E	Unit 42-23A	1	21074	Pine	Red River	01/10/91	9239	25	5
Shell Western E & P Inc.	NWSW 24 11N 57E	Federal Unit 13-24A	1	21075	Pine	Red River	04/19/91	9316	22	

Status codes:

- 1 - development oil well * new pay zones
- 2 - development gas well ** extensions
- 3 - development dry hole *** new discovery
- 4 - exploratory oil well
- 5 - exploratory gas well
- 6 - exploratory dry hole
- 7 - service well
- 8 - other (usually temp. aband.)

Wells Completed in 1991 (278 Wells - by Region)



1991 SUMMARY OF SECONDARY RECOVERY PROJECTS

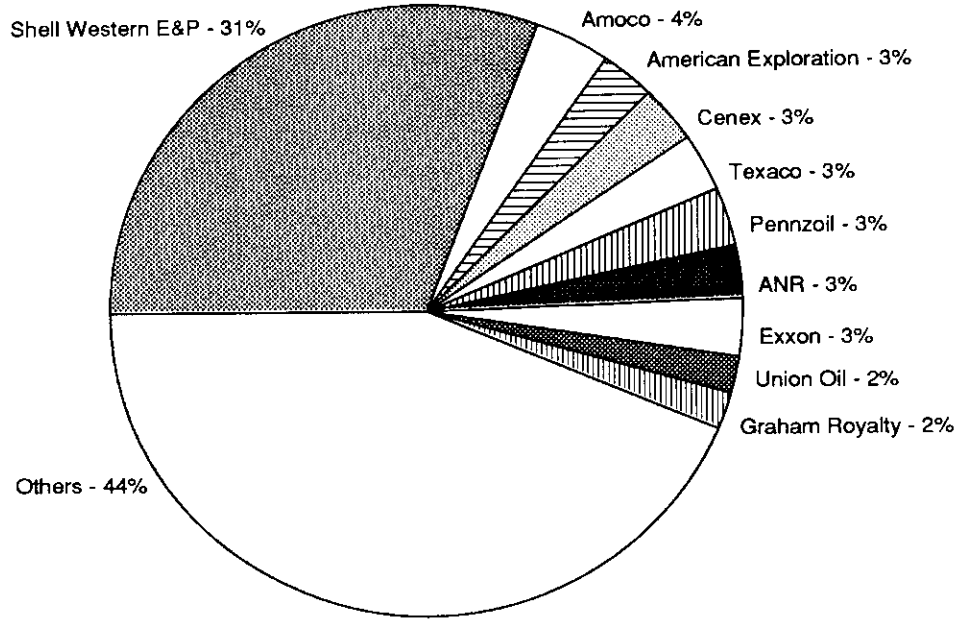
Field	Formation	Operator	Type of Project	Injection Pattern	Date Injection Completed	1991 Cumulative Injections MBBLS or MMCF	Avg. Daily Injection Rate BBLs or MMCF	No. of Injection Wells	Source of Injection Media and Remarks
Ash Creek Crow Tribe	Shannon	Mobil	Waterflood	Peripheral	10/64	256	-	-	Idle
Ash Creek SU (Mont)	Shannon	Bearcat Petroleum	Waterflood	Peripheral	10/64	1331	-	-	Idle
Bears Den	Liberty	J.R. Bacon, Inc.	Waterflood	Random	11/90	302	631	3	WSW/Produced
Beit Creek Tertiary	Muddy	Exxon Corporation	Waterflood	5 Spot	12/80	72385	8440	14	Produced
Bell Creek A	Muddy	Exxon Corporation	Waterflood	Peripheral	4/70	219055*	12315	25	Produced
Bell Creek B	Muddy	Exxon Corporation	Waterflood	Peripheral	10/70	61900	4063	10	Produced
Bell Creek C	Muddy	Exxon Corporation	Waterflood	Peripheral	9/71	40186	219	1	Produced
Beit Creek D	Muddy	Exxon Corporation	Waterflood	Peripheral	1/72	38280*	1427	3	Produced
Bell Creek E	Muddy	Exxon Corporation	Waterflood	Peripheral	1/72	34183	153	1	Produced
Bell Creek Ranch Cr.	Muddy	Exxon Corporation	Waterflood	Peripheral	3/71	45587	547	1	Produced
Bell Creek, South	Muddy	Exxon Corporation	Waterflood	Peripheral	2/91	122	364	4	Produced
Big Wall BWUTSU	Upper Tyler	Texaco	Waterflood	Random	8/66	39603	2517	1	Produced
Big Wall BWLTSU	Lower Tyler	Texaco	Waterflood	Random	10/84	21452	6665	3	Produced
Blackfoot	Cut Bank	Croft Petroleum	Waterflood	Random	7/76	3394*	628	4	Madison
Border, New	Cut Bank	P&M Petroleum	Waterflood	Random	1/82	-	-	-	Idle
Border, Old	Cut Bank	Gypsy Highview	Waterflood	Random	6/73	1623*	197	1	Madison
Cabin Creek	Siluro-Ord.	Shell	Waterflood	Semi-Perip	6/59	339723*	21663	32	Produced
Cat Creek East Dome	Ellis Sand	Robert Hoss	Waterflood	Semi-Perip	7/70	1442	145	3	Third Cat Creek
Cat Creek Mosby Dome	Swift	Cenex	Waterflood	Random	7/67	6619*	214	2	Third Cat Creek
Cat Creek Mosby	Amsden	Cenex	Waterflood	Random	6/71	313	-	-	Idle
Cat Creek Unit 1	1st Cat	Cenex	Waterflood	Semi-Perip	10/62	8052	542	1	Third Cat Creek
Cat Creek Unit 1	2nd Cat	Cenex	Waterflood	Semi-Perip	10/62	11810	1120	2	Third Cat Creek
Cat Creek Unit 2	1st Cat	Cenex	Waterflood	Semi-Perip	12/59	9869	112	2	Third Cat Creek
Cat Creek Unit 2	2nd Cat	Cenex	Waterflood	Semi-Perip	12/59	13402	841	3	Third Cat Creek
Cut Bank Dahlquist	Cut Bank	Bluejay Resources	Waterflood	Random	11/79	443	268	1	Madison
Cut Bank Lander A	Lander Sand	Grey Wolf Production	Waterflood	Random	4/65	2115	-	-	Idle
Cut Bank Marina	Cut Bank	P&M Petroleum	Waterflood	5 Spot	6/72	2075	-	-	Idle
Cut Bank No. Central	Cut Bank	Gypsy Highview	Waterflood	5 Spot	5/78	5757	35	6	Madison
Cut Bank No. East	Cut Bank	J and G Operating	Waterflood	5 Spot	6/63	13409	-	-	Idle
Cut Bank No. West	Cut Bank	J and G Operating	Waterflood	5 Spot	1/62	19794*	-	-	Idle
Cut Bank So. Central	Cut Bank	Union Oil	Waterflood	5 Spot	5/63	66646	8000	53	Madison
Cut Bank So. West	Cut Bank	J.R. Bacon Drilling	Waterflood	5 Spot	9/62	137650	9073	37	Madison/Recycle
Cut Bank Tesoro	Cut Bank	City Oil Co.	Waterflood	5 Spot	9/71	6759	-	-	Madison/Recycle
Cut Bank Tweedy	Cut Bank	Gypsy Highview	Waterflood	5 Spot	6/72	969*	18	1	Cut Bank
Cut Bank 2 Medicine	Madison	Montana Mill Oper.	Waterflood	Random	12/67	58499*	-	-	Idle
Darling	Cut Bank	Buttes Resources	Waterflood	Random	2/67	-	-	-	Idle
Darling North Unit	Moulton	Buttes Resources	Waterflood	Random	2/68	2472	-	-	Idle
Darling South Unit	Moulton	Buttes Resources	Waterflood	Random	2/67	7548	-	-	Idle
Dean Dome	Greybull	Eastern American	Steam Inj	Cyclic	8/81	29	-	-	Idle
Dwyer	Charles	Conoco	Waterflood	Peripheral	10/68	2098*	1708	3	Dwyer/Charles
Elk Basin	Frontier	Amoco	Waterflood	Crestal	12/72	6039	-	-	Idle
Elk Basin Unit	Tensleep	Amoco	Waterflood	Semi-Perip	4/67	2431	-	-	Idle
Elk Basin	Madison	Amoco	Waterflood	Semi-Perip	8/61	118155*	2613	13	Produced
Elk Basin NW	Madison	Amoco	Waterflood	Semi-Perip	12/88	1235	524	2	Produced
Elk Basin NW	Tensleep	Amoco	Waterflood	Semi-Perip	1/67	5918	-	-	Idle
Fairview	Red River	Mepna, Inc.	Pressure M	Random	5/70	4186	-	-	Idle
Fiat Coulee	Swift	Breck Operating Corp	Waterflood	Peripheral	2/72	15363	2447	12	Eagle
Flat Lake Unit	Ratcliffe	Graham Royalty, Ltd.	Pressure M	Random	6/71	42768	4778	15	Produced
Flat Lake West	Ratcliffe	American Exploration	Pressure M	Random	11/74	8160	603	2	Produced
Frannie	Tensleep	Conoco	Waterflood	Random	11/70	483356*	74853	43	Produced
Frannie	Tensleep	Conoco	LPG Inj	Random	11/70	23131*	-	-	Idle
Fred & George Creek	Sunburst	William M. Fulton	Waterflood	Random	7/76	56227	5277	2	Madison/Eagle
Gas City	Red River	Shell	Waterflood	Semi-Perip	10/69	16871	-	-	Idle
Goose Lake	Ratcliffe	Apache Corporation	Waterflood	Semi-Perip	1/73	27136	3325	2	Produced
Graben Coulee	Cut Bank	Monte Grande Explor.	Waterflood	Random	7/83	529*	325	2	Madison
Gumbo Ridge	Tyler B	Cline Production Co.	Waterflood	Semi-Perip	6/80	2978	535	1	Produced
Highview	Madison	Mountain States Res.	Co2 Inj.	Random	7/82	600	-	-	Idle
Ivanhoe	Tyler	Tomahawk Oil Co.	Pressure M	Random	5/64	244	51	2	Produced
Jim Coulee	Tyler	Beartooth Oil & Gas	Waterflood	Semi-Perip	7/72	24239*	3290	4	Produced Cat Ck.
Keg Coulee Unit	Tyler	Buttes Resources	Waterflood	Semi-Perip	8/66	6442	782	1	Produced
Keg Coulee Tyler SU	Tyler	Cline Production Co.	Waterflood	Semi-Perip	12/69	3609	-	-	Idle
Keg Coulee NW Unit	Tyler	N. Central Oil Co.	Waterflood	Semi-Perip	1/70	6179*	167	1	Madison
Kelley	Tyler B	E. C. Yegen	Waterflood	Random	7/69	3736	194	1	Produced
Kevin Sunburst SU	Sunburst	Texaco	Waterflood	Random	8/64	13108	160	4	Produced 4 mo.

1991 SUMMARY OF SECONDARY RECOVERY PROJECTS (CONTINUED)

Field	Formation	Operator	Type of Project	Injection Pattern	Date Injection Completed	1991	Avg. Daily Injection Rate BBLs or MMCF	No. of Injection Wells	Source of Injection Media and Remarks
						Cumulative Injections MBBLS or MMCF			
Kevin Homestake SU	Sunburst	Petro Production Inc	Waterflood	Random	8/64	7802*	1045	9	Madison
Kincheloe Ranch	Tyler A	E. Doyle Huckabay	Waterflood	Random	11/89	635	840	1	Third Cat Creek
Laird Creek	Swift	Natural Gas Proc.	Waterflood	Semi-Perip	2/77	807	-	-	Idle
Little Beaver	Red River	Shell Oil	Waterflood	Semi-Perip	8/66	53703*	3446	13	Produced
Little Beaver East	Red River	Shell Oil	Waterflood	Semi-Perip	4/65	22897*	2238	8	Produced
Little Wall Creek	Tyler	Texaco Producing	Waterflood	Random	/84	669	449	1	Produced
Little Wall South	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/83	12901	4243	4	Produced
Little Wall South	Gunderson	Beartooth Oil & Gas	Waterflood	Random	10/87	753	526	1	Produced
Lookout Butte Coral	Red River	Shell Oil	Waterflood	Semi-Perip	4/67	58386*	5345	11	Minnelusa
Lookout Butte East	Red River B	Meridian Oil Inc.	Waterflood	Pilot	7/88	126	134	1	Produced
Mason Lake	1st Cat Creek	Nielco, Inc.	Waterflood	Unknown	11/88	472	-	-	Idle
Melstone North	Tyler	True Oil Co.	Waterflood	Unknown	1/83	5902	1536	3	3rd Cat Creek
Monarch	Siluro/Ord	Shell Oil	Waterflood	Unknown	12/73	6986	427	2	Unknown
Pennel	Siluro/Ord	Shell Oil	Waterflood	Random	8/69	218743*	43685	88	Dakota/Produced
Pine A	Siluro/Ord	Shell Oil	Waterflood	Semi-Perip	3/59	178620	21874	26	Fox Hills/Prod.
Pine C & D	Red River	Shell Oil	Waterflood	Semi-Perip	3/68	23689*	1318	3	Lodgepole
Prichard Creek	Sunburst	Fulton Producing	Waterflood	Random	4/73	1184	-	-	Idle
Ragged Point Tyler A	Tyler	Buttes Resources	Waterflood	Semi-Perip	12/66	11601	641	1	Cat Creek
Ragged Point SW	Tyler	Graham Royalty Ltd.	Waterflood	Random	10/82	7407	3064	4	Produced
Raymond	Nisku	Santa Fe Energy	CO2 Inj.	Unknown	8/83	1735	625	1	Duperow
Regan Dome	Madison	Union Oil	Waterflood	Random	7/73	7325	1540	5	Produced
Red Creek	Cut Bank	Exxon	Waterflood	5 Spot	6/65	1793*	-	-	Idle
Ridgelawn	Duperow	Conoco Inc.	Secondary	Unknown	7/90	1489	2280	3	Dakota
Roscoe Dome	Lakota	E. Am. Energy	Steam Inj.	Unknown	5/82	5	-	-	Idle
Sheepherder	Judith River	Summit Resources	Secondary	Random	11/84	95	-	-	Idle
Stensvad	Tyler	Tomahawk Oil Co.	Waterflood	Semi-Perip	12/63	28617*	493	4	Produced
Sumatra Central	Tyler	Texaco	Waterflood	Semi-Perip	9/69	176717	10043	17	Madison/Prod.
Sumatra Grebe	Tyler	Tomahawk Oil Co.	Waterflood	Random	6/75	785	151	1	Produced
Sumatra NE	Tyler	Texaco	Waterflood	Semi-Perip	9/69	11963*	1682	5	Produced
Sumatra Sawyer	Tyler	Buttes Resources	Waterflood	Semi-Perip	6/80	1220	162	1	Madison
Sumatra SE	Tyler	Buttes Resources	Waterflood	Semi-Perip	12/69	29222	4003	4	Produced
Sumatra West	Tyler	Conoco	Waterflood	Semi-Perip	10/68	61375	5447	5	Produced
Sumatra W. Kincheloe	Tyler	Apache Corp.	Waterflood	Semi-Perip	5/82	19580	7858	6	Madison
Tippy Buttes	Tyler	True Oil	Waterflood	Random	5/82	262	-	-	Idle
Winnett Junction	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/77	8340	825	1	Produced

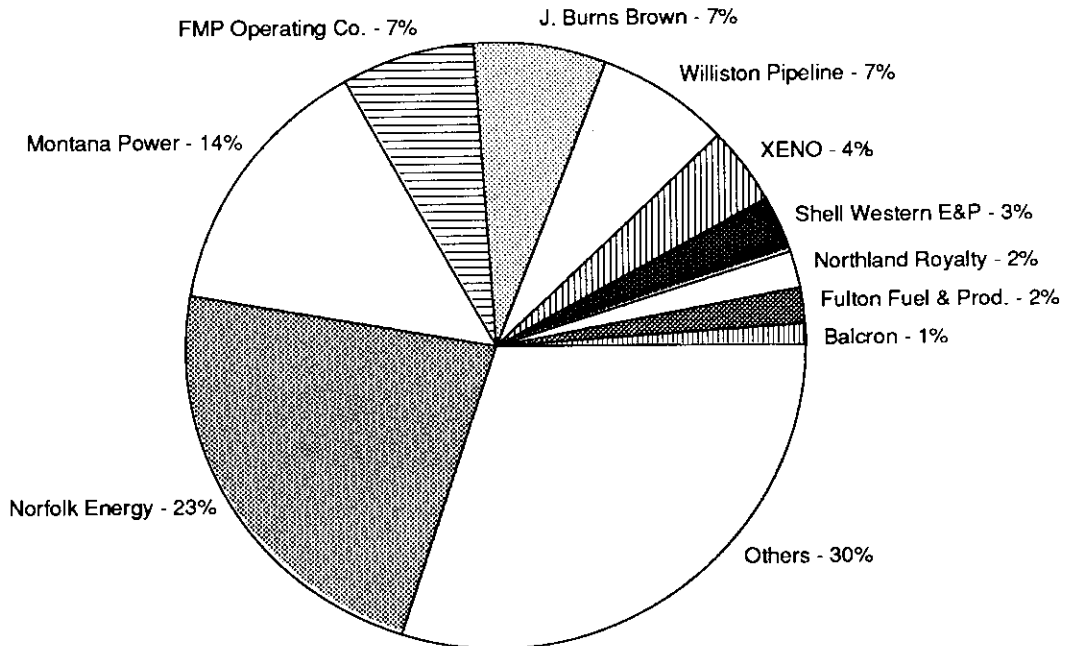
* Cumulative figures adjusted by operator

Top Producing Oil Companies - 1991
19,573,348 Barrels



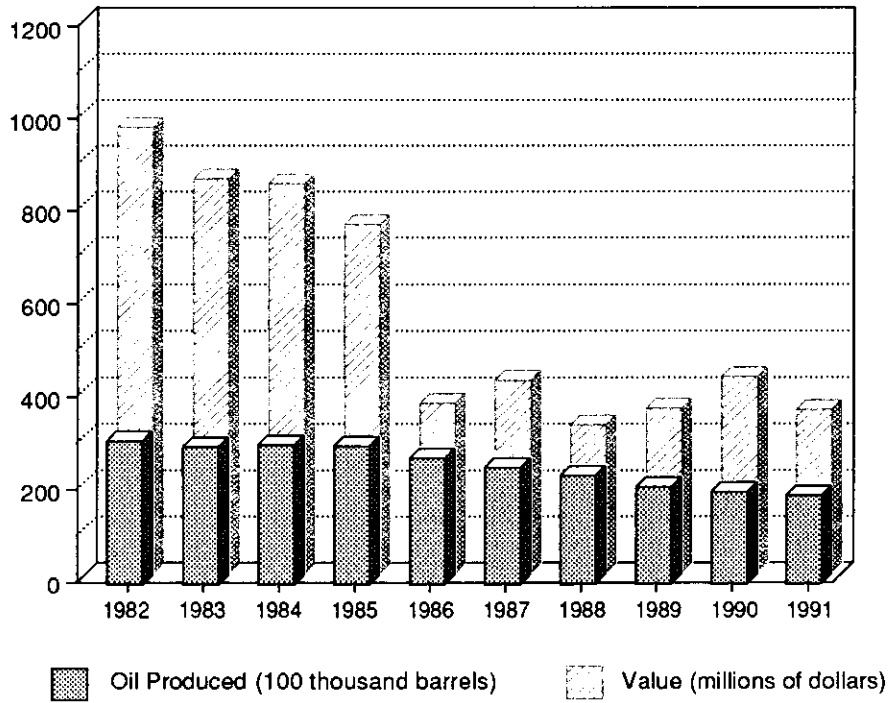
257 Active Oil Producers

Top Producing Gas Companies - 1991
53,002,530 Mcf

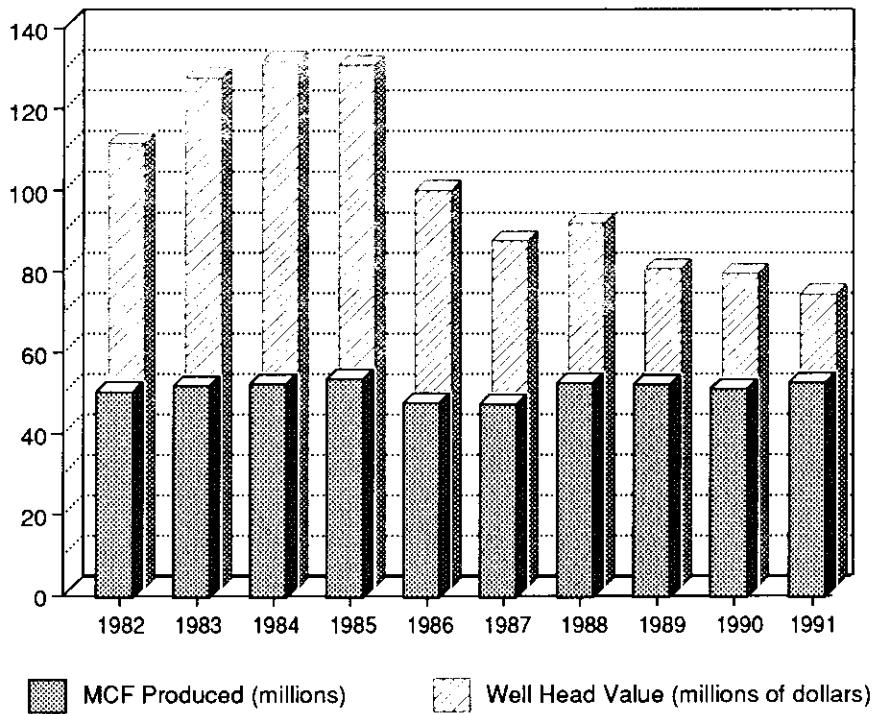


189 Active Gas Producers

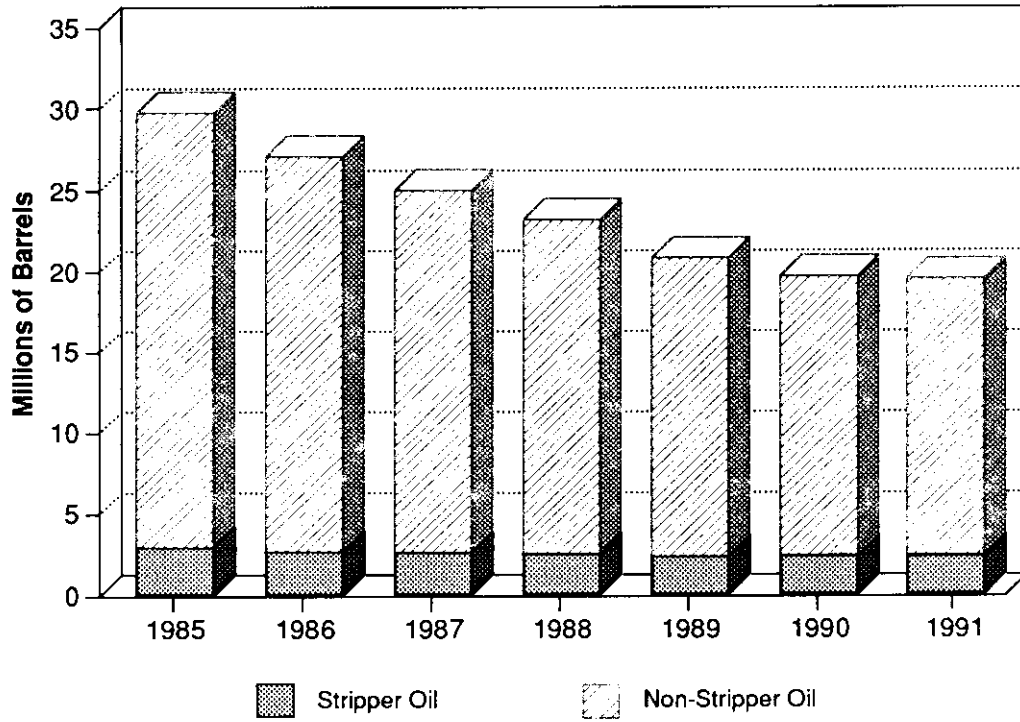
Oil Produced and Oil Value



Gas Produced and Gas Value Natural and Associated Gas

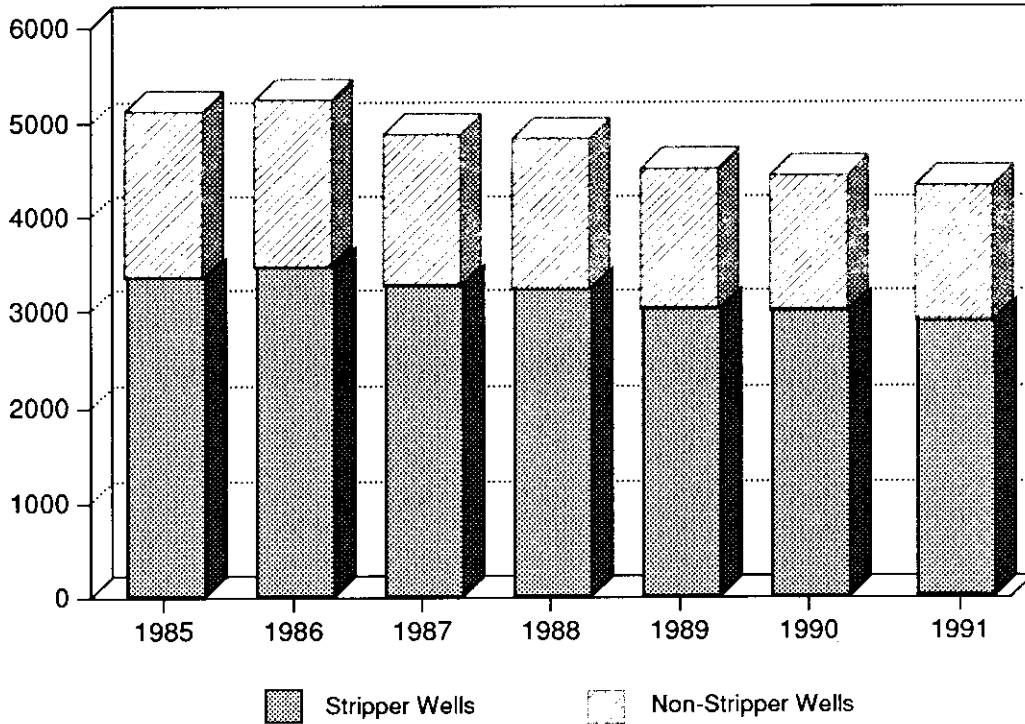


Stripper and Non-Stripper Oil Production



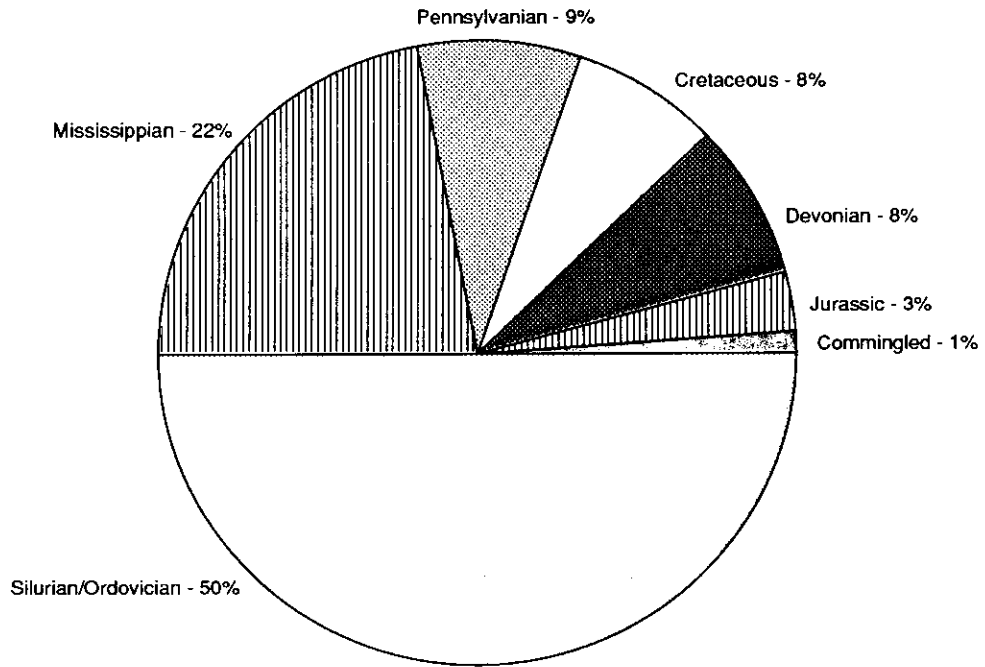
Stripper Well is 10 BOPD or less

Stripper and Non-Stripper Number of Producing Wells



Stripper well is 10 BOPD or less

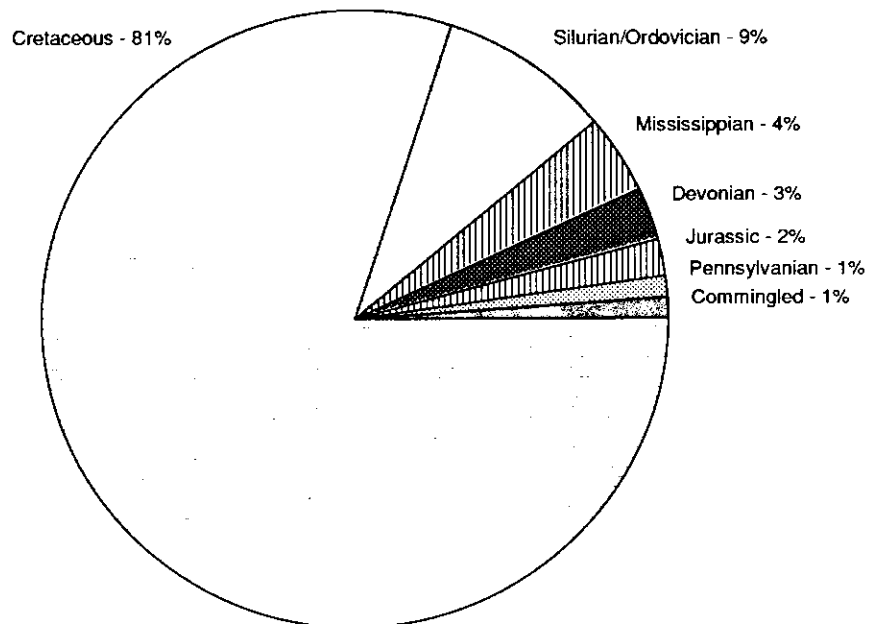
Oil Production By Geologic Period



19,573,348 Bbls Produced

Gas Production By Geologic Period

Natural & Associated Gas



53,002,530 Mcf Produced

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
ALMA				
Bow Island/Blackleaf	0	3	0	640-acre spacing units for the Sawtooth, Bow Island and shallower formations. Location to be no closer than 990' from spacing unit boundary. (Order 19-77)
AMANDA				
Bow Island/Dakota	0	11	0	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) Field enlargement. (Orders 25-83, 1-85, 25-88, 42-88, 2-89 and 29-91). Add Sec. 23-36N-4W for gas production below Bow Island and through the Swift. (Order 63-91)
Swift-Sunburst	0	8	0	
ANVIL				
Nisku	1	0	0	320-acre spacing units for Red River "B" and "C" with one well per zone no closer than 660' to unit boundary; commingling approved for one well only per spacing unit. (Order 75-85) Produced water disposed into the Dakota Formation. (Order 12-A-82)
Ratcliffe	2	0	1	
Red River	8	0	0	
Winnipegosis	1	0	0	
ARCH APEX				
Bow Island	0	39	4	330' from legal subdivision; 2,400' from any other drilling or producible gas well producing from the same reservoir for Colorado Blackleaf pool; 75' topographic tolerance. (Orders 5-56, 4-60) Single Bow Island spacing unit. (Order 3-78)
Swift-Sunburst	2	1	3	
ASH CREEK				
Shannon	2	0	4	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)
ASHFIELD				
Greenhorn/Phillips	0	12	1	640-acre spacing units for Bowdoin/Greenhorn/Phillips with two wells per formation (Orders 41-82 and 16-89). Amend to allow 4 wells per formation per 640-acre spacing unit located no closer than 660' to the spacing unit boundary, 1,320' between wells producing from the same formation with 150' of tolerance for geologic or topographic reasons. (Order 17-89).
Bowdoin-Greenhorn-Phillips	0	6	0	
Carlile	0	74	1	
Carlile/Greenhorn	0	4	0	
BADLANDS				
Eagle	0	10	3	Drilling and spacing units allow one Eagle Sandstone well per governmental section to be located anywhere within a section but no closer than 990' to a section line. (Order 22-78)
BAINVILLE				
Red River	2	0	0	Statewide. Single 320-acre spacing unit for Winnipegosis Formation. (Order 117-84) Single spacing unit for Red River and Winnipegosis formations. (Order 18-88) SWD approved EPA-90.
Red River-Gunton	1	0	0	
Ratcliffe	1	0	0	
BAINVILLE II				
Red River	3	0	0	320-acre Red River spacing units; no well closer than 660' to the unit boundaries. (Order 36-82) Field reduction. (Order 16-85) Single Red River spacing unit. (Order 69-85)
BAINVILLE, NORTH				
Ratcliffe	1	0	0	320-acre spacing units for Winnipegosis and Red River 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 1,650' 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)
Red River	3	0	0	
Winnipegosis	2	0	0	
Interlake	1	0	0	
Mission Canyon	1	0	0	
BAINVILLE, WEST				
Red River	1	0	0	320-acre spacing units for Madison Group to consist of two governmental quarter sections that may be in either one or two governmental sections. Location to be no closer than 660' to the unit boundary or closer than 1,650' to another producing well within the field. (Orders 19-78, 42-79) 320-acre Red River spacing units aligned in east-west direction with permitted well to be no closer than 660' to unit boundary. (Order 57-80)
BANNATYNE				
Swift	17	0	0	Center of 10-acre tracts, 50' topographic tolerance. Commingling permitted. (Order 20-58) Pilot waterflood of Swift suspended in 1963.
Madison	9	0	1	
BATTLE CREEK				
Eagle	0	57	1	Production of gas from all formations from surface to top of Virgelle Formation. One well per producing horizon per section no closer than 990' to section line but allowing additional wells in each section no closer than 1,320' to wells producing from same horizon. (Order 40-86)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
BEANBLOSSOM Tyler B	2	0	0	Three spacing units with one well per lot. (Order 23-86) SWD approved EPA-87, 88.
BEARS DEN Bow Island Swift	0 8	1 1	0 1	Statewide. Enhanced Recovery approved EPA-89. Swift unit delineated. (Order 5-89)
BELFRY Kootenai	0	0	1	Statewide.
BELL CREEK Muddy	71	0	224	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. (Order 25-80) Dissolution of secondary and enhanced recovery units created under Orders 7-70, 23-70 8-71, 26-71, 35-71, 20-80, 82-84, 11-84, 112-84 and 24-90 and consolidation of said units as the Bell Creek Consolidated (Muddy) Unit approved 12-12-91. (Order 71-91) Seven areas unitized (Unit "A," "B," Ranch Creek, "C," "D," "E" and South Muddy Unit). Floods used Madison water. (Orders 7-70, 23-70, 8-71, 26-71, 35-71, 36-71 and 24-90) Tertiary enhanced recovery authorized for Units "A," "B," "D," (Orders 82-84, 111-84, 112-84). Ranch Creek enhanced recovery approved EPA-85. Bell Creek South enhanced recovery approved EPA-90.
BELL CREEK, SOUTHEAST Muddy	0	0	1	160-acre spacing units, wells 660' from spacing unit boundary. (Order 31-72)
BENRUD, EAST Nisku	3	0	0	160-acre spacing units for Nisku with permitted location within a 1,320' square in center of quarter section. (Order 6-65) Single spacing unit. (Orders 108-84 and 7-85) Water disposal into Judith River Formation. (Orders 64-62, 32-66, 10-69, 4-A-73) SWD approved EPA-87.
BENRUD, NORTHEAST Nisku	1	0	0	Same as East Benrud Field. (Order 6-65) Field enlargement. (Order 26-66) Water disposal into Judith River Formation. (Order 38-67)
BERTHELOTE Sunburst	3	0	0	Sunburst wells located 330' from lease lines; 660' between wells with no more than one well per governmental quarter-quarter section. (Order 18-66)
BIG COULEE Cat Creek 3 Lakota Morrison	0 0 0	5 0 2	1 1 0	Statewide. Single spacing unit: Sec. 29, T4N R20E for production of gas from Morrison Formation. (Order 25-86)
BIG GULLY Tyler	2	0	0	Statewide.
BIG GULLY, NORTH Tyler	1	0	0	Statewide.
BIG MUDDY CREEK Mission Canyon Red River	2 1	0 0	2 0	One well per 320-acre spacing unit for Interlake and Red River with well no closer than 660' from boundary of four east-west units. (Order 4-75)
BIG ROCK GAS FIELD Dakota/Kootenai Bow Island Colorado	0 0 0	26 13 5	0 4 0	640-acre spacing units for Blackleaf "A" Formation. Location to be no closer than 990' to any governmental section line. (Order 31-78) Amended to allow 2 wells per section in 5 sections. (Order 64-85)
BIG WALL Amsden Tyler	5 9	0 0	0 1	Basal Amsden Sand and Amsden Dolomite spaced by old statewide spacing; 330' from lease or property line, 990' between wells in same reservoir. (Order 12-54) Previous disposal into Tyler "A" stopped in 1961. Waterflood of Tyler "B" sand started August 1966. (Order 22-66) Another Tyler "B" waterflood authorized by Order 96-83. Excess produced water disposed into the Tyler "B" Formation. (Order 13-A-77) Enhanced recovery approved EPA-86. SWD approved EPA-88.
BILLS COULEE Kootenai Dakota Moulton Sunburst Madison	0 0 0 0 0	3 1 2 1 1	0 0 0 0 0	Field without restrictions except that no well may be drilled closer than 330' from the exterior boundary of the field. (Order 22-80)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
BLACK BUTTE				
Eagle	0	1	1	320-acre spacing units for Eagle Sandstone consisting of either the N/2 and S/2 or E/2 and W/2 of the section with well location to be no closer than 990' from a section line nor closer than 660' to the interior boundary. (Order 134-80)
BLACK COULEE				
Eagle	0	9	2	320-acre Eagle 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)
BLACK DIAMOND				
Nisku/Madison	2	0	0	320-acre spacing units for Duperow, Red River and Nisku formations; well location no closer than 660' from unit boundary. (Orders 147-81 and 51-86) Field enlarged. (Order 15-87) Field delineated for Ratcliffe Formation. (Order 32-89)
BLACK JACK				
Dakota/Kootenai	0	2	0	Delineated for Sunburst and Swift with one gas well per 160 acres, no closer than 660' from boundary of each unit. (Order 3-69) Order 3-67 amended to include Blackleaf in spacing and field rules for gas. (Order 4-74). Blackleaf gas pooled. (Order 3-75)
Bow Island	0	1	0	
Second White Specks	0	1	0	
Sunburst	0	11	0	
BLACKFOOT				
Cut Bank-Madison	8	0	0	Delineated for Cut Bank and Madison with one well per 40-acre spacing unit; 300' tolerance from center of spacing unit. Dual completion in Cut Bank and Madison with administrative approval. (Order 3-57) Waterflood started November 1976. (Order 34-76) Enhanced recovery approved EPA-88.
Dakota-Sunburst	0	1	0	
Nisku	1	0	0	
BLACKFOOT SHALLOW GAS				
Dakota	0	6	1	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)
BLACKLEAF CANYON				Single 160-acre Madison spacing unit. (Order 84-81)
BLACKLEAF UNIT				
Sun River	0	3	2	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). Two 280-acre spacing units for Sun River. (Order 25-85) SWD approved EPA-90.
BLOOMFIELD				
Dawson Bay	2	0	0	320-acre spacing units for Interlake and Red River consisting of two contiguous governmental quarter sections which need not be in the same section; wells located no closer than 660' spacing unit boundaries. (Order 38-83) Dawson Bay Formation added and commingling of Dawson Bay, Interlake, and Red River formations authorized. (Order 16-84) Enlarged. (Orders 32-84 and 26-89)
Red River-Interlake	4	0	0	
BLUE MOUNTAIN				
Red River	1	0	0	Statewide.
BORDER				
Cut Bank	11	0	5	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)
Moulton	0	1	0	
Sunburst	0	1	0	
BOWDOIN & AREA				
Bowdoin (Carlile)	0	382	24	One well per quarter section not less than 1,000' from lease boundary or less than 2,000' from any gas well in same horizon. (Order 29-55) Unitized 1958. Delineated: (Order 3-72) One additional well in each 640-acre spacing unit no closer than 990' to spacing unit boundary in Whitewater and Ashfield Units. (Order 41-82) Produced water injected into Phillips Sand-Ashfield unit. (Order 10-A-77)
Greenhorn/Phillips				
BOWES				
Eagle	0	38	5	Eagle gas wells to be located 660' from boundary of legal subdivision and 1,320' from other wells in same formation with 75' topographic tolerance. (Order 23-54) Order 23-54 amended by establishing 160-acre Eagle spacing units in Sec. 5, 6, 7, 8, 17, 18 31N-19E. (Order 44-75) Sawtooth (Piper) oil wells 330' from lease or property line, 990' between wells in the same formation. (Order 13-54) Vacuum pumps authorized for Sawtooth Formation wells. (Order 74-83) Pilot waterflood initiated in 1961 and expanded to fieldwide waterflood in 1965. (Order 6-61) Water from Madison.
Sawtooth	57	0	35	
BOX CANYON				
Red River	2	0	0	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
BRADLEY				
Bow Island	0	1	0	One well per formation per section for production of gas from all horizons above the top of the Kootenai Formation. (Order 91-84)
Madison	1	0	0	
Sunburst	1	0	1	
BRADY				
Morrison	0	0	11	Originally delineated for Sunburst Sandstone; wells to be located at center of 10-acre spacing units with 75' topographic tolerance. (Orders 34-62, 55-62) Field enlargement. Operators may commingle production from Burwash and Sunburst formations in Section 16. (Order 86-81) SWD approved EPA-89. Produced water disposed into Sunburst Formation. (Order 62-A-84)
Sunburst	8	0	4	
Burwash	1	0	2	
BREED CREEK				
Tyler	9	0	5	Statewide. Enhanced recovery approved EPA-90.
BROADVIEW				
Frontier	0	1	0	Single 640-acre Frontier spacing unit comprised of Sec. 35, T5N, R22E. (Order 8-86)
BRORSON				
Madison	11	0	0	One well per 160-acre unit, no closer than 660' from unit boundary (Mission Canyon and Red River). (Order 5-69) Field enlargement. (Order 25-82) Gas to Brorson Field Plant. Produced water injected into Dakota Formation. (Order 129-A-81) SWD approved EPA-86.
Red River	3	0	0	
BRORSON, SOUTH				
Madison	3	0	0	Delineated for Red River production with 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)
Red River	3	0	0	
Bakken	1	0	0	
BROWN'S COULEE				
Eagle	0	0	1	Delineated for Judith River and Eagle gas production. One well per 160-acre unit, no closer than 660' to unit boundary. Commingling allowed with administrative approval. (Order 7-74)
BROWN'S COULEE, EAST				
Eagle	0	2	1	Statewide.
Judith River	0	0	1	
BRUSH LAKE				
Red River	4	1	0	320-acre Red River spacing unit with initial nine spacing units described in Order 15-71 corrected. SWD approved EPA-90.
BUFFALO FLAT				
Bow Island/Roberts	0	0	6	Statewide.
BUFFALO LAKE				
Madison	0	0	1	Statewide.
BULLWACKER				
Eagle	0	42	1	Delineated for Judith River and Virgelle/Eagle with 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) Field enlarged. (Order 63-85)
Judith River	0	2	0	
Virgelle	0	1	0	
BURGET, EAST				
Madison	3	0	0	Statewide.
BURNS CREEK				
Red River	1	0	0	Statewide.
CABARETT COULEE				
Madison	2	0	0	Statewide.
CABIN CREEK				
Madison	4	0	15	Spacing waived and General Rules for (Deviation), (Commingling), and (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. Field boundaries amended and spacing units designated. (Order 118-84) Waterflood of Siluro-Ordovician (Orders 5-59, 15-60, and 30-63). Produced water injected into the Mission Canyon (Order 60-62). SWD approved EPA-84, 85, 88. Enhanced Recovery approved EPA-87, 88, 89, 90, 91.
Silurian-Ordovician	91	1	9	
CAMP CREEK				
Eagle	0	1	0	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
CANADIAN COULEE & AREA				
Sawtooth	0	1	0	320-acre spacing units for Jurassic Sawtooth/Piper with well location no closer than 660' from unit boundary, and 990' from field exterior boundaries. (Order 18-76)
Firemoon	1	0	0	
CANADIAN COULEE, NORTH				
Sawtooth	0	1	0	640-acre spacing units for Jurassic Sawtooth. Location to be no closer than 1,650' to section line. (Order 15-74)
CANAL				
Madison	3	1	0	320-acre Red River spacing units consisting of E 1/2 and W 1/2 of governmental section. (Order 34-70) 160-acre Madison spacing units. Wells located no closer than 660' to unit boundary with 150' topographic tolerance. (Order 58-85)
Red River	1	0	0	
CANNON BALL				
Red River	1	0	0	Statewide.
CARLYLE				
Red River	1	0	0	320-acre Red River spacing units to consist of either the N/2 and S/2 or E/2 and W/2 of section or lots corresponding thereto. Well location to be no closer than 660' to unit boundary nor closer than 1,650' to any well drilling or producing from the same pool. (Order 39-79) E 1/2 of 18-11N-61E designated as a spacing unit for Nisku Formation with permission to commingle production with Red River. (Order 29-87) Produced water disposed into Dakota Formation. (Order 126-A-81)
CAT CREEK, EAST DOME				
Ellis (Swift)	9	0	4	220' from lease or property line, 440' from every other well in same formation. (Order 17-55) Three separate producing areas, East, Mosby, and West Domes. Field enlargement upper and lower Brindley wells in S1 T15N R28E are to be no closer than 350' from other Morrison wells in said section. (Order 101-82) Three Kootenai, two Ellis, and one Amsden waterflood 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) Enhanced Recovery approved EPA-89.
CAT CREEK, MOSBY DOME				
Amsden	2	0	0	
Cat Creek 2 & 3	2	0	0	
Ellis (Swift)	4	0	3	
Rierdon	1	0	0	
CAT CREEK, WEST DOME				
Cat Creek 1 & 2	30	0	6	
Ellis (Swift)	1	0	0	
Morrison	3	0	0	
Mowry	2	0	0	
CATTAILS				
Ratcliffe	8	0	0	160-acre spacing units for Ratcliffe; wells no closer than 660' to unit boundaries. (Order 31-88)
CATTAILS SOUTH				
Ratcliffe	1	0	0	160-acre spacing units for Ratcliffe; wells no closer than 660' to spacing unit boundaries. Authorizing horizontal wells to cross spacing unit boundaries. (Order 70-91)
CEDAR CREEK				
Eagle	0	86	4	Order 33-54, original field rules, vacated by Order 32-86. 320-acre spacing units, wells in center of NW 1/4 and SE 1/4 of each section with 200' topographic tolerance. (Order 1-61) Delineation amendments. (Order 23-76 and 32-86)
CHAIN LAKES				
Eagle	0	0	2	Statewide.
CHARLIE CREEK				
Red River	1	0	0	Delineated for Red River, Duperow, and Nisku with 320-acre spacing units, either east-west or north-south at option of operator; well located no closer than 660' from spacing unit boundary and no closer than 1,650' from another producing well. Spacing units may not cross section lines. Commingling upon administrative approval. (Order 66-76)
CHARLIE CREEK, EAST				
Red River	2	0	0	Two 160-acre spacing units for Duperow Formation. (Order 47-87) Two 320-acre spacing units for Red River Formation. (Order 38-88)
Duperow	1	0	0	
CHARLIE CREEK, NORTH				
Red River	0	1	0	Single Red River spacing unit. (Order 37-82) Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
CHELSEA CREEK Nisku	1	0	0	Statewide.
CHINOOK, EAST Eagle Sawtooth	0 0	0 0	1 2	Statewide.
CHIP CREEK Eagle	0	0	3	160-acre spacing units for Virgelle/Eagle and shallower formations. Location no closer than 660' from spacing unit boundary. (Order 89-76)
CLARKS FORK Greybull	0	1	0	330' from quarter-quarter section line. 1,320' between wells with 75' topographic tolerance. (Order 17-54)
CLARKS FORK, SOUTH Greybull	0	0	1	160-acre spacing for Frontier and deeper horizons; location no closer than 330' from quarter section line or 1,320' from any other well. (Order 21-69)
CLEAR LAKE Madison Nesson Nisku Red River	5 1 1 7	0 0 0 0	0 0 0 0	Statewide. Produced water disposed into Dakota, Muddy, Lakota, and Swift formation. (Orders 41-A-80, 116-A-81,) SWD approved EPA-87.
CLEAR LAKE, SOUTH Red River	1	0	0	Statewide.
COAL COULEE Eagle	0	1	2	One Eagle 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)
COAL MINE COULEE Eagle Second White Specks	0 0	4 1	0 0	Delineated for Judith River and Eagle formations with 4 wells per 640-acre spacing unit per formation with permitted well no closer than 990' to the exterior boundaries of the field and no closer than 660' to spacing unit boundaries with 150' topographic tolerance. (Order 1-90)
COAL RIDGE Mission Canyon	0	0	1	Statewide. Produced water injected into the Dakota Formation. (Order 81-A-79) SWD approved EPA-89.
COLORED CANYON Red River Nisku	3 1	0 0	0 0	Statewide plus single Red River spacing unit comprised of N 1/2 Sec 7, T32N, R57E. (Order 28-84) Single 160-acre Nisku spacing unit within Section 8, T32N, R57E. (Order 86-85)
COMERTOWN Nisku/Duperow Ratcliffe Red River Nesson	2 3 4 1	0 0 0 0	1 0 1 0	320-acre Red River spacing units; permitted well to be no closer than 660' to unit boundary. (Order 35-80) Field enlargement. (Orders 9-81 and 150-81) Produced water injected into the Dakota Formation. (Order 107-A-82)
COMERTOWN, SOUTH AND AREA Nisku Red River	1 2	0 0	0 0	320-acre spacing units consisting of N1/2 and S1/2 of Sec 21 and W1/2 of Sec 22, T36N, R57E, wells located no closer than 660' to unit boundary. (Order 96-84) Enlarged. (Order 20-85)
CONRAD, SOUTH Dakota Sunburst	0 2	0 0	4 3	Originally delineated for Dakota production with 10-acre spacing units. Wells in center of each unit with 75' topographic tolerance. (Orders 34-62, 31-63)
COTTONWOOD Red River	1	0	0	Single 320-acre Red River spacing unit. (Order 85-84)
COTTONWOOD, EAST Ratcliffe	1	0	0	Statewide.
COW CREEK Charles	0	0	1	80-acre Charles spacing units, direction at option of operator but wells to be in SW 1/4 and NE 1/4 of each quarter section. (Order 11-69)
COW CREEK, EAST Kibbey	10	0	0	40-acre spacing units for Charles and Kibbey formations consisting of quarter-quarter section with permitted well to be at center with 150' topographic tolerance. (Order 35-74) Produced water disposed into Dakota Formation. (Order 30-A-75 and 61-A-76)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
CRANE				
Devonian	3	0	0	320-acre spacing units for Red River and Duperow Formations consisting of one half of a governmental section; well location to be no closer than 660' from unit boundary and no closer than 1,650' to any well drilling or producing from the same pool. (Order 40-79) SWD approved EPA-87, 88.
Silurian-Ordovician	2	0	0	
CROCKER SPRINGS, EAST				
Mississippian	1	0	0	Statewide. (Order 68-82 which established 80-acre spacing units was vacated by Order 37-87.)
CROOKED CREEK				
Dakota	2	0	1	Statewide.
CUPTON				
Red River	5	0	0	160-acre quarter section spacing units for Red River Formation. Location no closer than 660' from spacing unit boundary. (Order 4-72) Produced water disposed into Red River Formation. (Order 1-A-80) SWD approved EPA-85, 86.
CUPTON SOUTH & AREA				
Red River	1	0	0	Statewide plus single Red River spacing unit. (Order 14-85)
CURLEW				
Red River	1	0	0	Statewide.
CUT BANK				
Dakota/Kootenai	0	1	1	(Kootenai Formation may include 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, 2,400' between wells in same formation. 75' topographic tolerance. (Order 10-54) Sec. 20, 29, and 32 of T36N, R4W spaced 320-acres (N 1/2 and S 1/2). (Order 26-70) 320-acre spacing units for gas (Cut Bank) units; (E 1/2 and W 1/2) wells to be located no closer than 330' from legal subdivision line nor less than 2,400' 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) Field enlarged. (Orders 68-83 and 13-85) There are 17 waterfloods in progress. Water from Eagle and Madison, or produced. Produced water disposed into Madison Formation. (Orders 51-65, 52-65, 22-A-74, 80-A-76, 55-A-77, 60-A-80, 91-A-80, 123-A-81, 39-A-82, 20-A-84) SCCBSU enhanced recovery approved EPA-84, 85, 87, 90, 91 and Order 88-85. SWD approved EPA-86, 89. Two Medicine enhanced recovery approved EPA-88.
Bow Island	0	19	1	
Cut Bank	520	185	333	
Cut Bank-Madison	3	0	0	
Kootenai	4	2	0	
Madison	43	1	22	
Moulton	37	2	25	
Sunburst	7	7	5	
Dakota	0	1	0	
DAGMAR				
Red River	2	0	1	Statewide.
DEAN DOME				
Greybull	0	0	7	Statewide. Oil ring below gas cap.
DEER CREEK				
Red River	0	0	1	80-acre spacing units for Interlake and Red River consisting of any two adjacent quarter-quarter sections. Well location in NE 1/4 and SW 1/4 of each quarter section with 75' topographic tolerance. (Orders 23-55 and 14-59) Well location amendment. (Order 10-86) Commingling of production in the Interlake, Stony Mountain, Red River, and Charles pay zones permitted upon approval of Board Petroleum Engineer. (Order 18-63) Excess produced water is disposed into Dakota and Lakota, Morrison and Swift formations. (Orders 6-56, 3-58 and 53-A-83)
Charles	1	0	0	
DEER CREEK, NORTH				
Tyler				Single Tyler spacing unit, S 1/2 Sec. 14 and N 1/2 Sec. 23, T18N, R53E. (Order 26-84)
DELPHIA				
Amsden	3	0	0	Statewide.
DEVILS BASIN				
Heath	3	0	6	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) SWD approved EPA-90. Produced water disposed into Heath Formation. (Order 59-A-84)
Tyler	1	0	0	
DEVILS POCKET				
Heath	1	0	1	40-acre spacing units; wells no closer than 165' to spacing unit boundary. (Order 34-85)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
DEVON Bow Island	0	26	4	160-acre spacing units for production of gas from all formations from surface to top of Kootenai Formation; wells located no closer than 330' to any quarter section line and 660' to exterior boundaries of field, excepting existing wells. (Order 32-83) Field enlarged and amended to provide 320-acre spacing units for Bow Island Formation; wells located no closer than 660' to interior spacing unit line and 990' to section lines. (Order 50-86) Field enlargement. (Order 5-88)
DEVON, EAST Bow Island	0	2	1	320-acre spacing units consisting of any two contiguous quarter sections; wells located no closer than 660' to spacing unit boundaries. (Order 42-86) Field enlarged. (Order 26-87)
DEVON, SOUTH UNIT Bow Island	0	1	0	Drilled on statewide spacing. Unitized for primary production. (Order 28-71, corrected) 320-acre spacing units; wells located no closer than 660' to unit boundaries. (Order 24-84) Field enlarged. (Order 11-87)
DIAMOND POINT Red River	2	0	0	320-acre spacing unit allowing two wells to produce from the Red River or from commercial production at any depth shallower. (Order 20-80) SWD approved EPA-85.
DIVIDE AND AREA Madison	8	0	0	Ratcliffe and Mission Canyon 160-acre spacing units, no closer than 660' from spacing unit boundaries and 1600' between wells; 150' topographic tolerance excluding boundary setback (Order 7-81) Remainder Statewide. Produced water disposed into Dakota Formation. (Order 42-A-80, 130-A-81) SWD approved EPA 90.
Red River	3	0	0	
DOOLEY Ratcliffe	4	0	0	Statewide.
DRY CREEK Frontier	0	15	1	Statewide. Field delineated. For frontier gas production with E 1/2 or W 1/2 of sections as spacing units. (Order 8-70) West Dome gas storage project approved (Order 31-66). Order 8-70 modified to allow N 1/2 or S 1/2 of section as spacing units. (Order 31-76)
Greybull	0	2	0	
Judith River	0	3	0	
Virgelle/Eagle	0	4	0	
DRY CREEK, MIDDLE Frontier	1	2	0	320-acre spacing units consisting of two adjacent governmental quarter sections lying north-south or east-west at operator's option with permitted well no closer than 660' from spacing boundary. (Order 25-75)
DRY CREEK, SHALLOW GAS Virgelle	0	1	0	160-acre spacing units with 1 well per productive horizon above Cody per spacing unit and location no closer than 660' to spacing unit boundaries for all horizons above Cody. (Order 54-76) additional wells. (Order 13-90)
DRY CREEK, SOUTHWEST Frontier	0	0	1	320-acre spacing units consisting of E 1/2 and W 1/2 of Sec. 5, T7S, R21E; wells located no closer than 990' to spacing unit boundaries. (Order 47-86)
DRY CREEK, WEST Greybull	0	1	0	Originally 160-acre spacing units for Greybull Sandstone; well location anywhere in spacing unit but no closer than 660' from unit boundary. (Order 43-78) Order 43-78 amended to include Frontier Formation. (Order 65-82) Field enlargement. (Order 86-82)
DRY FORK Bow Island	0	6	1	One well per section per horizon above top Kootenai; wells no closer than 990' from spacing unit boundaries. (Order 32-82)
DUNKIRK Dakota	0	16	0	Only one well per section may produce from each producing zone, formation, or horizon above Kootenai Formation, but no closer than 990' from section lines. (Order 58-81) Field enlargements. (Orders 104-81 and 66-82)
DUNKIRK, NORTH Bow Island	0	34	2	One well per governmental section per Bow Island zone or horizon. Each producing well to be located anywhere within section but no closer than 990' from section line. (Order 25-77) Field amended to allow 4 wells per section located no closer than 1,320' to another well producing from the same horizon. (Order 7-89) Field enlargements. (Orders 64-78, 157-81 and 6-89) Field reduction. (Order 61-91) Field amended to include Sunburst and Swift formations in 3 sections, 4 wells per formation per section with each Sunburst and Swift well located no closer than 660' to spacing unit boundaries and 1320' to any other well producing from same formation with a 75' topographic or geologic tolerance. (Order 72-91)
Sunburst	0	1	0	
Swift	0	1	0	
DUTCH JOHN COULEE Sunburst	2	2	4	Statewide. Sunburst sand unitization and gas repressuring project approved. (Order 27-88)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
DWYER Madison	9	0	5	160-acre Madison spacing units; well location in center of SE 1/4 of spacing units with 175' topographic tolerance. (Orders 25-60, 29-61) Field reduction. (Order 30-85) Produced water disposed into Dakota Formation. (Order 26-63) Waterflood. (Order 20-68) Enhanced recovery approved EPA-86.
DWYER-NISKU Nisku	2	0	0	Single 320-acre spacing unit. (Order 30-87)
DWYER RED RIVER & AREA Red River	3	0	0	Single Red River spacing unit with 2 wells. (Order 97-83)
DWYER-WINNIPEGOSIS Winnipegosis	1	0	0	Single 320-acre Winnipegosis spacing unit. (Order 10-91)
EAGLE Bakken	1	0	0	Statewide.
Duperow	1	0	0	
Madison	14	0	1	
Red River\Interlake	2	0	0	
EAGLE SPRING Bow Island-Sunburst-Swift	0	5	5	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 Rierdon Formation. Commingling of Swift and Sunburst permissible. (Orders 4-78, 19-79)
EAST GLACIER Green Horn	1	0	0	Statewide. 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)
ELK BASIN Big Horn	0	0	1	Statewide spacing is waived within unit areas. (Order 10-61) Gas to Elk Basin gasoline plant.
Frontier	12	0	12	
Madison	14	0	15	
Embar-Tensleep	20	1	13	
ELK BASIN, NORTHWEST Frontier	0	2	9	Spacing waived within unitized portion except that bottom of hole be no closer than 330' from unit boundary and there be at least 1,320' surface distance between wells in same formation; 75' topographic tolerance. (Orders 43-63, 28-64) Gas to Elk Basin gasoline plant.
Madison	7	0	3	
Tensleep	0	0	1	
Cloverly	2	0	0	
ENID, NORTH Red River	2	0	1	Spaced for one well Red River field, NE 1/4 of Section 10 and NW 1/4 of Section 11, T23N, R54E. (Order 45-79)
ETHRIDGE Swift	0	10	0	320-acre spacing units; well locations no closer than 660' to unit boundaries, for Swift Formation. (Order 4-90)
ETHRIDGE, NORTH Swift	0	1	0	320-acre spacing units for horizons above Rierdon; well location to be no closer than 660' from unit boundaries. Section 2, T33N, R4W is a 640-acre spacing unit. (Order 98-81)
FAIRVIEW Winnipegosis	0	0	1	160-acre spacing units. Well location anywhere in spacing unit but no closer than 660' from unit boundary. (Orders 48-65, 1-67, 43-67, 44-67, 38-84) Gas to Fairview plant. Field area reduced. (Order 119-84) Field enlarged. (Order 16-87)
Madison	7	0	0	
Red River	9	0	4	
FAIRVIEW, EAST Red River	1	0	0	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)
Winnipegosis	1	0	1	
FAIRVIEW, WEST Madison	1	0	1	320-acre Red River spacing units; designated well in the N 1/2 of Section 28 may be located no closer than 660' from the unit boundary or 1,650' from any well producing from the same pool. (Order 76-81) SWD approved EPA-88.
FERTILE PRAIRIE Red River	4	0	1	Statewide.
				80-acre spacing units consisting of north-south rectangular units. Well location in NW 1/4 and SE 1/4 of quarter section with 75' topographic tolerance. (Orders 3-56, 7-62) Board Orders 3-56 and 7-62 amended to provide well locations for each 80-acre spacing unit to be the center of the SW or NE quarter quarter section of each quarter section with 75' tolerance for surface obstructions. (Order 65-80)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
FIDDLER CREEK Greybull	0	0	2	Statewide.
FISHHOOK Madison Red River	1 2	0 0	0 0	Statewide.
FITZPATRICK LAKE Bow Island	0	8	1	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) Field enlarged. (Order 113-84)
FLAT COULEE Bow Island Dakota Sawtooth Swift	0 0 0 21	3 3 0 1	0 0 1 1	Bow Island Gas: 330' from boundary of legal subdivision and 1,320' from other wells in same reservoir. (Order 16-55) Sawtooth/Swift oil: 40-acre spacing units. Well in center of spacing unit with 150' topographic tolerance. (Orders 16-62, 19-63) Dakota Gas: Statewide. Waterflood unit and redelineation approved for Swift sandstone. (Orders 13-71, 17-A-71, 22-71)
FLAT LAKE Madison Nisku	41 1	0 0	27 0	160-acre Madison spacing units; well location in center of NE 1/4 of quarter section with 200' topographic tolerance. Wells no closer than 961' to North Dakota state line and no closer than 1,600' to Canadian line. (Orders 10-65, amended; 43-65, 23-66, 33-66) 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, EAST Madison	1	0	0	Single 160-acre Madison spacing unit. (Order 103-84) SWD approved EPA-88.
FLAT LAKE, SOUTH Ratcliffe	4	0	0	160-acre spacing units for Ratcliffe 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-A-67)
FLAXVILLE Mission Canyon	0	0	2	160-acre Madison spacing units; permitted well to be no closer than 660' from the exterior boundaries of the unit. (Order 105-82) Order 105-82 amended to provide 150' tolerance for topographic reasons. (Order 124-82) SWD approved EPA-85.
FORT CONRAD Bow Island	0	16	0	640-acre spacing units for Bow Island; well location to be no closer than 990' from the section line. (Order 19-81) Field enlargement. (Order 118-82)
FORT GILBERT Madison Red River	9 2	0 0	2 0	160-acre Ratcliffe/Mission Canyon 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)
FOUR MILE CREEK Red River	1	0	0	320-acre spacing units for Red River. (Order 43-75) Field boundary reduction. (Order 10-83)
FOUR MILE CREEK, WEST Red River	1	0	0	Statewide.
FOX CREEK, NORTH Bakken	1	0	0	160-acre spacing units for Madison Formation; wells located no closer than 660' to the unit boundary with 150' topographic tolerance. (Order 13-84)
FRANNIE Tensleep	1	0	0	10-acre spacing units; well location in center of each unit with 100' topographic tolerance. (Order 35-63) Unitized for waterflood of Phosphoria-Tensleep formations using produced fluids. (Order 21-70) EOR approved. (Order 62-85)
FRED & GEORGE CREEK Bow Island Sunburst/Swift	0 28	3 1	0 27	Sunburst Oil: 40-acre spacing units; well location in center of unit with 250' topographic tolerance. (Orders 29-63, 1-65, amended by Order 27-65) Sunburst Gas: same as Arch Apex. (Order 4-60) Statewide for other formations. Sunburst waterflood initiated July 1970, using water from Madison (Order 13-70) and Eagle. (Order 27-71) (Order 40-80)
FRESNO & AREA Eagle	0	4	3	640-acre spacing units for Eagle (Virgelle) and shallower horizons; 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)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
FROG COULEE Red River	1	0	0	320-acre Red River spacing units; wells to be located no closer than 660' from the unit boundary. (Order 55-79)
FROID, SOUTH Red River	1	0	0	Statewide. SWD approved EPA-90.
GAGE Amsden	2	0	1	40-acre Amsden spacing units; well location to be in center of each unit with a permitted tolerance of 150' for topographical or geological reasons. (Order 120-80) Field enlargement. (Order 44-81)
GALATA Bow Island	0	6	1	Two wells from same Bow Island horizon per section no closer than 1,320' to each other and 990' to section lines. (Order 28-85) Field enlarged. (Orders 21-84, 41-85 and 76-85)
GAS CITY Silurian-Ordovician Madison	8 1	0 0	3 0	80-acre spacing units consisting of E 1/2 and W 1/2 of quarter sections; well location in NW 1/4 and SE 1/4 of quarter section; 150' topographic tolerance. Spacing waived and statewide rules for (Deviation), (Commingling), and (Dual Completion) are waived in unitized portion of field. (Order 29-62) Excess produced water disposed into Judith River Formation. (Order 32-61) Disposal into Red River. (Order 20-64) Waterflood using produced water and Madison water. (Order 16-69) Produced water disposed into Charles "B" Formation. (Order 90-A-79)
GILFORD, NORTH Sawtooth	0	0	1	320-acre spacing units for Sawtooth production with no well closer than 660' to spacing unit boundary. (Orders 9-58, 38-76, 9-79)
GIRARD Bakken Red River	1 1	0 0	0 0	Statewide.
GLENDIVE Silurian-Ordovician	13	0	4	80-acre spacing units consisting of any two adjacent quarter-quarter sections; wells located in center of NE 1/4 and SW 1/4 of each quarter section with 75' topographic tolerance. (Orders 27-55, 19-62, 58-62, 20-66) 80-acre spacing units as set forth by Order 95-84. Commingling of Red River and Madison formations. (Order 95-84) Excess produced water disposed into Swift, Dakota, and Judith River formations. (Orders 16-56, 16-63, 40-A-70, 7-A-72, 8-A-82) SWD approved EPA-86, 88.
GOLD BUTTE Bow Island	0	1	0	640-acre spacing for Bow Island and Swift, well location any quarter-quarter section cornering on center of section. (Order 26-59) Amended field boundary. (Order 43-77)
GOLDEN DOME Frontier Greybull Eagle	2 1 0	4 3 1	0 0 0	Originally 160-acre spacing for Judith River, Claggett, and Eagle (Virgelle); 660' from spacing unit boundary. (Order 15-72) Single spacing unit for Greybull Formation. (Order 17-82) Field enlargement and inclusion of Frontier and Greybull formations. (Order 135-82) SWD approved EPA-89.
GOOSE LAKE Ratcliffe Red River	20 1	0 0	12 1	160-acre spacing units for Ratcliffe Formation. (Order 42-63) Field enlarged. (Orders 40-66, 47-67, 16-68) Refer to said orders for authorized well locations. Field size reduced. (Order 29-77) Single spacing unit for Red River. (Order 1-82) North Goose Lake Unit waterflood. (Order 17-72) Unit production curtailment. (Order 45-77) Excess produced water disposed into Mission Canyon and Dakota formations. (Orders 12-64, 14-66-A, 12-68-A) Produced water disposed into Ratcliffe Formation (Order 138-A-80) Produced water disposed into Dakota Formation. (Order 117-A-81) Enhanced recovery approved EPA-86. SWD approved EPA-87.
GOOSE LAKE, SOUTHEAST Ratcliffe	1	0	0	Statewide.
GOOSE LAKE, WEST Red River	1	0	0	Statewide.
GOSSETT Ratcliffe Red River	1 1	0 0	1 0	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
GRABEN COULEE				
Cut Bank	66	0	19	Sunburst - 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. 5-spot location on 40-acre tract allowed. (Order 73-62) Excess produced water disposed into Cut Bank Formation. (Order 45-A-75 and 63-A-84) Waterflood of Cut Bank sands. (Order 61-83) SWD approved EPA-86, 87, 88, 89.
Sunburst	8	0	6	
GRANDVIEW				
Bow Island	0	5	2	320-acre spacing units for all gas producing horizons, aligned in a north-south direction; well location no closer than 660' to a spacing unit boundary. (Order 49-67)
GRANDVIEW, EAST				
Swift	4	0	1	Statewide.
GRAY BLANKET				
Tensleep	1	0	0	Statewide.
GREBE				
Tyler	3	0	0	Statewide.
GREEN COULEE				
Red River	1	0	0	160-acre spacing units for Ratcliffe Formation. Well location to be no closer than 660' to unit boundaries with 150' tolerance allowed for topographic or geologic reasons. 320-acre spacing units for the Red River Formation with well location to be no closer than 660' to the unit boundary nor closer than 1,650' from any well producing from the Red River. (Order 56-81)
GUMBO RIDGE				
Tyler	3	0	3	Statewide. Third Cat Creek water for waterflood. (Order 54-79)
GUNSIGHT				
Madison	3	0	0	Statewide.
GYPSY BASIN				
Sawtooth, Sunburst, Swift Madison, Nisku	12	0	38	Sunburst-Swift - 330' from lease lines and 660' between wells in same formation. Only two wells per quarter-quarter section. (Order 7-66) Sawtooth-Madison oil and gas - 40-acre spacing units; wells no closer than 330' from lease line. (Orders 7-66, 12-79) Sawtooth-Madison Injection of excessive gas produced with oil into Sunburst gas cap. (Order 6-64)
HAMMOND				
Muddy	0	0	9	320-acre spacing units for Muddy Formation; each unit shall consist of a regular half of a governmental section with well location to be no closer than 660' to a unit boundary nor closer than 990' to the exterior boundaries of the field. (Order 97-80)
HARDPAN				
Bow Island	0	7	1	Spacing one well per section for Kootenai and above. Well location no closer than 990' from the section boundary. (Order 145-81) Field enlargement. (Order 131-82)
Blackleaf	0	0	1	
Swift	1	0	0	
HARDSCRABBLE CREEK				
Red River	1	0	0	Statewide.
HAVRE				
Eagle	0	1	1	Single spacing unit for production of gas from Eagle. (Order 48-82)
HAWK CREEK				
Amsden	1	0	0	Statewide.
HAY CREEK				
Interlake	0	0	1	320-acre spacing for Red River, consisting of 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 Bronson plant. SWD approved EPA-90. Water disposal into Red River. (Order 20-A-70) Produced water disposed into Dakota Formation. (Order 90-A-80, 129-A-81)
Mission Canyon	2	0	0	
Red River	1	0	0	
HAYSTACK BUTTE				
Bow Island	0	6	2	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)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
HAYSTACK BUTTE, WEST				
Bow Island	0	6	0	320-acre regular half-section spacing units for all formations above Rierdon; wells located no closer than 660' to the unit boundaries; commingling of production authorized as specified. (Order 6-88) Field enlarged. (Order 46-91)
HIAWATHA				
Tyler	3	0	0	Statewide.
HIBBARD				
Amsden	1	0	2	Statewide. Enhanced recovery approved EPA 91.
HIGH FIVE				
Stensvad	9	0	0	Statewide. Water disposed into Dakota and Stensvad formations. (Orders 33-A-77, 70-A-78) Unitized & Polymer-Waterflood authorized. (Order 110-80) Enhanced recovery approved EPA-88.
Tyler	5	0	0	
HIGHLINE				
Eagle	0	1	0	Single 640-acre spacing unit for Eagle and shallower horizons. (Order 35-88)
HIGHVIEW				
Madison	6	0	12	160-acre spacing units, located no closer than 660' from spacing unit boundary. 150' topographic tolerance. (Order 84-76) Orders 32-76, 84-76 and 63-82 are amended to provide as follows: 1. Permitted wells to the Moulton, Sunburst, Morrison, and Swift formations shall be no closer than 330' from the lease line nor closer than 660' to a permitted well in the same formation with only two such wells per quarter quarter section with a 150' topographic tolerance. 2. Madison: (Gas) 160-acre spacing units with well location to be no closer than 660' from quarter section lines. 3. Madison: (Oil) 40-acre spacing units with permitted location to be no closer than 330' from the lease line with a 150' topographic tolerance. 4. Sawtooth: (Oil and Gas) 40-acre spacing units with permitted location to be no closer than 330' from the lease line with a 150' topographic tolerance. (Order 136-82)
Devonian	1	0	0	
Swift	0	0	1	
Sawtooth	1	0	0	
HONKER				
Winnipegosis	0	0	1	320-acre specified spacing units for Red River Formation; permitted well not to be closer than 660' from the unit boundary. (Order 105-80) Single 160-acre Winnipegosis spacing unit. (Order 82-81)
HORSE CREEK				
Swift	1	0	0	Statewide.
HOWARD COULEE				
Tyler	1	0	0	Statewide. Produced water injected into the Piper Formation. (Order 69-A-78)
INJUN CREEK				
Stensvad	2	0	0	Statewide.
INTAKE II & AREA				
Madison/Ordovician	1	0	0	320-acre spacing units for Red River Formation; permitted well to be located no closer than 660' from the unit boundary. (Order 99-81) Produced water disposed into Dakota Formation. (Order 60-A-84) SWD approved EPA-85.
Red River	2	0	0	
IVANHOE				
Amsden	1	0	0	40-acre spacing unit for production from any one common formation; well location in center of unit with 200' topographic tolerance. (Order 7-60 and 13-56) Field size reduced. (Orders 27-89 and 29-89)
Morrison	1	0	1	
Tyler	3	0	2	
Cat Creek Two	1	0	0	
JIM COULEE				
Tyler	12	0	6	Unitized. (Order 18-72) No well closer than 330' from unit boundary. Waterflood project approved in Tyler Sands. (Order 18-72)
JIM COULEE, NORTH				
Tyler-Stensvad	1	0	1	Statewide.
KATY LAKE				
Red River	1	0	0	Statewide.
KATY LAKE, NORTH				
Madison	4	0	0	Statewide except for single 320-acre Red River spacing unit (Order 88-84) and single 160-acre Mission Canyon spacing unit. (Order 89-84) Produced water disposed into the Dakota Formation. (Order 15-A-82) SWD approved EPA-89.
Nesson	1	0	0	
Red River	5	0	0	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
KEG COULEE				
Stensvad	1	0	0	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: W 1/2 E 1/2 and W 1/2 Sec. 35-11N-30E; NW 1/4 Sec. 35-11N-30E; NW 1/4 Sec. 2-10N-30E. (Order 23-72) Topographic tolerance varies from 100' to 250'. (Order 11-60, 4-64, 23-64) Buffer zone waived. (Order 16-65) Field reduction. (Order 2-76) Orders 11-60, 4-64, and 2-76 amended by Order 58-76. Three waterflood units. (Orders 3-64, 28-66, 14-69) Madison water injected.
Tyler	8	0	10	
KEITH, EAST & AREA				
Bow Island	0	6	0	Statewide, except unitized portions spaced by Order 22-62. Pooling. (Order 19-66)
Niobrara	0	1	0	
Sawtooth	0	4	0	
Second White Specks	0	13	2	
KELLEY				
Tyler	2	0	2	40-acre spacing units with well at center of spacing unit with a 250' topographic tolerance. (Order 15-67) Waterflood using Third Cat Creek water. (Orders 8-69, 51-76)
KEVIN, EAST GAS FIELD				
Sunburst	0	1	0	320-acre spacing units for all horizons above base of Rierdon Formation, commingling approved. (Order 23-85) Field enlarged. (Orders 29-86, 10-87 and 8-90)
KEVIN, EAST NISKU OIL				
Nisku	12	0	2	80-acre spacing units consisting of E 1/2 or W 1/2 of governmental quarter section; wells located in center of SW 1/4 or NE 1/4 of each quarter section with 200' geologic or topographic tolerance. (Order 46-84) Field enlarged. (Order 9-86) Single spacing unit authorized to produce gas from the gas cap. (Order 24-88)
KEVIN-SOUTHWEST				
Bow Island-Dakota	0	28	0	320-acre one-half section spacing units lying north-south or east-west at operator's option. Location to be no closer than 660' 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. (Orders 82-79, 96-79, 47-80, 163-81 and 41-89)
Sunburst-Swift				
KEVIN SUNBURST				
Madison	860	8	638	Oil: 9 Wells per 40-acre tract; only 3 wells on any side of tract with set back at least 220' from line. Single spacing unit. (Order 61-85) Gas: Well to be no closer than 330' from the boundaries of any legal subdivision line, nor less than 2,400' from every other drilling or producible well on the same lease or units. (Orders 8-54, 28-55) Field enlarged. (Order 54-87) 160-acre Bow Island spacing units established. (Orders 2-88, 17-88, and 60-88) There are three waterfloods in operation using Madison water. (Orders 9-64, 17-64, 30-64, 36-65) Sunburst water disposed into Madison (Order 50-76 and 11-A-84). H ₂ S, CO ₂ and produced water disposed into Madison. (Order 156-81) EPA-87. SWD approved EPA-84, 85, 86, 87, 88. Enhanced recovery approved EPA-88, 91.
Burwash	9	1	0	
Cut Bank	2	0	0	
Bow Island, Kootenai, Swift	0	43	7	
Eagle, Dakota				
Ellis	45	2	13	
Swift	26	8	7	
Nisku	2	1	1	
Sunburst	92	49	42	
KEVIN SUNBURST, BOW ISLAND				
Bow Island	0	6	0	160-acre Bow Island spacing units; location no closer than 660' from spacing unit boundary. (Orders 2-88, 60-88) Field enlargement (Orders 17-88, 11-91)
KEVIN SUNBURST (DAKOTA)				
Dakota	0	1	0	Single spacing unit for production from Dakota interval. (Order 45-90)
KEVIN SUNBURST, NISKU & AREA				
Swift	0	1	0	Nisku Gas: 640-acre spacing units; location no closer than 990' from spacing unit boundary. (Order 83-76) Nisku Oil: 80-acre spacing units; location no closer than 330' from spacing unit boundary. (Order 7-86)
KICKING HORSE				
Bow Island	0	11	0	320-acre spacing units for Madison and shallower horizons; location 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)
Sawtooth	0	1	0	
Sunburst	0	4	1	
KINCHELOE RANCH				
Tyler	4	0	0	Enhanced recovery approved. EPA-88 and Order 46-88. Kincheloe Ranch Tyler "A" Unit. KR Tyler "A" Sand Unit approved. (Order 47-91)
KINCHELOE RANCH, WEST				
Tyler	2	0	0	Statewide. Enhanced recovery approved. EPA-88 and Order 46-88.
KINYON COULEE AREA				
Bow Island	0	3	0	Statewide.
KINYON COULEE, SOUTH				
				Single Bow Island spacing unit with only one well allowed; location no closer than 990' from section line. (Order 31-81)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
KIPPEN AREA, EAST				
Madison-Swift	0	1	0	Statewide.
Sawtooth	0	0	1	
LAIRD CREEK (LAIRD CREEK U)				
Swift	6	0	4	Statewide. Unitized and waterflood authorized in Swift for oil production. (Order 25-74) Commenced 2-25-77.
LAKE BASIN				
Eagle-Virgelle	0	13	7	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)
Frontier	0	1	0	
Telegraph Creek	0	2	1	
Clagget	0	3	0	
LAKE BASIN, NORTH				
Eagle	0	1	1	640-acre spacing units consisting of one section for all productive horizons. Locations 990' from section line. (Orders 6-58, 3-74) 160-acre spacing units for Claggett and Eagle/Virgelle, wells located no closer than 660' from quarter section lines within restricted sections. (Order 63-76)
Frontier	0	0	1	
LAMBERT				
Red River	3	0	0	320-acre Red River spacing units consisting of the E 1/2 and W 1/2 of section. (Order 3-83)
LAME STEER CREEK				
Red River	0	0	1	Single Red River spacing unit. (Order 101-84)
LANDSLIDE BUTTE				
Madison	10	0	9	Statewide. Reinject gas into Madison Formation. (Order 84-84) SWD approved EPA-86.
Sun River	1	0	0	
LAREDO				
Eagle	0	0	2	320-acre Eagle spacing with unit consisting of one-half section lying north-south or east-west at operator's option after administrative approval. Well no closer than 990' from unit boundary. (Order 8-74)
LEARY				
Muddy	3	0	0	40-acre spacing units for Muddy Formation; wells located no closer than 330' to spacing unit boundary with 75' topographic tolerance. (Order 115-84 which amended original 80-acre spacing established by Orders 12-69, 19-70, and 68-76)
LEDGER				
Bow Island	0	51	7	640-acre Bow Island 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) Field enlargement and amendment to allow two wells per sand per section. (Order 1-87)
Sawtooth	0	0	1	
LEROY				
Eagle	0	23	7	320-acre spacing for Judith River and Eagle/Virgelle with unit consisting of one-half section lying north-south or east-west at operator's option after administrative approval. Wells 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) Field enlargement. (Order 31-87)
LISCOM CREEK				
Shannon	0	8	0	Shannon spacing, one well per 640 acres, with location no closer than 990' from section boundary. (Order 20-72)
LITTLE BASIN				
Frontier	0	1	0	640-acre Frontier spacing units; one well per section located no closer than 990' from spacing unit boundary. (Order 27-86)
Lakota	0	2	1	
LITTLE BEAVER				
Silurian-Ordovician	35	0	7	Spacing waived and General Rules for (Deviation), (Commingling), 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. Enhanced recovery approved EPA-88.
LITTLE BEAVER, EAST				
Silurian-Ordovician	9	0	2	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	0	3	1	Statewide.
LITTLE PHANTOM				
Sunburst	1	0	0	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)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
LITTLE ROCK				
Bow Island-Blackleaf	0	11	0	320-acre N 1/2 and S 1/2 spacing units for Blackleaf and Bow Island. 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. (Orders 94-79 and 34-80) Allow two wells within each spacing unit no closer than 1,320' to each other and no closer than 660' to unit boundaries. (Order 12-90) Two 320-acre spacing units for Lander Formation gas, allowing 2 wells per spacing unit no closer than 1320' to another Lander formation well and 330' to the spacing unit boundary. (Order 56-91)
LITTLE WALL CREEK				
Stensvad	1	0	0	Statewide. Produced water injected into Tyler Formation. (Orders 54-A-77, 63-A-78, 1-A-81) Little Wall Creek, Tyler Sand Unit. (Order 40-84) Enhanced recovery approved EPA-84, 86, 91. SWD approved EPA-90. Weisner Tyler Sand Unit approved. (Order 65-91)
Tyler	3	0	0	
Tyler-Stensvad	3	0	1	
LITTLE WALL, SOUTH AND UNITS				
Tyler	15	0	2	Statewide. South Little Wall Creek Unit waterflood. (Order 85-83) Gunderson Tyler Sand Unit (Enhanced recovery approved EPA-87 and Order 39-87).
LOBO				
Interlake	2	0	0	Statewide
LODGE GRASS				
Tensleep	2	0	0	Statewide.
LOHMAN				
Eagle	0	3	4	640-acre Eagle spacing; one well per section to be located no closer than 990' from section line. (Order 23-78)
LONE BUTTE				
Red River	2	0	0	Single 320-acre spacing unit for Red River and Interlake formations; 160-acre spacing units for Madison with well location no closer than 660' from unit boundary with 150' tolerance for topographic or geologic reasons. (Order 83-85)
Mission Canyon	1	0	0	
LONETREE CREEK				
Red River	7	0	3	320-acre Red River spacing, wells 660' from spacing boundary, 2,000' between wells. (Order 29-72) Field reduction. (Orders 162-81 and 84-85)
LONETREE CREEK, WEST				Red River spacing units shall be S 1/2 and N 1/2 of Section 12, T24N R56E. No well closer than 660' from boundary or 1,320' from existing well. (Order 73-82)
LONG CREEK				
Charles C	1	0	0	Statewide.
LONG CREEK, WEST				
Nisku	2	0	0	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 or east-west with location to be no closer than 330' from unit boundary nor less than 1,000' from any other producing well. (Order 27-77) Field enlarged. (Order 71-83) SWD approved EPA-86.
LOOKOUT BUTTE				
Madison	4	0	6	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. (Order 7-63) Field reductions. (Orders 57-85 and 6-87) Water disposal into Madison. (Order 68-62) Waterflood of Silurian-Ordovician approved in 1966. (Order 35-66) Water from Minnelusa. Enhanced recovery approved EPA-87. SWD approved EPA-88.
Silurian-Ordovician	42	0	5	
LOOKOUT BUTTE, EAST				
Red River	8	0	0	22 delineated Red River spacing units with wells located no closer than 660' to the unit boundary with 175' topographic tolerance. (Order 87-85) Field enlargement and inclusion of Madison group and all Silurian formations. (Order 6-87) Enhanced recovery approved EPA-87. Pilot Red River "B" waterflood approved. (Orders 19-88, 21-89 and 49-90)
LORING FIELD				
Greenhorn-Phillips-Carlile	0	168	12	640-acre spacing units with 2 wells per formation. (Order 79-82 and 12-89) Amend to allow 4 wells per formation per spacing unit, no closer than 660' to section boundaries, 1,320' between wells producing from same formation with 150' tolerance for geologic and topographic reasons. (Order 13-89) Pilot infill drilling program approved for a portion of the field, with up to 8 wells per spacing unit with between well distance reduced to 990'. (Order 15-91)
LORING, EAST				
Bowdoin-Greenhorn-Phillips-Carlile	0	84	7	160-acre spacing units; where discrete gas formations (Bowdoin, Greenhorn and Phillips) exist, a well may be drilled to each discrete formation and may be located no closer than 660' from the unit boundaries. (Order 60-82)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
LORING, WEST Bowdoin, Greenhorn/Phillips	0	2	0	Spacing units comprised of 1 full section with 4 wells permitted to each formation in each spacing unit located no closer than 660' to the exterior boundary of the section and no closer than 1,320' to a well in the same formation. (Order 7-87)
LOWELL Red River	2	0	1	320-acre Red River spacing units consisting of two contiguous governmental quarter sections which may lie in either one or two governmental sections. Wells to be located no closer than 660' from unit boundary or closer than 1,650' to well producing from the same horizon. (Order 104-79) SWD approved EPA-89.
LUSTRE AND AREA Madison	43	0	15	80-acre Madison spacing units consisting of 1/2 of a regular governmental quarter section. Either E 1/2 and W 1/2 or N 1/2 and S 1/2. Well to be located in either NE 1/4 or SW 1/4 with 200' tolerance. (Order 19-83) Field enlargement. (Order 43-84) Produced water disposed into Dakota-Swift Formation. (Order 39-A-83 and 58-A-84) SWD approved EPA-85, 86, 87.
LUSTRE, NORTH Ratcliffe	1	0	0	80-acre spacing units for Madison Group Formations consisting of E 1/2 or W 1/2 of a governmental quarter section; wells located no closer than 660' to spacing unit boundary with 200' topographic or geologic tolerance. (Order 39-84)
MACKAY DOME Greybull	0	0	4	Statewide.
MARIAS RIVER Bow Island	0	18	2	One well per section per horizon above the top of the Kootenai. (Order 18-78) Field enlargement. (Order 12-83) Field amended to allow 2 wells per zone in each spacing unit located no closer than 1,320' to each other and no closer than 990' to spacing unit boundaries. (Order 26-90)
MASON LAKE Amsden Cat Creek	1 5	0 0	3 10	80-acre First Cat Creek Sand spacing units consisting of one half of a quarter section lying in either east-west or north-south direction; well location in center of the NE and SW quarter-quarter sections of each quarter section with 75' topographic tolerance. (Order 35-78) 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) and into Mowry Formation. (Order 29-A-84) SWD approved EPA-85. Enhanced recovery approved EPA-88. (Order 37-88, 67-89 and 52-90)
McCABE Ratcliffe	1	0	0	160-acre spacing units for Madison group; permitted well to be no closer than 660' from spacing unit boundary. (Orders 100-80, 43-79) 150' tolerance allowed for topographic reasons. (Order 3-81) Board Order No. 100-80 amended to eliminate the requirement of 1,650' between wells producing from the Madison group. (Order 37-81)
McCOY CREEK Red River	1	0	0	Statewide.
MEANDER Sunburst	2	0	0	40-acre spacing units for Sunburst with wells not closer than 330' to spacing unit boundaries. (Order 30-82)
MEDICINE LAKE Silurian-Ordovician Duperow Winnipegosis Mission Canyon	6 1 2 0	0 0 0 0	0 0 0 1	Delineated for formations from the base of the Winnipeg to the base of the Last Charles Salt; 320-acre spacing units comprised of any two contiguous governmental quarter sections in either one or two governmental sections. Well to be located no closer than 660' from unit boundary nor closer than 1,650' to any well producing from the same formation. (Order 50-79) Produced water disposed into Muddy, Kibby and Dakota formations. (Orders 133-A-81, 111-A-82) SWD approved EPA-86.
MELSTONE Tyler	7	0	6	Statewide. Enhanced recovery approved EPA-86.
MIDDLE BUTTE Bow Island Blackleaf Second White Specks	0 0 0	2 1 1	0 0 0	Orders 3-60, 21-75 amended to delineate field extension and 320-acre spacing units for Bow Island consisting of the E 1/2 and W 1/2 of each section; well location no closer than 990' from the section line and 660' from the interior boundary. (Order 47-77)
MIDFORK Charles C Nisku	2 2	0 0	0 0	Statewide. SWD approved EPA-86.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
MINERAL BENCH				Statewide. Water disposal into Dakota-Lakota per (Order 18-65). Produced water injected into Judith River. (Order 110-A-82) SWD approved EPA-86
MINERS COULEE				
Bow Island	0	13	2	Oil: 40-acre units Sunburst/Swift 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. Gas: 160-acre spacing units for horizons above Rierdon; wells to be located 990' from boundary. (Orders 5-74, 43-76, 44-77) Sawtooth gas spacing unit. (Order 43-76) Field redelineation/enlargement. (Orders 77-76, 44-77, 4-80)
Sawtooth	0	1	0	
Blackleaf	0	1	0	
Sunburst/Swift	0	3	9	
MISSOURI BREAKS				
Red River	1	0	0	320-acre Red River spacing units as specified by Order 97-82.
MONA				
Red River	1	0	0	Statewide.
MONARCH				
Madison	0	0	2	80-acre Madison spacing units consisting of E 1/2 and W 1/2 of quarter section. Well location in SW 1/4 and NE 1/4 of quarter section. Location within 660' square at center of quarter section. (Order 18-61) 160-acre Siluro-Ordovician spacing units consisting of a quarter section; well location in center of SW 1/4 of each quarter section with 175' topographic tolerance. (Orders 12-59, 4-63) Spacing waived within Siluro-Ordovician waterflood area. (Order 23-73) Produced water is disposed into the salt water disposal system for the Pennel Field. Waterflood initiated 12-1-73. (Order 23-73) Produced water disposed into the Silurian and Charles formation. (Orders 52-A-83 and 55-A-83)
Silurian-Ordovician	16	0	6	
MONDAK, WEST				
Devonian	1	0	1	320-acre spacing units for Silurian and Ordovician pools. Units to consist of either N 1/2 and S 1/2, or E 1/2 and W 1/2. Well location to be no closer than 660' to unit boundary or closer than 1,650' to any well drilling or producing from same pool. (Order 42-77) 320-acre spacing units for interval below Last Charles Salt and above the Devonian top. Units to consist of either N 1/2 and S 1/2, or E 1/2 and W 1/2. Well location to be no closer than 660' from a quarter section line or section line and no closer than 1,650' to any well drilling or producing from same pool. (Order 23-77) Order 51-79 amended to enlarge Madison Formation delineation. (Order 95-83) Produced water injected into Dakota-Lakota. (Order 49-A-78 and 111-A-80) SWD approved EPA-86.
Madison	26	0	3	
Silurian-Ordovician	7	0	2	
MOSSER DOME				
Mosser Sand	23	0	1	Spacing waived. Future development requires administrative approval of the Board. (Order 27-62) SWD approved EPA-90.
MT. LILLY				
Bow Island	0	1	0	640-acre spacing for Madison; well location in approximate center of any of the four quarter-quarter sections adjoining center of section; 250' topographic tolerance. (Order 37-63)
Madison	0	0	2	
Swift	0	1	0	
MUSSELSHELL				
Tyler	1	0	1	Statewide.
MUSTANG				
Red River	2	0	0	Statewide.
Madison	1	0	0	
NEISER CREEK				
Red River	1	0	0	Single 160-acre Red River spacing unit. (Order 78-82)
NINEMILE				
Nisku	2	0	0	Statewide.
NOHLY				
Nisku	5	0	0	Single Red River spacing unit. (Order 77-83) Field enlarged, 320-acre designated Red River spacing units. (Order 54-84) 160-acre Nisku spacing units, 660' setback from spacing unit boundaries, 150' topographic tolerance. (Order 55-84)
Ratcliffe	4	0	0	
Red River	3	0	0	
Mission Canyon	2	0	0	
NORTH FORK				
Madison	5	0	0	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
O'BRIENS COULEE				
Blackleaf	0	1	1	Statewide.
Bow Island	0	13	3	
Bow Island-Spike	0	1	0	
Second White Specks	0	1	0	
OLD SHELBY AND AREA				
Bow Island	0	3	0	320-acre spacing units to be comprised of either E 1/2, W 1/2, N 1/2, or S 1/2 of a section for Swift, Kootenai, Dakota, and Sunburst gas. Also delineated for Bow Island excluding T32N, R1W, Section 3 and T33N, R1W, Sections 14, 23, 26, and 35. Well location to be no closer than 660' to the unit boundary. Original spacing Order 85-81 plus field enlargement and amendment orders were superseded by Order 90-83 and subsequently by Order 15-88. Field extensions. (Orders 40-88, 47-88, 8-89 and 53-89) Amended to allow two wells per zone in each spacing unit in designated sections. (Order 39-90) Field reduction. (Orders 3-91 and 23-91) Amended to allow two wells per formation in Sunburst and Swift formations in designated sections; wells no closer than 660' to spacing unit boundaries or 1320' to producing wells in same formation and same spacing unit with 75' topographic or geologic tolerance. (Order 73-91)
Swift-Sunburst	0	64	3	
OLJE				
Red River	1	0	0	Single 160-acre spacing unit. (Order 35-85)
OLLIE				
Red River	1	0	0	320-acre specified spacing units for the Red River and Duperow formations. The permitted well for each spacing unit to be located no closer than 660' from the spacing unit boundary. (Order 73-80) Produced water disposed into the Dakota Formation. (Order 11-A-82)
OTIS CREEK				
Red River	1	0	1	Statewide.
OTIS CREEK, SOUTH				
Red River	1	0	0	320-acre spacing units for Red River; well to be located no closer than 660' to unit boundary. (Order 39-72) Extended field boundary. (Orders 56-76, 67-76) Orders 39-72 and 56-76 amended to eliminate spacing units. New spacing units are quarter sections. Well location no closer than 660' from unit boundary or 1,650' from producing well with 150' tolerance. Operator may designate contiguous quarter sections as spacing units. (Order 73-81)
OUTLOOK				
Duperow	1	0	0	160-acre spacing units for Siluro-Devonian; well location in center of either SW 1/4 or NE 1/4 of each quarter section; 175' topographic tolerance. (Order 19-59A) Produced water is disposed into Dakota and Siluro-Devonian formations (Orders 16-59, 17-65, 36-66, 9-A-77) into Madison Formation (Order 59-A-78) and into Dakota and Muddy formations. (Order 61-A-84) SWD approved EPA-86, 88.
Interlake	1	0	0	
Nisku	1	0	0	
Winnipegosis	1	0	5	
Gunton	1	0	0	
OUTLOOK, SOUTH				
Bakken	0	0	1	160-acre spacing for Siluro-Devonian; permitted wells in either SW 1/4 or NE 1/4 of quarter section; 175' topographic tolerance. (Orders 19-59A) Red River and Siluro-Devonian commingling permitted. (Order 45-64) Produced water disposed into Muddy and Dakota formations. (Order 17-65).
OUTLOOK, WEST				
Winnipegosis	1	0	1	160-acre spacing units for Winnipegosis consisting of quarter sections; permitted wells in 840' square in the center of spacing unit and no closer than 900' from quarter section boundaries. (Order 7-67 as amended by Order 26-67) Produced water disposed into Dakota formations. (Order 42-66)
OXBOW				
Red River	1	0	0	320-acre spacing units consisting of two contiguous governmental quarter sections which may be in one or two governmental sections lying east-west or north-south at operator's option. Location to be no closer than 660' to the unit boundary or closer than 1,650' to a well producing from same pool (formations below 11,000). (Order 7-78) Field enlargement. (Order 137-80)
OXBOW II				
Red River	1	0	0	320-acre spacing units for Red River consisting of two contiguous quarter sections which may cross section lines; wells located no closer than 660' to spacing unit boundaries. (Order 50-84)
PALAMINO				
Nisku	5	0	0	Statewide. Produced water disposed into the Dakota Formation. (Order 6-A-82, 58-A-82) SWD approved EPA-86.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
PARK CITY Virgelle	0	1	0	Statewide.
PELICAN				320-acre Ordovician spacing unit; well to be located no closer than 660' to any governmental section or quarter section line boundary. (Order 21-79)
PENNEL Silurian-Ordovician	177	0	27	80-acre spacing units consisting of E and W 1/2 of quarter section; wells located in center of SE 1/4 and NW 1/4 of quarter sections with 150' topographic tolerance. (Order 15-61) 80-acre spacing units on west side and 160-acre spacing units on east side of pool. Wells to be located in SE 1/4 and NW 1/4 of each quarter section (80 acres) and in SE 1/4 of each quarter section on 160-acre spacing. (Orders 1-56, 8-56, 15-61, 20-62, 4-63, 7-63) 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 November 1968. (Order 24-68) Enhanced recovery approved EPA-86. SWD approved EPA-87.
PETE CREEK Sunburst	1	0	0	Statewide.
PHANTOM Sunburst	0	2	4	Gas: wells permitted anywhere within the unit but no closer than 990' to the unit boundary. Oil: Projected depths greater than 6,000' to be located no closer than 660' to the unit boundary. Project depths less than 6,000' to be located no closer than 330' to the unit boundary. Formations between surface and top Rierdon included. (Order 48-77)
PHANTOM, WEST Sunburst	0	2	0	Delineated for Sunburst Sandstone gas production with one well per spacing unit to be located no closer than 660' to the exterior boundaries of the three designated spacing units. (Order 65-78)
PINE Madison Silurian-Ordovician	0 103	0 0	3 31	Statewide spacing rules are waived within the Pine Unit. 80-acre spacing units outside of unit area; well location in NW 1/4 and SE 1/4 of quarter section; 150' topographic tolerance. (Order 37-62) 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) Brine and CO2 injection test. (Order 70-83) Enhanced recovery approved EPA-85, 90.
POLICE COULEE Bow Island	0	8	1	320-acre spacing units for Bow Island Formation; location no closer than 990' from section line and 660' from half section lines. Spacing units to consist of N 1/2 or S 1/2, E 1/2 or W 1/2 at discretion of operator. (Order 53-76) Extended field boundaries. (Order 24-77) Field enlargements. (Orders 20-79 and 46-79)
PONDERA Madison Sun River	364 14	0 0	59 0	Delineated for production from Ellis/Madison contact; Oil: 220' from legal subdivision, 430' from other wells in same reservoir on same lease; 75' topographic tolerance. Porter Bench Extension: 330' from legal subdivision line; 650' from other wells in same reservoir on same lease or unit; 75' topographic tolerance. (Order 9-54) Gas: Well to be located no closer than 1,320' from the boundaries of any quarter section line, nor less than 3,700' from every other drilling or producible well on the same lease or unit. (Order 9-54 corrected) Amend Order 9-54 to designate six 160-acre spacing units for gas with wells to be located no closer than 660' from unit boundaries. (Order 26-83) 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, 108-A-82, 7-A-82, 1-A-83, 30-A-84) SWD approved EPA-86, 87, 88, 89, and 90.
PONDERA COULEE Madison Sun River	3 5	0 0	0 0	330' from legal subdivision lines or upon a 10-acre spacing pattern; 75' topographic tolerance. (Order 5-62)
POPLAR, EAST Heath Madison Nisku	1 44 0	0 0 0	1 21 1	Statewide spacing; field delineated by Order 7-55. Redelineation 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 1-55, 5-57, 7-57, 14-61, 21-61, 34-61, 10-62, 51-67, 15-70-A, 10-A-73, 33-A-75, 127-A-80, and 121-A-81) SWD approved EPA-86, 87.)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
POPLAR, NORTHWEST AND AREA Charles	29	0	6	80-acre spacing units consisting of E 1/2 and W 1/2 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 1/2 and S 1/2 or E 1/2 and W 1/2 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. (Orders 124-80, 83-83, 97-84 and 6-85) 80-acre spacing units for test wells to the Charles formation; spacing units to be N 1/2 and S 1/2 or E 1/2 and W 1/2 of each quarter section with location to be in center of each NE 1/4 or SW 1/4 of each quarter section with 150' tolerance for archeological reasons only. (Order 161-81) Field enlargement with 80-acre spacing units consisting of N 1/2 and S 1/2 of each quarter section with wells to be located in center of the NE or SW quarter of each quarter section with 150' topographic or geologic tolerance. (Order 42-83) Produced water disposed into Dakota. (Order 61-A-78, 128-A-82, 62-A-83) Produced water disposed into the Judith River Formation. (Orders 13-A-82, 8-A-75, 127-A-80 and 14-A-82) SWD approved EPA-85, 86.
PRAIRIE DELL Bow Island-Dakota-Sunburst-Swift	0	93	3	320-acre spacing units for all horizons above the Rierdon with well location no closer than 660' to spacing unit boundary. (Order 10-76) Field enlargement by Orders 28-78, 24-79, 132-80, 40-81, 54-81, 142-81, 56-83, 9-85, 60-86 and 12-87). Two wells per spacing unit approved for a portion of the field, well locations no closer than 1,320' to a producing well. (Order 21-88 and 3-91) Two 160-acre spacing units. (Order 3-89)
PRAIRIE DELL, WEST Swift Blackleaf	0 0	1 3	0 0	640-acre spacing unit for Swift Formation with well no closer than 990' to spacing unit boundary. (Order 16-78) Amended to include all horizons above the Rierdon Formation. (Order 54-78) Field enlarged. (Order 55-78) Field enlarged and amended to allow 4 wells per spacing unit no closer than 1,320' to each other and no closer than 660' to the unit boundaries. (Order 22-90)
PRAIRIE ELK Charles C	1	0	0	Statewide.
PRICHARD CREEK Bow Island Sunburst Swift	0 0 1	0 0 0	2 6 0	Sunburst/Swift spacing rules waived with locations subject to administrative approval. Unitized as to Sunburst for water injection. (Order 7-73)
PRONGHORN Red River	2	0	0	160-acre spacing units for Red River; wells located no closer than 660' from unit boundary with 150' topographic or geologic tolerance. (Orders 75-84 and 110-84)
PUTNAM Madison Red River-Interlake Bakken	6 9 1	0 0 0	0 0 0	Statewide, except for single spacing unit consisting of portions of Sections 15 and 16, T23N, R57E for production from all formations between 6,000 to 11,000 feet. (Order 2-84 amended by Order 11-85) SWD approved EPA-90.
RABBIT HILLS Sawtooth	2	0	0	Statewide. Disposal of produced water into Eagle Formation. (Order 49-A-75)
RABBIT HILLS, NORTHEAST Sawtooth	10	0	0	160-acre (quarter section) spacing units for Sawtooth, wells not less than 660' from spacing unit boundaries. (Order 33-76, referring to Order 34-74) Field reduction (Order 98-83) Amended to allow 1 well per quarter quarter section no closer than 330' to the quarter quarter section line. (Order 48-91)
RABBIT HILLS, SOUTHWEST Sawtooth	1	0	0	160-acre (quarter section) spacing units for Sawtooth, with wells not less than 660' from spacing unit boundaries. (Order 33-76, referring to order 34-74)
RAGGED POINT Tyler	4	0	7	40-acre spacing units; 75' topographic tolerance. (Order 8-59) Spacing waived for Tyler "A" sand reservoir within Tyler "A" Sand Unit except no well can be closer than 660' to unit boundary. (Order 35-65) A waterflood project on the Tyler "A" sand was commenced in February 1966, using Third Cat Creek water. (Order 35-65)
RAGGED POINT, SOUTHWEST Tyler	8	0	3	Applicants may drill and produce wells to the Tyler "A" Formation anywhere within the unit but not closer than 330' to the unit boundaries. (Order 83-82) Tyler "A" waterflood unit agreement approval effective August 1, 1982. (Order 83-82)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
RAINBOW Red River	1	0	0	Single 160-acre Red River spacing unit. (Order 69-82)
RAPELJE Eagle-Virgelle-Clagget	0	9	3	160-acre spacing for formations from surface to base, Telegraph Creek. Wells no closer than 990' to unit boundary. Commingling after administrative approval. (Order 29-73)
RATTLER BUTTE Tyler	4	0	2	Statewide.
RATTLESNAKE BUTTE Amsden Cat Creek	5 3	0 0	1 0	Statewide. SWD approved EPA 86, 87.
RATTLESNAKE COULEE Bow Island Sunburst	0 0	2 1	0 0	Statewide.
RAYMOND Duperow Mississippian Nisku Red River Winnipegosis	0 4 2 2 2	1 0 0 0 0	0 3 0 0 0	320-acre spacing units for Red River, Winnipegosis, Duperow, and Nisku formations. Wells 660' from spacing unit boundary. (Order 38-72) Gas Storage. (Order 50-78 and amended by Order 60-79) Mississippian pool delineation with 40-acre spacing units, wells no closer than 330' to spacing unit boundary. (Order 35-79) Field enlargement for Mississippian pool. (Orders 31-80 and 128-80) Field reduction for Nisku pool. (Order 135-81) Nisku Formation rules suspended for unit except for 660' setback distance from external unit boundaries. (Order 3-86) 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 Ratcliffe Formation. (Order 131-A-81) Authorization to inject Duperow gas into the Nisku Formation. (Order 135-81)
REAGAN Madison	54	1	12	Statewide. (Order 17-54) A pressure maintenance project utilizing gas injection was started in 1961. (Order 21-60) Waterflood. (Order 27-72)
RED BANK Madison Red River	9 1	0 0	2 1	Statewide. Produced water disposed into the Dakota Formation. (Order 10-A-82) SWD approved EPA-90.
RED BANK, SOUTH Red River	1	0	0	Statewide.
RED CREEK Cut Bank-Madison	13	0	6	40-acre spacing units; wells in center of spacing unit with 75' topographic or obstruction tolerance; spacing and field rules waived for unitized portion. (Orders 16-58, 31-64, 5-70) Field enlarged. (Order 9-62), redelineated. (Order 73-62) Excess produced water injected into Bow Island and Madison. (Orders 22-63, 37-64, 40-A-83, and 19-A-84) A waterflood project in the Cut Bank sand was initiated in June 1965, using Madison water. Enhanced recovery approved EPA-86, 87, 90.
RED FOX Nisku	1	0	0	Field consists of one 160-acre spacing unit for Nisku production which straddles the section line. (Order 20-67)
RED ROCK Eagle Judith River	0 0	7 0	3 3	Eagle Spacing units consisting of the N 1/2 and S 1/2 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)
RED WATER Bakken	1	0	0	Statewide.
RED WATER, EAST Red River	1	0	0	320-acre spacing units for Red River Formation consisting of 2 contiguous quarter sections with permitted well to be no closer than 660' to exterior boundaries of spacing unit. (Order 31-83)
REFUGE Red River	1	0	0	Statewide.
RESERVE Red River Winnipegosis	1 1	0 0	0 0	Delineated for Red River, Silurian, and Winnipegosis production with 160-acre spacing units; permitted well within 1,320' square in center of quarter section. Commingling of Red River and Interlake production permitted on individual well basis. (Orders 34-66, 27-67) Field reduction. (Order 68-85) Excess water injected into Dakota sand. (Order 23-A-67) SWD approved EPA-85.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
RESERVE II				
Red River	1	0	0	Single 160-acre spacing unit for Red River. (Order 44-87)
Interlake	1	0	0	Single 160-acre spacing unit for Winnipegosis, Interlake and Gunton. (Order 55-88)
RICHEY AND AREA				
Charles	3	0	1	Statewide. Original 80-acre spacing revoked. (Order 11-73) Excess produced water injected into Second and Third Cat Creek sands. (Order 10-58)
RICHEY, SOUTHWEST				
Interlake	6	0	3	160-acre spacing units for production from Devonian, Silurian, and Ordovician; 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)
RIDGELAWN				
Duperow	4	0	2	160-acre Duperow spacing units; wells no closer than 660' to spacing unit boundary with
Madison	18	1	2	150' topographic tolerance. (Order 18-89)
Red River	3	0	0	Ridgelawn Duperow Unit approved for secondary recovery. (Orders 49-89, 55-89 and 11-90) Unit EPA approved-90. SWD approved EPA 86.
RIPRAP COULEE				
Ratcliffe	5	0	0	160-acre spacing units for Ratcliffe; wells located no closer than 660' from spacing unit boundary with 150' topographic and geologic tolerance. (Order 93-84)
RIVER BEND				
Red River	1	0	0	Statewide.
ROCKY BOY AREA				
Eagle	0	5	1	Statewide.
Judith River	0	0	1	
ROCKY POINT				
Red River	1	0	0	320-acre Red River spacing unit; well to be located no closer than 660' from exterior boundary. (Order 22-79)
ROSCOE DOME				
Lakota	0	0	3	Statewide. Steam injection into Greybull and Lakota formations. (Order 40-82)
ROSEBUD				
Tyler	3	0	2	Statewide. Rosebud "Tyler B" waterflood unit approved. (Order 30-91) EPA-91.
ROYALS				
Dawson Bay	1	0	0	Statewide.
RUDYARD				
Eagle	0	1	0	640-acre spacing units for Sawtooth gas production consisting of one section; well location
Sawtooth	2	3	1	in center of NW 1/4 of section with 75' topographic tolerance. (Order 2-58) Field boundaries reduced. (Order 39-76)
RUNAWAY				
Madison	1	0	0	Statewide.
RUSH MOUNTAIN				
Winnipegosis	1	0	0	Statewide. Dual zone completion in discovery well. Commingling of Gunton and
Red River	0	0	1	Winnipegosis in Hoffelt #2 well approved. (Order 17-85) Excess water injected into Dakota Sand. (Order 5-A-71) SWD approved EPA-87.
SAGE CREEK				
Blackleaf	0	2	0	640-acre spacing for horizons above the Kootenai, one producing well per section per
Bow Island	0	1	0	formation to be located no closer than 990' from section line. (Order 38-77) Amended field
Second White Specks	0	14	3	boundary. (Order 86-79) Field enlargement. (Order 33-81, 65-83 and 36-84)
SALT LAKE				
Nisku	2	0	1	Statewide. Produced water disposed into Nesson (Madison) Formation. (Order 61-A-80)
Gunton	1	0	0	SWD approved EPA-88.
Red River	2	0	0	Four 160-acre spacing units for Red River Formation with production allocation by
Bakken	0	0	1	stipulated agreement. (Order 48-89)
Ratcliffe	1	0	0	
SANDWICH				
Swift	0	1	0	320-acre spacing units for production of gas from Swift. Well located no closer than 990' to spacing unit boundaries. (Order 17-77)
SATURN				
Ratcliffe	1	0	0	Statewide. SWD approved EPA-88.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SAWTOOTH MOUNTAIN & AREA				
Eagle	0	31	2	640-acre spacing units for Eagle and Judith River formations, one well per section per formation, location to be not less than 990' from governmental section line. (Order 45-76) Amended to allow one well per formation per quarter section in six sections. Wells no closer than 660' to quarter section lines and 990' to section lines. (Order 65-85) Amended to allow 4 wells per formation per section for 3 additional sections. (Ordered 62-89)
Judith River	0	3	3	
SECOND CREEK				
Duperow	1	0	1	303.1-acre Red River spacing unit. (Order 34-78) (Order 127-A-82) 160-acre Duperow spacing units; well locations for each unit to be as specified by Order 119-80. Produced water injected into Dakota/Lakota formations.
Red River	3	0	0	
Mission Canyon	1	0	0	
SECOND GUESS				
Madison	2	0	0	40-acre spacing units for oil production from top 100' of Mississippian Madison Formation to the surface. Wells to be located no closer than 330' to the spacing unit boundaries with 75' for topographic tolerance. (Order 57-91)
SHELBY AREA				
Sunburst	0	1	0	Statewide.
SHELBY, EAST				
640-acre spacing units for all formations from the surface to the top of the Rierdon Formation. (Order 8-91) Field enlarged and amended to allow 2 wells per spacing unit no closer than 990' to the section line and no closer than 990' to another well in the same section producing from the same horizon. (Order 45-91) Field enlarged for Bow Island production (Order 61-91).				
SHERARD				
Eagle	0	42	25	640-acre Eagle spacing units; 990' from section line. (Order 1-74) 160-acre Eagle spacing units for Section 8, T25N, R17E; Wells located no closer than 990' from section line, 660' from quarter section line. (Order 7-77) Enlarged field boundary with well locations no closer than 660' from quarter section line in enlarged area. (Order 4-83) 320-acre Eagle gas spacing units for Sections 19 and 30, T26N, R17E; wells located no closer than 990' to unit boundaries. (Order 24-87)
Judith River	0	3	4	
SHOTGUN CREEK				
Ratcliffe	3	0	0	Statewide.
SIDNEY				
Madison	15	0	3	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 1,650' 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) SWD approved EPA-86.
Red River	2	0	0	
SIDNEY, EAST				
Madison	8	0	0	Statewide.
SINGLETREE				
Red River	1	0	0	Single spacing unit for productin from Winnipegosis. (Order 78-84) Produced water disposed into Dakota Formation. (Order 59-A-80)
SIOUX PASS				
Red River	6	0	0	320-acre spacing units (Interlake and Red River) consisting of two adjacent governmental quarter sections lying north-south or east-west at operator's option. Permitted well no closer than 660' from unit boundary. 160-acre spacing units (Mission Canyon) with well no closer than 660' from unit boundary. Commingling of Interlake and Red River production authorized. (Orders 10-75, 15-77) Amended field boundary. (Order 15-77) Field reduction. (Order 89-81) Excess water injected into Dakota Formation (Order 15-A-75) SWD approved EPA-86.
Interlake	1	0	0	
Duperow	1	0	0	
SIOUX PASS, EAST				
Red River	1	0	0	Statewide.
SIOUX PASS, MIDDLE				
Red River	6	0	0	320-acre spacing units for Red River Formation to consist of two contiguous governmental quarter sections at operator's option. Location to be no closer than 660' from exterior boundary of unit and no closer than 1,650' from well producing from same formation. Commingling permissible with Administrative approval. (Order 55-76) An exception to Order 55-76 by (Order 39-81).
SIOUX PASS, NORTH				
Madison	3	0	0	320-acre spacing units for Red River, Interlake, Winnipegosis, Nisku, Madison; well locations at least 660' from unit boundary. (Orders 12-75, 17-76, 8-79) Commingling approved. (Order 17-76) 150'topographic tolerance. (Order 10-81) Field extensions. (Orders 12-77, 13-79 and 48-81) Produced water injected in Dakota-Lakota formations. (Order 34-A-75) Two 320-acre spacing units for Duperow. (Orders 107-80, 74-82) SWD approved EPA-90.
Ratcliffe	1	0	0	
Red River	10	0	0	
Red River/Nisku	1	0	0	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SIOUX PASS, SOUTH Red River	2	0	0	Statewide.
SNOOSE COULEE Bow Island Sunburst	1 0	8 1	1 0	640-acre spacing units for Bow Island and shallower formations; location no closer than 990' from spacing unit boundary. (Order 18-77) 320-acre Sunburst gas spacing unit approved. (Order 58-88)
SNYDER Tensleep	3	0	1	10-acre spacing units with center 5-spot permitted; 150' topographic tolerance. (Order 45-62)
SOAP CREEK Madison-Amsden Tensleep	21 9	0 0	3 2	One well per 10-acre spacing unit per producing formation; well location in center of spacing unit with 100' topographic tolerance. Delineation includes Madison, Amsden, and Tensleep formations. (Order 26-60)
SOAP CREEK, EAST Tensleep	3	0	0	Statewide.
SOBERUP COULEE Bow Island	0	1	0	320-acre 2nd Bow Island Sandstone spacing units, consisting of E 1/2 and W 1/2 of delineated section with locations no closer than 660' to spacing unit boundaries. (Order 25-79)
SOUTH FORK Mission Canyon Red River	1 2	0 0	0 0	Statewide. SWD approved EPA-87.
SPRING COULEE Sawtooth 2nd White Specks	0 0	1 1	1 0	Statewide.
SPRING LAKE Bakken Red River	3 2	0 0	0 0	Delineated for Red River and Nisku formations with one well per 160-acre spacing unit. Well location anywhere within 840' square in center of spacing unit. (Order 6-63) Field redelineation. (Orders 30-76, 49-76)
SPRING LAKE, WEST Bakken	1	0	0	Single 160-acre Duperow spacing unit. (Order 42-82)
STAMPEDE Bakken Red River	1 1	0 0	0 0	320-acre specified spacing units for the Red River Formation. 160-acre spacing units for the Duperow Formation with well location to be no closer than 660' from a spacing unit boundary line. (Order 19-82)
STENSVAD Tyler	8	0	10	40-acre spacing units; well location in center of spacing unit with 200' tolerance. (Orders 2-59 and 7-60) Wells may be drilled anywhere within waterflood unit boundary, no closer than 660' from unit boundary. (Order 5-65, amended) SWD approved EPA-86. Field enlarged. (Order 22-59) Produced water injected into Madison. (Order 38-62) Waterflood area enlarged. (Order 9-67)
STRAWBERRY CREEK AREA Bow Island Burwash	0 0	1 1	0 0	Statewide.
STUDHORSE Tyler	3	0	1	Statewide.
SUMATRA Amsden-Tyler Heath Madison	62 1 0	0 0 0	54 0 1	40-acre spacing units; well located in center of unit with 75' tolerance. (Order 14-58) Field redelineated. (Orders 14-75 and 16-72) Vacuum pumps permitted on certain wells. (Orders 99-79 and 32-80) Seven waterflood units using Madison water. (Orders 48-67, 6-69, 19-69, 23-69, 5-75, 21-78, and 43-80) Produced water disposed into Madison Formation. (Order 7-A-76) Convert CSTSU, SESTSU and Kincheloe Sumatra Unit to tertiary recovery projects. (Orders 99-84, 100-84 and 29-85) CSTSU enhanced recovery approved EPA-88. SWD approved EPA-89. Produced water into Amsden (Order 18-58) and Lower Tyler. (Order 47-A-75) Enhanced recovery approved Kincheloe. (EPA-91)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SUNNYHILL				
Madison	2	0	0	320-acre Red River & Duperow spacing units; location to be no closer than 660' to the section or quarter section line which is the exterior boundary of the unit nor closer than 1,650' to any well producing from same formation. 160-acre Madison spacing units consisting of regular quarter sections; location no closer than 660' to section or quarter section lines. (Order 39-78) Field boundaries reduced. (Order 79-84) Produced water disposed into Dakota Formation (Order 27-A-80)
Red River	1	0	0	
SUNNYHILL, WEST				
Red River	1	0	0	Statewide. SWD approved EPA-85.
SWANSON CREEK				
Bowdoin-Greenhorn-Phillips	0	58	2	320-acre spacing units; (Order 36-75) amended to enlarge field and provide that spacing units may run north-south or east-west with permitted wells to be no closer than 990' to section or quarter section lines. (Order 11-78) Field boundaries extended by Orders 32-78, 92-79, 66-80 and 55-81. All previous Swanson Creek orders are amended to allow one additional well in each existing 320-acre spacing unit that shall be drilled in a manner that there be no more than one well per quarter section and located no closer than 660' to the quarter section boundaries. (Order 28-82)
SWEETGRASS				
Sunburst	0	2	0	Single Sunburst gas spacing unit. (Order 121-82)
TARGET				
Madison	9	0	1	Single spacing unit for Mission Canyon/Ratcliffe formations. (Order 18-82) Amendment to Order 18-82 for field enlargement and establishing 160-acre spacing units with permitted well locations to be no closer than 660' from the unit boundaries. 150' tolerance for topographic reasons. (Order 35-82) Field enlargement. (Order 23-84) SWD approved EPA-86.
Madison/Nisku	1	0	0	
THIRTY MILE				
Sawtooth	2	0	0	Statewide.
THREE BUTTES				
Red River-Gunton	1	0	0	160-acre spacing units for Madison group formations, with well location no closer than 660' from governmental quarter section line or unit boundary. (Order 11-81).
Mission Canyon	0	0	1	
Bakken	1	0	0	
THREE MILE				
Eagle	0	2	4	Statewide.
TIBER				
Bow Island	0	3	0	Two wells per each gas producing horizon per section, from the surface to and including the Kootenai Formation; 990' setbacks and 1,320' between wells in each section. (Orders 143-81, 21-84 and 28-85)
TIBER, EAST				
Bow Island	0	7	0	Two wells from same Bow Island horizon per section no closer than 990' to section lines and 1,320' to each other. (Orders 21-84 and 28-85)
TIGER RIDGE & AREA				
Eagle	0	281	83	Field delineation and redelineations. (Orders 17-67, 23-68, 10-70, 13-75, 46-78, 48-79, 26-80, 30-89, 10-90 and 66-91) Statewide spacing for field area not unitized. Spacing rule amendments. (Orders 11-72, 41-72, 32-73, 37-75, 51-77, 52-77, 79-79, 26-80, 50-80, 51-80, 54-80, 26-82, 27-82, 14-84, 26-85, 48-85, 49-85, 56-85, 23-89, 24-89, 25-89 and 9-90) Excess produced water injected into Eagle Formation. (Orders 19-A-73, 46-A-75) (Order 19-A-73) Amended by Order 60-A-78. SWD approved EPA-87.
Judith River	0	3	1	
TIGER RIDGE, NORTH				
Eagle	0	0	1	160-acre spacing units; one well per horizon per spacing unit from the Virgelle Formation to the surface. Well to be no closer than 990' to the section line nor closer than 660' to the interior quarter section line. (Order 80-79)
TIMBER CREEK				
Sunburst	0	1	0	320-acre Sunburst Sandstone spacing units consisting of two contiguous quarter sections oriented either North-South or East West; locations no closer than 660' to internal spacing unit boundaries, or 990' to external boundaries.
TINDER BOX				
Tyler	1	0	0	Statewide.
TIPPY BUTTES				
Tyler	1	0	0	Statewide. Water injection into lower Tyler Formation. (Order 57-82)

OIL AND GAS FIELDS

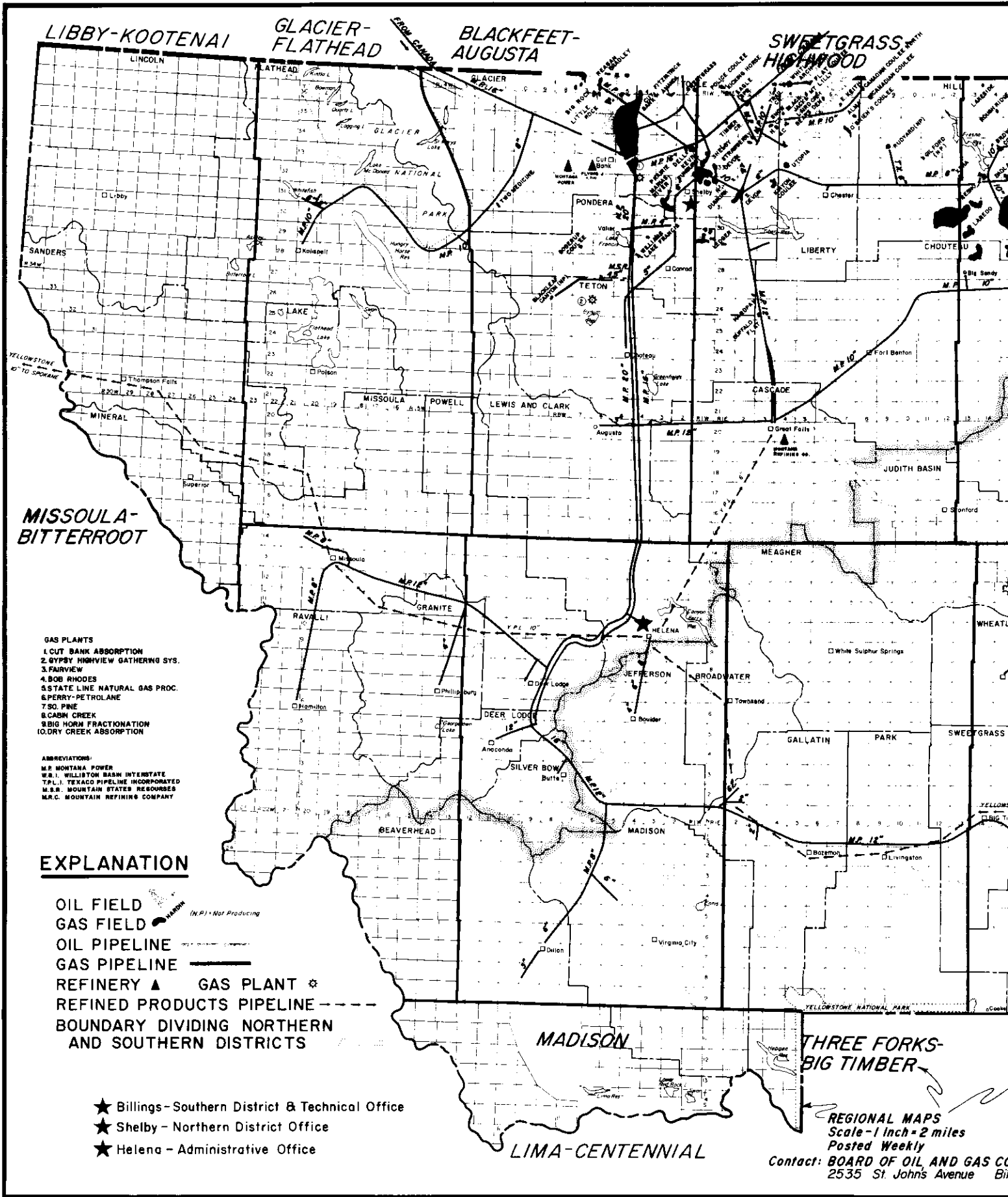
Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
TRAIL CREEK				
Bow Island	0	4	1	One well per 320-acres consisting of S 1/2 and N 1/2 of each governmental section but not closer than 990' from spacing boundary. (Orders 33-70, 28-76) Field enlargements. (Order 135-80)
Swift-Sunburst	0	3	0	
TULE CREEK				
Nisku	3	0	1	160-acre spacing units with permitted well anywhere within 1,320' square in center of each unit. (Orders 26-62, 6-65, 11-67, 5-77, 52-86) Produced water injected into Dakota and Judith River formations. (Orders 13-61, 12-66, 24-67, 8-A-76, 134-A-81) Produced water disposed into Dakota Formation. (Order 38-A-82) SWD approved EPA 86.
Devonian	1	0	0	
TULE CREEK, EAST				
Nisku	1	0	0	160-acre Nisku spacing units for Devonian Nisku with permitted well anywhere within 1,320' square in center of each unit. (Orders 40-64, 6-65, 4-86) Water injected into Judith River Formation. (Order 13-68) Water injected into Nisku Formation. (Order 28-A-79) SWD approved EPA-89.
TULE CREEK, SOUTH				
Nisku	1	0	1	160-acre Nisku spacing units with permitted well anywhere within a 1,320' square in center of each unit. (Orders 34-64, 6-65) Authority given to dispose of produced water into Dakota. (Order 44-64) Into Judith River Formation. (Order 29-67)
TWO FORKS				
Eagle	0	0	1	Statewide.
Judith River	0	0	1	
TWO WATERS				
Bakken	2	0	0	Statewide.
Duperow	1	0	0	
UTOPIA				
Bow Island	0	4	0	640-acre spacing units for formations between top of Kootenai, and top of Greenhorn; well location may be anywhere within the unit but no closer than 990' to any governmental section line. (Order 13-80) 40-acre spacing units for Swift Formation; location to be in center of quarter-quarter section with no more than 100' topographic tolerance. (Order 9-78) Order 9-78 amended. Spacing units shall consist of 1 well per quarter-quarter section no closer than 330' from the section boundary. (Order 96-81) Utopia Swift Unit approved for secondary recovery. (Orders 11-89, 38-89 and 33-90) Enhanced recovery approved. (EPA-91)
Sawtooth	0	2	0	
Swift	23	0	4	
VALIER				
Blackleaf	0	2	0	320-acre spacing units for production of gas from all formations from the top of the Kootenai Formation to the surface; One well per spacing unit per formation, wells no closer than 660' to spacing unit boundaries and 990' to field boundaries. (Order 12-91)
VANDALIA				
Carlile	0	8	0	160-acre spacing units; where discrete gas formations (Bowdoin, Greenhorn, and Phillips) exist a well may be drilled to each discrete formation and to be located no closer than 660' to the unit boundaries. (Order 61-82)
Green Horn	0	0	1	
VAUX				
Interlake	2	0	0	Statewide. Single spacing unit with commingling approved for Madison group. (Order 63-83) Single spacing unit for Mississippian Bakken formation. (Order 20-86) Single 160-acre spacing unit for Mission Canyon Formation. (Order 25-87) Produced water injected into the Dakota Formation. (Order 44-A-79 and 109-A-82)
Madison	17	0	1	
Red River	3	0	0	
Dawson Bay	1	0	0	
Stonewall	1	0	0	
Bakken	1	0	0	
VOLT				
Madison	1	0	0	160-acre Nisku spacing units with permitted well anywhere within a 1,320' square in center of each unit. (Orders 27-64, 6-65, 32-65) Excess produced water is disposed into Judith River. (Orders 3-65, 37-A-74) SWD approved EPA-87.
Nisku	5	0	0	
WAKEA				
Red River	3	0	0	Two 320-acre spacing units. (Order 84-83) Field enlarged. (Order 34-84) Wells located no closer than 660' to spacing unit boundaries. Delineation includes Red River, Nisku, Duperow, Winnipegosis, Interlake and Gunton formations. Commingling of production from Nisku and Duperow formations approved for one well. (Order 59-91)
Winnipegosis	2	0	0	
Nisku/Duperow	3	0	0	
WEED CREEK				
Amsden	1	0	1	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
WEST BUTTE				
Bow Island	0	3	1	Sawtooth-Madison gas commingled, unitized. (Order 5-72) No well closer than 330' from unit boundary.
Sunburst	3	0	3	
WEST BUTTE SHALLOW GAS				
Bow Island-Dakota	0	2	0	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' from the spacing unit boundaries. (Order 39-77)
WEYGAND				
Sawtooth	4	0	0	Statewide.
WHITEWATER FIELD				
Bowdoin/Greenhorn/Phillips	0	106	8	640-acre spacing units with 2 wells per formation. (Orders 41-82 and 14-89) Amend to allow 4 wells per formation per spacing unit no closer than 660' to spacing unit boundaries, 1,320' between wells producing from the same formation with 150' of tolerance for geologic or topographic reasons. (Order 15-89) Pilot infill drilling program approved for a portion of the field with up to 8 wells per spacing unit with between well distance reduced to 990'. (Order 15-91)
Carlile	0	97	2	
Carlile/Greenhorn	0	20	0	
WHITEWATER, EAST				
Bowdoin-Greenhorn-Phillips	0	7	1	640-acre spacing units with two wells allowed per formation to be located anywhere within the spacing unit but not closer than 990' to spacing unit boundary. (Order 100-83) Amend to allow 4 wells per formation per spacing unit no closer than 1,320' to another well producing from the same formation with 150' tolerance for geologic or topographic reasons. (Order 65-89)
WHITLASH				
Bow Island-Dakota-Spike	1	29	10	Gas: 300' from legal subdivision line and 2,400' between wells, 75' topographic tolerance. Oil: 330' from legal subdivision line and 650' between wells; 5-spot location at center of 40-acre tract permitted; 75' topographic tolerance. (Orders 16-54, 27-70) Order 16-54 amended to include S 1/2 of Section 30, T37N, R4E. SW 1/4 of 30 is 1 spacing unit, SE 1/4 is the other. Well location no closer than 990' from spacing unit boundary. (Order 45-81)
Madison	0	1	0	
Swift-Sunburst	54	8	27	
WHITLASH, WEST				
Bow Island	0	1	0	Gas: 160-acre spacing units consisting of quarter sections; well location anywhere within a 660' square in center of spacing unit. Oil: 330' from legal subdivision line, 650' between wells in same reservoir on same lease; 5-spot location permitted. (Orders 61-62, 22-65 as amended) Orders 61-62 amended by Order 48-77. Field extension. (Order 18-79)
Swift-Sunburst	3	5	7	
WILLIAMS				
Bow Island	0	16	4	640-acre spacing unit; well to be located no closer than 990' to exterior boundary for all formations above the Kootenai. (Order 49-79) Amendment enlarging field boundary. (Order 102-79, 11-83)
WILLOW CREEK, NORTH				
Tyler	3	0	1	Statewide. Pilotflood. (Order 19-72)
WILLOW RIDGE				
Bow Island	0	11	2	640-acre spacing units; location to be no closer than 990' to unit boundary for gas production from all formations from the surface to the top of the Kootenai. (Order 29-78) 40-acre spacing units for oil production from the Burwash, with 5 wells permitted in each spacing unit; well may be located in the center of each 10 acre quarter-quarter-quarter section and one in the center of each 40-acre subdivision with a 75' topographic tolerance allowed. (Order 30-78)
Burwash	4	0	0	
Dakota	0	1	0	
Sunburst	0	1	0	
Swift	0	1	0	
WILLOW RIDGE, SOUTH				
Sunburst	0	1	3	Statewide.
WILLOW RIDGE, WEST				
Bow Island	0	4	1	640-acre spacing units for formations between the top of the Kootenai and the surface; wells to be located no closer than 990' to unit boundaries. (Order 3-88)
WILLS CREEK, SOUTH				
Silurian-Ordovician	3	0	0	160-acre spacing units for Siluro-Ordovician. Well location in center of SE 1/4 of each unit with 175' topographic tolerance. (Orders 5-64, 30-66) Waterflood initiated 12-1-73. (Order 23-73)
WINDMILL				
Red River	1	0	0	Statewide.
WINNETT JUNCTION				
Tyler	3	0	1	20-acre spacing units. Units to be designated as W 1/2 and E 1/2 of quarter-quarter section, no closer than 120' to the boundary of a spacing unit. (Order 57-76) Certain lands bound by Order 57-76 vacated by Order 41-77. A waterflood operation commenced October 1, 1977 into Tyler Formation. (Order 41-77)

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-in	Spacing Regulations, Field Rules, and Remarks
WOLF SPRINGS & AREA Amsden	6	0	0	80-acre Amsden spacing units consisting of N 1/2 and S 1/2 of each quarter section. Well location in center of NW 1/4 and SE 1/4 of each quarter section with 75' topographic tolerance. (Orders 4-56, 9-59) Boundary changes. (Order 92-76 and 5-90)
WOLF SPRINGS, SOUTH Amsden	4	0	3	80-acre spacing units for Amsden comprised of W 1/2 or E 1/2 of quarter section; wells located center of NW 1/4 or SE 1/4 of quarter section with 150' topographic tolerance. (Order 57-84) Field enlargement. (Order 8-85)
WOODROW Charles	1	0	0	80-acre spacing units consisting of any two adjacent quarter-quarter sections; well locations in center of NE 1/4 and SW 1/4 of each quarter section with 200' topographic tolerance. (Order 47-62) Produced water injected into Dakota. (Order 48-62)
Siluro-Ordovician	1	0	1	
WRANGLER Red River	2	0	0	320-acre spacing units for production from Red River Formation consisting of W 1/2 and E 1/2 of S25 T34N R56E. (Order 44-85)
WRANGLER, NORTH Red River	1	0	0	Statewide.
WRIGHT CREEK Muddy	5	0	2	80-acre spacing units for Muddy Sandstone production consisting of N 1/2 and S 1/2 of quarter section with locations in NW 1/4 and SE 1/4 of each quarter section with 200' tolerance. (Order 27-69) Field area reduction. (Order 69-76) Excess produced water is disposed of into the Muddy Formation. (Order 8-A-77) SWD approved EPA-87, 89.
YATES Ratcliffe	1	0	0	320-acre spacing units; well locations as specified for the Duperow and Red River formations that may be dually completed. (Order 92-81) Single 320-acre spacing unit for Ratcliffe/Mission Canyon formations. (Order 22-86)



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

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

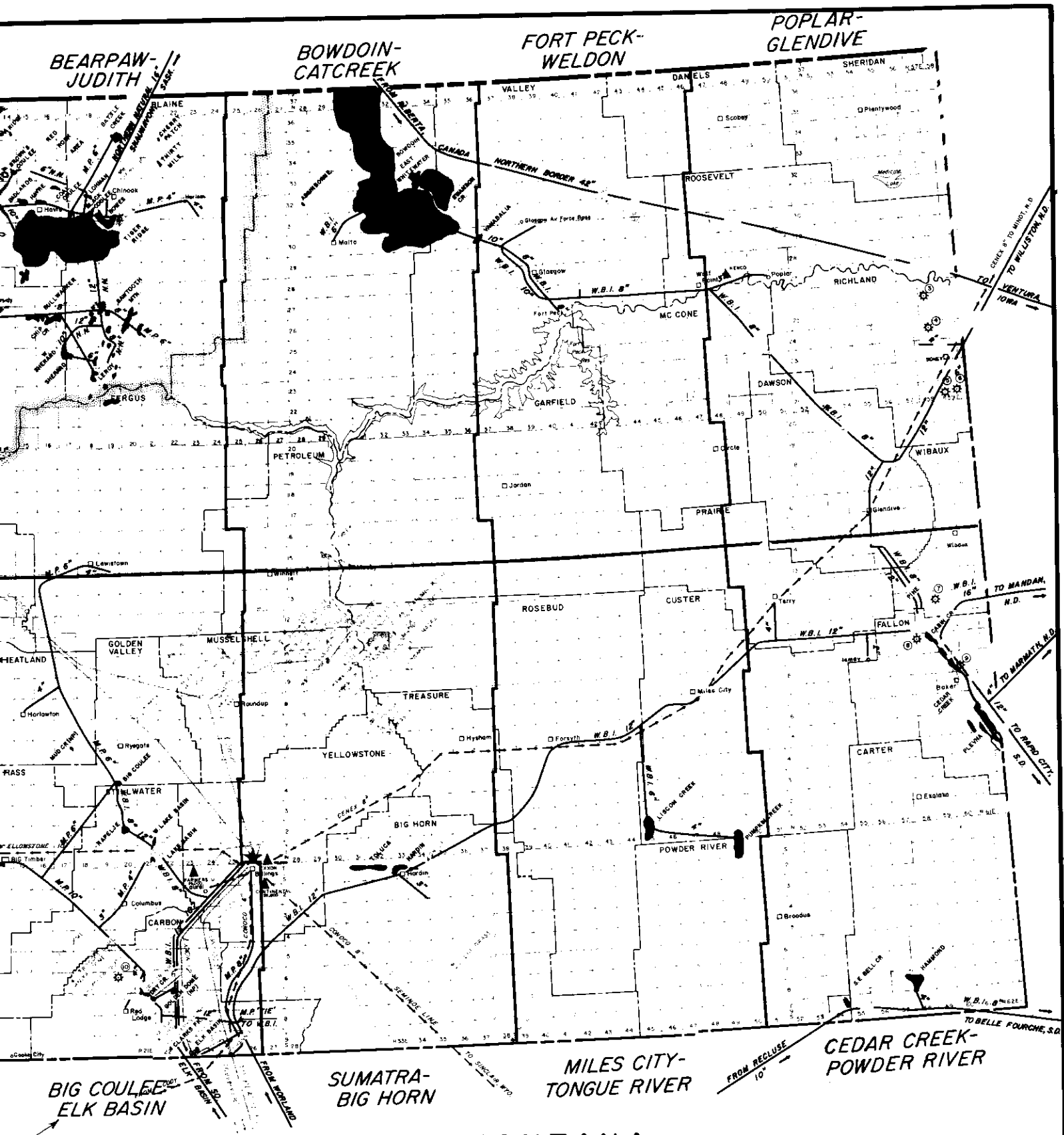
EXPLANATION

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

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

THREE FORKS-BIG TIMBER

REGIONAL MAPS
 Scale - 1 inch = 2 miles
 Posted Weekly
 Contact: BOARD OF OIL AND GAS COMMISSIONERS
 2535 St. John's Avenue, Billings, Montana



MONTANA
OIL AND GAS FIELDS, PIPELINES AND REFINERIES
 1987

BOARD OF OIL AND GAS CONSERVATION

U.S. CONSERVATION
 Billings, Mont. 59102 (406) 656-0040

SUMMARY OF PRODUCING OIL FIELDS

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP	
											PRIM.	SECND.		M BBLS	BB
1	Anvil	Nisku/Winn	Roosevelt	1981	10,900	40	1.50	14	17	34	43	0	320	2,600	
2	Anvil	Ratcliffe	Roosevelt	1982	8,990	36	1.35	22	11	50	12	0	320	2,225	
3	Anvil	Red River	Roosevelt	1978	12,600	47	1.63	26	14	32	11	0	2,560	30,159	1
4	Arch Apex	Swift/Sunburst	Toole	1980	8,400	37	2.00	8	8	90	51	0	320	79	
5	Ash Creek	Shannon	Big Horn	1952	4,500	34	1.00	14	22	42	26	5	200	2,772	
6	Bainville	Ratcliffe	Roosevelt	1988	8,630	38	0.00	16	0	0	0	0	160	0	
7	Bainville	Siluro/Ord.	Roosevelt	1969	12,402	44	0.00	0	0	0	0	0	1,920	0	
8	Bainville II	Red River	Roosevelt	1981	12,700	42	1.20	40	10	35	5	0	960	16,137	1
9	Bainville North	Madison	Roosevelt	1980	8,800	30.3	0.00	13	14	52	0	0	320	0	
10	Bainville North	Red River/Interlake	Roosevelt	1979	12,400	43	1.55	40	9	32	4	0	2,240	27,446	1
11	Bainville North	Winnipegosis	Roosevelt	1979	11,400	44	1.60	35	7	20	15	0	960	9,123	
12	Bainville West	Red River	Roosevelt	1978	8,500	34	1.50	12	6	45	13	0	960	1,966	
13	Beanblossom	Lower Tyler	Garfield	1985	4,562	0	0.00	0	0	0	0	0	480	0	
14	Bears Den	Swift	Liberty	1924	2,300	39	1.08	20	9	35	20	0	360	3,026	
15	Bell Creek	Muddy	Powder River	1967	4,400	36	1.11	10	26	23	57	28	8,240	115,297	1
16	Benrud East	Nisku	Roosevelt	1962	7,500	46	1.37	22	15	30	39	0	640	8,372	1
17	Benrud Northeast	Nisku	Roosevelt	1964	7,400	46	1.40	23	16	30	46	0	160	2,284	1
18	Big Muddy Creek	Red River	Roosevelt	1975	11,900	48	1.72	11	14	36	23	0	1,280	5,690	
19	Big Wall	Amsden	Musselshell	1953	2,500	19	1.01	17	16	35	31	0	280	3,802	
20	Big Wall	Lower Tyler Unit	Musselshell	1948	3,000	31	1.02	22	17	40	33	1	1,220	20,822	
21	Big Wall	Upper Tyler Unit	Musselshell	1948	3,000	0	0.00	0	0	0	0	0	480	0	
22	Black Diamond	Nisku/Madison	Wibaux	1981	11,310	27	1.31	4	40	10	12	0	640	5,458	
23	Blackfoot	Devonian/Madison	Glacier	1957	3,500	30	1.10	15	15	35	16	22	360	3,713	
24	Bloomfield	Dawson Bay	Dawson	1984	10,500	41	1.38	15	2	25	42	0	320	405	
25	Bloomfield	Interlake/Red River	Dawson	1983	10,650	43	1.32	13	4	0	17	0	800	2,445	
26	Border Old Unit	Cut Bank*	Toole	1929	2,400	31	1.08	22	15	30	12	2	480	7,965	
27	Box Canyon	Red River	Richland	1980	11,800	46	0.00	11	0	0	0	0	640	0	
28	Bradley	Madison/Sunburst	Glacier	1959	3,500	26	1.25	6	11	49	54	0	240	501	
29	Brady	Morrison/Sunburst*	Pondera	1942	1,500	34	1.01	10	12	30	5	0	680	4,387	
30	Breed Creek	Tyler	Roosevelt	1976	4,900	32	1.15	20	15	37	37	0	440	5,610	
31	Brorson	Madison	Richland	1954	9,600	32	1.40	40	5	40	14	0	1,760	11,703	
32	Brorson	Red River	Richland	1968	12,600	48	1.70	20	10	35	47	0	960	5,695	
33	Brorson South	Madison	Richland	1978	9,000	42	0.00	52	0	0	0	0	480	0	
34	Brorson South	Red River	Richland	1968	12,600	48	1.70	20	12	30	6	0	960	7,360	
35	Brush Lake	Red River	Sheridan	1969	11,400	40	1.50	30	14	35	10	0	2,240	31,628	
36	Burget East	Madison	Roosevelt	1981	9,000	0	0.00	36	0	0	0	0	640	0	
37	Burns Creek	Red River	Dawson	1972	11,400	39	1.25	14	14	40	5	0	640	4,671	
38	Cabin Creek Unit 1	Siluro/Ord.	Fallon	1953	9,000	33	1.20	50	13	30	17	11	14,560	428,293	1
39	Cabin Creek Unit 2	Madison	Fallon	1956	7,300	33	1.13	25	11	30	52	0	2,260	29,868	
40	Canal	Madison	Richland	1977	9,200	33	1.30	47	2	41	24	0	640	2,118	
41	Canal	Red River	Richland	1970	12,700	47	2.07	58	8	40	22	0	320	3,339	
42	Cannonball	Red River	Fallon	1980	10,300	34	2.00	14	11	34	13	0	160	631	
43	Carlyle	Red River	Wibaux	1978	10,700	37	1.30	12	12	27	8	0	640	4,015	
44	Cat Creek East Dome	Ellis	Petroleum	1920	1,200	52	1.10	6	22	40	33	8	880	4,915	
45	Cat Creek Mosby	Ellis	Petroleum	1945	1,700	52	1.10	25	18	40	11	1	880	16,757	
46	Cat Creek West Dome	1st and 2nd Cat	Petroleum	1920	1,100	52	1.10	51	21	19	17	5	1,480	90,551	
47	Cattails	Ratcliffe	Richland	1987	8,975	32	0.00	0	0	0	0	0	1,120	0	
48	Charlie Creek	Red River/Nisku	Richland	1976	9,900	42	1.60	12	6	35	50	0	640	1,452	
49	Charlie Creek East	Duperow	Richland	1987	10,475	0	0.00	0	0	0	0	0	320	0	
50	Charlie Creek East	Red River	Richland	1980	11,900	45	0.00	27	0	0	0	0	640	0	
51	Clear Lake	Madison	Sheridan	1978	7,600	33	1.15	10	5	30	35	0	960	2,267	
52	Clear Lake	Nisku	Sheridan	1979	9,000	43	1.53	31	11	27	3	0	320	4,039	
53	Clear Lake	Red River	Sheridan	1977	11,200	42	1.65	32	18	35	7	0	2,240	39,432	
54	Clear Lake South	Red River	Sheridan	1984	11,500	38	1.39	10	23	21	4	0	640	6,490	
55	Colored Canyon	Red River	Sheridan	1978	11,300	40	1.40	18	13	28	5	0	1,920	17,926	
56	Comertown	Bakken/Nisku	Sheridan	1983	10,672	36	1.30	13	17	39	11	0	640	5,149	
57	Comertown	Ratcliffe	Sheridan	1981	6,807	30	1.20	16	26	0	1	0	480	12,909	
58	Comertown	Red River	Sheridan	1980	10,500	30	1.30	19	10	38	39	0	800	5,624	
59	Comertown South	Red River/Nisku	Sheridan	1984	11,000	0	0.00	0	0	0	0	0	960	0	
60	Cow Creek East	Kibby	McCone	1971	6,300	35	1.05	15	15	0	10	0	1,600	26,599	
61	Crane	Devonian	Richland	1979	11,900	47	1.65	20	12	35	22	0	960	7,041	
62	Crane	Siluro/Ord.	Richland	1979	12,700	0	0.00	0	0	0	0	0	960	0	
63	Cupton	Red River	Fallon	1955	9,600	38	1.25	40	12	16	5	0	2,240	56,054	
64	Cut Bank	Cut Bank	Glacier/Toole	1932	2,900	31	1.09	18	15	35	22	6	49,000	612,064	
65	Dagmar	Red River	Sheridan	1976	11,300	37	1.65	22	16	35	4	0	1,280	13,770	
66	Dagmar North	Madison	Sheridan	1983	7,952	0	0.00	24	0	0	0	0	160	0	

PRODUCING OIL FIELDS—1991

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1991 PRODUCTION		CUMUL. PROD. 1-92 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC.	PRIM. (M BBLs)	SECND. (M BBLs)	TOTAL (M BBLs)	BBLs/ACRE	BBLs/ACRE FT.	BBLs	BOPD			
34	43	0	320	2,600	8,125	1,130	0	1,130	3,531	252	64,063	176	903	227	1
50	12	0	320	2,225	6,953	260	0	260	813	37	16,484	45	180	80	2
32	11	0	2,560	30,159	11,780	3,280	0	3,280	1,281	49	103,678	284	2,809	471	3
90	51	0	320	79	246	40	0	40	125	16	1,710	5	35	5	4
42	26	5	200	2,772	13,860	710	180	890	4,450	318	6,237	17	844	46	5
0	0	0	160	0	0	0	0	0	0	0	8,619	24	30	47	6
0	0	0	1,920	0	0	0	0	0	0	0	34,840	95	461	243	7
35	5	0	960	16,137	16,809	760	0	760	792	20	40,936	112	532	228	8
52	0	0	320	0	0	0	0	0	0	0	14,417	39	104	261	9
32	4	0	2,240	27,446	12,252	1,040	0	1,040	464	12	32,642	89	844	196	10
20	15	0	960	9,123	9,503	1,360	0	1,360	1,417	40	59,586	163	697	663	11
45	13	0	960	1,966	2,047	260	0	260	271	23	7,296	20	213	47	12
0	0	0	480	0	0	0	0	0	0	0	31,227	86	380	107	13
35	20	0	360	3,026	8,405	610	0	610	1,694	85	9,946	27	533	77	14
23	57	28	8,240	115,297	13,992	65,430	67,650	133,080	16,150	1,615	465,736	1,276	131,176	1,904	15
30	39	0	640	8,372	13,081	3,260	0	3,260	5,094	232	29,322	80	2,839	421	16
30	46	0	160	2,284	14,275	1,040	0	1,040	6,500	283	6,205	17	996	44	17
36	23	0	1,280	5,690	4,445	1,330	0	1,330	1,039	94	14,174	39	1,215	115	18
35	31	0	280	3,802	13,578	1,160	0	1,160	4,143	244	25,061	69	1,052	108	19
40	33	1	1,220	20,822	17,067	6,830	230	7,060	5,787	263	41,357	113	6,735	325	20
0	0	0	480	0	0	0	0	0	0	0	12,569	34	60	77	21
10	12	0	640	5,458	8,528	660	0	660	1,031	258	36,774	101	600	60	22
35	16	22	360	3,713	10,313	590	1,100	1,690	4,694	313	36,419	100	1,570	120	23
25	42	0	320	405	1,265	170	0	170	531	35	5,713	16	157	13	24
0	17	0	800	2,445	3,056	410	0	410	513	39	22,149	61	334	76	25
30	12	2	480	7,965	16,593	970	120	1,090	2,271	103	5,926	16	1,070	20	26
0	0	0	640	0	0	0	0	0	0	0	9,624	26	228	13	27
49	54	0	240	501	2,087	270	0	270	1,125	188	2,773	8	258	12	28
30	5	0	680	4,387	6,451	220	0	220	324	32	7,176	20	194	26	29
37	37	0	440	5,610	12,750	2,050	0	2,050	4,659	233	79,023	217	1,372	678	30
40	14	0	1,760	11,703	6,649	1,660	0	1,660	943	24	72,326	198	1,306	354	31
35	47	0	960	5,695	5,932	2,690	0	2,690	2,802	140	46,343	127	2,355	335	32
0	0	0	480	0	0	0	0	0	0	0	20,806	57	92	112	33
30	6	0	960	7,360	7,666	450	0	450	469	23	21,155	58	400	50	34
35	10	0	2,240	31,628	14,119	3,080	0	3,080	1,375	46	47,858	131	2,695	385	35
0	0	0	640	0	0	0	0	0	0	0	15,712	43	187	47	36
40	5	0	640	4,671	7,298	250	0	250	391	28	3,474	10	242	8	37
30	17	11	14,560	428,293	29,415	72,770	25,600	98,370	6,756	135	1,206,785	3,306	79,153	19,217	38
30	52	0	2,260	29,868	13,215	15,580	0	15,580	6,894	276	30,953	85	14,857	723	39
41	24	0	640	2,118	3,309	500	0	500	781	17	16,933	46	472	28	40
40	22	0	320	3,339	10,434	730	0	730	2,281	39	12,995	36	660	70	41
34	13	0	160	631	3,943	80	0	80	500	36	3,219	9	69	11	42
27	8	0	640	4,015	6,273	340	0	340	531	44	8,012	22	300	40	43
40	33	8	880	4,915	5,585	1,610	200	1,810	2,057	343	7,308	20	1,764	46	44
40	11	1	880	16,757	19,042	1,880	100	1,980	2,250	90	7,520	21	1,960	20	45
19	17	5	1,480	90,551	61,183	15,180	3,760	18,940	12,797	251	38,453	105	18,628	312	46
0	0	0	1,120	0	0	0	0	0	0	0	136,303	373	471	533	47
35	50	0	640	1,452	2,268	730	0	730	1,141	95	9,006	25	715	15	48
0	0	0	320	0	0	0	0	0	0	0	64,403	176	163	106	49
0	0	0	640	0	0	0	0	0	0	0	24,025	66	389	448	50
30	35	0	960	2,267	2,361	790	0	790	823	82	44,263	121	535	255	51
27	3	0	320	4,039	12,621	120	0	120	375	12	4,055	11	96	24	52
35	7	0	2,240	39,432	17,603	2,920	0	2,920	1,304	41	109,532	300	2,318	602	53
21	4	0	640	6,490	10,140	250	0	250	391	39	11,241	31	167	83	54
28	5	0	1,920	17,926	9,336	830	0	830	432	24	14,894	41	812	18	55
39	11	0	640	5,149	8,045	560	0	560	875	67	22,138	61	506	54	56
0	1	0	480	12,909	26,893	170	0	170	354	22	11,664	32	131	39	57
38	39	0	800	5,624	7,030	2,180	0	2,180	2,725	143	87,809	241	1,610	570	58
0	0	0	960	0	0	0	0	0	0	0	28,734	79	216	151	59
0	10	0	1,600	26,599	16,624	2,690	0	2,690	1,681	112	41,249	113	2,490	200	60
35	22	0	960	7,041	7,334	1,560	0	1,560	1,625	81	50,333	138	1,322	238	61
0	0	0	960	0	0	0	0	0	0	0	114,089	313	817	574	62
16	5	0	2,240	56,054	25,024	2,710	0	2,710	1,210	30	60,932	167	2,338	372	63
35	22	6	49,000	612,064	12,491	131,880	34,440	166,320	3,394	189	826,829	2,265	162,664	3,656	64
35	4	0	1,280	13,770	10,757	600	0	600	469	21	15,891	44	570	30	65
0	0	0	160	0	0	0	0	0	0	0	4,103	11	41	29	66

SUMMARY OF PRODUCING

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY *API	F.V.F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %	
											PRIM	SECN
67	Deer Creek	Charles	Dawson	1990	7,870	0	0.00	12	0	0	0	0
68	Delphia	Amsden	Musselshell	1957	6,300	35	1.15	12	7	30	18	0
69	Diamond Point	Red River	Roosevelt	1976	11,900	47	0.00	26	0	0	0	0
70	Divide	Madison/Ratcliffe	Sheridan	1979	7,900	33	1.35	25	7	42	19	0
71	Divide	Red River	Sheridan	1987	11,398	0	0.00	0	0	0	0	0
72	Dooley	Ratcliffe	Sheridan	1987	6,451	28	0.00	0	0	0	0	0
73	Dry Creek	Eagle/Virgelle	Carbon	1929	2,600	65	1.01	60	15	65	47	0
74	Dutch John Coulee	Sunburst	Toole	1985	2,040	0	0.00	0	0	0	0	0
75	Dwyer	Red River	Sheridan	1982	11,552	35	0.00	0	0	0	0	0
76	Dwyer Non Unit	Ratcliffe	Sheridan	1960	8,000	0	0.00	0	0	0	0	0
77	Dwyer Unit	Charles	Sheridan	1960	8,000	37	1.32	38	11	56	74	21
78	Eagle	Bakken/Duperow	Richland	1980	10,696	40	0.00	24	0	0	0	0
79	Eagle	Madison	Richland	1977	8,900	32	1.22	15	9	35	9	0
80	Eagle	Siluro/Ord.*	Richland	1982	12,448	38	0.00	0	0	0	0	0
81	Elk Basin	Frontier	Carbon	1915	1,400	0	0.00	0	0	0	0	0
82	Elk Basin	Madison	Carbon	1942	5,300	28	1.12	224	12	9	3	0
83	Elk Basin	Tensleep	Carbon	1942	5,000	29	1.16	124	11	10	24	0
84	Elk Basin Northwest	Madison/Tensleep	Carbon	1964	6,000	37	1.15	27	12	22	7	3
85	Enid North	Red River	Richland	1979	11,800	47	1.75	8	7	34	35	0
86	Fairview	Madison	Richland	1981	9,520	34	1.60	45	4	51	14	0
87	Fairview East	Red River	Richland	1981	12,800	48	1.50	24	13	32	6	0
88	Fairview East	Winnipegosis	Richland	1990	11,590	0	0.00	16	0	0	0	0
89	Fairview NW Unit	Red River	Richland	1965	12,700	0	0.00	0	0	0	0	0
90	Fairview Non Unit	Red River	Richland	1965	12,700	47	1.70	35	11	28	21	0
91	Fairview West	Madison	Richland	1980	9,200	37	0.00	60	3	0	0	0
92	Fertile Praire	Red River	Fallon	1952	9,300	29	1.20	6	14	27	34	0
93	Fishhook	Red River	Sheridan	1980	11,200	41	1.28	10	10	31	18	0
94	Flat Coulee NU	Swift	Liberty	1933	2,900	37	1.10	18	21	35	15	4
95	Flat Coulee Unit	Swift	Liberty	1933	2,900	37	1.10	18	21	35	19	0
96	Flat Lake	Madison/Nisku	Sheridan	1964	6,500	33	1.26	14	15	45	24	0
97	Flat Lake East	Madison	Sheridan	1984	6,523	28	0.00	0	0	0	0	0
98	Flat Lake South	Ratcliffe	Sheridan	1966	6,500	32	1.26	9	12	45	31	0
99	Fort Gilbert	Madison	Richland	1981	9,200	35	1.30	30	6	55	8	0
100	Fort Gilbert	Red River	Richland	1970	12,500	48	1.89	42	12	20	7	0
101	Four Mile Creek	Red River	Richland	1975	12,500	47	1.50	35	15	35	7	0
102	Four Mile Creek W.	Red River	Richland	1976	12,500	45	1.30	15	13	40	7	0
103	Frannie	Tensleep	Carbon	1929	2,700	27	1.02	29	19	16	28	0
104	Fred & George Creek	Swift/Sunburst	Field Total	1963	2,600	39	1.20	31	27	30	15	14
105	Froid South	Red River	Roosevelt	1970	12,100	48	1.55	12	17	25	11	0
106	Gage	Amsden	Musselshell	1944	6,000	38	1.32	16	18	36	13	0
107	Gas City	Red River/Madison	Dawson	1955	8,900	38	1.28	25	12	35	26	5
108	Girard	Bakken/Red River	Richland	1966	11,839	40	1.15	18	10	8	6	0
109	Girard	Red River	Richland	1985	11,850	44	0.00	8	0	0	0	0
110	Glendive	Siluro/Ord.	Dawson	1952	8,900	38	1.24	147	8	35	13	0
111	Goose Lake	Ratcliffe	Sheridan	1962	7,000	34	1.20	40	16	55	5	3
112	Goose Lake	Red River	Sheridan	1980	11,063	0	0.00	0	0	0	0	0
113	Goose Lake Southeast	Ratcliffe	Sheridan	1988	7,028	29	1.07	20	12	70	6	0
114	Goose Lake West	Red River	Sheridan	1981	11,500	39	0.00	29	0	0	0	0
115	Gossett	Madison	Richland	1979	9,550	31	0.00	0	0	0	0	0
116	Gossett	Red River	Richland	1983	12,331	0	0.00	11	0	0	0	0
117	Green Coulee	Red River	Sheridan	1981	11,100	32	1.40	18	15	56	5	0
118	Gunsight	Madison	Roosevelt	1980	9,550	36	0.00	0	0	0	0	0
119	Hay Creek	Mission Canyon	Richland	1969	9,600	39	1.15	40	5	0	9	0
120	Hay Creek	Siluro/Ord.	Richland	1969	12,600	46	1.90	53	12	30	7	0
121	Hiawatha	Tyler	Musselshell	1967	5,000	33	1.15	34	12	25	20	0
122	High Five	Tyler/Stensvad	Rosebud	1976	5,600	33	1.15	20	20	0	10	0
123	Highview	Madison	Pondera	1967	3,200	31	1.10	8	17	32	3	0
124	Howard Coulee	Tyler	Musselshell	1974	3,498	31	0.00	0	0	0	0	0
125	Intake II	Red River	Richland	1981	12,400	43	1.20	20	13	30	6	0
126	Ivanhoe	Tyler/Heath	Musselshell	1956	4,100	33	1.08	29	15	20	30	0
127	Jim Coulee Unit	Tyler	Musselshell	1971	3,700	33	1.10	37	15	33	3	13
128	Katy Lake	Red River	Sheridan	1984	11,523	0	0.00	11	0	0	0	0
129	Katy Lake North	Mission Canyon	Sheridan	1981	8,056	29	1.6	30	18	54	0	0
130	Katy Lake North	Nesson	Sheridan	1981	7,798	34	1.50	20	12	31	7	0
131	Katy Lake North	Red River	Sheridan	1979	11,300	46	1.42	19	15	30	20	0
132	Keg Coulee Tyler SU	Tyler	Musselshell	1960	4,600	33	1.00	19	14	32	26	3

SUMMARY OF PRODUCING OIL FIELDS—1991

F.V.F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1991 PRODUCTION		CUMUL. PROD. 1-92 (M BBLS)	RE-SERVES (M BBLS)	LINE NO.
				PRIM.	SECOND.		M BBLS	BBLS/AC.	PRIM. (M BBLS)	SECOND. (M BBLS)	TOTAL (M BBLS)	BBLS/ACRE	BBLS/ACRE FT.	BBLS	BOPD			
0.00	12	0	0	0	0	160	0	0	0	0	0	0	0	10,718	29	14	45	67
1.15	12	7	30	18	0	480	1,904	3,966	340	0	340	708	59	3,299	9	335	5	68
0.00	26	0	0	0	0	640	0	0	0	0	0	0	0	37,872	104	820	194	69
1.35	25	7	42	19	0	2,240	13,066	5,833	2,500	0	2,500	1,116	45	76,586	210	1,754	746	70
0.00	0	0	0	0	0	960	0	0	0	0	0	0	0	54,787	150	411	118	71
0.00	0	0	0	0	0	640	0	0	0	0	0	0	0	34,431	94	192	76	72
1.01	60	15	65	47	0	360	8,710	24,194	4,120	0	4,120	11,444	191	1,184	3	4,109	11	73
0.00	0	0	0	0	0	200	0	0	0	0	0	0	0	10,259	28	170	24	74
0.00	0	0	0	0	0	1,600	0	0	0	0	0	0	0	86,174	236	1,194	676	75
0.00	0	0	0	0	0	1,440	0	0	0	0	0	0	0	10,962	30	66	67	76
1.32	38	11	56	74	21	4,960	53,615	10,809	39,670	23,800	63,470	12,796	337	50,699	139	63,175	295	77
0.00	24	0	0	0	0	320	0	0	0	0	0	0	0	11,945	33	124	56	78
1.22	15	9	35	9	0	3,040	16,963	5,579	1,560	0	1,560	513	34	53,774	147	1,388	172	79
0.00	0	0	0	0	0	640	0	0	0	0	0	0	0	13,748	38	331	19	80
0.00	0	0	0	0	0	480	0	0	0	0	0	0	0	11,585	32	1,774	20	81
1.12	224	12	9	3	0	1,080	182,990	169,435	4,980	0	4,980	4,611	21	227,355	623	2,629	2,531	82
1.16	124	11	10	24	0	1,400	114,941	82,100	27,080	0	27,080	19,343	156	369,799	1,013	23,572	3,508	83
1.15	27	12	22	7	3	2,080	35,461	17,048	2,320	300	2,620	1,260	47	99,552	273	1,839	781	84
1.75	8	7	34	35	0	960	1,573	1,638	550	0	550	573	72	28,641	78	293	257	85
1.60	45	4	51	14	0	960	4,106	4,277	580	0	580	604	13	17,313	47	465	115	86
1.50	24	13	32	6	0	640	7,023	10,973	390	0	390	609	25	7,101	19	379	11	87
0.00	16	0	0	0	0	320	0	0	0	0	0	0	0	11,134	31	21	93	88
0.00	0	0	0	0	0	1,600	0	0	0	0	0	0	0	56,342	154	403	429	89
1.70	35	11	28	21	0	2,880	36,432	12,650	7,820	0	7,820	2,715	78	40,088	110	7,687	133	90
0.00	60	3	0	0	0	320	0	0	0	0	0	0	0	8,978	25	197	65	91
1.20	6	14	27	34	0	640	2,537	3,964	850	0	850	1,328	221	18,507	51	723	127	92
1.28	10	10	31	18	0	1,280	5,353	4,182	990	0	990	773	77	20,475	56	900	90	93
1.10	18	21	35	15	4	1,320	22,874	17,328	3,410	770	4,180	3,167	176	6,434	18	4,155	25	94
1.10	18	21	35	19	0	340	11,090	17,328	2,150	0	2,150	3,359	187	91,781	251	615	1,535	95
1.26	14	15	45	24	0	9,600	68,270	7,111	16,660	0	16,660	1,735	124	203,070	556	15,640	1,020	96
0.00	0	0	0	0	0	160	0	0	0	0	0	0	0	11,883	33	76	229	97
1.26	9	12	45	31	0	1,120	4,096	3,657	1,250	0	1,250	1,116	124	13,769	38	1,213	37	98
1.30	30	6	55	8	0	2,240	10,828	4,833	910	0	910	406	14	34,517	95	798	112	99
1.89	42	12	20	7	0	1,280	21,185	16,550	1,550	0	1,550	1,211	29	18,425	50	1,410	140	100
1.50	35	15	35	7	0	320	5,648	17,650	410	0	410	1,281	37	8,362	23	379	31	101
1.30	15	13	40	7	0	640	4,469	6,982	330	0	330	516	34	9,891	27	286	44	102
1.02	29	19	16	28	0	80	2,816	35,200	780	0	780	9,750	336	1,824	5	773	7	103
1.20	31	27	30	15	14	1,480	56,060	37,878	8,630	4,800	13,430	9,074	293	56,904	156	13,137	293	104
1.55	12	17	25	11	0	320	2,451	7,659	270	0	270	844	70	7,132	20	235	35	105
1.32	16	18	36	13	0	480	5,200	10,833	650	0	650	1,354	85	1,787	5	645	5	106
1.28	25	12	35	26	5	2,800	33,093	11,818	8,700	1,760	10,460	3,736	149	63,648	174	10,051	409	107
1.15	18	10	8	6	0	640	7,150	11,171	410	0	410	641	36	2,688	7	400	10	108
0.00	8	0	0	0	0	320	0	0	0	0	0	0	0	20,330	56	40	260	109
1.24	147	8	35	13	0	2,240	107,126	47,824	13,940	0	13,940	6,223	42	135,336	371	13,049	891	110
1.20	40	16	55	5	3	6,880	128,100	18,619	5,880	3,580	9,460	1,375	34	107,702	295	8,901	559	111
0.00	0	0	0	0	0	320	0	0	0	0	0	0	0	39,794	109	163	279	112
1.07	20	12	70	6	0	160	835	5,218	50	0	50	313	16	6,986	19	34	16	113
0.00	29	0	0	0	0	960	0	0	0	0	0	0	0	19,894	55	530	100	114
0.00	0	0	0	0	0	320	0	0	0	0	0	0	0	4,643	13	57	15	115
0.00	0	0	0	0	0	640	0	0	0	0	0	0	0	18,095	50	201	86	116
1.40	18	15	56	5	0	640	4,213	6,582	210	0	210	328	18	8,052	22	176	34	117
0.00	0	0	0	0	0	480	0	0	0	0	0	0	0	17,296	47	238	113	118
1.15	40	5	0	9	0	320	4,317	13,490	390	0	390	1,219	30	10,153	28	281	109	119
1.90	53	12	30	7	0	960	17,451	18,178	1,160	0	1,160	1,208	23	15,257	42	1,085	75	120
1.15	34	12	25	20	0	400	8,257	20,642	1,680	0	1,680	4,200	124	14,555	40	1,591	89	121
1.15	20	20	0	10	0	960	25,905	26,984	2,720	0	2,720	2,833	142	77,007	211	2,411	309	122
1.10	8	17	32	3	0	480	3,131	6,522	90	0	90	188	24	3,636	10	85	5	123
0.00	0	0	0	0	0	160	0	0	0	0	0	0	0	8,829	24	162	90	124
1.20	20	13	30	6	0	960	11,296	11,766	710	0	710	740	37	14,300	39	680	30	125
1.08	29	15	20	30	0	600	14,999	24,998	4,550	0	4,550	7,583	261	9,391	26	4,517	33	126
1.10	37	15	33	3	13	1,920	50,353	26,225	1,400	2,880	4,280	2,229	60	43,844	120	4,012	268	127
0.00	11	0	0	0	0	320	0	0	0	0	0	0	0	9,709	27	151	32	128
1.6	30	18	54	0	0	800	0	0	0	0	0	0	0	71,017	195	1,159	262	129
1.50	20	12	31	7	0	160	1,370	8,562	90	0	90	563	28	6,228	17	67	23	130
1.42	19	15	30	20	0	1,920	20,927	10,899	4,160	0	4,160	2,167	114	168,037	460	3,171	989	131
1.00	19	14	32	26	3	1,520	21,330	14,032	5,600	550	6,150	4,046	213	24,789	68	6,084	66	132

SUMMARY OF PRODUCING OIL FIELDS

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY *API	F.V.F.	NET PAY FT.	PORO-SITY (%)	% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIL	
											PRIM.	SECND.		M BBLs	E
133	Kevin East Nisku	Nisku	Toole	1984	3,000	39	1.10	7	9	30	32	0	520	1,617	
134	Kevin Sunburst	Total Production	Toole	1922	1,500	32	1.08	7	20	35	23	3	48,720	318,475	
135	Kincheloe Ranch	Tyler	Rosebud	1944	2,000	0	0.00	0	0	0	0	0	80	0	
136	Kincheloe Ranch W.	Tyler	Rosebud	1979	5,500	35	0.00	0	0	0	0	0	200	0	
137	Lambert	Red River	Richland	1980	12,200	44	0.00	7	13	40	0	0	1,280	0	
138	Landslide Butte	Madison/Sun River	Glacier	1967	4,700	41	0.00	24	0	0	0	0	520	0	
139	Leary	Muddy	Powder River	1969	5,800	41	1.15	7	17	33	32	0	400	2,151	
140	Little Beaver	Red River Unit	Fallon	1952	8,300	29	1.29	37	12	35	8	23	4,960	86,087	
141	Little Beaver East	Red River	Fallon	1954	8,300	30	1.50	24	13	35	43	0	1,600	16,782	
142	Little Wall Creek	Tyler/Stensvad	Musselshell	1970	3,700	33	1.10	40	15	33	17	0	1,120	31,754	
143	Lobo	Interlake/Red River	Roosevelt	1986	11,410	0	0.00	0	0	0	0	0	640	0	
144	Lodge Grass	Minnelusa	Big Horn	1964	6,520	0	0.00	0	0	0	0	0	640	0	
145	Lone Butte	Madison	Richland	1964	6,520	22	1.16	15	15	34	5	0	640	6,356	
146	Lone Butte	Red River	Richland	1974	12,400	45	1.70	14	11	30	15	0	960	4,723	
147	Lonetree Creek	Red River	Richland	1970	12,500	47	1.86	19	11	30	21	0	3,200	19,527	
148	Long Creek West	Nisku	Roosevelt	1977	7,700	39	0.00	24	18	0	0	0	320	0	
149	Lookout Butte	Total Production	Fallon	1961	8,900	33	1.15	15	15	25	29	19	9,280	105,644	
150	Lowell	Red River	Sheridan	1979	11,300	35	0.00	7	8	45	0	0	960	0	
151	Lustre	Madison	Valley	1982	7,200	33	1.19	27	16	45	4	0	8,000	123,919	
152	Lustre North	Ratcliffe	Valley	1983	6,150	36	1.15	42	4	30	0	0	960	0	
153	Mason Lake	Amsden/Cat Creek	Musselshell	1964	4,200	47	1.10	12	15	43	13	0	1,040	7,526	
154	McCabe	Ratcliffe	Roosevelt	1973	8,700	37	1.50	20	13	40	7	0	480	3,873	
155	Medicine Lake	Devonian	Sheridan	1980	10,300	43	1.46	39	5	16	0	0	480	0	
156	Medicine Lake	Siluro/Ord.	Sheridan	1984	11,319	44	1.55	38	9	35	8	0	1,920	21,363	
157	Melstone	Tyler	Musselshell	1948	4,400	34	1.09	25	15	30	27	0	800	14,947	
158	Midfork	Charles/Nisku	Valley	1985	7,174	0	0.00	0	0	0	0	0	480	0	
159	Missouri Breaks	Red River	Roosevelt	1982	12,000	45	1.74	15	15	30	17	0	320	2,247	
160	Mona	Red River	Richland	1982	11,300	60	2.30	18	14	33	8	0	320	1,822	
161	Monarch Non Unit	Siluro/Ord.	Fallon	1958	8,400	0	0.00	0	0	0	0	0	1,920	0	
162	Monarch Unit	Siluro/Ord.	Fallon	1958	8,400	32	1.00	31	7	35	3	4	2,720	29,764	
163	Mondak West	Duperow	Richland	1979	10,600	0	0.00	0	0	0	0	0	320	0	
164	Mondak West	Madison	Richland	1976	9,200	30	1.30	100	4	60	5	0	10,880	103,886	
165	Mondak West	Siluro/Ord.	Richland	1976	12,200	48	1.64	45	10	43	16	0	3,200	38,828	
166	Mosser Dome	Kootenai	Yellowstone	1936	1,000	22	1.01	15	24	30	2	0	960	18,582	
167	Mustang	Madison	Richland	1988	9,200	34	0.00	0	0	0	0	0	160	0	
168	Mustang	Red River	Richland	1979	12,500	47	1.41	17	12	0	7	0	960	10,775	
169	Neisser Creek	Red River	Sheridan	1982	10,900	46	2.00	15	17	21	14	0	320	2,501	
170	Ninemile	Nisku	Toole	1985	3,450	0	0.00	0	0	0	0	0	120	0	
171	Nohly	Nisku	Richland	1983	10,700	38	1.30	15	11	39	68	0	800	4,805	
172	Nohly	Red River	Richland	1972	12,900	46	1.43	27	10	40	22	0	960	8,437	
173	Nohly Area	Ratcliffe	Richland	1984	9,444	32	1.23	17	10	57	22	0	960	4,426	
174	North Fork	Madison	Richland	1977	9,500	35	1.37	18	3	70	52	0	960	881	
175	Ollie	Red River	Fallon	1980	10,200	36	0.00	56	0	0	0	0	160	0	
176	Otis/So. Otis Creek	Red River	Richland	1970	12,700	48	1.76	23	12	35	9	0	1,600	12,653	
177	Outlook	Duperow	Sheridan	1964	8,200	39	1.50	15	10	25	47	0	640	3,724	
178	Outlook	Interlake	Sheridan	1956	9,000	38	1.12	20	8	30	81	0	960	7,448	
179	Outlook	Nisku	Sheridan	1958	9,170	40	0.00	20	0	0	0	0	160	0	
180	Outlook West	Winnipegosis	Sheridan	1958	9,100	39	1.12	16	8	30	32	0	480	2,979	
181	Oxbow	Red River	Roosevelt	1978	12,600	47	1.50	18	12	45	27	0	320	1,966	
182	Palomino	Nisku	Roosevelt	1980	7,500	48	1.15	39	16	20	10	0	800	26,941	
183	Pennel	Siluro/Ord.	Fallon	1955	7,000	31	1.10	38	3	30	54	9	28,960	162,989	
184	Pine	Red River	Fallon/Wibaux	1952	8,400	34	1.17	32	12	30	24	23	16,480	293,731	
185	Pondera	Madison/Sun River	Pondera	1927	2,100	34	1.20	15	16	31	16	0	15,600	167,014	
186	Poplar East	Heath	Roosevelt	1969	4,900	38	1.10	8	11	50	24	0	480	1,490	
187	Poplar East	Madison	Roosevelt	1952	5,500	40	1.10	25	11	30	19	0	18,070	245,327	
188	Poplar Northwest	Madison	Roosevelt	1952	6,300	40	1.10	16	10	45	12	0	5,440	33,763	
189	Prairie Elk	Charles	McCone	1965	6,100	32	1.00	5	12	35	11	0	320	968	
190	Pronghorn	Red River	Sheridan	1983	10,580	40	1.30	17	13	54	4	0	1,280	7,765	
191	Putnam	Interlake	Richland	1969	11,900	41	1.75	16	9	30	7	0	1,920	8,580	
192	Putnam	Madison	Richland	1978	9,500	34	1.42	92	6	35	3	0	1,120	21,955	
193	Putnam	Red River	Richland	1969	11,900	41	1.75	16	9	30	22	0	4,160	18,589	
194	Rabbit Hills	Sawtooth	Blaine	1972	4,000	21	1.15	12	18	16	36	0	800	9,792	
195	Ragged Point	Tyler	Musselshell	1956	3,600	32	1.11	13	14	32	29	10	1,440	12,456	
196	Rainbow	Red River	Richland	1982	12,500	46	2.20	28	14	45	8	0	320	2,433	
197	Rattler Butte	Tyler	Rosebud	1975	5,300	35	1.10	25	12	60	57	0	240	2,031	
198	Rattlesnake Butte	Cat Creek/Amsden	Petroleum	1984	2,732	28	1.10	26	21	70	18	0	320	3,697	

PRODUCING OIL FIELDS—1991

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1991 PRODUCTION		CUMUL PROD. 1-92 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC.	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ACRE	BBLs/ACRE FT.	BBLs	BOPD			
30	32	0	520	1,617	3,109	510	0	510	981	140	38,154	105	347	163	133
35	23	3	48,720	318,475	6,536	72,280	7,970	80,250	1,647	235	393,803	1,079	78,221	2,029	134
0	0	0	80	0	0	0	0	0	0	0	6,111	17	14	43	135
0	0	0	200	0	0	0	0	0	0	0	57,480	157	658	128	136
40	0	0	1,280	0	0	0	0	0	0	0	22,579	62	441	128	137
0	0	0	520	0	0	0	0	0	0	0	50,314	138	375	201	138
33	32	0	400	2,151	5,377	680	0	680	1,700	243	13,882	38	630	50	139
35	8	23	4,960	86,087	17,356	6,890	8,850	15,740	3,173	86	318,124	872	10,699	5,041	140
35	43	0	1,600	16,782	10,488	7,180	0	7,180	4,488	187	100,548	275	5,838	1,342	141
33	17	0	1,120	31,754	28,351	5,370	0	5,370	4,795	120	185,841	509	4,259	1,111	142
0	0	0	640	0	0	0	0	0	0	0	28,584	78	259	30	143
0	0	0	640	0	0	0	0	0	0	0	4,283	12	34	7	144
34	5	0	640	6,356	9,931	300	0	300	469	31	4,990	14	292	8	145
30	15	0	960	4,723	4,919	720	0	720	750	54	21,272	58	642	78	146
30	21	0	3,200	19,527	6,102	4,030	0	4,030	1,259	66	52,750	145	3,577	453	147
0	0	0	320	0	0	0	0	0	0	0	29,957	82	675	254	148
25	29	19	9,280	105,644	11,384	30,480	1,300	31,780	3,425	228	525,001	1,438	25,213	6,567	149
45	0	0	960	0	0	0	0	0	0	0	10,550	29	73	52	150
45	4	0	8,000	123,919	15,489	5,400	0	5,400	675	25	237,996	652	4,532	868	151
30	0	0	960	0	0	0	0	0	0	0	8,830	24	88	56	152
43	13	0	1,040	7,526	7,236	990	0	990	952	79	9,935	27	966	24	153
40	7	0	480	3,873	8,068	290	0	290	604	30	5,611	15	239	51	154
16	0	0	480	0	0	0	0	0	0	0	52,218	143	111	156	155
35	8	0	1,920	21,363	11,126	1,720	0	1,720	896	24	88,150	242	1,242	478	156
30	27	0	800	14,947	18,683	4,020	0	4,020	5,025	201	54,480	149	3,706	314	157
0	0	0	480	0	0	0	0	0	0	0	16,344	45	179	45	158
30	17	0	320	2,247	7,021	380	0	380	1,188	79	12,632	35	320	60	159
33	8	0	320	1,822	5,693	140	0	140	438	24	15,897	44	105	35	160
0	0	0	1,920	0	0	0	0	0	0	0	82,089	225	622	570	161
35	3	4	2,720	29,764	10,942	980	960	1,940	713	23	37,378	102	1,501	439	162
0	0	0	320	0	0	0	0	0	0	0	5,915	16	191	63	163
60	5	0	10,880	103,886	9,548	5,330	0	5,330	490	5	123,933	340	4,881	449	164
43	16	0	3,200	38,828	12,133	6,100	0	6,100	1,906	42	262,022	718	4,114	1,986	165
30	2	0	960	18,582	19,356	400	0	400	417	28	7,405	20	388	12	166
0	0	0	160	0	0	0	0	0	0	0	8,836	24	29	19	167
0	7	0	960	10,775	11,223	770	0	770	802	47	24,328	67	535	235	168
21	14	0	320	2,501	7,815	340	0	340	1,063	71	16,535	45	253	87	169
0	0	0	120	0	0	0	0	0	0	0	2,252	6	33	8	170
39	68	0	800	4,805	6,006	3,290	0	3,290	4,113	274	208,681	572	2,580	710	171
40	22	0	960	8,437	8,788	1,850	0	1,850	1,927	71	47,463	130	1,703	147	172
57	22	0	960	4,426	4,610	970	0	970	1,010	59	110,380	302	469	501	173
70	52	0	960	881	917	460	0	460	479	27	17,583	48	338	122	174
0	0	0	160	0	0	0	0	0	0	0	5,693	16	131	13	175
35	9	0	1,600	12,653	7,908	1,110	0	1,110	694	30	10,684	29	1,079	31	176
25	47	0	640	3,724	5,818	1,750	0	1,750	2,734	182	22,616	62	1,686	64	177
30	81	0	960	7,448	7,758	6,000	0	6,000	6,250	313	17,682	48	5,901	99	178
0	0	0	160	0	0	0	0	0	0	0	12,645	35	71	48	179
30	32	0	480	2,979	6,206	950	0	950	1,979	124	23,391	64	788	162	180
45	27	0	320	1,966	6,143	540	0	540	1,688	94	16,980	47	398	142	181
20	10	0	800	26,941	33,676	2,560	0	2,560	3,200	82	142,276	390	1,811	749	182
30	54	9	28,960	162,989	5,628	87,570	25,600	113,170	3,908	103	2,836,817	7,772	80,586	32,584	183
30	24	23	16,480	293,731	17,823	71,150	54,000	125,150	7,594	237	1,304,053	3,573	108,912	16,238	184
31	16	0	15,600	167,014	10,706	27,290	0	27,290	1,749	117	301,752	827	25,824	1,466	185
50	24	0	480	1,490	3,104	360	0	360	750	94	7,723	21	308	52	186
30	19	0	18,070	245,327	13,576	46,180	0	46,180	2,556	102	154,201	422	45,098	1,082	187
45	12	0	5,440	33,763	6,206	4,120	0	4,120	757	47	138,926	381	3,567	553	188
35	11	0	320	968	3,025	110	0	110	344	69	3,268	9	100	10	189
54	4	0	1,280	7,765	6,066	300	0	300	234	14	10,971	30	278	22	190
30	7	0	1,920	8,580	4,468	590	0	590	307	19	74,582	204	518	72	191
35	3	0	1,120	21,955	19,602	600	0	600	536	6	45,454	125	444	156	192
30	22	0	4,160	18,589	4,468	4,020	0	4,020	966	60	18,069	50	3,892	128	193
16	36	0	800	9,792	12,240	3,480	0	3,480	4,350	363	131,863	361	1,261	2,219	194
32	29	10	1,440	12,456	8,650	3,620	1,210	4,830	3,354	258	64,210	176	3,997	833	195
45	8	0	320	2,433	7,603	190	0	190	594	21	9,025	25	150	40	196
60	57	0	240	2,031	8,462	1,150	0	1,150	4,792	192	25,944	71	962	188	197
70	18	0	320	3,697	11,553	680	0	680	2,125	82	34,477	94	484	196	198

SUMMARY OF PRODUCING

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %	
											PRIM.	SEC.
199	Raymond	Duperow	Sheridan	1979	8,360	46	0.00	0	0	0	0	
200	Raymond	Nisku	Sheridan	1972	7,900	50	1.40	22	9	0	13	
201	Raymond	Red River	Sheridan	1972	10,000	39	1.42	33	12	10	6	
202	Raymond	Winnipegosis	Sheridan	1972	9,300	42	1.17	40	5	27	18	
203	Reagan	Madison	Glacier	1947	3,700	38	1.10	11	12	30	47	
204	Red Bank	Madison	Roosevelt	1980	13,000	31	2.00	16	14	11	5	
205	Red Bank	Red River	Roosevelt	1980	13,000	45	2.00	20	18	8	3	
206	Red Bank South	Red River	Roosevelt	1981	13,000	47	0.00	20	17	29	0	
207	Red Creek Unit	Cut Bank/Madison	Glacier	1958	2,600	31	1.08	20	19	30	10	
208	Red Water East	Red River	Richland	1983	12,025	47	1.40	20	11	40	9	
209	Refuge	Red River	Sheridan	1979	11,300	44	1.69	13	5	30	40	
210	Reserve	Red River	Sheridan	1966	11,100	39	1.30	18	6	30	23	
211	Reserve II	Red River	Sheridan	1987	11,283	0	0.00	0	0	0	0	
212	Richey	Charles	McCone	1951	7,000	39	1.20	25	8	30	16	
213	Ridgelawn	Madison	Richland	1977	8,900	35	1.18	54	3	50	15	
214	Ridgelawn	Red River	Richland	1980	12,500	49	1.90	15	12	35	35	
215	Riprap Coulee	Ratcliffe	Roosevelt	1975	8,800	34	1.30	14	14	45	14	
216	Riverbend	Red River	Richland	1981	12,000	44	1.42	12	12	30	18	
217	Rocky Point	Red River	Roosevelt	1978	11,800	49	1.80	19	14	47	14	
218	Rosebud	Tyler	Musselshell	1974	5,000	34	1.24	32	14	48	17	
219	Royals	Dawson Bay	Dawson	1980	11,700	43	1.93	46	5	32	18	
220	Rush Mountain	Winnipegosis *	Sheridan	1968	12,000	39	1.62	14	10	33	47	
221	Salt Lake	Madison/Bakken/Nisku	Sheridan	1970	7,900	43	1.50	23	11	35	9	
222	Salt Lake	Red River	Sheridan	1987	10,554	35	1.30	13	10	25	28	
223	Second Creek	Red River/Madison	Richland	1972	12,700	46	1.50	30	7	40	13	
224	Shotgun Creek	Ratcliffe	Roosevelt	1984	9,234	0	0.00	20	0	0	0	
225	Sidney	Madison	Richland	1976	9,000	34	1.30	60	4	50	6	
226	Sidney	Red River	Richland	1981	12,500	41	1.70	30	11	45	6	
227	Singletree	Red River/Winn *	Roosevelt	1978	12,000	46	0.00	28	10	40	0	
228	Sioux Pass	Interlake *	Richland	1982	11,880	38.6	0.00	0	0	0	0	
229	Sioux Pass	Siluro/Ord.	Richland	1973	12,700	47	1.70	40	9	35	14	
230	Sioux Pass Middle	Red River	Richland	1976	12,600	45	1.40	17	16	25	8	
231	Sioux Pass North	Madison	Richland	1974	12,000	45	1.60	44	12	40	3	
232	Sioux Pass North	Red River	Richland	1974	12,000	45	1.60	44	12	40	6	
233	Sioux Pass South	Red River	Richland	1982	12,700	46	0.00	30	0	0	0	
234	Soap Creek	Tensleep/Madison	Big Horn	1952	1,900	20	1.05	20	15	35	13	
235	Soap Creek East	Tensleep	Big Horn	1977	3,400	17	1.02	15	15	35	20	
236	South Fork	Mission Canyon	Richland	1986	9,100	43	1.50	13	8	45	0	
237	South Fork	Red River	Richland	1976	12,400	46	1.00	41	11	0	1	
238	Spring Lake	Bakken	Richland	1982	10,800	42	1.50	17	8	20	12	
239	Spring Lake	Red River	Richland	1963	11,700	51	2.00	9	12	30	30	
240	Spring Lake West	Bakken	Richland	1980	11,660	0	0.00	0	0	0	0	
241	Stampede	Bakken	Richland	1989	9,768	0	0.00	26	0	0	0	
242	Stampede	Red River	Richland	1980	11,800	45	1.31	40	8	40	5	
243	Stensvad	Tyler	Musselshell	1958	5,500	33	1.17	25	14	20	40	
244	Studhorse	Tyler/Stensvad	Garfield	1984	4,805	32	1.05	15	16	50	5	
245	Sumatra	Tyler	Rosebud	1949	4,500	32	1.16	30	19	35	29	
246	Sunny Hill West	Red River	Sheridan	1983	12,330	50	1.55	14	13	28	7	
247	Target	Madison	Roosevelt	1981	10,500	32	0.00	50	11	55	0	
248	Three Buttes	Red River	Richland	1978	12,400	43	0.00	12	0	0	0	
249	Tule Creek	Nisku	Roosevelt	1960	7,500	46	1.41	25	15	30	45	
250	Tule Creek East	Nisku	Roosevelt	1964	7,500	43	1.91	30	18	30	42	
251	Tule Creek South	Duperow/Nisku	Roosevelt	1964	7,600	43	1.40	8	12	30	53	
252	Two Waters	Bakken	Richland	1982	9,950	0	0.00	42	0	0	0	
253	Utopia	Swift	Liberty	1977	2,300	33	1.15	17	16	40	8	
254	Vaux	Interlake/Stonewall	Richland	1981	12,100	45	0.00	0	0	0	0	
255	Vaux	Madison	Richland	1977	8,800	34	1.20	40	4	43	11	
256	Vaux	Red River	Richland	1976	12,400	48	1.60	24	14	45	9	
257	Volt	Nisku	Roosevelt	1964	7,300	47	1.40	14	20	30	57	
258	Wakea	Nisku	Sheridan	1988	9,906	0	0.00	14	0	0	0	
259	Wakea	Red River	Sheridan	1983	11,133	42	1.57	6	14	31	50	
260	Wakea	Winnipegosis	Sheridan	1985	10,179	44	1.42	12	14	30	47	
261	West Butte	Sunburst	Toole	1968	2,300	40	1.10	10	24	23	16	
262	Whitlash	Swift/Sunburst	Liberty	1927	2,600	38	1.13	15	16	20	13	
263	Wills Creek South	Red River	Fallon	1964	8,700	33	1.20	12	18	35	29	
264	Winnett Junction	Tyler	Musselshell	1973	2,500	28	1.10	12	18	30	13	

ARY OF PRODUCING OIL FIELDS—1991

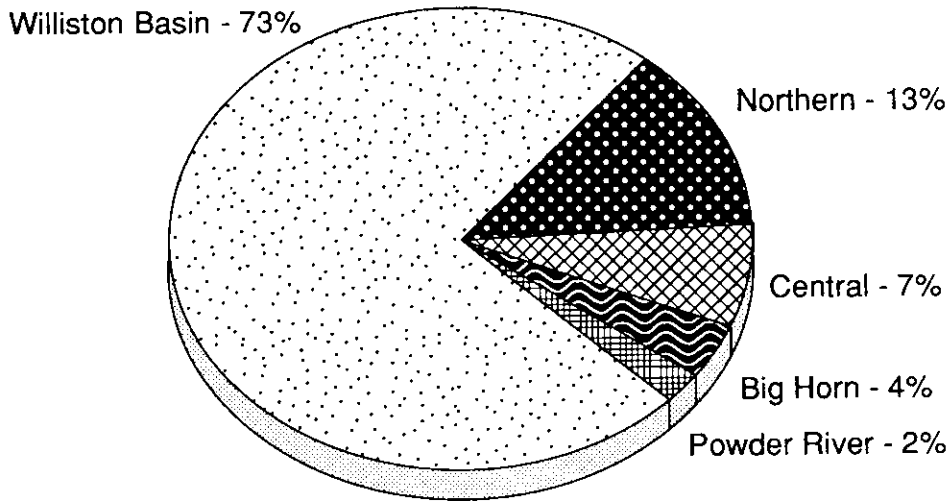
NET PAY FT.	PORO- SITY (%)	% WATER	RECOVERY FACTOR %		PRO- DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1991 PRODUCTION		CUMUL. PROD. 1-92 (M BBLs)	RE- SERVES (M BBLs)	LINE NO.	
			PRIM.	SECND.		M BBLs	BBLs/AC.	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ ACRE	BBLs/ ACRE FT.	BBLs	BOPD				
0	0	0	0	0	160	0	0	0	0	0	0	0	0	11,346	31	104	75	199
22	9	0	13	0	640	7,022	10,971	940	0	940	1,469	67	25,422	70	815	125	200	
33	12	10	6	0	960	18,693	19,471	1,120	0	1,120	1,167	35	25,079	69	941	179	201	
40	5	27	18	0	960	9,294	9,681	1,640	0	1,640	1,708	43	42,426	116	1,453	187	202	
11	12	30	47	14	2,600	16,943	6,516	8,030	2,300	10,330	3,973	361	136,579	374	8,931	1,399	203	
16	14	11	5	0	5,120	39,594	7,733	1,890	0	1,890	369	23	64,644	177	1,407	483	204	
20	18	8	3	0	960	12,333	12,846	390	0	390	406	20	8,048	22	385	5	205	
20	17	29	0	0	320	0	0	0	0	0	0	0	13,075	36	333	30	206	
20	19	30	10	2	1,410	26,942	19,107	2,820	300	3,120	2,213	111	44,087	121	3,000	120	207	
20	11	40	9	0	320	2,341	7,315	200	0	200	625	31	10,678	29	151	49	208	
13	5	30	40	0	320	668	2,087	270	0	270	844	65	10,152	28	202	68	209	
18	6	30	23	0	1,600	7,219	4,511	1,680	0	1,680	1,050	58	9,473	26	1,666	14	210	
0	0	0	0	0	640	0	0	0	0	0	0	0	12,897	35	173	60	211	
25	8	30	16	0	1,440	13,033	9,050	2,060	0	2,060	1,431	57	9,545	26	2,011	49	212	
54	3	50	15	0	4,480	23,858	5,325	3,520	0	3,520	786	15	96,137	263	3,029	491	213	
15	12	35	35	0	1,600	7,644	4,777	2,680	0	2,680	1,675	112	62,247	171	2,462	218	214	
14	14	45	14	0	800	5,147	6,433	740	0	740	925	66	33,269	91	597	143	215	
12	12	30	18	0	320	1,762	5,506	310	0	310	969	81	11,603	32	232	78	216	
19	14	47	14	0	640	3,889	6,076	530	0	530	828	44	14,458	40	483	47	217	
32	14	48	17	0	200	2,915	14,575	500	0	500	2,500	78	9,203	25	473	27	218	
46	5	32	18	0	320	2,012	6,287	370	0	370	1,156	25	11,204	31	302	68	219	
14	10	33	47	0	320	1,437	4,490	670	0	670	2,094	150	10,584	29	592	78	220	
23	11	35	9	0	640	5,443	8,504	480	0	480	750	33	9,521	26	441	39	221	
13	10	25	28	0	480	2,793	5,818	780	0	780	1,625	125	68,125	187	293	487	222	
30	7	40	13	0	1,600	10,427	6,516	1,350	0	1,350	844	28	26,796	73	1,247	103	223	
20	0	0	0	0	480	0	0	0	0	0	0	0	24,043	66	310	91	224	
60	4	50	6	0	7,040	50,415	7,161	3,100	0	3,100	440	7	63,371	174	2,868	232	225	
30	11	45	6	0	640	5,301	8,282	340	0	340	531	18	13,637	37	302	38	226	
28	10	40	0	0	320	0	0	0	0	0	0	0	9,380	26	300	34	227	
0	0	0	0	0	320	0	0	0	0	0	0	0	16,714	46	91	83	228	
40	9	35	14	0	2,560	27,337	10,678	3,930	0	3,930	1,535	38	83,753	229	3,312	618	229	
17	16	25	8	0	1,920	21,705	11,304	1,720	0	1,720	896	53	42,814	117	1,462	258	230	
44	12	40	3	0	1,600	24,577	15,360	540	0	540	338	8	24,109	66	416	124	231	
44	12	40	6	0	4,480	68,817	15,360	4,350	0	4,350	971	22	156,523	429	3,434	916	232	
30	0	0	0	0	640	0	0	0	0	0	0	0	14,355	39	253	212	233	
20	15	35	13	0	1,200	17,289	14,407	2,900	0	2,900	2,417	121	42,260	116	2,636	264	234	
15	15	35	20	0	120	1,335	11,125	270	0	270	2,250	150	8,712	24	153	117	235	
13	8	45	0	0	160	0	0	0	0	0	0	0	8,255	23	8	43	236	
41	11	0	1	0	960	33,589	34,988	300	0	300	313	8	17,016	47	185	115	237	
17	8	20	12	0	480	2,701	5,627	330	0	330	688	40	21,645	59	185	145	238	
9	12	30	30	0	960	2,815	2,932	850	0	850	885	98	9,403	26	838	12	239	
0	0	0	0	0	320	0	0	0	0	0	0	0	4,762	13	40	15	240	
26	0	0	0	0	160	0	0	0	0	0	0	0	3,245	9	3	14	241	
40	8	40	5	0	640	7,277	11,370	350	0	350	547	14	15,119	41	287	63	242	
25	14	20	40	14	960	17,824	18,566	7,120	3,080	10,200	10,625	425	17,455	48	10,170	30	243	
15	16	50	5	0	640	5,674	8,865	260	0	260	406	27	6,310	17	252	8	244	
30	19	35	29	7	5,520	136,779	24,778	40,020	9,540	49,560	8,978	299	397,236	1,088	44,237	5,323	245	
14	13	28	7	0	320	2,099	6,559	140	0	140	438	31	5,896	16	135	5	246	
50	11	55	0	0	1,760	0	0	0	0	0	0	0	34,185	94	654	40	247	
12	0	0	0	0	640	0	0	0	0	0	0	0	14,899	41	378	85	248	
25	15	30	45	0	1,280	18,487	14,442	8,390	0	8,390	6,555	262	37,070	102	8,158	232	249	
30	18	30	42	0	320	4,913	15,353	2,050	0	2,050	6,406	214	4,615	13	2,027	23	250	
8	12	30	53	0	480	1,787	3,722	950	0	950	1,979	247	12,488	34	830	120	251	
42	0	0	0	0	320	0	0	0	0	0	0	0	7,103	19	56	57	252	
17	16	40	8	0	960	10,569	11,009	880	0	880	917	54	29,178	80	642	238	253	
0	0	0	0	0	960	0	0	0	0	0	0	0	41,178	113	567	148	254	
40	4	43	11	0	3,360	19,811	5,896	2,090	0	2,090	622	16	128,384	352	1,771	319	255	
24	14	45	9	0	2,240	20,071	8,960	1,760	0	1,760	786	33	39,475	108	1,640	120	256	
14	20	30	57	0	800	8,689	10,861	4,970	0	4,970	6,213	444	82,284	225	3,212	1,758	257	
14	0	0	0	0	480	0	0	0	0	0	0	0	37,638	103	141	254	258	
6	14	31	50	0	960	2,749	2,863	1,380	0	1,380	1,438	240	56,063	154	1,047	333	259	
12	14	30	47	0	320	2,056	6,425	960	0	960	3,000	250	23,358	64	928	32	260	
10	24	23	16	0	160	2,085	13,031	330	0	330	2,063	206	3,792	10	303	27	261	
15	16	20	13	0	3,120	41,127	13,181	5,410	0	5,410	1,734	116	42,107	115	5,353	57	262	
12	18	35	29	0	480	4,357	9,077	1,250	0	1,250	2,604	217	20,582	56	1,136	114	263	
12	18	30	13	26	240	2,559	10,662	320	670	990	4,125	344	18,930	52	883	107	264	

SUMMARY OF PRODUCING OIL FIELDS

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOP	
											PRIM.	SECND.		M BBLs	B
265	Wolf Springs	Amsden	Yellowstone	1955	6,200	30	1.07	11	6	23	62	0	2,080	7,664	
266	Wolf Springs South	Amsden	Yellowstone	1984	6,100	31	0.00	12	0	0	0	0	960	0	
267	Woodrow	Red River/Charles	Dawson	1952	9,600	42	1.30	25	14	35	18	0	560	7,603	
268	Wrangler	Red River	Sheridan	1979	11,200	30	1.00	6	10	0	26	0	640	2,979	
269	Wrangler North	Red River	Sheridan	1979	10,000	41	1.40	18	16	45	5	0	320	2,809	
270	MISCELLANEOUS SMALL FIELDS														
271	STATE TOTALS														

Note: Reservoir parameters and production figures are supplied by operators. Reserve estimates are extrapolated from computer generated decline curves. Pools with incalculable or small reserves are not printed.

1991 Oil Production by Region 19,573,348 Barrels

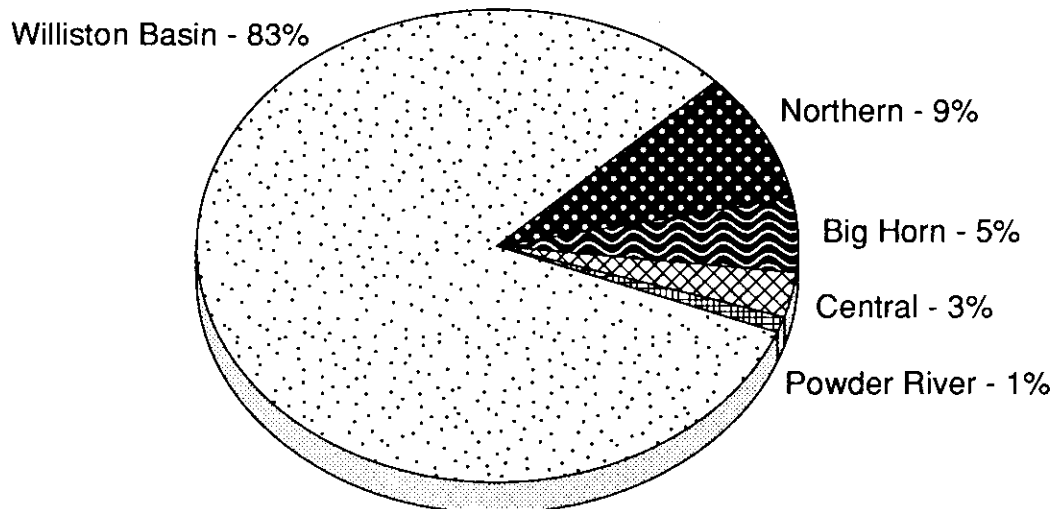


Williston B

PRODUCING OIL FIELDS—1991

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOP		ULTIMATE RECOVERY					1991 PRODUCTION		CUMUL PROD. 1-92 (M BBLS)	RE-SERVES (M BBLS)	LINE NO.
	PRIM.	SECND.		M BBLS	BBL/AC.	PRIM. (M BBLS)	SECOND. (M BBLS)	TOTAL (M BBLS)	BBL/ ACRE	BBL/ ACRE FT.	BBL	BOPD			
23	62	0	2,080	7,664	3,684	4,780	0	4,780	2,298	209	18,880	52	4,736	44	265
0	0	0	960	0	0	0	0	0	0	0	17,483	48	822	58	266
35	18	0	560	7,603	13,576	1,370	0	1,370	2,446	98	16,074	44	1,208	162	267
0	26	0	640	2,979	4,654	780	0	780	1,219	203	31,279	86	548	232	268
45	5	0	320	2,809	8,778	150	0	150	469	26	4,873	13	120	30	269
											1,101M	3,016			270
											19,573M	54,258		156033	271

1991 Oil Reserves by Region 156 Million Barrels



ERA	PERIOD	SOUTHWEST MONTANA (GENERALIZED)	CRAZY MOUNTAINS BASIN	CENTRAL MONTANA		BIG HORN BASIN	
CENOZOIC	TERTIARY	BOZEMAN GP SIXMILE CREEK FM RENOVA FM SPHINX CGL	TONGUE RIVER MBR LEBO MBR TULLOCK MBR			TONGUE RIVER MBR LEBO MBR TULLOCK MBR	
	MESOZOIC	UPPER	BEAVERHEAD CGL MONTANA GP UNDIVIDED EAGLE FM TELEGRAPH CK CODY SH	HELL CREEK FM LENNEP FM BEARPAW FM JUDITH RIVER FM CLAGGET FM	HELL CREEK FM FOX HILLS FM BEARPAW FM JUDITH RIVER FM CLAGGET FM		LANCE FM LENNEP FM MEETEETSE FM JUDITH RIVER FM PARKMAN SS CLAGGET FM
LOWER			COLORADO GP UNDIVIDED MOWRY SH MUDDY SS THERMOPOLIS SH (RUSTY BED MBR) KOOTENAI FM	LIVINGSTON GP EAGLE FM (VIRGELLE MBR) TELEGRAPH CK FM NIOBRARA FM CARLILE FM FRONTIER FM GREENHORN FM BELLE FOURCHE FM BIG ELK SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM	MONTANA GP EAGLE FM (VIRGELLE SS) TELEGRAPH CK FM NIOBRARA FM CARLILE FM FRONTIER FM GREENHORN FM BELLE FOURCHE FM BIG ELK SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA (1st CAT CREEK) KOOTENAI FM (2nd CAT CREEK) KOOTENAI FM (3rd CAT CREEK)	MESA VERDE GP EAGLE FM (VIRGELLE SS) TELEGRAPH CK FM CODY FM TORCHLIGHT SS FRONTIER FM PEAY SS MOWRY FM MUDDY SST SKULL CK SH DAKOTA SILT DAKOTA FM GREYBULL SS KOOTENAI FM LAKOTA FM	E. BULL WOOTEN ATTLE CK E. BULL WOOTEN L. MINE JY. LOH FM. SHE WOODIN WHITE S. CLARK'S FK. ELK BASIN & NW LINWOOD SPRING & E. WIL BELFRY, S. CLARK'S FK., DEAN DO BASIN, JACK CK, MACKAY DOME CLARK'S FORK MACKAY DOME, ROSCOE DOME N. CLARK'S FORK
		JURASSIC	MORRISON FM SWIFT FM RIERDON FM SAWTOOTH FM	MORRISON FM SWIFT FM RIERDON FM PIPER FM	MORRISON FM SWIFT FM RIERDON FM PIPER FM	MORRISON FM UPPER MBR LOWER MBR GYPSUM SPRINGS FM	
TRIASSIC		THAVNES FM WOODSIDE FM DINWOODY FM	CHUGWATER FM DINWOODY FM		CHUGWATER FM DINWOODY FM		
PALEOZOIC	PERMIAN	SHEDHORN FM PHOSPHORIA FM PARK CITY MBR	PHOSPHORIA FM		PHOSPHORIA FM		ELK BASIN
	PENNSYLVANIAN	QUADRANT FM AMSDEN GP	QUADRANT FM AMSDEN GP	TENSLEEP FM AMSDEN GP (ALASKA BENCH) TYLER FM	TENSLEEP FM AMSDEN FM DARWIN SS		ELK BASIN, NW ELK BASIN, FRANNIE ELK BASIN
	MISSISSIPPIAN	BIG SNOWY GP MISSION CANYON LS LODGEPOLE LS SAPPINGTON MBR	BIG SNOWY GP CHARLES FM MISSION CANYON LS LODGEPOLE LS SAPPINGTON MBR	BIG SNOWY GP HEATH FM OTTER FM KIBBEY FM CHARLES FM MISSION CANYON LS LODGEPOLE LS BAKKEN FM	BIG SNOWY GP HEATH FM OTTER FM KIBBEY FM MADISON GROUP		ELK BASIN, NW ELK BASIN, FRANNIE
	DEVONIAN	THREE FORKS FM JEFFERSON FM MAYWOOD FM	THREE FORKS FM BIRDBEAR FM? JEFFERSON FM MAYWOOD FM	THREE FORKS FM BIRDBEAR FM? JEFFERSON FM MAYWOOD FM	THREE FORKS FM JEFFERSON FM		ELK BASIN
	SILURIAN						
	ORDOVICIAN	BIG HORN FM	BIG HORN FM	RED RIVER FM WINNIPEG FM	LEIGH DOL BIG HORN FM LANDER MBR		ELK BASIN
PRECAMBRIAN	CAMBRIAN	RED LION FM HASMARCK FM SILVER HILL FM FLATHEAD SS PILGRIM FM PARK SH MEAGHER LS WOLSEY SH	GROVE CK FM? SNOWY RANGE FM PILGRIM FM PARK SH MEAGHER LS WOLSEY SH FLATHEAD SS	SNOWY RANGE FM PILGRIM FM PARK SH MEAGHER LS WOLSEY SH FLATHEAD SS	GROVE CK FM GALLATIN LS SNOWY RANGE PILGRIM FM GROS VENTRE GP FLATHEAD SS		
	PROTEROZOIC	BELT SUPERGROUP	BELT SUPERGROUP	BELT SUPERGROUP	PRE-BELT ROCKS		
	ARCHEAN	PRE-BELT METAMORPHIC AND IGNEOUS ROCKS					
		SOUTHWEST MONTANA (GENERALIZED)	CRAZY MOUNTAINS BASIN	CENTRAL MONTANA		BIG HORN BASIN	

GENERALIZED STRATIGRAPHIC SHOWING PRODUCING FORMATIONS

	SOUTH CENTRAL MONTANA		NORTHERN POWDER RIVER BASIN		WILLISTON BASIN
			WASATCH FM TONGUE RIVER MBR LEBO MBR TULLOCK MBR		FLAXVILLE FM TONGUE RIVER MBR LEBO MBR TULLOCK MBR
	HELL CREEK FM FOX HILLS FM		HELL CREEK FM FOX HILLS FM		HELL CREEK FM FOX HILLS FM
	BEARPAW FM		BEARPAW FM		BEARPAW FM
	JUDITH RIVER FM	* DRY CREEK GOLDEN DOME RAPELJE	JUDITH RIVER FM (PARKMAN SS)		JUDITH RIVER FM
	CLAGGET FM	* LAKE BASIN & N. RAPELJE	CLAGGET FM		CLAGGET FM
	EAGLE FM (VIRGELLE SS)	* DRY CK. GOLDEN DOME LAKE BASIN & N. RAPELJE * PARK CITY	EAGLE FM (SHANNON SS)	* ASH CK * LISCOM CK. PUMPKIN CK	EAGLE FM
• S. CLARK'S FK. ELK BASIN & NW LINE CK	TELEGRAPH CK FM NIOBRARA FM CARLILE FM GREENHORN FM FRONTIER FM	* LAKE BASIN * DRY CK. GOLDEN DOME LAKE BASIN & N.	TELEGRAPH CK FM NIOBRARA FM CARLILE FM GREENHORN FM BELLE FOURCHE FM		TELEGRAPH CK FM NIOBRARA FM CARLILE FM GREENHORN FM BELLE FOURCHE FM
	BIG ELK SS MOWRY FM		MOWRY FM		MOWRY FM
	MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM	* CROOKED CK. LAUREL MOSSER * DRY CK & W. GOLDEN DOME	MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM FUSON FM LAKOTA FM	* BELL CK. LEARY ROUGH CK. WRIGHT CK * SE BELL CK. HAMMOND	MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM (FUSON) LAKOTA FM
• BEL FRY, S. CLARK'S FK., DEAN DOME, NW ELK BASIN, JACK CK, MACKAY DOME * CLARK'S FORK	GREYBULL SS KOOTENAI FM LAKOTA FM	* DRY CK			
• MACKAY DOME, ROSCOE DOME * N. CLARK'S FORK					
	MORRISON FM SWIFT FM RIERDON FM PIPER FM		MORRISON FM SUNDANCE FM UPPER MBR LOWER MBR GYPSUM SPRINGS FM		MORRISON FM SWIFT FM RIERDON FM PIPER FM DOWIE'S MBR FIREMOUND MBR TAMPIO MBR KATHE MBR NICHOLS MBR POE MBR
	CHUGWATER FM DINWOODY FM		SPEARFISH FM		SPEARFISH FM PINE SALT
• ELK BASIN	PHOSPHORIA FM		PHOSPHORIA FM MINNEKAHTA FM OPECHE FM		MINNEKAHTA FM OPECHE FM
• ELK BASIN, NW ELK BASIN, FRANNIE	TENSLEEP FM AMSDEN FM		TENSLEEP FM MINNELUSA FM AMSDEN FM	• LODGEGRASS SOAP CK. E. SOAP CK. SNYDER • SOAP CK	MINNELUSA FM TYLER FM
• ELK BASIN					HEATH FM OTTER FM KIBBEY FM
• ELK BASIN, NW ELK BASIN, FRANNIE	CHARLES FM MISSION CANYON LS LODGEPOLE LS		MADISON LS	• SOAP CK	CHARLES FM MISSION CANYON LS LODGEPOLE LS BAKKEN FM
• ELK BASIN	THREE FORKS FM JEFFERSON FM		THREE FORKS FM JEFFERSON FM		THREE FORKS FM BIRDBEAR (NISKU) FM DUPEROW FM DAWSON BAY FM PRAIRIE EVAPORITE WINNIPEGOSIS FM ASHERN
	BEARTOOTH BUTTE FM				ANVIL, E & NE BE L. COLORED CANYON TULE CK, S. & E. V
			INTERLAKE FM		E. CHARLIE CK. CO BENOH OLLIE, S. & S SPRING L. STAMP
	LEIGH DOL BIG HORN FM LANDER MBR		STONY MTN FM RED RIVER FM WINNIPEG FM		• BLOOMFIELD, LOS
• ELK BASIN	GROVE CK FM GALLATIN LS SNOWY RANGE PILGRIM FM GROS VENTRE GP FLATHEAD SS		GROVE CK FM GROS VENTRE GP FLATHEAD SS		ANVIL N. BAINVILLE RAYMOND, RESER
					• N. BAINVILLE, BIG HAY CK, LOBO, LO PRONGHORN, PUT WAKEA, WOODRO
	PRE BELT ROCKS		PRE-BELT ROCKS		• BAINVILLE, CABIN BUTTE, MEDICINE • BAINVILLE & N. BR CARLYLE, CHARLIE FAIRVIEW, FERTILE GOOSE L., HAY CK BUTTE, MEDICINE OLLIE, OTIS CK & RAYMOND, RED BAY ROCKY POINT, RUS FORK, SPRING L., WINDMILL, WOOD
	SOUTH CENTRAL MONTANA		NORTHERN POWDER RIVER BASIN		WILLISTON BASIN

*SOME FIELDS OMITTED DUE TO SPACE LIMITATIONS

GENERALIZED STRATIGRAPHIC CORRELATION CHART

SHOWING PRODUCING FORMATIONS* • OIL ✱ GAS

NORTHERN POWDER RIVER BASIN		WILLISTON BASIN		NORTH CENTRAL MONTANA	
		FLAXVILLE FM		FLAXVILLE FM	
FERTILE MOUNTAIN GP	WASATCH FM TONGUE RIVER MBR LERO MBR TULLOCK MBR	FERTILE MOUNTAIN GP	TONGUE RIVER MBR LEBO MBR TULLOCK MBR		
MONTANA GP	HELL CREEK FM FOX HILLS FM BEARPAW FM	MONTANA GP	HELL CREEK FM FOX HILLS FM BEARPAW FM	MONTANA GP	HELL CREEK FM FOX HILLS FM BEARPAW FM
MONTANA GP	JUDITH RIVER FM (PARKMAN SS) CLAGGET FM EAGLE FM (SHANNON SS) TELEGRAPH CK FM NIOBRARA FM CARLILE FM GREENHORN FM BELLE FOURCHE FM	MONTANA GP	JUDITH RIVER FM CLAGGET FM EAGLE FM TELEGRAPH CK FM NIOBRARA FM (1ST WHITE SPK) CARLILE FM GREENHORN FM BELLE FOURCHE FM	MONTANA GP	JUDITH RIVER FM CLAGGET FM EAGLE FM TELEGRAPH CK FM (1ST WHITE SPK) NIOBRARA FM (PHILLIPS SS) GREENHORN FM (PHILLIPS SS) BELLE FOURCHE FM (FISH SCALE SS)
MONTANA GP	MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM FUSON FM LAKOTA FM	MONTANA GP	MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM (FUSON) LAKOTA FM	MONTANA GP	MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM
MONTANA GP	MORRISON FM SUNDANCE FM (UPPER MBR, LOWER MBR) GYPSUM SPRINGS FM	MONTANA GP	MORRISON FM SWIFT FM RIERDON FM PIPER FM BOWEN MBR FIREMOON MBR TAMPECK MBR NESSON FM KLINE MBR HEARD MBR HOE MBR	MONTANA GP	MORRISON FM RIERDON FM PIPER FM BOWEN MBR FIREMOON MBR TAMPECK MBR
MONTANA GP	SPEARFISH FM	MONTANA GP	SPEARFISH FM PINE SALT	MONTANA GP	
MONTANA GP	PHOSPHORIA FM MINNEKAHTA FM OPECHE FM	MONTANA GP	MINNEKAHTA FM OPECHE FM	MONTANA GP	
MONTANA GP	TENSLEEP FM AMSDEN FM	MONTANA GP	MINNELUSA FM TYLER FM	MONTANA GP	
MONTANA GP	MADISON LS	MONTANA GP	HEATH FM OTTER FM KIBBEY FM CHARLES FM MISSION CANYON LS LODGEPOLE LS BAKKEN FM	MONTANA GP	CHARLES FM MISSION CANYON LS LODGEPOLE LS BAKKEN FM
MONTANA GP	THREE FORKS FM	MONTANA GP	THREE FORKS FM BIRDBEAR (NISKU) FM	MONTANA GP	THREE FORKS FM POTLATCH ANYH BIRDBEAR (NISKU) FM
MONTANA GP	JEFFERSON FM	MONTANA GP	DUPEROW FM SOURIS RIVER FM DAWSON BAY FM PRAIRIE EVAPORITE WINNIPEGOSIS FM ASHERN	MONTANA GP	DUPEROW FM SOURIS RIVER FM
MONTANA GP	INTERLAKE FM	MONTANA GP	INTERLAKE FM STONEWALL	MONTANA GP	
MONTANA GP	STONY MTN FM BIG HORN FM RED RIVER FM WINNIPEG FM	MONTANA GP	STONY MTN FM GUNTUN MBR STOUGHTON MBR RED RIVER FM WINNIPEG FM	MONTANA GP	RED RIVER FM WINNIPEG FM
MONTANA GP	GROVE CK FM GROS VENTRE GP FLATHEAD SS	MONTANA GP	DEADWOOD FM	MONTANA GP	EMERSON FM FLATHEAD SS
MONTANA GP	PRE BELT ROCKS	MONTANA GP	PRE-BELT ROCKS	MONTANA GP	PRE-BELT ROCKS
MONTANA GP	NORTHERN POWDER RIVER BASIN	MONTANA GP	WILLISTON BASIN	MONTANA GP	NORTH CENTRAL MONTANA

*SOME FIELDS OMITTED DUE TO SPACE LIMITATIONS

SWEETGRASS ARCH		NORTHERN DISTURBED BELT		PERIOD	ERA
				TERTIARY	CENOZOIC
<p>WILLOW CK FM</p> <p>ST MARY RIVER FM</p> <p>HORSETHIEF SS</p> <p>BEARPAW FM</p> <p>MONTANA GP</p> <p>JUDITH RIVER FM</p> <p>TWO MEDICINE FM</p> <p>CLAGGET FM</p> <p>EAGLE SS</p> <p>VIRGELLE SS</p> <p>TELEGRAPH CK FM</p> <p>KEVIN SH MBR</p> <p>FERDIG MBR</p> <p>CONE (2ND WHITE SPK) (GREENHORN)</p> <p>FLOWEREE MBR</p> <p>(FISH SCALE SS)</p> <p>BOOTLEGGER MBR</p> <p>(RED SPK)</p> <p>VAUGHN BOW ISLAND</p> <p>TAFT HILL</p> <p>FLOOD (DAKOTA) (BURWASH)</p> <p>KOOTENAI FM</p> <p>(MOUTON) (SUNBURST) (CUT BANK)</p>		<p>WILLOW CK FM</p> <p>ST MARY RIVER FM</p> <p>HORSETHIEF SS</p> <p>BEARPAW FM</p> <p>MONTANA GP</p> <p>MEDICINE FM</p> <p>VIRGELLE SS</p> <p>TELEGRAPH CK FM</p> <p>KEVIN SH MBR</p> <p>FERDIG MBR</p> <p>CONE (2ND WHITE SPK) (GREENHORN)</p> <p>FLOWEREE MBR</p> <p>VAUGHN MBR</p> <p>TAFT HILL MBR</p> <p>FLOOD MBR</p> <p>KOOTENAI FM</p> <p>MT. PABLO FM (CUT BANK)</p>		UPPER	CRETACEOUS
<p>ASHFIELD, BOWDOIN, LORING, E & W LORING, SWANSON CK, VANDALIA, WHITEWATER & E</p> <p>ASHFIELD, BOWDOIN, COAL MINE C., GORMAN C., LORING & E., SPRING C., SWANSON CK, VANDALIA, WHITEWATER & E., WILD HORSE</p> <p>BADLANDS, BATTLE CK, BLACK BUTTE, BLACK C., BOWES BROWN'S C. & E., BULLWACKER, CHAIN LAKES, CHIP CK, COAL C., COAL MINE C., FRESNO, HAYRE, HIGHLINE, LAREDO, LEROY, LOHMAN, RED ROCK, RUDYARC, SAWTOOTH MTN, SHERARD, TIGER RIDGE, TWO FORKS</p> <p>BROWN'S C. & E., BULLWACKER, COAL MINE C., LEROY, RED ROCK, SAWTOOTH MTN, TIGER RIDGE, TWO FORKS</p>		<p>BLACKJACK, E. KEITH, MIDDLE BUTTE, O'BRIEN'S C., SAGE CK</p> <p>ALMA, AMANDA, ARCH, APEX, BIG ROCK, BUFFALO FLAT, CUT BANK, DEVON, DRY FORK, DUNKIRK, FITZPATRICK, L. FLAT C., FT. CONRAD, GALATA, GRANDVIEW, HARDPAN, HAYSTACK BUTTE, E. KEITH, KEVIN SUNBURST, SW KEVIN, KICKING HORSE, LEDGER, MARIAS RIVER, MINER'S C., O'BRIEN'S C., OLD SHELBY, POLICE C., PRAIRIE DELL, SMOOSE C., SOBER UP C., TIBER, TRAIL CK, WHITLASH, WILLIAMS, WILLOW RIDGE</p> <p>S. CONRAD</p> <p>BLACKFOOT, BRADLEY, CUT BANK, DUNKIRK, FLAT C., KEVIN-SUNBURST, KICKING HORSE, M. BUTTE, PRAIRIE DELL, W. BUTTE, WHITLASH, WILLOWRIDGE, BRADY, KEVIN-SUNBURST, STRAWBERRY CK, WILLOW RIDGE</p> <p>BRADY, KEVIN-SUNBURST, STRAWBERRY CK, WILLOW RIDGE</p> <p>AMANDA, ARCH, APEX, BLACKFOOT, DUNKIRK, E. & SW KEVIN, OLD SHELBY, PRAIRIE DELL, BERTHELOTE, BRADY, S. CONRAD, DUTCH, JOHN, FRED & GEORGE, GRABEN C., GYPSY B., KEVIN-SUNBURST, PHANTOM & W. W. BUTTE, WHITLASH & W.</p> <p>BLACKFOOT & E., BORDER RED C., CUT BANK, GRABEN C., RED CK</p>		LOWER	
<p>MORRISON FM</p> <p>SWIFT FM</p> <p>RIERDON FM</p> <p>SAWTOOTH FM</p> <p>ELLIS GP</p> <p>BOWES, RABBIT HILLS & NE & SW, THIRTY MILE</p> <p>CANADIAN C., E., CHINOOK, N. GILDFORD, RUDYARD</p>		<p>MORRISON FM</p> <p>SWIFT FM</p> <p>RIERDON FM</p> <p>SAWTOOTH FM</p> <p>ELLIS GP</p> <p>BRADY</p> <p>ARCH, APEX, BANNATYNE, BEAR'S DEN, FLAT C., FRED & GEORGE CK, GRANDVIEW, HORSE CK, LAIRD CK, PRICHARD CK, UTOPIA, WHITLASH & W.</p> <p>AMANDA, EAGLE SPGS., ETHRIDGE, SW KEVIN, OLD SHELBY, PRAIRIE DELL & W. WEST BUTTE</p> <p>GYPSY B., HIGHVIEW, KEVIN-SUNBURST</p> <p>CANADIAN C., FLAT C., KEITH, KICKING HORSE, MINER'S C., UTOPIA</p>			JURASSIC
					TRIASSIC
					PERMIAN
					PENNSYLVANIAN
<p>SUN RIVER DOLOMITE</p> <p>MISSION CANYON LS</p> <p>LODGEPOLE LS</p> <p>EXSHAW (BAKKEN) FM</p> <p>MADISON GP</p>		<p>SUN RIVER MBR</p> <p>CASTLE REEF DOL</p> <p>LOWER MBR</p> <p>ALLAN MOUNTAIN LS</p> <p>EXSHAW (BAKKEN) FM</p> <p>MADISON GP</p>			MISSISSIPPIAN
<p>THREE FORKS FM</p> <p>THREE FORKS SHALE</p> <p>POTLATCH ANHY</p> <p>BIRDBEAR (NISKU) FM</p> <p>JEFFERSON GP</p> <p>DUPEROW FM</p> <p>SOURIS RIVER FM</p>		<p>THREE FORKS FM</p> <p>THREE FORKS SHALE</p> <p>BIRDBEAR (NISKU) FM</p> <p>JEFFERSON FM</p> <p>LOWER MBR (DUPEROW)</p> <p>MAYWOOD (SOURIS RIVER) FM</p>			DEVONIAN
					SILURIAN
					ORDOVICIAN
<p>RED LION FM</p> <p>PILGRIM FM</p> <p>CAMBRIAN SHALE UNDIVIDED</p> <p>PARK SH</p> <p>MEAGHER LS</p> <p>WOLSEY SH</p> <p>FLATHEAD SS</p>		<p>DEVILS GLEN DOL</p> <p>SWITCHBACK SH</p> <p>STEAMBOAT LS</p> <p>PENTAGON SH</p> <p>PAGODA LS</p> <p>DEARBORN LS</p> <p>DAMNATION LS</p> <p>GORDON SH</p> <p>FLATHEAD SS</p>			CAMBRIAN
<p>PRE-BELT ROCKS</p>		<p>BELT SUPERGROUP</p> <p>PRE-BELT ROCKS</p>			PROTEROZOIC
<p>PRE-BELT ROCKS</p>		<p>PRE-BELT ROCKS</p>			ARCHEAN
SWEETGRASS ARCH		NORTHERN DISTURBED BELT			PRECAMBRIAN